CDP-203/203ES

SERVICE MANUAL

CDP-203:
US Model
Canadian Model
AEP Model
CDP-203ES:
E Model

SPECIFICATIONS

System	Compact disc digital audio system
Disc	Compact disc
Laser	Semiconductor laser (λ = 780 nm)
Laser output	Max. 0.4 mW *

* This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.

Spindle speed	200 r.p.m. to 500 r.p.m. (CLV)
Scan velocity	1.2 - 1.4 m/sec.
Error correction	Sony Super Strategy Cross Interleave Reed Solomon Code
Number of channels	2
D-A conversion	16-bit linear
Frequency response	2 - 20,000 Hz±0.3 dB
Harmonic distortion	Less than 0.003% (1 kHz)
Signal-to-noise ratio	98 dB
Dynamic range	More than 96 dB
Channel separation	More than 93 dB (1 kHz)
Wow and flutter	Below measurable limit
Outputs	Line outputs Output level 2 V rms (at MSB) Load impedance over 10 kilohms Headphones (stereo phone jack) 28 mW at 32 ohms

Disc

Track pitch	1.6 μm
Sampling frequency	44.1 kHz
Quantization	16 bit linear quantizing/channel
Modulation system	EFM
Transfer rate	2.03 Mbit/sec. (before modulation)

General

Power requirements	US, Canadian model: 120 V ac, 60 Hz AEP model: 220 V ac, 50/60 Hz E model: 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	13 W
Dimensions	Approx. 430 × 80 × 285 mm (w/h/d) (17 × 3 1/4 × 11 1/4 inches) including projecting parts and controls
Weight	Approx. 4.2 kg (9 lbs, 4 oz), net

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND 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 TRAME ET 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.

COMPACT DISC PLAYER

SONY®

MICROFILM

AUD

REMOTE COMMANDER RM-D350

Remote control system	Infrared control
Power requirements	3 V dc with two batteries IEC designation R6 (size AA)
Dimensions	Approx. 67 × 20 × 175 mm (w/h/d) ($2^3/_4$ × $^{13}/_{16}$ × 7 inches) incl. projecting parts and controls
Weight	Approx. 145 g (5.1 oz) incl. batteries

FEATURES

High performance and high fidelity

- With the Sony CDP-203 Compact Disc player, flat frequency response, low wow and flutter, wide dynamic range, minimal distortion and high channel separation are achieved.
- A true 16-bit D/A converter with two-to-one over-sampling and newly developed high-attenuation digital filters.

Quick operation

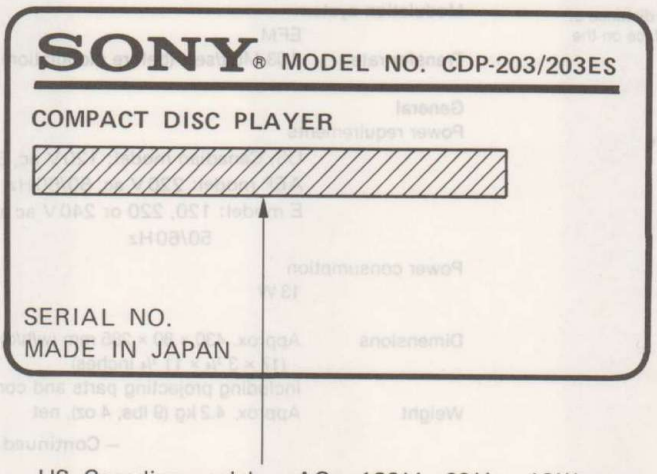
Feather-touch function buttons for direct mode change.

Multi-functional

- The program play function programs the desired selections in a desired order.
- The shuffle-play function plays selections in random order.
- The repeat function allows you to repeat play continuously in any mode.
- Large and easy-to-read music calender display shows the selection numbers on the disc and the time counter shows the elapsed or remaining playing time.
- The index function allows you to locate quickly the part you want.

MODEL IDENTIFICATION

–Specifications Labels–



US, Canadian model: AC: 120 V – 60 Hz 13W
AEP model: AC: 220 V – 50/60 Hz 13W
E model: AC: 120, 220, 240 V – 50/60 Hz 13W

SAFETY CHECK-OUT (US Model)

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 2 V AC range are suitable. (See Fig. A)

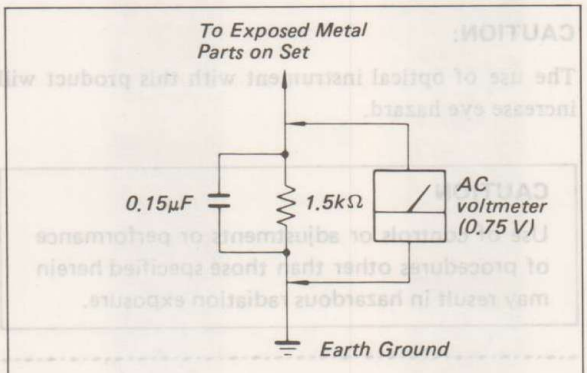
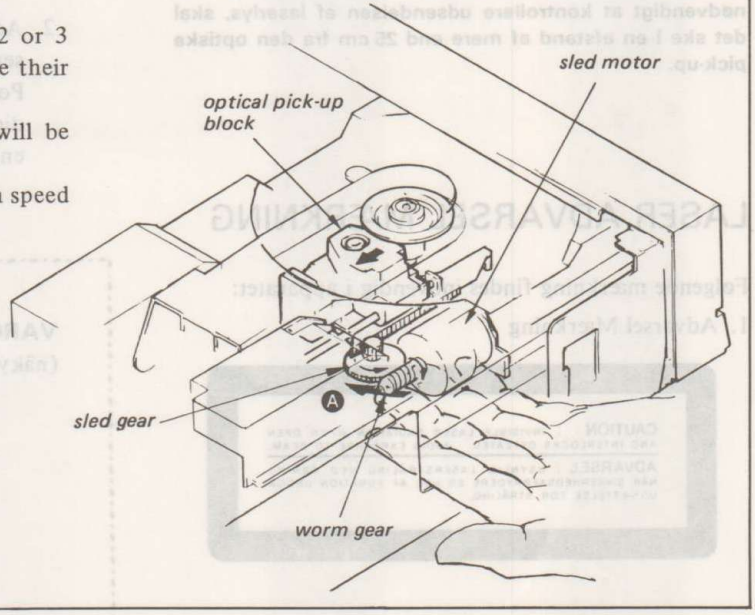


Fig. A. Using an AC voltmeter to check AC leakage.

NOTE ON REPAIR

If optical pick-up block goes inward too much, worm gear of sled motor and sled gear may bite excessively each other.
In this time, turn worm gear of sled motor 2 or 3 times in the direction of arrow Ⓐ and release their bite.
If starting disc playing without release, disc will be ejected.
In this time, spindle motor may turn at a high speed and run away.



PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

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

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION:

The use of optical instrument with this product will increase eye hazard.

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. 0.4 mW*
     * This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.
   - Classification: Class IIIb
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 Optiocal Pick-up Block (including APC borad).

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!!

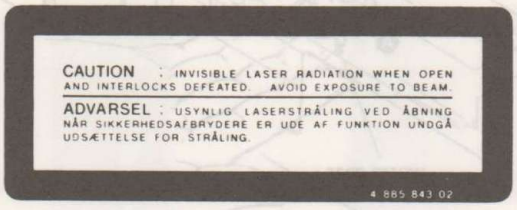
Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

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 objektivlinsen 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. laserdioden) 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



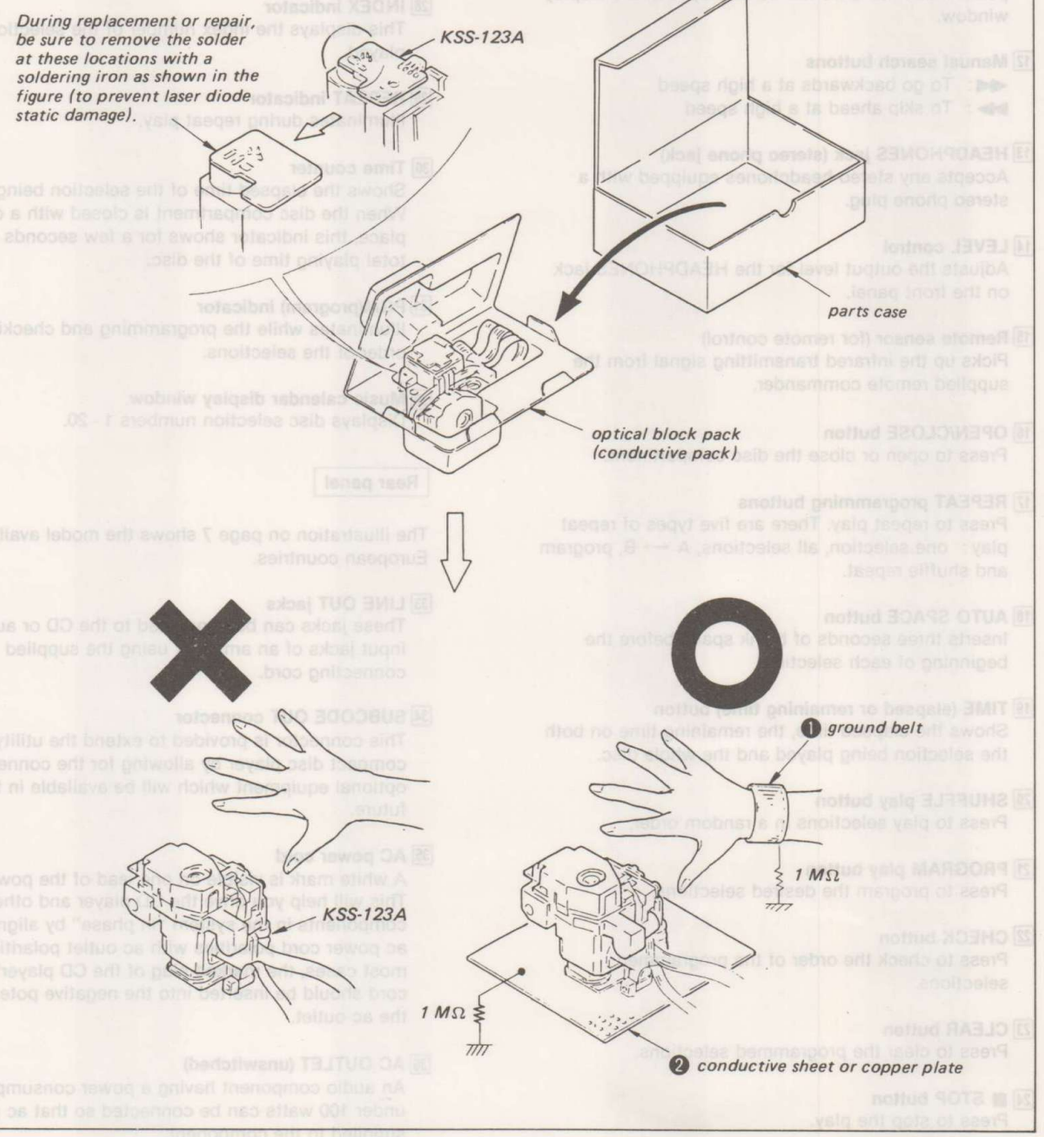
VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

NOTES ON HANDLING THE OPTICAL BLOCK (KSS-123A)

The laser diode inside the optical block may be damaged by static electricity in clothes or the human body.

The following procedures are required when unpacking and repairing KSS-123A in order to avoid static electricity damage.

1. Body grounding
   Be sure to wear a ground belt (less than $10^8\,\Omega$) in order to release the static electricity stored in the body.
2. Workbench grounding
   Place a conductive sheet (less than $10^9\,\Omega$) or copper plate on the bench where KSS-123A is to be placed to ground it.
3. Static electricity in the clothing will not be released by the ground belt, so be careful not to let KSS-123A touch clothing.

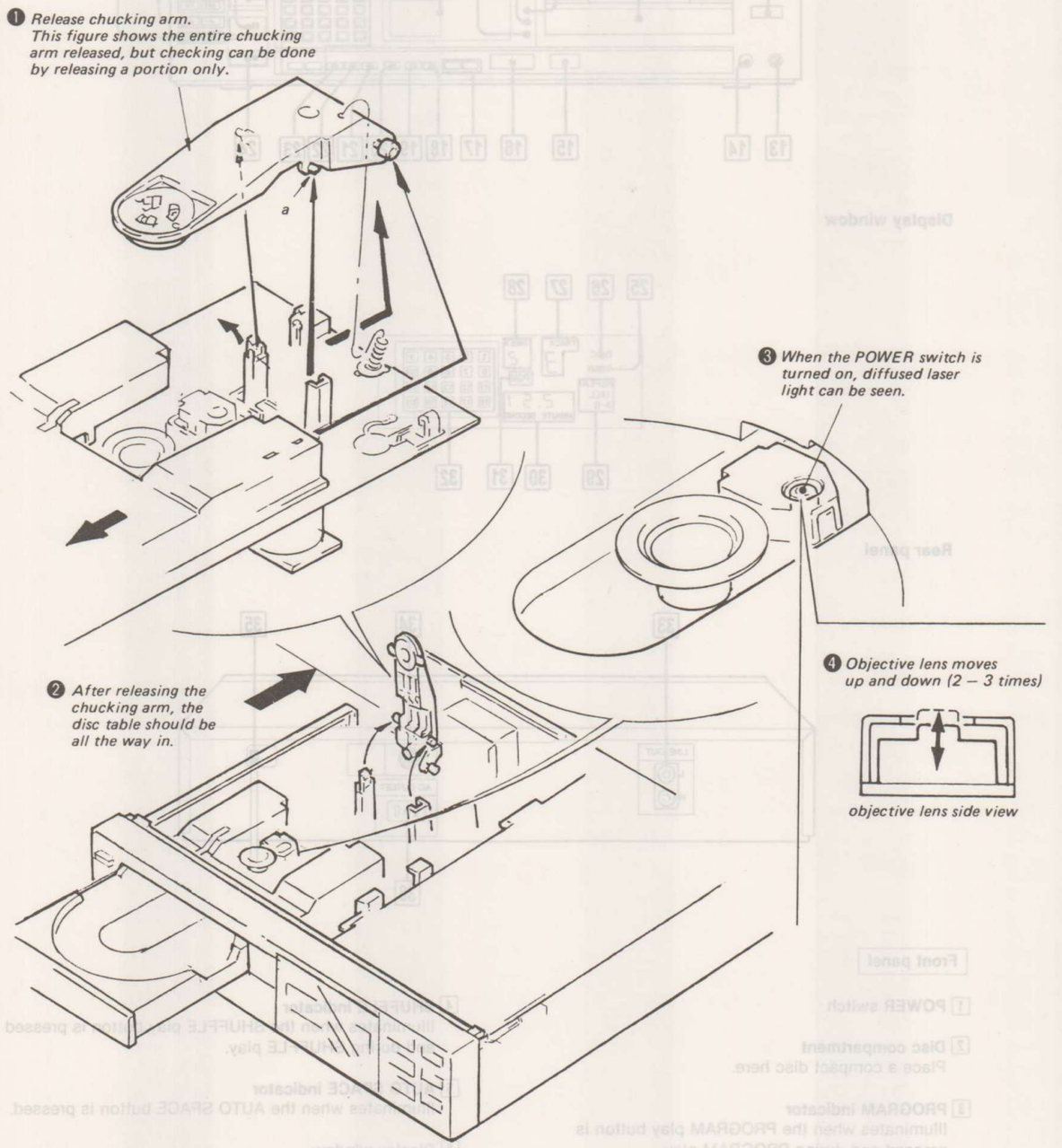


NOTES ON CHECKING LASER DIODE LIGHT EMISSION

The laser beam on this set is converged by the objective lens in the optical block so that it focuses on the disc reflective surface. Therefore, when checking light emission of the laser diode, be sure to keep the eyes more than 30 cm away from the objective lens.

CHECKING LASER DIODE AND FOCUS SEARCH OPERATION

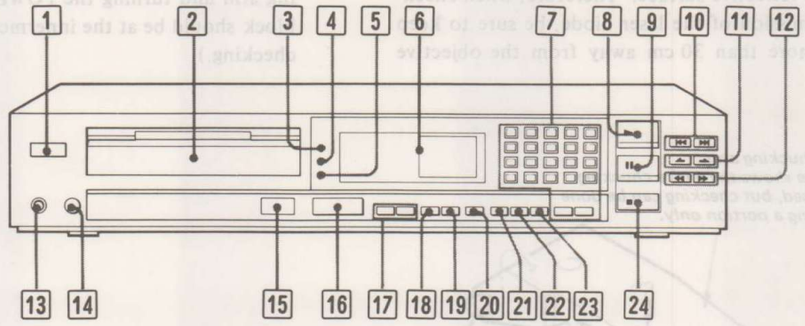
Check if the following operation is performed by looking at the objective lens after releasing the chucking arm and turning the POWER switch on. (Optical block should be at the innermost circumference when checking.)



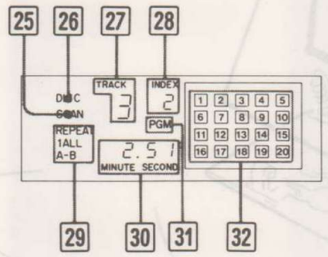
CDP-203/203ES

LOCATION AND FUNCTION OF CONTROLS

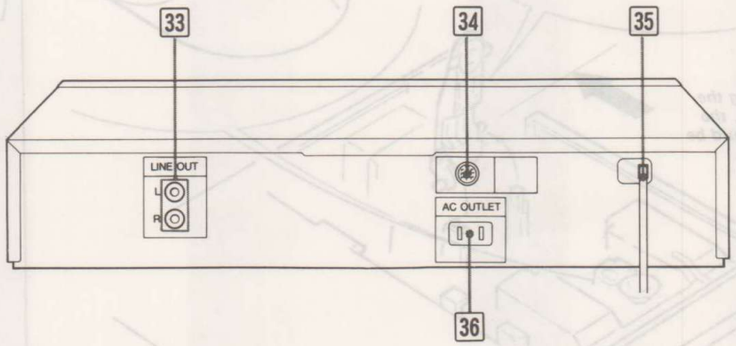
Front panel



Display window



Rear panel



Front panel

[1] **POWER switch**

[2] **Disc compartment**
Place a compact disc here.

[3] **PROGRAM indicator**
Illuminates when the PROGRAM play button is pressed and during PROGRAM play.

[4] **SHUFFLE indicator**
Illuminates when the SHUFFLE play button is pressed and during SHUFFLE play.

[5] **AUTO SPACE indicator**
Illuminates when the AUTO SPACE button is pressed.

[6] **Display window**

[7] **Direct selection buttons**
Select the desired selection directly by number.

[8] **▶ PLAY button and indicator**
Press to start disc play.

[9] **❚❚ PAUSE button and indicator**
Press to pause during play. To release the pause mode, press it again.

[10] **AMS (Automatic Music Sensor) buttons**
⏮: Press to go back to the beginning of the selection being played or the previous selection.
⏭: Press to skip ahead to a later selection.

[11] **INDEX buttons**
Press one of these buttons to search for a particular index number so that playback can begin at that point. Index numbers will be displayed in the display window.

[12] **Manual search buttons**
◀◀: To go backwards at a high speed
▶▶: To skip ahead at a high speed

[13] **HEADPHONES jack (stereo phone jack)**
Accepts any stereo headphones equipped with a stereo phone plug.

[14] **LEVEL control**
Adjusts the output level for the HEADPHONES jack on the front panel.

[15] **Remote sensor** (for remote control)
Picks up the infrared transmitting signal from the supplied remote commander.

[16] **OPEN/CLOSE button**
Press to open or close the disc compartment.

[17] **REPEAT programming buttons**
Press to repeat play. There are five types of repeat play: one selection, all selections, A ⟷ B, program and shuffle repeat.

[18] **AUTO SPACE button**
Inserts three seconds of blank space before the beginning of each selection.

[19] **TIME (elapsed or remaining time) button**
Shows the elapsed time, the remaining time on both the selection being played and the whole disc.

[20] **SHUFFLE play button**
Press to play selections in a random order.

[21] **PROGRAM play button**
Press to program the desired selections.

[22] **CHECK button**
Press to check the order of the programmed selections.

[23] **CLEAR button**
Press to clear the programmed selections.

[24] **■ STOP button**
Press to stop the play.

Display window

[25] **SCAN indicator**
Illuminates while the player is searching for the point on the disc you have selected.

[26] **DISC indicator**
Illuminates when the disc compartment is closed with a disc in place or when the disc compartment is opened.

[27] **TRACK indicator**
Shows the track number of the selection being played.
When the disc compartment is closed with a disc in place, this indicator shows for a few seconds the total selection number of the disc.

[28] **INDEX indicator**
This displays the index number of the selection being played.

[29] **REPEAT indicator**
Illuminates during repeat play.

[30] **Time counter**
Shows the elapsed time of the selection being played. When the disc compartment is closed with a disc in place, this indicator shows for a few seconds the total playing time of the disc.

[31] **PGM(program) indicator**
Illuminates while the programming and checking the order of the selections.

[32] **Music calendar display window**
Displays disc selection numbers 1 - 20.

Rear panel

The illustration on page 7 shows the model available in European countries.

[33] **LINE OUT jacks**
These jacks can be connected to the CD or auxiliary input jacks of an amplifier using the supplied connecting cord.

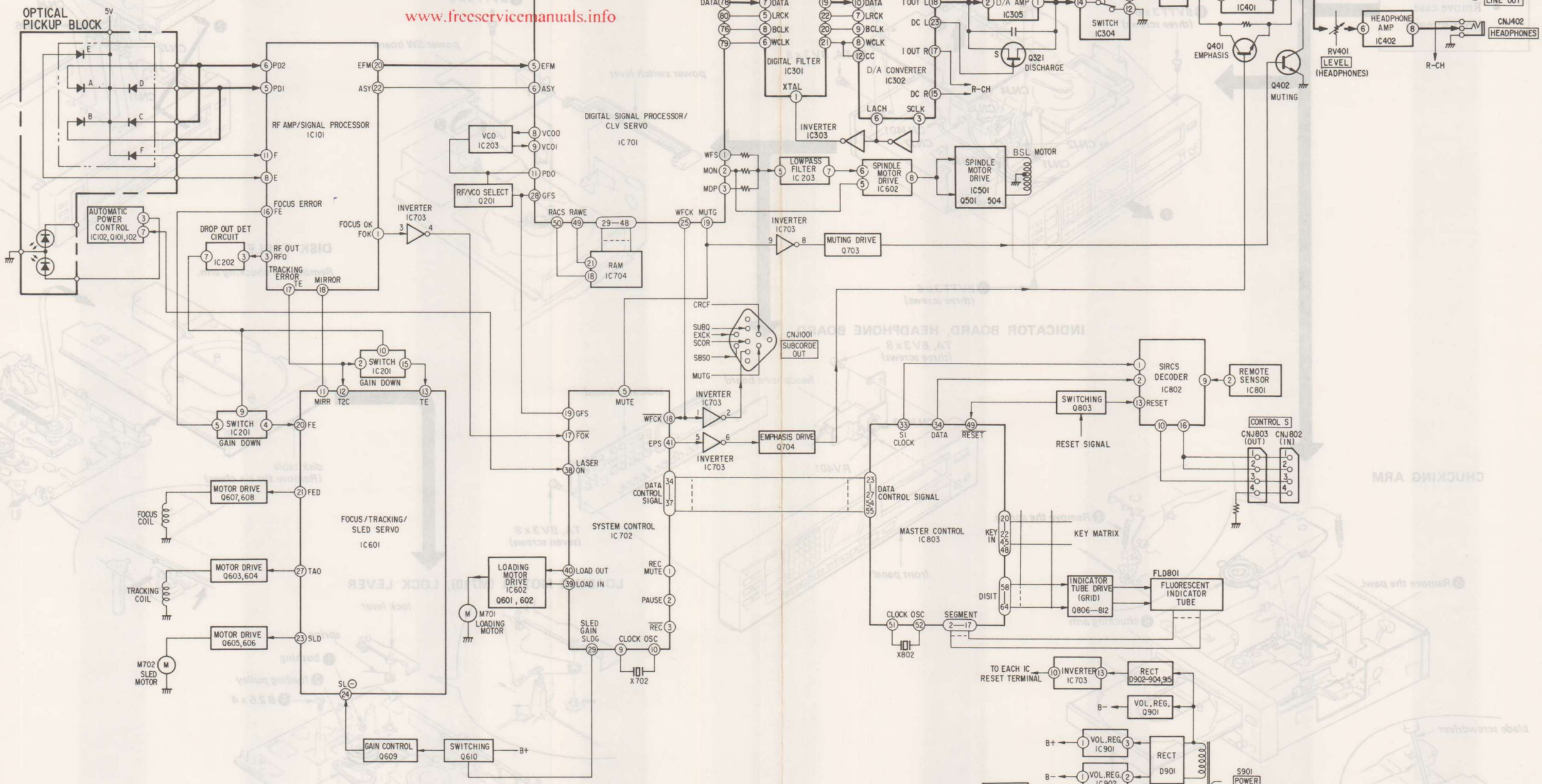
[34] **SUBCODE OUT connector**
This connector is provided to extend the utility of this compact disc player by allowing for the connection of optional equipment which will be available in the future.

[35] **AC power cord**
A white mark is visible on one lead of the power cord. This will help you drive the CD player and other components in the system "in phase" by aligning the ac power cord polarities with ac outlet polarities. In most cases, the marked plug of the CD player's power cord should be inserted into the negative potential of the ac outlet.

[36] **AC OUTLET (unswitched)**
An audio component having a power consumption under 100 watts can be connected so that ac power is supplied to the component.

SECTION 1
OUTLINE

BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

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

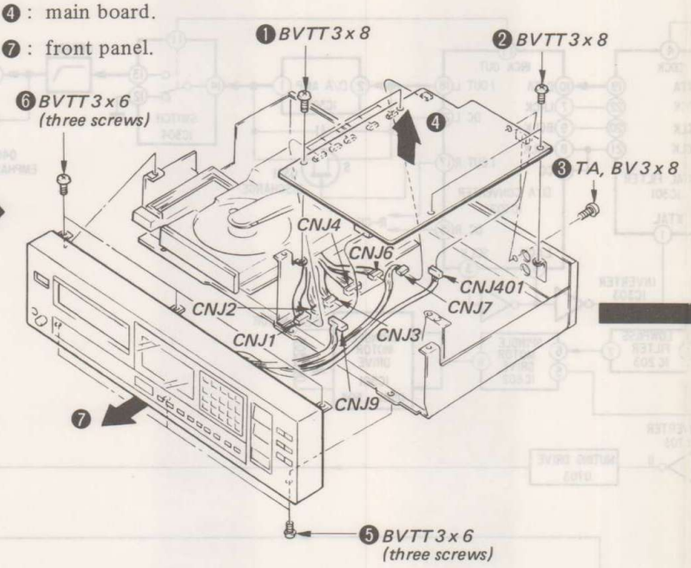
CASE

- Rmove case (four screws)

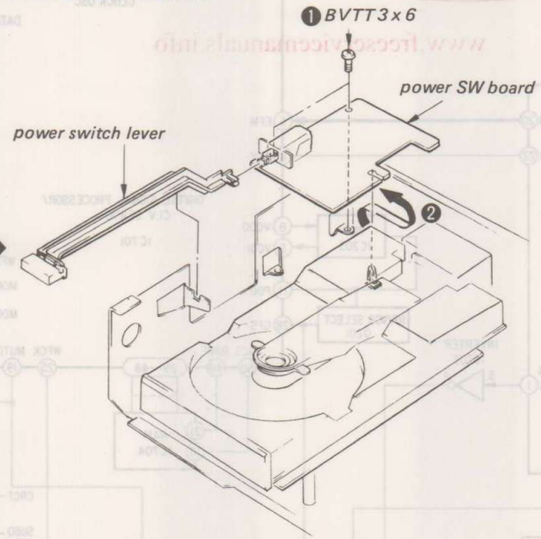
FRONT PANEL, MAIN BOARD

❶~❹ : main board.

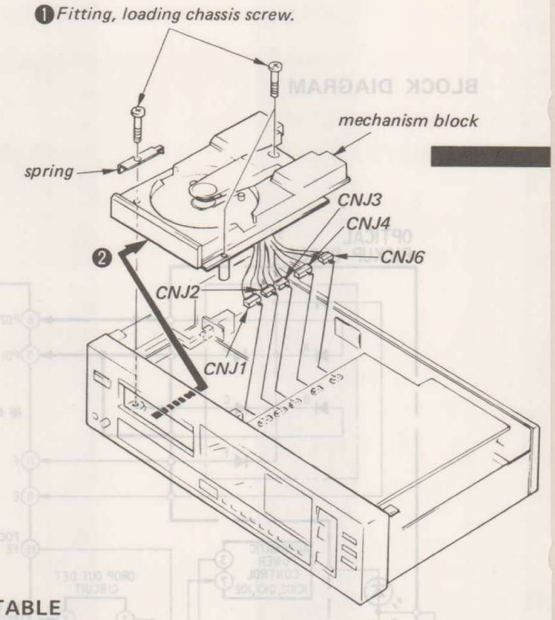
❺~❼ : front panel.



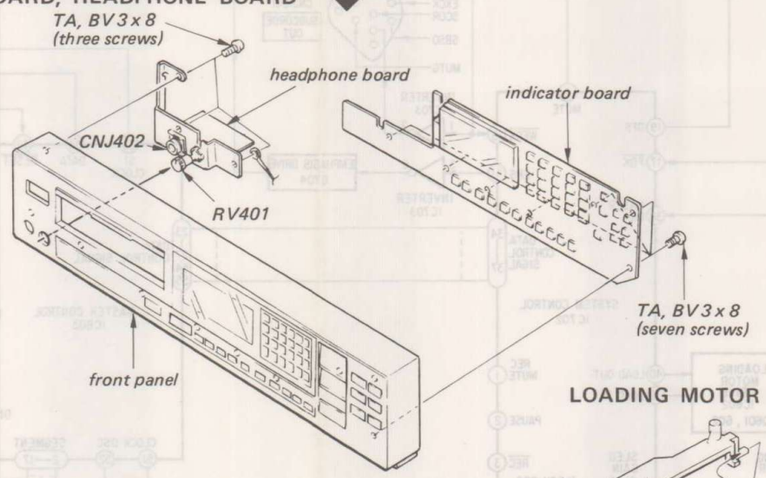
POWER SW BOARD



MECHANISM BLOCK

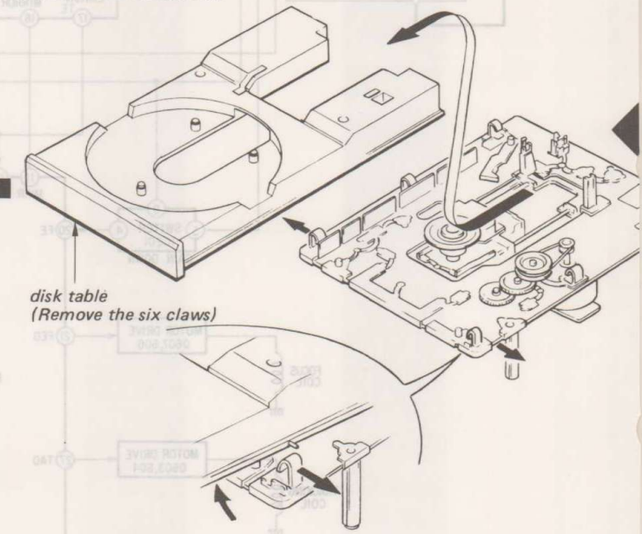


INDICATOR BOARD, HEADPHONE BOARD

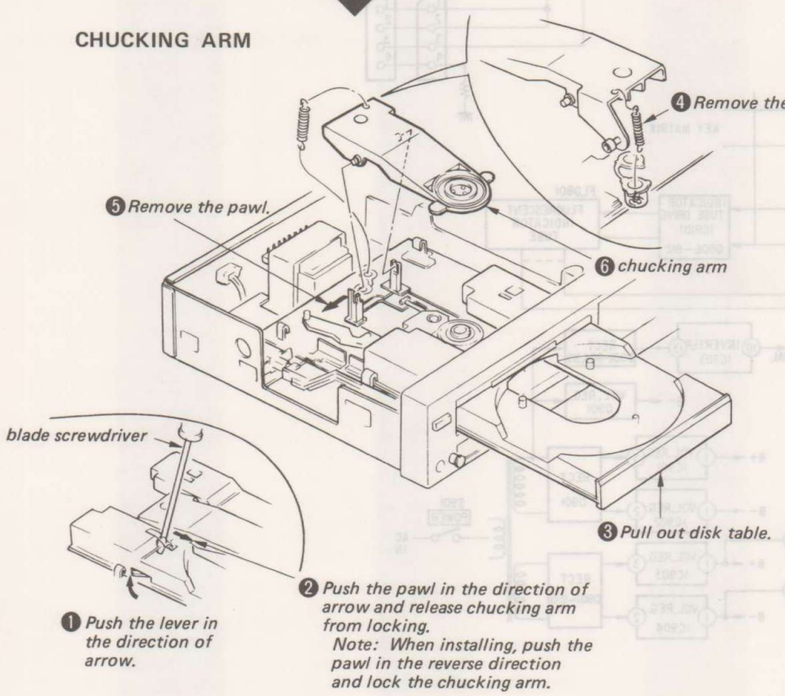


DISK TABLE

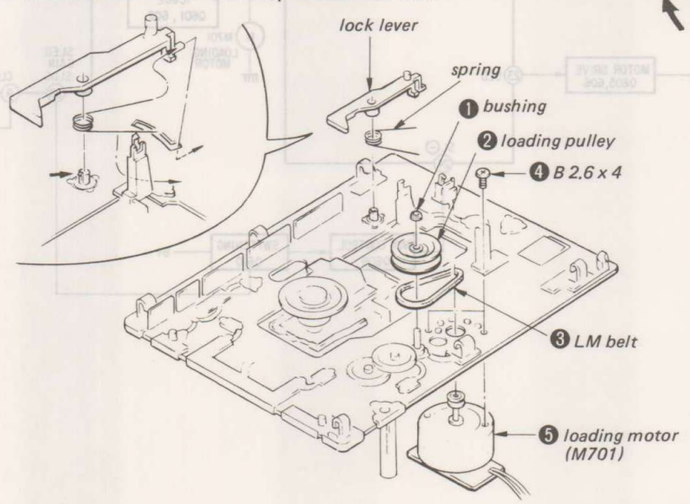
Remove the chucking arm.



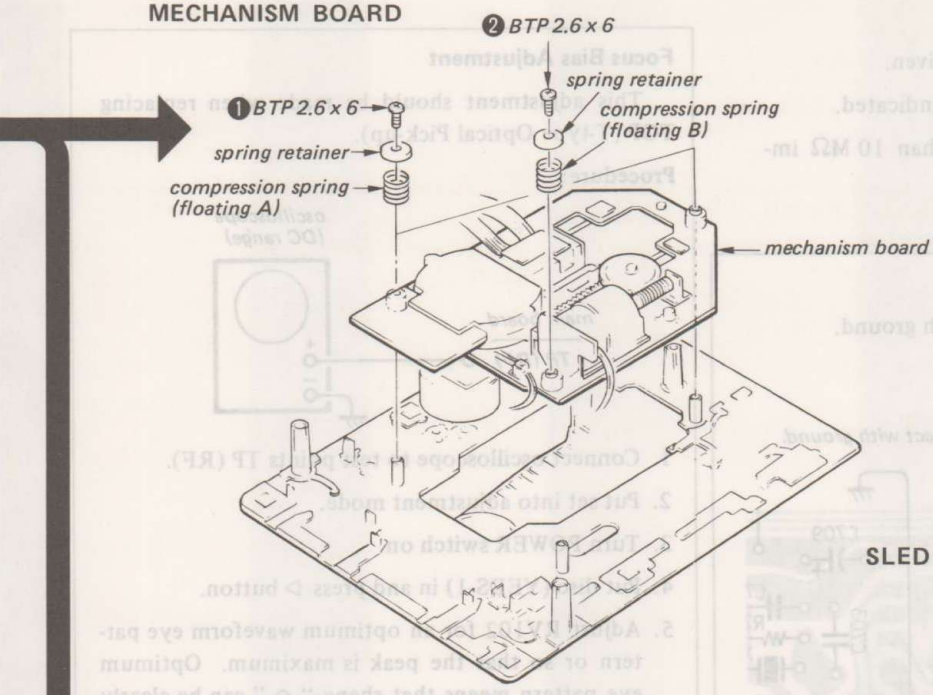
CHUCKING ARM



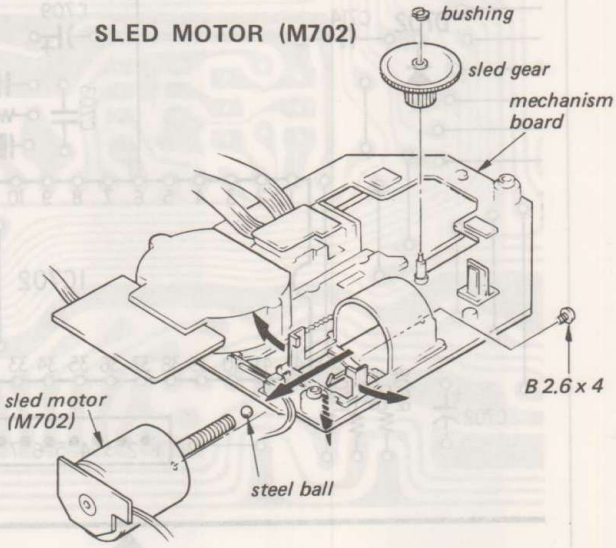
LOADING MOTOR (M710), LOCK LEVER



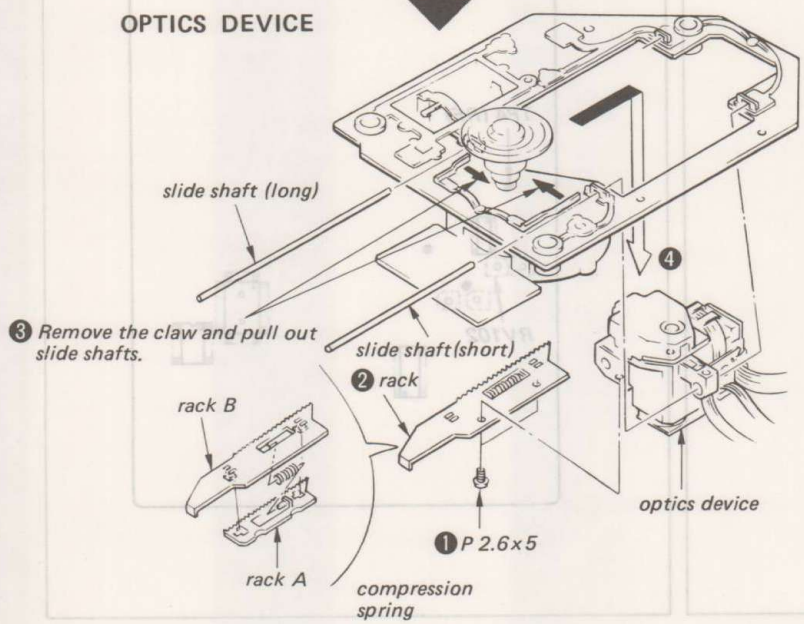
MECHANISM BOARD



SLED MOTOR (M702)



OPTICS DEVICE



SECTION 3
ADJUSTMENTS

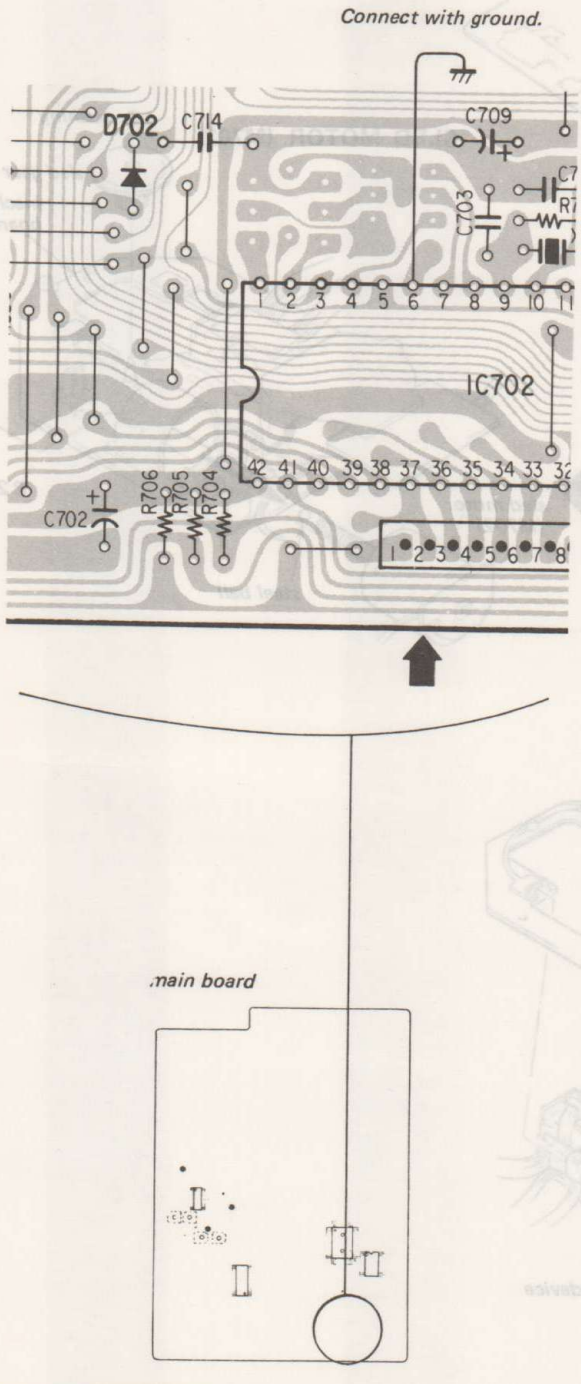
ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-1 disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

Adjustment Mode

Connect terminal (6) of IC702 with ground.

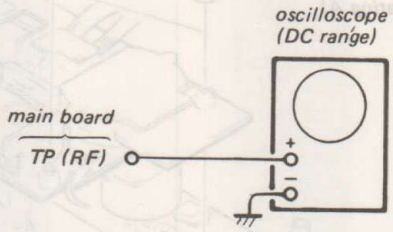
Connecting Location: main board



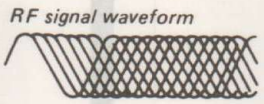
Focus Bias Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

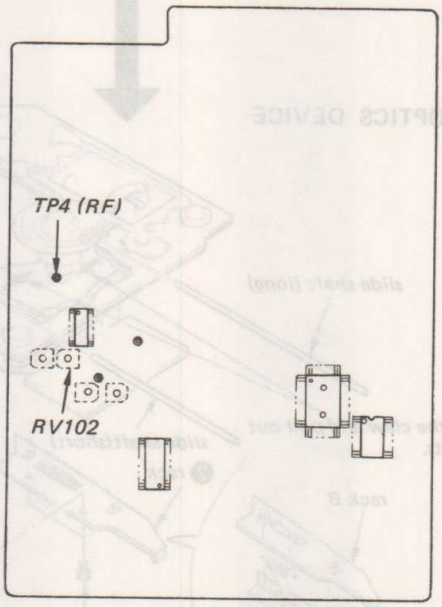
Procedure:



1. Connect oscilloscope to test points TP (RF).
2. Put set into adjustment mode.
3. Turn POWER switch on.
4. Put disc (YEDS-1) in and press ▷ button.
5. Adjust RV102 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape " ◇ " can be clearly distinguished at the center of the waveform.



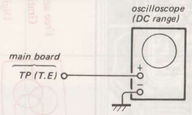
Adjustment Location: main board



E-F Balance Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

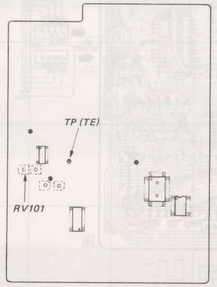
Procedure:



1. Connect oscilloscope to test point TP (T.E).
2. Put set into adjustment mode. (See page 14.)
3. Turn POWER switch on.
4. Put disc (YEDS-1) in and press ▷ button.
5. Ground the in pin (13) of IC601.
6. Adjust RV101 so that the traverse waveform is symmetrical above and below.
7. After adjustment, cancel the adjustment mode.

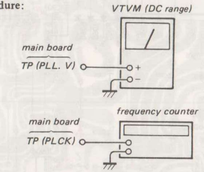
VOLT/DIV: 1 V
TIME/DIV: 1 ms

Adjustment Location: main board



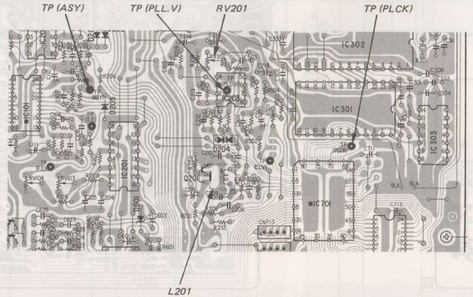
RF PLL Frequency Adjustment /Lock Frequency Check

Procedure:



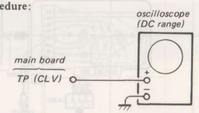
1. Connect test point TP (ASY) to ground with jumper wire.
2. Connect VTVM to test points TP (PLL.V).
3. Turn POWER switch on.
4. Adjust RV201 so that the reading on VTVM is 0 ±50 mV.
5. Connect the frequency counter to test points TP (PLCK).
6. Adjust L201 so that the reading on frequency counter is 4.3218 MHz.
   . . . . . (RF PLL frequency adjustment)
7. Remove lead wire connecting TP (ASY) and ground.
8. Put disc (YEDS-1) in and press ▷ button.
9. Confirm that the reading on frequency counter is 4.3218 MHz.

Adjustment Location: main board

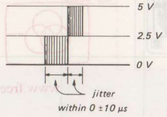


CLV Phase Lock Check

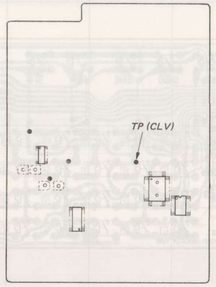
Procedure:



1. Connect oscilloscope to test point TP (CLV).
2. Turn POWER switch on.
3. Put disc (YEDS-1) in and press ▷ button.
4. Check that the waveform is as shown in the figure below.



Adjustment Location: main board



REFERENCE

Focus/Tracking Gain Adjustment

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

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

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

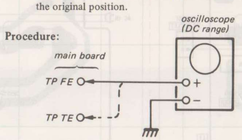
Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮, ⏭buttons pressed. (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP→▷PLAY or automatic selection (⏮, ⏭ buttons pressed.)	–	low
• Disc table opens shortly after STOP→▷PLAY.	low or high	–
• Sound is interrupted during PLAY. Or time counter display stops progressing.	–	low
• More poise during 2-axis device operation.	high	high

The following is a simple adjustment method.

– Simple Adjustment –

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

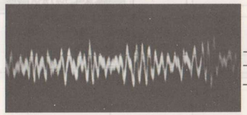


1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-1) and press ▷PLAY button.
3. Connect oscilloscope to main amp board TP FE.
4. Adjust RV104 so that the waveform is as shown in the figure below. (focus gain adjustment)

- Incorrent Examples (DC level changes more than on adjusted waveform)

low focus gain

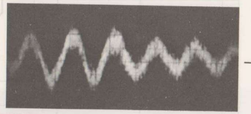
high focus gain



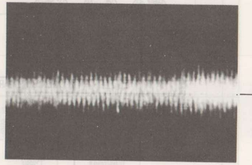
5. Connect oscilloscope to main board TP TE.
6. Adjust RV103 so that the waveform is as shown in the figure below. (tracking gain adjustment)

- Incorrect Examples (fundamental wave appears)

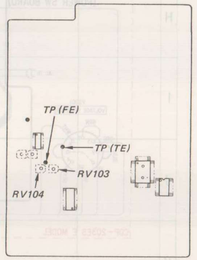
low tracking gain



high tracking gain
(higher fundamental wave than for low gain)



Adjustment Location: main board



CDP-203/203ES CDP-203/203ES

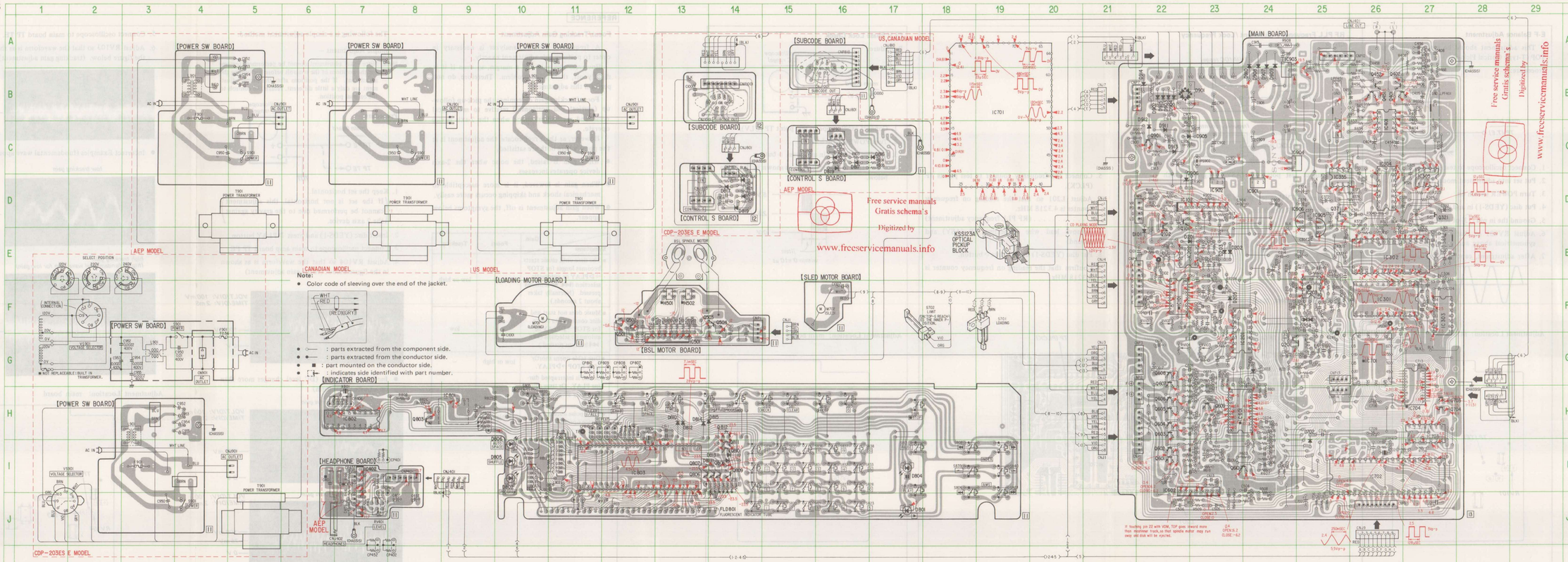
SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM

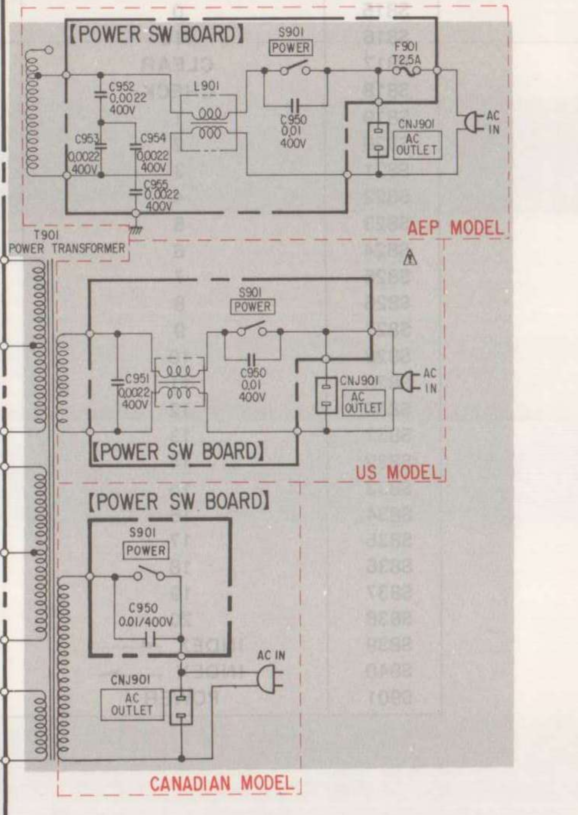
● See page 29 for semiconductor lead layouts.

SEMICONDUCTOR LOACTION

Ref. No.	Location	Ref. No.	Location
D101	E-22	IC355	D-25
D201	E-22	IC401	C-26
D202	E-23	IC402	I-7
D203	E-23	IC501	G-13
D204	F-25	IC601	H-23
D205	F-23	IC602	I-22
D601	G-24	IC701	G-26
D702	I-25	IC702	I-26
D801	J-17	IC703	H-27
D802	I-10	IC704	H-27
D804	I-17	IC801	H-9
D805	I-10	IC802	H-7
D806	I-10	IC803	I-12
D810	H-13	IC901	D-24
D811	I-14	IC902	D-23
D812	H-13	IC903	A-24
D813	I-14	IC904	C-25
D814	H-13	IC905	D-25
D815	H-14	IC906	D-25
D816	C-17 (AEP MODEL)	Q101	D-22
	D-14 (E MODEL)	Q102	D-22
D817	C-16 (AEP MODEL)	Q201	G-24
	D-14 (E MODEL)	Q321	D-27
D818	C-16 (AEP MODEL)	Q371	D-25
	D-14 (E MODEL)	Q401	B-26
D819	C-16 (AEP MODEL)	Q402	B-26
	D-14 (E MODEL)	Q451	B-26
D901	B-22	Q452	B-26
D902	B-22	Q501	F-12
D903	B-22	Q502	F-12
D904	B-22	Q503	F-14
D905	C-22	Q504	F-14
D906	D-22	Q601	I-22
D907	B-24	Q602	I-22
D908	B-24	Q603	H-22
D909	B-24	Q604	H-22
D910	B-24	Q605	H-22
D911	C-22	Q606	H-22
D912	C-22	Q607	G-22
D913	C-22	Q608	G-22
D914	B-22	Q609	H-23
D915	B-22	Q610	I-23
H501	F-13	Q703	H-27
H502	F-13	Q704	H-27
IC101	F-22	Q803	H-8
IC102	D-23	Q806	I-13
IC201	G-23	Q807	I-13
IC202	E-22	Q808	I-14
IC203	F-25	Q809	I-14
IC301	F-26	Q810	I-14
IC302	E-26	Q811	I-14
IC303	F-27	Q812	H-14
IC304	D-26	Q901	C-22
IC305	D-27		



4-2. SCHEMATIC DIAGRAM



Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : nonflammable resistor.
- : signal path.
- : L-CH signal path.
- : R-CH signal path.
- : B+ bus.
- : B- bus.
- : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  ( ) : CD playing
- Waveforms are taken to ground in PLAY mode by using oscilloscope.
  Voltage variations may be noted due to normal production tolerances.

—Continued on page 28—

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

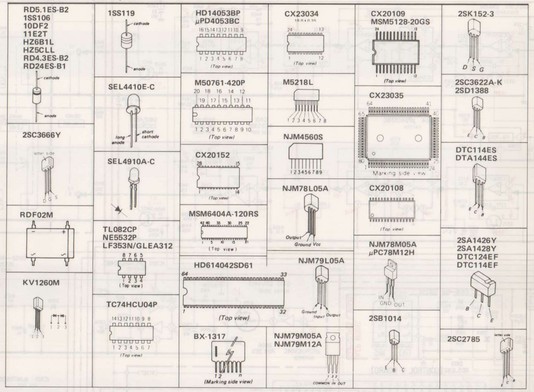
Note: Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note on schematic diagram (page 23 – 27).

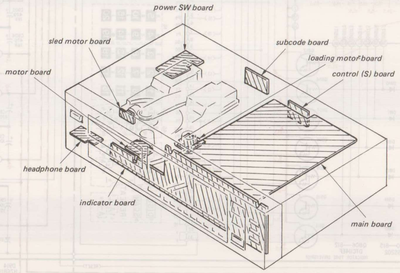
- Switches

Ref. No.	Switch	Position
S701	LOADING	OFF
S702	LIMIT	OFF
S801	I/ALL CLEAR	OFF
S802	REPEAT A B	OFF
S803	AUTO SPACE	OFF
S804	TIME	OFF
S805	OPEN/CLOSE	OFF
S806	⏮	OFF
S807	⏭	OFF
S808	◀◀	OFF
S809	▶▶	OFF
S810	SHUFFLE	OFF
S811	PROGRAM	OFF
S812	PLAY	OFF
S813	PAUSE	OFF
S814	STOP	OFF
S815	0	OFF
S816	+10	OFF
S817	CLEAR	OFF
S818	CHECK	OFF
S819	1	OFF
S820	2	OFF
S821	3	OFF
S822	4	OFF
S823	5	OFF
S824	6	OFF
S825	7	OFF
S826	8	OFF
S827	9	OFF
S828	10	OFF
S829	11	OFF
S830	12	OFF
S831	13	OFF
S832	14	OFF
S833	15	OFF
S834	16	OFF
S835	17	OFF
S836	18	OFF
S837	19	OFF
S838	20	OFF
S839	INDEX ⟵	OFF
S840	INDEX ⟶	OFF
S901	POWER	OFF

- Semiconductor Lead Layouts



CIRCUIT BOARD LAYOUT



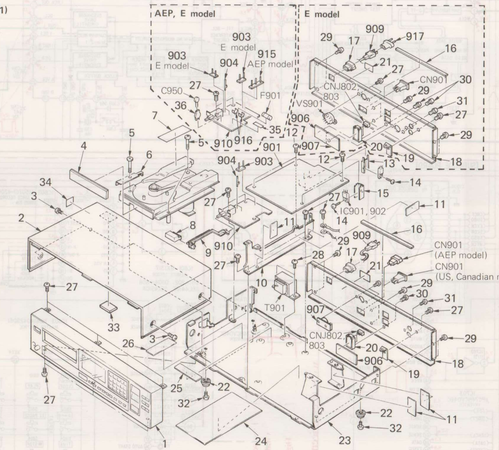
SECTION 5
EXPLODED VIEWS AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

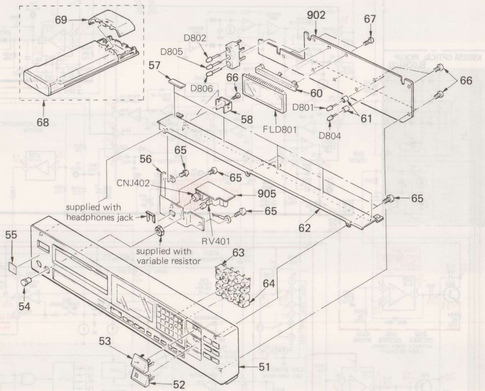
(1)



No.	Part No.	Description	Remarks
1	X-4913-920-1	(E).....PANEL, FRONT	
	X-4913-921-1	(US,Canadian,AEP)...PANEL, FRONT	
2	4-913-935-01	CASE	
3	4-886-821-01	SCREW, M3 CASE	
4	X-4913-715-1	PANEL ASSY, LOADING	
5	4-910-416-01	SCREW, FITTING, LOADING CHASSIS	
6	4-913-752-01	SPRING	
7	4-885-843-02	(AEP,E)....LABEL, CAUTION, LASER	
8	4-913-942-01	KNOB (POWER,L), T	
9	*4-913-932-01	LEVER, POWER SWITCH	
10	*4-913-723-01	CHASSIS (M)	
11	*4-913-955-01	DAMPER (D)	
12	4-911-049-01	SCREW (3X8)	
13	*3-309-144-01	HEAT SINK	
14	2-259-121-00	SCREW, TR	
15	*4-886-555-00	HEAT SINK	
16	3-831-441-XX	CUSHION (B), CABINET	
17	3-703-244-00	(AEP).....BUSHING (2104), CORD	
	1-703-571-11	(US,Canadian,E)...BUSHING (S)(4516), CORD	
18	*4-913-902-11	(US).....PLATE, JACK	
	*4-913-902-21	(Canadian)...PLATE, JACK	
	*4-913-902-31	(AEP).....PLATE, JACK	
	*4-913-902-51	(E).....PLATE, JACK	
19	*4-913-926-01	BRACKET (LEFT), PC BOARD	
20	*3-322-818-01	(AEP,E)...HOLDER, CONNECTOR	
21	*4-885-838-00	(AEP,E)....LABEL, CLASS 1	
22	3-701-191-99	FOOT ASSY, MINI	
23	*X-4913-915-1	CHASSIS ASSY, MAIN	
24	*4-913-952-01	DUMPER (A)	
25	*4-913-954-01	DUMPER (C)	
26	*4-913-953-01	DUMPER (B)	
27	7-685-871-01	SCREW +BVTT 3X6 (S)	
28	7-685-818-01	SCREW +BVTT 4X8 (S)	
29	7-685-872-01	SCREW +BVTT 3X8	
30	7-685-133-14	SCREW +P 2.6X6 TYPE1	
31	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	

No.	Part No.	Description	Remarks
32	7-685-880-01	SCREW +BVTT 4X6 (S)	
33	*4-913-768-01	DUMPER (LOCKTO)	
34	3-703-680-00	(US).....LABEL, CAUTION, SUB, NEW UL	
35	3-701-948-18	(AEP,E)....LABEL, FUSE	
36	*4-875-455-01	(AEP,E)....COVER (DAI.20), CAPACITOR	
901	*A-4651-071-A	MOUNTED PCB, MAIN	
903	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
904	1-535-416-00	TERMINAL	
906	*1-618-390-11	(AEP)....PC BOARD, CONTROL (S)	
	*1-618-751-11	(E).....PC BOARD, CONTROL (S)	
907	*1-618-393-11	(US,Canadian,AEP)...PC BOARD, SUB CODE	
	*1-618-750-11	(E).....PC BOARD, SUB CODE	
909	⚠1-558-182-11	(E).....CORD, POWER	
	⚠1-558-566-11	(US,Canadian)...CORD, POWER	
	⚠1-558-568-11	(AEP).....CORD, POWER	
910	*1-618-638-11	PC BOARD, POWER SWITCH	
915	*1-535-140-00	(AEP)...BASE POST-19MM (10MM PITCH)3P	
916	⚠1-523-183-11	(AEP,E)...HOLDER, FUSE	
917	⚠1-526-565-00	(E).....AC PLUG ADAPTOR	
C950	⚠1-161-744-00	CERAMIC 0.01MF 400V	
CN901	⚠1-526-774-11	(E).....OUTLET, AC	
CN901	⚠1-526-794-11	(AEP).....OUTLET, AC	
CN901	⚠1-526-882-00	(US,Canadian)...OUTLET, AC	
CNJ802	*1-560-039-00	(AEP,E)...PIN, CONNECTOR	
CNJ803	*1-560-039-00	(AEP,E)...PIN, CONNECTOR	
F901	⚠1-532-286-00	(AEP,E)...FUSE, TIME-LAG	
IC901	8-759-700-11	IC NJM78M05A	
IC902	8-759-700-20	IC NJM79M05A	
IC903	8-759-170-12	IC UPC78M12H	
IC904	8-759-700-24	IC NJM79M12A	
T901	⚠1-448-339-11	(US,Canadian)...TRANSFORMER, POWER	
T901	⚠1-448-390-11	(AEP).....TRANSFORMER, POWER	
T901	⚠1-448-391-11	(E).....TRANSFORMER, POWER	
VS901	⚠1-526-576-11	(E)...SELECTOR, POWER VOLTAGE	

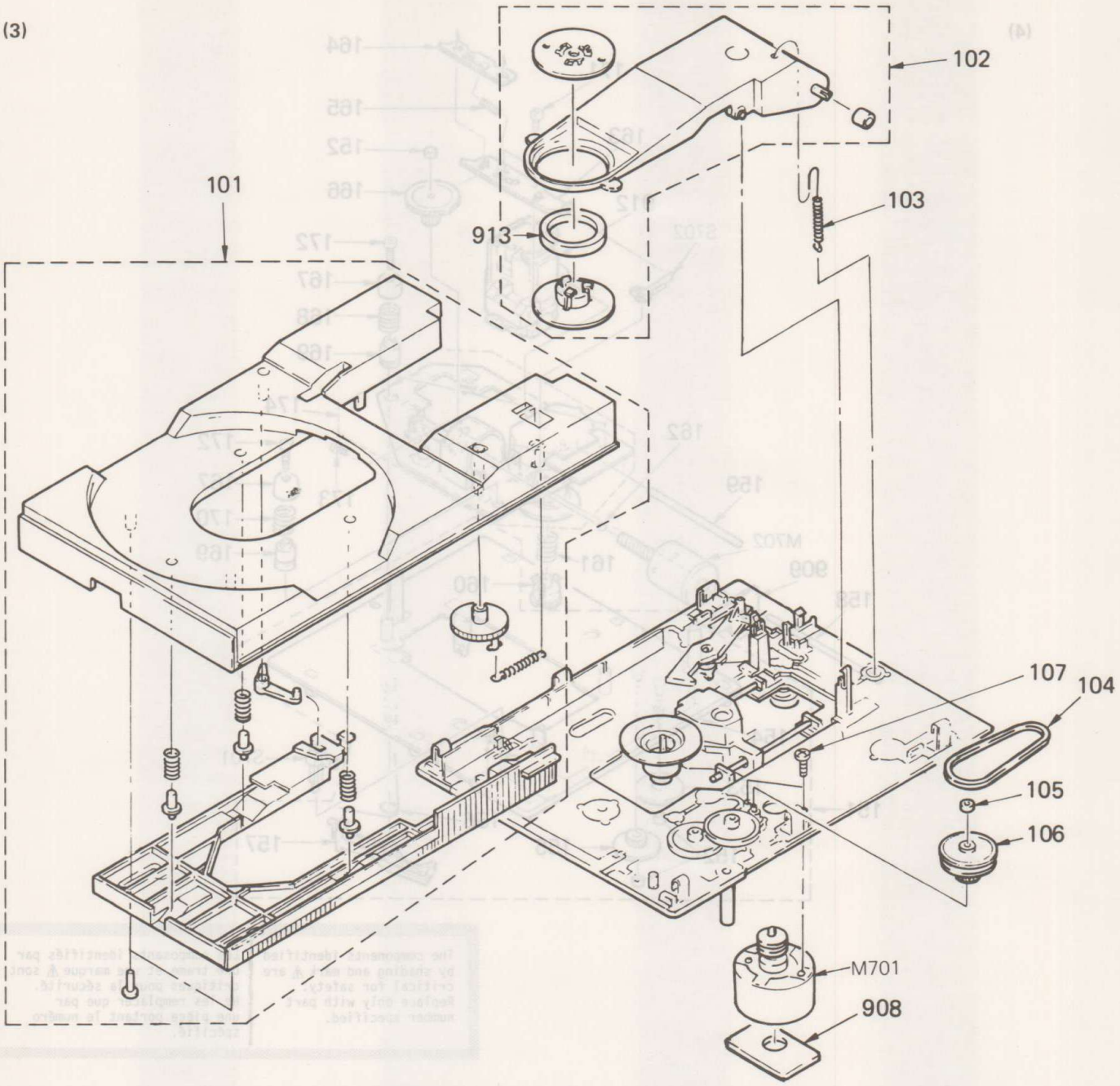
(2)



No.	Part No.	Description	Remarks
51	X-4913-920-1	(E).....PANEL, FRONT	
	X-4913-921-1	(US,Canadian,AEP)...PANEL, FRONT	
52	X-4913-909-1	BUTTON ASSY, PAUSE	
53	X-4913-910-1	BUTTON ASSY, PLAY	
54	4-902-067-11	KNOB, CONTROL	
55	3-703-713-41	STICKER, SONY SYMBOL (10)	
56	*4-913-917-01	BRACKET, HEADPHONE	
57	3-831-441-XX	CUSHION (B), CABINET	
58	4-913-757-01	BRACKET, PC BOARD	
59	*4-913-936-01	HOLDER (3 GANG), LED	
60	*4-913-715-01	RETAINER, INDICATION TUBE	
61	3-655-122-00	TIRE, S BRAKE	
62	*4-913-937-01	REINFORCEMENT (UPPER)	
63	4-913-718-21	BUTTON, 10 GANG	
64	4-913-718-31	BUTTON, 10 GANG	

No.	Part No.	Description	Remarks
65	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
66	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
67	7-685-132-11	SCREW +P 2.6X5 TYPE2 NON-SLIT	
68	1-463-696-11	REMOTE COMMANDER (RM-D350)	69
69	2-394-123-01	LID, BATTERY CASE	
902	*A-4655-024-A	(US,Canadian)...MOUNTED PCB, INDICATION	
	*A-4655-025-A	(AEP,E).....MOUNTED PCB, INDICATION	
905	*1-618-348-11	PC BOARD, HEADPHONE	
CNJ402	1-507-863-21	JACK, LARGE TYPE (HEADPHONES)	
D801	8-719-301-35	DIODE SEL4410E-C	
D802	8-719-301-35	DIODE SEL4410E-C	
D804	8-719-302-13	DIODE SEL4910A-C	
D805	8-719-302-13	DIODE SEL4910A-C	
FLD801	1-519-383-11	INDICATOR TUBE, FLUORESCENT	
RV401	1-230-997-21	RES, VAR, CARBON 20K/20K (HEADPHONES LEVEL)	

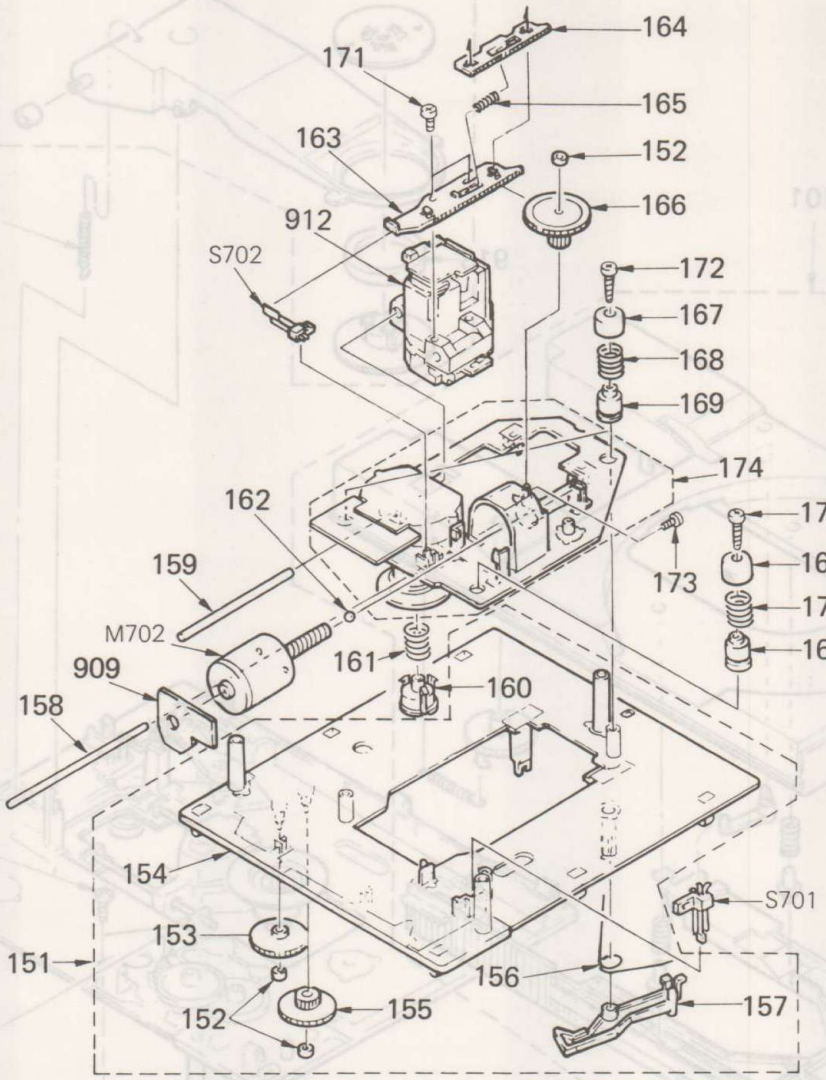
(3)



No.	Part No.	Description	Remarks
101	X-4910-410-4	TABEL ASSY, DISK	
102	A-4604-149-A	ARM ASSY, CHUCKING	
103	4-913-729-01	SPRING, TENSION	
104	3-653-387-00	BELT, LM	
105	4-910-418-01	BUSHING (DIA. 4)	

No.	Part No.	Description	Remarks
106	4-913-731-01	PULLEY, ROADING	
107	7-621-775-10	SCREW +B 2.6X4	
908	*1-618-387-11	PC BOARD, LOADING	
913	1-452-340-11	MAGNET	
M701	A-4608-320-A	MOTOR ASSY, L	

(4)



The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
151	*X-4910-405-1	CHASSIS ASSY, LOADING	152-157
152	4-910-418-01	BUSHING (DIA. 4)	
153	4-910-403-01	GEAR (3), LOADING	
154	*4-912-902-03	CHASSIS (OUTSERT), LOADING	
155	4-910-402-01	GEAR (2), LOADING	
156	4-910-412-01	SPRING	
157	*4-910-434-01	LEVER, LOCK	
158	*4-910-431-01	SHAFT, SLIDE	
159	*4-910-431-11	SHAFT, SLIDE	
160	4-911-694-01	CAP, CENTERING	
161	4-910-427-01	SPRING, COMPRESSION	
162	7-671-112-11	BALL, STEEL	
163	4-910-425-01	RACK (A)	
164	4-910-442-01	RACK (B)	
165	4-910-462-01	SPRING, COMPRESSION (RACK)	

No.	Part No.	Description	Remarks
166	4-910-432-02	GEAR, SLED	
167	4-910-414-01	RETAINER, SPRING	
168	4-910-423-01	SPRING(FLOATING A), COMPRESSION	
169	4-910-498-01	RUBBER, FLOATING	
170	4-910-463-01	SPRING (FLOATING B), COMPRESSION	
171	7-621-775-20	SCREW +P 2.6X5	
172	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
173	7-621-775-15	SCREW +B 2.6X4	
174	X-4912-510-1	MOTOR ASSY	
911	*1-618-388-11	PC BOARD, SLED	
912	⚠1-848-042-01	PICKUP, OPTICS KSS-123A	
M702	A-4608-308-A	MOTOR ASSY, SLED	
S701	1-570-203-11	SWITCH, LEAF (LOADING)	
S702	1-570-202-11	SWITCH, LEAF (LIMIT)	

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

SEMICONDUCTORS
In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	*A-4651-071-A	MOUNTED PCB, MAIN			
902	*A-4655-024-A	(US,Canadian)...MOUNTED PCB, INDICATION			
	*A-4655-025-A	(AEP,E).....MOUNTED PCB, INDICATION			
903	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P			
904	1-535-416-00	TERMINAL			
905	*1-618-348-11	PC BOARD, HEADPHONE			
906	*1-618-390-11	(AEP)....PC BOARD, CONTROL (S)			
	*1-618-751-11	(E).....PC BOARD, CONTROL (S)			
907	*1-618-393-11	(US,Canadian,AEP)...PC BOARD, SUB CODE			
	*1-618-750-11	(E).....PC BOARD, SUB CODE			
908	*1-618-387-11	PC BOARD, LOADING			
909	⚠.1-558-182-11	(E).....CORD, POWER			
	⚠.1-558-566-11	(US,Canadian)...CORD, POWER			
	⚠.1-558-568-11	(AEP).....CORD, POWER			
910	*1-618-638-11	PC BOARD, POWER SWITCH			
911	*1-618-388-11	PC BOARD, SLED			
912	⚠.8-848-042-01	PICKUP, OPTICS KSS-123A			
913	1-452-340-11	MAGNET			
915	*1-535-140-00	(AEP)...BASE POST-19MM (10MM PITCH)3P			
916	⚠.1-533-183-11	(AEP,E)...HOLDER, FUSE			
917	⚠.1-526-565-00	(E)...AC PLUG ADAPTOR			
C101	1-123-343-00	ELECT	33MF	20%	25V
C102	1-162-600-11	CERAMIC	0.0047MF	10%	16V
C103	1-162-205-31	CERAMIC	18PF	5%	50V
C104	1-162-205-31	CERAMIC	18PF	5%	50V
C105	1-162-282-31	CERAMIC	100PF	10%	50V
C106	1-162-282-31	CERAMIC	100PF	10%	50V
C107	1-130-489-00	MYLAR	0.033MF	5%	50V
C108	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C109	1-162-306-31	CERAMIC	0.01MF	20%	16V
C110	1-123-379-00	ELECT	0.47MF	20%	50V
C111	1-123-332-00	ELECT	47MF	20%	16V
C112	1-124-443-00	ELECT	100MF	20%	10V
C113	1-124-443-00	ELECT	100MF	20%	10V
C114	1-123-332-00	ELECT	47MF	20%	16V
C115	1-162-306-31	CERAMIC	0.01MF	20%	16V
C201	1-130-489-00	MYLAR	0.033MF	5%	50V
C202	1-130-483-00	MYLAR	0.01MF	5%	50V
C203	1-136-165-00	FILM	0.1MF	5%	50V
C204	1-136-173-00	FILM	0.47MF	5%	50V
C205	1-136-173-00	FILM	0.47MF	5%	50V
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C208	1-102-647-00	CERAMIC	39PF	5%	50V
C209	1-102-658-00	CERAMIC	180PF	5%	50V
C210	1-102-725-00	CERAMIC	36PF	5%	50V
C211	1-162-302-31	CERAMIC	0.0022MF	20%	16V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C212	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C213	1-162-282-31	CERAMIC	100PF	10%	50V
C214	1-130-483-00	MYLAR	0.01MF	5%	50V
C215	1-123-356-00	ELECT	10MF	20%	50V
C216	1-123-369-00	ELECT	4.7MF	20%	50V
C217	1-123-343-00	ELECT	33MF	20%	25V
C218	1-123-343-00	ELECT	33MF	20%	25V
C219	1-161-974-00	CERAMIC	0.1MF	20%	16V
C301	1-162-294-31	CERAMIC	0.001MF	10%	50V
C302	1-161-974-00	CERAMIC	0.1MF	20%	16V
C304	1-161-974-00	CERAMIC	0.1MF	20%	16V
C305	1-161-974-00	CERAMIC	0.1MF	20%	16V
C306	1-161-974-00	CERAMIC	0.1MF	20%	16V
C307	1-123-307-00	ELECT	100MF	20%	10V
C309	1-102-523-00	CERAMIC	56PF	5%	50V
C310	1-162-294-31	CERAMIC	0.001MF	10%	50V
C311	1-102-513-00	CERAMIC	18PF	5%	50V
C312	1-123-306-00	ELECT	47MF	20%	10V
C314	1-123-332-00	ELECT	47MF	20%	25V
C315	1-123-306-00	ELECT	47MF	20%	10V
C321	1-104-230-00	POLYSTYRENE	0.0015MF	5%	50V
C322	1-123-334-00	ELECT	220MF	20%	25V
C323	1-123-318-00	ELECT	33MF	20%	16V
C324	1-123-318-00	ELECT	33MF	20%	16V
C325	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C328	1-123-306-00	ELECT	47MF	20%	10V
C331	1-161-974-00	CERAMIC	0.1MF	20%	16V
C332	1-161-974-00	CERAMIC	0.1MF	20%	16V
C333	1-161-974-00	CERAMIC	0.1MF	20%	16V
C371	1-104-230-00	POLYSTYRENE	0.0015MF	5%	50V
C372	1-123-334-00	ELECT	220MF	20%	25V
C373	1-123-318-00	ELECT	33MF	20%	16V
C374	1-123-318-00	ELECT	33MF	20%	16V
C375	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C401	1-130-289-00	FILM	0.0047MF	5%	100V
C404	1-123-318-00	ELECT	33MF	20%	16V
C405	1-124-724-71	ELECT	47MF	20%	50V
C406	1-162-291-31	CERAMIC	560PF	10%	50V
C407	1-123-321-00	ELECT	220MF	20%	16V
C408	1-162-306-31	CERAMIC	0.01MF	20%	16V
C409	1-162-306-31	CERAMIC	0.01MF	20%	16V
C410	1-162-290-31	(AEP)...CERAMIC	470PF	10%	50V
C451	1-130-289-00	FILM	0.0047MF	5%	100V
C454	1-123-318-00	ELECT	33MF	20%	16V
C455	1-124-724-71	ELECT	47MF	20%	50V
C456	1-162-291-31	CERAMIC	560PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C457	1-123-321-00	ELECT	220MF	20%	16V
C460	1-162-290-31	(AEP)...CERAMIC	470PF	10%	50V
C501	1-123-380-00	ELECT	1MF	20%	50V
C502	1-136-165-00	FILM	0.1MF	5%	50V
C503	1-130-481-00	MYLAR	0.0068MF	5%	50V
C504	1-136-165-00	FILM	0.1MF	5%	50V
C505	1-136-169-00	FILM	0.22MF	5%	50V
C506	1-162-290-31	CERAMIC	470PF	10%	50V
C507	1-162-290-31	CERAMIC	470PF	10%	50V
C508	1-162-290-31	CERAMIC	470PF	10%	50V
C509	1-123-821-00	ELECT	47MF	20%	16V
C510	1-123-821-00	ELECT	47MF	20%	16V
C601	1-124-443-00	ELECT	100MF	20%	10V
C603	1-123-332-00	ELECT	47MF	20%	16V
C604	1-162-294-31	CERAMIC	0.001MF	10%	50V
C605	1-136-169-00	FILM	0.22MF	5%	50V
C606	1-130-489-00	MYLAR	0.033MF	5%	50V
C607	1-162-294-31	CERAMIC	0.001MF	10%	50V
C608	1-136-161-00	FILM	0.047MF	5%	50V
C609	1-124-183-00	ELECT	2.2MF	20%	50V
C610	1-124-184-00	ELECT	3.3MF	20%	50V
C611	1-136-169-00	FILM	0.22MF	5%	50V
C612	1-162-294-31	CERAMIC	0.001MF	10%	50V
C613	1-162-294-31	CERAMIC	0.001MF	10%	50V
C614	1-130-487-00	MYLAR	0.022MF	5%	50V
C615	1-130-475-00	MYLAR	0.0022MF	5%	50V
C616	1-162-291-31	CERAMIC	560PF	10%	50V
C617	1-123-334-00	ELECT	220MF	20%	25V
C618	1-123-334-00	ELECT	220MF	20%	25V
C619	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C620	1-123-356-00	ELECT	10MF	20%	50V
C621	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C622	1-130-489-00	MYLAR	0.033MF	5%	50V
C623	1-136-165-00	FILM	0.1MF	5%	50V
C624	1-136-169-00	FILM	0.22MF	5%	50V
C625	1-162-290-31	CERAMIC	470PF	10%	50V
C626	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C702	1-123-343-00	ELECT	33MF	20%	25V
C703	1-162-210-31	CERAMIC	30PF	5%	50V
C704	1-162-210-31	CERAMIC	30PF	5%	50V
C705	1-162-596-00	CERAMIC	0.022MF		25V
C708	1-123-334-00	ELECT	220MF	20%	25V
C709	1-123-343-00	ELECT	33MF	20%	25V
C711	1-123-334-00	ELECT	220MF	20%	25V
C713	1-123-334-00	ELECT	220MF	20%	25V
C714	1-162-306-31	CERAMIC	0.01MF	20%	16V
C804	1-162-306-31	CERAMIC	0.01MF	30%	16V
C805	1-162-306-31	CERAMIC	0.01MF	30%	16V
C808	1-162-596-00	CERAMIC	0.022MF		25V
C809	1-162-596-00	CERAMIC	0.022MF		25V
C810	1-162-211-31	CERAMIC	33PF	5%	50V
C811	1-162-211-31	CERAMIC	33PF	5%	50V
C813	1-162-294-31	CERAMIC	0.001MF	10%	50V
C900	1-162-294-31	CERAMIC	0.001MF	10%	50V
C901	⚠.1-123-327-00	ELECT	4700MF	20%	16V
C902	⚠.1-123-327-00	ELECT	4700MF	20%	16V
C903	1-123-323-00	ELECT	470MF	20%	16V
C904	1-123-323-00	ELECT	470MF	20%	16V

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C905	1-123-356-00	ELECT	10MF	20%	50V
C906	1-123-356-00	ELECT	10MF	20%	50V
C907	1-124-475-11	ELECT	470MF	20%	16V
C908	⚠.1-124-704-61	ELECT	3300MF	20%	25V
C909	⚠.1-124-704-61	ELECT	3300MF	20%	25V
C910	1-123-323-00	ELECT	470MF	20%	16V
C911	1-123-324-00	ELECT	1000MF	20%	16V
C912	1-124-122-11	ELECT	100MF	20%	50V
C913	1-124-121-00	ELECT	100MF	20%	35V
C914	1-124-479-11	ELECT	330MF	20%	25V
C915	1-130-789-00	FILM	1MF	10%	100V
C916	1-130-483-00	MYLAR	0.01MF	5%	50V
C950	⚠.1-161-744-00	CERAMIC	0.01MF		400V
C951	⚠.1-161-742-00	(US).....CERAMIC	0.0022MF	20%	400V
C952	⚠.1-161-742-00	(AEP,E)...CERAMIC	0.0022MF	20%	400V
C953	⚠.1-161-742-00	(AEP,E)...CERAMIC	0.0022MF	20%	400V
C954	⚠.1-161-742-00	(AEP,E)...CERAMIC	0.0022MF	20%	400V
C955	⚠.1-161-742-00	(AEP,E)...CERAMIC	0.0022MF	20%	400V
C1000	1-162-306-31	CERAMIC	0.01MF	20%	16V
C1001	1-124-270-11	ELECT	0.47MF	20%	50V
C1002	1-102-121-00	CERAMIC	0.0022MF	10%	50V
CN901	⚠.1-526-774-11	(E).....OUTLET, AC			
CN901	⚠.1-526-794-11	(AEP).....OUTLET, AC			
CN901	⚠.1-526-882-00	(US,Canadian)...OUTLET, AC			
CNJ401	*1-562-960-11	JACK, PIN 2P			
CNJ402	1-507-863-21	JACK, LARGE TYPE (HEADPHONES)			
CNJ801	*1-564-719-21	(AEP,E)...PIN, CONNECTOR (SMALL TYPE)3P			
CNJ802	*1-560-039-00	(AEP,E)...PIN, CONNECTOR			
CNJ803	*1-560-039-00	(AEP,E)...PIN, CONNECTOR			
CNJ10011	-562-677-11	SOCKET, CONNECTOR (SUB CODE)			
CNP1	*1-564-523-31	PLUG, CONNECTOR 8P			
CNP2	1-564-519-41	PLUG, CONNECTOR 4P			
CNP3	*1-564-520-11	PLUG, CONNECTOR 5P			
CNP4	1-564-523-41	PLUG, CONNECTOR 8P			
CNP6	*1-564-519-21	PLUG, CONNECTOR 4P			
CNP7	*1-564-339-00	PIN, CONNECTOR 5P			
CNP9	*1-506-503-11	PIN, CONNECTOR 9P			
CNP10	*1-508-815-00	14MM BASE POST			
CNP12	*1-564-509-11	PLUG, CONNECTOR 6P			
CNP13	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNP14	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNP100	*1-564-724-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNP401	*1-564-509-11	PLUG, CONNECTOR 6P			
CP401	1-232-694-11	COMPOSITION CIRCUIT BLOCK			
CP402	1-232-994-11	COMPOSITION CIRCUIT BLOCK			
CP452	1-232-994-11	COMPOSITION CIRCUIT BLOCK			
CP802	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
CP803	1-232-998-11	COMPOSITION CIRCUIT BLOCK			
CP804	1-232-997-11	COMPOSITION CIRCUIT BLOCK			
CP805	1-232-995-11	COMPOSITION CIRCUIT BLOCK			
CP806	1-232-991-11	COMPOSITION CIRCUIT BLOCK			
CP807	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
CP808	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
CP809	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
CP810	1-232-992-11	COMPOSITION CIRCUIT BLOCK			
D101	8-719-911-19	DIODE 1SS119			
D201	8-719-911-06	DIODE 1SS106			
D202	8-719-911-06	DIODE 1SS106			
D203	8-719-911-06	DIODE 1SS106			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D204	8-719-928-03	DIODE KV1260M
D205	8-719-911-19	DIODE 1SS119
D601	8-719-951-13	DIODE HZ5CLL
D702	8-719-911-19	DIODE 1SS119
D801	8-719-301-35	DIODE SEL4410E-C
D802	8-719-301-35	DIODE SEL4410E-C
D804	8-719-302-13	DIODE SEL4910A-C
D805	8-719-302-13	DIODE SEL4910A-C
D806	8-719-301-35	DIODE SEL4410E-C
D810	8-719-911-19	DIODE 1SS119
D811	8-719-911-19	DIODE 1SS119
D812	8-719-911-19	DIODE 1SS119
D813	8-719-911-19	DIODE 1SS119
D814	8-719-911-19	DIODE 1SS119
D815	8-719-911-19	DIODE 1SS119
D816	8-719-911-19	(AEP)...DIODE 1SS119
D817	8-719-911-19	(AEP)...DIODE 1SS119
D818	8-719-911-19	(AEP)...DIODE 1SS119
D819	8-719-109-85	(AEP)...DIODE RD5.1ES-B2
D901 ⚠	8-719-937-49	DIODE RDF02M
D902	8-719-911-19	DIODE 1SS119
D903	8-719-911-19	DIODE 1SS119
D904	8-719-911-19	DIODE 1SS119
D905	8-719-911-19	DIODE 1SS119
D906	8-719-109-75	DIODE RD4.3ES-B2
D907 ⚠	8-719-210-12	DIODE 10DF2
D908 ⚠	8-719-210-12	DIODE 10DF2
D909 ⚠	8-719-210-12	DIODE 10DF2
D910 ⚠	8-719-210-12	DIODE 10DF2
D911	8-719-200-23	DIODE 11E2T
D912	8-719-200-23	DIODE 11E2T
D913	8-719-110-61	DIODE RD24ES-B1
D914	8-719-910-64	DIODE HZ6B1L
D915	8-719-911-19	DIODE 1SS119
F901 ⚠	1-532-286-00	(AEP,E)...FUSE, TIME-LAG
FLD801	1-519-383-11	INDICATOR TUBE, FLUORESCENT
H501	8-719-403-79	OH009
H502	8-719-403-79	OH009
IC101	8-752-010-90	IC CX20109
IC102	8-759-600-02	IC M5218L
IC201	8-759-340-53	IC HD14053BP
IC202	8-759-990-82	IC TL082CP
IC203	8-759-990-82	IC TL082CP
IC301	8-759-912-53	IC CX23034
IC302	8-752-015-20	IC CX20152
IC303	8-759-202-13	IC TC74HCU04P
IC304	8-759-140-53	IC UPD4053BC
IC305	8-759-910-77	IC LF353N/GLEA312
IC355	8-759-910-77	IC LF353N/GLEA312
IC401	8-759-900-72	IC NE5532P
IC402	8-759-700-40	IC NJM4560S
IC501	8-759-600-02	IC M5218L
IC601	8-752-010-80	IC CX20108
IC602	8-759-600-02	IC M5218L
IC701	8-759-912-52	IC CX23035
IC702	8-759-924-82	IC MSM6404A-12ORS
IC703	8-759-202-13	IC TC74HCU04P

ELECTRICAL PARTS

Ref.No.	Part No.	Description
IC704	8-759-910-36	IC MSM5128-20GS
IC801	8-741-131-70	IC BX-1317
IC802	8-759-602-87	IC M50761-420P
IC803	8-759-303-41	IC HD614042SD61
IC901	8-759-700-11	IC NJM78M05A
IC902	8-759-700-20	IC NJM79M05A
IC903	8-759-170-12	IC UPC78M12H
IC904	8-759-700-24	IC NJM79M12A
IC905	8-759-708-05	IC NJM78L05A
IC906	8-759-700-65	IC NJM79L05A
L201	1-426-212-11	COIL (RF)
L301	1-406-123-11	COIL (OSC)
L602	1-408-117-00	MICRO INDUCTOR 10UH
L802	1-410-328-11	MICRO INDUCTOR 10UH
L901	1-421-580-00	(US).....LINE FILTER
L901	1-421-340-00	(AEP,E)...LINE FILTER
LPF401	1-464-630-11	FILTER UNIT, LOW PASS
LPF451	1-464-630-11	FILTER UNIT, LOW PASS
M701	A-4608-320-A	MOTOR ASSY, L
M702	A-4608-308-A	MOTOR ASSY, SLED
PS901 ⚠	1-532-679-00	LINK, IC
PS902 ⚠	1-532-679-00	LINK, IC
Q101	8-729-178-54	TRANSISTOR 2SC2785
Q102	8-729-206-49	TRANSISTOR 2SC3666Y
Q201	8-729-900-80	TRANSISTOR DTC114ES
Q321	8-729-800-43	TRANSISTOR 2SK152-3
Q371	8-729-800-43	TRANSISTOR 2SK152-3
Q401	8-729-107-99	TRANSISTOR 2SC3622A-K
Q402	8-729-107-99	TRANSISTOR 2SC3622A-K
Q451	8-729-107-99	TRANSISTOR 2SC3622A-K
Q452	8-729-107-99	TRANSISTOR 2SC3622A-K
Q501	8-729-802-34	TRANSISTOR 2SD1388
Q502	8-729-802-22	TRANSISTOR 2SB1014
Q503	8-729-802-22	TRANSISTOR 2SB1014
Q504	8-729-802-34	TRANSISTOR 2SD1388
Q601	8-729-206-49	TRANSISTOR 2SC3666Y
Q602	8-729-206-43	TRANSISTOR 2SA1426Y
Q603	8-729-206-49	TRANSISTOR 2SC3666Y
Q604	8-729-206-43	TRANSISTOR 2SA1426Y
Q605	8-729-206-49	TRANSISTOR 2SC3666Y
Q606	8-729-206-43	TRANSISTOR 2SA1426Y
Q607	8-729-206-49	TRANSISTOR 2SC3666Y
Q608	8-729-206-43	TRANSISTOR 2SA1426Y
Q609	8-729-107-99	TRANSISTOR 2SC3622A-K
Q610	8-729-900-65	TRANSISTOR DTA144ES
Q703	8-729-900-65	TRANSISTOR DTA144ES
Q704	8-729-900-65	TRANSISTOR DTA144ES
Q803	8-729-900-37	TRANSISTOR DTC124EF
Q806	8-729-900-45	TRANSISTOR DTC114EF
Q807	8-729-900-45	TRANSISTOR DTC114EF
Q808	8-729-900-45	TRANSISTOR DTC114EF
Q809	8-729-900-45	TRANSISTOR DTC114EF
Q810	8-729-900-45	TRANSISTOR DTC114EF
Q811	8-729-900-45	TRANSISTOR DTC114EF
Q812	8-729-900-45	TRANSISTOR DTC114EF
Q901	8-729-205-95	TRANSISTOR 2SA1428Y

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R101	1-249-417-11	CARBON	1K	5%	1/6W
R102	1-249-429-11	CARBON	10K	5%	1/6W
R103	1-249-432-11	CARBON	18K	5%	1/6W
R104	1-247-893-00	CARBON	390K	5%	1/6W
R105	1-247-883-00	CARBON	150K	5%	1/6W
R106	1-247-897-00	CARBON	560K	5%	1/6W
R107	1-247-883-00	CARBON	150K	5%	1/6W
R108	1-247-881-00	CARBON	120K	5%	1/6W
R109	1-249-429-11	CARBON	10K	5%	1/6W
R110	1-249-433-11	CARBON	22K	5%	1/6W
R111	1-249-435-11	CARBON	33K	5%	1/6W
R112	1-249-429-11	CARBON	10K	5%	1/6W
R113	1-249-441-11	CARBON	100K	5%	1/6W
R114	1-249-429-11	CARBON	10K	5%	1/6W
R115	1-215-413-00	METAL	470	1%	1/6W
R116	1-215-429-00	METAL	2.2K	1%	1/6W
R117	1-249-429-11	CARBON	10K	5%	1/6W
R118	1-247-845-00	CARBON	3.9K	5%	1/6W
R119	1-249-417-11	CARBON	1K	5%	1/6W
R120	1-215-449-00	METAL	15K	1%	1/6W
R121	1-215-445-00	METAL	10K	1%	1/6W
R122	1-247-873-00	CARBON	56K	5%	1/6W
R123	1-249-417-11	CARBON	1K	5%	1/6W
R124	1-214-092-00	METAL	22	1%	1/4W
R126	1-249-433-11	CARBON	22K	5%	1/6W
R201	1-249-425-11	CARBON	4.7K	5%	1/6W
R202	1-249-433-11	CARBON	22K	5%	1/6W
R203	1-247-903-00	CARBON	1M	5%	1/6W
R204	1-249-435-11	CARBON	33K	5%	1/6W
R205	1-247-895-00	CARBON	470K	5%	1/6W
R206	1-249-425-11	CARBON	4.7K	5%	1/6W
R207	1-247-895-00	CARBON	470K	5%	1/6W
R208	1-247-895-00	CARBON	470K	5%	1/6W
R209	1-215-453-00	METAL	22K	1%	1/6W
R211	1-215-453-00	METAL	22K	1%	1/6W
R212	1-249-425-11	CARBON	4.7K	5%	1/6W
R213	1-249-441-11	CARBON	100K	5%	1/6W
R214	1-249-441-11	CARBON	100K	5%	1/6W
R215	1-249-441-11	CARBON	100K	5%	1/6W
R216	1-249-435-11	CARBON	33K	5%	1/6W
R217	1-247-852-00	CARBON	7.5K	5%	1/6W
R218	1-247-857-00	CARBON	12K	5%	1/6W
R219	1-249-422-11	CARBON	2.7K	5%	1/6W
R220	1-249-433-11	CARBON	22K	5%	1/6W
R221	1-249-429-11	CARBON	10K	5%	1/6W
R222	1-249-417-11	CARBON	1K	5%	1/6W
R301	1-249-437-11	CARBON	47K	5%	1/6W
R302	1-247-843-00	CARBON	3.3K	5%	1/6W
R303	1-249-589-11	CARBON	36K		1/4W
R304	1-249-405-11	CARBON	100	5%	1/6W
R321	1-249-425-11	CARBON	4.7K	5%	1/6W
R322	1-249-419-11	CARBON	1.5K	5%	1/6W
R323	1-247-719-11	CARBON	3.3K		1/4W
R324	1-247-161-00	CARBON	18K		1/4W
R325	1-247-721-11	CARBON	4.7K		1/4W
R326	1-247-719-11	CARBON	3.3K		1/4W
R371	1-249-425-11	CARBON	4.7K	5%	1/6W
R372	1-249-419-11	CARBON	1.5K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R373	1-247-719-11	CARBON	3.3K		1/4W
R374	1-247-161-00	CARBON	18K		1/4W
R375	1-247-721-11	CARBON	4.7K		1/4W
R376	1-247-719-11	CARBON	3.3K		1/4W
R401	1-247-704-11	CARBON	220		1/4W
R402	1-249-622-00	CARBON	820K		1/4W
R403	1-249-577-11	CARBON	11K		1/4W
R404	1-247-721-11	CARBON	4.7K		1/4W
R406	1-249-469-11	CARBON	100K		1/4W
R407	1-249-556-11	CARBON	1.5K		1/4W
R408	1-247-125-00	CARBON	560		1/4W
R409	1-249-417-11	CARBON	1K	5%	1/6W
R410	1-247-700-11	CARBON	100		1/4W
R411	1-247-163-00	CARBON	22K		1/4W
R413	1-249-417-11	CARBON	1K	5%	1/6W
R416	1-247-815-00	CARBON	220	5%	1/6W
R417	1-249-425-11	CARBON	4.7K	5%	1/6W
R418	1-249-441-11	CARBON	100K	5%	1/6W
R451	1-247-704-11	CARBON	220		1/4W
R452	1-249-622-00	CARBON	820K		1/4W
R453	1-249-577-11	CARBON	11K		1/4W
R454	1-247-721-11	CARBON	4.7K		1/4W
R456	1-249-469-11	CARBON	100K		1/4W
R457	1-249-556-11	CARBON	1.5K		1/4W
R458	1-247-125-00	CARBON	560		1/4W
R459	1-249-417-11	CARBON	1K	5%	1/6W
R460	1-247-700-11	CARBON	100		1/4W
R461	1-247-163-00	CARBON	22K		1/4W
R463	1-249-417-11	CARBON	1K	5%	1/6W
R466	1-247-815-00	CARBON	220	5%	1/6W
R467	1-249-425-11	CARBON	4.7K	5%	1/6W
R468	1-249-441-11	CARBON	100K	5%	1/6W
R501	1-215-441-00	METAL	6.8K	1%	1/6W
R502	1-247-856-00	CARBON	11K	5%	1/6W
R503	1-215-441-00	METAL	6.8K	1%	1/6W
R504	1-247-903-00	CARBON	1M	5%	1/6W
R505	1-247-856-00	CARBON	11K	5%	1/6W
R506	1-249-433-11	CARBON	22K	5%	1/6W
R507	1-215-453-00	METAL	22K	1%	1/6W
R508	1-215-449-00	METAL	15K	1%	1/6W
R509	1-247-843-00	CARBON	3.3K	5%	1/6W
R510	1-247-869-00	CARBON	39K	5%	1/6W
R511	1-247-887-00	CARBON	220K	5%	1/6W
R512	1-247-849-00	CARBON	5.6K	5%	1/6W
R513	1-247-849-00	CARBON	5.6K	5%	1/6W
R514	1-247-849-00	CARBON	5.6K	5%	1/6W
R515	1-247-849-00	CARBON	5.6K	5%	1/6W
R516	1-247-895-00	CARBON	470K	5%	1/6W
R517	1-247-895-00	CARBON	470K	5%	1/6W
R520	1-247-895-00	CARBON	470K	5%	1/6W
R521	1-247-895-00	CARBON	470K	5%	1/6W
R601	1-247-851-00	CARBON	6.8K	5%	1/6W
R602	1-247-864-00	CARBON	24K	5%	1/6W
R603	1-249-425-11	CARBON	4.7K	5%	1/6W
R604	1-249-425-11	CARBON	4.7K	5%	1/6W
R605	1-247-859-00	CARBON	15K	5%	1/6W
R606	1-249-429-11	CARBON	10K	5%	1/6W
R607	1-249-417-11	CARBON	1K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R608	1-247-851-00	CARBON	6.8K	5%	1/6W
R609	1-247-837-00	CARBON	1.8K	5%	1/6W
R610	1-249-441-11	CARBON	100K	5%	1/6W
R611	1-249-429-11	CARBON	10K	5%	1/6W
R612	1-249-437-11	CARBON	47K	5%	1/6W
R613	1-249-429-11	CARBON	10K	5%	1/6W
R614	1-247-878-00	CARBON	91K	5%	1/6W
R615	1-249-440-11	CARBON	82K	5%	1/6W
R616	1-249-440-11	CARBON	82K	5%	1/6W
R617	1-247-878-00	CARBON	91K	5%	1/6W
R618	1-247-903-00	CARBON	1M	5%	1/6W
R619	1-249-417-11	CARBON	1K	5%	1/6W
R620	1-247-869-00	CARBON	39K	5%	1/6W
R621	1-249-405-11	CARBON	100	5%	1/6W
R622	1-249-434-11	CARBON	27K	5%	1/6W
R623	1-249-433-11	CARBON	22K	5%	1/6W
R624	1-247-845-00	CARBON	3.9K	5%	1/6W
R625	1-249-405-11	CARBON	100	5%	1/6W
R626	1-247-873-00	CARBON	56K	5%	1/6W
R627	1-249-425-11	CARBON	4.7K	5%	1/6W
R628	1-247-819-00	CARBON	330	5%	1/6W
R629	1-247-851-00	CARBON	6.8K	5%	1/6W
R630	1-249-434-11	CARBON	27K	5%	1/6W
R631	1-249-405-11	CARBON	100	5%	1/6W
R632	1-247-851-00	CARBON	6.8K	5%	1/6W
R633	1-249-441-11	CARBON	100K	5%	1/6W
R634	1-247-849-00	CARBON	5.6K	5%	1/6W
R640	1-247-889-00	CARBON	270K	5%	1/6W
R641	1-249-433-11	CARBON	22K	5%	1/6W
R703	1-247-903-00	CARBON	1M	5%	1/6W
R704	1-249-429-11	CARBON	10K	5%	1/6W
R705	1-249-421-11	CARBON	2.2K	5%	1/6W
R706	1-249-421-11	CARBON	2.2K	5%	1/6W
R707	1-249-437-11	CARBON	47K	5%	1/6W
R708	1-247-891-00	CARBON	330K	5%	1/6W
R803	1-249-405-11	(AEP)...CARBON	100	5%	1/6W
R804	1-249-433-11	(AEP)...CARBON	22K	5%	1/6W
R805	1-249-433-11	(AEP)...CARBON	22K	5%	1/6W
R806	1-247-783-00	(AEP)...CARBON	10	5%	1/6W
R808	1-249-433-11	CARBON	22K	5%	1/6W
R809	1-247-903-00	CARBON	1M	5%	1/6W
R819	1-249-441-11	CARBON	100K	5%	1/6W
R820	1-249-441-11	CARBON	100K	5%	1/6W
R821	1-249-441-11	CARBON	100K	5%	1/6W
R825	1-249-433-11	CARBON	22K	5%	1/6W
R826	1-249-433-11	CARBON	22K	5%	1/6W
R901	1-249-417-11	CARBON	1K	5%	1/6W
R902	1-249-441-11	CARBON	100K	5%	1/6W
R903	1-247-799-00	CARBON	47	5%	1/6W
R904 ⚠	1-217-387-00	FUSIBLE	10	5%	1/4W F
R905	1-249-417-11	CARBON	1K	5%	1/6W
R906	1-249-421-11	CARBON	2.2K	5%	1/6W
R907	1-249-429-11	CARBON	10K	5%	1/6W
R908 ⚠	1-217-391-00	FUSIBLE	22	5%	1/4W F
RV101	1-237-198-11	RES, ADJ, CARBON 500K			
RV102	1-237-194-11	RES, ADJ, CARBON 20K			
RV103	1-237-193-11	RES, ADJ, CARBON 10K			
RV104	1-237-194-11	RES, ADJ, CARBON 20K			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
RV201	1-237-191-11	RES, ADJ, CARBON 2K
RV401	1-230-997-21	RES, VAR, CARBON 20K/20K (HEADPHONES LEVEL)
S701	1-570-203-11	SWITCH, LEAF (LOADING)
S702	1-570-202-11	SWITCH, LEAF (LIMIT)
S802	1-554-303-21	SWITCH, KEY BOARD (A ⟷ B)
S803	1-554-303-21	SWITCH, KEY BOARD (AUTO SPACE)
S804	1-554-303-21	SWITCH, KEY BOARD (TIME)
S805	1-554-303-21	SWITCH, KEY BOARD (OPNE/CLOSE)
S806	1-554-303-21	SWITCH, KEY BOARD (AMS ⏮)
S807	1-554-303-21	SWITCH, KEY BOARD (AMS ⏭)
S808	1-554-303-21	SWITCH, KEY BOARD (◀◀)
S809	1-554-303-21	SWITCH, KEY BOARD (▶▶)
S810	1-554-303-21	SWITCH, KEY BOARD (SHUFFLE)
S811	1-554-303-21	SWITCH, KEY BOARD (PROGRAM)
S812	1-554-303-21	SWITCH, KEY BOARD (PLAY)
S813	1-554-303-21	SWITCH, KEY BOARD (PAUSE)
S814	1-554-303-21	SWITCH, KEY BOARD (STOP)
S815	1-554-303-21	SWITCH, KEY BOARD (0)
S816	1-554-303-21	SWITCH, KEY BOARD (+10)
S817	1-554-303-21	SWITCH, KEY BOARD (CLEAR)
S818	1-554-303-21	SWITCH, KEY BOARD (CHECK)
S819	1-554-303-21	SWITCH, KEY BOARD (1)
S820	1-554-303-21	SWITCH, KEY BOARD (2)
S821	1-554-303-21	SWITCH, KEY BOARD (3)
S822	1-554-303-21	SWITCH, KEY BOARD (4)
S823	1-554-303-21	SWITCH, KEY BOARD (5)
S824	1-554-303-21	SWITCH, KEY BOARD (6)
S825	1-554-303-21	SWITCH, KEY BOARD (7)
S826	1-554-303-21	SWITCH, KEY BOARD (8)
S827	1-554-303-21	SWITCH, KEY BOARD (9)
S828	1-554-303-21	SWITCH, KEY BOARD (10)
S829	1-554-303-21	SWITCH, KEY BOARD (11)
S830	1-554-303-21	SWITCH, KEY BOARD (12)
S831	1-554-303-21	SWITCH, KEY BOARD (13)
S832	1-554-303-21	SWITCH, KEY BOARD (14)
S833	1-554-303-21	SWITCH, KEY BOARD (15)
S834	1-554-303-21	SWITCH, KEY BOARD (16)
S835	1-554-303-21	SWITCH, KEY BOARD (17)
S836	1-554-303-21	SWITCH, KEY BOARD (18)
S837	1-554-303-21	SWITCH, KEY BOARD (19)
S838	1-554-303-21	SWITCH, KEY BOARD (20)
S839	1-554-303-21	SWITCH, KEY BOARD (INDEX ◀—)
S840	1-554-303-21	SWITCH, KEY BOARD (INDEX —▶)
S901 ⚠	1-553-318-00	SWITCH, PUSH (AC POWER)(1 KEY)
T901 ⚠	1-448-389-11	(US,Canadian)...TRANSFORMER, POWER
T901 ⚠	1-448-390-11	(AEP).....TRANSFORMER, POWER
T901 ⚠	1-448-391-11	(E).....TRANSFORMER, POWER
VS901 ⚠	1-526-576-51	(E)...SELECTOR, POWER VOLTEGE
X301	1-567-664-11	VIBRATOR, CRYSTAL
X702	1-567-192-11	OSCILLATOR, CERAMIC
X801	1-527-532-00	OSCILLATOR, CERAMIC
X802	1-567-192-11	OSCILLATOR, CERAMIC

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ACCESSORY & PACKING MATERIAL

Part No.	Description
1-463-696-11	REMOTE COMMANDER (RM-D350)
1-551-734-11	CORD, CONNECTION (RK-74A)
1-558-233-11	(AEP,E)...CORD (WITH CONNECTOR)(SIRCS)4P
3-536-825-00	(E)....BAG, PROTECTING
3-701-630-00	BAG, POLYETHYLENE
3-703-390-01	(US).....INSTRUCTION
3-795-629-11	(AEP)....INSTRUCTION
3-765-106-11	(AEP).....MANUAL, INSTRUCTION
3-765-106-21	(US,Canadian)...MANUAL, INSTRUCTION
3-765-106-31	(Canadian).....MANUAL, INSTRUCTION
3-765-106-41	(AEP).....MANUAL, INSTRUCTION
3-765-106-51	(E).....MANUAL, INSTRUCTION
4-876-352-00	(US,Canadian,AEP)...SHEET, PROTECTION
4-907-610-01	JOINT
4-913-750-01	CUSHION
4-913-939-11	(US).....INDIVIDUAL CARTON
4-913-939-21	(Canadian,AEP)INDIVIDUAL CARTON
4-913-939-31	(E).....INDIVIDUAL CARTON
4-913-941-01	HOLDER, COMMANDER

English
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