

PS-LX100/LX285

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model*
PS-LX100



Photo: PS-LX285.

*US Model
Canadian Model
E Model
Italian Model*
PS-LX285

PS-LX285: This set is the turntable system section in SEN 280.

SPECIFICATIONS

Turntable

Platter	30 cm (12 in.) US model: Plastics Others: aluminium-alloy diecast
Motor	DC servo motor
Drive system	Belt-drive
Speed	33 $\frac{1}{3}$ rpm, 45 rpm
Signal-to-noise ratio	65dB (DIN-B)
Automatic system	Return, reject
Tonearm type	Statically balanced



Cartridge

Type	Moving magnet type
Stylus	Sony ND-155G (0.6 mil diamond)
Dimensions	US model: Approx. 430x95x350mm (w/h/d) (17x3 $\frac{3}{4}$ x 13 $\frac{7}{8}$ inches) Others model: Approx. 430x105x350mm (w/h/d) (17x4 $\frac{1}{4}$ x 13 $\frac{7}{8}$ inches)
Weight	US model: Approx. 2.5 kg (5 lb 9oz) net Others model: Approx. 3.3 kg (7 lb 5oz) net


Power Requirement (PS-LX100 model only)

US, Canadian model:	120V AC, 60Hz
AEP model:	220V AC, 50/60Hz
UK model:	240V AC, 50/60Hz
E model:	110-120 or 220-240V AC adjustable, 50/60Hz

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.



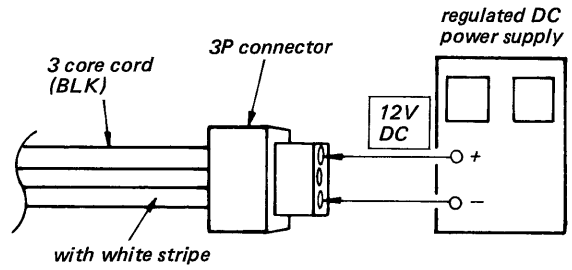
STEREO TURNTABLE SYSTEM
SONY®

LX285 Model only

REPAIRING PRECAUTION

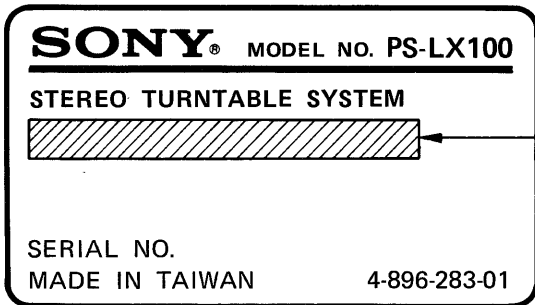
[To supply B+ voltage]

The power of this unit is fed from TA-AX285. Because of this, connect the regulated power supply as illustrated right when this unit alone operates.



MODEL IDENTIFICATION

— Specification Label —



PS-LX100 Model only:

- US, Canadian model: AC 120V 60Hz 4W
- AEP model: AC 220V 50/60Hz 2W
- UK model: AC 240V 50/60Hz 2W
- E model: AC 110 – 120/220 – 240V 50/60Hz 4W

PS-LX100 Model only

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 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

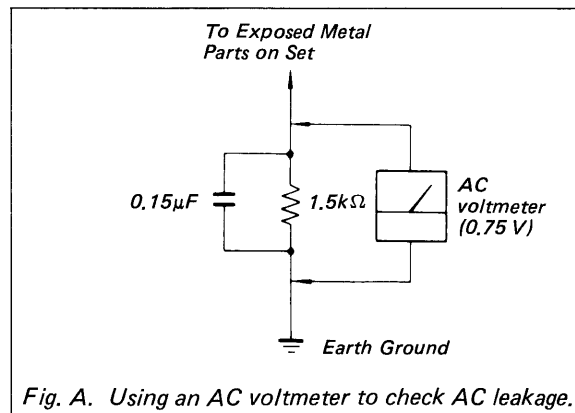
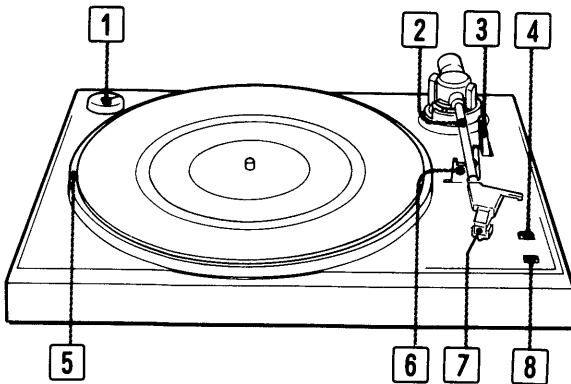


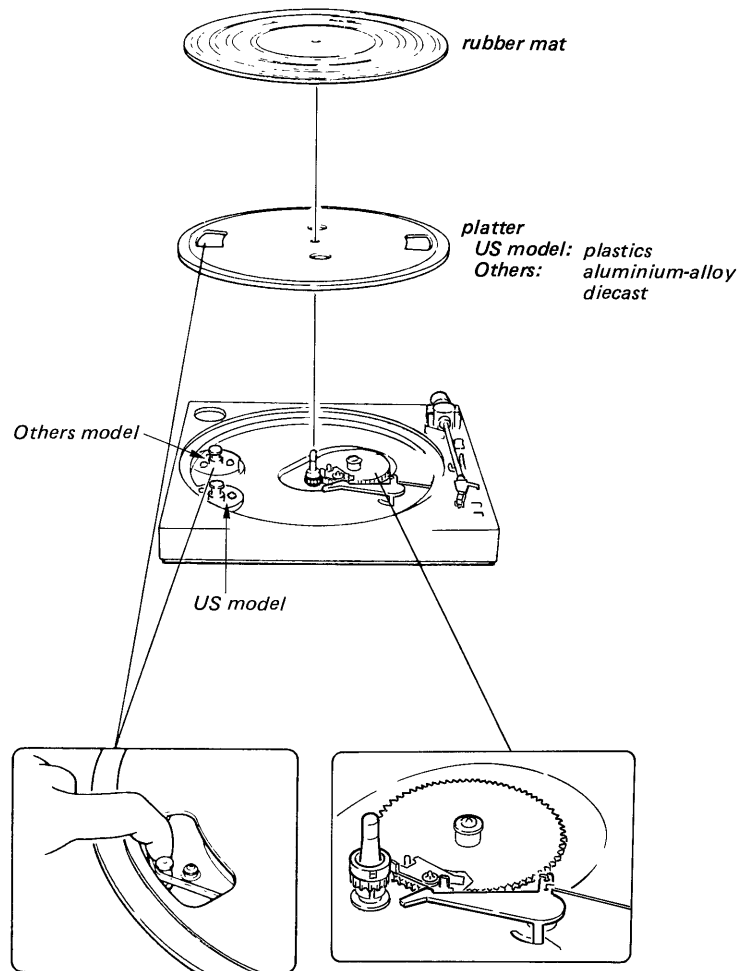
Fig. A. Using an AC voltmeter to check AC leakage.

LOCATION AND FUNCTION OF CONTROLS



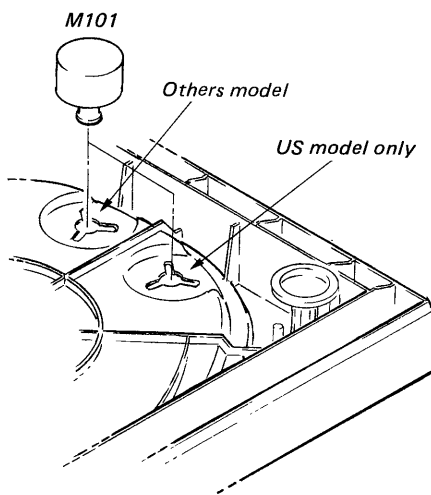
- 1** 45-rpm adaptor
- 2** Tonearm
- 3** ▼/▼ (cueing) lever
Used to lift or lower the tonearm.
- 4** REJECT button
To stop during play, press this button.
- 5** Turntable platter
- 6** Arm rest
- 7** Cartridge
- 8** SPEED selector
For 45-rpm records, depress the selector. For 33-rpm records, press it again.

TURNTABLE ASSEMBLY



Hook the belt on the motor pulley.
If the belt come off from the platter, replace it with the glossy side outward.

SERVICING NOTE



SECTION 1 ADJUSTMENTS

Speed Adjustment

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

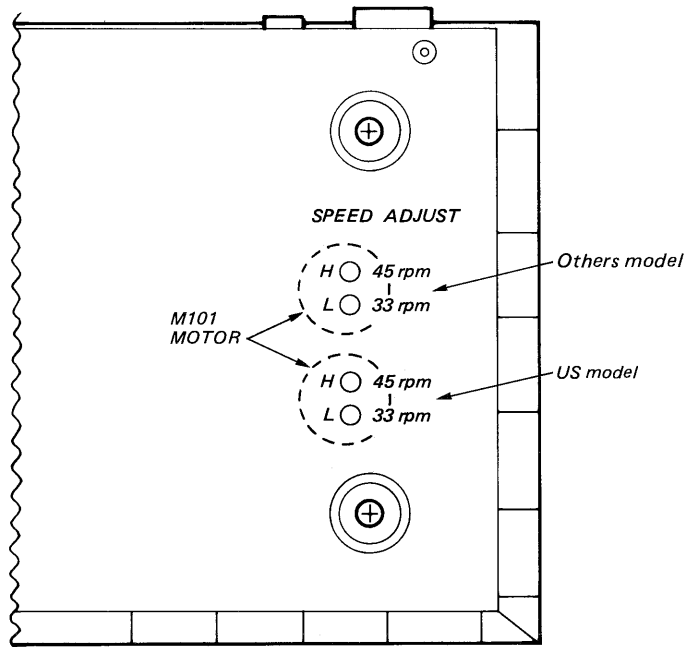
— Using a stroboscope board —

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 —

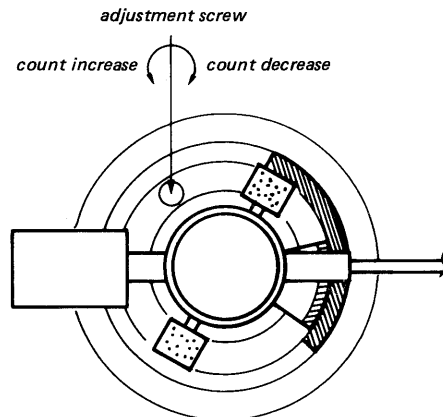
1. Put a test record (YFSC-16) on the mat.
2. Move the arm onto a-2 (3kHz) section and trace it.
3. Adjust M101(L) so that the frequency is 2,991 – 3,009 Hz.
4. Set the SPEED switch to 45.
Adjust M101(H) so that the frequency is 4,038 – 4,062 Hz.

Adjustment Location:



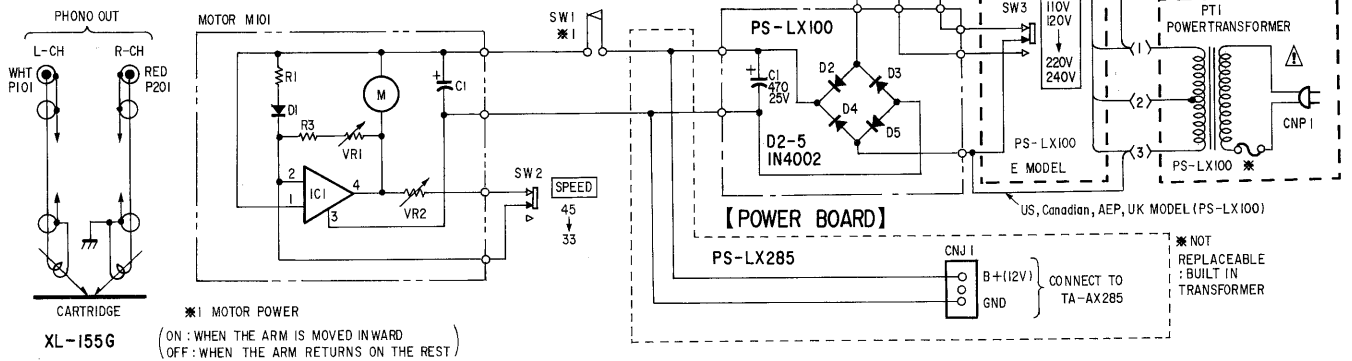
Automatic Return Position Adjustment

1. Put a test record (YFSC-16) on the mat.
2. Set the SPEED switch to 33 and move the tonearm on a return check groove.
3. Turn the Adjustment screw so that the tonearm starts to return at count of 4 – 10.



SECTION 2 DIAGRAMS

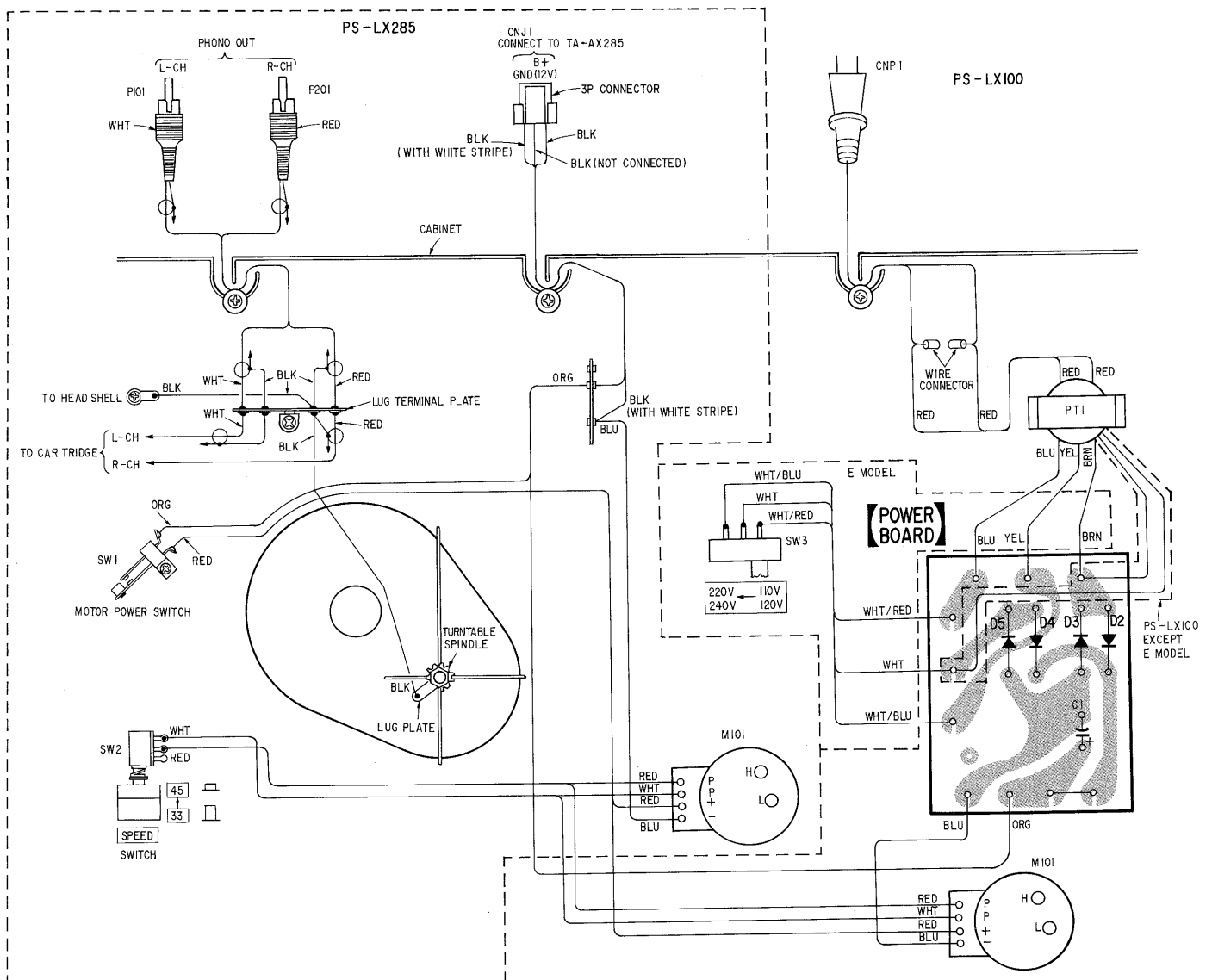
2-1. SCHEMATIC DIAGRAMS



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.



2-2. PRINTED WIRING BOARDS




Note IT: Italian

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-909-060-01 4-895-491-01	TURNTABLE (US)...TURNTABLE, GEAR		33	7-685-648-79	(LX100)...SCREW +BTP 3X12 TYPE 2	N-S
2	4-877-807-11 4-895-496-01	SHEET, TURNTABLE (US)...MAT, TURNTABLE		34	4-895-493-01	(US)...SPINDLE	
3	4-895-490-01	(US)...CLIP, SPINDLE		35	4-895-802-01	BUTTON, SPEED	
4	4-895-492-01	BELT		38	*4-895-804-01	ARM, SLIDE	
5	*4-896-298-01	REST, ARM		39	4-896-302-01	SPRING, SLIDE	
6	4-895-830-01	(EXCEPT US)...SPINDLE ASSY		40	4-895-807-01	WASHER	
7	*4-895-404-01	SPINDLE WASHER		43	7-685-104-19	SCREW +P 2X6 TYPE2 SLIT	
8	4-895-413-01	SCREW		44	*4-895-808-01	ROD, CUE	
9	4-895-414-01	GROMMET (A)		45	4-895-809-01	LEVER, CUE	
10	*4-896-300-01 *4-896-330-01	(LX285)...CABINET, MAIN (LX100)...CABINET, MAIN		46	*4-896-304-01	LEVER, TRIP	
11	4-895-430-01	SCREW (7-BID 3008 ZN3A 12D)		47	*4-896-305-01	ROD, TRIP	
12	4-896-294-01	SCREW (7-BID 3006 ZN3A 10D)		48	*4-895-812-01	SHAFT, LIFT	
13	7-685-647-79	SCREW +BTP 3X10 TYPE2 N-S		49	4-895-813-01	SPRING, LIFT	
14	4-895-024-01	(LX100,LX285:US)...POLY WASHER		50	4-895-814-01	FORK, LIFT	
15	*4-896-282-01 *4-896-283-01	(LX285).....LABEL, MODEL NUMBER (U2) (LX100:US,Canadian) ...LABEL, MODEL NUMBER (U2)		51	7-624-104-04	STOP RING 2.0, TYPE -E	
	*4-896-284-01	(LX100:AE2)...LABEL, MODEL NUMBER (AE2)		52	4-895-818-01	CAM, ADJUSTMENT	
	*4-896-285-01	(LX100:UK)...LABEL, MODEL NUMBER (UK)		53	4-895-819-01	SPRING, ADJUSTMENT	
	*4-896-286-01	(LX100:E).....LABEL, MODEL NUMBER (E)		54	4-895-817-01	LINK, RETURN	
	*4-896-287-01	(LX100:AE1)...LABEL, MODEL NUMBER (AE1)		58	4-895-474-01	CARTRIDGE COVER	
16	4-895-435-01	FOOT		59	1-549-132-11	STYLUS (ND-155D)	
17	X-4895-412-1	(LX100:Canadian,AEP,UK,E, LX285:Canadian,E,IT)...COVER ASSY, DUST		60	4-896-293-01	SCREW ASSY	
18	4-895-495-01	GEAR, CAM, CLUTCH		61	4-896-296-01	WASHER, POLYETHYLENE	
19	X-4895-411-1	ARM ASSY		62	*4-896-297-01	HOLDER, SWITCH	
20	4-895-850-01	SPRING, REJECT		63	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
21	*4-895-836-01	WIRE, REJECT		64	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S	
22	*4-895-837-01	LEVER, REJECT		903	1-558-595-11	CORD, CONNECTION (P101,P201)	
23	4-896-311-01	PANEL, FUNCTION		904	7-623-512-01	LUG TERMINAL 1L4P	
24	4-895-839-01	BUTTON, REJECT		905	*4-896-325-01	(LX100)...PC BOARD, POWER	
25	*4-895-840-01	HOLDER, REJECT		906	△*4-896-338-01	(LX100)...WIRE, CONNECTOR (AC CONNECTION)	
26	4-896-321-01	(LX100:Canadian,AEP,UK,E,LX285:Canadian, E,IT)...HINGE ASSY		907	△.1-526-565-12	(LX100:E)...AC PLUG ADAPTOR	
27	4-896-322-01	(LX100:Canadian,AEP,UK,E,LX285:Canadian, E,IT)...STOPPER, DUST COVER		CNJ1	1-558-596-11	(LX285)...CORD, CONNECTION (3 CORE) (SYSTEM CONTROL)	
28	4-895-443-01	W GEAR 0003 ZN3A		CNP1	△.1-558-945-11	(LX100:US,Canadian)...CORD, POWER	
29	4-896-320-01	HEAD ASSY, PU		CNP1	△.1-558-944-11	(LX100:AEP).....CORD, POWER	
30	4-895-445-01	NUT 50 ZN3A		CNP1	△.1-558-946-11	(LX100:UK).....CORD, POWER	
31	7-621-773-95	(LX100:E)....SCREW +B 2.6X6		CNP1	△.1-551-472-23	(LX100:E).....CORD, POWER	
32	*4-896-299-01	CABINET, LOWER		M101	4-896-306-01	CASE, MOTOR	
				PT1	△.1-449-392-11	(LX100:US,Canadian)...POWER TRANSFORMER	
				PT1	△.1-449-393-11	(LX100:AEP).....POWER TRANSFORMER	
				PT1	△.1-449-394-11	(LX100:UK).....POWER TRANSFORMER	
				PT1	△.1-449-395-11	(LX100:E).....POWER TRANSFORMER	
				SW1	4-896-303-01	SELECTION, LEAF (POWER)	
				SW2	4-896-301-01	SELECTION, PUSH (SPEED 33/45)	
				SW3	△.1-571-083-11	(LX100:E)...SLIDE (VOLT SELECTION)	

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.

SECTION 4 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.
- 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 circuits in 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: $\mu\mu F$.

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

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

Ref.No.	Part No.	Description
903	1-558-595-11	CORD, CONNECTION (P101,P201)
904	7-623-512-01	LUG TERMINAL 1L4P
905	★4-896-325-01	(LX100)...PC BOARD, POWER
906	Δ ★4-896-338-01	(LX100)...WIRE, CONNECTOR (AC CONNECTION)
907	Δ .1-526-565-12	(LX100:E)...AC PLUG ADAPTOR
C1	1-124-480-51	(LX100)...ELECT 470MF 25V
CNJ1	1-558-596-11	(LX285)...CORD, CONNECTION (3 CORE) (SYSTEM CONTROL)
CNP1	Δ .1-558-945-11	(LX100:US,Canadian)...CORD, POWER
CNP1	Δ .1-558-944-11	(LX100:AEP)...CORD, POWER
CNP1	Δ .1-558-946-11	(LX100:UK)...CORD, POWER
CNP1	Δ .1-551-472-23	(LX100:E)...CORD, POWER
D2	8-719-200-02	(LX100)...DIODE 10E2
D3	8-719-200-02	(LX100)...DIODE 10E2
D4	8-719-200-02	(LX100)...DIODE 10E2
D5	8-719-200-02	(LX100)...DIODE 10E2
M101	4-896-306-01	CASE, MOTOR
PT1	Δ .1-449-392-11	(LX100:US,Canadian)...POWER TRANSFORMER
PT1	Δ .1-449-393-11	(LX100:AEP)...POWER TRANSFORMER
PT1	Δ .1-449-394-11	(LX100:UK)...POWER TRANSFORMER
PT1	Δ .1-449-395-11	(LX100:E)...POWER TRANSFORMER
SW1	4-896-303-01	SELECTION, LEAF (POWER)
SW2	4-896-301-01	SELECTION, PUSH (SPEED 33/45)
SW3	Δ .1-571-083-11	(LX100:E)...SLIDE (VOLT SELECTION)

ACCESSORY & PACKING MATERIAL

3-550-458-01	(LX100:E)...LABEL, CAUTION, POWER SELECTOR A
3-703-450-01	(LX100:US)...INSTRUCTION
3-703-079-21	(LX100:UK)...LABEL, CAUTION (BACK)
3-786-002-11	(LX100:AEP,UK,E).....MANUAL, INSTRUCTION
3-786-002-21	(LX100:US,Canadian)...MANUAL, INSTRUCTION
3-786-002-31	(LX100:Canadian).....MANUAL, INSTRUCTION
3-786-002-41	(LX100:AEP).....MANUAL, INSTRUCTION
*4-895-829-01	PLATE, CONTROL, SPEED
4-895-846-01	POLYETHYLENE BAG
4-895-847-01	HOLDER, TURNTABLE
4-895-848-01	PLATE, TOP
4-895-481-01	(LX100)...ADAPTOR, 45
*4-896-307-01	(LX100:Canadian,AEP,UK,E,LX285:E) ...CUSHION (RIGHT)
*4-896-309-01	(LX100:US,LX285:US)...CUSHION (RIGHT)
*4-896-308-01	(LX100:Canadian,AEP,UK,E,LX285:E) ...CUSHION (LEFT)
*4-896-310-01	(LX100:US,LX285:US)...CUSHION (LEFT)

PS-LX100/285

SONY[®] SERVICE MANUAL

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CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

	INCORRECT				CORRECT			
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
7	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
	905	4-896-325-01	(LX100)...	PC BOARD, POWER	905	<u>4-896-339-01</u>	(LX100)...	PC BOARD, POWER