

# SERVICE MANUAL

## YP-B2



004364



**YAMAHA**

Printed in Japan 6.78, T.T. 2K

# ■ CONTENTS

SPECIFICATIONS .....	3
APPELLATION OF PARTS .....	4
MECHANISM .....	5
ADJUSTMENT .....	7
LUBRICATION .....	10
MAINTENANCE OF TURNTABLE .....	10
SCHEMATIC DIAGRAM .....	11
TROUBLESHOOTING .....	13
PARTS LIST .....	14

## ■ SPECIFICATIONS

### ● Turntable Section

<b>Motor</b>	4-Pole synchronous type
<b>Turntable Platter</b>	30 cm (12") die-cast aluminum
<b>Speeds</b>	33-1/3 and 45 rpm (2-speeds)
<b>Drive System</b>	Belt drive
<b>Signal-to-Noise Ratio</b>	Better than 62dB (DIN-B)
<b>Wow and Flutter</b>	Better than 0.08% wrms

### ● Tonearm Section

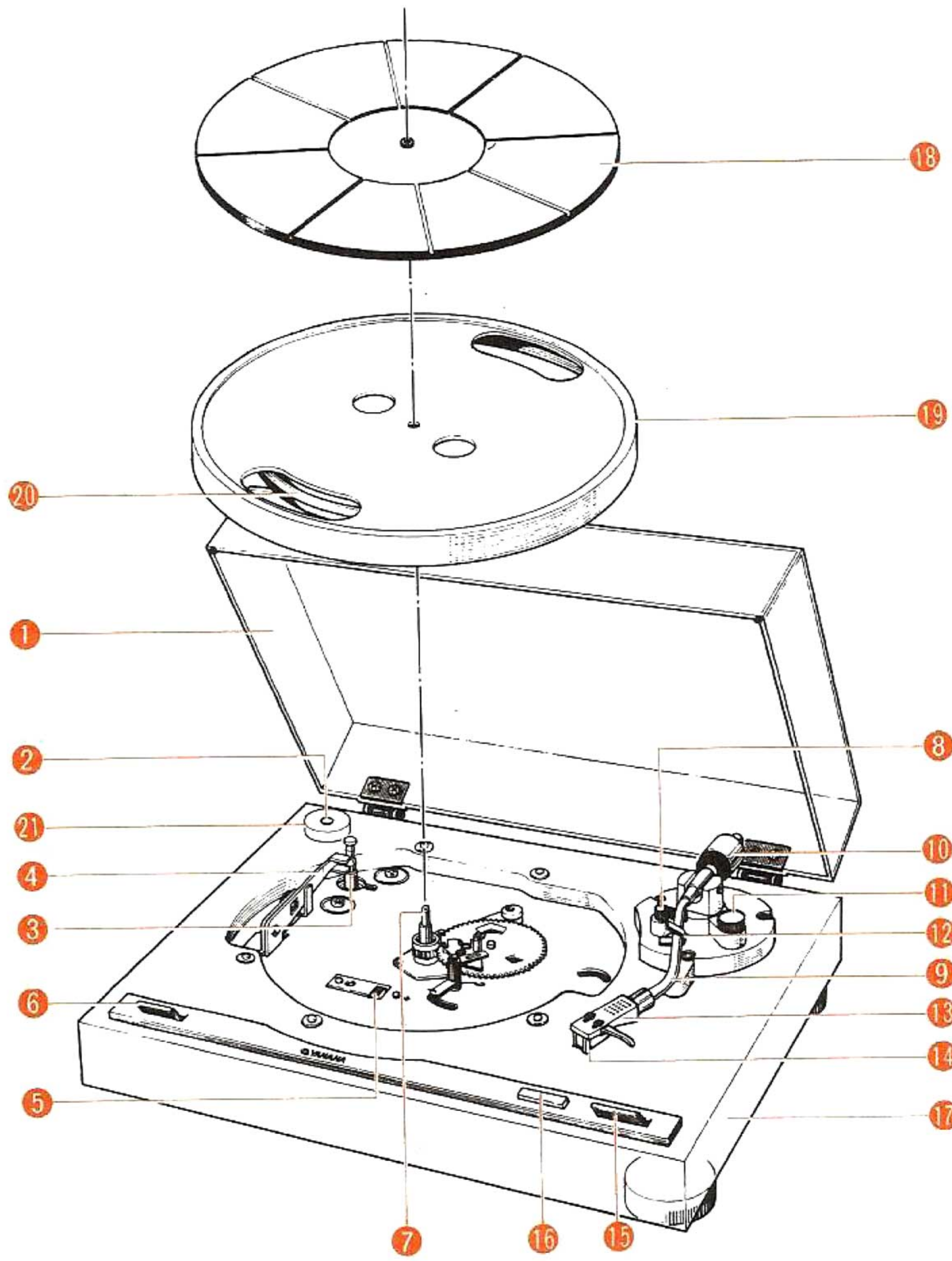
<b>Type</b>	S-type static balance
<b>Effective length</b>	209 mm (8-1/2")
<b>Overhang</b>	16 mm
<b>Suitable Cartridge Weight</b>	4 to 10 grams
<b>Headshell</b>	Plug-in type to EIA standard

### ● General

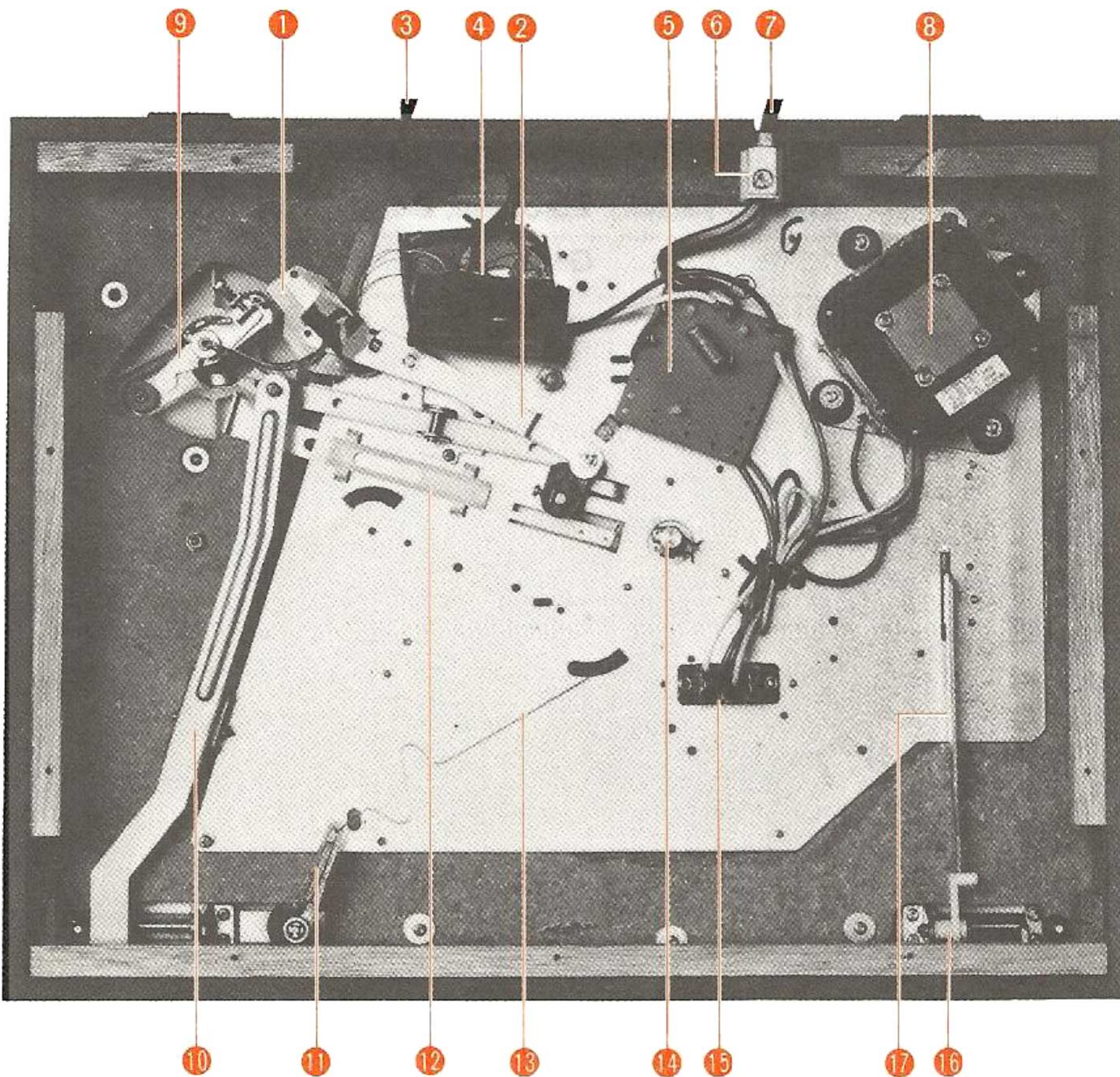
<b>Power Supplies</b>	120V AC, 60Hz USA and Canada 220V AC, 50Hz North Europe 110 – 130/220 – 240V AC, 50Hz Europe 240V AC, 50Hz British, Australia 110 – 130/220 – 240V AC, 50/60Hz General
<b>Power Consumption</b>	9 Watts
<b>Dimensions (W x H x D)</b>	435 x 140 x 360mm (17-1/8" x 5-7/8" x 14-1/4")
<b>Weight</b>	6 kg (13 lb 3 oz)
<b>Accessories</b>	EP adapter Cartridge-retaining screw, Overhang gauge
<b>Exterior Finish</b>	YP-B2 [Solomon walnut] USA and Canada YP-B2 [Century walnut] European, British, Australian and General YP-B2B [Black] European, British, Australian and General

*Specifications subject to change without notice.*

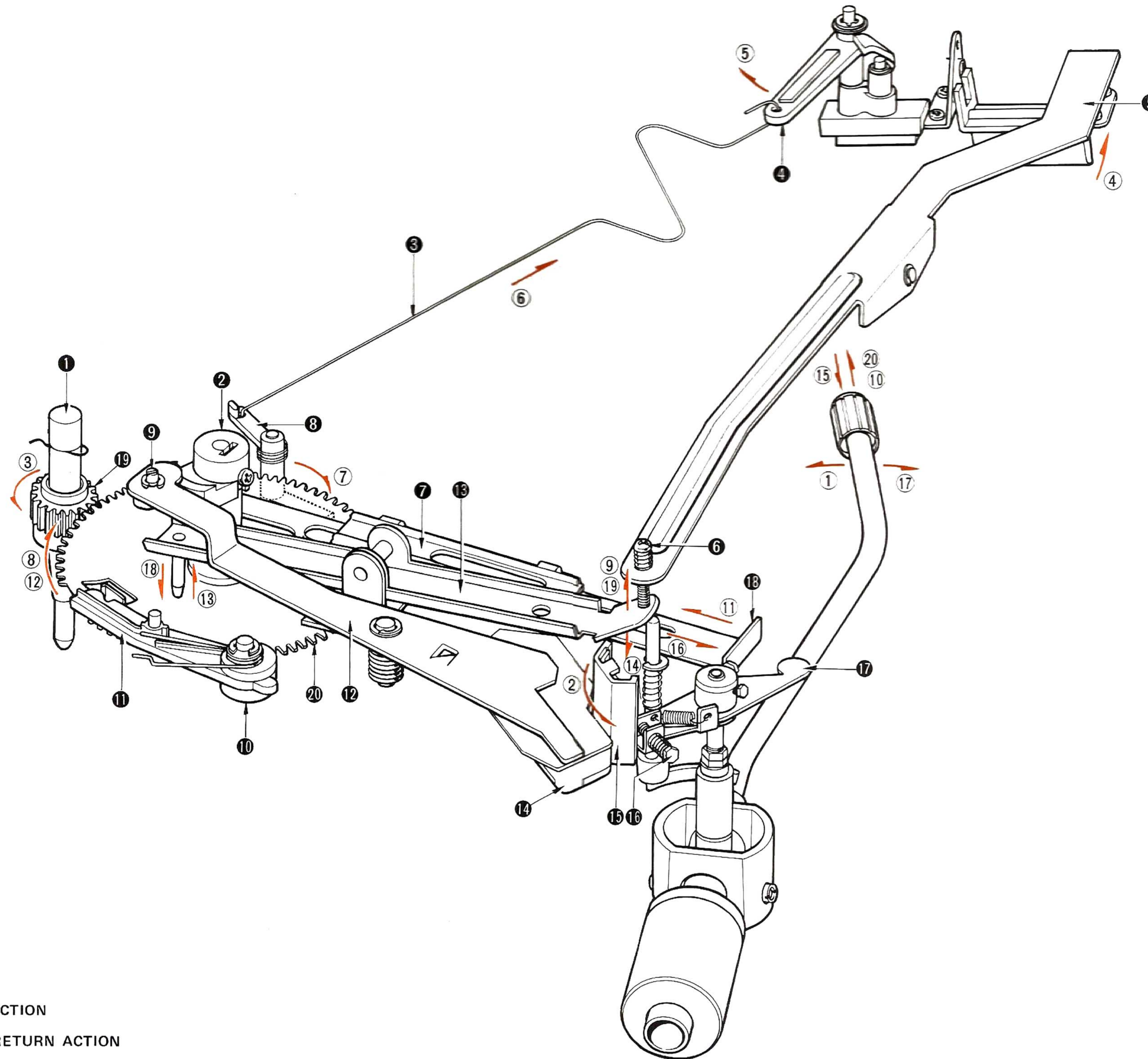
# ■ APPELLATIONS OF PARTS



- ① DUST COVER
- ② EP ADAPTOR HOLDER
- ③ MOTOR PULLEY
- ④ BELTGUIDE
- ⑤ VOLTAGE SELECTOR
- ⑥ SPEED SELECTOR LEVER
- ⑦ CENTER SHAFT
- ⑧ ARM LIFTER
- ⑨ TONE ARM
- ⑩ WEIGHT ASSEMBLY
- ⑪ INSIDE FORCE CANCELER
- ⑫ ARM REST
- ⑬ HEAD SHELL
- ⑭ CARTRIDGE
- ⑮ CUEING LEVER
- ⑯ CUT BUTTON
- ⑰ CABINET
- ⑱ RUBBER SHEET
- ⑲ PLATTER
- ⑳ DRIVE BELT
- ㉑ EP ADAPTOR



- ① MICRO SWITCH
- ② SWITCH ARM ASSEMBLY
- ③ SIGNAL OUTPUT CABLE
- ④ 5P LUG TERMINAL
- ⑤ POWER CIRCUIT BOARD
- ⑥ CORD STOPPER
- ⑦ AC CORD
- ⑧ MOTOR ASSEMBLY
- ⑨ CUE SEESAW
- ⑩ REJECT LEVER
- ⑪ ACTUATE BASE
- ⑫ REJECT SPRING
- ⑬ KICK LEVER
- ⑭ T.T BEARING ASSEMBLY
- ⑮ SLIDE SWITCH
- ⑯ SELECTOR ARM
- ⑰ BELT GUIDE



APPELATIONS

- ① TURNTABLE SHAFT
- ② SWITCH LEVER (B)
- ③ REJECT SPRING
- ④ REJECT LEVER
- ⑤ SEESAW
- ⑥ ADJUSTING SCREW
- ⑦ OPERATION BASE
- ⑧ KICK LEVER
- ⑨ ECCENTRIC PIN
- ⑩ GS ECCENTRIC SHAFT
- ⑪ GS ARM
- ⑫ SWITCH ARM Ass'y
- ⑬ SEESAW ARM Ass'y
- ⑭ MICRO SWITCH
- ⑮ FEED BASE
- ⑯ ADJUSTING SCREW
- ⑰ FEED ARM
- ⑱ OPERATION ARM
- ⑲ TURNTABLE GEAR
- ⑳ R GEAR

① ~ ⑩ PLAY ACTION

⑪ ~ ⑳ AUTO RETURN ACTION

# ADJUSTMENT

## 1. Arm lifter height adjustment

Set the cueing lever to the UP (▼) position, then turn screw (A) so that the stylus tip of the cartridge is 4 to 10 mm above the surface of the record. (Refer to Figs. 1 and 2.)

Note: Always keep the cover on the stylus when adjusting the height of the arm lifter. This is to protect the stylus.

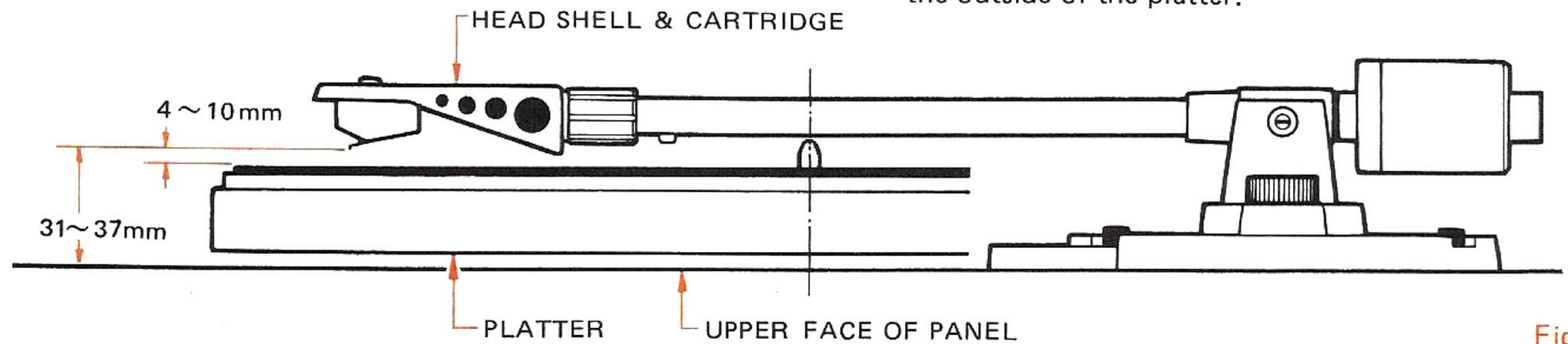


Fig. 1

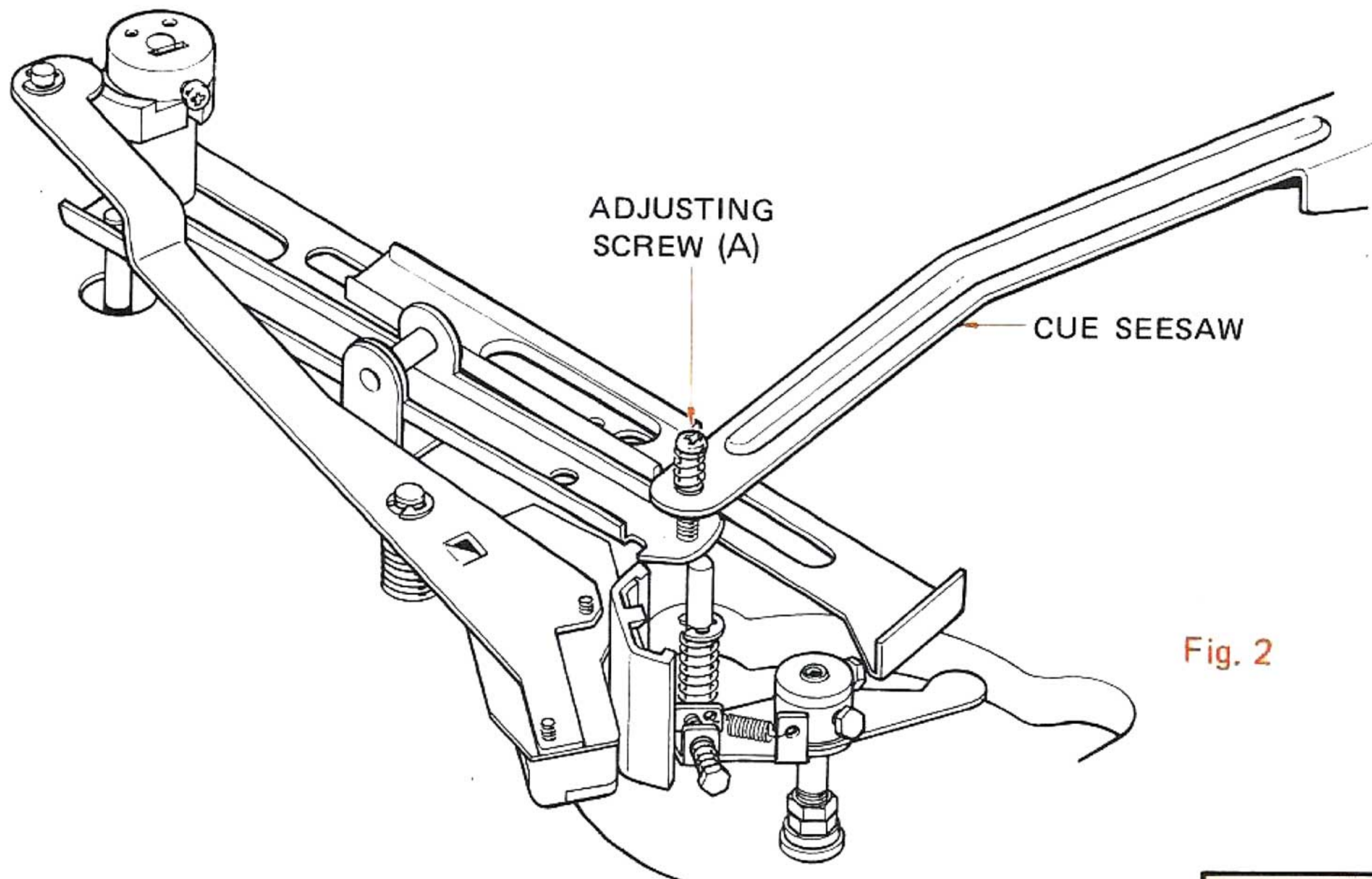


Fig. 2

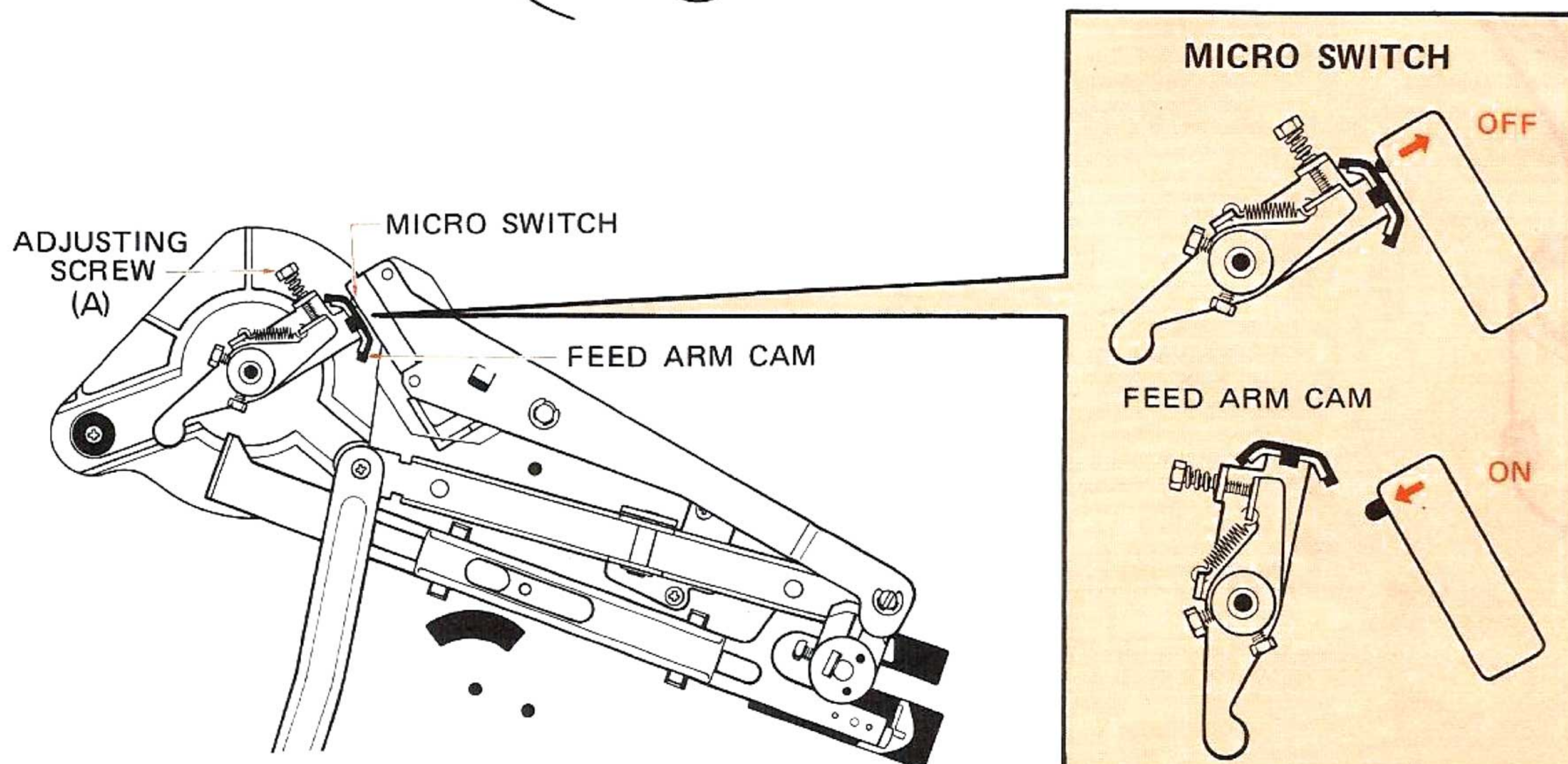


Fig. 3

## 2. Micro switch adjustment

Check that the micro switch in Fig. 3 is OFF when the tonearm is resting on the arm rest. (Refer to Fig. Fig. 3.)

If it will not go OFF, rotate screw (A) in Fig. 3 and adjust.

Now set the turntable to the operating mode, depress the CUT button, rotate screw (A) in Fig. 3 and adjust the position of the feed arm cam so that the micro switch goes OFF when the tonearm moves across to the outside of the platter.

### 3. Motor pulley height adjustment

Make this adjustment when the motor pulley is replaced in such a case that the turntable is moved to another area where different power frequency covers or the motor pulley itself fails.

Attach the platter, then mount the belt on the pulley. At this time, adjust height of the motor pulley so that the belt is centered on the pulley (at its crowned portion) and is clear of the belt guide, and smooth selection of 33 and 45 rpm can be achieved. (See Fig. 4)

After adjustment, tighten the securing screw positively.

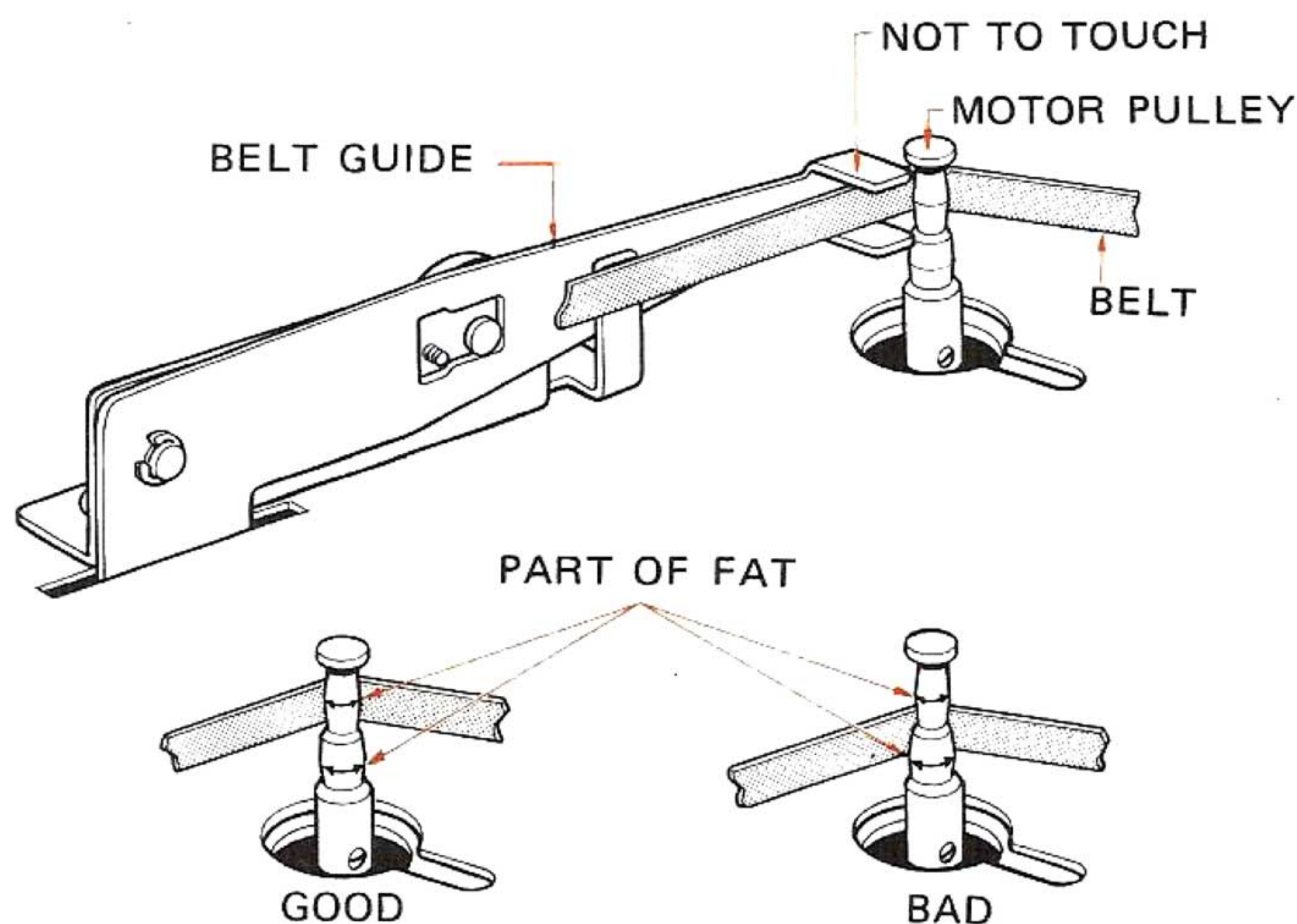


Fig. 4

### 4. Belt guide adjustment

Attach the platter, then mount the belt on the motor pulley.

As shown in Fig. 5, loosen a securing screw slightly, and turn the eccentric pin so that 33 and 45 rpm can be selected smoothly.

Here, set the belt so that it is centered on the pulley (at its crowned portion) and is clear of the belt guide, along with the pulley height adjustment. (See Fig. 4) After adjustment, tighten the securing screw positively.

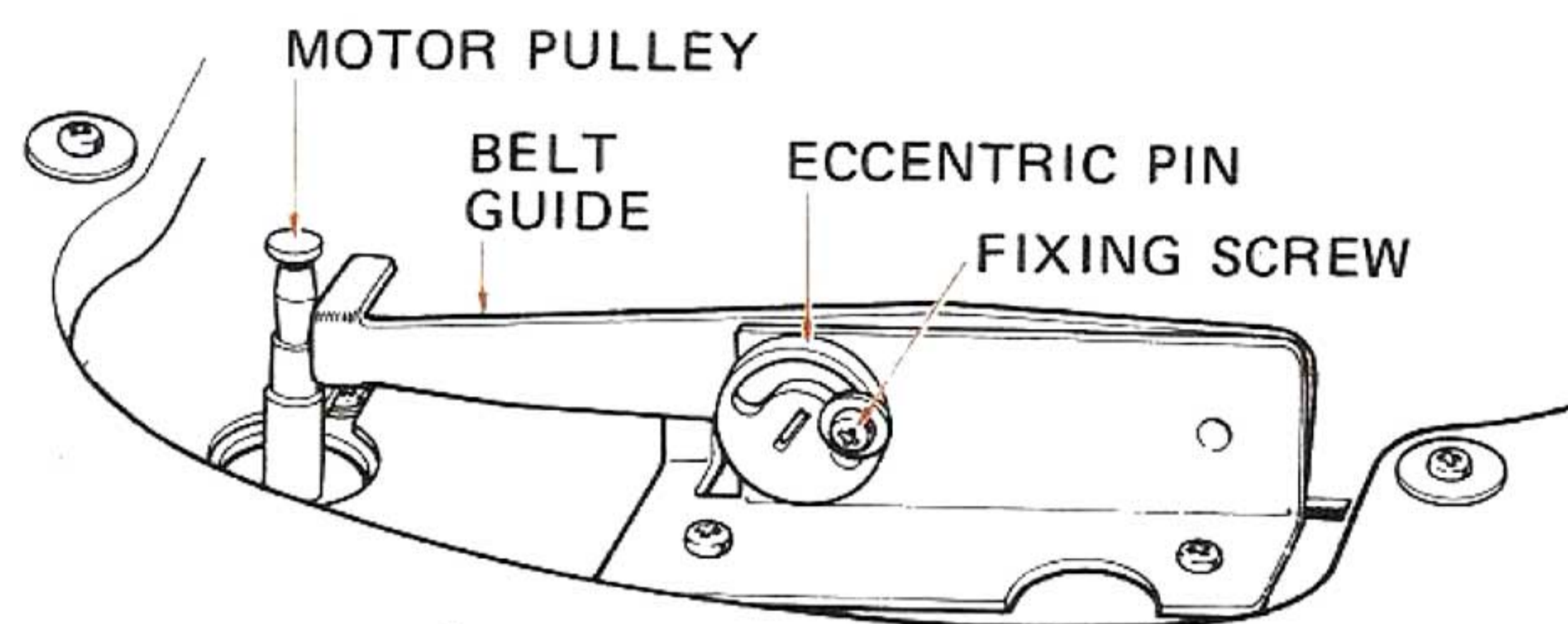


Fig. 5

### 5. Adjustment of auto return position

When the tonearm is not completely returned to the arm rest in auto return mode, make this adjustment by turning the eccentric pin, along with the return adjustment as explained in Item 2). (See Fig. 6)

Note: Be sure to rotate the eccentric pin in the range of 180°.

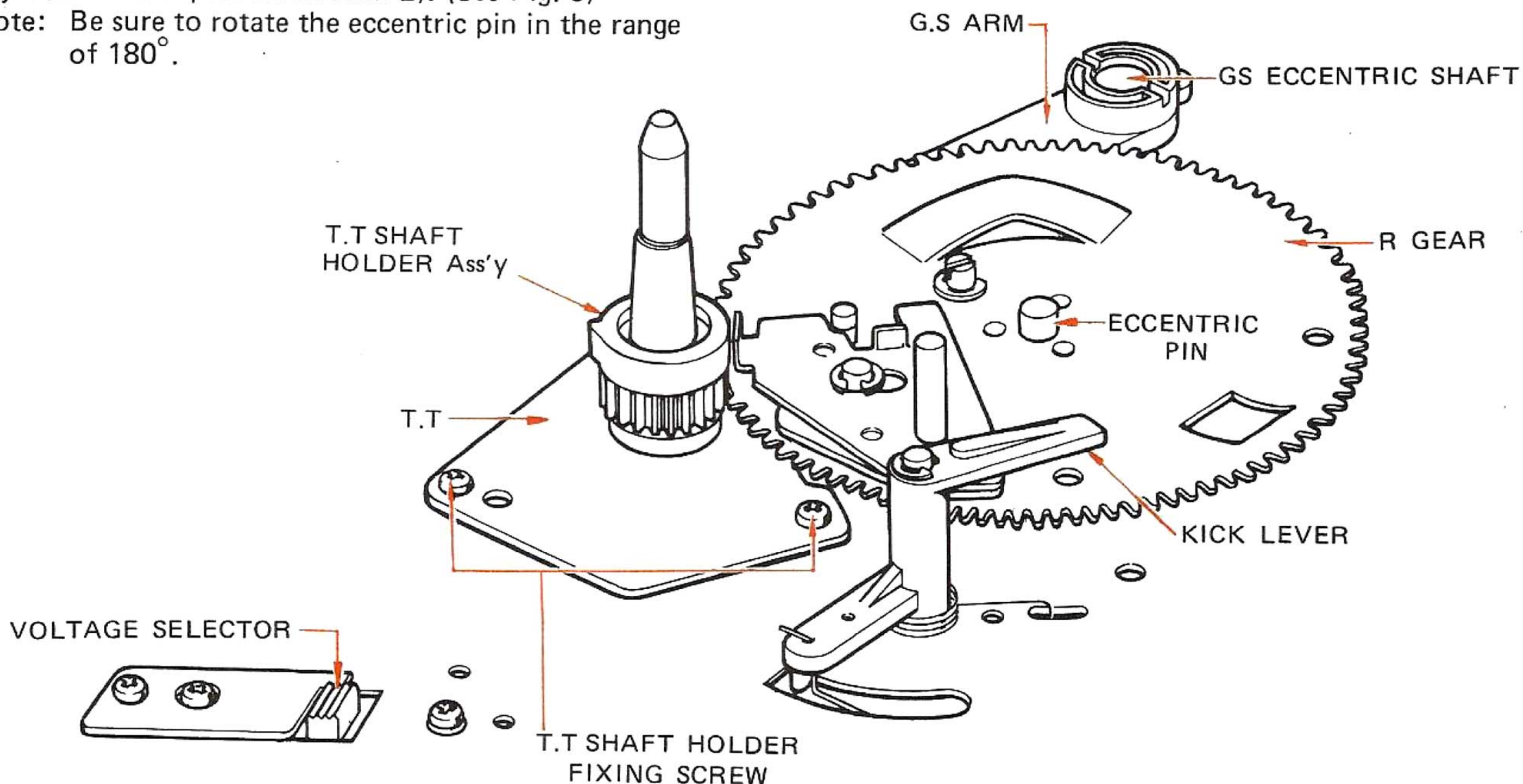


Fig. 6

## 6. Gear engagement adjustment

Engage the R gear with the platter gear first, then check if both are enmeshed properly. If there is an excessive gap between gear teeth, adjust the gap after loosening screws securing the platter shaft bearing. After adjustment, tighten the screws securely.

As shown in Figs 6 and Fig. 7, disengage both gears, then adjust by turning the GS eccentric shaft so that the center of toothless portion of the R gear is directed toward the platter gear.

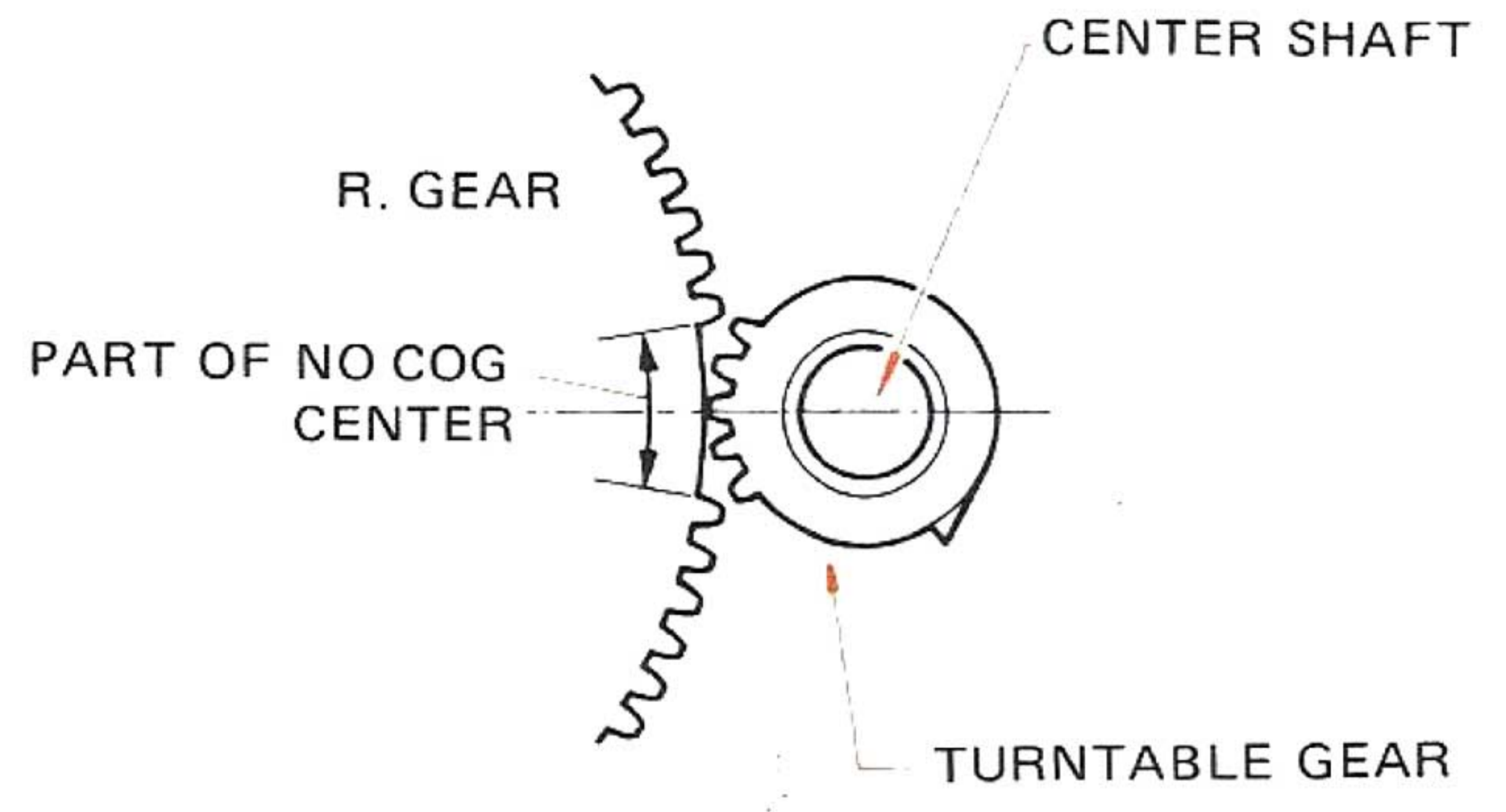


Fig. 7

## 7. ON-OFF timing adjustment of microswitch

By turning the eccentric pin, adjust so that the microswitch is turned off without failure when the tonearm is returned to the arm rest. (See Fig. 8)

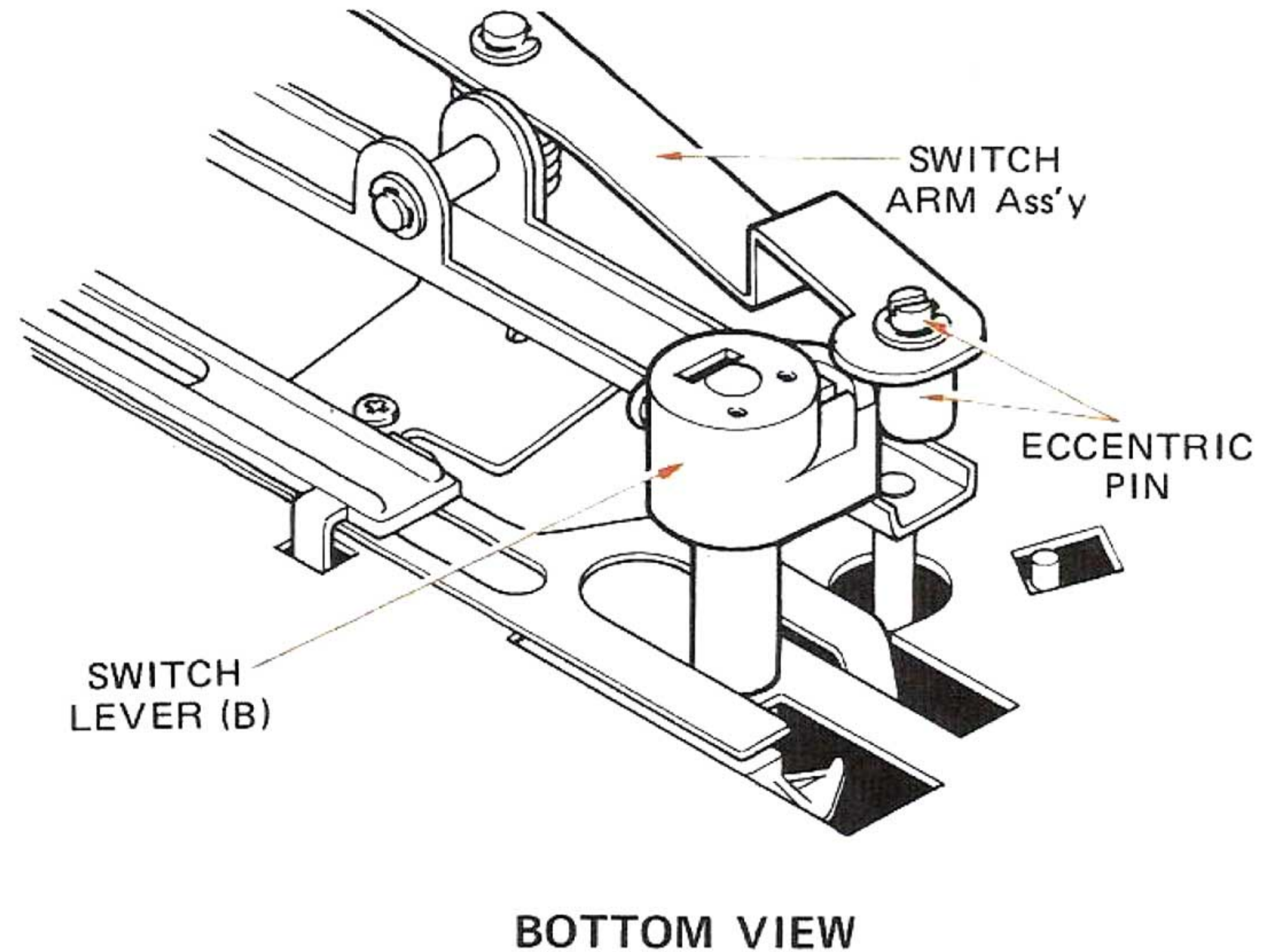


Fig. 8

## LUBRICATION

PART TO BE LUBRICATED	TYPE OF LUBRICANT
Seasaw Base Pin Seasaw Base Ass'y & Eccentric Cam Ass'y R Gear Bearing Kick Lever Lever Holder GS Arm REJ Lever Shaft	DET light Silicon grease
Selection Base Ass'y	Lub-plate aero grease
Turntable Centershaft Lever, Reject Other moving parts such as cam and lever, and friction parts.	Silicon grease

**Important:** Never lubricate excessively. Note that an excessive lubricant will flow out and penetrate in the heart of the machine, causing serious troubles such as slippage.



# MAINTENANCE OF TURNTABLE

## 1. Replacing and cleaning of stylus

Service life of a stylus tip varies with changes in conditions of a record used. Average service life of a diamond-pointed stylus is 200 to 300 hours. Please replace the stylus prematurely for record protection. Also, please use a cartridge with the following weight range.

Suitable cartridge weight: 4 to 10 grams

Clean the stylus tip at each play on one surface of the record. Here, remove dirt from the stylus tip by moving a special brush for stylus in back-to-forth direction only.

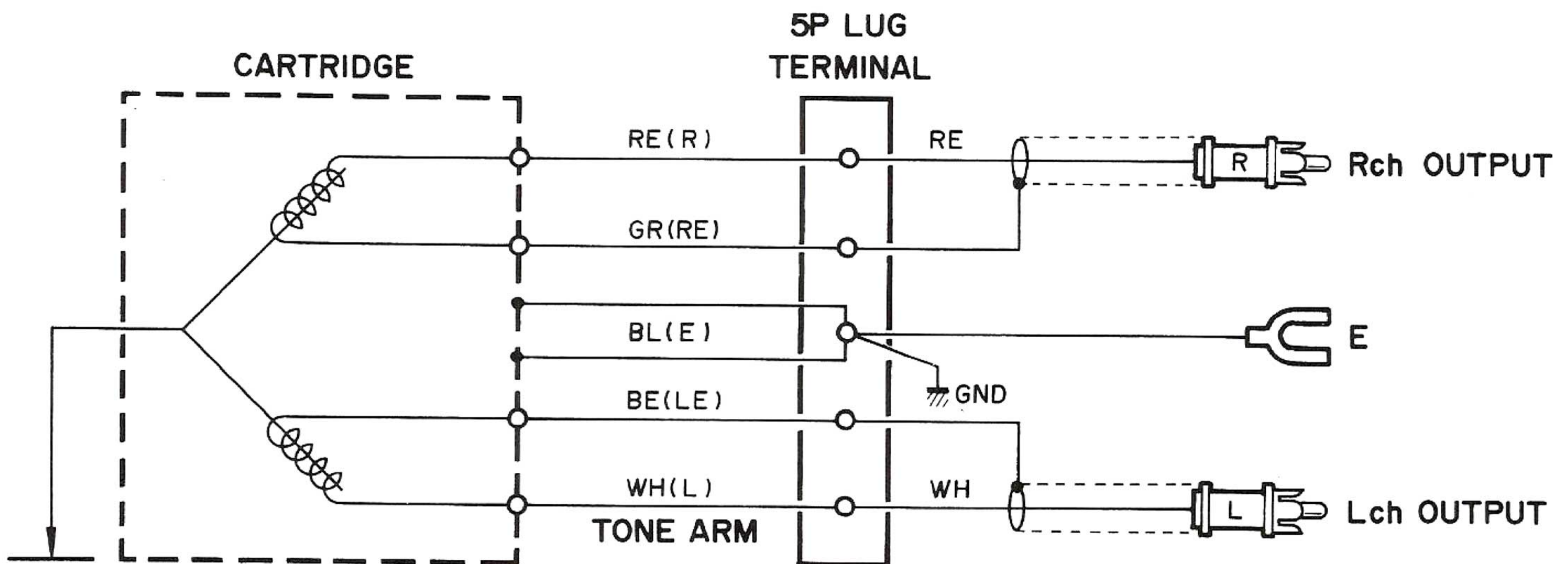
Further, keep the record clean at all times. Also, clean the rubber sheet on the platter sometimes using a brush.

## 2. Replacing of belt

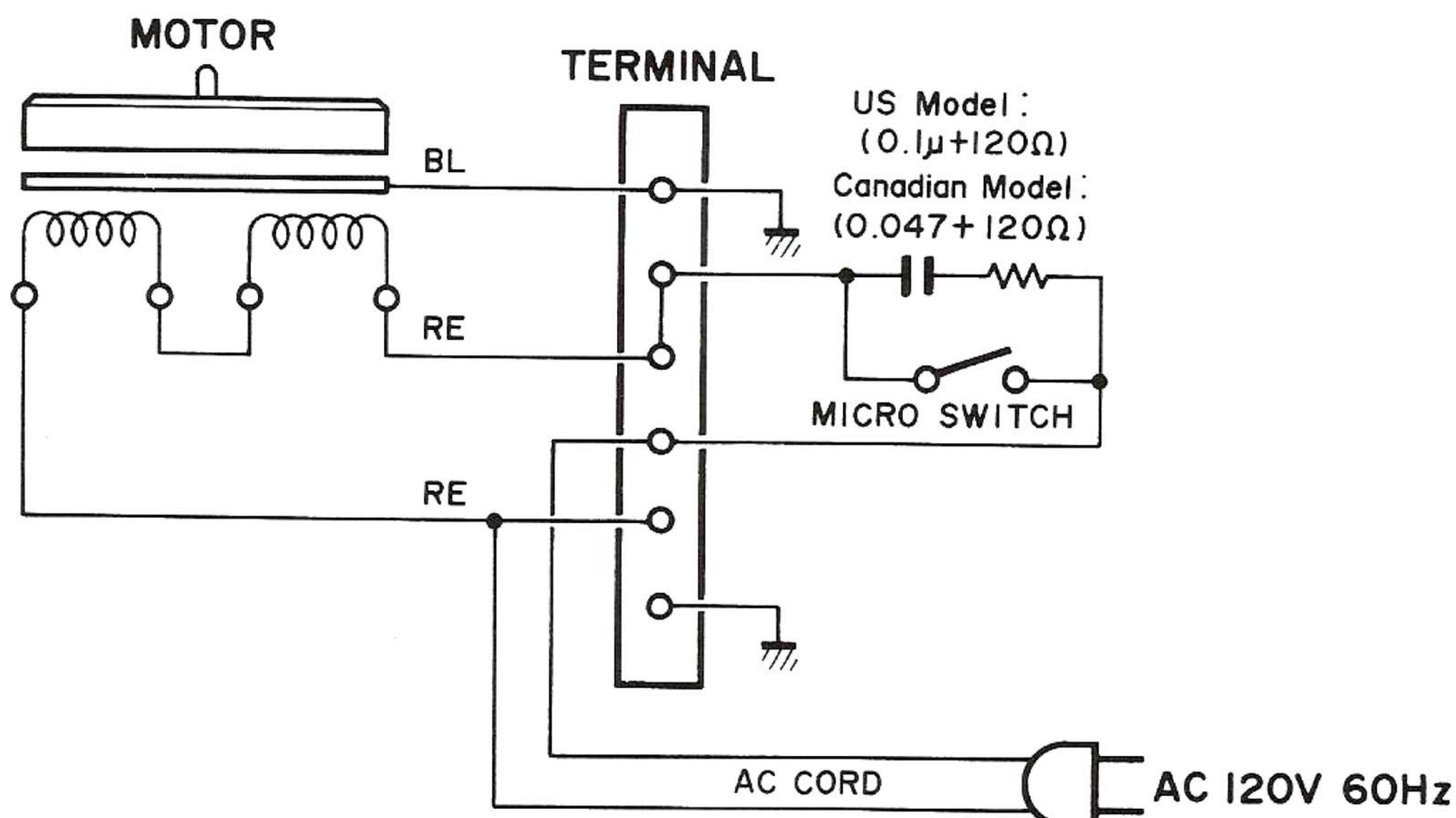
When the belt is excessively elongated or worn out, irregular rotation of the platter will be caused. To avoid this, replace the belt properly like the stylus.

# SCHEMATIC DIAGRAM

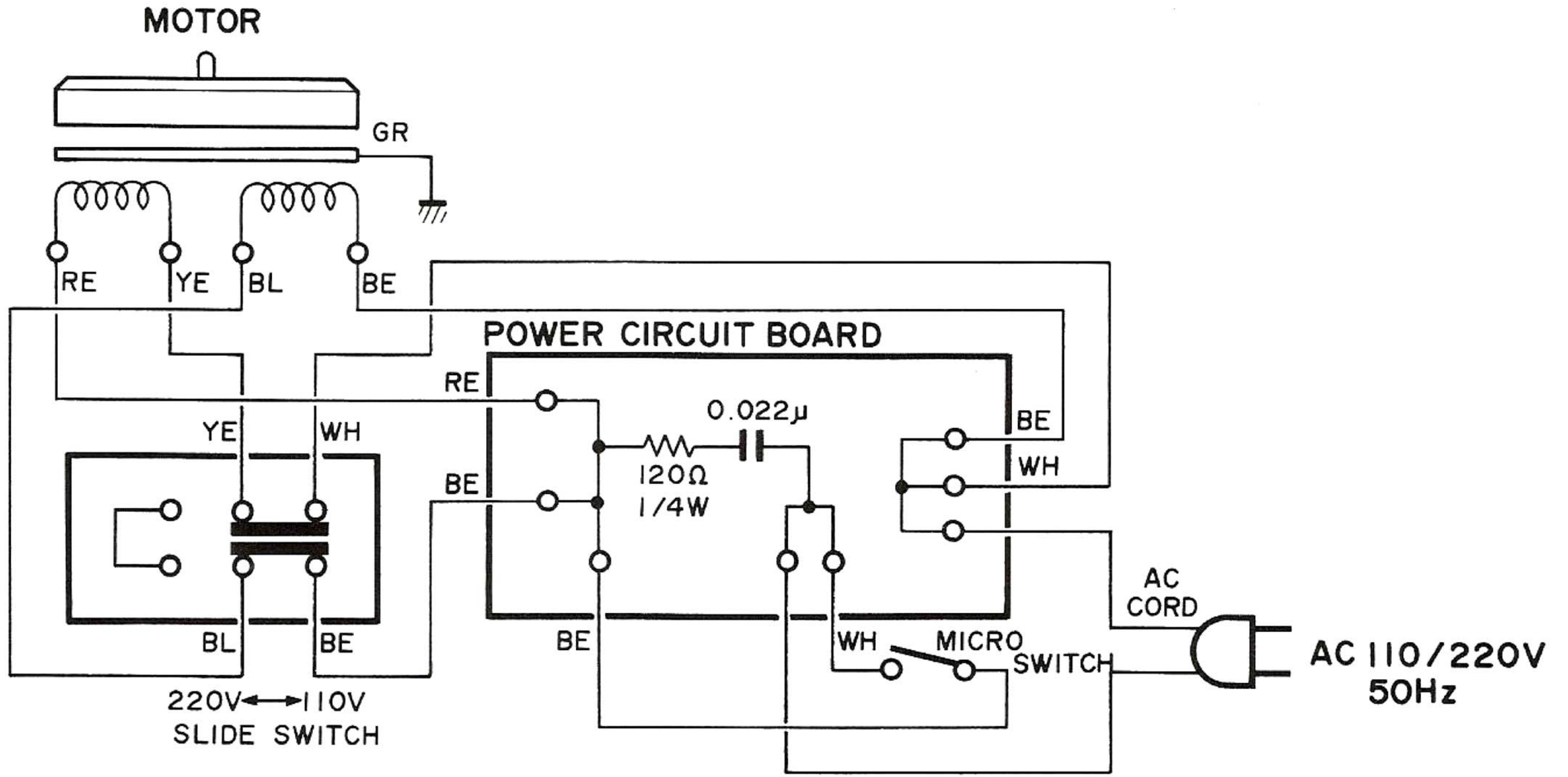
▼ PICK UP Assembly (Common Use)



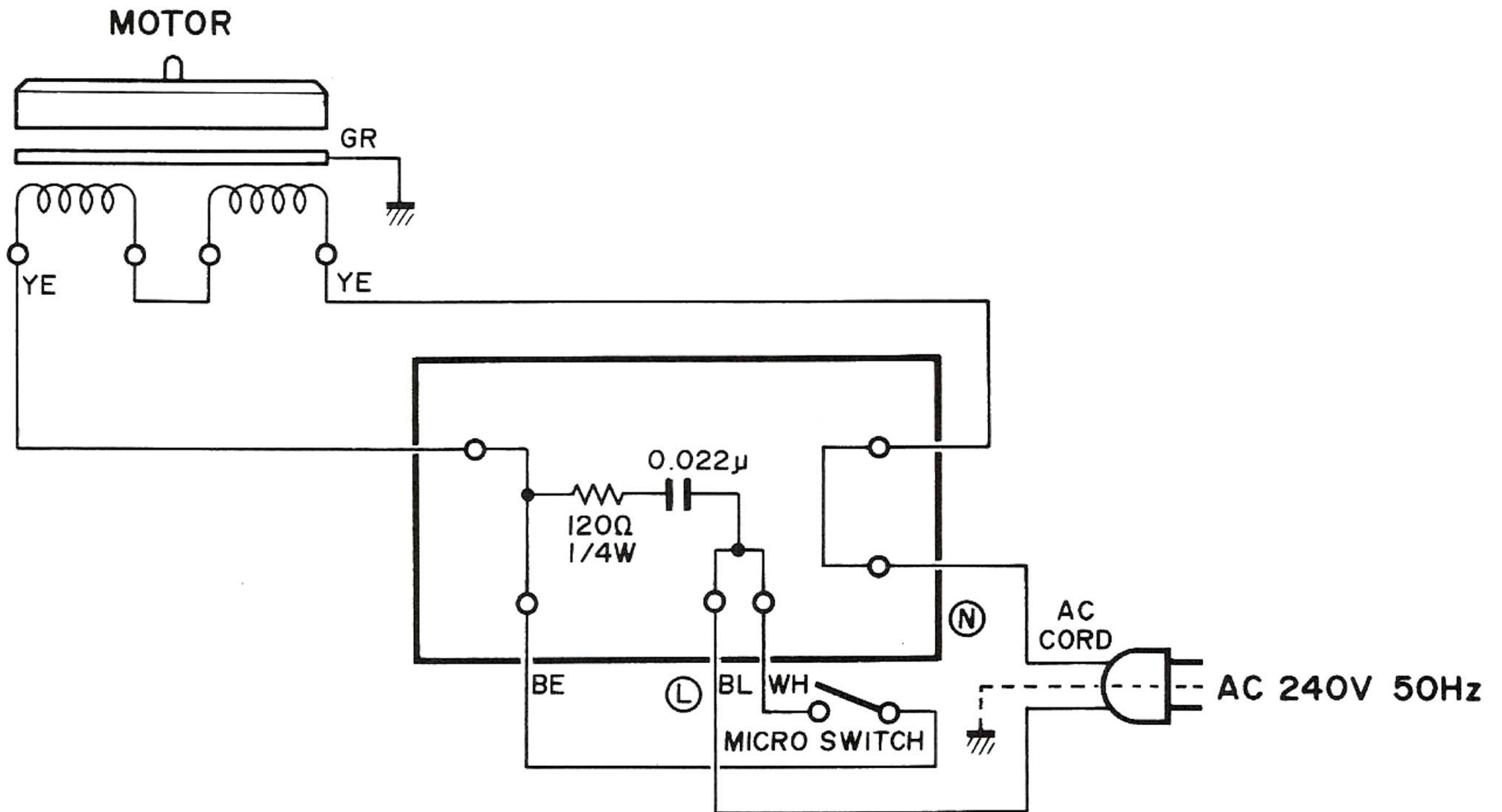
▼ US & CANADIAN MODELS



▼GENERAL & EUROPEAN MODELS



▼AUSTRALIAN & BRITISH MODELS

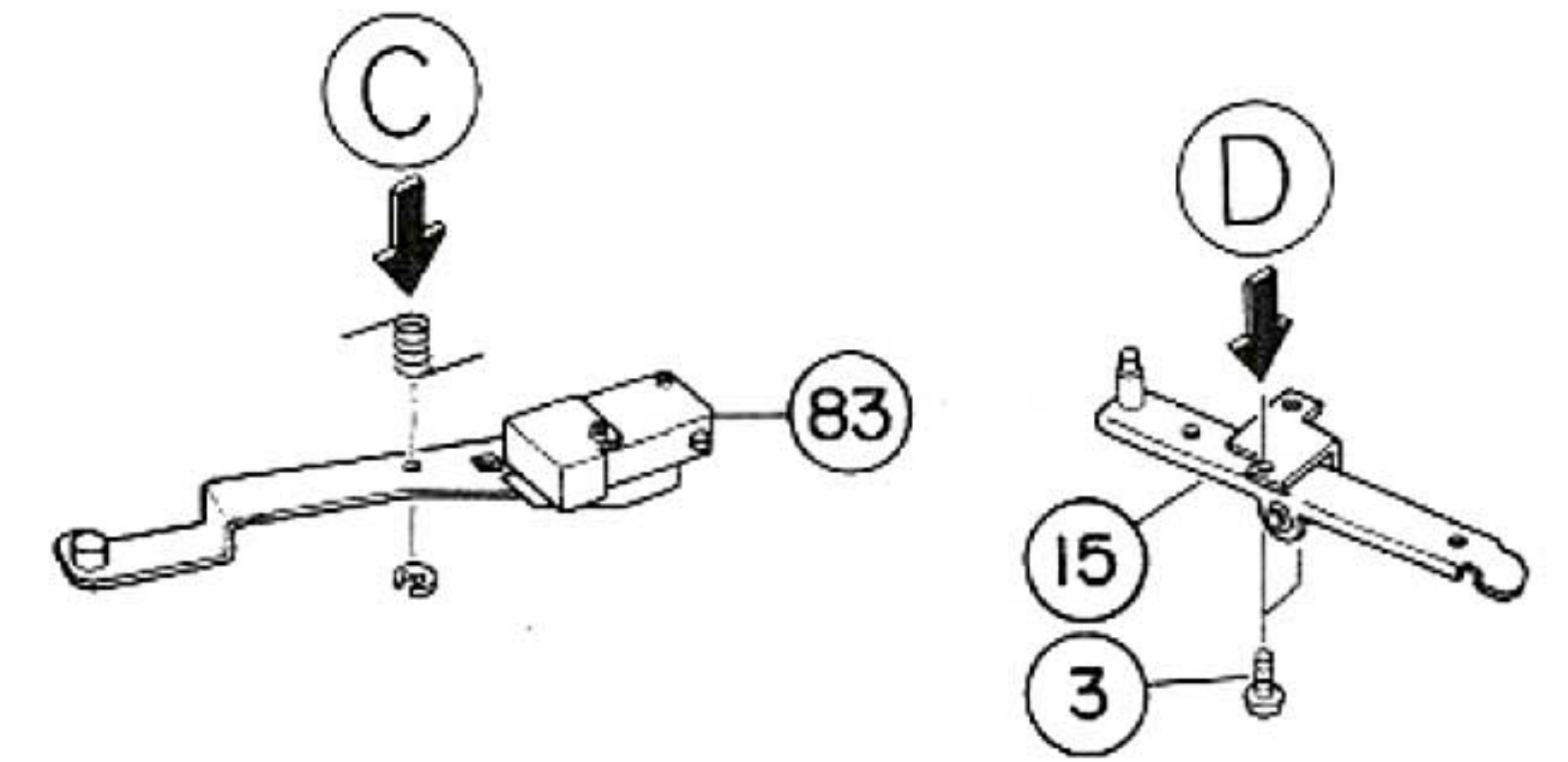
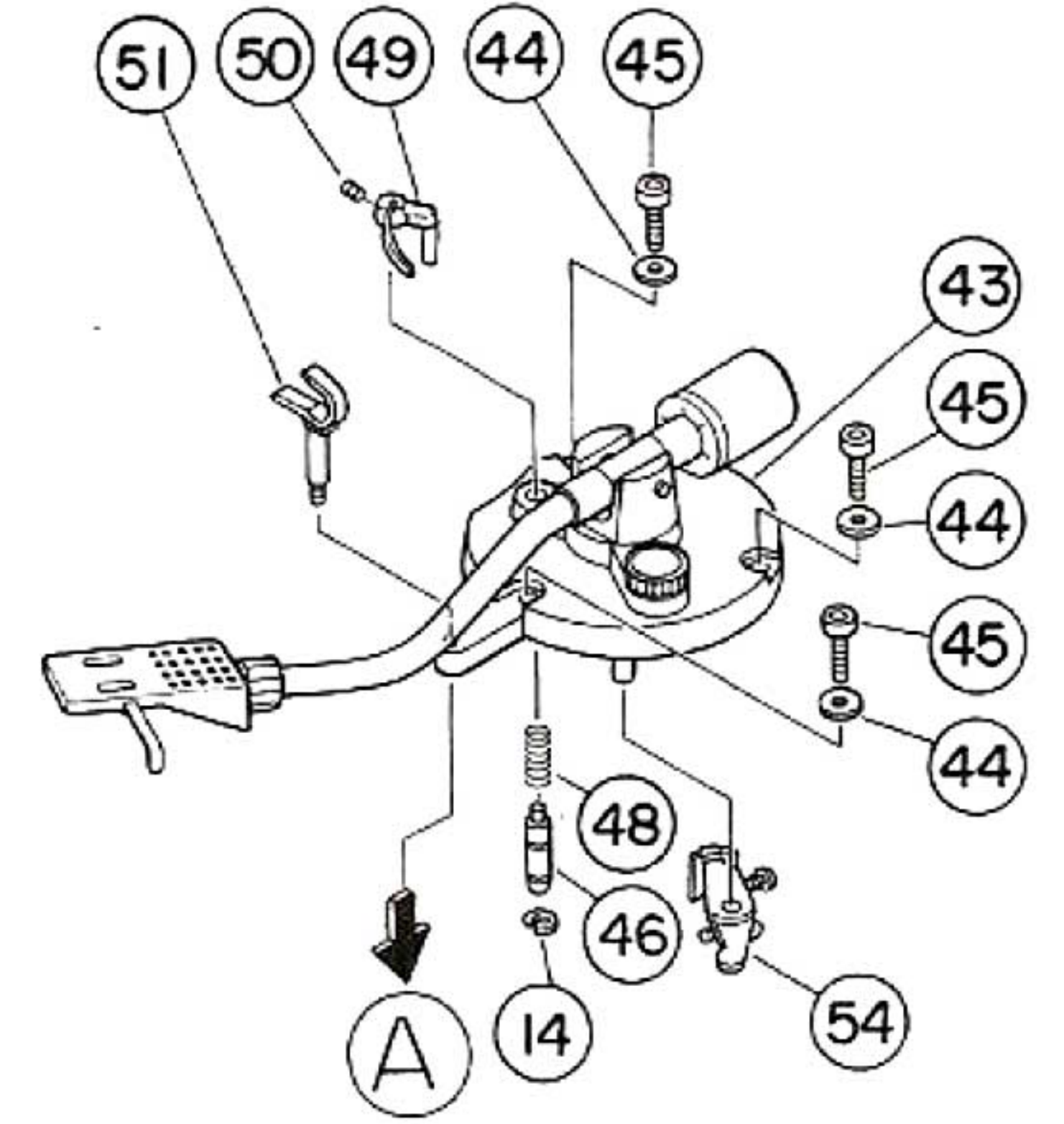
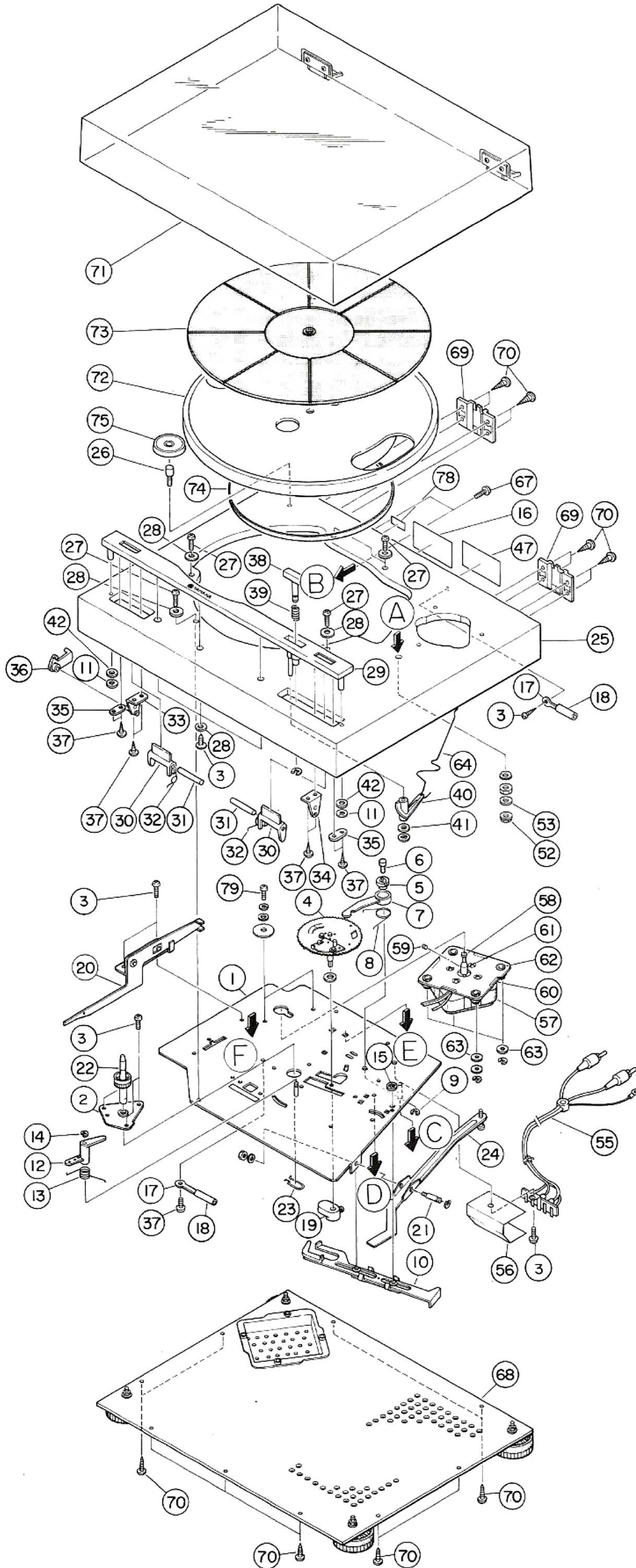


## ■ TROUBLESHOOTING

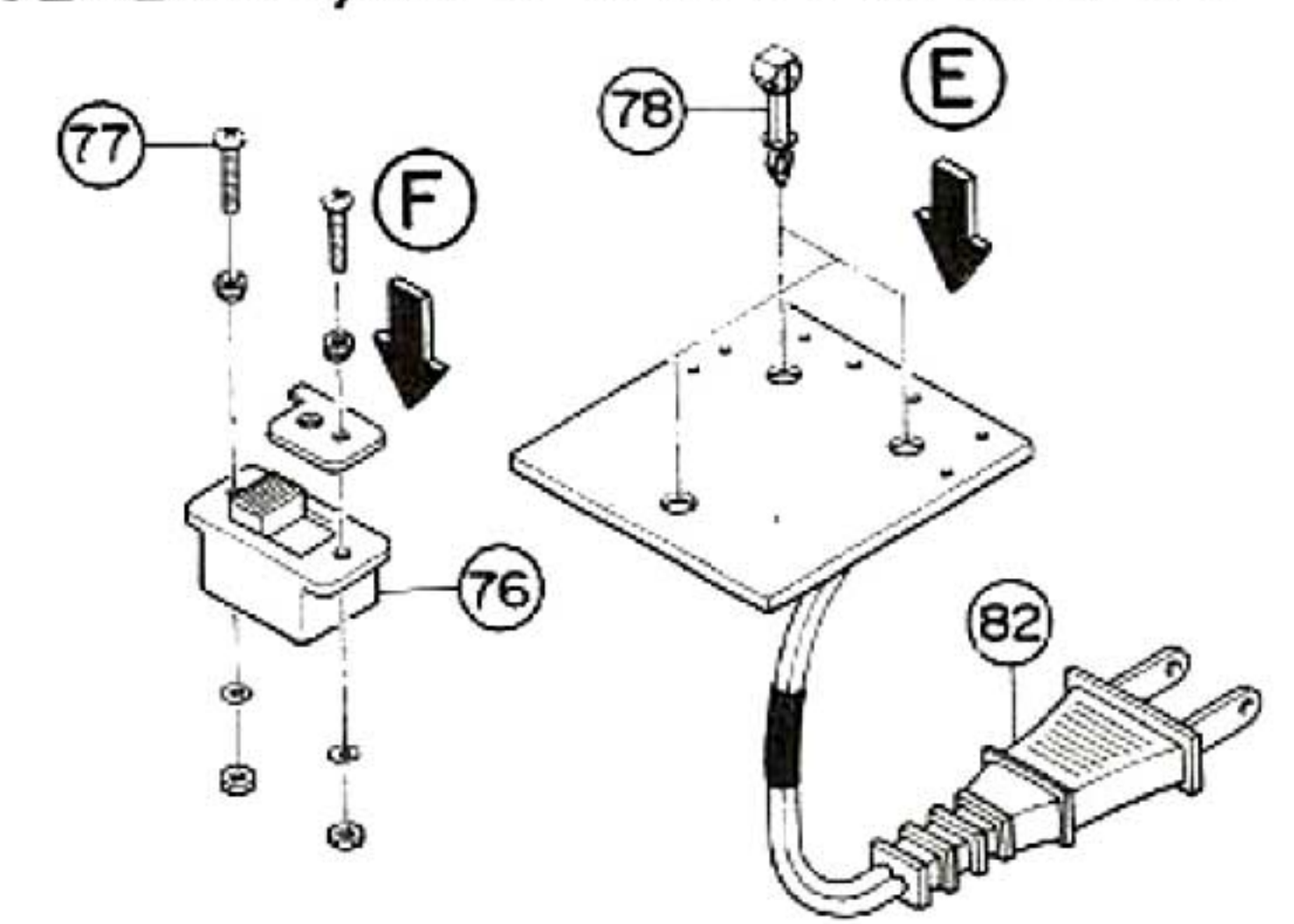
TROUBLE	CAUSE	REMEDY
Platter does not rotate (When motor does not rotate).	In case of lead-in of tonearm, feed base is not disengaged from microswitch button	With reference to "Return Adjustment" (see Item 2), adjust the position of feed arm assembly.
	Abnormally heavy movement of auto-return mechanism. (Rotate it by hand for confirmation)	Replace the auto-return assembly.
	The motor is not powered.	Check if power cord is securely plugged in. If not so, securely plug the cord in. Replace the defective microswitch, etc.
	Defective motor.	Replace the defective motor.
Platter does not rotate (When motor rotates).	Belt disengaged.	Replace the belt.
	Slippage of belt	Wipe off oil from the belt. Replace the elongated or worn-out belt.
	Main shaft of platter is not rotated smoothly. (Rotate it by hand for confirmation)	Replace the main shaft.
	Malfunction of auto-return mechanism.	Replace the auto-return mechanism.
Platter is rotated irregularly.	Belt is elongated, partially worn out, or slipped.	Replace the belt.
	Oil is deposited on outside circumference of platter or motor pulley belt, causing slippage.	Wipe off oil completely.
	Improper attaching position of motor pulley.	With reference to "Motor Pulley Height Adjustment", adjust the position of motor pulley.
	Defective motor. (Irregular rotation, insufficient torque)	Replace the motor.
Tonearm is not moved smoothly.	Improper auto-return timing of auto-return mechanism.	With reference to "Adjustment of Auto Return Position", make adjustment.
Tonearm descends in biased direction.	Where arm lifter is inclined arm slides on arm lifter.	Correct the inclination of arm lifter.
Arm lifter is inactive.	Improper adjustment of arm lifter height.	With reference to "Arm Lifter Height Adjustment", make adjustment.
	Defective arm lifter mechanism	Replace the defective parts of arm lifter mechanism.
Speed selection cannot be made.	Improper attaching position of motor pulley.	With reference to "Motor Pulley Height Adjustment", make adjustment.
	Belt does not pass through belt guide.	Pass the belt through belt guide.
	Speed selector mechanism is defective or has defective parts.	Replace the defective parts.
No "reject (auto-cut)" functions.	Reject spring is elongated.	Retract the reject spring by hand, or replace it if necessary.
	Defective timing mechanism (consisting of kick lever, clutch plate, clutch van spot, clutch guide, etc.) which transmits rotation of platter shaft gear to R gear.	Readjust the timing. Replace the defective parts. (See mechanism drawing)

TROUBLE	CAUSE	REMEDY
Auto return is too fast or too slow.	Timing of contact of kick lever with clutch plate, clutch van spot or clutch guide is too fast or too slow. (Improper return adjustment)	With reference to "Return Adjustment", adjust the timing by auto return timing adjusting screw at arm bearing.
No "auto-return" functions.	Improper return adjustment.	With reference to "Retrun Adjustment", make adjustment by auto return timing adjustment screw.
	Auto return assembly is defective.	Replace the auto return assembly.
Noise is produced.	Pin plug is defective or lead wire is broken.	Connect the wire lead correctly.
	Earth wire of turntable is disconnected to earth terminal of amp.	Connect the earth wire to earth terminal.
	Turntable and speaker systems are too closely arranged, so that turntable is subject to vibration and resonance.	Move the turntable to a level, rigid place away from speaker systems.
	Attaching position of motor pulley is improper.	With reference to "Motor Pulley Height Adjustment", make adjustment.
	Center shaft runs short of lubricant.	Lubricate to center shaft, avoiding excessive lubrication.
No sound is reproduced.	Connection to amp is incomplete.	Confirm if pin cord is connected correctly.
	Pin cord is broken.	Replace the pin cord with a new one.
	Dimensions of newly replaced cartridge do not fit.	Attach another cartridge with proper Dimensions.
	Cartridge is defective.	Replace the cartridge.
One channel reproduces sound, but the other does not produce it.	Stylus is worn out.	Replace the stylus.
	Cantilever is bent	
	Cartridge is defective (braeking, short-circuiting, etc. of coil inside cartridge).	Replace the cartridge.
	Lead wires and pin plug are broken or short-circuited.	Interchange both channels to check breaking and short-circuiting of lead wires and pin plug. Replace the defective parts.
	Inside force canceler and lateral balance are adujsted improperly.	Adjust the inside force canceler and lateral balance properly.
Sound is distorted	Turntable is inclined, not horizontal.	Set the turntable on horizontal surface.
	Stylus tip is worn out.	Replace the stylus tip.
	Cantilever is bent.	
	Tracking force is adjusted improperly.	Readjust the tracking force to the specific value the cartridge used.
	Cartridge is defective.	Replace the cartridge.

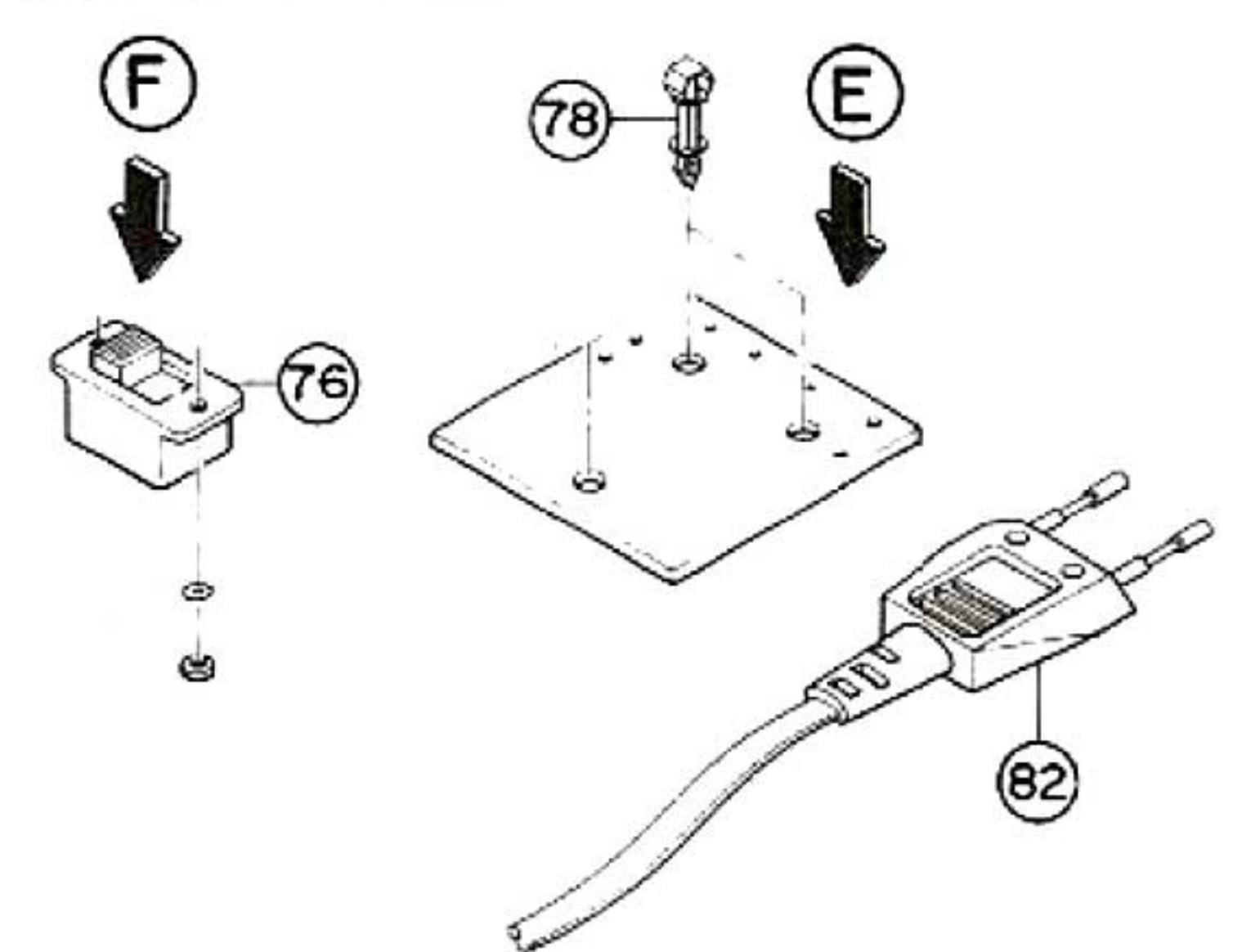
# PARTS LIST



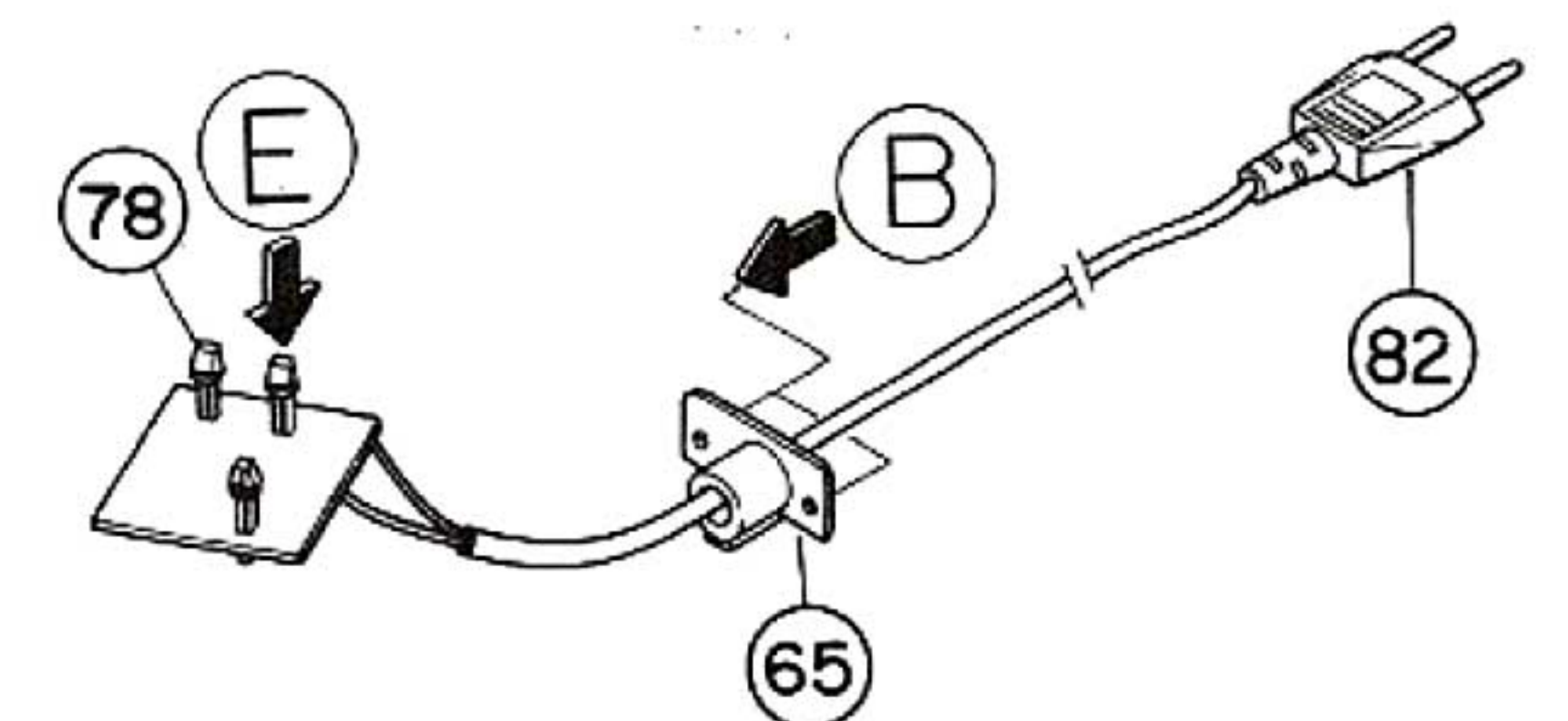
## GENERAL, US & CANADIAN MODELS



## EUROPEAN MODELS



## N. EUROPEAN MODELS



Ref. No.	Part No.	Description (部 品 名)	Markets	Remarks
*	1	SX 97 11 10 Sub Chassis Assembly 851428		
				サブシャーシ Ass'y
	2	SX 99 40 10 Turn Table Bearing Assembly		
				T . T 軸 受 Ass'y
*	3	Ei 03 00 80 BT ⊕ 3 x 8		
				B T ⊕ 3 × 8
*	4	SX 97 11 20 R. Gear Assembly 894821		
				R ギ ヤ - Ass'y
	5	SX 99 41 00 Eccentric Shaft		
				G S 偏 芯 軸
	6	SX 99 40 90 GS Stud		
				G S ス タ ッ ド
	7	SX 99 41 10 GS Arm		
				G S ア - ム
	8	SX 99 41 20 GS Spring		
				G S ス プ リ ン グ
*	9	EV 30 04 00 Spring Washer E-813153		
				バ ネ ワ ッ シ ャ -
*	10	SX 97 11 30 Operation Base Assembly 870095-3		
				作 動 ベ - ス Ass'y
	11	SX 96 01 40 CS Grip Ring		
				C S 止 メ ワ
	12	SX 99 41 70 Kick Lever		
				キ ッ ク レ バ -
	13	SX 99 41 80 Spring		
				戻 シ バ ネ
	14	SX 96 05 00 E-3.2		
				E - 3.2
	15	SX 99 43 10 See Saw Assembly		
				シ - ソ - Ass'y
*	16	SX 97 11 40 Name Plate 896796		
				ネ - ム プ レ - ト
	17	SX 96 07 00 Lug		
				ラ グ
	18	SX 96 06 80 UL Tube		
				U L チ ュ - ブ U
*	19	SX 97 11 50 Switch Lever Assembly 890721		
				ス イ ッ チ レ バ - Ass'y
	20	SX 99 42 80 Selector Base Assembly		
				切 換 ベ - ス Ass'y
*	21	SX 97 11 60 REJ Lever Shaft 890332-2		
				R E J レ バ - 軸
*	22	SX 97 11 70 Turn Table Shaft Assembly 891791		
				T . T 軸 Ass'y
	23	SX 99 40 30 Stopper		
				ス ト ッ パ -
*	24	SX 97 11 80 KUE See Saw 971518		
				キ ュ - シ - ソ -
*	25	SX 97 11 90 Cabinet 846693-1		
				キ ャ ビ ネ ッ ト
*		SX 97 12 00 - do. - 846693-2		
				"
				YP-B2B
				YP-B2
	26	SX 96 00 80 Adaptor Shaft		
				ア ダ プ タ - 軸
*	27	Ei 03 01 60 BT 3 x 16		
				B T ⊕ 3 × 16
*	28	EV 90 03 20 FW φ3.2 x φ13 x 0.8t		
				FW φ3.2 × φ13 × 0.8 t
*	29	SX 97 12 10 Panel 851414		
				操 作 パ ネ ル
*		SX 97 12 20 - do. - 851448		
				"
				YP-B2
*	30	SX 97 12 30 Selector Lever 896646		
				切 換 レ バ -
*	31	SX 97 12 40 Lever Pin 896645		
				レ バ - ピ ン
*	32	SX 97 12 50 Click Spring 896707		
				ク リ ッ ク バ ネ
*	33	SX 97 12 60 Selector Base Assembly 896677		
				切 換 ベ - ス Ass'y
*	34	SX 97 12 70 Selector Base 896642		
				切 換 ベ - ス
*	35	SX 97 12 80 Stopper 896643		
				ピ ン 押 立
*	36	SX 97 12 90 Selector Arm 896644		
				切 換 ア - ム
*	37	SX 97 14 90 FMT⊕ 3 x 6		
				F M T ⊕ 3 × 6
*	38	SX 97 13 00 REJ Button Assembly 896641		
				R E J ボ タ ン Ass'y
*	39	SX 97 13 10 Button Spring 892081		
				ボ タ ン ス プ リ ン グ
*	40	SX 97 13 20 REJ Lever 896655		
				R E J レ バ -
*	41	EV 90 32 80 FW φ3.2 x φ8 x 0.5t		
				FW φ3.2 × φ8 × 0.5 t
*	42	SX 97 13 30 Packing 892940		
				パ ッ キ ン
*	43	SX 97 13 40 PU Assembly 851430		
				P U Ass'y
*	44	SX 97 15 00 BW φ4.5 x φ9.8 x 0.5t		
				B W φ4.5 × 9.8 × 0.5 t
*	45	EZ 00 04 80 Hexagonal Screw M4 x 18		
				六 角 孔 付 ボ ル ト
	46	SX 95 02 30 Elevation Shaft		
				エ レ ベ - シ ョ ン 軸
*	47	SX 97 13 50 Label 893536		
				ウ ォ - ニ ン グ ラ ベ ル
	48	SX 99 43 70 Elevation Spring		
				エ レ ベ - シ ョ ン バ ネ
	49	SX 95 02 30 Elevation Plate		
				エ レ ベ - シ ョ ン プ レ - ト
*	50	SX 97 15 10 FT ⊙ 2.6 x 5		
				F T ⊙ 2.6 × 5
	51	SX 95 03 90 Arm Rest		
				レ ス ト 台

Ref. No.	Part No.	Description (部 品 名)	Markets	Remarks
* 52	EV 19 03:00	Flange Nut M3		
* 53	EV 90 32:10	FW $\phi 3.2 \times \phi 10 \times 1t$		
54	SX 95 02:40	Traveling Arm Assembly		
* 55	SX 97 13:60	Lug Plate (5P) Assembly 896528		
56	SX 99 38:20	Shield Plate		
* 57	SX 97 14:60	Motor Assembly IM-S275-12C-05	A, E	
* 58	SX 97 14:70	- do. - IM-S275-12D-01	R	
* 59	SX 97 14:80	- do. - IM-S275-12BUC-01	U, C	
58	SX 96 10:20	Pully 50 Hz		
	SX 96 10:30	- do. - 60 Hz		
* 59	SX 97 15:20	T $\ominus$ 2.6 x 2		
* 60	SX 97 13:70	Mounting Plate 896147		
* 61	SX 97 15:30	TP $\oplus$ 3 x 6		
62	SX 95 10:40	Rubber		
63	SX 96 10:70	Fiber Washer		
* 64	SX 97 13:80	REJ Spring 892086-5		
65	SX 96 02:50	AC Cord Stopper		
66	SX 96 02:60	SR Bushing		
* 67	SX 97 15:40	TPM $\oplus$ 3 x 14		
* 68	SX 97 13:90	Buttom Plate Assembly 871556-1		
* 69	SX 97 14:00	Lock Plate 895259		
* 70	SX 97 15:50	WM $\oplus$ 3.1 x 16		
* 71	SX 97 14:10	Dust Cover 851134-4		
72	SX 99 45:60	Turn Table		
73	SX 95 03:80	Turn Table Seat		
74	SX 96 00:60	Belt		
75	SX 96 00:70	EP Adaptor		
76	SX 96 13:40	Selector		
* 77	SX 97 15:60	FM $\oplus$ 3 x 8	R, E	
* 78	SX 97 14:20	PC Support 894023	R, E	
79	SX 96 09:70	FM $\oplus \ominus$ Screw		
* 80	SX 97 15:70	BW $\phi 5 \times \phi 10 \times 0.2t$		
81	SX 96 11:40	Terminal Assembly	U, C	
* 82	SX 97 14:30	AC Cord Assembly 892435-1	U, C	
* 83	SX 97 14:40	- do. - 892534-1	R	
	SX 99 42:50	- do. -	E	
83	SX 99 38:30	Micro Switch	U, C	
* 84	SX 97 14:50	- do. - 894614	R, E	