

MZ-E30

SERVICE MANUAL



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

Model Name Using Similar Mechanism	NEW
Mini Disc Mechanism Type	MT-MZE30-126
Tape Transport Mechanism Type	ODX-1

SPECIFICATIONS

System

Audio playing system

MiniDisc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength: $\lambda = 790 \text{ nm}$

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 lens surface on the optical pick-up block.)

Revolutions

400 rpm to 900 rpm (CLV)

Error correction

Advanced Cross Interleave Reed Solomon Code (ACIRC)

Sampling frequency

44.1 kHz

Coding

Adaptive Transform Acoustic Coding (ATRAC)

Modulation system

EFM (Eight to Fourteen Modulation)

Number of channels

2 stereo channels

1 monaural channel

Frequency response

20 to 20,000 Hz $\pm 3 \text{ dB}$

Wow and Flutter

Below measurable limit

Outputs

Headphones: stereo mini-jack, maximum output level 5 mW + 5 mW, load impedance 16 ohm

General

Power requirements

Sony AC Power Adaptor (not supplied) connected at the DC IN 1.5 V jack: 100-240V AC, 50/60 Hz

One size AA (LR6) battery (supplied)

Nickel metal hydride rechargeable battery NH-9WM(N) (supplied)

Battery operation time

See "Using on a dry battery"

Dimensions

Approx. 82 x 25.8 x 79.6 mm (w/h/d)

Mass

Approx. 120 g the player only

Approx. 160 g incl. a premastered MD, and a Nickel metal hydride rechargeable battery NH-9WM(N)

Supplied accessories

Battery Charger BC-7HT (1)

Rechargeable battery NH-9WM (N) (1)

Rechargeable battery carrying case (1)

Headphones with a remote controller (1)

Battery case (1)

Carrying case (1)

Ear pad (2)

Size AA (LR6) battery (1)

US and foreign patents licensed from Dolby Laboratories Licensing Corporation.

Design and specifications are subject to change without notice.

PORTABLE MINI DISC PLAYER

SONY®



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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

TABLE OF CONTENTS

1. GENERAL

Playing an MD right away !	3
Various ways of playback	3
Power sources	3
Additional information	3

2. DISASSEMBLY

2-1. BOTTOM PANEL (S) ASSY	4
2-2. UPPER PANEL (S) ASSY	4
2-3. MAIN BOARD	5
2-4. BELT ASSY	6
2-5. CHASSIS (BELT) ASSY	6
2-6. OPTICAL PICK-UP BLOCK	7

3. TEST MODE

8

4. ELECTRICAL ADJUSTMENTS

11

5. DIAGRAMS

5-1. IC PIN DESCRIPTION	13
5-2. BLOCK DIAGRAM	15
5-3. PRINTED WIRING BOARD	17
5-4. SCHEMATIC DIAGRAM	21
5-5. SCHEMATIC DIAGRAM	25
5-6. PRINTED WIRING BOARD	29

6. EXPLODED VIEWS

6-1. PANEL SECTION	37
6-2. MD SECTION	38

7. ELECTRICAL PARTS LIST

39

Playing an MD right away!

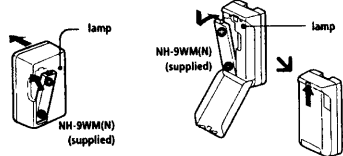
Before Using the supplied rechargeable battery for the first time, charge it. Other choices are dry batteries and house current (see "Power sources").

Charge the rechargeable battery.

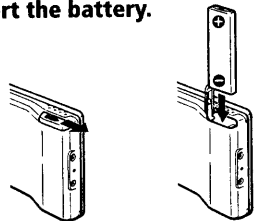
Install the supplied rechargeable battery NH-9WM(N) to the supplied battery charger with correct polarity. And connect to wall outlet.

The charger lamp goes off when the charging has finished.

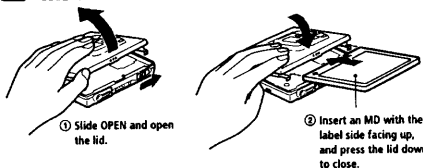
- U.S.A., Canadian, European & Australian model (Full charging takes 60 minutes.)
- Other countries & World model (Full charging takes 120 minutes.)



2 Insert the battery.

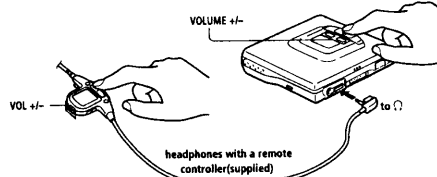


3 Insert an MD.



4 Play an MD.

- Press **▶**. The player starts to play the first track. If you use remote controller, a short beep sounds in the headphones.
- Press **VOLUME +/-** (VOL +/- on the remote controller) to adjust the volume. You can check the volume in the display of the remote controller.



To stop play, press **■**.

To	Press (beeps in the headphones)
Pause	 (Continuous short beeps) Press again to resume play.
Find the beginning of the current track	◀ or ▶ side of ▶ on the remote controller once (Three short beeps)
Find the beginning of the next track	▶ or ▶ side of ▶ on the remote controller once (Two short beeps)
Go backwards while playing	keep pressing ◀ or ▶ side of ▶ on the remote controller
Go forward while playing	keep pressing ▶ or ▶ side of ▶ on the remote controller
Remove the MD	■ and open the lid ▶

If the play does not start
Make sure the player is not locked. See "To lock the controls".

For models supplied with the AC plug adaptor
If the battery charger does not fit the wall outlet, use the AC plug adaptor.

Display window while playing back

- Display window on the remote controller
- Track name* or elapsed time of the track being played



Track number

- Display window on the player



Track number

- To go backwards or forward quickly without listening, press **■** and keep pressing **◀** or **▶**.
- Once you open the lid, the point to start play will change to the beginning of the first track.
- Appears only with MDs that have been electronically labeled.

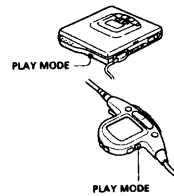
Note
Don't slide OPEN during playback. If you do, the lid will open and playback will stop.

The player automatically switches to play the stereo or monaural sound according to the recorded sound.

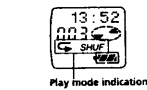
▶ Various ways of playback

Playing tracks repeatedly

You can play tracks repeatedly in three ways—all repeat, single repeat, and shuffle repeat.



Press **PLAY MODE** while the player is playing an MD. Each time you press **PLAY MODE**, the play mode indication changes as follows.

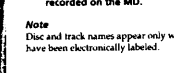
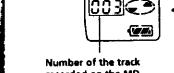
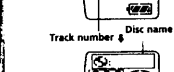
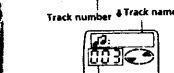
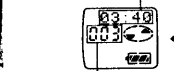
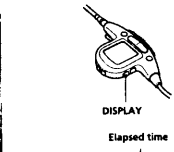


Play mode indication

- (none) (normal play)
All the tracks are played once.
- ▶** (all repeat)
All the tracks are played repeatedly.
- ▶** (single repeat)
A single track is played repeatedly.
- ▶** SHUFF (shuffle repeat)
All the tracks are played repeatedly in random order.

Tips on playback

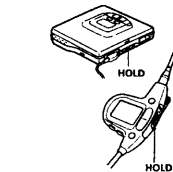
To know the track name and time
Press **DISPLAY** while the player is playing an MD. Each time you press **DISPLAY**, the display changes as follows.



Note
Disc and track names appear only with MDs that have been electronically labeled.

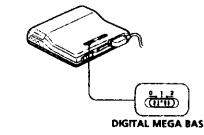
To lock the controls

To prevent the buttons from being accidentally operated when you carry the player, use this function.



Slide **HOLD** in the direction of the **▶**. On the player, slide **HOLD** to lock the controls of the player.

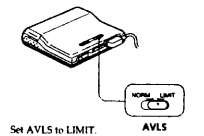
To emphasize bass (DIGITAL MEGA BASS)
The **DIGITAL MEGA BASS** function intensifies low frequency sound for richer quality audio reproduction.



Slide **DIGITAL MEGA BASS**. The **DIGITAL MEGA BASS** to cancel the effect, set **DIGITAL MEGA BASS** to 0.

Note
If the sound is distorted when emphasizing bass, turn down the volume.

To protect your hearing (AVLS)
The **AVLS (Automatic Volume Limiter System)** function keeps down the maximum volume to protect your ears.



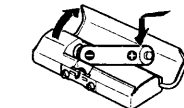
Set **AVLS** to **LIMIT**. The volume is kept at a moderate level, even if you try to turn the volume above the limited level.

▶ Power sources

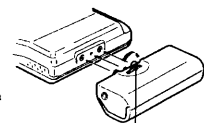
You can use the player on a dry battery, house current, or a Ni-MH rechargeable battery.

Using on a dry battery

- Insert one size AA (LR6) alkaline battery (supplied with the World model only) into the supplied battery case, and close the lid.



- Attach the battery case to the player.



Turn to **LOCK** side. To release the battery case, turn to **RELEASE**.

When to replace or charge the batteries

You can check the battery condition with the battery indication displayed while using the player.

- Used batteries
- Weak batteries. Replace all the batteries
- The batteries have gone out. "LoBATT" flashes in the display, and the power goes off.

Battery life*

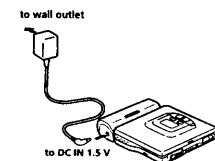
Batteries	Playback
Ni-MH rechargeable battery (NH-9WM(N))	Approx. 4 hours
One size AA (LR6) alkaline battery	Approx. 5 hours
One size AA (LR6) alkaline battery and a Ni-MH rechargeable battery (NH-9WM(N))	Approx. 10 hours

* The battery life may be shorter due to operating conditions and the temperature of the location.

Using on house current

Before using the player, remove the rechargeable battery if it is installed.

- Attach the supplied battery case to the player.
- Connect the **AC-E15 L** AC power adaptor (not supplied) to the **DC IN 1.5V** jack of the battery case.
- Connect the AC power adaptor to wall outlet.



Note
The battery indication **■** is displayed while using the AC power adaptor.

▶ Additional information

Precautions

On safety

- Do not put any foreign objects in the **DC IN 1.5V** jack.

On power sources

- Use house current. Use the AC power adaptor **AC-E15 L** (not supplied). Do not use any other AC power adaptor since it may cause the player to malfunction.
- For use in your house. Use the AC power adaptor **AC-E15 L** (not supplied). Do not use any other AC power adaptor since it may cause the player to malfunction.



Polarity of the plug

- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use this player for a long time, be sure to disconnect the power supply (AC power adaptor, dry batteries, rechargeable batteries, or car battery cord). To remove the AC power adaptor from the wall outlet, grasp the adaptor plug itself; never pull the cord.
- For use in the car. Use the **CPA-9** car connecting pack and the **DCC-E15** car battery cord (not supplied).

On charging

- Be sure to use the supplied battery charger.
- Charging time may vary depending on the battery condition.
- When you use the battery for the first time or after a long period of disuse, the battery life may be shorter. In this case, charge and discharge the battery several times. The battery life will be restored.
- If the rechargeable battery capacity becomes half the normal life, replace it with a new one.

On heat build-up

- Heat may build up in the player if it is used for an extended period of time. In this case, leave the player to cool down.

On installation

- Never use the player where it will be subjected to extremes of light, temperature, moisture or vibration.
- Never wrap the player in anything when it is being used with the AC power adaptor. Heat build-up in the player may cause malfunction or injury.

On the headphones

- Do not use headphones while driving, cycling, or operating any motorized vehicle. It may create a traffic hazard and is illegal in many areas. It can also be potentially dangerous to play your player at high volume while walking, especially at pedestrian crossings. You should exercise extreme caution or discontinue use in potentially hazardous situations.

Preventing hearing damage

- Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Caring for others

- Keep the volume at a moderate level. This will allow you to hear outside sounds and to be considerate of the people around you.

On the MiniDisc cartridge

- Do not break open the shutter.
- Do not place the cartridge where it will be subject to light, temperature, moisture or dust.
- On cleaning
 - Clean the player casing with a soft cloth slightly moistened with water or a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene as it may mar the finish of the casing.
 - Wipe the disc cartridge with a dry cloth to remove dirt.
 - Dust on the lens may prevent the unit from operating properly. Be sure to close the disc compartment lid after inserting and ejecting an MD.

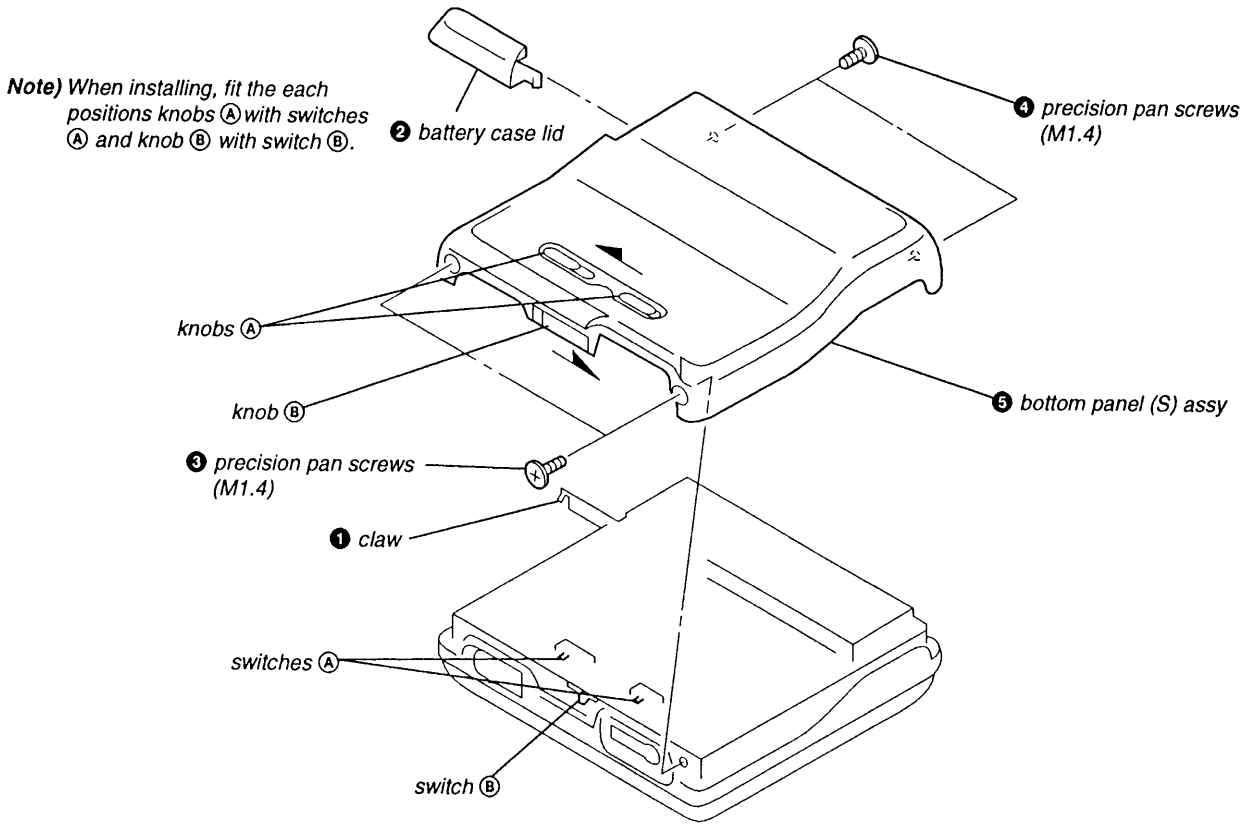
SECTION 2 DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

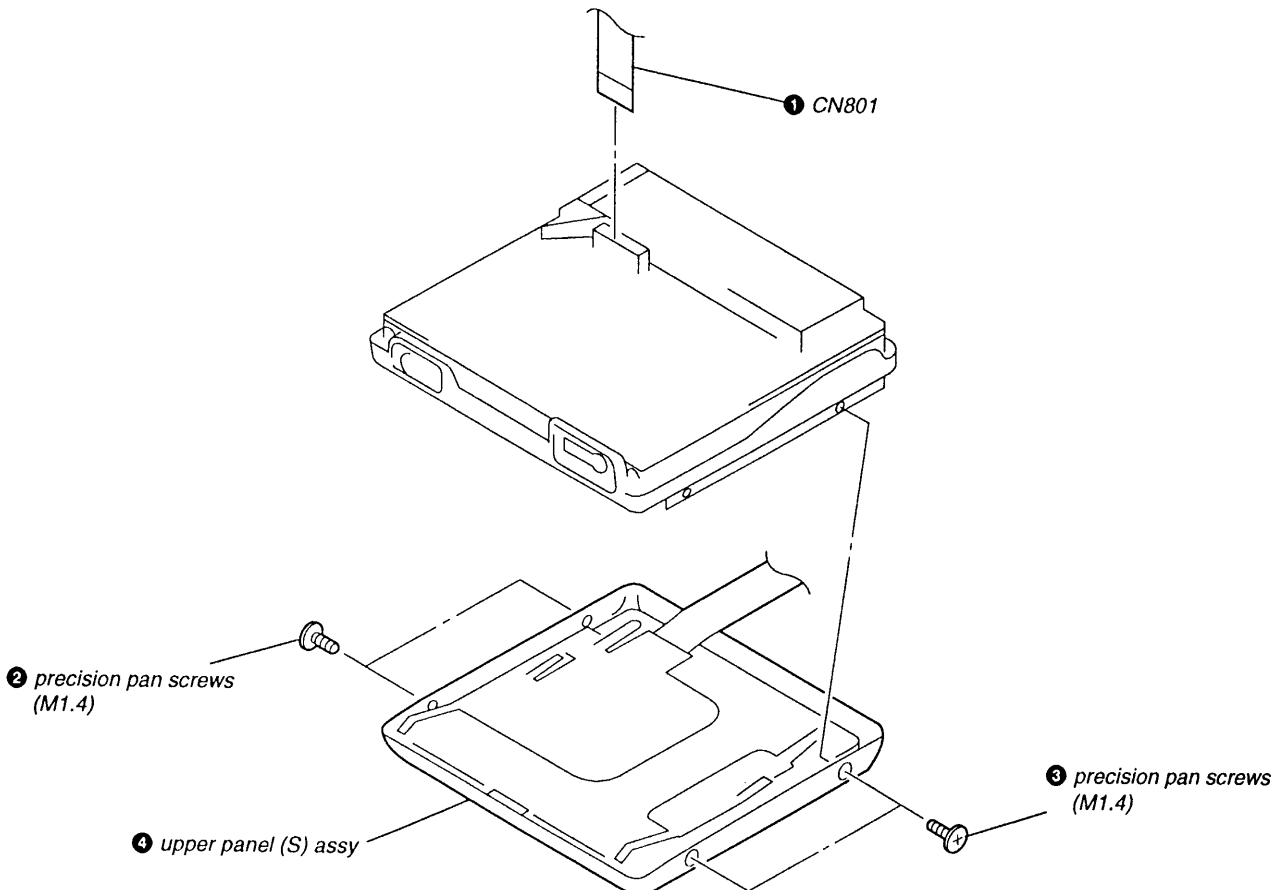
Bottom Panel (S) assy ➡ Upper Panel (S) assy ➡ Main Board ➡ Belt assy ➡ Chassis (Belt) assy ➡ Optical Pick-up Block

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

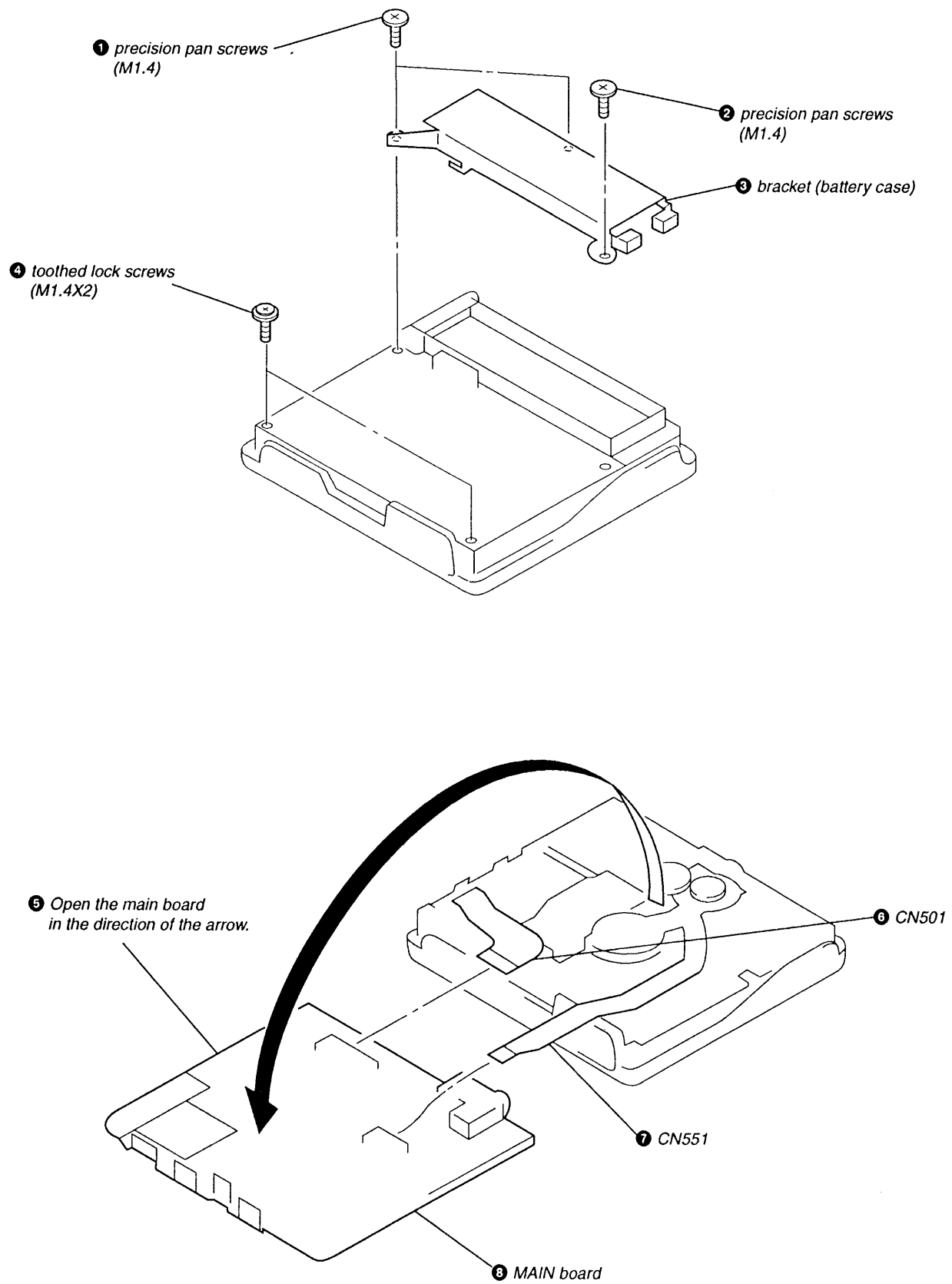
2-1. BOTTOM PANEL (S) ASSY



2-2. UPPER PANEL (S) ASSY

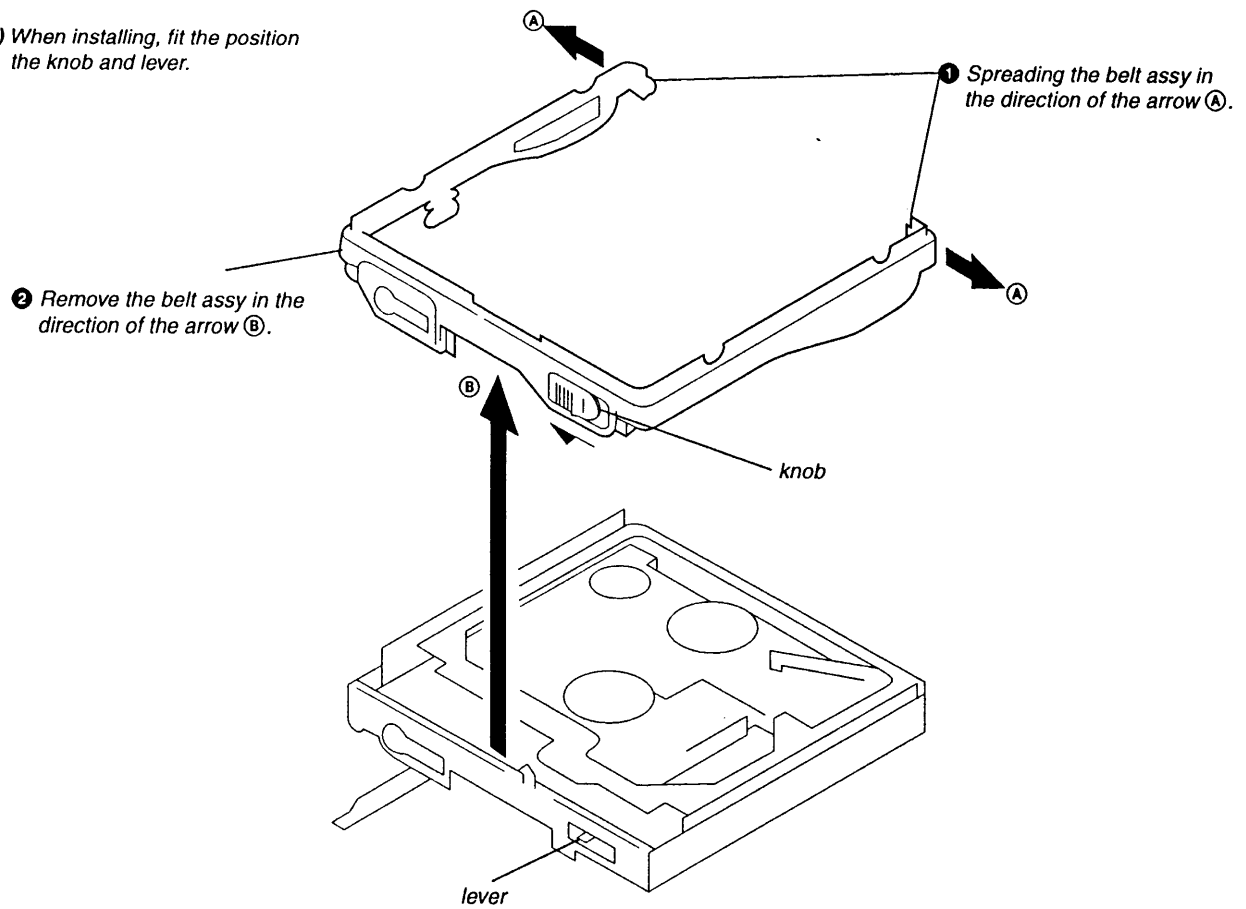


2-3. MAIN BOARD

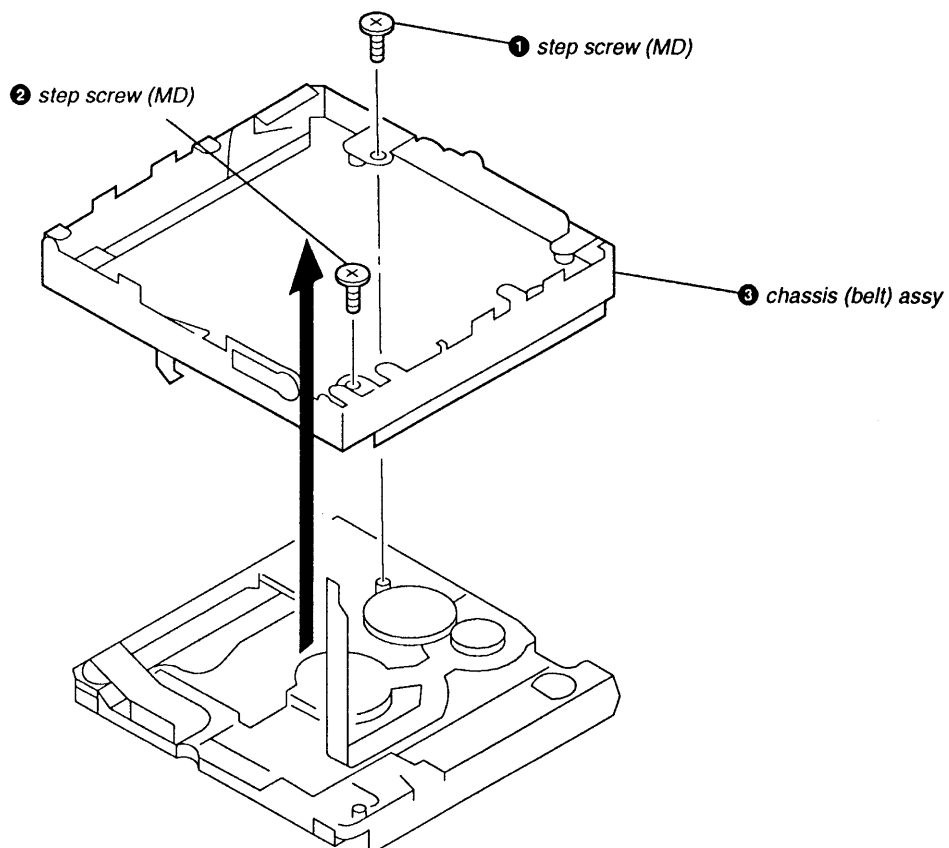


2-4. BELT ASSY

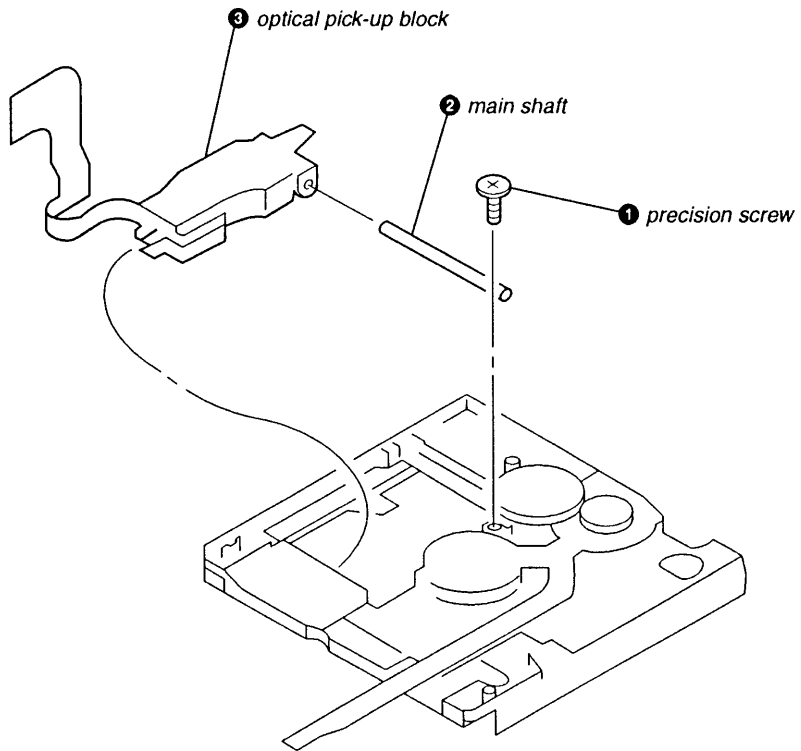
Note) When installing, fit the position the knob and lever.



2-5. CHASSIS (BELT) ASSY



2-6. OPTICAL PICK-UP BLOCK



SECTION 3 TEST MODE

Outline

- In this set, overall adjustment mode is made available by entering test mode to perform automatic adjustment of CD and MO. In the overall adjustment mode, the disc is determined whether it is CD or MO and adjustments are performed in sequence. If a fault is found, the location of the fault is displayed. Also, in servo mode, each adjustment can be automatically made.

Setting the Test Mode

To enter the test mode, two methods are available :

1. Entering method with key input

Turn on the HOLD switch on the set. While holding down the ■ key on the set, press the following keys in the following order :
 ►►► → ►►► → ◄◄◄ → ◄◄◄ → ►►► → ►►► → ◄◄◄ → ◄◄◄ → ►►► → ►►► → ◄◄◄ → ◄◄◄

2. Entering method by shorting the test point

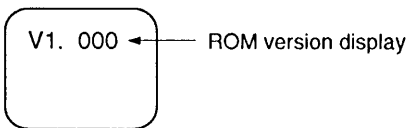
Solder bridge the test point TAP801 (TEST) on the main board (connect IC801 pin ② to GND), and turn on the POWER.

Releasing the Test Mode

- When test mode was entered with key input, turn off the POWER.
- When test mode was entered by shorting the test point, turn off the POWER and open the solder bridge of TAP801 (TEST) on the main board.

Operation of Setting on Test Mode

When the test mode is set, the LCD displays the following :

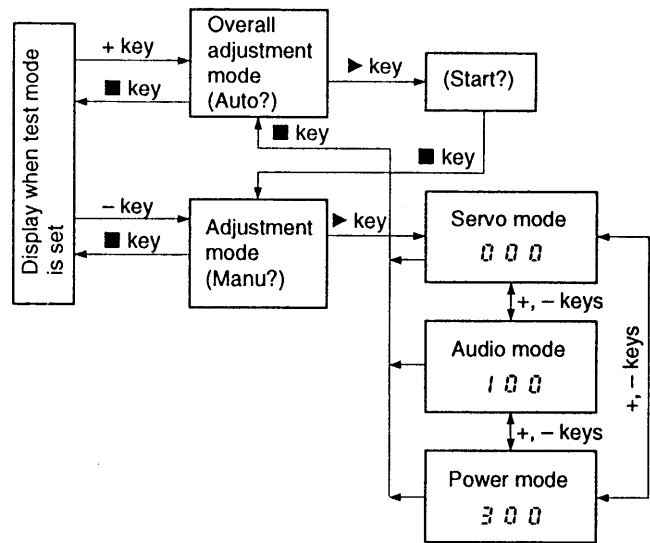


LCD on remote commander

- ROM version display to all LEDs ON to all LEDs OFF and so on. These operations are repeated.
- When the PLAY MODE key is pressed and hold down, the display at that time is held so that the display can be checked.

Configuration of Test Mode

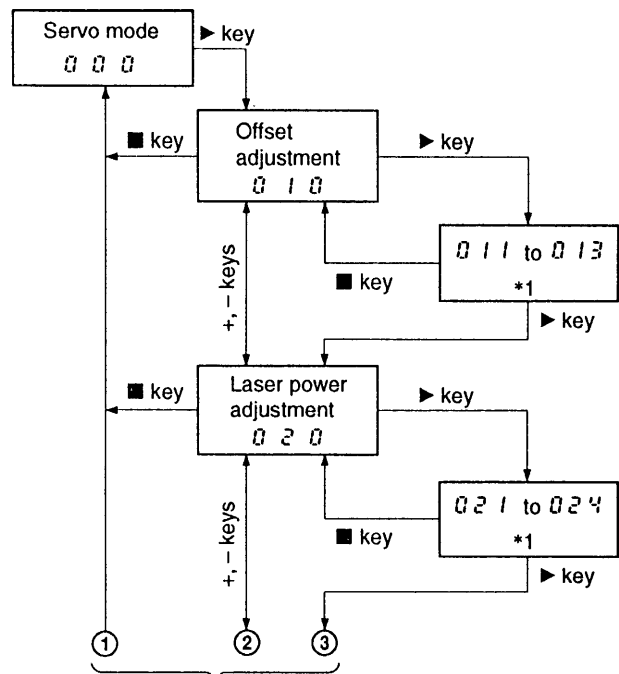
The test mode has the configuration given below.



Displays of the LCD on the remote commander are shown in parentheses.

Servo Mode

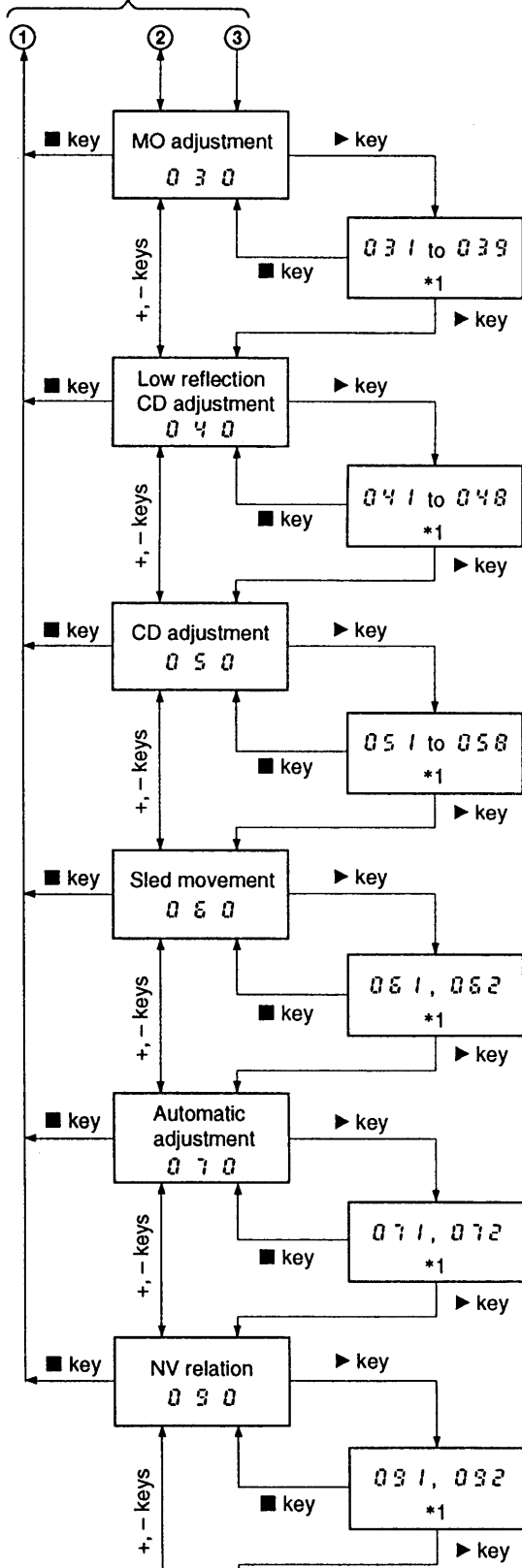
- Set the test mode, press the VOLUME – key and use the ► key to set the servo mode.
 - When the servo mode is set, use the ►►► key and the ◄◄◄ key to move the optical pick-up to the outer circumference and to the inner circumference respectively.
 - When entering another mode, refer to the configuration of test mode.
1. Structure of Servo Mode



(See page 9.)

*1 : Repeatedly press ► key to change the mode. (Refer to the following list for a description of each mode.)

(See page 8.)



Return the Offset adjustment (0 1 0)

*1 : Repeatedly press ► key to change the mode. (Refer to the following list for a description of each mode.)

2. Description of Each Mode

0 1 0 Offset adjustment

Mode	Description
0 1 1	FE offset
0 1 2	TE offset
0 1 3	All servo ON

0 2 0 Laser power adjustment

Mode	Description
0 2 1	MO power A
0 2 2	MO power E
0 2 3	CDL power
0 2 4	CD power

0 3 0 MO adjustment

Mode	Description
0 3 1	MO EF balance
0 3 2	MO EF gain
0 3 3	MO ABCD gain
0 3 4	MO focus gain
0 3 5	MO tracking gain
0 3 6	MO RF gain
0 3 7	MO ADIP gain
0 3 8	MO focus bias E
0 3 9	MO focus bias A

0 4 0 Low reflection CD adjustment

Mode	Description
0 4 1	Low reflection CD EF balance
0 4 2	Low reflection CD EF gain
0 4 3	Low reflection CD ABCD gain
0 4 4	Low reflection CD focus gain
0 4 5	Low reflection CD tracking gain
0 4 6	Low reflection CD RF offset
0 4 7	Low reflection CD RF gain
0 4 8	Low reflection CD focus bias

0 5 0 CD adjustment

Mode	Description
0 5 1	CD EF balance
0 5 2	CD EF gain
0 5 3	CD ABCD gain
0 5 4	CD focus gain
0 5 5	CD tracking gain
0 5 6	CD RF offset
0 5 7	CD RF gain
0 5 8	CD focus bias

050 Sled movement

Mode	Description
051	Sled in
052	Sled out 5

070 Automatic adjustment

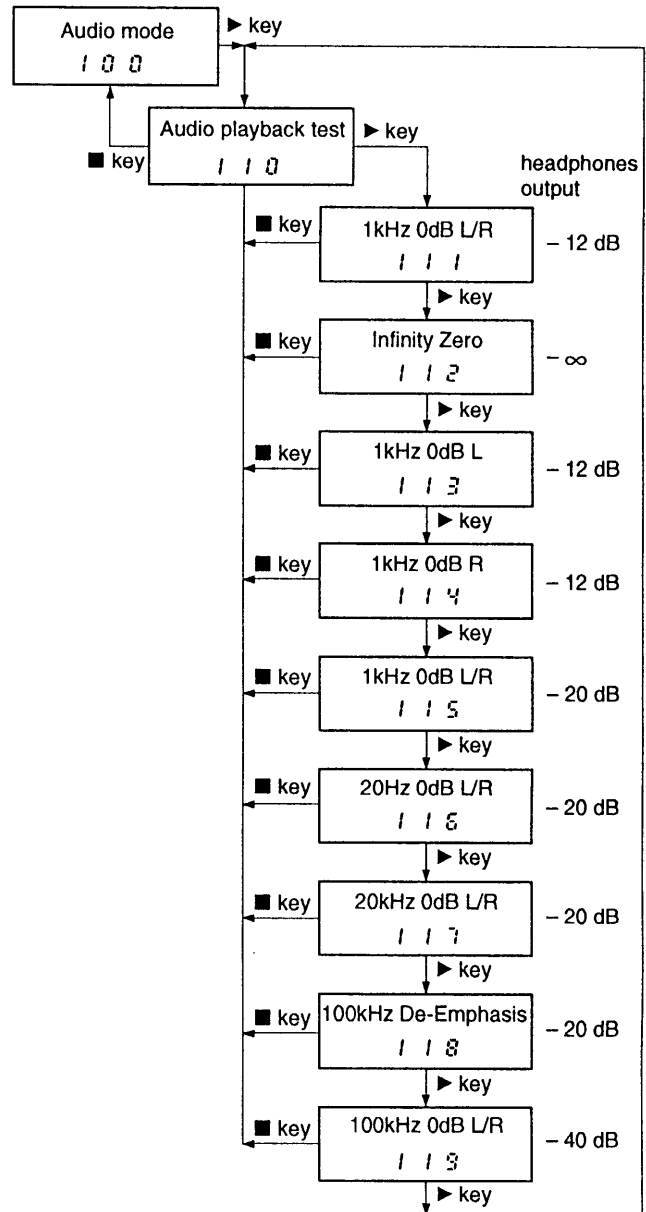
Mode	Description
071	Focus search
072	Access 32
073	ADDER check

090 NV relation

Mode	Description
091	NV clear
092	Power OFF

Audio Mode

- Enter the test mode and press the VOLUME – key. Then, press the ► key and the VOLUME + key in this turn to enter audio mode.
 - When entering another mode, refer to the configuration of test mode.
1. Structure of Audio Mode

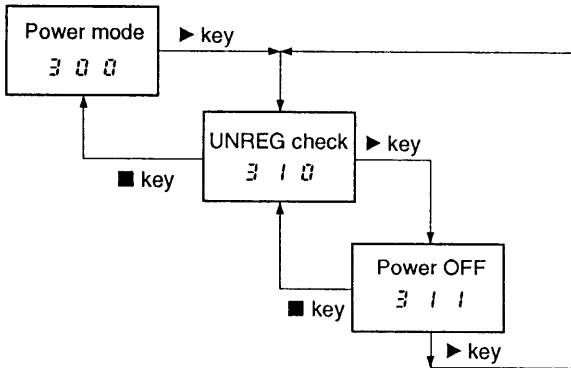


- The mode No. 111 is for S/N and crosstalk. The mode No. 115 is for distortion factor and frequency characteristics.
- When the VOLUME +/- keys is pressed in any mode, the volume of the headphones is changed (increased/decreased) in units of one step. When the ►► / ◄◄ keys is pressed, the volume of the headphones is maximized/minimized.
- For the volume value, any changed value remains as it is basically. However, when the volume is switched from 114 to 115 or 118 to 119, it returns the default value.

SECTION 4 ELECTRICAL ADJUSTMENTS

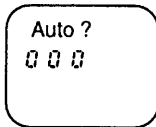
Power Mode

- Enter the test mode and press the VOLUME – key. Then, press the ► key and the VOLUME – key in this turn to enter power mode.
 - When entering another mode, refer to the configuration of test mode.
1. Structure of Power Mode

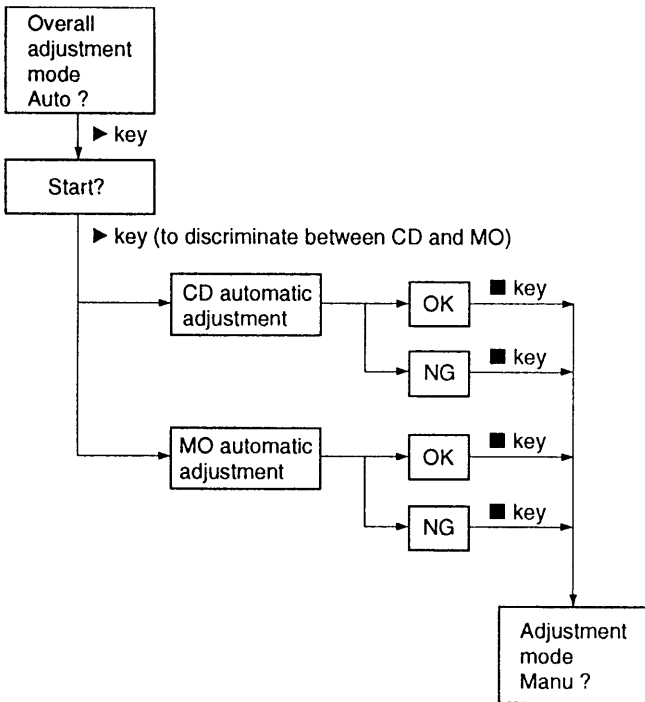


Overall Adjustment Mode

- Enter the test mode and press the VOLUME + key to enter overall adjustment mode.
- When entering another mode, refer to the configuration of test mode.
- When the overall adjustment mode is entered, the LCD on the remote commander displays the following :



1. Structure of Overall Adjustment Mode



Notes for Adjustment

- In this set, automatic adjustment of CD and MO can be performed by entering the test mode.
- Adjustments are performed in the overall adjustment mode. If an item is determined as NG, the item is readjusted in servo mode.

Adjustment Method in Overall Adjustment Mode

1. Enter the test mode and press the VOLUME + key to enter overall adjustment mode.
2. Insert the CD test disc (TGYS-1) or SONY MO disc (recorded) commercially available.
3. Press the ► key twice. The disc is determined whether it is CD or MO and each adjustment mode is set. Automatic adjustments are performed in the order of the items listed below.

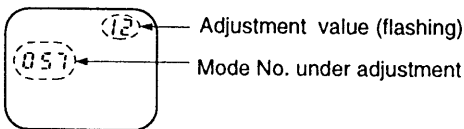
- In CD Automatic Adjustment Mode

No.	Mode	Description
1	0&1	Sled in
2	071	Focus search
3	0&2	Sled out 5
4	051	CD EF balance
5	052	CD EF gain
6	051	CD EF balance
7	053	CD ABCD gain
8	054	CD focus gain
9	055	CD tracking gain
10	05&	CD RF offset
11	057	CD RF gain
12	05&	CD RF offset
13	058	CD focus bias

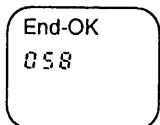
• In MO Automatic Adjustment Mode

No.	Mode	Description
1	061	Sled in
2	071	Focus search
3	062	Sled out
4	031	MO EF balance
5	032	MO EF gain
6	031	MO EF balance
7	033	MO ABCD gain
8	034	MO focus gain
9	035	MO tracking gain
10	036	MO RF gain
11	037	MO ADIP gain
12	038	MO focus bias E
13	039	MO focus bias A
14	073	ADER check
15	061	Sled in
16	071	Focus search
17	041	Low reflection CD EF balance
18	042	Low reflection CD EF gain
19	041	Low reflection CD EF balance
20	043	Low reflection CD ABCD gain
21	044	Low reflection CD focus gain
22	045	Low reflection CD tracking gain
23	046	Low reflection CD RF offset
24	047	Low reflection CD RF gain

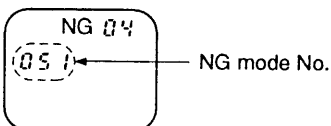
* Remote commander display during automatic adjustment



4. If result of automatic adjustment is OK, the following display appears.



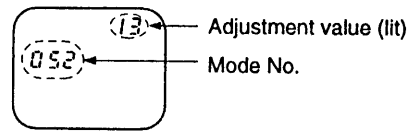
5. If result of automatic adjustment is NG, the following display appears.



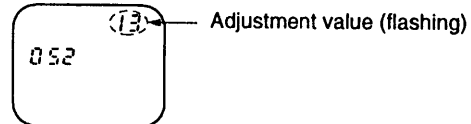
* If NG, enter servo mode to perform automatic adjustment of the item determined as NG.

Adjustment in Servo Mode Method

1. When each adjustment mode is set according to the structure of servo mode, the lower two digits of the mode No. and the adjustment value written in EEPROM are displayed and lit on the LCD on the remote commander.

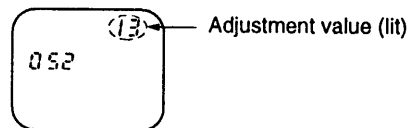


2. When the **||** key is pressed, the following display appears and the automatic adjustment is performed.



Note) Although the VOLUME +/- keys can be used to change the adjustment value to any value, they should not be used whenever possible.

3. When the automatic adjustment is completed, the flashing adjustment value is lit.

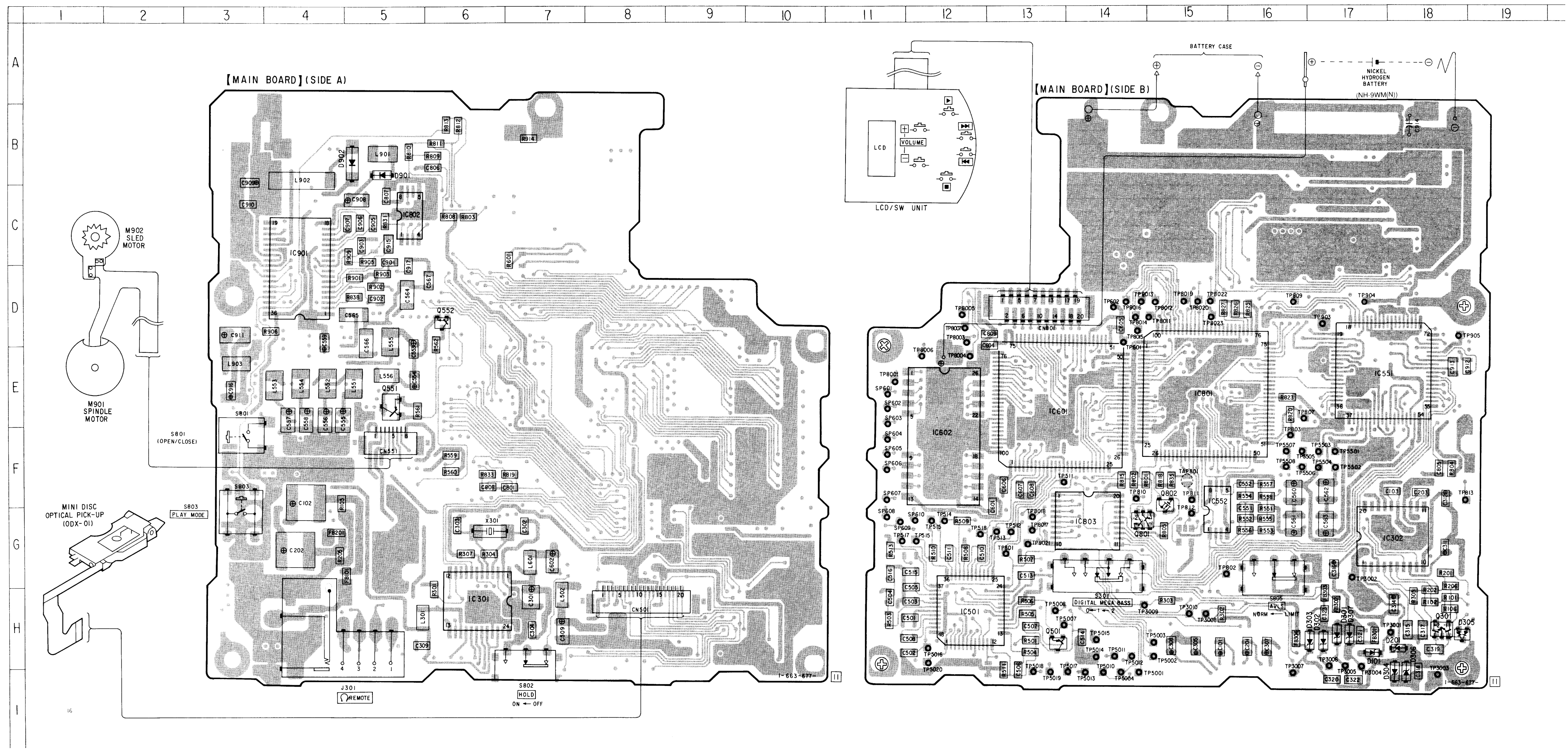


5-3. PRINTED WIRING BOARD

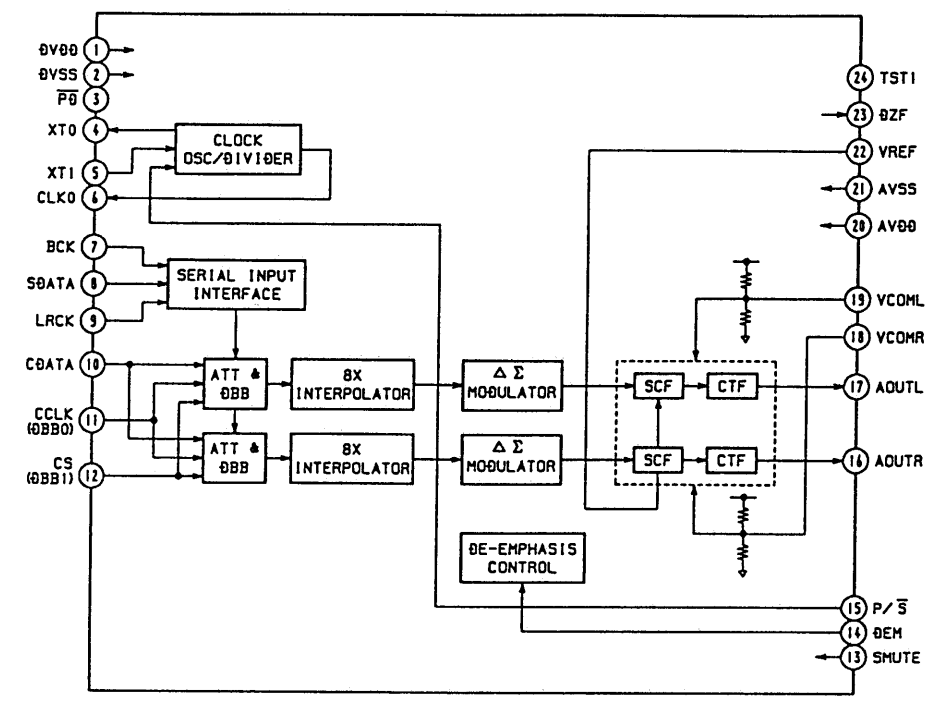
• Semiconductor Location

Ref. No.	Location
D101	H-17
D201	H-18
D301	H-17
D302	H-17
D303	H-16
D304	I-17
D305	H-18
D306	I-18
D307	H-17
D901	B-5
D902	B-5
IC301	H-6
IC302	G-17
IC501	H-12
IC551	E-17
IC552	G-15
IC601	E-13
IC602	F-12
IC801	E-15
IC802	C-5
IC803	G-14
IC901	C-4
Q301	H-18
Q501	H-13
Q551	E-5
Q552	D-6
Q801	G-14
Q802	F-15

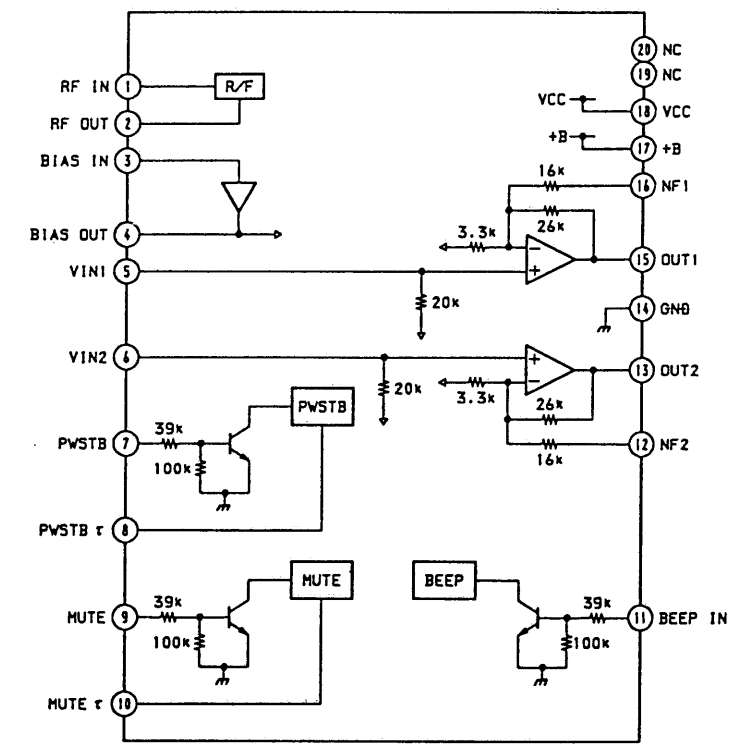
Note:
 • — : parts extracted from the conductor side.
 • — : Pattern on the side which is seen.



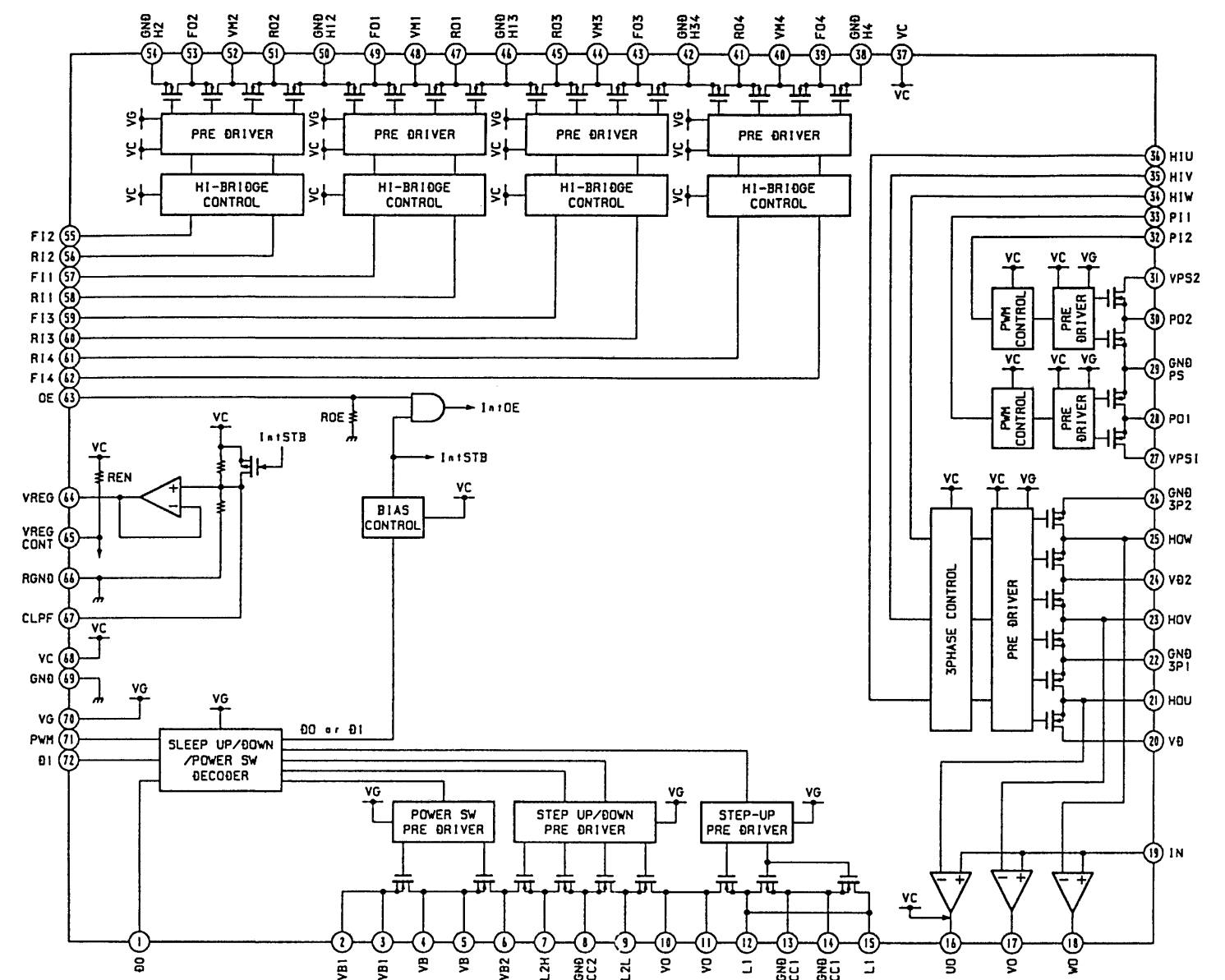
IC301 AK4314-VF-E2



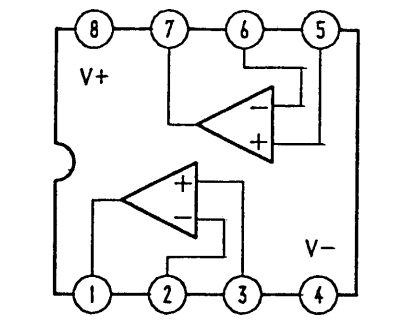
IC302 BA3577FS-E2



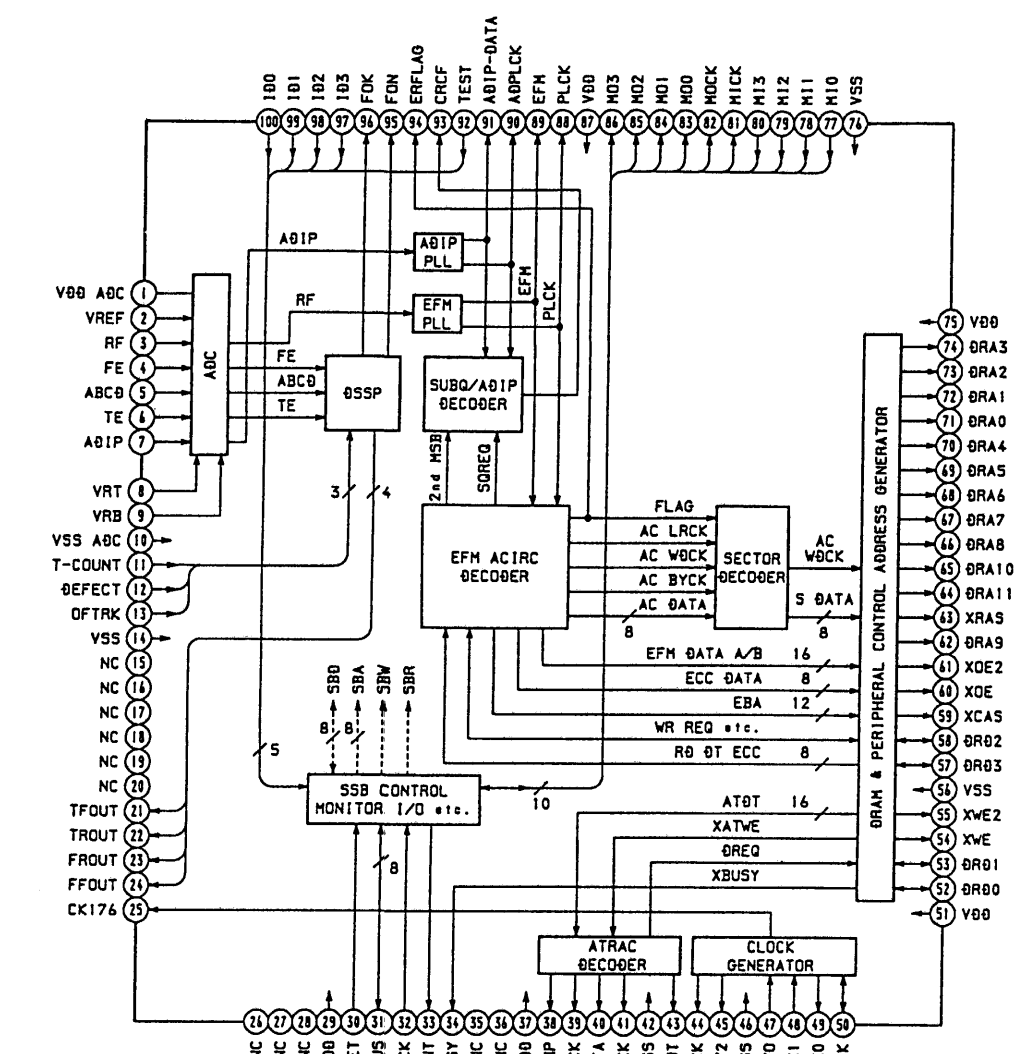
IC551 MPC17A55FTA



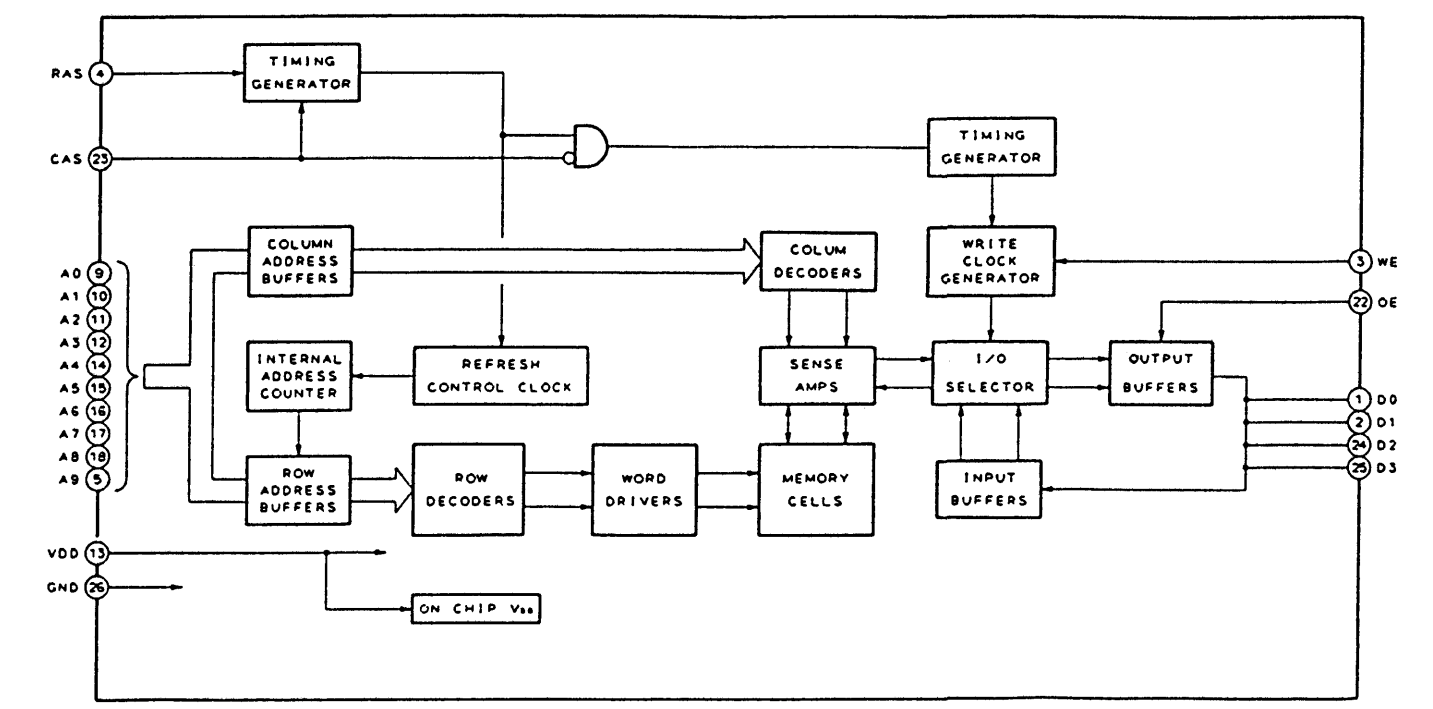
IC552 TLC372CPW-E20



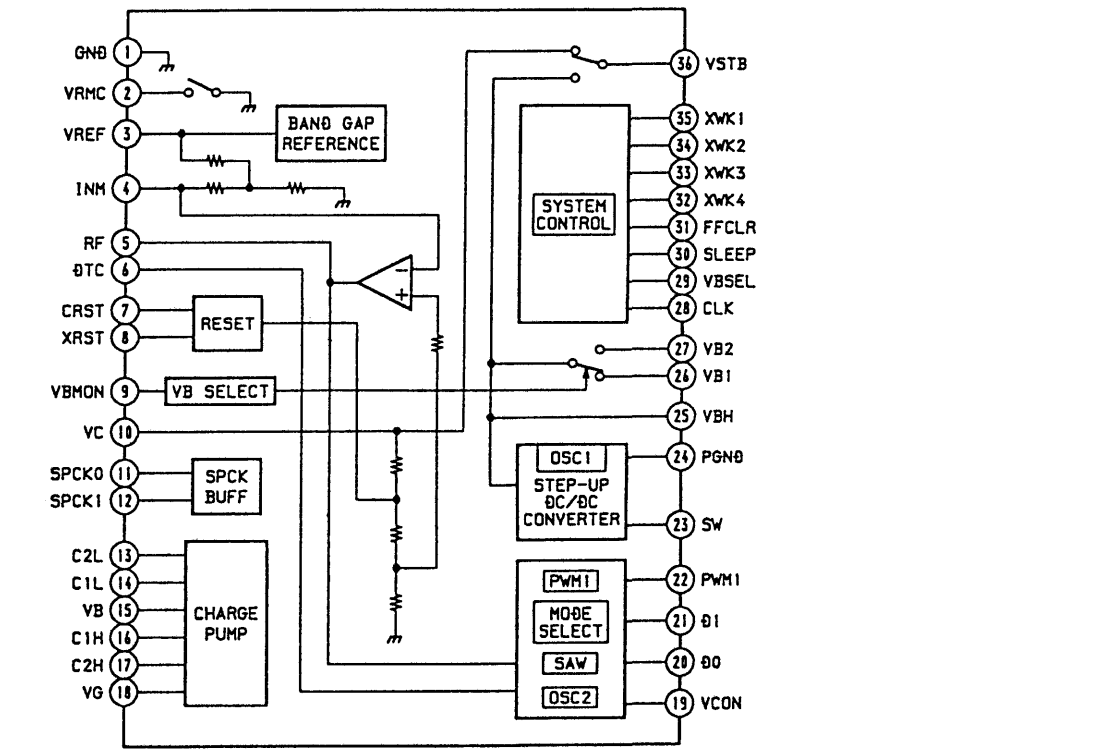
IC601 μPD63730GC-9EU



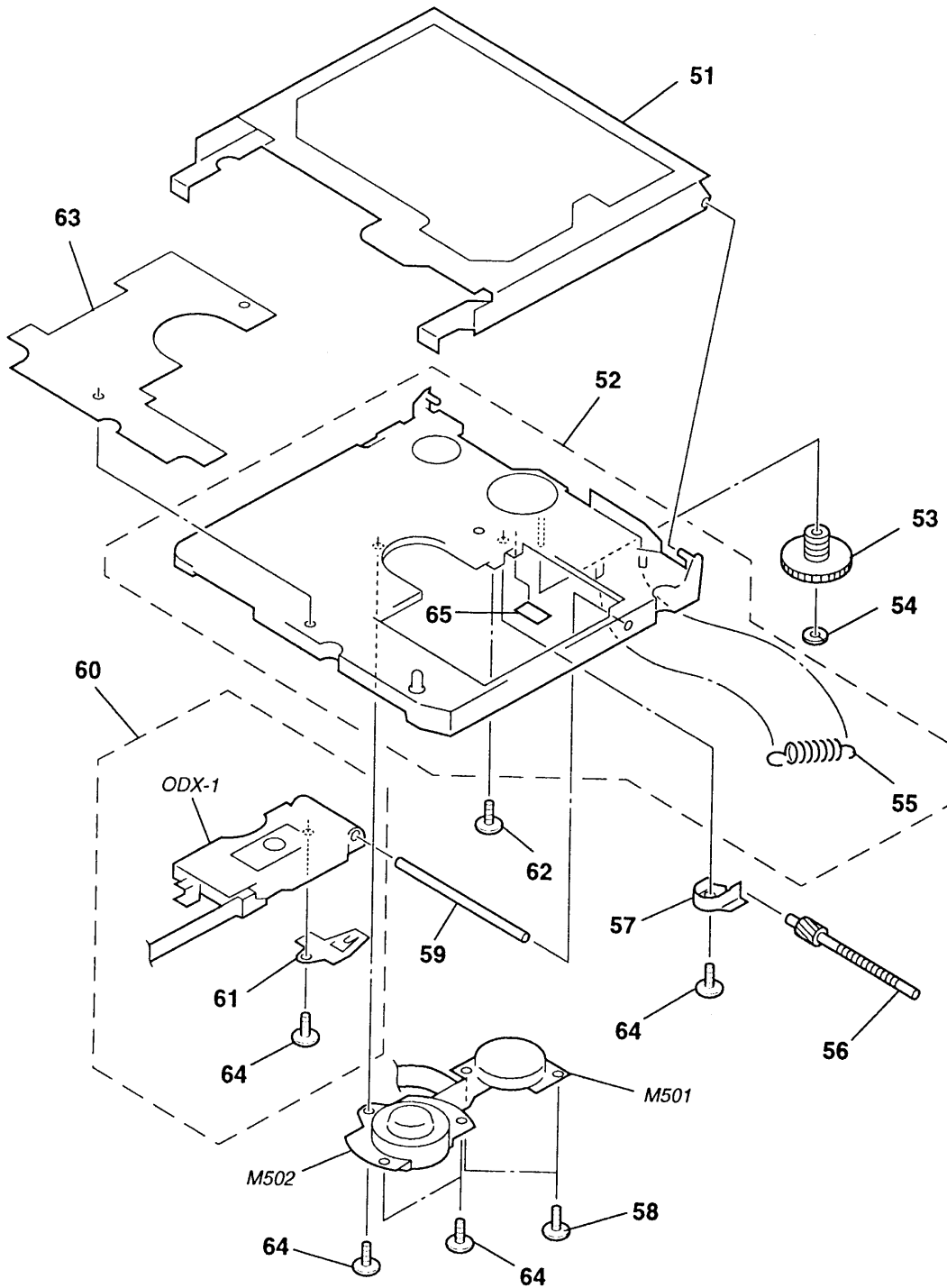
IC602 MSM51V4400-70TS-K



IC901 MPC1830VMEL



6-2. MD SECTION (MT-MZE30-126)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	X-4948-010-1	HOLDER ASSY		60	A-3311-036-A	OP BLOCK ASSY	
52	X-4947-186-1	CHASSIS ASSY		61	4-982-561-01	SPRING, RACK	
53	4-982-555-01	GEAR(A)		62	3-349-825-83	SCREW, PRECISION	
54	4-965-893-01	WASHER, GEAR(A)STOPPER		63	4-988-297-01	COVER, MD	
55	4-986-811-01	SPRING(EJECT), TENSION		64	4-963-883-21	SCREW(M1.4), PRECISION PAN	
56	A-3311-035-A	SCREW BLOCK ASSY, LEAD		65	4-989-308-01	SPACER (MAIN SHAFT)	
57	4-982-563-01	SPRING THRUST		M501	1-698-764-11	MOTOR, SLED	
58	4-963-883-61	SCREW(M1.4), PRECISION PAN		M502	8-835-563-01	MOTOR, DC SSM-01C02A/J-N	
59	4-989-792-01	SHAFT, MAIN					

SECTION 7 ELECTRICAL PARTS LIST

MAIN

Note:

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

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA..., μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	A-3293-451-A	MAIN BOARD, COMPLETE (US,CND) *****		C516	1-162-910-11	CERAMIC CHIP 5PF	0.25PF 50V
	A-3293-453-A	MAIN BOARD, COMPLETE (AEP,UK,AUS) *****		C551	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
	A-3311-115-A	MAIN BOARD, COMPLETE (E,JE) *****		C552	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
		< CAPACITOR >		C553	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V
C101	1-107-812-11	TANTAL. CHIP 4.7uF	20% 6.3V	C554	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V
C102	1-115-585-11	TANTAL. CHIP 220uF	20% 4V				
C103	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C555	1-107-765-11	TANTAL. CHIP 3.3uF	20% 16V
C201	1-107-812-11	TANTAL. CHIP 4.7uF	20% 6.3V	C556	1-107-765-11	TANTAL. CHIP 3.3uF	20% 16V
C202	1-115-585-11	TANTAL. CHIP 220uF	20% 4V	C557	1-135-238-21	TANTAL. CHIP 6.8uF	20% 10V
				C558	1-135-238-21	TANTAL. CHIP 6.8uF	20% 10V
C203	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C559	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V
C301	1-110-975-11	TANTAL. CHIP 47uF	20% 6.3V				
C302	1-162-912-11	CERAMIC CHIP 7PF	0.5PF 50V	C560	1-104-630-11	TANTAL. CHIP 33uF	20% 6.3V
C303	1-162-912-11	CERAMIC CHIP 7PF	0.5PF 50V	C561	1-104-630-11	TANTAL. CHIP 33uF	20% 6.3V
C304	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C562	1-104-630-11	TANTAL. CHIP 33uF	20% 6.3V
				C563	1-104-630-11	TANTAL. CHIP 33uF	20% 6.3V
C305	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V	C564	1-115-566-11	CERAMIC CHIP 4.7uF	10% 10V
C307	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V	C565	1-115-566-11	CERAMIC CHIP 4.7uF	10% 10V
C308	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V	C566	1-115-566-11	CERAMIC CHIP 4.7uF	10% 10V
C309	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C567	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C311	1-107-862-11	TANTAL. CHIP 1uF	20% 16V	C601	1-164-360-11	CERAMIC CHIP 0.1uF	16V
				C602	1-104-929-11	TANTAL. CHIP 22uF	20% 6.3V
C312	1-107-971-11	TANTAL. CHIP 2.2uF	20% 16V				
C314	1-104-929-11	TANTAL. CHIP 22uF	20% 6.3V	C604	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C315	1-109-982-11	CERAMIC CHIP 1uF	10% 10V	C605	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C316	1-109-888-11	TANTAL. CHIP 3.3uF	20% 6.3V	C606	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C317	1-109-982-11	CERAMIC CHIP 1uF	10% 10V	C607	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
				C608	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C318	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V (EXCEPT E, JE)	C801	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C319	1-109-982-11	CERAMIC CHIP 1uF	10% 10V	C805	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C320	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C806	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C321	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V (EXCEPT E, JE)	C807	1-164-360-11	CERAMIC CHIP 0.1uF	16V
C322	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V (EXCEPT E, JE)	C808	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
C323	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V (EXCEPT E, JE)	C809	1-162-962-11	CERAMIC CHIP 470PF	10% 50V
C501	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C901	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C502	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C902	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C503	1-162-917-11	CERAMIC CHIP 15PF	5% 50V	C903	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C504	1-162-919-11	CERAMIC CHIP 22PF	5% 50V	C905	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C505	1-162-917-11	CERAMIC CHIP 15PF	5% 50V				
C506	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C906	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C507	1-162-962-11	CERAMIC CHIP 470PF	10% 50V	C907	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
C508	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C908	1-107-765-11	TANTAL. CHIP 3.3uF	20% 16V
C509	1-104-929-11	TANTAL. CHIP 22uF	20% 6.3V	C909	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V
				C910	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C510	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V				
C511	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C911	1-117-232-11	TANTALUM 22uF	20% 4V
C513	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C912	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C514	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C913	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
C515	1-162-908-11	CERAMIC CHIP 3PF	0.25PF 50V	C914	1-124-576-11	ELECT 220uF	20% 4V
				C915	1-109-982-11	CERAMIC CHIP 1uF	10% 10V
				C916	1-107-813-11	TANTAL. CHIP 10uF	20% 6.3V
				C917	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >					
CN501	1-573-360-21	CONNECTOR, FFC/FPC 20P		L554	1-414-400-11	INDUCTOR 22uH	
CN551	1-691-346-11	CONNECTOR, FFC/FPC 8P		L555	1-412-031-11	INDUCTOR CHIP 47uH	
* CN801	1-750-504-21	CONNECTOR, FFC/FPC (ZIF) 20P		L556	1-414-754-11	INDUCTOR 10uH	
		< DIODE >		L601	1-414-754-11	INDUCTOR 10uH	
D101	8-719-017-58	DIODE MA8068		L901	1-412-031-11	INDUCTOR CHIP 47uH	
D201	8-719-017-58	DIODE MA8068					
D301	8-719-017-58	DIODE MA8068		L902	1-411-804-21	COIL, CHOKE 10uH	
D302	8-719-017-58	DIODE MA8068		L903	1-414-754-11	INDUCTOR 10uH	
D303	8-719-017-58	DIODE MA8068					
D304	8-719-017-58	DIODE MA8068					
D305	8-719-989-03	DIODE DAN222					
D306	8-719-017-58	DIODE MA8068					
D307	8-719-017-58	DIODE MA8068					
D901	8-719-421-27	DIODE MA728					
D902	8-719-048-98	DIODE RB160L-40TE25					
		< FERRITE BEAD >					
FB101	1-414-228-11	INDUCTOR, FERRITE BEAD	(EXCEPT E, JE)	R101	1-216-837-11	METAL CHIP 22K 5%	1/16W
FB101	1-216-864-11	METAL CHIP 0	5% 1/16W (E, JE)	R102	1-216-831-11	METAL CHIP 6.8K 5%	1/16W
FB201	1-414-228-11	INDUCTOR, FERRITE BEAD	(EXCEPT E, JE)	R105	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
FB201	1-216-864-11	METAL CHIP 0	5% 1/16W (E, JE)	R106	1-216-835-11	METAL CHIP 15K 5%	1/16W
FB301	1-414-228-11	INDUCTOR, FERRITE BEAD		R201	1-216-837-11	METAL CHIP 22K 5%	1/16W
FB302	1-414-228-11	INDUCTOR, FERRITE BEAD		R202	1-216-831-11	METAL CHIP 6.8K 5%	1/16W
FB303	1-414-228-11	INDUCTOR, FERRITE BEAD		R205	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
FB304	1-414-228-11	INDUCTOR, FERRITE BEAD		R206	1-216-835-11	METAL CHIP 15K 5%	1/16W
		< IC >		R301	1-216-845-11	METAL CHIP 100K 5%	1/16W
IC301	8-759-432-15	IC AK4314-VF-E2		R302	1-216-845-11	METAL CHIP 100K 5%	1/16W
IC302	8-759-431-56	IC BA3577FS-E2		R303	1-216-833-11	METAL CHIP 10K 5%	1/16W
IC501	8-759-458-04	IC SN761050A		R304	1-216-857-11	METAL CHIP 1M 5%	1/16W
IC551	8-759-390-25	IC MPC17A55FTA		R305	1-216-809-11	METAL CHIP 100 5%	1/16W
IC552	8-759-358-40	IC TLC372CPW-E20		R307	1-216-809-11	METAL CHIP 100 5%	1/16W
IC601	8-759-433-60	IC UPD63730GC-9EU		R307	1-216-864-11	METAL CHIP 0 5%	1/16W (EXCEPT E, JE)
IC602	8-759-341-28	IC HM51W4400TT6-8		R501	1-216-827-11	METAL CHIP 3.3K 5%	1/16W (E, JE)
IC602	8-759-334-38	IC MSM51V4400-70TS-K		R503	1-216-833-11	METAL CHIP 10K 5%	1/16W
IC801	8-759-462-48	IC RU6715MF-0003		R504	1-216-853-11	METAL CHIP 470K 5%	1/16W
IC802	8-759-449-23	IC AK93C55AV-L		R505	1-216-809-11	METAL CHIP 100 5%	1/16W
IC803	8-759-441-35	IC BU12101-E2		R506	1-216-793-11	METAL GLAZE 4.7 5%	1/16W
IC901	8-759-457-81	IC MPC1830VMEL		R507	1-216-849-11	METAL CHIP 220K 5%	1/16W
		< JACK >		R508	1-216-841-11	METAL CHIP 47K 5%	1/16W
J301	1-778-368-11	JACK, HEADPHONE (○)/REMOTE		R509	1-216-864-11	METAL CHIP 0 5%	1/16W
		< COIL >		R510	1-216-864-11	METAL CHIP 0 5%	1/16W
L301	1-414-754-11	INDUCTOR 10uH		R511	1-216-817-11	METAL CHIP 470 5%	1/16W
L502	1-414-754-11	INDUCTOR 10uH		R513	1-216-853-11	METAL CHIP 470K 5%	1/16W
L551	1-412-031-11	INDUCTOR CHIP 47uH		R551	1-216-821-11	METAL CHIP 1K 5%	1/16W
L552	1-412-031-11	INDUCTOR CHIP 47uH		R552	1-216-821-11	METAL CHIP 1K 5%	1/16W
L553	1-414-400-11	INDUCTOR 22uH		R553	1-216-833-11	METAL CHIP 10K 5%	1/16W
				R554	1-216-821-11	METAL CHIP 1K 5%	1/16W
				R555	1-216-857-11	METAL CHIP 1M 5%	1/16W
				R556	1-216-857-11	METAL CHIP 1M 5%	1/16W
				R557	1-216-821-11	METAL CHIP 1K 5%	1/16W
				R558	1-216-857-11	METAL CHIP 1M 5%	1/16W
				R559	1-216-857-11	METAL CHIP 1M 5%	1/16W
				R560	1-216-833-11	METAL CHIP 10K 5%	1/16W
				R561	1-216-853-11	METAL CHIP 470K 5%	1/16W
				R562	1-216-809-11	METAL CHIP 100 5%	1/16W
				R601	1-216-864-11	METAL CHIP 0 5%	1/16W
				R801	1-216-841-11	METAL CHIP 47K 5%	1/16W
				R802	1-216-841-11	METAL CHIP 47K 5%	1/16W

Ref. No.	Part No.	Description	Quantity	Percentage	Remarks	Ref. No.	Part No.	Description	Remarks
R803	1-216-853-11	METAL CHIP	470K	5%	1/16W			MISCELLANEOUS	
R804	1-216-853-11	METAL CHIP	470K	5%	1/16W			*****	
R805	1-216-853-11	METAL CHIP	470K	5%	1/16W				
R808	1-216-841-11	METAL CHIP	47K	5%	1/16W		M501	1-698-764-11	MOTOR, SLED
R809	1-216-825-11	METAL CHIP	2.2K	5%	1/16W		M502	8-835-563-01	MOTOR, DC SSM-01C02AJ-N

R810	1-216-829-11	METAL CHIP	4.7K	5%	1/16W			ACCESSORIES & PACKING MATERIALS	
R811	1-216-831-11	METAL CHIP	6.8K	5%	1/16W			*****	
R812	1-216-835-11	METAL CHIP	15K	5%	1/16W				
R813	1-216-839-11	METAL CHIP	33K	5%	1/16W				
R815	1-216-853-11	METAL CHIP	470K	5%	1/16W			1-473-677-11	REMOTE CONTROL UNIT
								1-528-539-31	BATTERY CASE
R818	1-216-853-11	METAL CHIP	470K	5%	1/16W	△		1-528-576-11	BATTERY CHARGER (BC-9HU)(US,CND)
R819	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	△		1-528-577-11	BATTERY CHARGER (BC-9HY)(AEP)
R820	1-216-845-11	METAL CHIP	100K	5%	1/16W	△		1-528-578-11	BATTERY CHARGER (BC-9HP)(UK)
R823	1-216-857-11	METAL CHIP	1M	5%	1/16W				
R825	1-216-845-11	METAL CHIP	100K	5%	1/16W			1-528-579-11	BATTERY CHARGER (BC-9HG)(AUS)
								1-528-580-11	BATTERY CHARGER (BC-7HT)(E,JE)
R826	1-216-845-11	METAL CHIP	100K	5%	1/16W			1-528-743-11	BATTERY, NICKEL HYDROGEN
R827	1-216-845-11	METAL CHIP	100K	5%	1/16W			1-569-007-11	ADAPTOR, CONVERSION 2P (E,JE)
R831	1-216-853-11	METAL CHIP	470K	5%	1/16W	△		3-008-521-01	CASE, BATTERY CHARGE
R833	1-216-827-11	METAL CHIP	3.3K	5%	1/16W				
R835	1-216-853-11	METAL CHIP	470K	5%	1/16W			3-800-626-01	INSTRUCTION (A7 SIZE)(JE)
R838	1-216-833-11	METAL CHIP	10K	5%	1/16W			3-859-043-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH)
R901	1-216-863-11	METAL GLAZE	3.3M	5%	1/16W			3-859-043-21	MANUAL, INSTRUCTION (CND,AEP,JE) (FRENCH,GERMAN)
R902	1-216-853-11	METAL CHIP	470K	5%	1/16W			3-859-043-31	MANUAL, INSTRUCTION (AEP) (DUTCH/SWEDISH)
R903	1-216-845-11	METAL CHIP	100K	5%	1/16W			3-859-043-41	MANUAL, INSTRUCTION (AEP) (ITALIAN/PORTUGUESE)
R905	1-216-845-11	METAL CHIP	100K	5%	1/16W				
R906	1-216-847-11	METAL CHIP	150K	5%	1/16W			3-859-043-51	MANUAL, INSTRUCTION (E, JE) (JAPANESE,CHINESE,KOREAN)
R909	1-216-833-11	METAL CHIP	10K	5%	1/16W				
R914	1-216-864-11	METAL CHIP	0	5%	1/16W			4-972-888-01	CASE, CARRYING
		< SWITCH >						8-953-091-90	HEADPHONE MDR-E838MP SET
S301	1-762-079-11	SWITCH, SLIDE (DIGITAL MEGA BASS)						X-3329-657-1	ATTACHMENT ASSY
S801	1-572-688-11	SWITCH, PUSH (1 KEY)(OPEN /CLOSE)							
S802	1-762-078-11	SWITCH, SLIDE (HOLD)							
S803	1-692-088-11	SWITCH, TACTILE (PLAY MODE)							
S805	1-762-078-11	SWITCH, SLIDE (AVLS)							
		< VIBRATOR >							
X301	1-767-124-11	VIBRATOR, CRYSTAL 16.9MHz							

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

- Abbreviation
CND : Canadian model
AUS : Australian model
JE : Tourist model

