

# MZ-E900

## SERVICE MANUAL

Ver 1.1 2001.01



US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Tourist Model

US and foreign patents licensed from Dolby Laboratories Licensing Corporation

Model Name Using Similar Mechanism	NEW
MD Mechanism Type	MT-MZE900-173
Optical Pick-up Mechanism Type	LCX-4E

### SPECIFICATIONS

#### System

Audio playing system

MiniDisc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength:  $\lambda = 790$  nm

Emission duration: continuous

Laser output: less than  $44.6 \mu\text{W}^*$

\* This output is the value measured at a distance of 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.

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 (min)

One LR6 (size AA) battery (not supplied)

External power jack: Power rating 1.5V DC

Battery operation time <sup>1) 2)</sup>

Batteries	Stereo(normal)	LP2 Stereo	LP4 Stereo
Ni-MH rechargeable battery	29	33	37
NH-14WM (A) <sup>1)</sup>			
LR6 (SG) Sony alkaline dry battery <sup>3)</sup>	42	49	58
LR6 (SG) Sony alkaline dry battery <sup>3)</sup> and a Ni-MH rechargeable rechargeable battery <sup>1)</sup>	76	87	100

Unit: Approx. hours

<sup>1)</sup> With a fully charged battery

<sup>2)</sup> Measured in accordance with the EIAJ (Electronic Industries Association of Japan) standard (using a Sony MDW-series Mini-disc).

<sup>3)</sup> When using a Sony LR6 (SG) "STAMINA" alkaline dry battery (produced in Japan).

#### Note

The battery life may be shorter depending on operating conditions, the surrounding temperature, and the battery type.

Dimensions

Approx. 77.7 x 12.7 x 71.0 mm (w/h/d) ( $3 \frac{1}{8} \times \frac{1}{2} \times 2 \frac{7}{8}$  in.) (not including projecting parts and controls)

Mass

Approx. 58g (2.0 oz) (the player only)

Supplied accessories

Headphones/earphones with a remote control (1)

Battery charger (1) (EXCEPT Korean MODEL)

Rechargeable battery (1)

Rechargeable battery carrying case (1) (Tourist MODEL)

Dry battery case (1)

Carrying pouch (1) (EXCEPT US MODEL)

AC plug adaptor (1) (E33, Tourist model)

Design and specifications are subject to change without notice.

## PORTABLE MINIDISC PLAYER

# SONY®

9-927-992-12

2001A0200-1

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**Sony Corporation**

**Audio Entertainment Group**

**General Engineering Dept.**

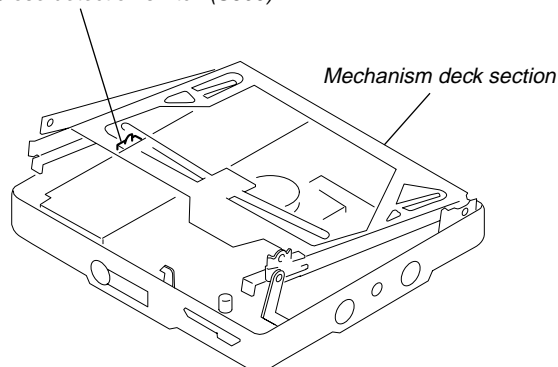
## SECTION 1 SERVICING NOTE

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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)



### ● 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.)



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.

### 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.

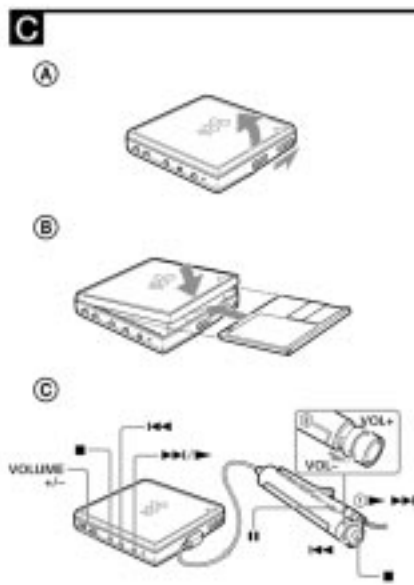
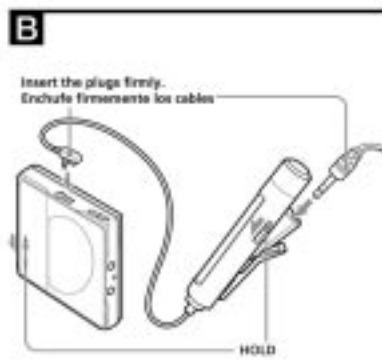
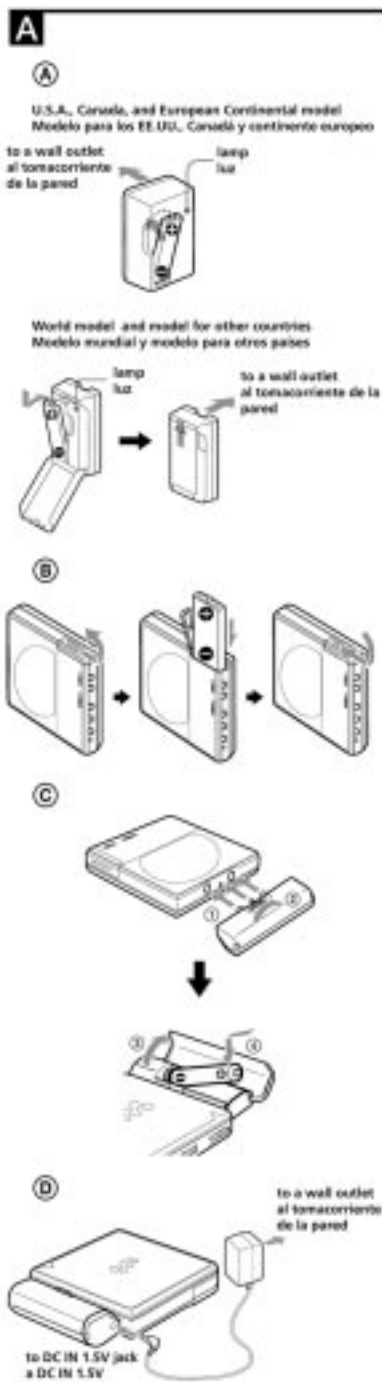
### SAFETY-RELATED COMPONENT WARNING!!

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

\* Replacement of CXD2671-201GA (IC601) used in this set requires a special tool.

## SECTION 2 GENERAL

This section is extracted from instruction manual.



### Preparing a power source

#### Using on the rechargeable battery

Charge the supplied rechargeable battery before using it for the first time.

- Charge the supplied rechargeable battery NH-14WM(A) with the supplied battery charger (See Fig. A-20). After about 1.5 hours, charging ends and the lamp on the charger turns off. (To get maximum performance from battery, continue charging it for another hour after the lamp turns off.) Because of the fast charging rate of the battery charger, the charger and the battery may become temporarily hot while the battery is being charged or right after charging is completed. In this case, remove the battery from the charger for five minutes after the lamp turns off.
- Open the rechargeable battery compartment lid and insert the charged battery with correct polarity. (See Fig. A-20). You can charge the battery about 300 times.

#### Using on a dry battery (See Fig. A-21)

Attach the supplied battery case to the player, and then insert one LR6 (size AA) battery with correct polarity. Be sure to insert the battery (minus) end first.

#### When to replace or recharge the battery

You can check the battery condition with the battery indication on the remote control while using the player.

- ☐ Battery power decreasing
- Weak batteries
- ☐ The batteries have gone out. "LOW BATT" flashes in the display on the remote control, and the power goes off.

Batteries	Stereo (normal)	LP2 Stereo	LP4 Stereo
Ni-MH rechargeable battery NH-14WM(A) <sup>1)</sup>	29	33	37
LR6 (SC) Sony Alkaline dry battery <sup>2)</sup>	42	49	56
LR6 (SC) Sony Alkaline dry battery <sup>3)</sup> and a Ni-MH rechargeable battery <sup>1)</sup>	76	87	100

(Unit: Approx. hours)

<sup>1)</sup> With a fully charged battery  
<sup>2)</sup> Manufactured in accordance with the IEC (Electronic Industries Association) of Japan standard (using a Sony MD99-series Mini-disc).  
<sup>3)</sup> When using a Sony LR6 (SC) "STEAMINA" alkaline dry battery (produced in Japan).

**Note**  
 The battery life may be shorter depending on operating conditions, the surrounding temperature, and the battery type.

#### Using on house current (See Fig. A-22)

- Attach the supplied battery case to the player. If the rechargeable battery is inserted in the player, remove it.
- Connect the AC-E15HG AC power adapter (not supplied) to the DC IN 1.5V jack of the battery case.
- Connect the AC power adapter to a wall outlet.

**Note**  
 The battery indication mark is displayed while using the AC power adapter.

### To connect the headphones/earphones (See Fig. B)

- Connect the supplied headphones/earphones to the remote control. Connect the remote control to the jack of the player. Slide HOLD on the remote control and the player to the direction of the arrows shown in the illustration.

#### ▶MD playing

### Playing an MD

- Insert an MD.
  - Slide OPEN. (See Fig. B-2)
  - Insert the MD with the label side facing up, and press the lid down to close. (See Fig. B-3)
- Play the MD. (See Fig. B-4)
  - Turn the control towards ◀▶▶▶ or ▶▶▶▶ on the remote control (or press ▶▶▶▶/▶▶▶▶ on the player). When using the remote control, a short beep sounds in the headphones/earphones.
  - Push and turn VOL +/- on the remote control (or press VOLUME +/- on the player) to adjust the volume. The volume indicator appears on the remote control to allow you to check the volume.

#### ▶Other disc operation

To	Do this (Beeps in the headphones/earphones)
Stop	Press ■. (A Long beep)
Pause	Press II on the remote control. (Continuous short beeps) Press II on the remote control again to resume playback. <sup>1)</sup>
Find the beginning of the current track	Turn the control towards ◀▶▶▶ on the remote control. (Three short beeps) Press ◀▶▶▶ on the player once.
Listen to the beginning of the previous track	Turn the control towards ◀▶▶▶ on the remote control repeatedly. (Continuous three short beeps) Press ◀▶▶▶ on the player repeatedly.
Listen to the beginning of the next track	Turn the control towards ▶▶▶▶ on the remote control. (Two short beeps) Press ▶▶▶▶/▶▶▶▶ on the player once.
Go backwards while playing <sup>1)</sup>	Turn and hold the control towards ◀▶▶▶ on the remote control. Hold down ◀▶▶▶ on the player.
Go forward while playing <sup>1)</sup>	Turn and hold the control towards ▶▶▶▶ on the remote control. Hold down ▶▶▶▶/▶▶▶▶ on the player.
Remove the MD	Press ■, and then slide OPEN. <sup>2)</sup>

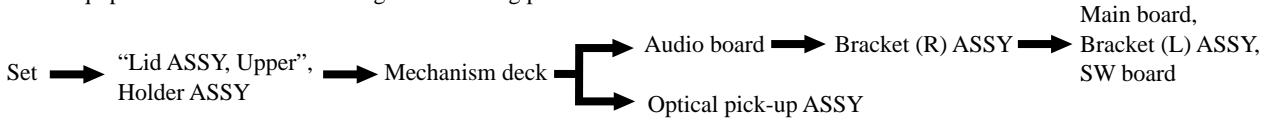
<sup>1)</sup> When you press ◀▶▶▶ or ▶▶▶▶ on the player during pause, the player resumes playback. If you turn and hold the control towards ◀▶▶▶ or ▶▶▶▶ on the remote control (or hold down ◀▶▶▶ or ▶▶▶▶ on the player) during pause, you can fast forward/rewind without listening to the playback sound.  
<sup>2)</sup> Once you open the lid, the point to start playback changes to the beginning of the first track.

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

- Tips**
- The player can play the track recorded by double or 4 times long mode (LP2 or LP4). Normal stereo playback, LP2 stereo playback, LP4 stereo playback or normal playback is automatically selected to match the audio source.
  - During the operation of the unit, the OPEN lamp on the player turns on. After you press ■ to stop the playback, the OPEN lamp turns off.
  - The display on the remote control will turn off shortly after you press ■.

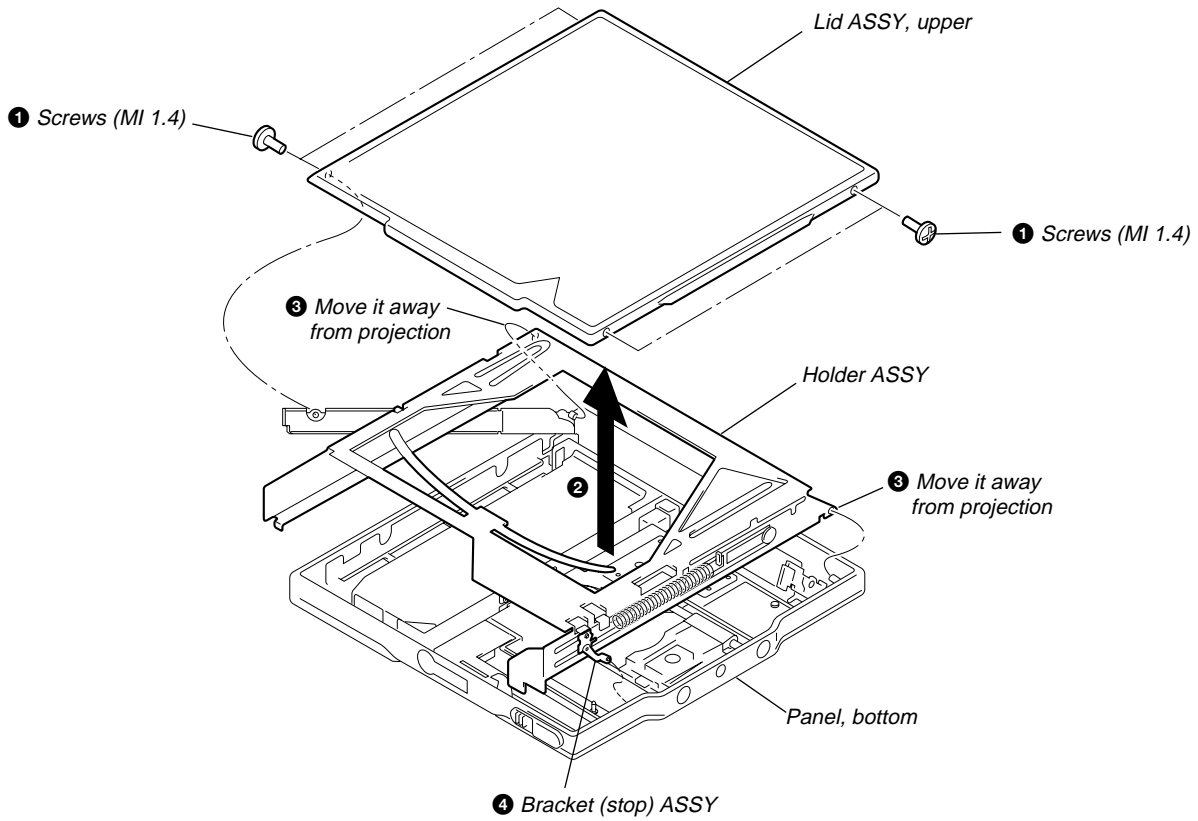
## SECTION 3 DISASSEMBLY

• The equipment can be removed using the following procedure.

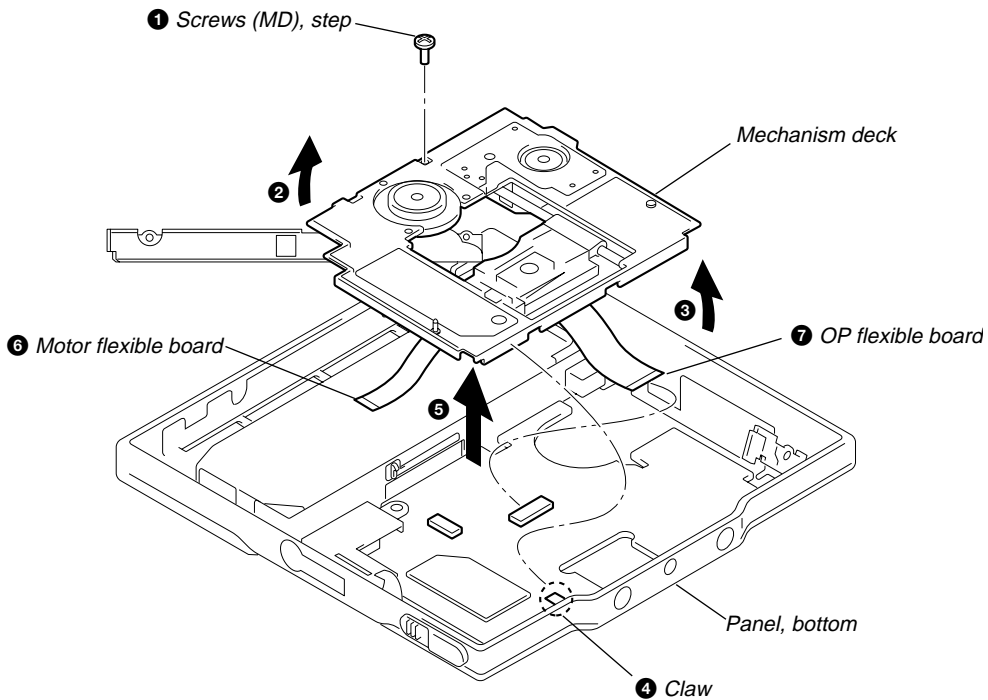


**Note :** Follow the disassembly procedure in the numerical order given.

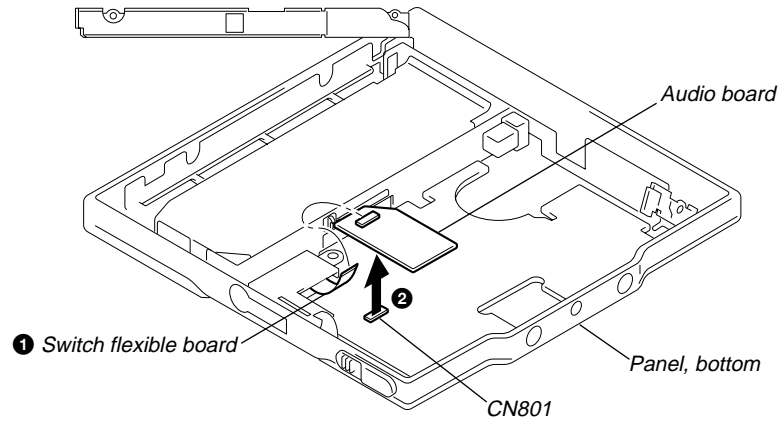
### 3-1. "LID ASSY, UPPER", HOLDER ASSY



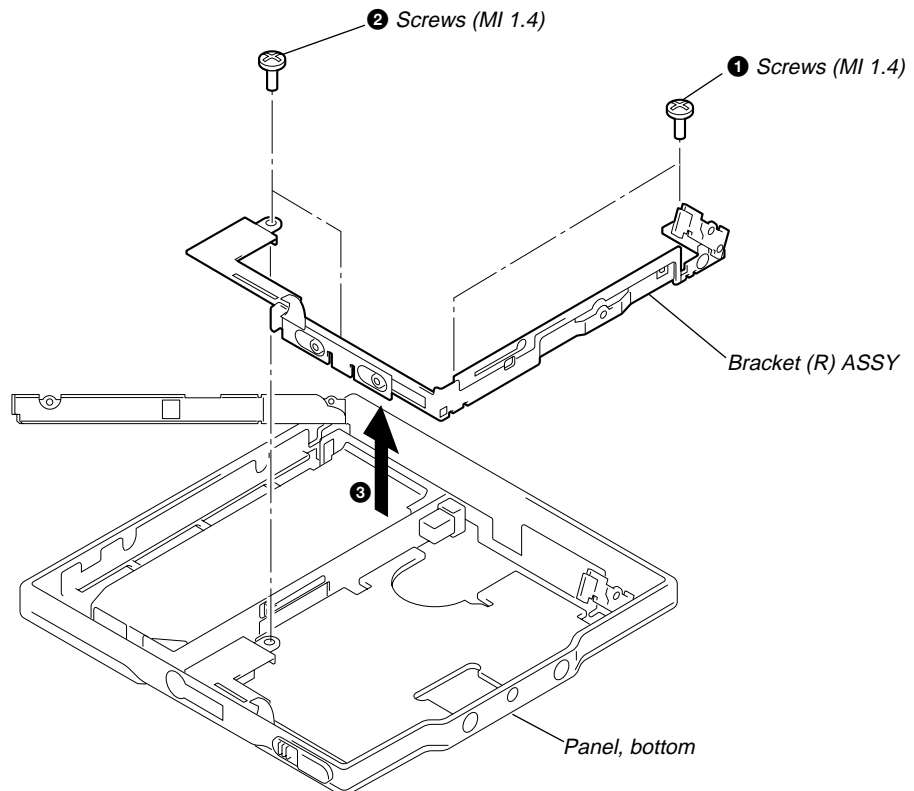
### 3-2. MECHANISM DECK



### 3-3. AUDIO BOARD

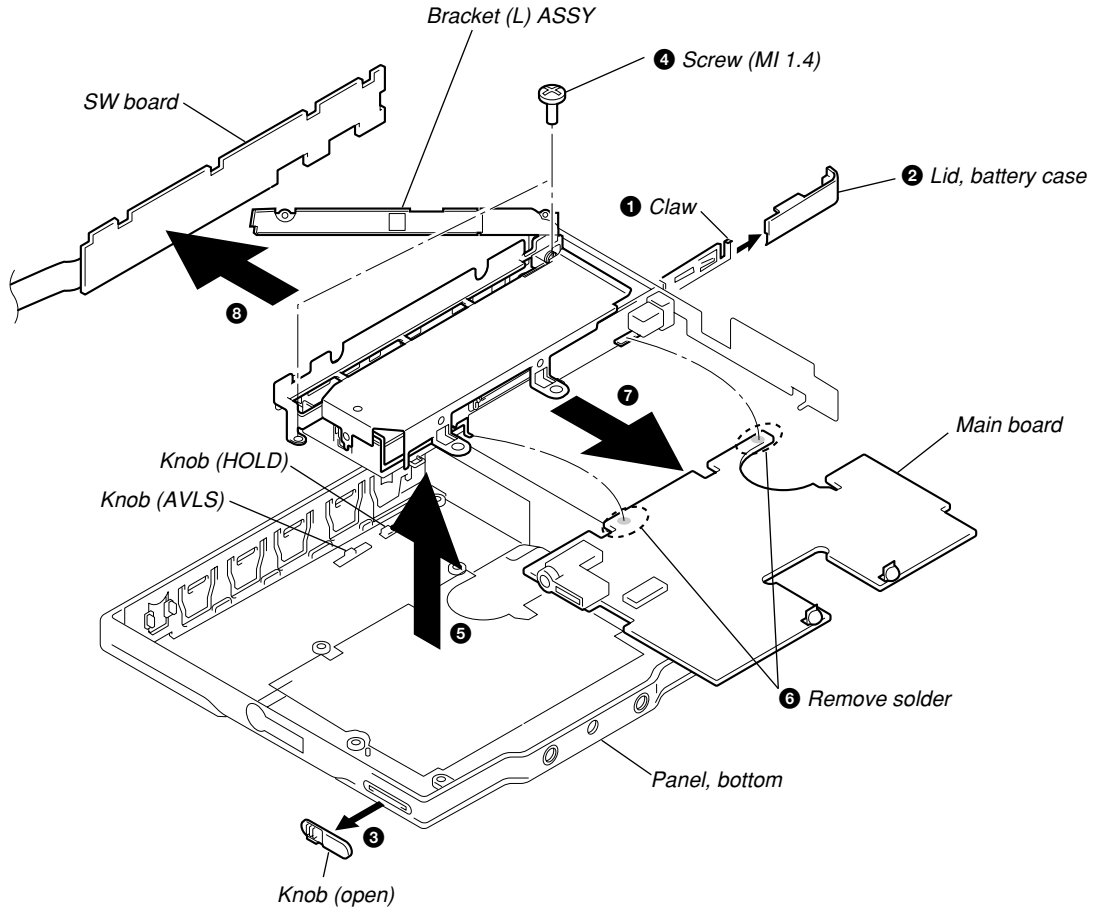


### 3-4. BRACKET (R) ASSY

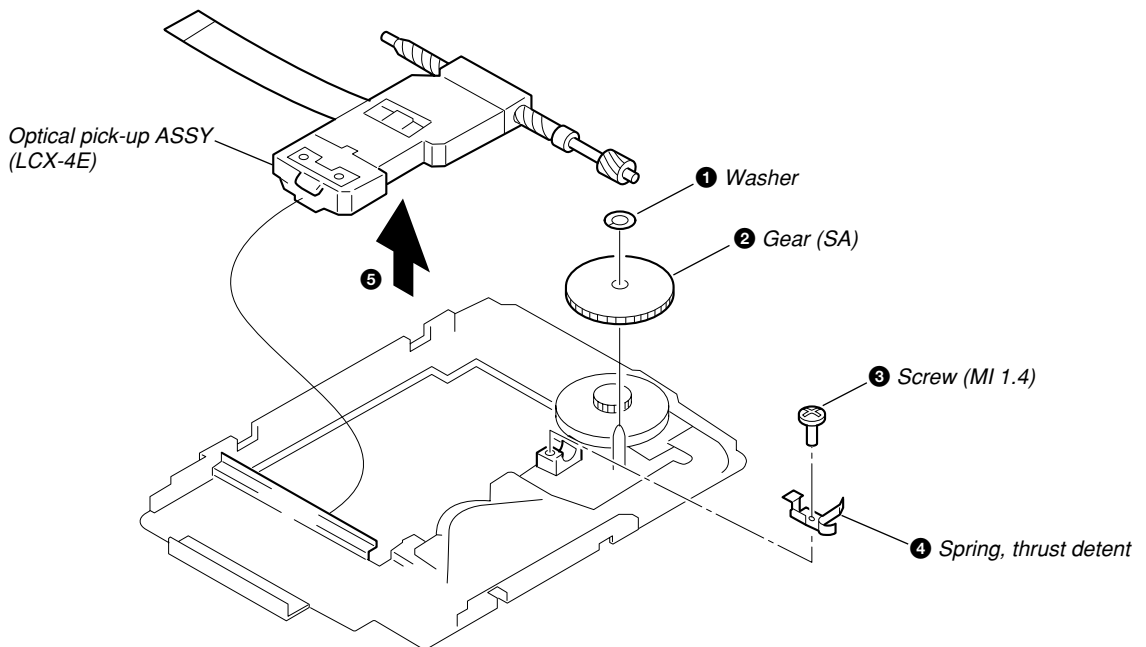


**3-5. MAIN BOARD, BRACKET (L) ASSY, SW BOARD**

**Note :** On installation of bottom panel assy, adjust the position of both two switches (S807, S808) and two knobs (AVLS, HOLD).



**3-6. OPTICAL PICK-UP ASSY**



## SECTION 4 TEST MODE

### 4-1. GENERAL

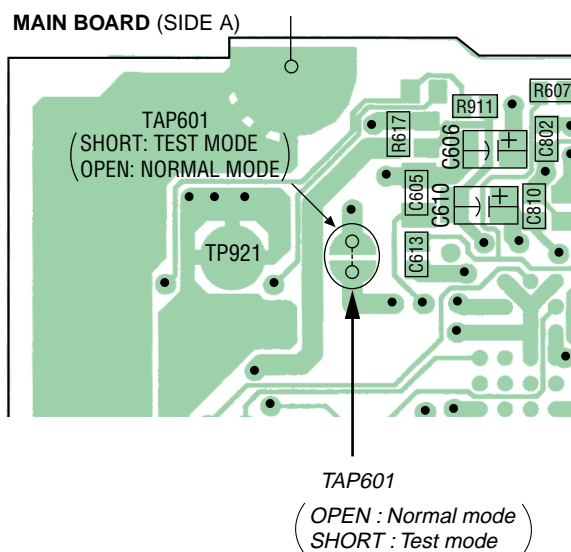
- When entered in the TEST MODE, this set provides the Overall Adjustment mode which allows CD and MO discs to be automatically adjusted. In the Overall Adjustment mode, the system discriminates between CD and MO discs, performs adjustments in sequence automatically, and displays the faulty location 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

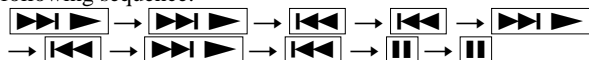
To set the TEST MODE, two methods are available.

- Solder bridge and short TAP601 (TEST) on the main board. Then turn on the power.



- 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:

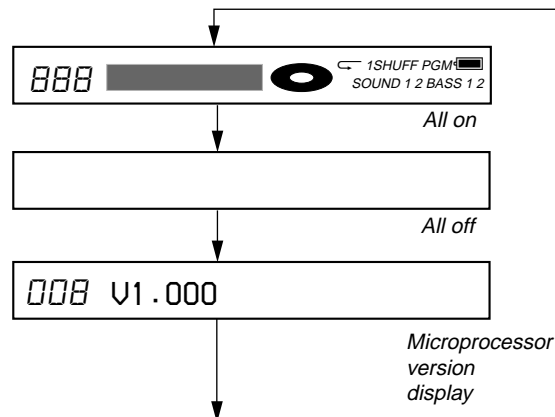


#### 4-2-2. Operations when the TEST MODE is set

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.

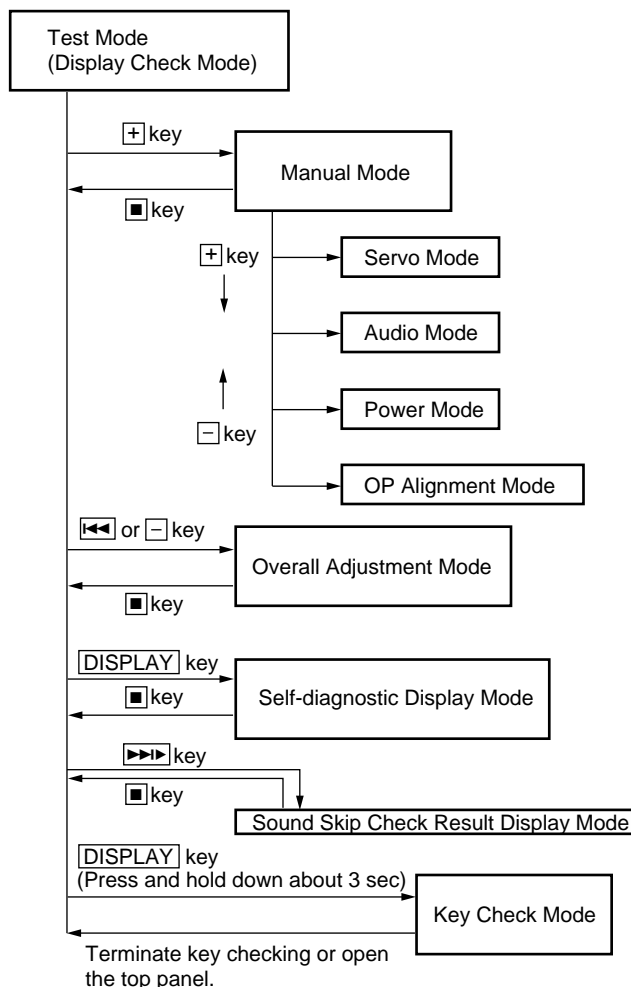
Note: The solder should be removed clean. The remaining solder may make a short with the chassis and other part.

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.

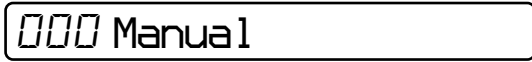
Usually, no adjustments are made in this mode.

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

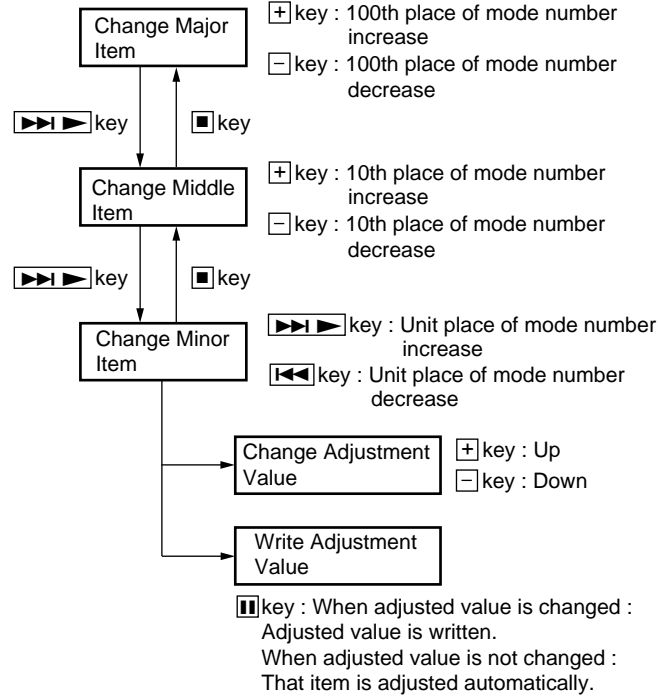
4-4-2. How to set the Manual mode

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

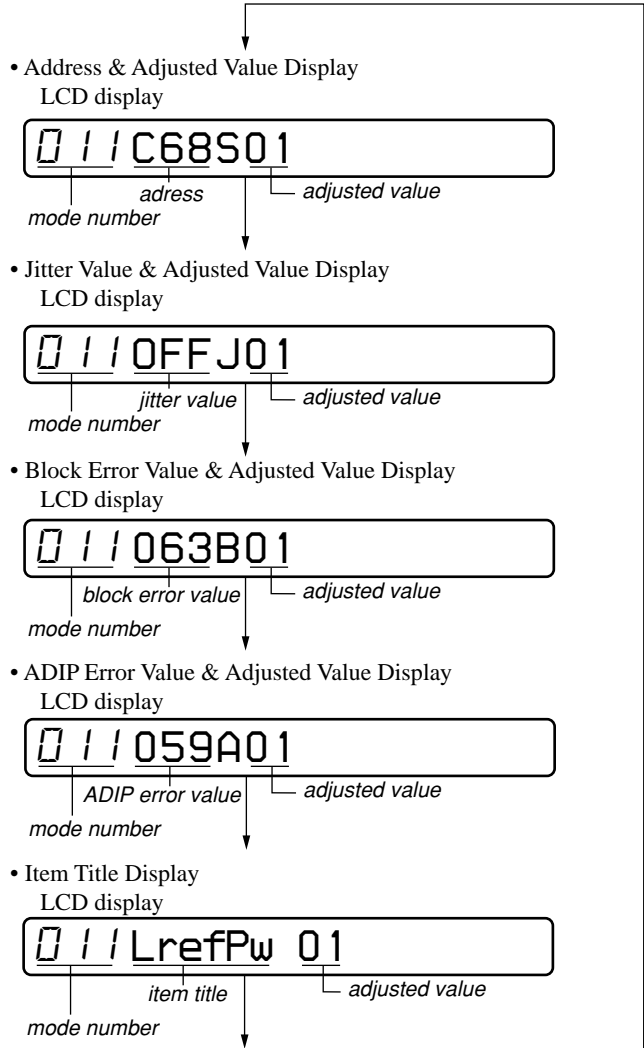
Remote control LCD display



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.



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 ADJUSTMENTS. (See page 11)

4-6. SELF-DIAGNOSTIC DISPLAY MODE

4-6-1. Outline of the function

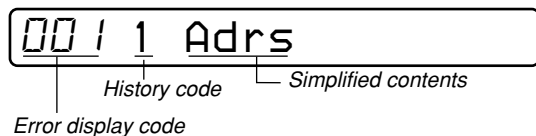
The Self-diagnostic system is used in this set. If an error occurs during playback, this system detects the fault through the microprocessor's mechanism and power control blocks and stores the cause in EEPROM in a history format.

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

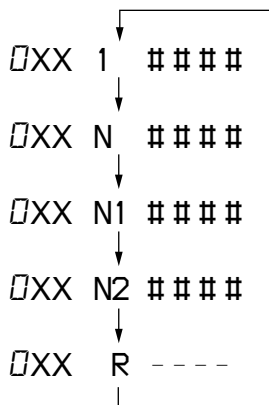


### 4-6-2. Self-diagnostic mode

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



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



- Press **◀◀◀◀** key to go back to the previous display.

#### • 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 **■** 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 **■** key on the remote control again.

#### • Contents of the history codes

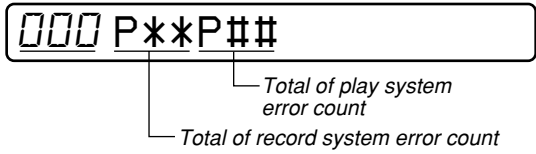
History code number	Contents
1	The first error that occurred.
N	The last error that occurred.
N-1	The first error from the last one.
N-2	The second error from the last one.
R	Total recording time (---- is displayed for MZ-E900)

**4-7. Sound Skip Check Result Display Mode**

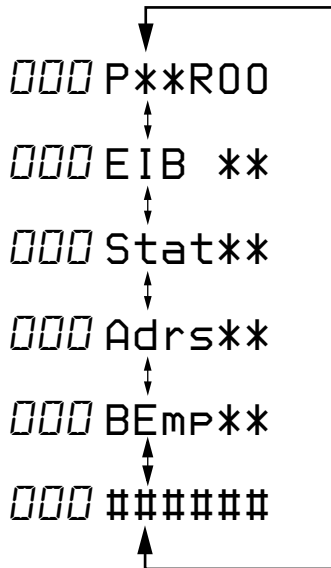
This set can display and check the error count occurring during play.

- Setting method of Sound Skip Check Result Display Mode

1. Setting the test mode.
2. Press the key activates the sound skip check result display mode where the LCD displays as shown below.  
LCD display



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



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	Decoder 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 key (for more than 3 sec) to set the Key Check mode.

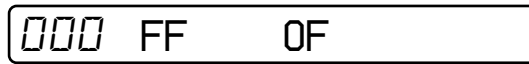
LCD display



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 key on the set is pressed:

LCD display



Example: When key on the remote control is pressed:

LCD display



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



Example: When the keys on the remote control are considered as OK:

LCD display



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 setting 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.

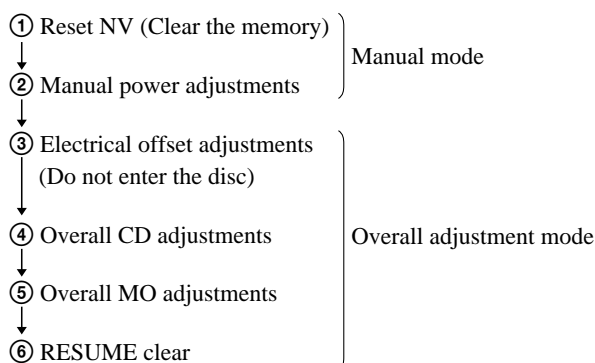
### 5-2. NOTES FOR ADJUSTMENT

#### 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:



#### 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 **II** key on the remote control.

LCD display

021 Res OK?

4. Press **II** 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 sequence:

- ① Vc PWM Duty (L) adjustment (item No.:762)
- ↓
- ② Vc PWM duty (H) adjustment (item No.:763)
- ↓
- ③ VI PWM Duty adjustment (item No.:764)

#### 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

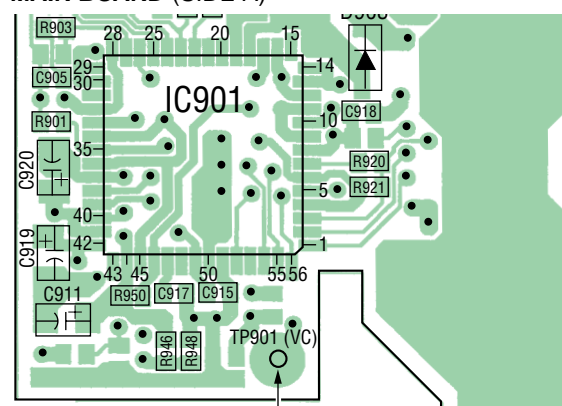
762 Vc1PWM XX

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.

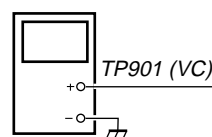
Adjustment value:2.36V

Standard value:2.35 to 2.365V

#### MAIN BOARD (SIDE A)



digital voltmeter



5. Press **II** key to write the adjustment value. Item No. will change to 763.

**5-4-3. Vc PWM Duty (H) adjustment method**

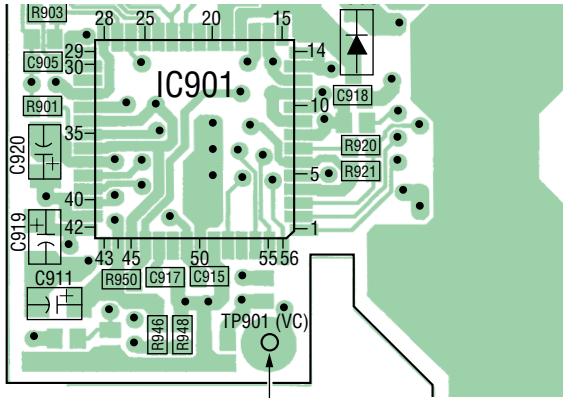
1. Set the Manual mode and set the item No. to 763.

LCD display

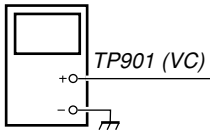


2. Connect a digital voltmeter to TP901(VC) on the main board and adjust  $\left[ \begin{smallmatrix} + \\ - \end{smallmatrix} \right]$  key and  $\left[ \begin{smallmatrix} - \\ + \end{smallmatrix} \right]$  key on the remote control. Adjustment value:2.75V Standard value:2.735 to 2.765V

**MAIN BOARD (SIDE A)**



digital voltmeter

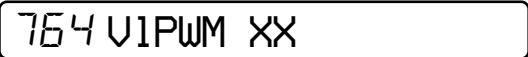


3. Press  $\left[ \begin{smallmatrix} \blacksquare \\ \blacksquare \end{smallmatrix} \right]$  key to write the adjustment value.

**5-4-4. VI PWM Duty adjustment method**

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

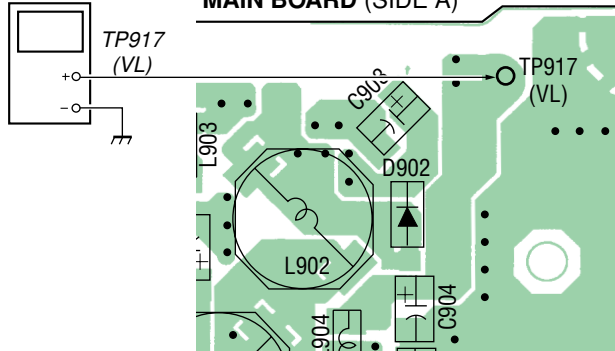
LCD display



2. Connect a digital voltmeter to TP917 (VL) on the main board and adjust  $\left[ \begin{smallmatrix} + \\ - \end{smallmatrix} \right]$  key and  $\left[ \begin{smallmatrix} - \\ + \end{smallmatrix} \right]$  key on the remote control. Adjustment value:2.23V Standard value:2.22 to 2.235V

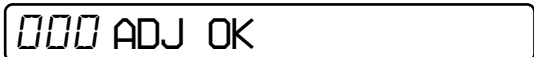
digital voltmeter

**MAIN BOARD (SIDE A)**



3. Press  $\left[ \begin{smallmatrix} \blacksquare \\ \blacksquare \end{smallmatrix} \right]$  key to write the adjustment value.

LCD display



**5-4-5. Electrical offset adjustment method**

**Note:** Doing adjustment by the state that a disc does not enter.

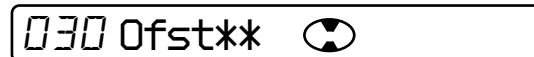
1. Confirm the power voltage is 1.5V.
2. Set to the test mode.
3. Press the  $\left[ \begin{smallmatrix} - \\ - \end{smallmatrix} \right]$  key activates the overall adjustment mode.

LCD display



4. Press the DISPLAY key.

LCD display



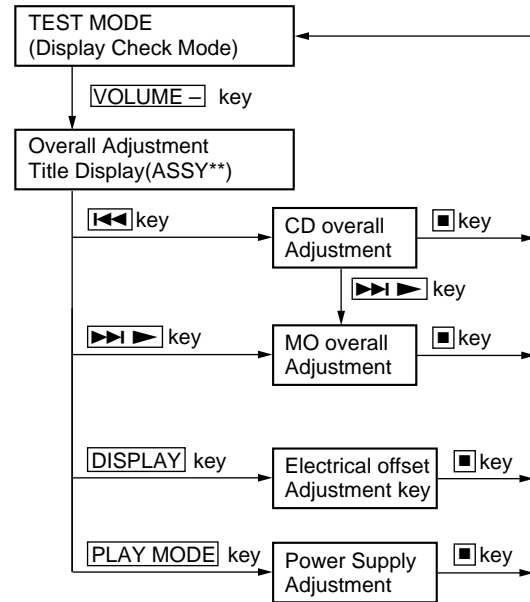
5. If result of electrical offset adjustment is OK, the following display appears.

LCD display



**5-5. OVERALL ADJUSTMENT MODE**

**5-5-1. Overall adjustment mode structure**

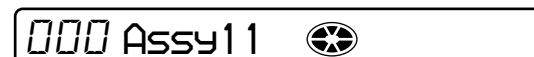


Note: The overall adjustments should be always performed in the sequence of CD → MO adjustments.

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

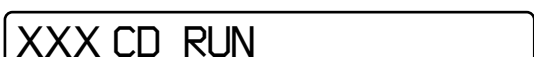
1. Set the TEST MODE and press  $\left[ \begin{smallmatrix} - \\ - \end{smallmatrix} \right]$  key to set the Overall Adjustment mode.

LCD display



2. Insert CD disc in the set, and press  $\left[ \begin{smallmatrix} \leftarrow \\ \leftarrow \end{smallmatrix} \right]$  key to set the Overall CD Adjustment mode. Automatic adjustments are made.

LCD display



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

- 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.

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

LCD display

XXX CD OK

- 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.

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

LCD display

000 XXX NG

XXX: NG item No.

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

LCD display


000 MO OK

### 5-5-3.Resume clear method

- Setting the testmode.
- Set the Manual mode and set the item No.043(RESUME Clear).

LCD display

043 Resume CC

- Press the  key.

LCD display

043 Res \*\*\*

After reset is completed

LCD display

043 Res Clr

### 5-5-3. 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	

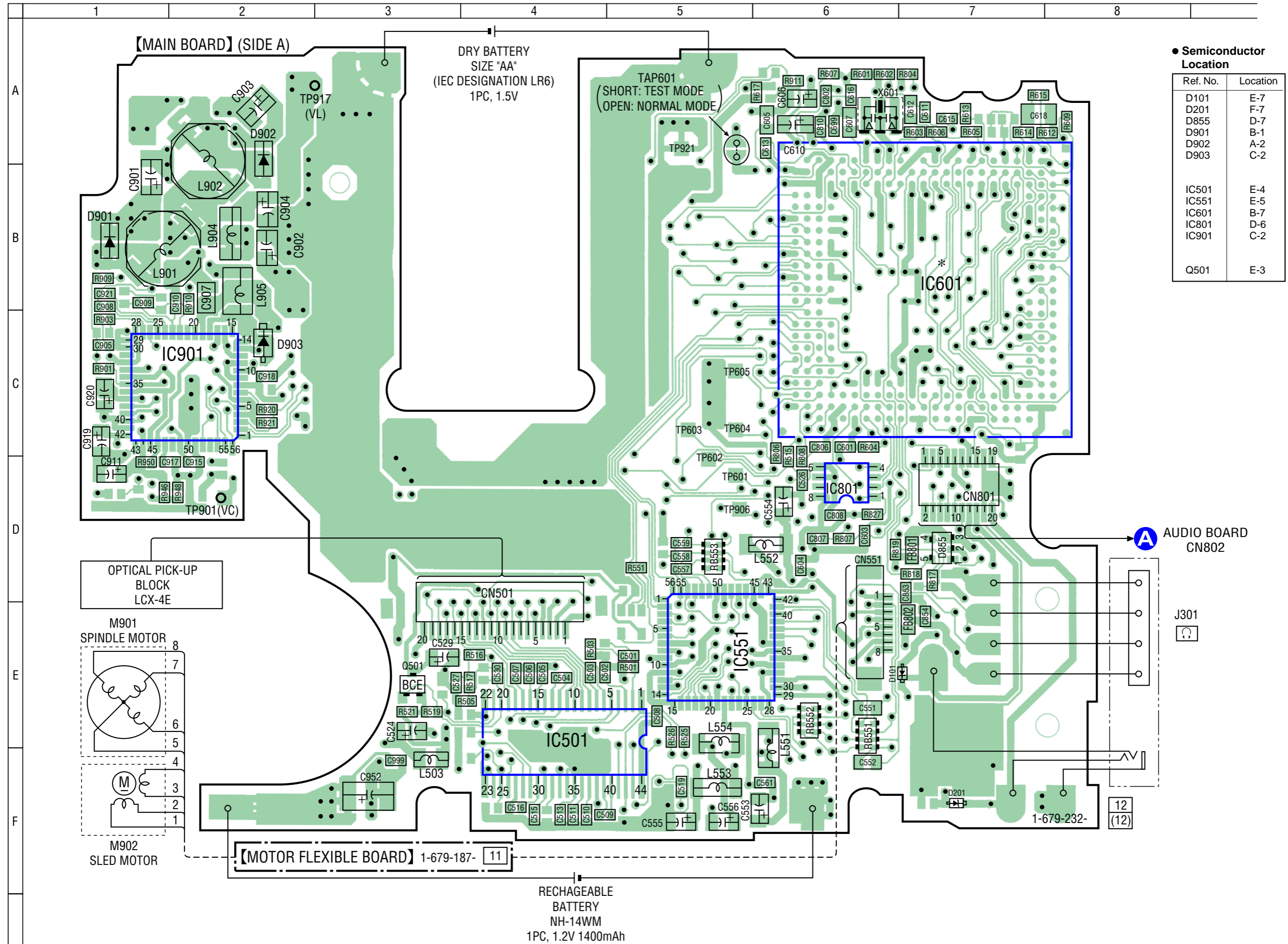
#### 3. Overall MO adjustment items

Item No.	Contents
761	VC,VR power voltage High/Low selection
100	G RV setting
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
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

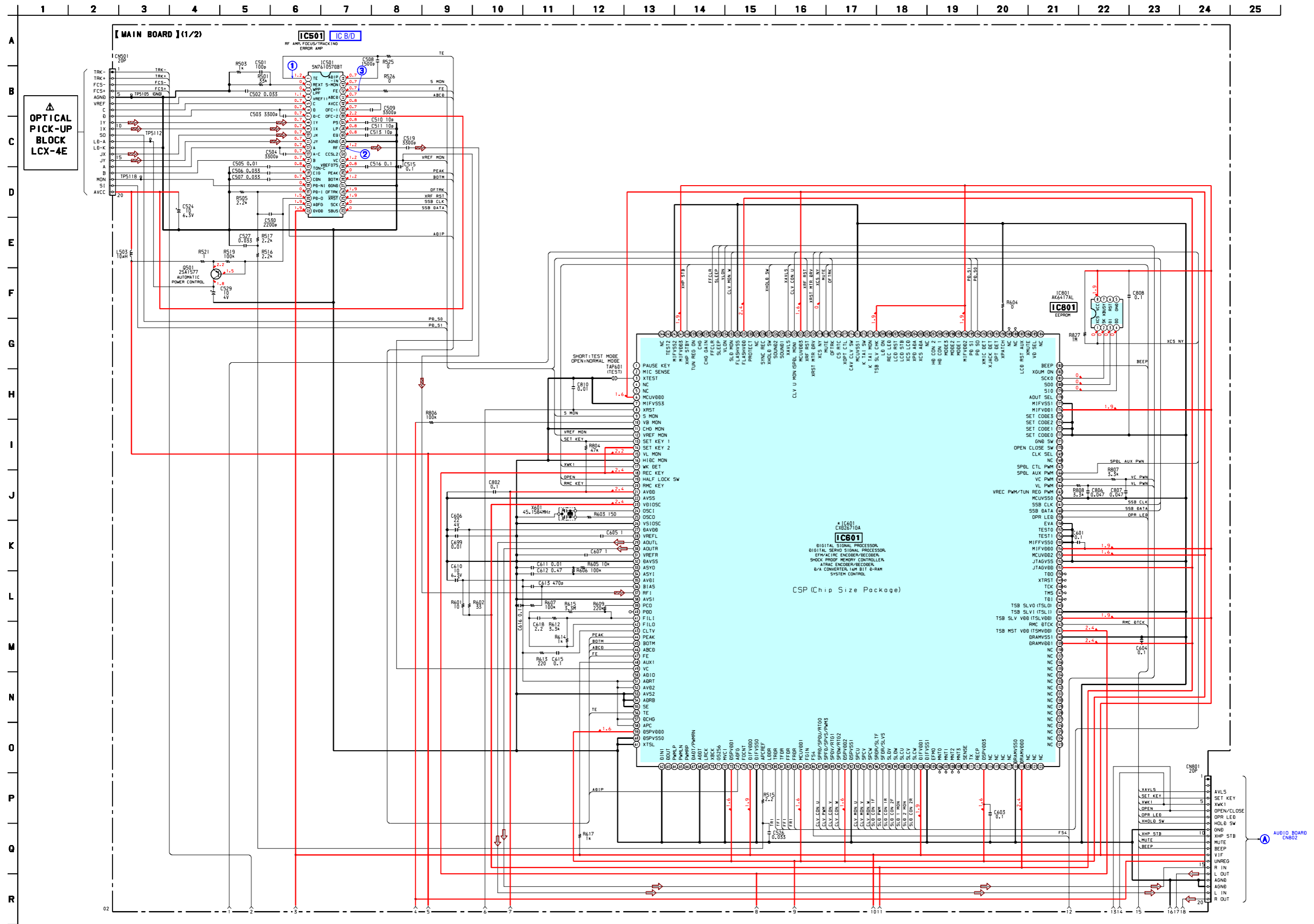






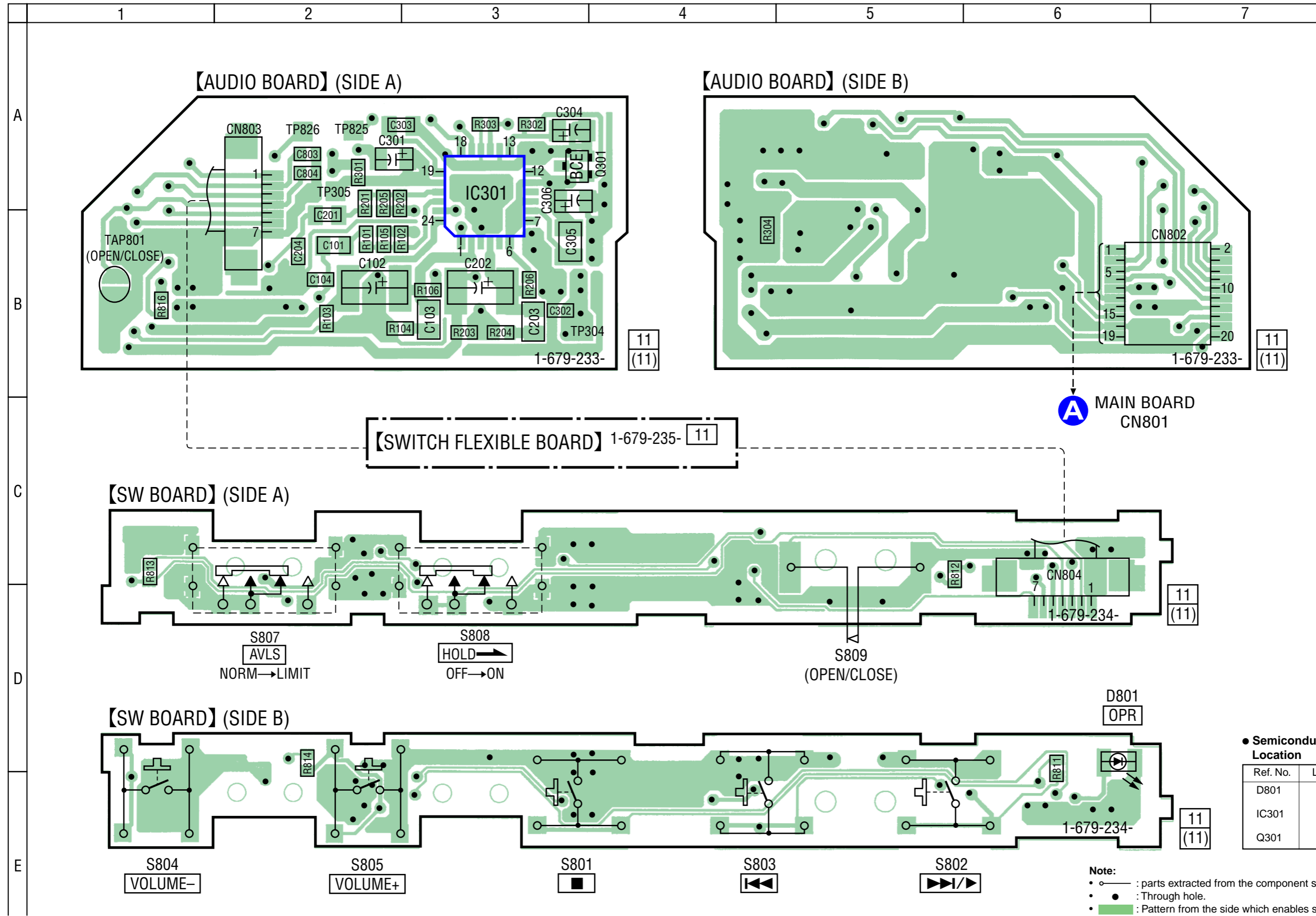


6-4. SCHEMATIC DIAGRAM – MAIN SECTION (1/2) – ● Refer to page 22 for Notes. ● Refer to page 22 – 24 for IC Block Diagrams. ● Refer to page 22 for Waveforms.





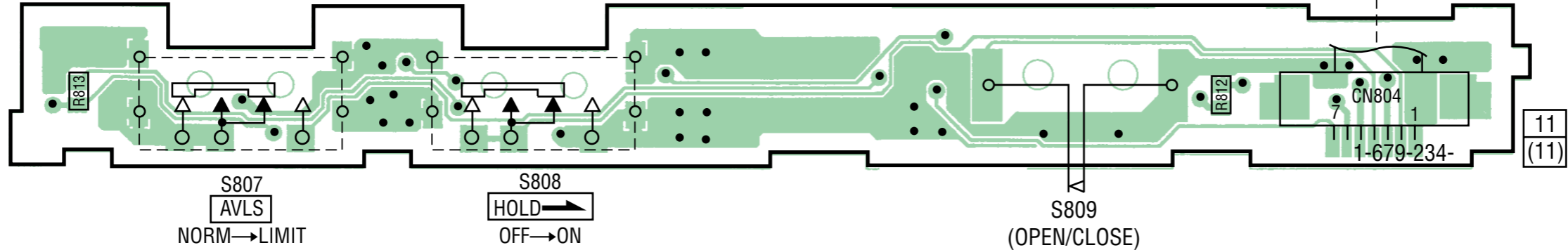




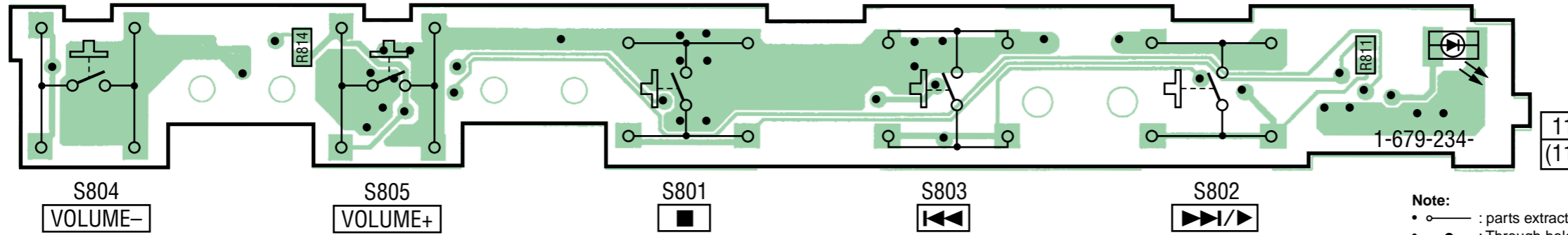
【SWITCH FLEXIBLE BOARD】 1-679-235- 11

**A** MAIN BOARD  
CN801

【SW BOARD】 (SIDE A)



【SW BOARD】 (SIDE B)



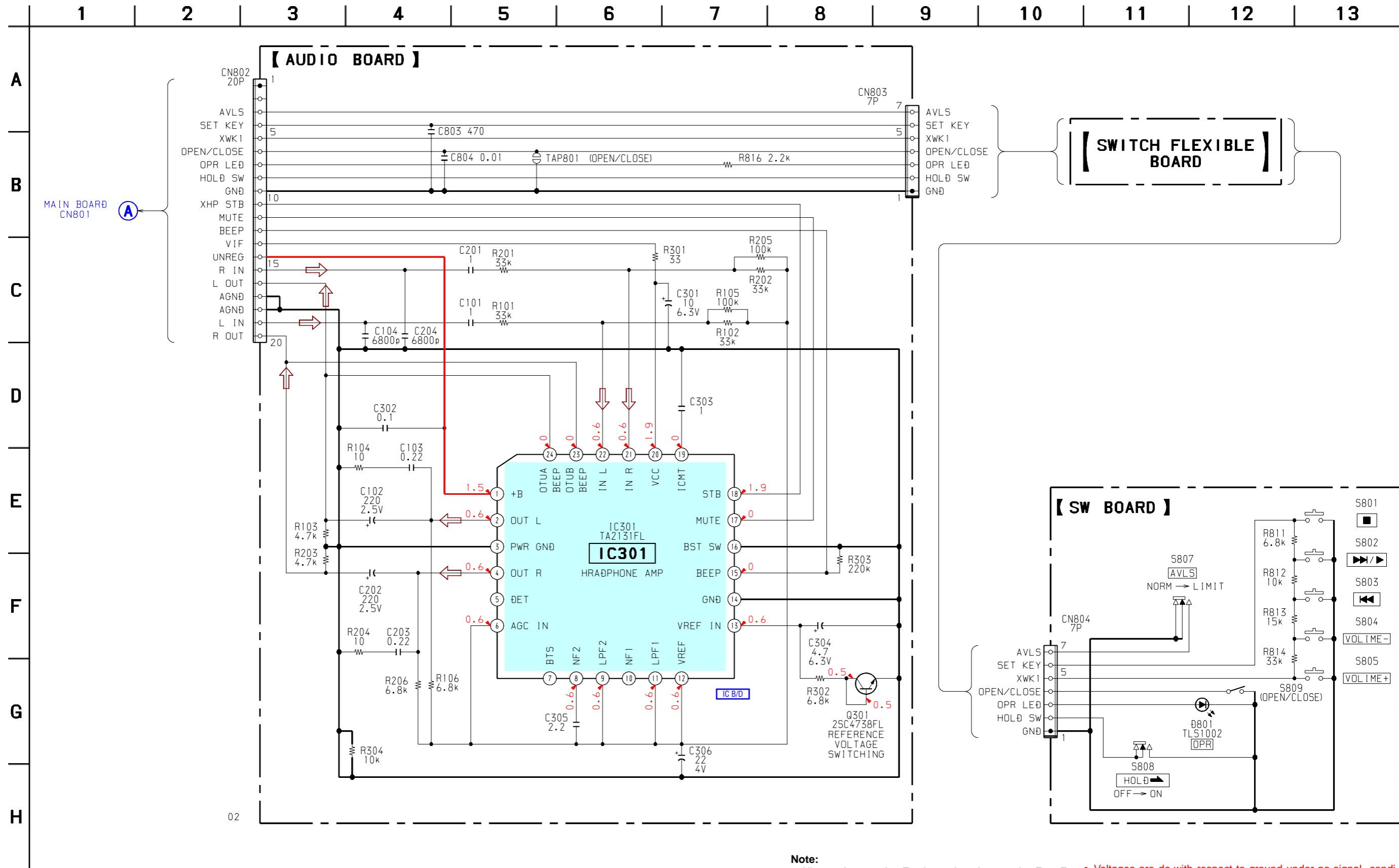
● Semiconductor Location

Ref. No.	Location
D801	D-6
IC301	A-3
Q301	A-3

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

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

6-7. SCHEMATIC DIAGRAM – AUDIO SECTION –



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{pF}$  50 WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
  - — : B+ Line.
  - Power voltage is dc 1.5V and fed with regulated dc power supply from battery terminal.
  - Voltages are dc with respect to ground under no-signal conditions. no mark : PLAY
  - Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

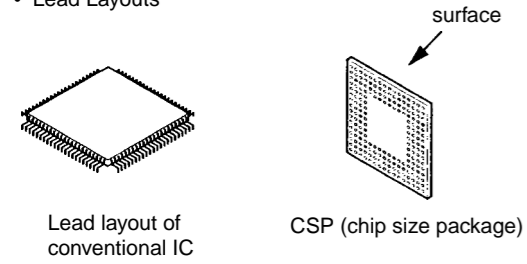
**Note on Printed Wiring Boards: MAIN SECTION**

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

- Main boards is four-layer printed 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**



**Note on Schematic Diagram: MAIN SECTION**

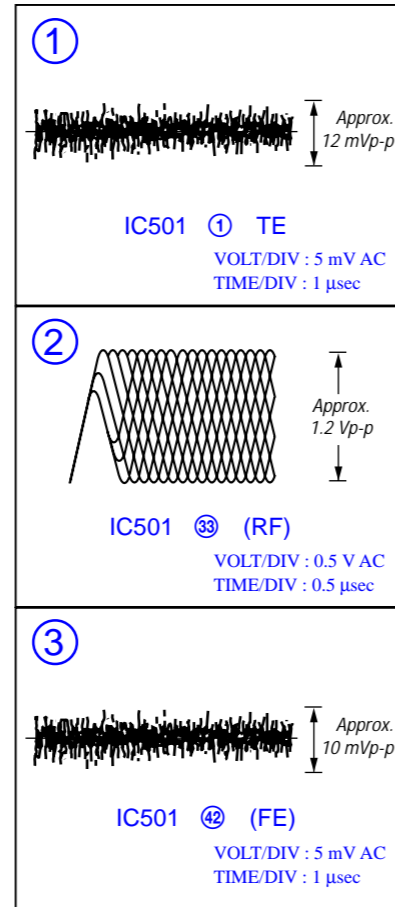
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{ W}$  or less unless otherwise specified.
- $\Delta$  : internal component.

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

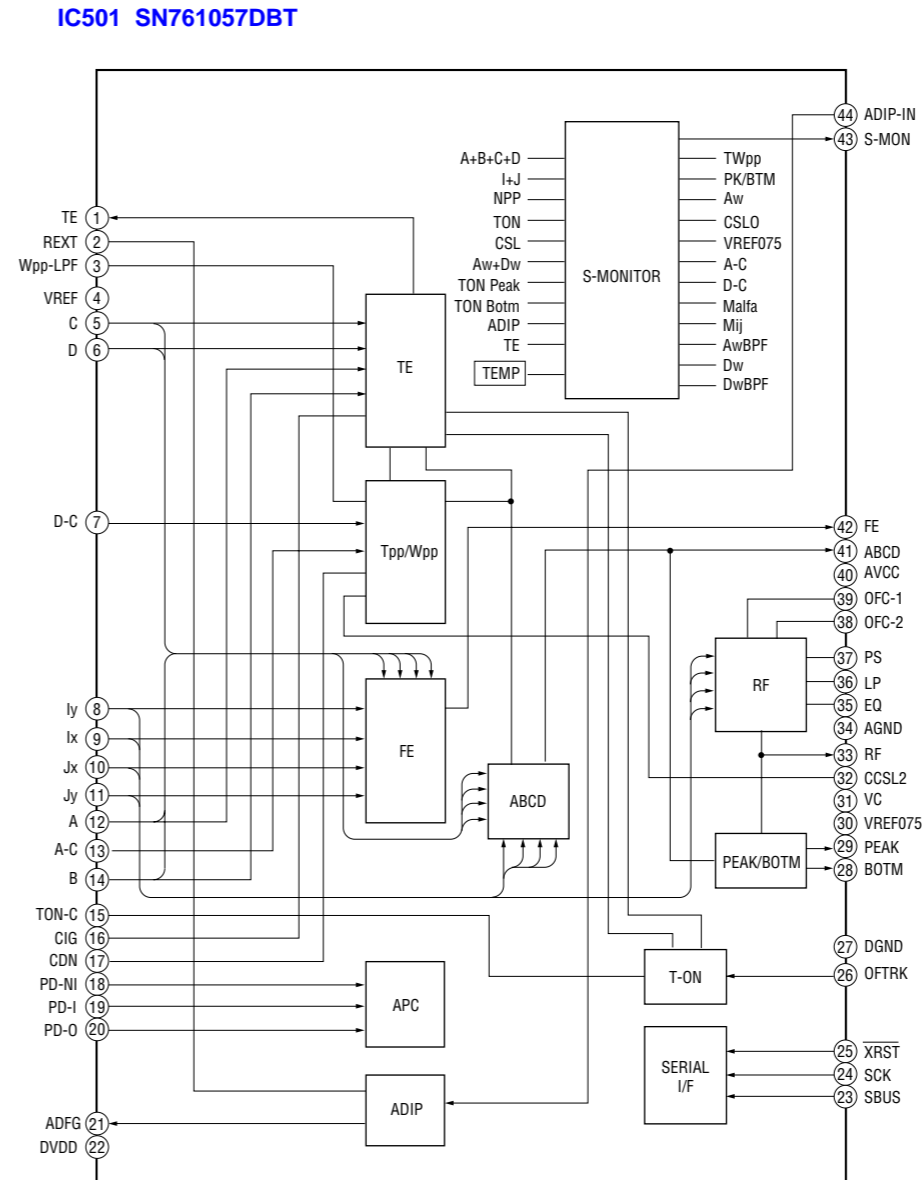
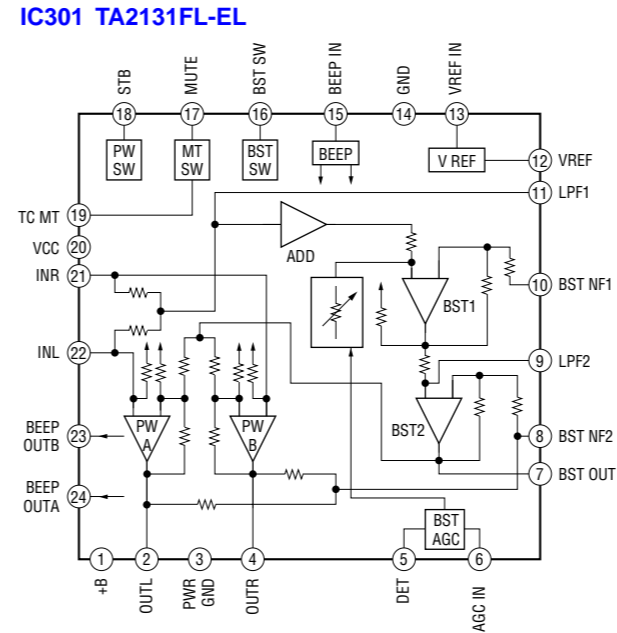
- : B+ Line.
- Power voltage is dc 1.5V and fed with regulated dc power supply from battery terminal.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due 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.

**● WAVEFORMS**

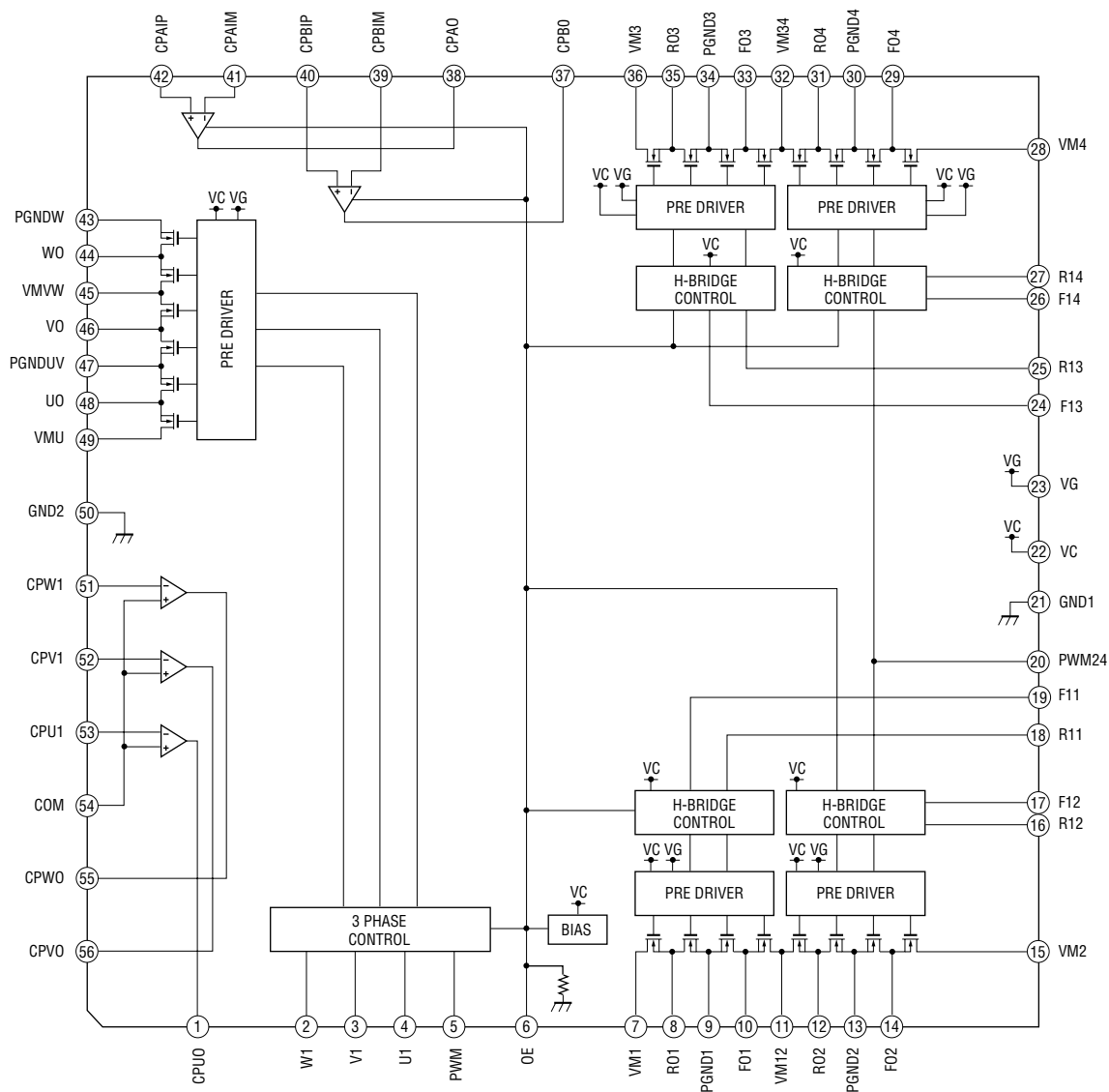


**● IC BLOCK DIAGRAMS**

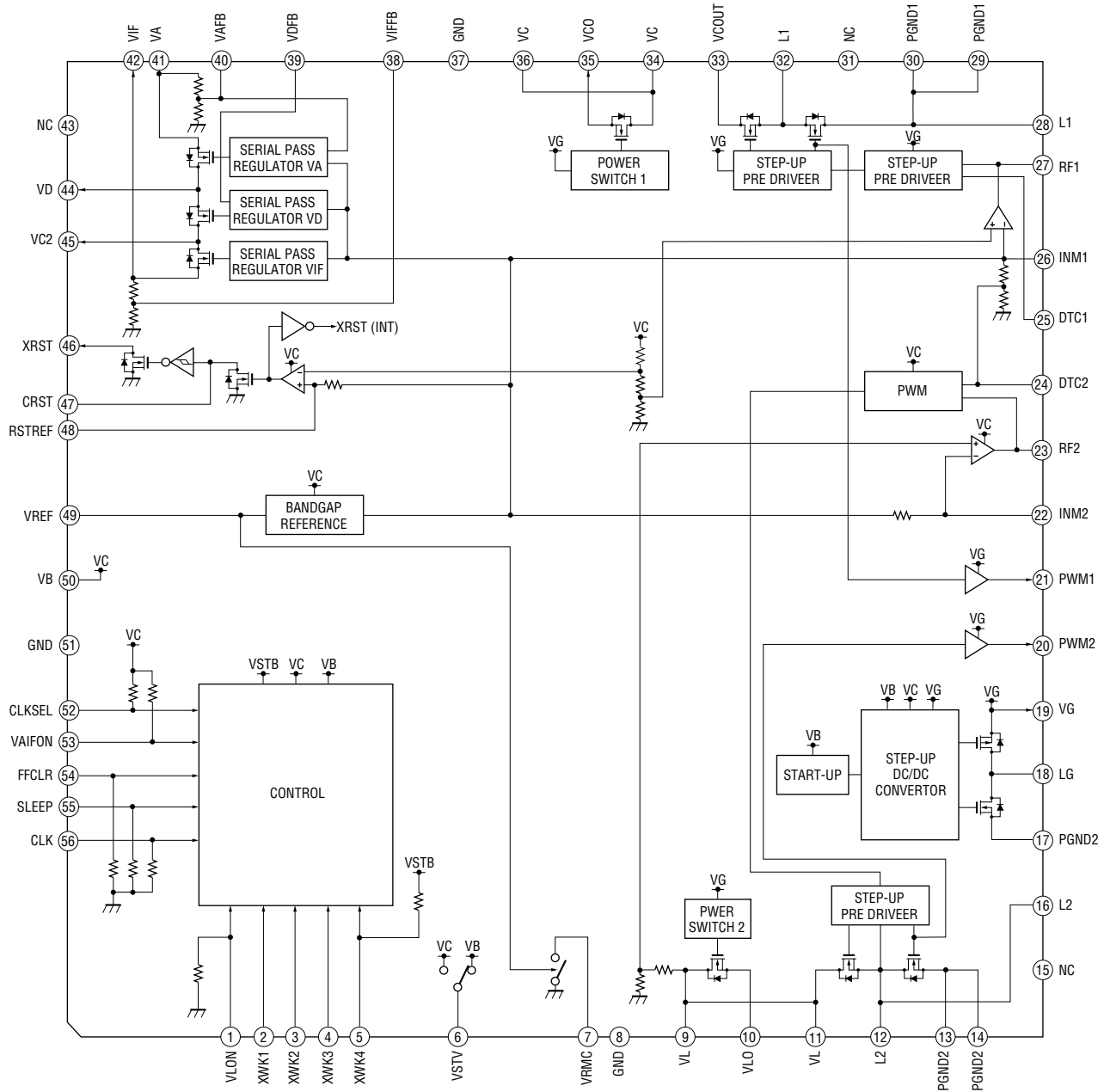




IC551 SC111257FCR2

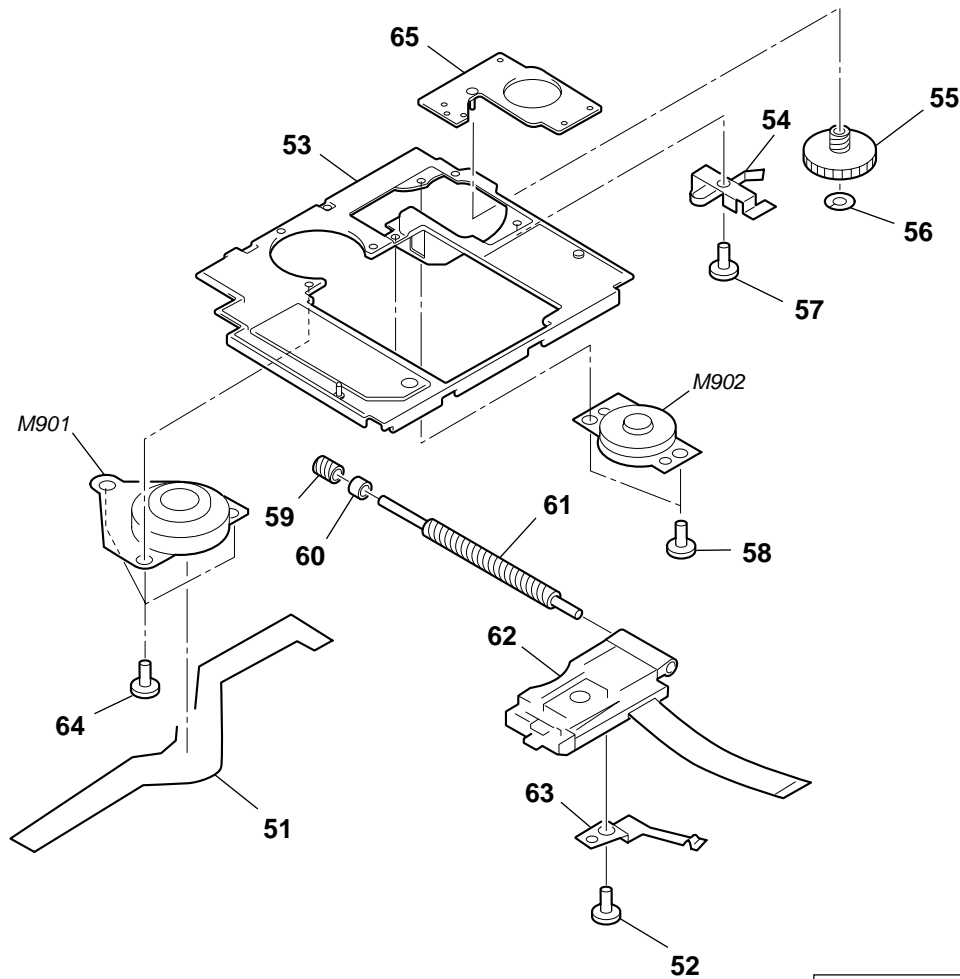


IC901 XPC18A32FCR2





7-2. MECHANISM DECK SECTION  
(MT-MZE900-173)



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	1-679-187-11	MOTOR FLEXIBLE BOARD		60	4-222-204-01	BEARING (N)	
52	3-222-392-01	SCREW (M1.4), TAPPING		61	4-222-203-01	SCREW, LEAD	
53	3-222-394-01	CHASSIS		$\triangle$ 62	X-3379-869-1	OPTICAL PICK-UP ASSY(LCX-4E)	
54	3-224-779-01	SPRING, THRUST DETENT		63	3-222-391-01	SPRING (M), RACK	
55	4-222-216-01	GEAR (SA)		64	3-225-278-11	SCREW, TAPPING	
56	3-338-645-41	WASHER (0.8-2.5)		65	X-3379-529-1	BASE ASSY, MOTOR	
57	4-218-233-13	SCREW (1.7), MI		M901	8-835-706-01	MOTOR, DC SSM18A (SPINDLE)	
58	4-218-233-01	SCREW (1.4), MI		M902	1-763-399-11	MOTOR, DC (SLED)(INCLUDING PULLY GEAR)	
59	4-222-208-01	GEAR (SB)					

## SECTION 8 ELECTRICAL PARTS LIST

**AUDIO**    **MAIN**

**NOTE :**

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

- SEMICONDUCTORS  
In each case, u :  $\mu$  , for example :  
uA.... :  $\mu$  A.... , uPA.... :  $\mu$  PA....  
uPB.... :  $\mu$  PB.... , uPC.... :  $\mu$  PC....  
uPD.... :  $\mu$  PD....
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
HK : Hong Kong  
JEW : Tourist  
FR : French  
KR : Korean

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  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	Ref. No.	Part No.	Description	Remark
*	A-3322-892-A	AUDIO BOARD, COMPLETE *****		R205	1-218-977-11	RES-CHIP 100K 5%	1/16W
		< CAPACITOR >		R206	1-218-963-11	RES-CHIP 6.8K 5%	1/16W
C101	1-125-837-51	CERAMIC CHIP 1uF 10%	6.3V	R301	1-218-935-11	RES-CHIP 33 5%	1/16W
C102	1-135-868-91	TANTAL. CHIP 220uF 20%	2.5V	R302	1-218-963-11	RES-CHIP 6.8K 5%	1/16W
C103	1-115-467-11	CERAMIC CHIP 0.22uF 10%	10V	R303	1-218-981-11	RES-CHIP 220K 5%	1/16W
C104	1-164-942-11	CERAMIC CHIP 0.0068uF 10%	16V				
C201	1-125-837-51	CERAMIC CHIP 1uF 10%	6.3V	R304	1-218-965-11	RES-CHIP 10K 5%	1/16W
				R816	1-218-957-11	RES-CHIP 2.2K 5%	1/16W
				*****			
C202	1-135-868-91	TANTAL. CHIP 220uF 20%	2.5V	*	A-3323-599-A	MAIN BOARD, COMPLETE *****	
C203	1-115-467-11	CERAMIC CHIP 0.22uF 10%	10V			< CAPACITOR >	
C204	1-164-942-11	CERAMIC CHIP 0.0068uF 10%	16V	C501	1-164-931-11	CERAMIC CHIP 100PF 10%	16V
C301	1-117-919-11	TANTAL. CHIP 10uF 20%	6.3V	C502	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
C302	1-107-820-11	CERAMIC CHIP 0.1uF 16V		C503	1-164-940-11	CERAMIC CHIP 0.0033uF 10%	16V
C303	1-125-837-51	CERAMIC CHIP 1uF 10%	6.3V	C504	1-164-940-11	CERAMIC CHIP 0.0033uF 10%	16V
C304	1-125-926-91	TANTAL. CHIP 4.7uF 20%	6.3V	C505	1-164-943-11	CERAMIC CHIP 0.01uF 10%	16V
C305	1-125-838-11	CERAMIC CHIP 2.2uF 10%	6.3V	C506	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
C306	1-127-895-91	TANTAL. CHIP 22uF 20%	4V	C507	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
C803	1-164-935-11	CERAMIC CHIP 470PF 10%	16V	C508	1-164-938-11	CERAMIC CHIP 0.0015uF 10%	16V
				C509	1-164-940-11	CERAMIC CHIP 0.0033uF 10%	16V
C804	1-164-943-11	CERAMIC CHIP 0.01uF 10%	16V	C510	1-164-850-11	CERAMIC CHIP 10PF 0.50PF	16V
		< CONNECTOR >		C511	1-164-850-11	CERAMIC CHIP 10PF 0.50PF	16V
CN802	1-778-595-21	CONNECTOR, BOARD TO BOARD 20P		C513	1-164-850-11	CERAMIC CHIP 10PF 0.50PF	16V
* CN803	1-794-771-21	CONNECTOR, FFC/FPC (ZIF) 7P		C515	1-107-820-11	CERAMIC CHIP 0.1uF	16V
		< IC >		C516	1-125-777-11	CERAMIC CHIP 0.1uF 10%	6.3V
IC301	8-759-598-15	IC TA2131FL-EL		C519	1-164-940-11	CERAMIC CHIP 0.0033uF 10%	16V
		< TRANSISTOR >		C524	1-117-919-11	TANTAL. CHIP 10uF 20%	6.3V
Q301	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).S0		C526	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
		< RESISTOR >		C527	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
R101	1-218-971-11	RES-CHIP 33K 5%	1/16W	C529	1-137-762-11	TANTAL. CHIP 10uF 20%	4V
R102	1-218-971-11	RES-CHIP 33K 5%	1/16W	C530	1-164-939-11	CERAMIC CHIP 0.0022uF 10%	16V
R103	1-218-961-11	RES-CHIP 4.7K 5%	1/16W	C551	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
R104	1-218-929-11	RES-CHIP 10 5%	1/16W	C552	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V
R105	1-218-977-11	RES-CHIP 100K 5%	1/16W	C553	1-127-578-91	TANTAL. CHIP 3.3uF 20%	6.3V
R106	1-218-963-11	RES-CHIP 6.8K 5%	1/16W	C554	1-127-578-91	TANTAL. CHIP 3.3uF 20%	6.3V
R201	1-218-971-11	RES-CHIP 33K 5%	1/16W	C555	1-131-621-91	TANTAL. CHIP 6.8uF 20%	6.3V
R202	1-218-971-11	RES-CHIP 33K 5%	1/16W	C556	1-131-621-91	TANTAL. CHIP 6.8uF 20%	6.3V
R203	1-218-961-11	RES-CHIP 4.7K 5%	1/16W	C557	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
R204	1-218-929-11	RES-CHIP 10 5%	1/16W	C558	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
				C559	1-127-772-81	CERAMIC CHIP 33000PF 10%	10V
				C561	1-107-820-11	CERAMIC CHIP 0.1uF	16V

**MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C601	1-107-820-11	CERAMIC CHIP	0.1uF	16V		< IC >	
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	IC501	8-759-689-67	IC SN761057DBT
C606	1-127-895-91	TANTAL. CHIP	22uF	20% 4V	IC551	8-759-698-62	IC SC111257FCR2
					@ IC601	8-752-410-47	IC CXD2671-201GA
					IC801	8-759-680-85	IC AK6417AL-L
					IC901	8-759-698-61	IC XPC18A32FCR2
C607	1-115-156-11	CERAMIC CHIP	1uF	10V		< JACK >	
C610	1-117-919-11	TANTAL. CHIP	10uF	20% 6.3V	J301	1-793-288-61	JACK (♁)
C611	1-164-943-11	CERAMIC CHIP	0.01uF	10% 16V		< COIL >	
C612	1-125-891-11	CERAMIC CHIP	0.47uF	10% 10V			
C613	1-164-935-11	CERAMIC CHIP	470PF	10% 16V			
C615	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V			
C616	1-107-820-11	CERAMIC CHIP	0.1uF	16V			
C618	1-125-838-11	CERAMIC CHIP	2.2uF	10% 6.3V	L503	1-469-570-21	INDUCTOR 10uH
C699	1-164-943-11	CERAMIC CHIP	0.01uF	10% 16V	L551	1-410-389-31	INDUCTOR CHIP 47uH
C802	1-107-820-11	CERAMIC CHIP	0.1uF	16V	L552	1-410-389-31	INDUCTOR CHIP 47uH
					L553	1-414-400-41	INDUCTOR 22uH
					L554	1-414-400-41	INDUCTOR 22uH
C806	1-119-923-81	CERAMIC CHIP	0.047uF	10% 10V			
C807	1-119-923-81	CERAMIC CHIP	0.047uF	10% 10V			
C808	1-107-820-11	CERAMIC CHIP	0.1uF	16V	L901	1-419-258-21	INDUCTOR 68uH
C810	1-164-943-11	CERAMIC CHIP	0.01uF	10% 16V	L902	1-419-646-21	INDUCTOR 47uH
C851	1-107-820-11	CERAMIC CHIP	0.1uF	16V	L904	1-414-398-11	INDUCTOR 10uH
					L905	1-414-404-41	INDUCTOR 100uH
C853	1-164-942-11	CERAMIC CHIP	0.0068uF	10% 16V		< TRANSISTOR >	
C854	1-107-820-11	CERAMIC CHIP	0.1uF	16V			
C901	1-137-739-91	TANTALUM	22uF	20% 6.3V	Q501	8-729-922-10	TRANSISTOR 2SA1577-QR
C902	1-127-895-91	TANTAL. CHIP	22uF	20% 4V		< RESISTOR >	
C903	1-135-989-91	TANTAL. CHIP	47uF	20% 6.3V			
C904	1-127-895-91	TANTAL. CHIP	22uF	20% 4V			
C905	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R501	1-218-971-11	RES-CHIP 33K 5% 1/16W
C907	1-109-982-11	CERAMIC CHIP	1uF	10% 10V	R503	1-218-953-11	RES-CHIP 1K 5% 1/16W
C908	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R505	1-208-691-11	METAL CHIP 2.2K 0.5% 1/16W
C909	1-164-943-11	CERAMIC CHIP	0.01uF	10% 16V	R515	1-208-691-11	METAL CHIP 2.2K 0.5% 1/16W
					R516	1-208-691-11	METAL CHIP 2.2K 0.5% 1/16W
C910	1-164-937-11	CERAMIC CHIP	0.001uF	10% 16V	R517	1-208-691-11	METAL CHIP 2.2K 0.5% 1/16W
C911	1-127-895-91	TANTAL. CHIP	22uF	20% 4V	R519	1-218-977-11	RES-CHIP 100K 5% 1/16W
C915	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R521	1-242-967-81	RES-CHIP 1 5% 1/16W
C917	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R525	1-218-990-11	SHORT 0
C918	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R526	1-218-990-11	SHORT 0
C919	1-127-895-91	TANTAL. CHIP	22uF	20% 4V	R551	1-218-990-11	SHORT 0
C920	1-127-895-91	TANTAL. CHIP	22uF	20% 4V	R601	1-218-929-11	RES-CHIP 10 5% 1/16W
C921	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R602	1-218-935-11	RES-CHIP 33 5% 1/16W
C952	1-127-569-91	TANTAL. CHIP	100uF	20% 4V	R603	1-218-943-11	RES-CHIP 150 5% 1/16W
C999	1-125-777-11	CERAMIC CHIP	0.1uF	10% 6.3V	R604	1-218-990-11	SHORT 0
					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
					R617	1-218-953-11	RES-CHIP 1K 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
						< CONNECTOR >	
* 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 >	
D101	8-719-056-58	DIODE MAZS027008SO					
D201	8-719-056-58	DIODE MAZS027008SO					
D855	8-719-077-43	DIODE MAZZ068H01SO					
D901	8-719-081-33	DIODE MA2YD1500LSO					
D902	8-719-081-33	DIODE MA2YD1500LSO					
D903	8-719-420-51	DIODE MA729					
						< FERRITE BEAD >	
FB801	1-414-228-11	INDUCTOR	0uH				
FB802	1-414-228-11	INDUCTOR	0uH				

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

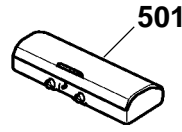
Ref. No.	Part No.	Description	Remark
R901	1-218-969-11	RES-CHIP 22K 5%	1/16W
R903	1-218-957-11	RES-CHIP 2.2K 5%	1/16W
R909	1-218-965-11	RES-CHIP 10K 5%	1/16W
R910	1-218-965-11	RES-CHIP 10K 5%	1/16W
R911	1-218-990-11	SHORT 0	
R920	1-208-707-11	METAL CHIP 10K 0.5%	1/16W
R921	1-218-979-11	RES-CHIP 150K 5%	1/16W
R946	1-208-715-11	METAL CHIP 22K 0.5%	1/16W
R948	1-208-939-11	METAL CHIP 150K 0.5%	1/16W
R950	1-218-953-11	RES-CHIP 1K 5%	1/16W
< COMPOSITION CIRCUIT BLOCK >			
RB551	1-233-959-21	RES, NETWORK (CHIP TYPE) 470	
RB552	1-233-973-11	RES, NETWORK (CHIP TYPE) 100K	
RB553	1-233-967-11	RES, NETWORK (CHIP TYPE) 10K	
< VIBRATOR >			
X601	1-795-002-21	VIBRATOR, CERAMIC (45.1584MHz)	
*****			
*	A-3322-889-A	SW BOARD, COMPLETE	
*****			
< CONNECTOR >			
* CN804	1-794-771-21	CONNECTOR, FFC/FPC (ZIF) 7P	
< DIODE >			
D801	8-719-061-82	LED TLSU1002(TPX1,SONY) (OPR)	
< 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
< SWITCH >			
S801	1-786-033-21	SWITCH, TACTILE (■)	
S802	1-786-033-21	SWITCH, TACTILE (▶▶1/▶)	
S803	1-786-033-21	SWITCH, TACTILE (◀◀)	
S804	1-786-033-21	SWITCH, TACTILE (VOLUME-)	
S805	1-786-033-21	SWITCH, TACTILE (VOLUME+)	
S807	1-572-922-11	SWITCH, SLIDE (AVLS)	
S808	1-572-922-11	SWITCH, SLIDE (HOLD →)	
S809	1-771-483-61	SWITCH, PUSH (1 KEY) (OPEN/CLOSE)	
*****			

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		*****	
7	1-679-235-11	SWITCH FLEXIBLE BOARD	
51	1-679-187-11	MOTOR FLEXIBLE BOARD	
△ 62	X-3379-869-1	OPTICAL PICK-UP ASSY(LCX-4E)	
M901	8-835-706-01	MOTOR, DC SSM18A (SPINDLE)	
M902	1-763-399-11	MOTOR, DC (SLED)(INCLUDING PULLY GEAR)	
*****			

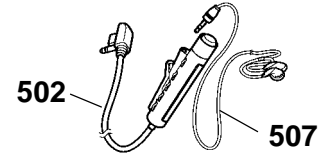


Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS *****			
501	1-251-895-21	BATTERY CASE	
502	1-476-395-11	REMOTE CONTROL UNIT	
△ 503	1-528-580-21	BATTERY CHARGER (BC-7HT) (E33,JEW)	
△ 503	1-528-865-12	BATTERY CHARGER (BC-9HY2) (AEP,FR)	
△ 503	1-528-866-11	BATTERY CHARGER (BC-9HP2) (UK,HK)	
△ 503	1-528-891-12	CHARGER, BATTERY (BC-9HU2) (US,Canadian)	
△	1-569-007-11	ADAPTOR, CONVERSION 2P (E33,JEW)	
504	1-756-120-11	BATTERY, NICKEL HYDROGEN (JEW)	
504	1-756-120-21	BATTERY, NICKEL HYDROGEN (US,Canadian,AEP,FR,UK,E33,HK,KR)	
505	3-008-521-01	CASE, BATTERY CHARGE (US,Canadian,AEP,FR,UK,E33,HK,KR)	
505	3-008-521-21	CASE, BATTERY CHARGE (JEW)	
	3-021-018-11	LABEL, FRANCE (FR)	
	3-220-299-12	MANUAL, INSTRUCTION (ENGLISH, SPANISH) (US,Canadian,AEP,UK,E33,HK,JEW)	
	3-220-299-22	MANUAL, INSTRUCTION (FRENCH, GERMAN) (Canadian,AEP,FR,JEW)	
	3-220-299-31	MANUAL, INSTRUCTION (DUTCH, SWEDISH) (AEP)	
	3-220-299-41	MANUAL, INSTRUCTION (ITALIAN, PORTUGUESE) (AEP)	
	3-220-299-51	MANUAL, INSTRUCTION (FINNISH, RUSSIAN) (AEP)	
	3-220-299-62	MANUAL, INSTRUCTION (TRADITIONAL CHINESE, JAPANESE, KOREAN) (E33,HK,JEW)	
	3-220-299-71	MANUAL, INSTRUCTION (KOREAN, ENGLISH) (KR)	
506	3-220-749-01	CASE, CARRYING (Canadian,AEP,FR,UK,E33,HK,KR,JEW)	
507	8-953-278-90	HEADPHONE MDR-A34SP (US)	
507	8-953-304-91	RECEIVER,EAR MDR-E805SP (Canadian,AEP,FR,UK,E33,HK,KR,JEW)	

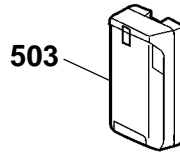
• Dry Battery Case



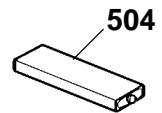
• Headphones/earphones with a remote control



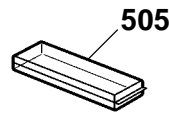
• Battery Charger



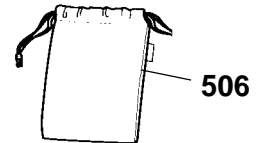
• Rechargeable Battery



• Rechargeable Battery Carrying Case



• Carrying Pouch



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

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



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