

# D-311

## SERVICE MANUAL

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



# Discman

### SPECIFICATIONS

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wavelength: $\lambda = 780 \text{ nm}$ Emission duration: Continuous Laser output: Less than $44.6 \mu\text{W}$ (This output is the value measured at a distance of 200 mm from the 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 $\pm 3 \text{ dB}$ (measured by EIAJ CP-307)
Output (at 6 V input level)	Line output (stereo minijack) Output level 0.55 V rms at 50 kilohms Load impedance over 10 kilohms Headphones (stereo minijack) 9 mW + 9 mW at 16 $\Omega$
General	
Power requirements	Supplied: <ul style="list-style-type: none"> <li>• DC 3.2 V rechargeable battery pack BP-5</li> <li>• DC IN 6 V jack accepts the Sony AC power adaptor for use on:               <ul style="list-style-type: none"> <li>US, Canadian model : 120V AC, 60Hz</li> <li>AEP model : 220 – 230V AC, 50Hz</li> <li>UK, Australian model : 240V AC, 50Hz</li> <li>E, Tourist model : 100 – 240V AC, 50/60Hz</li> </ul> </li> </ul> Not supplied: <ul style="list-style-type: none"> <li>• DC IN 6 V accepts the Sony CPM-203P/CPM-200P mount plate and CPM-200PK/CPM-203PK Car mount arm for use on 12 V car battery.</li> <li>• DC 3 V two size AA (LR6) alkaline batteries</li> </ul>
Dimensions	Approx. 128.3 × 21.6 × 147.8 mm (5 $\frac{1}{8}$ × 7 $\frac{1}{8}$ × 5 $\frac{7}{8}$ in.) (w/h/d) incl. projecting parts and controls
Weight	Approx. 325 g (11.5 oz.) incl. rechargeable battery
Supplied accessories	AC power adaptor (1) Rechargeable battery (1) Connecting cord (phono plug × 2 ↔ stereo miniplug) (1) Headphones with remote commander (1) Car mount adaptor (1) Battery case (1)

Design and specifications subject to change without notice.

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM-311

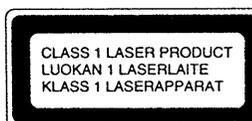
#### Note on the AC power adaptor

Use only the supplied AC power adaptor or the AC-E4M AC power adaptor (not supplied).



Polarity of the plug  
(Unified polarity type)

Never use any other adaptors manufactured by Sony because the polarity of the supplied adaptor is opposite of conventional adaptors. Do not use the supplied AC power adaptor for other "Discman" CD compact players with DC IN 9 V jack, nor the optional AC power adaptor such as the AC-D6M.



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

COMPACT DISC COMPACT PLAYER  
**SONY**<sup>®</sup>

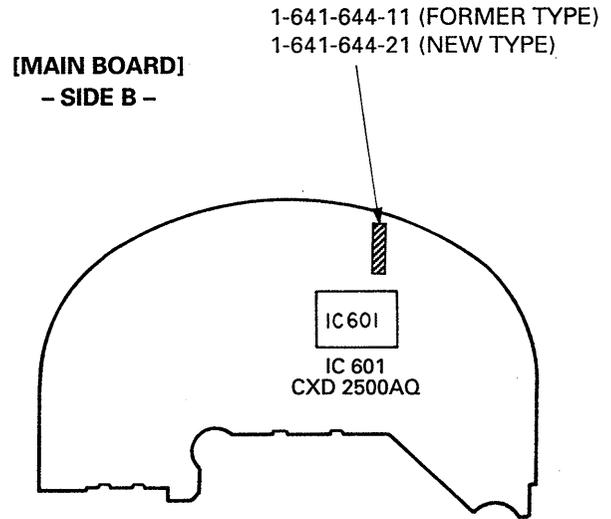
**SECTION 1  
SERVICE NOTE**

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**1-1. MAIN BOARD IDENTIFICATION**

- In the Us, Canadian, E, and Tourist models, the main board is marked with a number having either "-11" or "-21" at the end. "-11" indicates the former type and "-21" the new type, as shown below. The AEP, UK and "-21" the new type, as shown below. The AEP, UK and Australian models only have "-21".



	Printed Wiring Boards	Schematic Diagram
FORMER TYPE	Page 18-20	Page 21-24
NEW TYPE	Page 29-31	Page 25-28

**SAFETY-RELATED COMPONENT WARNING!!**

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

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

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

## 1-2. LASER NOTE

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

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

During repair, pay attention to electrostatic break-down 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.

### 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 from more than 30 cm away from the objective lens.

### Before Replacing the Optical Pick-Up Block

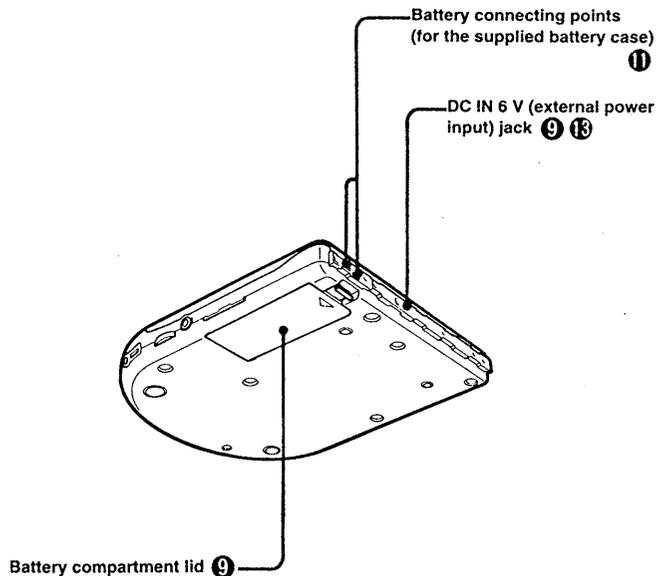
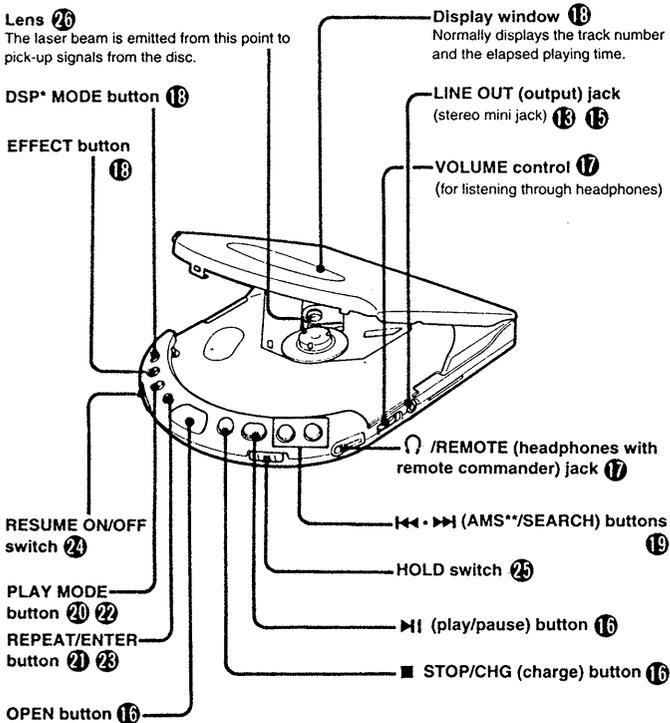
Please be sure to check thoroughly the parameters as per the "Optical Pick-Up Block Checking Procedures" (Part No. : 9-960-027-11) issued separately before replacing the optical pick-up block.

Note and specifications required to check are given below.

- FOK output : IC501 ⑨ pin  
When checking FOK, remove the lead wire to disc motor and unsolder and open IC801 ⑩ pin (FOK).
- S curve P-to-P value : 2.5Vp-p  
When checking S curve P-to-P value, remove the lead wire to disc motor.
- Adjusted part for focus gain adjustment : RV505
- RF signal P-to-P value : 0.80 – 1.10Vp-p
- Traverse signal P-to-P value : 1.5Vp-p
- The repairing grating holder is impossible.
- Adjusted part for tracking gain adjustment : RV501

# Location and Function of Controls

See the pages in ● for more details.

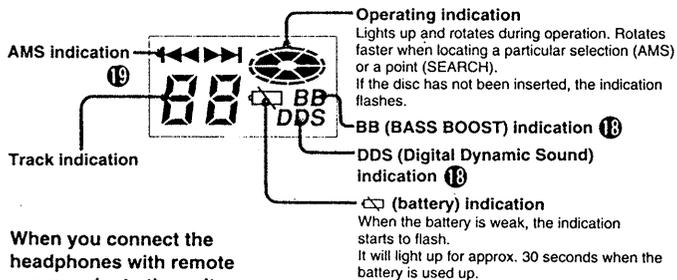
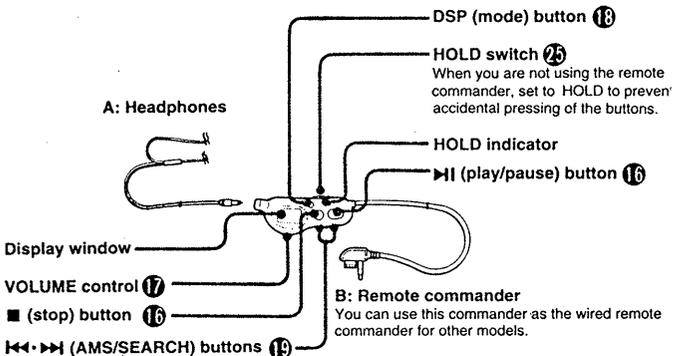


\* Digital Signal Processing  
\*\* Automatic Music Sensor

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## Headphones with Remote Commander



**When you connect the headphones with remote commander to the unit**  
Make sure that the unit is in the stop mode.

**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 do not use the headphones with remote commander**  
Detach the remote commander from the /REMOTE jack to avoid unnecessary battery consumption caused by accidental operation of the commander.

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## SECTION 3 SERVICE MODE

### Precautions for Checking Emission of Laser Diode

Laser light of the equipment is focused by the object lens in the optical pickup so that the light focuses on the reflection surface of the disk. Therefore, be sure to keep your eyes more than 30 cm apart from the object lens when you check the emission of laser diode.

### Laser Diode Checking Methods

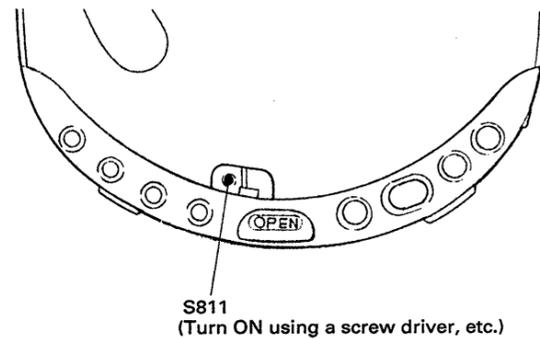
During normal operation of the equipment, emission of the laser diode is prohibited unless the upper panel is closed while turning ON the S811 (leaf switch type).

However, in the service mode, the laser diode always emits light regardless of the S811 turned ON or OFF.

The following two checking methods for the laser diode are operable.

- **Method - 1 (in the service mode or normal operation):**  
Emission of the laser diode is visually checked.

1. Open the upper panel.
2. Push the S811 as shown in Fig. 1.  
(This is not needed in the service mode.)
3. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pickup.  
During normal operation, the laser diode is turned ON about 2.5 seconds for focus searching.

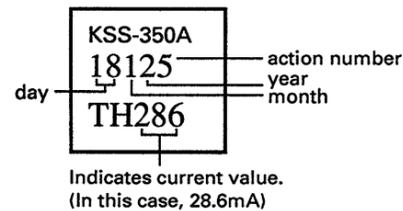


**Fig. 1 Method to push the S811**

- **Method - 2 (In service mode or normal operation):**  
Check the value of current flowing in the laser diode.

1. Open the upper panel.
2. Remove the main board and read the current printed on the label attached on the rear side of the optical pickup.

(Label stuck outside of the optical pickup)

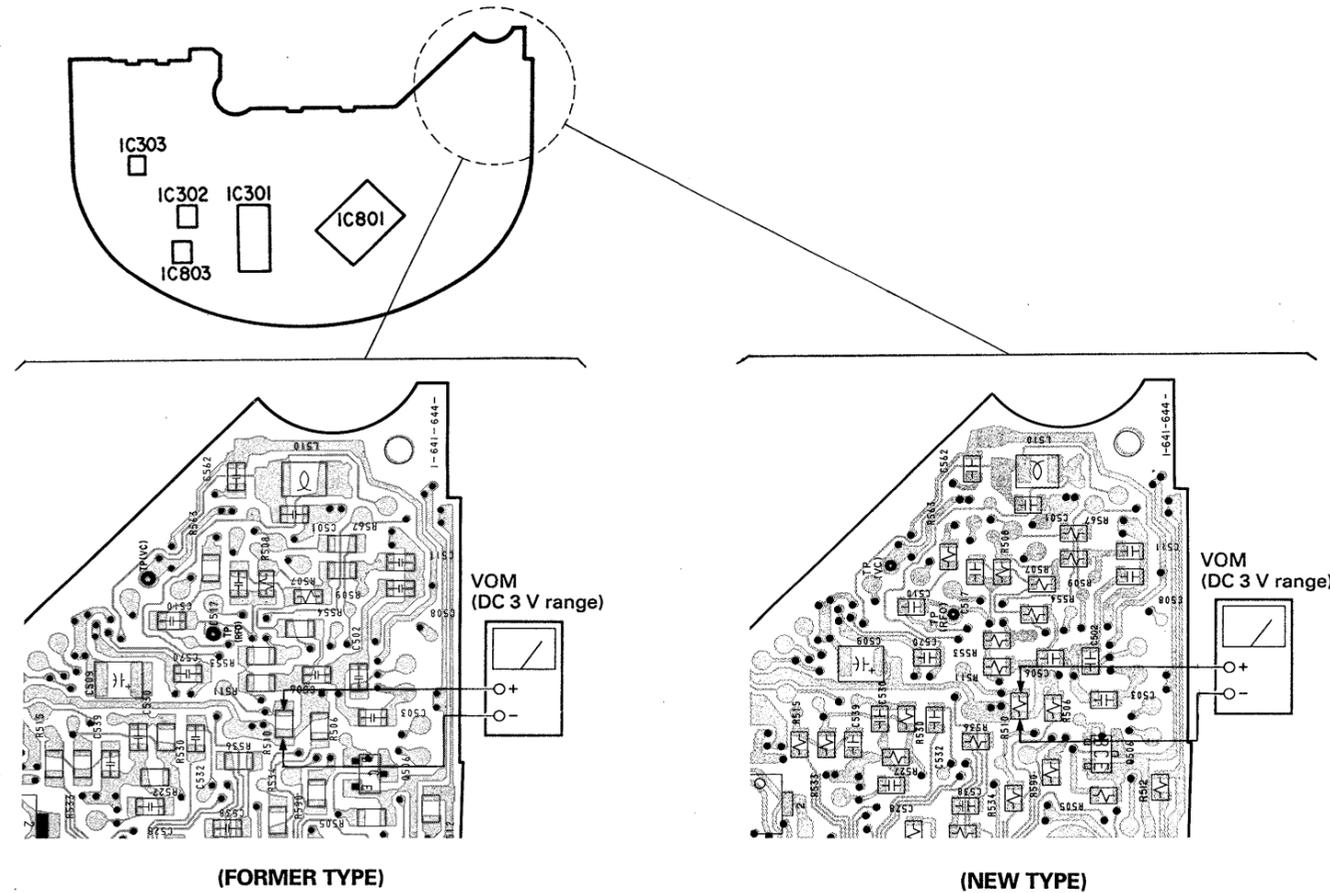


3. Connect a VOM as shown in Fig. 2 (terminate it with R510, 10Ω at both ends).
4. Press the  $\triangleright \square$  key.

5. Calculate current value by the reading of the VOM.  
Reading of the tester (V)  $\div$  10 = current value (A)  
(Example) Reading of the VOM of 0.46 V:  
 $0.46 \div 10 = 0.046$  (A) = 46 mA
6. Check that the current value is within the following range.
  - Current value of the label  $\frac{25}{11}$  mA (25 °C)  
Variation by temperature: 0.4 mA/C  
Current increases with temperature increased.  
Current decreases with temperature decreased.

If the current is more than the range above, there is a trouble in the automatic power control circuit or the laser diode is in deterioration.  
If less than the range, a trouble exists in the automatic power control circuit or the optical pickup.

- MAIN board - (side A)

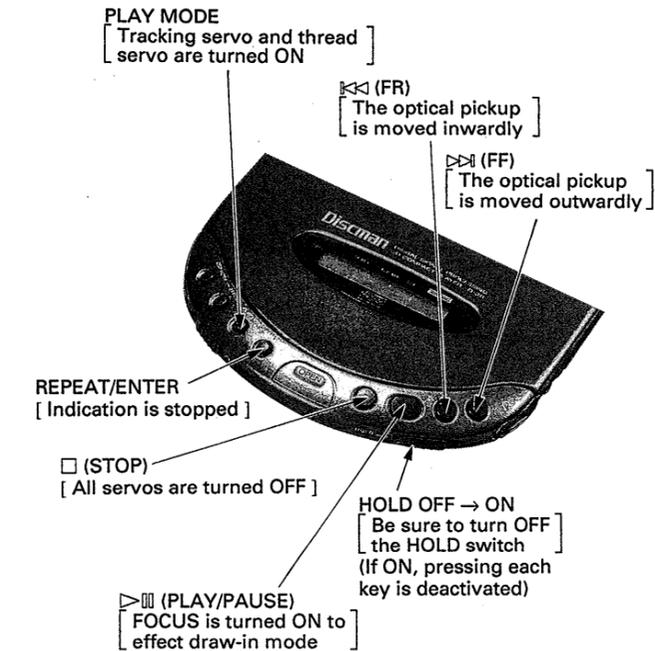


**Fig. 2 VOM connecting location**

### Service Mode (Service program)

The equipment is provided with a service program built in the microcomputer, like conventional models.

Service program operation methods are described in the following.



Descriptions in [ ] indicate major operations in the service mode. For more information, see Step 2.

**Fig. 3 Layout of each key**

- **Step 1 (Service mode setting methods)**

1. Turn OFF the HOLD switch with external power supply disconnected (power is not applied to the set).
2. Solder the jumper wire across the TEST terminals (pin ⑤, IC801 (TEST) is grounded).
3. Keep the S811 in continuously pressed state. (Or, solder the jumper wire across the DOOR terminals.)

Thus, the set is switched to the service mode.

- **Step 2 (Operation in the service mode)**

1. Once the service mode is effected, the LCD displays 5 indications each of which is repeatedly displayed.  
However, the following operations can be activated even if LCD indication is effected.
2. By pressing the  $\ll$  or  $\gg$  key, the optical pickup is movable inwardly or outwardly. However, if this is activated, tracking servo and thread servo are turned OFF, so it can be turned ON by pressing the PLAY MODE key if required.
3. By pressing the REPEAT/ENTER key, all indications light up. With the key released, repeated indication is continued, so you can check each segment.
4. By pressing the  $\triangleright \square$  key, focus is turned ON from focus searching while entering CLV-S (draw-in mode).  
Without disk, focus searching is repeated continuously.
5. By pressing the PLAY MODE key, tracking servo, thread servo and CLV-A (servo in PLAY) are turned ON.

6. When 4. and 5. are performed, playing begins. No muting is ON in the service mode.
7. By pressing the  key, all servos (focus, tracking and thread) are turned OFF. However, the disk motor revolves for a while by inertia.

• **Step 3 (Resetting of service mode)**

1. Be sure to disconnect the external power supply and remove the soldered jumper wire at the TEST terminals connected before in setting.
2. The set thus becomes available for normal operation.

– MAIN board – (side B)

**DOOR terminal**

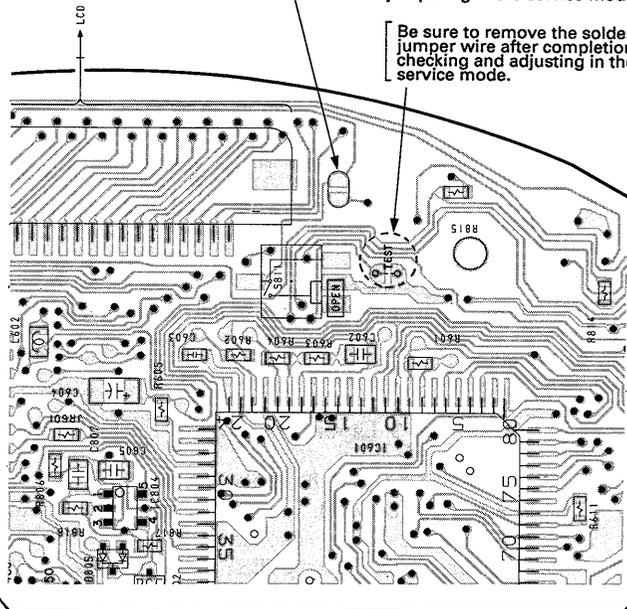
With this terminal soldered for jumpering, the S811 is fixed in continuously pressed state, while activating to press each key.

[ Be sure to remove the soldered jumper wire after the completion of service. ]

**TEST terminal**

Location to be soldered for jumpering in the service mode

[ Be sure to remove the soldered jumper wire after completion of checking and adjusting in the service mode. ]



(FORMER TYPE)

– MAIN board – (side B)

**DOOR terminal**

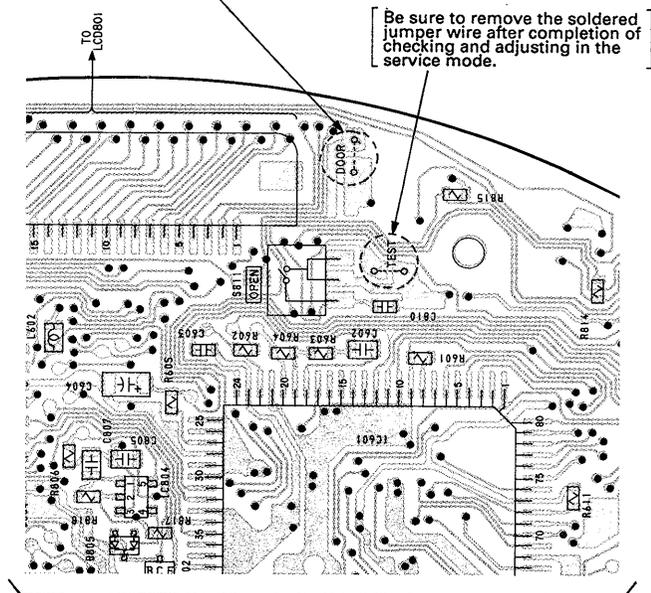
With this terminal soldered for jumpering, the S811 is fixed in continuously pressed state, while activating to press each key.

[ Be sure to remove the soldered jumper wire after the completion of service. ]

**TEST terminal**

Location to be soldered for jumpering in the service mode

[ Be sure to remove the soldered jumper wire after completion of checking and adjusting in the service mode. ]



(NEW TYPE)

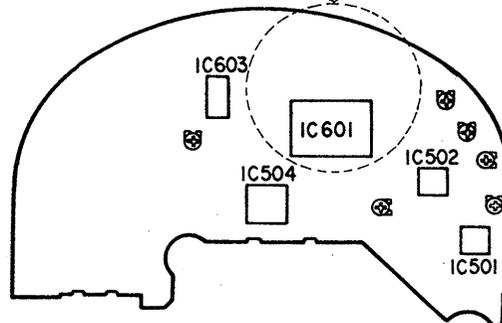


Fig. 4 Location of Test and Door terminal

## SECTION 4

### ELECTRICAL ADJUSTMENTS

#### Precautions for Adjustment

1. Before beginning adjustment, set the equipment to service mode.  
After the completion of adjustment, be sure to reset the service mode.  
 For more information, see "Service Mode (service program)" on Page 6.
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 requirement. : DC6V  
 HOLD switch : OFF  
 VOLUME knob : Minimum  
 RESUME switch : OFF

#### Before Beginning Adjustment

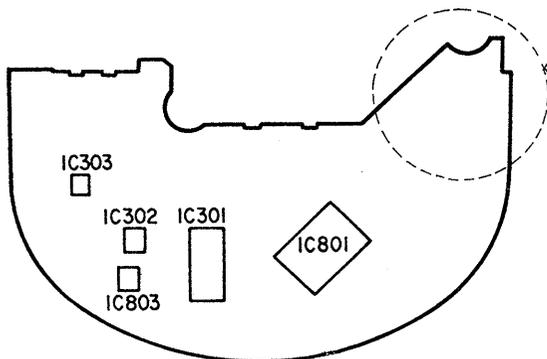
Set the equipment to service mode (see page 6) and check the following. If there is an error, repair the equipment.

#### • Checking of the thread motor

1. Press the  $\triangleright\triangleleft$  and  $\triangleleft\triangleleft$  keys and check that the optical pickup can move smoothly without sluggishness or abnormal noise in innermost periphery  $\rightarrow$  outermost periphery  $\rightarrow$  innermost periphery.  
 $\triangleright\triangleleft$  : The optical pickup moves outwardly.  
 $\triangleleft\triangleleft$  : The optical pickup moves inwardly.

#### • Checking of focus searching

1. Press the  $\triangleright\blacksquare$  key. (Focus searching operation is activated continuously.)
2. Check the object lens of the optical pickup for smooth up/down motion without sluggishness or abnormal noise.
3. Press the  $\square$  key.  
 Check that focus searching operation is deactivated. If not, again press the  $\square$  key slightly longer.



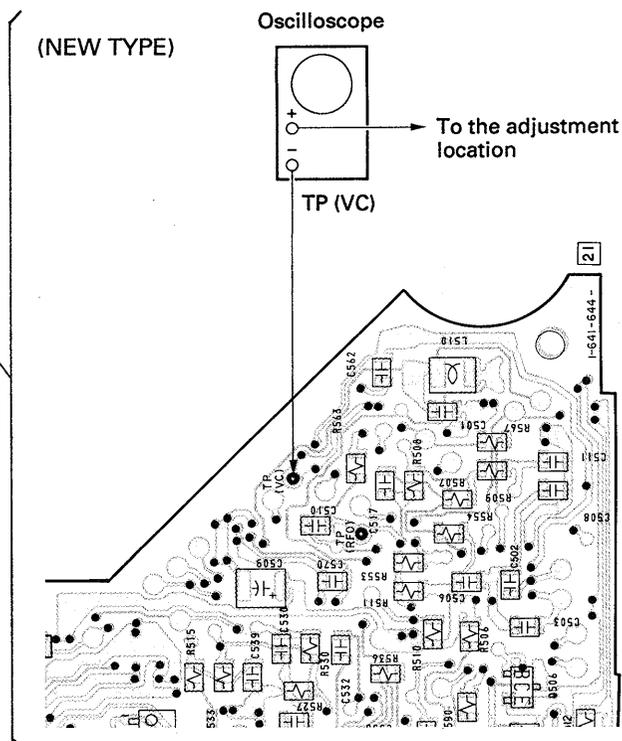
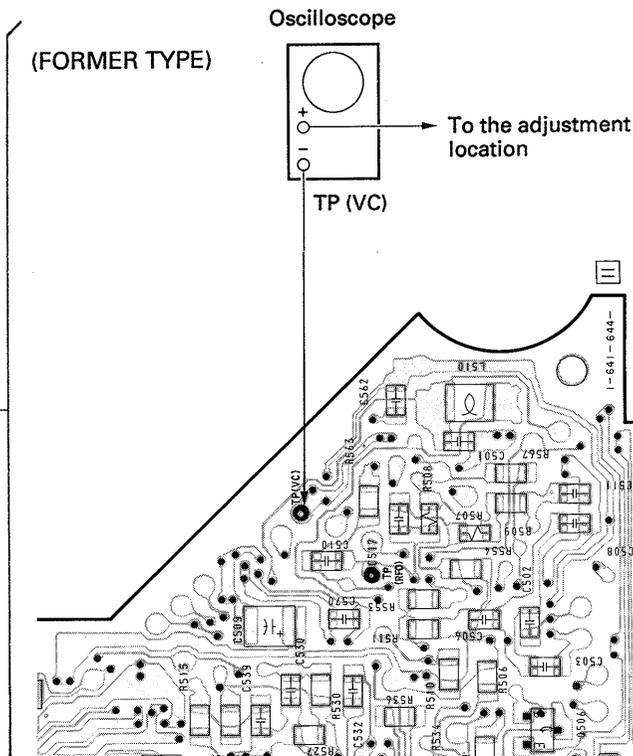
#### • VC (1/2Vcc) connection location

Focus bias adjustment

Tracking balance adjustment

For any of the adjustments above, connect the minus side of the oscilloscope at the point of the following view.

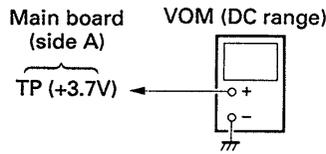
#### Connection Location: MAIN board (side A)



### +3.7V Adjustment

\* Use a SUM-3 battery for +3.7 V adjustment.

#### Adjustment Procedure:



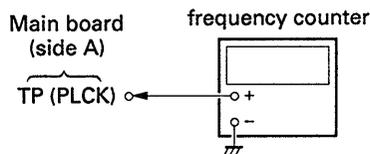
1. Connect the VOM to TP (+3.7 V) of the main board.
2. Adjust RV401 of the main board for 3.6 – 3.75V reading on the VOM.

**Connection Location:** MAIN board (side A)

**Adjustment Location:** MAIN board (side B)

### PLL Free-run Frequency Check and Adjustment

#### Check/Adjustment Procedure:



1. Short the jumper terminal of Pin ⑦, IC501 (ASY) to GND.
2. Connect the frequency counter to the test point TP (PLCK) of Pin ④, IC601 on the main board.
3. Set the equipment to service mode stop state (see page 6).
4. Confirm that the frequency counter indicates  $4.3218 \pm 0.01$  MHz. If not, adjust RV504 for that frequency.
5. After the completion of adjustment, reset the service mode. (see page 6)
6. Open the jumper terminal shorten in step 1.

**Connection Location:** MAIN board (side A)

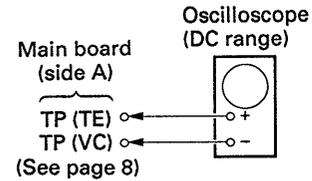
**Adjustment Location:** MAIN board (side B)

### Tracking Balance Adjustment

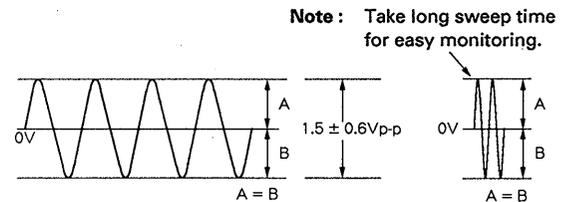
#### Condition:

- Hold the set in horizontal state.

#### Adjustment Procedure:



1. Connect the oscilloscope to TP (TE) of the main board.
2. Set the equipment to service mode stop state. (see page 6)
3. Move the optical pickup by pressing the  $\triangleright \blacktriangleleft$  and  $\blacktriangleleft \triangleright$  keys.
4. Put the disc (YEDS-18).
5. Press the  $\triangleright \square$  key.
  - From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and thread are turned OFF.
6. Adjust RV502 so that the waveform on the oscilloscope becomes up/down symmetrical with an axis of 0 V.



7. Stop revolving of the disc motor by pressing the  $\square$  key.
8. After the completion of adjustment, reset service mode. (see page 6)

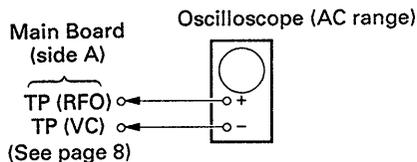
**Connection and Adjustment Location:** MAIN board (side B)

## Focus Bias Adjustment

### Condition:

- Hold the set in horizontal state.

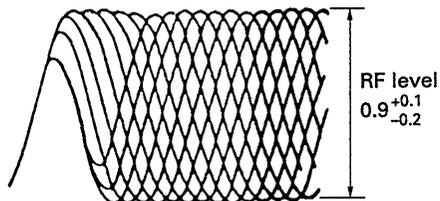
### Adjustment Procedure:



1. Hold the set in service mode stop state. (see page 6)
2. Connect the oscilloscope to the test point TP (RFO) of the main board.
3. Move the optical pickup by pressing the  $\triangleright\triangleright$  and  $\ll\ll$  keys.  
(To display the eye pattern more clearly, move the optical pickup to the music range of the disc.)
4. Put the disc (YEDS-18) and close the upper panel.
5. Press the  $\triangleright\Box$  key.  
  - [ From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and thread are turned OFF.
6. Press the PLAY MODE key. (Both tracking and thread are turned ON.)
7. Adjust RV503 so that the eye pattern in the waveform of the oscilloscope is clearly displayed. "Clear display of the eye pattern" means that the  $\diamond$  shape can be clearly discriminated at the center of the waveform.

### RF SIGNAL REFERENCE WAVEFORM (EYE PATTERN)

VOLT DIV : 20 mV (With the 10:1 probe in use)  
 TIME DIV : 500 ns



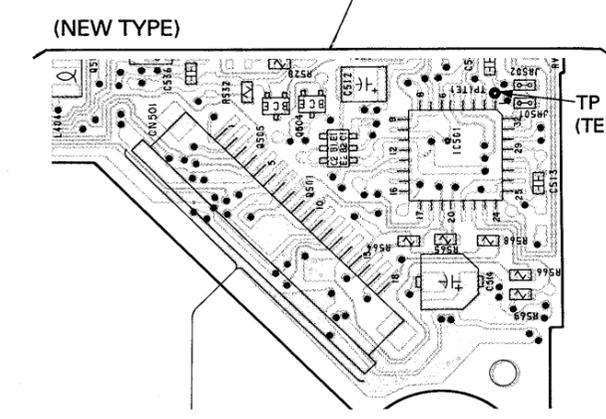
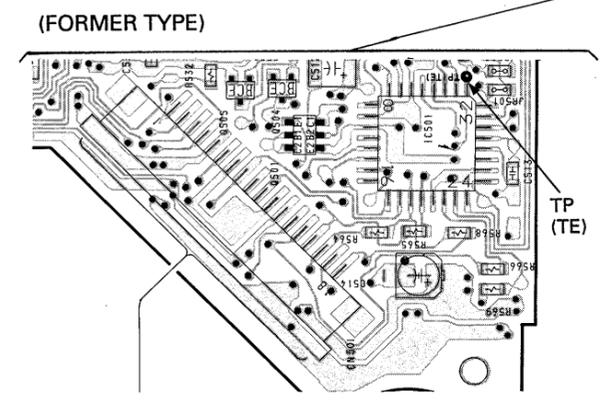
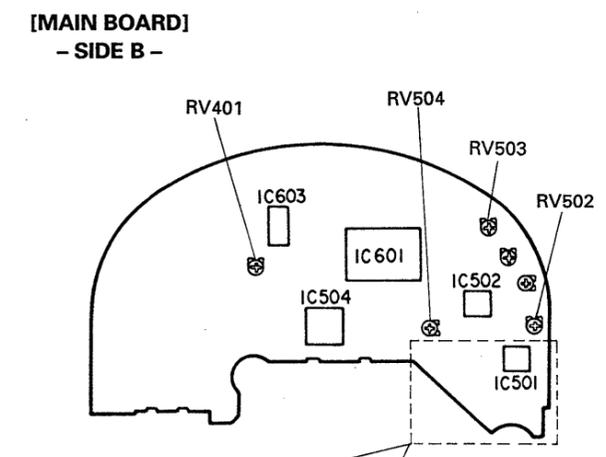
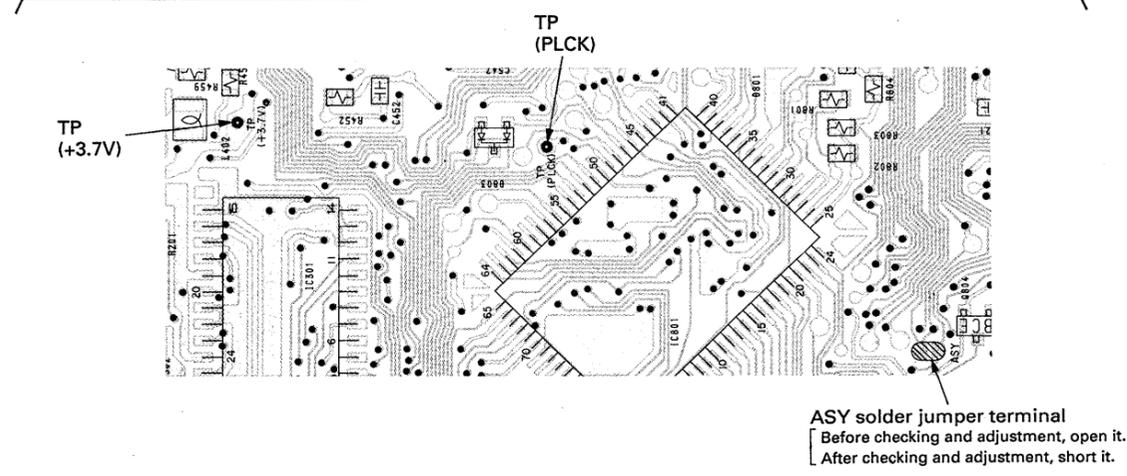
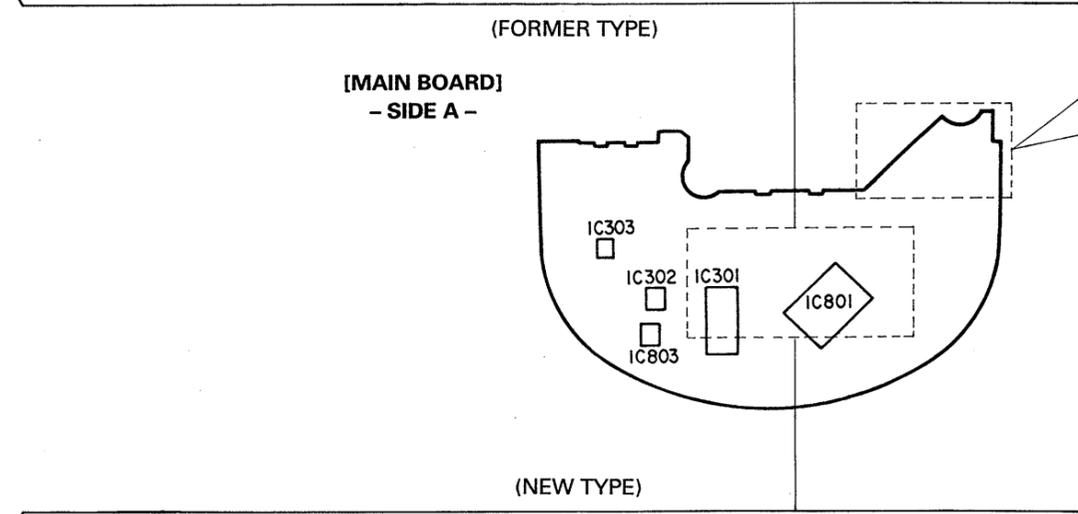
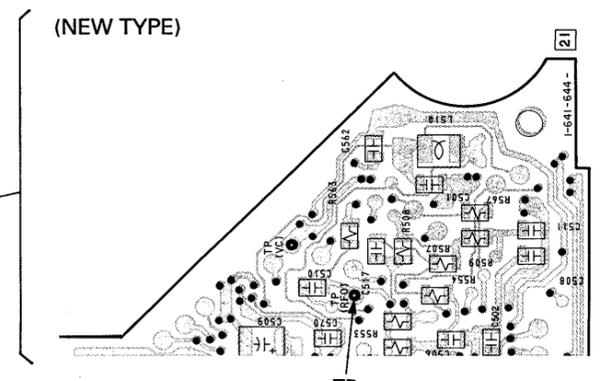
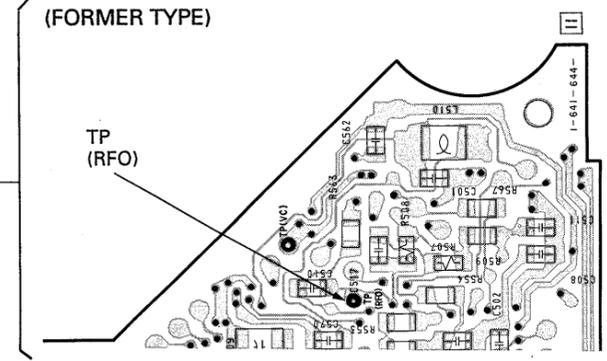
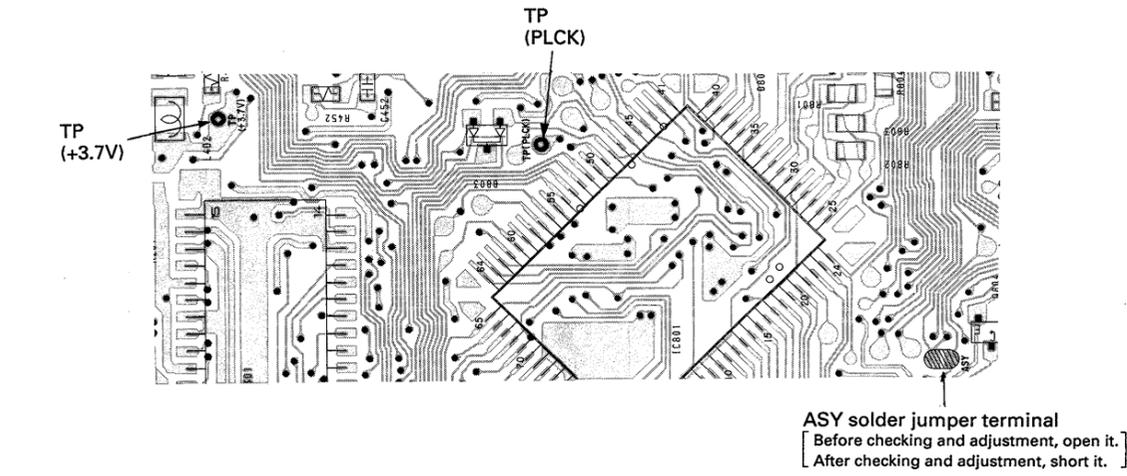
To watch the eye pattern, set the oscilloscope to AC range and increase the vertical sensitivity of the oscilloscope for easy watching.

8. Stop revolving of the disc motor by pressing the  $\square$  key.
9. After the completion of adjustment, reset service mode.  
(see page 6)

**Connection Location:** MAIN board (side A)

**Adjustment Location:** MAIN board (side B)

Connection and Adjustment Location: MAIN board (side A, side B)



**Focus/Tracking Gain Adjustment**

To perform this adjustment precisely, a servo analyser or CD jigs are required.

However, there is an allowance for this gain, so substantially no problems occur normally even if it is slightly deviated. Therefore, you need not perform this adjustment.

Focus/tracking gain determines the follow-up property of the pickup to mechanical shocks during 2-axis device operation. However, since these requirements are inconsistent, the equipment is adjusted to compromise both properties.

- With gain increased, noise in 2-axis device operation also increases.
- With gain decreased, the equipment becomes less immune to mechanical shocks, where sound jumping often occurs.

This adjustment has to be performed upon replacing any of the following parts.

- Optical pickup
- RV505 (Focus gain VR)
- RV501 (Tracking gain VR)

Normally, be sure not to move RV505 (focus gain VR) and RV501 (tracking gain VR).

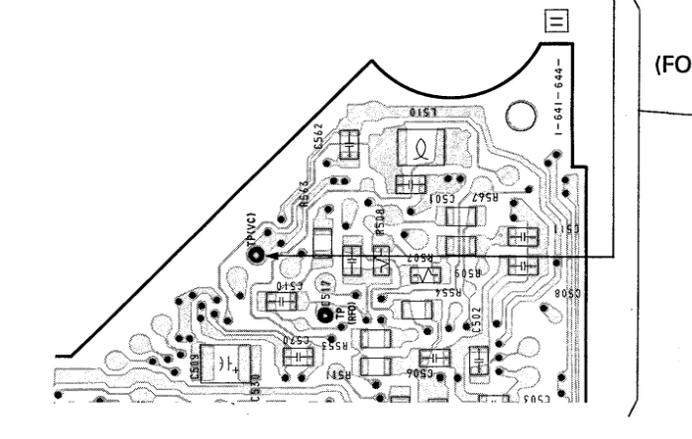
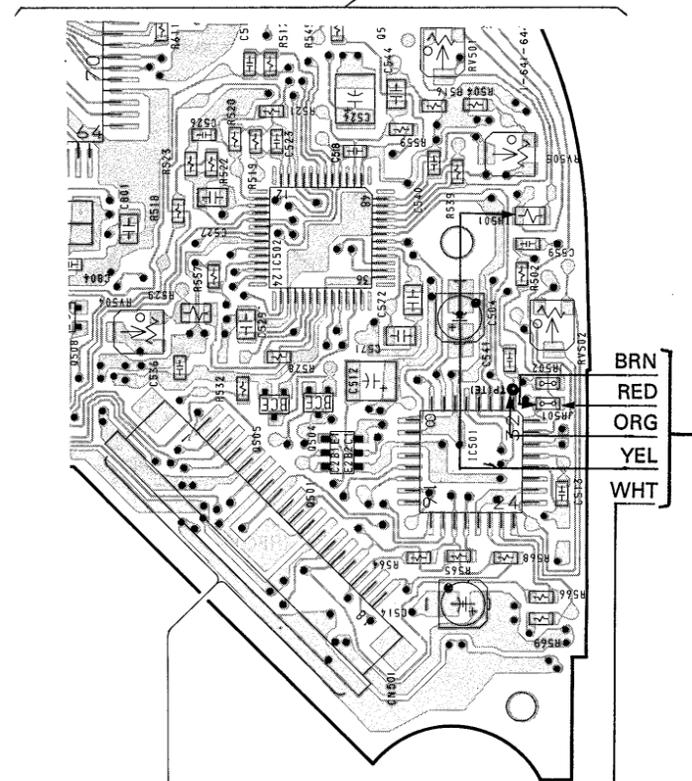
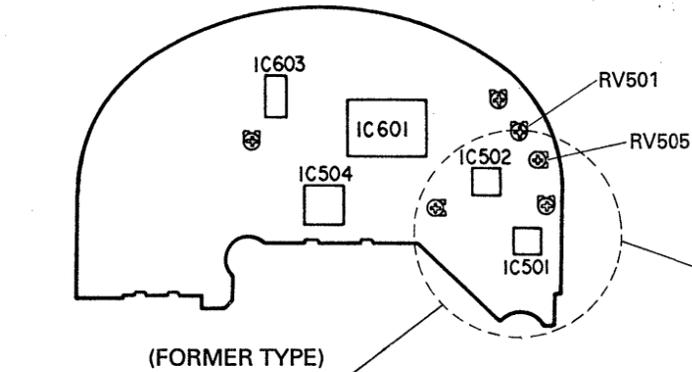
With this equipment, it is very difficult to simply perform this adjustment.

If the equipment is not so often suffering from "occasional sound jumping" or not easily decided for complete repairing, use the CD jigs for the adjustment. To connect the CD jigs, see the right view. For more detailed adjustment methods, see the separate CD jig operation manual.

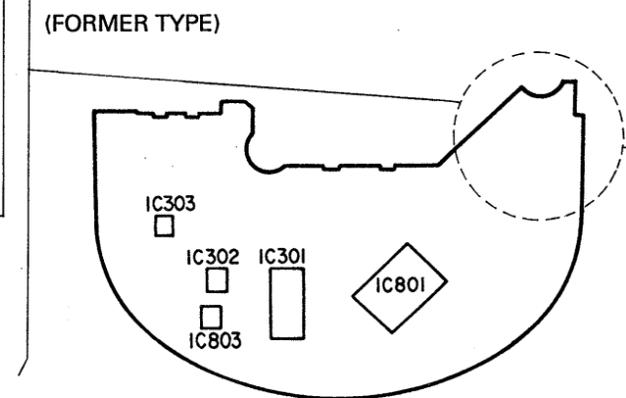
**CD jig connecting methods:**

Remove 2 jumper wires JR501 and JR502 and connect the equipment to the CD jigs as shown in the right view. At that time, connect the IC501 side and each VR side to the output to the CD jigs and the input from the CD jigs, respectively.

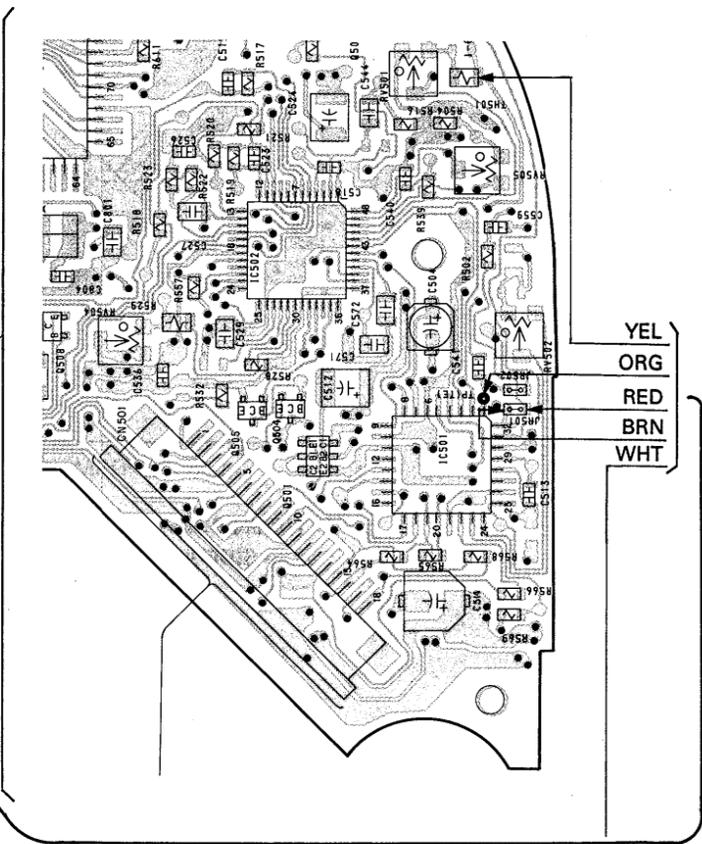
Connection and Adjustment Location: MAIN board (side B)



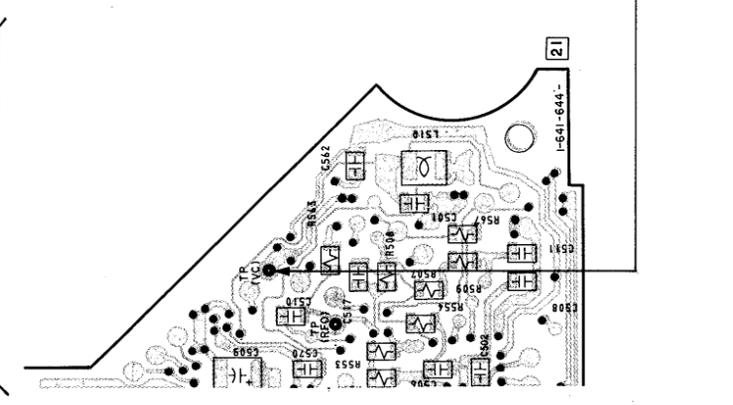
Connection Location: MAIN board (side A)



(NEW TYPE)

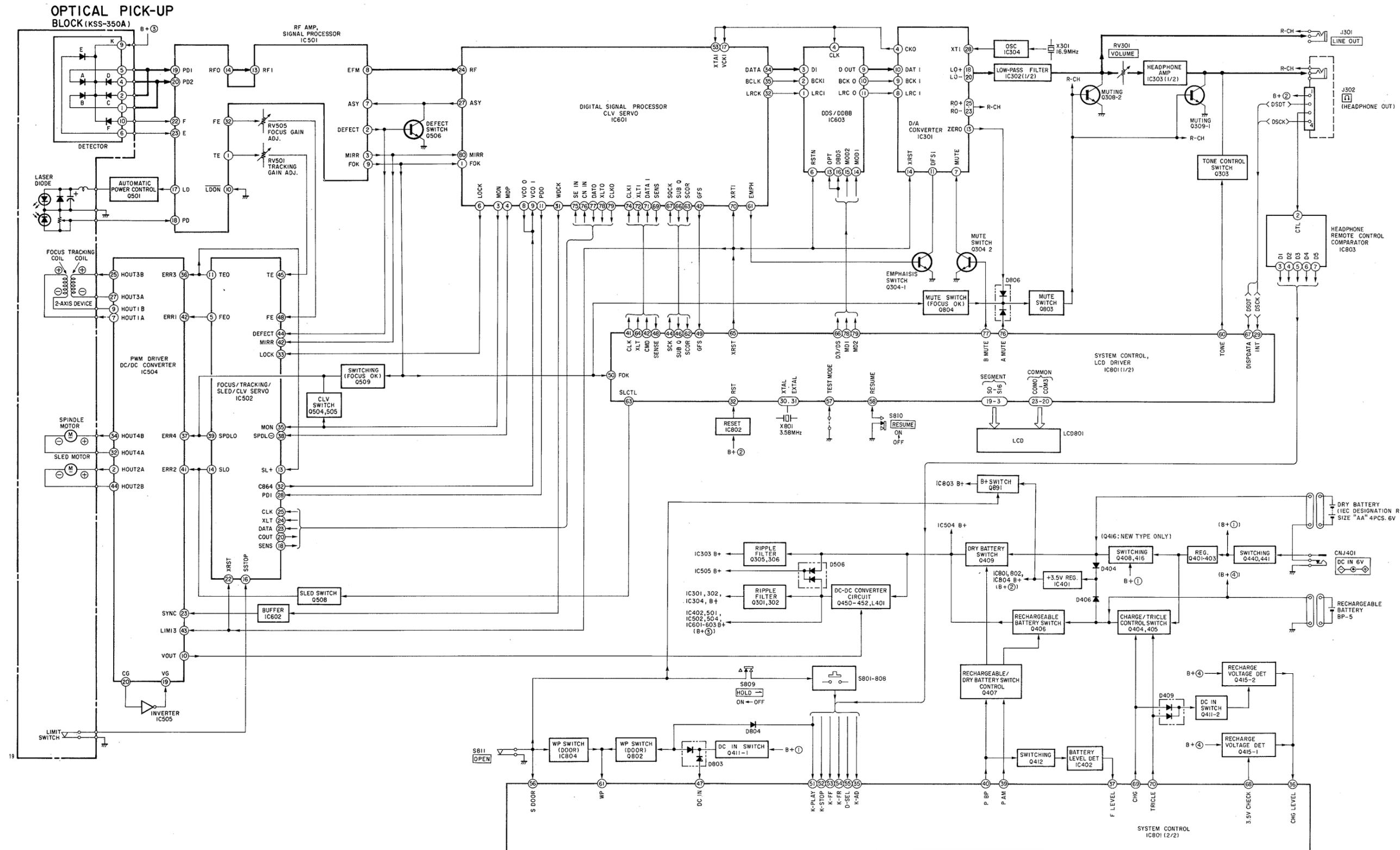


(NEW TYPE)



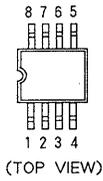
**SECTION 5  
DIAGRAMS**

**5-1. BLOCK DIAGRAM**

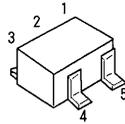


5-2. SEMICONDUCTOR LEAD LAYOUTS

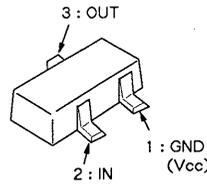
BA3819F  
NJM2100M



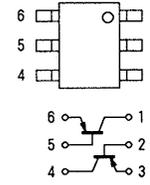
NJM2107F  
TC7S04F  
TC4S30F  
TC7SU04F



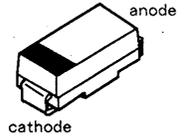
DTA124EU  
DTC124EU



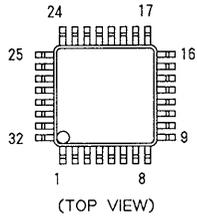
XN4404



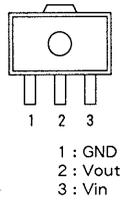
DTZ5.6B  
DTZ6.8B  
DTZ12



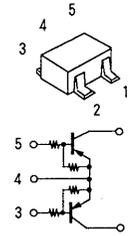
CXA1271Q



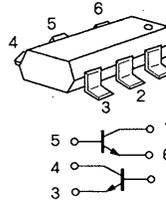
RH5RC351A



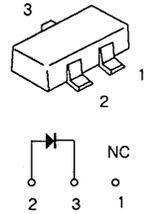
FMA4



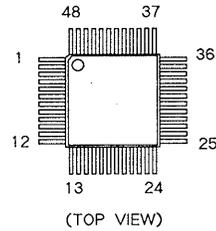
XN4504



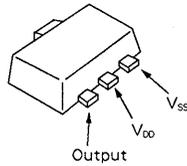
RB451F  
SB01-05CP



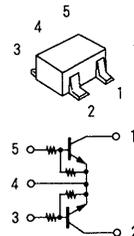
CXA1602R



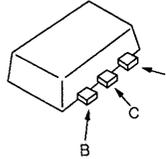
RH5VA30AA



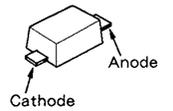
FMG5  
FMG8  
FMG11



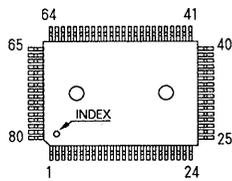
2SB1120-G



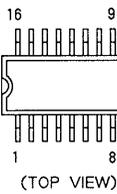
MA110  
MA8039-H



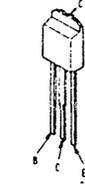
CXD2500AQ  
CXP5078H-617Q



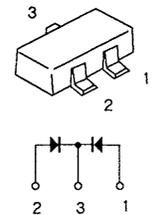
SM5852AS-ET



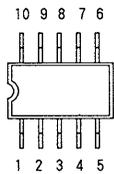
2SB1182F5-Q



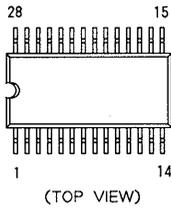
MA152WK  
SB007W03Q



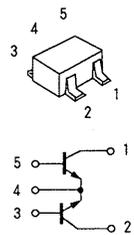
LA4534M



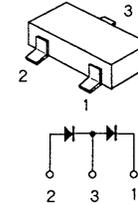
SM5870CS



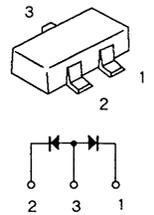
FMW1



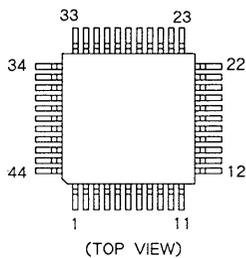
DA204U



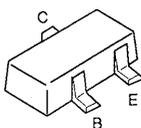
RB717F



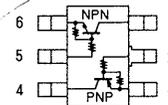
MPC1716AFU



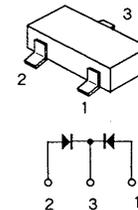
DTA115TU  
DTA124EK  
DTC124EK  
DTC143TU  
2SA1162  
2SA1745  
2SB624-BV345



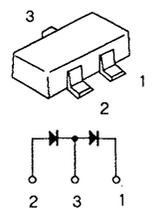
IMD2



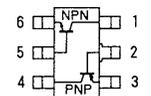
DAN202U



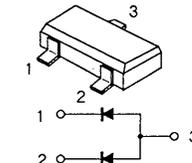
SB007T03C  
SB007T03Q



XN4601  
XN4608  
XN4609



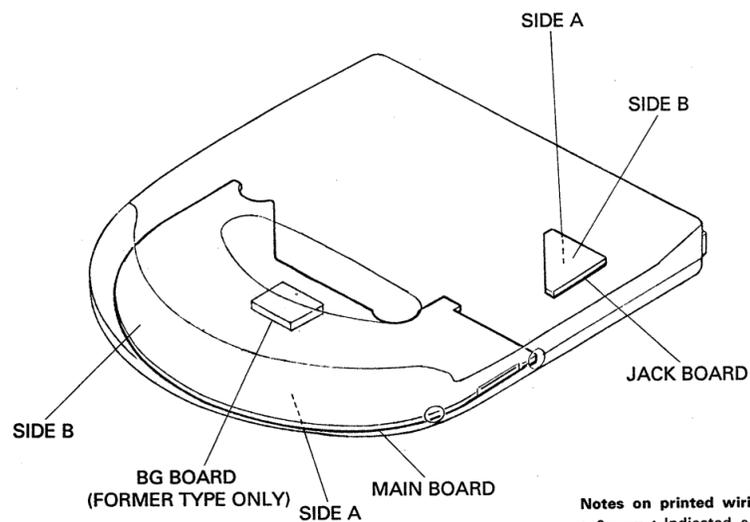
DAP202U



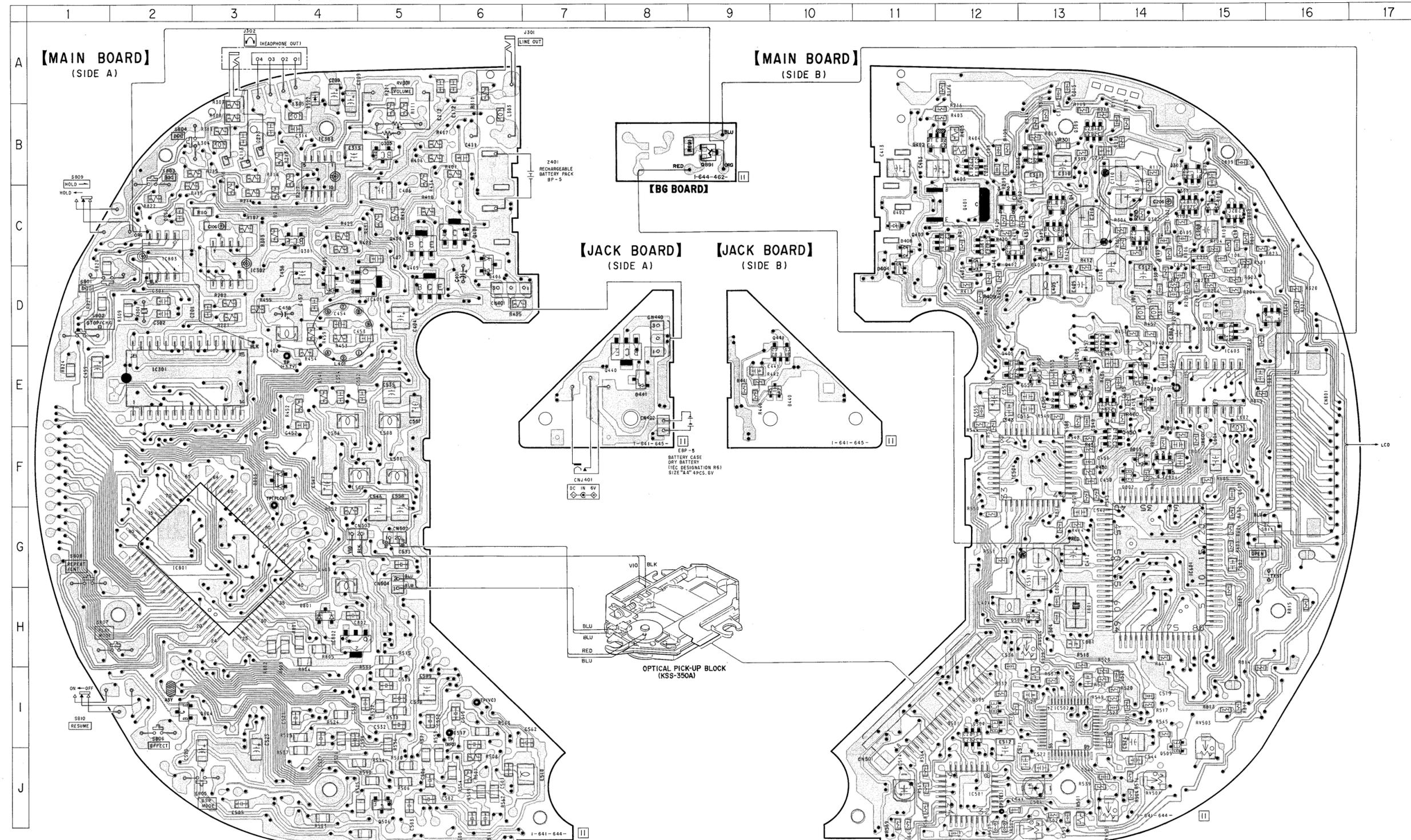
● SEMICONDUCTOR LOCATION (FORMER TYPE)

Ref. No.	Location						
D302	A-4	IC301	E-2	Q301	C-4	Q415	C-13
D402	C-11	IC302	D-3	Q302	C-14	Q440	E-8
D403	D-12	IC303	B-4	Q303	B-15	Q441	E-10
D404	D-11	IC304	D-16	Q304	D-15	Q450	F-14
D405	D-4	IC401	D-5	Q305	B-5	Q451	E-14
D406	D-6	IC402	C-12	Q306	B-13	Q452	D-13
D407	C-13	IC501	J-12	Q308	C-15	Q501	I-12
D408	C-11	IC502	I-13	Q309	B-13	Q504	I-12
D409	E-13	IC504	F-13	Q401	C-12	Q505	I-12
D440	E-10	IC505	E-13	Q402	B-11	Q506	J-5
D441	E-8	IC601	G-14	Q403	B-12	Q508	H-13
D501	E-13	IC602	E-14	Q404	C-12	Q509	J-14
D502	E-13	IC603	E-15	Q405	E-12	Q802	F-14
D506	E-13	IC801	G-2	Q406	C-6	Q803	C-15
D801	H-4	IC802	H-4	Q407	C-12	Q804	I-2
D803	F-4	IC803	C-2	Q408	C-5	Q891	B-8
D804	E-14	IC804	F-14	Q409	D-5		
D805	F-14			Q411	C-13		
D806	C-15			Q412	C-12		

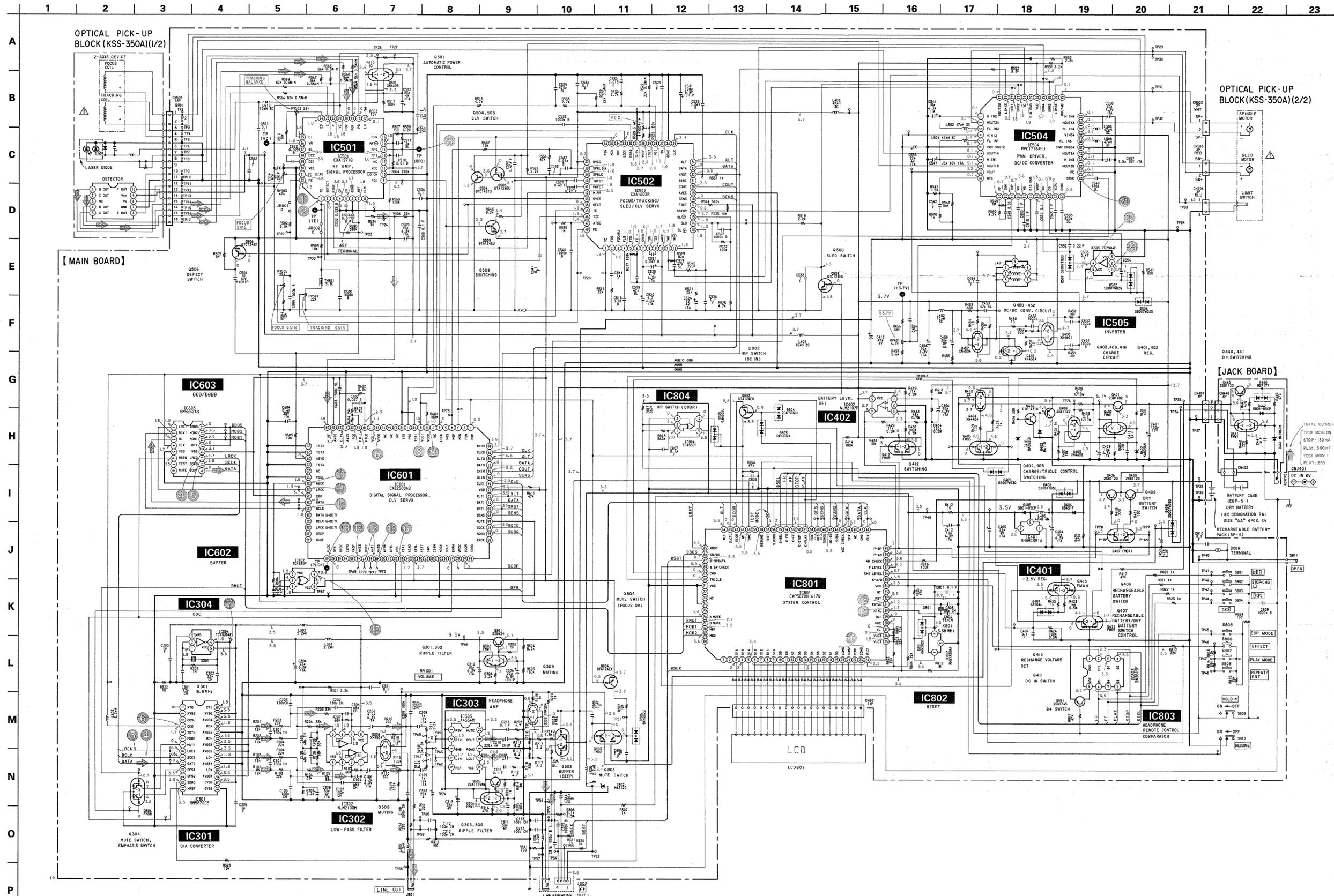
5-3. CIRCUIT BOARDS LOCATION



Notes on printed wiring boards:  
 • — : Indicated a lead wire mounted on the component side  
 • ● : Through hole  
 • [Pattern] : Pattern from the side which enables seeing  
 (The other layers' patterns are not indicated.)







**Notes on schematic diagram:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\mu\text{F}$ :  $\mu\text{F}$  50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- $\Delta$  : Internal component
- % : Indicate a permissible margin

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

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

- B + Line
- Adjustment for repair
- Power voltage is dc 6V and fed with regulated dc power supply from external voltage jack.
- Voltage and oscilloscope are dc with respect to ground under service mode condition.
- No mark : STOP
- Voltages are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path
- CD

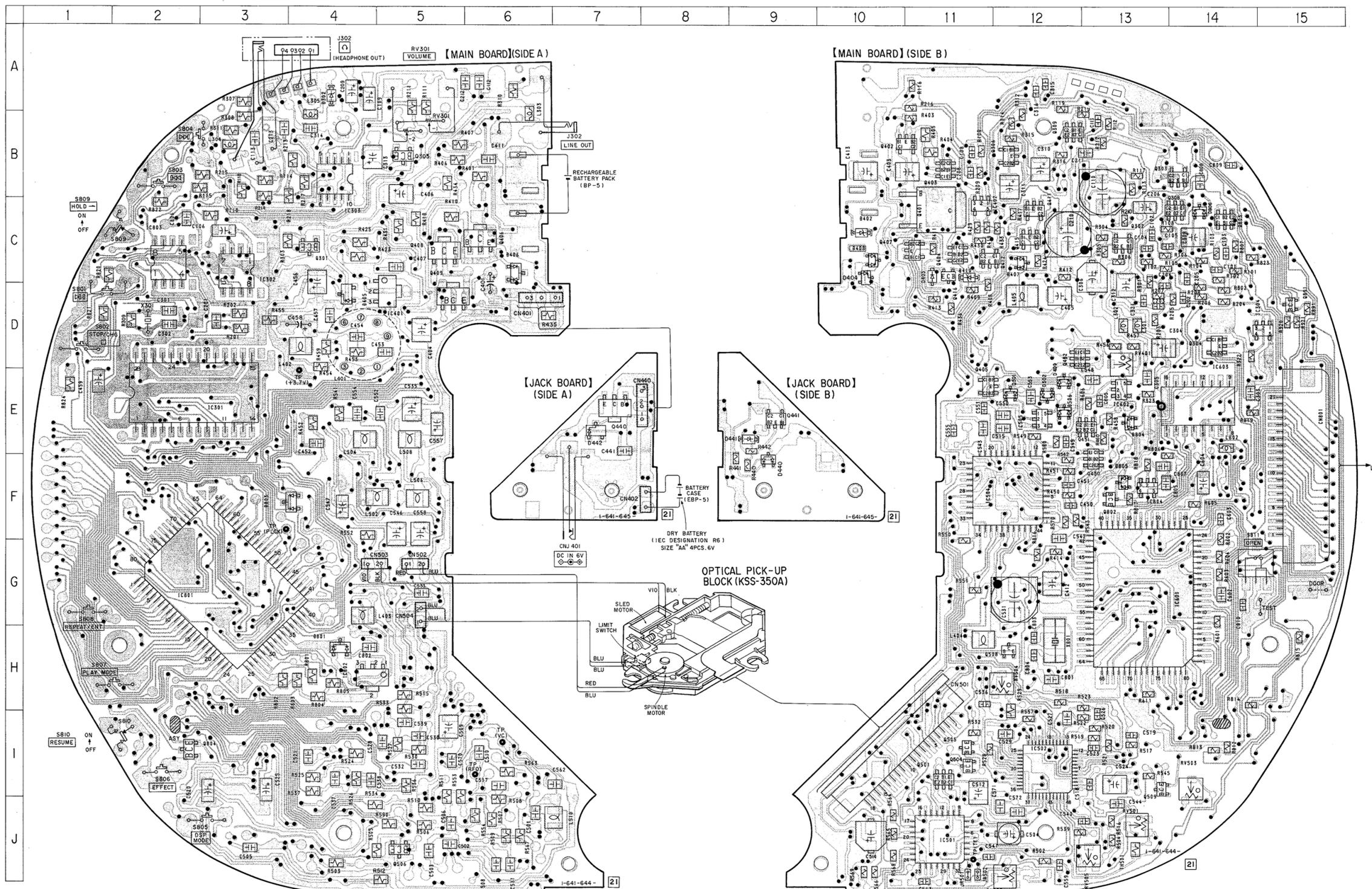
5-7. PRINTED WIRING BOARDS

• See page 17 for semiconductor lead layouts and 18 for circuit boards location.

● SEMICONDUCTOR LOCATION (NEW TYPE)

Ref. No.	Location						
D302	A-4	D806	C-14	Q301	C-4	Q416	C-11
D402	C-10			Q302	C-13	Q440	E-8
D403	C-11	IC301	E-3	Q303	B-14	Q441	E-9
D404	D-10	IC302	C-3	Q304	D-14	Q450	D-13
D405	D-4	IC303	B-4	Q305	B-5	Q451	E-13
		IC304	D-15				
D406	C-6	IC401	D-5	Q306	B-12	Q452	D-13
D407	C-12			Q308	C-13	Q501	I-11
D408	C-10	IC402	C-11	Q309	B-12	Q504	I-11
D409	E-12	IC501	J-11	Q401	C-11	Q505	I-11
D410	E-9	IC502	I-12	Q402	B-11	Q506	J-5
		IC504	F-12				
		IC505	E-12	Q403	B-11	Q508	H-12
D440	F-9			Q404	C-11	Q509	I-13
D441	E-9			Q405	D-11	Q802	F-13
D442	E-7	IC601	G-13	Q406	C-6	Q803	C-14
D501	E-12	IC602	E-13	Q407	C-10	Q804	I-3
D502	E-12	IC603	E-14				
		IC801	G-2	Q408	C-5	Q891	D-15
		IC802	H-4	Q409	C-5		
D506	E-12			Q411	C-12		
D801	H-4			Q412	C-12		
D803	F-4	IC803	C-2	Q415	C-12		
D804	E-13	IC804	F-13				
D805	F-13						

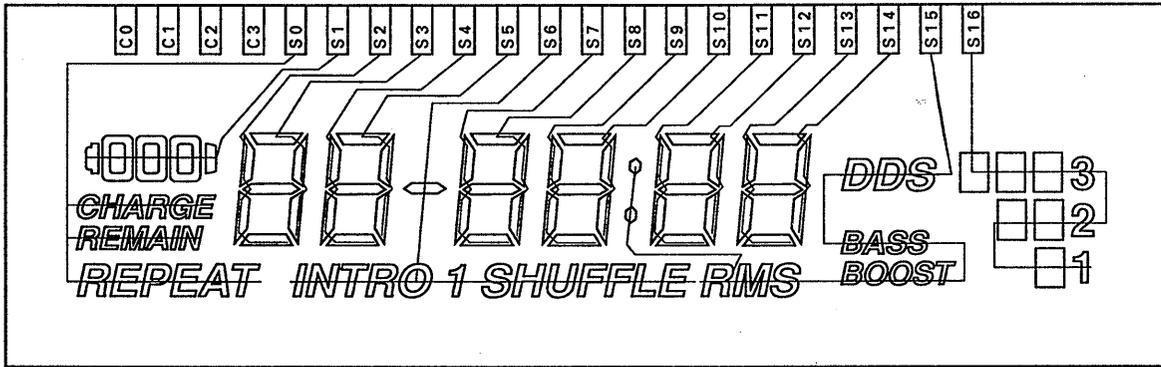
- NEW TYPE -



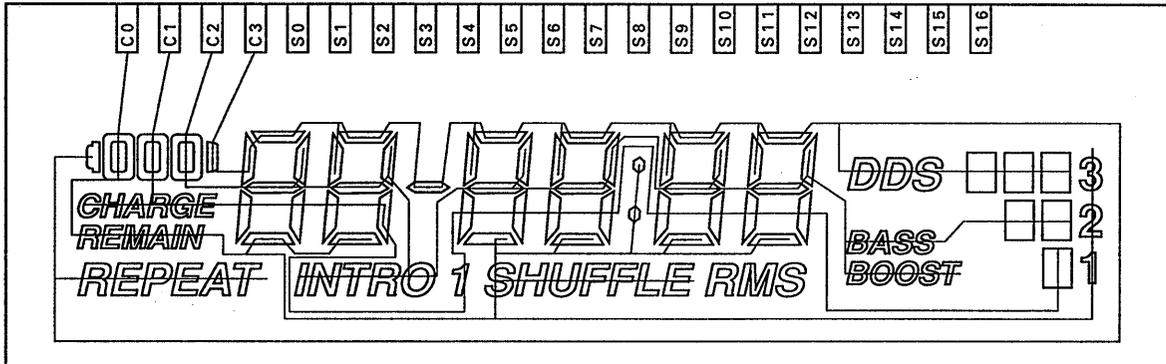
Notes on printed wiring boards:  
 ○ : Indicated a lead wire mounted on the component side  
 ● : Through hole  
 ■ : Pattern from the side which enables seeing  
 (The other layers' patterns are not indicated.)

● LCD (LCD801)

• Segment Connection

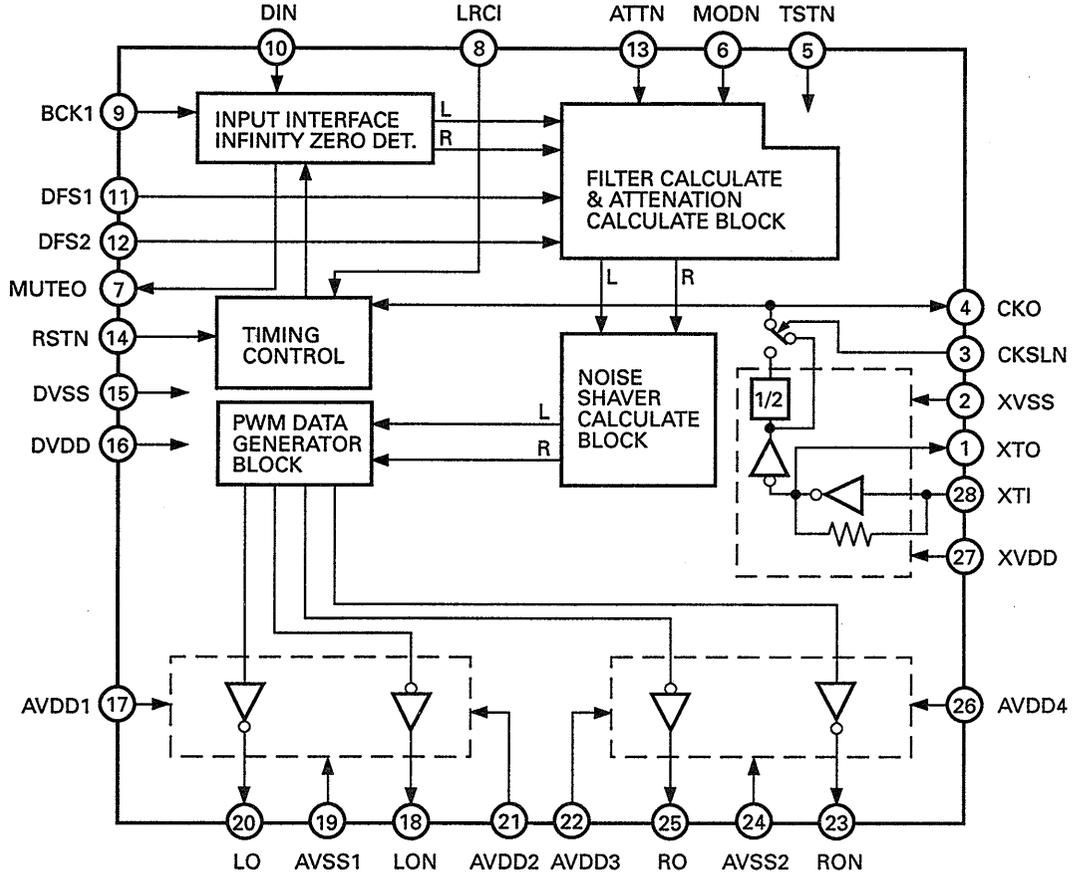


• Common Connection

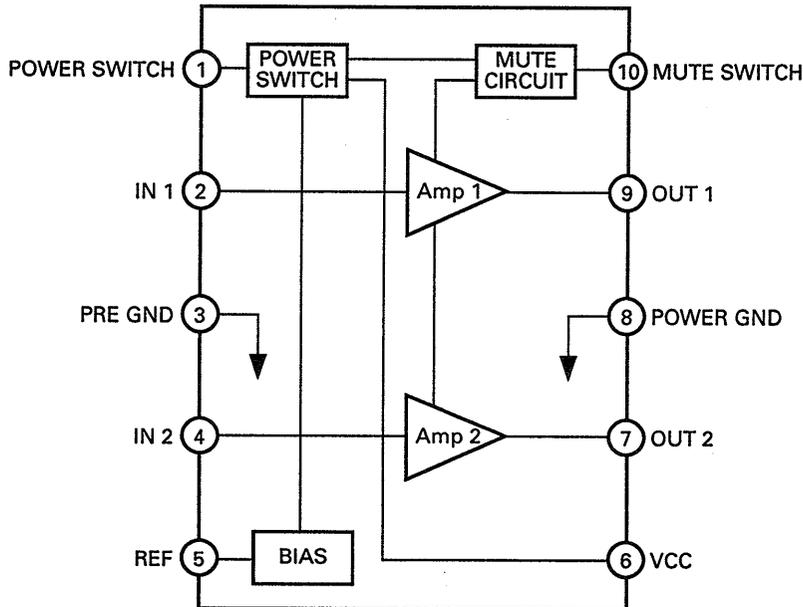


● IC BLOCK DIAGRAMS

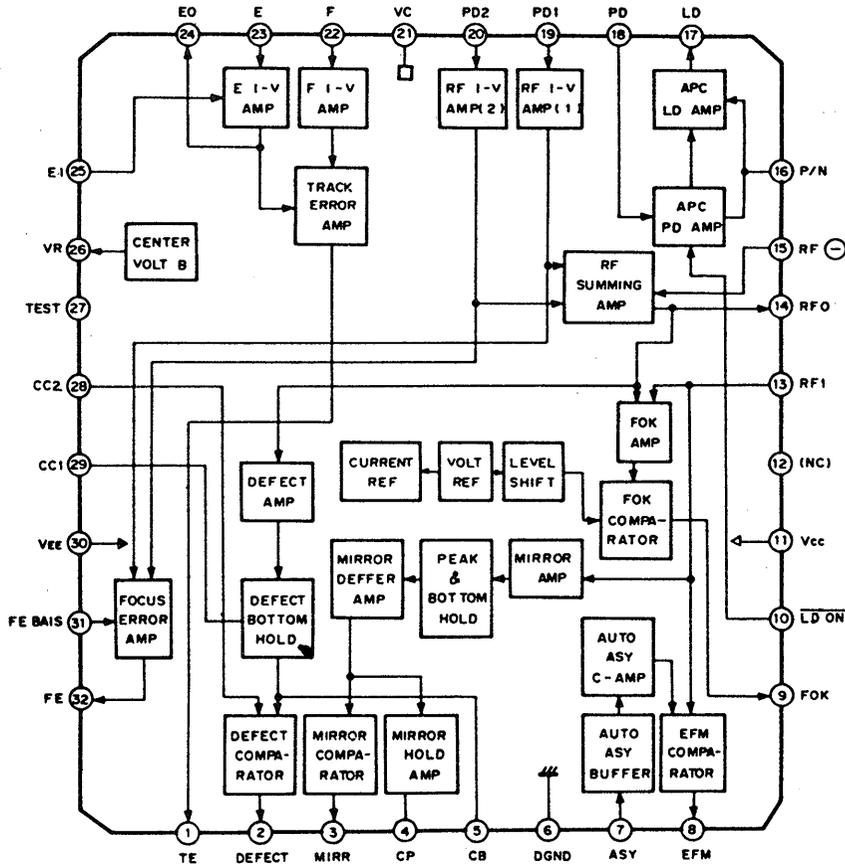
IC301 SM5870CS



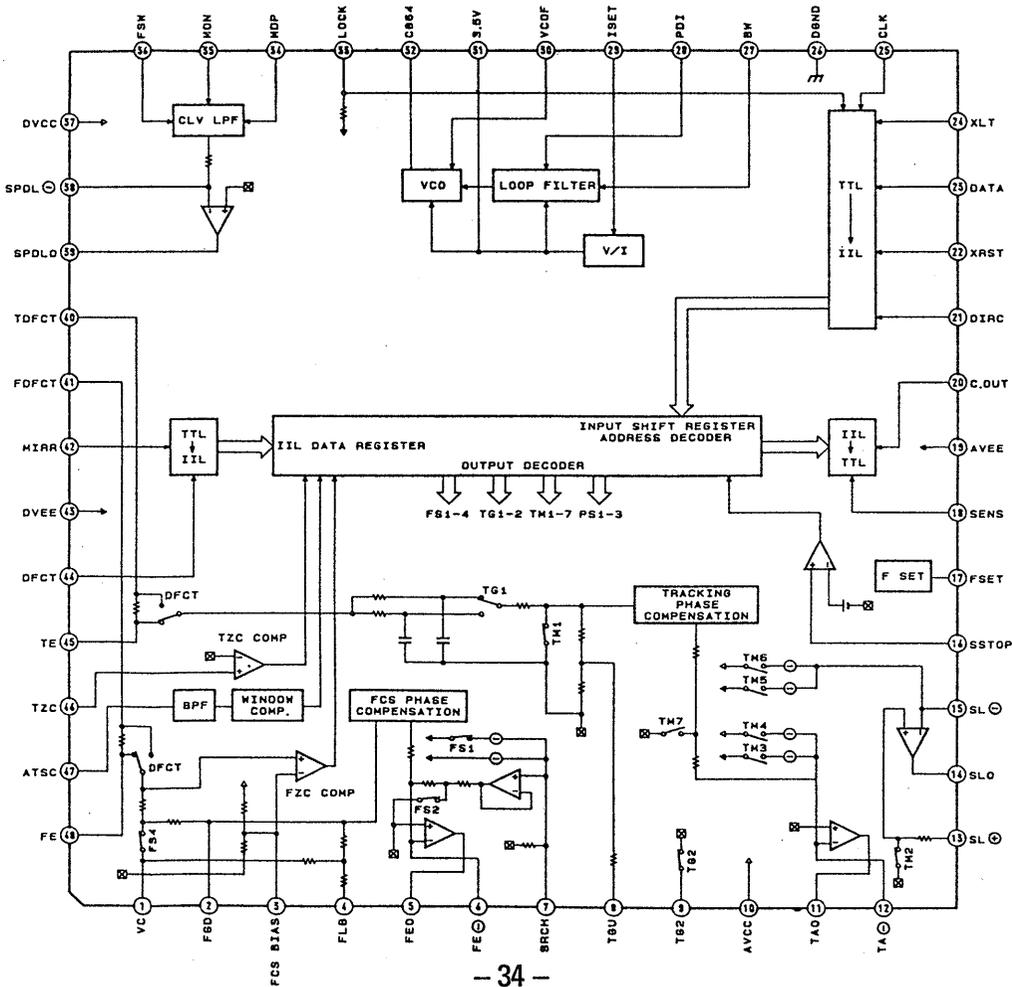
IC303 LA4534M



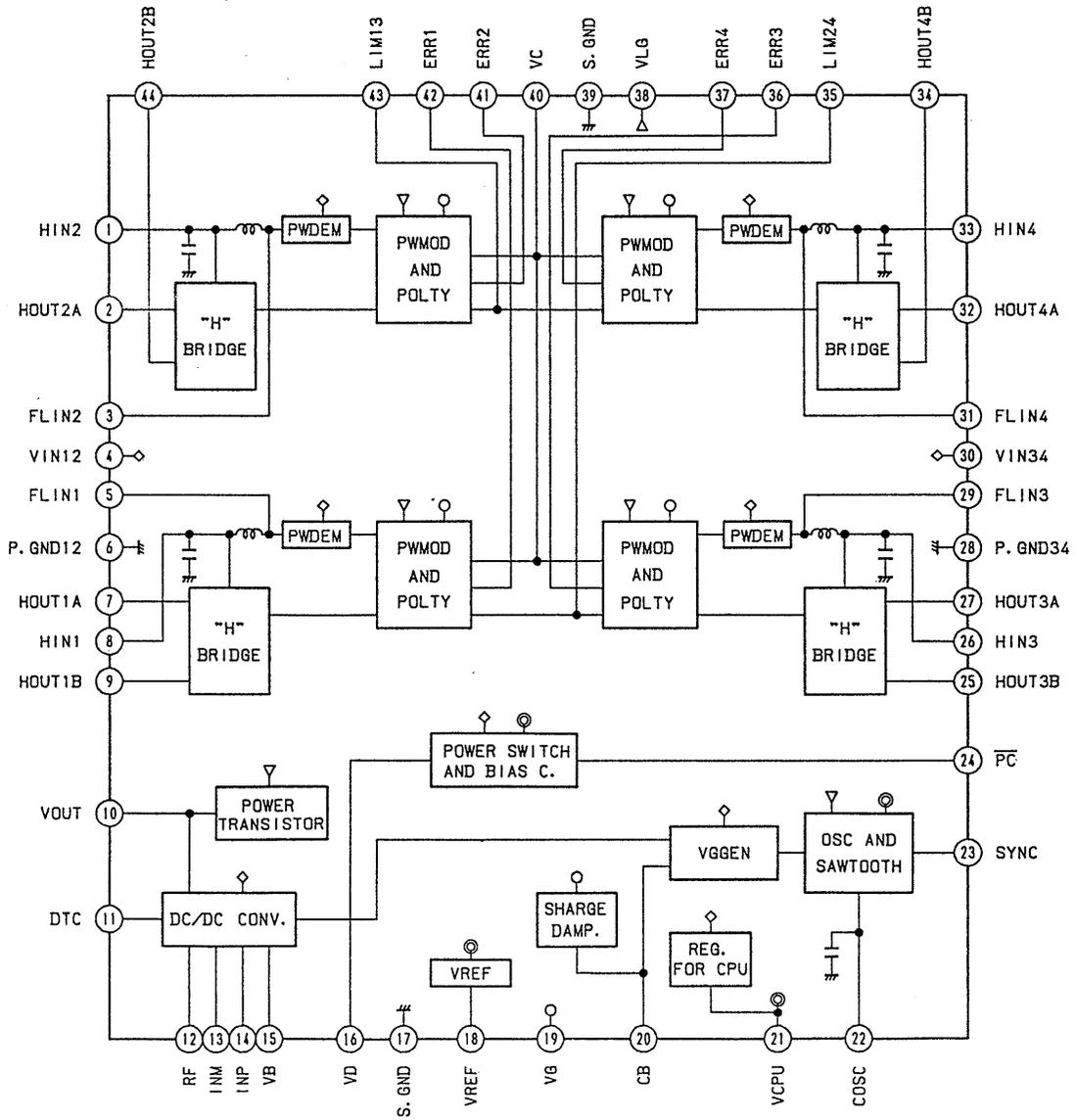
IC501 CXA1271Q



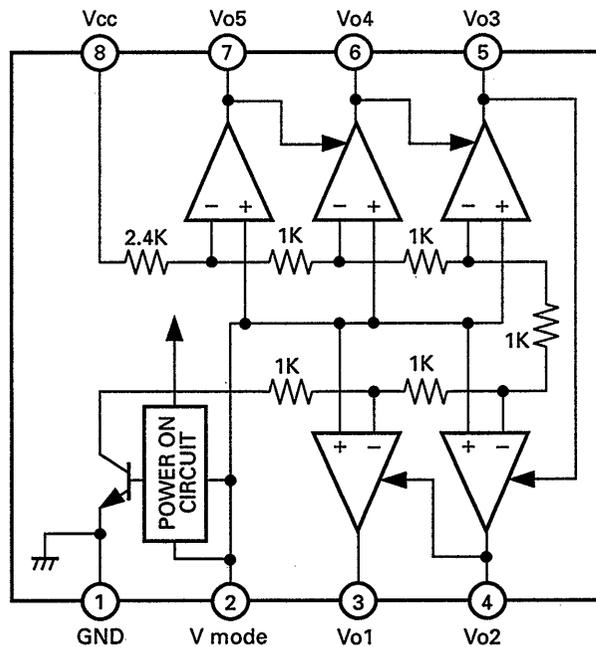
IC502 CXA1602R



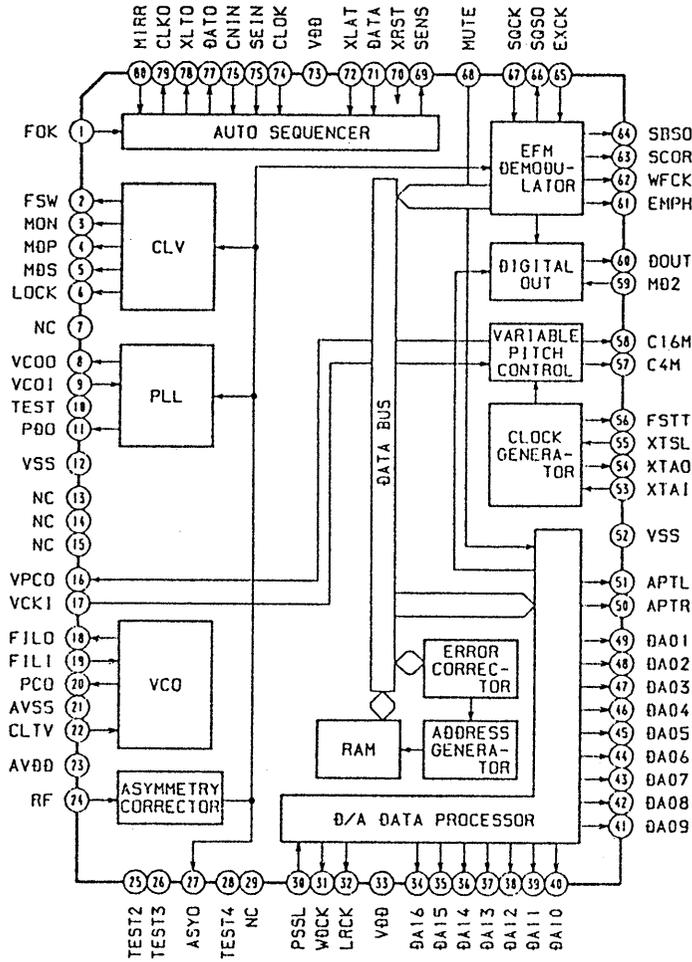
IC504 MPC1716AFU



IC803 BA3819F



IC601 CXD2500AQ



5-8. IC PIN FUNCTIONS

• SM5852AS (IC603) DDBB/DDS

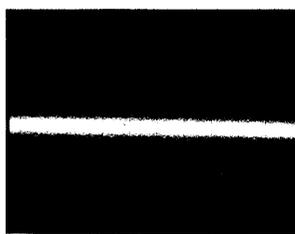
Pin No.	Pin Name	I/O	Description					
1	LRCI	I	Sample rate (fs) clock input terminal for input data					
2	BCKO	I	Bit clock input terminal					
3	DI	I	Serial data input terminal					
4	CLK	I	Clock input terminal					
5	Vss	/	GND terminal					
6	RSTN	I	System reset (initialize) terminal ; L level - reset					
7	TESTN	I	Test mode terminal ; L level - test					
8	MUTEN	I	Mute terminal ; L level - mute					
9	DOUT	O	Serial data output terminal					
10	BCKO	O	Bit clock output terminal					
11	LRCO	O	Sample rate (fs) clock output terminal for output data					
12	VDD	/	Power terminal (3.2 - 5.5 V)					
13	OPT	I	DDBB/DDS function select terminal ; H level = DDBB/L level = DDS					
14	MOD1	I	DDBB/DDS gain select terminal	MOD1	H	L	H	L
15	MOD2	I		MOD2	H	H	L	L
				Gain mode	OFF	MIN	MID	MAX
16	DB/BS	I	DDBB/DDS function select terminal ; H level = DDBB/L level = DDS					

## • CXP5078H-612Q (IC801) SYSTEM CONTROL IC

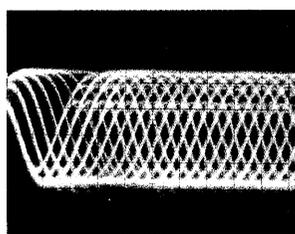
Pin No.	Pin Name	I/O	Description					
1	–	–	Not in use					
2	–	–	Not in use					
3-19	S16-S0	O	Segment signal output terminal					
20-23	COM3-COM0	O	Common signal output terminal (4-split indication)					
24-26	VLC1-VLC3	–	LCD bias power supply terminal					
27	VL	–	Control terminal for cutting off current flowing in the LCD bias resistance, in standby					
28	RMC	–	Not in use. Connect it to Pin ② because standby current increases in OPEN.					
29	INT	I	Clock signal (for data output) is entered from the LCD remote controller. Upon detecting rise of input ( $\uparrow$ ), data is updated.					
30	XTAL	O	Output terminal of the clock oscillator					
31	EXTAL	I	Input terminal of the clock oscillator					
32	RST	I	System reset input. In “L” level, resetting is effected.					
33	NC	–	Not in use					
34	VDD	–	Power supply terminal					
35	K-A/D	I	A/D input terminal for EFFECT (S806) switch, PLAY MODE (S807) switch and REPEAT/ENT (S808) switch <table style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-right: 5px;">1.05-1.70V : EFFECT</td> <td rowspan="3" style="font-size: 2em; vertical-align: middle;">}</td> <td rowspan="3" style="padding-left: 10px;">Each detected upon fall from 3.5 V.</td> </tr> <tr> <td>1.70-2.32V : PLAY MODE</td> </tr> <tr> <td>2.32-3.05V : REPEAT/ENT</td> </tr> </table>	1.05-1.70V : EFFECT	}	Each detected upon fall from 3.5 V.	1.70-2.32V : PLAY MODE	2.32-3.05V : REPEAT/ENT
1.05-1.70V : EFFECT	}	Each detected upon fall from 3.5 V.						
1.70-2.32V : PLAY MODE								
2.32-3.05V : REPEAT/ENT								
36	CHG	I	A/D input terminal to detect charging voltage of charger (BP-5)					
37	F LEVEL	I	A/D input terminal to detect reduced voltage of the battery (BP-5/AM-3)					
38	AM CHECK	I	A/D input terminal to detect terminal voltage of dry cell (AM-3)					
39	P-AM	O	Output terminal to control power supply of DC-IN/dry cell (AM-3) “H”: Power ON    “L”: Power OFF					
40	P-BP	O	Output terminal to control power supply of charger (BP-5) “H”: Power ON    “L”: Power OFF					
41	CLK	O	Clock signal output terminal in transferring serial data to CXD2500AQ (IC601)					
42	CMD	O	Serial data output terminal to CXD2500AQ (IC601)					
43	NC	–	Not in use					
44	SCK	O	Clock signal output terminal to enter SUB-Q signal from CXD2500AQ (IC601)					
45	Vcc CHECK	I	Input terminal to detect reduced voltage of power supply for CXD2500AQ (IC601) The equipment is set to STOP state upon detecting “L” level in PLAY.					
46	SUBQ	I	Input terminal to enter SUB-Q signal from CXD2500AQ (IC601)					
47	DC-IN	I	Input terminal to detect DC-IN. “L”: With DC-IN    “H”: Without DC-IN					
48	SENSE	I	Input terminal for SENSE signal output of CXD2500AQ (IC601)					
49	GFS	I	Input terminal for GFS signal output of CXD2500AQ (IC601)    “H”: OK    “L”: NG					
50	FOK	I	Input terminal for FOK signal output of CXD2500AQ (IC601)    “H”: OK    “L”: NG					
51	K-PLAY	I	PB switch (S801) input terminal					
52	K-STOP	I	STOP switch (S802) input terminal					
53	K-FF	I	FF switch (S804) input terminal					
54	K-FR	I	FR switch (S803) input terminal					
55	D-SEL	I	DSP SELECT switch (S805) input terminal					
56	S-DOOR	I	Door switch (S811) input terminal    “H” : OPEN    “L” : CLOSE					
57	TEST	I	Test mode effected upon entering “L” level after resetting system					
58	RESUME	I	RESUME switch (S810) input terminal    “L” : RESUME ON    “H” : RESUME OFF					
59	–	–	Not in use					
60	TONE	O	Beep sound pulse output terminal					
61	WP	I	Input terminal to reset system stop state. Stop is reset upon rising of input ( $\uparrow$ ).					
62	SCOR	I	Input terminal for SCORE signal output of CXD2500AQ (IC601)					

Pin No.	Pin Name	I/O	Description
63	SLCTL	O	Output terminal to control ON/OFF of SLO output for CXA1602R (IC502) “L” : ON      “H” : OFF
64	XLT	O	Latch signal output terminal in transferring serial data to CXD2500AQ (IC601)
65	XRST	O	Reset signal output terminal to CXD2500AQ (IC601), CXA1602R (IC502), SM5852AS (IC603) and SM5870AS (IC301). Upon outputting “L” level, each IC is reset.
66	DB/DS	O	DBDS signal output terminal to SM5852AS (IC603)      “H” : DBB      “L” : DDS
67	DISPDATA	O	Serial data output terminal to the LCD remote controller
68	3.5V	O	Control output terminal for voltage to detect charging of the battery (BP-5)
69	CHG	O	Battery (BP-5) charging control output terminal      “H” in charged state
70	TRICLE	O	Battery (BP-5) trickle charging control output terminal      “H” in trickle charging
71	Vss	-	Ground terminal
72		-	Not in use
73	NC	-	Not in use
74		-	Not in use (grounded)
75		-	Not in use
76	A MUTE	O	Analog mute control output terminal      “H” : mute
77	B MUTE	O	Mute control output terminal for SM5870AS (IC301)      “H” : mute
78	MD1	O	DBB/DDS gain select output terminal to SM5852AS (IC603) Gain :    OFF    MIN    MID    MAX
79	MD2		MD1 :    H     L     H     L MD2 :    H     H     L     L
80			Not in use

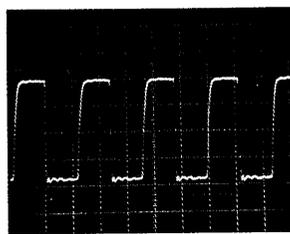
5-9. WAVEFORMS



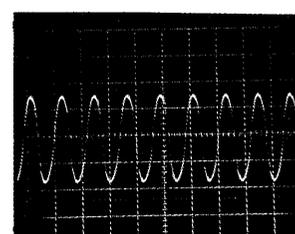
① IC501 ⑫pin (FE)  
Approx.150mVp-p  
PLAY mode



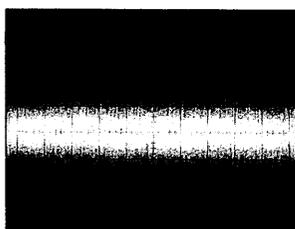
③ IC501 ⑭pin (RFO)  
0.9Vp-p  
PLAY mode



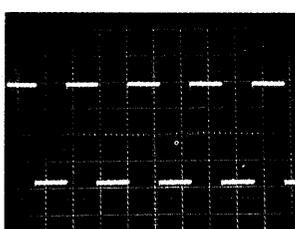
⑤ IC301 ⑨pin (BCKI),  
IC603 ⑩pin (BCKO)  
3.8Vp-p, 0.48μsec



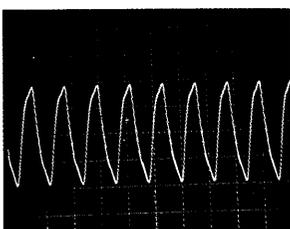
⑦ IC301 ⑳pin (XTI),  
IC304 ④pin  
3.9Vp-p, 0.6μsec



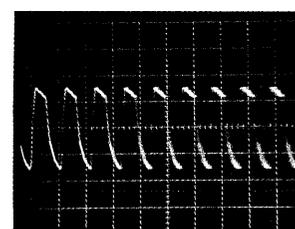
② IC501 ①pin (TE)  
Approx.600mVp-p  
PLAY mode



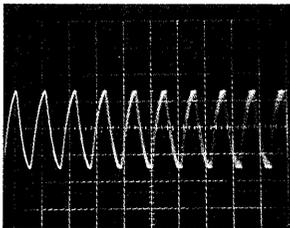
④ IC301 ⑧pin (LRCI),  
IC603 ⑪pin (LRCO)  
3.8Vp-p, 23μsec



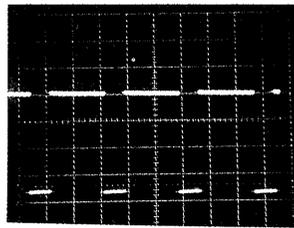
⑥ IC301 ④pin (CKO),  
IC601 ⑬pin (XTAI)  
3.8Vp-p, 0.6μsec



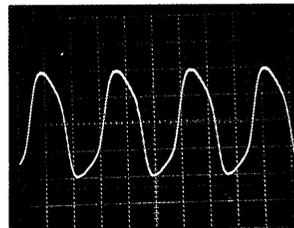
⑧ IC601 ⑨pin  
(VCOI)  
1.5Vp-p, 80nsec



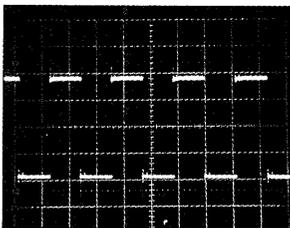
9 IC601 ⑧pin  
(VCOO)  
2.9Vp-p, 80nsec



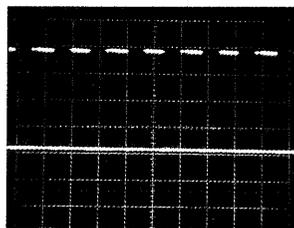
14 IC601 ④pin  
(MNT3)  
3.8Vp-p, 135μsec



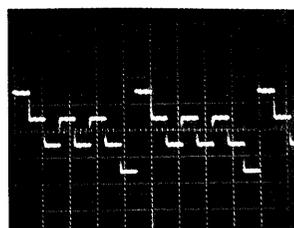
19 IC801 ⑩pin  
(XTAL)  
4Vp-p, 1.4μsec



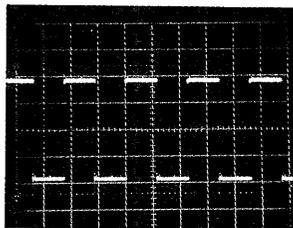
10 IC601 ⑩pin (WDCK),  
IC602 ②pin  
3.8Vp-p, 11μsec



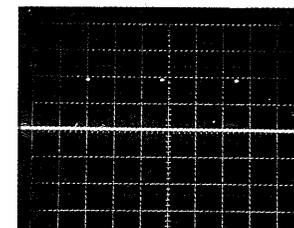
15 IC601 ④pin (MNT2),  
IC601 ④pin (MNT1)  
3.8Vp-p, 65μsec



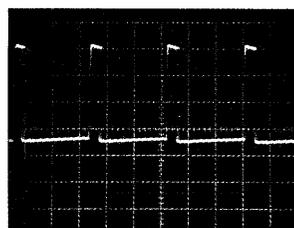
20 IC801 ⑫-⑬pin  
(COM3-COM0)  
3Vp-p, 9.2msec



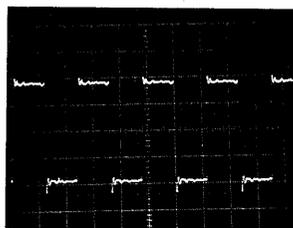
11 IC601 ⑫pin (LRCK),  
IC603 ①pin (LRCL)  
3.8Vp-p, 22μsec



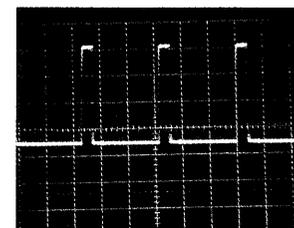
16 IC601 ④pin  
(MNT0)  
3.8Vp-p, 135μsec



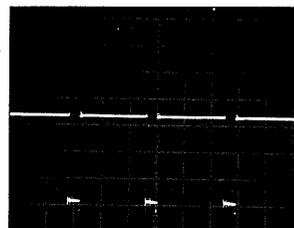
21 IC504 ⑫pin  
(SYNC)  
3.8Vp-p, 5.6μsec



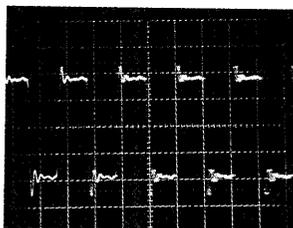
12 IC601 ⑤pin (BCLK),  
IC603 ②pin (BCKI)  
4.4Vp-p, 0.48μsec



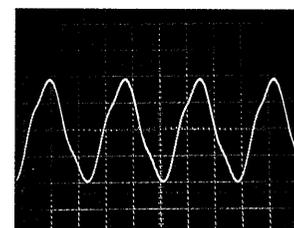
17 IC602 ④pin  
3.7Vp-p, 5.6μsec



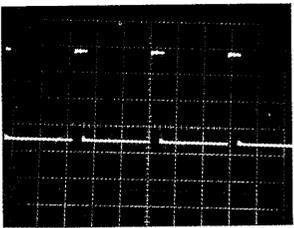
22 IC505 ④pin  
3.4Vp-p, 5.6μsec



13 IC601 ④pin  
(PLCK)  
4.8Vp-p, 0.22μsec



18 IC801 ⑩pin  
(EXTAL)  
3.8Vp-p, 1.4μsec



23 IC504 ⑫pin (CG),  
IC505 ②pin  
3.6Vp-p, 5.6μsec

REVISED

SECTION 6  
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB,BALANCE(WHITE)...(RED)  
↑                    ↑  
Parts color    Cabinet's color

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

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

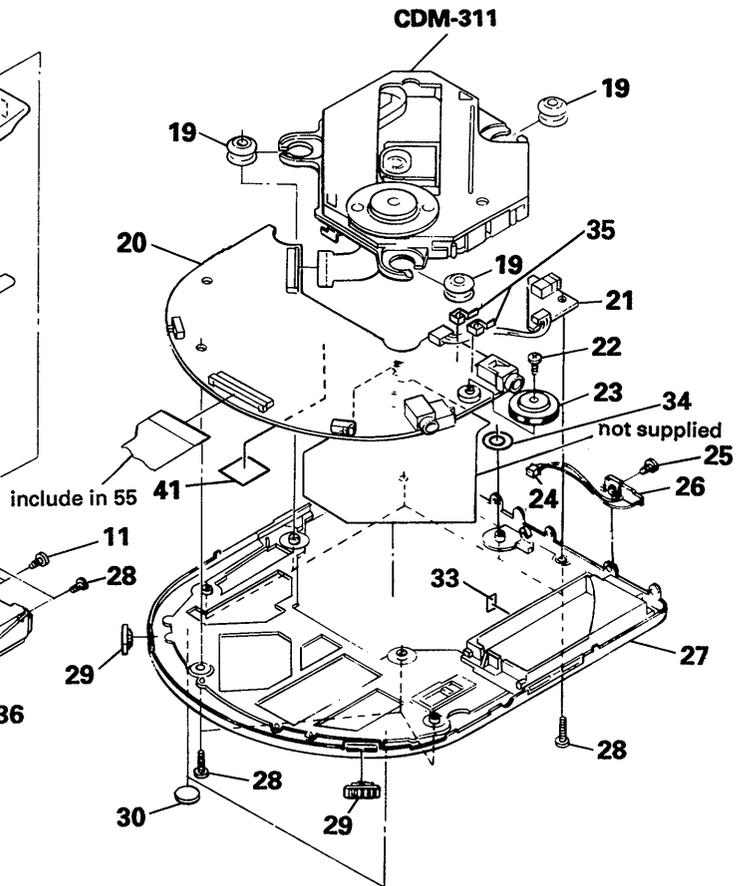
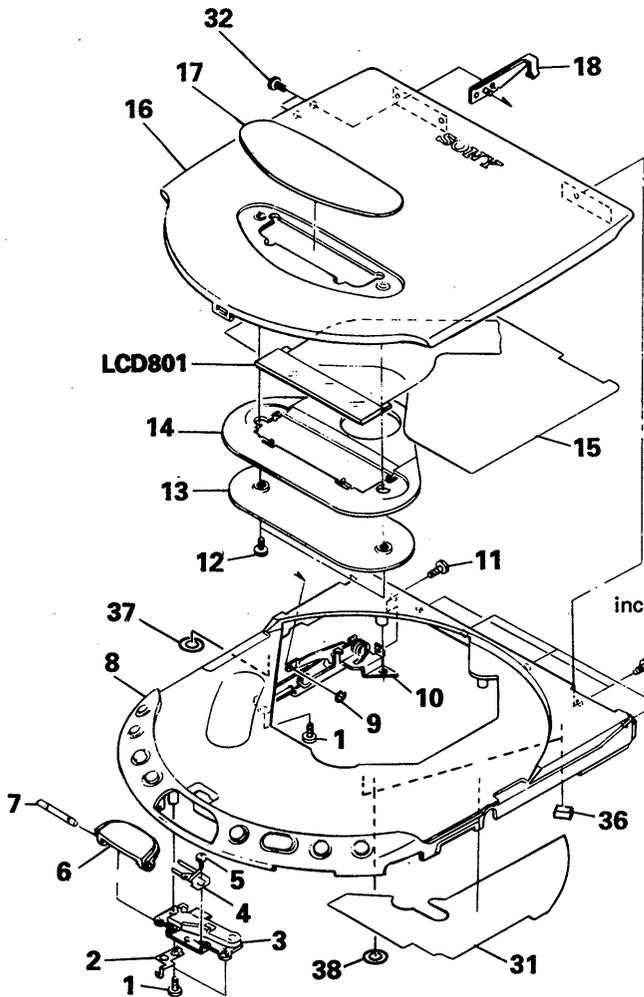
Les composants identifiés par une marque Δ sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CABINET SECTION

- AUS : Australian model
- JE : Tourist model
- EA : Saudi Arabia model



- For the silver model, please refer to the sections marked "N.T." (NEW TYPE).
- Saudi Arabia model is only a silver model, so please refer to the Silver & E model.

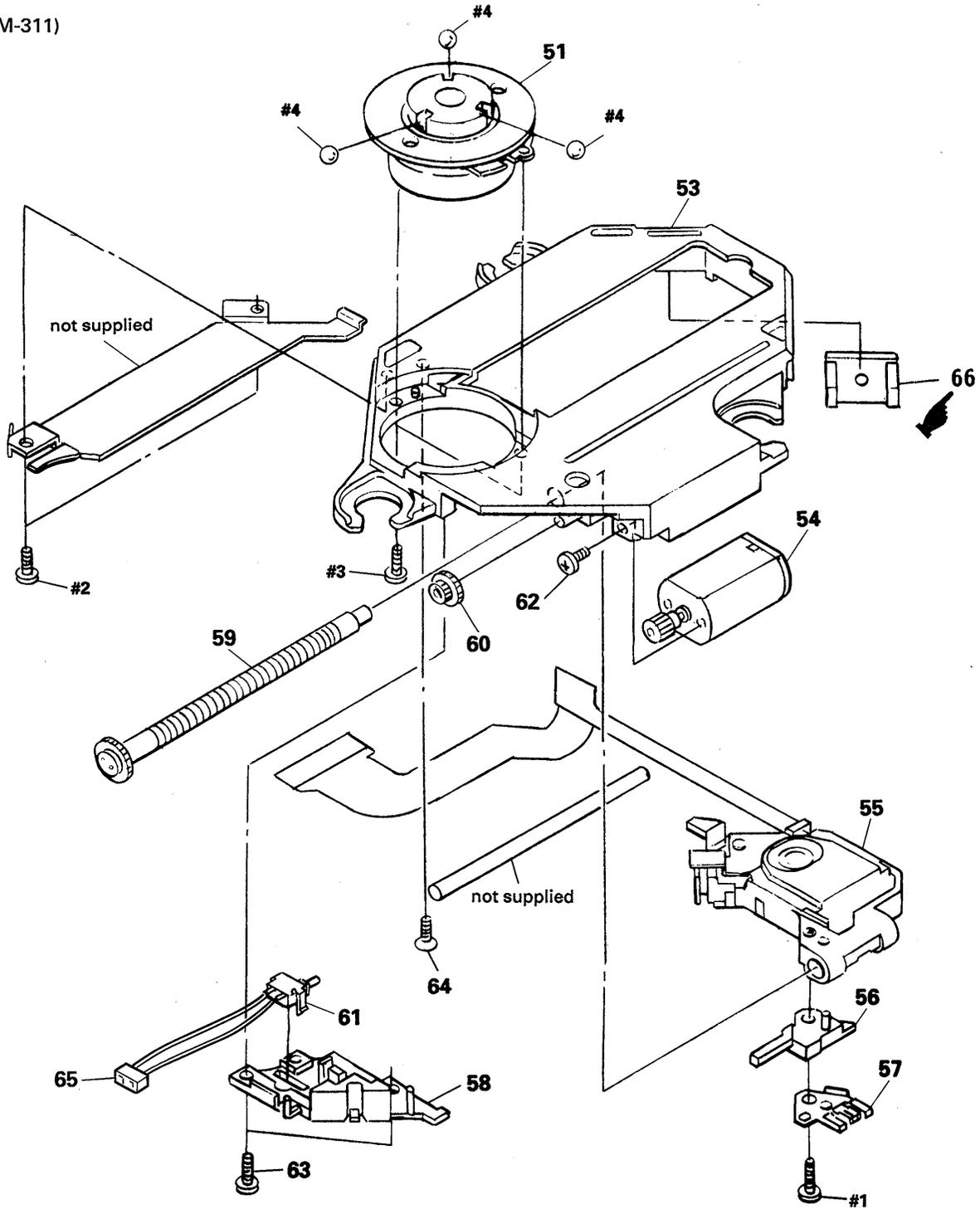


Ref. No.	Part No.	Description	Remarks
1	4-945-318-01	SCREW	
2	4-950-051-01	PLATE, GROUND	
3	X-4942-106-1	RETAINER ASSY	
4	4-948-107-01	SPRING (OPEN)	
5	3-704-246-02	SCREW (P1. 4X1.6)	
6	4-947-860-01	BUTTON (OPEN)	
6	4-947-860-11	BUTTON (OPEN)...(SILVER)	
7	4-948-106-01	SHAFT (OPEN)	
8	X-4941-962-1	CABINET ASSY	
8	X-4942-985-1	CABINET ASSY...(SILVER)	
9	3-318-236-01	WASHER, POLY, SLIT	
10	X-4941-965-1	SWITCHING ASSY	
11	3-703-816-11	SCREW (M1. 4×4.0), SPECIAL HEAD..(SILVER)	
11	3-703-816-12	SCREW (M1. 4×4.0), SPECIAL HEAD	
12	3-704-197-02	SCREW (M1. 4×1.6), LOCKING	
13	4-947-873-01	RETAINER, LCD	
14	4-947-887-01	HOLDER (LCD)	
15	4-950-050-01	SHEET, PANEL	
16	X-4941-964-1	PANEL ASSY, UPPER	
16	X-4942-987-1	PANEL ASSY, UPPER..(SILVER)	
17	4-947-856-01	WINDOW (LCD)	
18	X-4942-321-1	BLACKET ASSY, P	
19	4-947-864-11	INSULATOR	
20	A-3275-265-A	MAIN BOARD, COMPLETE (EXCEPT UK)	
20	A-3275-290-A	MAIN BOARD, COMPLETE (UK)	
*21	1-641-645-11	JACK BOARD (F. T.)	
*21	1-641-645-21	JACK BOARD (N. T.)	
22	3-345-648-01	SCREW (M1. 4×3.0)	
23	4-947-871-01	KNOB (VOLUME)	
*24	1-690-530-11	LEAD (WITH CONNECTOR)	
25	3-703-816-01	SCREW (M1. 4×2.0), SPECIAL HEAD..(SILVER)	
25	3-703-816-02	SCREW (M1. 4×2.0), SPECIAL HEAD	
*26	1-691-098-11	SOCKET, CONNECTOR 1P	
27	X-4941-968-1	PLATE ASSY, BOTTOM	
27	X-4942-989-1	PLATE ASSY, BOTTOM...(SILVER)	
28	4-949-954-01	SCREW	
28	4-949-954-11	SCREW.....(SILVER)	
29	4-947-855-01	KNOB (H. R.)	
29	4-947-855-11	KNOB (H. R.)....(SILVER)	
30	4-912-641-01	FOOT, RUBBER	
31	4-947-872-01	SHEET, BATTERY CASE	
32	3-704-197-11	SCREW (M1. 4×2.0), LOCKING....(SILVER)	
32	3-704-197-12	SCREW (M1. 4×2.0), LOCKING	
33	3-831-441-XX	SPACER, KOB	
34	3-942-525-01	BLIND (1), KOB	
35	4-947-865-01	TERMINAL, BATTERY	
36	9-911-841-XX	CUSHION, CASSETTE LID	
37	4-917-785-11	SPACER	
38	4-917-785-22	SPACER	
*41	1-644-462-11	BG BOARD (F. T.)	
		LCD801 1-809-543-11	MODULE (WITH LIQUID CRYSTAL)

REVISED

6-2. OPTICAL PICK-UP BLOCK SECTION

(CDM-311)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	X-4941-973-1	MOTOR ASSY, TURNTABLE		60	4-947-908-01	GEAR (B)	
* 53	4-947-897-01	CHASSIS, MD		61	1-571-099-11	SWITCH (LIMIT)	
54	X-4941-975-1	MOTOR ASSY, SLED		62	3-703-816-91	SCREW (M1.4X2.8), SPECIAL HEAD	
△55	8-848-236-01	DEVICE, OPTICAL KSS-350A		63	4-912-432-01	SCREW (B1.4X5), TAPPING	
* 56	4-947-902-01	TABLE, RACK		64	4-941-983-01	SCREW (B1.7X6), SPECIAL	
* 57	4-947-901-01	RACK (INSERT)		65	1-690-530-21	LEAD (WITH CONNECTOR)	
* 58	4-947-904-01	COVER (A)		66	4-947-910-01	RETAINER, FLEXIBLE	
59	X-4941-974-1	SCREW ASSY, FEED					

**REVISED**

**SECTION 7  
ELECTRICAL PARTS LIST**

**BG JACK MAIN**

**NOTE:**

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

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

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

- 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
- AUS: Australian model
- JE : Tourist model
- F.T. : Former type
- N.T.: New type
- EA : Saudi Arabia model
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example :  
uA...:  $\mu$ A..., uPA...:  $\mu$ PA...,  
uPB...:  $\mu$ PB..., uPC...:  $\mu$ PC...,  
uPD...:  $\mu$ PD...
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H
- For the silver model, please refer to the sections marked "N.T." (NEW TYPE).
- Saudi Arabia model is only a silver model, so please refer to the Silver & E model.

Ref.No.	Part No.	Description	Remarks	Ref.No.	Part No.	Description	Remarks
*	1-644-462-11	BG BOARD (F. T.) *****		R442	1-216-813-11	METAL CHIP 220 5% 1/16W *****	
		< TRANSISTOR >		*	A-3275-265-A	MAIN BOARD, COMPLETE (EXCEPT UK)	
Q891	8-729-602-36	TRANSISTOR 2SA1602 (F. T.)		*	A-3275-290-A	MAIN BOARD, COMPLETE (UK) *****	
		< RESISTOR >				< CAPACITOR >	
R891	1-216-089-00	METAL CHIP 47K 5% 1/10W (F. T.)		C101	1-164-217-11	CERAMIC CHIP 150PF 5% 50V	
*****				C102	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
*	1-641-645-11	JACK BOARD (F. T.)		C103	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
*	1-641-645-21	JACK BOARD (N. T.) *****		C104	1-162-925-11	CERAMIC CHIP 68PF 5% 50V	
		< CAPACITOR >		C105	1-162-925-11	CERAMIC CHIP 68PF 5% 50V	
C441	1-164-346-11	CERAMIC CHIP 1uF 16V		C106	1-135-181-21	TANTALUM CHIP 4.7uF 20% 6.3V	
		< CONNECTOR >		C108	1-162-959-11	CERAMIC CHIP 330PF 5% 50V	
CN402	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P		C109	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
		< JACK >		C110	1-126-246-11	ELECT CHIP 220uF 20% 4V	
CNJ401	1-691-099-11	JACK, DC (POLAR UNITY TYPE) (DC IN 6V)		C111	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
		< DIODE >		C112	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
D440	8-719-989-08	DIODE RB717F-T106		C113	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
D441	8-719-977-12	DIODE DTZ6.8B		C201	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
D442	8-719-938-72	DIODE SB01-05CP (N. T.)		C202	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
		< TRANSISTOR >		C203	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
Q440	8-729-806-76	TRANSISTOR 2SB1120-G		C204	1-162-925-11	CERAMIC CHIP 68PF 5% 50V	
Q441	8-729-903-10	TRANSISTOR FMW1		C205	1-162-925-11	CERAMIC CHIP 68PF 5% 50V	
		< RESISTOR >		C206	1-135-181-21	TANTALUM CHIP 4.7uF 20% 6.3V	
R440	1-216-817-11	METAL CHIP 470 5% 1/16W		C208	1-162-959-11	CERAMIC CHIP 330PF 5% 50V	
R441	1-216-817-11	METAL CHIP 470 5% 1/16W		C209	1-135-091-00	TANTALUM CHIP 1uF 20% 16V	
				C210	1-126-246-11	ELECT CHIP 220uF 20% 4V	
				C211	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
				C212	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
				C213	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	
				C301	1-163-229-11	CERAMIC CHIP 12PF 5% 50V	
				C302	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
				C303	1-164-346-11	CERAMIC CHIP 1uF 16V	
				C304	1-135-245-11	TANTAL. CHIP 22uF 20% 6.3V	
				C305	1-164-346-11	CERAMIC CHIP 1uF 16V	
				C306	1-124-778-00	ELECT CHIP 22uF 20% 6.3V	
				C308	1-135-253-11	TANTAL. CHIP 33uF 20% 4V	

## MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C310	1-135-202-21	TANTAL. CHIP 22uF	20% 4V	C528	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C311	1-135-253-11	TANTAL. CHIP 33uF	20% 4V	C529	1-164-346-11	CERAMIC CHIP 1uF	16V
C312	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C530	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V
C313	1-135-202-21	TANTAL. CHIP 22uF	20% 4V	C531	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
C314	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	C532	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C315	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C533	1-164-346-11	CERAMIC CHIP 1uF	16V
C316	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C535	1-135-202-21	TANTAL. CHIP 22uF	20% 4V
C321	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C536	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C401	1-124-584-00	ELECT 100uF	20% 10V	C537	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C403	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C538	1-164-346-11	CERAMIC CHIP 1uF	16V
C404	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C539	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C405	1-135-202-21	TANTAL. CHIP 22uF	20% 4V	C540	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C406	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C541	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C407	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C542	1-164-346-11	CERAMIC CHIP 1uF	16V
C411	1-164-346-11	CERAMIC CHIP 1uF	16V	C543	1-164-346-11	CERAMIC CHIP 1uF	16V
C412	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C544	1-164-346-11	CERAMIC CHIP 1uF	16V
C413	1-135-254-11	TANTAL. CHIP 47uF	20% 4V	C546	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V
C450	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C547	1-135-148-21	TANTAL. CHIP 1.5uF	20% 10V
C451	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	C548	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C452	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	C549	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
C453	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C550	1-164-346-11	CERAMIC CHIP 1uF	16V
C454	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C551	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C456	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V	C552	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C457	1-164-346-11	CERAMIC CHIP 1uF	16V	C553	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C458	1-127-561-11	ELECT(SOLID) 33uF	20% 10V	C554	1-164-346-11	CERAMIC CHIP 1uF	16V
C459	1-135-181-21	TANTALUM CHIP 4.7uF	20% 6.3V	C555	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V (F. T.)
C501	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C555	1-164-473-11	CERAMIC CHIP 820pF	5% 50V (N. T.)
C502	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V	C557	1-135-148-21	TANTAL. CHIP 1.5uF	20% 10V
C503	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C558	1-135-157-21	TANTALUM CHIP 10uF	20% 6.3V
C504	1-128-004-11	ELECT CHIP 10uF	20% 16V	C559	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C505	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V	C562	1-164-346-11	CERAMIC CHIP 1uF	16V
C506	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C563	1-135-181-21	TANTALUM CHIP 4.7uF	20% 6.3V(F. T.)
C508	1-163-038-00	CERAMIC CHIP 0.1uF	25V	C570	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C509	1-135-217-21	TANTALUM CHIP 15uF	20% 6.3V	C571	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C510	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C572	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C511	1-163-229-11	CERAMIC CHIP 12PF	5% 50V	C602	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V
C512	1-135-253-11	TANTAL. CHIP 33uF	20% 4V	C603	1-164-672-11	CERAMIC CHIP 1500PF	5% 16V
C513	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V	C604	1-135-145-11	TANTALUM CHIP 0.47uF	10% 35V
C514	1-126-607-11	ELECT CHIP 47uF	20% 4V	C605	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
C515	1-164-346-11	CERAMIC CHIP 1uF	16V	C801	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C517	1-163-085-00	CERAMIC CHIP 2PF	50V	C802	1-164-346-11	CERAMIC CHIP 1uF	16V
C518	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	C803	1-162-921-11	CERAMIC CHIP 33PF	5% 50V
C519	1-162-949-11	CERAMIC CHIP 47PF	5% 50V	C804	1-162-921-11	CERAMIC CHIP 33PF	5% 50V
C520	1-135-181-21	TANTALUM CHIP 4.7uF	20% 6.3V	C805	1-164-346-11	CERAMIC CHIP 1uF	16V
C521	1-163-809-11	CERAMIC CHIP 0.047uF	10% 25V	C806	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C523	1-162-949-11	CERAMIC CHIP 47PF	5% 50V	C807	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C524	1-135-202-21	TANTAL. CHIP 22uF	20% 4V	C808	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C525	1-135-181-21	TANTALUM CHIP 4.7uF	20% 6.3V	C809	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C526	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C810	1-164-156-11	CERAMIC CHIP 0.1uF	25V (N. T.)
C527	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V				

## NOTE :

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MAIN

Ref.No.	Part No.	Description	Remarks	Ref.No.	Part No.	Description	Remarks
		< CONNECTOR >					
* CN401	1-690-365-11	LEAD (WITH CONNECTOR) 3P		J301	1-565-287-41	JACK (LINE OUT)	
* CN501	1-580-526-11	CONNECTOR, FPC (PC BOARD) 18P		J302	1-580-680-11	JACK (HEADPHONE OUT)	
CN502	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P				< JUMPER RESISTOR >	
CN503	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P		JR301	1-216-864-11	METAL CHIP	0 5% 1/16W (F. T.)
CN504	1-566-757-11	PIN, CONNECTOR (PC BOARD) 2P		JR501	1-216-864-11	METAL CHIP	0 5% 1/16W
CN801	1-569-030-11	CONNECTOR, FPC (ZIF) 21P		JR502	1-216-864-11	METAL CHIP	0 5% 1/16W
		< DIODE >		JR601	1-216-864-11	METAL CHIP	0 5% 1/16W (F. T.)
D302	8-719-977-34	DIODE DTZ12				< COIL >	
D402	8-719-977-03	DIODE DTZ5.6B		L301	1-410-997-31	INDUCTOR CHIP	2.2uH
D403	8-719-941-23	DIODE DA204U (F. T.)		L302	1-410-997-31	INDUCTOR CHIP	2.2uH
D403	8-719-404-46	DIODE MA110 (N. T.)		L303	1-410-997-31	INDUCTOR CHIP	2.2uH
D404	8-719-975-49	DIODE RB451F		L304	1-410-997-31	INDUCTOR CHIP	2.2uH
D405	8-719-938-72	DIODE SB01-05CP		L305	1-410-997-31	INDUCTOR CHIP	2.2uH
D406	8-719-989-73	DIODE SB007T03C		L401	1-450-726-11	TRANSFORMER, DC-DC CONVERTER	
D407	8-719-941-23	DIODE DA204U		L402	1-412-029-11	INDUCTOR CHIP	10uH
D408	8-719-988-78	DIODE SB007W03Q		L403	1-412-031-11	INDUCTOR CHIP	47uH
D409	8-719-988-78	DIODE SB007W03Q		L404	1-412-029-11	INDUCTOR CHIP	10uH
D410	8-719-421-24	DIODE MA8039-H (N. T.)		L405	1-412-630-51	INDUCTOR	47uH
D501	8-719-023-69	DIODE SB007T03Q		L502	1-412-031-11	INDUCTOR CHIP	47uH
D502	8-719-988-78	DIODE SB007W03Q		L504	1-412-031-11	INDUCTOR CHIP	47uH
D506	8-719-988-78	DIODE SB007W03Q		L506	1-412-031-11	INDUCTOR CHIP	47uH
D801	8-719-400-18	DIODE MA152WK		L508	1-412-031-11	INDUCTOR CHIP	47uH
D803	8-719-400-18	DIODE MA152WK		L510	1-412-029-11	INDUCTOR CHIP	10uH
D804	8-719-941-09	DIODE DAP202U		L602	1-410-997-31	INDUCTOR CHIP	2.2uH
D805	8-719-941-86	DIODE DAN202U				< TRANSISTOR >	
D806	8-719-941-86	DIODE DAN202U		Q301	8-729-141-48	TRANSISTOR	2SB624-BV345
		< IC >		Q302	8-729-903-10	TRANSISTOR	FMW1
IC301	8-759-075-45	IC SM5870CS		Q303	8-729-902-90	TRANSISTOR	FMA4
IC302	8-759-710-55	IC NJM2100M		Q304	8-729-924-79	TRANSISTOR	FMG8
IC303	8-759-048-93	IC LA4534M		Q305	8-729-141-48	TRANSISTOR	2SB624-BV345 (F. T.)
IC304	8-759-243-19	IC TC7SU04F		Q305	8-729-216-22	TRANSISTOR	2SA1162 (N. T.)
IC401	8-759-994-55	IC RH5RC351A		Q306	8-729-903-10	TRANSISTOR	FMW1
IC402	8-759-710-79	IC NJM2107F		Q308	8-729-425-18	TRANSISTOR	XN4504
IC501	8-752-033-55	IC CXA1271Q		Q309	8-729-425-18	TRANSISTOR	XN4504
IC502	8-752-055-94	IC CXA1602R		Q401	8-729-921-84	TRANSISTOR	2SB1182F5-Q
IC504	8-759-039-13	IC MPC1716AFU		Q402	8-729-903-10	TRANSISTOR	FMW1
IC505	8-759-031-84	IC SC7S04F		Q403	8-729-402-16	TRANSISTOR	XN4608
IC601	8-752-337-26	IC CXD2500AQ		Q404	8-729-422-39	TRANSISTOR	XN4404
IC602	8-759-234-13	IC TC4S30F		Q405	8-729-907-03	TRANSISTOR	FMG5
IC603	8-759-048-91	IC SM5852AS-ET		Q406	8-729-806-76	TRANSISTOR	2SB1120-G
IC801	8-752-833-29	IC CXP5078H-617Q		Q407	8-729-012-01	TRANSISTOR	FMG11
IC802	8-759-056-64	IC RH5VA30AA		Q408	8-729-806-76	TRANSISTOR	2SB1120-G
IC803	8-759-062-27	IC BA3819F		Q409	8-729-806-76	TRANSISTOR	2SB1120-G
IC804	8-759-234-13	IC TC4S30F		Q411	8-729-907-03	TRANSISTOR	FMG5
		< JACK >		Q412	8-729-924-79	TRANSISTOR	FMG8
				Q415	8-729-902-90	TRANSISTOR	FMA4

## NOTE :

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## MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
Q416	8-729-922-94	TRANSISTOR	DTC143TU (N. T.)	R215	1-216-053-00	METAL CHIP	1.5K 5% 1/10W
Q450	8-729-402-84	TRANSISTOR	XN4601	R216	1-216-813-11	METAL CHIP	220 5% 1/16W
Q451	8-729-425-18	TRANSISTOR	XN4504	R217	1-216-298-00	METAL CHIP	2.2 5% 1/10W
Q452	8-729-425-18	TRANSISTOR	XN4504	R218	1-216-037-00	METAL CHIP	330 5% 1/10W
Q501	8-729-402-90	TRANSISTOR	XN4609	R219	1-216-821-11	METAL CHIP	1K 5% 1/16W
Q504	8-729-922-94	TRANSISTOR	DTC143TU	R301	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q505	8-729-905-57	TRANSISTOR	DTA124EU	R302	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q506	8-729-901-00	TRANSISTOR	DTC124EK	R303	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q508	8-729-905-61	TRANSISTOR	DTC124EU	R304	1-216-832-11	METAL CHIP	8.2K 5% 1/16W
Q509	8-729-905-57	TRANSISTOR	DTA124EU	R305	1-216-848-11	METAL CHIP	180K 5% 1/16W
Q802	8-729-905-57	TRANSISTOR	DTA124EU	R306	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q803	8-729-907-39	TRANSISTOR	IMD2	R307	1-216-049-00	METAL CHIP	1K 5% 1/10W
Q804	8-729-901-05	TRANSISTOR	DTA124EK	R308	1-216-674-11	METAL CHIP	9.1K 0.5% 1/10W
Q891	8-729-823-86	TRANSISTOR	2SA1745 (N. T.)	R309	1-216-121-00	METAL CHIP	1M 5% 1/10W
		< RESISTOR >		R310	1-216-025-00	METAL CHIP	100 5% 1/10W
R101	1-216-834-11	METAL CHIP	12K 5% 1/16W	R311	1-216-025-00	METAL CHIP	100 5% 1/10W
R102	1-216-834-11	METAL CHIP	12K 5% 1/16W	R312	1-216-821-11	METAL CHIP	1K 5% 1/16W
R103	1-216-837-11	METAL CHIP	22K 5% 1/16W	R314	1-216-836-11	METAL CHIP	18K 5% 1/16W
R104	1-216-837-11	METAL CHIP	22K 5% 1/16W	R315	1-216-848-11	METAL CHIP	180K 5% 1/16W
R105	1-216-839-11	METAL CHIP	33K 5% 1/16W	R316	1-216-817-11	METAL CHIP	470 5% 1/16W
R106	1-216-839-11	METAL CHIP	33K 5% 1/16W	R320	1-216-821-11	METAL CHIP	1K 5% 1/16W
R107	1-216-093-00	METAL CHIP	68K 5% 1/10W (F. T.)	R321	1-216-821-11	METAL CHIP	1K 5% 1/16W
R107	1-216-843-11	METAL CHIP	68K 5% 1/16W (N. T.)	R322	1-216-797-11	METAL CHIP	10 5% 1/16W
R108	1-216-843-11	METAL CHIP	68K 5% 1/16W	R323	1-216-833-11	METAL CHIP	10K 5% 1/16W (N. T.)
R109	1-216-845-11	METAL CHIP	100K 5% 1/16W	R401	1-216-041-00	METAL CHIP	470 5% 1/10W
R110	1-216-033-00	METAL CHIP	220 5% 1/10W	R403	1-216-813-11	METAL CHIP	220 5% 1/16W
R111	1-216-071-00	METAL CHIP	8.2K 5% 1/10W	R404	1-216-302-00	METAL CHIP	2.7 5% 1/10W
R112	1-216-793-11	METAL GLAZE	4.7 5% 1/16W	R405	1-216-302-00	METAL CHIP	2.7 5% 1/10W
R113	1-216-796-11	METAL GLAZE	8.2 5% 1/16W	R406	1-216-049-00	METAL CHIP	1K 5% 1/10W
R114	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R407	1-216-073-00	METAL CHIP	10K 5% 1/10W
R115	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R408	1-216-821-11	METAL CHIP	1K 5% 1/16W
R116	1-216-813-11	METAL CHIP	220 5% 1/16W	R409	1-216-809-11	METAL CHIP	100 5% 1/16W
R117	1-216-789-11	METAL CHIP	2.2 5% 1/16W	R410	1-216-009-00	METAL CHIP	22 5% 1/10W
R118	1-216-037-00	METAL CHIP	330 5% 1/10W	R411	1-216-809-11	METAL CHIP	100 5% 1/16W
R119	1-216-821-11	METAL CHIP	1K 5% 1/16W	R412	1-216-797-11	METAL CHIP	10 5% 1/16W
R201	1-216-075-00	METAL CHIP	12K 5% 1/10W	R413	1-216-813-11	METAL CHIP	220 5% 1/16W
R202	1-216-075-00	METAL CHIP	12K 5% 1/10W	R414	1-216-845-11	METAL CHIP	100K 5% 1/16W
R203	1-216-837-11	METAL CHIP	22K 5% 1/16W	R417	1-216-841-11	METAL CHIP	47K 5% 1/16W
R204	1-216-837-11	METAL CHIP	22K 5% 1/16W	R418	1-216-073-00	METAL CHIP	10K 5% 1/10W
R205	1-216-839-11	METAL CHIP	33K 5% 1/16W	R419	1-218-330-11	METAL CHIP	11K 0.5% 1/16W
R206	1-216-839-11	METAL CHIP	33K 5% 1/16W	R423	1-216-680-11	METAL CHIP	16K 0.5% 1/10W
R207	1-216-843-11	METAL CHIP	68K 5% 1/16W	R424	1-218-740-11	METAL CHIP	100K 0.5% 1/16W
R208	1-216-843-11	METAL CHIP	68K 5% 1/16W	R425	1-216-049-00	METAL CHIP	1K 5% 1/10W
R209	1-216-845-11	METAL CHIP	100K 5% 1/16W	R429	1-218-330-11	METAL CHIP	11K 0.5% 1/16W
R210	1-216-813-11	METAL CHIP	220 5% 1/16W	R430	1-218-740-11	METAL CHIP	100K 0.5% 1/16W
R211	1-216-071-00	METAL CHIP	8.2K 5% 1/10W	R431	1-216-073-00	METAL CHIP	10K 5% 1/10W
R212	1-216-793-11	METAL GLAZE	4.7 5% 1/16W	R433	1-216-830-11	METAL CHIP	5.6K 5% 1/16W
R213	1-216-313-00	METAL CHIP	8.2 5% 1/10W	R434	1-218-754-11	METAL CHIP	120K 0.5% 1/10W
R214	1-216-053-00	METAL CHIP	1.5K 5% 1/10W	R435	1-216-105-00	METAL CHIP	220K 5% 1/10W
				R436	1-216-815-11	METAL CHIP	330 5% 1/16W (N. T.)

## NOTE :

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MAIN

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
R450	1-216-833-11	METAL CHIP	10K	5%	1/16W	R549	1-216-857-11	METAL CHIP	1M	5%	1/16W
R451	1-216-833-11	METAL CHIP	10K	5%	1/16W	R550	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R452	1-216-025-00	METAL CHIP	100	5%	1/10W	R551	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R453	1-216-045-00	METAL CHIP	680	5%	1/10W	R552	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R454	1-216-001-00	METAL CHIP	10	5%	1/10W	R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R455	1-217-671-11	METAL CHIP	1	5%	1/10W	R554	1-216-105-00	METAL CHIP	220K	5%	1/10W
R456	1-216-840-11	METAL CHIP	39K	5%	1/16W	R557	1-216-821-11	METAL CHIP	1K	5%	1/16W
R457	1-216-830-11	METAL CHIP	5.6K	5%	1/16W	R563	1-216-099-00	METAL CHIP	120K	5%	1/10W
R458	1-216-797-11	METAL CHIP	10	5%	1/16W	R564	1-216-842-11	METAL CHIP	56K	5%	1/16W
R459	1-216-001-00	METAL CHIP	10	5%	1/10W	R565	1-216-842-11	METAL CHIP	56K	5%	1/16W
R460	1-216-797-11	METAL CHIP	10	5%	1/16W	R566	1-218-738-11	METAL CHIP	82K	0.5%	1/16W
R502	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	R567	1-216-693-11	METAL CHIP	56K	0.5%	1/10W
R503	1-216-079-00	METAL CHIP	18K	5%	1/10W	R568	1-216-842-11	METAL CHIP	56K	5%	1/16W
R504	1-216-834-11	METAL CHIP	12K	5%	1/16W	R569	1-218-738-11	METAL CHIP	82K	0.5%	1/16W
R505	1-216-121-00	METAL CHIP	1M	5%	1/10W	R570	1-216-821-11	METAL CHIP	1K	5%	1/16W
R506	1-216-081-00	METAL CHIP	22K	5%	1/10W	R580	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R507	1-216-077-00	METAL CHIP	15K	5%	1/10W	R590	1-216-109-00	METAL CHIP	330K	5%	1/10W
R508	1-216-068-00	METAL CHIP	6.2K	5%	1/10W	R601	1-216-845-11	METAL CHIP	100K	5%	1/16W
R509	1-216-073-00	METAL CHIP	10K	5%	1/10W	R602	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R510	1-216-001-00	METAL CHIP	10	5%	1/10W	R603	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R511	1-216-097-00	METAL CHIP	100K	5%	1/10W	R604	1-218-293-11	METAL GLAZE	24K	5%	1/16W
R512	1-216-073-00	METAL CHIP	10K	5%	1/10W	R605	1-216-833-11	METAL CHIP	10K	5%	1/16W
R515	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R606	1-216-833-11	METAL CHIP	10K	5%	1/16W
R516	1-216-837-11	METAL CHIP	22K	5%	1/16W	R611	1-216-841-11	METAL CHIP	47K	5%	1/16W
R517	1-216-845-11	METAL CHIP	100K	5%	1/16W	R801	1-216-073-00	METAL CHIP	10K	5%	1/10W
R518	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R802	1-216-081-00	METAL CHIP	22K	5%	1/10W
R519	1-216-844-11	METAL CHIP	82K	5%	1/16W	R803	1-216-081-00	METAL CHIP	22K	5%	1/10W
R520	1-216-849-11	METAL CHIP	220K	5%	1/16W	R804	1-216-081-00	METAL CHIP	22K	5%	1/10W
R521	1-216-837-11	METAL CHIP	22K	5%	1/16W	R805	1-216-089-00	METAL CHIP	47K	5%	1/10W
R522	1-216-845-11	METAL CHIP	100K	5%	1/16W	R806	1-216-841-11	METAL CHIP	47K	5%	1/16W
R523	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R807	1-216-833-11	METAL CHIP	10K	5%	1/16W
R524	1-216-115-00	METAL CHIP	560K	5%	1/10W	R812	1-216-837-11	METAL CHIP	22K	5%	1/16W
R525	1-216-073-00	METAL CHIP	10K	5%	1/10W	R813	1-216-835-11	METAL CHIP	15K	5%	1/16W
R526	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R814	1-216-840-11	METAL CHIP	39K	5%	1/16W
R527	1-216-683-11	METAL CHIP	22K	0.5%	1/10W	R815	1-216-835-11	METAL CHIP	15K	5%	1/16W
R528	1-216-848-11	METAL CHIP	180K	5%	1/16W	R816	1-216-845-11	METAL CHIP	100K	5%	1/16W
R529	1-216-062-00	METAL CHIP	3.6K	5%	1/10W	R817	1-216-854-11	METAL CHIP	560K	5%	1/16W
R530	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R818	1-216-854-11	METAL CHIP	560K	5%	1/16W
R532	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	R819	1-216-857-11	METAL CHIP	1M	5%	1/16W
R533	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R820	1-216-049-00	METAL CHIP	1K	5%	1/10W
R534	1-216-049-00	METAL CHIP	1K	5%	1/10W	R821	1-216-049-00	METAL CHIP	1K	5%	1/10W
R536	1-216-089-00	METAL CHIP	47K	5%	1/10W	R822	1-216-049-00	METAL CHIP	1K	5%	1/10W
R537	1-216-073-00	METAL CHIP	10K	5%	1/10W	R823	1-216-821-11	METAL CHIP	1K	5%	1/16W
R538	1-216-821-11	METAL CHIP	1K	5%	1/16W (F. T.)	R824	1-216-025-00	METAL CHIP	100	5%	1/10W
R539	1-216-857-11	METAL CHIP	1M	5%	1/16W	R891	1-216-841-11	METAL CHIP	47K	5%	1/16W (N. T.)
R541	1-216-047-00	METAL CHIP	820	5%	1/10W	< VARIABLE RESISTOR >					
R542	1-216-823-11	METAL CHIP	1.5K	5%	1/16W	RV301	1-230-485-11	RES, VAR, CARBON 10K/10K (VOLUME)			
R543	1-216-842-11	METAL CHIP	56K	5%	1/16W	RV401	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (+3.7V)			
R544	1-216-833-11	METAL CHIP	10K	5%	1/16W (F. T.)	RV501	1-241-396-11	RES, ADJ, METAL GLAZE 22K (TRACKING GAIN)			
R545	1-216-832-11	METAL CHIP	8.2K	5%	1/16W						

## NOTE :

F.T. : Former type

N.T. : New type

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

REVISED

MAIN

Ref. No.	Part No.	Description	Remarks
RV502	1-241-396-11	RES, ADJ, METAL GLAZE 22K (TRACKING BALANCE)	
RV503	1-241-397-11	RES, ADJ, METAL GLAZE 47K (FOCUS BIAS)	
RV504	1-241-392-11	RES, ADJ, METAL GLAZE 1K (VCO)	
RV505	1-241-396-11	RES, ADJ, METAL GLAZE 22K (FOCUS GAIN)	
< SWITCH >			
S801	1-572-596-11	SWITCH, KEY BOARD (▷□)	
S802	1-572-596-11	SWITCH, KEY BOARD (STOP/CHG □)	
S803	1-572-596-11	SWITCH, KEY BOARD (◁◁)	
S804	1-572-596-11	SWITCH, KEY BOARD (▷▷)	
S805	1-572-596-11	SWITCH, KEY BOARD (DSP MODE)	
S806	1-572-596-11	SWITCH, KEY BOARD (EFFECT)	
S807	1-572-596-11	SWITCH, KEY BOARD (PLAY MODE)	
S808	1-572-596-11	SWITCH, KEY BOARD (REPEAT/ENT)	
S809	1-572-598-21	SWITCH, SLIDE (HOLD ▲)	
S810	1-572-598-21	SWITCH, SLIDE (RESUME)	
S811	1-572-947-11	SWITCH, PUSH (1 KEY) (OPEN)	
< THERMISTOR >			
TH501	1-809-468-11	THERMISTOR, CHIP 3.3K	
< VIBRATOR >			
X301	1-577-576-11	VIBRATOR, CRYSTAL (16.9MHz)	
X801	1-578-769-11	VIBLATOR, CERAMIC (3.58MHz)	
*****			
MISCELLANEOUS *****			
* 24	1-690-530-11	LEAD (WITH CONNECTOR)	
* 26	1-691-098-11	SOCKET, CONNECTOR 1P	
△55	8-848-236-01	DEVICE, OPTICAL KSS-350A	
61	1-571-099-11	SWITCH (LIMIT)	
65	1-690-530-21	LEAD (WITH CONNECTOR)	
LCD801	1-809-543-11	MODULE (WITH LIQUID CRYSTAL)	
*****			
HARDWARE LIST			
#1	7-627-557-07	SCREW, PRECISION +P1. 7X5. 5	
#2	7-627-852-98	SCREW, PRECISION +P1. 7X4. 5 TYPE3	
#3	7-627-552-98	SCREW, PRECISION +P1. 7X8	
#4	7-671-155-01	STEEL BALL 3.0	

Ref. No.	Part No.	Description	Remarks
ACCESSORIES & PACKING MATERIALS *****			
△	1-465-268-21	ADAPTOR, AC (AC-64N)... (EA)	
△	1-465-266-11	ADAPTOR, AC (AC-64N(CA)) (Canadian)	
△	1-465-269-11	ADAPTOR, AC (AC-64N(UK)) (UK)	
△	1-465-270-11	ADAPTOR, AC (AC-64N(AUS)) (AUS)	
△	1-465-520-41	ADAPTOR, AC (AC-64NA) (E, JE)	
△	1-465-608-11	ADAPTOR, AC (AC-64NA) (US)	
△	1-465-833-11	ADAPTOR, AC (AC-64NEM) (AEP)	
	1-465-940-11	REMOTE CONTROL UNIT	
	1-528-303-13	BATTERY PACK (BP-5) (EXCEPT AEP)	
	1-528-303-23	BATTERY PACK (BP-5) (AEP)	
	1-528-391-31	CASE, BATTERY	
	1-555-658-21	CORD, CONNECTION	
△	1-569-008-01	ADAPTER, CONVERSION.... (EA)	
△	1-569-007-11	ADAPTER, CONVERSION 2P (E, JE)	
	1-575-195-11	CORD, CONNECTION	
	1-590-038-11	CORD, CONNECTION (EXCEPT UK)	
	2-397-316-01	SHEET, PROTECTION	
*	3-703-034-21	LABEL, CAUTION (JE)	
	3-754-396-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH) (Canadian, AEP, E, JE)	
	3-754-396-21	MANUAL, INSTRUCTION (ENGLISH) (US, UK, AUS)	
	3-754-396-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH, PORTUGUESE) (North European)	
	3-754-396-51	MANUAL, INSTRUCTION (GERMAN, ITALIAN) (European)	
	3-754-396-61	MANUAL, INSTRUCTION (JAPANESE, KOREAN, CHINESE) (JE)	
	4-947-878-01	ADAPTOR, CAR MOUNT	
*	4-948-769-01	CUSHION (UPPER)	
*	4-948-770-01	CUSHION (LOWER) (US, Canadian, E, JE)	
*	4-948-771-01	CUSHION (LOWER) (AEP, UK, AUS)	
*	4-948-773-01	INDIVIDUAL CARTON (US, Canadian, E, JE)	
*	4-948-774-01	INDIVIDUAL CARTON (AEP, UK, AUS)	
• For Silver Model			
	*4-954-993-01	INDIVIDUAL CARTON (BODY)(US, Canadian, E, JE)	
	*4-954-995-01	INDIVIDUAL CARTON (BODY)(AEP, UK, AUS, EA)	
	*4-955-390-01	INDIVIDUAL CARTON (LID) (US, Canadian, E, JE)	
	*4-955-391-01	INDIVIDUAL CARTON (LID) (AEP, UK, AUS, EA)	
	*4-955-587-01	CASE, CARRYING (AEP, UK, EA)	
	*4-955-587-02	CASE, CARRYING (US, Canadian, E, AUS)	
	8-953-424-90	HEADPHONE MDR-A21MP SET (US, UK)	
	8-953-468-90	HEADPHONE MDR-E552PC SET (EXCEPT US, UK)	

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

9-956-843-12  
[Including 9-956-843-85  
9-956-843-86]

Sony Corporation  
General Audio Group

English  
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