MZ-E707

SERVICE MANUAL

Ver 1.1 2001.12

E Model
Tourist Model

Model Name Using Similar Mechanism	MZ-E909
MD Mechanism Type	MT-MZE909-173
Optical Pick-up Mechanism Type	LCX-4E

SPECIFICATIONS

Audio playing system
MiniDisc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: λ = 790 nm
Emission duration: continuous
Laser output: less than 44.6 μW*
* This output is the value measured at a distance
  of 200 mm from the objective lens surface on
  the optical pick-up block with 7 mm aperture.

Revolutions
Approx. 300 rpm to 2,700 rpm

Error correction
ACIRC (Advanced Cross Interleave Reed Solomon Code)

Sampling frequency
44.1 kHz

Coding ATRAC (Adaptive TRansform Acoustic Coding)
ATRAC3: LP2
ATRAC3: LP4

Modulation system
EFM (Eight to Fourteen Modulation)

Number of channels
2 stereo channels
1 monaural channel

Frequency response
20 to 20,000 Hz $\pm$ 3 dB

Wow and Flutter
Below measurable limits

Outputs
Headphones/earphones: stereo mini-jack,
maximum output level
5 mW + 5 mW load impedance 16 ohms

Power requirements
Nickel metal hydride rechargeable battery
One NH-14WM(A) (supplied): 1.2V, 1,350 mAh
One LR6 (size AA) battery (not supplied)
External power jack (for the battery charging
stand): Power rating 3V DC

Battery operation time
See "When to replace or recharge the battery"

Dimensions
Approx. 71.9 x 78.0 x 13.9 mm (w/h/d)
(2 $^7/_8$ x 3 $^1/_8$ x $^9/_{16}$ in.)
(not including projecting parts and controls)

Mass Approx. 69 g (2.5 oz) (the player only)
Supplied accessories
Headphones/earphones with a remote control (1)
Battery charging stand (1)
AC power adaptor* (for the supplied battery
charging stand)
Rechargeable battery (1)
Rechargeable battery carrying case (1)
Dry battery case (1)
Carrying pouch (1)
AC plug adaptor (1) (world model only)

Design and specifications are subject to change without notice.

PORTABLE MINIDISC PLAYER

SONY

MZ-E707
Ver 1.1 2001.12

TABLE OF CONTENTS

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

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

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

SAFETY-RELATED COMPONENT WARNING!!

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

* Replacement of CXD2671B-206GA (IC601) used in this set requires a special tool.

• **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.)

  LF : **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.

MAIN BOARD SUB ASSY
• Audio board is supplied with main board sub ASSY.
• Audio board can not be moved away from main bord.Give a damage when take it off forcibly.
• The part that audio board overlap with main board can not be repaired.

SECTION 1
SERVICING NOTE

When repairing this device with the power on, if you remove the main board, this device stops working.
In this case, you work without the device stopping by fastening the hook of the Open/Close detection switch (S809).

Open/Close detection switch (S809)

MZ-E707

This section is extracted from instruction manual.

The Player
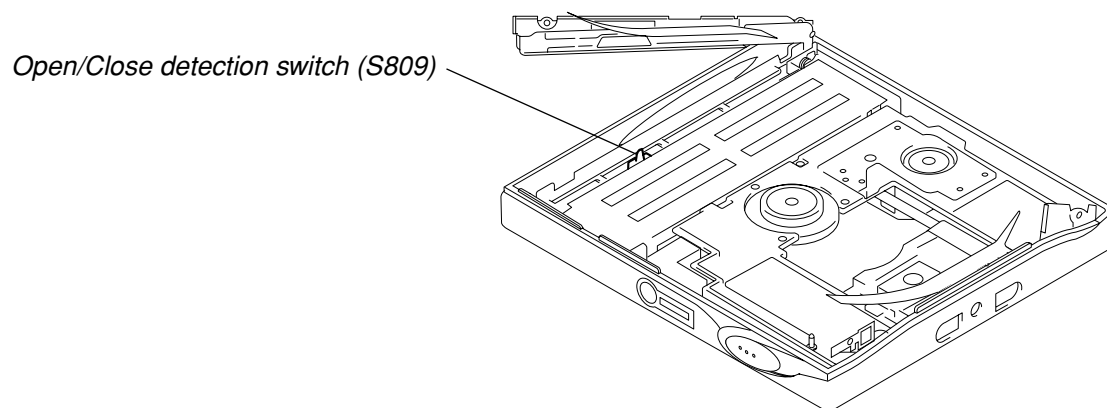
The Player controls
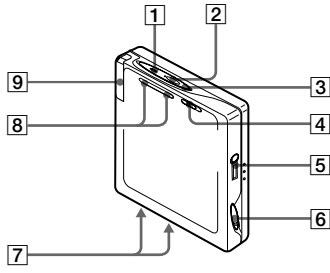
1. ⏮/■/⏭ ► button
2. 3 Color Info-LED
3. GROUP button
4. HOLD (Locking the control) switch
5. ⌒ (earphones) jack
6. OPEN switch
7. Terminals for charging stand/ dry battery case (at the bottom)
8. VOL +/− button
9. Battery compartment

The earphones with a remote control
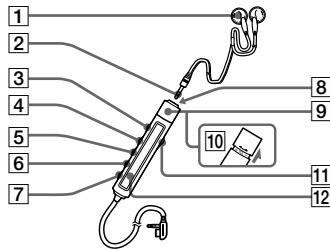
1. Headphones/earphones
2. Stereo mini plug
3. ⏸ (pause) button
4. SOUND button
5. RPT/ENT (Repeat/Enter) button
6. PLAYMODE button
7. DISPLAY button
8. ■ (stop) button*
9. Control (⏮/►⏭)
10. Control VOL +/−
    Pull and turn to adjust the volume.
11. HOLD (Locking the control) switch
12. Display window

* The stop button also operates as the enter button, depending on the function.

The display window of the remote control

1. Track number display
2. Charactor information display
3. Disc indication
4. Alarm indication
5. Play mode indication
6. Battery level indication
7. SOUND indication

The battery charging stand

1. Terminals for charging
2. CHARGE lamp
3. DC IN (3V jack) (at the rear)

Playing an MD

1 Insert an MD.

① Slide OPEN to open the lid.   ② Insert an MD.   ③ Close the lid.

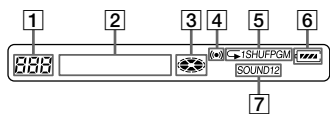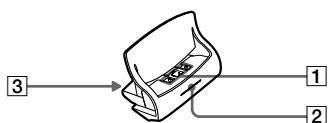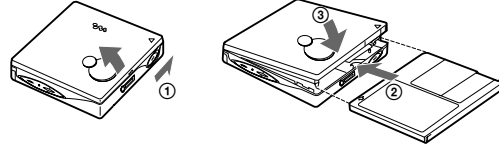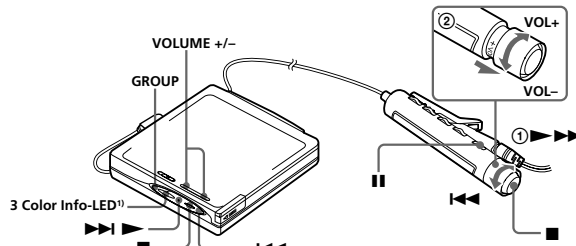**Insert an MD with the lable side facing up, pushing the MD to the direction of the arrow in the illustration.**

2 Play an MD.

① **Turn the control towards ►►⏭ on the remote control (or press ⏭ ► on the player) to play the disc.**
A short beep sounds in the headphones/earphones when using the remote control. The LED flashes and then lights up.

② **Pull and turn VOL +/− on the remote control (or press VOLUME +/− on the player) to adjust the volume.**
The volume indicator appears in the display, allowing you to check the volume level. After you adjust the volume, push back the control.

To stop play, press ■.
Playback starts from the point you last stopped playing. To start playback from the beginning of the disc, turn and hold the control towards ►►⏭ on the remote control (or hold down ⏭ ► on the player) for 2 seconds or more.

1) The LED indicates the current operating status by the lighting up in the following colors. When the battery power is exhausted, the LED starts flashing. For more details, see "When to replace or recharge the battery."

LED color	Operating status
Red	Normal play (The LED lights up continuously)
Green	Group mode* (The LED lights up continuously)
Orange	Group skip mode* (The LED lights for about 5 seconds)

*For more details, see "Using the group function."

To	Do this (Beeps[2] in the headphones)
Find the beginning of the current track or the previous track[3]	Turn the control towards ⏮ on the remote control once (three short beeps). (Or press ⏮ on the player once.) Turn the control towards ⏮ on the remote control repeatedly (continuous three short beeps). (Or press ⏮ on the player repeatedly.)
Find the beginning of the next track[4]	Turn the control towards ►►⏭ on the remote control (two short beeps). Press ⏭ ► on the player once.
Go backwards while playing	Turn and hold the control towards ⏮ on the remote control. Hold down ⏮ on the player.
Go forward while playing	Turn and hold the control towards ►►⏭ on the remote control. Hold down ⏭ ► on the player.
Pause	Press ⏸ on the remote control (continuous short beeps). Press ⏸ on the remote control again to resume play.
Remove the MD	Press ■, and then slide OPEN.[5]

2) You can turn off the beep sound. For more details, see "Turning off the beep sound."
3) If you turn the control towards ⏮ on the remote control (or press ⏮ on the player) during the first track of the disc, the player goes to the beginning of the last track on the disc.
4) If you turn the control towards ►►⏭ on the remote control (or press ⏭ ► on the player) during the last track of the disc, the player goes to the beginning of the first track on the disc.
5) If you open the lid, the playback will begin from the beginning of the first track (except when disc information is stored to the personal disc memory or when group mode is on).

🔆
The MZ-E707 supports the newly developed DSP TYPE-R for ATRAC.
It thus allows you to enjoy TYPE-R high-quality sound from MDs recorded in SP stereo on TYPE-R-equipped MD decks, etc.

Note
When removing the disc, make sure to press ■ first, and then slide OPEN.

Viewing the display window of the remote control

Track number   Track name[6] or elapsed time of the track

6) Appears only with MDs that have been electronically labeled.

🔆
• The player can play the track recorded by 2× or 4× long playing mode (LP2 or LP4). Normal stereo playback, LP2 stereo playback, LP4 stereo playback or monaural playback is automatically selected to match the audio source.
• The display on the remote control will turn off shortly after you press ■.

SECTION 3
DISASSEMBLY

ꞓ The equipment can be removed using the following procedure.

Set ➡ Upper lid ASSY ➡ Mechsnism ASSY ➡ Bracket (R) ASSY ➡ Main board Sub ASSY SW board

Optical pick-up ASSY

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

3-1. UPPER LID ASSY

❶ Screws (M1.4)

Upper lid ASSY

❶ Screws (M1.4)

❷

Bracket (bottom) ASSY

3-2. MECHANISM ASSY

❸ Screw (step)

❹

Mechanism deck

❶ Move claw from bracket (stop) ASSY

❺

❾ Motor flexible board (CN551)

❽ OP flexible board (CN501)

❷

Bracket (R) ASSY

❼

Panel, bottom

❻ Claw

Bracket (stop) ASSY

5

3-3. BRACKET (R) ASSY

❶ Screw, (M1.4)

❶ Screw, (M1.4)

Bracket (R) ASSY

Bracket (bottom) ASSY

❷

Panel, bottom

3-4. MAIN BOARD SUB ASSY, SW BOARD

Belt, ornamental

❺

SW board

❾

❸ Claw

❹ Lid, battery case

❷

Case (K), battery

❶ Screws (M1.4)

❽

Main board

Bracket (bottom) ASSY

❼ Remove solder
(Two places)

(Audio board)

Knob (HOLD)

❻

❶ Screws (M1.4)

Panel, bottom

❶ Screws (M1.4)

❶ Screws (M1.4)

Note : On installation, adjust the position of
knob (HOLD).

MAIN BOARD SUB ASSY
• Audio board is supplied with main board
sub ASSY.
• Audio board can not be moved away from
main bord.
Give a damage when take it off forcibly.
• The part that audio board overlap with
main board can not be repaired.

3-5. OPTICAL PICK-UP ASSY

Optical pick-up ASSY
(LCX-4E)

❶ Washer

❷ Gear (SA)

❸ Screw (MI 1.4)

❹ Spring, thrust detent

❺

SECTION 4
TEST MODE

4-1. GENERAL

- When entered in the TEST MODE, this set provides the Overall Adjustment mode which allows CD and MO discs to be automatically adjusted. In the Overall Adjustment mode, the system discriminates between CD and MO discs, performs adjustments in sequence automatically, and displays the faulty location if any fault is found. In the Manual mode, selected adjustments can be performed automatically.
- The attached remote control is used to operate the TEST MODE. Unless otherwise specified in the text, the key means that on the remote control.

4-2. SETTING THE TEST MODE
4-2-1. How to set the TEST MODE
To set the TEST MODE, two methods are available.
① Solder bridge and short TAP601 (TEST) on the main board. Then turn on the power.

MAIN BOARD (SIDE A)

② In the normal mode, operate the keys on the set and those on the remote control as specified below:
Turn on HOLD switch on the set. Holding down ■ (STOP) key on the set, press the keys on the remote control in the following sequence:

4-2-2. Operations when the TEST MODE is set
When the TEST MODE is entered, the system switches to the display check mode within the TEST MODE. From this mode, the other Test modes can be accessed.
When the TEST MODE is set, the LCD repeats a cycle of the following displays:

Remote control LCD

- Press and hold down ❚❚ to hold the current display while the key is being pressed.

4-2-3. How to release the TEST MODE
When method ① was used:
Turn off the power and open the solder bridge on TAP601 on the main board.
Note: The solder should be removed clean. The remaining solder may make a short with the chassis and other part.
When method ② was used:
Turn off the power.
Note: If electrical adjustment (see page 11) has not been finished completely, always start in the test mode. (The set cannot start in normal mode)

4-3. TEST MODE STRUCTURE

4-4. MANUAL MODE

4-4-1. Outline of the function

The Manual mode is designed to perform adjustments and operational checks on the set's operation according to each individual function.

Usually, no adjustments are made in this mode.

However, the Manual mode is used to clear the memory before performing automatic adjustments in the Overall Adjustment mode.

4-4-2. How to set the Manual mode

1. Set the TEST MODE and press + key to set the Manual mode.

   Remote control LCD display

   ```
   000 Manual
   ```

2. During each test, press and hold down ▶▶▌ ▶ key or ▐◀◀ key for a while to move the optical pickup on the sled outer or inner perimeter.

3. Each test item is assigned with a three-digit item number. The 100th place is a major item, 10th place is a middle item, and unit place is a minor item.

4. During each test mode, the display is changed from one to another each time DISPLAY key is pressed.

• Address & Adjusted Value Display
  LCD display
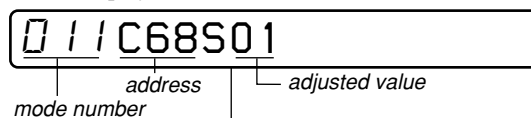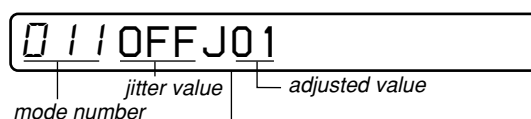
  ```
  011C68S01
  ```
  mode number — address — adjusted value

• Jitter Value & Adjusted Value Display
  LCD display

  ```
  011OFFJ01
  ```
  mode number — jitter value — adjusted value

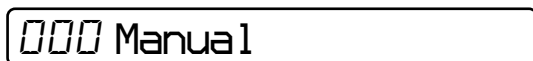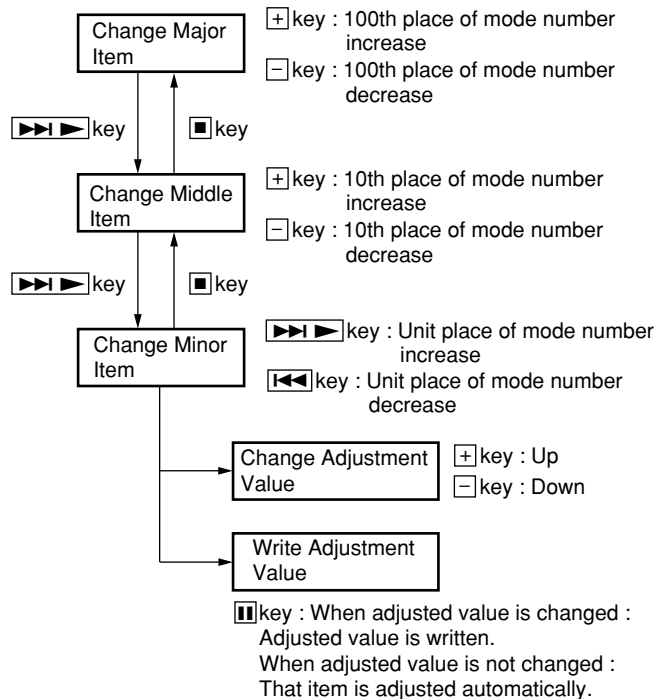• Block Error Value & Adjusted Value Display
  LCD display

  ```
  011063B01
  ```
  mode number — block error value — adjusted value

• ADIP Error Value & Adjusted Value Display
  LCD display

  ```
  011059A01
  ```
  mode number — ADIP error value — adjusted value
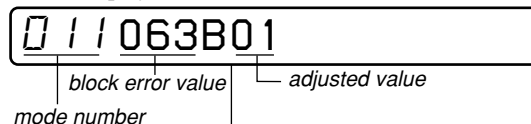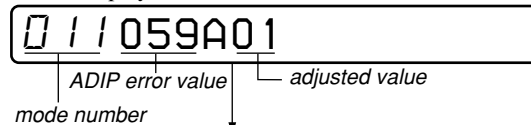
• Item Title Display
  LCD display

  ```
  011LrefPw 01
  ```
  mode number — item title — adjusted value
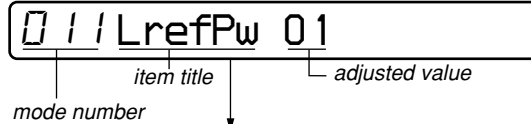
Note: In the Power mode, the item title display is only displayed.

5. To terminate the Manual mode and return to the TEST MODE, press ■ key.

4-5. OVERALL ADJUSTMENT MODE

4-5-1. Outline of the function

This mode is designed to adjust the servo system automatically by going through all the adjustment items.

Usually, this mode is used to perform automatic adjustments when servicing the set.

For further information, refer to section 5. ELECTRICAL ADJUST-MENTS. (See page 12)

4-6. SELF-DIAGNOSTIC DISPLAY MODE

4-6-1. Outline of the function

The Self-diagnostic system is used in this set. If an error occurs during playback, this system detects the fault through the microprocessor's mechanism and power control blocks and stores the cause in EEPROM in a history format.

This history, which can be viewed in the TEST MODE, provides the means of locating the fault in troubleshooting.

4-6-2. Self-diagnostic mode

1. Set the TEST MODE.
2. With all the LCD display segments blinking on the set, press DISPLAY key and ▶▶I▶ key, the Self-diagnostic mode is entered.

```
□□11 Adrs
```

History code — Simplified contents
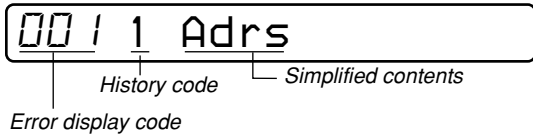
Error display code

3. Hereinafter, each time ▶▶I▶ key is pressed, the reference information display changes as follows:

```
□XX 1   # # # #
        ↓
□XX N   # # # #
        ↓
□XX N1  # # # #
        ↓
□XX N2  # # # #
        ↓
□XX R   - - - -
```
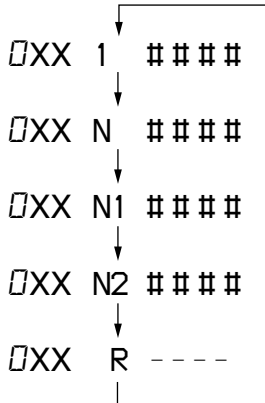
• Press I◀◀ key to go back to the previous display.

• Contents of the history codes

History code number	Contents
1	The first error that occurred.
N	The last error that occurred.
N-1	The first error from the last one.
N-2	The second error from the last one.
R	Total recording time (− − − − is displayed for MZ-E707)

• Description of the error display codes

Contents of fault	Display code	Meaning of code	Simplified contents	Description
No error	00	No error	− − − −	No error
Servo system error	01	Access target address illegally specified	Adrs	An attempt to access an abnormal address.
	02	HIGH TEMP	Temp	HIGH TEMP
	03	FOCUS ERROR	Fcus	Focus off-center.
	04	SPINDLE ERROR	Spdl	Abnormal rotation of disc
TOC error	11	TOC ERROR	TOC	
	12	READ DATA ERROR	Data	
Power system error	22	LOWBATT	LBat	Instantaneous interruption detected.
Offset error	31	OFFSET ERROR	Ofst	Offset error
	32	FE_ABCD_OFFSET_ERR	ABCD	FE ABCD Offset error
	33	TE_ABCD_OFFSET_ERR	TE	TE ABCD Offset error
	34	X1_TE_OFFSET_ERR	X1TE	X1 TE ABCD Offset error

4-6-3. Clearing the error display code

After servicing, reset the error display code.

1. Set the TEST MODE.
2. Press the DISPLAY key on the remote control activates the self-diagnosis display mode.
3. To reset the error display code press II key on the remote control when the code is displayed.(except for R - - - - display)
   (All the data on the 1st, N, N-1 and N-2 will be reset)
4. Press II key on the remote control again.

4-7. SOUND SKIP CHECK RESULT DISPLAY MODE
This set can display and check the error count occurring during play.
• Setting method of Sound Skip Check Result Display Mode
1. Setting the test mode.
2. Press the ▶▶I ▶ key activates the sound skip check result display mode where the LCD displays as shown below.
LCD display

```
000 P**P##
```
          └── Total of play system error count
        └── Total of record system error count

3. When ▶▶I ▶ key is pressed, the total of error count is displayed on the LCD, and each time the ▶▶I ▶ key is pressed, the error count descents one by one as shown below. Also, when I◀◀ key is pressed, the error count ascends by one.

```
000 P**R00
000 EIB **
000 Stat**
000 Adrs**
000 BEmp**
000 ######
```

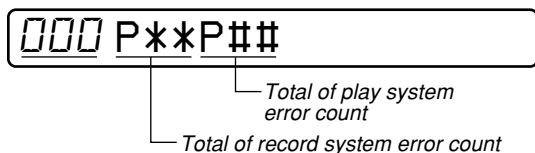P**R00 : Total of play system error and record system error count
** : Sound skip check items counter (hexadecimal)
: 6-digit address (hexadecimal) where a sound skipped

Error code

	Cause of error	Description of error
Playback	EIB	Sound error correction error
	Stat	Decorder status error
	Adrs	Cannot access the address
	BEmp	Buffer becomes empty

4. Quit the sound skip check result display mode, and press the ■ key to return to the test mode. (display check mode)

4-8. KEY CHECK MODE

4-8-1. Outline of the function
This mode is used to check to make sure that each of the keys (including the slide switch) on the set operates normally.

4-8-2. Setting the Key Check mode
1. Set the TEST MODE. Press and hold down DISPLAY key (for more than 3 sec) to set the Key Check mode.

LCD display
```
000
```
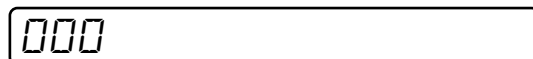
2. When each key on the set and on remote control is pressed, its name is displayed on the LCD. (The operated position is displayed for 4 sec after the slide switch is operated. If any other key is pressed during this display, the LCD switches to its name display)

Example: When ▶▶I ▶ key on the set is pressed:
LCD display
```
000  FF
```
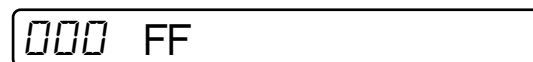
Example: When ▶▶I ▶ key on the remote control is pressed:
LCD display
```
000  rPLAY
```
XX: AD value of the remote control key (hexadecimal 00 to FF)
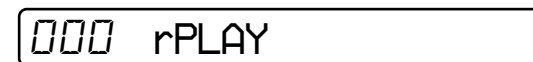
3. When all the keys on the set and on the remote control are considered as OK, the following displays are shown for 2 sec. (The key pressed to enter the Key Check mode has been checked even if it is not pressed in this mode)

Example: When the keys on the set are considered as OK:
LCD display
```
888  SET OK OF ✿
```

Example: When the keys on the remote control are considered as OK:
LCD display
```
888  RMC OK OX ⬭
```
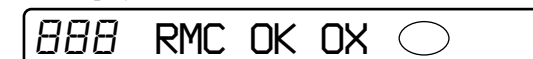
4. When all the key have been checked or when the top panel is opened during this checking, the system terminates the Key Check mode and return to the TEST MODE.

SECTION 5
ELECTRICAL ADJUSTMENTS

5-1. GENERAL

In this set, CD and MO discs can be automatically adjusted by set-
ting the Overall Adjustment mode within the TEST MODE,
Before performing these automatic adjustments, it is necessary to
clear the memory and adjust the power in the Manual mode.

5-2. NOTES FOR ADJUSTMENT

5-2-1. Jigs
• CD disc   TDYS-1 (part code: 4-963-646-01)
• MO disc   PTDM-1 (part code: J-2501-054-A)
              or commercially available MO disc (recorded)
• Digital voltmeter

5-2-2. Adjustment sequence
The adjustments should be always performed in the following
sequence:

① Reset NV (Clear the memory)
  ↓   } Manual mode
② Manual power adjustments

③ Electrical offset adjustments
   (Do not enter the disc)

④ Overall CD adjustments
  ↓
⑤ Overall MO adjustments   } Overall adjustment mode
  ↓
⑥ RESUME clear
  ↓
⑦ Rewrite the NV value
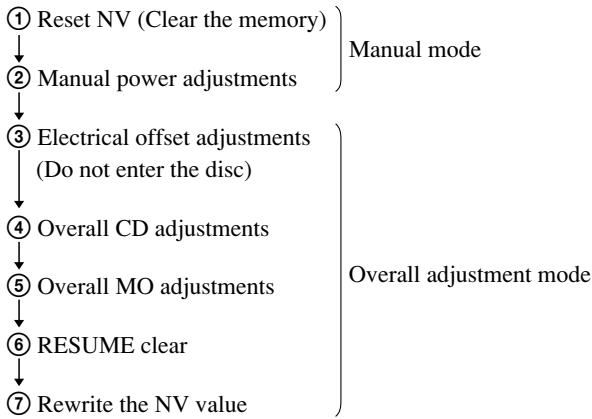
5-2-3. Power
The power is supplied with 1.5 V DC from the battery case.

5-3. RESET NV

5-3-1. How to reset NV
1. Set the TEST MODE.

2. Set the Manual mode and set the item No. 021, Reset NV.
   LCD display

   ```
   021 Res NV CC
   ```

3. Press ⏸ key on the remote control.

   LCD display

   ```
   021 Res OK?
   ```

4. Press ⏸ key on the remote control again.

   LCD display

   ```
   021 Res ***
   ```
   ↓
   After reset is completed.

   ```
   021 Reset!
   ```

5. Press ■ key to terminate the Manual mode and return to the
   TEST MODE.

5-4. MANUAL POWER ADJUSTMENTS

5-4-1. Adjustment sequence
The adjustments should be always performed in the following se-
quence:

① Vc PWM Duty (L) adjustment (item No.:762)
  ↓
② Vl PWM Duty adjustment (item No.:764)
  ↓
③ Vd PWM Duty adjustment (item No.:765)

5-4-2. Vc PWM Duty (L) adjustment method
1. Confirm that the power voltage is at 1.5 V DC.

2. Set the TEST MODE.

3. Set the overall adjustment mode and press PLAY MODE key,
   item No. will change to 762.

   LCD display

   ```
   762 Vc1PWM XX
   ```

4. Connect a digital voltmeter to TP901 (VC) on the main board
   and adjust + key (voltage up) and − key (voltage down) on
   the remote control.
Adjustment value:2.35V
Standard value:2.34 to 2.355V

MAIN BOARD (SIDE A)
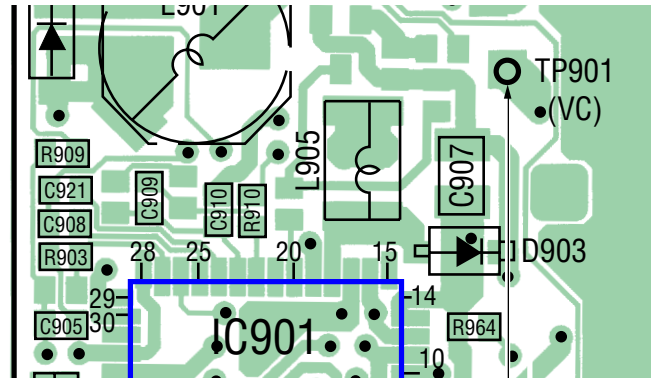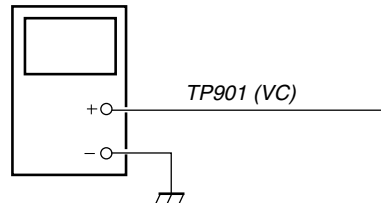
5. Press ⏸ key to write the adjustment value.

5-4-3. VI PWM Duty adjustment method

1. Set the Manual mode and set the item No. to 764.

   LCD display

   `764 V1PWM XX`
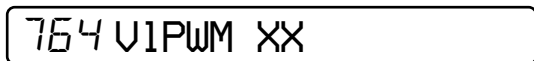
2. Connect a digital voltmeter to TP917 (VL) on the main board and adjust + key (Voltage up) and – key (Voltage down) on the remote control.
   Adjustment value:2.23V
   Standard value:2.22 to 2.235V

digital voltmeter　　**MAIN BOARD** (SIDE A)
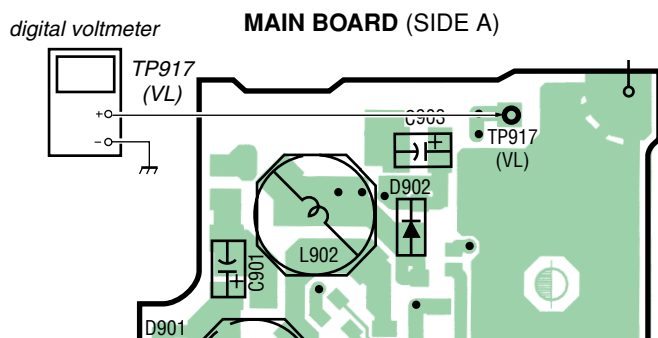
3. Press ▮▮ key to write the adjustment value.

5-4-4.Electrical offset adjustment method

Note: Doing adjustment by the state that a disc does not enter.
1. Confirm the power voltage is 1.5V.
2. Set to the test mode.
3. Press the – key activates the overall adjustment mode.
   LCD display

   `000 Assy11`
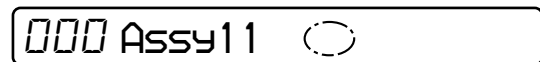
4. Press the DISPLAY key.
   LCD display

   `030 Ofst**`
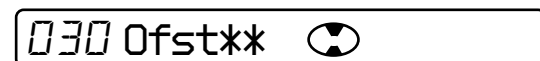
5. If result of electrical offset adjustment is OK,the following display appears.
   LCD display

   `030 OfstOK`

5-5. OVERALL ADJUSTMENT MODE

5-5-1. Overall adjustment mode structure
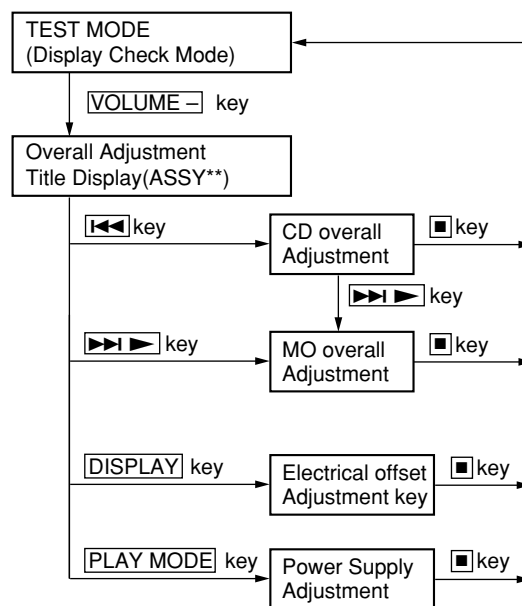
Note: The overall adjustments should be always performed in the sequence of CD → MO adjustments.

5-5-2. Overall CD and MO adjustment method

1. Set the TEST MODE and press – key to set the Overall Adjustment mode.

   LCD display

   `000 Assy11`
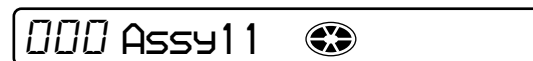
2. Insert CD disc in the set, and press ▮◀◀ key to set the Overall CD Adjustment mode.
   Automatic adjustments are made.

   LCD display

   `XXX CD RUN`
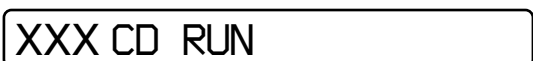
   XXX: Item No. for which an adjustment is being executed.

3. If NG in the overall CD adjustments, return to Reset NV and perform from the electrical offset adjustment again.

LCD display

```
XXX NG
```

XXX: NG item No.

4. If OK through the overall CD adjustments, then perform overall MO adjustments.

LCD display

```
XXX CD OK
```

5. Insert MO disc in the set, and press ▶▶| ▶ key to set the Overall MO Adjustment mode. Automatic adjustments are made.

LCD display

```
XXX MO RUN
```

XXX: Item No. for which an adjustment is being executed.

6. If NG in the overall MO adjustments, return to Reset NV and perform the adjustment again.

LCD display

```
☐☐☐ XXX NG
```

XXX: NG item No.

7. If OK through the overall MO adjustments, press ■ key to return to the TEST MODE and terminate the Overall Adjustment mode.

LCD display

```
☐☐☐ MO OK
```
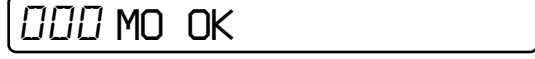
5-5-3.Resume clear method
1. Setting the testmode.
2. Set the Manual mode and set the item No.043(RESUME Clear).
LCD display

```
☐ЧӠ Resume CC
```

3. Press the ❙❙ key.
LCD display

```
☐ЧӠ Res ***
```

After reset is completed

LCD display

```
☐ЧӠ Res Clr
```
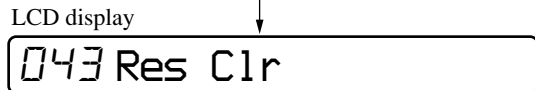
5-5-4. Rewrite the NV value
After resume clear, rewrite the NV value.
Microprocessor version 1.0 to 2.0 : Step 1 and 2.
Microprocessor version 2.1 and later : Step 1 only

Step	Item NO.	NV value
1	861	0F (h)
	862	0B (h)
2	863	87 (h)
	864	75 (h)

5-5-5. Overall CD and MO adjustment items
1. Overall offset adjustment

Item No.	Contents
030	GRV setting • Sarvo OFF • Head UP
035	Laser ON/OFF electrical offset difference measurement
Completed	

2. Overall CD adjustment items

Item No.	Contents
761	VC,VR power voltage High/Low selection
300	HPIT setting • Sarvo OFF
561	SLED move to inside
562	SLED move to outside
High reflection CD electrical offset adjustment	
312	Laser ON • Focus UP • VC correction ALFA offset adjustment
313	IJ offset adjustment
314	FE offset adjustment
HPIT adjustment	
320	Focus servo ON
324	TE offset adjustment 1
321	TE gain adjustment
328	TWPP gain adjustment
324	TE offset adjustment 1
332	TE offset adjustment 2
330	Tracking servo ON
336	ABCD gain adjustment
337	KF gain correction
338	RF gain adjustment
344	CD focus gain adjustment
345	CD tracking gain adjustment
521	CD two-axis sensitivity adjustment (inside)
522	CD two-axis sensitivity adjustment (outside)
341	CD focus bias adjustment
300	HPIT setting • servo OFF
completed	

3. Overall MO adjustment items

Item No.	Contents
761	VC,VR power voltage High/Low selection
100	G RV setting • Servo OFF
Low reflect MO offset adjustment	
112	Laser ON • Focus UP • EVC correction ALFA offset adjustment
113	IJ offset adjustment
114	FE offset adjustment
118	Wpp denominator adjustment
HPIT adjustmet	
200	LPIT setting • servo OFF
561	SLED move to inside
220	Focus servo ON
224	TE offset adjustment 1
221	TE gain adjustment
224	TE offset adjustment 1
232	TE offset adjustment 2

Item No.	Contents
230	Tracking servo ON
236	ABCD gain adjustment
237	KF gain adjustment
238	RF gain adjustment
244	FCS gain adjustment
245	TRK gain adjustment
READ GRV adjustment 1	
100	R GRV setting • Servo OFF
562	SLED move to outside
120	Focus servo OFF
122	TON offset adjustment
121	TE gain adjustment
122	TON offset adjustment
123	TEIN offset adjustment
124	TWPP offset adjustment
130	Tracking servo ON
131	TWPP offset adjustment
136	ABCD gain adjustment
137	KF gain adjustment
139	ADIP BPF fo adjustment
144	FCS gain adjustment
145	TRK gain adjustment
134	TWPP gain adjustment
131	TWPP offset adjustment 1
132	TWPP offset adjustment 2
149	TWPP OP offset adjustment
138	RF gain adjustment
100	R GRV setting • Servo OFF

SECTION 6
DIAGRAMS

6-1. EXPLANATION OF IC TERMINALS

• **MAIN BOARD   IC501   SN761057DBT (RF AMP, FOCUS/TRACKING ERROR AMP)**

Pin No.	Pin name	I/O	Description
1	TE	O	Tracking error signal output to IC601
2	REXT	I	Connected to the external resistor for the ADIP amplifier control
3	WPPLPF	I	Connected to the external capacitor for low-pass filter of the TPP/WPP
4	VREF11	O	Reference voltage output terminal (+1.1V)
5	C	I	Signal input from the optical pick-up detector (C)
6	D	I	Signal input from the optical pick-up detector (D)
7	D-C	I	Signal input from the optical pick-up detector (D) (AC input)
8	IY	I	I-V converted RF signal IY input from the optical pick-up block detector
9	IX	I	I-V converted RF signal IX input from the optical pick-up block detector
10	JX	I	I-V converted RF signal JX input from the optical pick-up block detector
11	JY	I	I-V converted RF signal JY input from the optical pick-up block detector
12	A	I	Signal input from the optical pick-up detector (A)
13	A-C	I	Signal input from the optical pick-up detector (A) (AC input)
14	B	I	Signal input from the optical pick-up detector (B)
15	TON-C	I	Connected to the external capacitor for the TON hold
16	CIG	I	Connected to the external capacitor for low-pass filter of the NPP divider denominator
17	CDN	I	Connected to the external capacitor for low-pass filter of the CSL divider denominator
18	PD-NI	I	Light amount monitor input terminal (non-invert input)
19	PD-I	I	Light amount monitor input terminal (invert input)
20	PD-O	O	Light amount monitor output terminal
21	ADFG	O	ADIP duplex FM signal (22.05 kHz ± 1 kHz) output to IC601
22	DVDD	—	Power supply terminal (+2.4V) (digital system)
23	SBUS	I/O	Two-way SSB serial data bus with the system controller (IC601)
24	SCK	I	SSB serial clock signal input from the system controller (IC601)
25	$\overline{\text{XRST}}$	I	Reset signal input from the system controller (IC601) "L": reset
26	OFTRK	I	Off track signal input from IC601
27	DGND	—	Ground terminal (digital system)
28	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to IC601
29	PEAK	O	Light amount signal (RF/ABCD) peak hold output to IC601
30	VREF075	—	Connected to the external capacitor for the internal reference voltage
31	VC	O	Middle point voltage (+1.2V) generation output terminal
32	CCSL2	—	Connected to the external capacitor for low-pass filter of the TPP/WPP
33	RF OUT	O	Playback EFM RF signal output to IC601
34	AGND	—	Ground terminal (analog system)
35	EQ	—	Connected to the external capacitor for the RF equalizer
36	LP	—	Connected to the external capacitor for the RF equalizer
37	PS	—	Connected to the external capacitor for the RF equalizer
38	OFC-2	—	Connected to the external capacitor for the RF AC coupling
39	OFC-1	—	Connected to the external capacitor for the RF AC coupling
40	AVCC	—	Power supply terminal (+2.4V) (analog system)
41	ABCD	O	Light amount signal (ABCD) output to IC601
42	FE	O	Focus error signal output to IC601
43	S-MON	O	Servo signal monitor output to the system controller (IC601)
44	ADIP-IN	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input terminal Not used

6-2. BLOCK DIAGRAMS
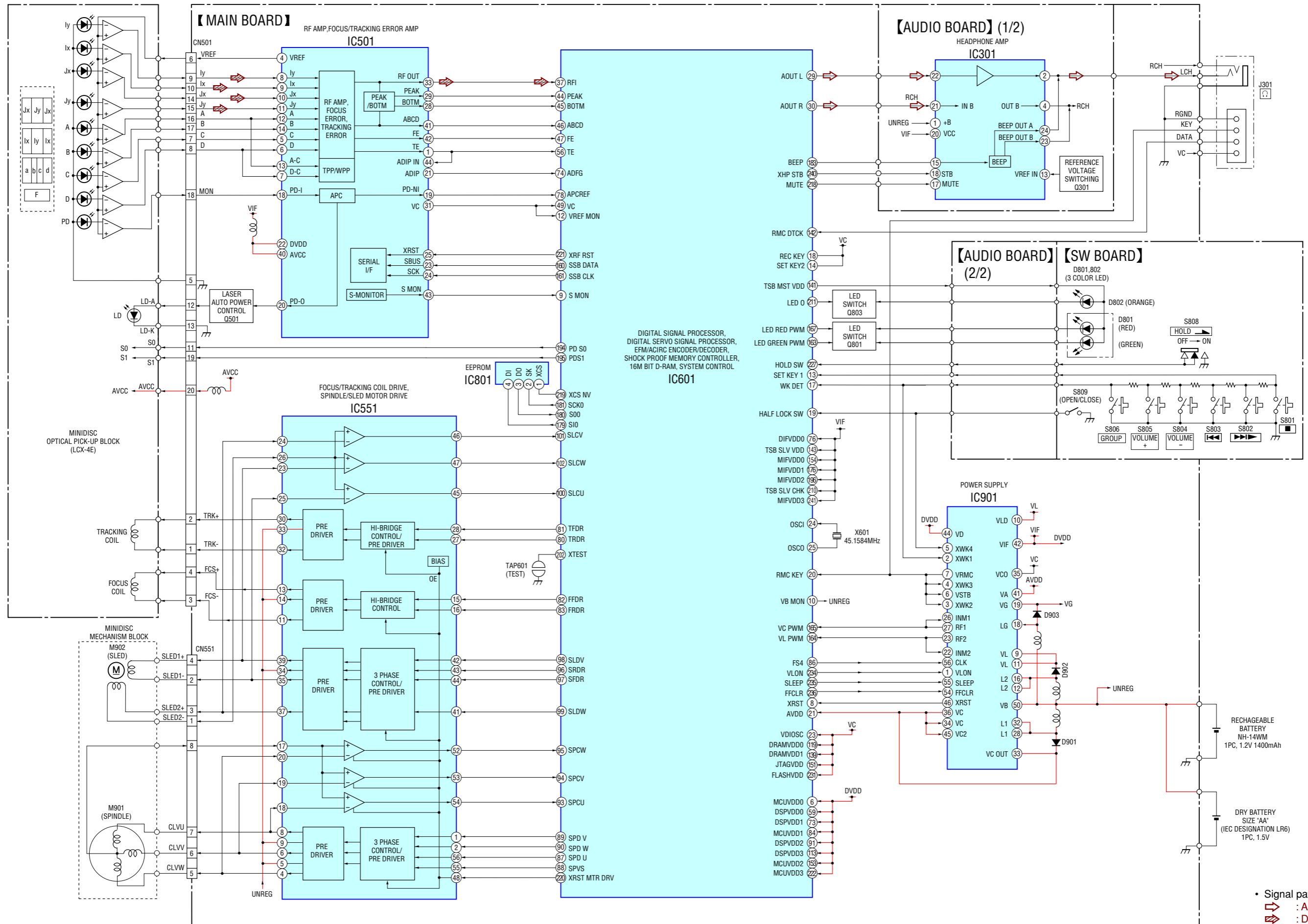
MZ-E707

【MAIN BOARD】(SIDE A)

DRY BATTERY
SIZE "AA"
(IEC DESIGNATION LR6)
1PC, 1.5V

TAP601
(SHORT: TEST MODE
OPEN: NORMAL MODE)

● Semiconductor
Location

Ref. No.	Location
D101	E-7
D201	F-8
D855	D-7
D901	B-2
D902	A-3
D903	C-3
IC501	E-5
IC551	E-6
IC601	B-7
IC801	D-7
IC901	C-2
Q501	D-5
Q801	E-7
Q803	D-8

OPTICAL PICK-UP
BLOCK
LCX-4E

M901
SPINDLE MOTOR

M902
SLED MOTOR

【MOTOR FLEXIBLE BOARD】

RECHAGEABLE
BATTERY
NH-14WM
1PC, 1.2V 1400mAh

AUDIO BOARD
CN802

J301

1-682-471-

11
(11)

18   18
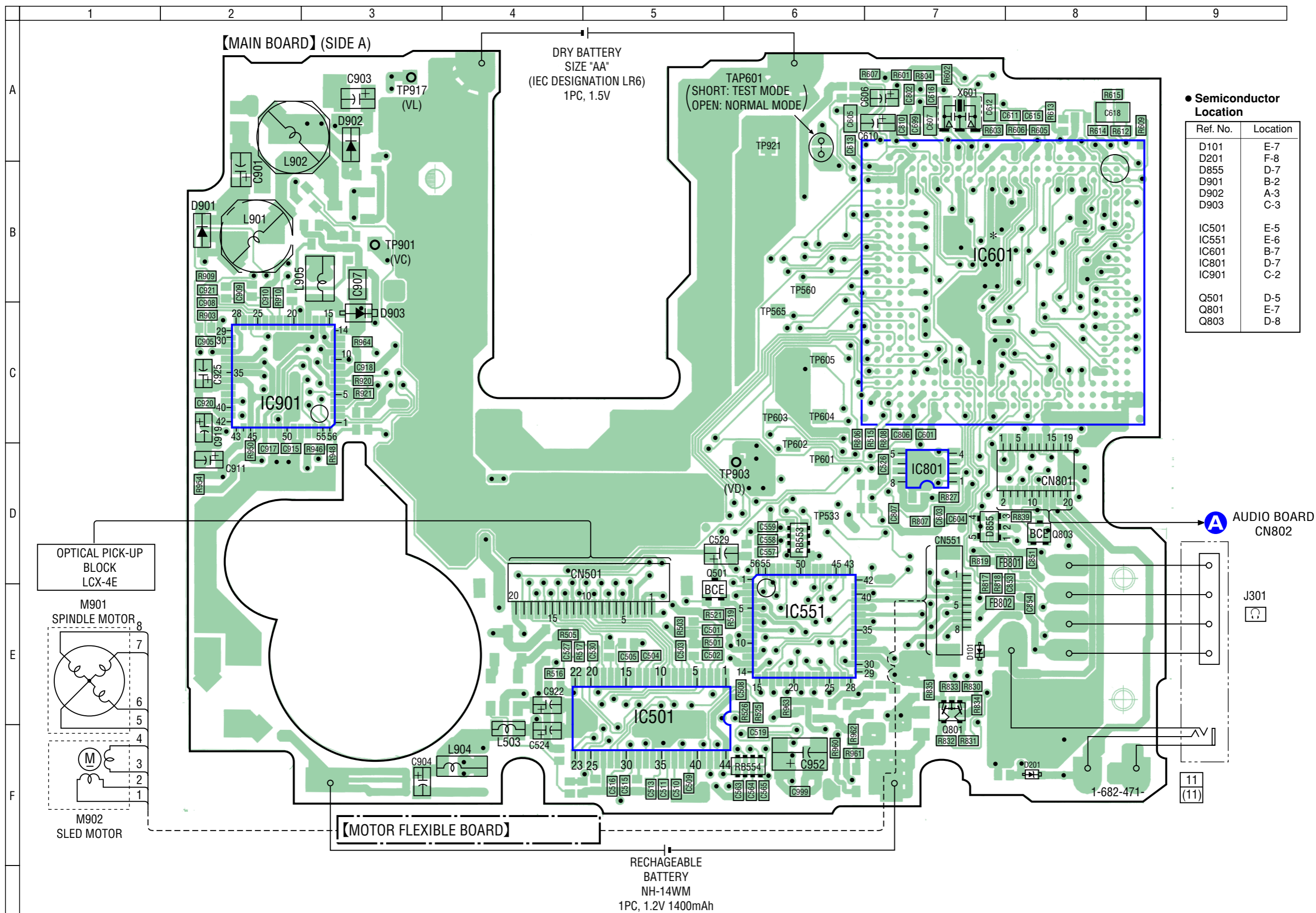
6-4. PRINTED WIRING BOARDS – MAIN SECTION (2/2) – 🔲 **: Uses unleaded solder.** ● **Refer to page 24 for Notes.**

【MAIN BOARD】(SIDE B)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

TP606
TP904
TP552
TP556 TP911
TP912
TP613
TP559 TP563 TP561
TP615 TP558
TP562 TP557 TP920
TP609
TP611 TP902
TP612 TP607 TP610 TP564
TP616
TP613
TP608
TP919
TP551 TP907

TP104
TP505 TP513 TP516
TP204 TP507 TP510
TP503 TP511 TP514 TP519
TP576 TP504 TP508
TP577 TP557 TP512 TP515 TP517
TP810 TP566 TP567 TP506 TP509
TP811 TP574
TP502
TP812 TP572 TAP501
TP573 TP501
TP813 TP570 TP571
TP529 TP521
TP526
TP103 TP524
TP532 TP523 TP530
TP302 TP203 TP952 TP525 TP527 TP528
TP591

11
(11)
1-682-471-

MZ-E707

[MAIN BOARD] (1/2)

IC B/D   IC501

OPTICAL
PICK-UP
BLOCK
LCX-4E

RF AMP FOCUS/TRACKING
ERROR AMP

IC501
SN761057DBT

IC801
AK6417AL
EEPROM

IC801
CXD2871-206GA

DIGITAL SIGNAL PROCESSOR,
DIGITAL SERVO SIGNAL PROCESSOR,
EFM/ACIRC ENCODER/DECODER,
SHOCK PROOF MEMORY CONTROLLER,
ATRAC ENCODER/DECODER,
D/A CONVERTER,16M BIT D-RAM
SYSTEM CONTROL

CSP(Chip Size Package)

Q801,03
LED DRIVE

AUDIO BOARD

MAIN BOARD
(2/2)

20   20

6-6. SCHEMATIzC DIAGRAM – MAIN SECTION (2/2) – ● Refer to page 24 for Notes.   ● Refer to page 24, 26 for IC Block Diagrams.
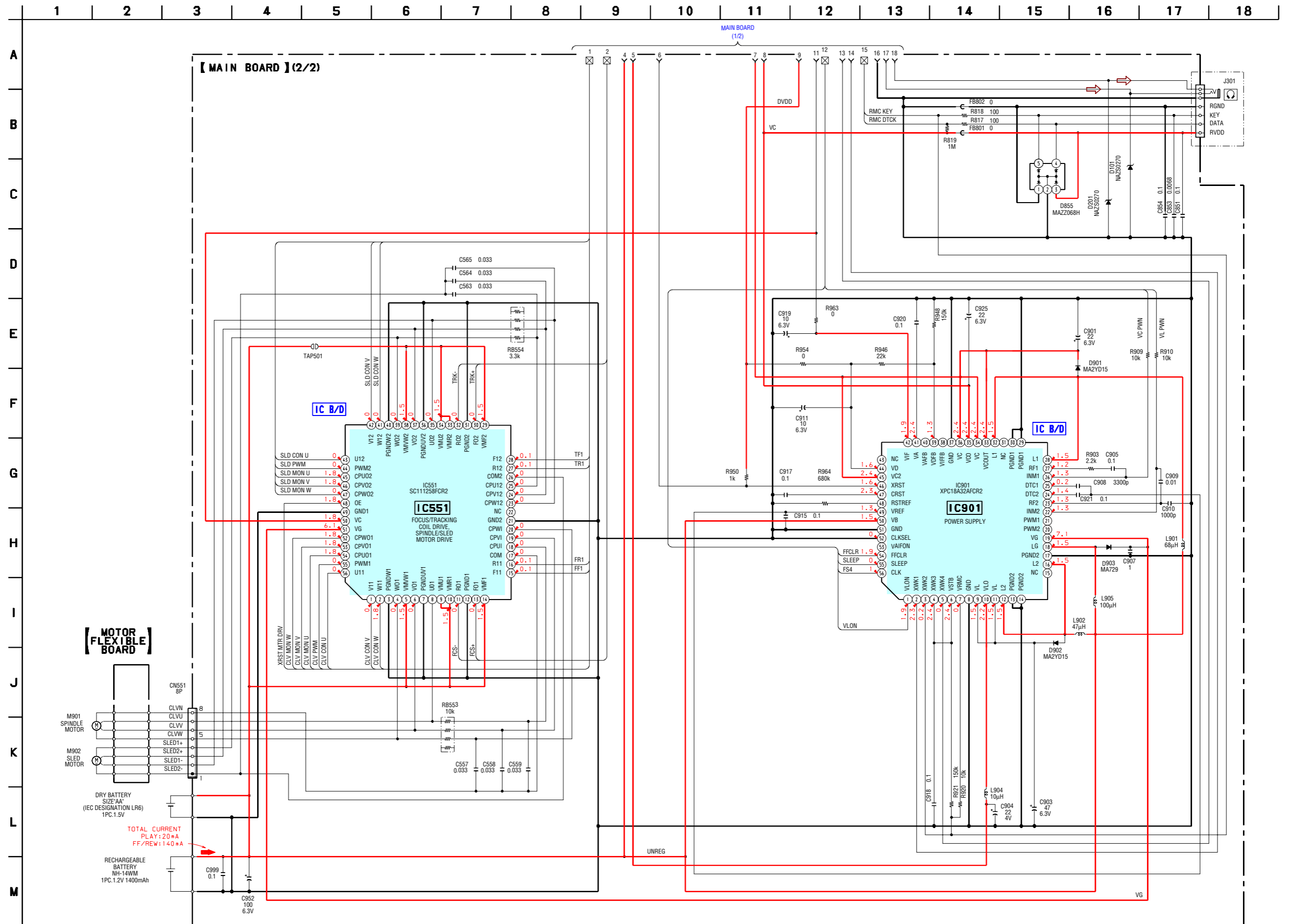
MZ-E707

⚡ : Uses unleaded solder.   ● Refer to page 24 for Notes.

【AUDIO BOARD】(SIDE A)

【AUDIO BOARD】(SIDE B)

MAIN BOARD
CN801

【SWITCH FLEXIBLE BOARD】 1-682-470- 11

【SW BOARD】(SIDE A)

S804
VOLUME−

S805
VOLUME+

S808
HOLD →
OFF→ON

S809
(OPEN/CLOSE)

D801,802
(3 COLOR LED)

【SW BOARD】(SIDE B)

(GREEN)
(RED)
(ORANGE)

D801

D802

S803
|◄◄

S801
■

S802
►►|►

S806
GROUP
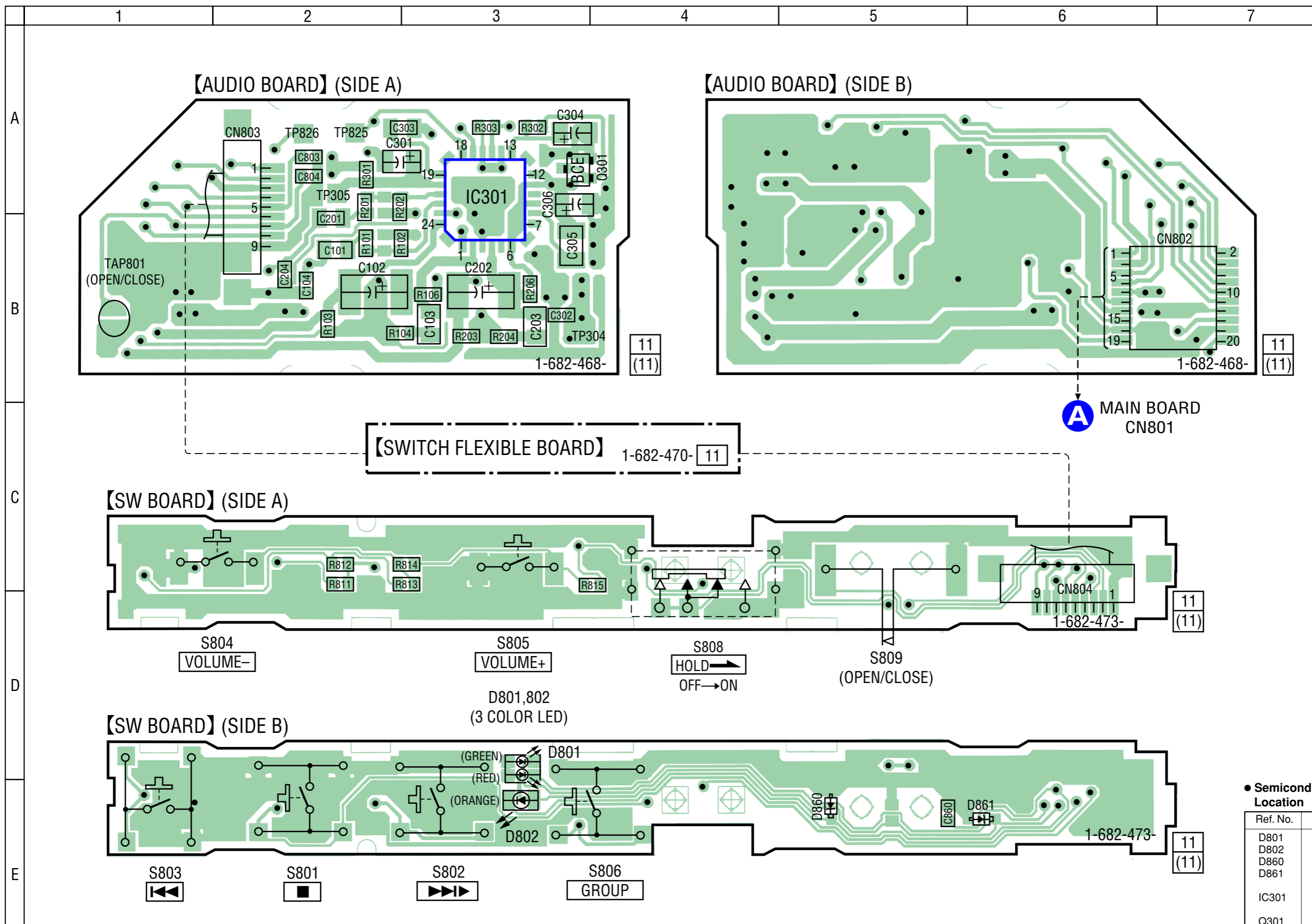
● Semiconductor
Location

Ref. No.	Location
D801	D-3
D802	E-3
D860	E-5
D861	E-6
IC301	A-3
Q301	A-3

6-8. SCHEMATIzC DIAGRAM – AUDIO SECTION – ● Refer to page 24 for Notes. ● Refer to page 25 for IC Block Diagrams.

【 AUDIO BOARD 】

CN802 20P

LED R	1
LED G	
VC	
LED O	5
SET KEY	
XWK1	
OPEN/CLOSE	
HOLD SW	
GND	
XHP STB	10
MUTE	
BEEP	
VIF	
UNREG	
R IN	15
L OUT	
AGND	
AGND	
L IN	
R OUT	20

MAIN BOARD CN801 — (A)

CN803 9P

9	LED R
	LED G
	VC
5	LED O
	SET KEY
	XWK1
	OPEN/CLOSE
	HOLD SW
1	GND

【 SWITCH FLEXIBLE BOARD 】

C803 470p
C804 0.01
TAP801 (OPEN/CLOSE)

C201 1 R201 33k R301 33
R202 33k
C301 10 6.3V
C101 1 R101 33k
C104 6800p C204 6800p R102 33k

IC B/D

C302 0.1
R104 10 C103 0.22
C102 220 2.5V
C303 1

IC301 TA2131FL
IC301
HEADPHONE AMP

Pin	Label
24	OTUA BEEP (0)
23	OTUB BEEP (0)
22	IN L (0.6)
21	IN R (0.6)
20	VCC (1.9)
19	ICMT (0)
1	+B (1.5)
2	OUT L (0.6)
3	PWR GND
4	OUT R (0.6)
5	DET
6	AGC IN (0.6)
7	BTS
8	NF2 (0.6)
9	LPF2 (0.6)
10	NF1
11	LPF1 (0.6)
12	VREF (0.6)
13	VREF IN (0.6)
14	GND
15	BEEP (0)
16	BST SW
17	MUTE (0)
18	STB (1.9)

R103 4.7k
R203 4.7k
C202 220 2.5V
R204 10 C203 0.22
R206 6.8k R106 6.8k
C305 2.2
C306 22 4V
R303 220k
C304 4.7 6.3V
R302 6.8k
Q301 2SC4738FL
REFERENCE VOLTAGE SWITCHING
(0.5)

【 SW BOARD 】

D801,802 (3 COLOR LED)
D802 TLQU1008 (ORANGE)
(RED)
(GREEN)
D801 KPTB-1612SURKMGKC
C860 0.1 D860 MAZS068008SO
D861 MAZS068008SO

CN804 9P

LED R	9
LED G	
VC	
LED O	5
SET KEY	
XWK1	
OPEN/CLOSE	
HOLD SW	
GND	1

R811 6.8k S801 ■
R812 10k S802 ▶▶ ▶
R813 15k S803 ◀◀
R814 33k S804 VOLUME-
R815 68k S805 VOLUME+
S806 GROUP

S809 (OPEN/CLOSE)
S808
HOLD
OFF → ON

Note on Printed Wiring Boards: MAIN SECTION

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

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

- Main boards is four-layer pritnted board.
  However, the patterns of layer 2 and 3 have not been included in this diagrams.
- Replacement of IC601 used in this set requires a special tool.

- Lead Layouts

surface

Lead layout of
conventional IC

CSP (chip size package)
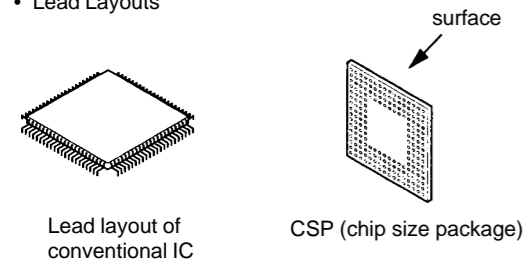
Note on Schematic Diagram: MAIN SECTION

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$ W or less unless otherwise specified.
- △ : internal component.

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

- ▬▬▬ : B+ Line.
- Power voltage is dc 1.5V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : Analog
  ⇨ : Digital

- Replacement of IC601 used in this set requires a special tool.
- The voltage and waveform of CSP (chip size package) cannot be measured, because its lead layout is different form that of conventional IC.

MAIN BOARD SUB ASSY

- Audio board is supplied with main board sub ASSY.
- Audio board can not be moved away from main bord. Give a damage when take it off forcibly.
- The part that audio board overlap with main board can not be repaired.

- **WAVEFORMS**

①

IC501 ① TE

*Approx.
12 mVp-p*

②

IC501 ㉝ (RF)

*Approx.
1.2 Vp-p*

③

IC501 ㊷ (FE)

*Approx.
10 mVp-p*

- **IC BLOCK DIAGRAMS**

IC901 XPC18A32FCR2

IC501 SN761057DBT

S-MONITOR block (IC501)

Left inputs: A+B+C+D, I+J, NPP, TON, CSL, Aw+Dw, TON Peak, TON Botm, ADIP, TE, TEMP

Right outputs: TWpp, PK/BTM, Aw, CSLO, VREF075, A-C, D-C, Malfa, Mij, AwBPF, Dw, DwBPF

Left pins:
- TE (1)
- REXT (2)
- Wpp-LPF (3)
- VREF (4)
- C (5)
- D (6)
- D-C (7)
- Iy (8)
- Ix (9)
- Jx (10)
- Jy (11)
- A (12)
- A-C (13)
- B (14)
- TON-C (15)
- CIG (16)
- CDN (17)
- PD-NI (18)
- PD-I (19)
- PD-O (20)
- ADFG (21)
- DVDD (22)

Right pins:
- (44) ADIP-IN
- (43) S-MON
- (42) FE
- (41) ABCD
- (40) AVCC
- (39) OFC-1
- (38) OFC-2
- (37) PS
- (36) LP
- (35) EQ
- (34) AGND
- (33) RF
- (32) CCSL2
- (31) VC
- (30) VREF075
- (29) PEAK
- (28) BOTM
- (27) DGND
- (26) OFTRK
- (25) XRST
- (24) SCK
- (23) SBUS

Internal blocks: TE, Tpp/Wpp, FE, ABCD, APC, ADIP, RF, PEAK/BOTM, T-ON, SERIAL I/F

IC301 TA2131FL(EL)

Top pins:
- STB (18)
- MUTE (17)
- BST SW (16)
- BEEP IN (15)
- GND (14)
- VREF IN (13)

Left pins:
- TC MT (19)
- VCC (20)
- INR (21)
- INL (22)
- BEEP OUTB (23)
- BEEP OUTA (24)

Right pins:
- VREF (12)
- LPF1 (11)
- BST NF1 (10)
- LPF2 (9)
- BST NF2 (8)
- BST OUT (7)

Bottom pins:
- +B (1)
- OUTL (2)
- PWR GND (3)
- OUTR (4)
- DET (5)
- AGC IN (6)

Internal blocks: PW SW, MT SW, BST SW, BEEP, V REF, ADD, BST1, BST2, PW A, PW B, BST AGC

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IC551 SC111258FCR2

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 are given in the last of this parts list.

MAIN BOARD SUB ASSY
- Audio board is supplied with main board sub ASSY.
- Audio board can not be moved away from main bord.
  Give a damage when take it off forcibly.

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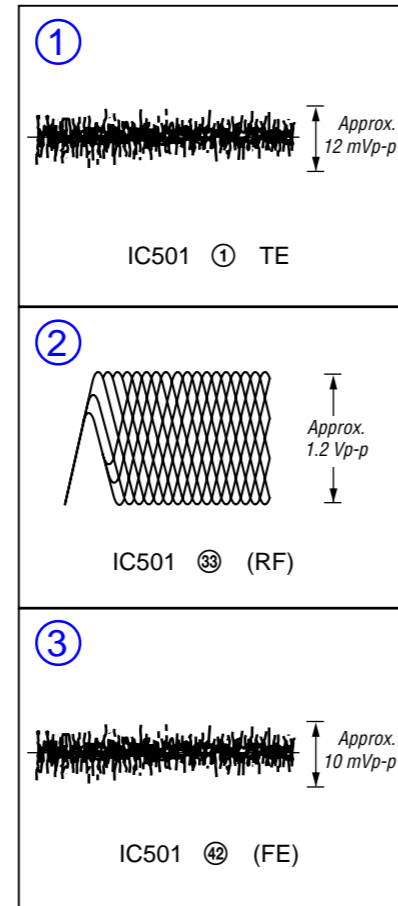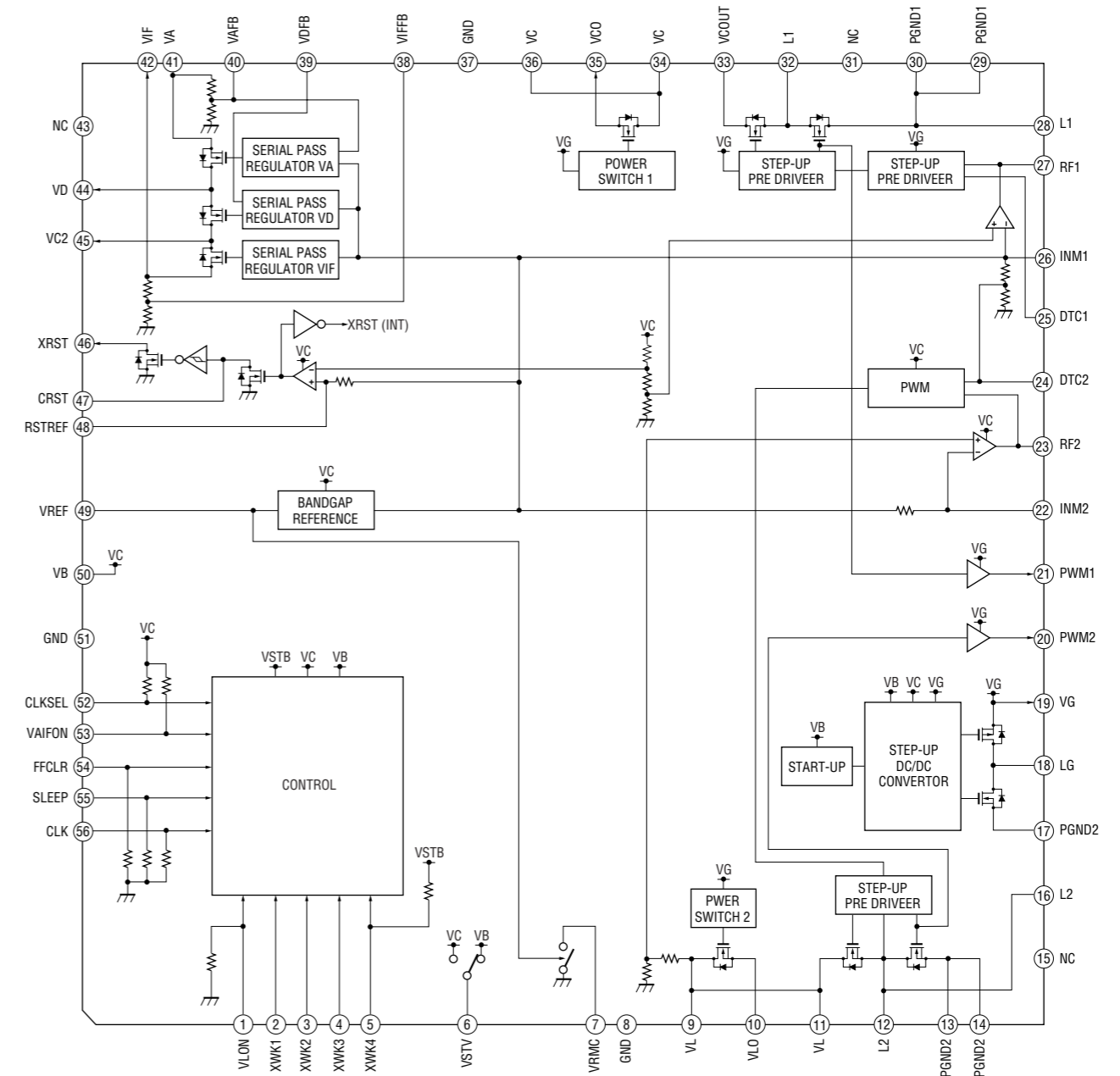> Replace only with part number specified.

7-1. MAIN SECTION

MT-MZE909-173

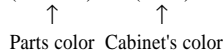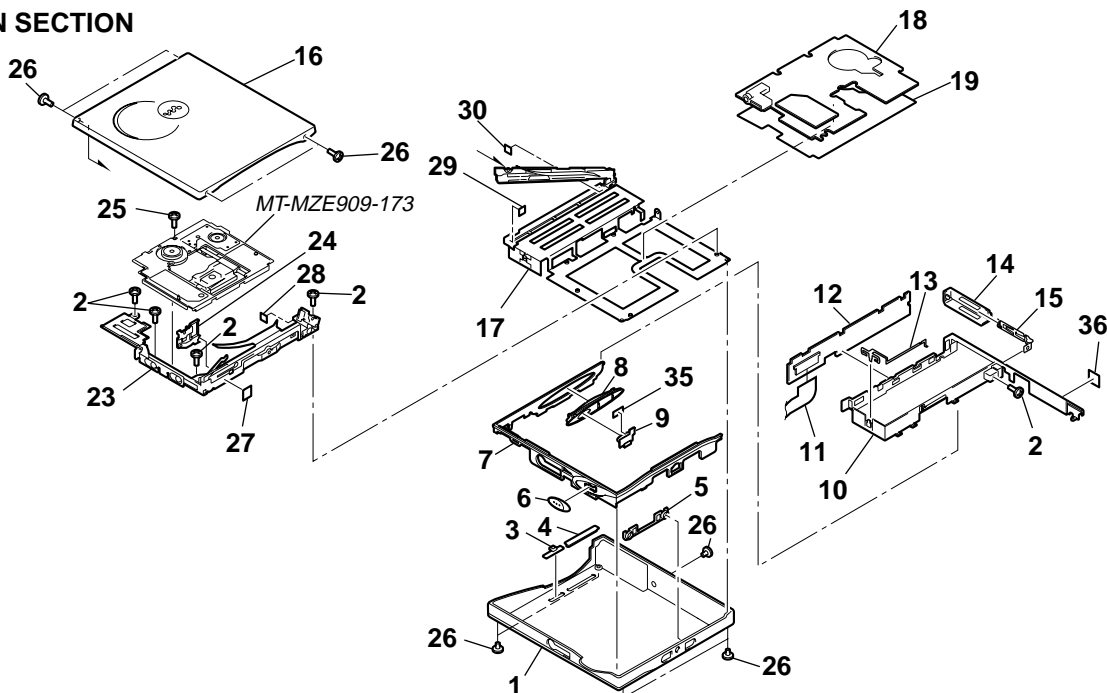| Ref. No.	Part No.	Description	Remark
1	3-234-174-01	PANEL, BOTTOM...(SILVER) (JEW)	
1	3-234-174-21	PANEL, BOTTOM...(ORANGE) (JEW)	
1	3-234-174-41	PANEL, BOTTOM...(SILVER) (HK)	
1	3-234-174-51	PANEL, BOTTOM...(BLUE) (HK)	
1	3-234-174-61	PANEL, BOTTOM...(ORANGE) (HK)	
1	3-234-174-71	PANEL, BOTTOM...(GREEN) (HK)	
2	3-232-536-02	SCREW (M1.4) (EG)	
3	3-222-249-41	KNOB (HOLD)...(SILVER)	
3	3-222-249-51	KNOB (HOLD)...(BLUE) (HK)	
3	3-222-249-61	KNOB (HOLD)...(ORANGE)	
3	3-222-249-71	KNOB (HOLD)...(GREEN) (HK)	
4	3-234-182-01	KNOB (VOL)...(SILVER)	
4	3-234-182-11	KNOB (VOL)...(BLUE) (HK)	
4	3-234-182-21	KNOB (VOL)...(ORANGE)	
4	3-234-182-31	KNOB (VOL)...(GREEN) (HK)	
5	3-234-167-01	ESCUTCHEON	
6	3-234-177-01	KNOB (OPEN)	
7	3-234-178-02	BELT, ORNAMENTAL...(SILVER)	
7	3-234-178-12	BELT, ORNAMENTAL...(BLUE) (HK)	
7	3-234-178-22	BELT, ORNAMENTAL...(ORANGE)	
7	3-234-178-32	BELT, ORNAMENTAL...(GREEN) (HK)	
8	3-234-175-01	BUTTON (CONTROL)	
9	3-234-176-01	WINDOW (LED)	
10	3-227-923-21	CASE (K), BATTERY	
11	1-682-470-11	PWB, SWITCH FLEXIBLE	

Ref. No.	Part No.	Description	Remark
* 12	1-682-473-11	SWITCH BOARD	
13	3-222-373-01	TERMINAL BOARD (MINUS)	
14	3-234-179-01	LID, BATTERY CASE...(SILVER)	
14	3-234-179-11	LID, BATTERY CASE...(BLUE) (HK)	
14	3-234-179-21	LID, BATTERY CASE...(ORANGE)	
14	3-234-179-31	LID, BATTERY CASE...(GREEN) (HK)	
15	X-3380-997-1	TERMINAL (PLUS) ASSY, BATTERY	
16	X-3381-391-1	LID ASSY (OS), UPPER...(SILVER)	
16	X-3381-392-1	LID ASSY (OL), UPPER...(BLUE) (HK)	
16	X-3381-393-1	LID ASSY (OD), UPPER...(ORANGE)	
16	X-3381-394-1	LID ASSY (OG), UPPER...(GREEN) (HK)	
17	X-3380-998-1	BRACKET (BOTTOM) ASSY	
* 18	X-3381-940-1	MAIN BOARD SUB ASSY	
		(including AUDIO BOARD)	
19	3-234-164-01	SHEET (INSULATING)	
23	X-3380-994-1	BRACKET (R) ASSY	
24	X-3380-996-1	BRACKET (STOP) ASSY	
25	3-236-443-01	SCREW (LL), STEP	
26	3-234-449-11	SCREW (M1.4)	
27	3-238-309-01	SHEET (BRACKET R HORIZONTAL)	
28	3-238-315-01	SHEET (E LEVER)	
29	3-238-657-01	SHEET (BRACKET BOTTOM A)	
30	3-238-658-01	SHEET (BRACKET BOTTOM B)	
35	3-238-763-01	SHEET (LED 2)	
36	4-958-295-01	SHEET (HP), ADHESIVE	

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7-2. MECHANISM DECK SECTION
(MT-MZE707-173)
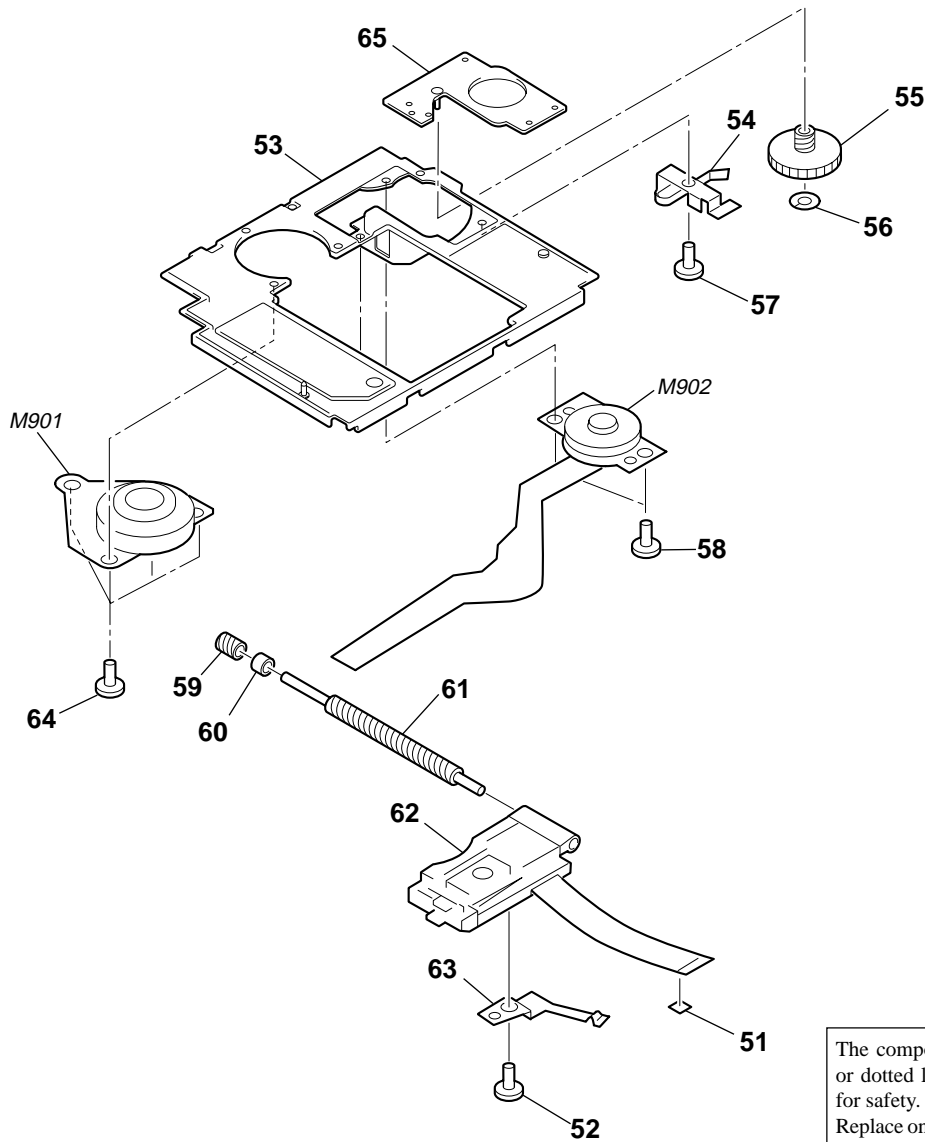
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	3-232-142-01	SHEET (CONNECTOR)	
52	3-222-392-01	SCREW (M1.4), TAPPING	
53	3-222-394-01	CHASSIS	
54	3-224-779-01	SPRING, THRUST DETENT	
55	4-222-216-01	GEAR (SA)	
56	3-338-645-31	WASHER (0.8-2.5)	
57	3-225-996-01	SCREW (M1.4)(EG),PRECISION PAN	
58	3-225-996-07	SCREW (M1.4)(EG),PRECISION PAN	
59	4-222-208-01	GEAR (SB)	
60	3-043-237-02	BEARING (N)	

Ref. No.	Part No.	Description	Remark
61	4-222-203-01	SCREW, LEAD	
⚠62	X-3379-869-1	OPTICAL PICK-UP ASSY (LCX-4E)	
63	3-222-391-01	SPRING (M), RACK	
64	3-225-278-11	SCREW, TAPPING	
65	X-3379-529-1	BASE ASSY, MOTOR	
M901	8-835-744-01	MOTOR, DC SSM18B (SPINDLE)	
M902	1-763-727-21	MOTOR, DC(SLED)	
		(INCLUDING PULEEY GEAR AND MOTOR FLEXIBLE BOARD)	

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
  HK   : Hong Kong
  JEW   : Tourist

MAIN BOARD SUB ASSY
- Audio board is supplied with main board sub ASSY.
- Audio board can not be moved away from main bord.

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

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

Ref. No.	Part No.	Description			Remark
		AUDIO BOARD (included in MAIN BOARD SUB ASSY) **********			
		<CAPACITOR>			
C101	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C102	1-135-868-91	TANTAL. CHIP	220uF	20%	2.5V
C103	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C104	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C201	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C202	1-135-868-91	TANTAL. CHIP	220uF	20%	2.5V
C203	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C204	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C301	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C302	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C303	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C304	1-125-926-11	TANTAL. CHIP	4.7uF	20%	6.3V
C305	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C306	1-127-895-11	TANTAL. CHIP	22uF	20%	4V
C803	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C804	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
		<CONNECTOR>			
CN802	1-778-595-21	CONNECTOR, BOARD TO BOARD 20P			
* CN803	1-793-327-21	CONNECTOR, FPC (ZIF) 9P			
		<IC>			
IC301	8-759-598-15	IC TA2131FL(EL)			
		<TRANSISTOR>			
Q301	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
		<RESISTOR>			
R101	1-218-971-11	RES-CHIP	33K	5%	1/16W
R102	1-218-971-11	RES-CHIP	33K	5%	1/16W
R103	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R104	1-208-635-11	RES-CHIP	10	5%	1/16W
R106	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R201	1-218-971-11	RES-CHIP	33K	5%	1/16W
R202	1-218-971-11	RES-CHIP	33K	5%	1/16W
R203	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R204	1-208-635-11	RES-CHIP	10	5%	1/16W
R206	1-218-963-11	RES-CHIP	6.8K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R301	1-218-935-11	RES-CHIP	33	5%	1/16W
R302	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R303	1-218-981-11	RES-CHIP	220K	5%	1/16W
		**			
*	X-3381-940-1	MAIN BOARD SUB ASSY (including AUDIO BOARD) ******************			
	3-049-041-01	TERMINAL BOARD			
		<CAPACITOR>			
C501	1-164-931-11	CERAMIC CHIP	100PF	10%	50V
C502	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C503	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C504	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C505	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C508	1-164-938-11	CERAMIC CHIP	0.0015uF	10%	50V
C509	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C510	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C511	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C513	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	50V
C515	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C516	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C519	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C524	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C526	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C527	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C529	1-137-762-11	TANTALUM	10uF	20%	4V
C530	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	50V
C557	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C558	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C559	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C563	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C564	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C565	1-127-772-11	CERAMIC CHIP	33000PF	10%	10V
C601	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C603	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C604	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C605	1-115-156-11	CERAMIC CHIP	1uF		10V
C606	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C607	1-115-156-11	CERAMIC CHIP	1uF		10V
C610	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V

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Ref. No.	Part No.	Description			Remark
C613	1-164-935-11	CERAMIC CHIP	470PF	10%	50V
C615	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C616	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C618	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C699	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C802	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C806	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C807	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C810	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C851	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C853	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C854	1-107-820-11	CERAMIC CHIP	0.1uF		16V
C901	1-137-739-11	TANTALUM	22uF	20%	6.3V
C903	1-135-989-11	TANTAL. CHIP	47uF	20%	6.3V
C904	1-135-837-11	TANTAL. CHIP	22uF	20%	6.3V
C905	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C907	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C908	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C909	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C910	1-164-937-11	CERAMIC CHIP	0.001uF	10%	50V
C911	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C915	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C917	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C918	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C919	1-117-919-11	TANTAL. CHIP	10uF	20%	6.3V
C920	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C921	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C925	1-135-837-11	TANTAL. CHIP	22uF	20%	6.3V
C952	1-128-964-11	TANTAL. CHIP	100uF	20%	6.3V
C999	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V

\<CONNECTOR\>

Ref. No.	Part No.	Description	
* CN501	1-794-772-21	CONNECTOR, FPC (ZIF) 20P	
* CN551	1-778-156-11	CONNECTOR, FFC/FPC (ZIF) 8P	
CN801	1-778-590-21	CONNECTOR, BOARD TO BOARD 20P	

\<DIODE\>

Ref. No.	Part No.	Description	
D101	8-719-056-58	DIODE	MAZS027008SO
D201	8-719-056-58	DIODE	MAZS027008SO
D855	8-719-077-43	DIODE	MAZZ068H01S0
D901	8-719-081-33	DIODE	MA2YD1500LS0
D902	8-719-081-33	DIODE	MA2YD1500LS0
D903	8-719-420-51	DIODE	MA729

\<FERRITE BEAD\>

Ref. No.	Part No.	Description	
FB801	1-414-228-11	FERRITE	0uH
FB802	1-414-228-11	FERRITE	0uH

\<IC\>

Ref. No.	Part No.	Description	
IC501	8-759-689-67	IC	SN761057DBT
IC551	6-700-680-01	IC	SC111258FCR2
@ IC601	8-752-413-14	IC	CXD2671-206GA
IC801	8-759-680-85	IC	AK6417AL-L
IC901	8-759-698-61	IC	XPC18A32FCR2

\<JACK\>

Ref. No.	Part No.	Description
J301	1-793-288-62	JACK (⌒)

\<INDUCTOR\>

Ref. No.	Part No.	Description			Remark
L503	1-469-570-21	INDUCTOR	10uH		
L901	1-419-258-21	INDUCTOR	68uH		
L902	1-419-646-21	INDUCTOR	47uH		
L904	1-414-398-11	INDUCTOR	10uH		
L905	1-412-032-11	INDUCTOR CHIP	100uH		

\<TRANSISTOR\>

Ref. No.	Part No.	Description
Q501	8-729-922-10	TRANSISTOR 2SA1577-QR
Q801	8-729-429-44	TRANSISTOR XP1501
Q803	8-729-037-75	TRANSISTOR UN9214J-(TX).SO

\<RESISTOR\>

Ref. No.	Part No.	Description			Remark
R501	1-218-971-11	RES-CHIP	33K	5%	1/16W
R503	1-218-953-11	RES-CHIP	1K	5%	1/16W
R505	1-208-691-11	METAL CHIP	2.2K	1%	1/16W
R515	1-208-691-11	METAL CHIP	2.2K	1%	1/16W
R516	1-208-691-11	METAL CHIP	2.2K	1%	1/16W
R517	1-208-691-11	METAL CHIP	2.2K	1%	1/16W
R519	1-218-977-11	RES-CHIP	100K	5%	1/16W
R521	1-242-967-11	RES-CHIP	1	5%	1/16W
R525	1-218-990-11	SHORT 0			
R526	1-218-990-11	SHORT 0			
R601	1-208-635-11	RES-CHIP	10	5%	1/16W
R602	1-208-635-11	RES-CHIP	10	5%	1/16W
R603	1-218-943-11	RES-CHIP	150	5%	1/16W
R605	1-218-965-11	RES-CHIP	10K	5%	1/16W
R606	1-218-977-11	RES-CHIP	100K	5%	1/16W
R607	1-218-977-11	RES-CHIP	100K	5%	1/16W
R609	1-218-981-11	RES-CHIP	220K	5%	1/16W
R612	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R613	1-218-945-11	RES-CHIP	220	5%	1/16W
R614	1-218-953-11	RES-CHIP	1K	5%	1/16W
R615	1-202-974-11	RES-CHIP	3.3M	5%	1/16W
R804	1-218-973-11	RES-CHIP	47K	5%	1/16W
R806	1-218-977-11	RES-CHIP	100K	5%	1/16W
R807	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R808	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R817	1-218-941-11	RES-CHIP	100	5%	1/16W
R818	1-218-941-11	RES-CHIP	100	5%	1/16W
R819	1-218-989-11	RES-CHIP	1M	5%	1/16W
R827	1-218-989-11	RES-CHIP	1M	5%	1/16W
R830	1-218-975-11	RES-CHIP	68K	5%	1/16W
R831	1-218-947-11	RES-CHIP	330	5%	1/16W
R832	1-218-935-11	RES-CHIP	33	5%	1/16W
R833	1-218-967-11	RES-CHIP	15K	5%	1/16W
R834	1-218-985-11	RES-CHIP	470K	5%	1/16W
R835	1-218-985-11	RES-CHIP	470K	5%	1/16W
R839	1-218-949-11	RES-CHIP	470	5%	1/16W
R903	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R909	1-218-965-11	RES-CHIP	10K	5%	1/16W
R910	1-218-965-11	RES-CHIP	10K	5%	1/16W
R920	1-208-707-11	METAL CHIP	10K	1%	1/16W
R921	1-218-979-11	RES-CHIP	150K	5%	1/16W
R946	1-208-715-11	METAL CHIP	22K	1%	1/16W
R948	1-208-939-11	METAL CHIP	150K	1%	1/16W
R950	1-218-953-11	RES-CHIP	1K	5%	1/16W
R954	1-218-990-11	SHORT 0			

@ Replacement of IC601 used in this set requires a special tool.

Ref. No.	Part No.	Description			Remark
R963	1-218-990-11	SHORT 0			
R964	1-218-987-11	RES-CHIP	680K	5%	1/16W
		<NETWORK RESISTOR>			
RB553	1-233-967-11	RES, NETWORK (CHIP TYPE) 10K			
RB554	1-233-964-21	RES, NETWORK (CHIP TYPE) 3.3K			
		<VIBLATOR>			
X601	1-795-002-21	VIBRATOR, CERAMIC (45.1584MHz)			

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*	1-682-473-11	SWITCH BOARD			

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		<CAPACITOR>			
C860	1-107-820-11	CERAMIC CHIP	0.1uF	16V	
		<CONNECTOR>			
* CN804	1-793-327-21	CONNECTOR, FPC (ZIF) 9P			
		<DIODE>			
D801	6-500-050-01	DIODE KPTB-1612LSURKMGKC			
D802	8-719-083-54	DIODE TLOU1008A(T05)			
D860	8-719-056-54	DIODE MAZS068008SO			
D861	8-719-056-54	DIODE MAZS068008SO			
		<RESISTOR>			
R811	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R812	1-218-965-11	RES-CHIP	10K	5%	1/16W
R813	1-218-967-11	RES-CHIP	15K	5%	1/16W
R814	1-218-971-11	RES-CHIP	33K	5%	1/16W
R815	1-218-975-11	RES-CHIP	68K	5%	1/16W
		<SWITCH>			
S801	1-786-033-21	SWITCH, TACTILE (■)			
S802	1-786-033-21	SWITCH, TACTILE (▶▶I▶)			
S803	1-786-033-21	SWITCH, TACTILE (I◀◀)			
S804	1-786-227-21	SWITCH, TACTILE (VOLUME-)			
S805	1-786-227-21	SWITCH, TACTILE (VOLUME+)			
S806	1-786-033-21	SWITCH, TACTILE (GROUP)			
S808	1-572-922-11	SWITCH, SLIDE (HOLD ➡)			
S809	1-771-483-61	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)			

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		MISCELLANEOUS			

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|					
11	1-682-470-11	SWITCH FLEXIBLE BOARD			
⚠62	X-3379-869-1	OPTICAL PICK-UP ASSY (LCX-4E)			
M901	8-835-744-01	MOTOR, DC SSM18B (SPINDLE)			
M902	1-763-727-21	MOTOR, DC(SLED)			
		(INCLUDING PULEEY GEAR AND MOTOR FLEXIBLE BOARD)			

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

Ref. No.	Part No.	Description	Remark
		ACCESSORIES	

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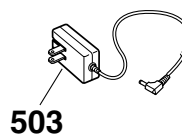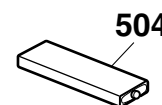|			
501	1-251-895-11	BATTERY CASE	
502	1-476-395-12	REMOTE CONTROL UNIT (RM-MC11EL)	
508	1-476-763-15	CHARGE UNIT (BCA-WM10)	
⚠503	1-476-833-11	ADAPTOR, AC (AC-ES305S) (JEW)	
⚠503	1-476-834-11	ADAPTOR, AC (AC-ES305) (HK)	
⚠	1-569-007-11	ADAPTOR, CONVERSION 2P (JEW)	
504	1-756-036-11	BATTERY, NICKEL HYDROGEN (HK)	
504	1-756-120-12	BATTERY, NICKEL HYDROGEN (JEW)	
	3-008-521-21	CASE, BATTERY CHARGE	
505	3-220-749-01	CASE, CARRYING	
	3-234-033-01	MANUAL, INSTRUCTION (JAPANESE) (JEW)	
	3-234-033-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-234-033-21	MANUAL, INSTRUCTION (FRENCH) (JEW)	
	3-234-033-31	MANUAL, INSTRUCTION (SPANISH) (JEW)	
	3-234-033-41	MANUAL, INSTRUCTION	
		(TRADITIONAL CHINESE)	
	3-234-033-51	MANUAL, INSTRUCTION (KOREAN)	
506	8-954-008-91	RECEIVER,EAR MDR-E808SP	
507	X-3381-007-1	ATTACHMENT ASSY (S)...(SILVER)	
507	X-3381-008-1	ATTACHMENT ASSY (L)...(BLUE) (HK)	
507	X-3381-085-1	ATTACHMENT ASSY (D)...(ORANGE)	
507	X-3381-086-1	ATTACHMENT ASSY (G)...(GREEN) (HK)	

● *Dry Battery Case*

501

● *Headphnes/earphones
with a remote control*
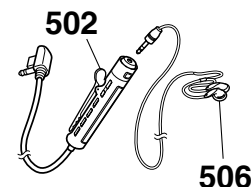
502

506

● *AC adaptor*

503

● *Rechargeable Battery*

504

● *Carrying Pouch*

505

● *Battery Charging stand*

507

508
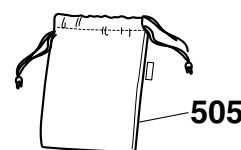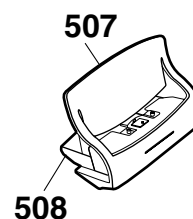
Note : The component name in a figure just mentions a component name
in instruction manual.

MZ-E707

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.12	Change the main board to service ASSY (including audio board). (SPM-01053)
1.0	2001.10	New