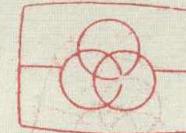


## PS-X40

US Model  
Canadian Model  
AEP Model  
UK Model  
E Model



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## AUTOMATIC STEREO TURNTABLE SYSTEM

### SPECIFICATIONS

#### GENERAL

**Power Requirements:** 120V ac, 60Hz (US, Canadian model)  
240V ac, 50Hz (UK model)  
120 V, 220 ac adjustable, 50/60 Hz (AEP, E model)

**Power Consumption:** 8W

**Dimensions:** Approx. 445(w) x 145(h) x 400(d) mm  
(17½(w) x 5¾(h) x 15¾(d)  
inches)  
including projecting parts and controls

**Weight:** Approx. 8 kg (17 lb 10 oz), net  
Approx. 9.1 kg (20 lb 2 oz), in shipping  
carton

#### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS 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 UN TRAMÉ ET UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES 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 DES SUPPLÉMENTS PUBLIÉS PAR SONY.

#### TURNTABLE

**Platter:** 31.4 cm (12<sup>3</sup>/<sub>8</sub> inches) dia., aluminum-alloy diecast

**Motor:** DC servo-controlled linear BSL motor

**Drive System:** Direct drive, crystal lock control system

**Speed:** 33<sup>1</sup>/<sub>3</sub> rpm, 45 rpm  
Starting characteristics  
Comes to nominal speed within a half revolution (33<sup>1</sup>/<sub>3</sub> rpm)

**Wow and Flutter:** ± 0.045% (DIN)  
0.025% (WRMS)

**S/N Ratio:** 73 dB (DIN-B)

**Initial Drift:** Within 0.0003%

**Load Characteristics:** 0% up to 100 g tracking force

**Automatic System:** Lead-in, return, reject, repeat

#### TONEARM

**Type:** Statically balanced, universal

**Pivot-to-stylus Length:** 216.5 mm (8<sup>1</sup>/<sub>2</sub> inches)

**Overall Arm Length:** 300 mm (11<sup>7</sup>/<sub>8</sub> inches)

**Overhang:** 16.5 mm (2<sup>1</sup>/<sub>32</sub> inches)

**Tracking Error:** +3°, -1°

**Tracking Force:**

**Adjustment Range:** 0 – 3 g

**Shell Weight:** 10.5 g

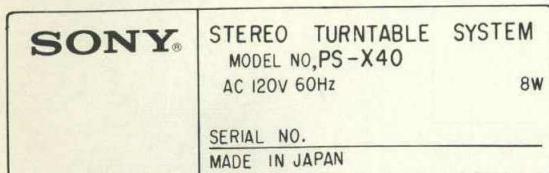
**Cartridge Weight Range:** 12–19 g (including shell)

**SONY®**  
**SERVICE MANUAL**

## MODEL IDENTIFICATION

## - Specification Label -

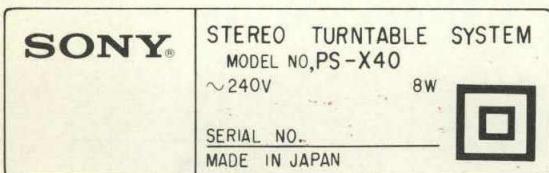
## US, Canadian model



## AEP, E model

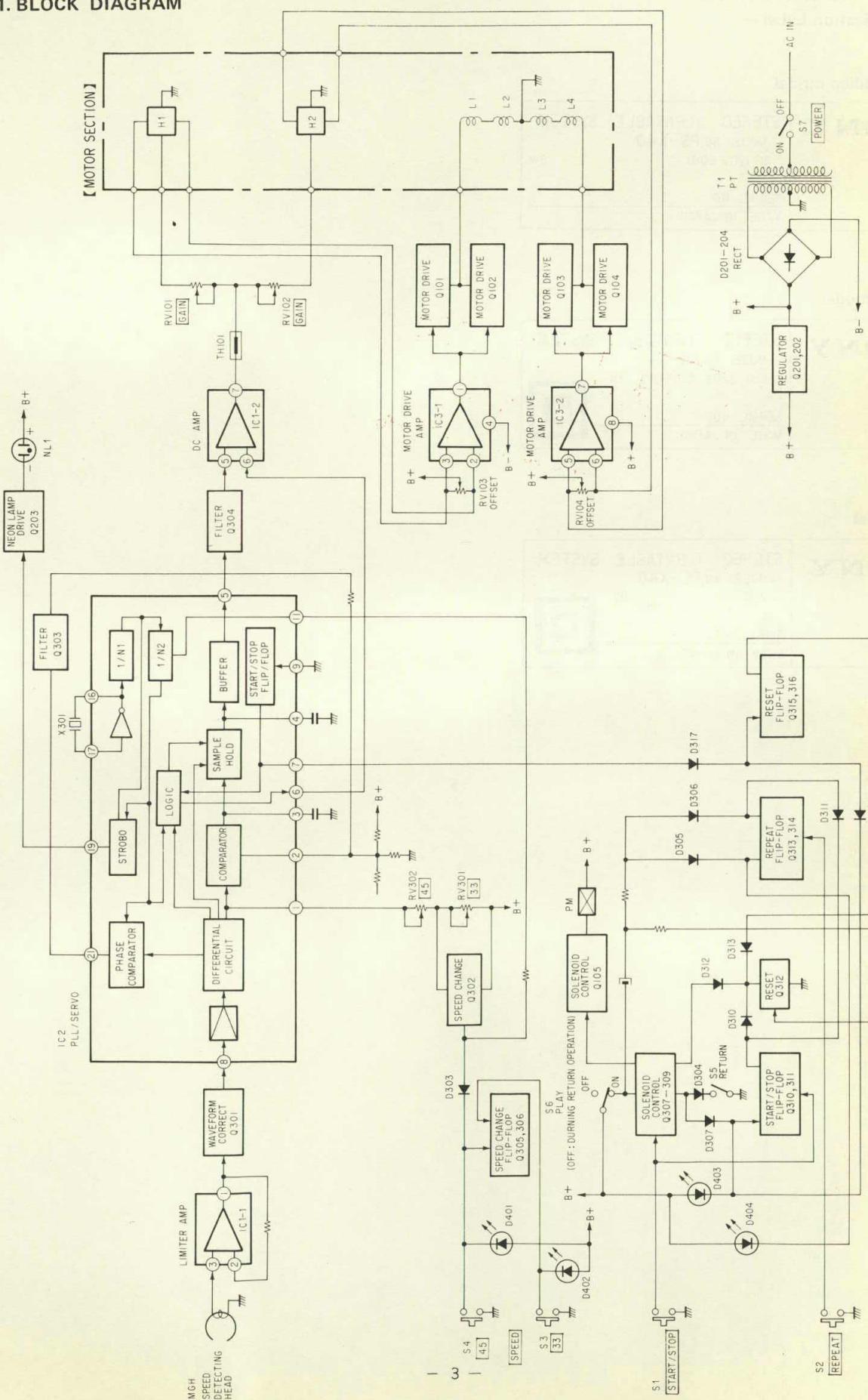


## UK model



## SECTION 1 OUTLINE

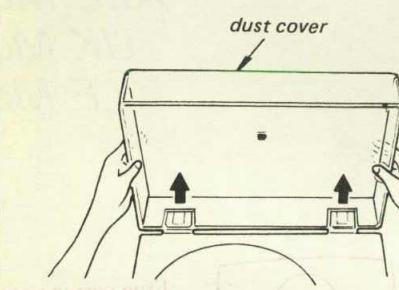
### 1-1. BLOCK DIAGRAM



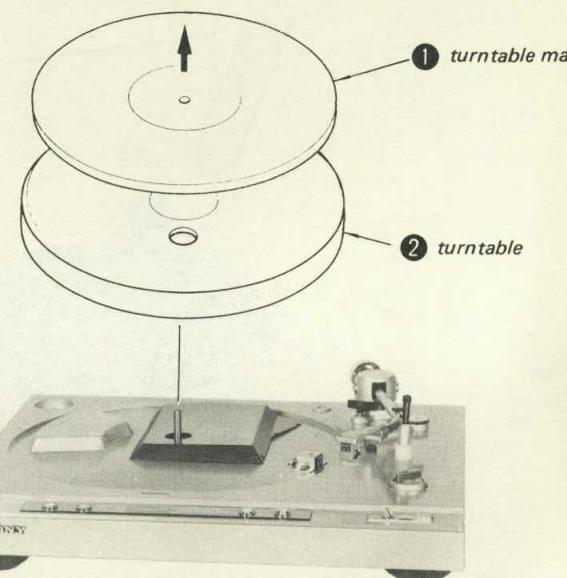
## SECTION 2 DISASSEMBLY

### 2-1. REMOVAL

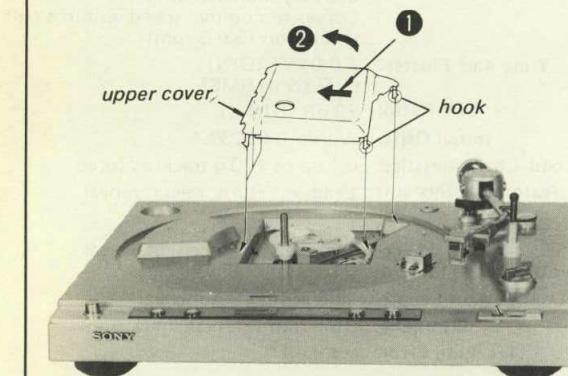
#### Dust Cover and Turntable Removal



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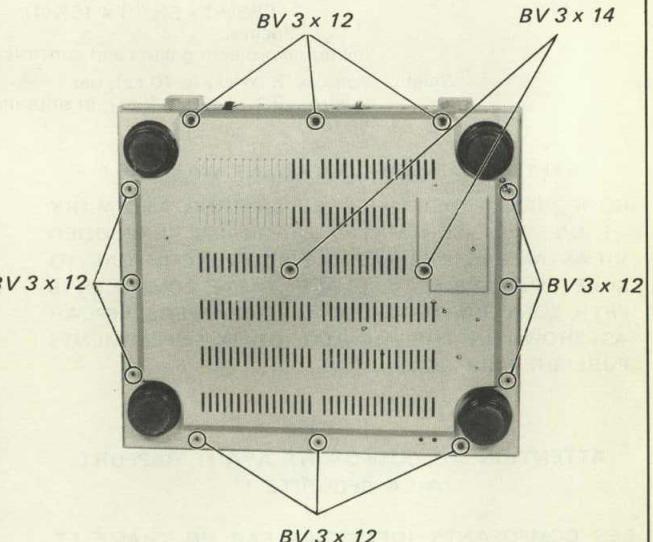


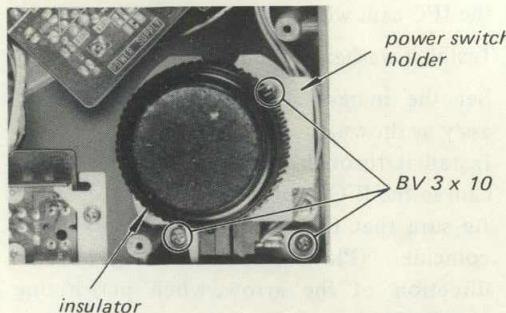
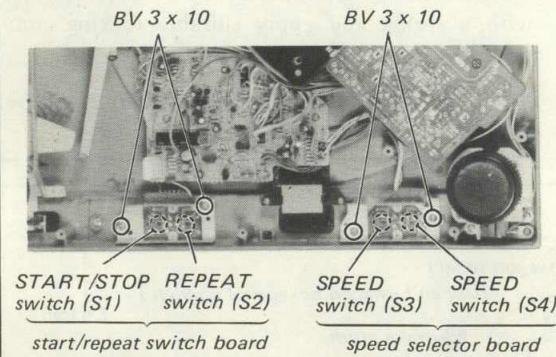
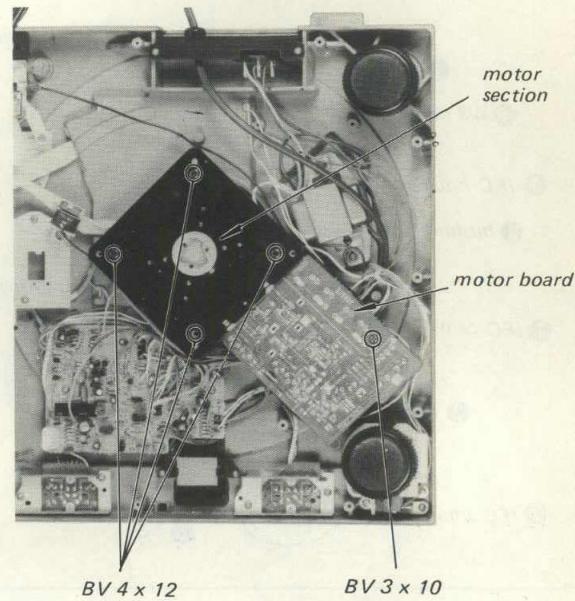
#### Upper Cover Removal



1. Press the upper cover in the direction of the arrow 1 and unhook the two hooks on the right.
2. Push up the upper cover in the direction of the arrow 2.

#### Bottom Plate Removal

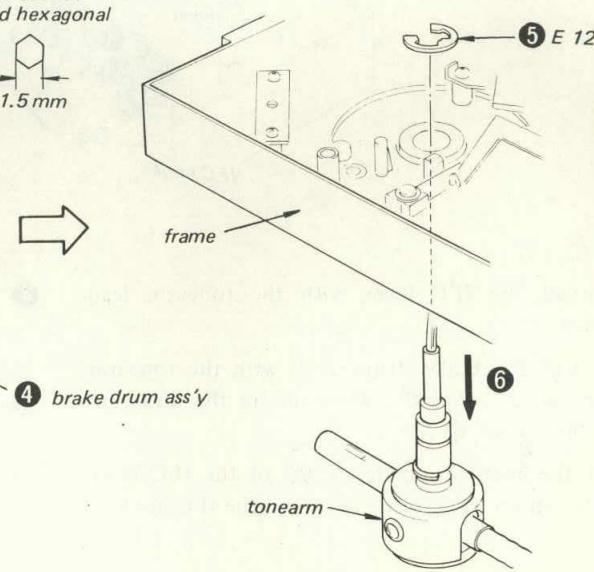
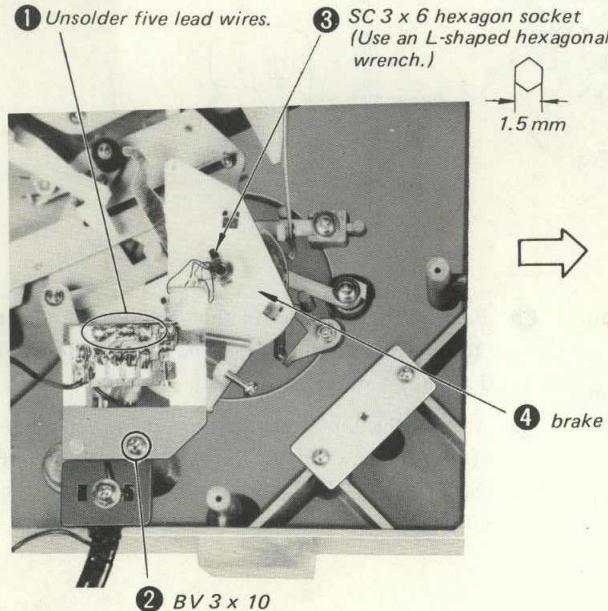


**POWER Switch (S7) Removal****Start/Repeat Switch Board and Speed Selector Board Removal****Motor and Motor Section Removal**

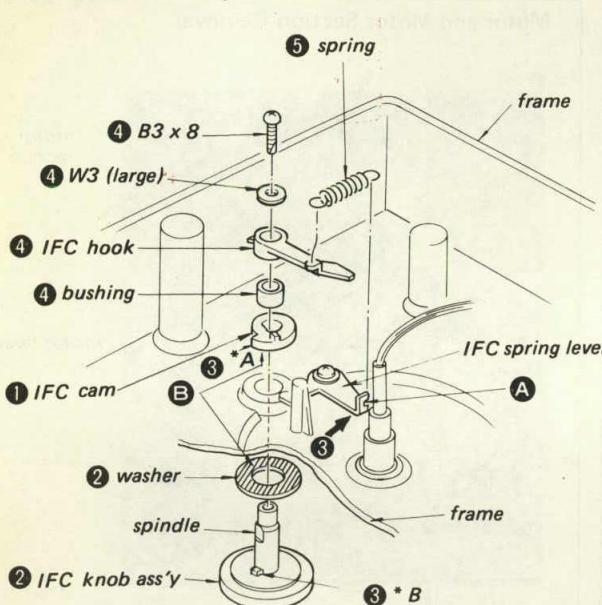
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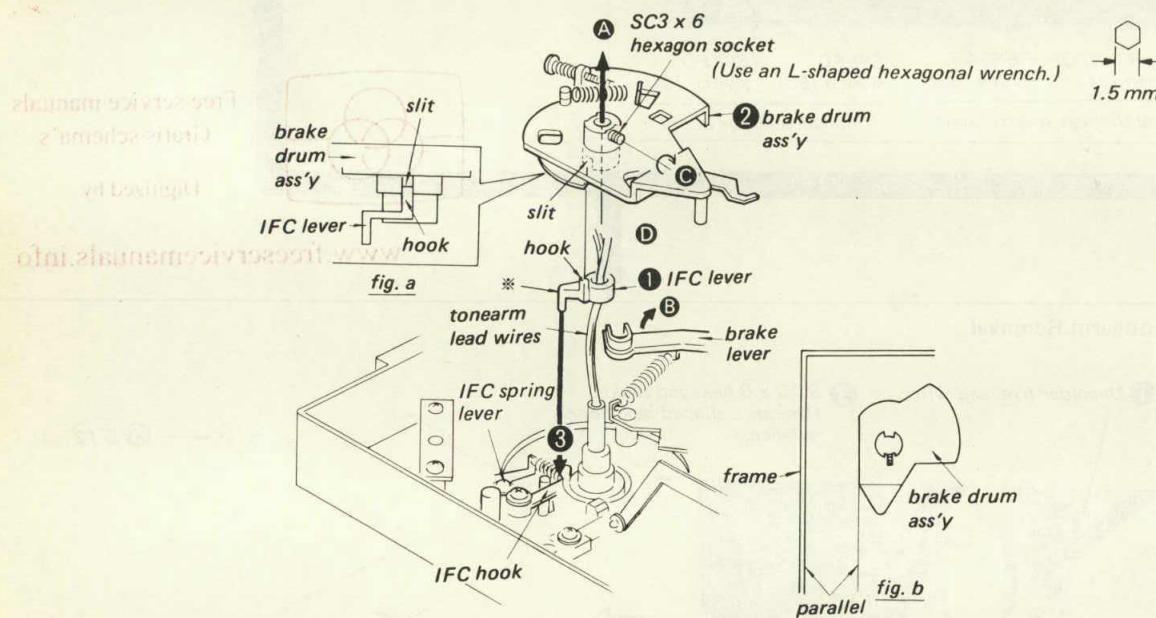
**Tonearm Removal**

## IFC Knob Assembly Installation

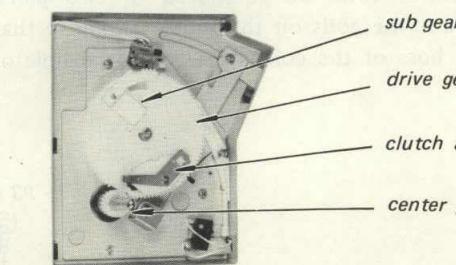
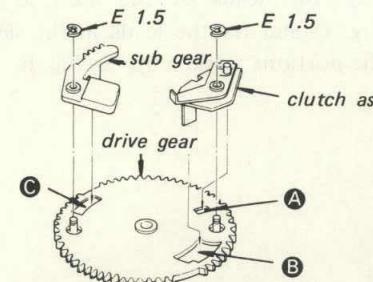


- 1 Smear the shaded portion **B** of the washer and the IFC cam with grease.
- 2 Install a washer in the IFC knob ass'y.
- 3 Set the marked point (\*B) of the IFC knob ass'y as shown. Install it through the frame and install the IFC cam in the IFC knob ass'y. Be sure that the two marked points (\*A & \*B) coincide. (Place the IFC spring lever in the direction of the arrow when performing this installation.)
- 4 Place the bushing, IFC hook and washer (W3) on the spindle and fasten them with screw B3 x 8.
- 5 Connect the IFC hook and the IFC spring lever with a spring and apply suitable locking compound at point **A** of the lever.
- 6 After the installation has been completed, be sure that the IFC hook moves on its own.

## Brake Drum Installation



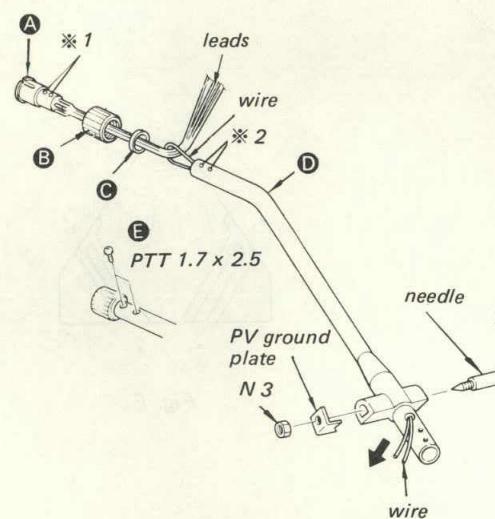
- 1 Thread the IFC lever with the tonearm lead wires.
- 2 Thread the brake drum ass'y with the tonearm lead wires. Pull the wires out in the direction of the arrow **A**.
- 3 Set the marked portion ( \*) of the IFC lever between the IFC spring lever and the IFC hook.
- 4 Push the brake lever in the direction of the arrow **B** and match the slotted part with the hook of the IFC lever. (See fig. a)
- 5 Adjust the position of the drum so that the straight side of drum is parallel with the frame (See fig. b). Fix the drum by turning the set screw (SC3 x 6) in the direction of the arrow **C**.

**Sub Gear and Clutch Ass'y Installation**

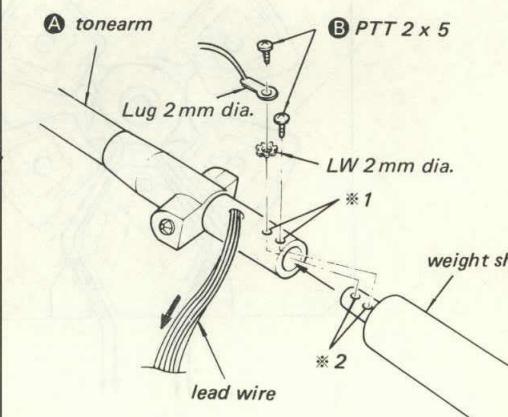
- ① Set the pawl of the sub gear in hole **C** and fasten the sub gear with E1.5.
- ② Set the pawls of the clutch ass'y in holes **A** and **B** and fasten the clutch ass'y with E1.5.
- ③ After installation has been completed, make sure that they move on their own.

**TONEARM INSTALLATION****1. Pipe Assembly (1)**

1. Thread a wire in **D**.
2. Thread the leads of **A** in **B** and **C**, and hook the leads by the wire.
3. Insert **A** in **D** by pulling the wire in the direction of the arrow, adjust two holes marked **\*1** and **\*2** to tighten the two screws **B**.

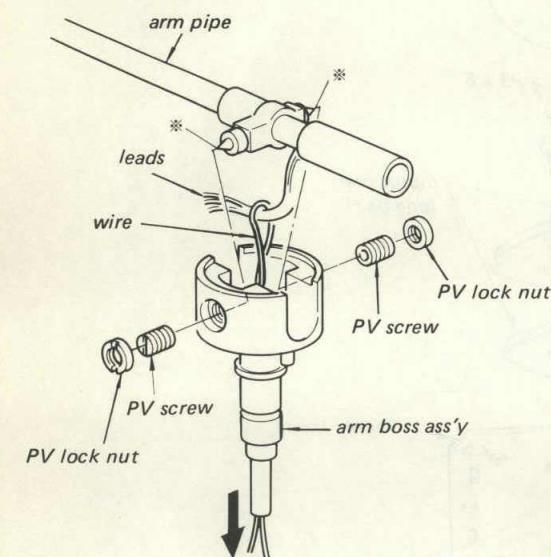
**2. Pipe Assembly (2)**

1. Hook the leads together by the wire and pull the leads into **A** in the direction of arrow.
2. Adjust the two holes marked **\*1** and **\*2** to tighten the two screws **B**.

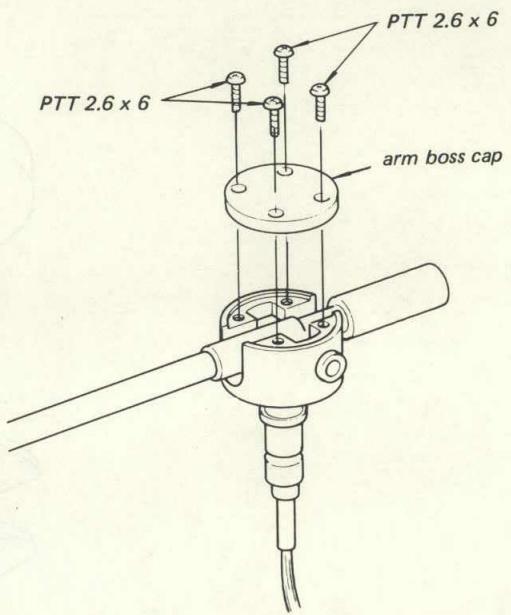
**3. Arm Boss Ass'y Installation**

1. Thread the wire in arm boss ass'y.
2. Hook the five leads by the wire.
3. Pull the wire in the direction of arrow.
4. Tighten the pivot screw and the lock nut temporarily.

**Note:** Confirm that the portions marked **\*** of the tornarm pipe are positioned to the center of the screw hole.

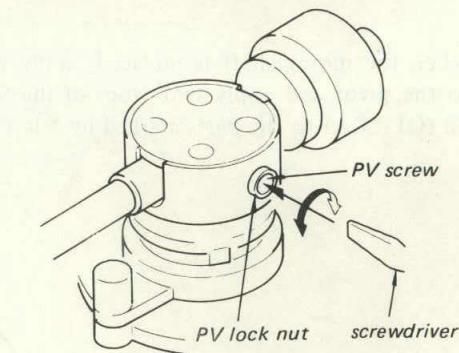
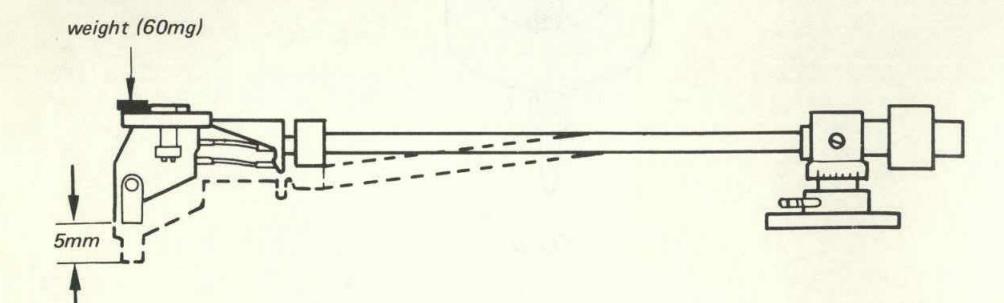
**4. Arm Boss Cap Installation**

1. Install the arm boss cap with four screws.
2. Install the tornarm to the frame.

**5. Longitudinal Sensitivity Adjustment**

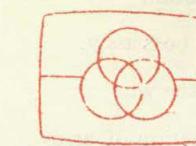
1. Make the longitudinal balance adjustment of tonearm.
2. Repeating the following procedures, adjust the pivot screw and the lock nut.
  - a. When the 60 mg weight is placed on the top of the shell, the tonearm sinks 5 mm (measured at stylus-tip.)
  - b. When the weight is removed, the tonearm returns horizontally.

**Note:** Rotate the left and right pivot screws by same numbers of turns.



**MOTOR INSTALLATION**

The motor and the servo amp board are assembled together. If found defective, disassemble the motor block as shown in Fig. A and repair it.



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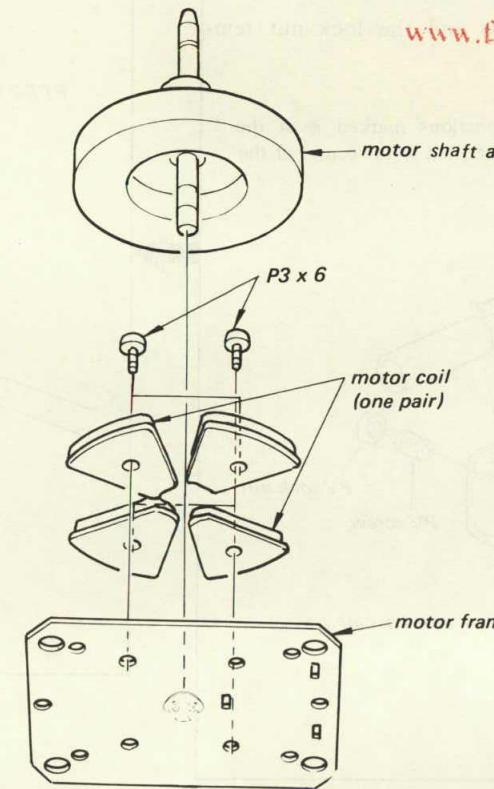


Fig. A

1. When the motor shaft is replaced, apply grease to the pivot and apply two drops of the SONY oil (OL-2KA) to the parts marked by \* in Fig. B
2. When the motor bearing and the thrust retainer plate are replaced, apply grease to the pivot.

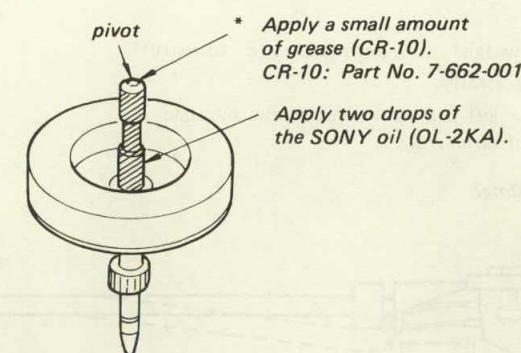


Fig. B

3. Insert the motor shaft assembly slowly in the motor bearing so that the motor shaft is not attracted by strong magnetic field strength.
4. The motor coils are composed of two pairs.
  - a). Mount the coils on the motor frame so that the boss of the coil is placed in the hole of

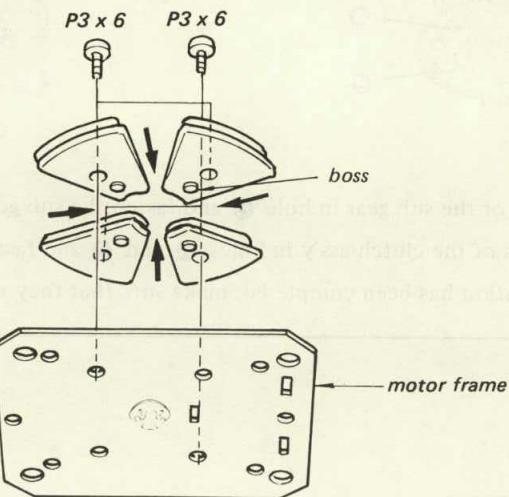


Fig. C

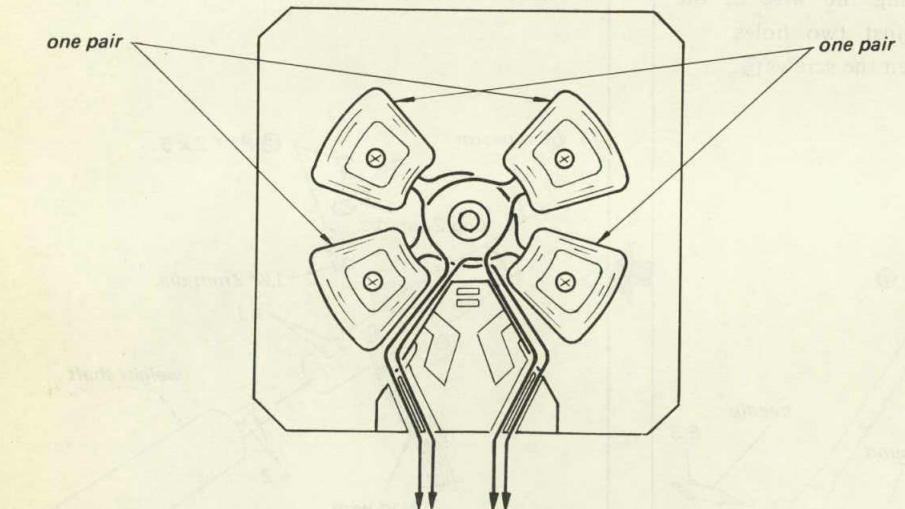


Fig. D

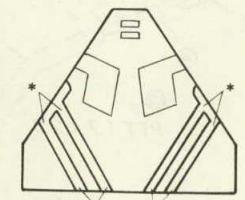


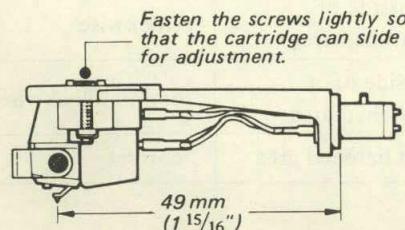
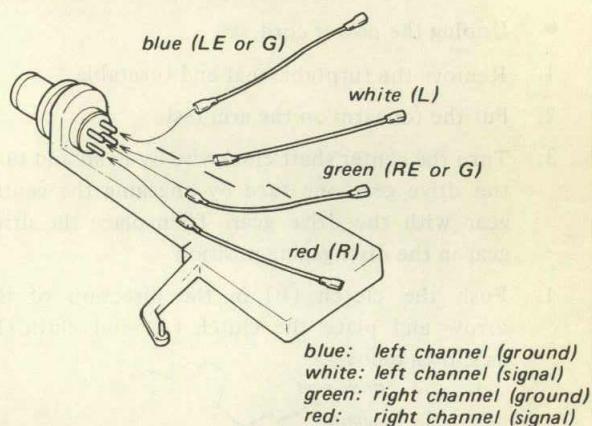
Fig. E

the frame as illustrated in Fig. C.

- b). Push the coils in the arrowed direction and tighten the screws.
- c). Lay the leads of the coils as shown in Fig. D and fix the leads in the slot between the portions marked by \* in Fig. E.

**CARTRIDGE INSTALLATION**

Install the cartridge into the shell with the mounting screws so that the distance between the shell end and the stylus tip is 49 mm (1 15/16 inches).

**LEAD WIRE CONNECTION**

## SECTION 3

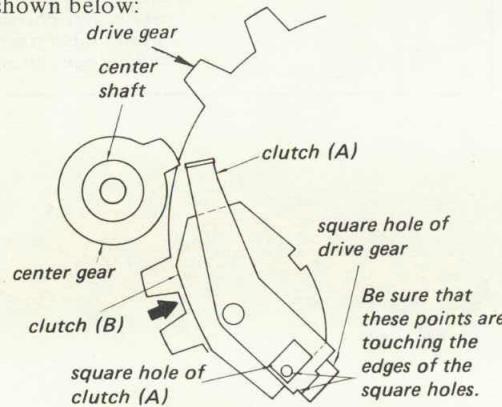
## ADJUSTMENTS

## 3-1 MECHANICAL ADJUSTMENTS

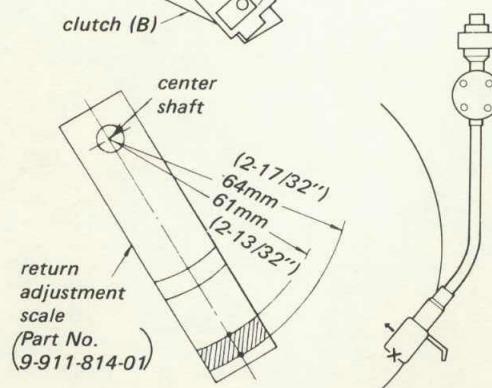
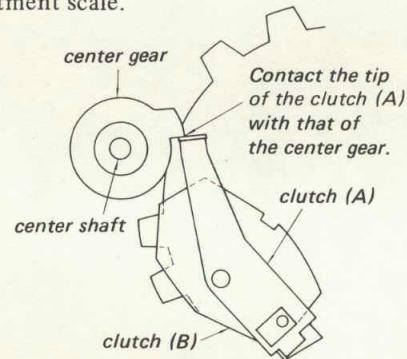
## Automatic Return Position Adjustment

- Unplug the power cord.

1. Remove the turntable mat and turntable.
2. Put the tonearm on the arm rest.
3. Turn the center shaft clockwise by hand and turn the drive gear one turn by engaging the center gear with the drive gear. Then place the drive gear in the disengaging position.
4. Push the clutch (B) in the direction of the arrow and place the clutch (A) and clutch (B) as shown below:



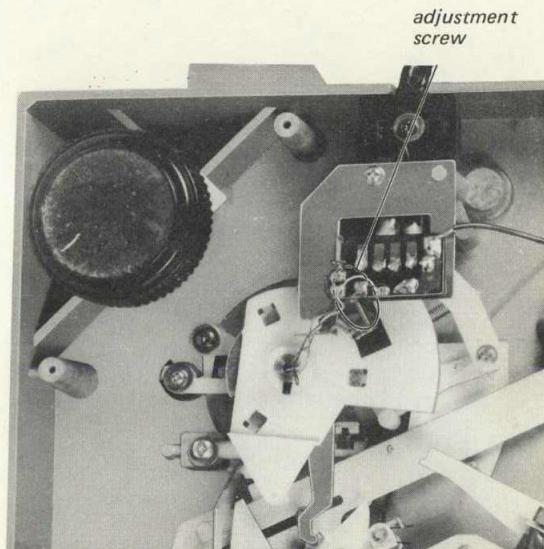
5. Put the return adjustment scale (Part No. 9-911-814-01) on the center shaft.
6. Move the tonearm toward the center shaft by hand so that the clutch (A) is positioned as shown below and confirm that the stylus is located on the hatched area of the return adjustment scale.



7. If necessary, adjust the adjustment screw.

Stylus Position	Adjustment Screw
outside of hatched area	clockwise
inside of hatched area	counterclockwise
on hatched area	correct

8. Play the automatic-return test record (YFSC-16, A side "C-3") and confirm that the tonearm returns at count 4 to 11.

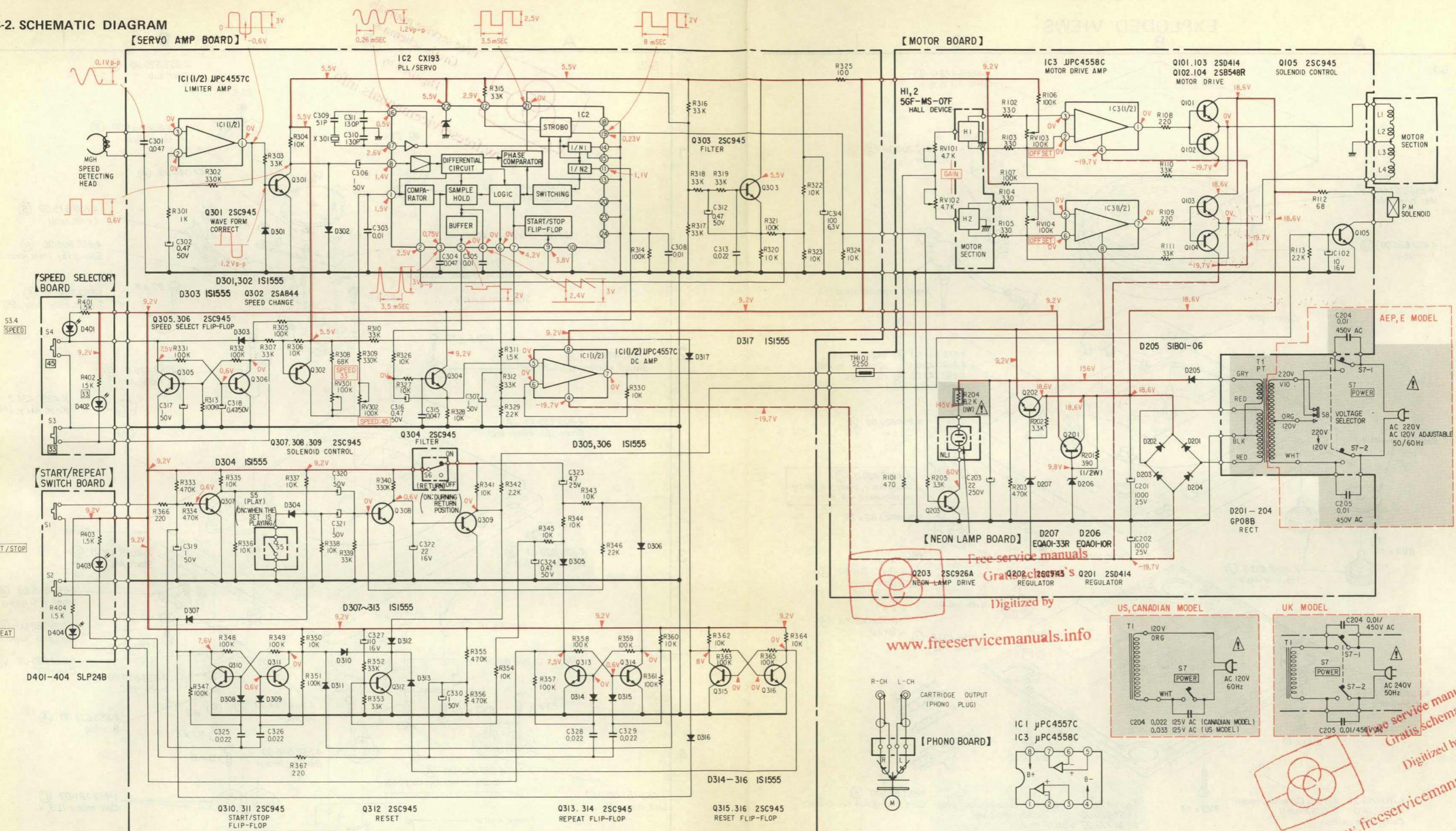






## PS-X40 PS-X40

## 4-2. SCHEMATIC DIAGRAM



## Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$  :  $\mu\mu\text{F}$  50  $\text{pV}$  or less are not indicated except for electrolytics.
- All resistors are in ohms, 1/4 W unless otherwise noted.  $\text{k}\Omega$  : 1000  $\Omega$ ;  $\text{M}\Omega$  : 1000  $\text{k}\Omega$
- Panel designation.
- adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken in stop mode with a VOM (20k $\Omega$ /V).
- Waveforms are taken at 33 rpm.
- :  $\text{B}+$  Bus.
- :  $\text{B}-$  Bus.

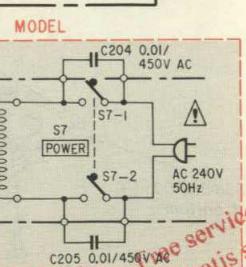
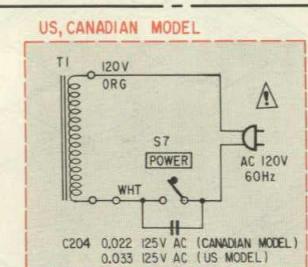
## • Switch

Ref. No.	Switch	Position
S1	START/STOP	OFF
S2	REPEAT	OFF
S3	SPEED (33)	OFF
S4	SPEED (45)	OFF
S5	PLAY	OFF
S6	RETURN	OFF
S7	POWER	OFF

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

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

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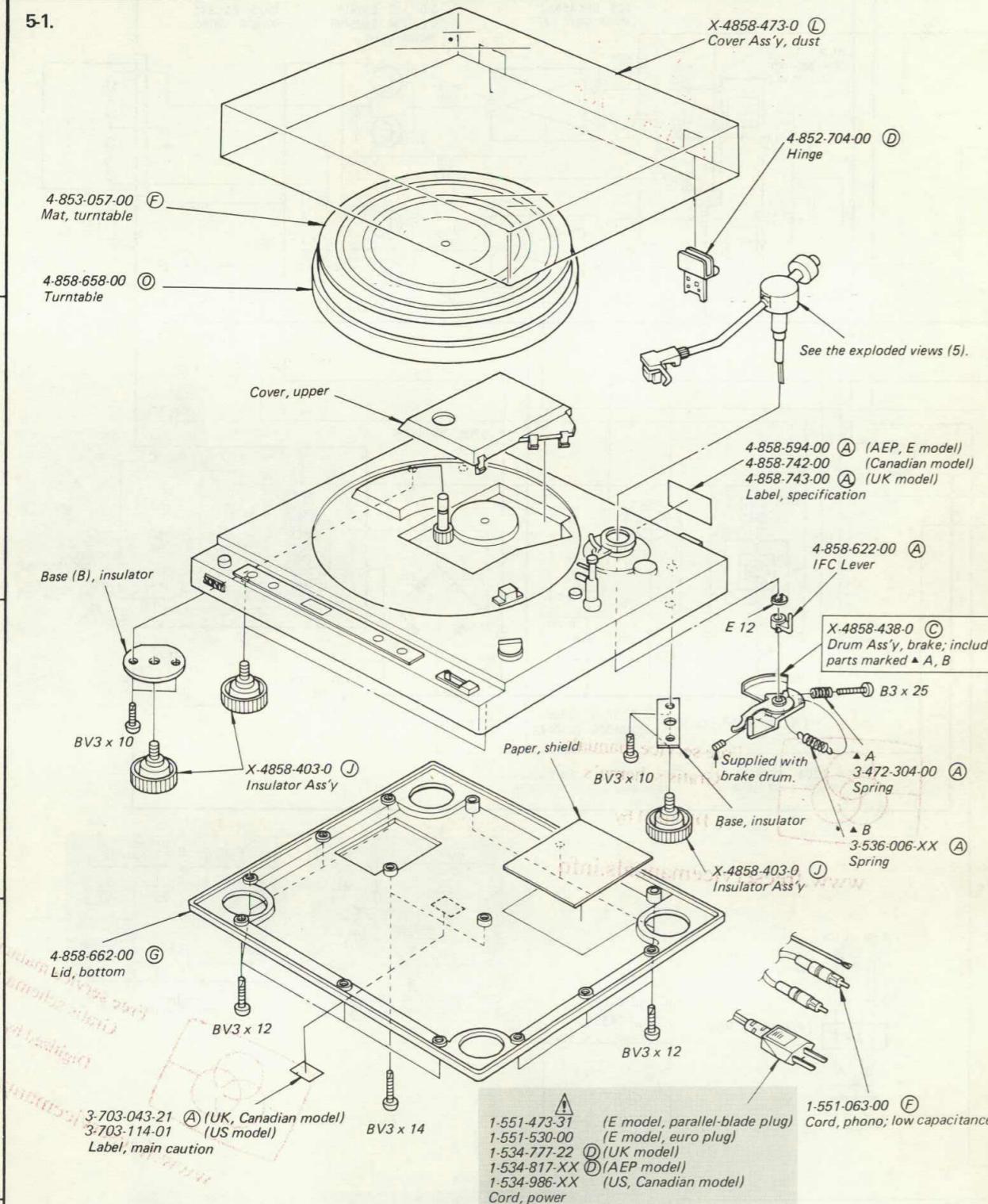
## SECTION 5

## EXPLODED VIEWS

A

B

C



5

## Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.  
(-) = slotted head
- Circled letters (A) to (Z) are applicable to European models only.

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

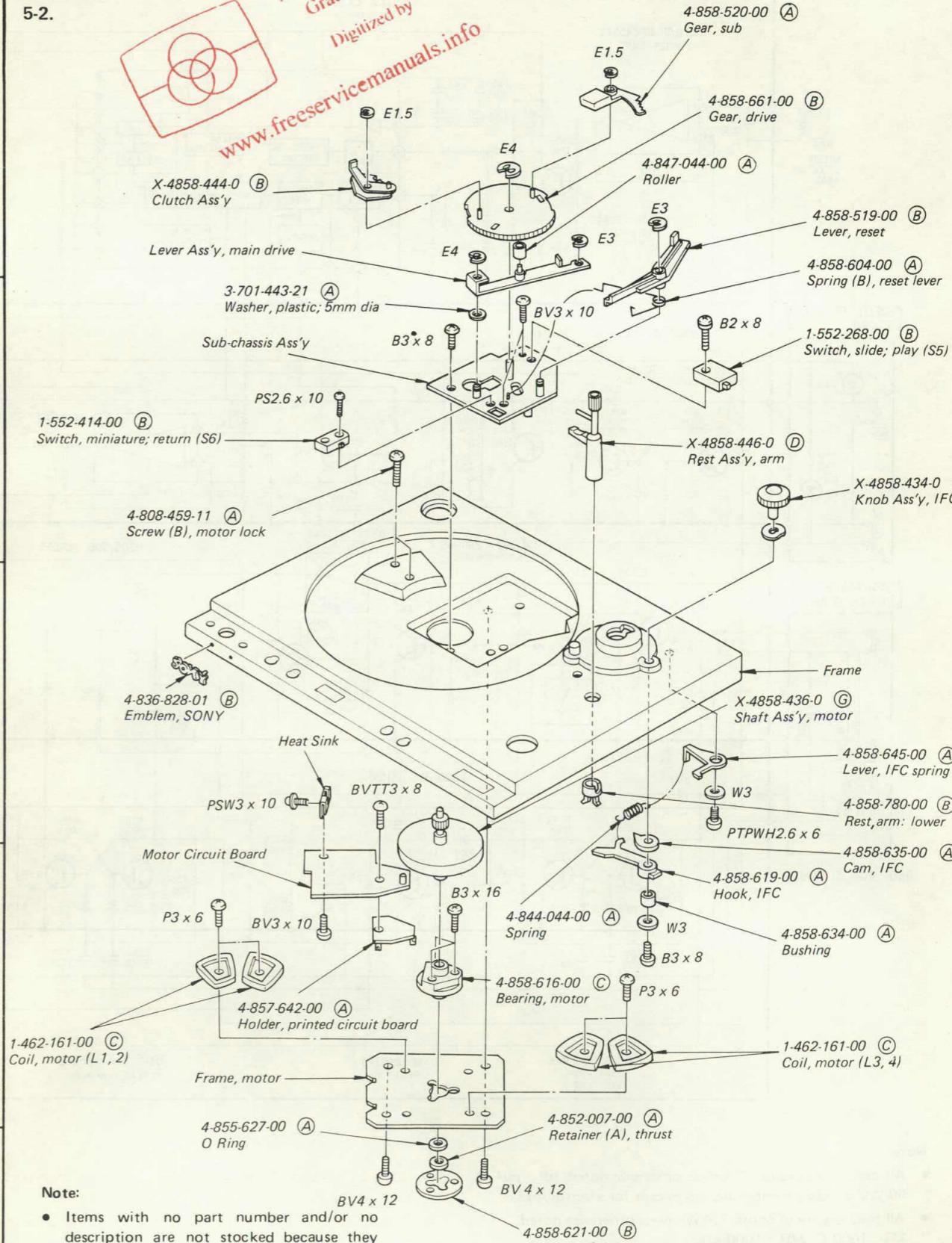


A

B

C

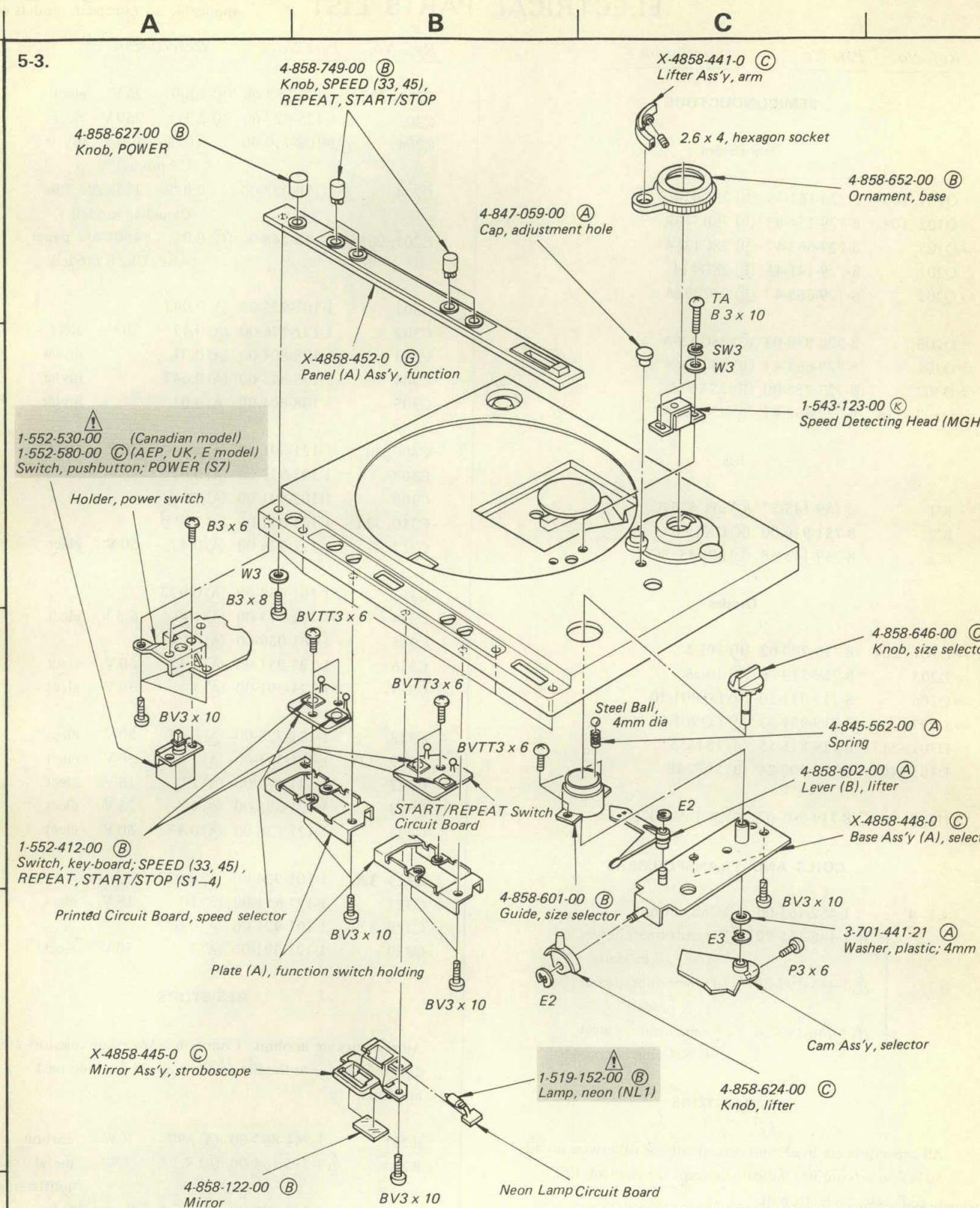
D



5

## Note:

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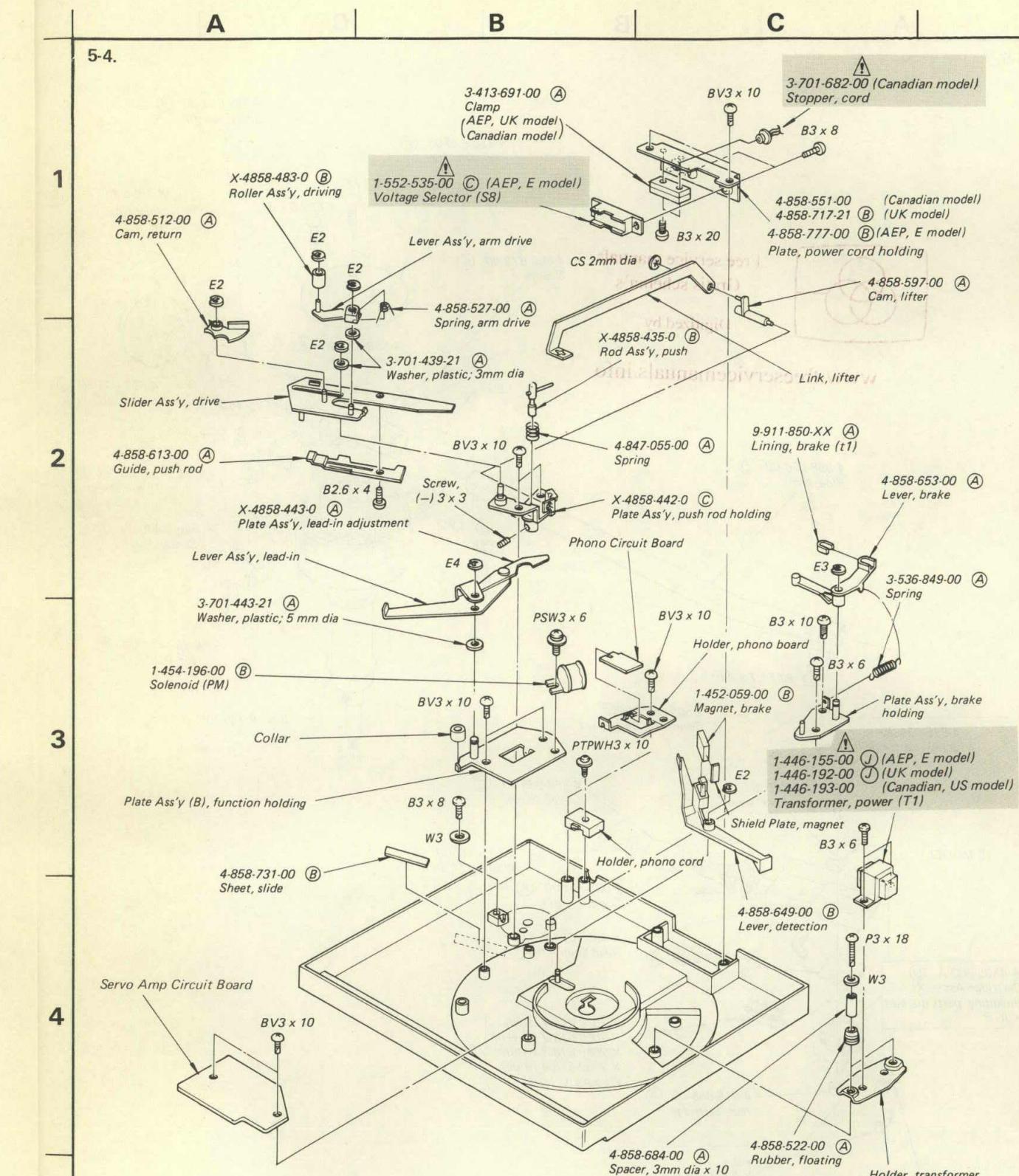


**Note:**

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(-) = slotted head
- Circled letters (Ⓐ to Ⓛ) are applicable to European models only.

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

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



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

## SECTION 6

## ELECTRICAL PARTS LIST

Note: Circled letters (Ⓐ to Ⓛ) are applicable to European models only.

A

B

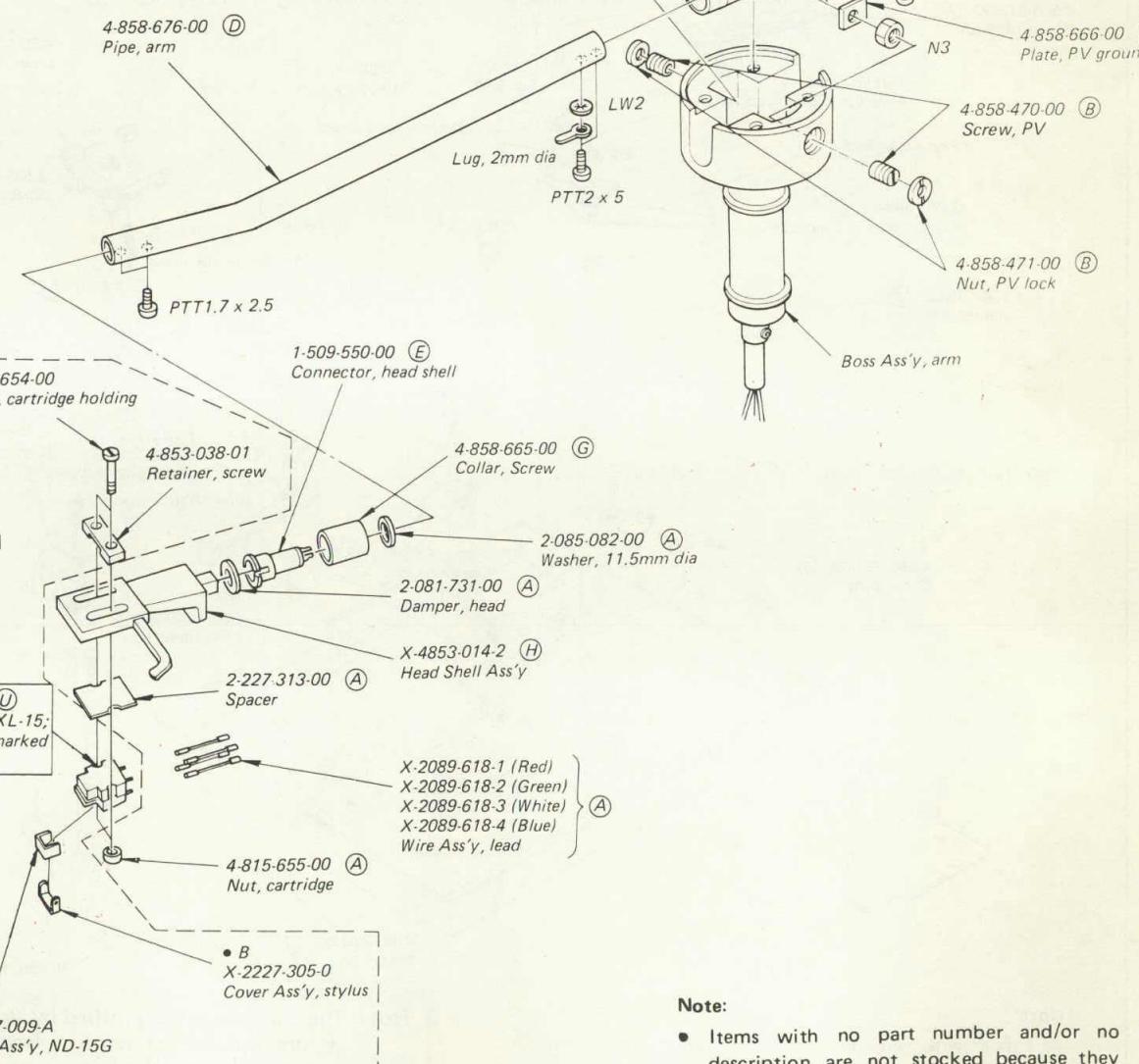
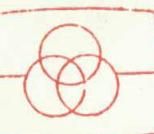
C

5-5.

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## Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.  
(-) = slotted head
- Circled letters (Ⓐ to Ⓛ) are applicable to European models only.

Ref. No.	Part No.	Description
----------	----------	-------------

## SEMICONDUCTORS

## Transistors

Q101, 103	8-729-141-43	Ⓑ 2SD414
Q102, 104	8-729-154-83	Ⓑ 2SB548R
⇒ Q105	8-729-663-47	Ⓑ 2SC1364
Q201	8-729-141-43	Ⓑ 2SD414
⇒ Q202	8-729-663-47	Ⓑ 2SC1364
Q203	8-720-950-03	Ⓒ 2SC926A
⇒ Q301	8-729-663-47	Ⓑ 2SC1364
⇒ Q302	8-727-788-00	Ⓑ 2SA678
⇒ Q303-316	8-729-663-47	Ⓑ 2SC1364

## ICs

IC1	8-759-145-57	Ⓒ μPC4557C
IC2	8-751-930-00	⓫ CX193
IC3	8-759-145-58	Ⓓ μPC4558C

## Diodes

⇒ D201-204	8-719-200-02	Ⓑ 10E2
⇒ D205	8-719-210-06	Ⓑ 10D6
⇒ D206	8-719-931-10	Ⓑ EQB01-10
⇒ D207	8-719-931-33	Ⓑ EQB01-33
D301-317	8-719-815-55	Ⓐ 1S155
D401-404	8-719-900-24	Ⓑ SLP24B
H1, 2	8-719-905-07	Ⓒ SGF-MS-07F

## COILS AND TRANSFORMERS

L1-4	1-462-161-00	Ⓒ Coil, motor
T1	△ 1-446-155-00	① Transformer, power (AEP, E model)
	△ 1-446-192-00	① Transformer, power (UK model)
	△ 1-446-193-00	Transformer, power (US, Canadian model)

## CAPACITORS

All capacitors are in  $\mu$ F and ceramic unless otherwise noted.  
50 WV or less are not indicated except for electrolytics.

p:  $\mu$ F, elect: electrolytic

C102	1-121-651-00	Ⓐ 10 16 V elect
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⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

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

Ref. No.	Part No.	Description
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C201, 202	1-121-388-00	Ⓑ 1000 25 V elect
C203	1-123-027-00	Ⓑ 2.2 250 V elect
C204	△ 1-108-750-00	0.033 125 V mylar (US model)
C204	△ 1-130-098-00	0.022 125VAC film (Canadian model)
C204, 205	△ 1-115-148-00	Ⓒ 0.01 450VAC paper (AEP, UK, E model)

C301	1-101-925-00	Ⓐ 0.047
C302	1-121-726-00	Ⓐ 0.47 50 V elect
C303	1-108-804-00	Ⓐ 0.01 mylar
C304	1-108-845-00	Ⓐ 0.047 mylar
C305	1-108-804-00	Ⓐ 0.01 mylar

C306, 307	1-121-391-00	Ⓐ 1 50 V elect
C308	1-101-923-00	Ⓐ 0.01
C309	1-102-491-00	Ⓐ 51 p
C310, 311	1-101-081-00	Ⓐ 130 p
C312	1-121-726-00	Ⓐ 0.47 50 V elect

C313	1-161-034-00	Ⓐ 0.022
C314	1-121-413-00	Ⓐ 100 6.3 V elect
C315	1-161-036-00	Ⓐ 0.047
C316	1-121-951-00	Ⓐ 0.47 50 V elect
C317	1-121-391-00	Ⓐ 1 50 V elect
C318	1-121-726-00	Ⓐ 0.47 50 V elect
C319-321	1-121-391-00	Ⓐ 1 50 V elect
C322	1-121-479-00	Ⓐ 22 16 V elect
C323	1-121-395-00	Ⓐ 4.7 25 V elect
C324	1-121-726-00	Ⓐ 0.47 50 V elect

C325, 326	1-101-924-00	Ⓐ 0.022
C327	1-121-651-00	Ⓐ 10 16 V elect
C328, 329	1-101-924-00	Ⓐ 0.022
C330	1-121-391-00	Ⓐ 1 50 V elect

## RESISTORS

All resistors are in ohms. Common  $\frac{1}{4}$  W carbon resistors are omitted. Refer to the list on page 28 for their part numbers.

R201	1-244-863-00	Ⓐ 390 $\frac{1}{2}$ W carbon
R204	△ 1-213-154-00	Ⓑ 8.2 k 1 W metal oxide (nonflammable)

RV101, 102	1-224-633-00	Ⓐ 4.7 k, adjustable; gain
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RV103, 104	1-224-637-00	Ⓐ 100 k, adjustable; offset
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RV301, 302	1-224-637-00	Ⓐ 100 k, adjustable; speed (33, 45)
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Note: Les composants identifiés par un trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note: Circled letters ( **A** to **Z** ) are applicable to European models only.

Ref. No.	Part No.	Description
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### SWITCHES

S1-4	1-552-412-00	(B) Key-Board, START/STOP, REPEAT, SPEED (33, 45)
S5	1-552-268-00	(B) Slide, PLAY
S6	1-552-414-00	(B) Miniature, RETURN
S7	{ 1-552-530-00	Pushbutton, POWER (US, Canadian model)
	△ 1-552-580-00	(C) Pushbutton, POWER (AEP, UK, E model)
S8	△ 1-552-535-00	(C) Voltage Selector (AEP, E model)

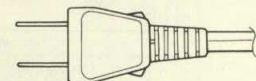
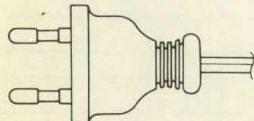
### MISCELLANEOUS

MGH	1-543-123-00	(K) Speed Detecting Head
NL1	△ 1-519-152-00	(B) Lamp, neon
PM	1-454-196-00	(B) Solenoid
TH101	1-800-195-00	(A) Thermistor, S-250
X301	1-527-380-00	(D) Crystal
	1-452-059-00	(B) Magnet, Brake
	1-509-550-00	(E) Connector, head shell
△	1-534-777-72	(D) Cord, power (UK model)
△	1-534-817-XX	(D) Cord, power (AEP model)
△	1-534-986-XX	Cord, power (US, Canadian model)
	1-551-063-00	(F) Cord, phono; low capacitance
△	1-551-473-31	Cord, power, parallel-blade plug (E model)
△	1-551-530-00	Cord, power; euro-plug (E model)

### —Power Cord (E model)—

euro-plug  
(1-551-530-00)

parallel-blade plug  
(1-551-473-31)

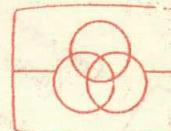


Note: The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

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

### ACCESSORIES AND PACKING MATERIALS

Part No.	Description
X-4853-006-0	(E) Screw Ass'y, cartridge including: (AEP, UK, US, Canadian model)
2-011-002-00	Bag, polyethylene
2-056-532-01	(B) Screw (A), cartridge
2-224-081-00	(B) Screw (E), cartridge
2-224-081-11	(B) Screw (E), cartridge
3-770-625-11	(D) Manual, instruction (AEP, UK, E model)
3-770-625-21	Manual, instruction (US model)
3-770-625-21	Manual, instruction (Canadian model)
3-794-319-31	(A) Bag, polyethylene
3-701-614-00	(A) Bag, polyethylene, shell and main weight
3-701-630-00	(A) Bag, polyethylene
3-701-634-00	(A) Bag, polyethylene, turntable
3-701-806-00	(A) Adaptor, 45 rpm
3-701-891-00	(A) Label, main caution (Canadian, UK model)
3-703-114-01	Label, main caution (US model)
3-793-395-00	(B) Gauge, tracking error check
3-794-265-00	Leaflet, caution (E model)
4-847-314-00	(C) Bag, polyethylene
4-848-002-00	(A) Cushion, arm pipe
4-857-655-00	(A) Plate (A), protection
4-858-407-00	(A) Adjustor, drop-point
4-858-587-00	(A) Bag, accessory
4-858-593-00	(A) Cushion, weight
4-858-738-00	(E) Carton
4-858-740-00	(C) Cushion, right
4-858-741-00	(C) Cushion, left
4-858-748-00	(C) Box, accessory



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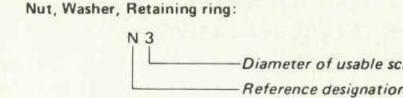
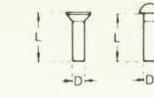
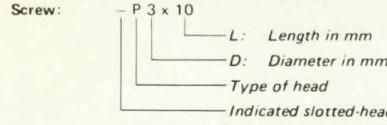
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## 1/4 WATT CARBON RESISTORS A

Note: Circled letter A is applicable to European models only.

$\Omega$	Part No.										
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00

## HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

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