

PS-LX150

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model*



SPECIFICATIONS

Platter	30 cm, aluminum-alloy diecast
Motor	DC servo motor
Drive system	Belt drive
Speed	33 1/3 r/min, 45 r/min
Automatic system	Return, reject
Tone arm type	Statically balanced
Cartridge type	Moving magnet type
Stylus	CN-234

General

Dimensions	Approx. 430 × 98 × 360 mm (w/h/d) (17 × 37/8 × 14 1/4 inches)
Weight	Approx. 2.9 kg (6 lb 6 oz)
Power requirement	US, Canadian model : 120V AC, 60Hz AEP model : 220-230V AC, 50/60Hz UK model : 240V AC, 50/60Hz
Power consumption	4 W
Supplied accessory	45-r/min adaptor (1)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.



STEREO TURNTABLE SYSTEM
SONY®

SAFETY CHECK-OUT (US, Canadian 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)

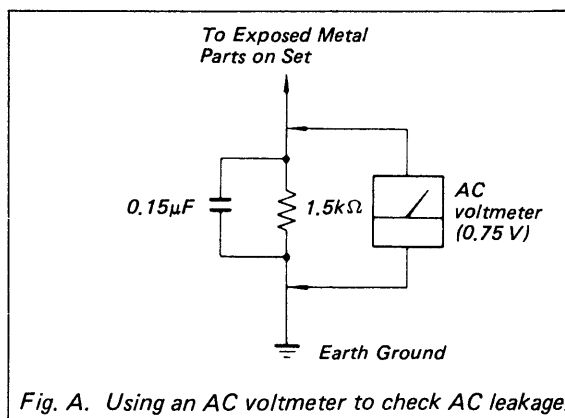
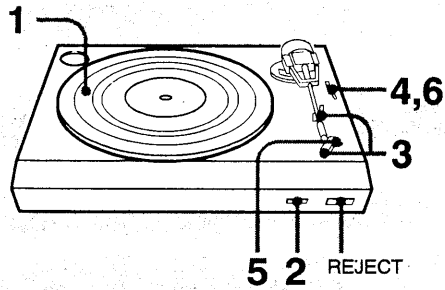


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 1 GENERAL

This section is extracted from instruction manual.

Playing Records



- 1 Place a record on the turntable.
- 2 Press the SPEED button to select the speed.
- 3 Remove the cover from the cartridge, and release the stopper from the tone arm.
- 4 Set the cueing lever to ∇ .
- 5 Move the tone arm by hand to the desired point.
The turntable automatically starts rotating.
- 6 Set the cueing lever to ∇ .

When the record is played to the end

The tone arm returns to the arm rest and the turntable stops.

To stop during play

Press the REJECT button.

To play a different part of the record

Lift the tone arm by setting the cueing lever to ∇ , move the tone arm by hand to the desired point, then set the cueing lever to ∇ .

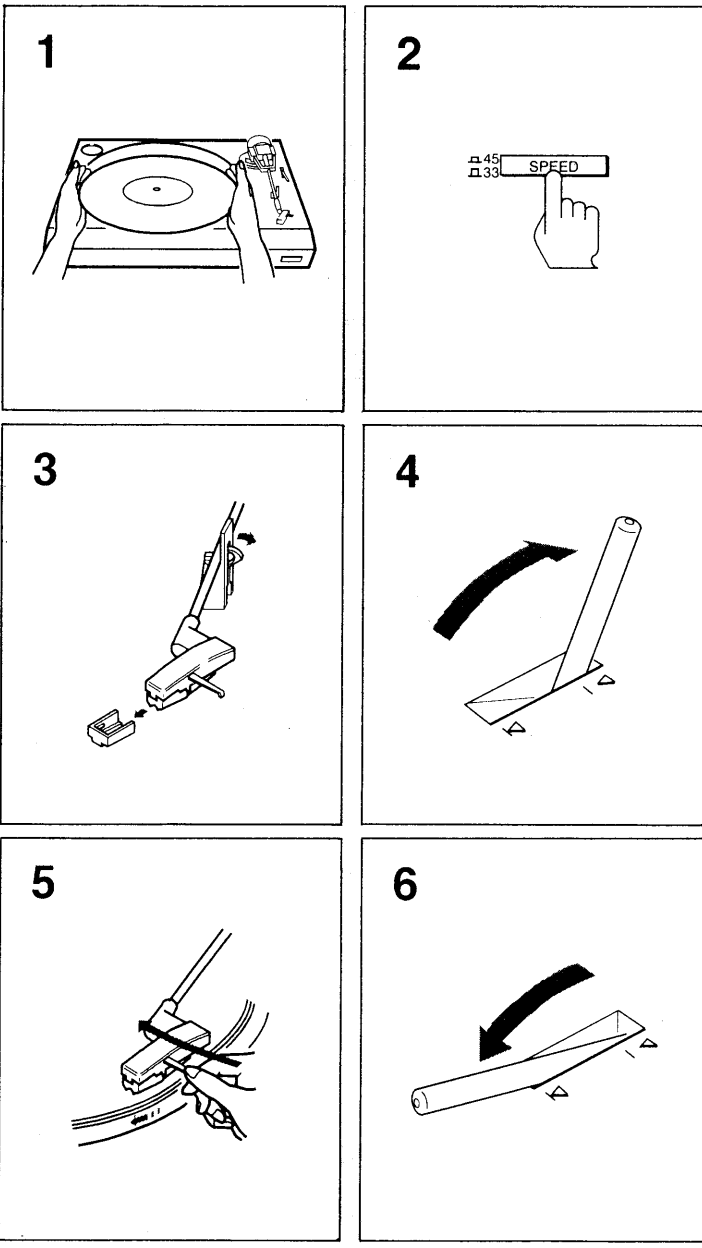
To play a 17-cm record

Use the supplied adaptor.

If the tone arm moves outward when you move it toward the center

Do not resist this movement, as it may damage the automatic return mechanism.

If the tone arm does not return to the arm rest
Press the REJECT button.



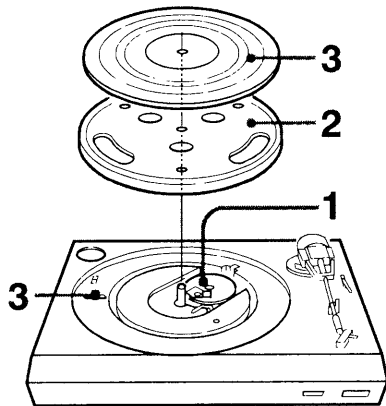
Connections

Assembling the Turntable

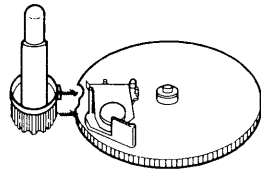
- 1** Move the metallic parts inside the larger gear in the direction of arrows.
- 2** Set the turntable on the spindle, gripping the three holes at the center of the turntable with your right hand, and holding the black rubber belt with your left thumb.
- 3** Hook the belt on the pulley and place the rubber mat on the turntable.
To make sure it operates properly, spin the turntable clockwise once or twice with your hand.

Setting the Voltage Selector **A**

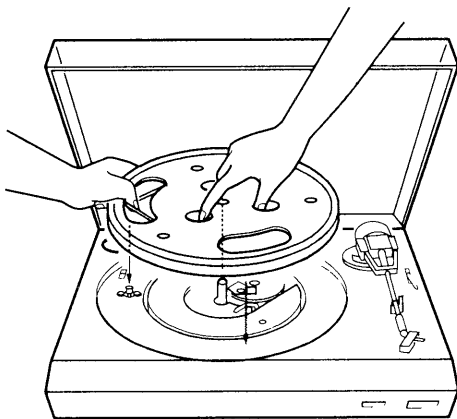
For the customers of the model equipped with the voltage selector
Check that the voltage selector is set to the local power line voltage. If not, set the voltage selector to the correct position before connecting the AC power cord to a wall outlet.



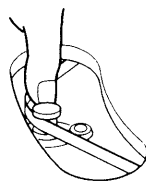
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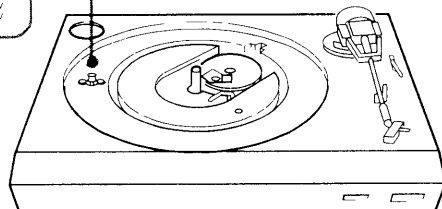
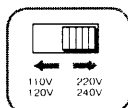
2



3



A



SECTION 2 ADJUSTMENTS

Speed Adjustment

Note: Be sure to perform 33-rpm adjustment before 45-rpm.

— Using a stroboscope board —

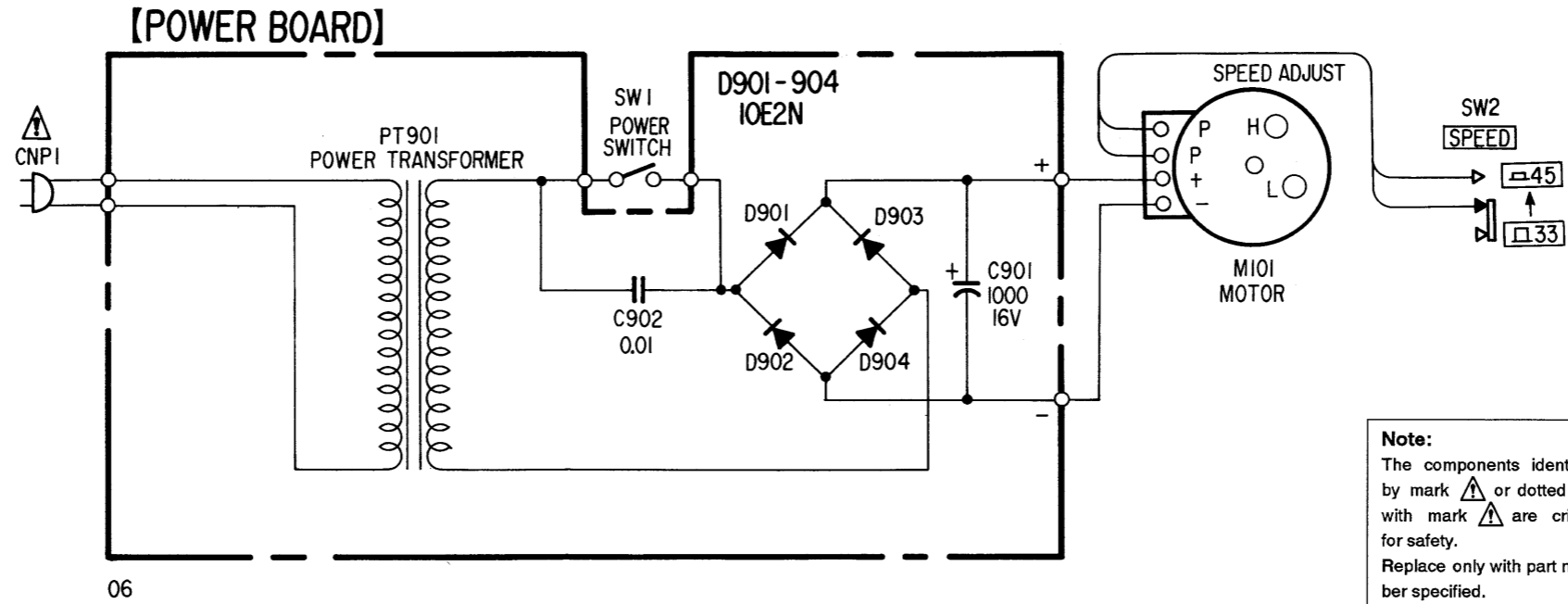
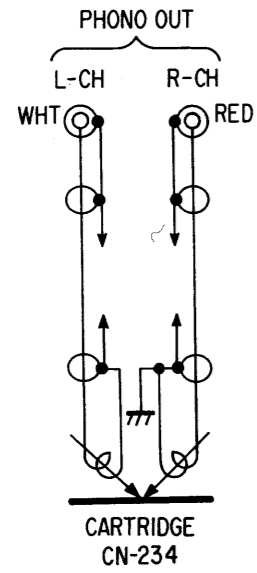
1. Put a stroboscope board on the mat.
2. Set the SPEED switch to 33.
Depress the lifter knob to make a lift-up mode and move the arm above to the outer most groove of a record.
Adjust M101(L) so that the striped pattern of stroboscope board is stationary.
3. Set the SPEED switch to 45.
Adjust M101(H) in the same way.

— Using a test record —

1. Put a test record (YFSC-16) on the mat.
2. Move the arm onto a-2 (3 kHz) section and trace it.
3. Adjust M101(L) so that the frequency is 2,991 – 3,009 Hz.
4. Set the SPEED switch to 45.
Adjust M101(H) so that the frequency is 4,038 – 4,062 Hz.

**SECTION 3
DIAGRAMS**

3-1. SCHEMATIC DIAGRAMS

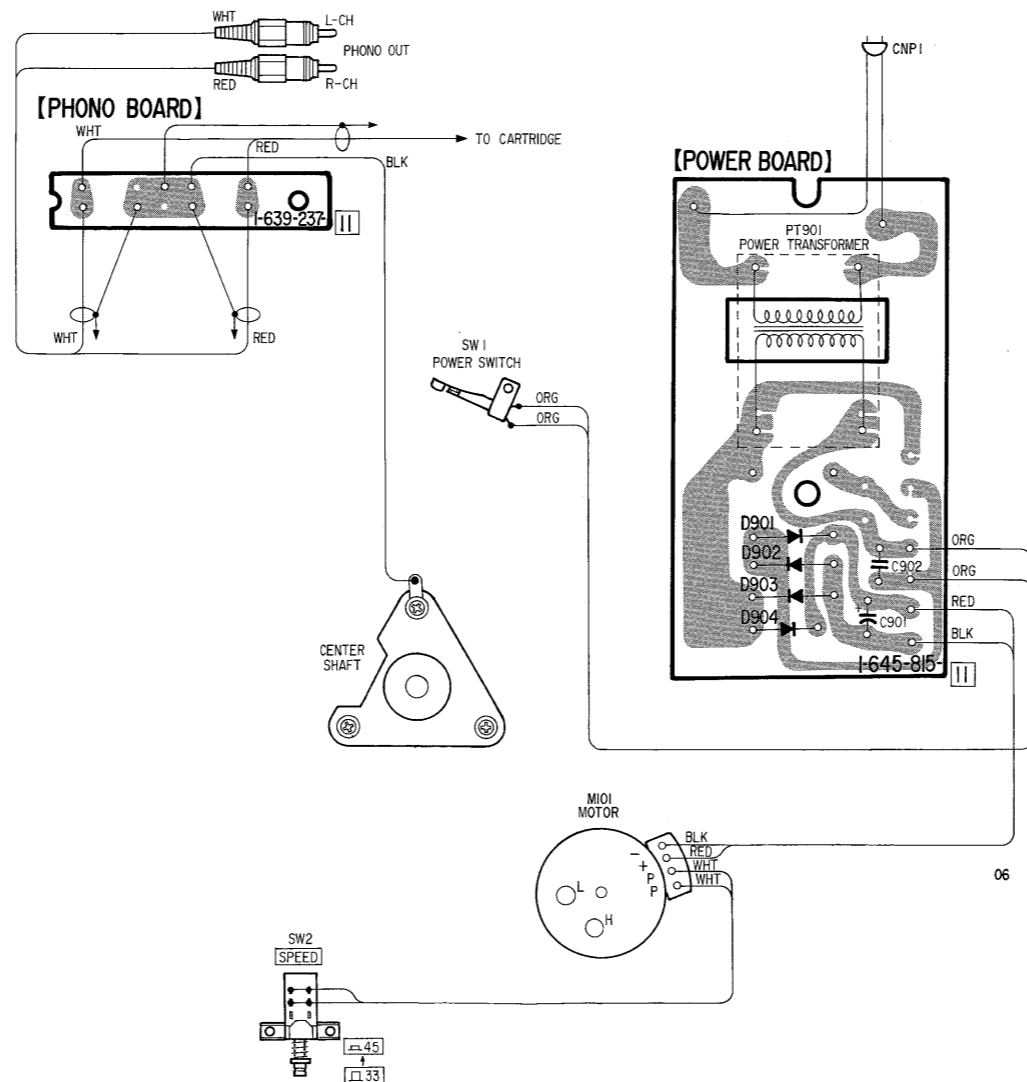


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Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

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

3-2. PRINTED WIRING BOARDS



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Note:
• ○ : parts extracted from the component side.

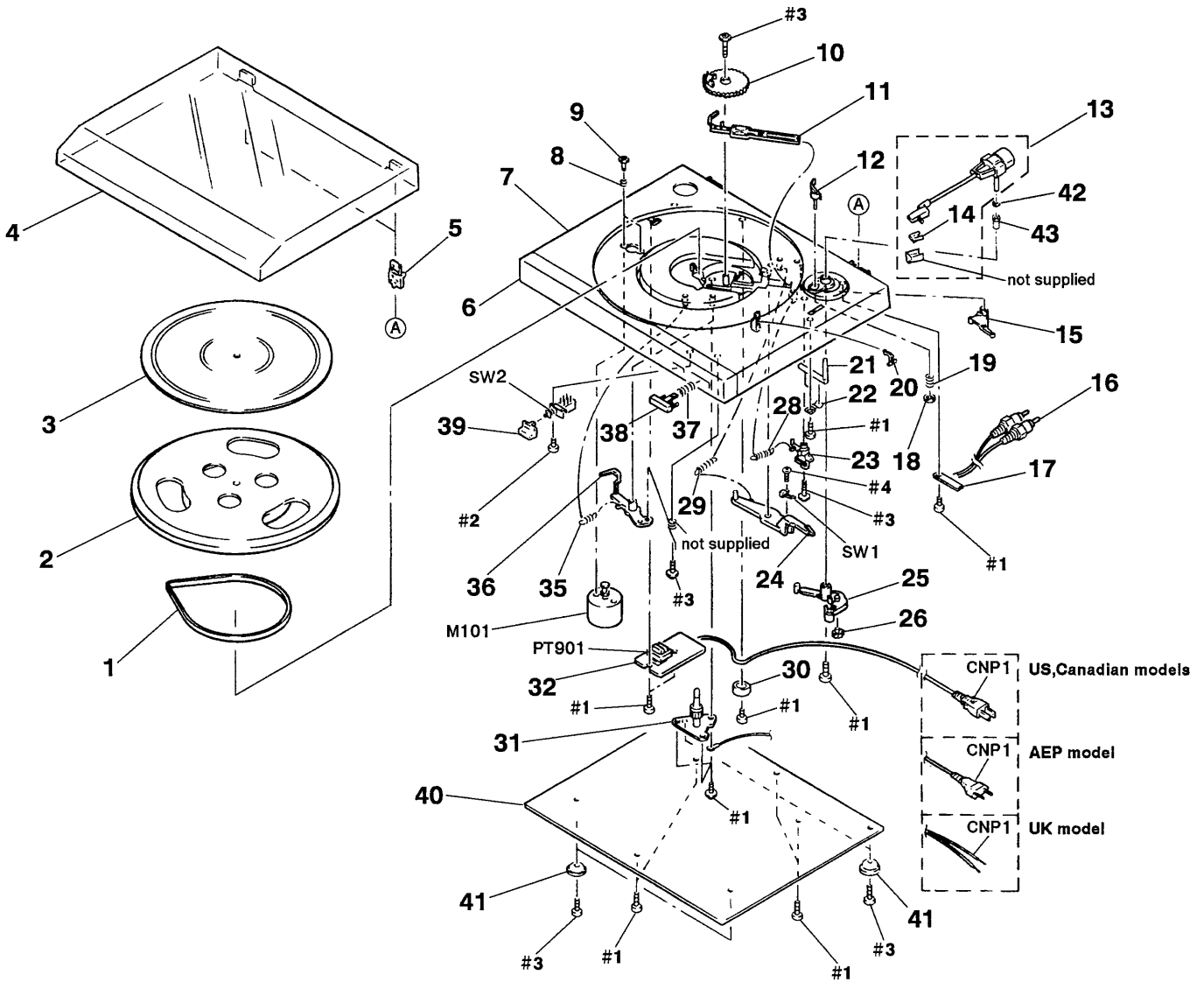
SECTION 4 EXPLODED VIEW

NOTE:

- -XX,-X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.



- 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.

<p>The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.</p>
<p>Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>




<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
1	4-950-434-01	BELT		28	4-950-455-01	SPRING, ELEVATOR	
2	4-954-330-01	PLATTER		29	4-950-464-01	SPRING, CONTROL ARM	
3	4-950-505-01	RUBBER ASSY, SHEET		* 30	4-954-326-01	HOLDER, CORD	
4	A-4660-198-A	COVER ASSY, DUST		31	4-954-329-01	SHAFT, CENTER	
5	4-954-319-01	HINGE		* 32	1-645-815-11	POWER BOARD	
6	A-4660-197-A	PANEL ASSY, FRONT		35	4-950-453-01	SPRING, REJECT	
* 7	4-954-318-01	CABINET, UPPER		36	4-950-452-01	LEVER, REJECT	
8	4-950-470-01	CUSHION, MOTOR		37	4-944-686-01	SPRING, RETURN	
9	4-950-469-01	SCREW, SETTING MOTOR		38	4-954-320-01	BUTTON, REJECT	
10	A-4660-140-A	GEAR ASSY, RING		39	4-950-445-01	BUTTON, SPEED	
11	4-954-323-01	ARM, ACTUATING		* 40	4-954-327-01	COVER, BUTTON	
12	4-950-437-01	ARM, ELEVATION		41	4-944-693-01	RUBBER, FOOT	
13	A-4660-199-A	ARM ASSY, TONE		42	4-950-435-01	SPACER	
14	4-951-290-01	STYLUS (CN-234)		43	4-950-436-01	BUSHING, TONE ARM	
15	4-953-060-01	LEVER, SWITCH		△CNP1	1-696-743-11	CORD, POWER (US, Canadian)	
16	1-590-871-11	CORD (WITH CONNECTOR)		△CNP1	1-555-750-00	CORD, POWER (AEP)	
* 17	1-639-237-11	PHONO BOARD		△CNP1	1-696-587-11	CORD, POWER (UK)	
18	4-950-444-01	WASHER, C/S		M101	A-4660-141-A	MOTOR ASSY	
19	4-950-442-01	SPRING, ELEVATION		PT901	1-423-380-11	TRANSFORMER, POWER (US)	
20	4-950-439-01	LOCKER, ARM		PT901	1-423-381-11	TRANSFORMER, POWER (Canadian)	
21	4-950-440-01	LEVER, CUEING		PT901	1-450-508-11	TRANSFORMER, POWER (AEP, UK)	
22	4-950-441-01	BRACKET, CUEING		SW1	1-572-746-11	SWITCH, LEAF	
23	4-950-454-01	ELEVATOR		SW2	1-572-744-11	SWITCH, PUSH	
24	4-954-322-01	ARM, CONTROL					
25	4-950-450-01	ARM, FEED					
26	4-950-451-01	CAM, ADJUST					

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.

POWER

PHONO

SECTION 5 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the part 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

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

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

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

Ref. No.	Part No.	Description	Remark
*	1-645-815-11	POWER BOARD	
*	1-639-237-11	PHONO BOARD	

< CAPACITOR >			
C901	1-124-555-11	ELECT 1000uF	20% 16V
C902	1-101-004-11	CERAMIC 0.01uF	50V
< DIODE >			
D901	8-719-200-77	DIODE 10E2N	
D902	8-719-200-77	DIODE 10E2N	
D903	8-719-200-77	DIODE 10E2N	
D904	8-719-200-77	DIODE 10E2N	
< TRANSFORMER >			
PT901	1-423-380-11	TRANSFORMER, POWER (US)	
PT901	1-423-381-11	TRANSFORMER, POWER (Canadian)	
PT901	1-450-508-11	TRANSFORMER, POWER (AEP, UK)	

MISCELLANEOUS			

16	1-590-871-11	CORD (WITH CONNECTOR)	
\triangle CNP1	1-696-743-11	CORD, POWER (US, Canadian)	
\triangle CNP1	1-555-750-00	CORD, POWER (AEP)	
\triangle CNP1	1-696-587-11	CORD, POWER (UK)	
M101	A-4660-141-A	MOTOR ASSY	
SW1	1-572-746-11	SWITCH, LEAF	
SW2	1-572-744-11	SWITCH, PUSH	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

	3-755-629-11	MANUAL, INSTRUCTION (AEP, UK) (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-755-629-21	MANUAL, INSTRUCTION (US, Canadian) (ENGLISH)	
	3-755-629-31	MANUAL, INSTRUCTION (Canadian) (FRENCH)	
	3-755-629-41	MANUAL, INSTRUCTION (AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)	

HARDWARE LIST			

#1	7-685-646-79	SCREW 3X8	
#2	7-685-246-19	SCREW 2.6X8	
#3	7-685-903-21	SCREW 3X10X8	
#4	7-685-104-19	SCREW 2X8	