

# PS-1150

*E Model  
AEP Model  
AUS Model*



## AUTOMATIC STEREO TURNTABLE SYSTEM

### SPECIFICATIONS

#### GENERAL

<b>Power requirements:</b>	240 V ac, 50 Hz (AUS model) 220 V ac, 50 Hz (AEP model) 110–120, 220–240 V ac, 50/60 Hz (E model)
<b>Power consumption:</b>	9 W
<b>Dimensions:</b>	Approx. 440 (w) x 150 (h) x 350 (d) mm 17 <sup>3</sup> / <sub>8</sub> (w) x 5 <sup>7</sup> / <sub>8</sub> (h) x 13 <sup>3</sup> / <sub>4</sub> (d) inches
<b>Weight:</b>	Approx. 6 kg, 13 lb 4 oz net 8 kg, 17 lb 10 oz in shipping carton

#### TURNTABLE

<b>Platter:</b>	30 cm (12"), aluminum-alloy diecast
<b>Motor:</b>	4-pole synchronous
<b>Drive system:</b>	Belt drive
<b>Speeds:</b>	33 <sup>1</sup> / <sub>3</sub> rpm, 45 rpm
<b>Wow and flutter:</b>	±0.17 % (DIN) 0.1 % WRMS (NAB)
<b>S/N ratio:</b>	58 dB (DIN-B)

#### TO NEARM

<b>Type:</b>	Statically balanced, universal
<b>Pivot-to-stylus length:</b>	212 mm (8 <sup>3</sup> / <sub>8</sub> " )
<b>Overall arm length:</b>	277 mm (10 <sup>7</sup> / <sub>8</sub> " )
<b>Overhang:</b>	13 mm ( <sup>1</sup> / <sub>2</sub> " )
<b>Tracking error:</b>	+4°, -1.8°
<b>Tracking-force adjustment range:</b>	0 – 3 g
<b>Shell weight:</b>	7.5 g
<b>Cartridge weight range:</b>	4 – 8 g

#### CARTRIDGE VM-26GA

<b>Type:</b>	Induced magnet type
<b>Frequency range:</b>	20 – 20,000 Hz
<b>Channel separation:</b>	15 dB at 1,000 Hz
<b>Output voltage:</b>	3.6 mV at 1 kHz, 5 cm/sec, 45°
<b>Load impedance:</b>	50 k ohms
<b>Tracking force:</b>	2.5 ± 0.5 g (2.5 g recommended)
<b>Stylus:</b>	Sony ND-132GA (Conical 0.5 mil diamond)
<b>Weight:</b>	6.8 g

#### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING 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.

# SONY®

## SERVICE MANUAL

# SECTION 1 OUTLINE

## 1-1. AUTOMATIC RETURN OPERATION

The turntable starts to rotate when the tonearm is lifted from its rest and moved toward the first groove of the record. The tonearm lever ass'y (1) which is attached to the end of the tonearm shaft (2) rotates and releases the motor on/off switch (3) as shown in Fig. 1-1, so that the motor is switched on.

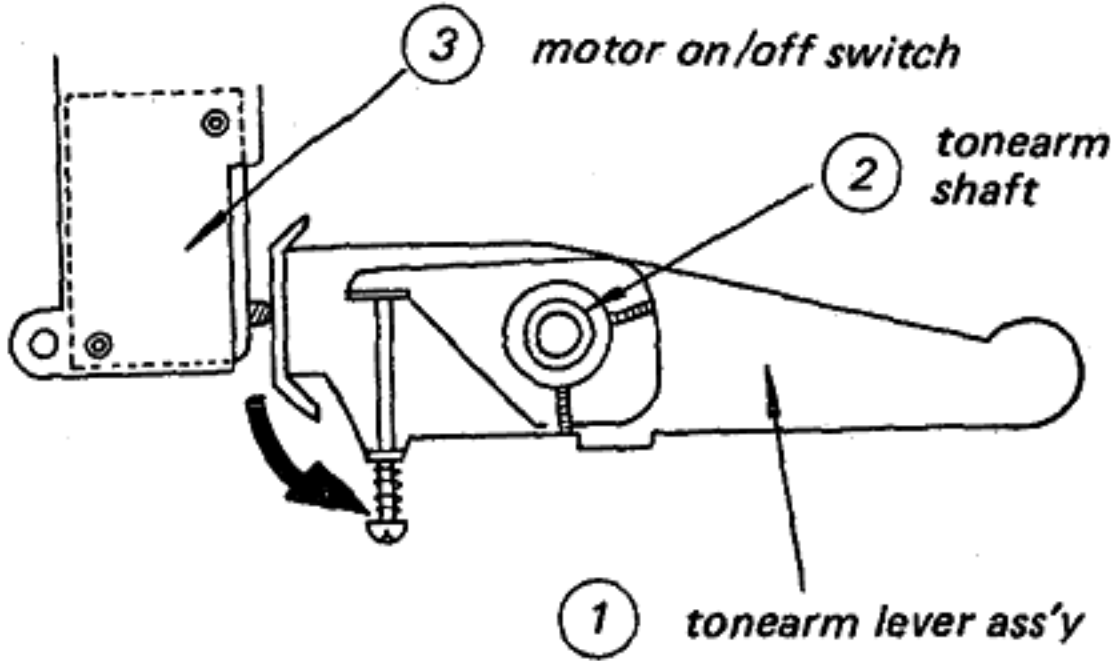


Fig. 1-1. Tonearm lever ass'y movement

When the stylus approaches the lead-out groove of record, the tip (5) of the tonearm lever ass'y (1) bears against the tonearm slide/return lever (6) and slides it toward the turntable center as shown in Fig. 1-2. When the stylus enters the first groove, the tonearm slide/return lever (6) pushes the return pawl (7) on the main cam (8) toward the turntable center along with the trip pawl (9) which is simply mounted on the return pawl (7). The trip pawl is moved by means of friction between the return pawl and the trip pawl as shown in Fig. 1-3. The trip pawl (9) enters path of the revolving-turntable shaft's tooth, when the stylus enters the eccentric lead-out groove as shown in Fig. 1-4.

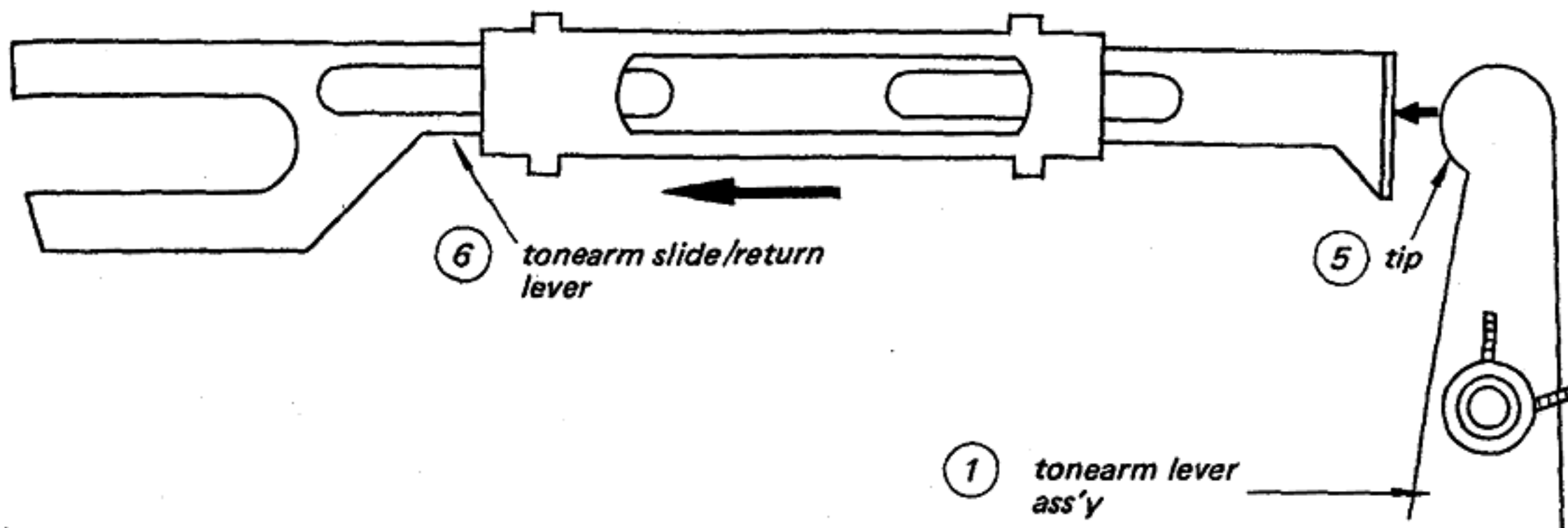


Fig. 1-2. Tonearm slide/return lever movement

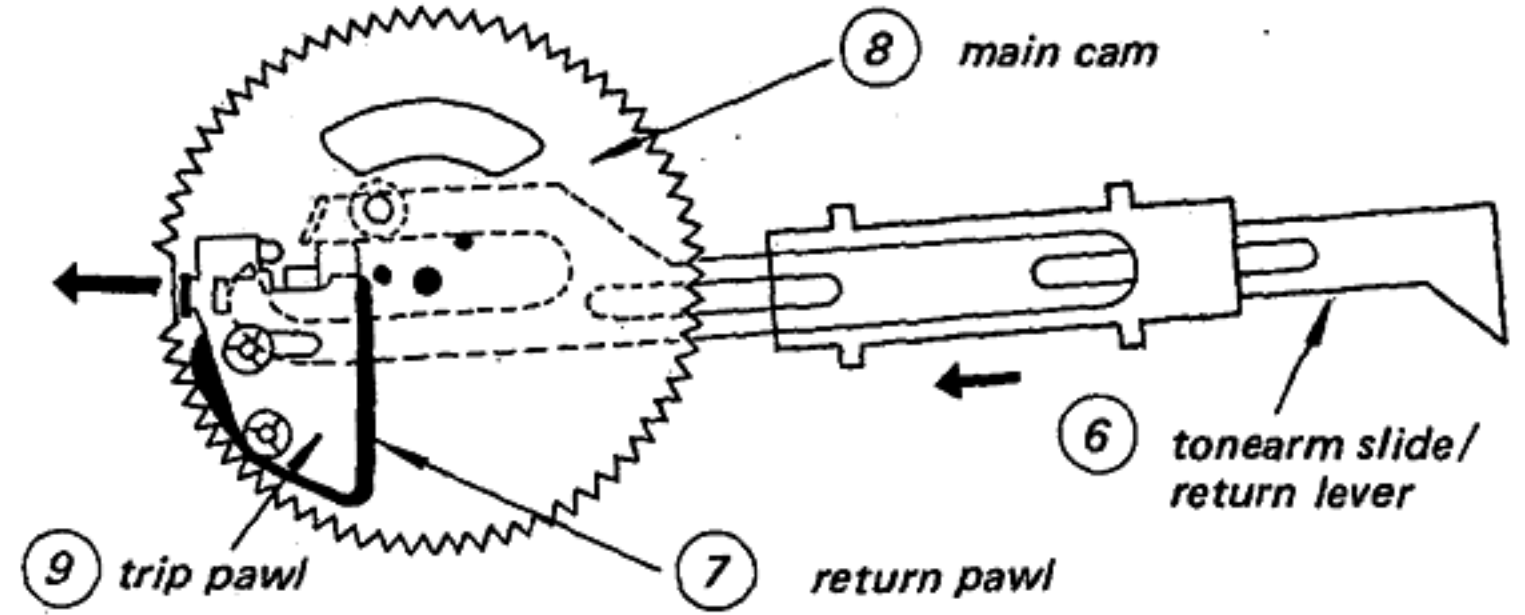


Fig. 1-3. Return pawl movement

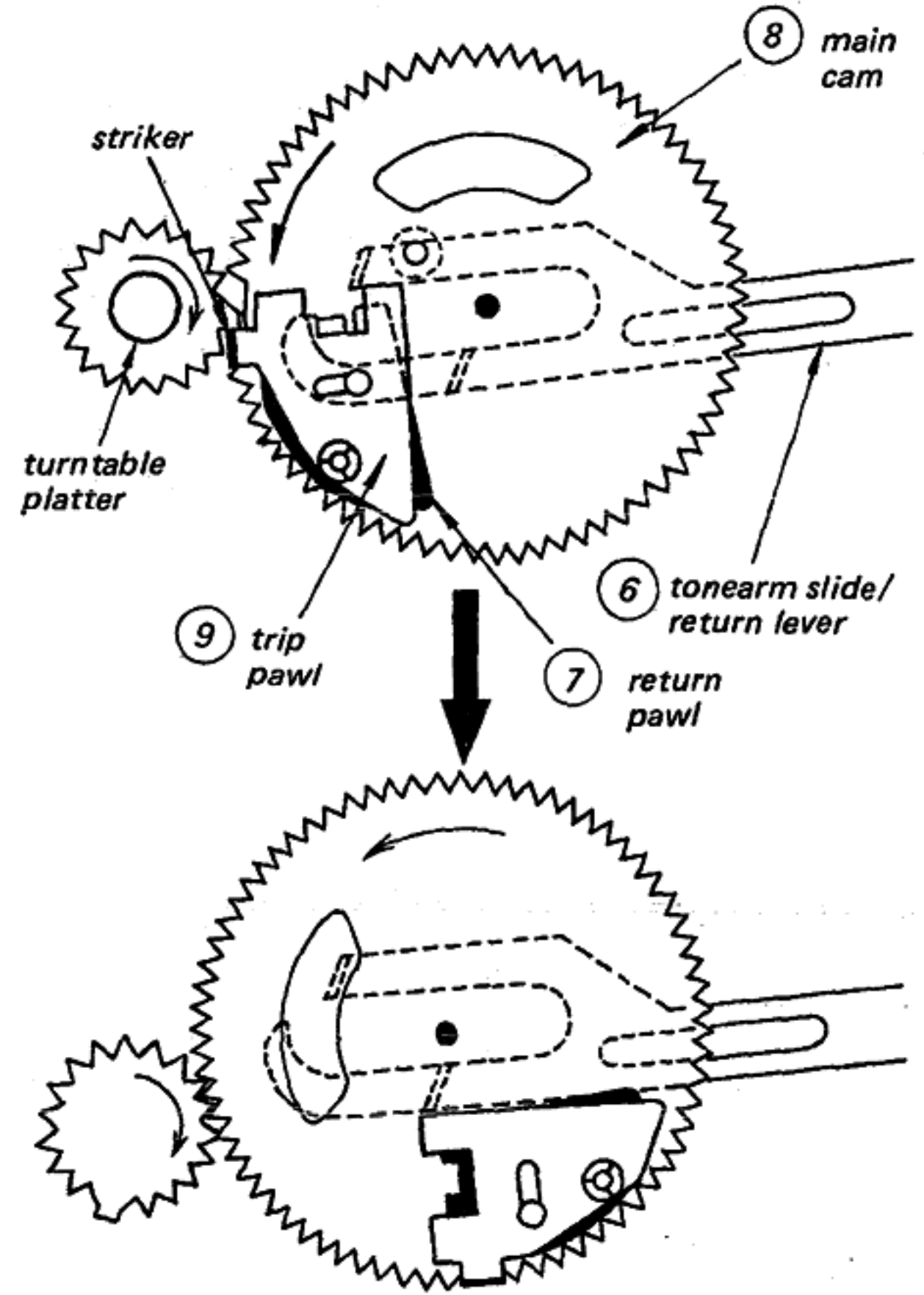


Fig. 1-4. Main cam movement

The main cam (8) rotates and moves the tonearm lifting lever (11), causing the tonearm lever ass'y (1) to pivot and raise the tonearm lifting rod (12) as shown in Fig. 1-5.

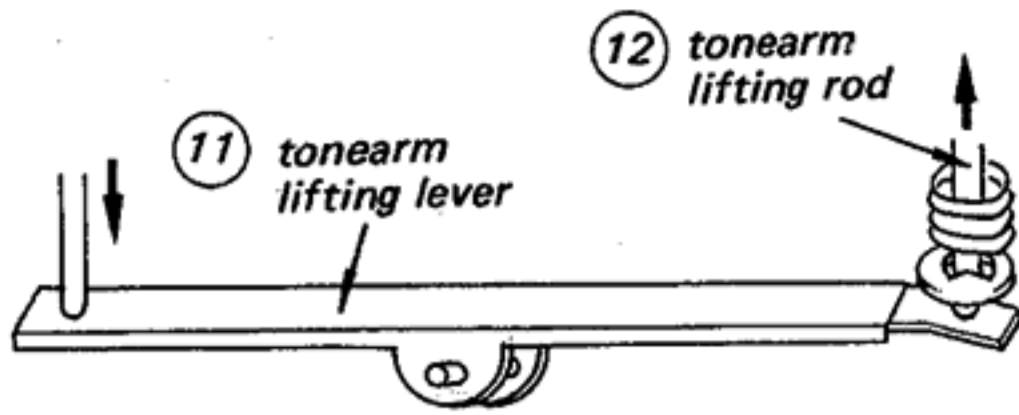


Fig. 1-5. Tonearm lifting lever movement

The movement of tonearm lever ass'y retains the motor on/off switch (3) on position. This ensures power to the motor to complete last half cycle of rejecting operation after the tonearm has moved back to its rest. When the main cam (8) comes to its last movement, the tonearm slide/return lever (6) is moved back to its original position, cutting off power to the motor, because the motor on/off switch (3) is pressed by means of the tonearm lever ass'y (1) as shown in Fig. 1-6. Now the tonearm returns to its rest.

## 1-2. MANUAL REJECT OPERATION

The tonearm can be rejected anywhere on the record by using the manual REJECT knob (14). When REJECT knob is moved to the arrowed direction (1), the reject lever pushes the pin on the trip pawl. Now the trip pawl moves to the turntable platter and enters path of the revolving-turntable shafts tooth. This triggers the automatic return operation as previously described.

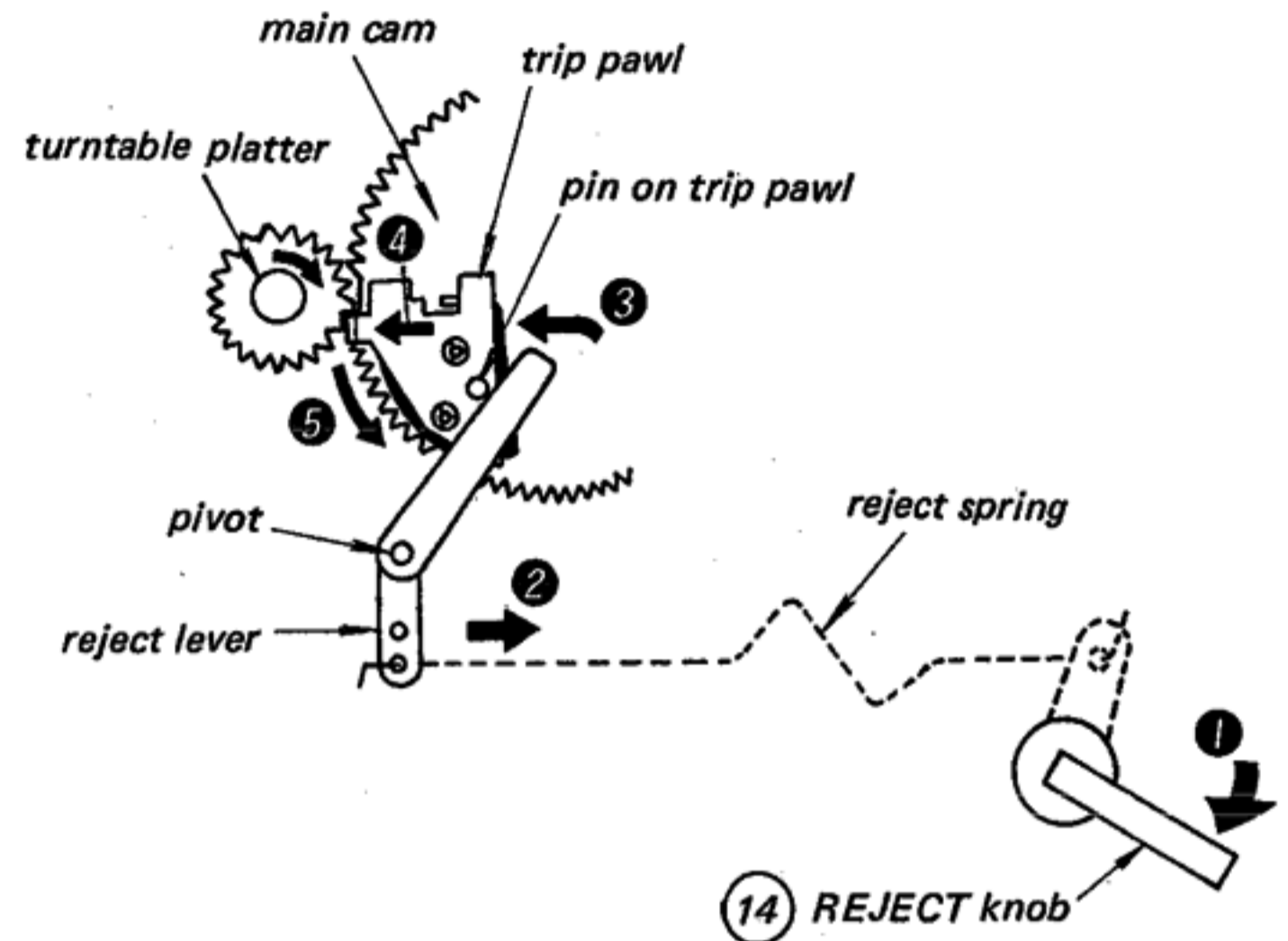


Fig. 1-7. Reject lever movement

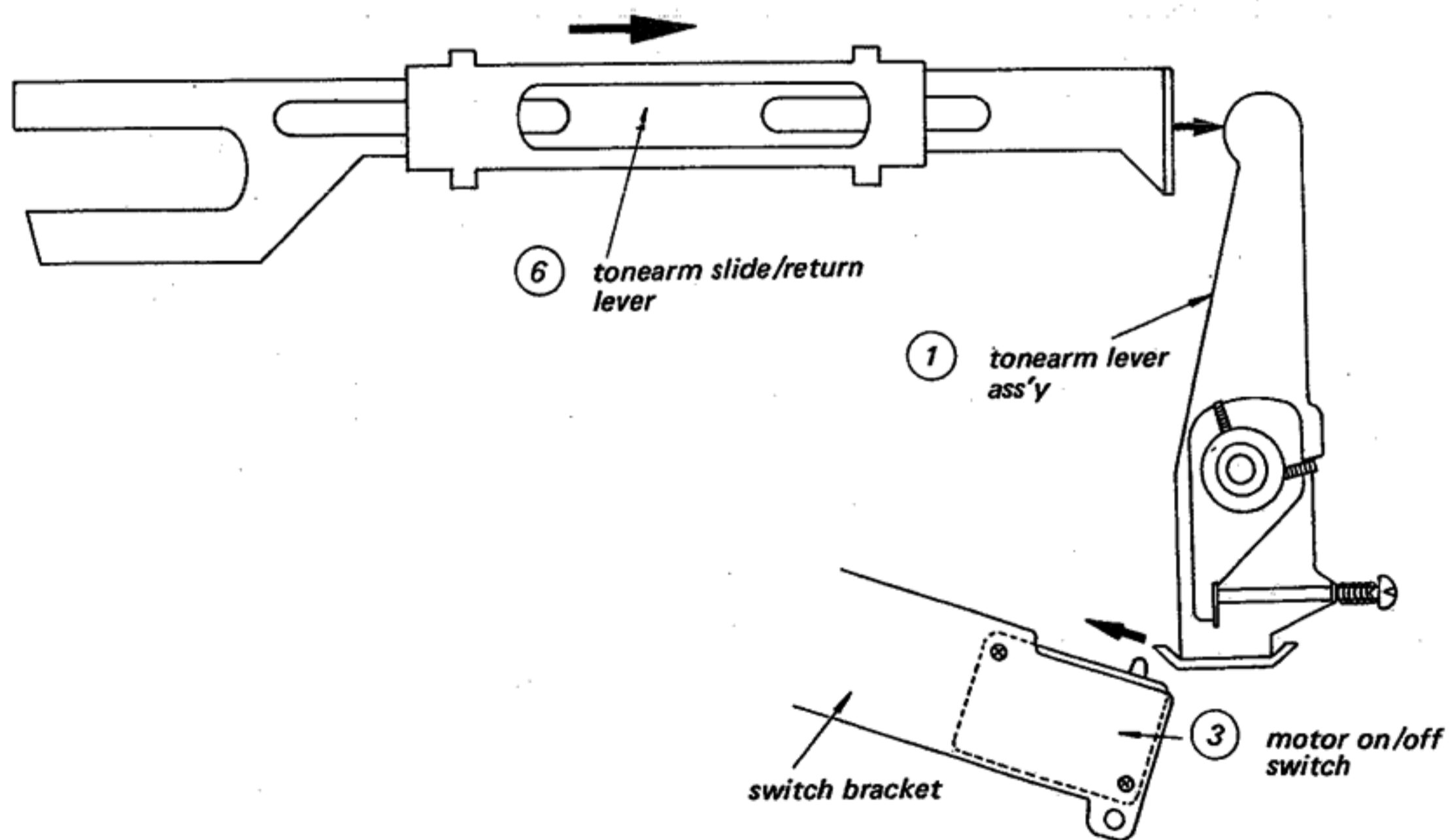
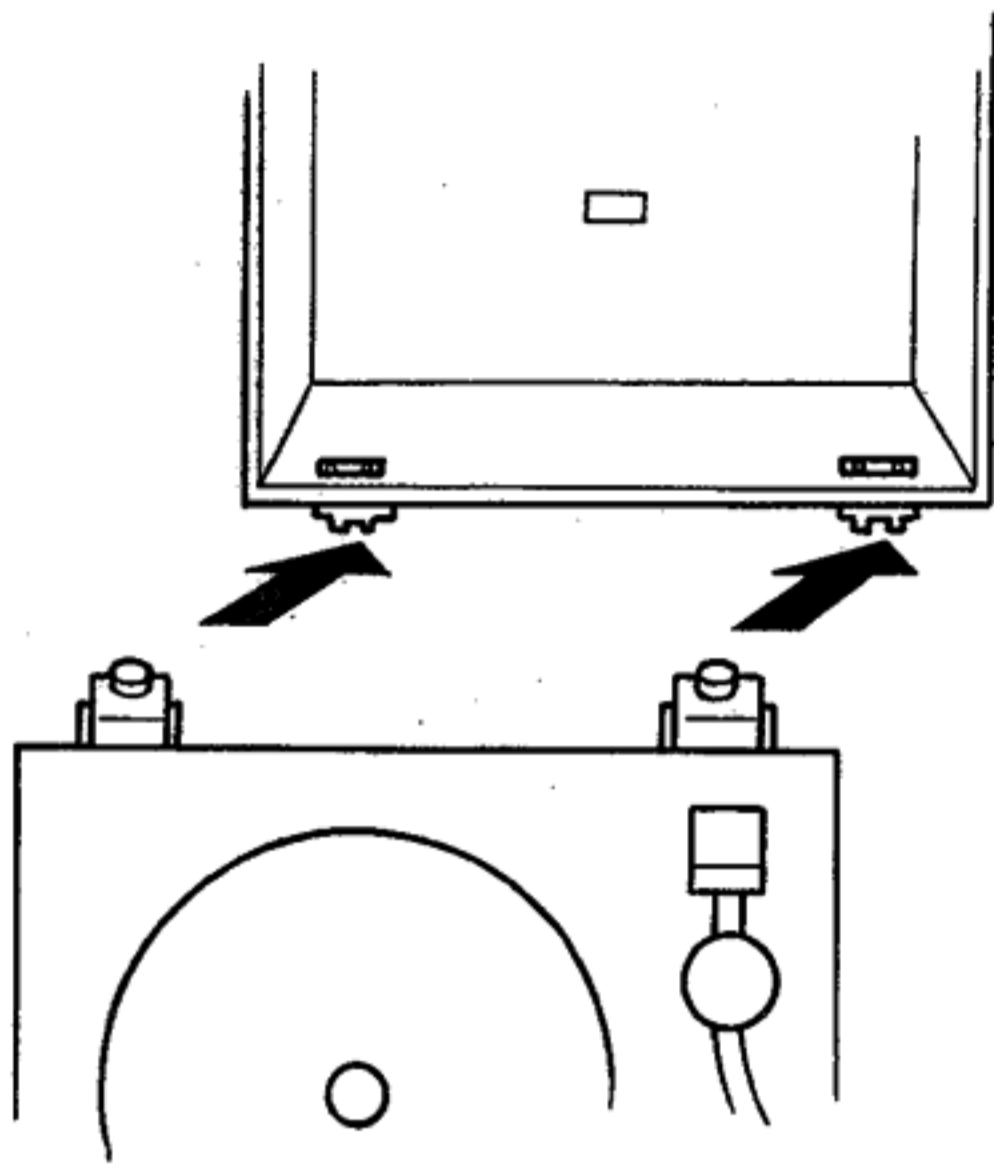


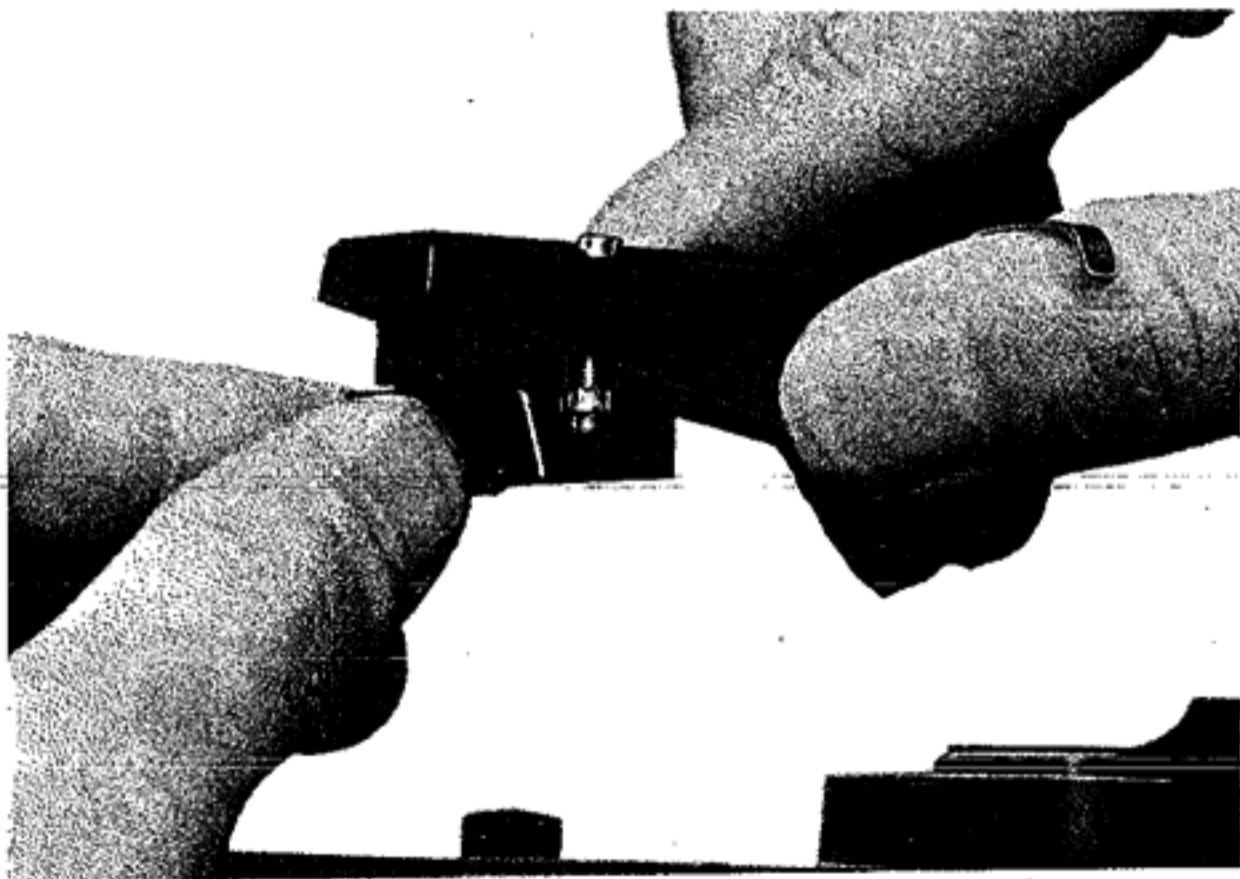
Fig. 1-6. Tonearm slide/return lever movement

## SECTION 2 DISASSEMBLY AND REPLACEMENT

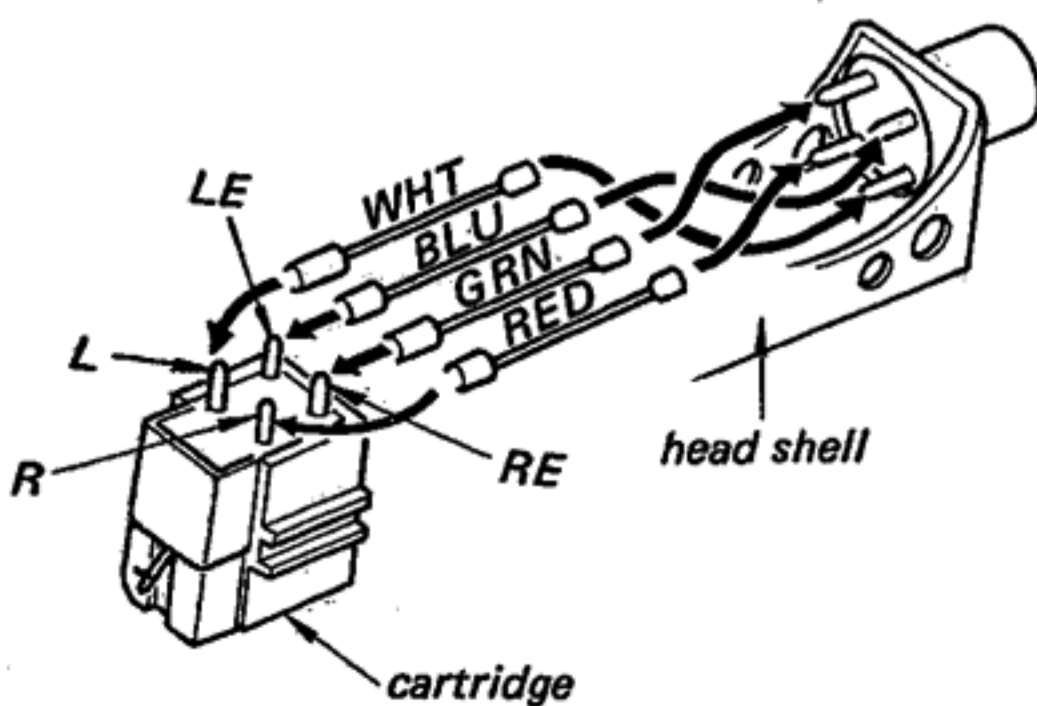
### 2-1. TOP COVER REMOVAL



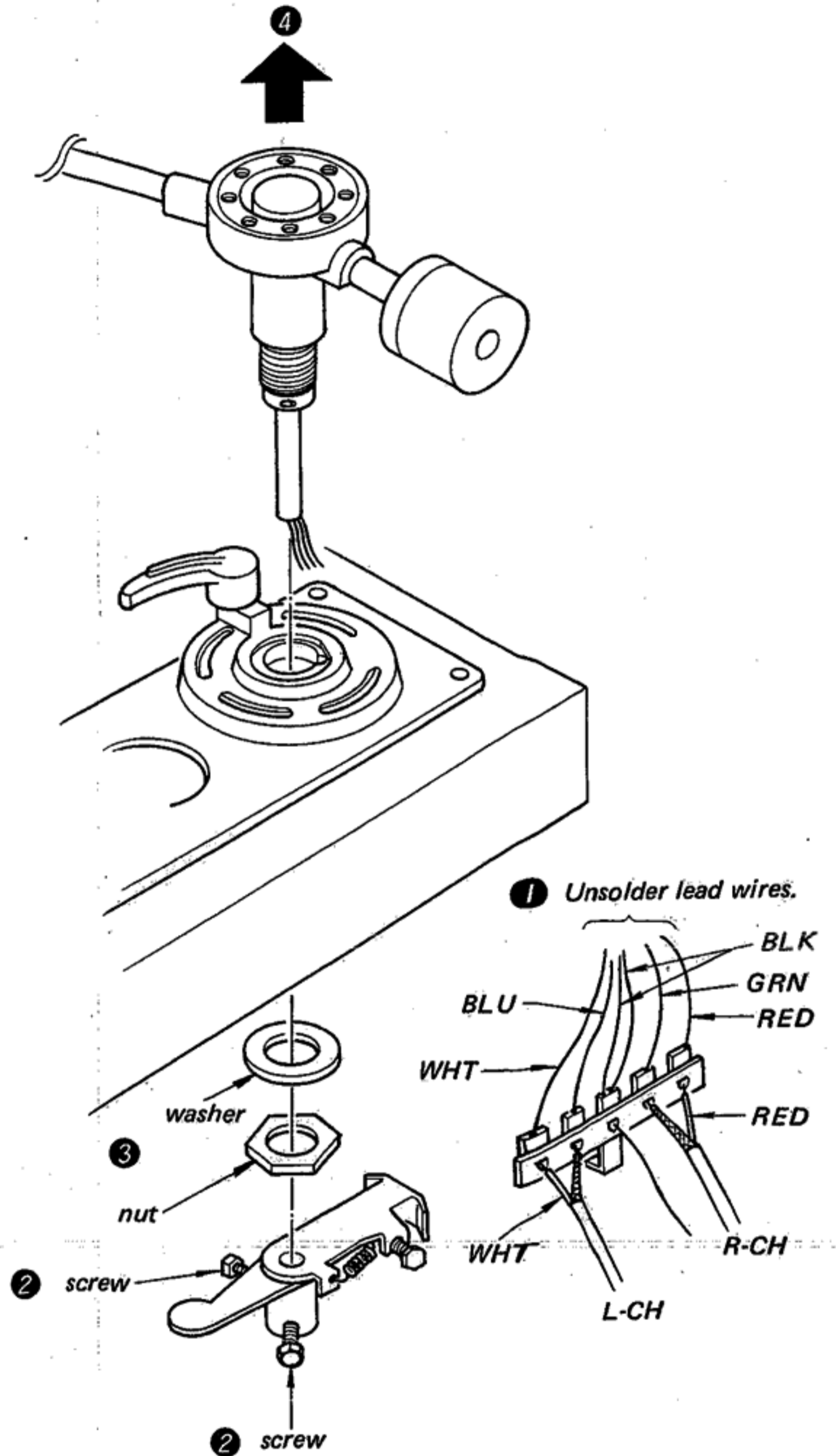
### 2-2. STYLUS REPLACEMENT



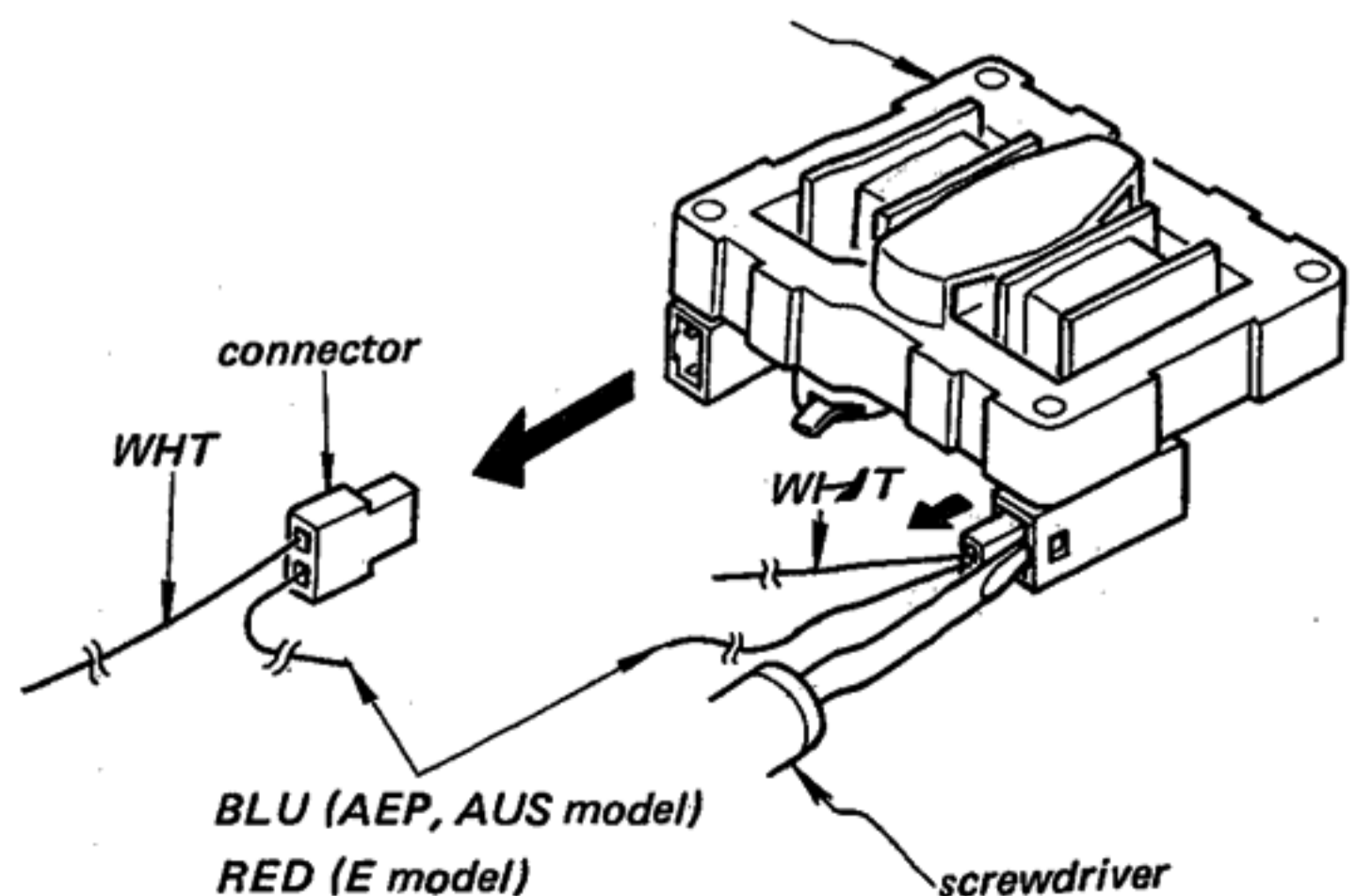
### 2-3. CONNECTION OF CARTRIDGE TO HEAD SHELL



### 2-4. TONEARM REPLACEMENT



### 2-5. MOTOR CONNECTOR REMOVAL

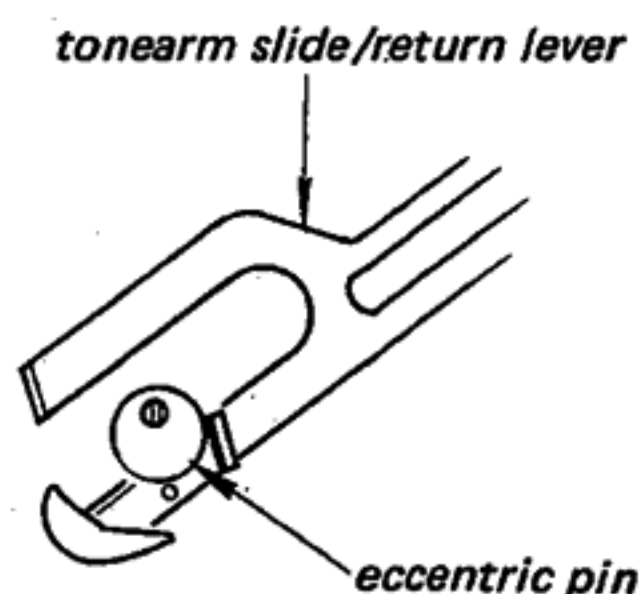
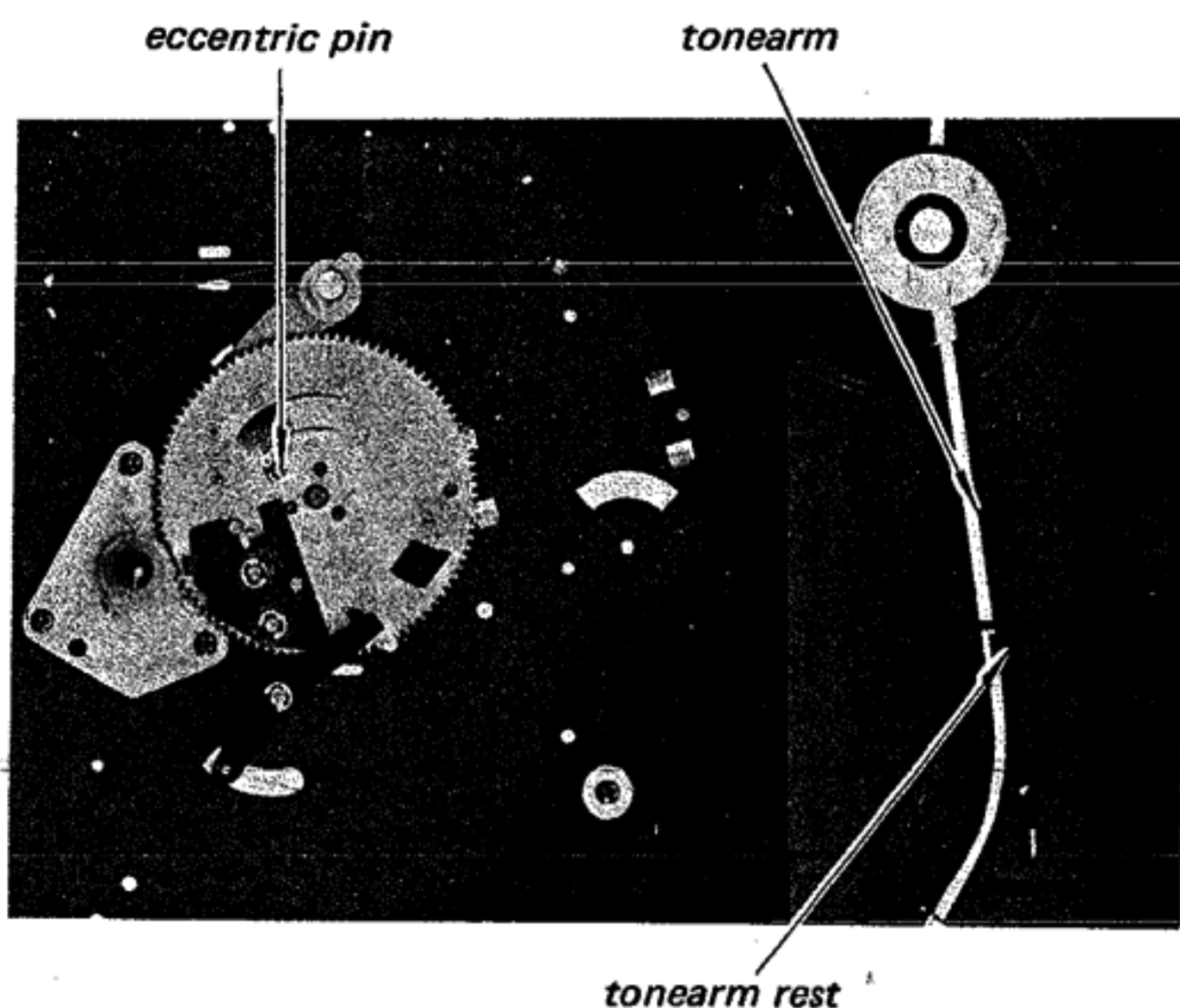


## SECTION 3 ADJUSTMENTS

### 3-1. AUTOMATIC RETURN POSITION ADJUSTMENT

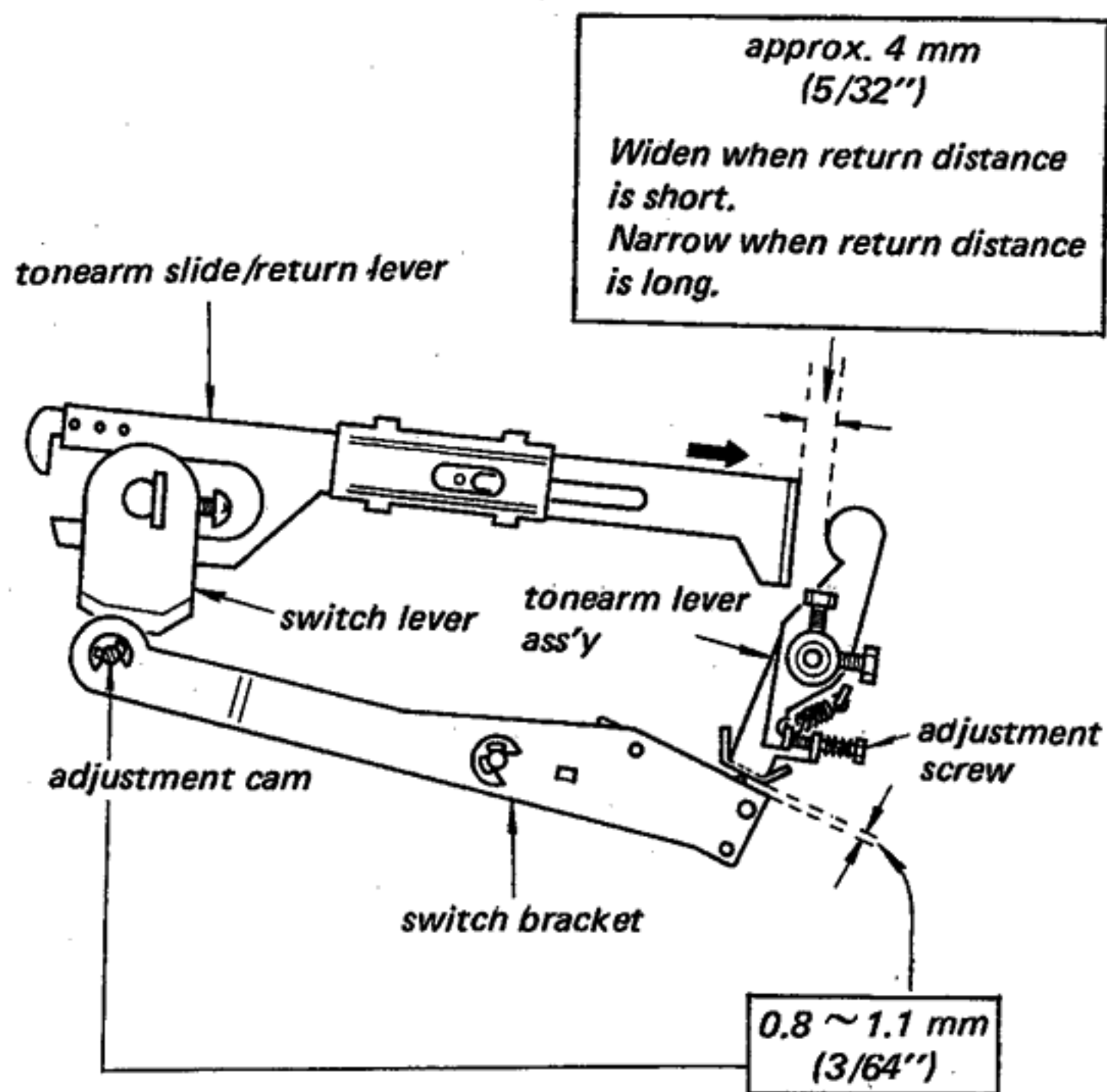
3-1-1. Perform this adjustment when the tonearm does not back to the tonearm rest or it backs to the tonearm too strongly while operating automatic tonearm return.

1. Remove the turntable platter.
2. Slowly move the tonearm to nearly the center of the main cam until it stops.
3. Slowly turn the main cam counterclockwise by hand.
4. The tonearm lifts up and starts to move to the tonearm rest.
5. Adjust the eccentric pin when the main cam rotates approximately one half turn (at which time the tonearm moves most fast) so that the tonearm just rests on the arm rest.



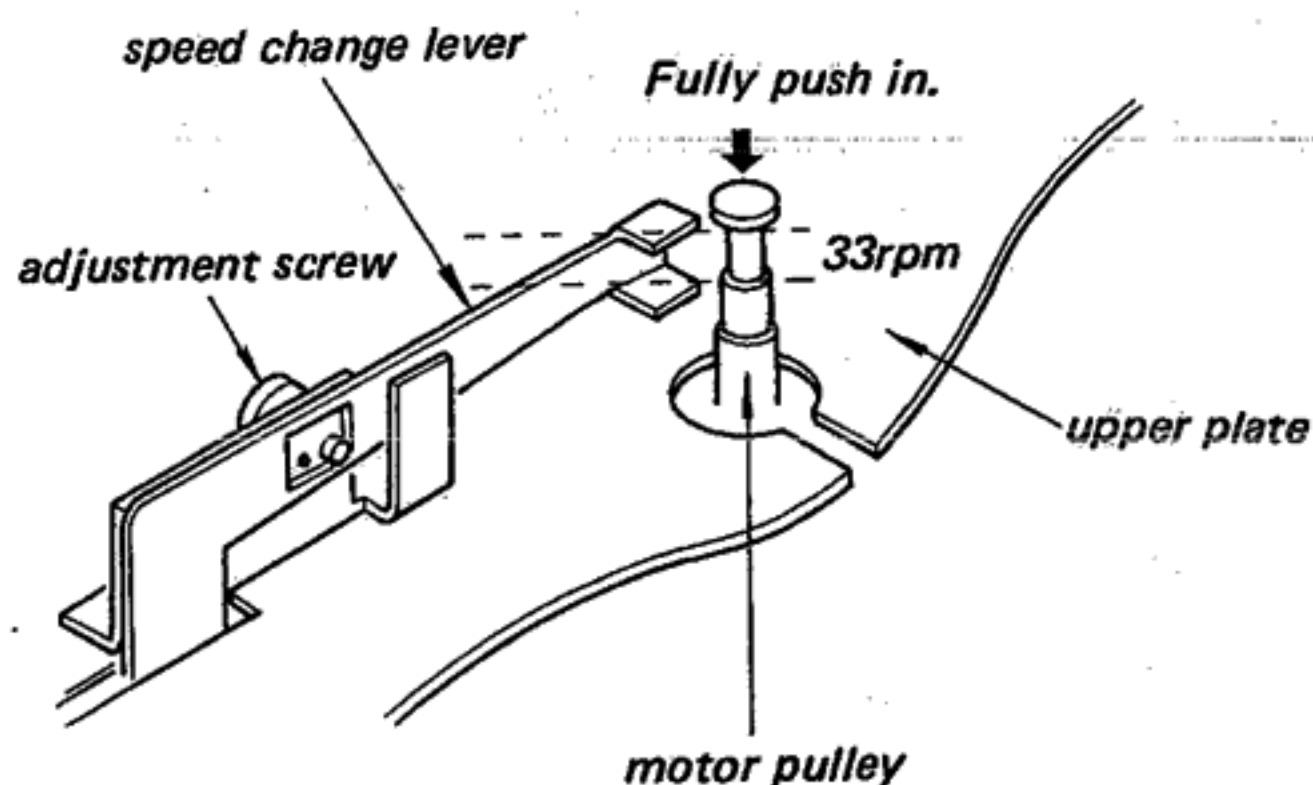
3-1-2. Adjust the screw and the cam with the tonearm rested on the tonearm rest.

After above adjustment, confirm the automatic return operation using the lead-out groove of a record.



### 3-2. SPEED-CHANGE LEVER HEIGHT ADJUSTMENT

1. Fully press in the motor pulley on the motor shaft.
2. Push SPEED 33 button in.
3. Adjust the adjustment screw so that the end of the speed change lever just fits to the 33rpm portion of the pulley.



### 3-3. ADAPTATION TO LOCAL LINE FREQUENCY

Select the motor pulley.

50 Hz  
(no groove)

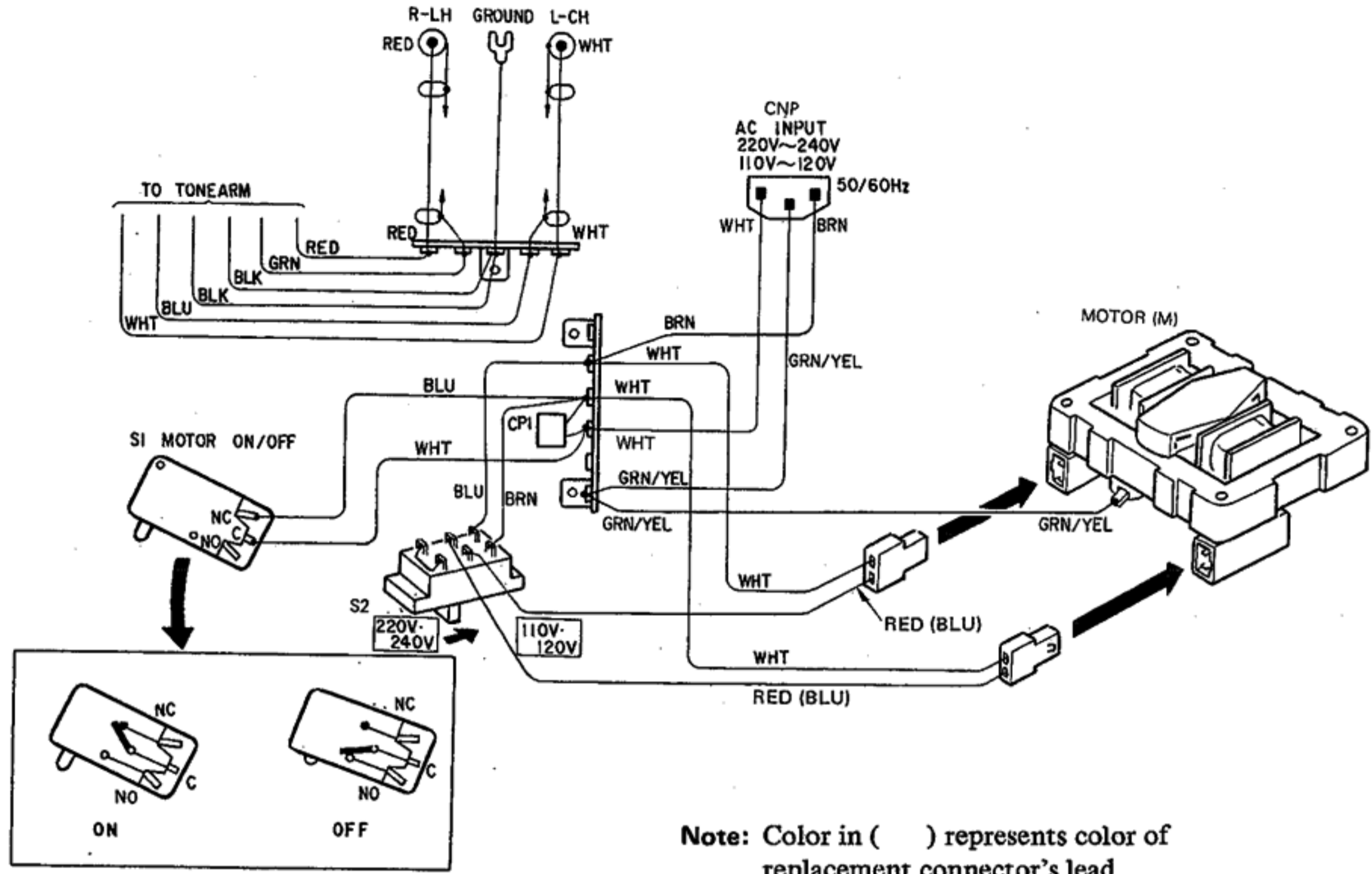


60 Hz  
(grooved)



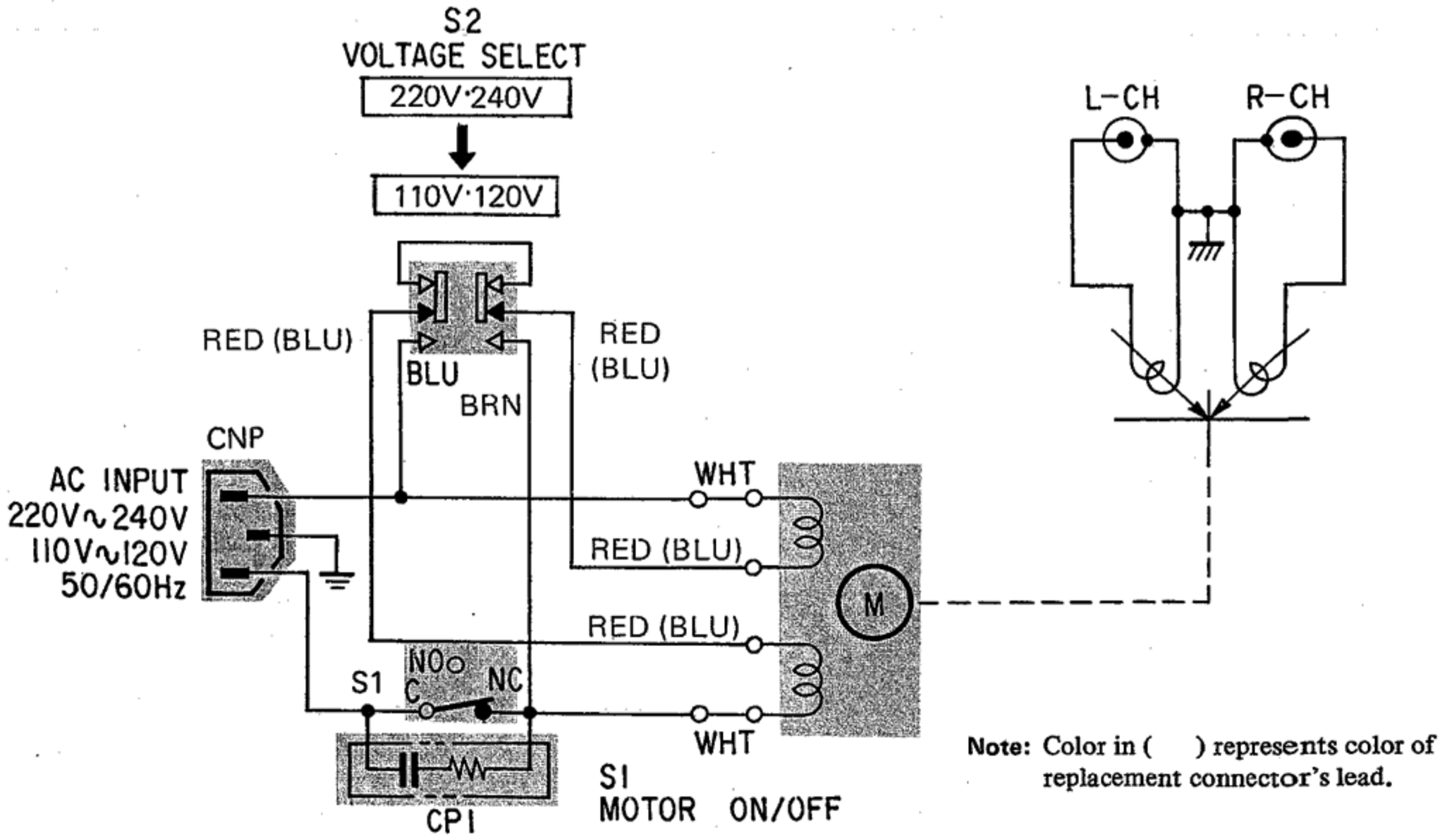
# SECTION 4 DIAGRAMS

## 4-1. WIRING DIAGRAM (1) (E model)

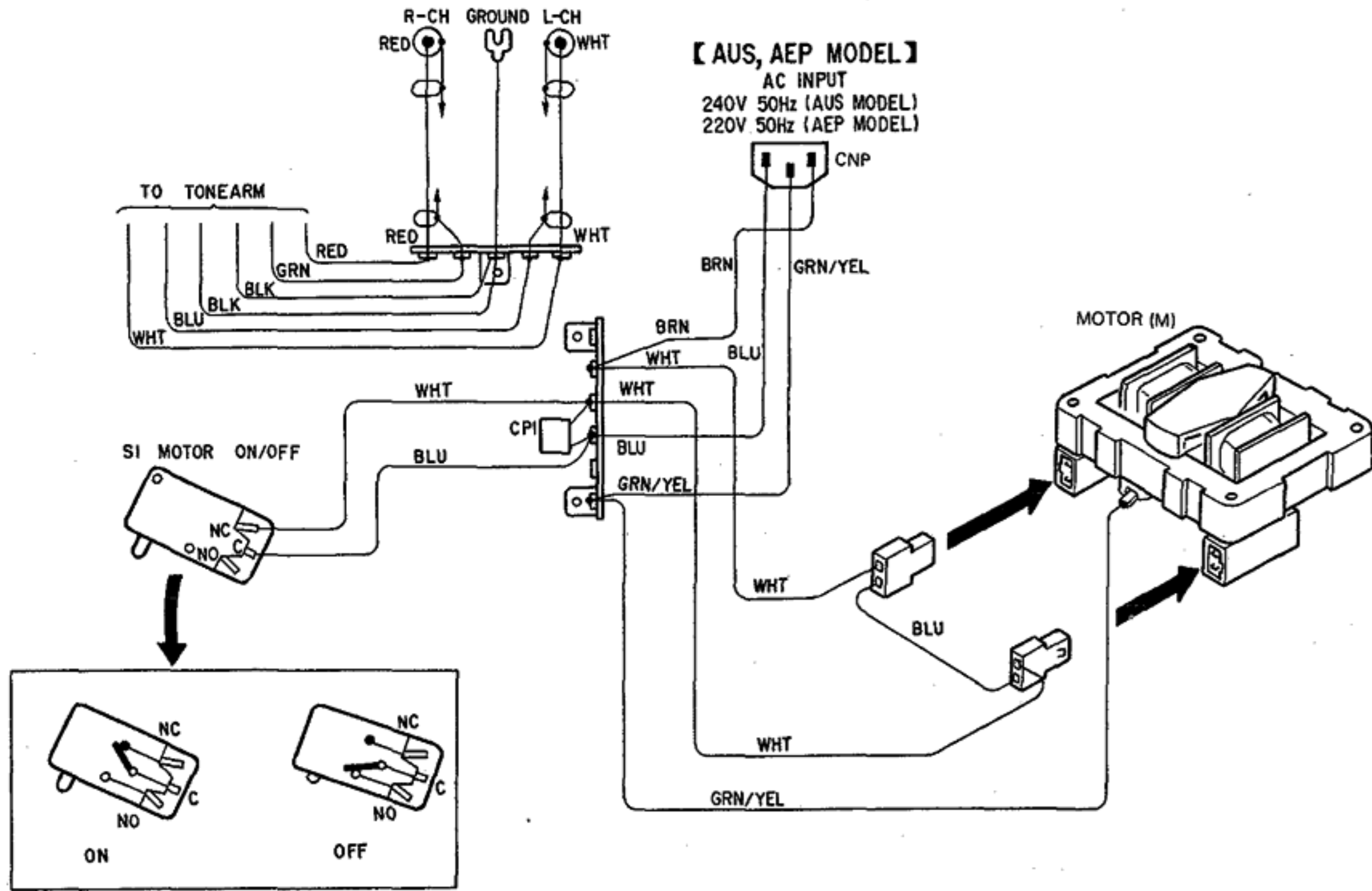


## 4-2. SCHEMATIC DIAGRAM (1) (E model)

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

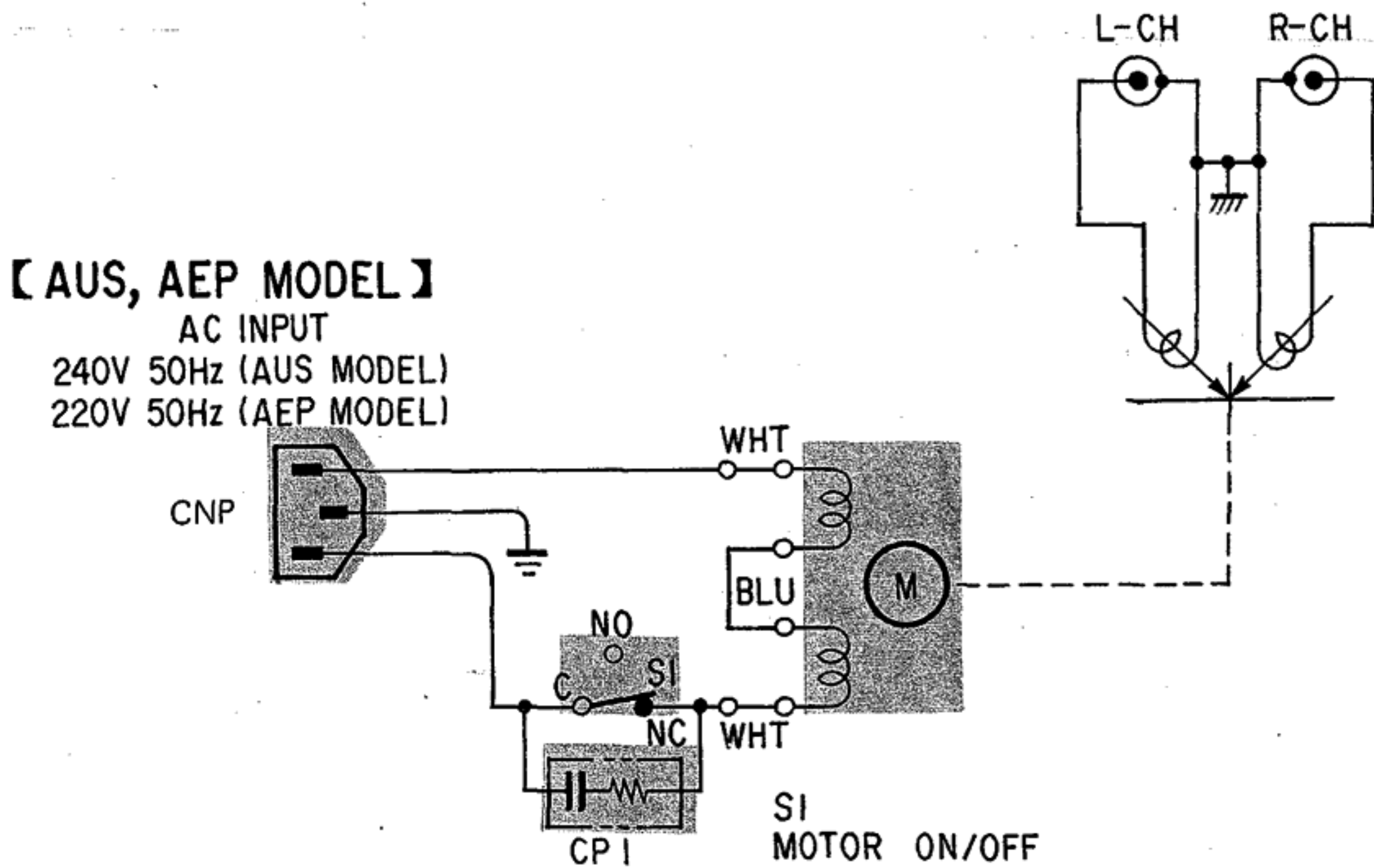


4-3. WIRING DIAGRAM (2) (AEP, AUS model)



4-4. SCHEMATIC DIAGRAM (2) (AEP, AUS model)

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



# MEMO



1

2

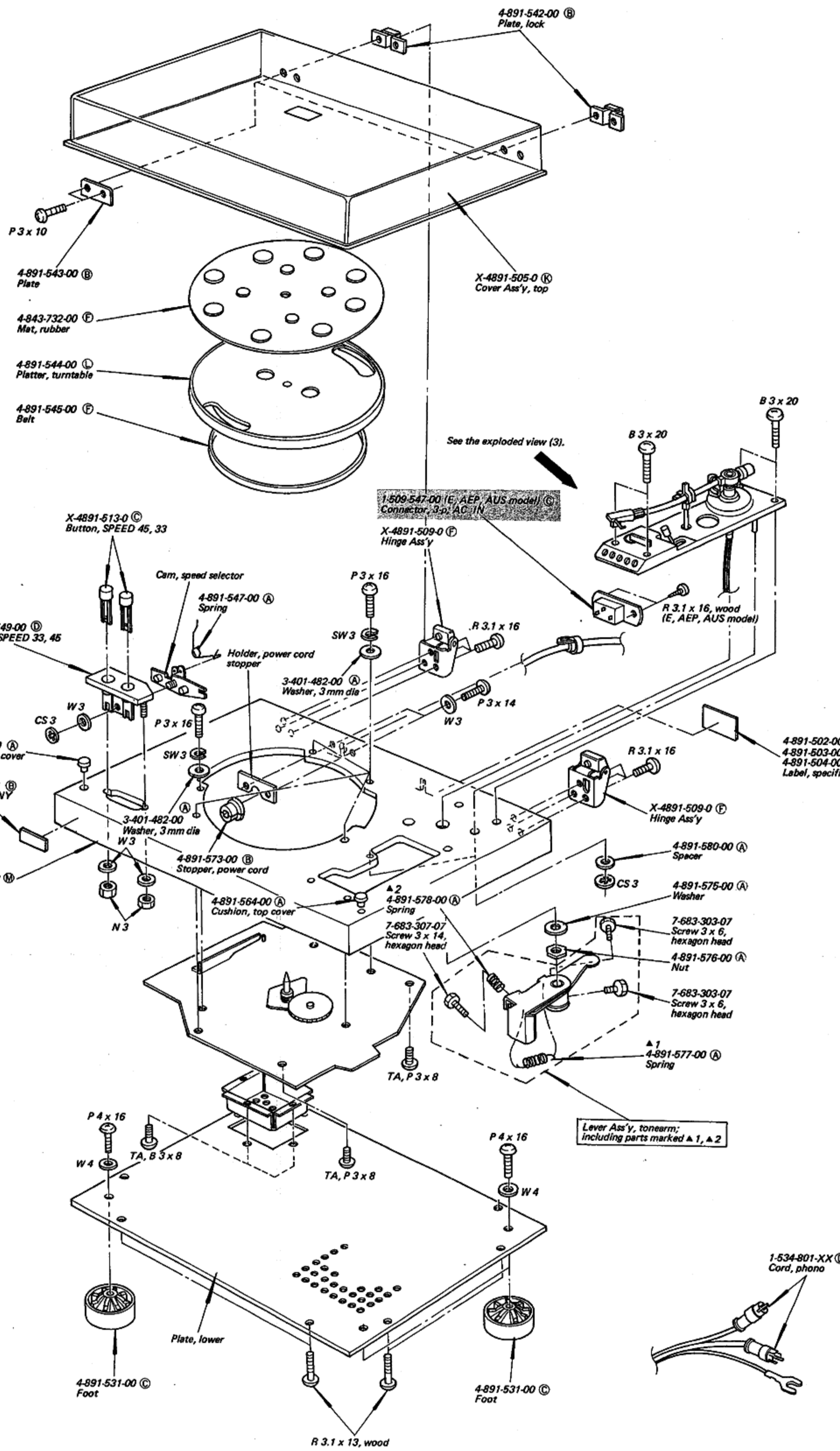
3

4

5

6

7



-9-

-10-

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

**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
- The circled letters (A to Z) are applicable to European model only.

A

B

C

D

E

(2)

-11-

1

2

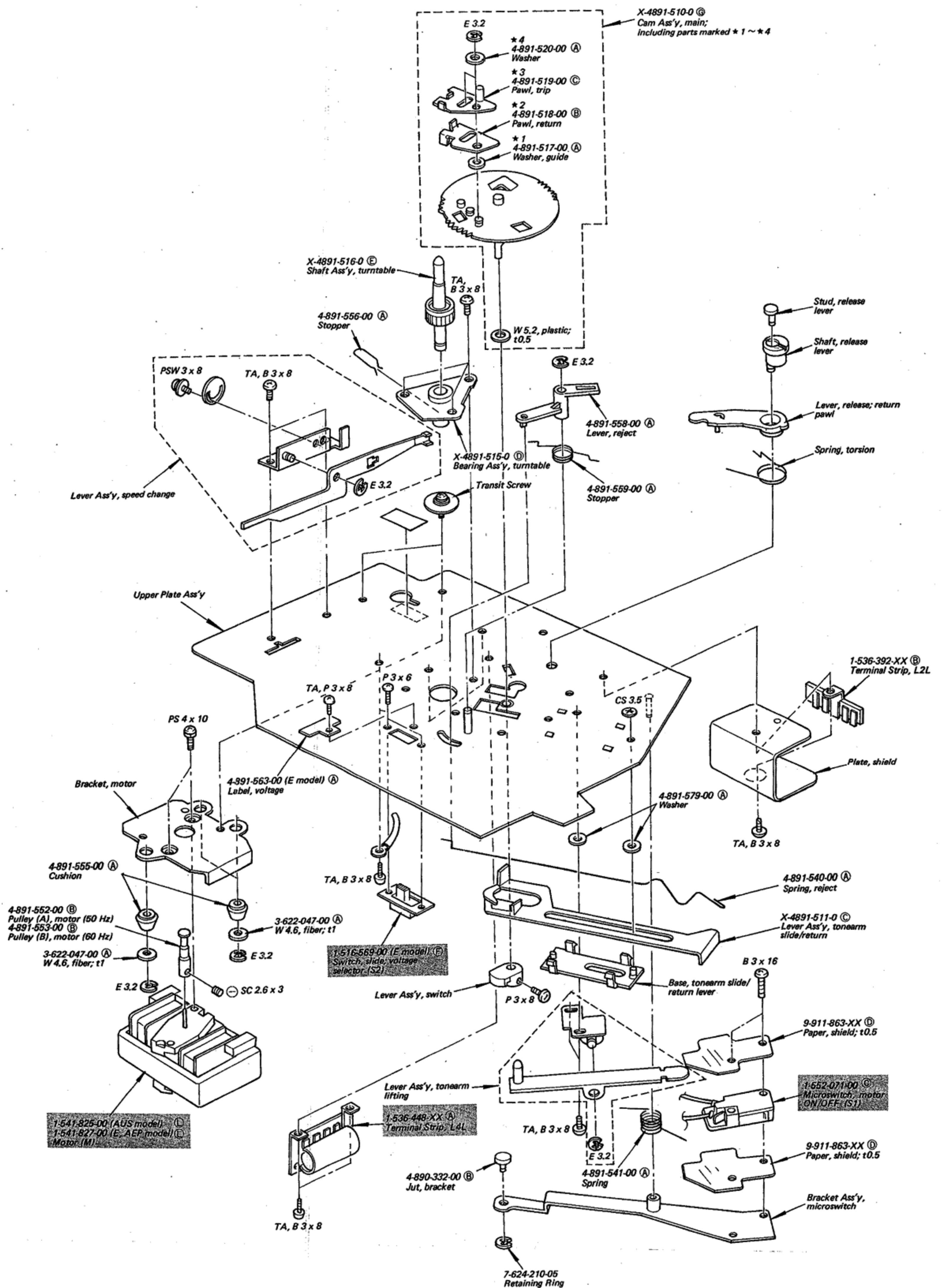
3

4

5

6

7

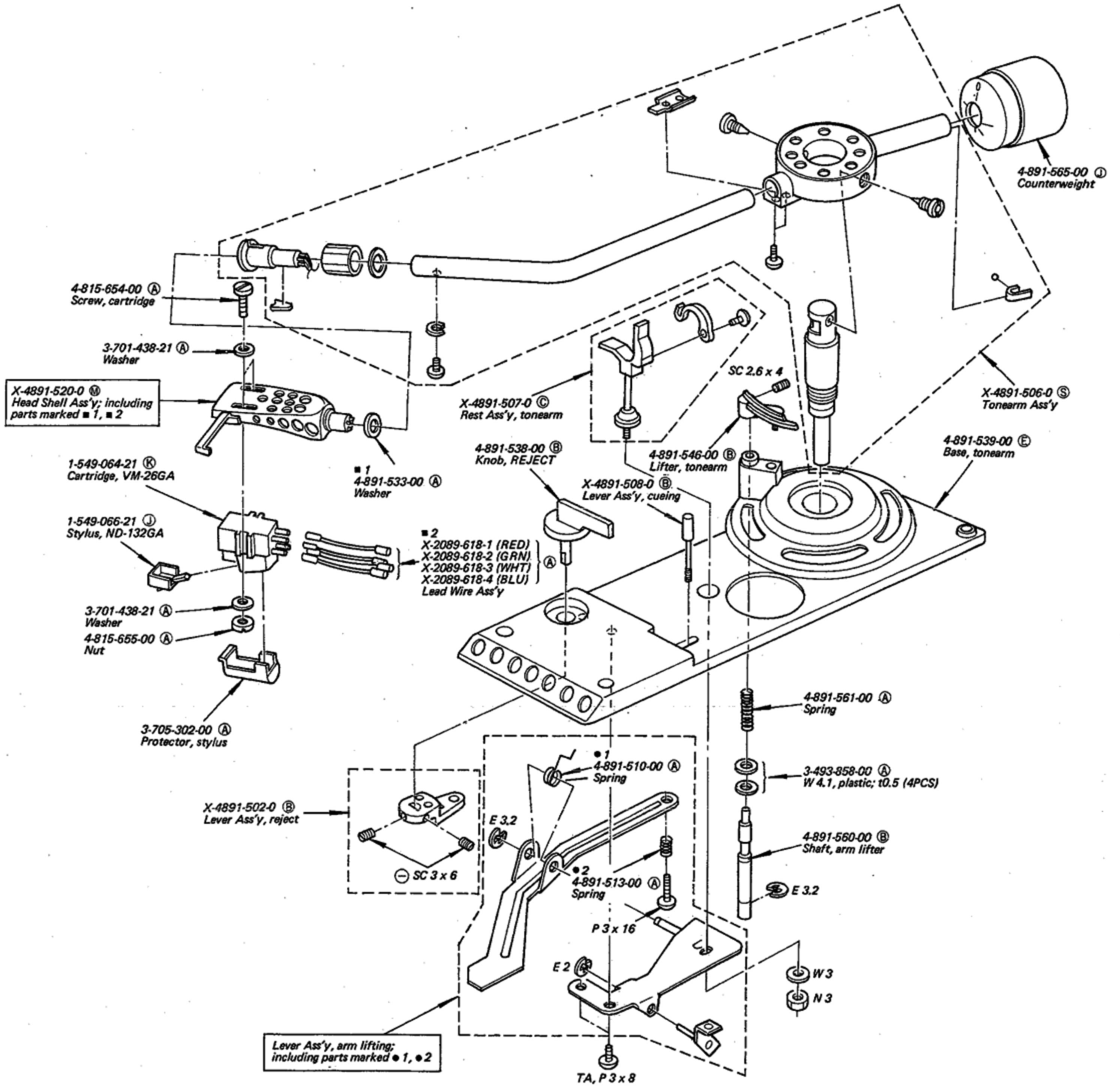


-12-

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

**Note:**

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- All screws are Phillips (cross recess) type unless otherwise noted.
- (-)=slotted head
- The circled letters (A) to (Z) are applicable to European model only.



# SECTION 6 ELECTRICAL PARTS LIST

Note: The circled letters (A) to (Z) are applicable to European model only.

Ref. No.	Part No.	Description
CNP	1-509-547-00	Connector, 3-p; AC IN (E, AEP, AUS model)
CPI	1-231-057-31	Encapsulated Component
M	1-541-825-00	Motor (AUS model)
	1-541-827-00	Motor (E, AEP model)
S1	1-552-071-00	Microswitch, motor ON/OFF
S2	1-516-569-00	Switch, slide; voltage selector (E model)
	1-534-801-XX	Cord, phono
	1-536-392-XX	Terminal Strip, 2L2
	1-536-448-XX	Terminal Strip, L4L
	1-549-064-21	Cartridge, VM-26GA
	1-549-066-21	Stylus, ND-132GA
	1-551-247-00	Connector, motor

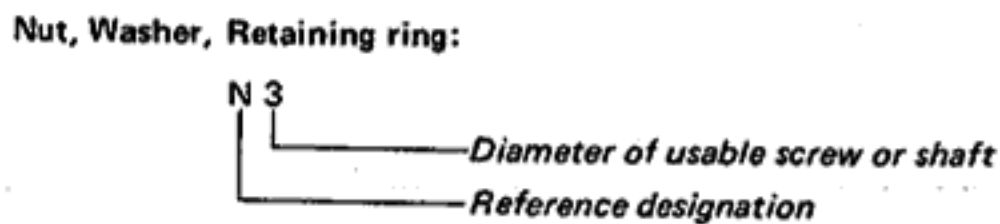
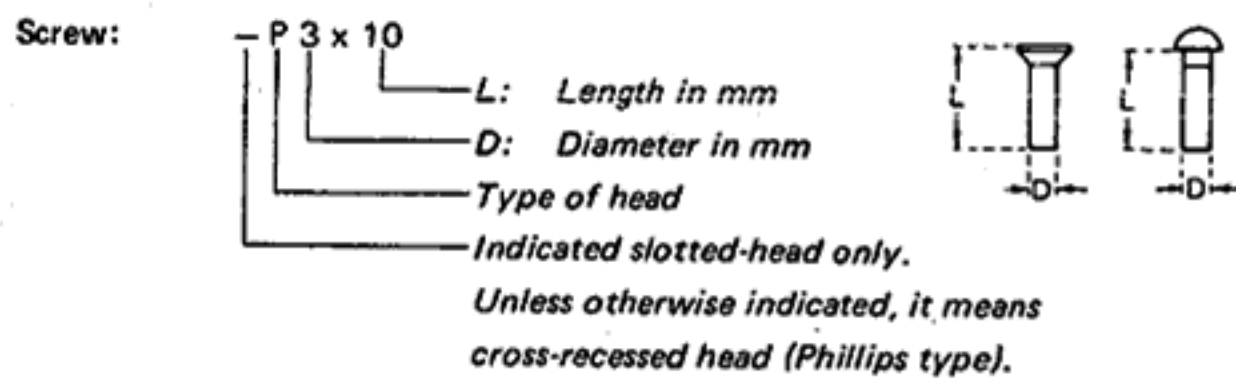
Part No.	Description
3-701-635-00	Bag, plastic; turntable platter
3-701-806-01	Adaptor, 45 rpm
3-770-056-11	Manual, instruction
4-891-507-00	Carton
4-891-552-00	Pulley, motor (50 Hz)
4-891-553-00	Pulley, motor (60 Hz)
4-891-565-00	Counterweight
4-891-566-00	Cushion, turntable platter
4-891-567-00	Cushion, top
4-891-568-00	Holder, parts
4-891-569-00	Sheet, top cover
4-891-570-00	Sheet, set
4-891-571-00	Cushion, right
4-891-572-00	Cushion, left

### ACCESSORIES AND PACKING MATERIALS

1-526-565-00	Adaptor, ac
1-534-754-00	Cord, power

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

### HARDWARE NOMENCLATURE



Reference Designation	Shape	Description	Remarks
<b>SCREWS</b>			
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
<b>SELF-TAPPING SCREWS</b>			
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
<b>SET SCREWS</b>			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
<b>NUT</b>			
N		nut	
<b>WASHERS</b>			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
<b>RETAINING RINGS</b>			
E		retaining ring	
G		grip-type retaining ring	