

CDP-X777ES

SERVICE MANUAL

US Model

Canadian Model

AEP Model

UK Model

Australian Model



SPECIFICATIONS

Compact Disc Player Unit

System	Compact disc digital audio system
Disc	Compact Disc
Data read system	Non-Contact optical reading (using a semiconductor laser)
Laser	GaAlAs dual hetero-diode (λ (wavelength) = 780 nm)
Spindle speed	Approx. 200 rpm - 500 rpm (CLV)
Error correction	Sony Super Strategy, Cross Interleave Reed Solomon code
Frequency response	2-20,000 Hz ±0.3 dB
Signal to noise ratio	More than 118 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0015% (1 kHz)
Channel separation	More than 110 dB (1 kHz)
Wow and flutter	Below measurable limit

Output jacks

LINE OUT (FIXED)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
LINE OUT (VARIABLE)	Output level max. 2 V (at 50 kilohms) Load impedance over 50 kilohms
BALANCED OUT (FIXED)	Output level 2 V (at 50 kilohms) Load impedance over 600 ohms
DIGITAL OUT (COAXIAL)	Output level 0.5 Vp-p (at 75 ohms) Load impedance 75 ohms
DIGITAL OUT (OPTICAL)	Wave length 660 nm Output level -18 dBm

General

Power requirements	US, Canadian model : AC120V, 60Hz Europe model: AC 220-230, 240 V, 50/60 Hz
RAM memory storage	Held for more than a month (after turning the power OFF).
Power consumption	30 watts
Dimensions (w/h/d)	430 × 125 × 375 mm (UK) (17 × 5 × 147/8 inches) 470 × 125 × 375 mm (others) (185/8 × 5 × 147/8 inches) (Including projecting parts and controls)
Weight	16 kg (35 lb 5 oz) (UK) 17 kg (37 lb 8 oz) (others)

Remote Commander (supplied)

Remote control system	Infrared control
Power requirements	3V DC (with two R6 (size AA) batteries)
Dimensions	62 × 18 × 175 mm (w/h/d) (27/16 × 23/32 × 7 inches)

Weight 135 g (4.8 oz) (including batteries)

Supplied accessories

Audio signal connecting cord	× 1
Remote commander	× 1
R6 (Size AA) battery	× 2
Screwdriver	× 1

Screw (M4) × 8 (excluding UK model)

Design and specifications subject to change without notice.

Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol \pm or coloured green or green-and yellow.

COMPACT DISC PLAYER
SONY®

www.electronicsrepair.net

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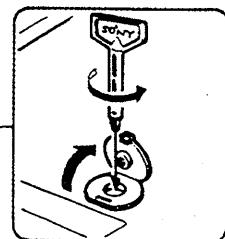
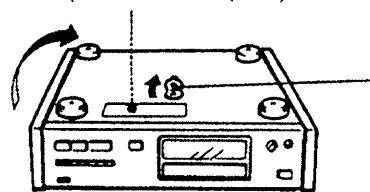
Before Use (Transportation Screw)

Before starting any operation, be sure to release the transportation screw (for protection of the laser pickup and internal mechanism) located on the bottom of the unit. Turn this screw in the direction of the arrow, following the Caution Sheet attached to the bottom plate. To release the transportation screw, open the cap and turn the screw counterclockwise 180 degrees **using the provided screwdriver**. Be careful not to turn screw too far, as it could damage the internal mechanism or cause a malfunction.

Before transporting this unit, tighten the screw firmly.

When rotating the screw, be sure to place the unit upside down.

Caution Sheet
(on the bottom plate)



SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

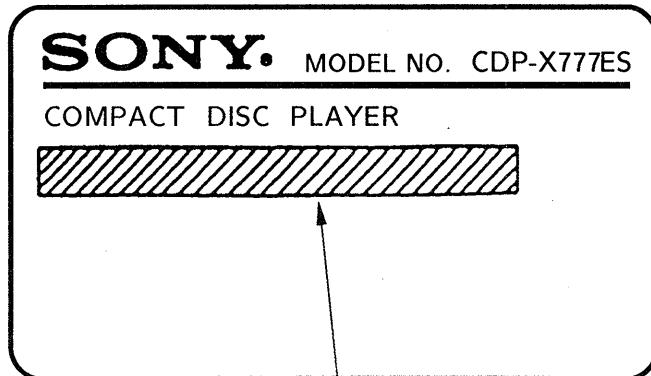
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1

SERVICING NOTE

MODEL IDENTIFICATION

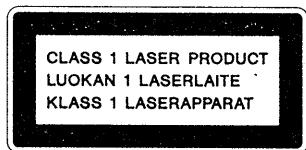
- Specification Label Printed on Back Panel -



US/Canadian Model : AC 120V 60Hz 30W

AEP Model : AC 220 - 230V ~ 50/60Hz

UK/Australian Model : AC 240V ~ 50/60Hz



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

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check 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 TEST

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 microampers). 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)

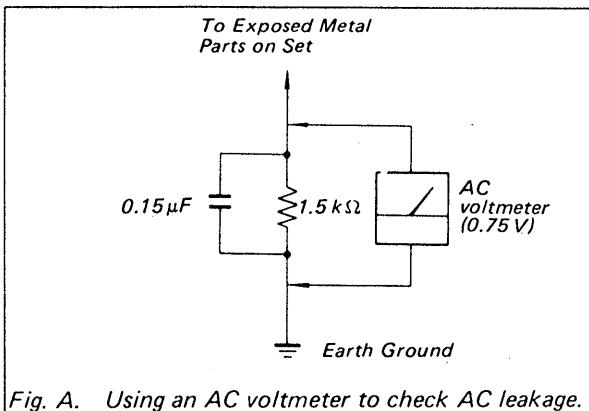


Fig. A. Using an AC voltmeter to check AC leakage.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

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

1. Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 44.6 μ W*

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

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optocal Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

1. Laser-didoe data

- Materiale: GaAlAs
 - Bølgelængde: 780 nm
 - Udstråling: Kontinuerlig
 - Laseroutput: Max. 0,4 mW*
- * Målt i 1,6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhed.

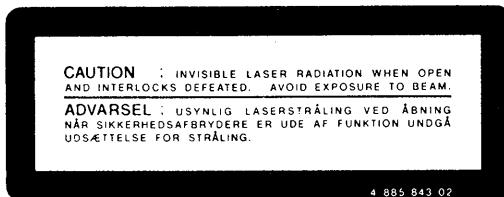
- Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning



VAROITUS: Laite sisältää, laserdiodin, joka lähettilä (näkymätöntä) silmille vaarallista lasersateilyä.

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

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

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

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

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 25 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Remove disc pulley by lifting up chucking arm by hand. (Fig. A, B)
2. Make POWER switch on with no disc inserted and disc table closed.
3. Confirm that the operation indicated in Fig. C is performed while observing the objecting lens.

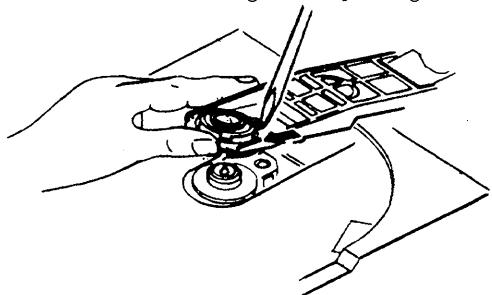


Fig. A

Remove here at first

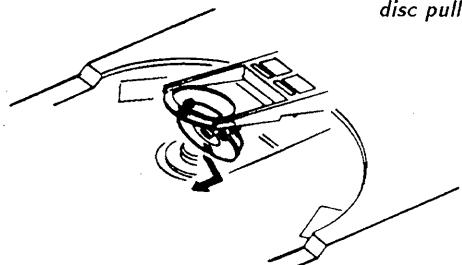
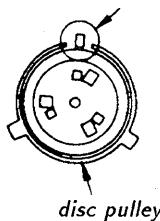
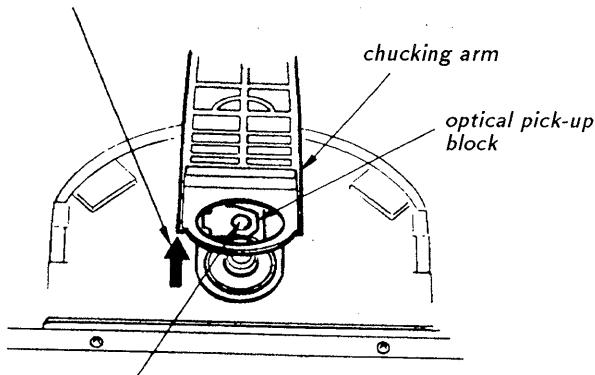


Fig. B

Lift up chucking arm by hand in the direction of arrow.

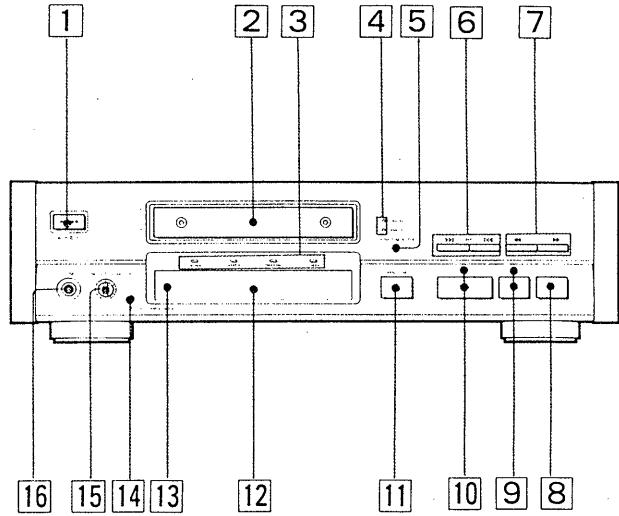


- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

Fig. C

SECTION 2 GENERAL

2-1. LOCATION AND FUNCTION OF CONTROLS



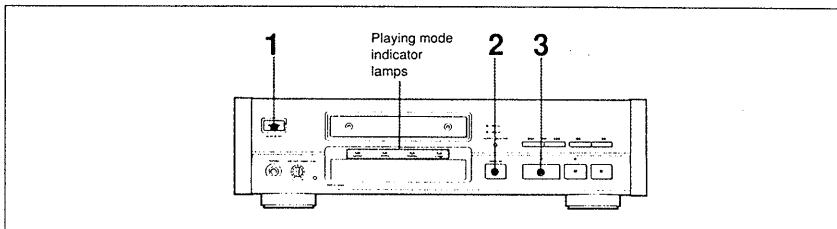
UK model is not equipped with side panels.

Name of control	Operation
[1] POWER switch	Depress to turn on the power.
[2] Disc table	Place a disc here.
[3] Playing mode indicator lamps	The lamp of the current play mode lights up.
[4] Output Indicator lamp	The lamp of the output you chose with the OUTPUT SELECTOR lights up.
[5] OUTPUT SELECTOR button	Select analog output or digital output with this selector.
[6] AMS * buttons	Use these buttons to designate the selection number to be played. During play, each time the ◀◀ button is pressed, the beginning of the current selection, then the beginning of the previous selection is located in sequence. (Each time the ▶▶ button is pressed, the beginning of the next selection is located in the same way.) When the ◀◀ or ▶▶ button is kept pressed, the selections are skipped continuously.
[7] ◀◀▶▶ (manual search) buttons	Use these buttons to play from the desired point of a selection. To go back, keep ◀◀ pressed, and to go ahead, keep ▶▶ pressed. When the ◀◀ or ▶▶ button is pressed in the pause mode, a quick search operation can be activated.
[8] ■ (stop) button	Press to stop the play.
[9] □ (pause) button/lamp	Press to stop the play momentarily. Press ▶ button or this button to release pause.
[10] ▶ (play) button/lamp	Press to start the play or to release pause.
[11] ▲ OPEN/CLOSE button	Press to open or close the disc table.
[12] Display window	The current play mode, the track number of the selection, and the elapsed playing time of the selection, etc., are displayed here.
[13] Remote sensor	The signals from the remote commander are received here.
[14] DISPLAY MODE button	Press to switch off the display. Press once more to display the indications again.
[15] LINE OUT/PHONE LEVEL (volume) control	Use this control to adjust the level of headphones and the output level of the line out (VARIABLE).
[16] PHONES jack	Connect headphones here.

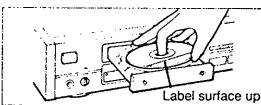
* AMS is the abbreviation of Automatic Music Sensor.

This section is extracted from instruction manual.

2-2. PLAYING A DISC



- 1 Depress the POWER switch to ON.
The playing mode indicator lights up. If an indicator other than CONTINUE lights up, press the CONTINUE/SINGLE button on the remote commander. If CONTINUE lamp lights up and "SINGLE" appears in the window, press the CONTINUE/SINGLE button again and "SINGLE" will disappear.



- 2 Press ▲ button and place a disc on the disc table.
- 3 Press ▶ button.
The compartment closes and play begins from the beginning of the disc.

2-3. ADJUSTING THE VOLUME

When you use the digital output or balanced output connection or make the connection to the FIXED jack for analog use

Adjust the volume with the volume control of an amplifier. You cannot control the volume with the LINE OUT/PHONE LEVEL control on the player or LINE OUT LEVEL +/- on the remote commander.

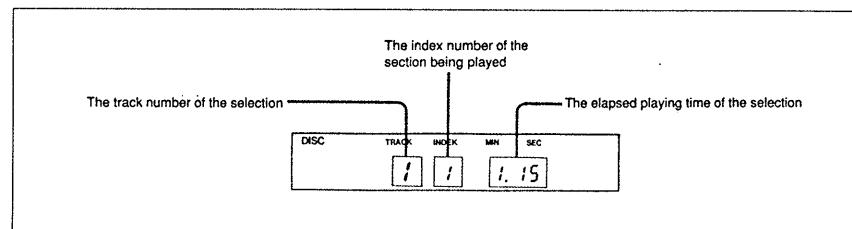
When you make the connection to the VARIABLE side for analog use

You can control the volume with the LINE OUT/PHONE LEVEL control on the player or LINE OUT LEVEL +/- on the remote commander.

Note on 8 cm CD
You can play an 8 cm (3 inch) CD on the inside circle of the table. Do not put a normal CD (size of 12 cm (5 inch)) over it.

To wake up to your favorite music (Timer play)
Leave a disc in the player before you turn the power off. When you turn the power back on, the player will automatically play the disc according to the conditions before the power was turned off. You can also play a program of selections by making a program bank. (see page 26.) By connecting a commercially available timer, you can have the player wake you up to your favorite music.

2-4. TIME DISPLAY DURING PLAY



To display the total number of selections and the total playing time

After a disc is placed on the disc table, and the ▲ button is pressed to close the disc table, the total number of selections (tracks) on the disc and the total playing time will be displayed for several seconds. The player will enter the STOP mode a few seconds later.

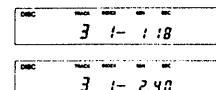
If you press the TIME button while in STOP mode, the total number of selections and total playing time is shown in the window.

"DISC" appears when a disc is inserted.



To display time remaining until the end of the disc

During play, press the TIME button on the remote commander. When this button is pressed once, the remaining time of the currently playing selection is displayed. If the current track number is over 40, "----" is displayed.



When it is pressed again, the total remaining time until the end of the disc will be displayed.

Press the TIME button once more to resume the normal display.



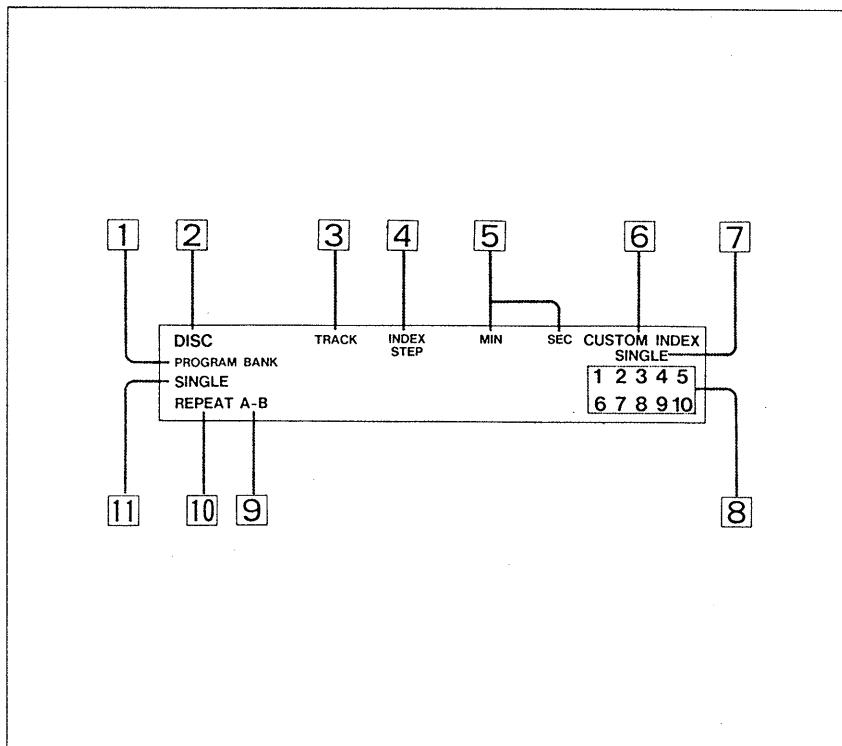
To turn the display off

Press DISPLAY MODE once. The display will turn off even during playback.

Press once more to display the indications again.

Even when no indications appear in the window, any operations made directly on the player will be shown in the window for about one second.

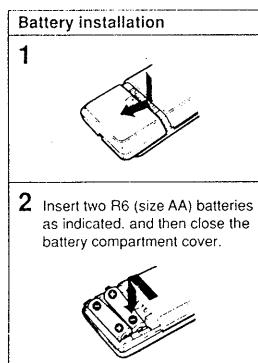
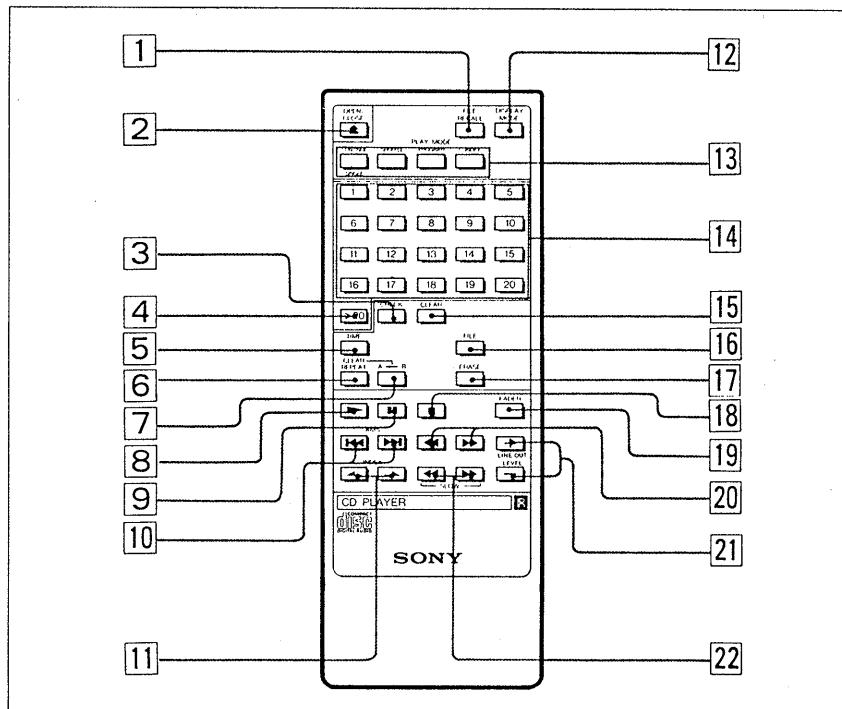
2-5. INFORMATION DISPLAY



Indication	Meaning
[1] PROGRAM BANK	The program bank is stored.
[2] DISC	A disc is inserted.
[3] TRACK	The track number of the selection is displayed.
[4] INDEX	While "INDEX" is lit, the index number of the section being played is displayed. When the custom index is stored, the custom index number is displayed while the custom index is played.
STEP	During program play, "STEP" is lit and the program number of the selection is displayed.
[5] MIN/SEC	The elapsed playing time of the selection, the remaining time of the currently playing selection, and the total remaining time until the end of the disc are displayed with each press of the TIME button.
[6] CUSTOM INDEX	The custom index is stored, and the playing mode is the custom index mode.
[7] CUSTOM INDEX SINGLE	The playing mode is the custom index single mode.
[8] 1 ~ 10	The custom index number is displayed while custom index is played.
[9] REPEAT A - B	A ↔ B repeat is being played.
[10] REPEAT	The unit is in the repeat play mode.
[11] SINGLE	The unit is in the single play mode.

2-6. LOCATION AND FUNCTION OF CONTROLS

(The Remote commander)



Battery replacement

The service life of the batteries is about six months in normal operation. When the distance from which remote control operation is possible becomes shorter, replace both batteries with new ones.

Note on remote control operation

Make sure that the remote control signal sensor is not subject to direct sunlight or to lighting of high intensity, as this may cause malfunctioning or make remote control operation impossible.

[1] FILE RECALL button	Press to recall the program bank.
[2] ▲ (open/close) button	Press to open or close the disc table.
[3] CHECK (program check) button	Press to check the programmed contents. Use this button to cancel a custom index memory.
[4] >20 (over 20 button)	Press to select a selection having a track number over 20. Then press one of the 1 to 10 buttons. In this case, the 10 button corresponds to "0". <Example> To select the 22nd selection: Press >20, then 2 and 2. To select the 30th selection: Press >20, then 3 and 10.
[5] TIME button	Press to change the display.
[6] CLEAR REPEAT (repeat clear/repeat) button	Press to play the disc repeatedly. Press again to release repeat play.
[7] A↔B repeat button	Press when the required start point and stop point for repeat play are reached.
[8] ▶ (play) button	Press to start the play or to release pause.
[9] II (pause) button	Press to stop the play momentarily. Press ▶ button or this button to release pause.
[10] I◀AMS▶I buttons	Use these buttons to designate the selection number to be played.
[11] — INDEX — buttons	Press to select the desired index number or a custom index.
[12] DISPLAY MODE button	Press to turn off all the indications. Press to display the indications again.
[13] PLAY MODE buttons	Press to select the desired play mode. CONTINUE/SINGLE (continuous/single play) button SHUFFLE (shuffle play) button PROGRAM (program play) button C.INDEX (custom index mode) button
[14] Numeric buttons	Press to designate the desired selection.
[15] CLEAR (program clear) button	Press to cancel a programmed selection.
[16] FILE (custom file) button	Press to store a program or a custom index.
[17] ERASE (memory erase) button	Press to cancel a program bank or a custom index memory.
[18] ■ (stop) button	Press to stop the play.
[19] FADER (fade in/fade out) button	Press to have the play fade in or fade out.
[20] I◀▶▶ (manual search) buttons	Use these buttons to play from the desired point of a selection.
[21] LINE OUT LEVEL +/- buttons	Use these buttons to adjust the level of headphones and the output level of the LINE OUT VARIABLE.
[22] I◀▶▶ SLOW (low speed manual search) buttons	Press to search at a lower speed.

The following operations cannot be conducted with the remote commander:

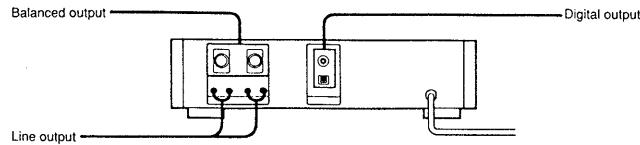
- Switching on/off the power.
- Selecting analog or digital output.

What is an index?

On some discs, index numbers divide the selections into sections, such as movements in a symphony. The index numbers help you find particular sections.

2-7. CONNECTIONS

Before Making Connections



Balanced output

As it is hardly affected by external noise, the balanced output connector is utilised by professionals in studios and the broadcasting stations. Connect the unit to an amplifier having a balanced input jack. For the connection, use cannon connectors XLR-3-32 or equivalent.
Pin assignment of the connectors are as follows; 1: GND, 2: HOT, 3: COLD.
(For Canadian model; 1:GND, 2:COLD, 3:HOT)

Digital output

The music signal remains in digital from when transmitted for virtually signal deterioration. Use the digital output connection when you connect the unit to an amplifier with a digital input or D/A converter.
When you connect a unit using a coaxial digital connecting cord, use the digital connecting cord VMC-1ES (not supplied). When you connect using optical digital connecting cord, use the audio optical cable POC-15 (not supplied).

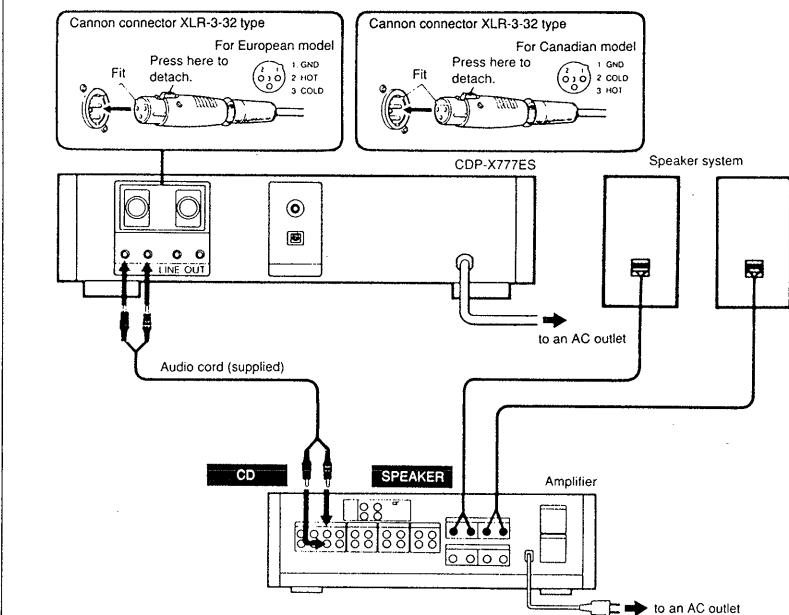
Line output

Use the line output jacks when connecting this unit for analog use.
Normally make the connection to the FIXED jack. If you use the VARIABLE jack to connect a power amplifier, you can adjust the volume with the LINE OUT/PHONE LEVEL control on the player or LINE OUT/PHONE LEVEL +/- buttons on the remote commander. The LINE OUT/PHONE LEVEL control (or LINE OUT LEVEL +/- buttons on the remote commander) not only adjusts the headphones output but also the output level of the VARIABLE LINE OUT jack. Accordingly, you can make the level of this unit correspond to that of other music sources. Be careful when recording as the recording level will change when you use the LINE OUT/PHONE LEVEL control (or LINE OUT LEVEL +/- buttons on the remote commander).

Notes on Connection

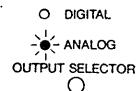
- Turn off the power of each unit before making connections.
- Connect the AC power cord last.
- Be sure to insert the plugs firmly into the jacks. Loose connection may cause hum and noise.
- Leave a little slack in the connecting cord to allow for inadvertent shock or vibration.
- Cord plugs and jacks are color coded: Red plugs and jacks are for the right channel (R) and white ones for the left channel (L).

Connecting the Unit with Analog Equipment



After Making Connection

Turn the power switch on.
Press the OUTPUT SELECTOR on the front panel of the unit to light the ANALOG lamp. The signals will be output to the analog jack.

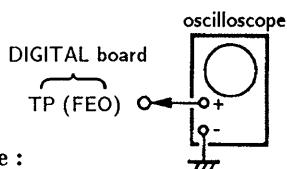


SECTION 3

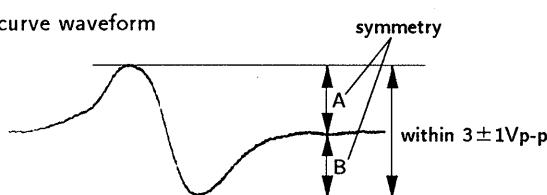
ELECTRICAL ADJUSTMENTS

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 the oscilloscope with more than $10M\Omega$ 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.

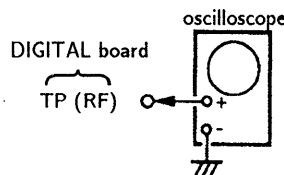
S Curve Check**Procedure :**

1. Connect oscilloscope to test point TP (FEO) on DIGITAL board.
2. Connect between test point TP (FES) to ground with lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within $3 \pm 1V_{p-p}$.

S curve waveform

5. After check, remove the lead wire connected in step 2.

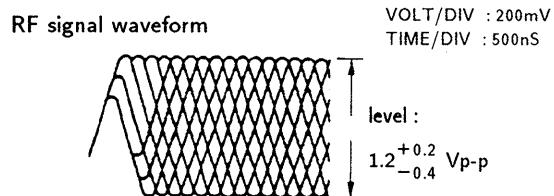
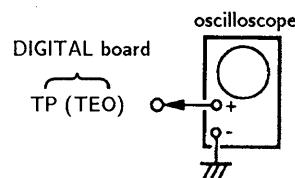
- Note :**
- Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
 - Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check**Procedure :**

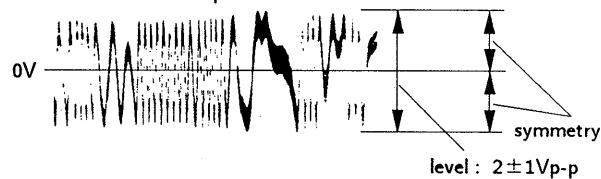
1. Connect oscilloscope to test point TP (RF) on DIGITAL board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

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

**E-F Balance Check****Procedure :**

1. Connect test point TP (ADJ) and TP (TES) to ground with lead wire.
2. Connect oscilloscope to test point TP (TEO) on DIGITAL board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

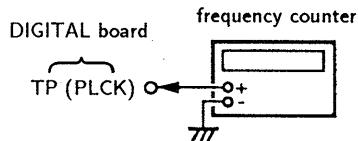
Traverse oscilloscope

6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

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



2. Turn Power switch on.
3. Confirm that reading on frequency counter is
4. 3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.

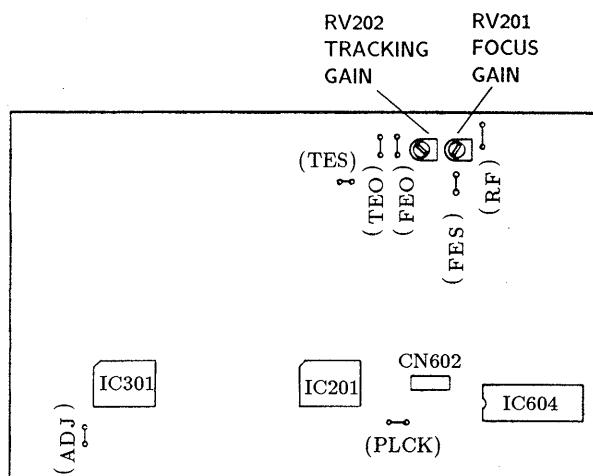
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustmen Locations :

[DIGITAL BOARD]

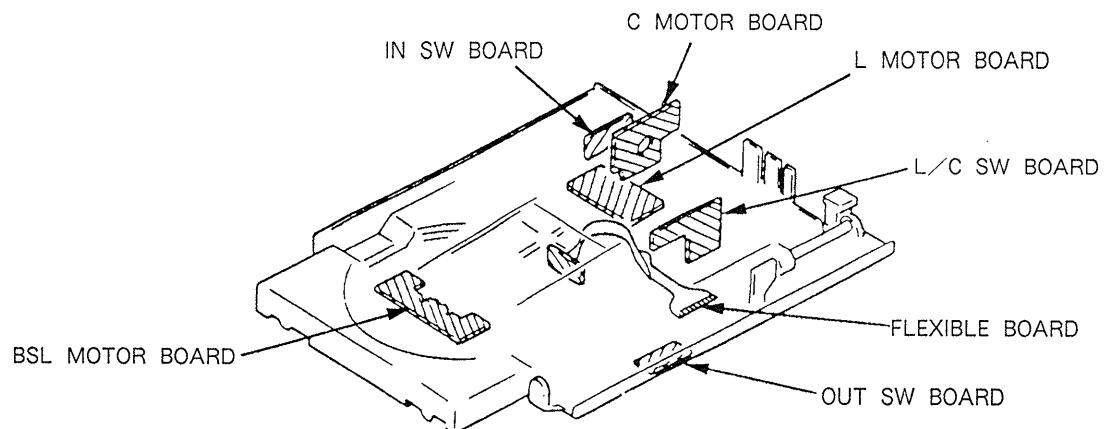
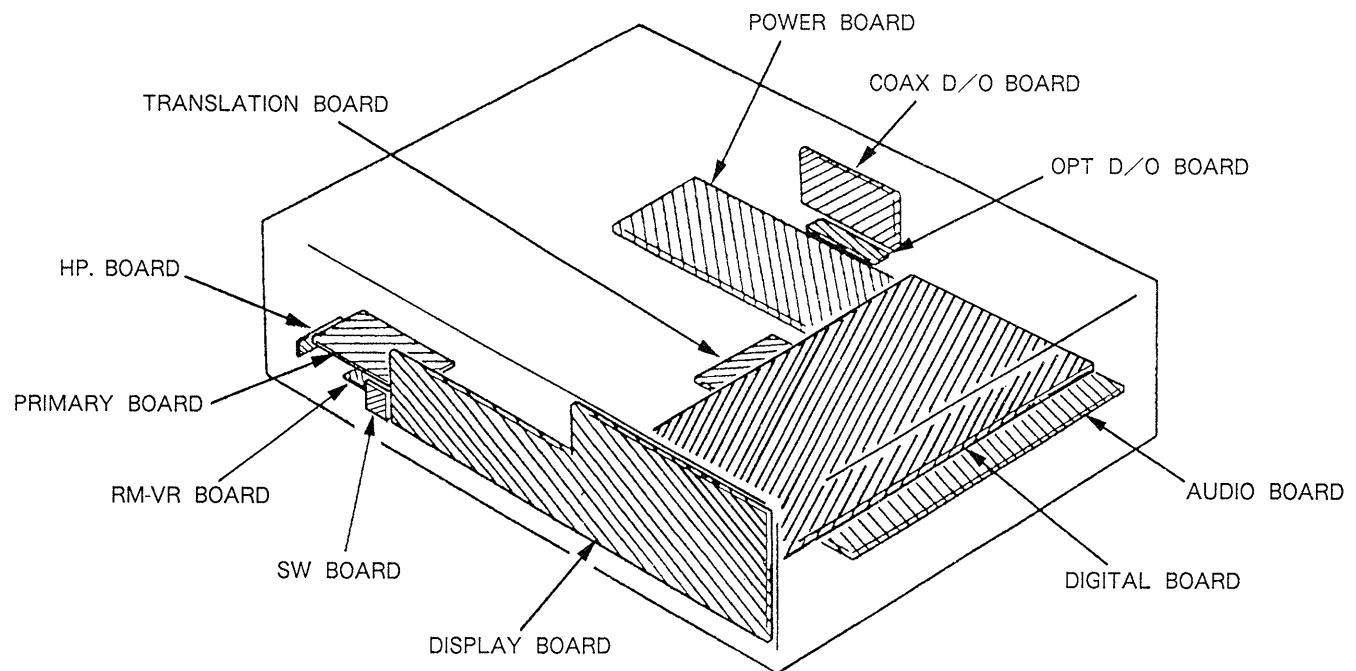
- Component Side -



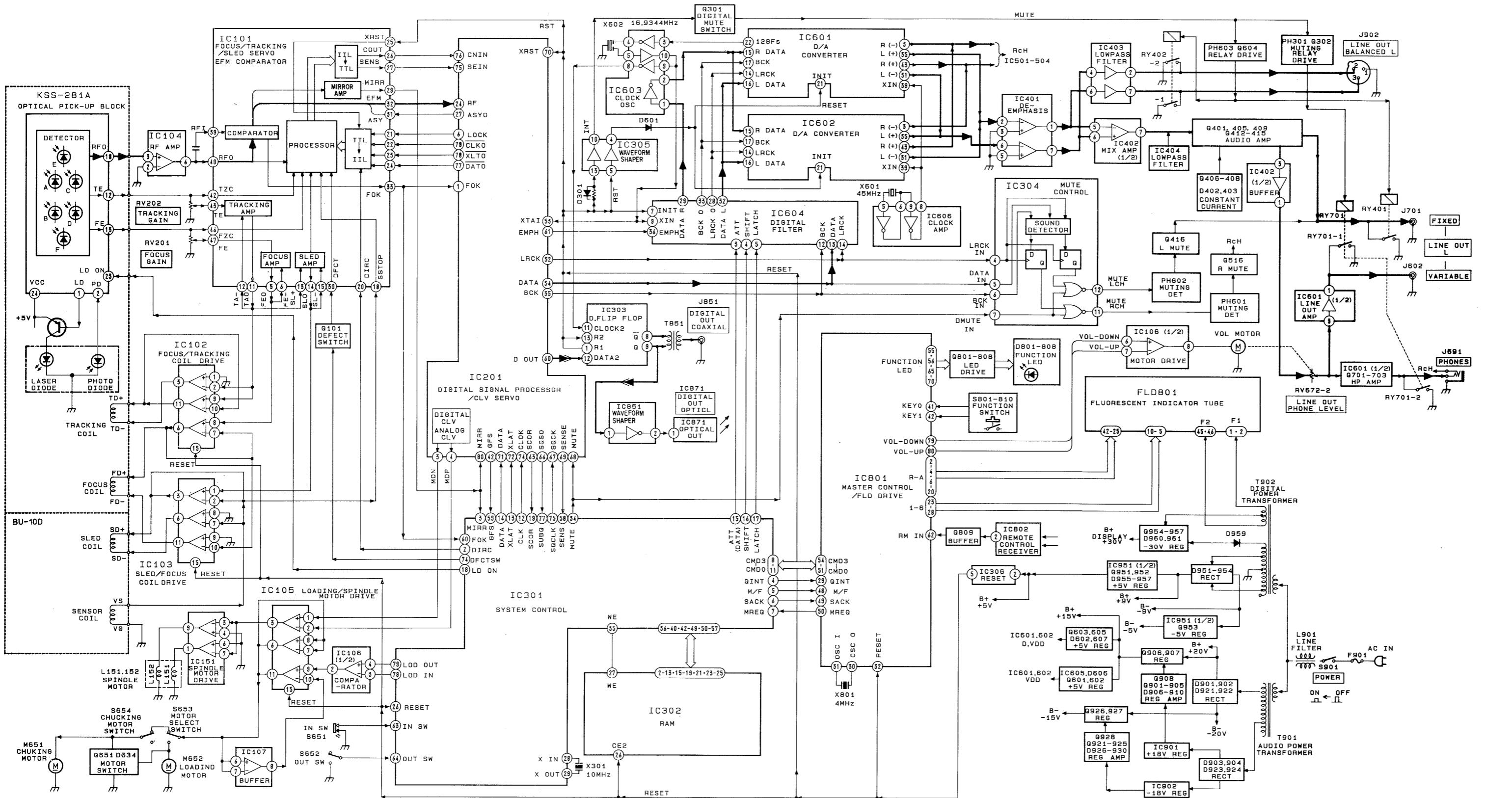
SECTION 4

DIAGRAMS

4-1. CIRCUIT BOARD LOCATION



4-2. BLOCK DIAGRAM



• SEMICONDUCTOR
LOCATION

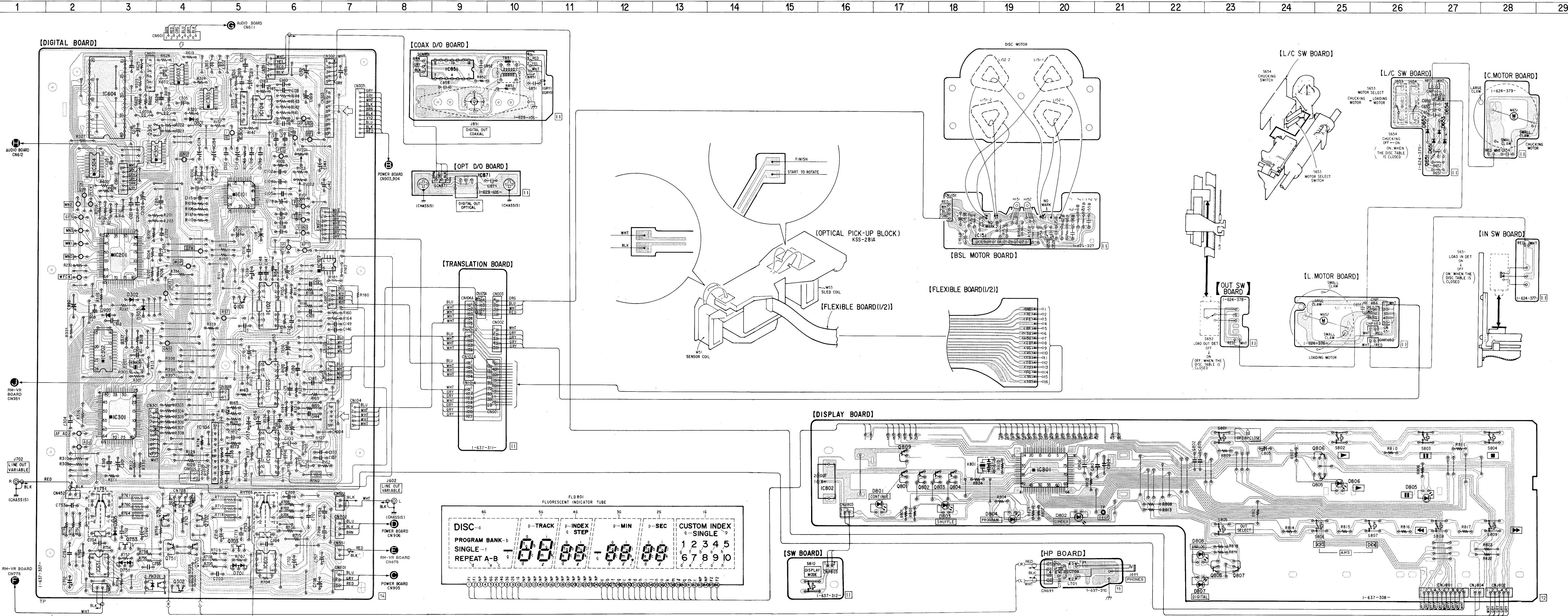
Ref. No.	Location	Ref. No.	Location
D301	B-4	IC601	K-6
D302	F-3	IC603	B-4
D303	F-3	IC604	B-3
D305	J-3	IC651	K-2
D651	C-27	IC801	I-20
D652	C-27	IC802	I-16
D653	C-27	IC851	B-9
D654	C-27	IC871	D-9
D701	K-5		
D751	K-3		
D801	I-17	PH301	K-3
D802	J-20		
D803	I-18	Q101	F-5
D804	J-19	Q301	C-3
D805	J-26	Q302	K-4
D806	I-25	Q651	C-27
D807	K-22	Q701	J-4
D808	J-22	Q702	J-4
D907	F-3	Q703	J-5
IC101	D-5	Q752	J-4
IC102	F-6	Q753	J-3
IC103	G-6	Q801	I-17
IC104	B-5	Q802	I-17
IC105	I-6	Q803	I-18
IC106	H-5	Q804	I-18
IC107	E-7	Q805	I-25
IC151	E-19	Q806	I-25
IC201	E-3	Q807	K-23
IC301	H-3	Q808	K-23
IC302	G-3	Q809	H-17
IC303	B-4		
IC304	C-2		
IC305	C-4		
IC306	B-5		

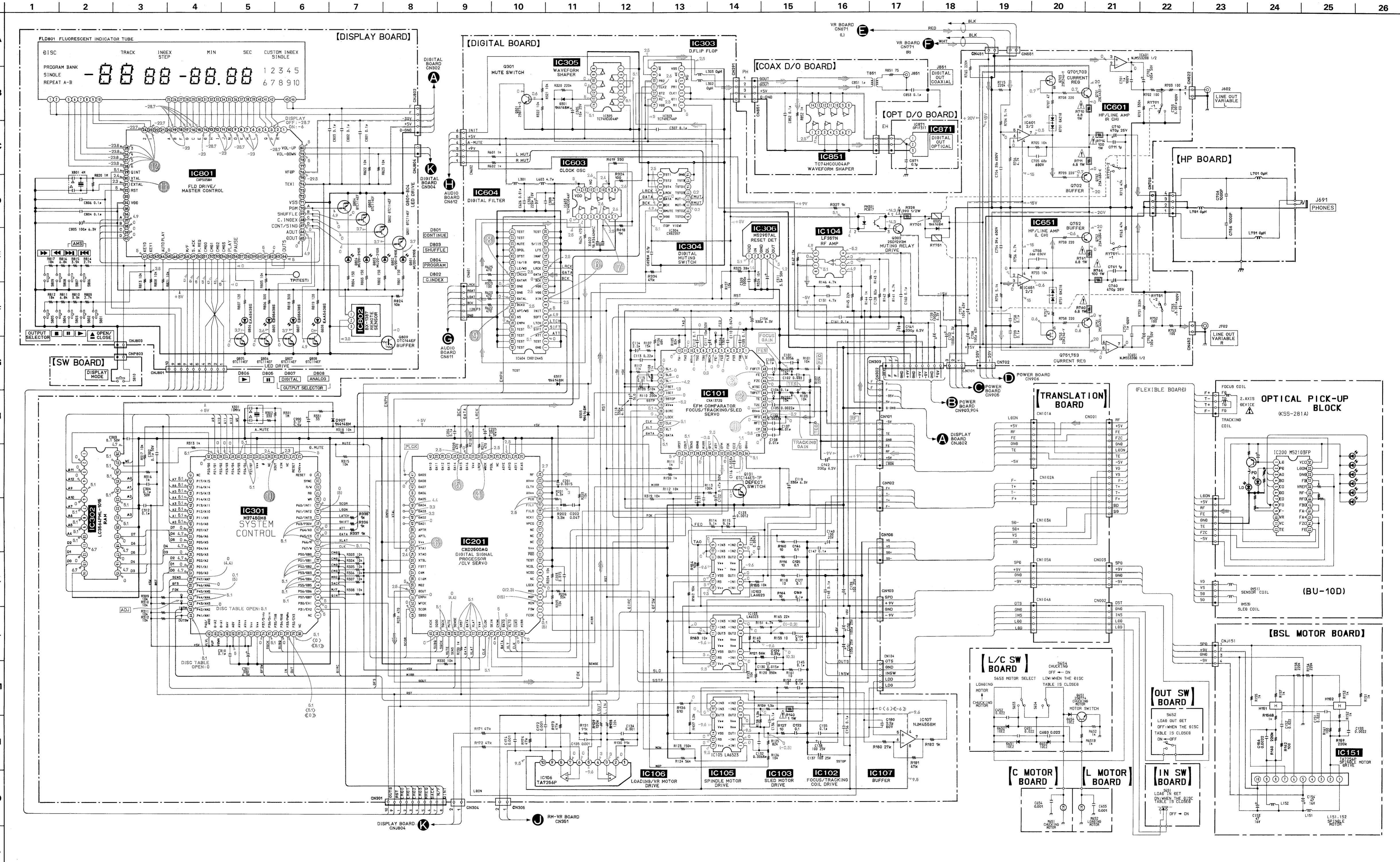
Note :

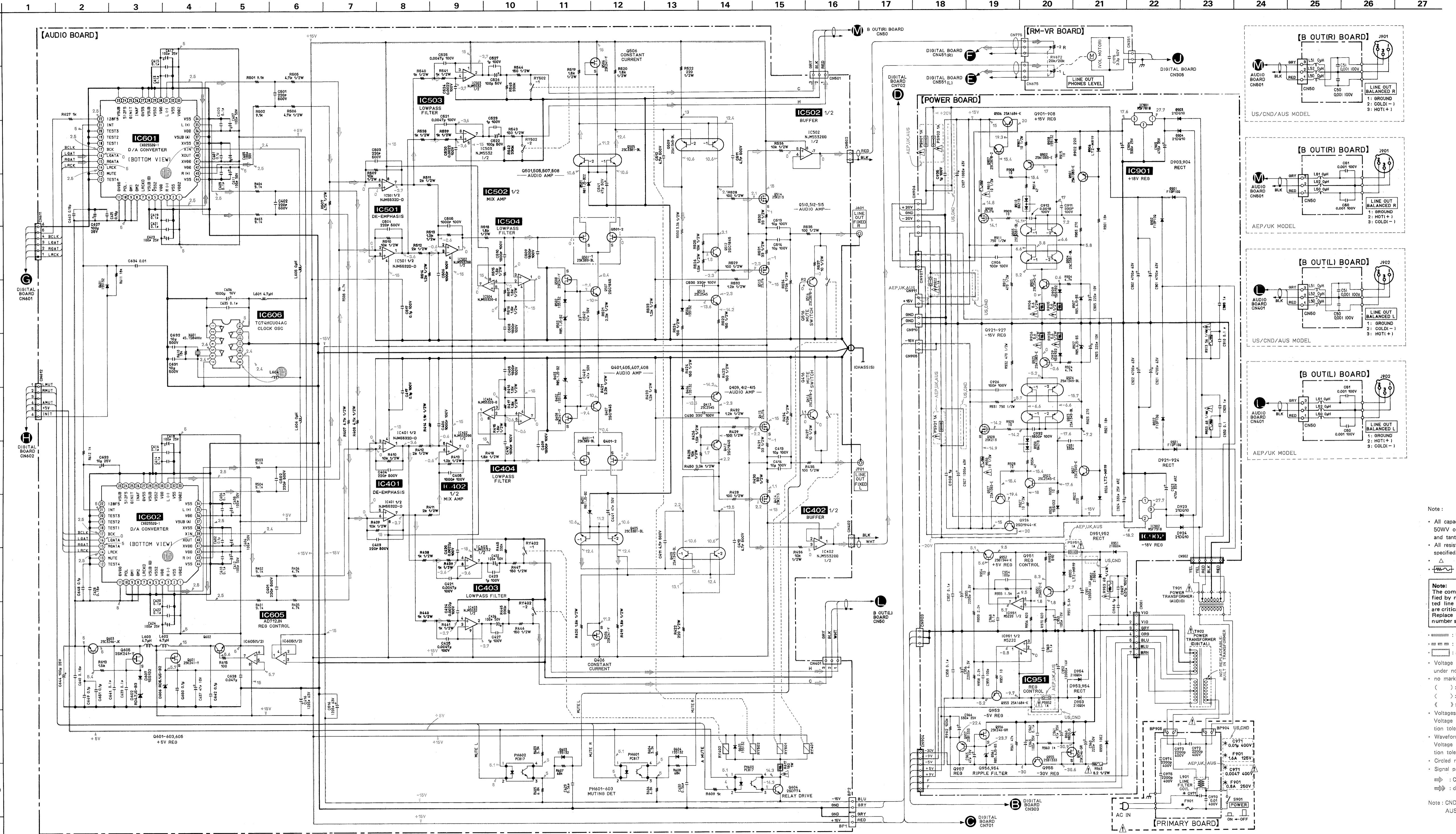
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : parts mounted on the conductor side.
- : Pattern on the side which is seen.

Note : CND : Canadian MODEL
AUS : Australian MODEL

4-3. PRINTED WIRING BOARDS (DIGITAL SECTION) • Refer to Page 36 for Semiconductor Lead Layouts.





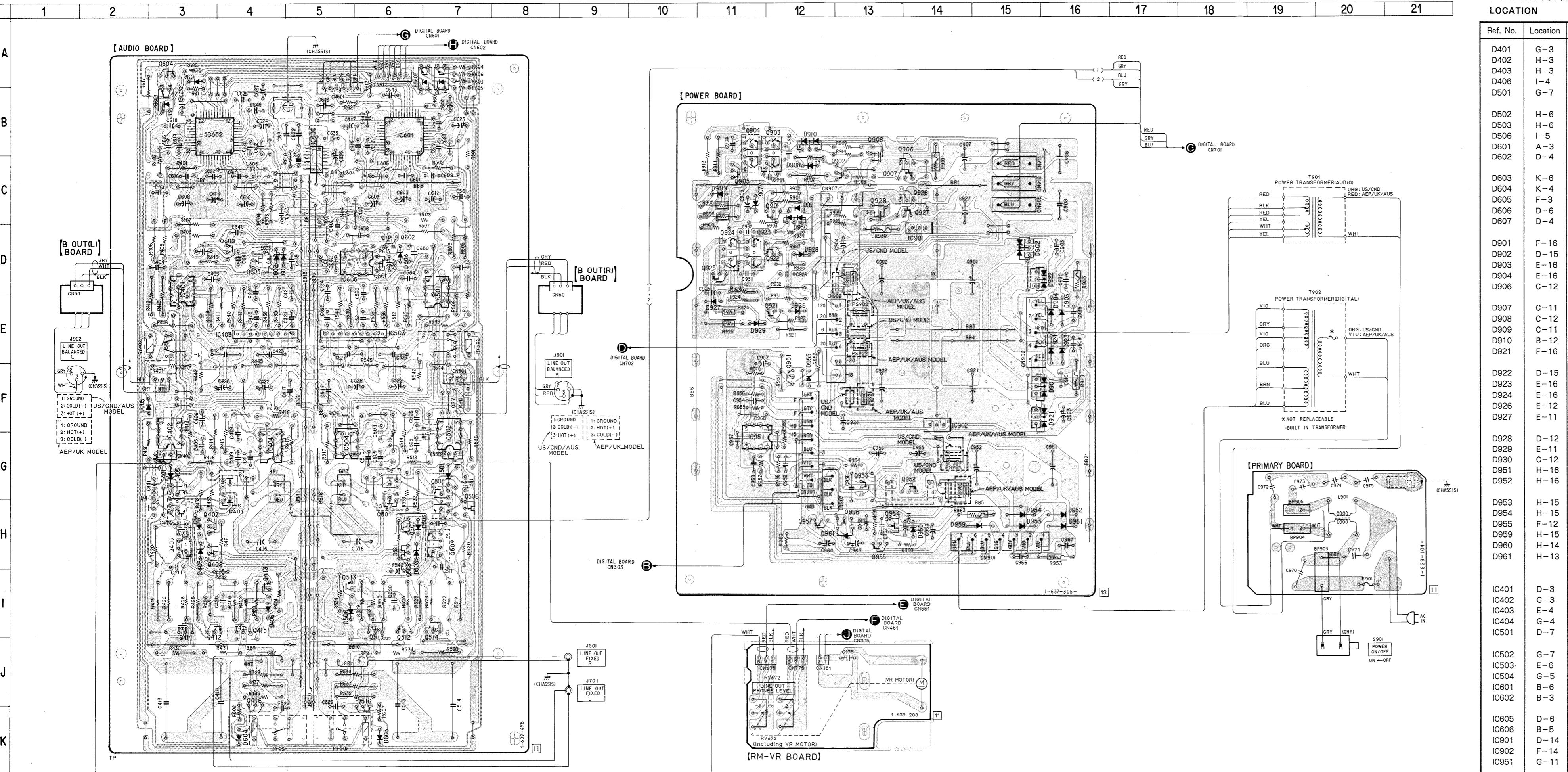


Note :
 • All capacitors are in μ F unless otherwise noted. pF : $\mu\mu$ F
 50WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $1/2$ W or less unless otherwise specified.
 △ : internal component.
 W : fusible resistor.

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

Note :
 B+ Line
 B- Line
 □ : adjustment for repair.
 Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark : STOP
 () : PLAY
 < > : when LOAD OUT operates
 < > : when LOAD IN operates
 Voltages are taken with a VOM (input impedance 10M Ω).
 Voltage variations may be noted due to normal production tolerances.
 Waveforms are taken with an oscilloscope.
 Voltage variations may be noted due to normal production tolerances.
 Circled numbers refer to waveforms.
 Signal path:
 → : CD
 → : digital out

Note : CND : Canadian MODEL
 AUS : Australian MODEL



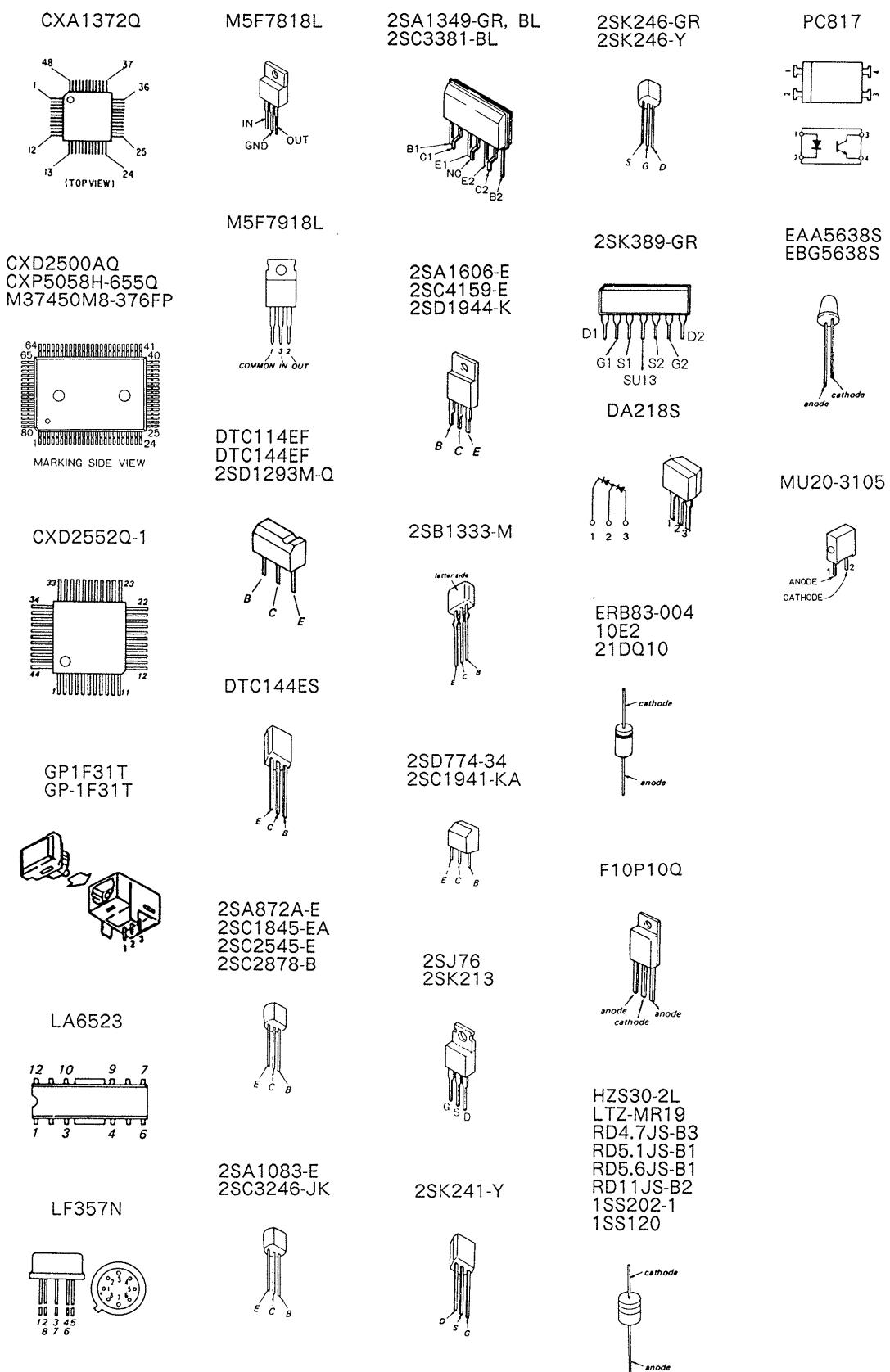
SIMICONDUCTOR APPLICATION

No.	Location	Ref. No.	Location
01	G-3	PH601	A-7
02	H-3	PH602	A-7
03	H-3	PH603	B-3
06	I-4		
01	G-7		
		Q401	G-4
02	H-6	Q405	G-3
03	H-6	Q406	H-3
06	I-5	Q407	H-3
01	A-3	Q408	H-3
02	D-4		
		Q412	I-3
03	K-6	Q413	I-4
04	K-4	Q414	I-3
05	F-3	Q415	I-4
06	D-6	Q416	J-4
07	D-4		
		Q501	G-6
01	F-16	Q505	G-7
02	D-15	Q506	H-7
03	E-16	Q507	H-6
04	E-16	Q508	H-6
06	C-12		
		Q509	H-7
07	C-11	Q512	I-6
08	C-12	Q513	I-5
09	C-11	Q514	I-7
10	B-12	Q515	I-6
21	F-16		
		Q516	K-6
22	D-15	Q601	D-6
23	E-16	Q602	D-6
24	E-16	Q603	D-4
26	E-12	Q604	A-3
27	E-11		
		Q605	D-4
28	D-12	Q901	C-1
29	E-11	Q902	C-1
30	C-12	Q903	B-1
51	H-16	Q904	B-1
52	H-16		
		Q905	C-1
53	H-15	Q906	C-1
54	H-15	Q907	C-1
55	F-12	Q908	B-1
59	H-15	Q921	E-1
60	H-14		
61	H-13	Q922	D-1
		Q923	D-1
		Q924	D-1
01	D-3	Q925	D-1
02	G-3	Q926	C-1
03	E-4		
04	G-4	Q927	C-1
01	D-7	Q928	C-1
		Q951	F-1
02	G-7	Q952	G-1
03	E-6	Q953	G-1
04	G-5		
01	B-6	Q954	H-1
02	B-3	Q955	H-1
		Q956	H-1
05	D-6	Q957	H-1
06	B-5		
01	D-14		
02	F-14		
51	G-11		

34

- : parts extracted from the
— : parts extracted from the
: parts mounted on the

• SEMICONDUCTOR LEAD LAYOUTS



SECTION 5

EXPLODED VIEWS

NOTE:

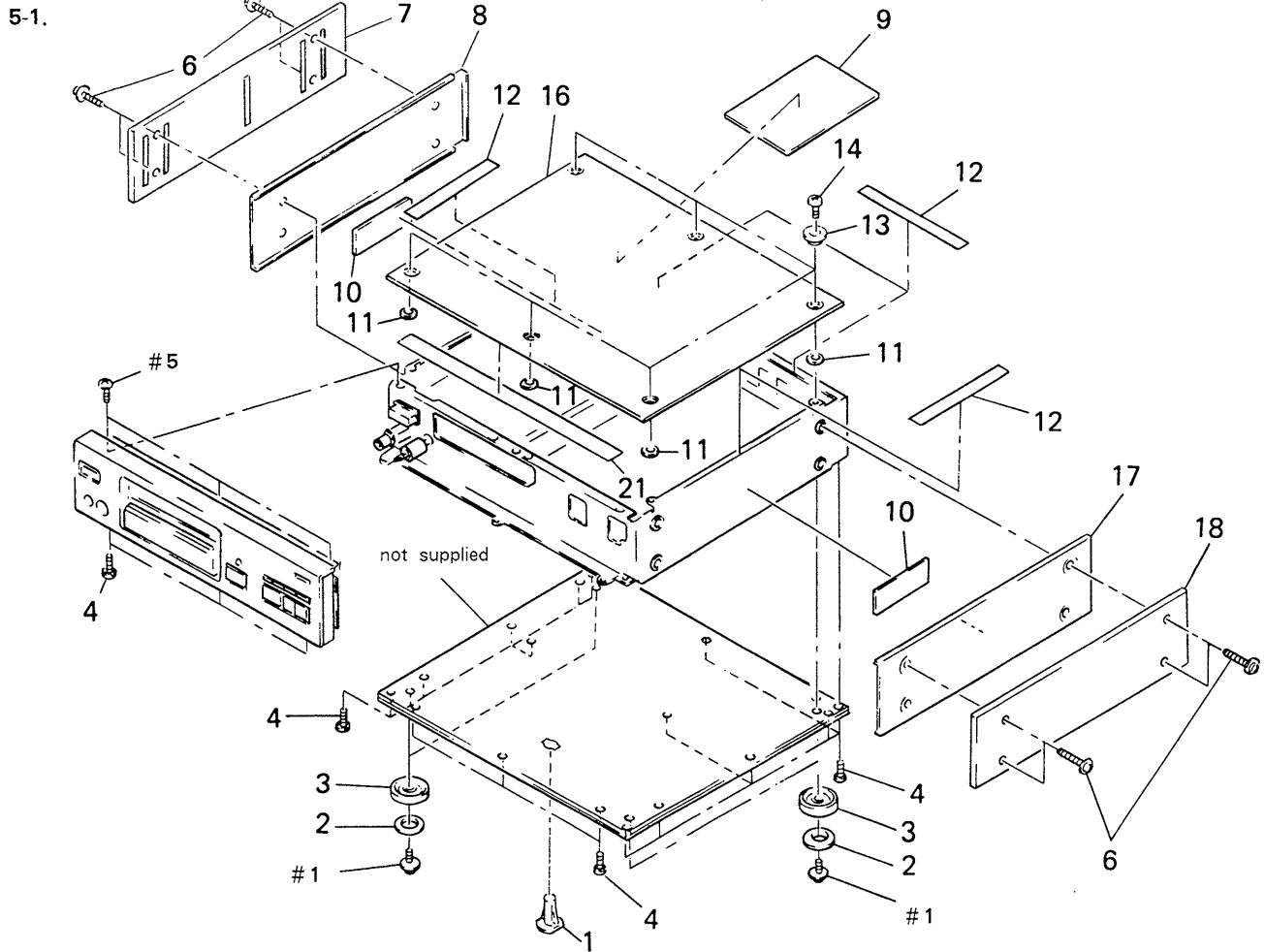
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:
KNOB, BALANCE (WHITE)....(RED)

↑
Parts color Cabinet's color

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

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

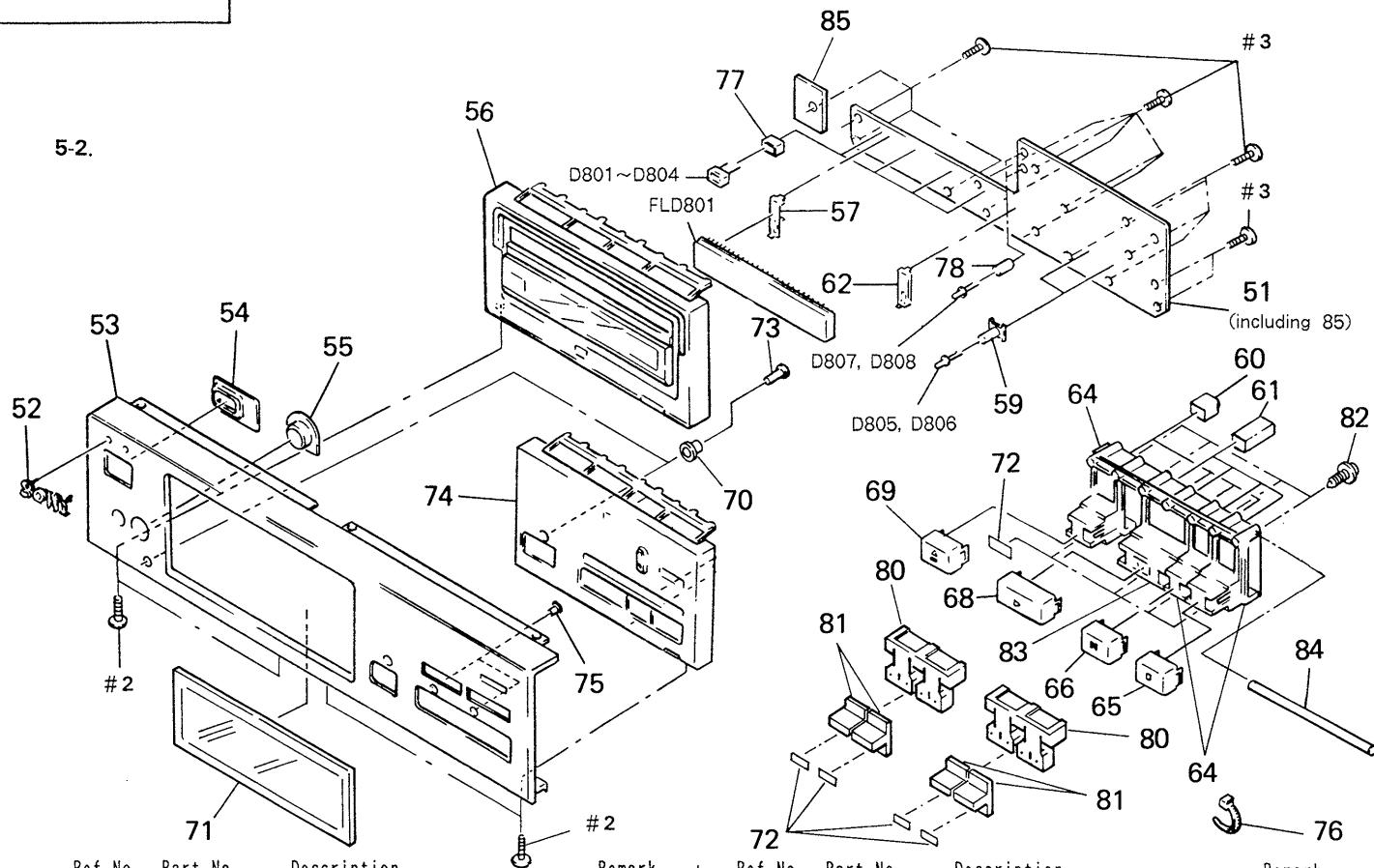
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
1	* 4-922-553-01	PLATE, LOCK, TRANSPORT	
2	4-935-912-01	FOOT (CUSHION)	
3	4-928-028-21	BASE, FOOT (GOLD) (AEP/GOLD, Canadian)	
3	4-928-028-01	BASE, FOOT (EXCEPT Canadian, AEP/GOLD)	
4	4-929-074-01	SCREW (+BVTT 3X8)	
6	4-885-979-11	SCREW (4X25) (EXCEPT UK)	
7	X-4941-168-1	PLATE (L) ASSY, ORNAMENTAL SIDE (Canadian, AEP/GOLD)	
7	X-4941-204-1	PLATE (L) ASSY, ORNAMENTAL SIDE (EXCEPT Canadian) (AEP/GOLD)	
7	X-4941-206-1	PRATE (L) ASSY, ORNAMENTAL SIDE (US, AUS)	
8	* 4-928-061-31	PLATE (LEFT), SIDE (GRAY) (Canadian, AEP/GOLD)	
9	4-913-188-11	FELT (C), ACOUSTIC ABSORBENT	
10	* 4-923-562-01	CUSHION	
11	* 4-923-581-01	SPACER	
12	3-831-441-11	SPACER	

Ref. No.	Part No.	Description	Remark
13	4-928-025-21	ESCUTCHEON (TOP PLATE) (GOLD) (Canadian, AEP/GOLD)	
13	4-928-025-01	ESCUTCHEON (TOP PLATE) (BLACK) (EXCEPT Canadian, AEP/GOLD)	
14	4-924-242-11	SCREW (M3X6), FLAT HEAD	
16	* 4-928-020-11	PLATE, TOP (GOLD) (Canadian, AEP/GOLD)	
16	* 4-928-020-01	PLATE, TOP (BLACK) (EXCEPT Canadian, AEP/GOLD)	
17	* 4-928-062-31	PLATE (RIGHT), SIDE (GRAY) (AEP/GOLD, Canadian)	
18	X-4941-205-1	PRATE (R) ASSY, ORNAMENTAL SIDE (AEP/BLACK)	
18	X-4941-207-1	PRATE (R) ASSY, ORNAMENTAL SIDE (US, AUS)	
18	X-4941-169-1	PLATE (R) ASSY, ORNAMENTAL, SIDE (AEP/GOLD, Canadian)	
21	3-831-441-XX	TAPE	

5-2.



Ref. No.	Part No.	Description	Remark
51	* A-4617-749-A	DISPLAY BOARD, COMPLETE (INCLUDING SW BOARD)	

52	4-908-848-21	EMBLEM, SONY (GOLD) (Canadian, AEP/GOLD)
52	4-908-848-01	EMBLEM, SONY (SILVER) (EXCEPT Canadian, AEP/GOLD)

53	4-935-957-02	PANEL, FRONT (BLACK) (AEP/BLACK)
53	4-935-957-11	PANEL, FRONT (GOLD) (AEP/GOLD)
53	4-935-957-22	PANEL, FRONT (BLACK) (UK)
53	4-935-957-32	PANEL, FRONT (BLACK) (US, AUS)
53	4-935-957-41	PANEL, FRONT (GOLD) (Canadian)

54	4-928-038-01	ESCUTCHEON (POWER) (BLACK) (EXCEPT Canadian, AEP/GOLD)
54	4-928-038-11	ESCUTCHEON (POWER) (GRAY) (Canadian, AEP/GOLD)

55	4-942-459-11	ESCUTCHEON, KNOB (GRAY) (Canadian, AEP/GOLD)
55	4-942-459-01	ESCUTCHEON, KNOB (BLACK) (EXCEPT Canadian, AEP/GOLD)

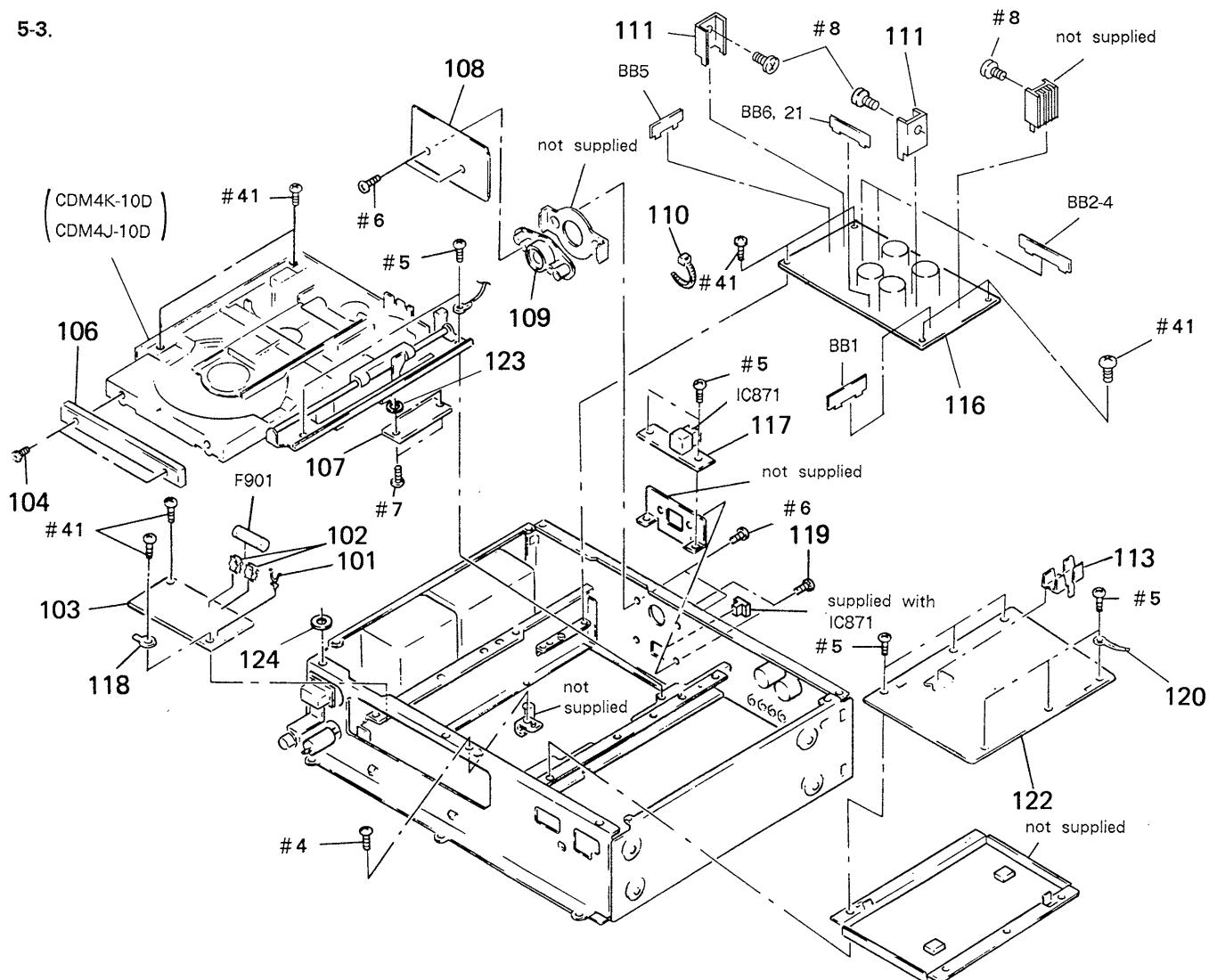
56	X-4941-201-1	BASE ASSY, PANEL (GOLD) (Canadian, AEP/GOLD)
56	X-4941-202-1	BASE ASSY, PANEL (BLACK) (EXCEPT Canadian, AEP/GOLD)

57	* 4-928-053-01	HOLDER (LEFT)
59	* 4-913-139-01	SPACER (A) LED
60	9-911-846-XX	CUSHION
61	9-911-845-XX	CUSHION
62	* 4-928-052-01	HOLDER (RIGHT)
64	* 4-935-951-01	BASE (S). BUTTON
65	4-935-955-81	CAP (S), KNOB (Canadian, AEP/GOLD)
65	4-935-955-21	CAP (S), KNOB (BLACK) (EXCEPT Canadian, AEP/GOLD)

66	4-935-955-71	CAP (S), KNOB (GOLD) (Canadian, AEP/GOLD)
66	4-935-955-11	CAP (S), KNOB (BLACK) (EXCEPT Canadian, AEP/GOLD)

Ref. No.	Part No.	Description	Remark
68	4-935-954-21	CAP (L), KNOB (GOLD) (Canadian, AEP/GOLD)	
68	4-935-954-01	CAP (L), KNOB (BLACK) (EXCEPT Canadian, AEP/GOLD)	
69	4-935-955-61	CAP (S), KNOB (GOLD) (Canadian, AEP/GOLD)	
69	4-935-955-01	CAP (S), KNOB (BLACK) (EXCEPT Canadian, AEP/GOLD)	
70	4-935-949-01	GUIDE (BUTTON)	
71	4-935-942-01	WINDOW	
72	3-831-441-11	SPACER	
73	4-928-046-21	BUTTON (DIA. 3.4) (GOLD) (Canadian, AEP/GOLD)	
73	4-928-046-01	BUTTON (DIA. 3.4) (BLACK) (EXCEPT Canadian, AEP/GOLD)	
74	* 4-935-961-11	BASE (R), PANEL (GRAY) (Canadian, AEP/GOLD)	
74	* 4-935-961-01	BASE (R), PANEL (BLACK) (EXCEPT Canadian, AEP/GOLD)	
75	4-941-214-01	INDICATOR	
76	3-655-653-21	BAND (TAITON), BINDING	
77	* 4-935-940-01	SPACER (LED)	
78	* 4-923-532-41	SPACER LED	
80	* 4-935-952-01	BASE (AMS), BUTTON	
81	* 4-935-956-21	BUTTON (AMS) (GOLD) (Canadian, AEP/GOLD)	
81	* 4-935-956-01	BUTTON (AMS) (BLACK) (EXCEPT Canadian, AEP/GOLD)	
82	4-933-134-11	SCREW (+PTPWH M2.6X8)	
83	* 4-935-950-01	BASE (L), BUTTON	
84	* 4-935-953-01	SHAFT (BUTTON)	
85	* 1-637-312-11	SW BOARD	
FLD801	1-519-480-11	INDICATOR TUBE, FLUORESCENT	

5-3.



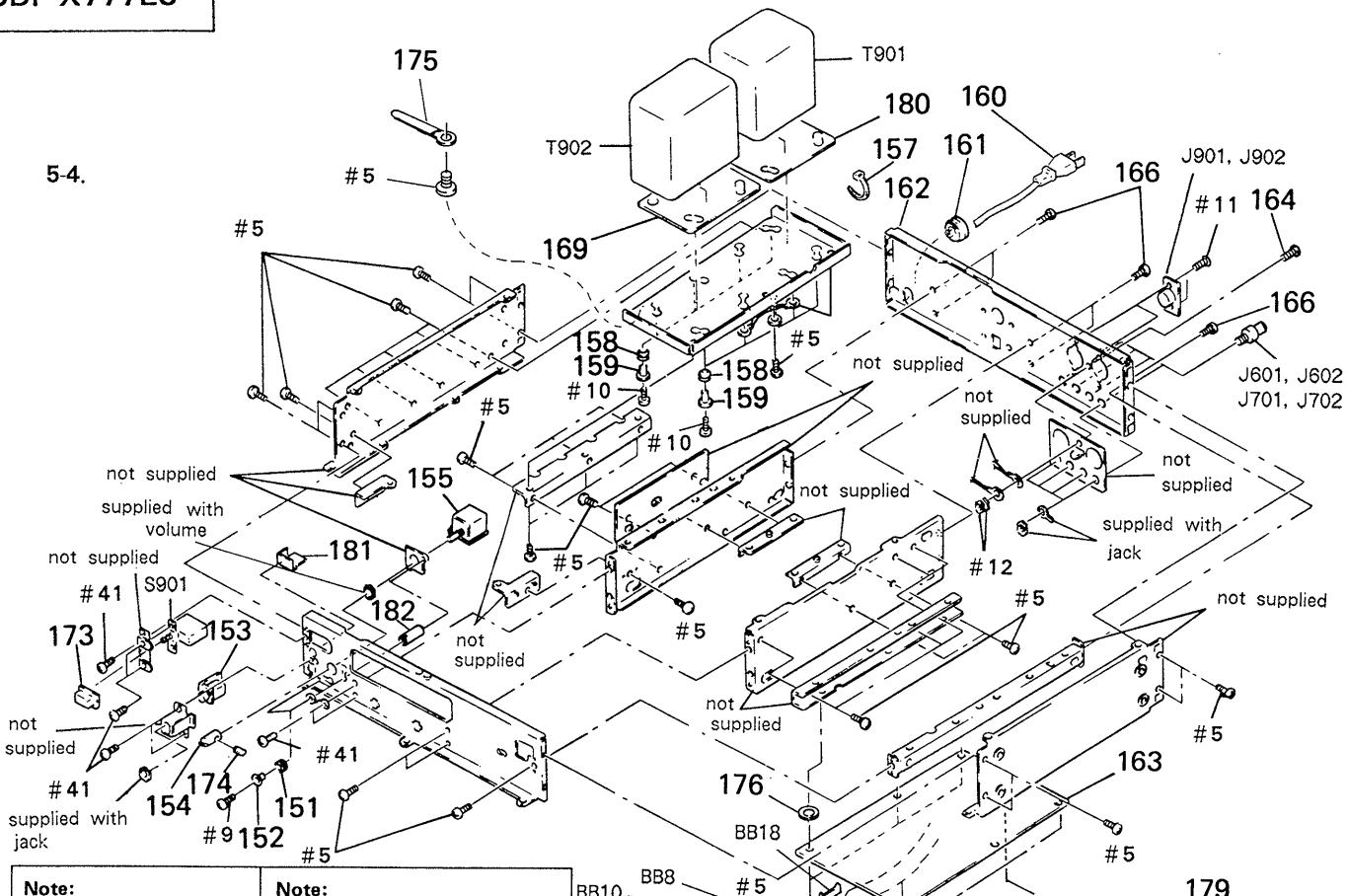
Note:
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Note:
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
101	* 1-535-688-11	TERMINAL	
102	1-533-183-11	HOLDER, FUSE	
103	* 1-629-104-11	PRIMERY BOARD	
104	4-942-333-01	SCREW, ORNAMENTAL	
106	4-935-947-01	PANEL, LOADING (BLACK) (EXCEPT Canadian, AEP/GOLD)	
106	4-935-947-21	PANEL, LOADING (GOLD) (Canadian, AEP/GOLD)	
107	* 1-637-311-11	TRANSLATION BOARD	
108	* 1-629-106-11	COAX D/O BOARD	
109	* 4-913-152-01	ESCIUTCHEON, D/O	
110	3-655-653-21	BAND (TAITON), BINDING	
111	* 4-941-237-01	HEAT SINK	
113	* 4-922-525-01	HEAT SINK	
116	* A-4617-949-A	POWER BOARD, COMPLETE (EXCEPT US, Canadian)	
116	* A-4617-920-A	POWER BOARD, COMPLETE (US, Canadian)	

Ref. No.	Part No.	Description	Remark
117	* 1-629-105-11	OPT D/O BOARD	
118	4-870-539-00	PLATE, GROUND	
119	3-703-685-21	SCREW (+BV 3X8)	
120	* 3-701-822-00	HOLDER, WIRE	
122	* A-4617-750-A	DIGITAL BOARD, COMPLETE	
123	3-572-085-11	WASHER, FIBER	
124	4-926-103-01	WASHER	
BB1	* 1-566-940-11	BUS BAR 6P	
BB2	1-566-940-21	BUS BAR 3P	
BB3	1-566-940-21	BUS BAR 3P	
BB4	1-566-940-21	BUS BAR 3P	
BB5	* 1-568-130-11	BUS BAR 3P	
BB6	* 1-566-940-11	BUS BAR 6P	
BB21	* 1-566-940-11	BUS BAR 6P	
F901	Δ 1-532-215-00	FUSE, TIME-LAG (0.8A 250V) (AEP, UK, AUS)	
F901	Δ 1-532-742-11	FUSE, GLASS TUBE (1.6A 125V) (US, Canadian)	

5-4.



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

Note:
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
151	* 4-888-798-11	BUSHING, RUBBER	
152	* 4-928-026-01	COLLAR (B)	
153	* 1-637-310-11	HB, BOARD	

154	4-942-457-12	KNOB (VOL) (GOLD) (Canadian, AEP/GOLD)	
154	4-942-457-01	KNOB (VOL) (BLACK) (EXCEPT Canadian, AEP/GOLD)	

155	* 1-639-208-11	RM-VR BOARD	
157	3-655-653-21	BAND (TAITON), BINDING	
158	* 4-888-798-00	BUSHING, RUBBER	

159 * 4-928-068-01 COLLAR (C)

160	\triangle 1-559-479-11	CORD, POWER (US, Canadian)	
160	\triangle 1-558-568-11	CORD, POWER (AEP)	
160	\triangle 1-559-272-11	CORD, POWER (UK)	
160	\triangle 1-575-379-11	CORD, POWER (AUS)	

161	2-231-019-00	CLAMPER, CORD (AEP, AUS)	
161	4-916-783-01	BUSHING, CORD (US, UK, Canadian)	

162	* 4-941-069-31	PANEL, BACK (AEP/BLACK)	
162	* 4-941-069-61	PANEL, BACK (AEP/GOLD)	
162	* 4-941-069-21	PANEL, BACK (UK)	
162	* 4-941-069-71	PANEL, BACK (Australian)	
162	* 4-941-069-81	PANEL, BACK (Canadian)	
162	* 4-941-069-41	PANEL, BACK (US)	

163	* A-4617-919-A	AUDIO BOARD, COMPLETE	
164	4-886-821-51	SCREW, CASE, (M3X14)	
166	4-929-074-01	SCREW (+BVTT 3X8)	
169	* 4-928-064-01	CUSHION (TRANSFORMER)	

173	X-4934-014-1	KNOB (POWER) ASSY (BLACK)	
173	X-4941-629-1	KNOB (POWER) ASSY (GOLD)	(Canadian, AEP/GOLD)

174	3-701-505-00	SET SCREW, DOUBLE POINT 3X3	
175	* 3-701-822-00	HOLDER, WIRE	
176	4-924-973-11	WASHER	

Ref. No.	Part No.	Description	Remark
179	4-924-264-01	TERMINAL, MOUNT	
180	* 4-942-463-01	CUSHION (TRANSFORMER)	
181	* 4-942-464-01	COVER, INSULATING	
182	* 4-942-456-01	BRACKET (VOL)	

BB7	1-566-940-21	BUS BAR 3P	
BB8	1-566-940-21	BUS BAR 3P	
BB9	* 1-568-130-11	BUS BAR 4P	
BB10	* 1-568-130-11	BUS BAR 4P	
BB11	* 1-569-135-11	BUS BAR 4P	
BB12	* 1-569-135-11	BUS BAR 4P	
BB17, 20	* 1-569-135-11	BUS BAR 4P	
BB18	* 1-569-135-11	BUS BAR 4P	
BB19	* 1-568-130-11	BUS BAR 4P	
BB20	* 1-569-135-11	BUS BAR 4P	

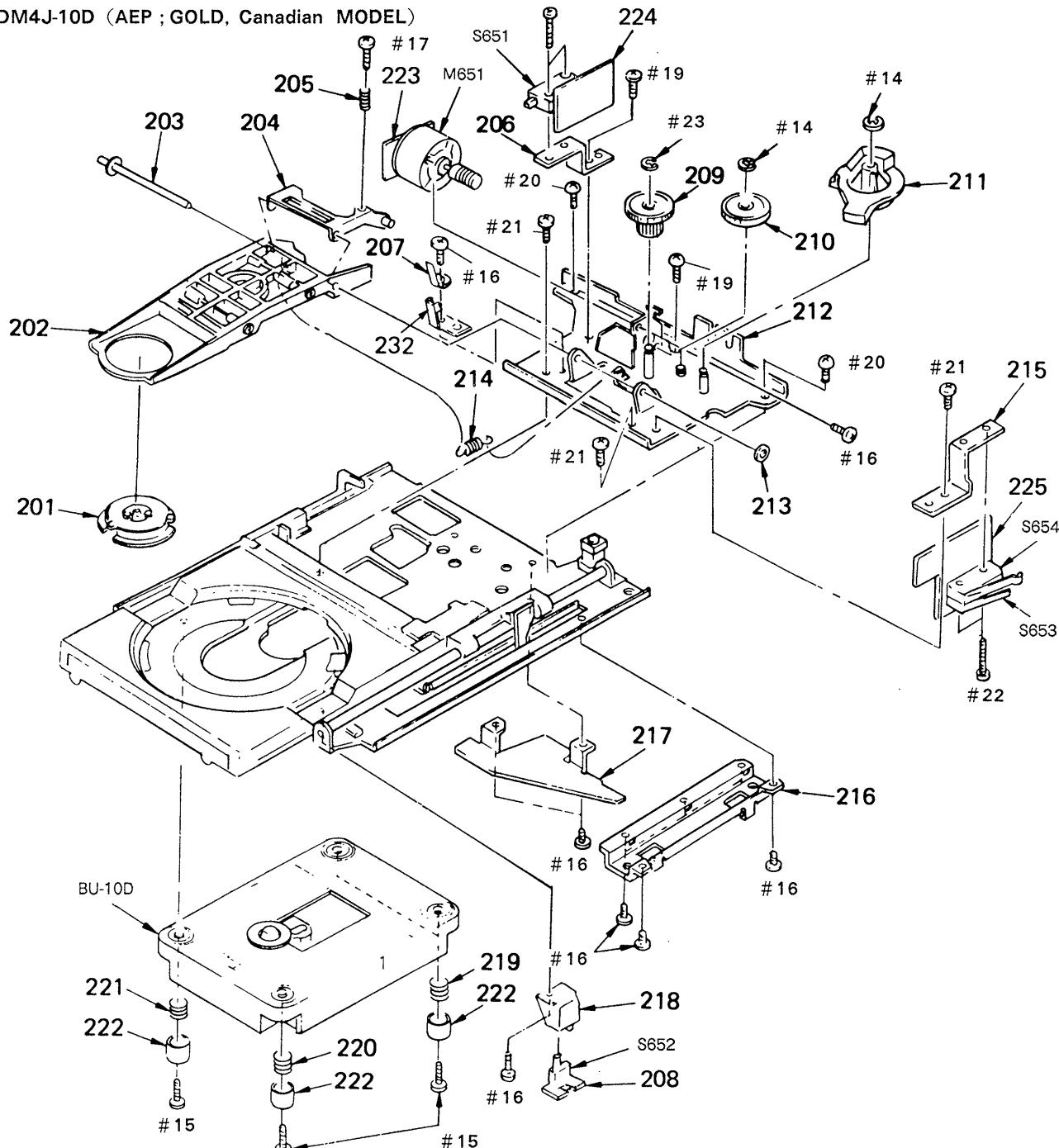
J601	1-507-918-00	JACK, PIN 1P (LINE OUT VARIABLE L)	
J602	1-507-918-00	JACK, PIN 1P (LINE OUT VARIABLE R)	
J701	1-507-918-00	JACK, PIN 1P (LINE OUT FIXED R)	
J702	1-507-918-00	JACK, PIN 1P (LINE OUT VARIABLE R)	
J901	1-563-030-11	CONNECTOR (RECEPTACLE) 3P (LINE OUT BLANSED R)	
J902	1-563-030-11	CONNECTOR (RECEPTACLE) 3P (LINE OUT BLANSED L)	

S901	\triangle 1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)	
T901	\triangle 1-450-497-11	TRANSFORMER, POWER (AUDIO) (AEP, UK, AUS)	
T901	\triangle 1-450-495-11	TRANSFORMER, POWER (AUDIO) (US, Canadian)	
T902	\triangle 1-450-496-11	TRANSFORMER, POWER (DIGITAL) (AEP, UK, AUS)	
T902	\triangle 1-450-494-11	TRANSFORMER, POWER (DIGITAL) (US, Canadian)	

5-5. MECHANISM SECTION-1

CDM4K-10D (US, UK, AEP ; BLACK, Australian MODEL) #18

CDM4J-10D (AEP ; GOLD, Canadian MODEL)



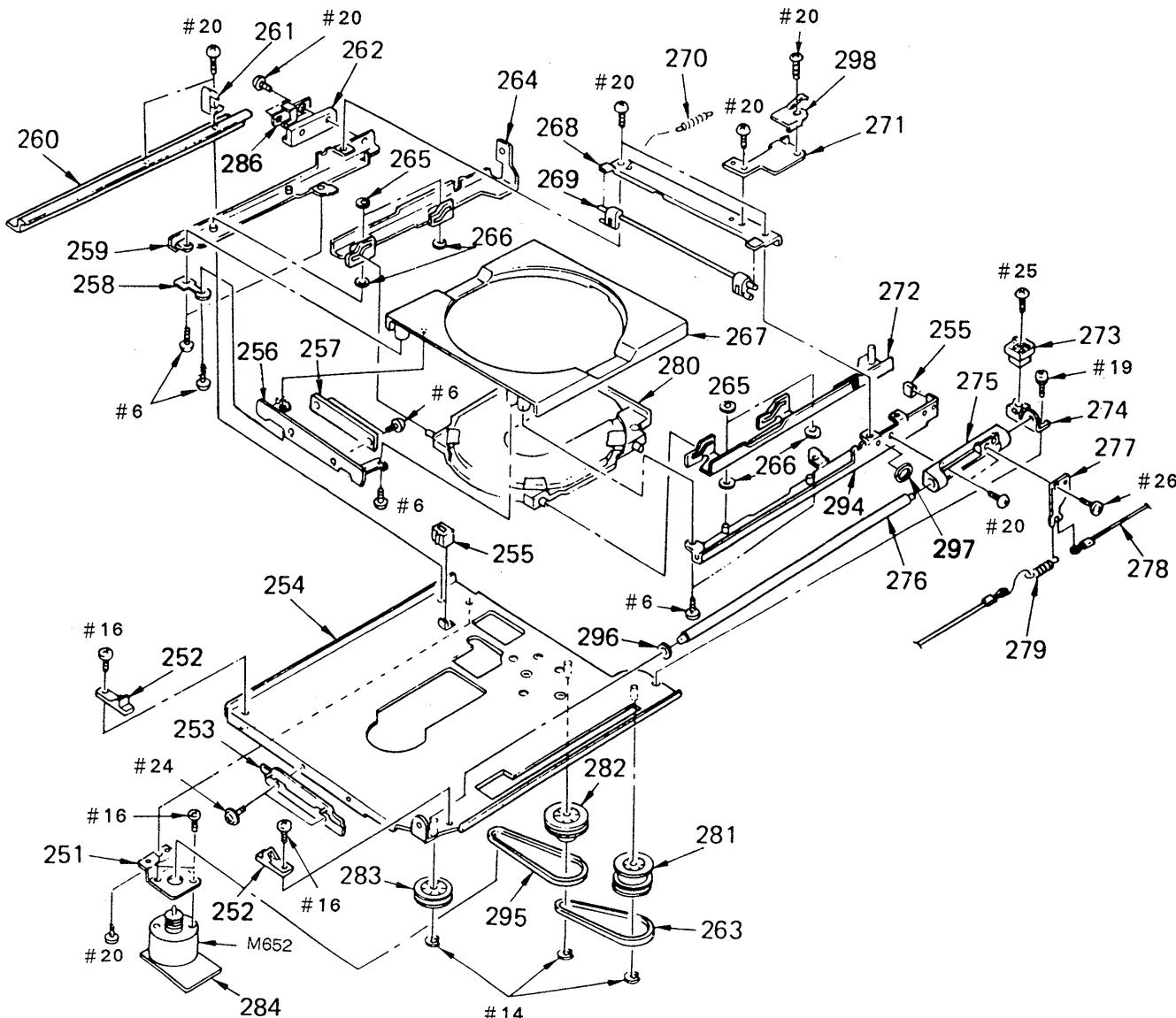
Ref. No.	Part No.	Description	Remark
201	A-4604-767-A	PULLEY ASSY, PRESS (EXCEPT Canadian, AEP/GOLD)	
201	A-4604-794-A	PULLEY ASSY, PRESS (Canadian, AEP/GOLD)	
202	* X-4912-509-1	ARM ASSY, C	
203	4-908-513-01	SHAFT, FULCRUM, C ARM	
204	X-4908-513-1	PLATE ASSY, ADJUSTMENT, ARM	
205	4-908-559-01	SPRING, COMPRESSION	
206	* 4-912-543-01	BRACKET (D), SWITCH	
207	* 4-912-569-01	PLATE (B), GROUND	
208	* 1-624-378-11	OUT SW BOARD	
209	4-912-514-01	GEAR (A)	
210	4-912-525-01	GEAR (B)	
211	4-912-528-01	GEAR, CAM	
212	* X-4912-503-1	CHASSIS ASSY, SUB	
213	3-558-708-21	WASHER, STOPPER	
214	4-908-555-01	SPRING, TENSION (C ARM)	

Ref. No.	Part No.	Description	Remark
215	* 4-912-524-01	BRAKET (A) SWITCH	
216	* 4-912-580-01	COVER, ROPE	
217	* 4-908-597-01	COVER, BELT	
218	* 4-912-588-01	HOLDER (OUT SW)	
219	4-912-577-01	SPRING (H), COMPRESSION	
220	4-912-575-01	SPRING (F), COMPRESSION	
221	4-912-576-01	SPRING (C), COMPRESSION	
222	4-912-578-01	HOLDER, SP	
223	* 1-629-379-11	C MOTOR BOARD	
224	* 1-624-377-11	IN SW BOARD	
225	* 1-624-375-11	L/C SW BOARD	
232	* 4-912-598-01	PLATE (B), GROUND	
M651	X-4902-019-1	MOTOR ASSY, CHUCKING	
S651	1-554-205-00	SWITCH, PUSH (LOADING IN DET)	
S652	1-571-300-21	SWITCH, ROTARY	
S653	1-553-636-00	SWITCH, MICRO	
S654	1-570-447-11	SWITCH, MICRO	

5-6. MECHANISM SECTION-2

CDM4K-10D (US, UK, AEP ; BLACK, Australian MODEL)

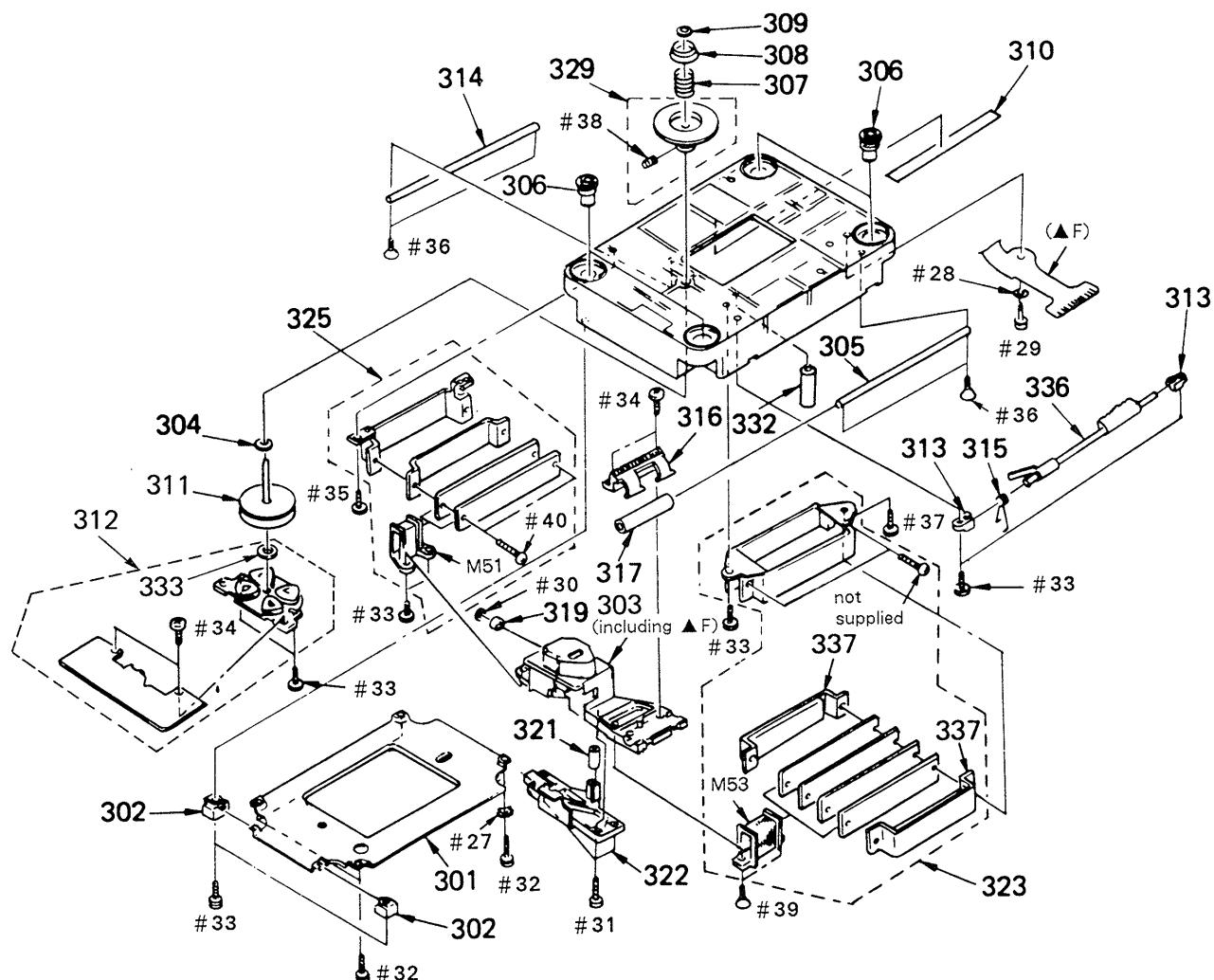
CDM4J-10D (Canadian, AEP ; GOLD MODEL)



Ref. No.	Part No.	Description	Remark
251	* 4-908-523-01	BRACKET, MOTOR	
252	4-908-540-01	GUIDE, ASSIST	
253	* X-4912-508-1	BRACKET ASSY, TABLE	
254	* X-4912-516-1	CHASSIS ASSY, MECHANICAL	
255	4-887-175-00	RUBBER, STOPPER	
256	* 4-912-579-01	BRACKET (LP)	
257	* 4-912-544-01	PLATE, FIXED	
258	* 4-912-568-01	PLATE (A), GROUND	
259	* X-4912-504-1	BRACKET (LEFT) ASSY, TABLE	
260	* 4-912-529-01	GUIDE, LOADING	
261	* 4-912-527-01	RETAINER, TABLE	
262	* 4-912-534-01	GUIDE, SUB	
263	4-912-599-01	BELT (FF)	
264	* 4-912-583-01	SLIDER (CAM LEFT)	
265	3-558-708-21	WASHER, STOPPER	
266	3-701-439-11	WASHER	
267	* 4-912-585-01	TABLE, DISK (US, UK, AEP/BLACK, AUS)	
267	* 4-912-585-11	TABLE, DISK (Canadian, AEP/GOLD)	
268	* 4-912-532-01	REINFORCEMENT, TABLE	
269	4-908-534-01	LEVER, FUNCTION	
270	4-912-516-01	SPRING (DISK CAM), TENSION	
271	* 4-912-522-01	PLATE, SW	
272	* X-4912-514-1	SLIDER (CAM RIGHT) ASSY	

Ref. No.	Part No.	Description	Remark
273	* 4-912-513-01	STOPPER, TABLE	
274	* 4-912-519-01	RETAINER (RIGHT), SHAFT	
275	4-912-538-01	BEARING (RIGHT), GUIDE	
276	4-912-521-11	SHAFT (RIGHT), GUIDE	
277	* 4-912-520-01	BRACKET, ROPE	
278	4-912-517-01	ROPE	
279	4-908-553-01	SPRING, COMPRESSION (ROPE)	
280	* X-4912-515-1	PLATE ASSY, DISK	(EXCEPT Canadian, AEP/GOLD)
280	* X-4941-167-1	PLATE ASSY, DISK (Canadian, AEP/GOLD)	
281	4-908-525-01	PULLEY (C)	
282	4-908-519-01	PULLEY (A)	
283	4-908-524-01	PULLEY (B)	
284	* 1-624-376-11	L MOTOR BOARD	
286	4-912-594-01	SPRING	
294	* X-4912-505-1	BRACKET (RIGHT) ASSY, TABLE	
295	4-908-591-01	BELT, DRIVING	
296	* 4-912-587-01	CUSHION	
297	4-912-593-01	WASHER	
298	* 4-936-101-01	PLATE (MD), GROUND	
M652	X-4912-517-1	MOTOR ASSY, LOADING	

5-7. BASE UNIT (BU-10D)



Ref. No.	Part No.	Description
301	* 4-921-859-01	COVER (A), MECHANICAL BASE
302	* 4-921-823-01	HOLDER
303	▲ 8-848-210-11	DEVICE, OPTICAL KSS-281A (INCLUDING FLEXIBLE BOARD)
304	4-921-853-01	WASHER
305	4-921-821-01	SHAFT (B), SLIDE
306	4-921-816-01	INSULATOR
307	4-908-213-01	SPRING, COMPRESSION
308	4-921-857-01	CAP, CENTERING
309	4-926-219-01	RING (DIA. 2.3), RETAINING
310	9-911-838-XX	CUSHION
311	A-4675-324-A	ROTOR ASSY
312	A-4604-792-A	STATOR ASSY
313	4-908-220-01	HOLDER, ROD
314	4-921-822-01	SHAFT (A), SLIDE
315	4-921-817-01	SPRING

Ref. No.	Part No.	Description
316	4-921-826-01	HOLDER, BEARING
317	4-908-221-01	BEARING
319	4-908-208-01	BEARING (NO-FLANGE), BALL
321	* 4-921-819-01	TUBE, RUBBER
322	4-921-860-01	COVER (B), SLIDE BASE
323	A-4608-347-A	MOTOR ASSY
325	A-4675-229-A	SENSOR ASSY
329	X-4941-371-1	PULLEY ASSY, DISC
332	X-4908-221-1	CAM ASSY, LOCK
333	4-943-342-01	BEARING
336	4-921-825-01	LEVER, LOCK
337	A-4675-110-A	MAGNET ASSY, LINEAR
M51	1-422-198-21	COIL (SENSOR)
M53	1-422-197-21	COIL (DRIVE)

AUDIO

SECTION 6

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.

- -XX, -X mean standardized parts, so they may have some difference from the original one.

• RESISTORS

All resistors are in ohms

METAL : Metal-film resistor

METAL OXIDE : Metal Oxide-film resistor

F : nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• SEMICONDUCTORS

In each case, u: μ , for example:

uA....: μ A...., uPA....: μ PA....

uPB....: μ PB...., uPC....: μ PC....

uPD....: μ PD....

• CAPACITORS

uF: μ F

• COILS

uH: μ H

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.

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

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
	* A-4617-919-A	AUDIO BOARD, COMPLETE				C412	1-107-046-00	MICA	4.7PF		500V
		*****				C413	1-136-764-11	FILM	10uF	10%	100V
	* 4-908-951-01	REINFORCEMENT (B), PWB				C414	1-136-764-11	FILM	10uF	10%	100V
	4-924-264-01	TERMINAL, MOUNT				C416	1-125-663-11	ELECT	1200uF	20%	63V
						C417	1-136-960-11	FILM	0.1uF	10%	160V
		< BASE POST >				C420	1-136-230-00	FILM	0.0022uF	3%	100V
BP1	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P				C421	1-136-233-11	FILM	0.0047uF	3%	100V
BP2	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P				C422	1-124-572-11	ELECT	100uF	20%	63V
						C423	1-136-763-11	FILM	1uF	10%	100V
		< BUS BAR >				C424	1-136-230-00	FILM	0.0022uF	3%	100V
BB7	1-566-940-21	BUS BAR 3P				C425	1-136-233-11	FILM	0.0047uF	3%	100V
BB8	1-566-940-21	BUS BAR 3P				C426	1-124-572-11	ELECT	100uF	20%	63V
BB9	* 1-568-130-11	BAR, BUS 3P				C427	1-136-763-11	FILM	1uF	10%	100V
BB10	* 1-568-130-11	BAR, BUS 3P				C430	1-136-811-11	FILM	330PF	5%	100V
BB11	* 1-569-135-11	BAR, BUS 4P				C441	1-126-051-11	ELECT	47uF	20%	50V
BB12	* 1-569-135-11	BAR, BUS 4P				C442	1-126-051-11	ELECT	47uF	20%	50V
BB17	* 1-569-135-11	BAR, BUS 4P				C501	1-109-621-00	MICA	220PF	1%	500V
BB18	* 1-569-135-11	BAR, BUS 4P				C502	1-109-621-00	MICA	220PF	1%	500V
BB19	* 1-568-130-11	BAR, BUS 3P				C503	1-109-621-00	MICA	220PF	1%	500V
BB20	* 1-569-135-11	BAR, BUS 4P				C504	1-109-621-00	MICA	220PF	1%	500V
		< CAPACITOR >				C505	1-136-814-11	FILM	0.001uF	5%	100V
C401	1-109-621-00	MICA	220PF	1%	500V	C506	1-136-814-11	FILM	0.001uF	5%	100V
C402	1-109-621-00	MICA	220PF	1%	500V	C508	1-136-192-11	FILM	0.0018uF	2%	100V
C403	1-109-621-00	MICA	220PF	1%	500V	C509	1-136-192-11	FILM	0.0018uF	2%	100V
C404	1-109-621-00	MICA	220PF	1%	500V	C510	1-136-192-11	FILM	0.0018uF	2%	100V
C405	1-136-814-11	FILM	0.001uF	5%	100V	C511	1-107-046-00	MICA	4.7PF		500V
						C512	1-107-046-00	MICA	4.7PF		500V
C406	1-136-814-11	FILM	0.001uF	5%	100V	C513	1-136-764-11	FILM	10uF	10%	100V
C408	1-136-192-11	FILM	0.0018uF	2%	100V	C514	1-136-764-11	FILM	10uF	10%	100V
C409	1-136-192-11	FILM	0.0018uF	2%	100V	C516	1-125-663-11	ELECT	1200uF	20%	63V
C410	1-136-192-11	FILM	0.0018uF	2%	100V	C517	1-136-960-11	FILM	0.1uF	10%	160V
C411	1-107-046-00	MICA	4.7PF		500V	C520	1-136-230-00	FILM	0.0022uF	3%	100V
						C521	1-136-233-11	FILM	0.0047uF	3%	100V
						C522	1-124-572-11	ELECT	100uF	20%	63V

AUDIO

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C523	1-136-763-11	FILM	1uF	10%	100V	C643	1-136-168-00	FILM	0.18uF	5%	50V
C524	1-136-230-00	FILM	0.0022uF	3%	100V	C644	1-126-052-11	ELECT	100uF	20%	25V
C525	1-136-233-11	FILM	0.0047uF	3%	100V	C648	1-136-165-00	FILM	0.1uF	5%	50V
C526	1-124-572-11	ELECT	100uF	20%	63V	C649	1-136-165-00	FILM	0.1uF	5%	50V
C527	1-136-763-11	FILM	1uF	10%	100V	C650	1-136-165-00	FILM	0.1uF	5%	50V
C530	1-136-811-11	FILM	330PF	5%	100V	C651	1-136-165-00	FILM	0.1uF	5%	50V
C541	1-126-051-11	ELECT	47uF	20%	50V	< CONNECTOR >					
C542	1-126-051-11	ELECT	47uF	20%	50V	CN401	* 1-564-506-11	PLUG, CONNECTOR 3P			
C601	1-162-806-11	CERAMIC	0.1uF	10%	50V	CN402	* 1-564-505-11	PLUG, CONNECTOR 2P			
C602	1-162-806-11	CERAMIC	0.1uF	10%	50V	CN501	* 1-564-506-11	PLUG, CONNECTOR 3P			
C603	1-126-052-11	ELECT	100uF	20%	50V	CN502	* 1-564-505-11	PLUG, CONNECTOR 2P			
C604	1-126-052-11	ELECT	100uF	20%	50V	CN611	* 1-564-509-11	PLUG, CONNECTOR 6P			
C605	1-136-165-00	FILM	0.1uF	5%	50V	< DIODE >					
C606	1-136-165-00	FILM	0.1uF	5%	50V	D401	8-719-114-65	DIODE RD11JS-B2			
C607	1-126-052-11	ELECT	100uF	20%	50V	D402	8-719-107-94	DIODE 1SS202-1			
C608	1-126-052-11	ELECT	100uF	20%	50V	D403	8-719-114-29	DIODE RD5.1JS-B1			
C609	1-136-165-00	FILM	0.1uF	5%	50V	D406	8-719-107-94	DIODE 1SS202-1			
C610	1-136-165-00	FILM	0.1uF	5%	50V	D501	8-719-114-65	DIODE RD11JS-B2			
C611	1-126-052-11	ELECT	100uF	20%	50V	D502	8-719-107-94	DIODE 1SS202-1			
C612	1-126-052-11	ELECT	100uF	20%	50V	D503	8-719-114-29	DIODE RD5.1JS-B1			
C613	1-136-165-00	FILM	0.1uF	5%	50V	D506	8-719-107-94	DIODE 1SS202-1			
C614	1-136-165-00	FILM	0.1uF	5%	50V	D601	8-719-107-94	DIODE 1SS202-1			
C615	1-136-165-00	FILM	0.1uF	5%	50V	D602	8-719-114-27	DIODE RD4.7JS-B3			
C616	1-136-165-00	FILM	0.1uF	5%	50V	D603	8-719-107-94	DIODE 1SS202-1			
C617	1-126-052-11	ELECT	100uF	20%	25V	D604	8-719-107-94	DIODE 1SS202-1			
C618	1-126-052-11	ELECT	100uF	20%	25V	D605	8-719-107-94	DIODE 1SS202-1			
C619	1-136-165-00	FILM	0.1uF	5%	50V	D606	8-719-114-30	DIODE RD5.1JS-B2			
C620	1-136-165-00	FILM	0.1uF	5%	50V	D607	8-719-107-94	DIODE 1SS202-1			
C621	1-136-165-00	FILM	0.1uF	5%	50V	< IC >					
C622	1-136-165-00	FILM	0.1uF	5%	50V	IC401	8-759-982-03	IC RC5532D-D			
C623	1-126-052-11	ELECT	100uF	20%	25V	IC402	8-759-982-03	IC RC5532D-D			
C624	1-126-052-11	ELECT	100uF	20%	25V	IC403	8-759-710-32	IC NJM5532S			
C625	1-136-168-00	FILM	0.18uF	5%	50V	IC404	8-759-982-03	-IC RC5532D-D			
C627	1-126-052-11	ELECT	100uF	20%	25V	IC501	8-759-982-03	IC RC5532D-D			
C628	1-136-168-00	FILM	0.18uF	5%	50V	IC502	8-759-982-03	IC RC5532D-D			
C629	1-136-174-00	FILM	0.56uF	5%	50V	IC503	8-759-710-32	IC NJM5532S			
C630	1-136-174-00	FILM	0.56uF	5%	50V	IC504	8-759-982-03	IC NJM5532D-D			
C631	1-107-202-00	MICA	10PF	5%	500V	IC601	8-752-335-51	IC CXD2552Q-1			
C632	1-107-202-00	MICA	10PF	5%	500V	IC602	8-752-335-51	IC CXD2552Q-1			
C633	1-126-059-11	ELECT	10uF	20%	25V	IC605	8-759-971-80	IC AD712JN			
C634	1-136-153-00	FILM	0.01uF	5%	50V	IC606	8-759-233-64	IC TC74HCU04AF			
C635	1-136-165-00	FILM	0.1uF	5%	50V	< COIL >					
C636	1-126-013-11	ELECT	1000uF	20%	16V	L601	1-410-324-11	INDUCTOR	4.7uH		
C637	1-123-306-00	ELECT	47uF	20%	10V	L602	1-410-324-11	INDUCTOR	4.7uH		
C638	1-136-961-11	FILM	0.047uF	10%	160V	L603	1-410-324-11	INDUCTOR	4.7uH		
C639	1-136-165-00	FILM	0.1uF	5%	50V	L604	1-410-397-21	FERRITE BEAD INDUCTOR			
C640	1-136-168-00	FILM	0.18uF	5%	50V						
C641	1-136-165-00	FILM	0.1uF	5%	50V						
C642	1-136-165-00	FILM	0.1uF	5%	50V						

AUDIO

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L605	* 1-410-858-11	INDUCTOR	0uH	R411	1-249-809-11	CARBON	2K 1% 1/2W
L606	* 1-410-858-11	INDUCTOR	0uH	R412	1-249-809-11	CARBON	2K 1% 1/2W
< PHOTO INTERRUPTER >							
PH601	8-719-902-56	PHOTO COUPLER	PC817	R413	1-259-557-11	CARBON	1.2K 1% 1/2W
PH602	8-719-902-56	PHOTO COUPLER	PC817	R414	1-259-557-11	CARBON	1.2K 1% 1/2W
PH603	8-719-902-56	PHOTO COUPLER	PC817	R415	1-259-561-11	CARBON	1.8K 1% 1/2W
< TRANSISTOR >							
Q401	8-729-203-21	TRANSISTOR	2SK389-GR	R416	1-259-561-11	CARBON	1.8K 1% 1/2W
Q405	8-729-202-72	TRANSISTOR	2SC3381-BL	R417	1-259-561-11	CARBON	1.8K 1% 1/2W
Q406	8-729-200-55	TRANSISTOR	2SK241Y	R418	1-259-561-11	CARBON	1.8K 1% 1/2W
Q407	8-729-184-53	TRANSISTOR	2SC1845-EA	R419	1-259-561-11	CARBON	1.8K 1% 1/2W
Q408	8-729-200-55	TRANSISTOR	2SK241Y	R420	1-259-561-11	CARBON	1.8K 1% 1/2W
Q409	8-729-232-67	TRANSISTOR	2SA1349-GR	R421	1-259-563-11	CARBON	2.2K 1% 1/2W
Q412	8-729-184-53	TRANSISTOR	2SC1845-EA	R422	1-259-539-11	CARBON	220 1% 1/2W
Q413	8-729-184-53	TRANSISTOR	2SC1845-EA	R423	1-249-782-11	CARBON	150 1% 1/2W
Q414	8-729-321-35	TRANSISTOR	2SK213	R424	1-249-782-11	CARBON	150 1% 1/2W
Q415	8-729-307-65	TRANSISTOR	2SJ76	R425	1-259-579-11	CARBON	10K 1% 1/2W
Q416	8-729-201-05	TRANSISTOR	2SC2878-B	R426	1-259-559-11	CARBON	1.5K 1% 1/2W
Q501	8-729-203-21	TRANSISTOR	2SK389-GR	R428	1-259-531-11	CARBON	100 1% 1/2W
Q505	8-729-202-72	TRANSISTOR	2SC3381-BL	R429	1-259-531-11	CARBON	100 1% 1/2W
Q506	8-729-200-55	TRANSISTOR	2SK241Y	R430	1-259-519-11	CARBON	33 1% 1/2W
Q507	8-729-184-53	TRANSISTOR	2SC1845-EA	R431	1-259-519-11	CARBON	33 1% 1/2W
Q508	8-729-200-55	TRANSISTOR	2SK241Y	R432	1-259-557-11	CARBON	1.2K 1% 1/2W
Q509	8-729-232-67	TRANSISTOR	2SA1349-GR	R433	1-259-557-11	CARBON	1.2K 1% 1/2W
Q512	8-729-184-53	TRANSISTOR	2SC1845-EA	R434	1-259-619-11	CARBON	470K 1% 1/2W
Q513	8-729-184-53	TRANSISTOR	2SC1845-EA	R435	1-259-531-11	CARBON	100 1% 1/2W
Q514	8-729-321-35	TRANSISTOR	2SK213	R436	1-259-579-11	CARBON	10K 1% 1/2W
Q515	8-729-307-65	TRANSISTOR	2SJ76	R437	1-259-507-11	CARBON	10 1% 1/2W
Q516	8-729-201-05	TRANSISTOR	2SC2878-B	R438	1-259-555-11	CARBON	1K 1% 1/2W
Q601	8-729-200-55	TRANSISTOR	2SK241Y	R439	1-259-555-11	CARBON	1K 1% 1/2W
Q602	8-729-194-13	TRANSISTOR	2SC1941-KA	R440	1-259-555-11	CARBON	1K 1% 1/2W
Q603	8-729-620-23	TRANSISTOR	2SC3246-JK	R441	1-259-555-11	CARBON	1K 1% 1/2W
Q604	8-729-140-96	TRANSISTOR	2SD774-34	R442	1-247-891-00	CARBON	330K 5% 1/4W
Q605	8-729-200-55	TRANSISTOR	2SK241Y	R445	1-247-891-00	CARBON	330K 5% 1/4W
< RESISTOR >							
R401	1-249-946-11	CARBON	9.1K 1% 1/4W	R446	1-249-782-11	CARBON	150 1% 1/2W
R402	1-249-946-11	CARBON	9.1K 1% 1/4W	R447	1-249-782-11	CARBON	150 1% 1/2W
R403	1-249-946-11	CARBON	9.1K 1% 1/4W	R450	1-249-814-11	CARBON	3.3K 1% 1/2W
R404	1-249-946-11	CARBON	9.1K 1% 1/4W	R501	1-249-946-11	CARBON	9.1K 1% 1/4W
R405	1-259-571-11	CARBON	4.7K 1% 1/2W	R502	1-249-946-11	CARBON	9.1K 1% 1/4W
R406	1-259-571-11	CARBON	4.7K 1% 1/2W	R503	1-249-946-11	CARBON	9.1K 1% 1/4W
R407	1-259-571-11	CARBON	4.7K 1% 1/2W	R504	1-249-946-11	CARBON	9.1K 1% 1/4W
R408	1-259-571-11	CARBON	4.7K 1% 1/2W	R505	1-259-571-11	CARBON	4.7K 1% 1/2W
R409	1-259-579-11	CARBON	10K 1% 1/2W	R506	1-259-571-11	CARBON	4.7K 1% 1/2W
R410	1-259-579-11	CARBON	10K 1% 1/2W	R507	1-259-571-11	CARBON	4.7K 1% 1/2W
				R508	1-259-571-11	CARBON	4.7K 1% 1/2W
				R509	1-259-579-11	CARBON	10K 1% 1/2W
				R510	1-259-579-11	CARBON	10K 1% 1/2W
				R511	1-249-809-11	CARBON	2K 1% 1/2W
				R512	1-249-809-11	CARBON	2K 1% 1/2W
				R513	1-259-557-11	CARBON	1.2K 1% 1/2W
				R514	1-259-557-11	CARBON	1.2K 1% 1/2W

AUDIO**B OUT(L)****B OUT(R)**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R515	1-259-561-11	CARBON	1.8K 1% 1/2W				< RELAY >
R516	1-259-561-11	CARBON	1.8K 1% 1/2W				RY401 1-515-727-11 RELAY
R517	1-259-561-11	CARBON	1.8K 1% 1/2W				RY402 1-515-727-11 RELAY
R518	1-259-561-11	CARBON	1.8K 1% 1/2W				RY501 1-515-727-11 RELAY
R519	1-259-561-11	CARBON	1.8K 1% 1/2W				RY502 1-515-727-11 RELAY
R520	1-259-561-11	CARBON	1.8K 1% 1/2W				
R521	1-259-563-11	CARBON	2.2K 1% 1/2W				< CRYSTAL >
R522	1-259-539-11	CARBON	220 1% 1/2W				X601 1-577-686-11 VIBRATOR, CRYSTAL (45.1584MHz)
R523	1-249-782-11	CARBON	150 1% 1/2W				*****
R524	1-249-782-11	CARBON	150 1% 1/2W				
R525	1-259-579-11	CARBON	10K 1% 1/2W				
R526	1-259-559-11	CARBON	1.5K 1% 1/2W				* 1-640-174-11 B OUT (L) BOARD
R528	1-259-531-11	CARBON	100 1% 1/2W				*****
R529	1-259-531-11	CARBON	100 1% 1/2W				
R530	1-259-519-11	CARBON	33 1% 1/2W				< CAPACITOR >
R531	1-259-519-11	CARBON	33 1% 1/2W				
R532	1-259-557-11	CARBON	1.2K 1% 1/2W		C50	1-136-250-11 CAP, PP FILM	0.001uF 5% 100V (AEP, UK)
R533	1-259-557-11	CARBON	1.2K 1% 1/2W		C51	1-136-250-11 CAP, PP FILM	0.001uF 5% 100V (AEP, UK)
R534	1-259-619-11	CARBON	470K 1% 1/2W				< CONNECTOR >
R535	1-259-531-11	CARBON	100 1% 1/2W		CN50	* 1-564-506-11 PLUG, CONNECTOR 3P	
R536	1-259-579-11	CARBON	10K 1% 1/2W				
R537	1-259-507-11	CARBON	10 1% 1/2W				< COIL >
R538	1-259-555-11	CARBON	1K 1% 1/2W		L50	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R539	1-259-555-11	CARBON	1K 1% 1/2W		L51	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R540	1-259-555-11	CARBON	1K 1% 1/2W		L52	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R541	1-259-555-11	CARBON	1K 1% 1/2W				*****
R542	1-247-891-00	CARBON	330K 5% 1/4W				* 1-640-174-11 B OUT (R) BOARD
R543	1-249-782-11	CARBON	150 1% 1/2W				*****
R544	1-249-782-11	CARBON	150 1% 1/2W				
R545	1-247-891-00	CARBON	330K 5% 1/4W				< CAPACITOR >
R550	1-249-814-11	CARBON	3.3K 1% 1/2W		C50	1-136-250-11 CAP, PP FILM	0.001uF 5% 100V (AEP, UK)
R603	1-259-440-11	CARBON	3.3K 5% 1/6W		C51	1-136-250-11 CAP, PP FILM	0.001uF 5% 100V (AEP, UK)
R604	1-259-440-11	CARBON	3.3K 5% 1/6W				< CONNECTOR >
R605	1-259-448-11	CARBON	6.8K 5% 1/6W		CN50	* 1-564-506-11 PLUG, CONNECTOR 3P	
R606	1-259-448-11	CARBON	6.8K 5% 1/6W				
R607	1-259-472-11	CARBON	68K 5% 1/6W		L50	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R608	1-259-472-11	CARBON	68K 5% 1/6W		L51	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R609	1-259-428-11	CARBON	1K 5% 1/6W		L52	* 1-410-858-11 INDUCTOR, SMALL TYPE	0uH (AEP, UK)
R610	1-215-445-00	METAL	10K 1% 1/6W				
R611	1-259-452-11	CARBON	10K 5% 1/6W				
R612	1-259-428-11	CARBON	1K 5% 1/6W				
R613	1-259-432-11	CARBON	1.5K 5% 1/6W				
R615	1-259-404-11	CARBON	100 5% 1/6W				
R617	1-216-428-00	METAL OXIDE	180 5% 1W F				
R627	1-259-428-11	CARBON	1K 5% 1/6W				

C MOTOR COAX D/O DIGITAL

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
		* 1-624-379-11 C.MOTOR BOARD *****				C110	1-136-161-00 FILM	0.047uF	5%	50V	
		< CAPACITOR >				C111	1-126-059-11 ELECT	10uF	20%	50V	
C654	1-130-471-00 MYLAR	0.001uF 5% 50V				C112	1-136-165-00 FILM	0.1uF	5%	50V	
		*****				C113	1-136-169-00 FILM	0.22uF	5%	50V	
		* 1-629-106-11 COAX D/O BOARD *****				C114	1-126-045-11 ELECT	2.2uF	20%	50V	
		< CAPACITOR >				C115	1-162-306-11 CERAMIC	0.01uF	20%	16V	
		*****				C116	1-136-159-00 FILM	0.033uF	5%	50V	
						C118	1-124-983-11 ELECT	330uF	20%	6.3V	
						C119	1-124-983-11 ELECT	330uF	20%	6.3V	
						C121	1-136-153-00 FILM	0.01uF	5%	50V	
						C122	1-126-043-11 ELECT	0.47uF	20%	50V	
						C123	1-130-472-00 MYLAR	0.0012uF	5%	50V	
C851	1-136-177-00 FILM	1uF 5% 50V				C124	1-106-359-00 MYLAR	4700PF	5%	200V	
C852	1-162-179-11 CERAMIC	0.1uF	50V			C125	1-164-159-11 CERAMIC	0.1uF	50V		
C853	1-162-179-11 CERAMIC	0.1uF	50V			C127	1-164-159-11 CERAMIC	0.1uF	50V		
		< CONNECTOR >				C128	1-162-280-31 CERAMIC	82PF	10%	50V	
CN851	* 1-564-519-11 PLUG, CONNECTOR 4P					C129	1-136-172-00 FILM	0.39uF	5%	50V	
		< IC >				C130	1-136-155-00 FILM	0.015uF	5%	50V	
IC851	8-759-917-18 IC SN74HCU04AN					C131	1-162-195-31 CERAMIC	4.7PF	10%	50V	
		< JACK >				C132	1-106-363-00 MYLAR	6800PF	5%	200V	
J851	1-507-567-71 JACK, PIN 1P (DIGITAL OUT COAXIAL)					C133	1-164-159-11 CERAMIC	0.1uF	50V		
		< RESISTOR >				C134	1-162-294-31 CERAMIC	0.001uF	10%	50V	
R851	1-247-804-11 CARBON	75 5% 1/4W				C135	1-162-294-31 CERAMIC	0.001uF	10%	50V	
R852	1-249-417-11 CARBON	1K 5% 1/4W				C136	1-164-159-11 CERAMIC	0.1uF	50V		
		< COIL >				C137	1-126-023-11 ELECT	100uF	20%	25V	
T851	1-459-795-11 COIL (WITH CORE)					C138	1-126-023-11 ELECT	100uF	20%	25V	
		*****				C139	1-126-023-11 ELECT	100uF	20%	25V	
		* A-4617-750-A DIGITAL BOARD, COMPLETE *****				C140	1-126-023-11 ELECT	100uF	20%	25V	
		* 4-922-525-01 HEAT SINK				C141	1-124-983-11 ELECT	330uF	20%	6.3V	
		< CAPACITOR >				C142	1-124-983-11 ELECT	330uF	20%	6.3V	
C101	1-130-480-00 MYLAR	0.0056uF 5% 50V				C144	1-164-159-11 CERAMIC	0.1uF	50V		
C102	1-136-159-00 FILM	0.033uF 5% 50V				C145	1-164-159-11 CERAMIC	0.1uF	50V		
C103	1-136-165-00 FILM	0.1uF 5% 50V				C146	1-164-159-11 CERAMIC	0.1uF	50V		
C104	1-136-165-00 FILM	0.1uF 5% 50V				C147	1-164-159-11 CERAMIC	0.1uF	50V		
C105	1-161-375-00 CERAMIC	0.0022uF 20% 50V				C148	1-164-159-11 CERAMIC	0.1uF	50V		
C106	1-106-351-00 MYLAR	2200PF 5% 200V				C149	1-164-159-11 CERAMIC	0.1uF	50V		
C107	1-136-153-00 FILM	0.01uF 5% 50V				C150	1-126-023-11 ELECT	100uF	20%	25V	
C108	1-136-153-00 FILM	0.01uF 5% 50V				C151	1-126-023-11 ELECT	100uF	20%	25V	
C109	1-136-165-00 FILM	0.1uF 5% 50V				C152	1-124-985-11 ELECT	1000uF	20%	6.3V	
						C154	1-124-983-11 ELECT	330uF	20%	6.3V	
						C155	1-164-159-11 CERAMIC	0.1uF	50V		
		*****				C156	1-164-159-11 CERAMIC	0.1uF	50V		
						C157	1-164-159-11 CERAMIC	0.1uF	50V		
						C159	1-124-985-11 ELECT	1000uF	20%	6.3V	
						C160	1-164-159-11 CERAMIC	0.1uF	50V		
						C161	1-164-159-11 CERAMIC	0.1uF	50V		
						C172	1-162-294-31 CERAMIC	0.001uF	10%	50V	
						C174	1-162-294-31 CERAMIC	0.001uF	10%	50V	
						C180	1-124-767-00 ELECT	2.2uF	20%	50V	

DIGITAL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C201	1-106-347-00	MYLAR	1500PF 5% 200V	CN305	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
C202	1-136-161-00	FILM	0.047uF 5% 50V	CN391	* 1-564-507-11	PLUG, CONNECTOR 4P	
C203	1-136-155-00	FILM	0.015uF 5% 50V	CN451	* 1-564-505-11	PLUG, CONNECTOR 2P	
C205	1-124-983-11	ELECT	330uF 20% 6.3V	CN452	* 1-564-505-11	PLUG, CONNECTOR 2P	
C206	1-164-159-11	CERAMIC	0.1uF 50V	CN522	* 1-564-505-11	PLUG, CONNECTOR 2P	
C301	1-124-983-11	ELECT	330uF 20% 6.3V	CN551	* 1-564-505-11	PLUG, CONNECTOR 2P	
C302	1-164-159-11	CERAMIC	0.1uF 50V	CN601	* 1-564-509-11	PLUG, CONNECTOR 6P	
C303	1-164-159-11	CERAMIC	0.1uF 50V	CN602	* 1-564-340-00	PIN, CONNECTOR 6P	
C304	1-164-159-11	CERAMIC	0.1uF 50V	CN701	* 1-564-506-11	PLUG, CONNECTOR 3P	
C305	1-126-059-11	ELECT	10uF 20% 25V	CN702	* 1-564-506-11	PLUG, CONNECTOR 3P	
C306	1-124-995-11	ELECT	220uF 20% 10V	CN703	* 1-564-507-11	PLUG, CONNECTOR 4P	
C307	1-164-159-11	CERAMIC	0.1uF 50V			< DIODE >	
C308	1-136-165-00	FILM	0.1uF 5% 50V	D301	8-719-912-20	DIODE 1SS120	
C309	1-162-294-31	CERAMIC	0.001uF 10% 50V	D302	8-719-912-20	DIODE 1SS120	
C310	1-164-159-11	CERAMIC	0.1uF 50V	D303	8-719-912-20	DIODE 1SS120	
C311	1-126-303-11	ELECT	3.3uF 20% 50V	D305	8-719-912-20	DIODE 1SS120	
C312	1-164-159-11	CERAMIC	0.1uF 50V	D701	8-719-980-31	DIODE DA218S	
C626	1-136-153-00	FILM	0.01uF 5% 50V				
C628	1-164-159-11	CERAMIC	0.1uF 50V	D751	8-719-980-31	DIODE DA218S	
C701	1-136-763-11	FILM	1uF 10% 100V	D907	8-719-912-20	DIODE 1SS120	
C702	1-124-572-11	ELECT	100uF 20% 63V			< IC >	
C703	1-136-814-11	FILM	0.001uF 5% 100V	IC101	8-752-050-82	IC CXA1372Q	
C704	1-136-440-11	FILM	39PF 5% 630V	IC102	8-759-823-11	IC LA6523	
C705	1-136-272-00	FILM	68PF 5% 630V	IC103	8-759-823-11	IC LA6523	
C708	1-124-130-00	ELECT	100uF 20% 63V	IC104	8-759-998-31	IC LF357N	
C709	1-136-165-00	FILM	0.1uF 5% 50V	IC105	8-759-823-11	IC LA6523	
C710	1-124-913-11	ELECT	470uF 20% 50V				
C711	1-136-177-00	FILM	1uF 5% 50V	IC106	8-759-202-01	IC TA7256P	
C751	1-136-763-11	FILM	1uF 10% 100V	IC107	8-759-981-92	IC RC4558M	
C752	1-124-572-11	ELECT	100uF 20% 63V	IC201	8-752-337-26	IC CXD2500AQ	
C753	1-136-814-11	FILM	0.001uF 5% 100V	IC301	8-759-635-51	IC M37450M8-376FP	
C754	1-136-440-11	FILM	39PF 5% 630V	IC302	8-759-822-78	IC LC3564PML-1015	
C755	1-136-272-00	FILM	68PF 5% 630V				
C757	1-124-130-00	ELECT	100uF 20% 63V	IC303	8-759-925-90	IC SN74HC74AF	
C758	1-136-165-00	FILM	0.1uF 5% 50V	IC304	8-752-339-86	IC CXD2557M	
C760	1-124-913-11	ELECT	470uF 20% 50V	IC305	8-759-233-64	IC TC74HCU04AF	
C761	1-136-177-00	FILM	1uF 5% 50V	IC306	8-759-636-16	IC M51957AL	
C990	1-125-622-11	CAP, DOUBLE LAYERS	0.10F 5.5V	IC601	8-759-982-03	IC RC5532D-D	
				IC603	8-759-233-64	IC TC74HCU04AF	
				IC604	8-752-328-61	IC CXD1244S	
				IC651	8-759-982-03	IC RC5532D-D	
						< COIL >	
CN101	* 1-564-341-11	PIN, CONNECTOR	7P	L301	* 1-410-858-11	INDUCTOR	0uH
CN102	* 1-564-338-81	PIN, CONNECTOR	4P	L302	* 1-410-858-11	INDUCTOR	0uH
CN103	* 1-564-338-61	PIN, CONNECTOR	4P	L303	* 1-410-858-11	INDUCTOR	0uH
CN104	* 1-564-339-00	PIN, CONNECTOR	5P	L603	1-410-324-11	INDUCTOR	4.7uH
CN105	* 1-564-338-00	PIN, CONNECTOR	4P				
CN301	* 1-564-666-11	PIN, CONNECTOR	10P				
CN302	* 1-564-339-00	PIN, CONNECTOR	5P				
CN303	* 1-564-712-11	PIN, CONNECTOR (SMALL TYPE)	10P				
CN304	* 1-564-336-00	PIN, CONNECTOR	2P				
						< PHOTO INTERRUPTER >	
				PH301	8-719-902-56	PHOTO COUPLER	PC817

DIGITAL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRANSISTOR >							
Q101	8-729-900-89	TRANSISTOR DTC144ES		R142	1-259-428-11	CARBON	1K 5% 1/6W
Q301	8-729-140-96	TRANSISTOR 2SD774-34		R143	1-259-428-11	CARBON	1K 5% 1/6W
Q302	8-729-905-05	TRANSISTOR 2SD1293M-Q		R144	1-259-428-11	CARBON	1K 5% 1/6W
Q701	8-729-809-29	TRANSISTOR 2SC4159-E		R145	1-259-460-11	CARBON	22K 5% 1/6W
Q702	8-729-809-26	TRANSISTOR 2SA1606-E		R146	1-259-444-11	CARBON	4.7K 5% 1/6W
Q703	8-729-224-61	TRANSISTOR 2SK246-Y		R147	1-259-456-11	CARBON	15K 5% 1/6W
Q751	8-729-809-29	TRANSISTOR 2SC4159-E		R149	1-259-444-11	CARBON	4.7K 5% 1/6W
Q752	8-729-809-26	TRANSISTOR 2SA1606-E		R150	1-259-428-11	CARBON	1K 5% 1/6W
Q753	8-729-224-61	TRANSISTOR 2SK246-Y		R151	1-259-444-11	CARBON	4.7K 5% 1/6W
< RESISTOR >							
R101	1-259-452-11	CARBON	10K 5% 1/6W	R152	1-259-380-11	CARBON	10 5% 1/6W
R102	1-259-484-11	CARBON	220K 5% 1/6W	R153	1-259-452-11	CARBON	10K 5% 1/6W
R103	1-259-452-11	CARBON	10K 5% 1/6W	R154	1-259-452-11	CARBON	10K 5% 1/6W
R104	1-259-479-11	CARBON	130K 5% 1/6W	R155	1-259-452-11	CARBON	10K 5% 1/6W
R105	1-259-474-11	CARBON	82K 5% 1/6W	R157	1-259-452-11	CARBON	10K 5% 1/6W
R106	1-259-472-11	CARBON	68K 5% 1/6W	R159	1-259-380-11	CARBON	10 5% 1/6W
R107	1-259-456-11	CARBON	15K 5% 1/6W	R160	1-259-380-11	CARBON	10 5% 1/6W
R108	1-259-453-11	CARBON	11K 5% 1/6W	R161	1-259-380-11	CARBON	10 5% 1/6W
R109	1-259-493-11	CARBON	510K 5% 1/6W	R162	1-259-452-11	CARBON	10K 5% 1/6W
R110	1-259-483-11	CARBON	200K 5% 1/6W	R163	1-259-452-11	CARBON	10K 5% 1/6W
R111	1-259-428-11	CARBON	1K 5% 1/6W	R164	1-259-380-11	CARBON	10 5% 1/6W
R112	1-259-452-11	CARBON	10K 5% 1/6W	R165	1-259-460-11	CARBON	22K 5% 1/6W
R113	1-259-476-11	CARBON	100K 5% 1/6W	R171	1-259-468-11	CARBON	47K 5% 1/6W
R114	1-259-451-11	CARBON	9.1K 5% 1/6W	R172	1-259-468-11	CARBON	47K 5% 1/6W
R115	1-259-451-11	CARBON	9.1K 5% 1/6W	R173	1-259-468-11	CARBON	47K 5% 1/6W
R116	1-259-380-11	CARBON	10 5% 1/6W	R174	1-259-468-11	CARBON	47K 5% 1/6W
R117	1-259-453-11	CARBON	11K 5% 1/6W	R180	1-259-462-11	CARBON	27K 5% 1/6W
R118	1-259-380-11	CARBON	10 5% 1/6W	R181	1-259-468-11	CARBON	47K 5% 1/6W
R120	1-259-490-11	CARBON	390K 5% 1/6W	R182	1-259-428-11	CARBON	1K 5% 1/6W
R121	1-259-470-11	CARBON	56K 5% 1/6W	R201	1-259-440-11	CARBON	3.3K 5% 1/6W
R123	1-259-480-11	CARBON	150K 5% 1/6W	R202	1-259-440-11	CARBON	3.3K 5% 1/6W
R124	1-259-470-11	CARBON	56K 5% 1/6W	R203	1-259-452-11	CARBON	10K 5% 1/6W
R125	1-259-474-11	CARBON	82K 5% 1/6W	R204	1-259-452-11	CARBON	10K 5% 1/6W
R126	1-259-452-11	CARBON	10K 5% 1/6W	R205	1-259-452-11	CARBON	10K 5% 1/6W
R127	1-259-380-11	CARBON	10 5% 1/6W	R206	1-259-464-11	CARBON	33K 5% 1/6W
R128	1-259-478-11	CARBON	120K 5% 1/6W	R209	1-259-420-11	CARBON	470 5% 1/6W
R129	1-259-478-11	CARBON	120K 5% 1/6W	R210	1-259-420-11	CARBON	470 5% 1/6W
R130	1-259-475-11	CARBON	91K 5% 1/6W	R211	1-259-420-11	CARBON	470 5% 1/6W
R131	1-259-475-11	CARBON	91K 5% 1/6W	R230	1-259-428-11	CARBON	1K 5% 1/6W
R136	1-259-421-11	CARBON	510 5% 1/6W	R231	1-259-420-11	CARBON	470 5% 1/6W
R137	1-259-430-11	CARBON	1.2K 5% 1/6W	R301	1-259-500-11	CARBON	1M 5% 1/6W
R138	1-259-431-11	CARBON	1.3K 5% 1/6W	R302	1-259-416-11	CARBON	330 5% 1/6W
R139	1-259-431-11	CARBON	1.3K 5% 1/6W	R303	1-259-452-11	CARBON	10K 5% 1/6W
R140	1-216-349-00	METAL OXIDE	1 5% 1W F	R304	1-259-452-11	CARBON	10K 5% 1/6W
R141	1-259-444-11	CARBON	4.7K 5% 1/6W	R305	1-259-452-11	CARBON	10K 5% 1/6W
				R306	1-259-452-11	CARBON	10K 5% 1/6W
				R307	1-259-452-11	CARBON	10K 5% 1/6W
				R308	1-259-452-11	CARBON	10K 5% 1/6W
				R309	1-259-452-11	CARBON	10K 5% 1/6W
				R310	1-259-452-11	CARBON	10K 5% 1/6W

DIGITAL

DISPLAY

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R311	1-259-452-11	CARBON	10K 5% 1/6W	R755	1-247-725-11	CARBON	10K 5% 1/4W
R312	1-259-452-11	CARBON	10K 5% 1/6W	R756	1-247-721-11	CARBON	4.7K 5% 1/4W
R313	1-259-428-11	CARBON	1K 5% 1/6W	R757	1-259-396-11	CARBON	47 5% 1/6W
R315	1-259-452-11	CARBON	10K 5% 1/6W	R758	1-247-704-11	CARBON	220 5% 1/4W
R316	1-259-428-11	CARBON	1K 5% 1/6W	R759	1-247-704-11	CARBON	220 5% 1/4W
R317	1-259-452-11	CARBON	10K 5% 1/6W	R760	▲ 1-216-359-00	METAL OXIDE	6.8 5% 1W F
R318	1-259-452-11	CARBON	10K 5% 1/6W	R761	▲ 1-216-359-00	METAL OXIDE	6.8 5% 1W F
R319	1-259-452-11	CARBON	10K 5% 1/6W	R763	1-249-465-11	CARBON	47K 5% 1/4W
R320	1-259-484-11	CARBON	220K 5% 1/6W	R764	1-215-863-11	METAL OXIDE	100 5% 1W F
R321	1-259-452-11	CARBON	10K 5% 1/6W	R765	1-247-887-00	CARBON	220K 5% 1/4W
R322	1-259-452-11	CARBON	10K 5% 1/6W				
R323	1-259-404-11	CARBON	100 5% 1/6W				
R324	1-259-416-11	CARBON	330 5% 1/6W				
R325	1-259-466-11	CARBON	39K 5% 1/6W				
R326	1-259-456-11	CARBON	15K 5% 1/6W				
R327	1-259-428-11	CARBON	1K 5% 1/6W				
R328	▲ 1-247-746-11	CARBON	390 5% 1/2W				
R330	1-259-452-11	CARBON	10K 5% 1/6W				
R331	1-259-392-11	CARBON	33 5% 1/6W				
R334	1-259-468-11	CARBON	47K 5% 1/6W				
R335	1-259-428-11	CARBON	1K 5% 1/6W				
R336	1-259-428-11	CARBON	1K 5% 1/6W	X301	1-577-377-11	VIBRATOR, CERAMIC (10MHz)	
R337	1-259-428-11	CARBON	1K 5% 1/6W	X602	1-577-685-11	FILTER, CRYSTAL (16.9344MHz)	
R601	1-259-428-11	CARBON	1K 5% 1/6W				
R602	1-259-428-11	CARBON	1K 5% 1/6W				
R618	1-259-500-11	CARBON	1M 5% 1/6W				
R619	1-259-416-11	CARBON	330 5% 1/6W				
R622	1-259-420-11	CARBON	470 5% 1/6W				
R623	1-259-420-11	CARBON	470 5% 1/6W				
R624	1-259-420-11	CARBON	470 5% 1/6W				
R625	1-259-420-11	CARBON	470 5% 1/6W				
R701	1-247-891-00	CARBON	330K 5% 1/4W				
R702	1-247-700-11	CARBON	100 5% 1/4W				
R703	1-247-700-11	CARBON	100 5% 1/4W				
R704	1-259-445-11	CARBON	5.1K 5% 1/6W				
R705	1-247-725-11	CARBON	10K 5% 1/4W				
R706	1-247-721-11	CARBON	4.7K 5% 1/4W				
R707	1-259-396-11	CARBON	47 5% 1/6W				
R708	1-247-704-11	CARBON	220 5% 1/4W				
R709	1-247-704-11	CARBON	220 5% 1/4W				
R710	▲ 1-216-359-00	METAL OXIDE	6.8 5% 1W F				
R711	▲ 1-216-359-00	METAL OXIDE	6.8 5% 1W F				
R713	1-249-465-11	CARBON	47K 5% 1/4W				
R714	▲ 1-215-863-11	METAL OXIDE	100 5% 1W F				
R715	1-247-887-00	CARBON	220K 5% 1/4W				
R751	1-247-891-00	CARBON	330K 5% 1/4W	D801	8-719-974-68	DIODE MU20-3105 (CONTINUE)	
R752	1-247-700-11	CARBON	100 5% 1/4W	D802	8-719-974-68	DIODE MU20-3105 (C. INDEX)	
R753	1-247-700-11	CARBON	100 5% 1/4W	D803	8-719-974-68	DIODE MU20-3105 (SHUFFLE)	
R754	1-259-445-11	CARBON	5.1K 5% 1/6W	D804	8-719-974-68	DIODE MU20-3105 (PROGRAM)	

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

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

DISPLAY **H · J**

Ref. No.	Part No.	Description	Remark
D805	8-719-913-47	DIODE EAA5638S () (Canadian)	
D805	8-719-913-49	DIODE EBG5638S () (EXCEPT Canadian)	
D806	8-719-913-47	DIODE EAA5638S () (EXCEPT Canadian)	
D806	8-719-913-49	DIODE EBG5638S () (Canadian)	
D807	8-719-913-47	DIODE EAA5638S (DIGITAL) (Canadian)	
D807	8-719-913-49	DIODE EBG5638S (DIGITAL) (EXCEPT Canadian)	
D808	8-719-913-47	DIODE EAA5638S (ANALOG) (EXCEPT Canadian)	
D808	8-719-913-49	DIODE EBG5638S (ANALOG) (Canadian)	
< FLUORESCENT INDICATOR >			
FLD801	1-519-480-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC801	8-752-817-01	IC CXF5058H-655Q	
IC802	8-741-138-70	IC BX-1387	
< TRANSISTOR >			
Q801	8-729-900-45	TRANSISTOR DTC114EF	
Q802	8-729-900-45	TRANSISTOR DTC114EF	
Q803	8-729-900-45	TRANSISTOR DTC114EF	
Q804	8-729-900-45	TRANSISTOR DTC114EF	
Q805	8-729-900-45	TRANSISTOR DTC114EF	
Q806	8-729-900-45	TRANSISTOR DTC114EF	
Q807	8-729-900-45	TRANSISTOR DTC114EF	
Q808	8-729-900-45	TRANSISTOR DTC114EF	
Q809	8-729-900-33	TRANSISTOR DTC144EF	
< RESISTOR >			
R801	1-249-782-11	CARBON 150 5% 1/6W	
R802	1-249-782-11	CARBON 150 5% 1/6W	
R803	1-249-782-11	CARBON 150 5% 1/6W	
R804	1-249-782-11	CARBON 150 5% 1/6W	
R805	1-259-452-11	CARBON 10K 5% 1/6W	
R806	1-259-415-11	CARBON 300 5% 1/6W	
R807	1-259-406-11	CARBON 120 5% 1/6W	
R808	1-259-452-11	CARBON 10K 5% 1/6W	
R809	1-259-438-11	CARBON 2.7K 5% 1/6W	
R810	1-259-442-11	CARBON 3.9K 5% 1/6W	
R811	1-259-448-11	CARBON 6.8K 5% 1/6W	
R812	1-259-458-11	CARBON 18K 5% 1/6W	
R813	1-259-452-11	CARBON 10K 5% 1/6W	
R814	1-259-438-11	CARBON 2.7K 5% 1/6W	
R815	1-259-442-11	CARBON 3.9K 5% 1/6W	

Ref. No.	Part No.	Description	Remark
R816	1-259-448-11	CARBON 6.8K 5% 1/6W	
R817	1-259-458-11	CARBON 18K 5% 1/6W	
R818	1-259-415-11	CARBON 300 5% 1/6W	
R819	1-259-406-11	CARBON 120 5% 1/6W	
R820	1-259-500-11	CARBON 1M 5% 1/6W	
R821	1-259-452-11	CARBON 10K 5% 1/6W	
R822	1-259-452-11	CARBON 10K 5% 1/6W	
R823	1-259-452-11	CARBON 10K 5% 1/6W	
R824	1-259-452-11	CARBON 10K 5% 1/6W	
< SWITCH >			
S801	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)	
S802	1-554-303-21	SWITCH, TACTILE (►)	
S803	1-554-303-21	SWITCH, TACTILE ()	
S804	1-554-303-21	SWITCH, TACTILE (■)	
S805	1-554-303-21	SWITCH, TACTILE (OUTPUT SELECTOR)	
S806	1-554-303-21	SWITCH, TACTILE (◀)	
S807	1-554-303-21	SWITCH, TACTILE (▷)	
S808	1-554-303-21	SWITCH, TACTILE (◀)	
S809	1-554-303-21	SWITCH, TACTILE (▷)	
< CERAMIC >			
X801	1-577-082-11	VIBRATOR, CERAMIC	

* 1-637-310-11 H. J BOARD			

< CAPACITOR >			
C706	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C756	1-162-294-31	CERAMIC 0.001uF 10% 50V	
< CONNECTOR >			
CN691	* 1-564-519-11	PLUG, CONNECTOR 4P	
< JACK >			
J691	1-568-519-31	JACK, LARGE TYPE (PHONES) (EXCEPT Canadian, AEP/GOLD)	
J691	1-568-519-61	JACK, LARGE TYPE (PHONES) (Canadian, AEP/GOLD)	
< COIL >			
L701	* 1-410-858-11	INDUCTOR 0uH	
L731	* 1-410-858-11	INDUCTOR 0uH	
L751	* 1-410-858-11	INDUCTOR 0uH	

IN SW	L MOTOR	L/C SW	PRIMARY	OPT D/O				
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark	
-----	-----	-----	-----	-----	-----	-----	-----	
* 1-624-377-11	IN SW BOARD	*****				< SWITCH >		

		< SWITCH >			S653	1-553-636-00	SWITCH, MICRO (MOTOR SELECT)	
					S654	1-570-447-11	SWITCH, MICRO (CHUKING)	
S651	1-554-205-00	SWITCH, PUSH (LOAD IN DET)					*****	
		*****					*****	
* 1-624-376-11	L. MOTOR BOARD	*****						

		< CAPACITOR >						
C655	1-130-471-00	MYLAR	0.001uF 5% 50V					
		< CONNECTOR >						
CNP652	* 1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P						
CNP653	* 1-564-336-61	PIN, CONNECTOR 2P						
CNP656	* 1-564-337-00	PIN, CONNECTOR 3P						

* 1-624-375-11	L/C SW BOARD	*****						

		< CAPACITOR >						
C651	1-136-157-00	FILM	0.022uF 5% 50V		C970	1-161-744-00	CERAMIC	0.01uF 400V
C652	1-136-157-00	FILM	0.022uF 5% 50V		C971	1-161-744-00	CERAMIC	0.01uF 400V
C653	1-136-157-00	FILM	0.022uF 5% 50V		C971	1-162-599-12	CERAMIC	0.0047uF (US, Canadian)
							400V (AEP, UK, AUS)	
					C972	1-161-742-00	CERAMIC	0.0022uF 20% 400V
					C973	1-161-742-00	CERAMIC	0.0022uF 20% 400V
					C974	1-161-742-00	CERAMIC	0.0022uF 20% 400V
					C975	1-161-742-00	CERAMIC	0.0022uF 20% 400V
		< CONNECTOR >						
CNP654	* 1-564-336-71	PIN, CONNECTOR 2P						

		< DIODE >						
D651	8-719-200-02	DIODE 10E2						
D652	8-719-200-02	DIODE 10E2						
D653	8-719-200-02	DIODE 10E2						
D654	8-719-200-02	DIODE 10E2						

		< TRANSISTOR >						
Q651	8-729-140-96	TRANSISTOR 2SD774-3						

		< RESISTOR >						
R651	1-249-417-11	CARBON	1K 5% 1/4W					
R652	1-249-417-11	CARBON	1K 5% 1/4W					

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

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

OUT SW POWER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* 1-624-378-11	OUT SW BOARD	*****	C951	1-128-217-11	ELECT	12000uF 20% 16V
		*****		C952	1-128-217-11	ELECT	12000uF 20% 16V
		< SWITCH >		C953	1-124-994-11	ELECT	100uF 20% 10V
S652	1-571-300-21	SWITCH, ROTARY (LOAD OUT DET)		C954	1-162-282-31	CERAMIC	100PF 10% 50V
	*****			C955	1-124-986-11	ELECT	2200uF 20% 6.3V
	*****			C956	1-124-986-11	ELECT	2200uF 20% 6.3V
	* A-4617-920-A	POWER BOARD, COMPLETE (US, Canadian)		C957	1-164-159-11	CERAMIC	0.1uF 50V
	* A-4617-949-A	POWER BOARD, COMPLETE (EXCEPT US, Canadian)		C958	1-164-159-11	CERAMIC	0.1uF 50V
	*****			C959	1-162-282-31	CERAMIC	100PF 10% 50V
	* 4-941-237-01	HEAT SINK		C960	1-126-053-11	ELECT	220uF 20% 50V
	7-682-147-15	SCREW, TR		C961	1-126-051-11	ELECT	47uF 20% 35V
		< BUS BAR >		C962	1-164-159-11	CERAMIC	0.1uF 50V
BB1	* 1-566-940-11	BUS BAR 6P		C963	1-126-052-11	ELECT	100uF 20% 35V
BB2	1-566-940-21	BUS BAR 3P		C964	1-124-485-11	ELECT	330uF 20% 35V
BB3	1-566-940-21	BUS BAR 3P		C965	1-126-022-11	ELECT	47uF 20% 10V
BB4	1-566-940-21	BUS BAR 3P		C966	1-136-177-00	FILM	1uF 5% 50V
BB5	* 1-568-130-11	BAR, BUS 3P		C967	1-136-820-11	FILM	0.01uF 5% 100V
BB6	* 1-566-940-11	BUS BAR 6P		C968	1-164-159-11	CERAMIC	0.1uF 50V
BB21	* 1-566-940-11	BUS BAR 6P		C969	1-164-159-11	CERAMIC	0.1uF 50V
	< CAPACITOR >						< CONNECTOR >
C901	1-125-662-11	ELECT	4700uF 20% 63V	CN901	* 1-535-120-00	TERMINAL (7P)	
C902	1-125-662-11	ELECT	4700uF 20% 63V	CN902	* 1-535-118-00	TERMINAL (5P)	
C903	1-124-713-11	ELECT	470uF 20% 35V	CN903	* 1-535-116-00	TERMINAL	
C904	1-126-059-11	ELECT	330uF 20% 25V	CN905	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
C905	1-126-335-11	ELECT	220uF 20% 10V	CN906	* 1-535-119-00	TERMINAL	
C906	1-136-808-11	FILM	100PF 5% 100V	CN910	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
C907	1-124-922-11	ELECT	1000uF 20% 63V	CN911	* 1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
C908	1-136-763-11	FILM	1uF 10% 100V				< DIODE >
C909	1-136-177-00	FILM	1uF 5% 50V	D901	8-719-210-29	DIODE F10P10Q	
C910	1-136-165-00	FILM	0.1uF 5% 50V	D902	8-719-210-29	DIODE F10P10Q	
C911	1-136-811-11	FILM	330PF 5% 100V	D903	8-719-210-51	DIODE 21DQ10	
C912	1-136-253-11	FILM	0.0018uF 5% 100V	D904	8-719-210-51	DIODE 21DQ10	
C921	1-125-662-11	ELECT	4700uF 20% 63V	D906	8-719-988-53	DIODE LTZ-MR19	
C922	1-125-662-11	ELECT	4700uF 20% 63V	D907	8-719-114-36	DIODE RD5.6JS-B1	
C923	1-124-713-11	ELECT	470uF 20% 35V	D908	8-719-107-94	DIODE 1SS202-1	
C924	1-126-059-11	ELECT	330uF 20% 25V	D909	8-719-107-94	DIODE 1SS202-1	
C925	1-126-335-11	ELECT	220uF 20% 10V	D910	8-719-980-31	DIODE DA218S	
C926	1-136-808-11	FILM	100PF 5% 100V	D921	8-719-210-29	DIODE F10P10Q	
C927	1-124-922-11	ELECT	1000uF 20% 63V	D922	8-719-210-29	DIODE F10P10Q	
C929	1-136-177-00	FILM	1uF 5% 50V	D923	8-719-210-51	DIODE 21DQ10	
C930	1-136-165-00	FILM	0.1uF 5% 50V	D924	8-719-210-51	DIODE 21DQ10	
C931	1-136-811-11	FILM	330PF 5% 100V	D926	8-719-988-53	DIODE LTZ-MR19	
C932	1-136-253-11	FILM	0.0018uF 5% 100V	D927	8-719-114-36	DIODE RD5.6JS-B1	
C935	1-136-763-11	FILM	1uF 10% 100V	D928	8-719-107-94	DIODE 1SS202-1	
				D929	8-719-107-94	DIODE 1SS202-1	
				D930	8-719-980-31	DIODE DA218S	
				D951	8-719-975-85	DIODE ERB83-004	

POWER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D952	8-719-975-85	DIODE ERB83-004		Q956	8-729-224-62	TRANSISTOR 2SK246GR	
D953	8-719-975-85	DIODE ERB83-004		Q957	8-729-927-47	TRANSISTOR 2SB1333-M	
D954	8-719-975-85	DIODE ERB83-004					< RESISTOR >
D955	8-719-988-53	DIODE LTZ-MR19		R901	1-249-461-11	CARBON	18K 5% 1/4W
D959	8-719-200-02	DIODE 10E2		R902	1-247-704-11	CARBON	220 5% 1/4W
D960	8-719-934-22	DIODE HZS30-2L		R903	1-249-538-11	CARBON	270 5% 1/4W
D961	8-719-114-36	DIODE RD5.6JS-B1		R904	1-247-721-11	CARBON	4.7K 5% 1/4W
			< IC >	R905	▲ 1-214-810-00	METAL	5.6 1% 1/2W
IC901	8-759-604-87	IC M5F7818L		R906	▲ 1-214-810-00	METAL	5.6 1% 1/2W
IC902	8-759-604-91	IC M5F7918L		R907	1-259-507-11	CARBON	10 1% 1/2W
IC951	8-759-602-01	IC M5220P		R908	1-249-504-11	CARBON	10 5% 1/4W
			< LINK >	R909	1-249-504-11	CARBON	10 5% 1/4W
PS901	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R910	▲ 1-217-997-11	FUSIBLE	10 5% 1/2W
PS902	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R911	1-249-799-11	CARBON	750 1% 1/2W
PS921	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R912	1-259-547-11	CARBON	470 1% 1/2W
PS922	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R913	▲ 1-212-875-00	FUSIBLE	56 5% 1/4W F
PS951	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R914	1-249-520-11	CARBON	47 5% 1/4W
PS952	▲ 1-532-637-00	LINK, IC (ICP.N-25 1A)	(EXCEPT US, Canadian)	R915	1-249-504-11	CARBON	10 5% 1/4W
			< TRANSISTOR >	R921	1-249-461-11	CARBON	18K 5% 1/4W
Q901	8-729-322-40	TRANSISTOR 2SA1083-E		R922	1-247-704-11	CARBON	220 5% 1/4W
Q902	8-729-322-40	TRANSISTOR 2SA1083-E		R923	1-249-538-11	CARBON	270 5% 1/4W
Q903	8-729-202-72	TRANSISTOR 2SC3381-BL		R924	1-247-721-11	CARBON	4.7K 5% 1/4W
Q904	8-729-202-72	TRANSISTOR 2SC3381-BL		R925	▲ 1-214-810-00	METAL	5.6 1% 1/2W
Q905	8-729-354-52	TRANSISTOR 2SC2545-E		R926	▲ 1-214-810-00	METAL	5.6 1% 1/2W
Q906	8-729-809-26	TRANSISTOR 2SA1606-E		R927	1-259-507-11	CARBON	10 1% 1/2W
Q907	8-729-201-05	TRANSISTOR 2SC2878-B		R928	1-249-504-11	CARBON	10 5% 1/4W
Q908	8-729-307-65	TRANSISTOR 2SJ76		R929	1-249-504-11	CARBON	10 5% 1/4W
Q921	8-729-354-52	TRANSISTOR 2SC2545-E		R930	▲ 1-217-997-11	FUSIBLE	10 5% 1/2W
Q922	8-729-354-52	TRANSISTOR 2SC2545-E		R931	1-249-799-11	CARBON	750 1% 1/2W
Q923	8-729-232-00	TRANSISTOR 2SA1349-GRBL		R932	1-259-547-11	CARBON	470 1% 1/2W
Q924	8-729-232-00	TRANSISTOR 2SA1349-GRBL		R933	▲ 1-212-877-11	FUSIBLE	68 5% 1/4W F
Q925	8-729-322-40	TRANSISTOR 2SA1083ETZ		R934	1-249-520-11	CARBON	47 5% 1/4W
Q926	8-729-905-67	TRANSISTOR 2SD1944-K		R935	1-249-504-11	CARBON	10 5% 1/4W
Q927	8-729-322-40	TRANSISTOR 2SA1083-E		R940	1-247-717-11	CARBON	2.2K 5% 1/4W
Q928	8-729-321-35	TRANSISTOR 2SK213		R951	1-259-446-11	CARBON	5.6K 5% 1/6W
Q951	8-729-300-41	TRANSISTOR 2SA872A-E		R952	1-249-916-11	CARBON	510 1% 1/4W
Q952	8-729-905-67	TRANSISTOR 2SD1944-K		R953	▲ 1-212-877-11	FUSIBLE	68 5% 1/4W F
Q953	8-729-809-26	TRANSISTOR 2SA1606-E		R954	1-259-380-11	CARBON	10 5% 1/6W
Q954	8-729-224-62	TRANSISTOR 2SK246GR		R955	1-259-432-11	CARBON	1.5K 5% 1/6W
Q955	8-729-927-47	TRANSISTOR 2SB1333-M		R956	1-259-426-11	CARBON	820 5% 1/6W
				R957	1-259-380-11	CARBON	10 5% 1/6W
				R958	1-259-436-11	CARBON	2.2K 5% 1/6W
				R959	1-259-436-11	CARBON	2.2K 5% 1/6W
				R960	1-259-428-11	CARBON	1K 5% 1/6W
				R961	1-259-468-11	CARBON	47K 5% 1/6W
				R962	1-259-476-11	CARBON	100K 5% 1/6W
				R963	▲ 1-212-956-00	FUSIBLE	8.2 5% 1/2W F
				R970	1-215-419-00	METAL	820 1% 1/6W

Note:
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Note:
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TRANSLATION **RM-VR** **STATOR** **SW**

Ref. No.	Part No.	Description	Remark
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* 1-637-311-11 TRANSLATION BOARD

< CONNECTOR >

CN001 * 1-568-835-11 SOCKET, CONNECTOR 16P
CN002 * 1-564-339-61 PIN, CONNECTOR 5P
CN003 * 1-564-706-11 PIN, CONNECTOR (SMALL TYPE) 4P

* 1-639-208-11 RM-VR BOARD

< CAPACITOR >

C175 1-124-273-00 ELECT 3.3uF 20% 50V

< CONNECTOR >

CN351 * 1-564-704-11 PIN, CONNECTOR (SMALL TYPE) 2P
CN675 * 1-564-506-11 PLUG, CONNECTOR 3P
CN775 * 1-564-506-11 PLUG, CONNECTOR 3P

< VARIABLE RESISTOR >

RV672 1-241-527-11 RES, VAR, CARBON (MOTOR) 20KX2
(LINE OUT PHONES LEVEL)

A-4604-792-A STATOR ASSY

4-943-342-01 BEARING
7-621-775-10 SCREW +B 2.6X4

< CAPACITOR >

C151 1-161-494-00 CERAMIC 0.022uF 25V
C152 1-161-494-00 CERAMIC 0.022uF 25V
C153 1-124-477-11 ELECT 47uF 20% 25V
C154 1-124-477-11 ELECT 47uF 20% 25V
C155 1-161-375-00 CERAMIC 0.0022uF 20% 50V
C156 1-161-375-00 CERAMIC 0.0022uF 20% 50V

< CONNECTOR >

CNJ151 * 1-564-706-11 PIN, CONNECTOR (SMALL TYPE) 4P

< DIODE >

H151 8-719-800-18 DIODE THS103A-1
H152 8-719-800-18 DIODE THS103A-1

< IC >

IC151 8-759-202-01 IC TA7256P

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R151	1-249-417-11	CARBON	1K	5%	1/4W
R152	1-249-417-11	CARBON	1K	5%	1/4W
R153	1-249-417-11	CARBON	1K	5%	1/4W
R154	1-247-887-00	CARBON	220K	5%	1/4W
R155	1-249-417-11	CARBON	1K	5%	1/4W

R156	1-249-417-11	CARBON	1K	5%	1/4W
R157	1-249-417-11	CARBON	1K	5%	1/4W
R158	1-247-887-00	CARBON	220K	5%	1/4W
R159	1-247-887-00	CARBON	220K	5%	1/4W
R160	1-247-887-00	CARBON	220K	5%	1/4W

R161	1-249-405-11	CARBON	100	5%	1/4W
R162	1-249-405-11	CARBON	100	5%	1/4W

* 1-637-312-11 SW BOARD

< SWITCH >

S810 1-554-303-21 SWITCH, TACTILE (DISPLAY BOARD)

MISCELLANEOUS

160	▲ 1-558-568-11	CORD, POWER (AEP)
160	▲ 1-559-272-11	CORD, POWER (UK)
160	▲ 1-559-479-11	CORD, POWER (US, Canadian)
160	▲ 1-575-379-11	CORD, POWER (AUS)
303	▲ 8-848-210-11	DEVICE, OPTICAL KSS-281A
F901	▲ 1-532-215-00	FUSE, TIME-LAG (0.8A 250V) (AEP, UK, AUS)
F901	▲ 1-532-742-11	FUSE, GLASS TUBE (1.6A 125V) (US, Canadian)
J601	1-507-918-00	JACK, PIN 1P (LINE OUT FIXED L)
J602	1-507-918-00	JACK, PIN 1P (LINE OUT VARIABLE L)
J701	1-507-918-00	JACK, PIN 1P (LINE OUT FIXED R)
J702	1-507-918-00	JACK, PIN 1P (LINE OUT VARIABLE R)
J901	1-563-030-11	CONNECTOR (RECEPTACLE) 3P (LINE OUT BLANSED R)
J90	1-563-030-11	CONNECTOR (RECEPTACLE) 3P (LINE OUT BLANSED L)
M51	1-422-198-21	COIL (SENSOR)
M53	1-422-197-21	COIL (DRIVE)
M651	X-4902-019-1	MOTOR ASSY, CHUCKING
M652	X-4912-517-1	MOTOR ASSY, LOADING
S901	▲ 1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)
T901	▲ 1-450-495-11	TRANSFORMER, POWER (AUDIO) (US, Canadian)
T901	▲ 1-450-497-11	TRANSFORMER, POWER (AUDIO) (AEP, UK, AUS)
T902	▲ 1-450-494-11	TRANSFORMER, POWER (DIGITAL) (US, Canadian)
T902	▲ 1-450-496-11	TRANSFORMER, POWER (DIGITAL) (AEP, UK, AUS)

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

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

Ref. No.	Part No.	Description	Remark
***** ACCESSORY & PACKING MATERIAL *****			
	1-465-601-11	COMMANDER, REMOTE (RM-D993) (Canadian, AEP/GOLD)	
	1-465-602-11	COMMANDER, REMOTE (RM-D994) (US, UK, AUS, AEP/BLACK)	
	1-558-271-11	CORD, CONNECTION	
	3-707-584-01	COVER, BATTERY	
	3-752-396-11	MANUAL, INSTRUCTION (ENGLISH, F. E. P) (AEP, UK, Canadian, AUS)	
	3-752-396-21	MANUAL, INSTRUCTION (ENGLISH) (US, AUS)	
	3-752-396-41	MANUAL, INSTRUCTION (D, NL, S, I) (AEP)	
	3-795-629-15	INSTRUCTION (AEP)	
	4-847-802-00	SCREW (EXCEPT UK)	
*	4-912-947-01	KEY, LOCK	
*	4-912-947-01	KEY, LOCK	
*	4-928-005-01	CUSHION	
*	4-941-548-01	LABEL, CLASS 1 (EXCEPT US, Canadian)	
*	4-945-273-01	INDIVIDUAL CARTON	

Ref. No.	Part No.	Description	Remark
HARDWARE LIST *****			
# 1	7-682-664-09	SCREW +PSW 4X14	
# 2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 3	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
# 4	7-682-547-04	SCREW +B 3X6	
# 5	7-682-548-04	SCREW +BVTT 3X8 (S)	
# 6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 SLIT	
# 7	7-621-770-67	SCREW +BVTT 2.6X6 (S)	
# 8	7-682-147-15	SCREW, TR	
# 9	7-682-549-04	SCREW +BVTT 3X10 (S)	
#10	7-682-562-09	SCREW +B 4X10	
#11	7-685-246-14	SCREW +RKTP 3X8 TYPE2 SLIT	
#12	7-684-023-04	N 3, TYPE 2	
#14	7-624-106-04	STOP RING 3.0, TYPE -E	
#15	7-682-949-01	SCREW +PSW 3X10	
#16	7-621-775-00	SCREW +B 2.6X3	
#17	7-621-775-80	SCREW +B 2.6X16	
#18	7-621-773-87	SCREW +BVTT 2.6X10 (S)	
#19	7-682-646-09	SCREW +PS 3X5	
#20	7-685-870-01	SCREW +BVTT 3X5 (S)	
#21	7-682-544-09	SCREW +B 3X3	
#22	7-621-257-85	SCREW +P 2.3X14	
#23	7-624-109-04	STOP RING 5.0, TYPE -E	
#24	7-628-254-20	+PSW, 2.6X8	
#25	7-682-552-04	SCREW +BVTT 3X16 (S)	
#26	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S	
#27	7-623-421-07	LW 2.6, TYPE B	
#28	7-688-001-01	W 2, SMALL	
#29	7-628-253-10	SCREW +PS 2X5	
#30	7-624-105-04	STOP RING 2.3, TYPE -E	
#31	7-621-255-10	SCREW +P. 2X3	
#32	7-621-773-95	SCREW +P 2.6X6	
#33	7-621-775-50	SCREW +P 2.6X10	
#34	7-621-775-10	SCREW +B 2.6X4	
#35	7-682-545-04	SCREW +B 3X4	
#36	7-682-248-09	SCREW +K 3X8	
#37	7-682-546-09	SCREW +B 3X5	
#38	7-621-734-09	SET-SCT, HEX. 2.6X3	
#39	7-621-559-30	SCREW +K 2.6X5	
#40	7-621-770-XX	SCREW +BVTT 2.6X8 (S)	
#41	7-682-548-09	SCREW (3X8)	