

# CDP-XA7ES

## SERVICE MANUAL

*US Model  
Canadian Model  
AEP Model*

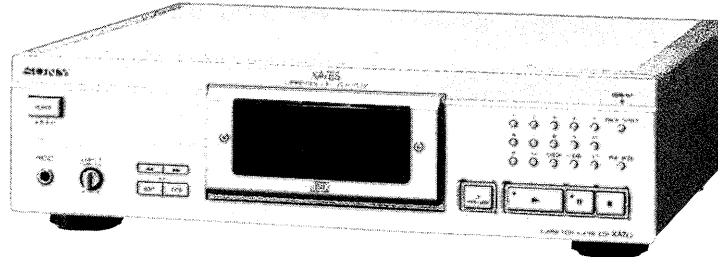


Photo : Gold

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM32HB-12H (BLACK) CDM32HN-12H (GOLD)
Base Unit Type	BU-12H
Optical Pick-up Type	KSS-273A

### SPECIFICATIONS

#### Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz $\pm$ 0.3 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0015%

#### Outputs

	Jack type	Maximum output level	Load impedance
LINE OUT (FIXED)	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
LINE OUT (VARIABLE)	Phono jacks	2 V (at 50 kilohms)	Over 50 kilohms
BALANCED OUT	XLR-3-32	2V (at 50 kilohms)	600 ohms
DIGITAL OUT (OPTICAL)	Optical output connector	-18 dBm	Wave length: 660 nm
DIGITAL OUT (COAXIAL)	Coaxial output connector	0.5Vp-p (75 ohms)	75 ohms

PHONES	Stereo phone jack	100 mW	32 ohms
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#### General

##### Power requirements

Where purchased	Power requirements
<b>AEP, German</b>	220 V – 230 V AC, 50/60 Hz

<b>US and Canadian</b>	120 V AC, 60 Hz
<b>Power consumption</b>	28 W
<b>Dimensions (approx.) (w/h/d)</b>	430 × 125 × 375 mm (17 × 5 × 14 7/8 in.) incl. projecting parts

<b>Mass (approx.)</b>	15.0 kg (33 lbs 1 oz)
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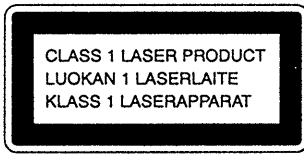
##### Supplied accessories

Audio cord (2 phono plugs – 2 phono plugs) (1)  
Remote commander (remote) (1)  
Sony SUM-3 (NS) batteries (2)  
Stabilizer (1)

Design and specifications are subject to change without notice.

**COMPACT DISC PLAYER**  
**SONY®**

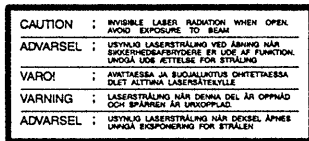
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This appliance is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside the unit.



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

### 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.

### 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.

### 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.

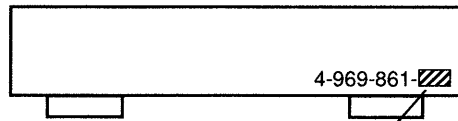
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### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

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 CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## MODEL IDENTIFICATION

— BACK PANEL —



US Model	: 1□ (U)
Canadian Model	: 2□ (CA)
AEP Model	: 3□ (CED)
German Model	: 4□ (CEE)

## SAFETY CHECK-OUT

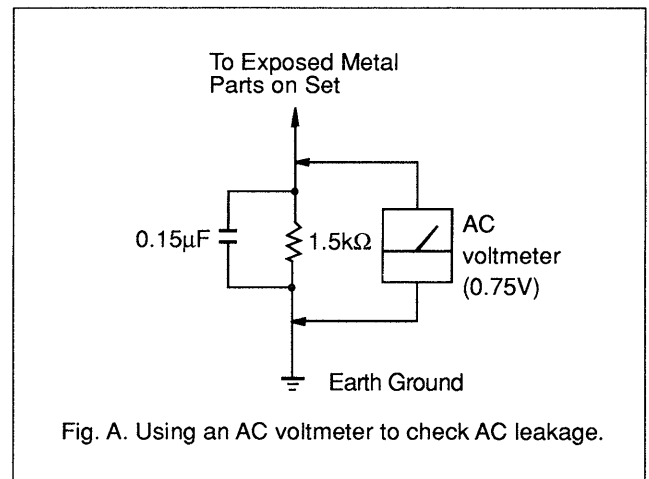
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)



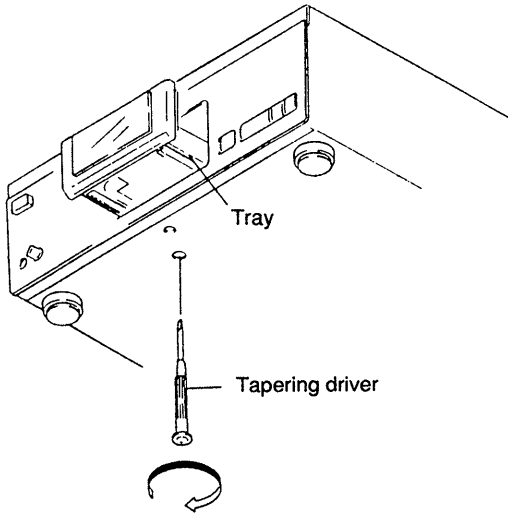
## SECTION 1

### SERVICING NOTE

#### HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).

\* To close the disc tray, turn the driver in the reverse direction (to IN direction).



#### 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.

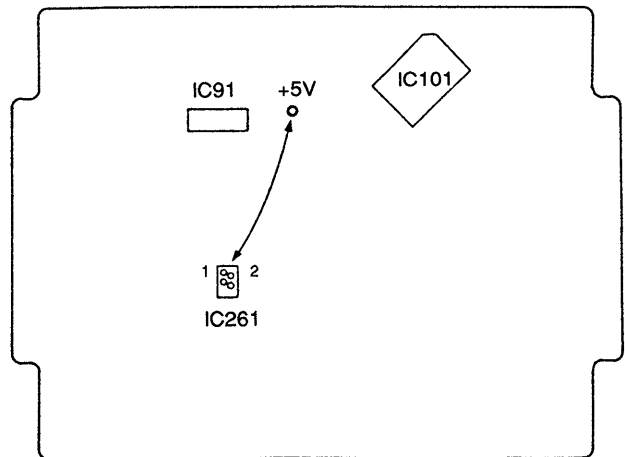
#### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output three times.

#### PREPARATION FOR ADJUSTMENT AND MESUREMENT

Perform connecting the IC261 ② pin of SERVO board to the line of +5V because this unit does not work without the stabilizer structurally.

#### SERVO BOARD — Conductor side —

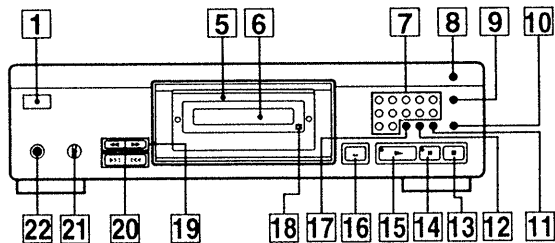


## SECTION 2

### GENERAL

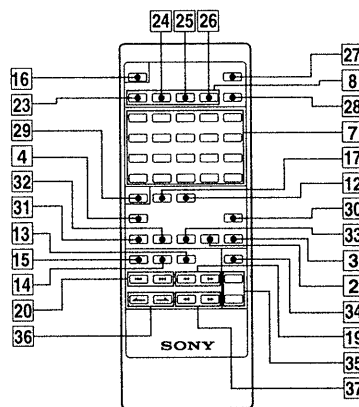
#### Identifying the Parts

##### Front Panel



- 1 Power switch
- 2 Time button
- 3 ERASE button
- 4 FILE button
- 5 Disc tray
- 6 Display window
- 7 Numeric buttons
- 8 DIGITAL OUT indicator
- 9 DIGITAL OUTPUT button
- 10 PLAY MODE buttons
- 11 >12 (over 12) button
- 12 CLEAR button
- 13 ■ (stop) button
- 14 || (pause) button
- 15 ► (play) button
- 16 ▲ OPEN/CLOSE button
- 17 CHECK button
- 18 Remote sensor
- 19 ◀▶ (manual search) buttons

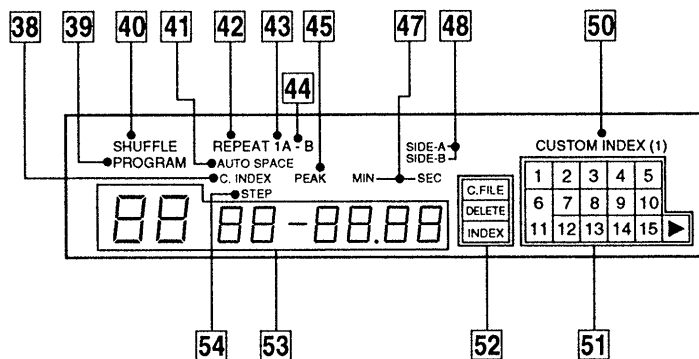
##### Remote Commander (RM-D921)



- 20 ◀◀▶▶ AMS\* buttons
- 21 LINE OUT/PHONE LEVEL control
- 22 PHONES jack
- 23 CONTINUE button
- 24 SHUFFLE button
- 25 PROGRAM button
- 26 C. INDEX button
- 27 DISPLAY MODE button
- 28 MUSIC SCAN button
- 29 >20 (over 20) button
- 30 PEAK SEARCH button
- 31 REPEAT (repeat/A-B repeat clear) button
- 32 A ↔ B repeat button
- 33 AUTO SPACE button
- 34 FADER (fade in/fade out) button
- 35 LINE OUT LEVEL (line out/headphone level) buttons
- 36 ← → INDEX buttons
- 37 ◀◀▶▶ SLOW (low speed manual search) buttons

\* AMS is the abbreviation of Automatic Music Sensor.

##### Display Window

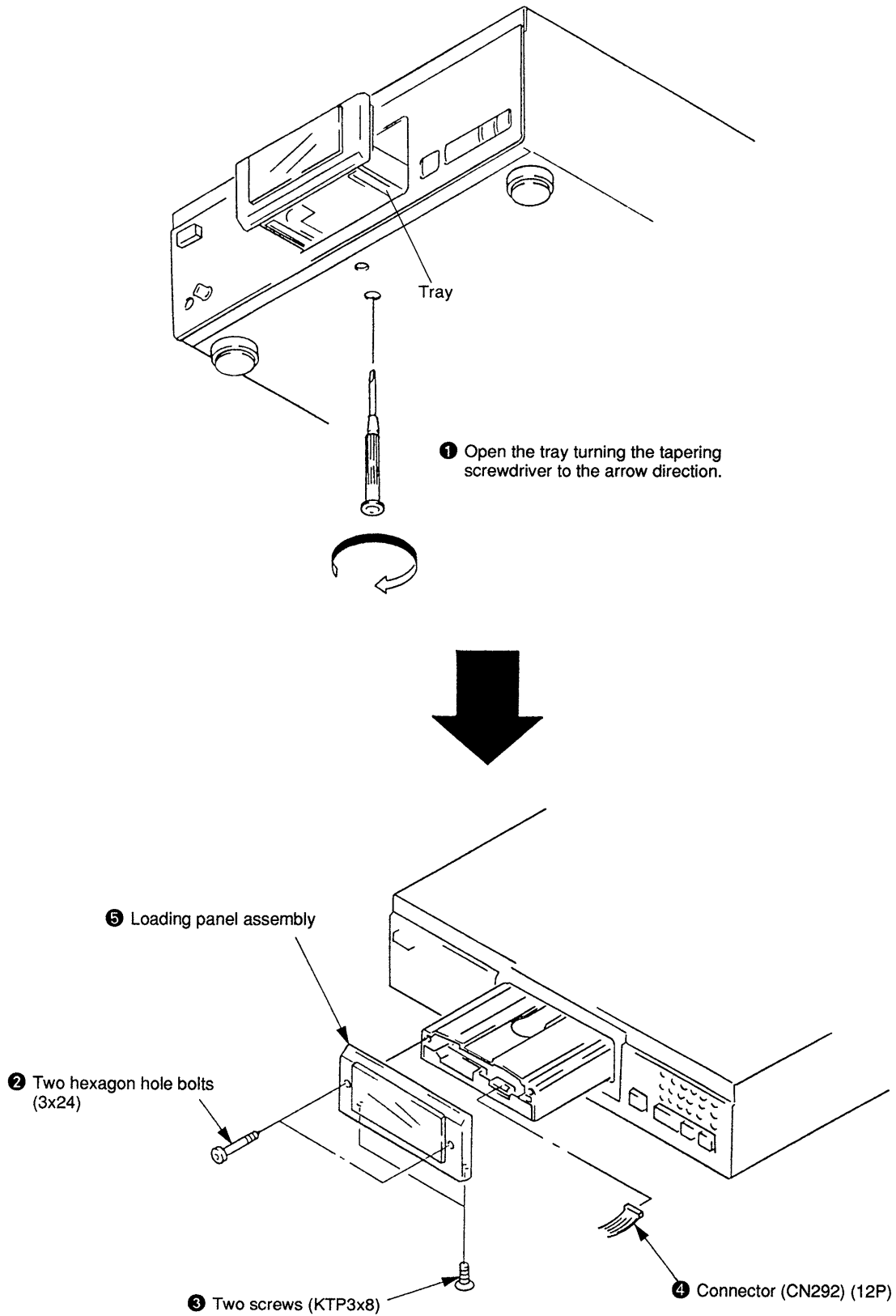


- 38 C. INDEX
- 39 PROGRAM
- 40 SHUFFLE
- 41 AUTO SPACE
- 42 REPEAT
- 43 REPEAT 1
- 44 REPEAT A-B
- 45 PEAK
- 47 MIN/SEC
- 48 SIDE A/SIDE B
- 50 CUSTOM INDEX (1)
- 51 1 ~ 15 ▶
- 52 C FILE/DELETE/INDEX
- 53 DISPLAY
- 54 STEP

## SECTION 3 DISASSEMBLY

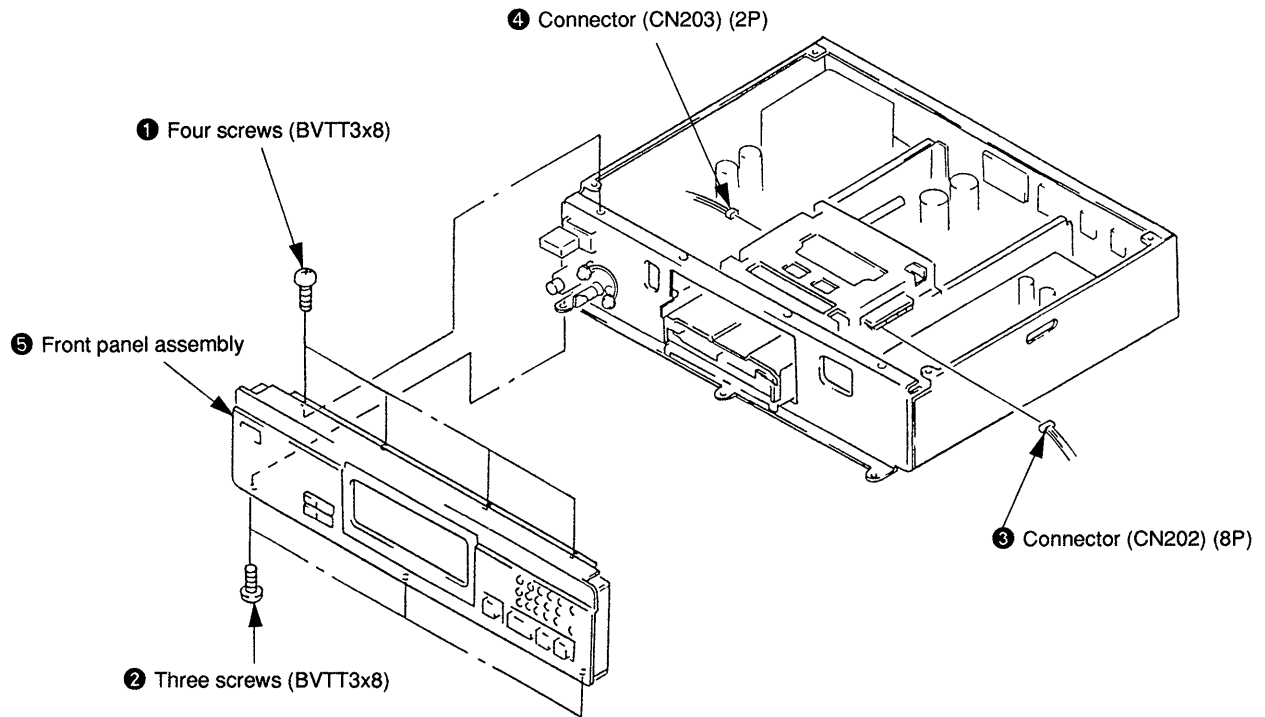
**Note :** Follow the disassembly procedure in the numerical order given.

### 3-1. LOADING PANEL

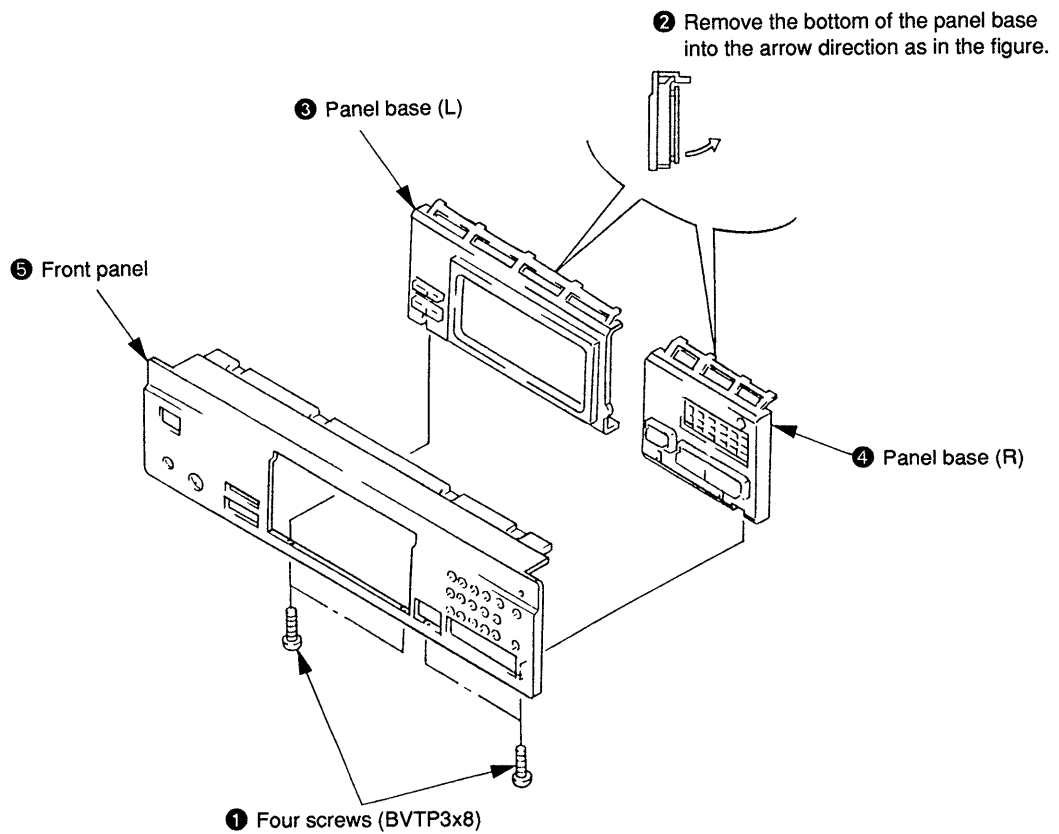


**Note :** Install in order ③ right → ③ left → two of ②.

### 3-2. FRONT PANEL ASSEMBLY



### 3-3. PANEL BASE (L), (R)



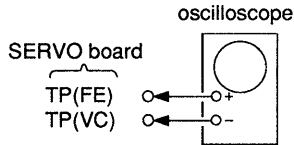
## SECTION 4

### ELECTRICAL BLOCK ADJUSTMENT

**Note :**

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

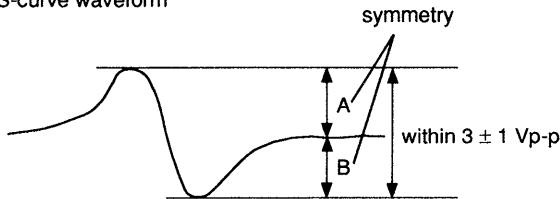
**S Curve Check**



**Procedure :**

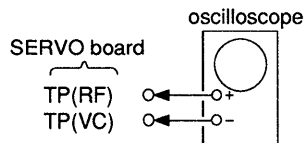
1. Connect oscilloscope to test point TP (FE).
2. Connect between test point TP (FEI : IC101 ⑳ pin) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within  $3 \pm 1$  Vp-p.

S-curve waveform



6. After check, remove the lead wire connected in step 2.
- Note :**
- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
  - Take sweep time as long as possible and light up the brightness to obtain best waveform.

**RF Level Check**



**Procedure :**

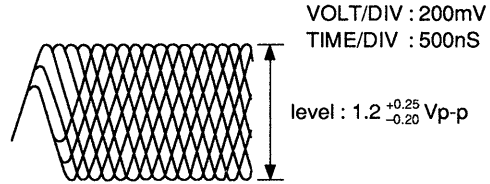
1. Connect oscilloscope to test point TP (RF).
2. Turned Power switch on.

3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

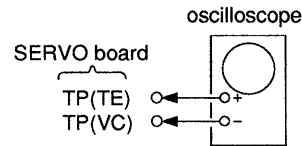
**Note :**

Clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

RF signal waveform



**E-F Balance (Traverse) Check**



**Procedure :**

1. Connect test point TP (ADJ) to ground and TP(TEI : IC101 ㉓ pin) to TP (VC) with a lead wire.
2. Connect oscilloscope to test point TP (TE).
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V dc, and check this level.

Traverse waveform

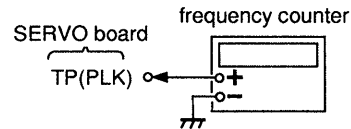


6. Remove the lead wire connected in step 1.

**RF PLL Free-run Frequency Check**

**Procedure :**

1. Connect frequency counter to test point (PLK) with lead wire.

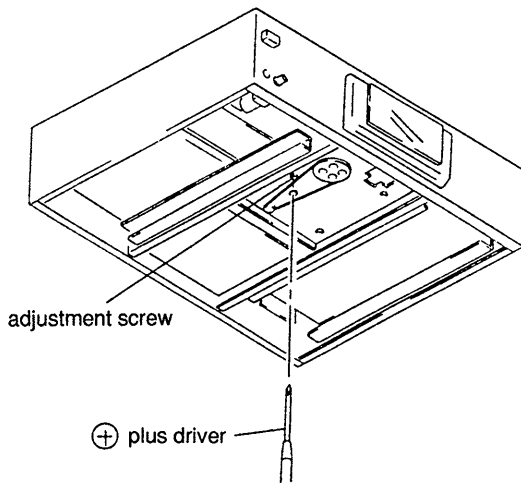
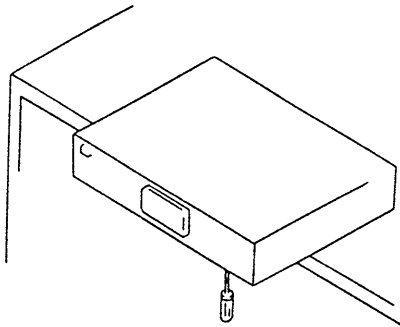
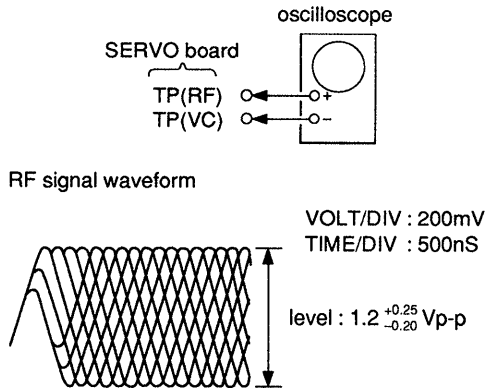


2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.



## Skew Adjustment

Do not perform the skew adjustment when not using attached stabilizer to a set.



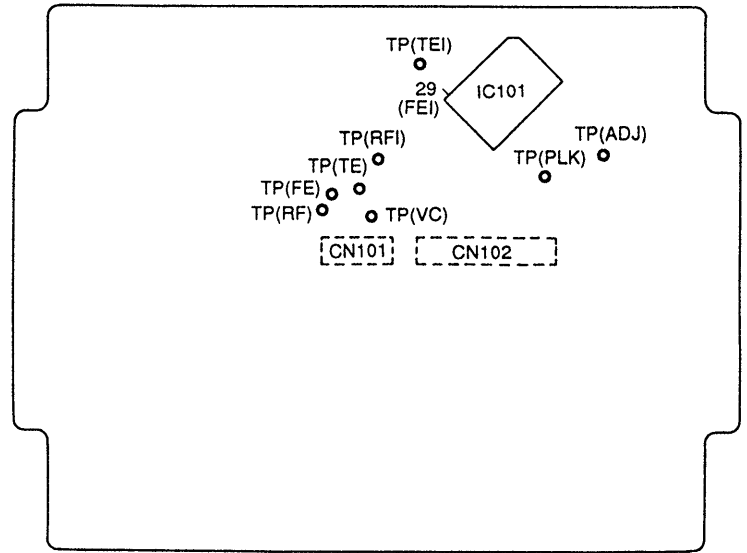
1. Remove the bottom board, put one third of the unit out from the desk.
2. Connect oscilloscope to test point TP (RF).
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Adjust to be clear the waveform of the oscilloscope turning the adjustment screw with a ⊕ screwdriver.

### Note :

A clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

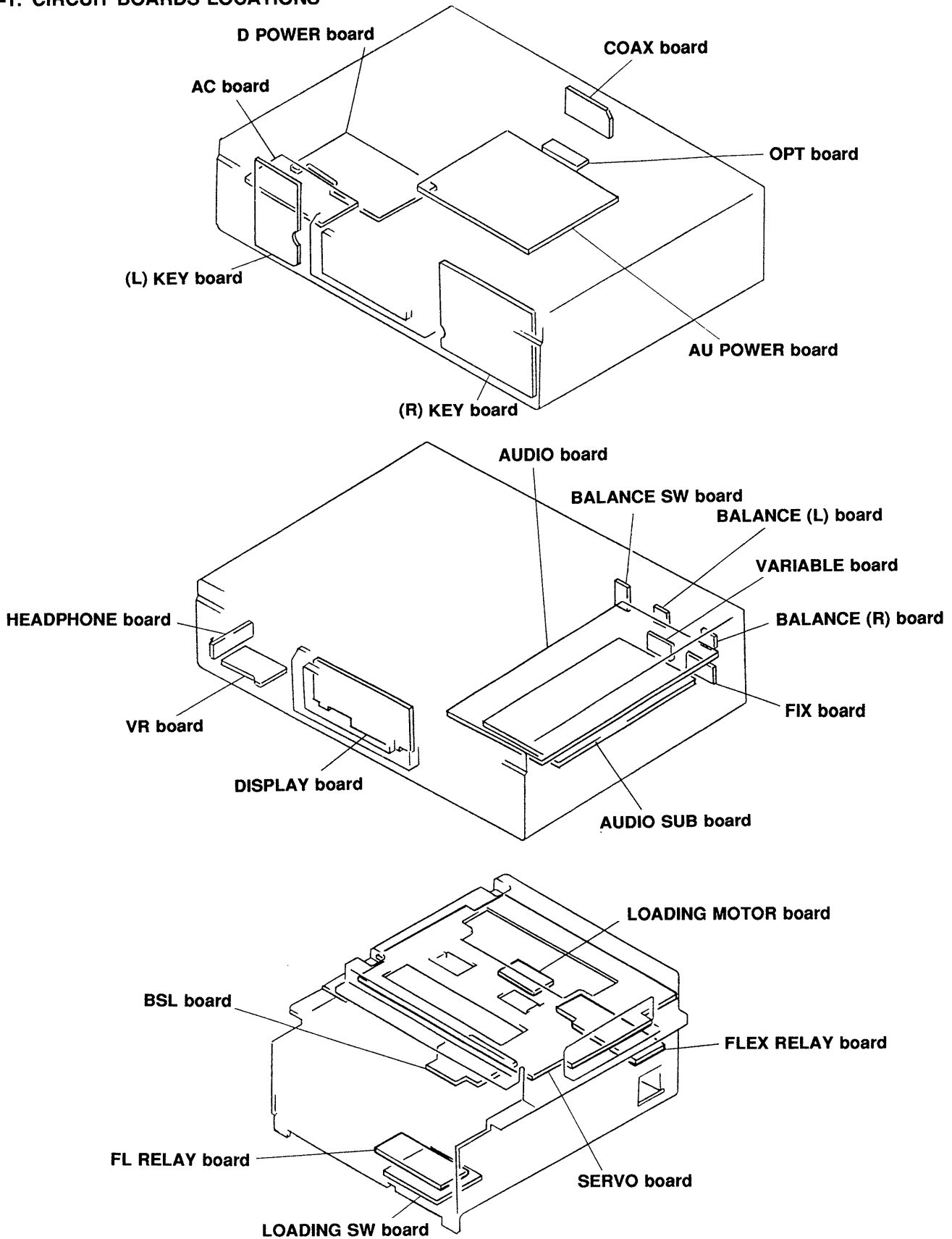
6. After the adjustment, lock the adjustment screw.

## [SERVO BOARD] — Conductor side —

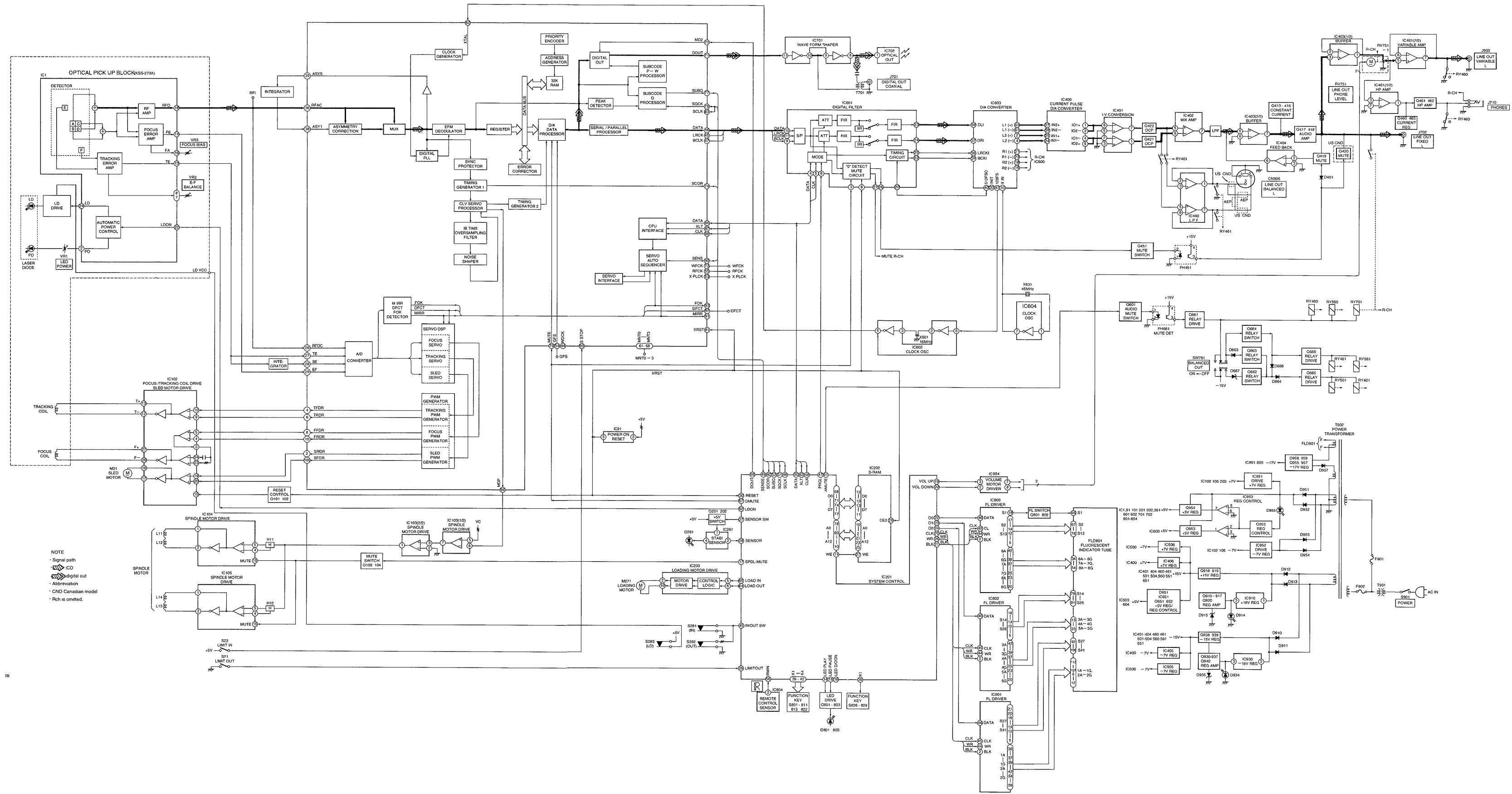


## SECTION 5 DIAGRAMS

### 5-1. CIRCUIT BOARDS LOCATIONS



5-2. BLOCK DIAGRAM



5-3. SEMICONDUCTOR LEAD LAYOUTS

<p><b>AD712JR-REEL</b> NJM4580E-D TC7WU04F μPC4558G2</p> <p>(TOP VIEW)</p>	<p><b>CXP84124-025Q</b></p>	<p><b>M5F7807L</b> M5F7818L M5F7907L M5F7918L</p> <p>IN OUT GND</p>	<p><b>2SA1083E</b></p>	<p><b>2SK208GR3</b></p>	<p><b>HZS12A2L</b> LTZ-MR19 RD4.7JS-B2 RD5.1JS-B2 RD5.6JS-B1 RD18JS-T2B1 11EQS04</p> <p>cathode anode</p>
<p><b>BA6208</b></p>	<p><b>GP-1F31T</b></p>	<p><b>M51957AL</b></p>	<p><b>2SA1349-GRBL</b> 2SC3381</p>	<p><b>2SK246-GR</b> 2SK246-Y</p>	<p><b>MAA3371X</b> MBG3371X</p> <p>ANODE CATHODE</p>
<p><b>BA6297AFP</b></p>	<p><b>GP1U90XB</b></p> <p>1: Vcc 2: Vout 3: GND</p>	<p><b>NJM2114D</b> NJM4580D-D OPA27GP</p> <p>(TOP VIEW)</p>	<p><b>2SA1606-E</b> 2SA985A-QP 2SC2275A-QP 2SC3514 2SC4159-E</p>	<p><b>DAP202K</b></p>	<p><b>PC817</b></p>
<p><b>CXA8042S</b></p> <p>(TOP VIEW)</p>	<p><b>IS471F</b></p>	<p><b>SN74HCU04AN</b></p> <p>(TOP VIEW)</p>	<p><b>2SC2545</b></p>	<p><b>DTZ4.7C</b></p> <p>ANODE CATHODE</p>	<p><b>ERB83-004</b> 10E2 1N4148M</p> <p>cathode anode</p>
<p><b>CXD2515Q</b></p>	<p><b>LB1641</b></p>	<p><b>DTA144ES</b> DTC114ES DTC144ES</p>	<p><b>2SC2878-AB</b></p>	<p><b>F10P10Q</b></p>	<p><b>GL480</b></p> <p>1 Emitter 2 Collector</p>
<p><b>CXD2562Q</b></p>	<p><b>LC7570E</b></p> <p>(TOP VIEW)</p>	<p><b>2SB734-34</b></p>	<p><b>2SD1623-S</b></p>	<p><b>DTA114EK</b> DTA144EK DTC144EK DTC114EK RN1404 RN2401 2SC2712-YG 2SC3395</p>	
<p><b>CXD8504M</b> LH5160TG</p> <p>(TOP VIEW)</p>		<p><b>2SJ76</b> 2SK213</p>			

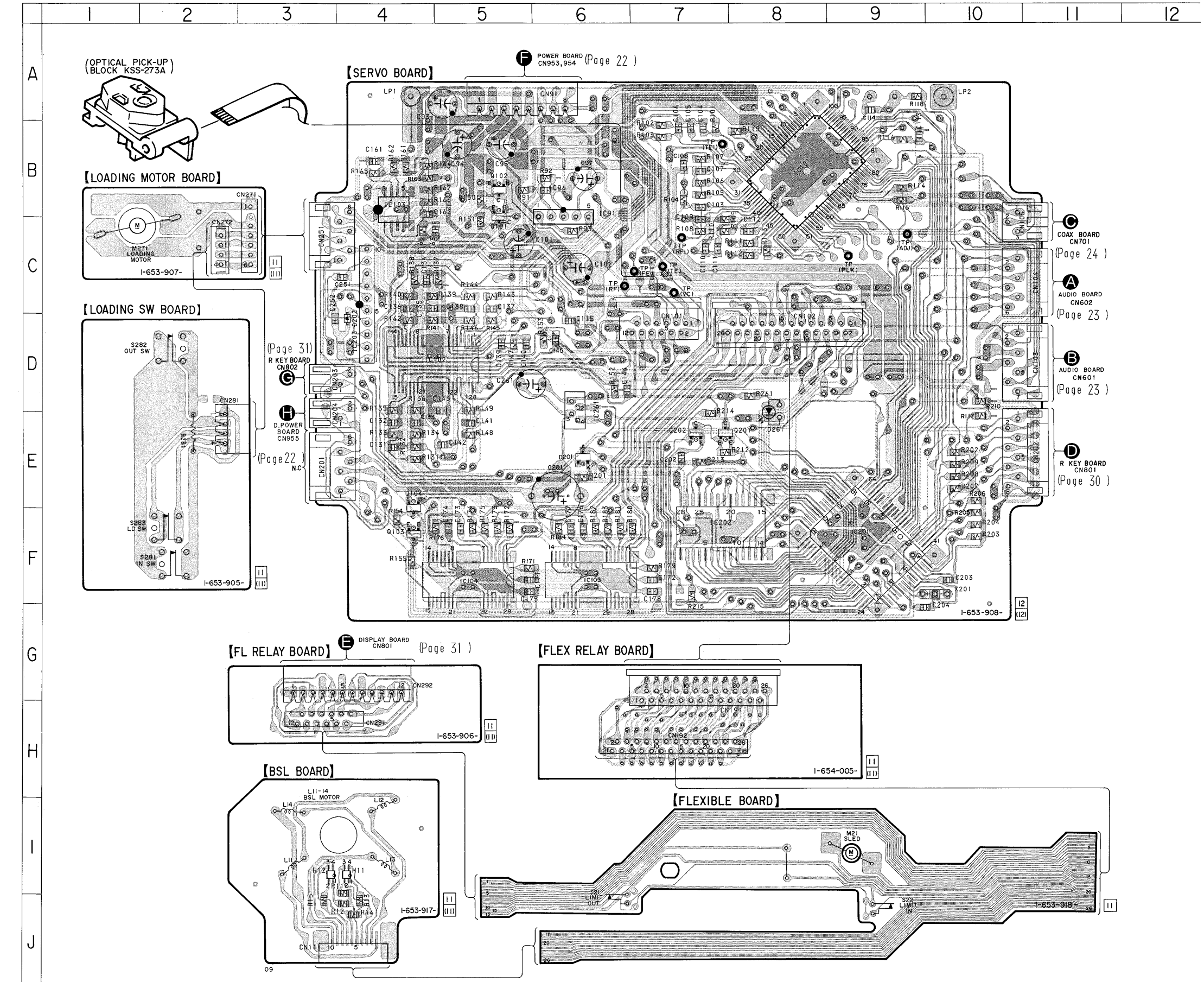
**Note:**

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- : Pattern from the side which enable seeing.
- : Pattern of the rear side.

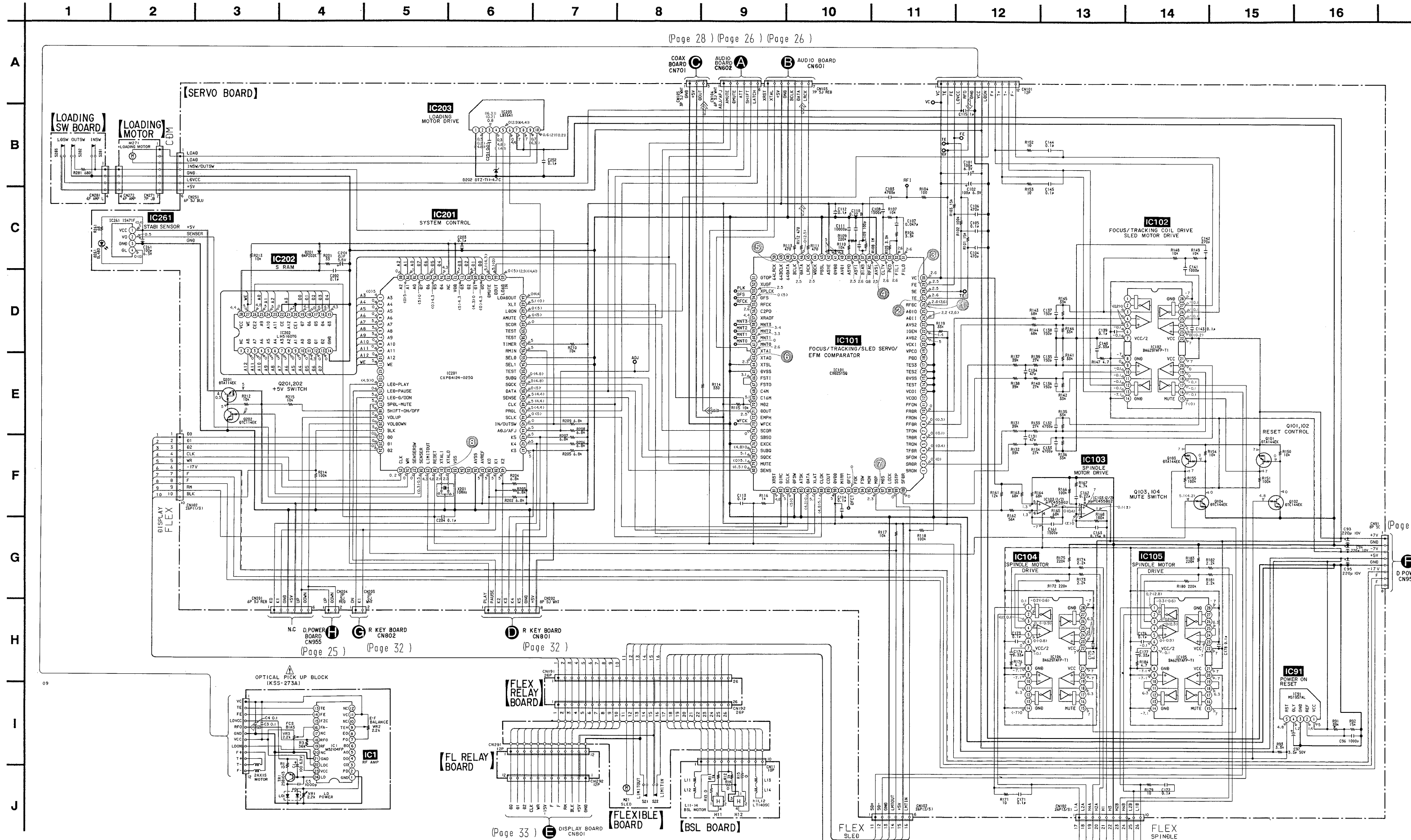
5-4. PRINTED WIRING BOARD — SERVO SECTION —  
• See page 10 for Circuit Boards Location.

**Semiconductor Location**

Ref. No.	Location
D201	E-6
D202	D-4
D261	E-8
H11	I-4
H12	I-3
IC91	B-6
IC101	B-8
IC102	D-4
IC103	B-4
IC104	F-5
IC105	F-6
IC201	F-9
IC202	F-7
IC203	C-4
IC261	D-6
Q101	C-5
Q102	B-5
Q103	F-4
Q104	E-4
Q201	E-7
Q202	E-7



5-5. SCHEMATIC DIAGRAM — SERVO SECTION —  
• See page 35 for IC Pin Functions. (IC201)



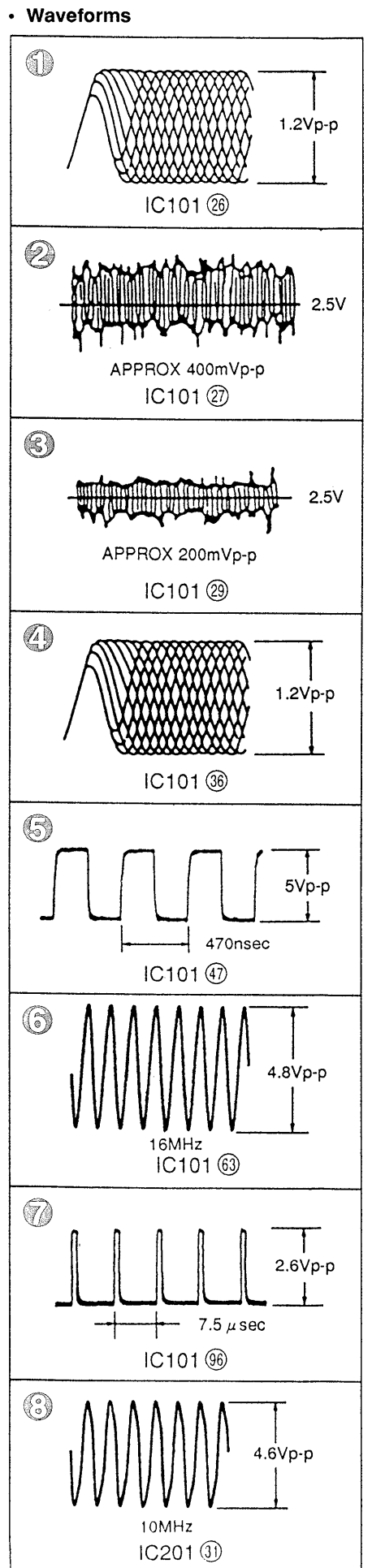
**Note:**

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

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

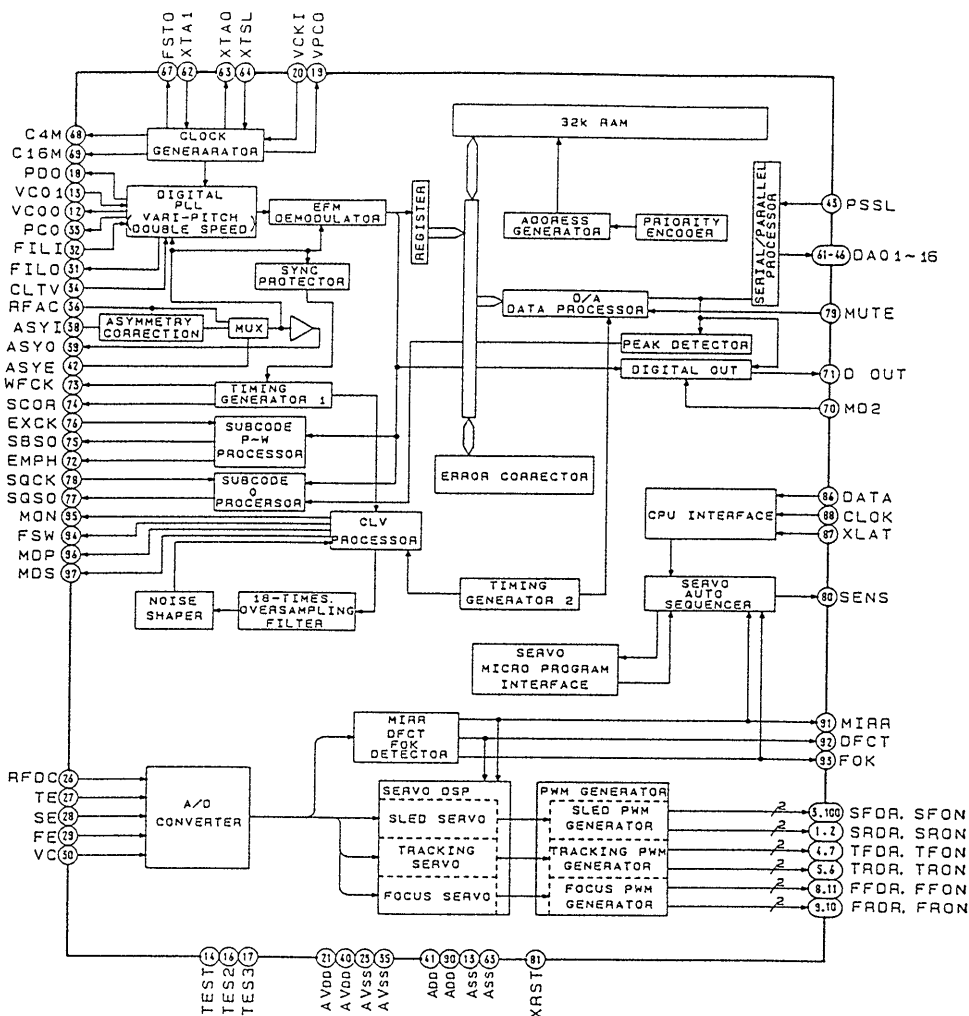
**Note:**  
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B- Line
- Voltage and waveforms are dc with respect to ground in playback mode.
- < > : PLAY
- ( ) : LOAD OUT
- (( )) : LOAD IN
- Voltagés are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\Rightarrow$  : CD
- $\Rightarrow$  : digital out

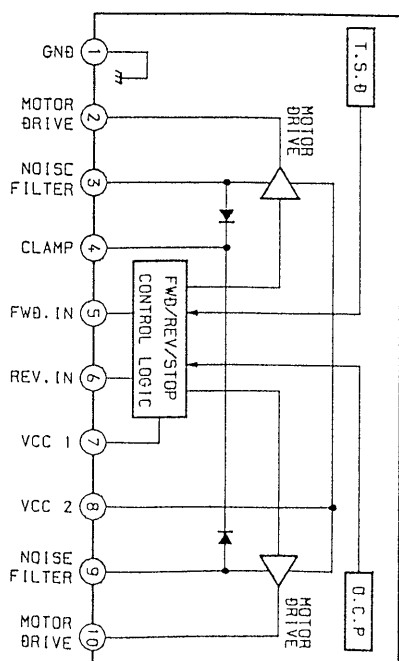


• IC Block Diagrams

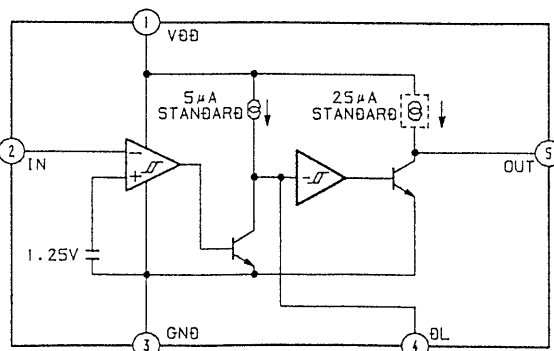
IC101 CXD2515Q



IC203 LB1641



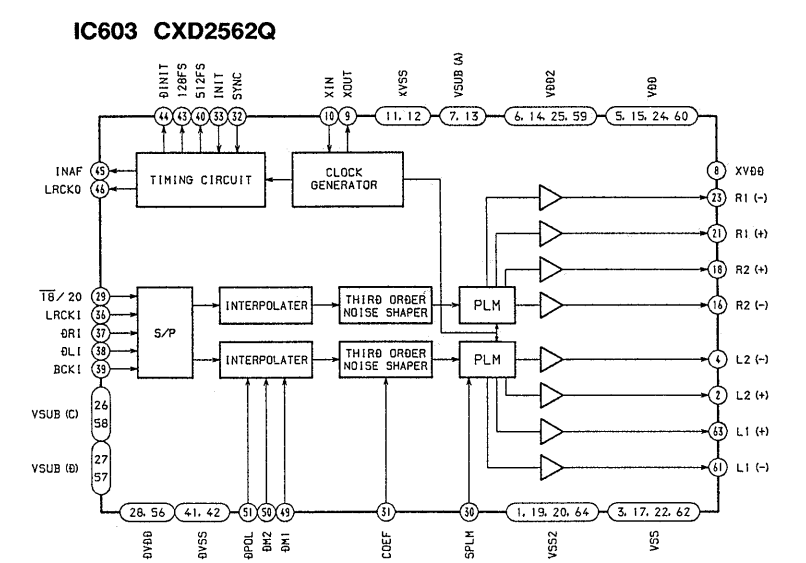
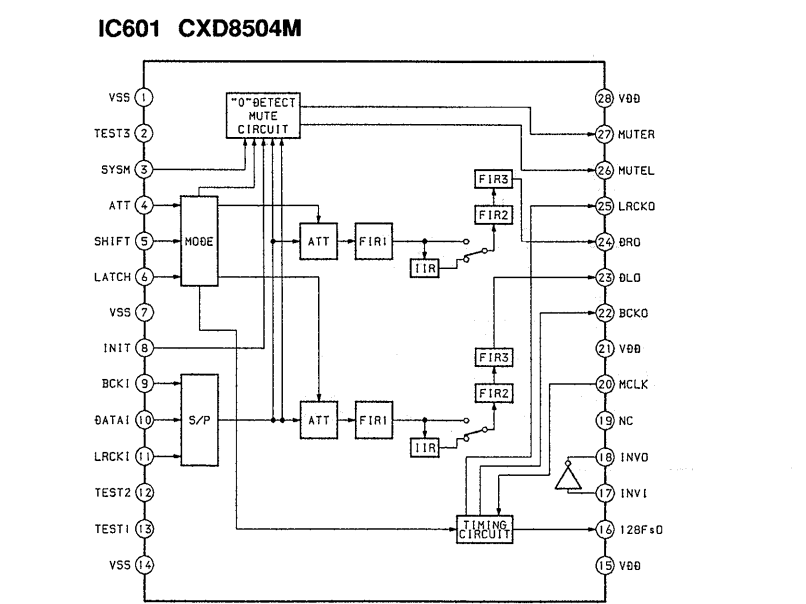
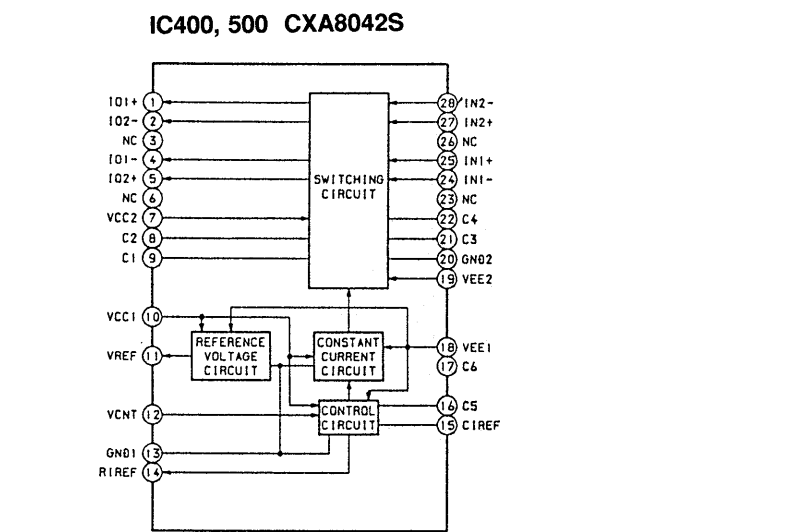
IC91 M51957AL



• See page 10 for Circuit Boards Location.  
 • See page 14 for Semiconductor Lead Layouts.

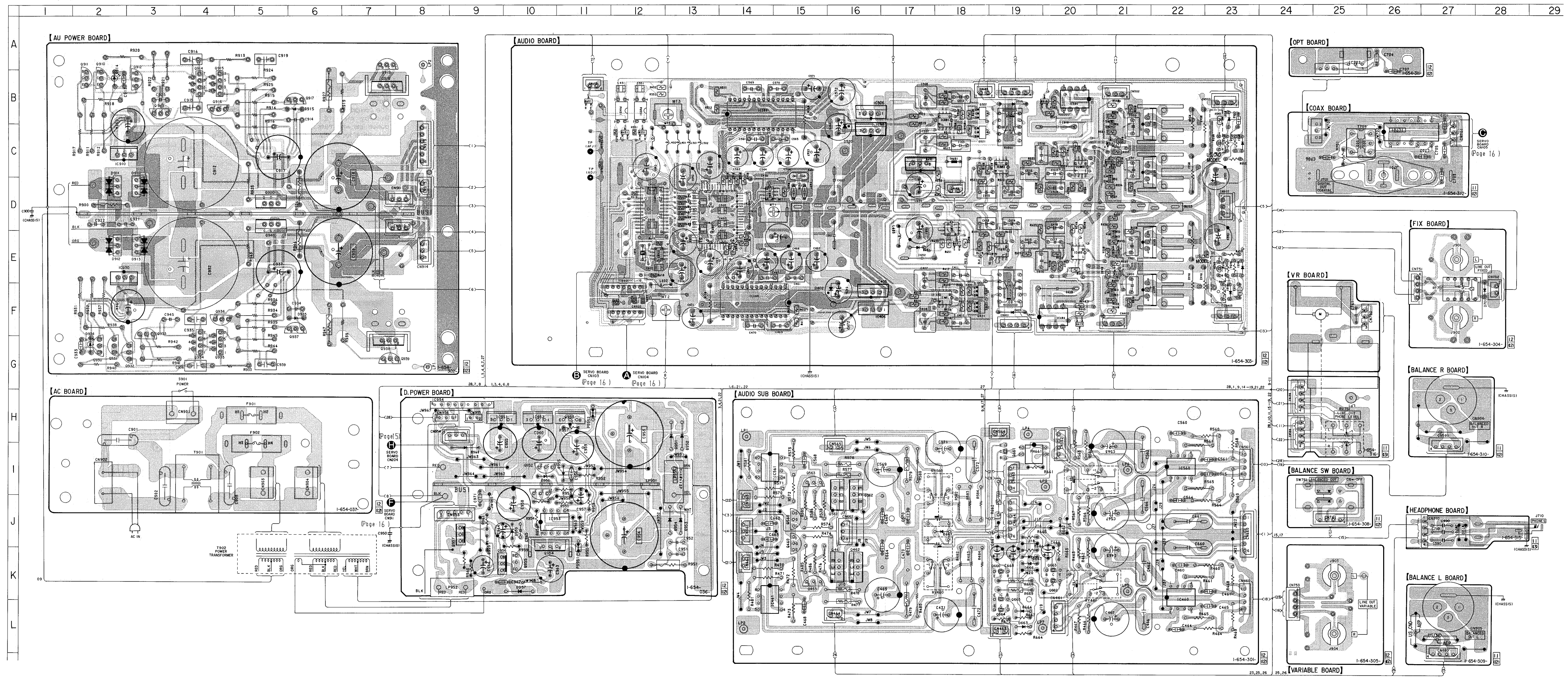
• IC Block Diagrams

• Semiconductor Location

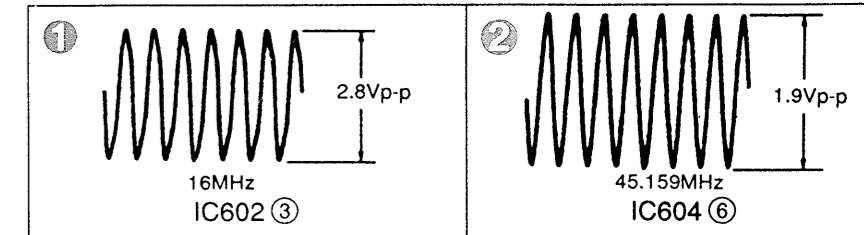


Ref. No.	Location	Ref. No.	Location
D401	F-23	Q413	F-21
D402	F-16	Q414	E-21
D405	F-19	Q415	E-21
D451	E-23	Q416	E-21
D501	B-23	Q417	F-21
D502	B-16	Q418	E-21
D505	B-19	Q419	F-20
D551	C-23	Q420	E-23
D651	E-17	Q421	F-18
D661	J-18	Q422	F-18
D662	J-20	Q451	C-12
D663	L-19	Q460	J-15
D664	L-19	Q461	K-16
D666	K-19	Q462	K-16
D677	K-19	Q463	K-15
D701	F-25	F-25	C-21
D810	D-3	Q514	C-21
D811	D-2	Q515	C-21
D812	E-2	Q516	D-21
D813	E-3	Q517	C-21
D814	B-2	Q518	C-21
D815	B-6	Q519	B-20
D834	G-2	Q520	C-23
D835	F-6	Q521	C-18
D851	H-13	Q522	B-18
D852	H-13	Q551	C-12
D853	J-13	Q560	J-15
D854	J-13	Q561	I-16
D855	I-11	Q562	I-16
D856	I-10	Q563	I-15
D857	K-10	Q601	B-11
D858	J-10	Q651	E-18
D859	J-9	Q652	C-17
D960	I-9	Q661	I-19
		Q662	K-20
		Q663	K-20
		Q664	L-19
		Q665	K-19
		Q666	K-19
IC400	F-14	Q910	B-2
IC401	F-18	Q911	B-2
IC402	E-19	Q912	B-3
IC403	E-20	Q913	B-3
IC404	F-20	Q914	B-4
IC405	F-16	Q915	B-4
IC406	F-16	Q916	B-4
IC460	K-22	Q917	B-6
IC461	K-14	Q918	B-7
IC500	B-14	Q919	A-7
IC501	B-18	Q920	D-5
IC502	C-19	Q930	G-2
IC503	C-20	Q931	G-2
IC504	B-20	Q932	F-2
IC505	C-16	Q933	F-3
IC506	B-16	Q934	G-4
IC560	I-22	Q935	G-4
IC561	I-14	Q936	F-4
IC601	D-3	Q937	F-3
IC602	E-12	Q938	G-7
IC603	D-13	Q939	G-7
IC604	D-14	Q940	D-5
IC651	D-18	Q951	I-10
IC701	C-26	Q952	I-10
IC702	A-25	Q953	H-11
IC910	C-2	Q954	J-10
IC930	E-2	Q955	K-10
IC951	H-9	Q956	K-9
IC952	H-10	Q957	J-9
IC953	J-10		
IC954	H-9		

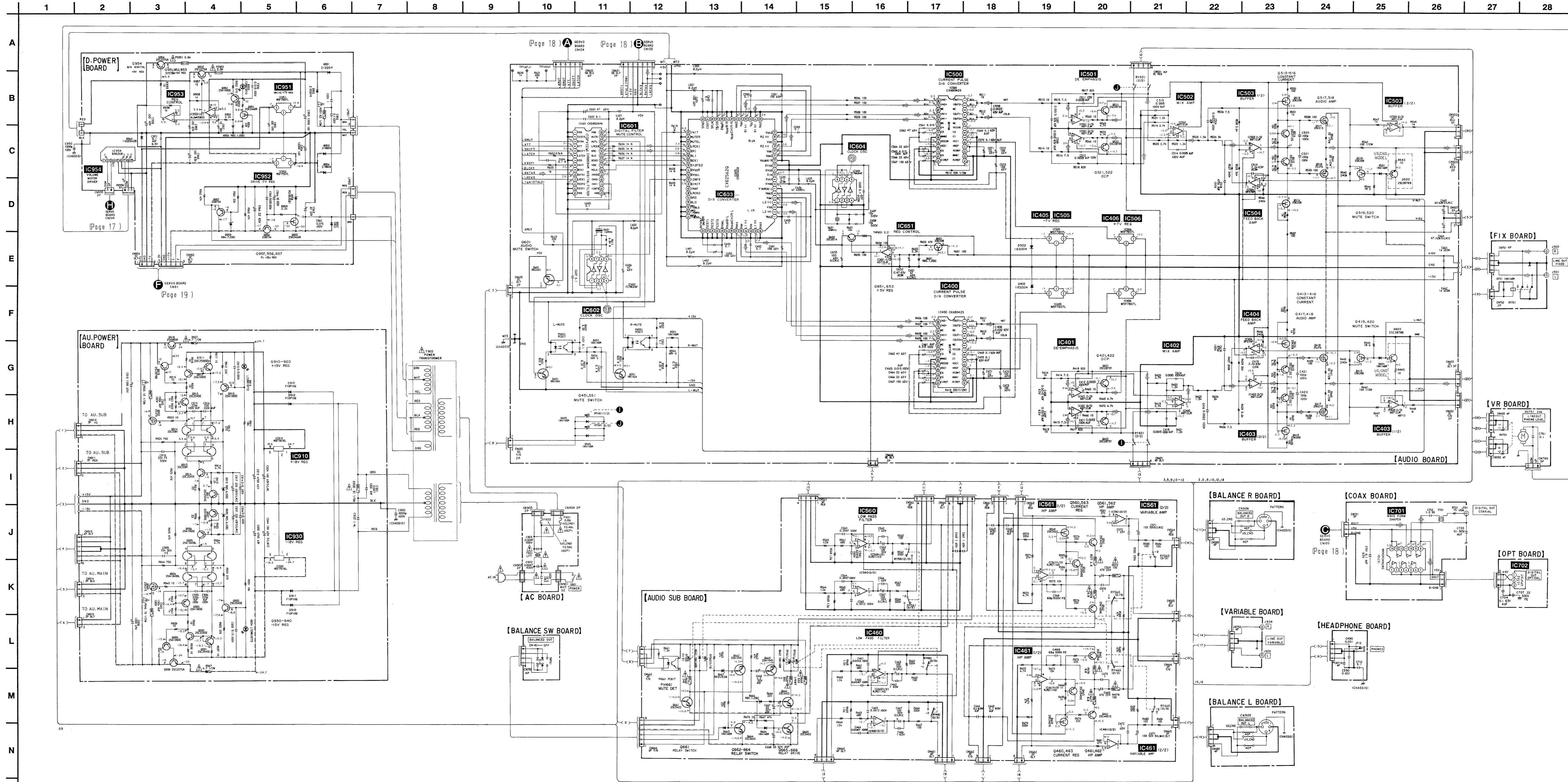
**Note:**  
 ○ : parts extracted from the component side.  
 ● : parts extracted from the conductor side.  
 ○ : Through hole.  
 ■ : parts mounted on the conductor side.  
 ▨ : Pattern from the side which enable seeing.  
 ▩ : Pattern of the rear side.  
 Abbreviation  
 CND : Canadian model.



Waveforms



5-7. SCHEMATIC DIAGRAM — MAIN SECTION —



**Note:**  
 • All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ ,  $\text{nF}$ ,  $\text{uF}$ ,  $\text{mF}$ ,  $\text{F}$  or less are not indicated except for electrolytics and tantalums.  
 • All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.  
 •  $\Delta$ : internal component.  
 •  $\square$ : fusible resistor.  
 •  $\square$ : panel designation.

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

**Note:**  
 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  
 • ———: B- Line  
 • Voltage and waveforms are dc with respect to ground under no-signal conditions.  
 • no mark: S10P  
 • Voltages are taken with a VOM (input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.  
 • Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.  
 • Circled numbers refer to waveforms.  
 • Signal path:  
 •  $\square$ : digital out  
 • Abbreviation:  
 • CND: Canadian model.

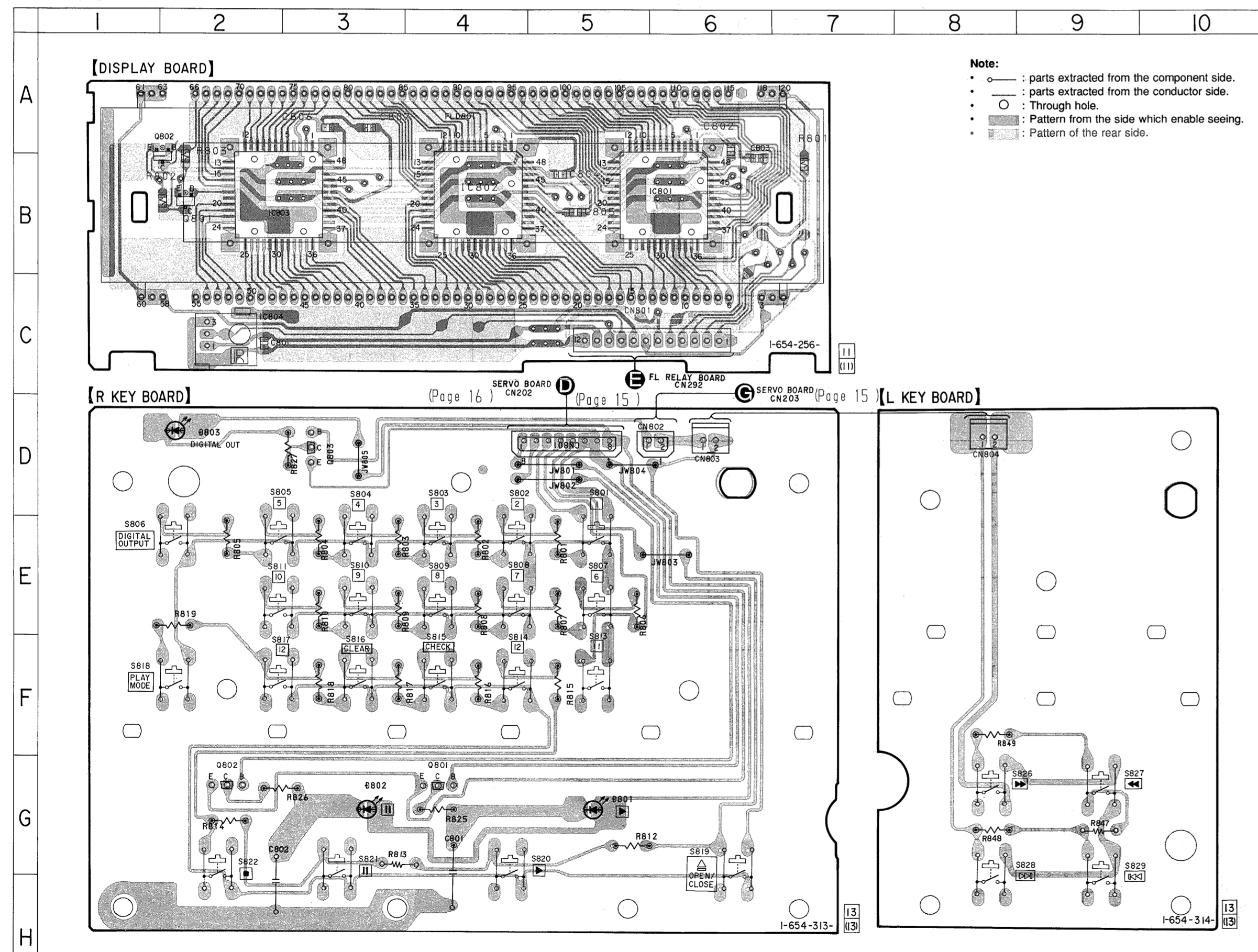


• Semiconductor Location

Ref. No.	Location
D801	G-5
D802	G-3
D803	D-2
IC801	B-6
IC802	B-4
IC803	B-2
IC804	C-2
Q801	B-2
Q801	G-4
Q802	B-2
Q802	G-2
Q803	D-3

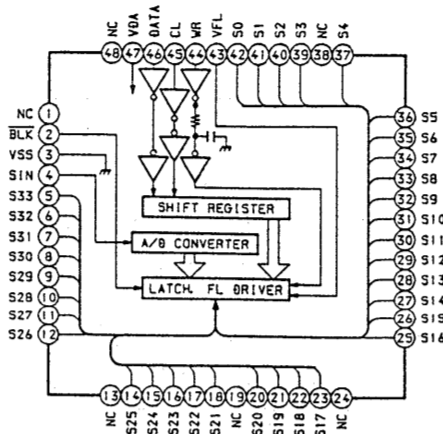
5-8. PRINTED WIRING BOARD — PANEL SECTION —

- See page 10 for Circuit Boards Location.
- See page 14 for Semiconductor Lead Layouts.

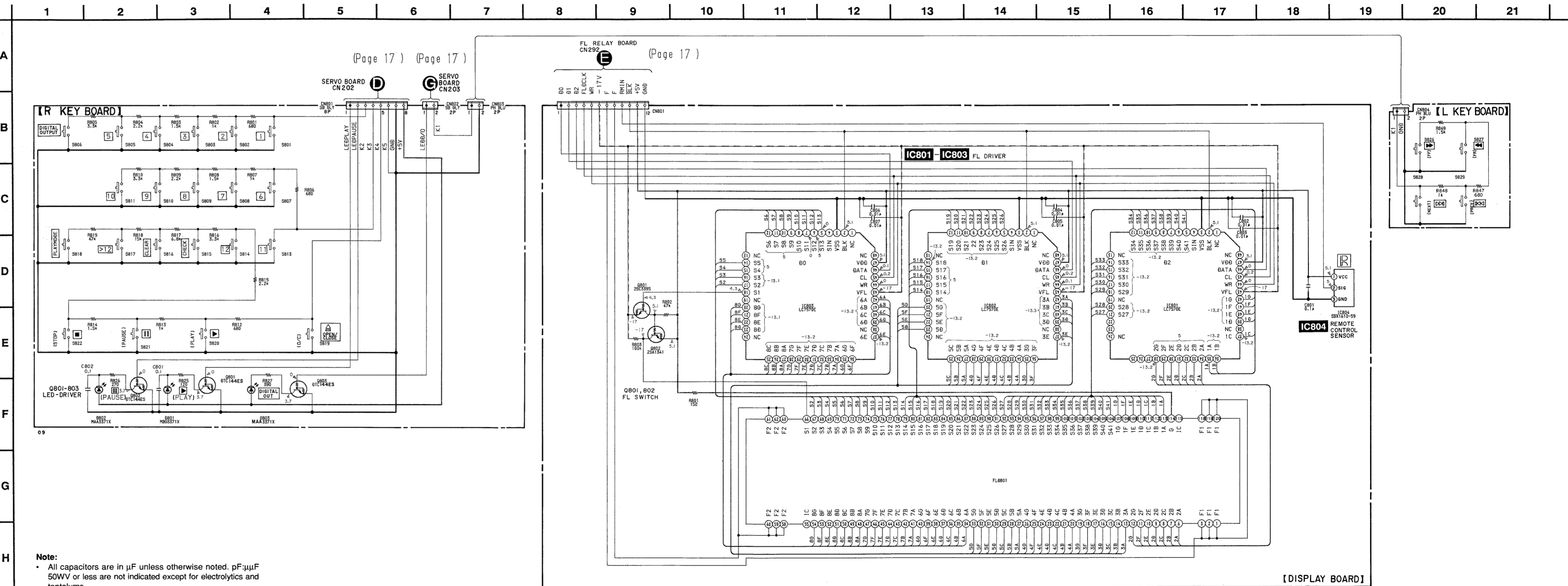


IC Block Diagram

IC801-803 LC7570E



5-9. SCHEMATIC DIAGRAM — PANEL SECTION —



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$   $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
  - □ : panel designation.
  - — : B+ Line
  - - - - - : B- Line
  - Voltage and waveforms are dc with respect to ground under no-signal conditions.
  - no mark : STOP
  - Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.

## 5-10. IC PIN FUNCTIONS

### • IC201 System Control (CXP84124-025Q)

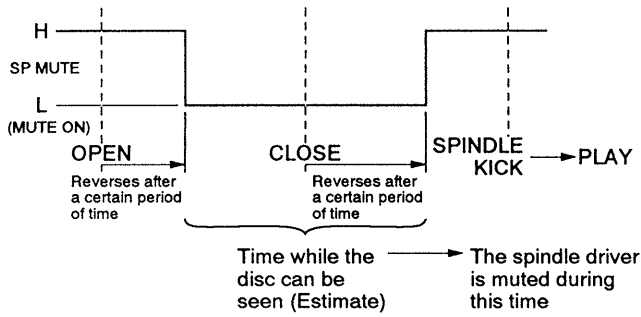
Pin No.	Pin Name	I/O	Function
1	A3	O	Output of address to S.RAM (LH5160TG)
2	A4	O	
3	A5	O	
4	A6	O	
5	A7	O	
6	A8	O	
7	A9	O	
8	A10	O	
9	A11	O	
10	A12	O	
11	WE	O	Output of write enable to S.RAM
12	—	O	Not used (open)
13	—	O	
14	LED-PLAY	O	PLAY Lamp output "H": ON
15	LED-PAUSE	O	PAUSE Lamp output "H": ON
16	LED-D/O ON	O	DIGITAL OUT Lamp output
17	SPDL-MUTE	O	Drive IC MUTE output for spindle. "L": ON
18	SHIFT-ON/OFF	I	D/F mode control input
19	VOL UP	O	Headphone motor volume up output
20	VOL DOWN	O	Headphone motor volume down output
21	BLK	O	Blank output to fluorescent indicator tube driver. (LC7570E). When the indicator tube lights: "H"
22	D0	O	Serial data output to fluorescent indicator tube driver. (LC7570E).
23	D1	O	
24	D2	O	
25	CLK	O	Clock output to fluorescent indicator tube driver. (LC7570E).
26	WR	O	Latch output to fluorescent indicator tube driver. (LC7570E).
27	SENDER SW	O	Senser power supply ON/OFF control output for stabilizer detection
28	SENDER	I	Stabilizer detection input
29	LIMIT OUT	I	Sled out switch input "L": SW ON
30	RESET	I	Microcomputer reset input
31	XTAL I	I	Oscillator connector pin (10 MHz)
32	XTAL O	O	
33	V <sub>SS</sub>	—	Connected to GND
34	—	—	Not used (open)
35	—	—	
36	AV <sub>SS</sub>	—	A/D converter GND
37	AV <sub>REF</sub>	—	A/D converter reference voltage input (Connected to +5V)
38	K0	I	Key data input (A/D input). When the key is not pressed: "H"
39	K1	I	
40	K2	I	

Pin No.	Pin Name	I/O	Function
41	K3	I	} Key data input (A/D input). When the key is not pressed: "H"
42	K4	I	
43	K5	I	Model distinction
44	ADJ/AFJ	I	Test mode input. The equipment is fixed at "H"
45	IN/OUT SW	I	Loading IN/OUT switch input
46	SCLK	O	Serial read out data read out clock output to CXD2515Q
47	PRGL	O	Program latch to digital filter
48	CLK	O	Serial data transfer clock output to CXD2515Q, CXD8504M
49	SENSE	I	SENSE signal input from CXD2515Q
50	DATA	O	Serial data output to CXD2515Q, CXD8504M
51	SQCK	O	Sub code Q read out clock output to CXD2515Q
52	SUBQ	I	Sub code Q data input from CXD2515Q
53	TEST	O	Not used (open)
54	SEL 1	I	} Model distinction
55	SEL 0	I	
56	RMIN	I	Remote control signal input
57	TIMER	I	Not used
58	TEST	O	} Not used (open)
59	TEST	O	
60	SCOR	I	Sub code sync input from CXD2515Q. Start to read out the sub code receiving this signal
61	AMUTE	O	Analog mute output. "H": mute on
62	LDON	O	Laser diode ON/OFF control output "H": ON
63	XLT	O	Serial data latch output to CXD2515Q
64	LOAD OUT	O	Output to rotate loading motor in the loading out direction. "H": OUT
65	LOAD IN	O	Output to rotate loading motor in the loading in direction. "H": IN
66	DOUT	O	Digital output ON/OFF control output
67	DMUTE	O	Muting control output
68	D0	I/O	} Input and output of data signal with S.RAM (LH5160TG)
69	D1	I/O	
70	D2	I/O	
71	D3	I/O	
72	VDD	I	Power supply terminal (+5V)
73	NC	-	Connected to +5V
74	D4	I/O	} Input and output of data signal with S.RAM (LH5160TG)
75	D5	I/O	
76	D6	I/O	
77	D7	I/O	
78	A0	O	} Address signal output to S.RAM (LH5160TG)
79	A1	O	
80	A2	O	

• **Main Ports**

⑰ **SPINDLE MUTE**

From the viewpoint of performance of the set, the disc must not move nor sway when the disc table opens. These problems however occur in the actual case due to the offset voltage generated and the voltage generated because of the positional relation between the BSL coil and Hall element. The BSL (IC104, IC105) driver is therefore muted while the tray is open. Pin ⑰ provides the timing for this.



⑳ **SENER**

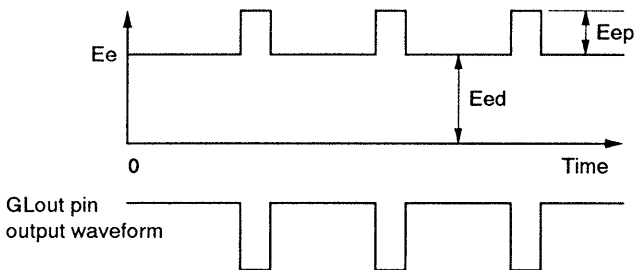
The results of the detection of IC261 IS471F is output to this pin. It becomes L when there is no stabilizer (when light reaches). The next process of imposing the next focus is not performed. (Effective only when ㉗ is H.) Therefore, it must be noted that if PLAY is performed when the servo mount at the top of the CDM is not assembled properly, the detection circuit operates and this pin does not operate. It does not operate, refer to 1. Service Note "Preparations for Adjustment and Measurement" on page 4.

㉑ **BLANK**

This port is required because the display tube in this set static-lights up and a dedicated screwdriver is required. It is basically a RESET pin. But as problems will occur if used also as RESET, timings are specially provided using the microprocessor.

㉗ **SENER SW**

As IC261 IS471F operate in pulse as shown in the figure, the sound quality may be affected if operated constantly. As the purpose of IC261 is to detect if the presence of the stabilizer, it should be operated only when the tray is drawn in. IC261 operates as it is H only at this time. Normally it is L.



\* Eep is the luminance of the signal light tuned with the low level timing of the GLout pin output.  
Eed is the luminance of the d.c. light. The light source is the infrared-emitting diode ( $\lambda p=940$  nm).

## SECTION 6 EXPLODED VIEWS

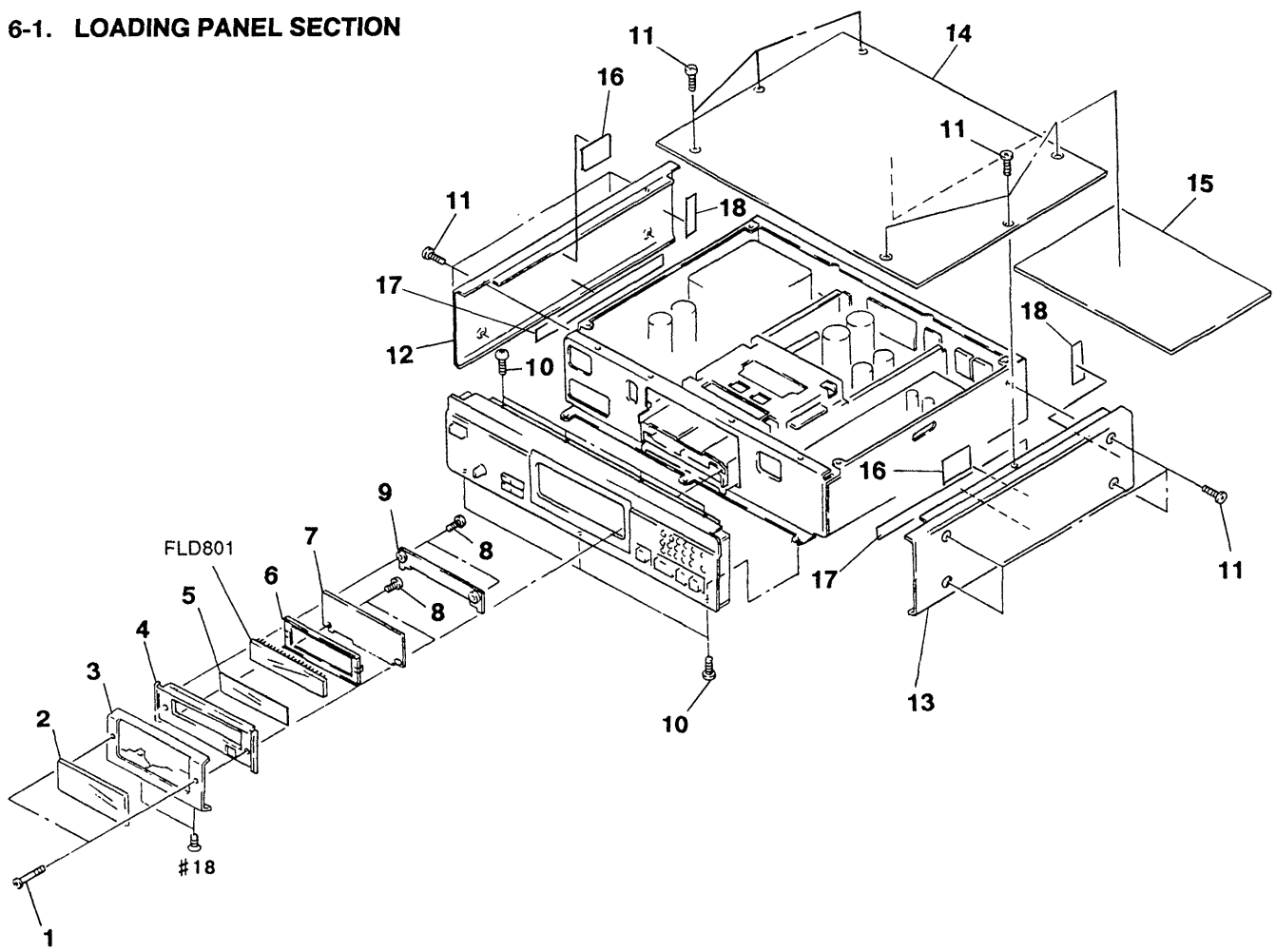
### NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) . . . (RED)  
                                  ↑                                  ↑  
                                  Parts color     Cabinet's color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation  
CND : Canadian model  
G : German model

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

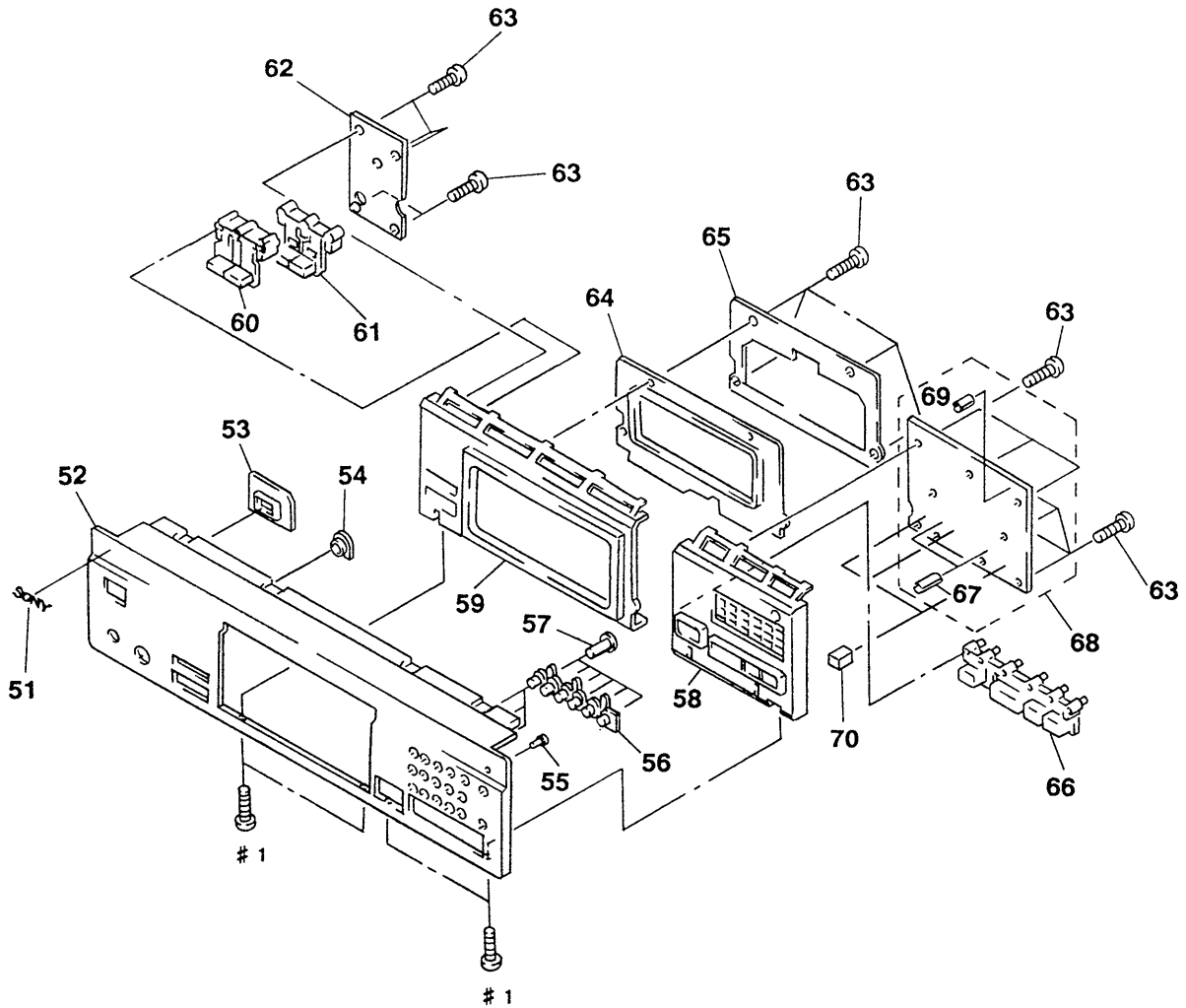
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 6-1. LOADING PANEL SECTION



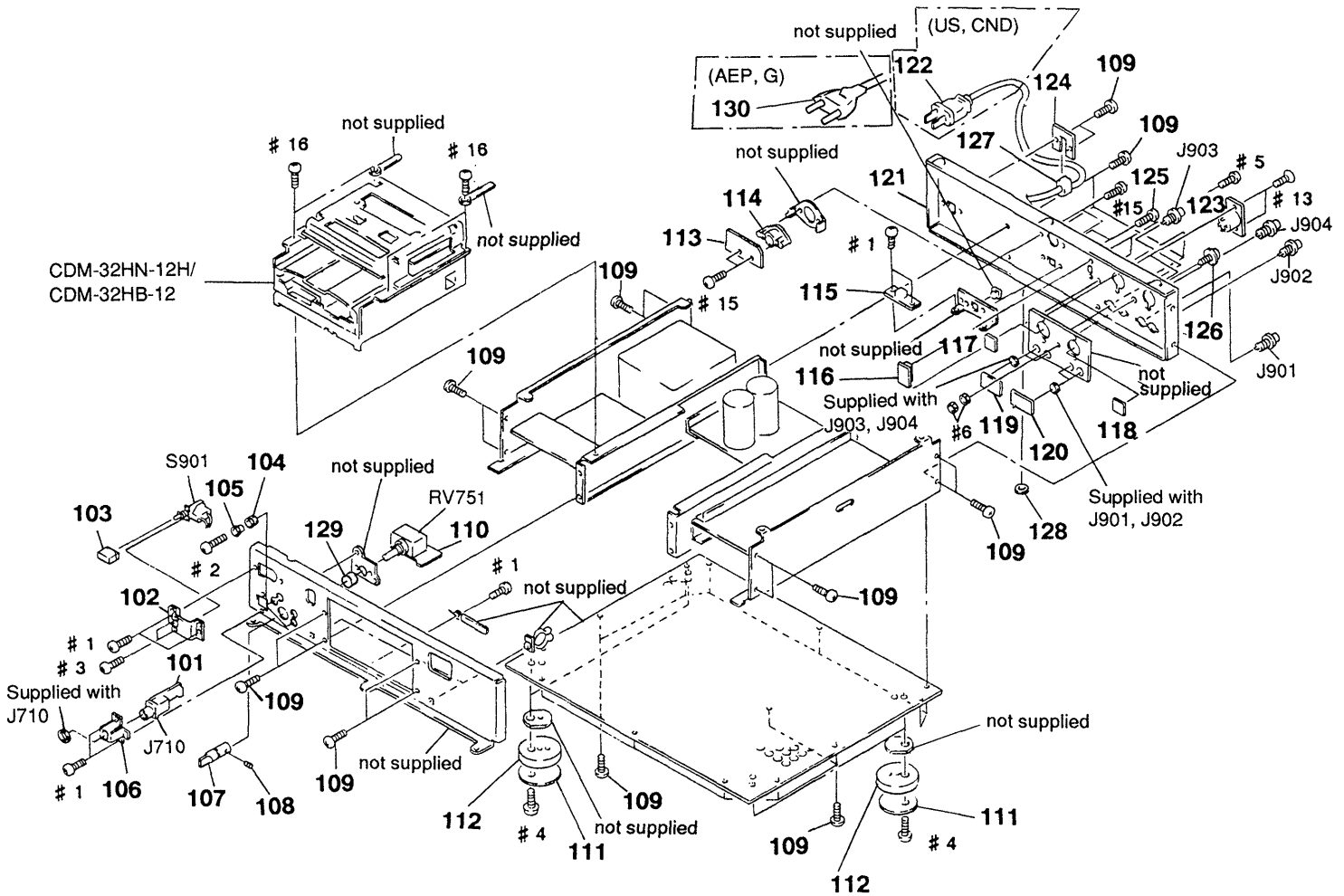
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-970-998-01	BOLT (3X24), HEXAGON HOLE	(BLACK).. (BLACK)	10	4-929-074-01	SCREW (3X8)	
1	4-970-998-11	BOLT (3X24), HEXAGON HOLE	(SILVER).. (GOLD)	11	4-924-242-11	SCREW (M3X6), FLAT HEAD (BLACK).. (BLACK)	
2	4-969-832-01	PLATE, INDICATION		11	4-924-242-61	SCREW (M3X6), FLAT HEAD (SILVER).. (GOLD)	
3	4-969-830-01	PANEL, LOADING (BLACK)		12	4-969-823-11	PLATE (L), SIDE (GOLD)	
3	4-969-830-11	PANEL, LOADING (GOLD)		12	4-969-823-01	PLATE (L), SIDE (BLACK)	
4	4-969-831-01	BASE, LOADING PANEL (BLACK)		13	4-969-824-11	PLATE (R), SIDE (GOLD)	
4	4-969-831-11	BASE, LOADING PANEL (GOLD)		14	4-969-864-01	PLATE, TOP (GOLD)	
5	4-969-834-01	FILTER		14	4-969-864-12	PLATE, TOP (BLACK)	
* 6	4-969-510-01	HOLDER (FL)		* 15	4-972-444-01	ABSORBENT, VIBRATION	
* 7	1-654-256-11	DISPLAY BOARD		16	4-971-708-01	PLATE, VIBRATION PROOF	
8	4-951-620-41	SCREW (2.6), +BVTP (BLACK).. (BLACK)		17	4-972-439-01	SPACER (SCREW HEAD)	
8	4-951-620-51	SCREW (2.6), +BVTP (SILVER).. (GOLD)		18	4-972-440-01	SPACER	
9	4-969-833-01	COVER, LOADING PANEL (BLACK)		FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT	
9	4-969-833-11	COVER, LOADING PANEL (GOLD)					

## 6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-942-568-01	EMBLEM (NO. 5), SONY (SILVER).. (BLACK)		59	4-969-845-12	BASE (L), PANEL (BLACK)	
51	4-942-568-21	EMBLEM (NO. 5), SONY (GOLD).. (GOLD)		60	X-4945-318-1	BUTTON BLOCK (FF) ASSY (GOLD)	
52	4-969-848-01	PANEL, FRONT (GOLD)		60	X-4945-727-1	BUTTON BLOCK (FF) ASSY (BLACK)	
52	4-969-848-12	PANEL, FRONT (BLACK)		61	X-4945-319-1	BUTTON BLOCK (AMS) ASSY (GOLD)	
53	4-969-842-01	ESCUTCHEON (POWER) (GOLD)		61	X-4945-728-1	BUTTON BLOCK (AMS) ASSY (BLACK)	
53	4-969-842-11	ESCUTCHEON (POWER) (BLACK)		* 62	1-654-314-11	(L) KEY BOARD	
54	4-935-939-21	ESCUTCHEON, KNOB (GOLD)		63	4-951-620-01	SCREW (2. 6X8), +BVTP	
54	4-935-939-31	ESCUTCHEON, KNOB (BLACK)		64	4-969-818-01	PACKING	
55	4-941-214-01	INDICATOR		65	4-969-819-11	RETAINER (PACKING)	
* 56	4-969-847-01	GUIDE (BUTTON DIA. 4)		66	X-4945-317-1	BUTTON BLOCK (PLAY) ASSY (GOLD)	
57	4-969-846-01	BUTTON (DIA. 4) (GOLD)		66	X-4945-726-1	BUTTON BLOCK (PLAY) ASSY (BLACK)	
57	4-969-846-12	BUTTON (DIA. 4) (BLACK)		* 67	4-923-532-41	SPACER, LED	
* 58	4-969-844-01	BASE (R), PANEL (GOLD)		* 68	A-4673-304-A	(R) KEY BOARD, COMPLETE	
58	4-969-844-12	BASE (R), PANEL (BLACK)		* 69	4-923-532-21	SPACER, LED	
* 59	4-969-845-01	BASE (L), PANEL (GOLD)		* 70	4-972-442-01	SPACER (BUTTON REPULSION)	

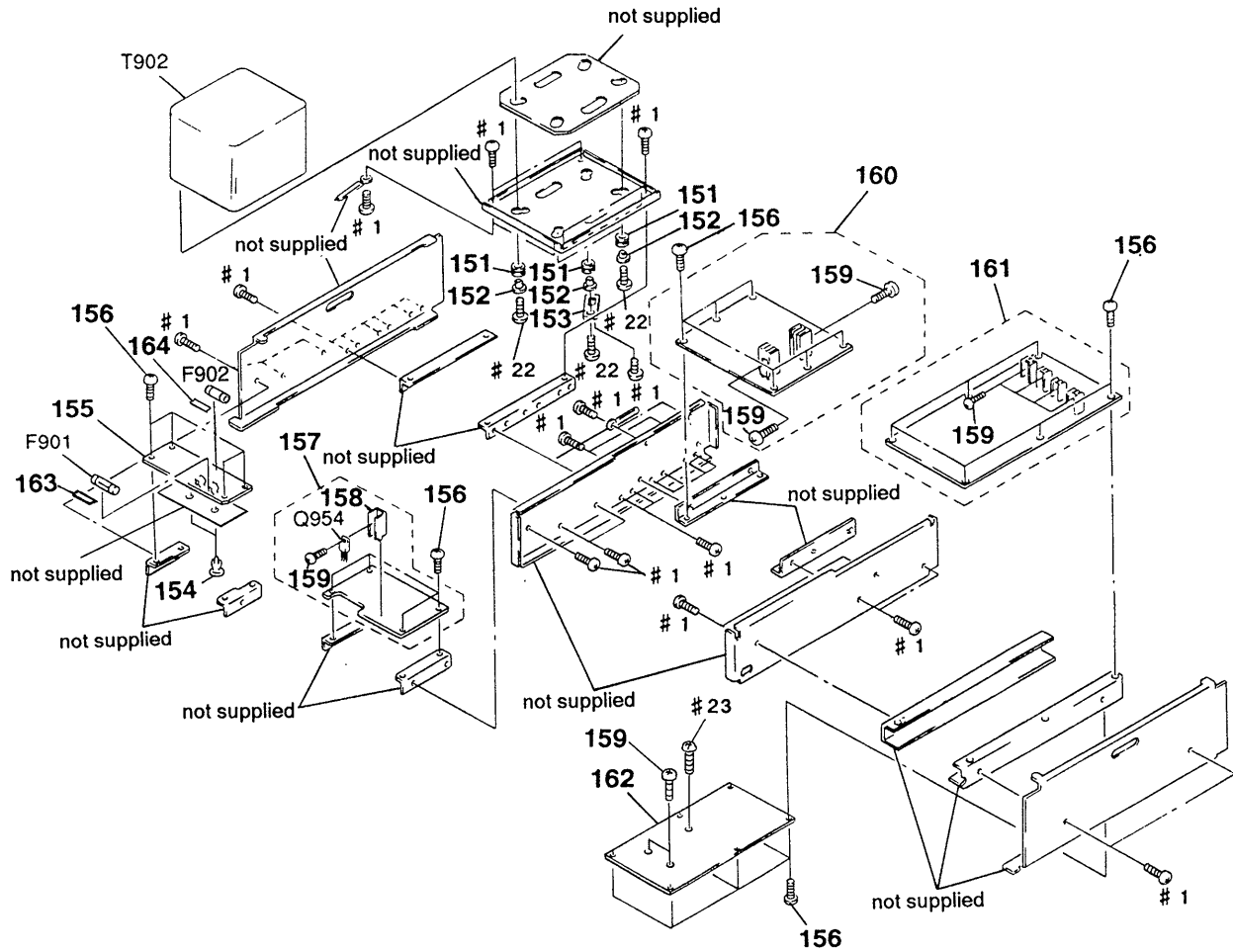
### 6-3. CHASSIS SECTION 1






<p>The components identified by mark <math>\triangle</math> or dotted line with mark <math>\triangle</math> are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque <math>\triangle</math> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	1-654-315-11	HEADPHONE BOARD		* 121	4-969-861-21	PANEL, BACK (CND)	
* 102	4-969-866-01	BRACKET (POWER SW)		* 121	4-969-861-31	PANEL, BACK (AEP)	
103	X-4934-014-1	KNOB (POWER) ASSY (BLACK)		* 121	4-969-861-41	PANEL, BACK (G)	
103	X-4941-629-1	KNOB (POWER) ASSY (GOLD)		$\triangle$ 122	1-690-958-11	CORD, POWER (US, CND)	
* 104	4-888-798-11	BUSHING, RUBBER		123	1-563-030-11	CONNECTOR (RECEPTACLE) 3P	
				* 124	4-923-873-01	BRACKET, CORD STOPPER	
* 105	4-928-026-01	COLLAR (B)		125	3-703-685-21	SCREW (+BV 3X8)	
* 106	4-969-865-01	BRACKET (HP)		126	4-886-821-51	SCREW, CASE, (M3X14)	
107	4-972-195-01	KNOB, VOLUME (GOLD)		* 127	3-703-244-00	BUSHING (2104), CORD (AEP, G)	
107	4-972-195-11	KNOB, VOLUME (BLACK)		127	4-916-783-01	BUSHING, CORD (US, CND)	
108	3-701-505-00	SET SCREW, DOUBLE POINT 3X3		128	4-971-099-01	WASHER (P)	
				129	4-972-196-01	ESCUTCHEON	
109	4-929-074-01	SCREW (3X8)		$\triangle$ 130	1-558-568-21	CORD, POWER (AEP, G)	
* 110	1-654-316-11	VR BOARD		J710	1-568-519-31	JACK, LARGE TYPE (PHONES) (BLACK)	
111	4-970-124-11	CUSHION (F50180S)		J710	1-568-519-61	JACK, LARGE TYPE (PHONES) (GOLD)	
112	4-970-487-01	FOOT (F50180S)		J901	1-568-918-41	JACK, PIN 1P (FIXED OUT L)	
* 113	1-654-312-11	COAX BOARD		J902	1-568-918-31	JACK, PIN 1P (FIXED OUT R)	
* 114	4-913-152-01	ESCUTCHEON, D/O		J903	1-568-918-41	JACK, PIN 1P (VARIABLE OUT L)	
* 115	1-654-311-11	OPT BOARD		J904	1-568-918-31	JACK, PIN 1P (VARIABLE OUT R)	
* 116	1-654-308-11	BALANCE SW BOARD		RV751	1-241-792-11	RES, VAR, CARBON 20K/20K	
* 117	1-654-309-11	BALANCE (L) BOARD				(LINE OUT/PHONE LEVEL)	
* 118	1-654-310-11	BALANCE (R) BOARD		$\triangle$ S901	1-571-250-41	SWITCH, PUSH (AC POWER) (1 KEY)	
* 119	1-654-305-11	VARIABLE BOARD					
* 120	1-654-304-11	FIX BOARD					
* 121	4-969-861-11	PANEL, BACK (US)					

### 6-4. CHASSIS SECTION 2



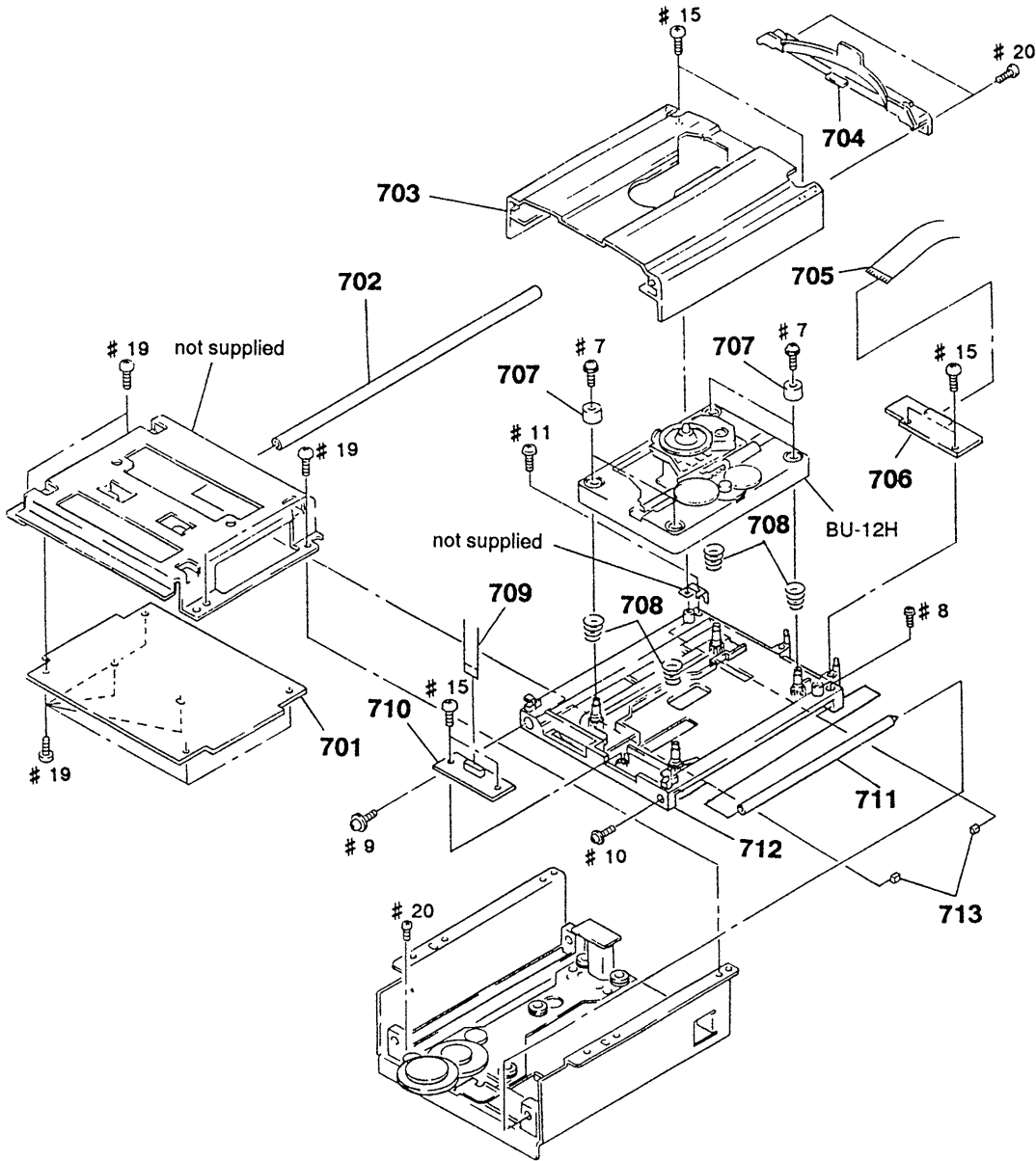
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	4-888-798-00	BUSHING, RUBBER		* 161	A-4673-569-A	AUDIO BOARD, COMPLETE (US, CND)	
152	4-928-068-01	COLLAR (C)		* 162	A-4673-477-A	AUDIO SUB BOARD, COMPLETE	
* 153	4-952-424-01	PLATE (TRANSFORMER), GROUND		163	3-701-946-34	LABEL, FUSE RATING (US, CND)	
154	3-531-576-11	RIVET		164	3-701-946-30	LABEL, FUSE RATING (US, CND)	
* 155	1-654-307-11	AC BOARD		 F901	1-532-066-00	FUSE, TIME-LAG (0.4A 250V) (AEP, G)	
156	4-967-961-01	SCREW (3X8) (SPECIAL)		 F901	1-532-739-11	FUSE, GLASS TUBE (0.8A 125V) (US, CND)	
* 157	A-4673-453-A	D POWER BOARD, COMPLETE		 F902	1-532-279-00	FUSE, TIME-LAG (0.5A 250V) (AEP, G)	
* 158	4-941-237-01	HEAT SINK		 F902	1-532-740-11	FUSE, GLASS TUBE (1A 125V) (US, CND)	
* 159	2-259-121-01	SCREW, TR		Q954	8-729-141-58	TRANSISTOR 2SC2275A-QP	
* 160	A-4673-309-A	AU POWER BOARD, COMPLETE		 T902	1-427-822-11	TRANSFORMER, POWER (US, CND)	
* 161	A-4673-303-A	AUDIO BOARD, COMPLETE (AEP, G)		 T902	1-427-823-11	TRANSFORMER, POWER (AEP, G)	

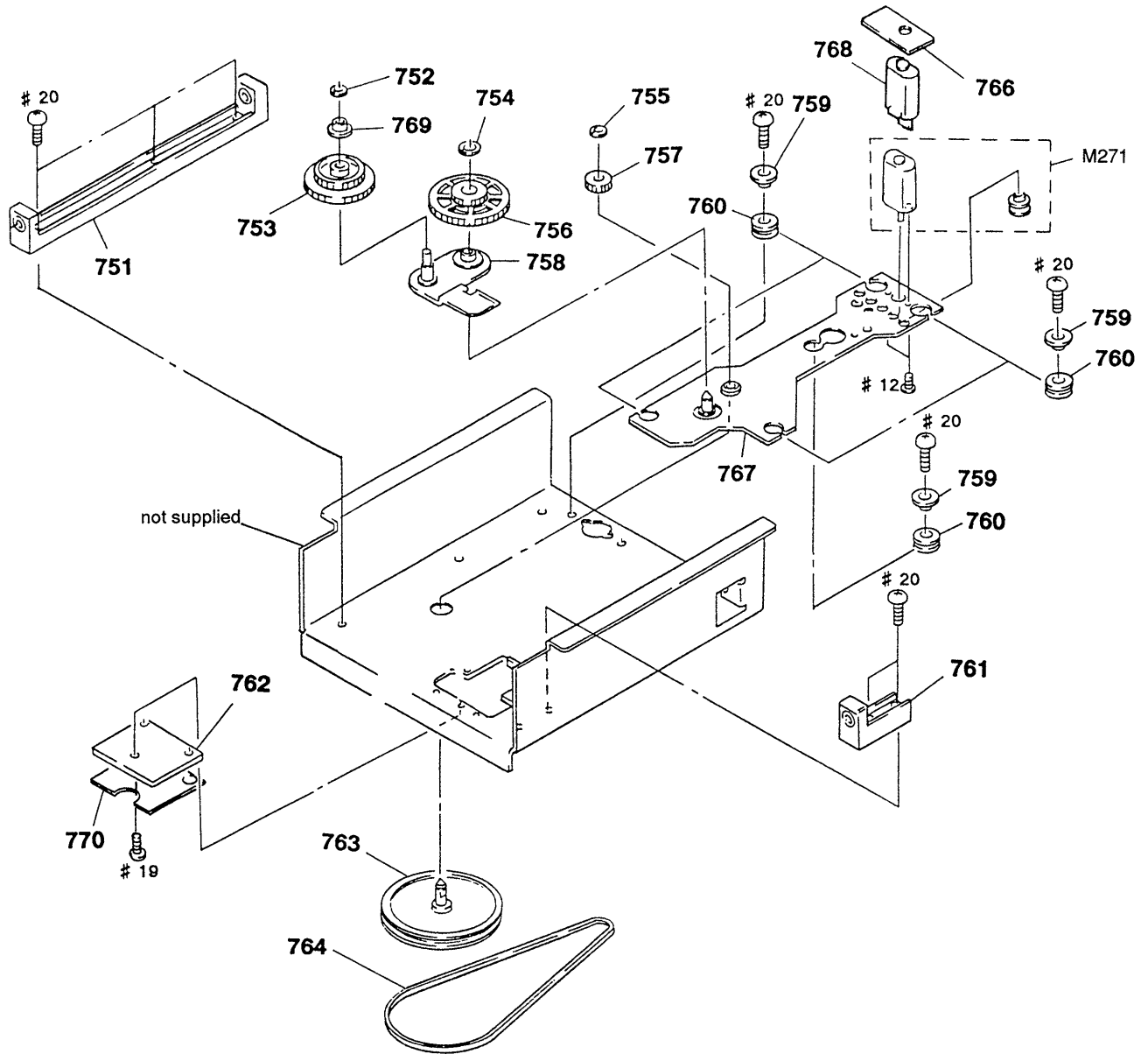


**6-5. CD MECHANISM SECTION-1  
(CDM32HN-12H/CDM32HB-12H)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 701	A-4673-224-A	SERVO BOARD, COMPLETE		707	4-927-634-01	HOLDER (SP)	
* 702	4-968-903-01	SHAFT (MAIN)		708	4-948-375-01	SPRING (F), COIL	
703	4-968-907-01	PANEL (DRAWER)		709	1-769-109-11	WIRE (FLAT TYPE)(12 CORE)	
704	4-971-000-01	COVER (CD) (BLACK)		* 710	1-653-906-11	FL RELAY BOARD	
704	4-971-000-11	COVER (CD) (GOLD)		* 711	4-968-904-01	SHAFT (SUB)	
705	1-769-110-11	WIRE (FLAT TYPE) (26 CORE)		* 712	4-968-906-01	HOLDER, BU	
* 706	1-654-005-11	FLEX RELAY BOARD		713	4-925-315-31	DAMPER	

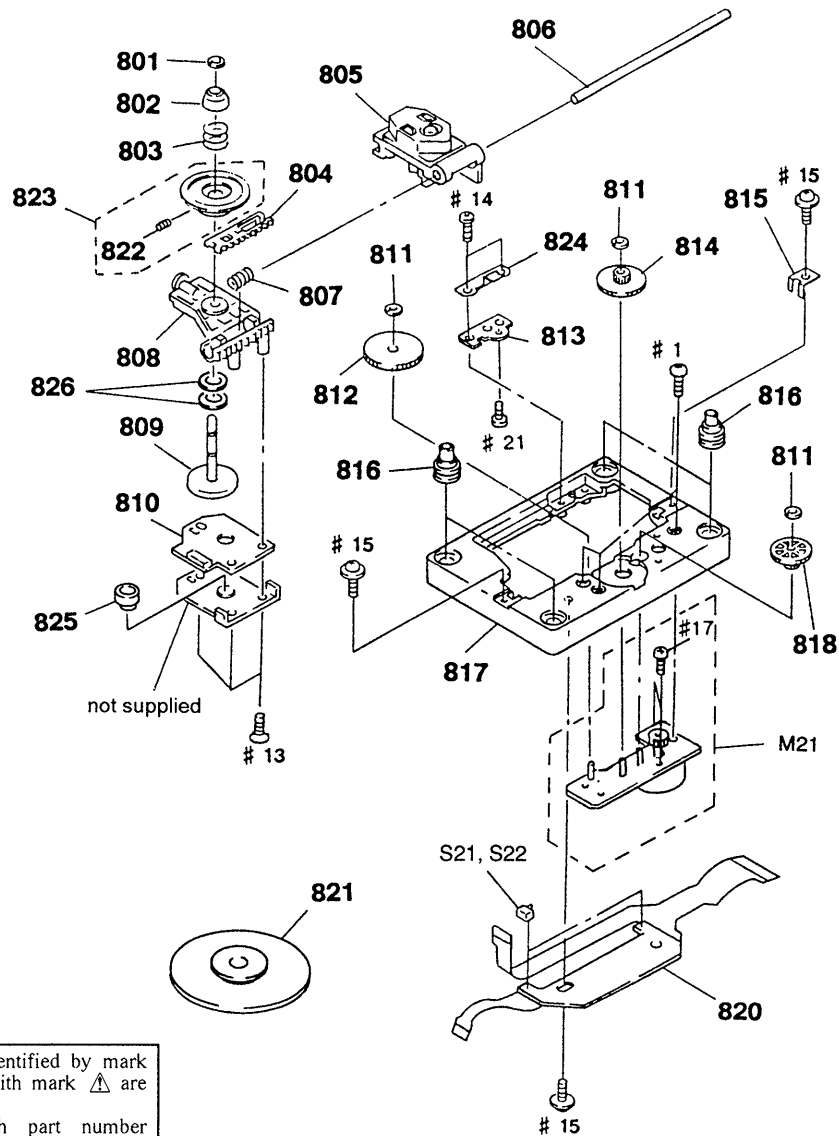
**6-6. CD MECHANISM SECTION-2  
(CDM32HN-12H/CDM32HB-12H)**



Ref. No.	Part No.	Description
* 751	4-968-901-01	BEARING (MAIN)
752	3-325-697-31	WASHER
753	4-968-900-01	GEAR (LAST)
754	3-363-191-01	WASHER (BA)
755	4-973-849-01	WASHER
756	4-968-899-01	GEAR (MIDLE)
757	4-968-898-01	GEAR (FIRST)
758	X-4945-207-1	BRACKET (LAST) ASSY
* 759	4-928-026-01	COLLAR (B)
* 760	4-888-798-11	BUSHING, RUBBER

Remark	Ref. No.	Part No.	Description	Remark
	* 761	4-968-902-01	BEARING (SUB)	
	* 762	1-653-905-11	LOADING SW BOARD	
	763	X-4945-209-1	PULLEY (FIRST) ASSY	
	764	4-968-905-01	BELT (CDM)	
	* 766	1-653-907-11	LOADING MOTOR BOARD	
	* 767	X-4945-205-1	SHAFT ASSY	
	768	4-971-894-01	DAMPER (MOTOR)	
	* 769	4-970-999-01	ROLLER (J RACK)	
	* 770	4-972-921-01	COVER (SW)	
	M271	X-4945-565-1	MOTOR ASSY (LOADING)	

## 6-7. BASE UNIT SECTION (BU-12H)



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.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
801	4-968-871-01	WASHER (SPINDLE)		816	4-917-562-11	INSULATOR	
802	4-968-867-01	CAP, CENTERING		* 817	4-968-862-01	BASE, MECHANICAL	
803	4-968-869-01	SPRING (CENTERING), COMPRESSION		818	4-968-864-01	GEAR (B)	
804	4-968-870-01	RACK, SLIDE		820	1-653-918-11	FLEXIBLE BOARD	
$\triangle$ 805	8-848-368-11	OPTICAL PICK-UP BLOCK KSS-273A/J-N		821	A-4660-862-A	STABILIZER ASSY	
* 806	4-968-944-01	SHAFT, SLED		822	4-971-266-01	SCREW (M2. 6X4)	
807	4-968-880-01	SPRING (SLED), COMPRESSION		823	A-4660-814-A	PULLEY ASSY, DISK	
808	X-4945-203-1	BASE ASSY, SLIDE		824	4-970-924-01	SPRING (SKEW), LEAF	
809	X-4945-273-1	ROTOR ASSY		825	4-943-342-01	BEARING	
810	A-4673-222-A	BSL BOARD, COMPLETE		826	3-701-444-11	WASHER, 6	
811	3-364-731-01	WASHER, POLY-SLIDER		M21	X-4945-920-1	MOTOR ASSY, SLED	
812	4-968-866-01	GEAR (D)		S21	1-571-958-11	SWITCH, PUSH (1 KEY)	
813	4-968-916-01	BRACKET (OP BASE)		S22	1-571-958-11	SWITCH, PUSH (1 KEY)	
814	4-968-865-01	GEAR (C)					
815	4-968-879-01	SPRING (OP), LEAF					

## SECTION 7 ELECTRICAL PARTS LIST

AC

AU POWER

**NOTE:**

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.

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

- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA..., uPB...:  $\mu$  PB...,  
uPC...:  $\mu$  PC..., uPD...:  $\mu$  PD...
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
CND : Canadian model  
G : German model

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
*	1-654-307-11	AC BOARD *****				< CAPACITOR >	
		< CAPACITOR >		C900	1-136-814-11	FILM 0.001uF 5%	100V
				C912	1-125-709-11	ELECT 4700uF 20%	63V
				C913	1-136-802-11	FILM 0.015uF 5%	63V
				C914	1-136-802-11	FILM 0.015uF 5%	63V
				C915	1-136-810-11	FILM 220PF 5%	100V
				C916	1-136-810-11	FILM 220PF 5%	100V
				C917	1-128-202-11	ELECT 220uF 20%	63V
				C918	1-110-510-11	ELECT 1200uF 20%	63V
				C919	1-107-597-11	MICA 22PF 5%	500V
				C921	1-136-818-11	FILM 0.0047uF 5%	100V
				C922	1-104-645-11	CERAMIC 1uF 20%	50V
				C924	1-128-201-11	ELECT 100uF 20%	63V
				C925	1-136-808-11	FILM 100PF 5%	100V
				C932	1-125-709-11	ELECT 4700uF 20%	63V
				C933	1-136-802-11	FILM 0.015uF 5%	63V
				C934	1-136-802-11	FILM 0.015uF 5%	63V
				C935	1-136-810-11	FILM 220PF 5%	100V
				C936	1-136-810-11	FILM 220PF 5%	100V
				C937	1-128-202-11	ELECT 220uF 20%	63V
				C938	1-110-510-11	ELECT 1200uF 20%	63V
				C939	1-107-597-11	MICA 22PF 5%	500V
				C944	1-128-201-11	ELECT 100uF 20%	63V
				C945	1-136-808-11	FILM 100PF 5%	100V
						< CONNECTOR >	
				* CN910	1-573-262-21	PIN, CONNECTOR 3P	
				* CN911	1-573-262-41	PIN, CONNECTOR 3P	
				* CN913	1-573-265-11	PIN, CONNECTOR 6P	
				* CN914	1-573-262-31	PIN, CONNECTOR 3P	
				* CN915	1-573-261-11	PIN, CONNECTOR 2P	
						< DIODE >	
				D910	8-719-210-29	DIODE F10P10Q	
				D911	8-719-210-29	DIODE F10P10Q	
				D912	8-719-210-29	DIODE F10P10Q	
				D913	8-719-210-29	DIODE F10P10Q	
				D914	8-719-988-53	DIODE LTZ-MR19	
				D915	8-719-114-36	DIODE RD5.6JS-B1	
				D934	8-719-988-53	DIODE LTZ-MR19	
				D935	8-719-114-36	DIODE RD5.6JS-B1	
						< BUS BAR >	
*	A-4673-309-A	AU POWER BOARD, COMPLETE *****					
		2-259-121-01	SCREW, TR				
			< BUS BAR >				
	BUS1	1-770-108-11	BAR, BUS 7P				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< IC >							
IC910	8-759-604-87	IC M5F7818L		R933	1-259-541-11	CARBON 270 1% 1/2W	
IC930	8-759-604-91	IC M5F7918L		R934	1-259-571-11	CARBON 4.7K 1% 1/2W	
< TRANSISTOR >							
Q910	8-729-322-40	TRANSISTOR 2SA1083E		R935	1-259-557-11	CARBON 1.2K 1% 1/2W	
Q911	8-729-354-52	TRANSISTOR 2SC2545		R936	1-259-519-11	CARBON 33 1% 1/2W	
Q912	8-729-322-40	TRANSISTOR 2SA1083E		R937	1-259-507-11	CARBON 10 1% 1/2W	
Q913	8-729-354-52	TRANSISTOR 2SC2545		R938	1-259-507-11	CARBON 10 1% 1/2W	
Q914	8-729-202-72	TRANSISTOR 2SC3381		R939	1-259-507-11	CARBON 10 1% 1/2W	
Q915	8-729-202-72	TRANSISTOR 2SC3381		R940	1-259-507-11	CARBON 10 1% 1/2W	
Q916	8-729-354-52	TRANSISTOR 2SC2545		R941	1-259-555-11	CARBON 1K 1% 1/2W	
Q917	8-729-354-52	TRANSISTOR 2SC2545		R942	1-259-555-11	CARBON 1K 1% 1/2W	
Q918	8-729-141-10	TRANSISTOR 2SA985A-QP		R943	1-259-507-11	CARBON 10 1% 1/2W	
Q919	8-729-231-55	TRANSISTOR 2SC2878-AB		R944	1-249-799-11	CARBON 750 1% 1/2W	
Q920	8-729-307-65	TRANSISTOR 2SJ76		R945	1-259-547-11	CARBON 470 1% 1/2W	
Q930	8-729-354-52	TRANSISTOR 2SC2545		△R946	1-217-997-11	FUSIBLE 10 5% 1/2W	
Q931	8-729-354-52	TRANSISTOR 2SC2545		△R947	1-217-989-11	FUSIBLE 4.7 5% 1/2W	
Q932	8-729-354-52	TRANSISTOR 2SC2545		*****			
Q933	8-729-322-40	TRANSISTOR 2SA1083E		*	A-4673-303-A AUDIO BOARD, COMPLETE (AEP, G)		
Q934	8-729-232-00	TRANSISTOR 2SA1349-GRBL		*****			
Q935	8-729-232-00	TRANSISTOR 2SA1349-GRBL		*	A-4673-569-A AUDIO BOARD, COMPLETE (US, CND)		
Q936	8-729-322-40	TRANSISTOR 2SA1083E		*****			
Q937	8-729-322-40	TRANSISTOR 2SA1083E			2-259-121-01 SCREW, TR		
Q938	8-729-141-58	TRANSISTOR 2SC2275A-QP			< BUS BAR >		
Q939	8-729-322-40	TRANSISTOR 2SA1083E		BUS3	1-569-360-11	BAR, BUS	
Q940	8-729-321-35	TRANSISTOR 2SK213		< CAPACITOR >			
< RESISTOR >							
△R900	1-219-021-11	FUSIBLE 91 5% 1/2W		C401	1-110-393-21	ELECT 100uF 20% 63V	
R911	1-259-585-11	CARBON 18K 1% 1/2W		C402	1-137-306-11	FILM CHIP 0.1uF 5% 16V	
R912	1-259-539-11	CARBON 220 1% 1/2W		C403	1-137-306-11	FILM CHIP 0.1uF 5% 16V	
R913	1-259-541-11	CARBON 270 1% 1/2W		C406	1-130-973-00	FILM 0.022uF 5% 63V	
R914	1-259-571-11	CARBON 4.7K 1% 1/2W		C407	1-130-892-00	FILM 0.015uF 5% 63V	
R915	1-259-557-11	CARBON 1.2K 1% 1/2W		C408	1-130-892-00	FILM 0.015uF 5% 63V	
R916	1-259-519-11	CARBON 33 1% 1/2W		C411	1-136-817-91	FILM 0.0033uF 5% 100V	
R917	1-259-507-11	CARBON 10 1% 1/2W		C412	1-136-817-91	FILM 0.0033uF 5% 100V	
R918	1-259-507-11	CARBON 10 1% 1/2W		C413	1-136-252-00	FILM 0.0015uF 5% 100V	
R919	1-259-507-11	CARBON 10 1% 1/2W		C414	1-136-252-00	FILM 0.0015uF 5% 100V	
R920	1-259-507-11	CARBON 10 1% 1/2W		C416	1-136-816-11	FILM 0.0022uF 5% 100V	
R921	1-259-555-11	CARBON 1K 1% 1/2W		C418	1-136-356-11	FILM 470PF 5% 100V	
R922	1-259-555-11	CARBON 1K 1% 1/2W		C419	1-137-508-11	FILM 2.2uF 10% 63V	
R923	1-259-507-11	CARBON 10 1% 1/2W		C420	1-136-808-11	FILM 100PF 5% 100V	
R924	1-249-799-11	CARBON 750 1% 1/2W		C421	1-136-808-11	FILM 100PF 5% 100V	
R925	1-259-547-11	CARBON 470 1% 1/2W		C451	1-137-306-11	FILM CHIP 0.1uF 5% 16V	
△R926	1-217-997-11	FUSIBLE 10 5% 1/2W		C452	1-162-806-11	CERAMIC 0.1uF 10% 50V	
△R927	1-217-989-11	FUSIBLE 4.7 5% 1/2W		C461	1-136-802-11	FILM 0.015uF 5% 100V	
R931	1-259-585-11	CARBON 18K 1% 1/2W		C462	1-109-857-11	ELECT 47uF 20% 63V	
R932	1-259-539-11	CARBON 220 1% 1/2W		C464	1-110-390-11	ELECT 22uF 20% 63V	
				C465	1-136-802-11	FILM 0.015uF 5% 100V	
				C466	1-110-390-11	ELECT 22uF 20% 63V	

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.
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C467	1-110-393-11	ELECT	100uF 20% 63V	C652	1-137-506-11	FILM	0.47uF 10% 63V
C469	1-136-850-11	FILM	0.1uF 5% 63V	C655	1-128-201-11	ELECT	100uF 20% 63V
C470	1-136-850-11	FILM	0.1uF 5% 63V	C661	1-110-512-11	FILM	1uF 10% 50V
C471	1-110-390-11	ELECT	22uF 20% 63V	C662	1-110-512-11	FILM	1uF 10% 50V
C472	1-128-201-11	ELECT	100uF 20% 63V	C663	1-109-857-11	ELECT	47uF 20% 63V
C473	1-128-201-11	ELECT	100uF 20% 63V	C664	1-109-857-11	ELECT	47uF 20% 63V
C501	1-110-393-21	ELECT	100uF 20% 63V	< CONNECTOR >			
C502	1-137-306-11	FILM CHIP	0.1uF 5% 16V	* CN401	1-573-263-11	PIN, CONNECTOR	4P
C503	1-137-306-11	FILM CHIP	0.1uF 5% 16V	* CN402	1-573-262-41	PIN, CONNECTOR	3P
C506	1-130-973-00	FILM	0.022uF 5% 63V	* CN403	1-573-262-11	PIN, CONNECTOR	3P
C507	1-130-892-00	FILM	0.015uF 5% 63V	* CN501	1-573-263-31	PIN, CONNECTOR	4P
C508	1-130-892-00	FILM	0.015uF 5% 63V	* CN502	1-573-262-31	PIN, CONNECTOR	3P
C511	1-136-817-91	FILM	0.0033uF 5% 100V	* CN503	1-573-262-21	PIN, CONNECTOR	3P
C512	1-136-817-91	FILM	0.0033uF 5% 100V	* CN601	1-569-994-21	PIN, CONNECTOR (PC BOARD)	7P
C513	1-136-252-00	FILM	0.0015uF 5% 100V	* CN602	1-569-993-11	PIN, CONNECTOR (PC BOARD)	6P
C514	1-136-252-00	FILM	0.0015uF 5% 100V	* CN603	1-573-261-11	PIN, CONNECTOR	2P
C516	1-136-816-11	FILM	0.0022uF 5% 100V	* CN605	1-573-261-41	PIN, CONNECTOR	2P
C518	1-136-356-11	FILM	470PF 5% 100V	* CN606	1-573-261-11	PIN, CONNECTOR	2P
C519	1-137-508-11	FILM	2.2uF 10% 63V	* CN607	1-573-262-31	PIN, CONNECTOR	3P
C520	1-136-808-11	FILM	100PF 5% 100V	< DIODE >			
C521	1-136-808-11	FILM	100PF 5% 100V	D401	8-719-987-63	DIODE	1N4148M
C551	1-137-306-11	FILM CHIP	0.1uF 5% 16V	D402	8-719-210-21	DIODE	11EQS04
C552	1-162-806-11	CERAMIC	0.1uF 10% 50V	D405	8-719-987-63	DIODE	1N4148M
C561	1-136-802-11	FILM	0.015uF 5% 100V	D451	8-719-987-63	DIODE	1N4148M
C562	1-109-857-11	ELECT	47uF 20% 63V	D501	8-719-987-63	DIODE	1N4148M
C564	1-110-390-11	ELECT	22uF 20% 63V	D502	8-719-210-21	DIODE	11EQS04
C565	1-136-802-11	FILM	0.015uF 5% 100V	D505	8-719-987-63	DIODE	1N4148M
C566	1-110-390-11	ELECT	22uF 20% 63V	D551	8-719-987-63	DIODE	1N4148M
C567	1-110-393-11	ELECT	100uF 20% 63V	D651	8-719-114-30	DIODE	RD5.1JS-B2
C569	1-136-850-11	FILM	0.1uF 5% 63V	< IC >			
C570	1-136-850-11	FILM	0.1uF 5% 63V	IC400	8-759-293-17	IC	CXA8042S
C571	1-110-390-11	ELECT	22uF 20% 63V	IC401	8-759-296-74	IC	AD712JR-REEL
C572	1-128-201-11	ELECT	100uF 20% 63V	IC402	8-759-296-74	IC	AD712JR-REEL
C573	1-128-201-11	ELECT	100uF 20% 63V	IC403	8-759-296-74	IC	AD712JR-REEL
C601	1-109-857-11	ELECT	47uF 20% 63V	IC404	8-759-998-79	IC	OPA27GP
C602	1-137-306-11	FILM CHIP	0.1uF 5% 16V	IC405	8-759-604-90	IC	M5F7907L
C604	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	IC406	8-759-604-86	IC	M5F7807L
C605	1-137-306-11	FILM CHIP	0.1uF 5% 16V	IC500	8-759-293-17	IC	CXA8042S
C606	1-109-857-11	ELECT	47uF 20% 63V	IC501	8-759-296-74	IC	AD712JR-REEL
C607	1-137-306-11	FILM CHIP	0.1uF 5% 16V	IC502	8-759-296-74	IC	AD712JR-REEL
C631	1-110-393-11	ELECT	100uF 20% 63V	IC503	8-759-296-74	IC	AD712JR-REEL
C632	1-137-306-11	FILM CHIP	0.1uF 5% 16V	IC504	8-759-998-79	IC	OPA27GP
C633	1-110-393-11	ELECT	100uF 20% 63V	IC505	8-759-604-90	IC	M5F7907L
C634	1-137-306-11	FILM CHIP	0.1uF 5% 16V	IC506	8-759-604-86	IC	M5F7807L
C635	1-137-506-11	FILM	0.47uF 10% 63V	IC601	8-759-287-69	IC	CXD8504M
C636	1-109-857-11	ELECT	47uF 20% 63V	IC602	8-759-242-70	IC	TC7WU04F
C637	1-107-947-91	CERAMIC	10PF 5% 50V	IC603	8-759-044-10	IC	CXD2562Q
C638	1-107-947-91	CERAMIC	10PF 5% 50V				
C639	1-137-506-11	FILM	0.47uF 10% 63V				
C651	1-109-857-11	ELECT	47uF 20% 63V				

# AUDIO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
IC604	8-759-242-70	IC TC7WU04F		R407	1-259-983-11	CARBON MELF	100 2% 1/8W
IC651	8-759-296-74	IC AD712JR-REEL		R408	1-259-983-11	CARBON MELF	100 2% 1/8W
		< COIL >		R409	1-259-983-11	CARBON MELF	100 2% 1/8W
L401	1-410-508-11	INDUCTOR	8. 2uH	R410	1-259-543-11	CARBON	330 1% 1/2W
L402	1-410-508-11	INDUCTOR	8. 2uH	R411	1-259-971-11	CARBON MELF	10 2% 1/8W
L501	1-410-508-11	INDUCTOR	8. 2uH	R412	1-259-971-11	CARBON MELF	10 2% 1/8W
L502	1-410-508-11	INDUCTOR	8. 2uH	R413	1-259-971-11	CARBON MELF	10 2% 1/8W
L601	1-410-508-11	INDUCTOR	8. 2uH	R414	1-259-971-11	CARBON MELF	10 2% 1/8W
L602	1-410-508-11	INDUCTOR	8. 2uH	R415	1-259-897-11	CARBON MELF	7. 5 2% 1/8W
L603	1-410-508-11	INDUCTOR	8. 2uH	R416	1-259-897-11	CARBON MELF	7. 5 2% 1/8W
		< MOUNT >		R417	1-259-994-11	CARBON MELF	820 2% 1/8W
MT1	4-924-264-01	TERMINAL, MOUNT		R418	1-259-994-11	CARBON MELF	820 2% 1/8W
MT2	4-924-264-01	TERMINAL, MOUNT		R419	1-216-208-00	CARBON MELF	2. 7K 2% 1/8W
MT3	4-924-264-01	TERMINAL, MOUNT		R420	1-216-208-00	CARBON MELF	2. 7K 2% 1/8W
		< PHOTO INTERRUPTER >		R421	1-249-418-11	CARBON	1. 2K 5% 1/4W F
PH451	8-719-902-56	DIODE PC817		R422	1-249-418-11	CARBON	1. 2K 5% 1/4W F
PH551	8-719-902-56	DIODE PC817		R423	1-259-997-11	CARBON MELF	1. 5K 2% 1/8W
		< TRANSISTOR >		R424	1-259-928-11	CARBON MELF	3K 2% 1/8W
Q413	8-729-232-69	TRANSISTOR	2SK208GR3	R426	1-259-897-11	CARBON MELF	7. 5 2% 1/8W
Q414	8-729-230-49	TRANSISTOR	2SC2712-YG	R427	1-259-951-11	CARBON MELF	240K 2% 1/8W
Q415	8-729-230-49	TRANSISTOR	2SC2712-YG	R428	1-259-929-11	CARBON MELF	3. 6K 2% 1/8W
Q416	8-729-232-69	TRANSISTOR	2SK208GR3	R429	1-259-941-11	CARBON MELF	36K 2% 1/8W
Q417	8-729-321-35	TRANSISTOR	2SK213	R430	1-259-983-11	CARBON MELF	100 2% 1/8W
Q418	8-729-307-65	TRANSISTOR	2SJ76	R431	1-259-995-11	CARBON MELF	1K 2% 1/8W
Q419	8-729-232-69	TRANSISTOR	2SK208GR3	R432	1-260-008-11	CARBON MELF	10K 2% 1/8W
Q420	8-729-231-51	TRANSISTOR	2SC2878-AB (US, CND)	R433	1-260-004-11	CARBON MELF	4. 7K 2% 1/8W
Q421	8-729-807-51	TRANSISTOR	2SD1623-S	R434	1-260-008-11	CARBON MELF	10K 2% 1/8W
Q422	8-729-807-51	TRANSISTOR	2SD1623-S	R435	1-260-004-11	CARBON MELF	4. 7K 2% 1/8W
Q451	8-729-207-58	TRANSISTOR	RN1404	R436	1-259-995-11	CARBON MELF	1K 2% 1/8W
Q513	8-729-232-69	TRANSISTOR	2SK208GR3	R437	1-259-983-11	CARBON MELF	100 2% 1/8W
Q514	8-729-230-49	TRANSISTOR	2SC2712-YG	R438	1-259-983-11	CARBON MELF	100 2% 1/8W
Q515	8-729-230-49	TRANSISTOR	2SC2712-YG	R439	1-259-983-11	CARBON MELF	100 2% 1/8W
Q516	8-729-232-69	TRANSISTOR	2SK208GR3	R440	1-259-519-11	CARBON	33 1% 1/2W
Q517	8-729-321-35	TRANSISTOR	2SK213	R441	1-259-519-11	CARBON	33 1% 1/2W
Q518	8-729-307-65	TRANSISTOR	2SJ76	R442	1-259-531-11	CARBON	100 1% 1/2W
Q519	8-729-232-69	TRANSISTOR	2SK208GR3	R443	1-259-380-11	CARBON	10 5% 1/6W (US, CND)
Q520	8-729-231-51	TRANSISTOR	2SC2878-AB (US, CND)	R444	1-259-500-11	CARBON	1M 5% 1/6W
Q521	8-729-807-51	TRANSISTOR	2SD1623-S	R445	1-259-951-11	CARBON MELF	240K 2% 1/8W
Q522	8-729-807-51	TRANSISTOR	2SD1623-S	R446	1-259-951-11	CARBON MELF	240K 2% 1/8W
Q551	8-729-207-58	TRANSISTOR	RN1404	R447	1-259-995-11	CARBON MELF	1K 2% 1/8W
Q601	8-729-207-67	TRANSISTOR	RN2401	R448	1-259-995-11	CARBON MELF	1K 2% 1/8W
Q651	8-729-232-69	TRANSISTOR	2SK208GR3	R451	1-216-047-00	METAL CHIP	820 5% 1/10W
Q652	8-729-104-18	TRANSISTOR	2SC3514	R452	1-260-003-11	CARBON MELF	3. 9K 2% 1/8W
		< RESISTOR >		R453	1-259-450-11	CARBON	8. 2K 5% 1/6W
R406	1-259-983-11	CARBON MELF	100 2% 1/8W	R454	1-259-472-11	CARBON	68K 5% 1/6W
				R465	1-259-971-11	CARBON MELF	10 2% 1/8W
				R466	1-259-971-11	CARBON MELF	10 2% 1/8W
				R469	1-260-004-11	CARBON MELF	4. 7K 2% 1/8W
				R470	1-260-004-11	CARBON MELF	4. 7K 2% 1/8W
				R506	1-259-983-11	CARBON MELF	100 2% 1/8W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R507	1-259-983-11	CARBON MELF	100 2% 1/8W	R601	1-216-045-00	METAL CHIP	680 5% 1/10W
R508	1-259-983-11	CARBON MELF	100 2% 1/8W	R602	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R509	1-259-983-11	CARBON MELF	100 2% 1/8W	R603	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R510	1-259-543-11	CARBON	330 1% 1/2W	R604	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R511	1-259-971-11	CARBON MELF	10 2% 1/8W	R605	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R512	1-259-971-11	CARBON MELF	10 2% 1/8W	R606	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R513	1-259-971-11	CARBON MELF	10 2% 1/8W	R607	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R514	1-259-971-11	CARBON MELF	10 2% 1/8W	R608	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R515	1-259-897-11	CARBON MELF	7.5 2% 1/8W	R609	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R516	1-259-897-11	CARBON MELF	7.5 2% 1/8W	R610	1-216-037-00	METAL CHIP	330 5% 1/10W
R517	1-259-994-11	CARBON MELF	820 2% 1/8W	R611	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R518	1-259-994-11	CARBON MELF	820 2% 1/8W	R619	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R519	1-216-208-00	CARBON MELF	2.7K 2% 1/8W	R631	1-260-008-11	CARBON MELF	10K 2% 1/8W
R520	1-216-208-00	CARBON MELF	2.7K 2% 1/8W	R651	1-259-983-11	CARBON MELF	100 2% 1/8W
R521	1-249-418-11	CARBON	1.2K 5% 1/4W F	R652	1-259-991-11	CARBON MELF	470 2% 1/8W
R522	1-249-418-11	CARBON	1.2K 5% 1/4W F	R653	1-259-999-11	CARBON MELF	2.2K 2% 1/8W
R523	1-259-997-11	CARBON MELF	1.5K 2% 1/8W	R654	1-259-983-11	CARBON MELF	100 2% 1/8W
R524	1-259-928-11	CARBON MELF	3K 2% 1/8W	R655	1-259-983-11	CARBON MELF	100 2% 1/8W
R526	1-259-897-11	CARBON MELF	7.5 2% 1/8W			< RELAY >	
R527	1-259-951-11	CARBON MELF	240K 2% 1/8W	RY401	1-755-062-11	RELAY	
R528	1-259-929-11	CARBON MELF	3.6K 2% 1/8W	RY501	1-755-062-11	RELAY	
R529	1-259-941-11	CARBON MELF	36K 2% 1/8W			< THERMISTOR >	
R530	1-259-983-11	CARBON MELF	100 2% 1/8W	TH651	1-806-882-11	THERMISTOR, POSITIVE	
R531	1-259-995-11	CARBON MELF	1K 2% 1/8W			< VIBRATOR >	
R532	1-260-008-11	CARBON MELF	10K 2% 1/8W	X601	1-577-685-11	FILTER, CRYSTAL (16MHZ)	
R533	1-260-004-11	CARBON MELF	4.7K 2% 1/8W	X631	1-577-686-11	VIBRATOR, CRYSTAL (45MHZ)	
R534	1-260-008-11	CARBON MELF	10K 2% 1/8W			*****	
R535	1-260-004-11	CARBON MELF	4.7K 2% 1/8W			* A-4673-477-A AUDIO SUB BOARD, COMPLETE	
R536	1-259-995-11	CARBON MELF	1K 2% 1/8W			*****	
R537	1-259-983-11	CARBON MELF	100 2% 1/8W			< CAPACITOR >	
R538	1-259-983-11	CARBON MELF	100 2% 1/8W	C460	1-136-233-11	FILM	0.0047uF 2% 100V
R539	1-259-983-11	CARBON MELF	100 2% 1/8W	C461	1-136-228-11	FILM	0.0012uF 2% 100V
R540	1-259-519-11	CARBON	33 1% 1/2W	C462	1-137-507-11	FILM	1uF 10% 63V
R541	1-259-519-11	CARBON	33 1% 1/2W	C463	1-124-572-11	ELECT	100uF 20% 63V
R542	1-259-531-11	CARBON	100 1% 1/2W	C464	1-136-233-11	FILM	0.0047uF 2% 100V
R543	1-259-971-11	CARBON MELF	10 2% 1/8W (US, CND)	C465	1-136-228-11	FILM	0.0012uF 2% 100V
R544	1-259-500-11	CARBON	1M 5% 1/6W	C466	1-137-507-11	FILM	1uF 10% 63V
R545	1-259-951-11	CARBON MELF	240K 2% 1/8W	C467	1-124-572-11	ELECT	100uF 20% 63V
R546	1-259-951-11	CARBON MELF	240K 2% 1/8W	C468	1-107-036-00	MICA	68PF 5% 500V
R547	1-259-995-11	CARBON MELF	1K 2% 1/8W	C469	1-124-913-11	ELECT	470uF 20% 50V
R548	1-259-995-11	CARBON MELF	1K 2% 1/8W	C470	1-104-645-11	CERAMIC	1uF 20% 50V
R551	1-216-047-00	METAL CHIP	820 5% 1/10W	C471	1-124-572-11	ELECT	100uF 20% 63V
R552	1-260-003-11	CARBON MELF	3.9K 2% 1/8W	C472	1-137-507-11	FILM	1uF 10% 63V
R553	1-259-450-11	CARBON	8.2K 5% 1/6W	C560	1-136-233-11	FILM	0.0047uF 2% 100V
R554	1-259-472-11	CARBON	68K 5% 1/6W	C561	1-136-228-11	FILM	0.0012uF 2% 100V
R565	1-259-971-11	CARBON MELF	10 2% 1/8W				
R566	1-259-971-11	CARBON MELF	10 2% 1/8W				
R569	1-260-004-11	CARBON MELF	4.7K 2% 1/8W				
R570	1-260-004-11	CARBON MELF	4.7K 2% 1/8W				
R600	1-216-049-91	METAL GLAZE	1K 5% 1/10W				



# AUDIO SUB

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C562	1-137-507-11	FILM	1uF 10% 63V			< PHOTO INTERRUPTER >	
C563	1-124-572-11	ELECT	100uF 20% 63V				
C564	1-136-233-11	FILM	0.0047uF 2% 100V	PH661	8-719-902-56	DIODE PC817	
C565	1-136-228-11	FILM	0.0012uF 2% 100V			< TRANSISTOR >	
C566	1-137-507-11	FILM	1uF 10% 63V				
C567	1-124-572-11	ELECT	100uF 20% 63V	Q460	8-729-224-61	TRANSISTOR 2SK246-Y	
C568	1-107-036-00	MICA	68PF 5% 500V	Q461	8-729-809-29	TRANSISTOR 2SC4159-E	
C569	1-124-913-11	ELECT	470uF 20% 50V	Q462	8-729-809-26	TRANSISTOR 2SA1606-E	
C570	1-104-645-11	CERAMIC	1uF 20% 50V	Q463	8-729-354-52	TRANSISTOR 2SC2545	
C571	1-124-572-11	ELECT	100uF 20% 63V	Q560	8-729-224-61	TRANSISTOR 2SK246-Y	
C572	1-137-507-11	FILM	1uF 10% 63V	Q561	8-729-809-29	TRANSISTOR 2SC4159-E	
C660	1-137-507-11	FILM	1uF 10% 63V	Q562	8-729-809-26	TRANSISTOR 2SA1606-E	
C661	1-137-507-11	FILM	1uF 10% 63V	Q563	8-729-354-52	TRANSISTOR 2SC2545	
C662	1-136-850-11	FILM	0.1uF 5% 63V	Q661	8-729-900-80	TRANSISTOR DTC114ES	
C663	1-136-850-11	FILM	0.1uF 5% 63V	Q662	8-729-900-65	TRANSISTOR DTA144ES	
C664	1-136-850-11	FILM	0.1uF 5% 63V	Q663	8-729-900-65	TRANSISTOR DTA144ES	
C665	1-136-850-11	FILM	0.1uF 5% 63V	Q664	8-729-900-80	TRANSISTOR DTC114ES	
C666	1-126-045-11	ELECT	2.2uF 20% 50V	Q665	8-729-900-80	TRANSISTOR DTC114ES	
C667	1-126-696-11	ELECT	33uF 20% 35V	Q666	8-729-900-80	TRANSISTOR DTC114ES	
C668	1-126-696-11	ELECT	33uF 20% 35V			< RESISTOR >	
< CONNECTOR >							
* CN461	1-573-263-11	PIN, CONNECTOR 4P		R460	1-249-926-11	CARBON 1.3K 5% 1/4W	
* CN462	1-573-261-11	PIN, CONNECTOR 2P		R461	1-247-711-11	CARBON 680 5% 1/4W F	
* CN463	1-573-261-11	PIN, CONNECTOR 2P		R462	1-247-891-00	CARBON 330K 5% 1/4W	
* CN464	1-573-261-41	PIN, CONNECTOR 2P		R463	1-247-702-11	CARBON 150 5% 1/4W F	
* CN562	1-573-263-21	PIN, CONNECTOR 4P		R464	1-249-926-11	CARBON 1.3K 5% 1/4W	
* CN563	1-573-261-21	PIN, CONNECTOR 2P		R465	1-247-711-11	CARBON 680 5% 1/4W F	
* CN564	1-573-261-21	PIN, CONNECTOR 2P		R466	1-247-891-00	CARBON 330K 5% 1/4W	
* CN565	1-573-261-31	PIN, CONNECTOR 2P		R467	1-247-702-11	CARBON 150 5% 1/4W F	
* CN660	1-573-265-11	PIN, CONNECTOR 6P		R468	1-249-926-11	CARBON 1.3K 5% 1/4W	
* CN661	1-573-262-21	PIN, CONNECTOR 3P		R469	1-249-926-11	CARBON 1.3K 5% 1/4W	
* CN662	1-573-262-41	PIN, CONNECTOR 3P		R470	1-247-891-00	CARBON 330K 5% 1/4W	
* CN663	1-573-263-41	PIN, CONNECTOR 4P		R471	1-249-586-11	CARBON 27K 5% 1/4W	
* CN664	1-573-265-41	PIN, CONNECTOR 6P		R472	1-247-721-11	CARBON 4.7K 5% 1/4W F	
< DIODE >							
D661	8-719-987-63	DIODE 1N4148M		R473	1-247-704-11	CARBON 220 5% 1/4W F	
D662	8-719-987-63	DIODE 1N4148M		R474	1-247-704-11	CARBON 220 5% 1/4W F	
D663	8-719-987-63	DIODE 1N4148M		R476	1-247-704-11	CARBON 220 5% 1/4W F	
D664	8-719-987-63	DIODE 1N4148M		△R477	1-212-853-00	FUSIBLE 6.8 5% 1/4W F	
D666	8-719-114-30	DIODE RD5.1JS-B2		△R478	1-212-853-00	FUSIBLE 6.8 5% 1/4W F	
D667	8-719-933-74	DIODE HZS12A2L		△R479	1-212-881-11	FUSIBLE 100 5% 1/4W F	
< IC >							
IC460	8-759-712-02	IC NJM2114D		R480	1-249-465-11	CARBON 47K 5% 1/4W	
IC461	8-759-712-02	IC NJM2114D		R481	1-249-586-11	CARBON 27K 5% 1/4W	
IC560	8-759-712-02	IC NJM2114D		R482	1-247-891-00	CARBON 330K 5% 1/4W	
IC561	8-759-712-02	IC NJM2114D		R483	1-247-700-11	CARBON 100 5% 1/4W F	
				R484	1-247-700-11	CARBON 100 5% 1/4W F	
				R485	1-247-713-11	CARBON 1K 5% 1/4W F	
				R486	1-247-713-11	CARBON 1K 5% 1/4W F	
				R560	1-249-926-11	CARBON 1.3K 5% 1/4W	
				R561	1-247-711-11	CARBON 680 5% 1/4W F	
				R562	1-247-891-00	CARBON 330K 5% 1/4W	
				R563	1-247-702-11	CARBON 150 5% 1/4W F	

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.

**AUDIOSUB**

**BALANCE (L)**

**BALANCE (R)**

**BALANCE SW**

**BSL**

**COAX**

Ref.No.	Part No.	Description	Remark
R564	1-249-926-11	CARBON	1.3K 5% 1/4W
R565	1-247-711-11	CARBON	680 5% 1/4W F
R566	1-247-891-00	CARBON	330K 5% 1/4W
R567	1-247-702-11	CARBON	150 5% 1/4W F
R568	1-249-926-11	CARBON	1.3K 5% 1/4W
R569	1-249-926-11	CARBON	1.3K 5% 1/4W
R570	1-247-891-00	CARBON	330K 5% 1/4W
R571	1-249-586-11	CARBON	27K 5% 1/4W
R572	1-247-721-11	CARBON	4.7K 5% 1/4W F
R573	1-247-725-11	CARBON	10K 5% 1/4W F
R574	1-247-704-11	CARBON	220 5% 1/4W F
R576	1-247-704-11	CARBON	220 5% 1/4W F
△R577	1-212-853-00	FUSIBLE	6.8 5% 1/4W F
△R578	1-212-853-00	FUSIBLE	6.8 5% 1/4W F
△R579	1-212-881-11	FUSIBLE	100 5% 1/4W F
R580	1-249-465-11	CARBON	47K 5% 1/4W
R581	1-249-586-11	CARBON	27K 5% 1/4W
R582	1-247-891-00	CARBON	330K 5% 1/4W
R583	1-247-700-11	CARBON	100 5% 1/4W F
R584	1-247-700-11	CARBON	100 5% 1/4W F
R585	1-247-713-11	CARBON	1K 5% 1/4W F
R586	1-247-713-11	CARBON	1K 5% 1/4W F
R661	1-259-432-11	CARBON	1.5K 5% 1/6W
△R662	1-212-889-00	FUSIBLE	220 5% 1/4W F
R663	1-259-468-11	CARBON	47K 5% 1/6W
R664	1-259-460-11	CARBON	22K 5% 1/6W
R665	1-259-468-11	CARBON	47K 5% 1/6W
R666	1-259-460-11	CARBON	22K 5% 1/6W
R667	1-259-468-11	CARBON	47K 5% 1/6W
△R668	1-212-893-00	FUSIBLE	330 5% 1/4W F
△R669	1-212-893-00	FUSIBLE	330 5% 1/4W F
R670	1-259-380-11	CARBON	10 5% 1/6W
< RELAY >			
RY460	1-515-804-11	RELAY	
RY461	1-515-804-11	RELAY	
RY560	1-515-804-11	RELAY	
RY561	1-515-804-11	RELAY	
*****			
*	1-654-309-11	BALANCE (L) BOARD	*****
< CONNECTOR >			
* CN480	1-573-263-11	PIN, CONNECTOR 4P	
CN905	1-563-030-11	CONNECTOR (RECEPTACLE) 3P(BALANCE OUT L)	
*****			

Ref.No.	Part No.	Description	Remark
*	1-654-310-11	BALANCE (R) BOARD	*****
< CONNECTOR >			
* CN580	1-573-263-21	PIN, CONNECTOR 4P	
CN906	1-563-030-11	CONNECTOR (RECEPTACLE) 3P(BALANCE OUT R)	
*****			
*	1-654-308-11	BALANCE SW BOARD	*****
< CONNECTOR >			
* CN761	1-573-263-41	PIN, CONNECTOR 4P	
< SWITCH >			
SW761	1-571-083-11	SWITCH, SLIDE (BALANCED OUT ON/OFF)	
*****			
A-4673-222-A BSL BOARD, COMPLETE			
*****			
< HALL ELEMENT >			
H11	8-719-987-62	DIODE LT140SZ	
H12	8-719-987-62	DIODE LT140SZ	
< RESISTOR >			
R11	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R12	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R13	1-216-295-91	CONDCTOR, CHIP (2012)	
R14	1-216-295-91	CONDCTOR, CHIP (2012)	
R15	1-216-295-91	CONDCTOR, CHIP (2012)	
*****			
*	1-654-312-11	COAX BOARD	*****
< CAPACITOR >			
C701	1-136-850-11	FILM 0.1uF 5% 63V	
C702	1-104-645-11	CERAMIC 1uF 20% 50V	
C703	1-136-850-11	FILM 0.1uF 5% 63V	
< CONNECTOR >			
* CN701	1-573-273-11	PIN, CONNECTOR 3P	
< IC >			
IC701	8-759-917-18	IC SN74HCU04AN	

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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# COAX D POWER

Ref. No.	Part No.	Description	Remark
		< JACK >	
J701	1-507-567-71	JACK, PIN 1P (DIGITAL OUT COAXIAL)	
		< RESISTOR >	
R701	1-259-401-11	CARBON 75 5% 1/6W	
		< TRANSFORMER >	
T701	1-459-795-11	COIL (WITH CORE)	
*****			
*	A-4673-453-A	D POWER BOARD, COMPLETE	
		*****	
	2-259-121-01	SCREW, TR	
*	4-941-237-01	HEAT SINK	
		< BUS BAR >	
* BUS1	1-691-279-11	BUS BAR 5P	
		< CAPACITOR >	
C950	1-136-814-11	FILM 0.001uF 5% 100V	
C951	1-104-645-11	CERAMIC 1uF 20% 50V	
C952	1-136-802-11	FILM 0.015uF 5% 100V	
C953	1-128-217-11	ELECT 12000uF 20% 16V	
C954	1-128-217-11	ELECT 12000uF 20% 16V	
C955	1-128-201-11	ELECT 100uF 20% 63V	
C956	1-136-802-11	FILM 0.015uF 5% 100V	
C957	1-110-645-11	ELECT 10uF 20% 63V	
C958	1-128-201-11	ELECT 100uF 20% 63V	
C959	1-128-201-11	ELECT 100uF 20% 63V	
C960	1-128-201-11	ELECT 100uF 20% 63V	
C962	1-136-802-11	FILM 0.015uF 5% 100V	
C963	1-109-857-11	ELECT 47uF 20% 63V	
C964	1-110-645-11	ELECT 10uF 20% 63V	
C965	1-136-802-11	FILM 0.015uF 5% 100V	
C966	1-110-390-11	ELECT 22uF 20% 63V	
C967	1-136-802-11	FILM 0.015uF 5% 100V	
C971	1-136-802-11	FILM 0.015uF 5% 100V	
		< CONNECTOR >	
* CN953	1-573-264-11	PIN, CONNECTOR 5P	
* CN954	1-573-262-11	PIN, CONNECTOR 3P	
* CN955	1-573-261-31	PIN, CONNECTOR 2P	
* CN956	1-573-262-31	PIN, CONNECTOR 3P	
		< DIODE >	
D951	8-719-975-85	DIODE ERB83-004	
D952	8-719-975-85	DIODE ERB83-004	
D953	8-719-975-85	DIODE ERB83-004	

Ref. No.	Part No.	Description	Remark
D954	8-719-975-85	DIODE ERB83-004	
D955	8-719-988-53	DIODE LTZ-MR19	
D956	8-719-114-30	DIODE RD5.1JS-B2	
D957	8-719-200-02	DIODE 10E2	
D958	8-719-114-86	DIODE RD1&JS-T2B1	
D959	8-719-114-26	DIODE RD4.7JS-B2	
D960	8-719-210-21	DIODE 11EQS04	
		< IC >	
IC951	8-759-604-86	IC M5F7807L	
IC952	8-759-604-90	IC M5F7907L	
IC953	8-759-710-59	IC NJM4580D-D	
IC954	8-759-962-08	IC BA6208	
		< BASE POST >	
LP951	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
LP952	1-535-139-00	BASE POST 22MM (10MM PITCH) 2P	
		< IC LINK >	
△PS951	1-532-685-00	LINK, IC 0.8A	
△PS952	1-532-685-00	LINK, IC 0.8A	
		< TRANSISTOR >	
Q951	8-729-224-62	TRANSISTOR 2SK246-GR	
Q952	8-729-322-40	TRANSISTOR 2SA1083E	
Q953	8-729-141-58	TRANSISTOR 2SC2275A-QP	
Q954	8-729-141-58	TRANSISTOR 2SC2275A-QP	
Q955	8-729-224-62	TRANSISTOR 2SK246-GR	
Q956	8-729-140-97	TRANSISTOR 2SB734-34	
Q957	8-729-140-97	TRANSISTOR 2SB734-34	
		< RESISTOR >	
R950	1-259-436-11	CARBON 2.2K 5% 1/6W	
△R951	1-219-017-11	FUSIBLE 62 5% 1/2W	
R952	1-259-421-11	CARBON 510 5% 1/6W	
R953	1-259-404-11	CARBON 100 5% 1/6W	
R954	1-259-412-11	CARBON 220 5% 1/6W	
R955	1-259-380-11	CARBON 10 5% 1/6W	
R956	1-259-428-11	CARBON 1K 5% 1/6W	
R957	1-259-380-11	CARBON 10 5% 1/6W	
R958	1-259-428-11	CARBON 1K 5% 1/6W	
R959	1-259-436-11	CARBON 2.2K 5% 1/6W	
R960	1-259-468-11	CARBON 47K 5% 1/6W	
R961	1-259-460-11	CARBON 22K 5% 1/6W	
R962	1-259-468-11	CARBON 47K 5% 1/6W	
*****			

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**DISPLAY** **FIX** **FL RELAY** **FLEX RELAY**

**FLEXIBLE** **HEADPHONE** **(L) KEY**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-654-256-11	DISPLAY BOARD *****		*****			
*	4-969-510-01	HOLDER (FL)  < CAPACITOR >		*	1-653-906-11	FL RELAY BOARD *****  < CONNECTOR >	
C801	1-163-038-91	CERAMIC CHIP	0.1uF	25V	CN291	1-568-794-11	SOCKET, CONNECTOR 12P
C802	1-163-031-11	CERAMIC CHIP	0.01uF	50V	* CN292	1-568-950-11	PIN, CONNECTOR 12P
C803	1-163-031-11	CERAMIC CHIP	0.01uF	50V	*****		
C804	1-163-031-11	CERAMIC CHIP	0.01uF	50V	*	1-654-005-11	FLEX RELAY BOARD *****
C805	1-163-031-11	CERAMIC CHIP	0.01uF	50V		< CONNECTOR >	
C806	1-163-031-11	CERAMIC CHIP	0.01uF	50V	CN191	1-580-473-11	SOCKET, CONNECTOR 26P
C807	1-163-031-11	CERAMIC CHIP	0.01uF	50V	*****		
		< FLUORESCENT INDICATOR >			1-653-918-11	FLEXIBLE BOARD *****	
FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT  < IC >			< MOTOR >		
IC801	8-759-324-36	IC	LC7570E		M21	X-4945-920-1	MOTOR ASSY, SLED
IC802	8-759-324-36	IC	LC7570E			< SWITCH >	
IC803	8-759-324-36	IC	LC7570E		S21	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT OUT)
IC804	8-749-923-80	IC	GP1U90XB		*****		
		< TRANSISTOR >		*	1-654-315-11	HEADPHONE BOARD *****	
Q801	8-729-805-45	TRANSISTOR	2SC3395		< CAPACITOR >		
Q802	8-729-901-06	TRANSISTOR	DTA144EK		C490	1-162-294-31	CERAMIC 0.001uF 10% 50V
		< RESISTOR >			C590	1-162-294-31	CERAMIC 0.001uF 10% 50V
R801	1-216-029-00	METAL CHIP	150 5%	1/10W	C710	1-164-159-11	CERAMIC 0.1uF 50V
R802	1-216-089-00	METAL CHIP	47K 5%	1/10W		< CONNECTOR >	
R803	1-216-097-00	METAL CHIP	100K 5%	1/10W	* CN710	1-573-274-11	PIN, CONNECTOR 4P
*****						< JACK >	
*	1-654-304-11	FIX BOARD *****		J710	1-568-519-31	JACK, LARGE TYPE (BLACK) (PHONES)	
		< CONNECTOR >		J710	1-568-519-61	JACK, LARGE TYPE (GOLD) (PHONES)	
* CN751	1-573-263-11	PIN, CONNECTOR 4P		*****			
* CN752	1-573-261-41	PIN, CONNECTOR 2P		*	1-654-314-11	(L) KEY BOARD *****	
		< DIODE >			< CONNECTOR >		
D701	8-719-987-63	DIODE	1N4148M		* CN804	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P
		< JACK >					
J901	1-568-918-41	JACK, PIN 1P (FIXED OUT L)					
J902	1-568-918-31	JACK, PIN 1P (FIXED OUT R)					
		< RELAY >					
RY701	1-755-062-11	RELAY					

**(L) KEY    LOADING MOTOR    LOADING SW    OPT    (R) KEY**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< RESISTOR >					
R847	1-259-424-11	CARBON            680   5%   1/6W		*	A-4673-304-A	(R) KEY BOARD, COMPLETE *****	
R848	1-259-428-11	CARBON            1K    5%   1/6W		*	4-923-532-21	SPACER, LED	
R849	1-259-432-11	CARBON            1.5K 5%   1/6W		*	4-923-532-41	SPACER, LED	
		< SWITCH >				< CAPACITOR >	
S826	1-554-303-21	SWITCH, TACTILE (▶▶▶)		C801	1-164-159-11	CERAMIC            0.1uF            50V	
S827	1-554-303-21	SWITCH, TACTILE (◀◀◀)		C802	1-164-159-11	CERAMIC            0.1uF            50V	
S828	1-554-303-21	SWITCH, TACTILE (▶◀◀)				< CONNECTOR >	
S829	1-554-303-21	SWITCH, TACTILE (◀◀◀)					
*****				* CN801	1-569-995-11	PIN, CONNECTOR (PC BOARD) 8P	
*	1-653-907-11	LOADING MOTOR BOARD *****		CN802	1-506-984-11	PIN, CONNECTOR (PC BOARD) 2P	
		< CONNECTOR >		* CN803	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
CN272	1-506-469-11	PIN, CONNECTOR 4P				< DIODE >	
		< MOTOR >		D801	8-719-051-83	DIODE    MBG3371X (▶)	
M271	X-4945-565-1	MOTOR ASSY, LOADING		D802	8-719-987-91	DIODE    MAA3371X (■)	
*****				D803	8-719-987-91	DIODE    MAA3371X (DIGITAL OUT)	
*	1-653-905-11	LOADING SW BOARD *****				< TRANSISTOR >	
		< CONNECTOR >		Q801	8-729-900-89	TRANSISTOR    DTC144ES	
* CN281	1-568-942-11	PIN, CONNECTOR 4P		Q802	8-729-900-89	TRANSISTOR    DTC144ES	
		< RESISTOR >		Q803	8-729-900-89	TRANSISTOR    DTC144ES	
R281	1-249-415-11	CARBON            680   5%   1/4W F				< RESISTOR >	
		< SWITCH >		R801	1-259-424-11	CARBON            680   5%   1/6W	
S281	1-692-193-11	SWITCH, PUSH (1 KEY) (IN SW)		R802	1-259-428-11	CARBON            1K    5%   1/6W	
S282	1-692-193-11	SWITCH, PUSH (1 KEY) (OUT SW)		R803	1-259-432-11	CARBON            1.5K 5%   1/6W	
S283	1-692-193-11	SWITCH, PUSH (1 KEY) (LD SW)		R804	1-259-436-11	CARBON            2.2K 5%   1/6W	
*****				R805	1-259-440-11	CARBON            3.3K 5%   1/6W	
*	1-654-311-11	OPT BOARD *****		R806	1-259-424-11	CARBON            680   5%   1/6W	
		< CAPACITOR >		R807	1-259-428-11	CARBON            1K    5%   1/6W	
C704	1-136-850-11	FILM                0.1uF    5%    63V		R808	1-259-432-11	CARBON            1.5K 5%   1/6W	
C707	1-107-597-11	MICA                22PF     5%    500V		R809	1-259-436-11	CARBON            2.2K 5%   1/6W	
		< IC >		R810	1-259-440-11	CARBON            3.3K 5%   1/6W	
IC702	8-759-977-71	IC    GP-1F31T		R812	1-259-424-11	CARBON            680   5%   1/6W	
*****				R813	1-259-428-11	CARBON            1K    5%   1/6W	
		< SWITCH >		R814	1-259-432-11	CARBON            1.5K 5%   1/6W	
				R815	1-259-436-11	CARBON            2.2K 5%   1/6W	
				R816	1-259-440-11	CARBON            3.3K 5%   1/6W	
				R817	1-259-448-11	CARBON            6.8K 5%   1/6W	
				R818	1-259-456-11	CARBON            15K 5%   1/6W	
				R819	1-259-468-11	CARBON            47K 5%   1/6W	
				R825	1-259-406-11	CARBON            120 5%   1/6W	
				R826	1-259-414-11	CARBON            270 5%   1/6W	
				R827	1-259-418-11	CARBON            390 5%   1/6W	
						< SWITCH >	
				S801	1-554-303-21	SWITCH, TACTILE (1)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S802	1-554-303-21	SWITCH, TACTILE (2)		C135	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
S803	1-554-303-21	SWITCH, TACTILE (3)		C136	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
S804	1-554-303-21	SWITCH, TACTILE (4)		C137	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
S805	1-554-303-21	SWITCH, TACTILE (5)		C138	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
S806	1-554-303-21	SWITCH, TACTILE (DIGITAL OUTPUT)		C139	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S807	1-554-303-21	SWITCH, TACTILE (6)		C140	1-164-336-11	CERAMIC CHIP 0.33uF	25V
S808	1-554-303-21	SWITCH, TACTILE (7)		C141	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
S809	1-554-303-21	SWITCH, TACTILE (8)		C142	1-163-127-00	CERAMIC CHIP 270PF 5%	50V
S810	1-554-303-21	SWITCH, TACTILE (9)		C143	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S811	1-554-303-21	SWITCH, TACTILE (10)		C144	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S813	1-554-303-21	SWITCH, TACTILE (11)		C145	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S814	1-554-303-21	SWITCH, TACTILE (12)		C161	1-163-145-00	CERAMIC CHIP 0.0015uF 5%	50V
S815	1-554-303-21	SWITCH, TACTILE (CHECK)		C162	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V
S816	1-554-303-21	SWITCH, TACTILE (CLEAR)		C163	1-164-492-11	CERAMIC CHIP 0.15uF 10%	16V
S817	1-554-303-21	SWITCH, TACTILE (>12)		C171	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S818	1-554-303-21	SWITCH, TACTILE (PLAY MODE)		C172	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S819	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)		C173	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S820	1-554-303-21	SWITCH, TACTILE (▶)		C174	1-164-336-11	CERAMIC CHIP 0.33uF	25V
S821	1-554-303-21	SWITCH, TACTILE (■)		C175	1-163-038-91	CERAMIC CHIP 0.1uF	25V
S822	1-554-303-21	SWITCH, TACTILE (■)		C176	1-163-038-91	CERAMIC CHIP 0.1uF	25V
				C177	1-164-336-11	CERAMIC CHIP 0.33uF	25V
*****							
*	A-4673-224-A	SERVO BOARD, COMPLETE		C178	1-163-038-91	CERAMIC CHIP 0.1uF	25V
		*****		C201	1-125-622-11	CAP, DOUBLE LAYERS	0.10F
		< CAPACITOR >		C202	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C93	1-124-995-11	ELECT 220uF 20%	10V	C203	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C94	1-124-995-11	ELECT 220uF 20%	10V	C204	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C95	1-124-995-11	ELECT 220uF 20%	10V	C251	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C96	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V	C252	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C97	1-126-162-11	ELECT 3.3uF 20%	50V	C261	1-126-177-11	ELECT 100uF 20%	10V
						< CONNECTOR >	
C101	1-126-177-11	ELECT 100uF 20%	10V	* CN91	1-573-278-11	PIN, CONNECTOR 8P	
C102	1-126-177-11	ELECT 100uF 20%	10V	CN101	1-568-795-11	SOCKET, CONNECTOR 12P	
C103	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V	CN102	1-580-473-11	SOCKET, CONNECTOR 26P	
C104	1-163-133-00	CERAMIC CHIP 470PF 5%	50V	CN103	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P	
C105	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	CN104	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P	
C106	1-163-133-00	CERAMIC CHIP 470PF 5%	50V	CN105	1-580-771-11	PIN, CONNECTOR (PC BOARD) 3P	
C107	1-163-809-11	CERAMIC CHIP 0.047uF 10%	25V	CN201	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P	
C108	1-163-145-00	CERAMIC CHIP 0.0015uF 5%	50V	CN202	1-580-775-11	PIN, CONNECTOR (PC BOARD) 8P	
C109	1-163-117-00	CERAMIC CHIP 100PF 5%	50V	CN203	1-580-770-11	PIN, CONNECTOR (PC BOARD) 2P	
C110	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V	CN204	1-580-770-11	PIN, CONNECTOR (PC BOARD) 2P	
C111	1-164-232-11	CERAMIC CHIP 0.01uF	50V	CN251	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P	
C112	1-163-038-91	CERAMIC CHIP 0.1uF	25V			< DIODE >	
C113	1-163-038-91	CERAMIC CHIP 0.1uF	25V	D201	8-719-914-44	DIODE DAP202K	
C114	1-163-038-91	CERAMIC CHIP 0.1uF	25V	D202	8-719-976-96	DIODE DTZ4.7C	
C115	1-164-346-11	CERAMIC CHIP 1uF	16V	D261	8-719-938-07	LED GL480	
C131	1-163-109-00	CERAMIC CHIP 47PF 5%	50V				
C132	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V				
C133	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V				
C134	1-163-109-00	CERAMIC CHIP 47PF 5%	50V				

# SERVO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< IC >				R138	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
IC91	8-759-636-16	IC M51957AL		R139	1-216-083-00	METAL CHIP	27K 5% 1/10W
IC101	8-752-351-94	IC CXD2515Q		R140	1-216-083-00	METAL CHIP	27K 5% 1/10W
IC102	8-759-071-79	IC BA6297AFP		R141	1-216-085-00	METAL CHIP	33K 5% 1/10W
IC103	8-759-100-96	IC uPC4558G2		R142	1-216-085-00	METAL CHIP	33K 5% 1/10W
IC104	8-759-071-79	IC BA6297AFP		R143	1-216-093-00	METAL CHIP	68K 5% 1/10W
IC105	8-759-071-79	IC BA6297AFP		R144	1-216-093-00	METAL CHIP	68K 5% 1/10W
IC201	8-752-864-35	IC CXP84124-025Q		R145	1-216-085-00	METAL CHIP	33K 5% 1/10W
IC202	8-759-289-95	IC LH5160TG		R146	1-216-085-00	METAL CHIP	33K 5% 1/10W
IC203	8-759-822-09	IC LB1641		R147	1-216-308-00	METAL CHIP	4.7 5% 1/10W
IC261	8-749-010-61	IC IS471F		R148	1-216-073-00	METAL CHIP	10K 5% 1/10W
< TRANSISTOR >				R149	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q101	8-729-901-06	TRANSISTOR DTA144EK		R150	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q102	8-729-901-01	TRANSISTOR DTC144EK		R151	1-216-097-00	METAL CHIP	100K 5% 1/10W
Q103	8-729-901-06	TRANSISTOR DTA144EK		R152	1-216-001-00	METAL CHIP	10 5% 1/10W
Q104	8-729-901-01	TRANSISTOR DTC144EK		R153	1-216-001-00	METAL CHIP	10 5% 1/10W
Q201	8-729-901-04	TRANSISTOR DTA114EK		R154	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q202	8-729-900-53	TRANSISTOR DTC114EK		R155	1-216-097-00	METAL CHIP	100K 5% 1/10W
< RESISTOR >				R161	1-216-075-00	METAL CHIP	12K 5% 1/10W
R91	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R162	1-216-091-00	METAL CHIP	56K 5% 1/10W
R92	1-216-077-00	METAL CHIP	15K 5% 1/10W	R163	1-216-093-00	METAL CHIP	68K 5% 1/10W
R93	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R164	1-216-093-00	METAL CHIP	68K 5% 1/10W
R101	1-216-077-00	METAL CHIP	15K 5% 1/10W	R165	1-216-093-00	METAL CHIP	68K 5% 1/10W
R102	1-216-097-00	METAL CHIP	100K 5% 1/10W	R166	1-216-097-00	METAL CHIP	100K 5% 1/10W
R103	1-216-077-00	METAL CHIP	15K 5% 1/10W	R167	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R104	1-216-025-91	METAL GLAZE	100 5% 1/10W	R168	1-216-097-00	METAL CHIP	100K 5% 1/10W
R105	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R171	1-216-001-00	METAL CHIP	10 5% 1/10W
R106	1-216-061-00	METAL CHIP	3.3K 5% 1/10W	R172	1-216-105-91	METAL GLAZE	220K 5% 1/10W
R107	1-216-073-00	METAL CHIP	10K 5% 1/10W	R173	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R108	1-216-121-00	METAL CHIP	1M 5% 1/10W	R174	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R109	1-216-105-91	METAL GLAZE	220K 5% 1/10W	R175	1-216-105-91	METAL GLAZE	220K 5% 1/10W
R110	1-216-073-00	METAL CHIP	10K 5% 1/10W	R176	1-216-308-00	METAL CHIP	4.7 5% 1/10W
R111	1-216-041-00	METAL CHIP	470 5% 1/10W	R179	1-216-001-00	METAL CHIP	10 5% 1/10W
R112	1-216-041-00	METAL CHIP	470 5% 1/10W	R180	1-216-105-91	METAL GLAZE	220K 5% 1/10W
R113	1-216-041-00	METAL CHIP	470 5% 1/10W	R181	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R114	1-216-037-00	METAL CHIP	330 5% 1/10W	R182	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R115	1-216-073-00	METAL CHIP	10K 5% 1/10W	R183	1-216-105-91	METAL GLAZE	220K 5% 1/10W
R116	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R184	1-216-308-00	METAL CHIP	4.7 5% 1/10W
R117	1-216-073-00	METAL CHIP	10K 5% 1/10W	R201	1-216-013-00	METAL CHIP	33 5% 1/10W
R118	1-216-097-00	METAL CHIP	100K 5% 1/10W	R202	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R119	1-216-085-00	METAL CHIP	33K 5% 1/10W	R203	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R131	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R204	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R132	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R205	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R133	1-216-083-00	METAL CHIP	27K 5% 1/10W	R206	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R134	1-216-083-00	METAL CHIP	27K 5% 1/10W	R207	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R135	1-216-085-00	METAL CHIP	33K 5% 1/10W	R208	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R136	1-216-085-00	METAL CHIP	33K 5% 1/10W	R209	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R137	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R210	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R212	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R213	1-216-073-00	METAL CHIP	10K 5% 1/10W

Ref.No.	Part No.	Description	Remark
R214	1-216-097-00	METAL CHIP      100K 5%      1/10W	
R215	1-216-073-00	METAL CHIP      10K 5%      1/10W	
R261	1-216-021-00	METAL CHIP      68 5%      1/10W	
< VIBRATOR >			
X201	1-577-377-11	VIBRATOR, CERAMIC (10MHz)	
*****			
*	1-654-305-11	VARIABLE BOARD *****	
< CONNECTOR >			
* CN753	1-573-263-31	PIN, CONNECTOR 4P	
< JACK >			
J903	1-568-918-41	JACK, PIN 1P (VARIABLE OUT L)	
J904	1-568-918-31	JACK, PIN 1P (VARIABLE OUT R)	
*****			
*	1-654-316-11	VR BOARD *****	
< CAPACITOR >			
C761	1-164-159-11	CERAMIC      0.1uF      50V	
< CONNECTOR >			
* CN490	1-573-274-11	PIN, CONNECTOR 4P	
* CN590	1-573-274-21	PIN, CONNECTOR 4P	
* CN790	1-573-273-11	PIN, CONNECTOR 3P	
< VARIABLE RESISTOR >			
RV751	1-241-792-11	RES, VAR, CARBON 20K/20K (LINE OUT/PHONE LEVEL)	
*****			
MISCELLANEOUS *****			
△122	1-558-568-21	CORD, POWER (AEP, G)	
△122	1-690-958-11	CORD, POWER (US, CND)	
123	1-563-030-11	CONNECTOR (RECEPTACLE) 3P	
705	1-769-110-11	WIRE (FLAT TYPE) (26 CORE)	
709	1-769-109-11	WIRE (FLAT TYPE) (12 CORE)	
△805	8-848-368-11	OPTICAL PICK-UP BLOCK KSS-273A/J-N	
△F901	1-532-066-00	FUSE, TIME-LAG (0.4A 250V) (AEP, G)	
△F901	1-532-739-11	FUSE, GLASS TUBE (0.8A 125V) (US, CND)	
△F902	1-532-279-00	FUSE, TIME-LAG (0.5A 250V) (AEP, G)	
△F902	1-532-740-11	FUSE, GLASS TUBE (1A 125V) (US, CND)	

Ref.No.	Part No.	Description	Remark
J901	1-568-918-41	JACK, PIN 1P (FIXED OUT L)	
J902	1-568-918-31	JACK, PIN 1P (FIXED OUT R)	
J903	1-568-918-41	JACK, PIN 1P (VARIABLE OUT L)	
J904	1-568-918-31	JACK, PIN 1P (VARIABLE OUT R)	
M21	X-4945-920-1	MOTOR ASSY, SLED	
M271	X-4945-565-1	MOTOR ASSY (LOADING)	
S21	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT OUT)	
S22	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT IN)	
△S901	1-571-250-41	SWITCH, PUSH (AC POWER) (1 KEY)	
△T902	1-427-822-11	TRANSFORMER, POWER (US, CND)	
△T902	1-427-823-11	TRANSFORMER, POWER (AEP, G)	
*****			
ACCESSORIES & PACKING MATERIALS *****			
1-467-889-11 REMOTE COMMANDER (RM-D921)			
1-590-861-11 CORD, CONNECTION (AUDIO 108cm)			
3-707-584-21 COVER, BATTERY (for RM-D921)			
3-759-341-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, SWEDISH) (US, CND, AEP)			
3-759-341-41 MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (AEP, G)			
*	4-971-334-01	CUSHION	
*	4-972-154-01	INDIVIDUAL CARTON	
A-4660-862-A STABILIZER ASSY			
*****			
***** HARDWARE LIST *****			
#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
#2	7-682-549-04	SCREW +BVTT 3X10 (S)	
#3	7-685-871-01	SCREW +BVTT 3X6 (S)	
#4	7-682-565-09	SCREW +B 4X16	
#5	7-621-775-10	SCREW +B 2.6X4	
#6	7-684-023-04	N 3, TYPE 2	
#7	7-685-134-19	SCREW +PTPWH 2.6X8 (TYPE2)	
#8	7-621-772-30	SCREW +B 2X6	
#9	7-682-903-01	SCREW +PWH 3X5	
#10	7-682-902-11	SCREW +PWH 2.6X5	
#11	7-621-775-50	SCREW +B 2.6X10	
#12	7-628-253-00	SCREW +PS 2X4	
#13	7-685-246-14	SCREW +KTP 3X8 TYPE2 NON-SLIT	
#14	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#15	7-685-646-79	SCREW, TAPPING	
#16	7-682-548-04	SCREW +BVTT 3X8 (S)	
#17	7-627-852-07	SCREW, PRECISION +P 1.7X2.5	
#18	7-685-246-19	SCREW +KTP 3X8 TYPE2 NON-SLIT (BLACK).. (BLACK)	

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
#18	7-685-246-14	SCREW +KTP 3X8 TYPE2 NON-SLIT (SILVER).. (GOLD)	
#19	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#20	7-685-647-79	SCREW +P 3X10 TYPE2 NON-SLIT	
#21	7-627-852-58	SCREW, PRECISION +P 1.7X5 TYPE3	
#22	7-682-562-09	SCREW +B 4X10	
#23	7-682-148-15	SCREW, TR	