

SERVICE MANUAL

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



Discman

Model Name Using Similar Mechanism	D-35/350
CD Mechanism Name	CDM-350

SPECIFICATIONS

CD section

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength: 780 nm

Emission duration: Continuous

Laser output: less than 44.6 μW

This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

Error correction

Sony Super Strategy Cross Interleave Reed Solomon Code

D-A conversion

1 bit quartz time-axis control

Frequency response

20 - 20,000 Hz ± 0.5 dB*

Dynamic range

More than 96 dB*

Signal-to-noise ratio

More than 100 dB*

Distortion ratio

Less than 0.006 % (1 kHz)*

Low and flutter

Below measurable limit*

Outputs (at 9 V input level)

Line output (stereo minijack)

Output level 1.5 V rms at 50 kilohms

Load impedance over 10 kilohms

Optical digital output (optical output connector)

Output level: -21 — -15 dBm

Wavelength: 630 — 690 nm at peak level

Headphones (stereo minijack)

5 mW + 5mW at 16 ohms

*Measured by EIAJ CP-307 at 9 V DC

General

Power requirements

Rechargeable battery pack BP-2EX (supplied)

LR6 (size AA) alkaline battery (2, not supplied)

DC IN 9 V jack accepts:

Sony AC power adaptor (supplied)

100 - 240 V AC, 50/60 Hz

Sony CPM-203 (available only in Japan), CPM-203P (available in other countries) car mount plate, or Sony DCC-E190M battery cord for use on 12 V car battery (not supplied)

Power consumption

Dimensions

3 W DC

Approx. 126.0 × 23.5 × 135.5 mm (w/h/d)

not incl. incl. inclined part (depth), projecting parts and controls

Approx. 126.0 × 27.4 × 135.5 mm (w/h/d)

incl. projecting parts and controls

Approx. 450 g incl. rechargeable battery

Headphones with remote commander (1)

AC power adaptor (1)

Rechargeable battery pack (1)

AC plug adaptor (1)

Carrying case (1)

Connecting cord (1) (stereo miniplug ↔ two phono plugs)

Operating instructions (1)

Design and specifications subject to change without notice.

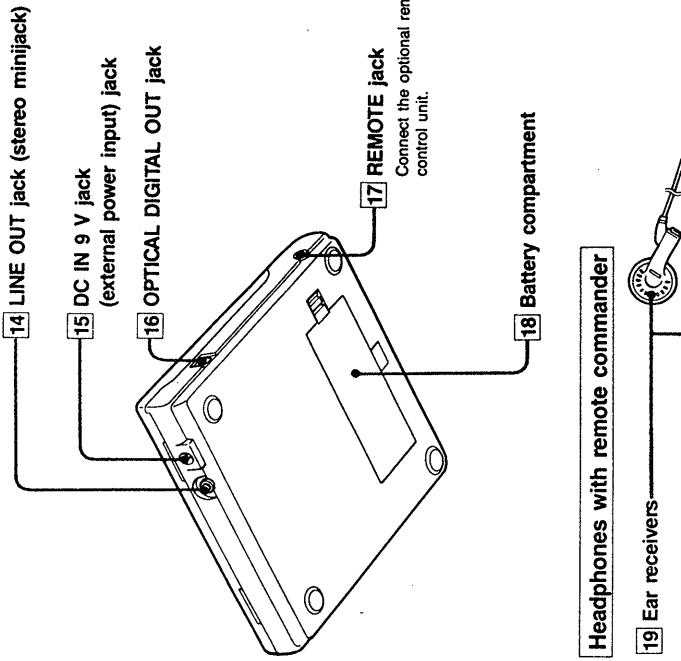
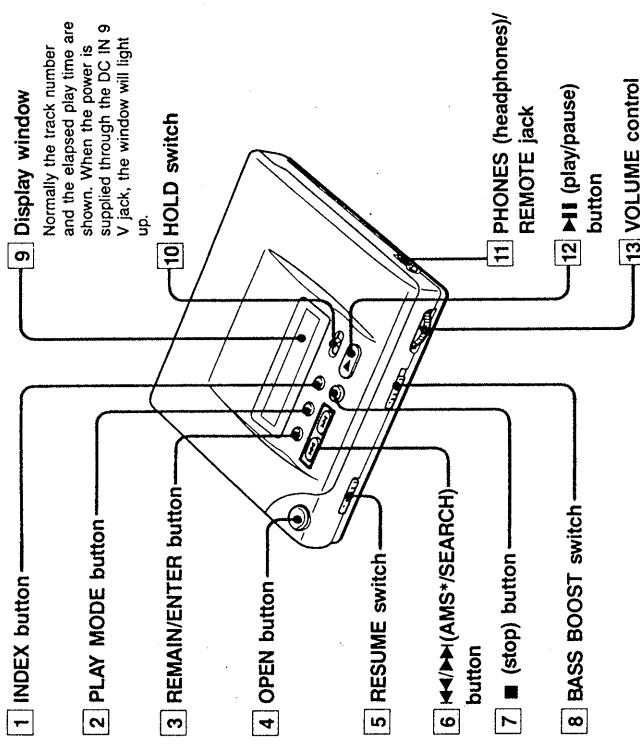
CAUTION

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

COMPACT DISC COMPACT PLAYER
SONY®



Location and Function of Controls



SECTION 1 GENERAL

This section is extracted from instruction manual.

You can operate the CD player with the remote commander attached to the supplied headphones.

The buttons and controls on the remote commander has the same function as those with same marks on the unit. Even if the HOLD switch on the unit is set to the right position (HOLD), you can operate the unit with the remote commander.

Is it possible to operate other compact disc compact player with the supplied remote commander?

Basically yes. However, some model is not operative.

When you are not using the remote commander, set to HOLD to prevent accidental pressing of the buttons.

21 HOLD switch

20 ▶/◀(AMS/SEARCH) buttons

21 ■ (stop) button

22 VOLUME control

23 ▶▷(play/pause) button

24 ■ (stop) button

SECTION 2

SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

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SAFETY-RELATED COMPONENT WARNING!!

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

Before Replacing the Optical Block

Please be sure to check thoroughly the parameters as per the "Optical Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical block. Note and specifications required to check are given below.

- FOK output : IC501⑨pin
- S carve P-to-P value : 2.5Vp-p
When checking FOK and S carve P-to-P value, remove the lead wire to disc motor and unsolder and open IC801⑩ pin.
- Adjusted part for focus gain adjustment : RV505
- RF signal P-to-P value : 0.8 - 1.35Vpp
- Traverse signal P-to-P value : 2Vp-p
- The grating holder can not repair,
- Adjusted part for tracking gain adjustment : RV501

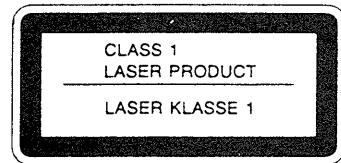
Flexible Circuit Board Repairing

- 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.

For the Customers in the United Kingdom and European Countries



This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the bottom exterior.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  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.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30cm away from the objective lens.

Laser Diode Check Procedure

The laser diode on this set will not emit unless the top panel is closed and S901 (push SW type) is turned on. The laser diode will always emit even if focus search is not performed in service mode.

The laser diode is checked using the current value which flows to the laser diode inside the optical pick-up.

Procedure 1 (service mode or normal operation)

Check the laser diode emission with the eye.

1. Open top panel.
2. S901 on as Fig. 1.
(In service mode, this operation is not necessary.)
3. Observe the objective lens and confirm that the laser diode goes on about 2.5 seconds due to focus search. If it does not, APC circuit or the optical pick-up is defective.

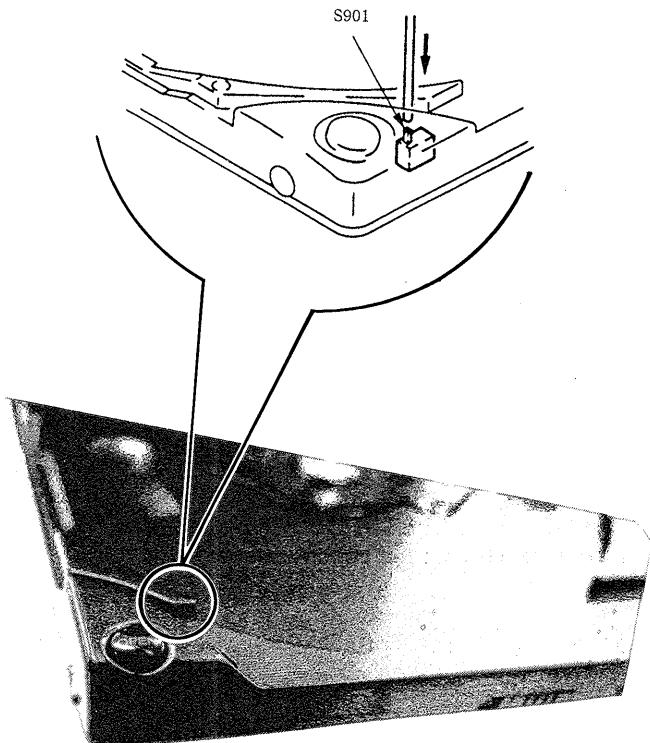


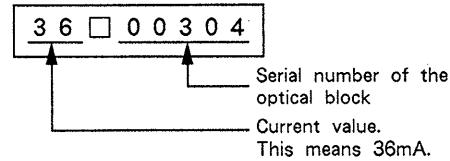
Fig.1 Turning S901 Connection

Procedure 2 (service mode or normal operation)

Check by the current with flows in the laser diode.

1. Close the top panel.
2. Remove the main board and read the current value on the label affixed to the optical pick-up.

(Label on the flexible board
of the optical pick-up)



3. Connect a VOM as shown in Fig.2.(both side of R510 : 10 Ω)

4. Press the $\blacktriangleright\parallel$ key.

5. Calculate the current by the VOM reading.

VOM reading (V) $\div 10 =$ current (A)

ex. VOM reading = 0.37V

$$0.37 \div 10 = 0.037 \text{ (A)} = 37 \text{ (mA)}$$

6. Confirm that the ammeter reading is within the range given below.

value on label ± 5 mA (25°C)

variation relative to temperature : 0.4mA/°C

(Current increases when temperature rises and decreases when it drops.)

If the value is more than the range given, diode has deteriorated. If it is less, APC circuit or the optical pick-up is defective.

-main board-

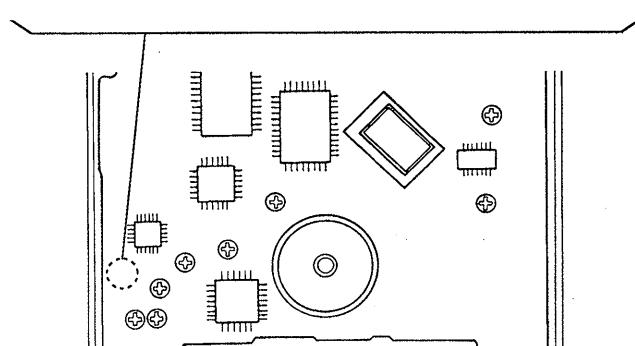
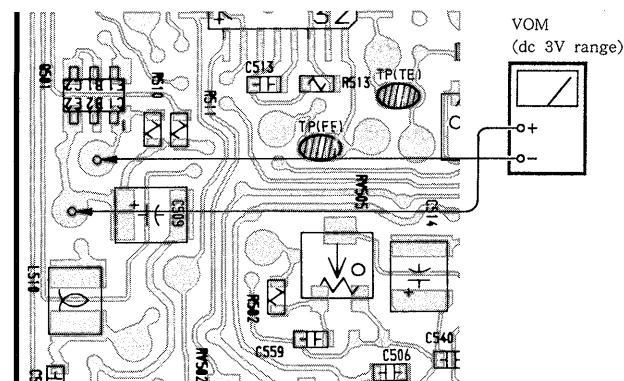


Fig.2 VOM Connection

SERVICE MODE (service program)

This set has built-in service program in the microcomputer as usual sets.

The operation method of service program is explained below.

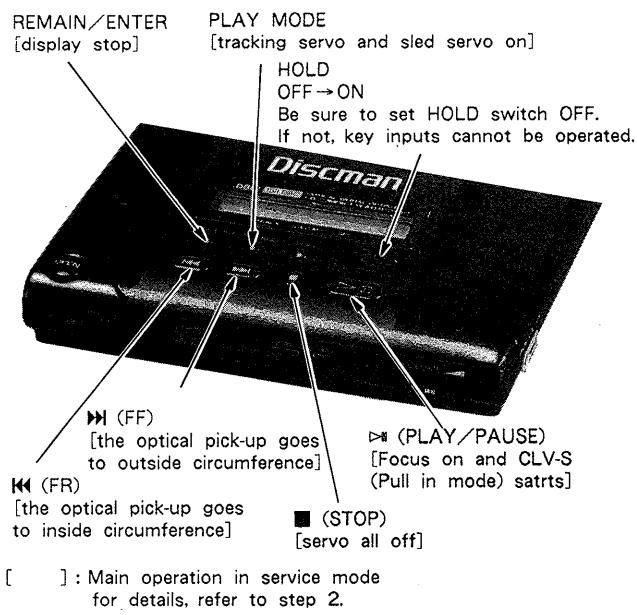
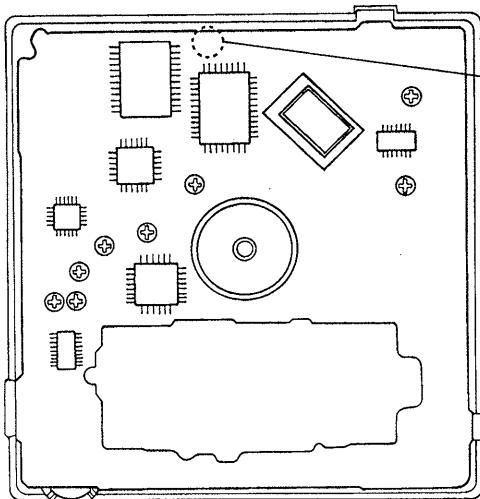


Fig.3 Key Positions

• Step 1 (Service Mode setting method)

1. Turn the HOLD switch to OFF with the external power supply not plugged in (no power applied to set) and press the ▶|| key.
2. Solder jumper TEST point.
(IC801 pin ⑪ (TEST) pin is grounded.)
3. Plug in external power supply.
This puts the set into service mode.



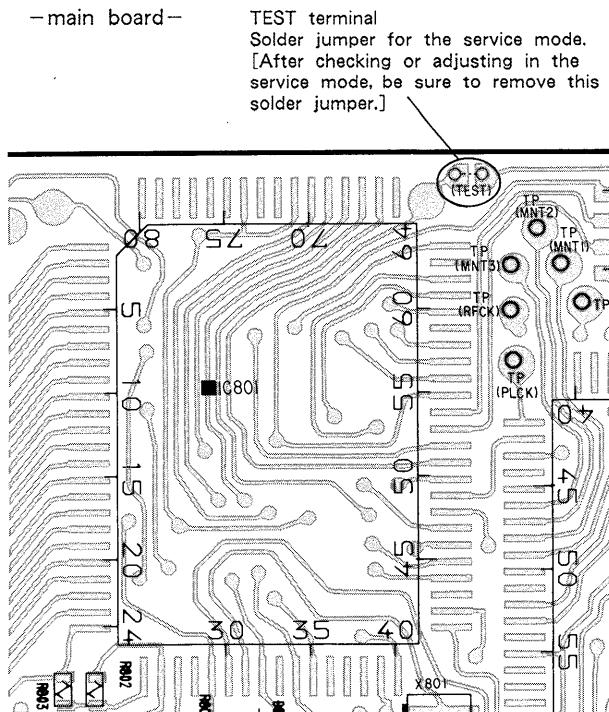
• Step 2 (Service Mode operation)

1. When service mode is set, the display will change 6 times, and those 6 changes will be repeated over and over.
With this the LCD display should be present in service mode. Even if LCD dose not display, other operations will be perfoemed.
2. When ▶|| or ▷ key is pressed, the optical pick-up moves to the inside or outside circumference. Tracking servo and sled servo go off when this is done, so press ▶|| key to turn on the tracking servo if necessary.
3. When REMAIN/ENTER key is pressed, the display stops. When REMAIN/ENTER key is released, the display continues to change.
This allows check of each segment.
4. When ▶|| key is pressed, CLV-S (pull-in mode) starts while performing focus search. When there is no disc installed, focus search is repeated several times while disc motor is rotating.
5. When ▶|| key is pressed, tracking servo, sled servo and CLV-A (servo during PLAY) go ON.
6. When 4 and 5 are performed, the disc begins to play.
At this time, the top panel should be closed and S901 are to be ON. When S901 is OFF, muting is ON. So there is no sound.
7. All servo (focus, tracking, sled and spindle) go off when ■ key is pressed. But disc motor continues rotating for a while by inertia.

• Step 3 (Service Mode release)

1. First be sure to unplug the external power supply, then remove the TEST point solder jumper.
2. The set will now operated normally.

—main board—



SECTION 3

ELECTRICAL ADJUSTMENTS

Notes on Adjustment

1. Perform adjustments except for RECHARGEABLE VOLTAGE ADJUSTMENT in service mode.
Be sure to release service mode after completing adjustment.
(Refer to "Service Mode (service program)" on page 4.)
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (part No. : 3-702-101-01) unless otherwise indicated.
4. Power supply voltage : DC 9V
HOLD switch : OFF
VOLUME knob : Minimum
BASS BOOST switch : NORM

PREPARATION

Put the set into service mode (See page 4.) and perform the following checks. Repair if there are any abnormalities.

• Sled Motor Check

1. Press the OPEN button and open the top panel.
2. Press the **►**, **◄** keys and make sure that the optical pick-up moves smoothly, without catching, from the inmost → outmost → inmost circumference.
►: The optical pick-up moves outward
◄: The optical pick-up moves inward

• Focus Search Check

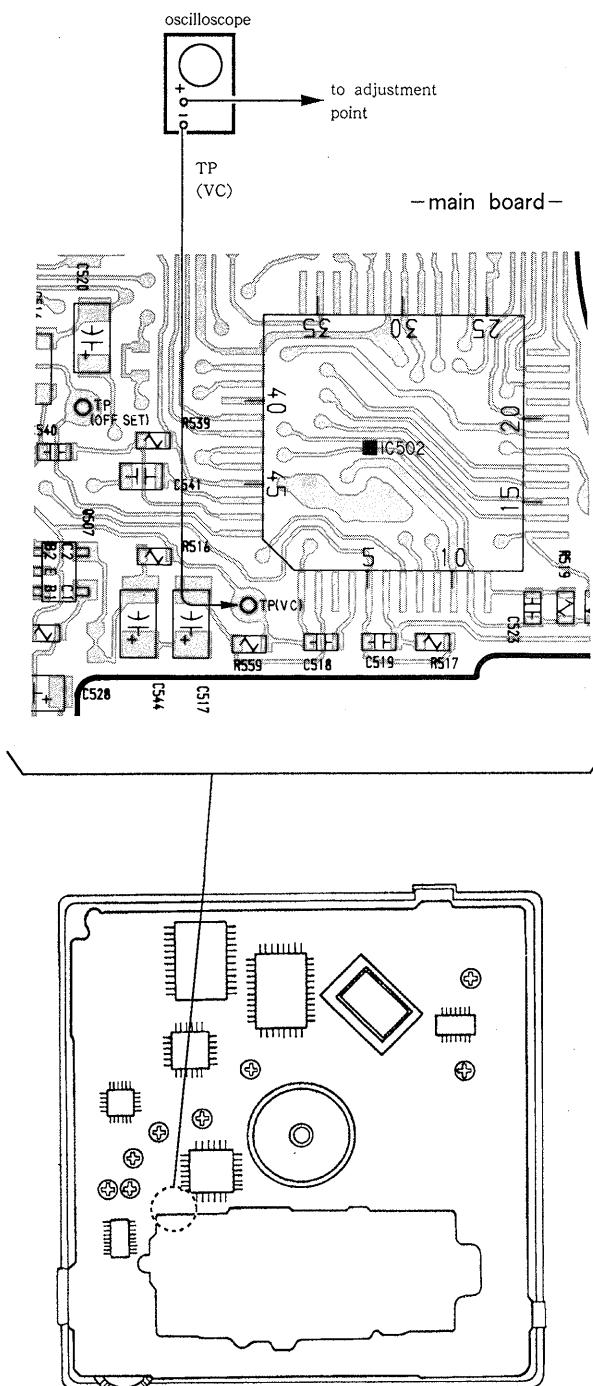
1. Press the OPEN button and open the top panel.
2. Press the **►**, **█** key. (Focus search is performed continuously.)
3. Observe the optical pick-up objective lens and check that it moves smoothly up and down with no catching or noises.
4. Press the **█** key.

Check that focus search operation stops. If it does not, stop press the **█** key again longer than before.

VC (1/2Vcc) Connecting Point

FOCUS BIAS ADJUSTMENT
TRACKING BALANCE ADJUSTMENT

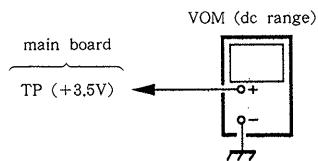
When the adjustments above are performed, connect the \ominus side of oscilloscope to the point below.



+3.5V Adjustment

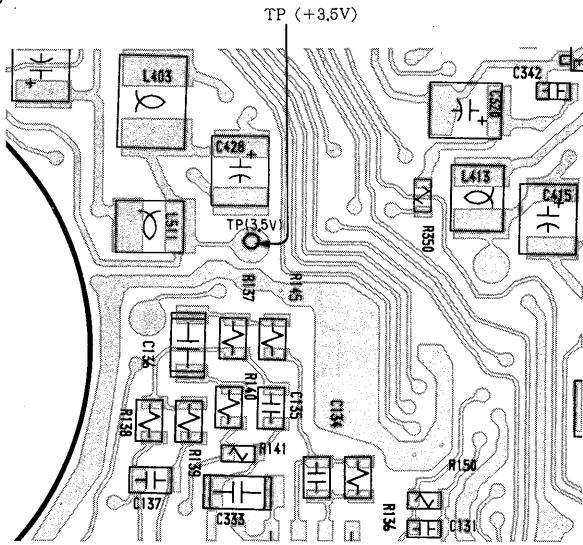
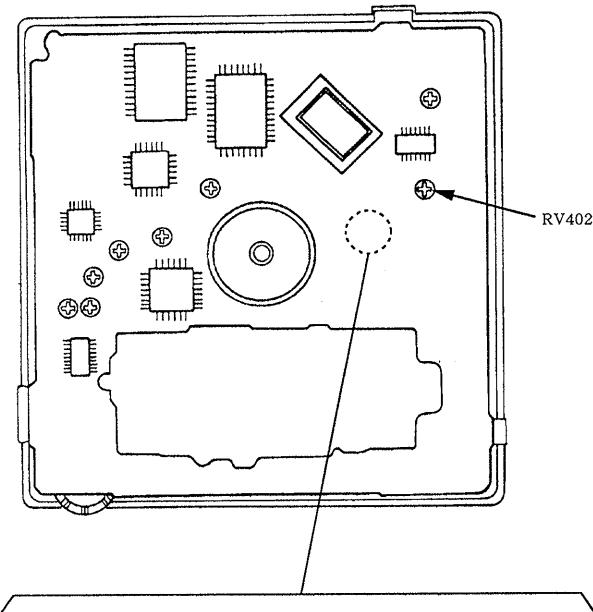
*Perform +3.5V adjustment with an AA size battery.

Adjustment Procedure :



1. Connect the VOM to main board TP (+3.5V)
2. Adjust RV402 for $3.5V \pm 0.05V$ reading on the VOM.

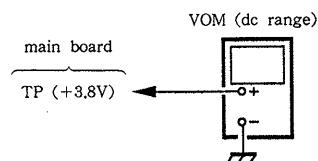
Adjustment Location : main board



+3.8V Adjustment

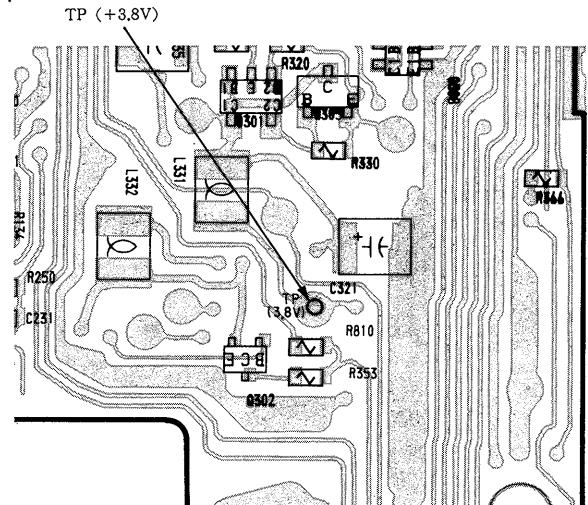
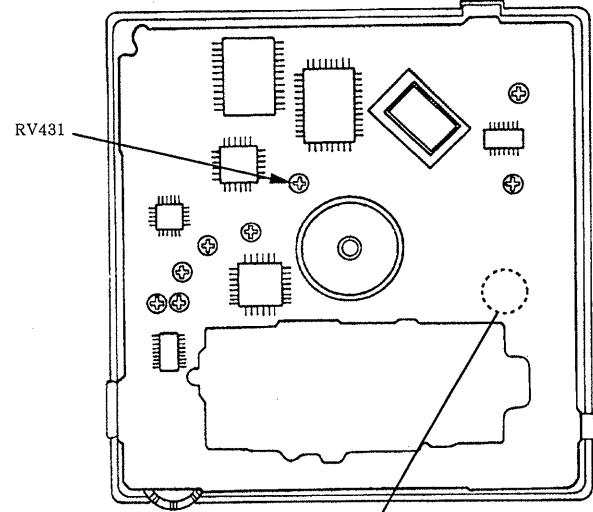
*Perform +3.8V adjustment with an AA size battery.

Adjustment Procedure :



1. Connect the VOM to main board TP (+3.8V)
2. Adjust RV431 for $3.8V \pm 0.05V$ reading on the VOM.

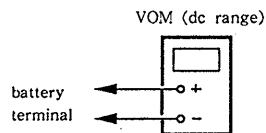
Adjustment Location : main board



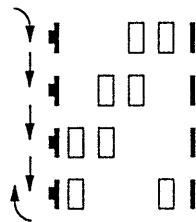
REVISED

Charge Voltage Adjustment

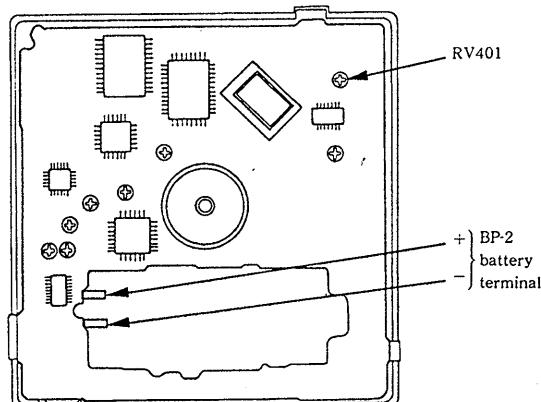
Adjustment Procedure :



1. Connect a dummy resistor of 240Ω to the BP terminal.
2. Apply 12V DC to the DC IN JACK.
3. Adjust RV401 so that the voltage between both BP terminals become $4.85\pm0.05V$.
4. Change the dummy resistor to one that 7Ω , and confirm that the current which flows to the dummy resistor is within $600\pm100mA$.
5. In step 4 above, the indications of the LCD will change as shown below.
6. Confirm that the voltage between both BP terminals is less than 5V without connecting a dummy resistor.

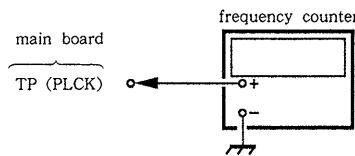


Adjustment Location : main board



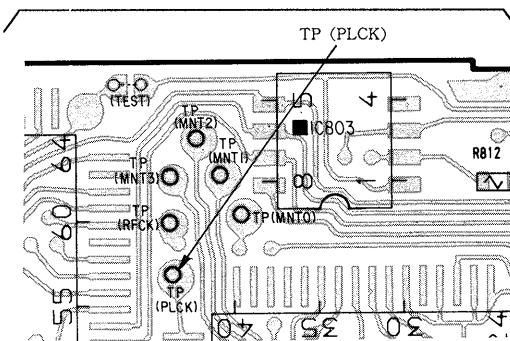
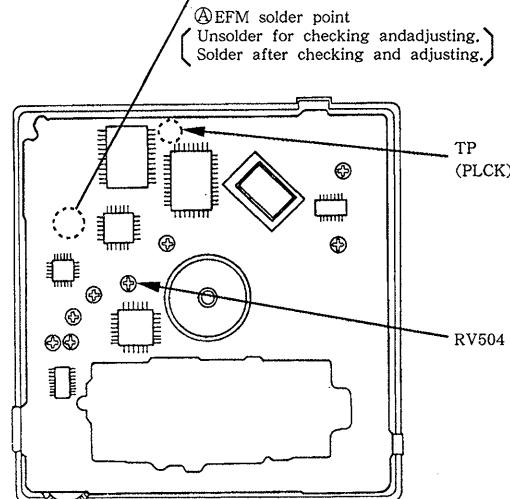
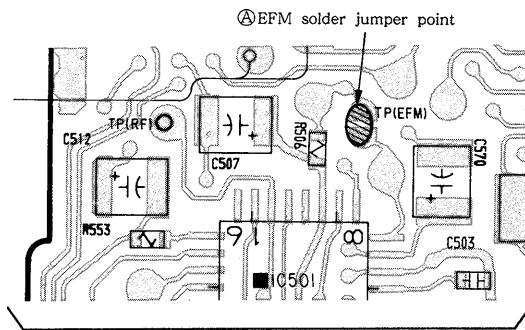
PLL Free Run Frequency Check and Adjustment

Check/Adjustment Procedure :



1. Disconnect the jumper point \textcircled{A} (EFM) in the diagram below.
2. Connect a frequency counter to main board test point TP (PLCK).
3. Put the set into service mode stop state (see page 4)
4. Check that the frequency counter reading is $4,3218\pm0.01MHz$. If not, adjust RV504 so that it is $4,3218\pm0.01MHz$.
5. After adjustment, release service mode (see page 4)
6. Short the jumper point disconnected in step 1.

Check/Adjustment Location : main board

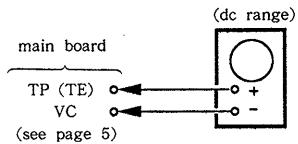


Tracking Balance Adjustment

Conditions :

The set should be placed either horizontally.

Adjustment Procedure :

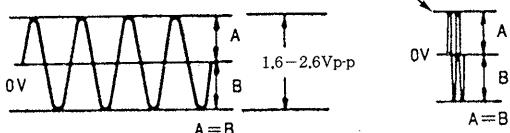


1. Connect the oscilloscope to main board TP (TE).
2. Put the set into service mode stop state (See page 4.)
3. Press the **►►** and **◀◀** keys to move the optical pick-up to the center.
4. Insert the disc (YEDS-18) and close the top panel.
5. Press the **►||** key.

(It will go from focus search to focus on, and CLV)
 (pull-in mode state. Tracking and sled are OFF.)

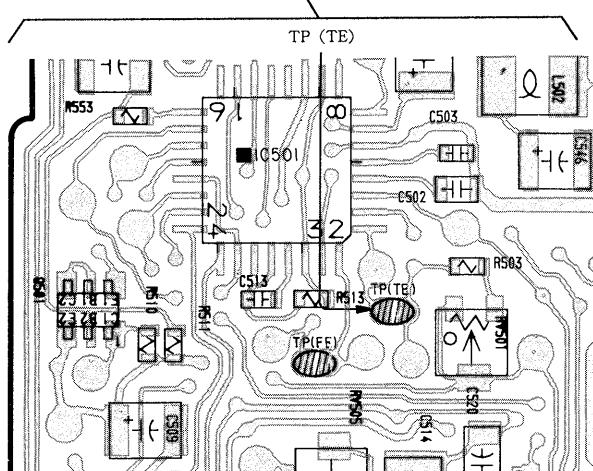
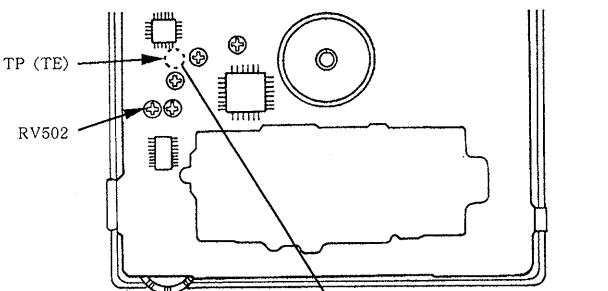
6. Adjust RV502 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.

Note : Take sweep time as long as possible to obtain best wave-form.



7. Press the **■** key to stop spindle motor from rotating.
8. After adjustment, release service mode (see page 4).

Adjustment Location : main board

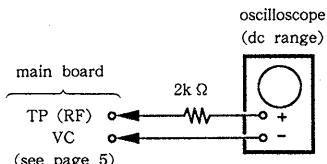


Focus Bias Adjustment

Conditions :

The set should be placed either horizontally.

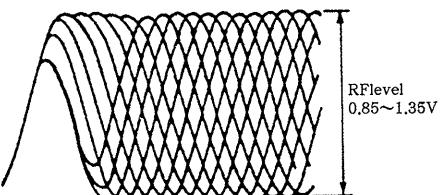
Adjustment Procedure :



1. Put the set into STOP state in service mode (See page 4.).
 2. Connect the oscilloscope to main board test point TP (RF).
 3. Press the **►►** and **◀◀** key to move the optical pick-up to the center.(Move the optical pick-up to the music area on the disc to enable easy visibility of the eye pattern).
 4. Insert the disc (YEDS-18) and close the top panel.
 5. Press the **►||** key.
- (It will go from focus search to focus on, and CLV)
 (pull-in mode state. Tracking and sled are OFF.)
6. Press the **►||** key .(Tracking and sled go ON.)
 7. Adjust RV503 so that the oscilloscope waveform eye pattern is good. A good eye pattern means that the diamond shape (\diamond) in the center of the waveform can be clearly distinguished.

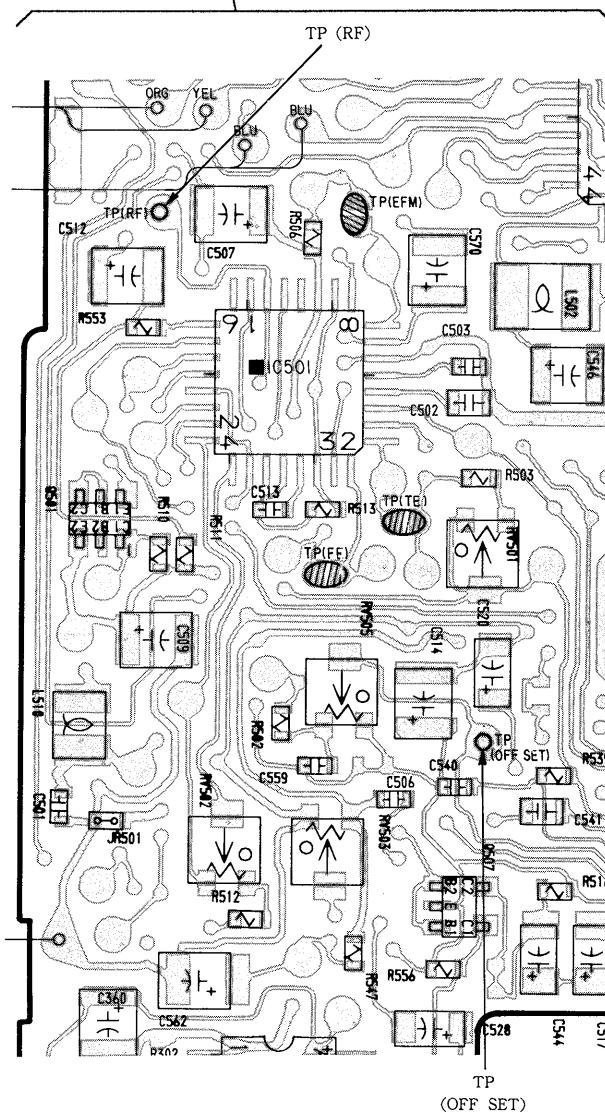
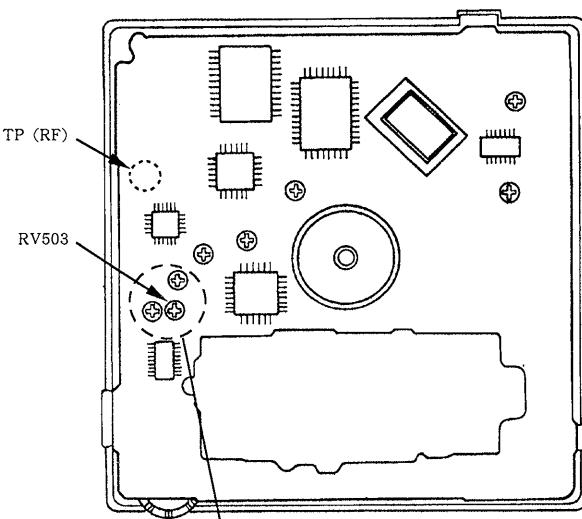
• RF Signal Reference Waveform (eye pattern)

VOLT/DIV : 200mV
TIME/DIV : 500nS



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

8. Measure the voltage of pin⑩TP (OFF SET) of IC502. Readjust RV503 according to the voltage range.
 $+20\text{mV} \rightarrow +50\text{mV}$
 $+20\text{mV} \rightarrow -20\text{mV} \rightarrow -20\text{mV}$
9. Press the **■** key to stop spindle from rotating.
10. After adjustment, release service mode (see psge 4.).

Adjustment Procedure : main board**Reference****Focus/Tracking Gain Adjustment**

A frequency response analyzer or CD jig is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up followup (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is high, the noise when the 2-axis device operates increases.
- When gain is low, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment is to be performed when replacing the following parts :

- optical pick-up block
- RV501 (tracking gain volume)
- RV505 (focus gain volume)

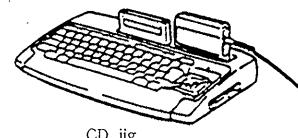
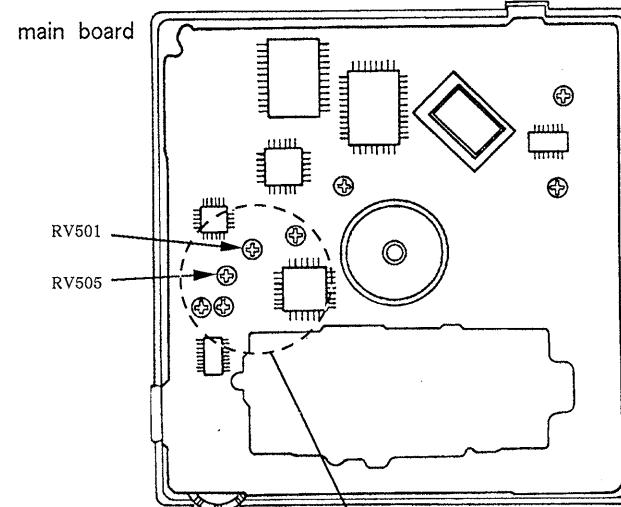
Be careful not to move RV505 (focus gain volume) and RV501 (tracking gain volume) ordinarily.

On this set, it is very difficult to simplify this adjustment. For those sets on which symptoms such as "occasional skipping" are hard to discover, or it is hard to tell if the set has been repaired, use the CD jig and perform this adjustment. Refer to the diagram below for connection of the CD jig. The adjustment procedure is described in the separate CD Jig Instruction Manual.

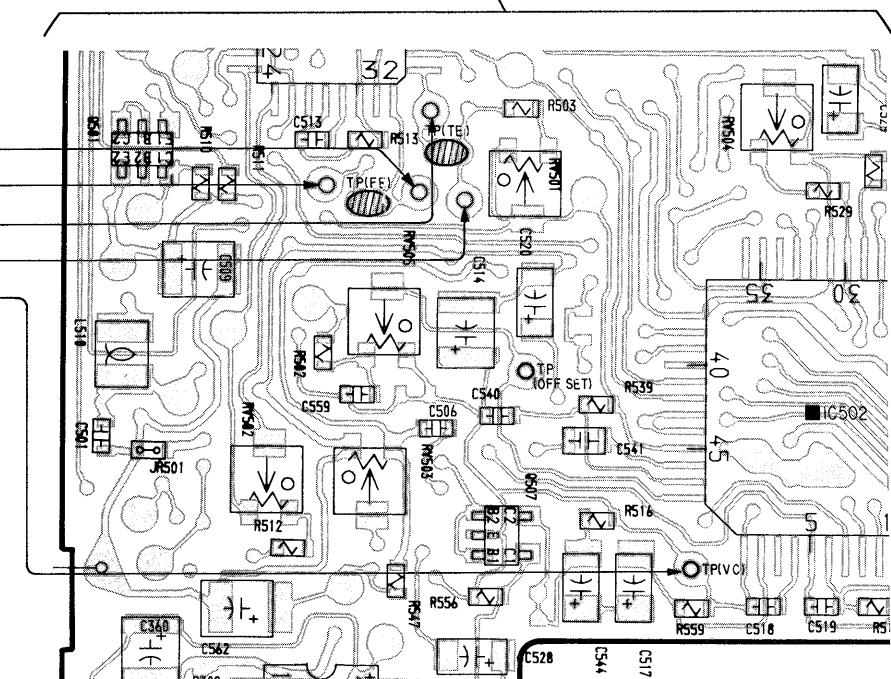
CD Jig Connection Procedure :

Remove the solder jumpers at the TE and FE locations and connect the CD jig.

(Connect the points on both TE and FE located on the side of IC501 to the output to the CD jig, and points located on the side of volumes to the input from the CD jig.)

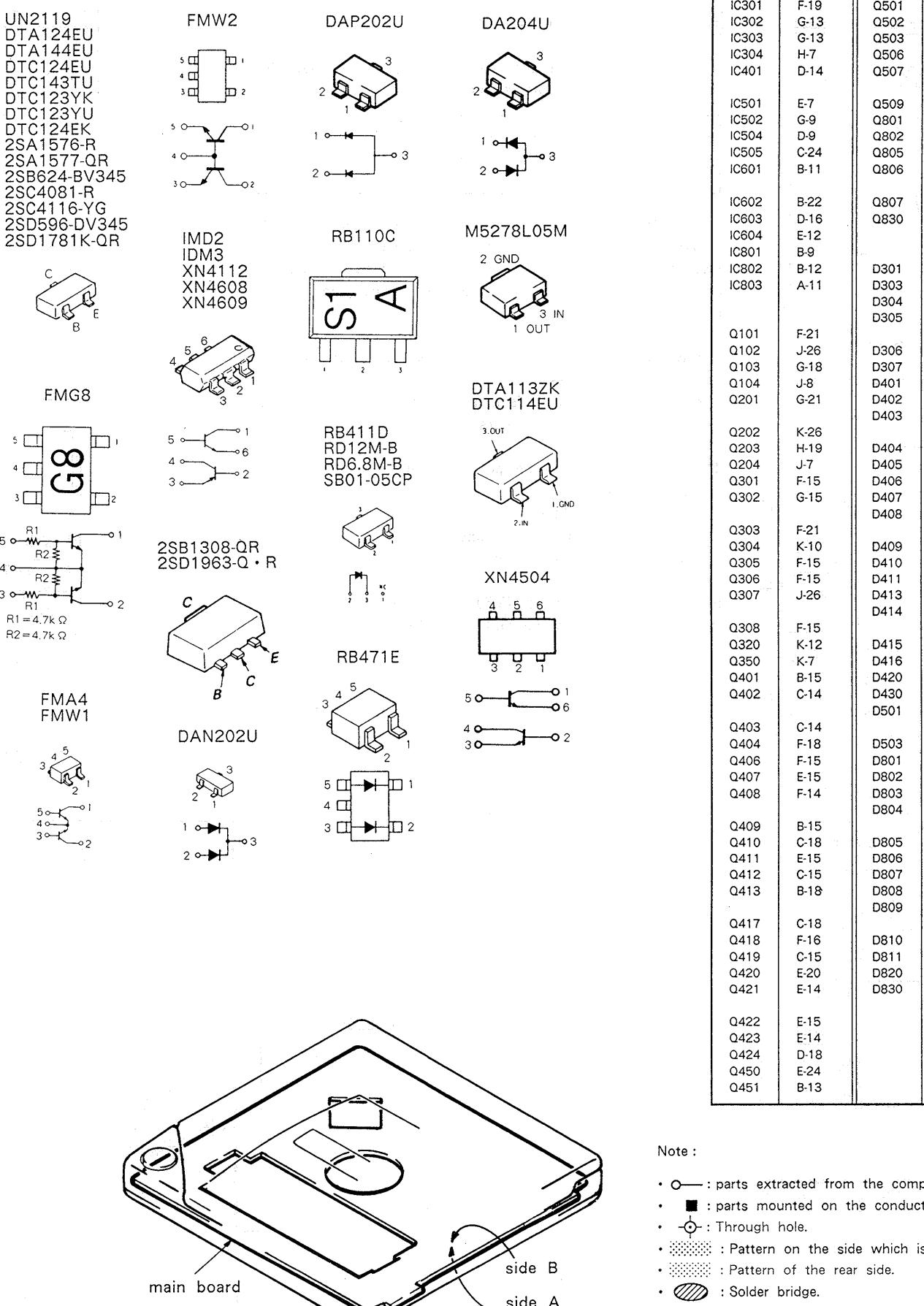


CD Jig
BRN
RED
ORG
YEL
WHT



**SECTION 4
DIAGRAMS**

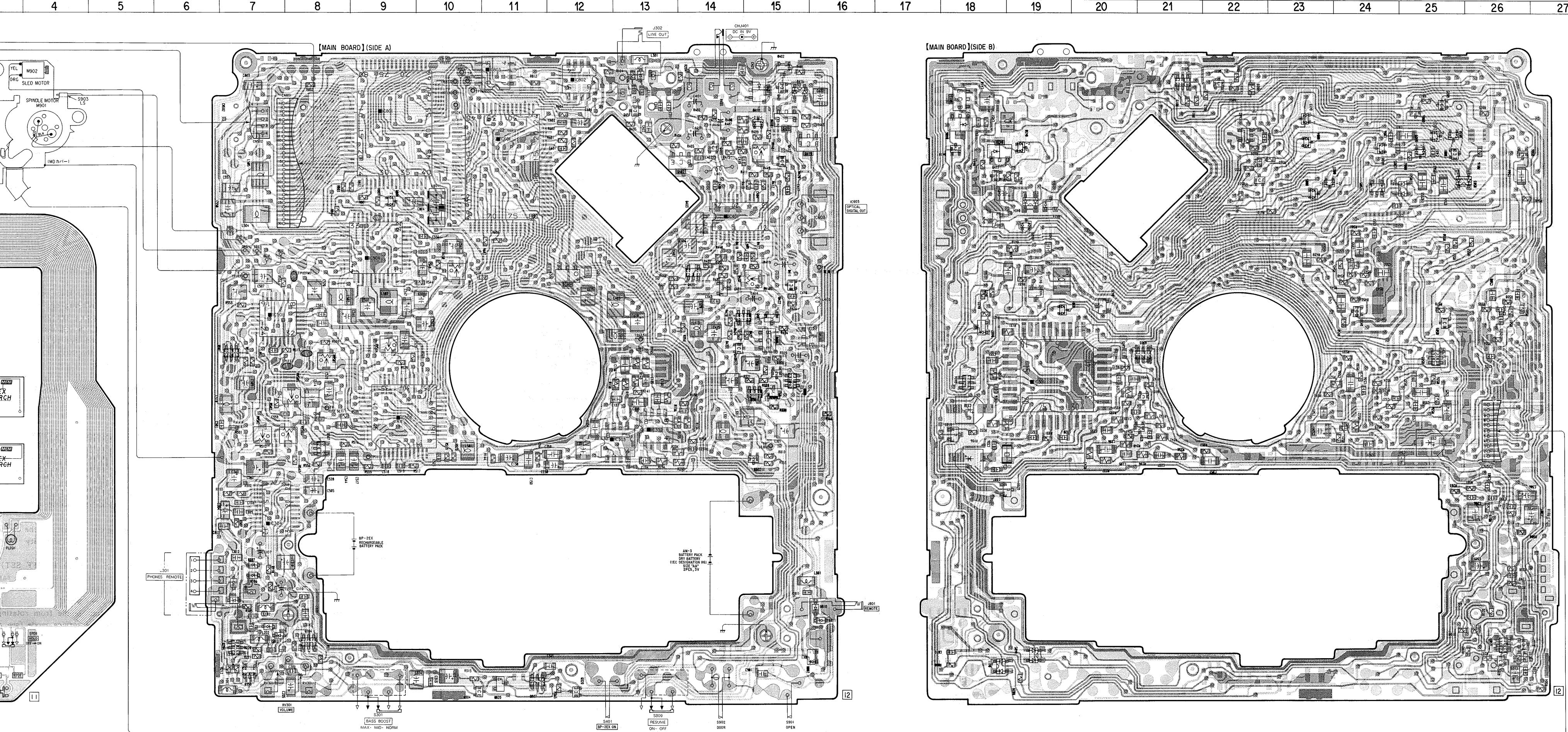
4.1. SEMICONDUCTOR LEAD LAYOUTS

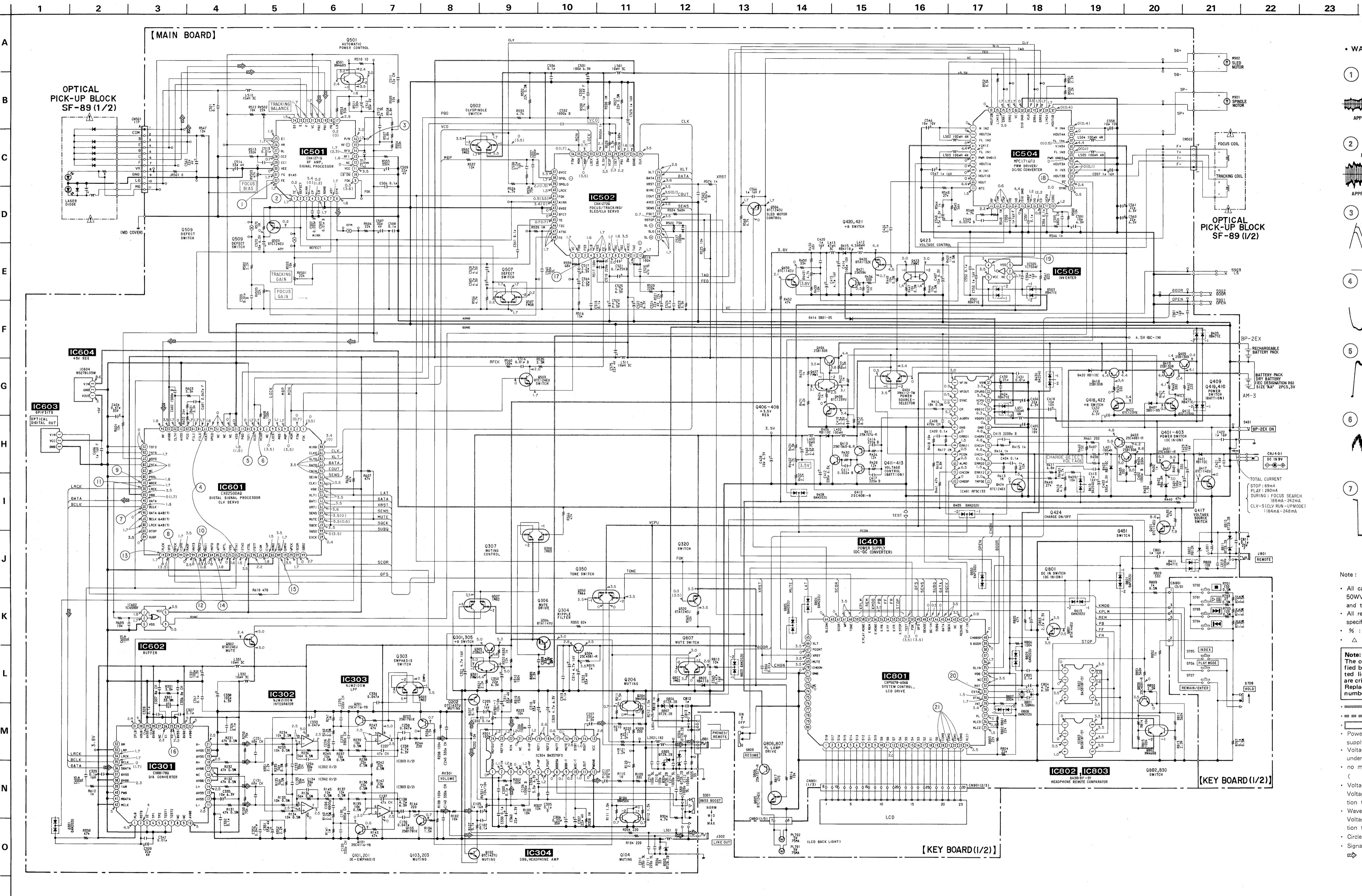
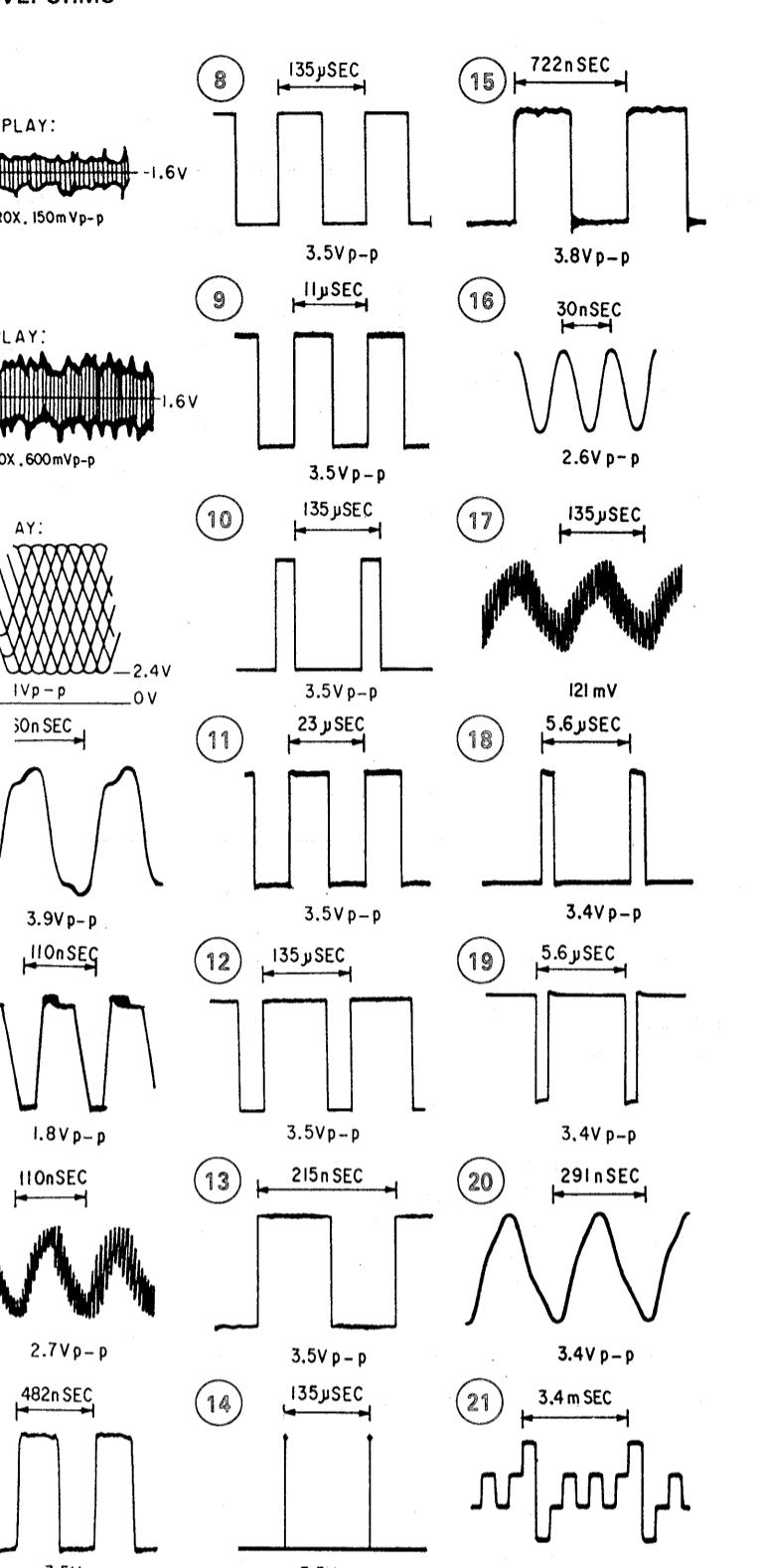


Note :

- ○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨▨ : Pattern of the rear side.
- ⚪ : Solder bridge.

4.2. PRINTED WIRING BOARDS



**WAVEFORMS**

Note :

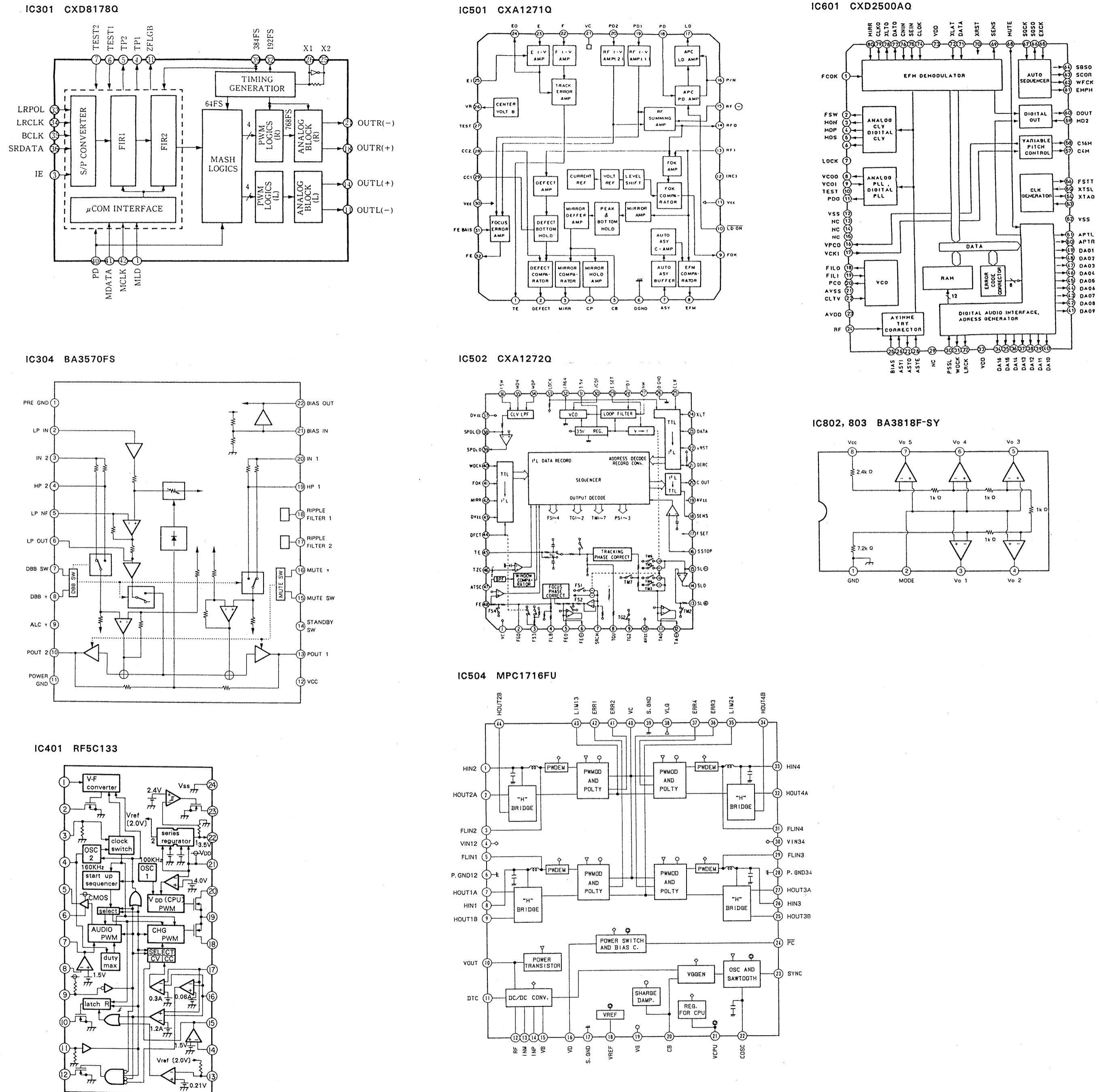
- All capacitors are in μF unless otherwise noted. pF : $\mu \mu F$ 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4W$ or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.

Note:

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

- : $B+$ Line
— : $B-$ Line
— : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
 - Voltage and waveforms are dc with respect to ground under the service mode.
 - no mark : STOP
 - () : PLAY
 - Voltages are taken with a VOM (input impedance 10M Ω). 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.

4-4. IC BLOCK DIAGRAMS



REVISED

SECTION 5 EXPLODED VIEWS

NOTE:

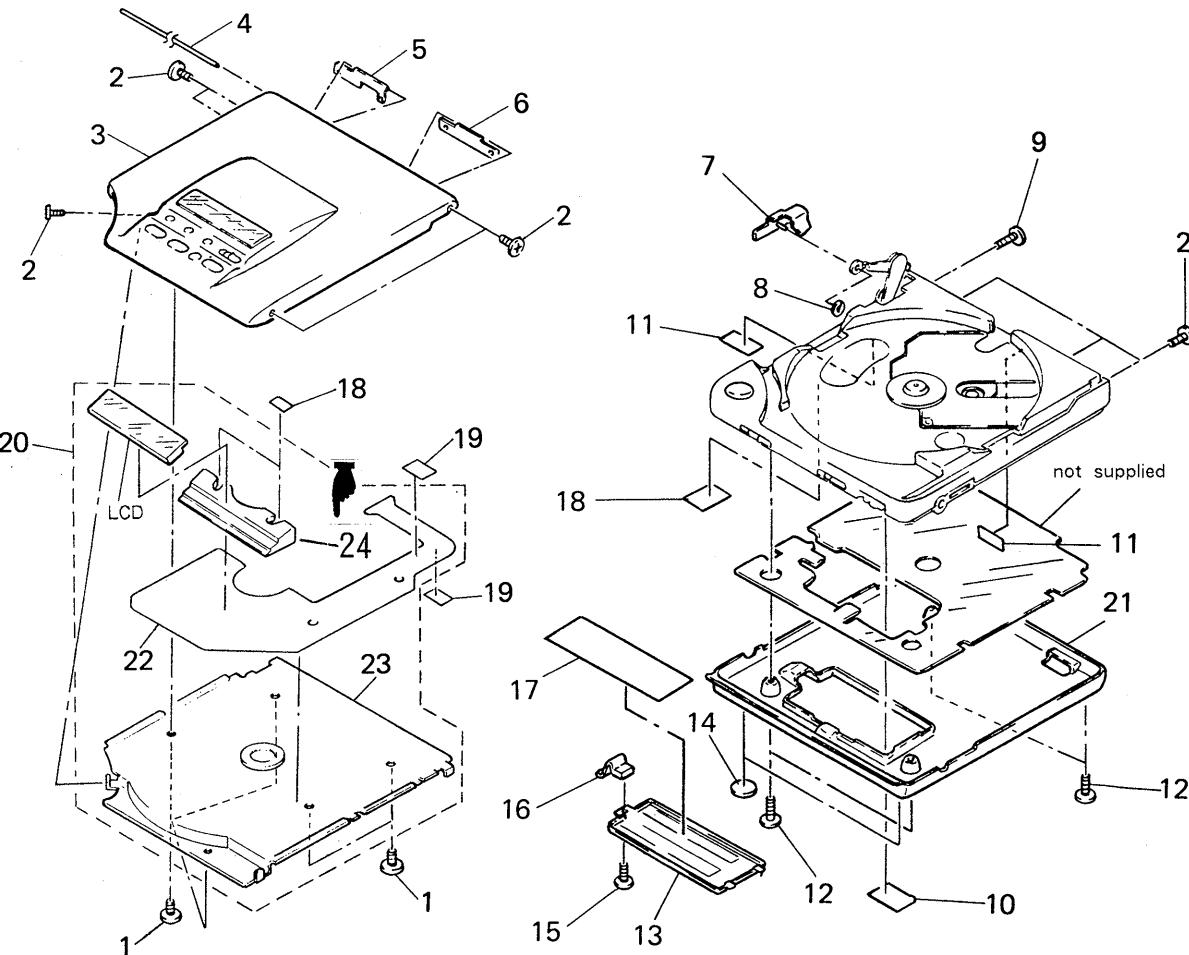
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
KNOB, BALANCE (WHITE)...(RED)
 ↑ ↑
 Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(#mark) list is given in the last of this parts list.

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.

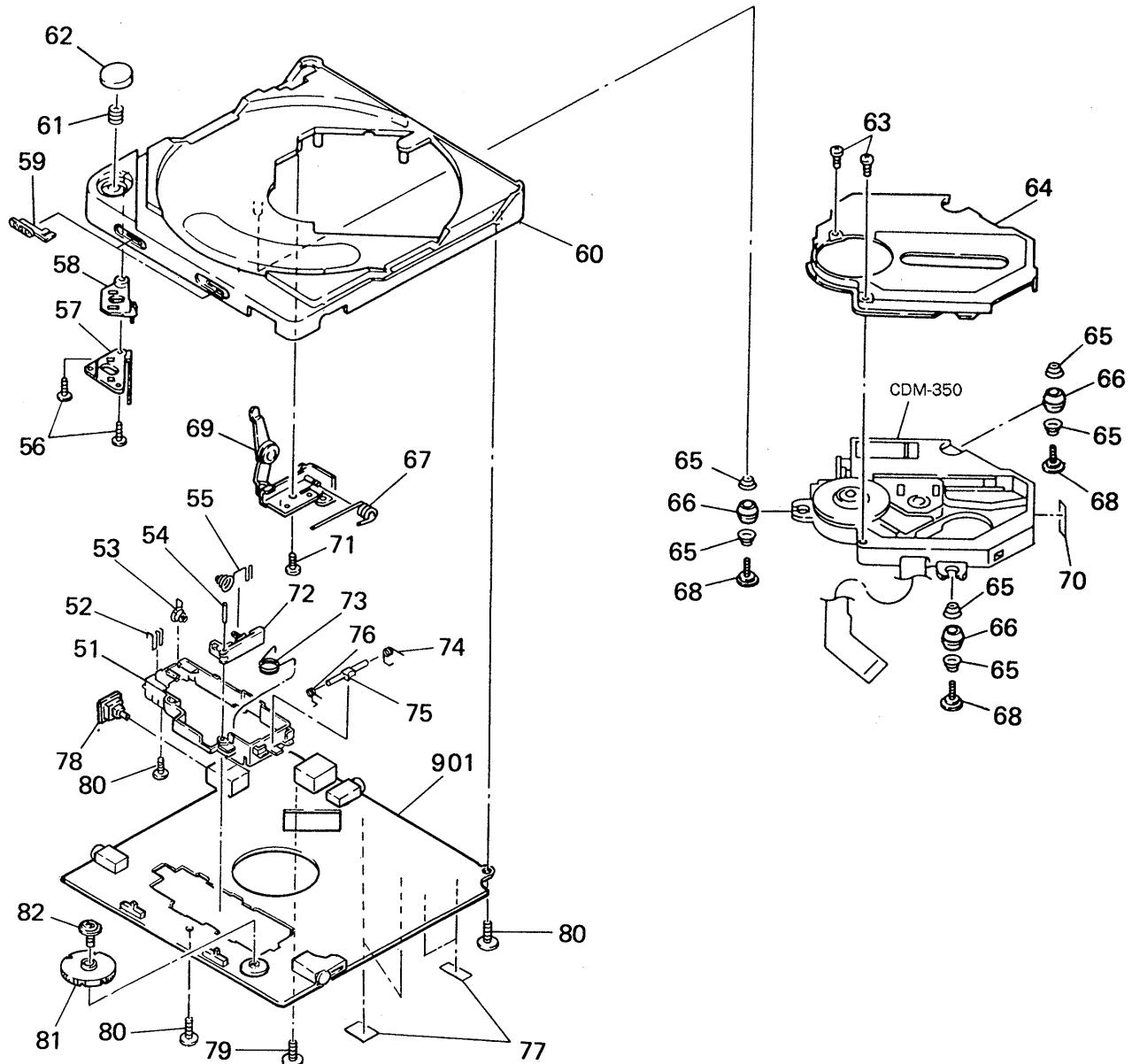
5-1. CABINET SECTION-1



Ref. No.	Part No.	Description	Remark
1	3-703-816-32	SCREW (M1.4X1.6), SPECIAL HEAD	
2	3-703-816-42	SCREW (M1.4X2.5), SPECIAL HEAD	
3	X-4941-303-1	PANEL ASSY, UPPER... (GRY)	
3	X-4941-304-1	PANEL ASSY, UPPER... (BLK)	
4	4-942-933-01	SHAFT, FULCRUM	
5	4-942-934-01	HINGE (L)	
6	4-942-932-01	HINGE (R)	
7	X-4941-298-1	RETAINER ASSY, ARM	
8	4-942-938-01	WASHER (V), POLY-SLIDER	
9	3-703-816-12	SCREW (M1.4X4.0), SPECIAL HEAD	
10	4-942-902-01	SHEET, BATTERY CASE	
11	3-831-441-XX	SPACER, KNOB	
12	4-908-792-71	SCREW (B2X6), TAPPING, P1	
13	4-942-918-01	LID, BATTERY CASE... (BLK)	
13	4-942-918-11	LID, BATTERY CASE... (GRY)	

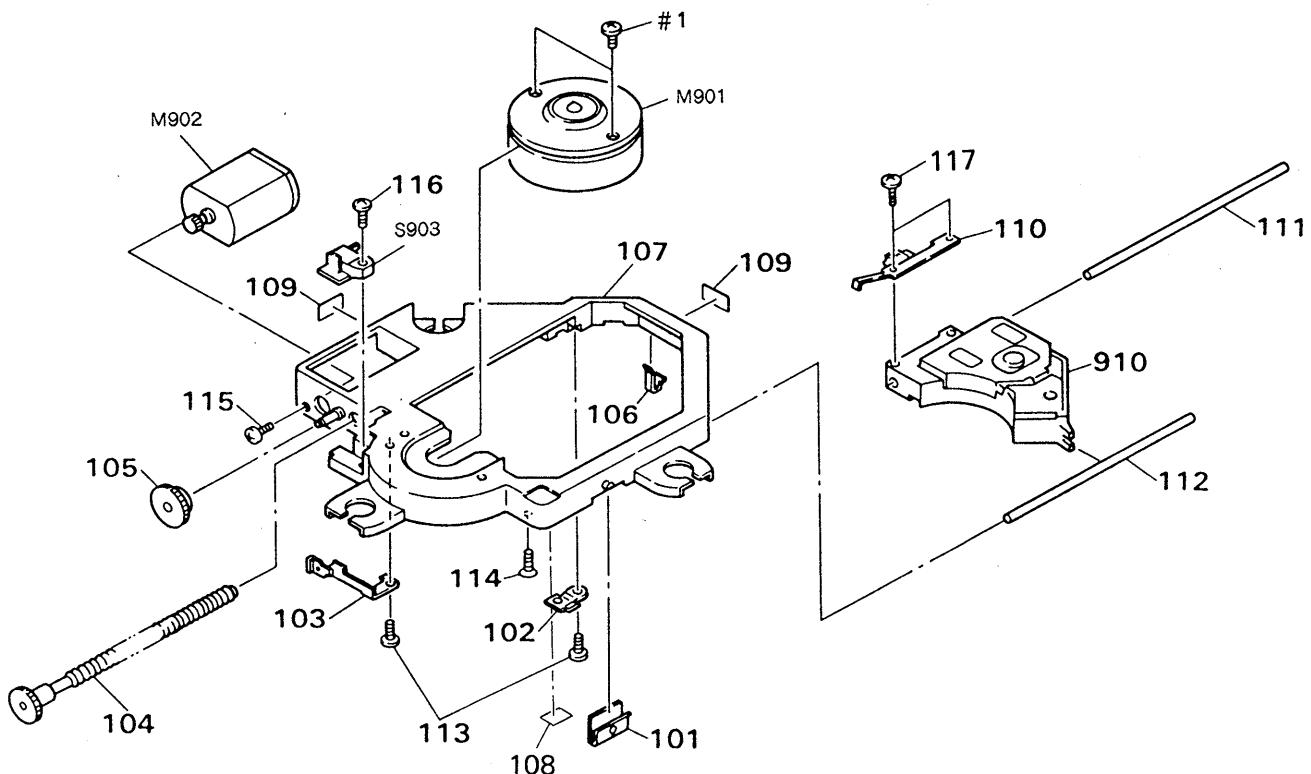
Ref. No.	Part No.	Description	Remark
14	4-912-641-01	FOOT, RUBBER	
15	3-342-512-11	SCREW (B1.7X3), TAPPING	
16	4-942-916-01	CLAW, LOCK	
17	4-942-908-01	SHEET, INSULATING	
18	3-831-441-11	CUSHION (B)	
19	* 4-935-727-01	SPACER (FU)	
20	A-3208-715-A	COVER BLOCK ASSY, LID (UK)	
21	X-4941-294-1	PANEL ASSY, BOTTOM... (BLK)	
21	X-4941-295-1	PANEL ASSY, BOTTOM... (GRY)	
22	* 1-466-507-11	PC BOARD, KEY SWITCH FLEXIBLE	
23	X-4941-301-1	COVER ASSY, LID	
24	* 4-942-921-02	PLATE, LIGHT GUIDE	
LCD	1-809-269-11	DISPLAY PANEL, LIQUID CRYSTAL	

5-2. CABINET SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-942-917-01	CASE, BATTERY		65	4-932-792-01	SPRING, COMPRESSION	
52	4-942-910-01	SPRING (+), BATTERY COIL		66	4-932-791-01	INSULATOR	
53	4-942-904-01	SPRING (-), BATTERY COIL		67	4-932-734-01	SPRING	
54	4-942-903-01	SHAFT		68	4-932-780-03	SCREW, STEP	
55	4-942-900-01	SPRING (+-), BATTERY COIL		69	X-4941-302-1	ARM ASSY, SWITCHING	
56	3-895-823-41	SCREW (B1.4X4), TAPPING		70	3-831-441-XX	SPACER, KNOB	
57	4-942-883-01	RETAINER, LOCK LEVER		71	4-908-792-51	SCREW (B2X5), TAPPING, P1	
58	4-942-914-01	LEVER, LOCK		72	4-942-915-01	TERMINAL BOARD, BATTERY	
59	4-942-901-01	KNOB (DBB) ... (BLK)		73	4-942-907-01	SPRING, TORSION	
59	4-942-901-11	KNOB (DBB) ... (GRY)		74	4-942-911-01	SPRING (A), BATTERY COIL	
60	4-942-920-01	CABINET... (BLK)		75	4-942-906-01	SHAFT, SPRING	
60	4-942-920-11	CABINET... (GRY)		76	4-942-899-01	SPRING (B), BATTERY COIL	
61	4-917-727-01	SPRING, COMPRESSION		77	3-831-441-11	CUSHION (B)	
62	4-942-909-01	BUTTON (OPEN) ... (BLK)		78	4-942-912-01	CAP	
62	4-942-909-11	BUTTON (OPEN) ... (GRY)		79	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK	
63	3-895-823-41	SCREW (B1.4X4), TAPPING		80	4-908-792-71	SCREW (B2X6), TAPPING, P1	
64	4-932-789-01	COVER, MD		81	4-942-913-01	KNOB (VOL)	
				82	3-703-502-31	SCREW	
				901	A-3270-937-A	MAIN BOARD, COMPLETE (EXCEPT FOR UK)	
				901	A-3275-094-A	MAIN BOARD, COMPLETE (UK)	

**5-3. MECHANISM SECTION
(CDM-350)**



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

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

Ref. No.	Part No.	Description	Remark
101	4-932-779-01	RETAINER (A), FLEXIBLE	
102	4-932-776-01	RETAINER, SHAFT	
103	4-932-786-01	SPRING, LEAF	
104	X-4921-254-1	FEED SCREW ASSY	
105	4-932-778-01	GEAR (B)	
106	4-932-777-01	RETAINER (B), FLEXIBLE	
107	* 4-932-790-01	CHASSIS	
108	* 4-935-743-11	SPACER	
109	3-831-441-XX	SPACER, KNOB	
110	4-932-785-01	RACK (OUTSERT)	

Ref. No.	Part No.	Description	Remark
111	4-932-784-01	SHAFT (A)	
112	4-932-775-11	SHAFT (B)	
113	3-895-823-41	SCREW (B1.4X4), TAPPING	
114	4-941-983-01	SCREW (B1.7X6), SPECIAL	
115	4-932-773-11	SCREW	
116	4-908-792-91	SCREW (B2X7), TAPPING, P1	
910	X-4921-260-1	PICKUP, OPTICAL	
M901	A-3133-398-A	MOTOR ASSY, CLV	
M902	X-4921-256-1	FEED MOTOR ASSY	
S903	1-570-771-11	SWITCH	

MAIN

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal Oxide-film resistor
F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA....: μ A...., uPA....: μ PA....
uPB....: μ PB...., uPC....: μ PC....
uD....: μ D....
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		A-3270-937-A MAIN BOARD, COMPLETE (EXCEPT FOR UK)		C140	1-162-959-11 CERAMIC CHIP	330PF	5% 50V
		*****		C150	1-137-302-11 FILM CHIP	0.047uF	5% 16V
		A-3275-094-A MAIN BOARD, COMPLETE (UK)		C202	1-164-156-11 CERAMIC CHIP	0.1uF	25V
		*****		C205	1-135-091-00 TANTAL CHIP	1uF	20% 16V
				C206	1-162-964-11 CERAMIC CHIP	0.001uF	10% 50V
		3-703-502-31 SCREW		C207	1-126-369-11 ELECT	220uF	20% 6.3V
		4-942-899-01 SPRING (B), BATTERY COIL		C210	1-162-953-11 CERAMIC CHIP	100PF	5% 50V
		4-942-900-01 SPRING (+), BATTERY COIL		C211	1-162-957-11 CERAMIC CHIP	220PF	5% 50V
		4-942-903-01 SHAFT		C212	1-162-964-11 CERAMIC CHIP	0.001uF	10% 50V
		4-942-904-01 SPRING (-), BATTERY COIL		C231	1-162-925-11 CERAMIC CHIP	68PF	5% 50V
		4-942-906-01 SHAFT, SPRING		C233	1-163-241-11 CERAMIC CHIP	39PF	5% 50V
				C234	1-163-241-11 CERAMIC CHIP	39PF	5% 50V
		4-942-907-01 SPRING, TORSION		C235	1-163-131-00 CERAMIC CHIP	390PF	5% 50V
		4-942-910-01 SPRING (+), BATTERY COIL		C236	1-137-292-11 FILM CHIP	0.0068uF	5% 16V
		4-942-911-01 SPRING (A), BATTERY COIL		C237	1-163-109-00 CERAMIC CHIP	47PF	5% 50V
		4-942-913-01 KNOB (VOL)		C238	1-135-181-21 TANTALUM CHIP	4.7uF	20% 6.3V
		4-942-915-01 TERMINAL BOARD, BATTERY		C239	1-162-959-11 CERAMIC CHIP	330PF	5% 50V
		4-942-917-01 CASE, BATTERY		C240	1-162-959-11 CERAMIC CHIP	330PF	5% 50V
		< CAPACITOR >		C250	1-137-302-11 FILM CHIP	0.047uF	5% 16V
C102	1-164-156-11 CERAMIC CHIP	0.1uF	25V	C303	1-164-004-11 CERAMIC CHIP	0.1uF	10% 25V
C105	1-135-091-00 TANTAL CHIP	1uF	20% 16V	C304	1-135-180-21 TANTALUM CHIP	3.3uF	20% 6.3V
C106	1-162-964-11 CERAMIC CHIP	0.001uF	10% 50V	C305	1-164-004-11 CERAMIC CHIP	0.1uF	10% 25V
C107	1-126-369-11 ELECT	220uF	20% 6.3V	C306	1-135-072-21 TANTALUM CHIP	0.22uF	10% 3.5V
C110	1-162-953-11 CERAMIC CHIP	100PF	5% 50V	C307	1-135-131-11 TANTAL CHIP	22uF	20% 4V
C111	1-162-957-11 CERAMIC CHIP	220PF	5% 50V	C308	1-124-292-00 ELECT	33uF	20% 6.3V
C112	1-162-964-11 CERAMIC CHIP	0.001uF	10% 50V	C309	1-135-181-21 TANTALUM CHIP	4.7uF	20% 6.3V
C131	1-162-925-11 CERAMIC CHIP	68PF	5% 50V	C310	1-135-162-21 TANTALUM CHIP	33uF	20% 4V
C133	1-163-241-11 CERAMIC CHIP	39PF	5% 50V	C311	1-135-162-21 TANTALUM CHIP	33uF	20% 4V
C134	1-163-241-11 CERAMIC CHIP	39PF	5% 50V	C313	1-164-156-11 CERAMIC CHIP	0.1uF	25V
C135	1-163-131-00 CERAMIC CHIP	390PF	5% 50V	C314	1-135-155-21 TANTALUM CHIP	4.7uF	20% 16V
C136	1-137-292-11 FILM CHIP	0.0068uF	5% 16V	C320	1-135-131-11 TANTAL CHIP	22uF	20% 4V
C137	1-163-109-00 CERAMIC CHIP	47PF	5% 50V	C321	1-135-155-21 TANTALUM CHIP	4.7uF	20% 16V
C138	1-135-181-21 TANTALUM CHIP	4.7uF	20% 6.3V	C323	1-135-162-21 TANTALUM CHIP	33uF	20% 4V
C139	1-162-959-11 CERAMIC CHIP	330PF	5% 50V				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C326	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C460	1-135-149-21	TANTALUM CHIP	2.2uF 20% 6.3V
C327	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	C501	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C328	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	C502	1-163-989-11	CERAMIC CHIP	0.033uF 10% 25V
C329	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	C503	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C330	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C505	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C331	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	C506	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C332	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	C507	1-135-162-21	TANTALUM CHIP	33uF 20% 4V
C333	1-137-302-11	FILM CHIP	0.047uF 5% 16V	C508	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C334	1-137-302-11	FILM CHIP	0.047uF 5% 16V	C509	1-135-131-11	TANTAL CHIP	22uF 20% 4V
C335	1-135-157-21	TANTALUM CHIP	10uF 20% 6.3V	C510	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C336	1-162-913-11	CERAMIC CHIP	8PF 0.5PF 50V	C511	1-162-916-11	CERAMIC CHIP	12PF 5% 50V
C337	1-162-913-11	CERAMIC CHIP	8PF 0.5PF 50V	C512	1-135-162-21	TANTALUM CHIP	33uF 20% 4V
C338	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	C513	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C339	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V	C514	1-135-162-21	TANTALUM CHIP	33uF 20% 4V
C341	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	C515	1-162-932-11	CERAMIC CHIP	2PF 0.25PF 50V
C342	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C516	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C350	1-135-144-11	TANTAL CHIP	22uF 20% 6.3V	C517	1-135-149-21	TANTALUM CHIP	2.2uF 20% 6.3V
C351	1-135-162-21	TANTALUM CHIP	33uF 20% 4V	C518	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C352	1-137-302-11	FILM CHIP	0.047uF 5% 16V	C519	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C360	1-135-144-11	TANTAL CHIP	22uF 20% 6.3V	C520	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C365	1-164-005-11	CERAMIC CHIP	0.47uF 16V	C521	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C401	1-124-455-00	ELECT	100uF 20% 16V	C522	1-135-144-11	TANTAL CHIP	22uF 20% 6.3V
C402	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C523	1-162-949-11	CERAMIC CHIP	47PF 5% 50V
C403	1-126-245-11	ELECT	330uF 20% 6.3V	C524	1-135-131-11	TANTAL CHIP	22uF 20% 4V
C404	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C525	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C405	1-135-174-11	TANTAL CHIP	10uF 20% 10V	C526	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C406	1-135-144-11	TANTAL CHIP	22uF 20% 6.3V	C527	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C407	1-135-157-21	TANTALUM CHIP	10uF 20% 6.3V	C528	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C408	1-163-133-00	CERAMIC CHIP	470PF 5% 50V	C529	1-135-091-00	TANTAL CHIP	1uF 20% 16V
C409	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C530	1-162-638-11	CERAMIC CHIP	1uF 16V
C410	1-135-180-21	TANTALUM CHIP	3.3uF 20% 6.3V	C531	1-126-206-11	ELECT CHIP	100uF 20% 6.3V
C411	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V	C532	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C412	1-126-245-11	ELECT	330uF 20% 6.3V	C536	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C413	1-164-346-11	CERAMIC CHIP	1uF 16V	C537	1-162-965-11	CERAMIC CHIP	0.0015uF 10% 50V
C414	1-124-584-00	ELECT	100uF 20% 10V	C538	1-164-337-11	CERAMIC CHIP	2.2uF 16V
C415	1-135-155-21	TANTALUM CHIP	4.7uF 20% 16V	C540	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C416	1-162-957-11	CERAMIC CHIP	220PF 5% 50V	C541	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C417	1-162-957-11	CERAMIC CHIP	220PF 5% 50V	C544	1-135-149-21	TANTALUM CHIP	2.2uF 20% 6.3V
C418	1-135-174-11	TANTAL CHIP	10uF 20% 10V	C546	1-135-174-11	TANTAL CHIP	10uF 20% 10V
C419	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C547	1-135-091-00	TANTAL CHIP	1uF 20% 16V
C420	1-162-638-11	CERAMIC CHIP	1uF 16V	C548	1-135-180-21	TANTALUM CHIP	3.3uF 20% 6.3V
C421	1-164-346-11	CERAMIC CHIP	1uF 16V	C549	1-163-986-00	CERAMIC CHIP	0.027uF 10% 25V
C422	1-164-346-11	CERAMIC CHIP	1uF 16V	C550	1-162-638-11	CERAMIC CHIP	1uF 16V
C426	1-163-077-00	CERAMIC CHIP	0.1uF 10% 25V	C551	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C428	1-135-157-21	TANTALUM CHIP	10uF 20% 6.3V	C552	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C429	1-124-455-00	ELECT	100uF 20% 16V	C553	1-162-638-11	CERAMIC CHIP	1uF 16V
C430	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C554	1-162-638-11	CERAMIC CHIP	1uF 16V
C431	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C555	1-163-201-00	CERAMIC CHIP	680PF 5% 50V
C432	1-135-144-11	TANTAL CHIP	22uF 20% 6.3V	C556	1-164-156-11	CERAMIC CHIP	0.1uF 25V

MAIN

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< JUMPER >											
JR501	1-216-864-11	METAL CHIP	0	Q403	8-729-905-35	TRANSISTOR 2SC4081-R					
< COIL >											
L102	1-543-813-21	BEAD, FERRITE		Q404	8-729-402-XX	TRANSISTOR XN4112					
L202	1-543-813-21	BEAD, FERRITE		Q406	8-729-923-45	TRANSISTOR 2SB1308-QR					
L301	1-543-813-21	BEAD, FERRITE		Q407	8-729-903-10	TRANSISTOR FMW1					
L331	1-412-029-11	INDUCTOR, CHIP 10uH		Q408	8-729-924-65	TRANSISTOR DTC123YU					
L332	1-412-029-11	INDUCTOR, CHIP 10uH		Q409	8-729-923-45	TRANSISTOR 2SB1308-QR					
L401	1-412-747-11	COIL, CHOKE 100uH		Q410	8-729-924-65	TRANSISTOR DTC123YU					
L402	1-412-747-11	COIL, CHOKE 100uH		Q411	8-729-905-23	TRANSISTOR 2SA1576-R					
L403	1-412-622-51	INDUCTOR	10uH	Q412	8-729-905-35	TRANSISTOR 2SC4081-R					
L412	1-412-400-31	INDUCTOR	68uH	Q413	8-729-923-36	TRANSISTOR 2SD1963-Q.R					
L413	1-412-031-11	INDUCTOR CHIP	47uH	Q417	8-729-907-00	TRANSISTOR DTC114EU					
L451	1-412-032-11	INDUCTOR CHIP	100uH	Q418	8-729-923-45	TRANSISTOR 2SB1308-QR					
L501	1-412-029-11	INDUCTOR CHIP	10uH	Q419	8-729-923-45	TRANSISTOR 2SB1308-QR					
L502	1-412-039-51	INDUCTOR CHIP	100uH	Q420	8-729-423-96	TRANSISTOR UN2119					
L503	1-412-039-51	INDUCTOR CHIP	100uH	Q421	8-729-141-75	TRANSISTOR 2SD596-DV345					
L504	1-412-039-51	INDUCTOR CHIP	100uH	Q422	8-729-923-04	TRANSISTOR DTC123YK					
L505	1-412-039-51	INDUCTOR CHIP	100uH	Q423	8-729-903-82	TRANSISTOR FMW2					
L510	1-412-029-11	INDUCTOR CHIP	10uH	Q424	8-729-901-00	TRANSISTOR DTC124EK					
L511	1-412-029-11	INDUCTOR CHIP	10uH	Q450	8-729-907-00	TRANSISTOR DTC114EU					
L801	1-543-813-21	BEAD, FERRITE		Q451	8-729-907-00	TRANSISTOR DTC114EU					
L804	1-543-813-21	BEAD, FERRITE		Q501	8-729-402-90	TRANSISTOR XN4609					
< TRANSISTOR >											
Q101	8-729-230-63	TRANSISTOR 2SC4116-YG		Q502	8-729-907-39	TRANSISTOR IMD2					
Q102	8-729-922-94	TRANSISTOR DTC143TU		Q503	8-729-905-61	TRANSISTOR DTC124EU					
Q103	8-729-921-73	TRANSISTOR 2SD1781K-QR		Q506	8-729-905-61	TRANSISTOR DTC124EU					
Q104	8-729-425-18	TRANSISTOR XN4504		Q507	8-729-924-79	TRANSISTOR FMG8					
Q201	8-729-230-63	TRANSISTOR 2SC4116-YG		Q509	8-729-905-61	TRANSISTOR DTC124EU					
Q202	8-729-922-94	TRANSISTOR DTC143TU		Q801	8-729-905-12	TRANSISTOR DTA144EU					
Q203	8-729-921-73	TRANSISTOR 2SD1781K-QR		Q802	8-729-402-16	TRANSISTOR XN4608					
Q204	8-729-425-18	TRANSISTOR XN4504		Q805	8-729-905-61	TRANSISTOR DTC124EU					
Q301	8-729-903-10	TRANSISTOR FMW1		Q806	8-729-922-10	TRANSISTOR 2SA1577-QR					
Q302	8-729-905-57	TRANSISTOR DTA124EU		Q807	8-729-907-39	TRANSISTOR IMD2					
Q303	8-729-907-39	TRANSISTOR IMD2		Q830	8-729-905-35	TRANSISTOR 2SC4081-R					
Q304	8-729-905-35	TRANSISTOR 2SC4081-R		< RESISTOR >							
Q305	8-729-141-48	TRANSISTOR 2SB624-BV345		R102	1-216-833-11	METAL CHIP	10K	5%	1/16W		
Q306	8-729-923-XX	TRANSISTOR DTA114YU		R103	1-216-833-11	METAL CHIP	10K	5%	1/16W		
Q307	8-729-907-39	TRANSISTOR IMD2T108		R104	1-216-813-11	METAL CHIP	220	5%	1/16W		
Q308	8-729-907-28	TRANSISTOR IMD3		R106	1-216-823-11	METAL CHIP	1.5K	5%	1/16W		
Q320	8-729-905-57	TRANSISTOR DTA124EU		R107	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W		
Q350	8-729-902-90	TRANSISTOR FMA4		R108	1-216-845-11	METAL CHIP	100K	5%	1/16W		
Q401	8-729-905-35	TRANSISTOR 2SC4081-R		R109	1-216-815-11	METAL CHIP	330	5%	1/16W		
Q402	8-729-806-76	TRANSISTOR 2SB1120-G		R110	1-216-797-11	METAL CHIP	10	5%	1/16W		
				R111	1-216-823-11	METAL CHIP	1.5K	5%	1/16W		
				R112	1-216-823-11	METAL CHIP	1.5K	5%	1/16W		
				R120	1-216-789-11	METAL CHIP	2.2	5%	1/16W		
				R121	1-216-825-11	METAL CHIP	2.2K	5%	1/16W		
				R131	1-216-691-11	METAL CHIP	47K	0.5%	1/10W		
				R132	1-216-691-11	METAL CHIP	47K	0.5%	1/10W		
				R133	1-216-675-11	METAL CHIP	10K	0.5%	1/10W		

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R134	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R309	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R135	1-216-693-11	METAL CHIP	56K 0.5% 1/10W	R310	1-216-848-11	METAL CHIP	180K 5% 1/16W
R136	1-216-693-11	METAL CHIP	56K 0.5% 1/10W	R315	1-216-821-11	METAL CHIP	1K 5% 1/16W
R137	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R319	1-216-847-11	METAL CHIP	150K 5% 1/16W
R138	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R320	1-216-834-11	METAL CHIP	12K 5% 1/16W
R139	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R321	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R140	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W	R330	1-216-821-11	METAL CHIP	1K 5% 1/16W
R141	1-216-857-11	METAL CHIP	1M 5% 1/16W	R331	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R142	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R350	1-216-841-11	METAL CHIP	47K 5% 1/16W
R143	1-216-841-11	METAL CHIP	47K 5% 1/16W	R351	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R144	1-216-813-11	METAL CHIP	220 5% 1/16W	R352	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R145	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R353	1-216-844-11	METAL CHIP	82K 5% 1/16W
R150	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R365	1-216-833-11	METAL CHIP	10K 5% 1/16W
R202	1-216-833-11	METAL CHIP	10K 5% 1/16W	R366	1-216-841-11	METAL CHIP	47K 5% 1/16W
R203	1-216-833-11	METAL CHIP	10K 5% 1/16W	R401	1-216-815-11	METAL CHIP	330 5% 1/16W
R204	1-216-813-11	METAL CHIP	220 5% 1/16W	R402	1-216-821-11	METAL CHIP	1K 5% 1/16W
R206	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R403	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
R207	1-218-345-11	METAL GLAZE	9.1K 5% 1/16W	R404	1-216-815-11	METAL CHIP	330 5% 1/16W
R208	1-216-845-11	METAL CHIP	100K 5% 1/16W	R405	1-216-811-11	METAL CHIP	150 5% 1/16W
R209	1-216-815-11	METAL CHIP	330 5% 1/16W	R407	1-217-671-11	METAL CHIP	1 5% 1/10W
R210	1-216-797-11	METAL CHIP	10 5% 1/16W	R408	1-217-671-11	METAL CHIP	1 5% 1/10W
R211	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R409	1-216-833-11	METAL CHIP	10K 5% 1/16W
R212	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R410	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R220	1-216-789-11	METAL CHIP	2.2 5% 1/16W	R411	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R221	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R412	1-216-833-11	METAL CHIP	10K 5% 1/16W
R231	1-216-691-11	METAL CHIP	47K 0.5% 1/10W	R413	1-216-857-11	METAL CHIP	1M 5% 1/16W
R232	1-216-691-11	METAL CHIP	47K 0.5% 1/10W	R414	1-216-821-11	METAL CHIP	1K 5% 1/16W
R233	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R415	1-216-821-11	METAL CHIP	1K 5% 1/16W
R234	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R416	1-216-681-11	METAL CHIP	18K 0.5% 1/10W
R235	1-216-693-11	METAL CHIP	56K 0.5% 1/10W	R417	1-216-857-11	METAL CHIP	1M 5% 1/16W
R236	1-216-693-11	METAL CHIP	56K 0.5% 1/10W	R418	1-216-833-11	METAL CHIP	10K 5% 1/16W
R237	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R419	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R238	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R420	1-218-330-11	METAL CHIP	11K 0.50% 1/16W
R239	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R421	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R240	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W	R422	1-216-821-11	METAL CHIP	1K 5% 1/16W
R241	1-216-857-11	METAL CHIP	1M 5% 1/16W	R424	1-216-821-11	METAL CHIP	1K 5% 1/16W
R242	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R426	1-216-834-11	METAL CHIP	12K 5% 1/16W
R243	1-216-841-11	METAL CHIP	47K 5% 1/16W	R427	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R244	1-216-813-11	METAL CHIP	220 5% 1/16W	R428	1-216-834-11	METAL CHIP	12K 5% 1/16W
R245	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R430	1-216-811-11	METAL CHIP	150 5% 1/16W
R250	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R431	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R301	1-216-845-11	METAL CHIP	100K 5% 1/16W	R432	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R302	1-216-845-11	METAL CHIP	100K 5% 1/16W	R434	1-216-815-11	METAL CHIP	330 5% 1/16W
R304	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R435	1-216-841-11	METAL CHIP	47K 5% 1/16W
R305	1-216-803-11	METAL CHIP	33 5% 1/16W	R436	1-216-815-11	METAL CHIP	330 5% 1/16W
R306	1-216-803-11	METAL CHIP	33 5% 1/16W	R437	1-216-821-11	METAL CHIP	1K 5% 1/16W
R307	1-216-832-11	METAL CHIP	8.2K 5% 1/16W	R438	1-216-843-11	METAL CHIP	68K 5% 1/16W
R308	1-216-857-11	METAL CHIP	1M 5% 1/16W	R439	1-216-833-11	METAL CHIP	10K 5% 1/16W
				R440	1-216-841-11	METAL CHIP	47K 5% 1/16W

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R441	1-216-841-11	METAL CHIP	47K 5% 1/16W	R548	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R442	1-216-813-11	METAL CHIP	220 5% 1/16W	R549	1-216-857-11	METAL CHIP	1M 5% 1/16W
R443	1-216-815-11	METAL CHIP	330 5% 1/16W	R550	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R446	1-216-833-11	METAL CHIP	10K 5% 1/16W	R551	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R447	1-216-833-11	METAL CHIP	10K 5% 1/16W	R552	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R448	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R553	1-216-839-11	METAL CHIP	33K 5% 1/16W
R449	1-216-838-11	METAL CHIP	27K 5% 1/16W	R554	1-216-849-11	METAL CHIP	220K 5% 1/16W
R450	1-216-839-11	METAL CHIP	33K 5% 1/16W	R555	1-216-851-11	METAL CHIP	330K 5% 1/16W
R452	1-216-841-11	METAL CHIP	47K 5% 1/16W	R556	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R460	1-216-811-11	METAL CHIP	150 5% 1/16W	R559	1-216-843-11	METAL CHIP	68K 5% 1/16W
R461	1-218-287-11	METAL GLAZE	200 5% 1/16W	R560	1-216-845-11	METAL CHIP	100K 5% 1/16W
R470	1-216-821-11	METAL CHIP	1K 5% 1/16W	R561	1-216-820-11	METAL CHIP	820 5% 1/16W
R471	1-216-832-11	METAL CHIP	8.2K 5% 1/16W	R568	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R472	1-216-832-11	METAL CHIP	8.2K 5% 1/16W	R570	1-216-857-11	METAL CHIP	1M 5% 1/16W
R502	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R574	1-216-821-11	METAL CHIP	1K 5% 1/16W
R503	1-216-833-11	METAL CHIP	10K 5% 1/16W	R580	1-216-833-11	METAL CHIP	10K 5% 1/16W
R506	1-216-837-11	METAL CHIP	22K 5% 1/16W	R590	1-216-857-11	METAL CHIP	1M 5% 1/16W
R507	1-216-831-11	METAL CHIP	6.8K 5% 1/16W	R601	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R508	1-216-831-11	METAL CHIP	6.8K 5% 1/16W	R602	1-218-293-11	METAL GLAZE	24K 5% 1/16W
R509	1-216-833-11	METAL CHIP	10K 5% 1/16W	R603	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R510	1-216-797-11	METAL CHIP	10 5% 1/16W	R604	1-216-833-11	METAL CHIP	10K 5% 1/16W
R511	1-216-845-11	METAL CHIP	100K 5% 1/16W	R606	1-216-841-11	METAL CHIP	47K 5% 1/16W
R512	1-216-833-11	METAL CHIP	10K 5% 1/16W	R607	1-216-841-11	METAL CHIP	47K 5% 1/16W
R513	1-216-851-11	METAL CHIP	330K 5% 1/16W	R608	1-216-845-11	METAL CHIP	100K 5% 1/16W
R516	1-216-835-11	METAL CHIP	15K 5% 1/16W	R609	1-216-833-11	METAL CHIP	10K 5% 1/16W
R517	1-216-845-11	METAL CHIP	100K 5% 1/16W	R610	1-216-817-11	METAL CHIP	470 5% 1/16W
R519	1-216-845-11	METAL CHIP	100K 5% 1/16W	R612	1-216-821-11	METAL CHIP	1K 5% 1/16W
R520	1-216-849-11	METAL CHIP	220K 5% 1/16W	R801	1-216-833-11	METAL CHIP	10K 5% 1/16W
R521	1-216-837-11	METAL CHIP	22K 5% 1/16W	R802	1-216-837-11	METAL CHIP	22K 5% 1/16W
R522	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R803	1-216-837-11	METAL CHIP	22K 5% 1/16W
R523	1-216-828-11	METAL CHIP	3.9K 5% 1/16W	R804	1-216-837-11	METAL CHIP	22K 5% 1/16W
R524	1-216-854-11	METAL CHIP	560K 5% 1/16W	R805	1-216-841-11	METAL CHIP	47K 5% 1/16W
R525	1-216-833-11	METAL CHIP	10K 5% 1/16W	R806	1-216-845-11	METAL CHIP	100K 5% 1/16W
R526	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R807	1-216-851-11	METAL CHIP	330K 5% 1/16W
R527	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R808	1-216-809-11	METAL CHIP	100 5% 1/16W
R528	1-216-848-11	METAL CHIP	180K 5% 1/16W	R809	1-216-651-11	METAL CHIP	1K 0.5% 1/10W
R529	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	R810	1-216-833-11	METAL CHIP	10K 5% 1/16W
R530	1-216-826-11	METAL CHIP	2.7K 5% 1/16W	R812	1-216-854-11	METAL CHIP	560K 5% 1/16W
R532	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R813	1-216-861-11	METAL CHIP	2.2M 5% 1/16W
R533	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R814	1-216-833-11	METAL CHIP	10K 5% 1/16W
R535	1-216-863-11	METAL GLAZE	3.3M 5% 1/16W	R815	1-216-845-11	METAL CHIP	100K 5% 1/16W
R536	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R816	1-216-833-11	METAL CHIP	10K 5% 1/16W
R537	1-216-833-11	METAL CHIP	10K 5% 1/16W	R817	1-216-817-11	METAL CHIP	470 5% 1/16W
R539	1-216-857-11	METAL CHIP	1M 5% 1/16W	R818	1-216-821-11	METAL CHIP	1K 5% 1/16W
R543	1-216-838-11	METAL CHIP	27K 5% 1/16W	R820	1-216-815-11	METAL CHIP	330 5% 1/16W
R544	1-216-821-11	METAL CHIP	1K 5% 1/16W	R850	1-216-861-11	METAL CHIP	2.2M 5% 1/16W
R545	1-216-842-11	METAL CHIP	56K 5% 1/16W	R851	1-216-854-11	METAL CHIP	560K 5% 1/16W
R546	1-216-821-11	METAL CHIP	1K 5% 1/16W	R852	1-216-821-11	METAL CHIP	1K 5% 1/16W
R547	1-216-833-11	METAL CHIP	10K 5% 1/16W				

MAIN

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV301	1-230-485-11	RES, VAR, CARBON 10K/10K (VOLUME)	
RV401	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (CHARGE DETECT VOLTAGE)	
RV402	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (3.5V)	
RV431	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (3.8V)	
RV501	1-241-396-11	RES, ADJ, METAL GLAZE 22K (TRACKING GAIN)	
RV502	1-241-396-11	RES, ADJ, METAL GLAZE 22K (TRACKING BALANCE)	
RV503	1-241-397-11	RES, ADJ, METAL GLAZE 47K (FOUCS BIAS)	
RV504	1-241-392-11	RES, ADJ, METAL GLAZE 1K (VOC)	
RV505	1-241-396-11	RES, ADJ, METAL GLAZE 22K (FOCUS GAIN)	
< SWITCH >			
S301	1-570-724-11	SWITCH, SLIDE (BASS BOOST)	
S401	1-572-126-11	SWITCH, PUSH (1 KEY) (BP-2EX ON)	
S809	1-570-724-11	SWITCH, SLIDE (RESUME)	
S901	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)	
S902	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)	
< CRYSTAL >			
X301	1-577-576-11	VIBRATOR, CRYSTAL (33.9MHz)	
X801	1-579-267-11	VIBRATOR, CERAMIC (3.58MHz)	

MISCELLANEOUS			

22	* 1-637-594-11	PC BOARD, KEY SWITCH FLEXIBLE	
LCD	1-809-269-11	DISPLAY PANEL, LIQUID CRYSTAL	
PL701	1-518-674-11	LAMP, PILOT	
PL702	1-518-674-11	LAMP, PILOT	
S903	1-570-771-11	SWITCH	

Ref. No.	Part No.	Description	Remark
ACCESSORY & PACKING MATERIAL			
	▲ 1-465-609-11	ADAPTOR, AC (AC-96N) (US)	
	▲ 1-465-665-11	ADAPTOR, AC (AC-96N(AU)) (AUS)	
	▲ 1-465-666-11	ADAPTOR, AC (AC-96N(AE)) (AEP)	
	▲ 1-465-667-11	ADAPTOR, AC (AC-96N(CA)) (Canadian)	
	▲ 1-465-668-11	ADAPTOR, AC (AC-96N(UK)) (UK)	
	▲ 1-465-669-11	ADAPTOR, AC (AC-96N) (E)	
	▲ 1-569-007-11	ADAPTOR, CONVERSION (E)	
	1-505-125-11	HEADPHONE (WITH REMOTE CONTROL)	(Canadian, E, AUS)
	1-505-125-21	HEADPHONE (WITH REMOTE CONTROL)	(US, AEP, UK)
	1-528-297-11	BATTERY PACK (BP-2EX)	
	1-555-658-21	CORD, CONNECTION	
	3-752-809-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (Canadian, AEP, E)	
	3-752-809-21	MANUAL, INSTRUCTION (US)	
	3-752-809-42	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
	* 4-942-752-01	INDIVIDUAL CARTON (Canadian)	
	* 4-942-754-01	INDIVIDUAL CARTON (US, E)	
	* 4-942-755-01	INDIVIDUAL CARTON (AEP, AUS, UK)	
	* 4-942-751-01	CUSHION (LOWER) (US, Canadian, E)	
	* 4-942-756-01	CUSHION (LOWER) (AEP, AUS, UK)	
	4-943-635-01	CASE, CARRYING	

HARDWARE LIST

#1 7-627-450-48 SCREW, PRECISION +K1.7X2.5 TYPE1

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

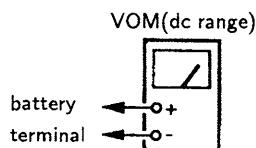
Note:
 Les composants identifiés par une marque ▲ sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

SUPPLEMENT-1

File this supplement with the service manual.

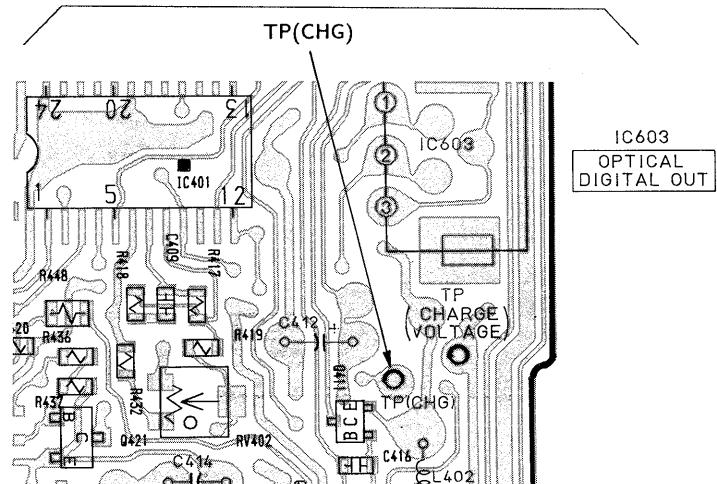
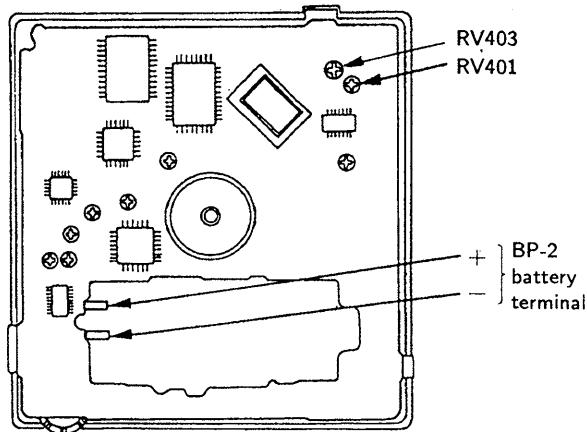
Subject : Circuit Change

Charge Voltage Adjustment



1. Connect a VOM to the main board (— SIDE A —) test point TP(CHG) : IC401 ⑫ pin.
2. Connect a VOM to the both side of 24 ohms resistor.
3. Apply DC 9V with regurated dc power supply from external power jack CNJ401.
4. Connect the load resistor 24 ohms (2 watts) BP-2 terminal.
5. Adjust RV403 on the main board so that the reading of the VOM becomes low level from high level at TP (CHG).
Confirm that the indication of LCD is in CHG.
6. Adjust RV401 on the main board so that the reading of VOM accross 24 ohms resistor is specified 5 volts ± 0.1 volts.
7. Remove 24 ohms resistor. Then, Comfirm that the indication of CHG become extinct from LCD.

Adjustment Location : main board — SIDE A —



REVISED

SECTION 5 EXPLODED VIEWS

NOTE:

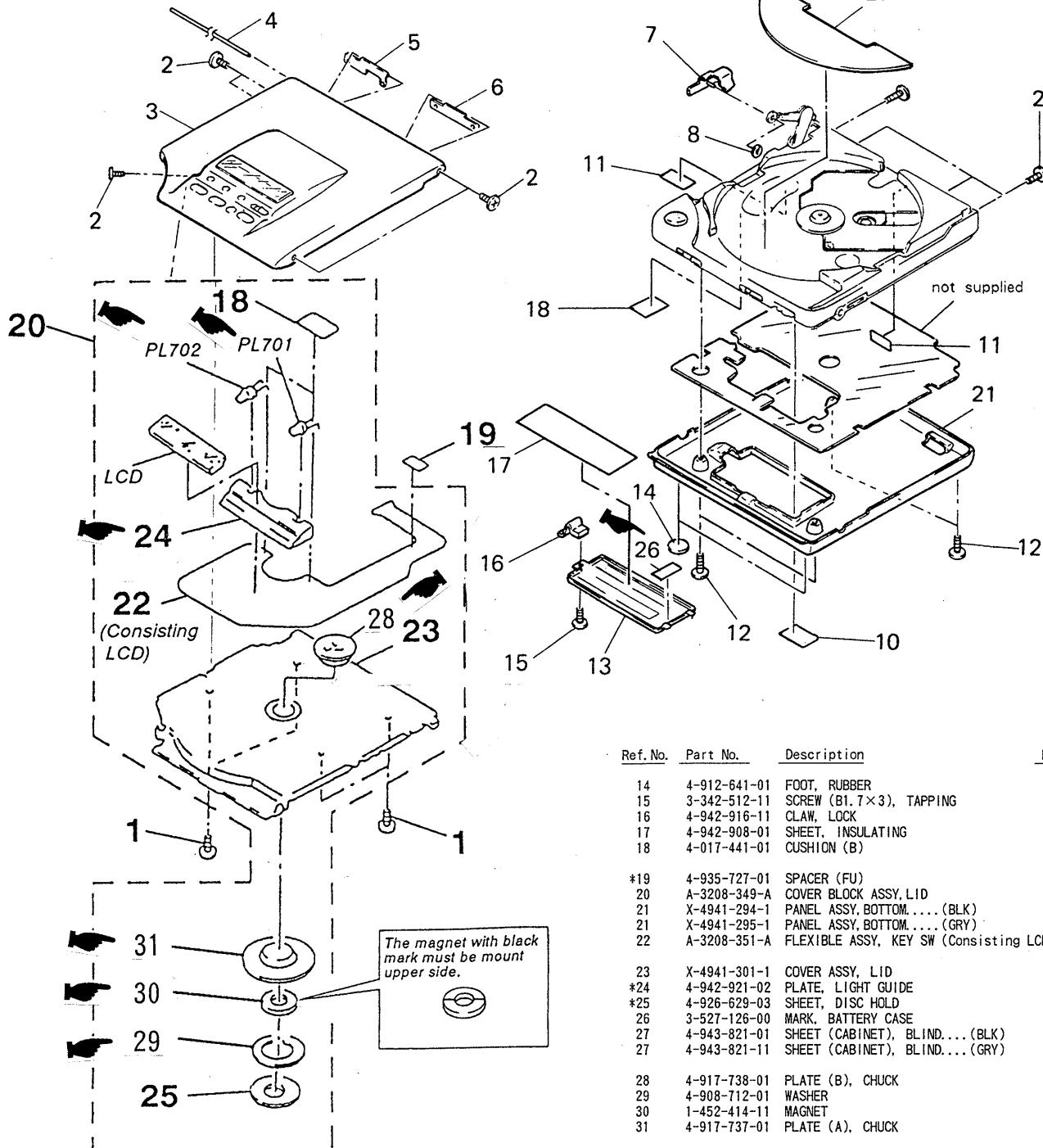
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) (RED)
 ↑ ↑
 Parts color Cabinet's color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

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.

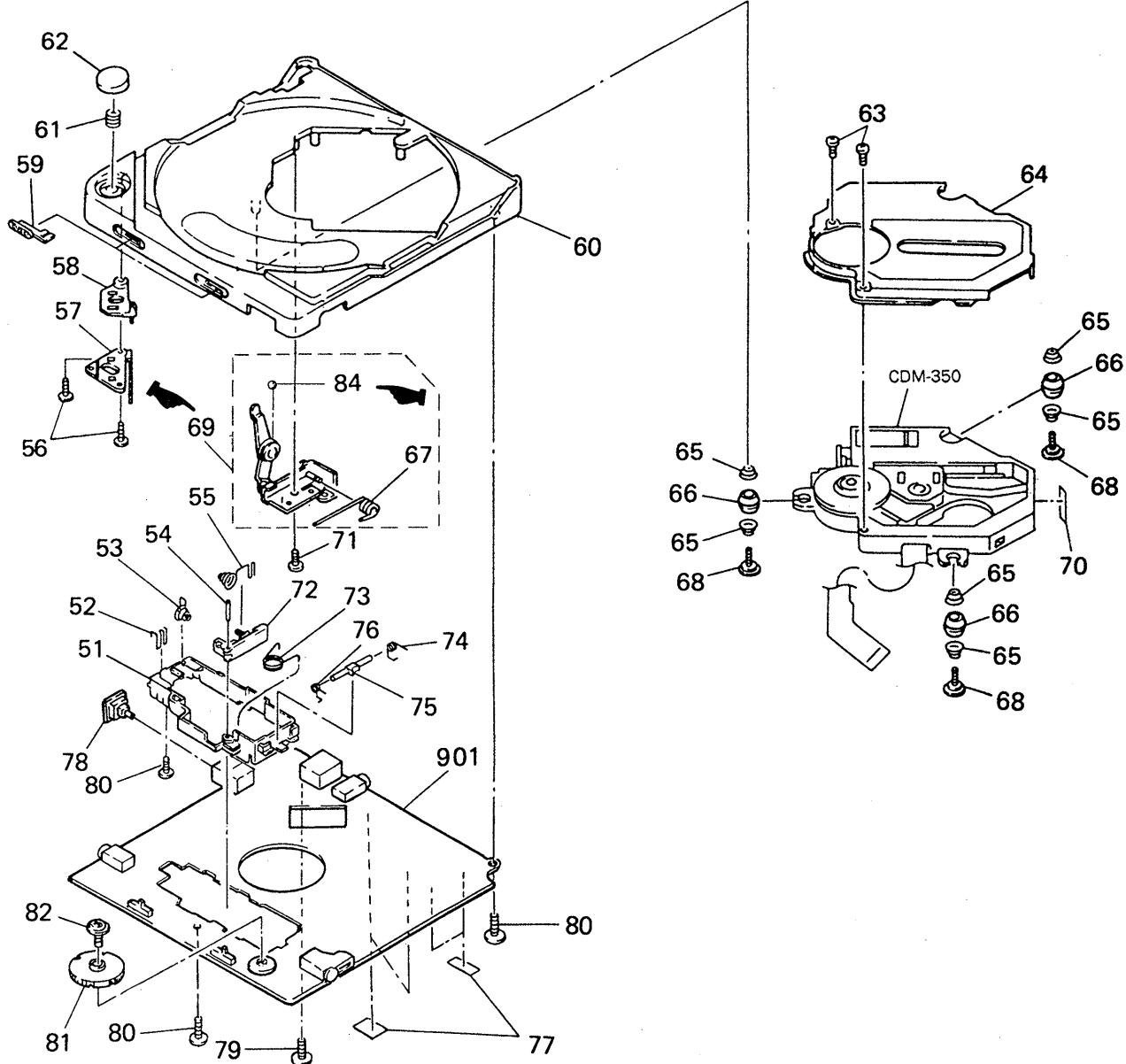
5-1. CABINET SECTION-1 Addition or Change Portion:



Ref. No.	Part No.	Description	Remark
14	4-912-641-01	FOOT, RUBBER	
15	3-342-512-11	SCREW (B1.7×3), TAPPING	
16	4-942-916-11	CLAW, LOCK	
17	4-942-908-01	SCHEET, INSULATING	
18	4-017-441-01	CUSHION (B)	
*19	4-935-727-01	SPACER (FU)	
20	A-3208-349-A	COVER BLOCK ASSY, LID	
21	X-4941-294-1	PANEL ASSY, BOTTOM....(BLK)	
21	X-4941-295-1	PANEL ASSY, BOTTOM....(GRY)	
22	A-3208-351-A	FLEXIBLE ASSY, KEY SW (Consisting LCD)	
23	X-4941-301-1	COVER ASSY, LID	
*24	4-942-921-02	PLATE, LIGHT GUIDE	
*25	4-926-629-03	SCHEET, DISC HOLD	
26	3-527-126-00	MARK, BATTERY CASE	
27	4-943-821-01	SCHEET (CABINET), BLIND....(BLK)	
27	4-943-821-11	SCHEET (CABINET), BLIND....(GRY)	
28	4-917-738-01	PLATE (B), CHUCK	
29	4-908-712-01	WASHER	
30	1-452-414-11	MAGNET	
31	4-917-737-01	PLATE (A), CHUCK	

LCD Not supplied itself. Refer to No. 22.
 PL701 1-518-674-11 LAMP, PILOT
 PL702 1-518-674-11 LAMP, PILOT

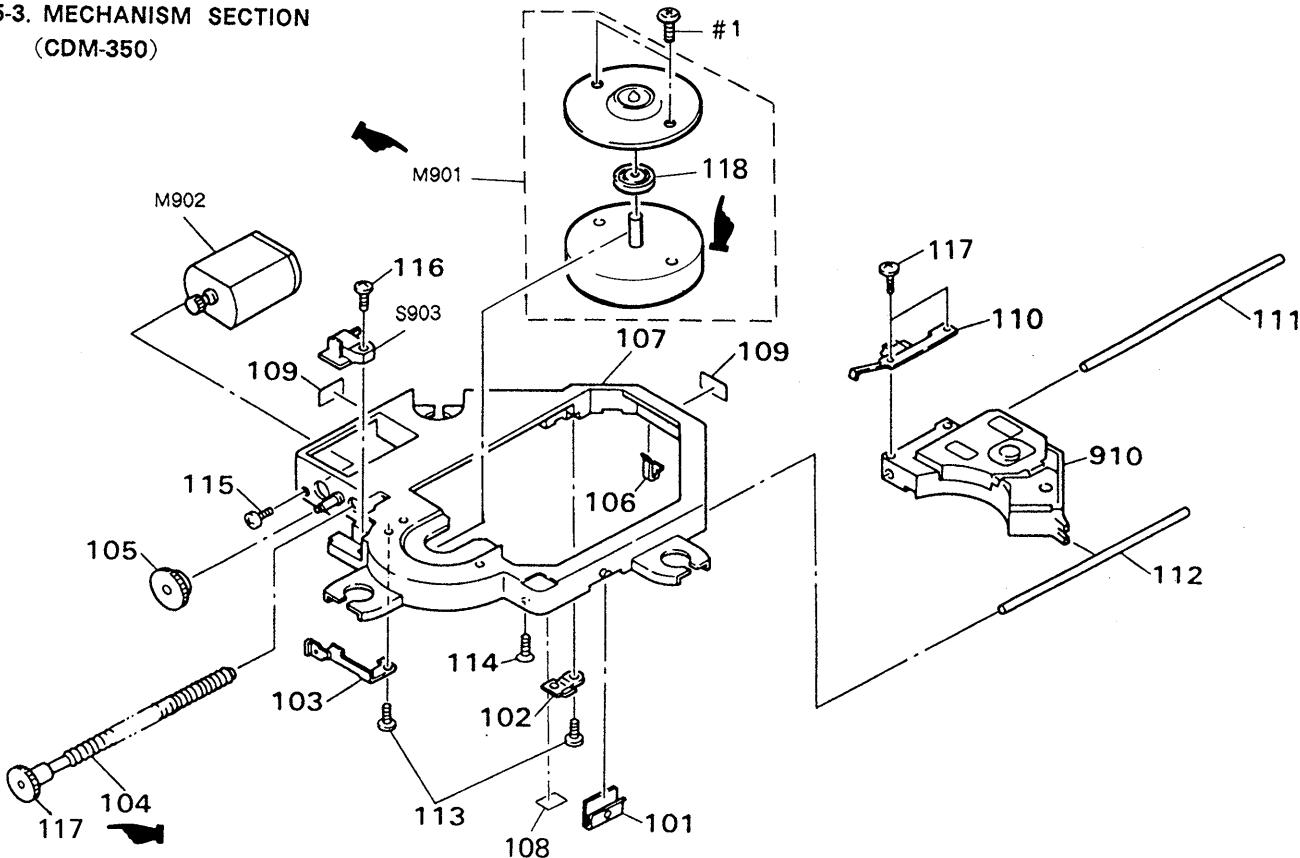
5-2. CABINET SECTION-2



Ref. No.	Part No.	Description	Remark
51	4-942-917-01	CASE, BATTERY	
52	4-942-910-01	SPRING (+), BATTERY COIL	
53	4-942-904-01	SPRING (-), BATTERY COIL	
54	4-942-903-01	SHAFT	
55	4-942-900-01	SPRING (+/-), BATTERY COIL	
56	3-895-823-41	SCREW (B1.4X4), TAPPING	
57	4-942-883-01	RETAINER, LOCK LEVER	
58	4-942-914-01	LEVER, LOCK	
59	4-942-901-01	KNOB (DBB) ... (BLACK)	
59	4-942-901-11	KNOB (DBB) ... (GRAY)	
60	4-942-920-01	CABINET ... (BLACK)	
60	4-942-920-11	CABINET ... (GRAY)	
61	4-917-727-01	SPRING, COMPRESSION	
62	4-942-909-01	BUTTON (OPEN) ... (BLACK)	
62	4-942-909-11	BUTTON (OPEN) ... (GRAY)	
64	4-932-789-01	COVER, MD	

Ref. No.	Part No.	Description	Remark
65	4-932-792-01	SPRING, COMPRESSION	
66	4-932-791-01	INSULATOR	
67	4-932-734-01	SPRING	
68	4-932-780-03	SCREW, STEP	
69	X-4941-302-1	ARM ASSY, SWITCHING	
70	3-831-441-XX	SPACER, KNOB	
71	4-908-792-51	SCREW (B2X5), TAPPING, P1	
72	4-942-915-01	TERMINAL BOARD, BATTERY	
73	4-942-907-01	SPRING, TORSION	
74	4-942-911-01	SPRING (A), BATTERY COIL	
75	4-942-906-01	SHAFT, SPRING	
76	4-942-899-01	SPRING (B), BATTERY COIL	
77	3-831-441-11	CUSHION (B)	
78	4-942-912-01	CAP	
79	3-335-797-21	SCREW (M1.4X3), TOOTHED LOCK	
81	4-942-913-01	KNOB (VOL)	
82	3-703-502-31	SCREW	
84	7-671-111-11	STEEL, BOUL 1.5MM	
901	A-3270-937-A	MAIN BOARD, COMPLETE (EXCEPT UK)	
901	A-3275-094-A	MAIN BOARD, COMPLETE (UK)	

**5-3. MECHANISM SECTION
(CDM-350)**



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

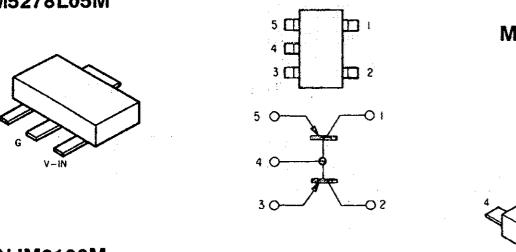
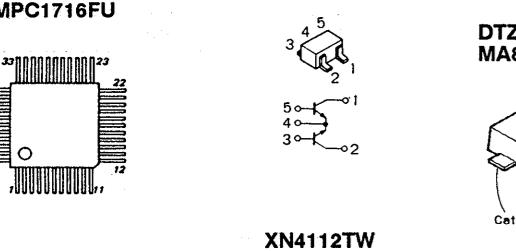
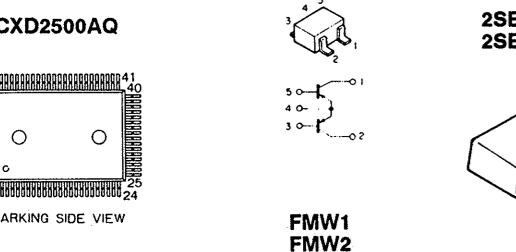
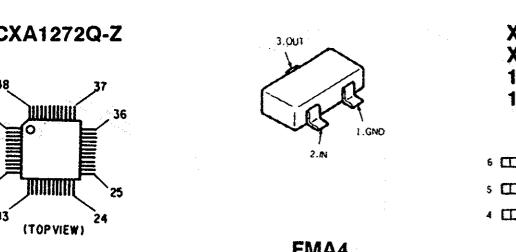
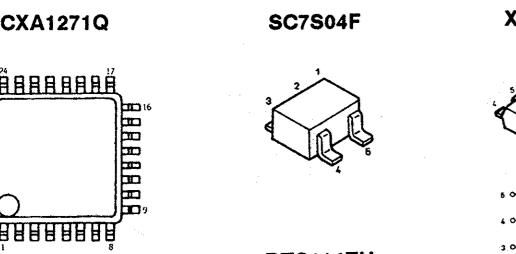
Note:
Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
101	4-932-779-01	RETAINER (A), FLEXIBLE	
102	4-932-776-01	RETAINER, SHAFT	
103	4-932-786-01	SPRING, LEAF	
105	4-932-778-01	GEAR (B)	
106	4-932-777-01	RETAINER (B), FLEXIBLE	
* 107	4-932-790-01	CHASSIS	
110	4-932-785-01	RACK (OUTSERT)	
111	4-932-784-01	SHAFT (A)	
112	4-932-775-11	SHAFT (B)	

Ref. No.	Part No.	Description	Remark
114	4-941-983-01	SCREW (B1.7X6), SPECIAL	
115	4-932-773-11	SCREW	
116	4-908-792-91	SCREW (B2X7), TAPPING, P1	
Δ 117	4-932-774-01	GEAR (C)	
Δ 118	4-941-987-01	WASHER, POLYETHYLENE	
Δ 910	X-4921-260-1	PICKUP, OPTICAL (F-89)	
M901	A-3133-398-A	MOTOR ASSY, CLV	
M902	X-4921-256-1	MOTOR ASSY	
S903	1-570-771-11	SWITCH (LS)	

SECTION 4 DIAGRAM

• Semiconductor Lead Layouts



XN4504

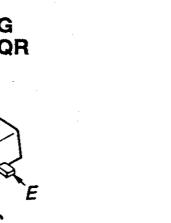


DTC114EU

DTC123YU



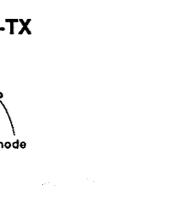
FMA4



FMW1

FMW2

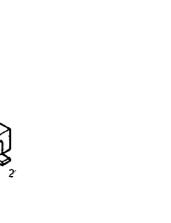
FMG8



XN4112TW



M724TW



SB01-05CP



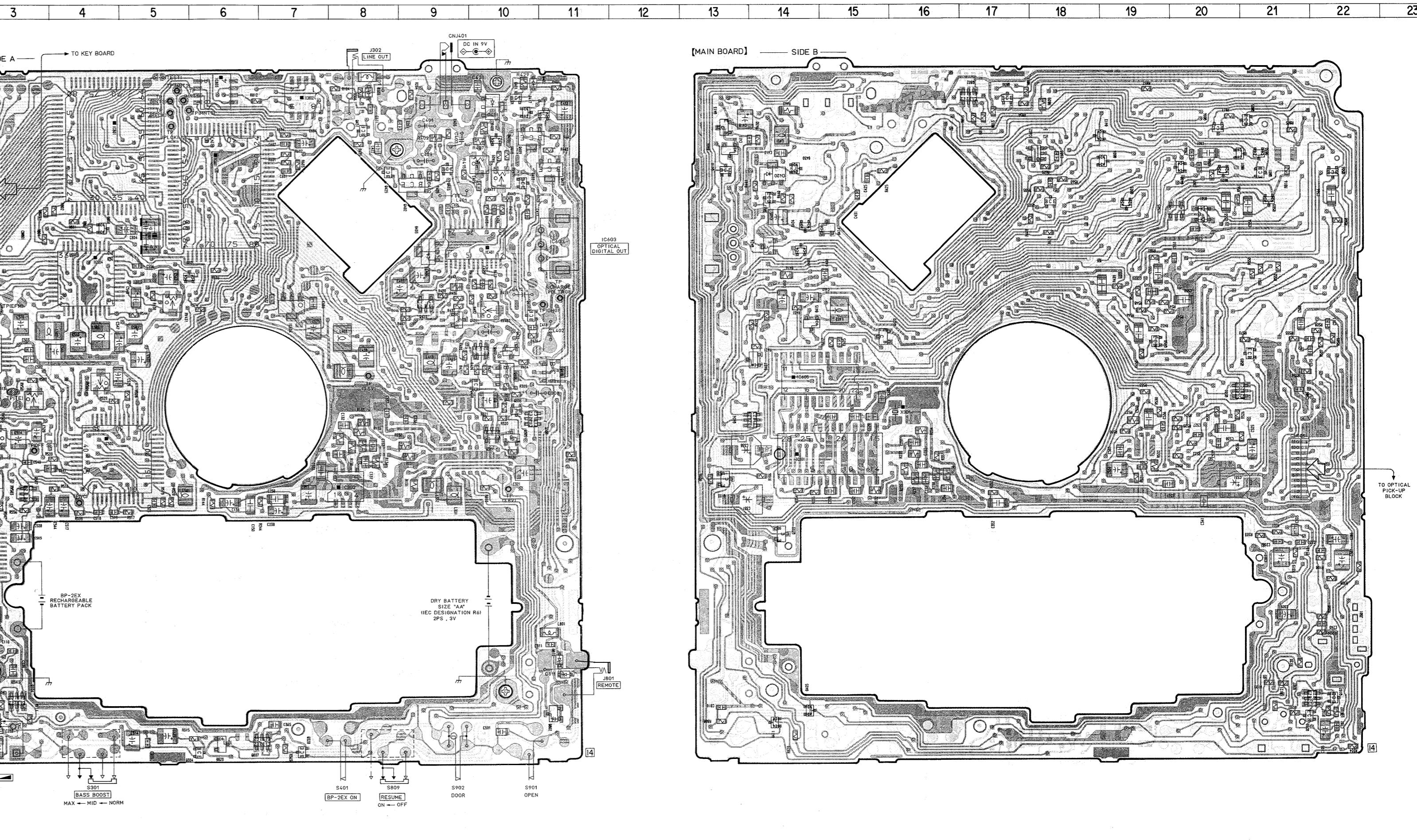
Note :

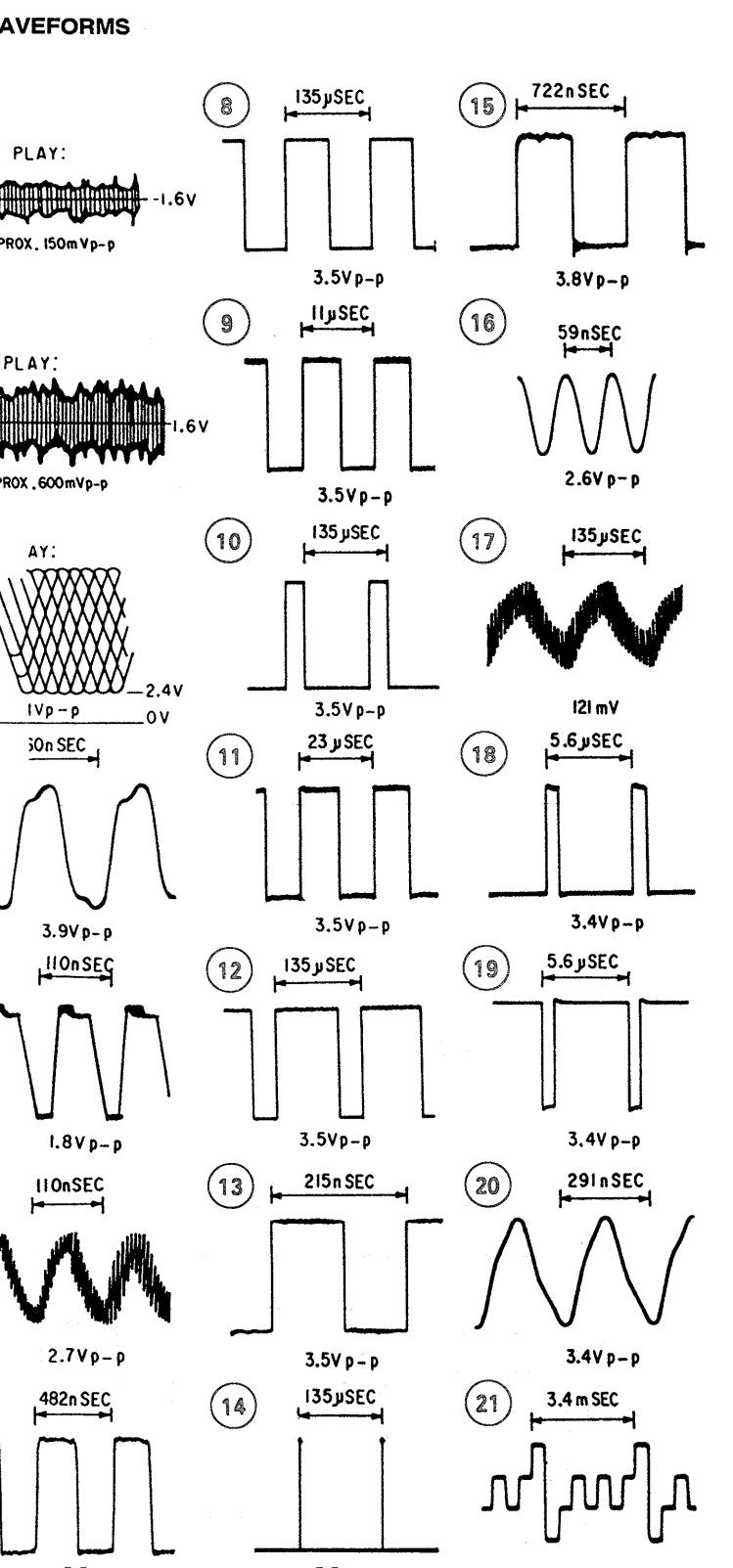
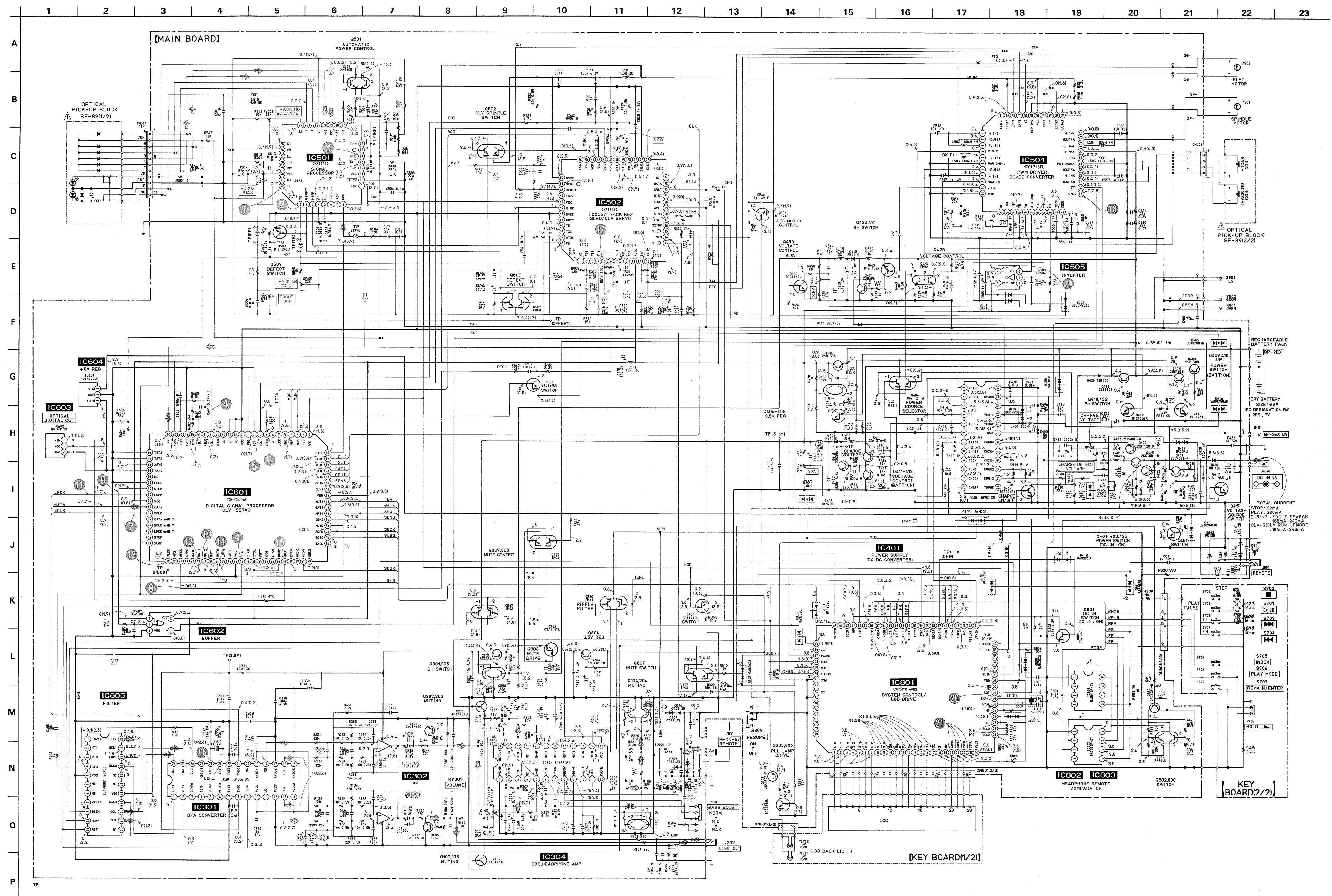
- ○ : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.
- □ : Chip components extracted from the rear side.
- ⓧ : Solder bridge.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
IC301	G-15	0503	C-18
IC302	G-8	0506	C-22
IC304	H-3	0507	G-3
IC401	D-10	0509	E-21
IC501	E-3	0801	C-21
IC502	G-4	0802	B-17
IC504	D-4	0805	B-21
IC505	C-20	0806	B-20
IC601	C-6	0807	K-7
IC602	B-18	0830	B-17
IC603	D-11		
IC604	E-7	D303	B-8
IC605	F-14	D304	J-3
IC801	B-4	D305	J-2
IC802	B-7	D306	I-2
IC803	B-6	D307	I-2
Q102	J-22	D401	B-10
Q103	G-13	D402	A-10
Q104	J-3	D403	D-9
Q202	K-21	D404	D-14
Q203	H-14	D405	K-14
Q204	K-2	D406	B-13
Q301	G-10	D407	E-14
Q305	K-6	D408	C-20
Q306	G-10	D409	D-14
Q307	J-22	D410	B-10
Q308	F-10	D411	K-14
Q320	K-7	D413	B-19
Q350	K-2	D414	D-15
Q401	B-10	D415	E-14
Q402	C-9	D416	B-11
Q403	C-9	D417	B-10
Q404	F-14	D420	C-14
Q406	F-10	D430	C-14
Q407	E-10	D501	C-20
Q408	F-10	D503	C-21
Q409	B-10	D801	B-21
Q410	C-13	D802	K-11
Q411	E-10	D803	C-19
Q412	C-10	D804	C-19
Q413	B-13	D805	D-6
Q417	C-14	D806	J-2
Q418	F-11	D807	I-2
Q419	C-11	D808	D-4
Q420	E-15	D809	C-20
Q421	E-9	D810	I-11
Q422	E-10	D811	I-11
Q423	E-9	D820	D-6
Q424	D-14	D830	B-21
Q425	C-8		
Q450	E-19		
Q451	B-8		
Q501	F-2		
Q502	F-21		

4-1. PRINTED WIRING BOARDS





Note :

- All capacitors are in μ F unless otherwise noted. pF: $\mu\mu$ F 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.

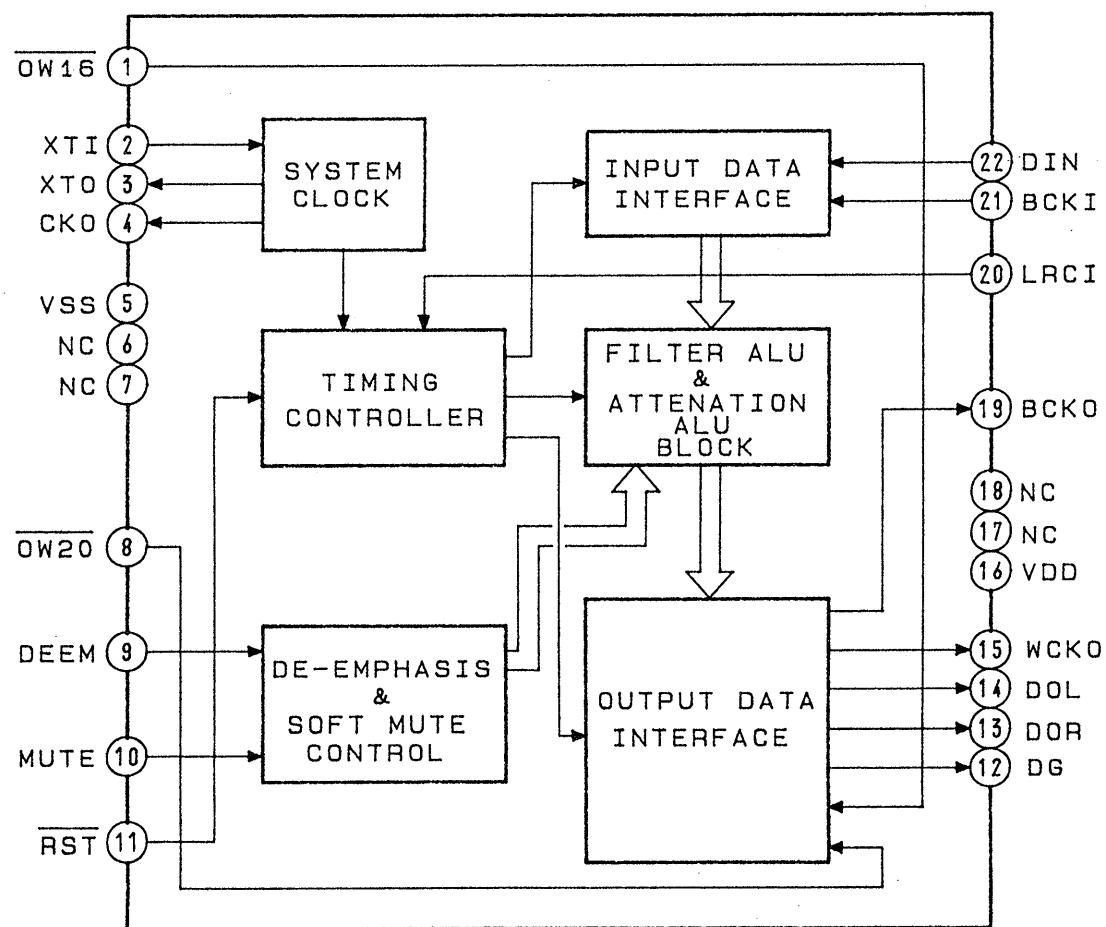
Note:
The components identified by mark A or dotted line with mark A are critical for safety. Replace only with part number specified.

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

- : B+ Line
- : B- Line
- : adjustment for repair.
- Power voltage is dc 9V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are dc with respect to ground under the service mode.
- no mark : STOP
- () : PLAY
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Waveform variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- ⇒ : CD

• IC BLOCK DIAGRAMS

Addition:IC605 SM5840CS



MAIN

SECTION 6 ELECTRICAL PARTS LIST

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, μ , for example:uA....: μ A..., uPA....: μ PA....uPB....: μ PB..., uPC....: μ PC....uPD....: μ PD....

● CAPACITORS

uF: μ F

● COILS

uH: μ H

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

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

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

Ref. No.	Part No.	Description	Remark
	A-3270-937-A	MAIN BOARD, COMPLETE (EXCEPT UK)	
	A-3275-094-A	MAIN BOARD, COMPLETE (UK)	

	3-703-502-31	SCREW	
	3-831-441-11	CUSHION (B)	
	4-942-899-01	SPRING (B), BATTERY COIL	
	4-942-900-01	SPRING (-), BATTERY COIL	
	4-942-903-01	SHAFT	
	4-942-904-01	SPRING (-), BATTERY COIL	
	4-942-906-01	SHAFT, SPRING	
	4-942-907-01	SPRING, TORSION	
	4-942-910-01	SPRING (+), BATTERY COIL	
	4-942-911-01	SPRING (A), BATTERY COIL	
	4-942-913-01	KNOB (VOL)	
	4-942-915-01	TERMINAL BOARD, BATTERY	
	4-942-917-01	CASE, BATTERY	
< CAPACITOR >			
C102	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C105	1-135-091-00	TANTALUM CHIP	1uF 20% 16V
C106	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C107	1-126-369-11	ELECT	220uF 20% 6.3V
C110	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C111	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C112	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C131	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C132	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C133	1-163-253-11	CERAMIC CHIP	120PF 5% 50V
C134	1-163-253-11	CERAMIC CHIP	120PF 5% 50V
C138	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C140	1-162-959-11	CERAMIC CHIP	330PF 5% 50V
C150	1-137-302-11	FILM CHIP	0.047uF 5% 16V
C202	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C205	1-135-091-00	TANTALUM CHIP	1uF 20% 16V

Ref. No.	Part No.	Description	Remark
C206	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C207	1-126-369-11	ELECT	220uF 20% 6.3V
C210	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C211	1-162-957-11	CERAMIC CHIP	220PF 5% 50V
C212	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C231	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C232	1-163-125-00	CERAMIC CHIP	220PF 5% 50V
C233	1-163-253-11	CERAMIC CHIP	120PF 5% 50V
C234	1-163-253-11	CERAMIC CHIP	120PF 5% 50V
C238	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C240	1-162-959-11	CERAMIC CHIP	330PF 5% 50V
C250	1-137-302-11	FILM CHIP	0.047uF 5% 16V
C303	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C304	1-135-180-21	TANTALUM CHIP	3.3uF 20% 6.3V
C305	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C306	1-135-072-21	TANTALUM CHIP	0.22uF 10% 35V
C307	1-135-131-11	TANTAL. CHIP	22uF 20% 4V
C308	1-124-292-00	ELECT	33uF 20% 6.3V
C309	1-135-181-21	TANTALUM CHIP	4.7uF 20% 6.3V
C310	1-135-162-21	TANTALUM CHIP	33uF 20% 6.3V
C311	1-135-162-21	TANTALUM CHIP	33uF 20% 6.3V
C314	1-135-155-21	TANTALUM CHIP	4.7uF 10% 16V
C321	1-135-155-21	TANTALUM CHIP	4.7uF 10% 16V
C323	1-135-162-21	TANTALUM CHIP	33uF 20% 6.3V
C326	1-164-346-11	CERAMIC CHIP	1uF 16V
C327	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C328	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C329	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
C330	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C331	1-126-206-11	ELECT CHIP	100uF 20% 6.3V
C332	1-164-346-11	CERAMIC CHIP	1uF 16V
C333	1-137-302-11	FILM CHIP	0.047uF 5% 16V
C336	1-162-921-11	CERAMIC CHIP	33PF 5% 50V
C337	1-162-921-11	CERAMIC CHIP	33PF 5% 50V
C338	1-126-206-11	ELECT CHIP	100uF 20% 6.3V

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C339	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C515	1-162-932-11	CERAMIC CHIP	2PF	0.25PF	50V
C350	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V	C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C351	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3V	C517	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C352	1-137-302-11	FILM CHIP	0.047uF	5%	16V	C518	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C360	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V	C519	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C365	1-164-005-11	CERAMIC CHIP	0.47uF		25V	C520	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C401	1-124-455-00	ELECT	100uF	20%	16V	C521	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C402	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C522	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V
C403	1-126-245-11	ELECT	330uF	20%	6.3V	C523	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C404	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C524	1-135-131-11	TANTAL. CHIP	22uF	20%	4V
C405	1-135-174-11	TANTAL. CHIP	10uF	20%	10V	C525	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C406	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V	C526	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C407	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V	C528	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C408	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	C529	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C409	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C530	1-162-638-11	CERAMIC CHIP	1uF		16V
C410	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V	C531	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C411	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V	C532	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C412	1-126-245-11	ELECT	330uF	20%	6.3V	C536	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C413	1-164-346-11	CERAMIC CHIP	1uF		16V	C537	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C414	1-124-584-00	ELECT	100uF	20%	10V	C538	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C415	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V	C540	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C416	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	C541	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C417	1-162-957-11	CERAMIC CHIP	220PF	5%	50V	C544	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C418	1-135-174-11	TANTAL. CHIP	10uF	20%	10V	C546	1-135-174-11	TANTAL. CHIP	10uF	20%	10V
C419	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C547	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C420	1-162-638-11	CERAMIC CHIP	1uF		16V	C548	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C421	1-164-346-11	CERAMIC CHIP	1uF		16V	C549	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C422	1-164-346-11	CERAMIC CHIP	1uF		16V	C550	1-162-638-11	CERAMIC CHIP	1uF		16V
C425	1-162-959-11	CERAMIC CHIP	330PF	5%	50V	C551	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C426	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V	C552	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C428	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V	C553	1-162-638-11	CERAMIC CHIP	1uF		16V
C429	1-124-455-00	ELECT	100uF	20%	16V	C554	1-162-638-11	CERAMIC CHIP	1uF		16V
C430	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C555	1-163-201-00	CERAMIC CHIP	680PF	5%	50V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C556	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C432	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V	C557	1-135-091-00	TANTALUM CHIP	1uF	20%	16V
C460	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V	C558	1-135-174-11	TANTAL. CHIP	10uF	20%	10V
C501	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C559	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C502	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	C560	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V
C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C561	1-135-144-11	TANTAL. CHIP	22uF	20%	6.3V
C505	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	C562	1-135-131-11	TANTAL. CHIP	22uF	20%	4V
C506	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C565	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C507	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3V	C566	1-162-638-11	CERAMIC CHIP	1uF		16V
C508	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C570	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C509	1-135-131-11	TANTAL. CHIP	22uF	20%	4V	C575	1-135-131-11	TANTAL. CHIP	22uF	20%	4V
C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C591	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C511	1-162-916-11	CERAMIC CHIP	12PF	5%	50V	C601	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C512	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3V						
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V						
C514	1-135-162-21	TANTALUM CHIP	33uF	20%	6.3V						

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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C602	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	D801	8-719-941-09	DIODE	DAP202U		
C603	1-162-953-11	CERAMIC CHIP	100PF	5%	50V	D802	8-719-157-54	DIODE	RD12M-B		
C604	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V	D803	8-719-941-86	DIODE	DAN202U		
C605	1-162-953-11	CERAMIC CHIP	100PF	5%	50V	D804	8-719-941-86	DIODE	DAN202U		
C606	1-164-346-11	CERAMIC CHIP	1uF		16V	D805	8-719-941-86	DIODE	DAN202U		
C607	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	D806	8-719-977-20	DIODE	DTZ8.2B		
C801	1-162-638-11	CERAMIC CHIP	1uF		16V	D807	8-719-977-20	DIODE	DTZ8.2B		
C803	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V	D808	8-719-941-86	DIODE	DAN202U		
C804	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V	D809	8-719-941-86	DIODE	DAN202U		
C805	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D810	8-719-977-20	DIODE	DTZ8.2B		
C806	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	D811	8-719-977-20	DIODE	DTZ8.2B		
C810	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D820	8-719-975-40	DIODE	RB411D		
C811	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D830	8-719-941-09	DIODE	DAP202U		
C812	1-164-346-11	CERAMIC CHIP	1uF		16V				< IC >		
C813	1-164-346-11	CERAMIC CHIP	1uF		16V	IC301	8-759-521-51	IC	SM5861AS		
C901	1-164-346-11	CERAMIC CHIP	1uF		16V	IC302	8-759-710-55	IC	NJM2100M		
< CONNECTOR >											
CN501	1-566-527-11	CONNECTOR, FPC (ZIF)	11P			IC304	8-759-510-56	IC	BA3570FS		
CN502	1-563-552-11	SOCKET, CONNECTOR	4P			IC401	8-759-510-58	IC	RF5C133		
CN801	1-569-142-21	HOUSING, CONNECTOR	30P			IC501	8-752-033-55	IC	CXA1271Q		
CNJ401	1-580-428-11	JACK, DC (DC IN 9V)				IC502	8-752-055-25	IC	CXA1272Q-Z		
< DIODE >											
D303	8-719-977-20	DIODE	DTZ8.2B			IC504	8-759-031-89	IC	MPC1716FU		
D304	8-719-977-20	DIODE	DTZ8.2B			IC505	8-759-031-84	IC	SC7S04F		
D305	8-719-977-20	DIODE	DTZ8.2B			IC601	8-752-337-26	IC	CXD2500AQ		
D306	8-719-977-20	DIODE	DTZ8.2B			IC602	8-759-234-13	IC	TC4S30F		
D307	8-719-977-20	DIODE	DTZ8.2B			IC603	8-759-977-71	IC	GP-1F31T		
D401	8-719-975-33	DIODE	RB110C			IC604	8-759-630-34	IC	M5278L05M		
D402	8-719-422-73	DIODE	MA8075-L-TX			IC605	8-759-501-31	IC	SM5840CS		
D403	8-719-975-33	DIODE	RB110C			IC801	8-752-830-80	IC	CXP5078-607Q		
D404	8-719-988-78	DIODE	SB007W03Q			IC802	8-759-998-45	IC	BA3818F-SY		
D405	8-719-988-78	DIODE	SB007W03Q			IC803	8-759-998-45	IC	BA3818F-SY		
D406	8-719-975-40	DIODE	RB411D			< JACK >					
D407	8-719-938-72	DIODE	SB01-05CP			J301	1-568-758-11	JACK (PHONES/REMOTE)			
D408	8-719-941-86	DIODE	DAN202U			J302	1-563-281-41	JACK (LINE OUT)			
D409	8-719-941-86	DIODE	DAN202U			J801	1-563-280-31	JACK (REMOTE)			
D410	8-719-941-23	DIODE	DA204U			< JUMPER >					
D411	8-719-988-78	DIODE	SB007W03Q			JR501	1-216-864-11	METAL CHIP	0	5%	1/16W
D413	8-719-941-86	DIODE	DAN202U			< COIL >					
D414	8-719-938-72	DIODE	SB01-05CP			L102	1-543-813-21	FILTER, EMI			
D415	8-719-975-40	DIODE	RB411D			L202	1-543-813-21	FILTER, EMI			
D416	8-719-988-78	DIODE	SB007W03Q			L301	1-543-813-21	FILTER, EMI			
D417	8-719-941-23	DIODE	DA204U			L331	1-412-029-11	INDUCTOR CHIP	10uH		
D420	8-719-975-33	DIODE	RB110C			L332	1-412-029-11	INDUCTOR CHIP	10uH		
D430	8-719-941-23	DIODE	DA204U								
D501	8-719-975-46	DIODE	RB471E								
D503	8-719-988-78	DIODE	SB007W03Q								

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L401	1-412-747-11	COIL, CHOKE	100uH	Q419	8-729-923-45	TRANSISTOR	2SB1308-QR
L402	1-412-747-11	COIL, CHOKE	100uH	Q420	8-729-423-96	TRANSISTOR	UN2119
L403	1-412-622-51	INDUCTOR	10uH	Q421	8-729-141-75	TRANSISTOR	2SD596DV345
L412	1-412-400-31	INDUCTOR	68uH	Q422	8-729-923-04	TRANSISTOR	DTC123YK
L413	1-412-031-11	INDUCTOR CHIP	47uH	Q423	8-729-903-82	TRANSISTOR	FMW2
L451	1-412-032-11	INDUCTOR CHIP	100uH	Q424	8-729-901-00	TRANSISTOR	DTC124EK
L501	1-412-029-11	INDUCTOR CHIP	10uH	Q425	8-729-905-35	TRANSISTOR	2SC4081-R
L502	1-412-039-51	INDUCTOR CHIP	100uH	Q450	8-729-907-00	TRANSISTOR	DTC114EU
L503	1-412-039-51	INDUCTOR CHIP	100uH	Q451	8-729-907-00	TRANSISTOR	DTC114EU
L504	1-412-039-51	INDUCTOR CHIP	100uH	Q501	8-729-402-90	TRANSISTOR	XN4609
L505	1-412-039-51	INDUCTOR CHIP	100uH	Q502	8-729-907-39	TRANSISTOR	IMD2
L510	1-412-029-11	INDUCTOR CHIP	10uH	Q503	8-729-905-61	TRANSISTOR	DTC124EU
L511	1-412-029-11	INDUCTOR CHIP	10uH	Q506	8-729-905-61	TRANSISTOR	DTC124EU
L801	1-543-813-21	FILTER, EMI		Q507	8-729-924-79	TRANSISTOR	FMG8
L804	1-543-813-21	FILTER, EMI		Q509	8-729-905-61	TRANSISTOR	DTC124EU
< PILOT LAMP >							
PL701	1-518-674-11	LAMP, PILOT		Q801	8-729-905-12	TRANSISTOR	DTA144EU
PL702	1-518-674-11	LAMP, PILOT		Q802	8-729-402-16	TRANSISTOR	XN4608
< TRANSISTOR >							
Q102	8-729-922-94	TRANSISTOR	DTC143TU	< RESISTOR >			
Q103	8-729-921-73	TRANSISTOR	2SD1781K-QR	R102	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q104	8-729-425-18	TRANSISTOR	XN4504	R103	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q202	8-729-922-94	TRANSISTOR	DTC143TU	R104	1-216-813-11	METAL CHIP	220 5% 1/16W
Q203	8-729-921-73	TRANSISTOR	2SD1781K-QR	R106	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
Q204	8-729-425-18	TRANSISTOR	XN4504	R107	1-218-345-11	METAL GLAZE	9.1K 5% 1/16W
Q301	8-729-903-10	TRANSISTOR	FMW1	R108	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q304	8-729-905-35	TRANSISTOR	2SC4081-R	R109	1-216-815-11	METAL CHIP	330 5% 1/16W
Q305	8-729-141-48	TRANSISTOR	2SB624-BV345	R110	1-216-797-11	METAL CHIP	10 5% 1/16W
Q306	8-729-923-XX	TRANSISTOR	DTA114YU-T106	R111	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
Q307	8-729-907-39	TRANSISTOR	IMD2	R112	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
Q308	8-729-907-28	TRANSISTOR	IMD3	R120	1-216-789-11	METAL CHIP	2.2 5% 1/16W
Q320	8-729-905-57	TRANSISTOR	DTA124EU	R121	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q350	8-729-902-90	TRANSISTOR	FMA4	R131	1-216-677-11	METAL CHIP	12K 0.5% 1/10W
Q401	8-729-905-35	TRANSISTOR	2SC4081-R	R132	1-216-677-11	METAL CHIP	12K 0.5% 1/10W
Q402	8-729-806-76	TRANSISTOR	2SB1120-G	R133	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
Q403	8-729-905-35	TRANSISTOR	2SC4081-R	R134	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
Q404	8-729-402-XX	TRANSISTOR	XN4112-TW	R135	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
Q406	8-729-923-45	TRANSISTOR	2SB1308-QR	R136	1-216-683-11	METAL CHIP	22K 0.5% 1/10W
Q407	8-729-903-10	TRANSISTOR	FMW1	R137	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
Q408	8-729-924-65	TRANSISTOR	DTC123YU	R138	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
Q409	8-729-923-45	TRANSISTOR	2SB1308-QR	R144	1-216-813-11	METAL CHIP	220 5% 1/16W
Q410	8-729-924-65	TRANSISTOR	DTC123YU	R202	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q411	8-729-905-23	TRANSISTOR	2SA1576-R	R203	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q412	8-729-905-35	TRANSISTOR	2SC4081-R	R204	1-216-813-11	METAL CHIP	220 5% 1/16W
Q413	8-729-141-75	TRANSISTOR	2SD596DV345	R206	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
Q417	8-729-907-00	TRANSISTOR	DTC114EU				
Q418	8-729-923-45	TRANSISTOR	2SB1308-QR				

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R207	1-218-345-11	METAL GLAZE	9.1K 5% 1/16W	R417	1-216-857-11	METAL CHIP	1M 5% 1/16W
R208	1-216-845-11	METAL CHIP	100K 5% 1/16W	R418	1-216-833-11	METAL CHIP	10K 5% 1/16W
R209	1-216-815-11	METAL CHIP	330 5% 1/16W	R419	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R210	1-216-797-11	METAL CHIP	10 5% 1/16W	R420	1-216-834-11	METAL CHIP	12K 5% 1/16W
R211	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R421	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R212	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R422	1-216-821-11	METAL CHIP	1K 5% 1/16W
R220	1-216-789-11	METAL CHIP	2.2 5% 1/16W	R424	1-216-821-11	METAL CHIP	1K 5% 1/16W
R221	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R425	1-216-833-11	METAL CHIP	10K 5% 1/16W
R231	1-216-677-11	METAL CHIP	12K 0.5% 1/10W	R426	1-216-834-11	METAL CHIP	12K 5% 1/16W
R232	1-216-677-11	METAL CHIP	12K 0.5% 1/10W	R427	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R233	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R428	1-216-834-11	METAL CHIP	12K 5% 1/16W
R234	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R429	1-216-001-00	METAL CHIP	10 5% 1/10W
R235	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R430	1-216-811-11	METAL CHIP	150 5% 1/16W
R236	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R431	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R237	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R432	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R238	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R434	1-216-815-11	METAL CHIP	330 5% 1/16W
R244	1-216-813-11	METAL CHIP	220 5% 1/16W	R435	1-216-841-11	METAL CHIP	47K 5% 1/16W
R301	1-216-845-11	METAL CHIP	100K 5% 1/16W	R436	1-216-815-11	METAL CHIP	330 5% 1/16W
R302	1-216-845-11	METAL CHIP	100K 5% 1/16W	R437	1-216-821-11	METAL CHIP	1K 5% 1/16W
R304	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R438	1-216-843-11	METAL CHIP	68K 5% 1/16W
R305	1-216-803-11	METAL CHIP	33 5% 1/16W	R439	1-216-833-11	METAL CHIP	10K 5% 1/16W
R306	1-216-803-11	METAL CHIP	33 5% 1/16W	R440	1-216-839-11	METAL CHIP	33K 5% 1/16W
R307	1-216-832-11	METAL CHIP	8.2K 5% 1/16W	R441	1-216-841-11	METAL CHIP	47K 5% 1/16W
R308	1-216-857-11	METAL CHIP	1M 5% 1/16W	R442	1-216-813-11	METAL CHIP	220 5% 1/16W
R309	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R443	1-216-815-11	METAL CHIP	330 5% 1/16W
R310	1-216-848-11	METAL CHIP	180K 5% 1/16W	R446	1-216-833-11	METAL CHIP	10K 5% 1/16W
R315	1-216-821-11	METAL CHIP	1K 5% 1/16W	R447	1-216-833-11	METAL CHIP	10K 5% 1/16W
R319	1-216-847-11	METAL CHIP	150K 5% 1/16W	R448	1-216-675-11	METAL CHIP	10K 0.5% 1/10W
R320	1-216-834-11	METAL CHIP	12K 5% 1/16W	R449	1-216-839-11	METAL CHIP	33K 5% 1/16W
R321	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R450	1-216-839-11	METAL CHIP	33K 5% 1/16W
R330	1-216-821-11	METAL CHIP	1K 5% 1/16W	R452	1-216-841-11	METAL CHIP	47K 5% 1/16W
R351	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R463	1-216-184-00	METAL GLAZE	270 5% 1/8W
R352	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R470	1-216-821-11	METAL CHIP	1K 5% 1/16W
R365	1-216-833-11	METAL CHIP	10K 5% 1/16W	R471	1-216-832-11	METAL CHIP	8.2K 5% 1/16W
R366	1-216-841-11	METAL CHIP	47K 5% 1/16W	R472	1-216-832-11	METAL CHIP	8.2K 5% 1/16W
R401	1-216-815-11	METAL CHIP	330 5% 1/16W	R502	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R402	1-216-049-00	METAL CHIP	1K 5% 1/10W	R503	1-216-833-11	METAL CHIP	10K 5% 1/16W
R403	1-216-823-11	METAL CHIP	1.5K 5% 1/16W	R506	1-216-837-11	METAL CHIP	22K 5% 1/16W
R405	1-216-811-11	METAL CHIP	150 5% 1/16W	R507	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R407	1-217-671-11	METAL CHIP	1 5% 1/10W	R508	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
R408	1-217-671-11	METAL CHIP	1 5% 1/10W	R509	1-216-833-11	METAL CHIP	10K 5% 1/16W
R409	1-216-833-11	METAL CHIP	10K 5% 1/16W	R510	1-216-797-11	METAL CHIP	10 5% 1/16W
R410	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R511	1-216-845-11	METAL CHIP	100K 5% 1/16W
R411	1-216-831-11	METAL CHIP	6.8K 5% 1/16W	R512	1-216-833-11	METAL CHIP	10K 5% 1/16W
R412	1-216-833-11	METAL CHIP	10K 5% 1/16W	R513	1-216-851-11	METAL CHIP	330K 5% 1/16W
R413	1-216-857-11	METAL CHIP	1M 5% 1/16W	R516	1-216-835-11	METAL CHIP	15K 5% 1/16W
R414	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R415	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R416	1-216-681-11	METAL CHIP	18K 0.5% 1/10W				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
R517	1-216-845-11	METAL CHIP	100K 5% 1/16W	R610	1-216-817-11	METAL CHIP	470 5% 1/16W				
R519	1-216-845-11	METAL CHIP	100K 5% 1/16W	R611	1-216-811-11	METAL CHIP	150 5% 1/16W				
R520	1-216-849-11	METAL CHIP	220K 5% 1/16W	R612	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R521	1-216-837-11	METAL CHIP	22K 5% 1/16W	R801	1-216-833-11	METAL CHIP	10K 5% 1/16W				
R522	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R802	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R523	1-216-828-11	METAL CHIP	3.9K 5% 1/16W	R803	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R524	1-216-854-11	METAL CHIP	560K 5% 1/16W	R804	1-216-837-11	METAL CHIP	22K 5% 1/16W				
R525	1-216-833-11	METAL CHIP	10K 5% 1/16W	R805	1-216-841-11	METAL CHIP	47K 5% 1/16W				
R526	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R806	1-216-845-11	METAL CHIP	100K 5% 1/16W				
R527	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R807	1-216-851-11	METAL CHIP	330K 5% 1/16W				
R528	1-216-848-11	METAL CHIP	180K 5% 1/16W	R808	1-216-809-11	METAL CHIP	100 5% 1/16W				
R529	1-218-705-11	METAL CHIP	3.6K 0.50% 1/16W	R809	1-216-651-11	METAL CHIP	1K 0.5% 1/10W				
R530	1-216-826-11	METAL CHIP	2.7K 5% 1/16W	R810	1-216-833-11	METAL CHIP	10K 5% 1/16W				
R532	1-216-683-11	METAL CHIP	22K 0.5% 1/10W	R812	1-216-854-11	METAL CHIP	560K 5% 1/16W				
R533	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R813	1-216-861-11	METAL CHIP	2.2M 5% 1/16W				
R535	1-216-863-11	METAL GLAZE	3.3M 5% 1/16W	R814	1-216-833-11	METAL CHIP	10K 5% 1/16W				
R536	1-218-296-11	METAL GLAZE	75K 5% 1/16W	R815	1-216-845-11	METAL CHIP	100K 5% 1/16W				
R537	1-216-833-11	METAL CHIP	10K 5% 1/16W	R816	1-216-833-11	METAL CHIP	10K 5% 1/16W				
R539	1-216-857-11	METAL CHIP	1M 5% 1/16W	R817	1-216-817-11	METAL CHIP	470 5% 1/16W				
R543	1-216-838-11	METAL CHIP	27K 5% 1/16W	R818	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R544	1-216-821-11	METAL CHIP	1K 5% 1/16W	R820	1-216-815-11	METAL CHIP	330 5% 1/16W				
R545	1-216-842-11	METAL CHIP	56K 5% 1/16W	R850	1-216-861-11	METAL CHIP	2.2M 5% 1/16W				
R546	1-216-821-11	METAL CHIP	1K 5% 1/16W	R851	1-216-854-11	METAL CHIP	560K 5% 1/16W				
R547	1-216-833-11	METAL CHIP	10K 5% 1/16W	R852	1-216-821-11	METAL CHIP	1K 5% 1/16W				
R548	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	< VARIABLE RESISTOR >							
R549	1-216-857-11	METAL CHIP	1M 5% 1/16W	RV301	1-230-485-11	RES, VAR, CARBON 10K/10K (VOLUME)					
R550	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	RV401	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (CHARGE DETECT VOLTAGE)					
R551	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	RV402 1-241-394-11 RES, ADJ, METAL GLAZE 4.7K (3.5V ADJ)							
R552	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	RV403	1-241-392-11	RES, ADJ, METAL GLAZE 1K(CHARGE VOLTAGE)					
R553	1-216-839-11	METAL CHIP	33K 5% 1/16W	RV431	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (3.8V ADJ)					
R554	1-216-849-11	METAL CHIP	220K 5% 1/16W	RV501	1-241-396-11	RES, ADJ, METAL GLAZE 22K(TRACKING GAIN)					
R555	1-216-851-11	METAL CHIP	330K 5% 1/16W	RV502 1-241-396-11 RES, ADJ, METAL GLAZE 22K (TRACKING BALANCE)							
R556	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	RV503	1-241-397-11	RES, ADJ, METAL GLAZE 47K (FOCUS BIAS)					
R559	1-216-843-11	METAL CHIP	68K 5% 1/16W	RV504	1-241-392-11	RES, ADJ, METAL GLAZE 1K (VCO)					
R560	1-216-845-11	METAL CHIP	100K 5% 1/16W	RV505	1-241-396-11	RES, ADJ, METAL GLAZE 22K (FOCUS GAIN)					
R561	1-216-820-11	METAL CHIP	820 5% 1/16W	< SWITCH >							
R568	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	S301	1-570-724-11	SWITCH, SLIDE (BASS BOOST)					
R569	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	S401	1-572-126-11	SWITCH, PUSH (1 KEY) (BP-2EX ON)					
R570	1-216-857-11	METAL CHIP	1M 5% 1/16W	S809	1-570-724-11	SWITCH, SLIDE (RESUME)					
R574	1-216-821-11	METAL CHIP	1K 5% 1/16W	S901	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)					
R580	1-216-833-11	METAL CHIP	10K 5% 1/16W	S902	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)					
R590	1-216-857-11	METAL CHIP	1M 5% 1/16W	< VIBRATOR >							
R601	1-216-827-11	METAL CHIP	3.3K 5% 1/16W	X301	1-577-576-11	VIBRATOR, CRYSTAL (16.9MHz)					
R602	1-218-293-11	METAL GLAZE	24K 5% 1/16W	X801	1-579-267-11	VIBRATOR, CERAMIC (3.58MHz)					
R603	1-216-827-11	METAL CHIP	3.3K 5% 1/16W								
R604	1-216-833-11	METAL CHIP	10K 5% 1/16W								
R606	1-216-841-11	METAL CHIP	47K 5% 1/16W								
R608	1-216-845-11	METAL CHIP	100K 5% 1/16W								
R609	1-216-833-11	METAL CHIP	10K 5% 1/16W								

Ref. No.	Part No.	Description	Remark
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MISCELLANEOUS

22	1-637-594-11	PC BOARD, KEY SWITCH FLEXIBLE	
LCD	1-809-269-11	DISPLAY PANEL, LIQUID CRYSTAL	
M901	A-3133-398-A	MOTOR ASSY, CLV	
M902	X-4921-256-1	MOTOR ASSY	
S903	1-570-771-11	SWITCH (LS)	

ACCESSORIES & PACKING MATERIALS

▲ 1-465-609-11 ADAPTOR, AC (AC-96N) (US)
 ▲ 1-465-665-11 ADAPTOR, AC (AC-96N(AU)) (Australian)
 ▲ 1-465-666-11 ADAPTOR, AC (AC-96N(AE)) (AEP)
 ▲ 1-465-667-11 ADAPTOR, AC (AC-96N(CA)) (Canadian)
 ▲ 1-465-668-11 ADAPTOR, AC (AC-96N(UK)) (UK)
 ▲ 1-465-669-11 ADAPTOR, AC (AC-96N) (E)

1-505-125-11 HEADPHONE (WITH REMOTE CONTROL)
 (E, Australian, Canadian)
 1-505-125-21 HEADPHONE (WITH REMOTE CONTROL)
 (US, AEP, UK)

1-528-297-11 BATTERY PACK (BP-2EX) (EXCEPT AEP)
 1-528-297-21 BATTERY PACK (BP-2EX) (AEP)
 1-555-658-21 CORD, CONNECTION
 1-590-038-11 CORD, CONNECTION

3-752-809-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,
 SPANISH, PORTUGUESE) (EXCEPT US)
 3-752-809-21 MANUAL, INSTRUCTION (US)
 3-752-809-41 MANUAL, INSTRUCTION (GERMAN, DUTCH,
 SWEDISH, ITALIAN) (AEP)

* 4-942-752-01 INDIVIDUAL CARTON (Canadian)
 * 4-942-754-01 INDIVIDUAL CARTON (E, US)
 * 4-942-755-01 INDIVIDUAL CARTON (AEP, UK, Australian)
 * 4-942-751-01 CUSHION (LOWER) (US, Australian, Canadian)
 * 4-942-756-01 CUSHION (LOWER) (AEP, UK, Australian)

4-943-635-01 CASE, CARRYING

HARDWARE LIST

#1	7-627-450-48 SCREW, PRECISION +K1.7X2.5 TYPE1
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Note: The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Sony Corporation
General Audio Group

9-956-138-81

English
 92A02100-1
 Printed in Japan
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Published by Customer Relations and Service Group