

PS-LX410/LX410(G)

SERVICE MANUAL

PS-LX410:

US Model

AEP Model

UK Model

E Model

PS-LX410(C):

US Model

Canadian Model



The PS-LX410 (AEP, UK, E Model) is supplied with a XL-250G cartridge, while the PS-LX410 (US model) is not supplied with a cartridge.

SPECIFICATIONS

Turntable

| | |
|--------------------------|---|
| Platter | 30.1 cm (12 in.), aluminum-alloy diecast |
| Motor | Linear torque BSL (brushless and slotless) motor |
| Drive system | Direct drive |
| Control system | Quartz lock servo control system |
| Speed | 33 $\frac{1}{3}$ rpm, 45 rpm |
| Starting characteristics | Comes to nominal speed within $\frac{2}{3}$ revolution (33 $\frac{1}{3}$ rpm) |
| Wow and flutter | 0.025% (WRMS)* 0.03% (WRMS) ±0.045% (DIN) |

| | |
|-----------------------|---|
| Signal-to-noise ratio | 75 dB (DIN-B) |
| Load characteristics | 0% up to 100 g stylus force (at lead-in groove of a record) |
| Speed deviation | Within ±0.0003% |
| Automatic system | Lead-in, return, reject, repeat |

Tonearm

| | |
|------------------------|--------------------------------|
| Type | Statically balanced |
| Pivot-to-stylus length | 216.5 mm (8 $\frac{1}{2}$ in.) |
| Overhang | 16.5 mm ($\frac{21}{32}$ in.) |
| Usable cartridge | Plug-in type, 6 g |

SAFETY-RELATED COMPONENT WARNING!

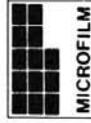
COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Cartridge VL-45G (supplied with some units)

| | |
|--------------------|---|
| Type | Moving magnet type |
| Frequency response | 20 Hz to 20 kHz |
| Channel separation | 20 dB at 1 kHz |
| Output voltage | 3.5 mV at 1 kHz, 5 cm/sec. |
| Load impedance | 47 to 100 kilohms |
| Tracking force | 1.25 g |
| Stylus | Sony ND-145G (conical 0.6 mil diamond) |
| Weight | 6 g |

ATTENTION AU COMPOSANT AYANT RAPPORT
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE Δ SUR LES DIAGRAMMES SCHEMATIQUES 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®

AUD

— Continued on page 2 —

PS-LX410/LX410(C)

Cartridge XL-250G

Type Moving magnet type
Frequency response 20 Hz to 20,000 Hz
Channel separation 8 dB at 1 kHz
Output voltage 5 mV at 1 kHz, 5 cm/sec., 45°
Load impedance 47 to 100 kilohms
Tracking force 1.0 to 1.5 g (1.25 g recommended)
Stylus Sony ND-250G
Weight 6 g

General

Power requirements US, Canadian model: 120 V ac, 60 Hz
AEP model: 220 V ac, 50/60 Hz
UK model: 240 V ac, 50/60 Hz

E model: 110–220 or 220–240 V ac, adjustable
50/60 Hz

Power consumption 8 W

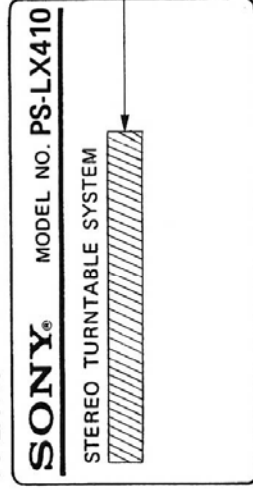
Dimensions Approx. 430 × 110 × 340 mm (w/h/d)
(17 × 4³/₈ × 13³/₈ in.)

Weight including projecting parts and controls
Approx. 4.7 kg (10 lbs 6 oz), net
Approx. 5.7 kg (12 lbs 9 oz), in shipping carton

MODEL IDENTIFICATION

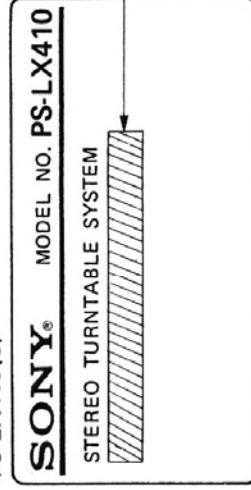
— Specification Label —

PS-LX410



US: AC: 120V 60Hz 8W
AEP: AC: 220V ~ 50/60Hz 8W
UK: AC: 240V ~ 50/60Hz 8W
E: AC: 110–220V, 220–240V ~ 50/60Hz 8W

PS-LX410(C)



US, Canadian: AC: 120V 60Hz 8W

FEATURES

Automatic turntable system

Automatic lead-in, return, reject and repeat functions are activated by merely pushing the buttons.

Linear torque BSL motor

Direct drive system with Sony's unique BSL (Brushless and slotless) motor which has a high signal-to-noise ratio to virtually eliminate wow and flutter. The motor's high torque assures a quick attainment of 33 $\frac{1}{3}$ rpm after only $\frac{2}{3}$ revolution.

Quartz lock servo system

The turntable maintains an accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator.

Low-mass tonearm and cartridge

The low-mass tonearm and cartridge allow the stylus to track with greater accuracy.

Resilient feet

The turntable has resilient feet that isolate the mechanism from external shock and vibration.

Disc centering guides

Disc centering guides facilitate placing a 30 cm record over the center spindle.

Wireless remote control operation

Using the optional RM-44 or RM-S410 system remote controller, start/stop play can be remotely controlled.

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 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.

Notes on Repair

Check as follows when the turntable does not rotate.

1. Check to see if a waveform appears at Q107-110 emitter when DC 2V is applied to D105 cathode side.

If the waveform appears, the motor drive circuit and motor are not defective, but the servo circuit may be defective.

2. If the motor does not rotate after step 1, the motor drive circuit or motor, etc. may be defective.

2-1. Motor Check

Check for power being conducted by applying a tester to the motor coil.

2-2. Hall Element Check

Measure the resistance values between each pin. (Between pins next to each other and diagonally across from each other.) The values should be about 600–1k Ω .

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, 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)

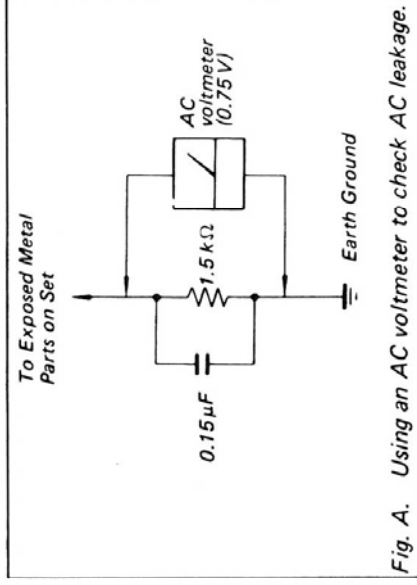
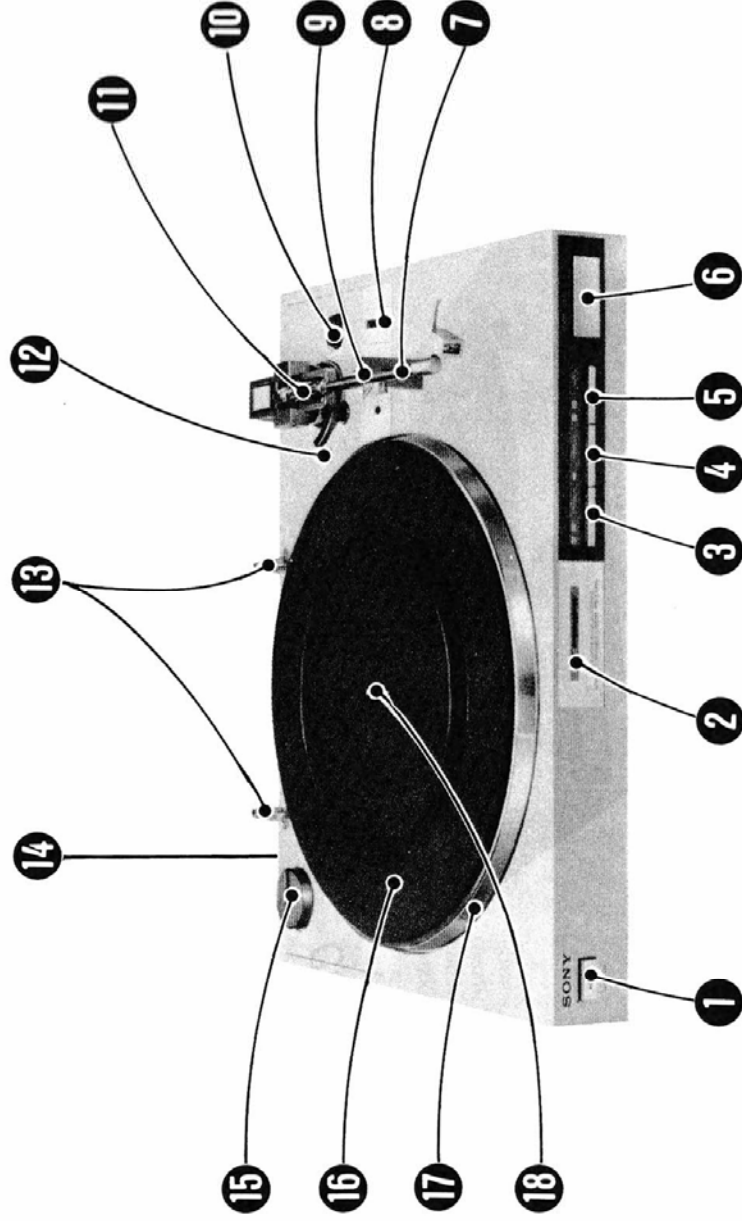


Fig. A. Using an AC voltmeter to check AC leakage.

PS-LX410/LX410(C)

PARTS IDENTIFICATION

The numbers in the photo are keyed to the following explanations.



1 POWER switch

Press to turn on the turntable. To turn the turntable off, press it again.

2 QUARTZ LOCK indicator

When the turntable platter starts rotating, this indicator flashes. When the platter speed is stabilized, this indicator lights up.

3 SPEED selector and indicators

Selects the record speed. When the POWER switch is turned on, the speed is always 33 $\frac{1}{3}$ rpm and the indicator on the right illuminates. When the selector is pressed, 45 rpm is selected and the indicator on the left illuminates.

4 REPEAT button and indicator

Press this button to repeat play. The indicator illuminates and repeat play continues until this button is pressed to stop it. If the START/STOP button is pressed during repeat play, the tonearm returns to the arm rest and the turntable stops rotating.

5 Record SIZE selector and indicators

Selects the record size. When the POWER switch is turned on, the size is always 30 cm and the indicator on the right illuminates. When the selector is pressed, 17 cm is selected and the indicator on the left illuminates.

6 START/STOP button

Press this button to start the record playing, and the QUARTZ LOCK indicator flashes, then lights up. To stop during play, press it again.

7 Tonearm

8 V/V (cueing) lever

Used to lift or lower the tonearm.

9 Arm rest

10 ANTI-SKATING compensator

11 Sub-weight

12 Tonearm drop-point adjustment hole

13 Disc centering guides

14 Remote connector (rear)

Connect the optional RM-44 or RM-S410 system remote controller to this connector.

15 45-rpm adaptor

16 Rubber mat

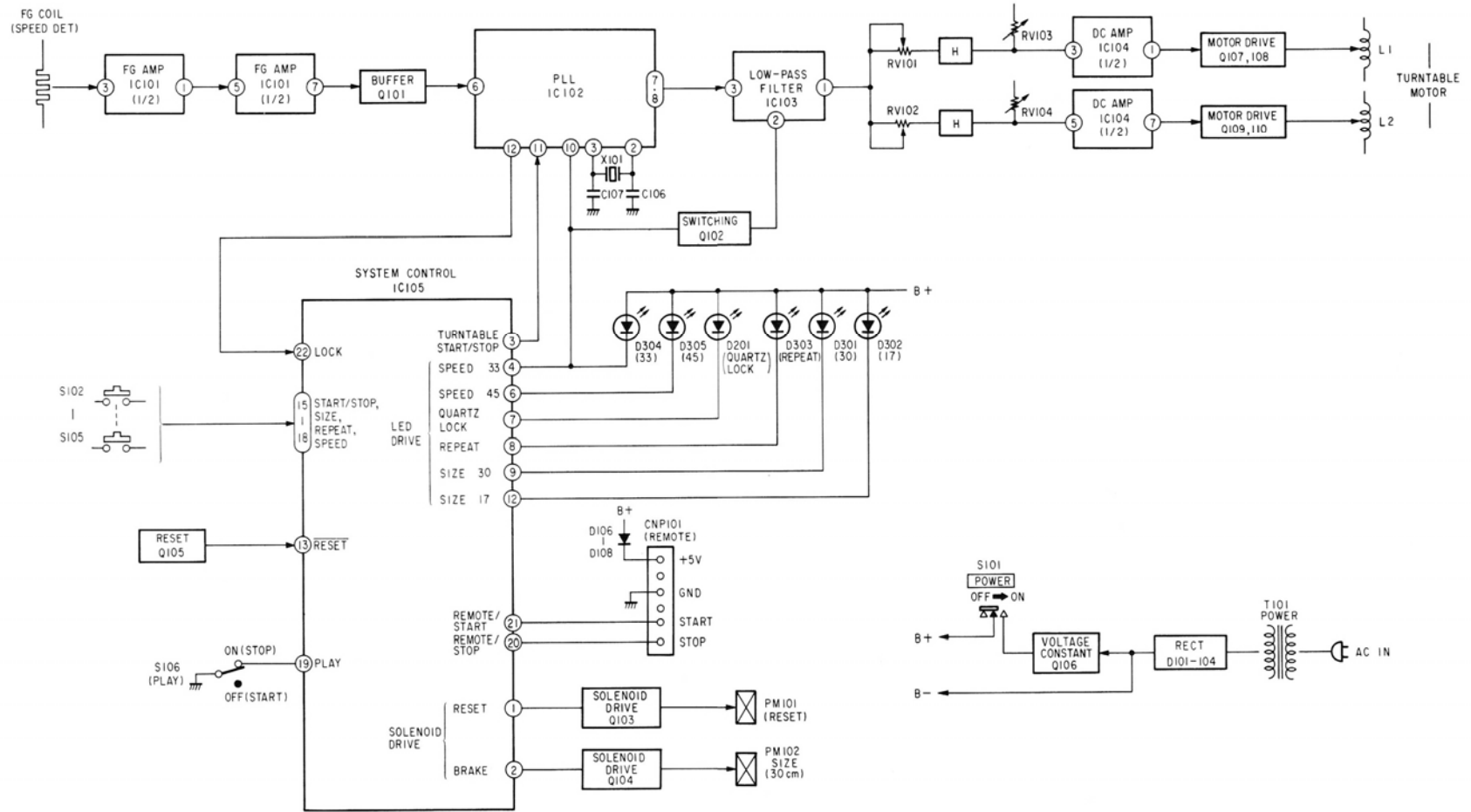
17 Turntable platter

18 Center spindle

PS-LX410/LX410(C)

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM

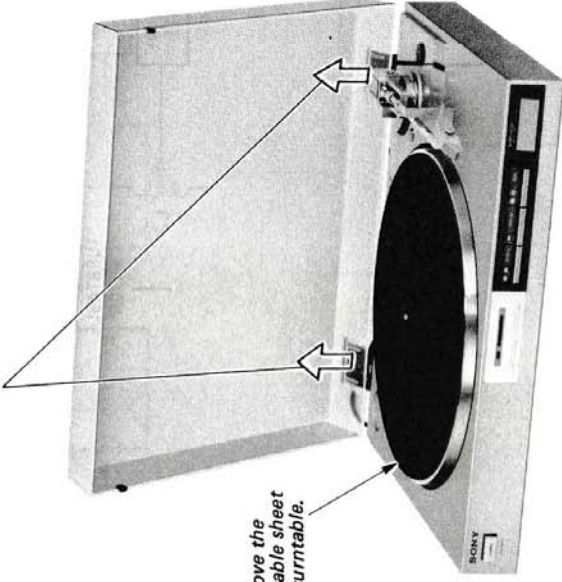


SECTION 2 DISASSEMBLY

2-1. REMOVAL **Note:** Follow the disassembly procedure in the numerical order given.

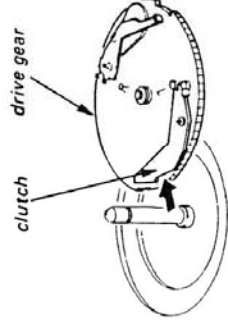
DUST COVER, TURNTABLE

① **Open the dust cover fully and slide it upward with both hands.**



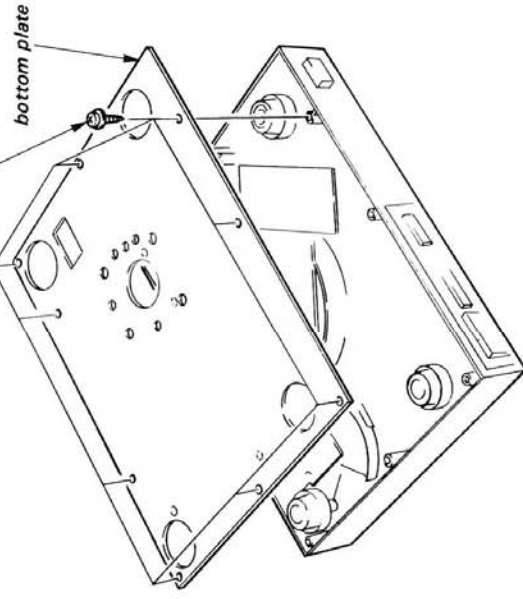
② **Remove the turntable sheet and turntable.**

Caution for installation:
Move the clutch in the direction as shown by the arrow and put it the inside of the drive gear.



BOTTOM PLATE

PTPWH3 x 12
(9 pcs.)

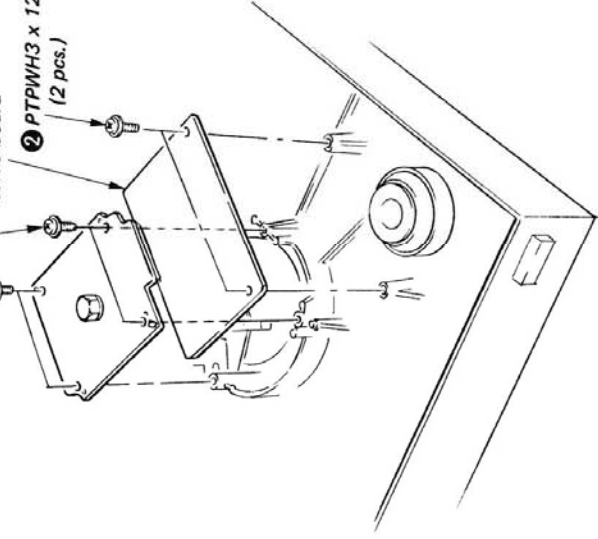


SERVO BOARD

① PTPWH3 x 12
(4 pcs.)

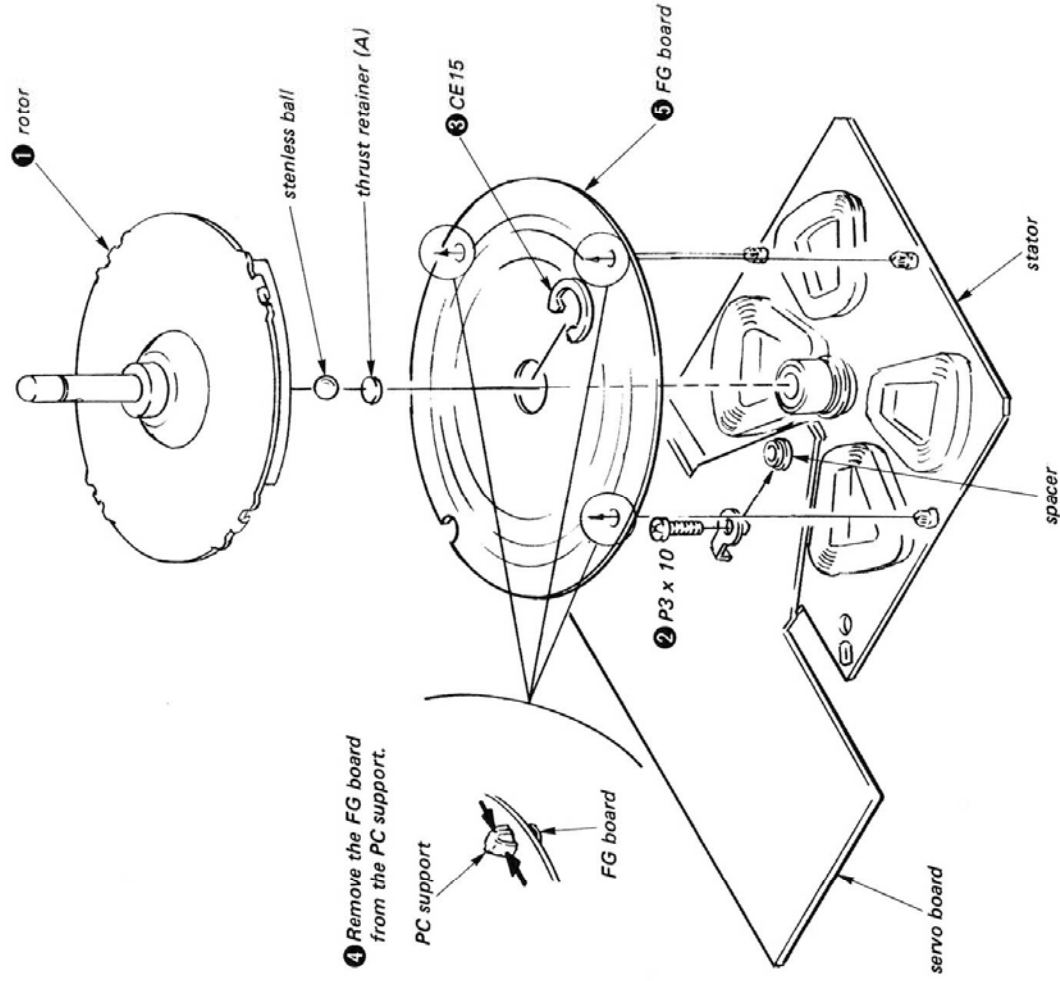
② PTPWH3 x 12
(2 pcs.)

servo board



PS-LX410/LX410(C)

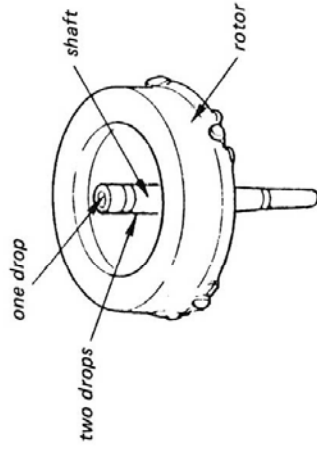
ROTOR, FG BOARD



- 4 Remove the FG board from the PC support.

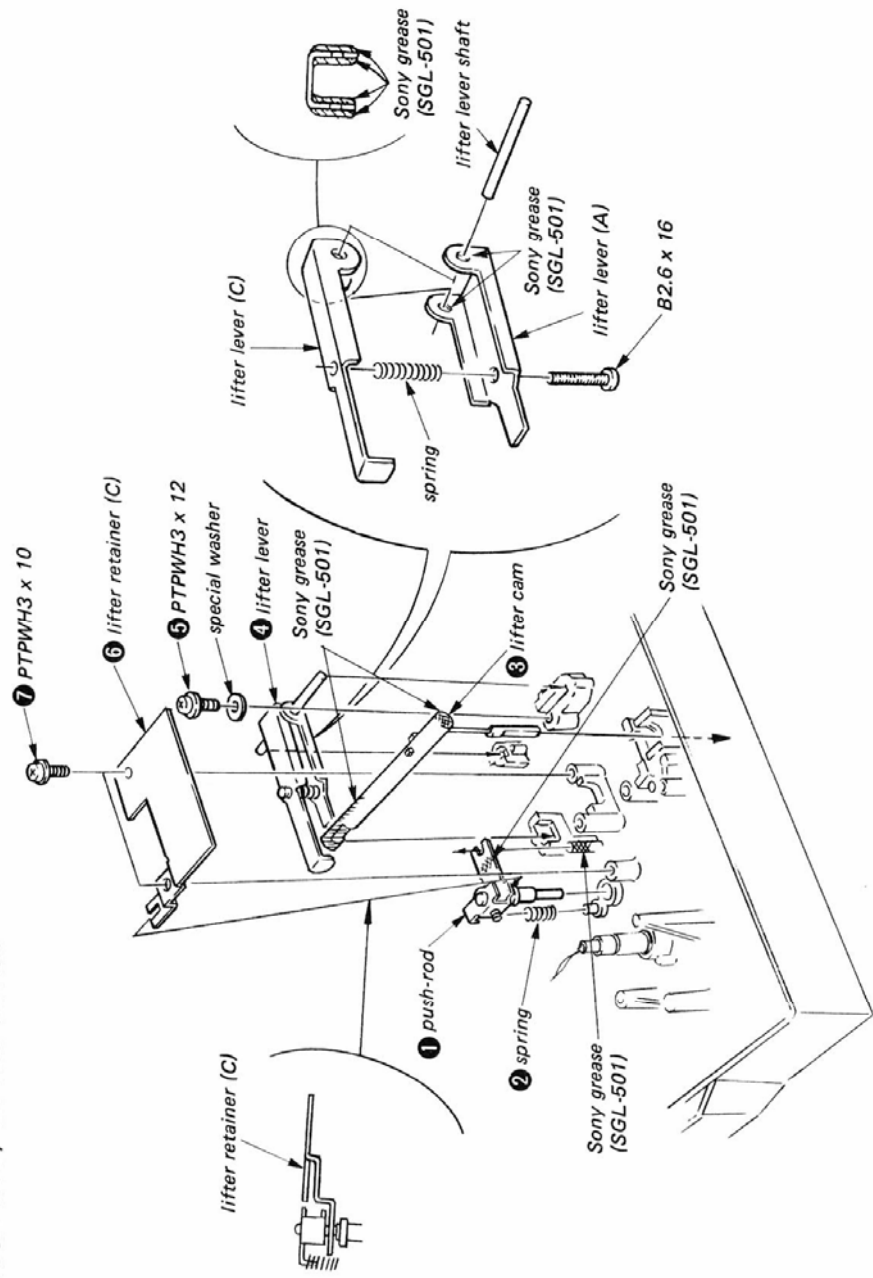
Caution for installation:

When the rotor is replaced, apply Sony oil OL-2KA to the rotor shaft as illustrated below.



2-2. INSTALLATION

PUSH ROD, LIFTER LEVER

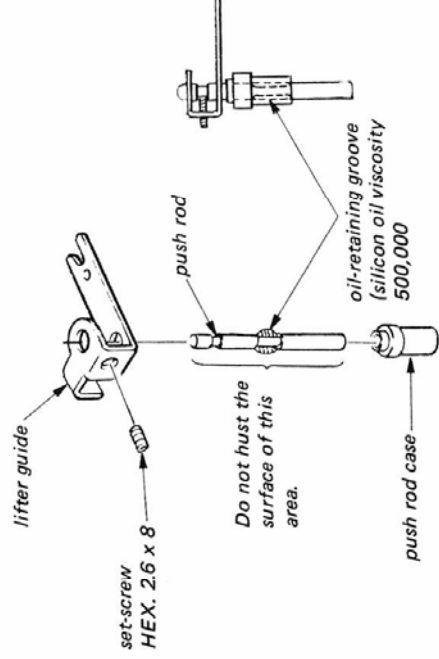


Caution for installation:

When the push rod is replaced, apply silicon oil (viscosity: 500,000 cs) to the push rod as illustrated below.

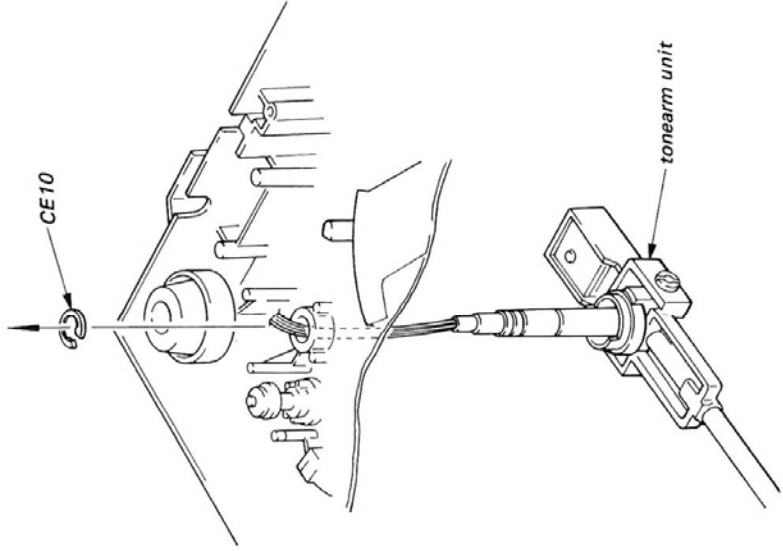
Caution:

When lubricating, rotate and move the push rod up and down a few times.

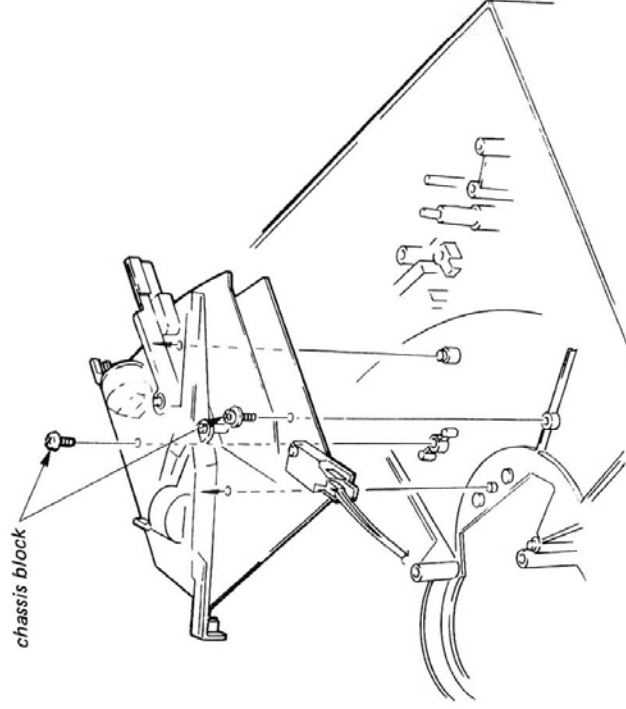


PS-LX410/LX410(C)

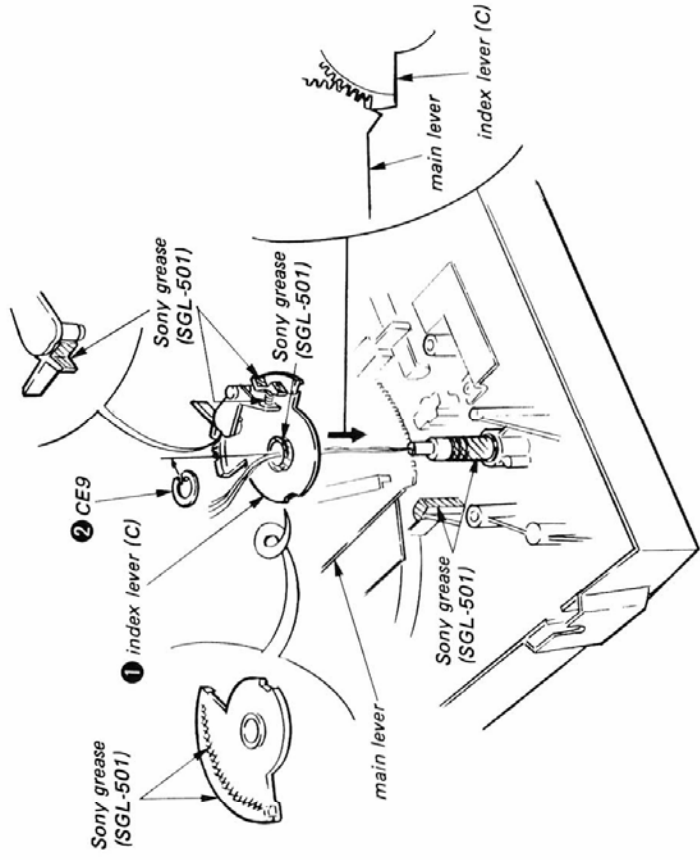
TONE ARM UNIT



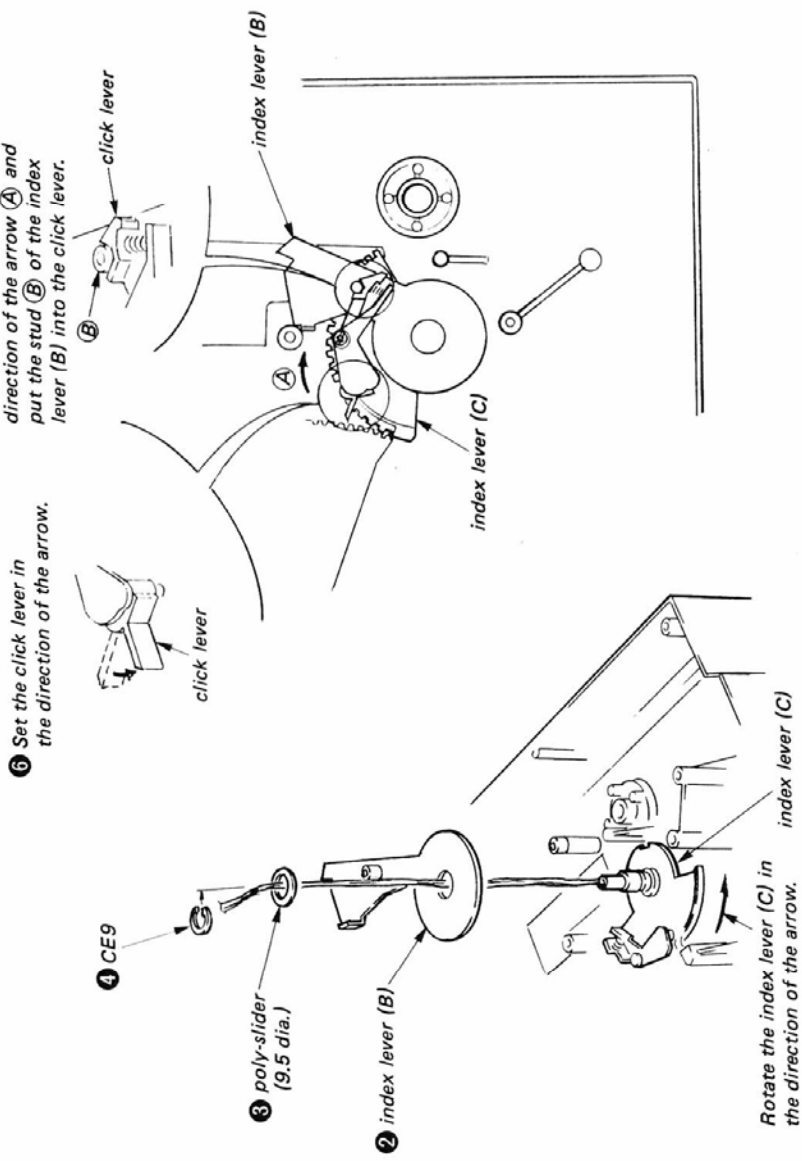
CHASSIS BLOCK



INDEX LEVER (C)

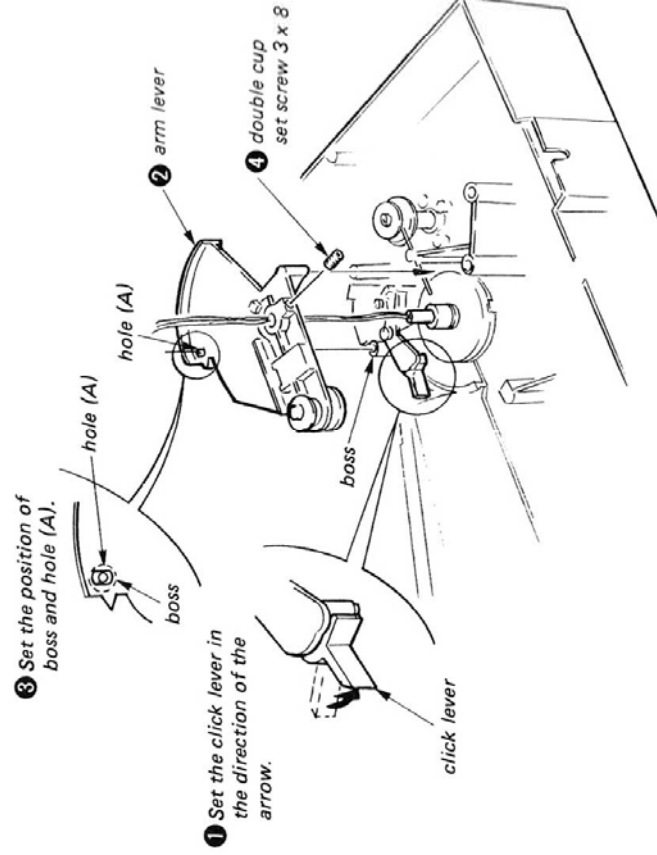


INDEX LEVER (B)

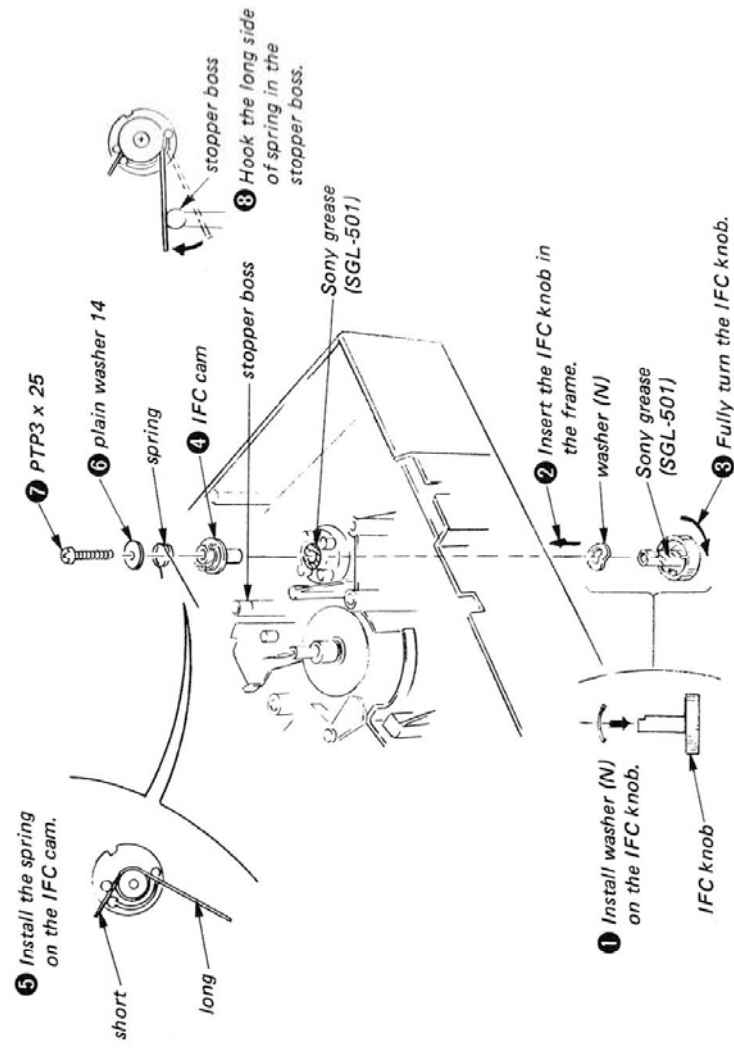


PS-LX410/LX410(C)

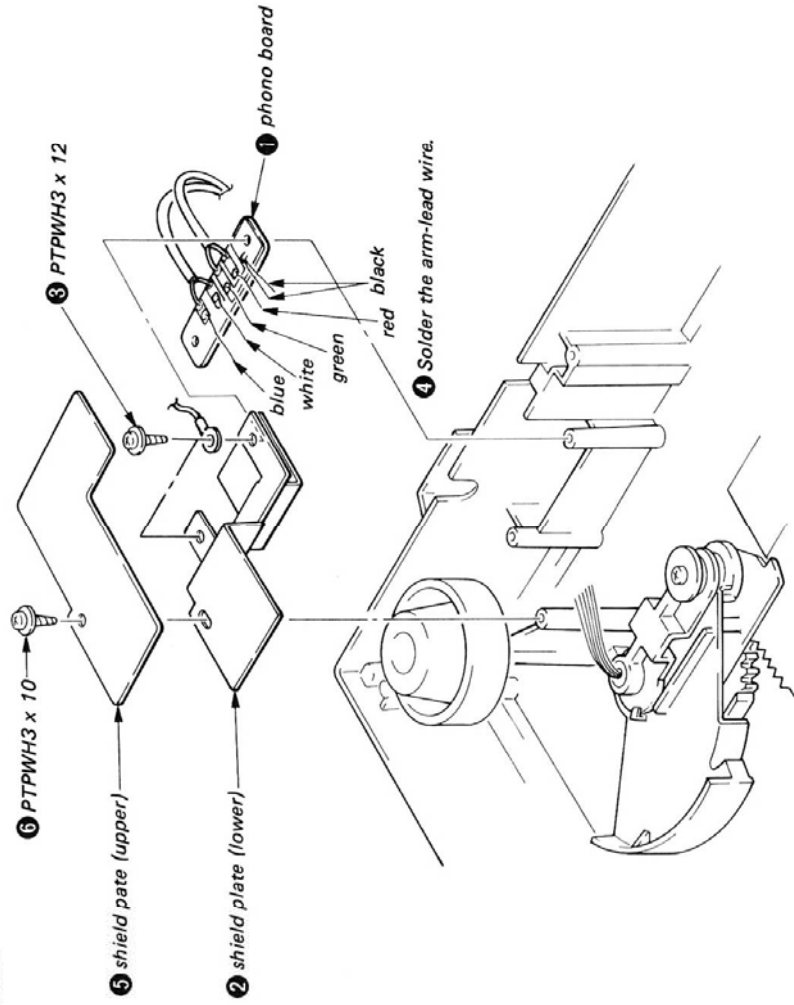
ARM LEVER



IFC (ANTI-SKATING) KNOB

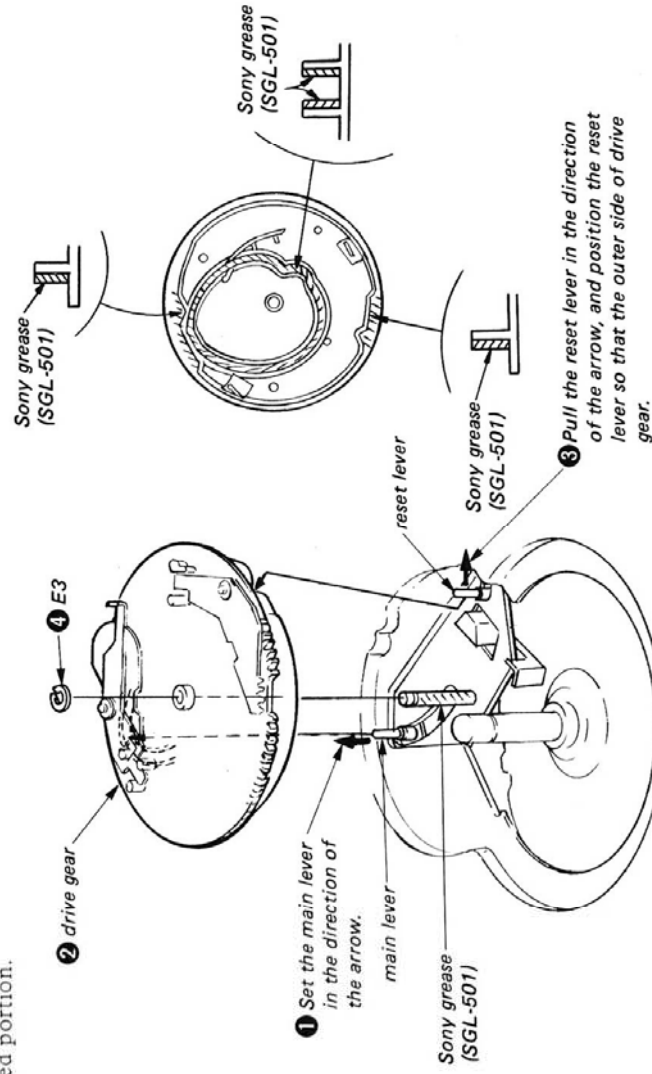


PHONO BOARD



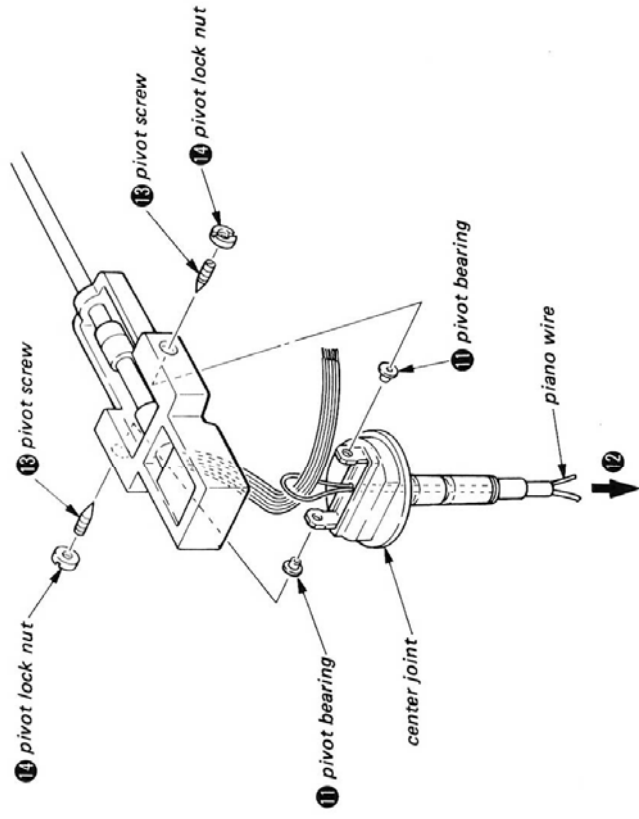
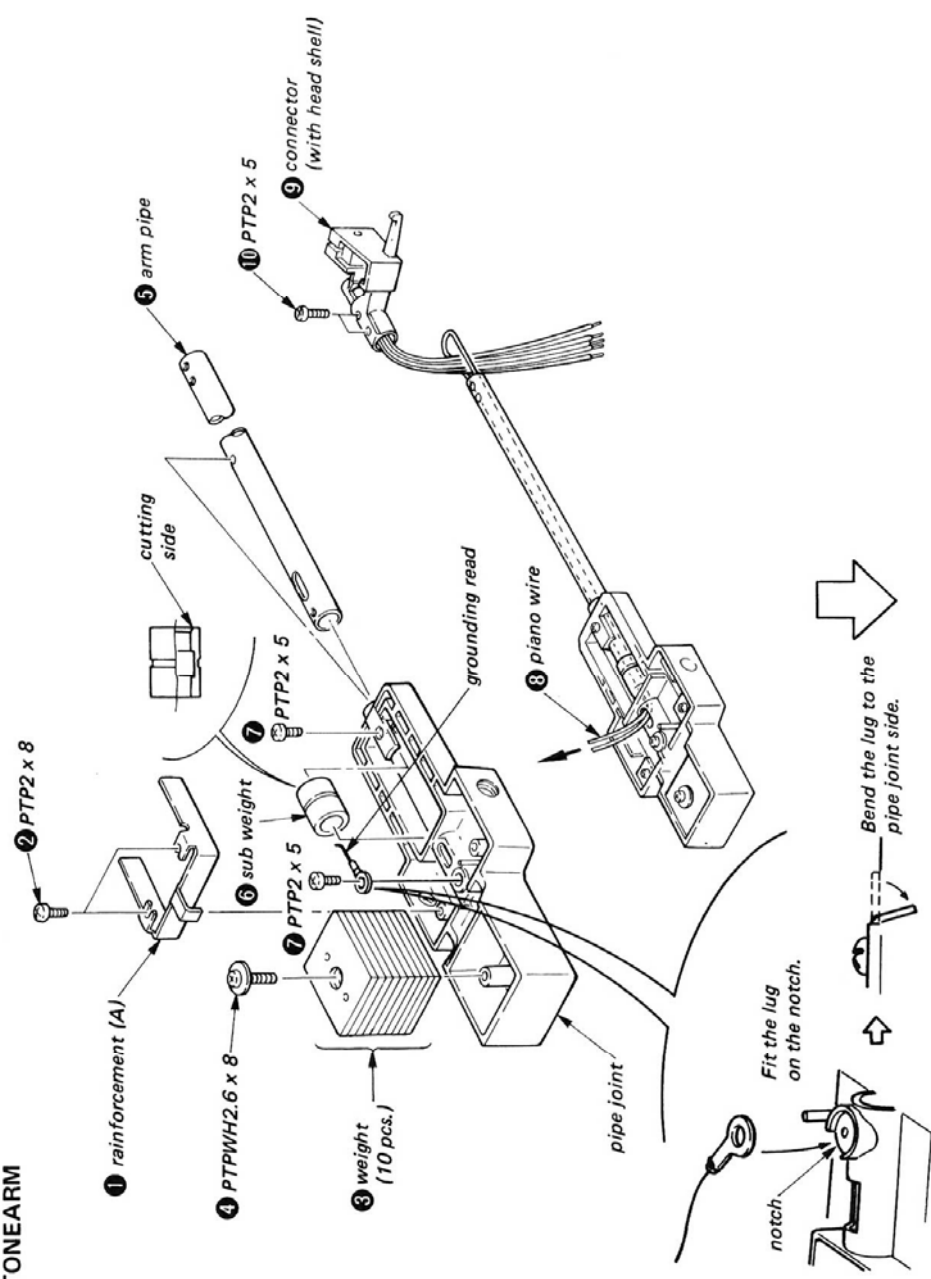
DRIVE GEAR

If necessary, apply Sony grease (SGL-510) to the specified portion.



PS-LX410/LX410(C)

TONEARM



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENT

Brake Lever Position Adjustment

1. Rotate the drive gear in the direction of the arrow by hand, and set the reset lever to the reset position where the pin of the reset lever is set into the reset groove of the drive gear. See Fig. 1.
2. Confirm that the portion **A** of the size lever lightly touches to rectangular hole of the chassis. See Fig. 2.
3. At this time, adjust the adjustment screw so that the brake lever is slightly detached from the size lever. See Fig. 3.
4. Secure the adjustment screw with locking compound.

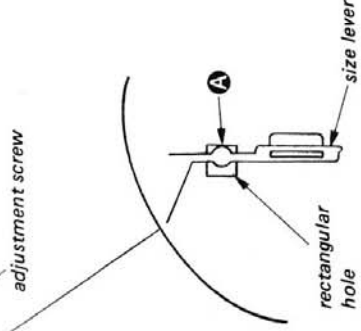
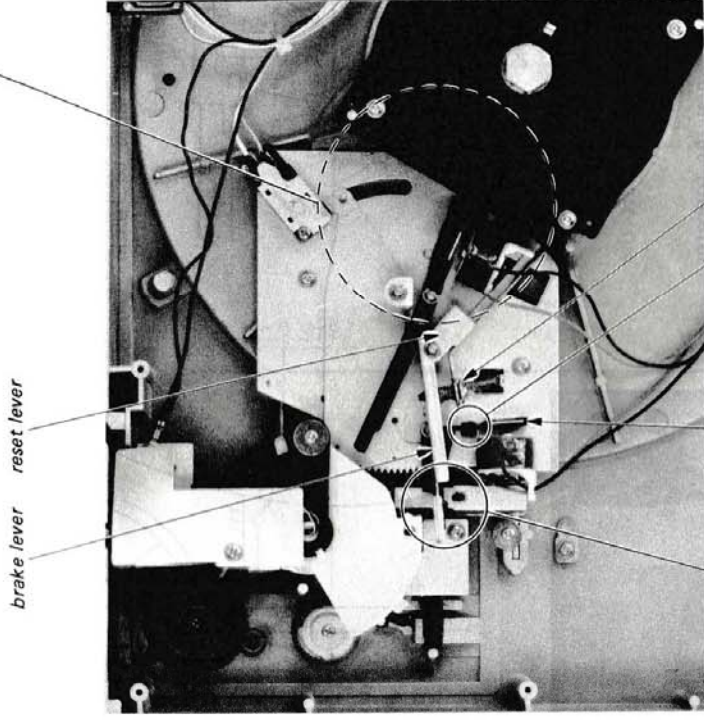
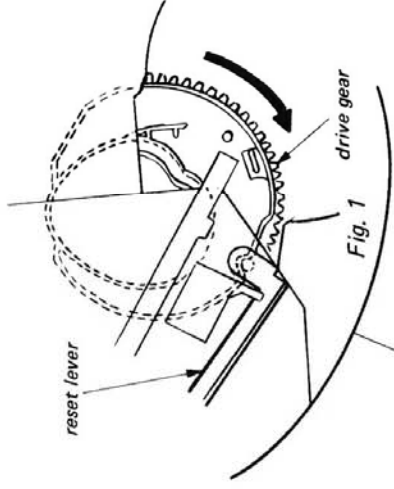


Fig. 2

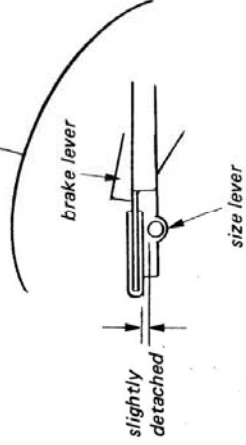


Fig. 3

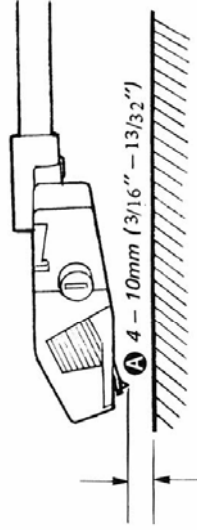
PS-LX410/LX410(C)

Stylus Height Adjustment

Note: Perform both adjustments for manual and automatic operations.

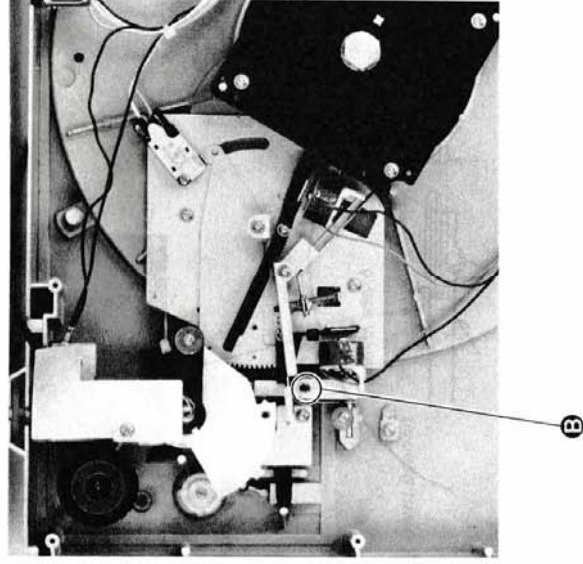
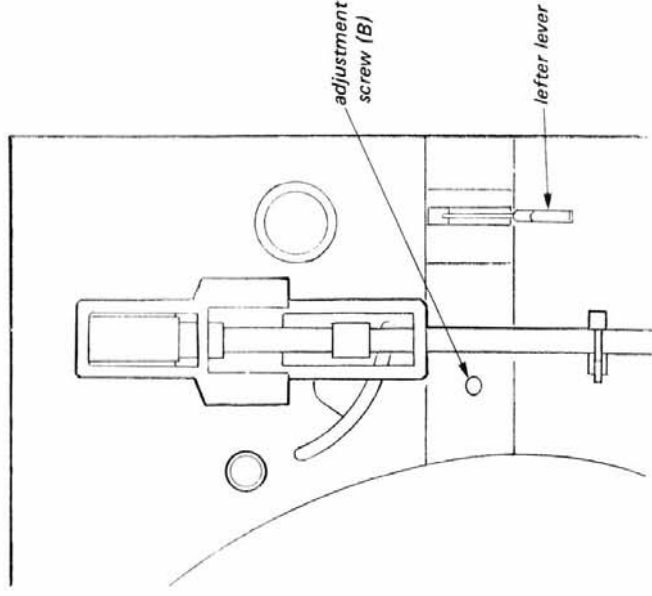
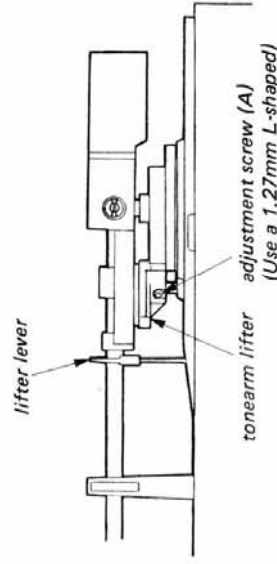
1. Automatic

- 1-a) Put a test record on the mat.
- 1-b) Depress the lifter lever to make a lifter-down mode (∇).
- 1-c) Press the START/STOP button to start the operation.
- 1-d) Turn the POWER off just when the tonearm has moved to the automatic-return point and the tonearm lifter has started to lift the tonearm. Stop the turning of the turntable by hand.
- 1-e) Loosen the adjustment screw (A) and adjust the height of the tonearm lifter so that the stylus height **A** becomes in 4mm to 10mm (3/16" to 13/32").



2. Manual

- 2-a) Put a test record on the mat.
- 2-b) Depress the lifter lever to make a lifter-up mode (∇).
- 2-c) Press the START/STOP button to start the operation.
- 2-d) Turn the POWER off just when the tonearm has come to the lead-in position and stopped moving.
- 2-e) Adjust the adjustment screw (B) so that the stylus height **A** becomes in 4mm to 8mm (3/16" to 13/32").
- 2-f) Secure the portion **B** with locking compound.



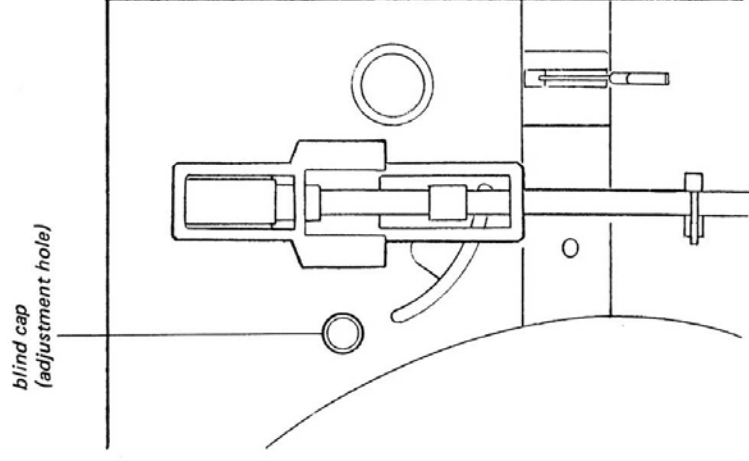
Stylus Drop-point Adjustment

1. Remove the blind cap.
2. Set the SPEED switch to 33.
3. Put a test record YFSC-16 on the mat.
4. Press the START/STOP button.
5. By using a hex-shaped ordinal pencil or a screwdriver, turn the adjustment screw so that the stylus tip drops on the record at the 4 – 16 count position.

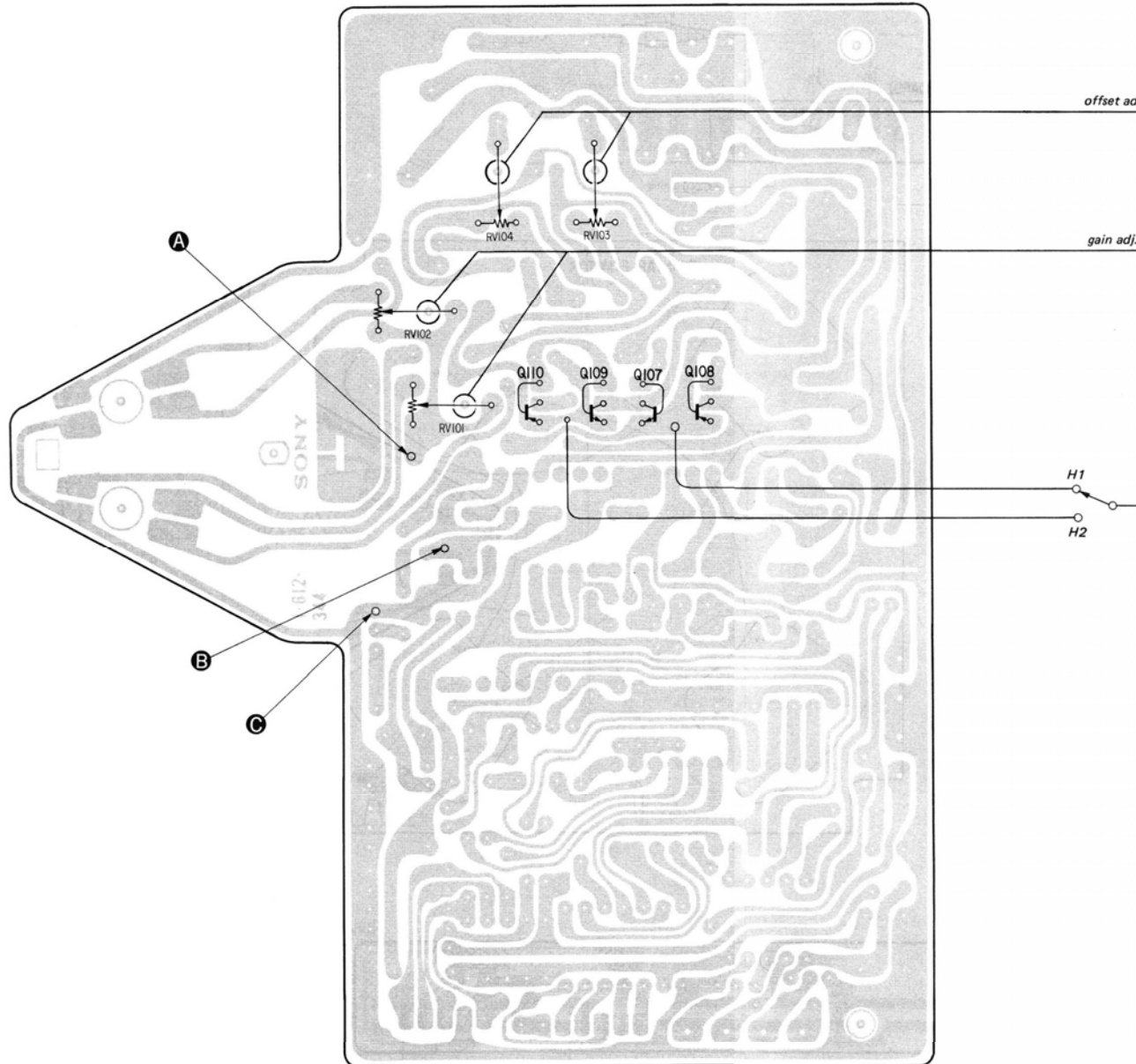
| Adjustment screw rotation | Drop point |
|---------------------------|------------------------------|
| clockwise | to inside (higher counts) |
| counterclockwise | to outside (lower counts) |

6. After the adjustment, confirm that the auto-return is started within 3 – 12 count on the test record.

Note: The proper adjustment for a 30cm record is also correct for a 17cm record.



3-2. ELECTRICAL ADJUSTMENT



Gain/Offset Adjustments

1. Connect the pattern **B** to the pattern **C** , and apply a 2V dc to the pattern **A** .
2. POWER switch: ON
SPEED switch: 45
3. Adjust the gain adjustment RV101 at the switch position H1 for a 6Vp-p reading on the oscilloscope.
4. Adjust the gain adjustment RV102 at H2 for a 6Vp-p reading.
5. Adjust the offset adjustment RV103 at H1 for a 0V dc centering on the waveform.
6. Adjust the offset adjustment RV104 at H2 for a 0V dc centering.
7. After the adjustments, disconnect the pattern **B** from the pattern **C** and remove the dc-voltage connection from the pattern **A** .

Note: Set the sweep time longer for easy waveform checking.

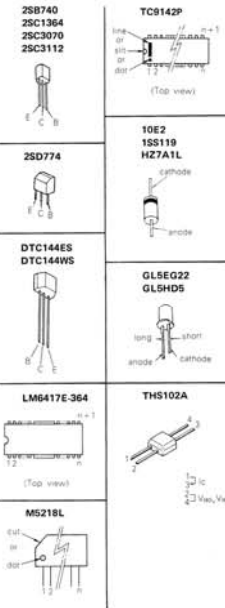
PS-LX410/LX410(C)

DIAGRAMS SECTION 4

PS-LX410/LX410(C) PS-LX410/LX410(C)

4-1. MOUNTING DIAGRAM
— Conductor Side —

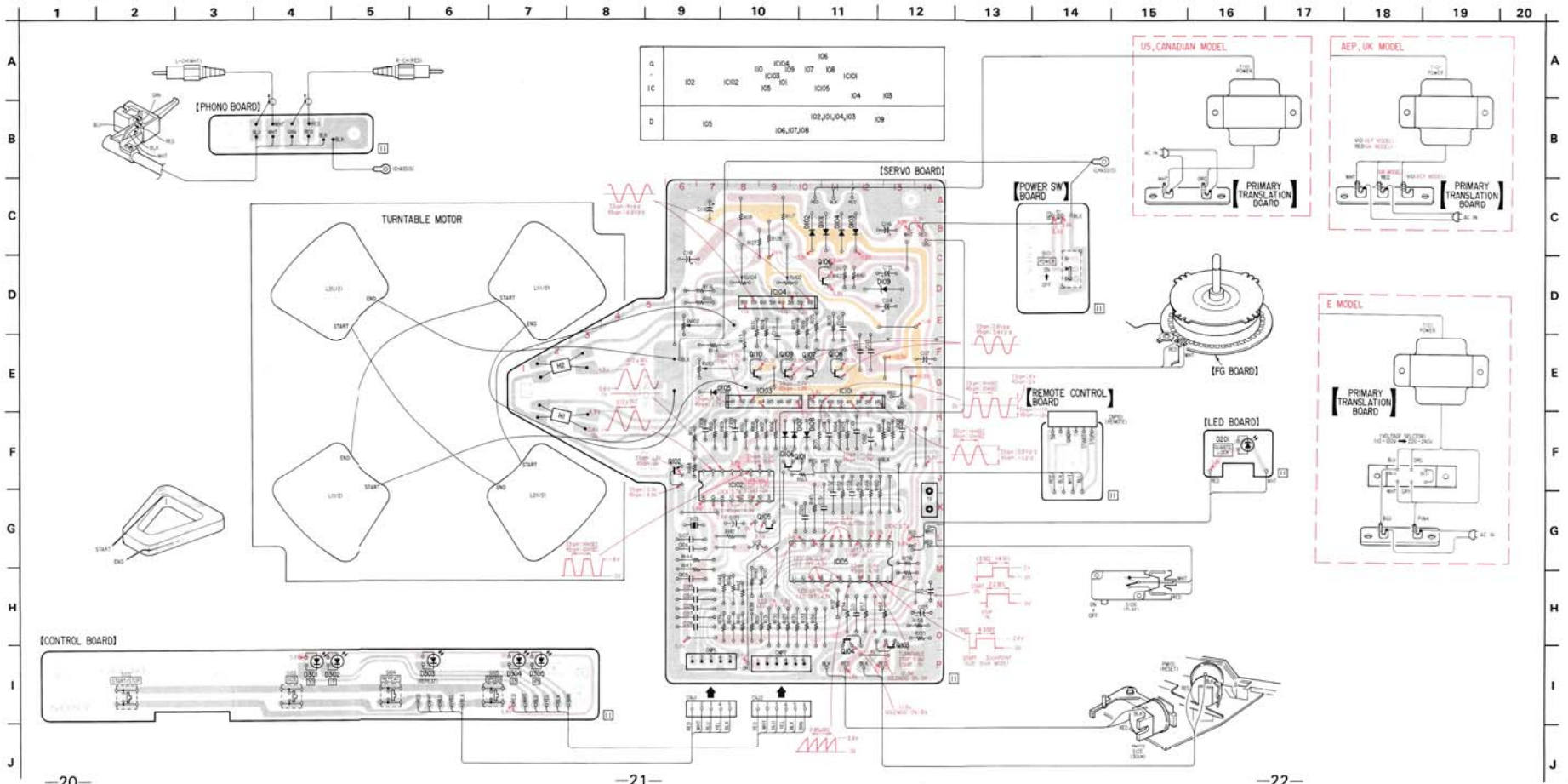
● Semiconductor Lead Layouts



Note:
● Color code of sleeving over the end of the jacket.

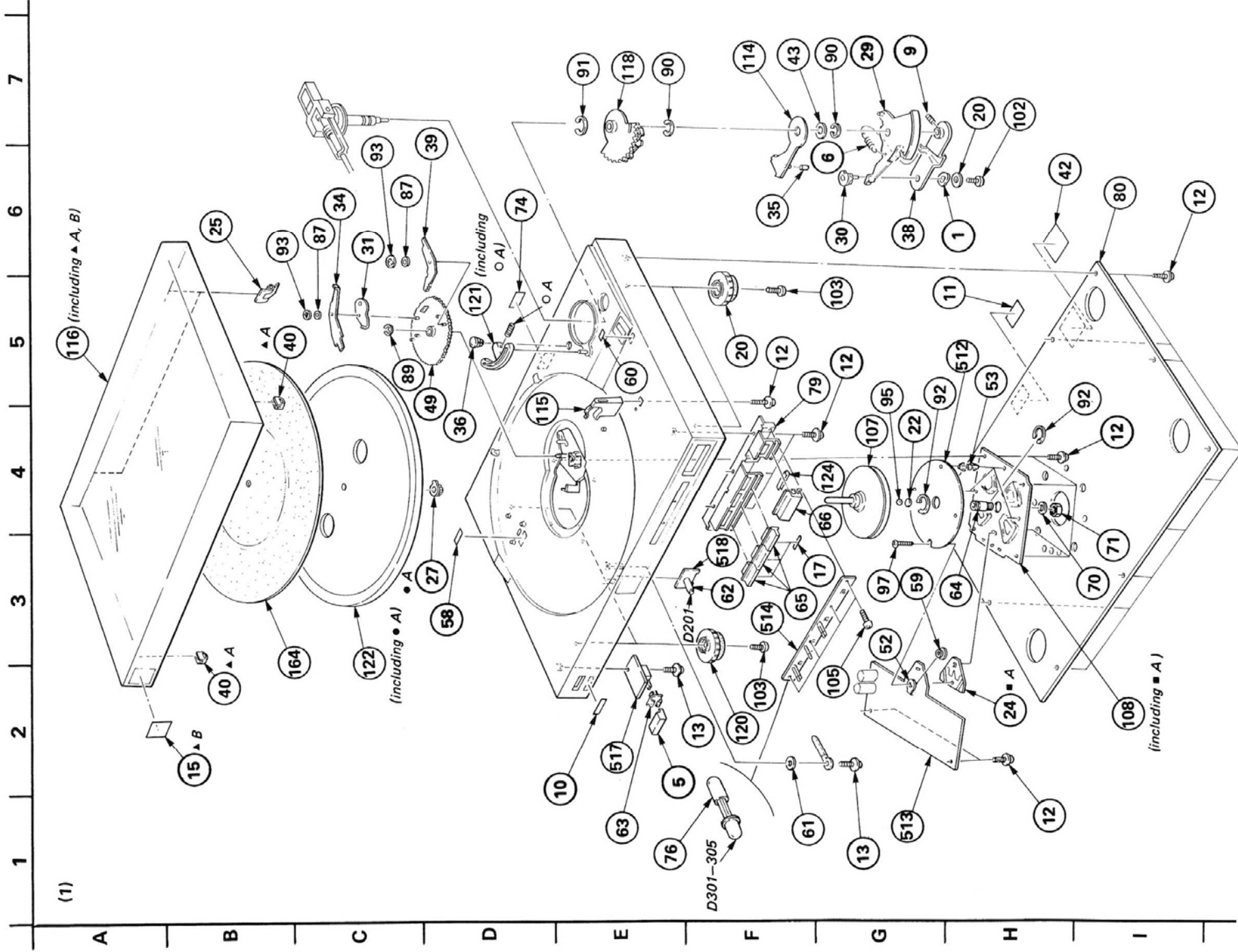


○ : parts extracted from the component side.
● : parts extracted from the conductor side.
■ : 1x pattern

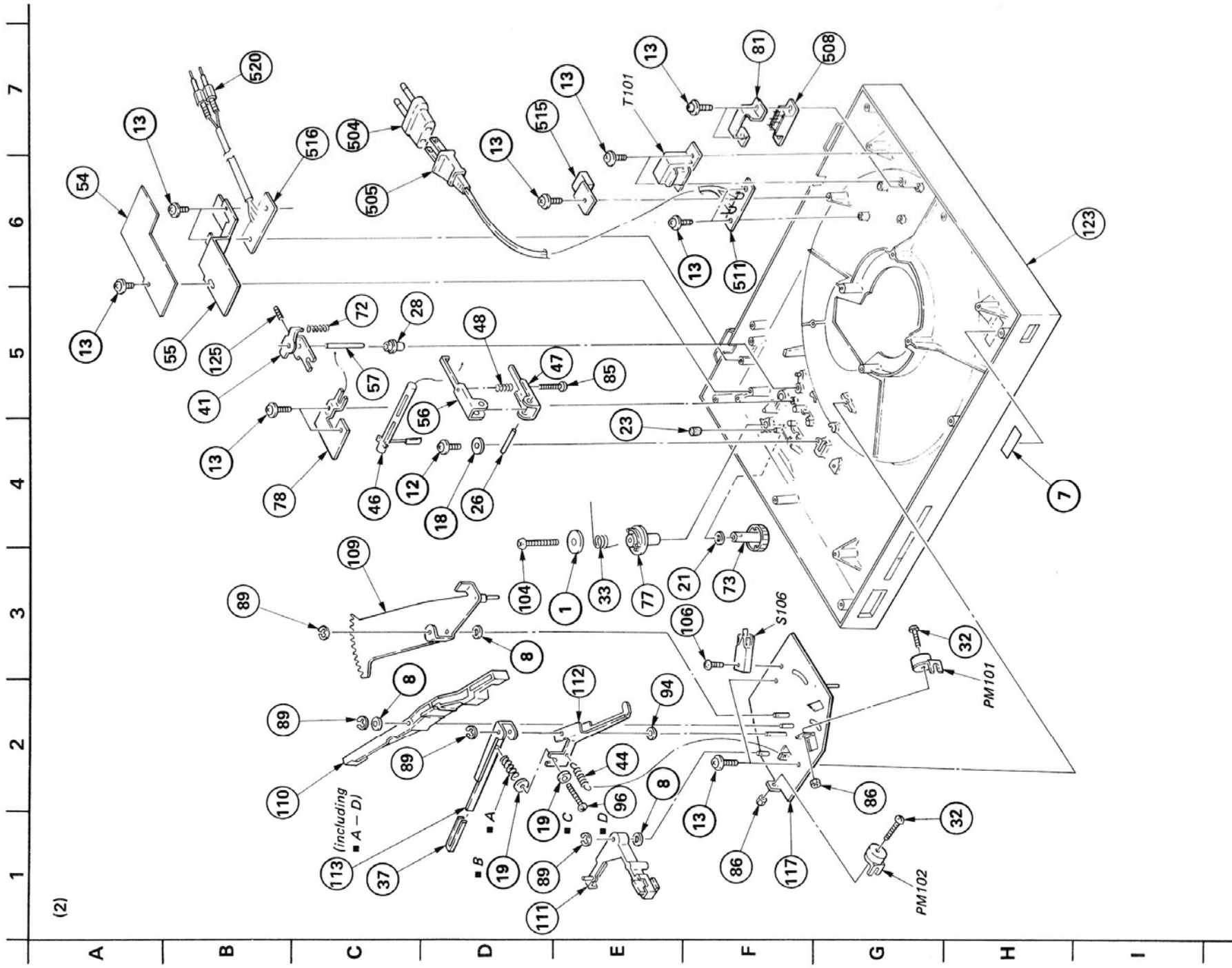


PS-LX410/LX410(C)

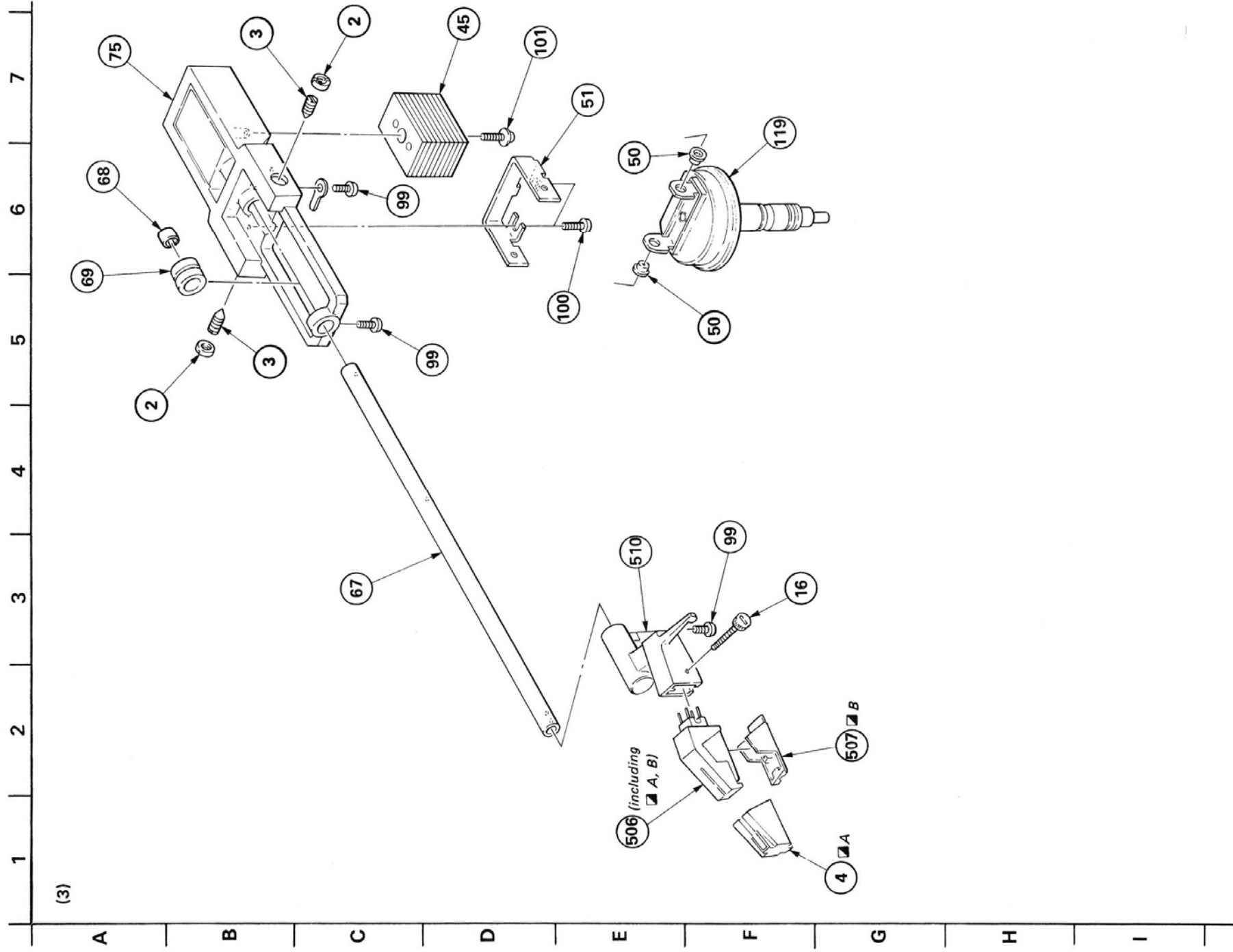
SECTION 5 EXPLODED VIEWS AND PARTS LIST



PS-LX410/LX410(C)



PS-LX410/LX410(C)



GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|--|
| 1 | 0-056-028-00 | WASHER, PLAIN, 14 DIA. |
| 2 | 2-203-518-61 | SCREW, PIVOT |
| 3 | 2-203-519-00 | NUT (A), LOCK, PIVOT |
| 4 | 2-231-824-01 | (AEP,UK,E).....COVER, STYLUS |
| 4 | 4-903-347-01 | (Canadian,PS-LX410(C))...COVER, STYLUS |
| 5 | 3-318-911-01 | (SILVER)....KNOB (POWER,L), T MOLD |
| 5 | 3-318-911-11 | (BLACK)....KNOB (POWER,L), MOLD |
| 6 | 3-548-124-00 | SPRING, TENSION |
| 7 | 3-701-030-00 | LABEL, SERIAL NUMBER |
| 8 | 3-701-441-21 | WASHER |
| 9 | 3-701-509-00 | SET SCREW, DOUBLE CUP 3X8 |
| 10 | 3-701-690-00 | (UK)....LABEL (MADE IN JAPAN) |
| 11 | 3-703-043-21 | (UK)....LABEL, CAUTION, MAIN |
| 11 | 3-703-845-01 | (US,Canadian)....LABEL, CAUTION, MAIN |
| 12 | 3-703-136-00 | SCREW, PTPMH 3X12 |
| 13 | 3-703-137-00 | SCREW, PTPMH 3X10 |
| 14 | 3-703-678-00 | LABEL, CAUTION, NEW UL |
| 15 | 3-703-705-01 | STICKER, SONY SYMBOL (30) |
| 16 | 3-706-937-01 | SCREW, SET, CARTRIDGE |
| 17 | 3-831-441-XX | SPACER (SRS) |
| 18 | 4-301-647-00 | WASHER, SPECIAL |
| 19 | 4-812-554-00 | WASHER |
| 20 | 4-844-041-00 | WASHER, (N) |
| 21 | 4-844-041-11 | WASHER, (N) |
| 22 | 4-852-007-00 | RETAINER (A), THRUST |
| 23 | 4-852-841-00 | TUBE |
| 24 | 4-857-642-00 | HOLDER, PC BOARD |
| 25 | 4-857-653-00 | HINGE, DUST COVER |
| 26 | 4-861-940-00 | SHAFT, LIFTER LEVER |
| 27 | 4-868-052-00 | GEAR, CENTER |
| 28 | 4-874-218-00 | CASE, PUSH ROD |
| 29 | 4-874-223-00 | LEVER (A), ARM |
| 30 | 4-874-231-00 | CAM, ECCENTRIC |
| 31 | 4-874-232-00 | CLUTCH (R) |
| 32 | 4-874-234-00 | CORE |
| 33 | 4-874-250-00 | SPRING |
| 34 | 4-874-254-00 | CLUTCH (S) |
| 35 | 4-874-259-00 | RUBBER, SHOCK ABSORBING |
| 36 | 4-874-260-11 | (BLACK)....CAP, BLIND |
| 36 | 4-874-260-01 | (SILVER)....CAP, BLIND |
| 37 | 4-874-275-00 | PAD, BRAKE |
| 38 | 4-874-277-00 | LEVER (B), ARM |
| 39 | 4-874-279-00 | CLUTCH (L) |
| 40 | 4-876-304-00 | CUSHION, DUST COVER |

GENERAL SECTION

| No. | Part No. | Description |
|-----|--------------|--------------------------------------|
| 41 | 4-876-317-00 | GUIDE, LIFTER |
| 42 | 4-876-344-00 | (AEP)....LABEL, CAUTION, POWER CORD |
| 43 | 4-876-324-21 | POLY-SLIDER (DIA. 9.5) |
| 44 | 4-903-424-01 | SPRING, TENSION (RESET) |
| 45 | 4-877-810-00 | WEIGHT |
| 46 | 4-877-824-00 | CAM, LIFTER |
| 47 | 4-880-501-00 | LEVER (A), LIFTER |
| 48 | 4-880-503-00 | SPRING, COMPRESSION |
| 49 | 4-880-524-00 | GEAR (S), DRIVE |
| 50 | 4-881-618-00 | BEARING, PIVOT |
| 51 | 4-881-628-00 | REINFORCEMENT (A) |
| 52 | 4-881-629-00 | PLATE (A), GROUND |
| 53 | 4-881-636-11 | SUPPORT (TMD), PC |
| 54 | 4-881-656-00 | PLATE (UPPER), SHIELD |
| 55 | 4-881-657-00 | PLATE (LOWER), SHIELD |
| 56 | 4-881-659-00 | LEVER (C), LIFTER |
| 57 | 4-881-688-00 | ROD, PUSH |
| 58 | 4-881-683-00 | (E)....LABEL, VOLTAGE |
| 59 | 4-885-727-00 | SPACER |
| 60 | 4-885-792-00 | PLUG IN SEAL (A) |
| 61 | 4-890-173-00 | WASHER |
| 62 | 4-901-657-00 | SPACER (A), LED |
| 63 | 4-902-831-01 | JOINT (G), KNOB |
| 64 | 4-903-304-01 | BEARING |
| 65 | 4-903-305-01 | (SILVER)....KNOB (SRS), T MOLD |
| 65 | 4-903-305-11 | (BLACK)....KNOB (SRS), T MOLD |
| 66 | 4-903-306-01 | (SILVER)....KNOB (SR), T MOLD |
| 66 | 4-903-306-11 | (BLACK)....KNOB (SR), T MOLD |
| 67 | 4-903-307-01 | PIPE, ARM |
| 68 | 4-903-308-01 | SHEET (S) |
| 69 | 4-903-312-01 | WEIGHT, SUB |
| 70 | 4-903-324-01 | PACKING (TMD) |
| 71 | 4-903-330-01 | NUT (TMD), BEARING |
| 72 | 4-903-331-01 | SPRING (LIFTER), COMPRESSION |
| 73 | 4-903-333-01 | KNOB, IFC |
| 74 | 4-903-401-01 | (AEP).....LABEL, MODEL NUMBER |
| 74 | 4-903-402-01 | (US,Canadian)....LABEL, MODEL NUMBER |
| 74 | 4-903-418-01 | (UK).....LABEL, MODEL NUMBER |
| 74 | 4-903-419-01 | (E).....LABEL, MODEL NUMBER |
| 75 | 4-903-336-01 | JOINT, PIPE |
| 76 | 4-903-408-01 | SPACER, LED |
| 77 | 4-903-409-01 | CAM, IFC |
| 78 | 4-903-410-01 | RETAINER (C), LIFTER |
| 79 | 4-903-412-01 | HOLDER, SWITCH, CONTROL |
| 80 | 4-903-416-01 | BOARD, BOTTOM |

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.
- Due to standardization, parts with part numbers Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX or Δ - $\Delta\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -X may be different from those used in the set.
- 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: μ F, PF: μ F.

RESISTORS

All resistors are in ohms.

F : nonflammable

COILS

MH : mH, UH : μ H

SEMICONDUCTORS

In each case, U : μ , for example:

UA....: μ A..., UPA....: μ PA..., UPC....: μ PC,

UPD....: μ PD....

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

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

PS-LX410/LX410(C)

GENERAL SECTION

| No. | Part No. | Description |
|-----|----------------|---------------------------------|
| 81 | ♣;4-903-421-01 | (E)...COVER, VOLTAGE SELECTION |
| 82 | 7-621-712-17 | SET-SCREW, SLOT 2.6X2 CUP POINT |
| 83 | 7-621-738-08 | SET-SCT, HEX, 2.6X4, FLAT POINT |
| 84 | 7-621-770-67 | SCREW +P 2.6X6 |
| 85 | 7-621-775-80 | SCREW +B 2.6X16 |
| 86 | 7-622-207-05 | N 2.6, TYPE 2 |
| 87 | 7-623-105-15 | W 2,MIDDLE |
| 88 | 7-623-505-01 | LUG, 2 |
| 89 | 7-624-106-04 | STOP RING 3.0, TYPE -E |
| 90 | 7-624-133-44 | STOP RING 9, TYPE-CE |
| 91 | 7-624-133-54 | STOP RING 10, TYPE-CE |
| 92 | 7-624-133-94 | STOP RING 15, TYPE-CE |
| 93 | 7-624-190-81 | STOP RING 2, TYPE-CS |
| 94 | 3-701-441-11 | WASHER |
| 95 | 7-671-156-01 | BALL, STENLESS |
| 96 | 7-682-110-01 | SCREW +P 3X18 |
| 97 | 7-682-149-13 | SCREW +P 3X10 |
| 98 | 7-685-102-14 | TOTSU PTPMH 2X4, TYPE 2, SLIT |
| 99 | 7-685-103-24 | SCREW +P 2X5 TYPE2 SLIT |
| 100 | 7-685-105-24 | SCREW +P 2X8 TYPE2 SLIT |
| 101 | 7-685-134-14 | SCREW, TOTSU PTPMH 2.6X8, TYPE2 |
| 102 | 7-685-145-14 | SCREW +P 3X6 TYPE2 SLIT |
| 103 | 7-685-150-14 | SCREW +BVTIP 3X16 TYPE2 SLIT |
| 104 | 7-685-152-21 | SCREW +P 3X25 TYPE2 SLIT |
| 105 | 7-685-646-11 | SCREW +BVTIP 3X8 TYPE2 N-S |
| 106 | 7-685-755-01 | SCREW +PTT 3X14 (S) |
| 107 | A-4608-277-A | ROTOR ASSY |
| 108 | A-4608-278-A | STATOR ASSY |
| 109 | ♣;X-4874-202-0 | LEVER ASSY, MAIN |
| 110 | X-4874-203-0 | LEVER ASSY, CLUTCH |
| 111 | ♣;X-4874-204-0 | LEVER ASSY, SIZE |
| 112 | ♣;X-4874-205-0 | LEVER ASSY, RESET |
| 113 | ♣;X-4874-206-0 | LEVER ASSY, BRAKE |
| 114 | ♣;X-4874-209-0 | LEVER (B) ASSY, INDEX |
| 115 | X-4874-212-1 | (SILVER)....REST ASSY, ARM |
| 115 | X-4874-212-X | (BLACK)....REST ASSY, ARM |
| 116 | X-4877-804-0 | COVER ASSY, DUST |
| 117 | ♣;X-4881-608-0 | CHASSIS ASSY |
| 118 | X-4881-610-0 | LEVER (C) ASSY, INDEX |
| 119 | X-4881-611-0 | JOINT ASSY, CENTER |
| 120 | X-4903-301-1 | INSULATOR ASSY |
| 121 | X-4903-302-1 | PLATE ASSY, UP AND DOWN |
| 122 | X-4903-303-1 | TABLE ASSY, TURN |
| 123 | X-4903-401-1 | FLAME ASSY |
| 124 | 3-831-441-11 | SPACER (T) |
| 125 | 7-621-741-09 | SEC-SCREW, HEX, 2.6X8 |

ACCESSORY & PACKING MATERIAL

| No. | Part No. | Description |
|-----|--------------|--------------------------------------|
| 151 | 3-701-616-00 | (US)...BAG, POLYETHYLENE |
| 152 | 3-701-630-00 | BAG, POLYETHYLENE |
| 153 | 3-701-634-00 | BAG, POLYETHYLENE |
| 154 | 3-701-806-00 | ADAPTOR, 45, (E) |
| 155 | 3-773-847-11 | (AEP,UK,E)....MANUAL, INSTRUCTION |
| 156 | 3-773-847-21 | (US,Canadian)....MANUAL, INSTRUCTION |
| 157 | 3-773-847-41 | (AEP)....MANUAL, INSTRUCTION |
| 158 | 3-794-123-11 | LABEL, CAUTION |
| 159 | 3-795-753-21 | (US)....INSTRUCTION |
| 160 | 4-858-078-00 | SHEET, PROTECTION |
| 161 | 4-862-043-00 | CUSHION, ARM |
| 162 | 4-874-262-00 | GUIDE, RECORD |
| 163 | 4-876-320-00 | SPACER, CLUTCH |
| 164 | 4-877-807-11 | SHEET, TURNTABLE |
| 165 | 3-773-847-31 | (Canadian)....MANUAL, INSTRUCTION |
| 166 | 4-903-404-01 | CUSHION, UPPER (LEFT) |
| 167 | 4-903-405-01 | CUSHION, UPPER (RIGHT) |
| 168 | 4-903-406-01 | CUSHION, LOWER (LEFT) |
| 169 | 4-903-407-01 | CUSHION, LOWER (RIGHT) |
| 170 | 4-903-422-01 | HOLDER, ARM |
| 171 | 4-903-423-01 | PLATE, PROTECTOR |
| 172 | 4-903-425-02 | (PS-LX410)....INDIVIDUAL, CARTON |
| 173 | 4-903-426-02 | (PS-LX410(C))....INDIVIDUAL, CARTON |
| 174 | 4-903-427-01 | HOLDER, TURUTABLE |

NOTE:

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- 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:μPF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MH : 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 **A** are critical for safety. Replace only with part number specified.

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

PS-LX410/LX410(C)

ELECTRICAL PARTS

| Ref. No. | Part No. | Description |
|----------|----------------------------|--------------------------------------|
| 501 | ♣;1-508-800-13 | U TYPE BASE POST 3P |
| 502 | ♣;1-508-801-00 | U TYPE BASE POST 4P |
| 503 | ♣;1-508-880-00 | BASE POST, MCD CONNECTOR 6P |
| 504 | ♣;1-526-565-00 (E) | AC PULG ADAPTOR |
| 505 | ♣;1-534-817-XX (AEP) | CORD, POWER, EULO-PLUG |
| 505 | ♣;1-551-472-00 (E) | CORD, POWER |
| 505 | ♣;1-551-628-00 (US,Canada) | CORD, POWER |
| 505 | ♣;1-551-884-00 (UK) | CORD, POWER |
| 506 | 1-549-117-00 | (PS-LX410(C))...CARTRIDGE(VL-45G) |
| 506 | A-4505-089-C | (AEP,UK,E).....CARTRIDGE (XL-250G) |
| 507 | 1-549-118-11 | (PS-LX410(C))...STYLUS ASSY, ND-145G |
| 507 | A-4587-071-C | (AEP,UK,E).....STYLUS ASSY, ND-250G |
| 508 | ♣;1-552-535-00 | SWITCH, VOLTAGE SELECTOR |
| 509 | ♣;1-560-070-00 | BASE POST |
| 510 | 1-562-517-11 | CONNECTOR (WITH HEAD SHELL) 4P |
| 511 | ♣;1-608-536-00 | PC BOARD, PRIMARY TRANSLATION |
| 512 | ♣;1-608-883-00 | PC BOARD, FG |
| 513 | ♣;1-612-344-11 | PC BOARD, SERVO |
| 514 | ♣;1-612-345-11 | PC BOARD, CONTROL |
| 515 | ♣;1-612-346-11 | PC BOARD, REMOTE CONTROL |
| 516 | ♣;1-612-347-11 | PC BOARD, PHONO |
| 517 | ♣;1-612-348-11 | PC BOARD, POWER SW |
| 518 | ♣;1-612-349-11 | PC BOARD, LED |
| 519 | A-4619-237-A | MOUNTED PCB, AMPLIFIER, SERVO |
| C101 | 1-161-494-00 | CERAMIC 0.022MF |
| C102 | 1-123-318-00 | ELECT 33MF |
| C103 | 1-130-636-00 | FILM 0.22MF |
| C104 | 1-162-110-00 | CERAMIC 0.001MF |
| C105 | 1-108-361-51 | MYLAR 0.056MF |
| C106 | 1-162-052-00 | CERAMIC 22PF |
| C107 | 1-162-052-00 | CERAMIC 22PF |
| C108 | 1-130-629-00 | FILM 0.056MF |
| C109 | 1-130-627-00 | FILM 0.039MF |
| C110 | 1-162-113-00 | CERAMIC 0.01MF |
| C111 | 1-162-113-00 | CERAMIC 0.01MF |
| C112 | 1-161-494-00 | CERAMIC 0.022MF |
| C113 | 1-161-494-00 | CERAMIC 0.022MF |
| C114 | 1-123-333-00 | ELECT 100MF |
| C115 | 1-123-328-00 | ELECT 4.7MF |
| C116 | 1-123-295-00 | ELECT 100MF |
| C117 | 1-123-333-00 | ELECT 100MF |
| C118 | ♣;1-123-324-00 | ELECT 1000MF |
| C119 | ♣;1-123-324-00 | ELECT 1000MF |
| C120 | 1-162-113-00 | CERAMIC 0.01MF |
| C121 | 1-162-102-00 | CERAMIC 220PF |
| C123 | 1-123-380-00 | ELECT 1MF |

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- 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.

ELECTRICAL PARTS

| Ref. No. | Part No. | Description |
|----------|---------------------|--------------------------|
| C124 | 1-123-356-00 | ELECT 10MF |
| C125 | 1-123-356-00 | ELECT 10MF |
| C126 | 1-162-113-00 | CERAMIC 0.01MF |
| C127 | 1-162-113-00 | CERAMIC 0.01MF |
| C128 | 1-162-113-00 | CERAMIC 0.01MF |
| C129 | 1-162-113-00 | CERAMIC 0.01MF |
| C130 | 1-162-113-00 | CERAMIC 0.01MF |
| C131 | 1-162-113-00 | CERAMIC 0.01MF |
| C132 | 1-162-113-00 | CERAMIC 0.01MF |
| C133 | 1-162-113-00 | CERAMIC 0.01MF |
| ♣ | CNP101;1-560-317-00 | CONNECTOR PIN 6P, REMOTE |
| D101 | ♣;8-719-200-02 | DIODE 10E-2 |
| D102 | ♣;8-719-200-02 | DIODE 10E-2 |
| D103 | ♣;8-719-200-02 | DIODE 10E-2 |
| D104 | ♣;8-719-200-02 | DIODE 10E-2 |
| D105 | 8-719-911-19 | DIODE 1SS119 |
| D106 | 8-719-911-19 | DIODE 1SS119 |
| D107 | 8-719-911-19 | DIODE 1SS119 |
| D108 | 8-719-911-19 | DIODE 1SS119 |
| D109 | 8-719-910-71 | DIODE HZ7ALL |
| D201 | 8-719-907-36 | DIODE GL-5EG22 |
| D301 | 8-719-904-55 | DIODE GL-5HD5 |
| D302 | 8-719-904-55 | DIODE GL-5HD5 |
| D303 | 8-719-904-55 | DIODE GL-5HD5 |
| D304 | 8-719-904-55 | DIODE GL-5HD5 |
| D305 | 8-719-904-55 | DIODE GL-5HD5 |
| H1 | 8-719-800-17 | THS102A |
| H2 | 8-719-800-17 | THS102A |
| IC101 | 8-759-600-02 | IC M5218L |
| IC102 | 8-759-201-58 | IC TC9142P |
| IC103 | 8-759-600-02 | IC M5218L |
| IC104 | 8-759-600-02 | IC M5218L |
| IC105 | 8-759-800-94 | IC LM6417E-364 |
| L101 | 1-408-894-00 | MICRO INDUCTOR 470UH |
| PM101 | 1-454-196-51 | SOLENOID (RESET) |
| PM102 | 1-454-196-51 | SOLENOID (BRAKE) |
| Q101 | 8-729-900-85 | TRANSISTOR DTC144MS |
| Q102 | 8-729-900-89 | TRANSISTOR DTC144ES |
| Q103 | 8-729-201-83 | TRANSISTOR 2SC3112 |
| Q104 | 8-729-201-83 | TRANSISTOR 2SC3112 |
| Q105 | 8-729-663-47 | TRANSISTOR 2SC1364 |
| Q106 | 8-729-800-34 | TRANSISTOR 2SC3070 |

CAPACITORS:

MF:μF, PF:μuF.

RESISTORS

- All resistors are in ohms.
- F: nonflammable

COILS

MH: 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.

PS-LX410 / LX410(C)

ELECTRICAL PARTS

| Ref.No. | Part No. | Description |
|---------|--------------|---------------------|
| Q107 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q108 | 8-729-374-02 | TRANSISTOR 2SB740 |
| Q109 | 8-729-177-43 | TRANSISTOR 2SD774 |
| Q110 | 8-729-374-02 | TRANSISTOR 2SB740 |
| R101 | 1-247-807-00 | CARBON 100 5% 1/6W |
| R102 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R103 | 1-247-859-00 | CARBON 15K 5% 1/6W |
| R104 | 1-247-859-00 | CARBON 15K 5% 1/6W |
| R105 | 1-247-897-00 | CARBON 560K 5% 1/6W |
| R106 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R107 | 1-247-889-00 | CARBON 270K 5% 1/6W |
| R108 | 1-247-889-00 | CARBON 270K 5% 1/6W |
| R109 | 1-247-884-00 | CARBON 160K 5% 1/6W |
| R110 | 1-247-891-00 | CARBON 330K 5% 1/6W |
| R111 | 1-247-882-00 | CARBON 130K 5% 1/6W |
| R112 | 1-247-892-00 | CARBON 360K 5% 1/6W |
| R113 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R114 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R115 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R116 | 1-247-839-00 | CARBON 2.2K 5% 1/6W |
| R117 | 1-202-459-00 | SOLID 1.5M 5% 1/4W |
| R118 | 1-202-459-00 | SOLID 1.5M 5% 1/4W |
| R119 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R120 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R121 | 1-247-806-00 | CARBON 91 5% 1/6W |
| R122 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R124 | 1-247-887-00 | CARBON 220K 5% 1/6W |
| R125 | 1-247-806-00 | CARBON 91 5% 1/6W |
| R127 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R128 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R129 | 1-247-823-00 | CARBON 470 5% 1/6W |
| R130 | 1-247-823-00 | CARBON 470 5% 1/6W |
| R131 | 1-247-823-00 | CARBON 470 5% 1/6W |
| R132 | 1-247-819-00 | CARBON 330 5% 1/6W |
| R133 | 1-247-823-00 | CARBON 470 5% 1/6W |
| R134 | 1-247-857-00 | CARBON 12K 5% 1/6W |
| R135 | 1-247-823-00 | CARBON 470 5% 1/6W |
| R136 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R137 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R138 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R139 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R140 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R141 | 1-247-855-00 | CARBON 10K 5% 1/6W |
| R142 | 1-247-863-00 | CARBON 22K 5% 1/6W |
| R143 | 1-247-863-00 | CARBON 22K 5% 1/6W |
| R144 | 1-247-855-00 | CARBON 10K 5% 1/6W |

NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- 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.

ELECTRICAL PARTS

| Ref.No. | Part No. | Description | 10K | 5% | 1/6W |
|---------|----------------|--------------------------------------|------|----|------|
| R145 | 1-247-855-00 | CARBON | 10K | 5% | 1/6W |
| R146 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R147 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R148 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R149 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R150 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R151 | 1-247-855-00 | CARBON | 10K | 5% | 1/6W |
| R152 | 1-247-855-00 | CARBON | 10K | 5% | 1/6W |
| R153 | 1-247-847-00 | CARBON | 4.7K | 5% | 1/6W |
| R154 | 1-247-855-00 | CARBON | 10K | 5% | 1/6W |
| R155 | 1-247-863-00 | CARBON | 22K | 5% | 1/6W |
| R156 | 1-247-847-00 | CARBON | 4.7K | 5% | 1/6W |
| R157 | 1-247-855-00 | CARBON | 10K | 5% | 1/6W |
| R158 | 1-247-863-00 | CARBON | 22K | 5% | 1/6W |
| R159 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R160 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R161 | 1-247-842-00 | CARBON | 3K | 5% | 1/6W |
| R162 | 1-247-831-00 | CARBON | 1K | 5% | 1/6W |
| R163 | 1-247-845-00 | CARBON | 3.9K | 5% | 1/6W |
| R164 | 1-247-892-00 | CARBON | 360K | 5% | 1/6W |
| RV101 | 1-226-234-00 | RES, ADJ, CARBON 2K | | | |
| RV102 | 1-226-234-00 | RES, ADJ, CARBON 2K | | | |
| RV103 | 1-226-239-00 | RES, ADJ, CARBON 100K | | | |
| RV104 | 1-226-239-00 | RES, ADJ, CARBON 100K | | | |
| S101 | Δ.1-552-928-00 | SWITCH | | | |
| S102 | 1-554-303-00 | SWITCH, KEY BOARD | | | |
| S103 | 1-554-303-00 | SWITCH, KEY BOARD | | | |
| S104 | 1-554-303-00 | SWITCH, KEY BOARD | | | |
| S105 | 1-554-303-00 | SWITCH, KEY BOARD | | | |
| S106 | 1-516-657-00 | SWITCH, MICRO | | | |
| T101 | Δ.1-447-256-00 | (US,Canadian).....TRANSFORMER, POWER | | | |
| T101 | Δ.1-447-257-00 | (AEP,UK).....TRANSFORMER, POWER | | | |
| T101 | Δ.1-447-691-00 | (E).....TRANSFORMER, POWER | | | |
| X101 | 1-567-259-11 | VIBRATOR, CRYSTAL | | | |

CAPACITORS:

MF:μF, PF:μuF.

RESISTORS

- All resistors are in ohms.
- F : nonflammable

COILS

- MH : 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.