

Service Manual

Player

SL-1350
-(M/MC)



11 SPECIFICATIONS

(TURNTABLE SECTION)

Type	Automatic player system Manual play, Repeat play and Multiple play
Drive method	Direct drive
Motor	Ultra-low speed brushless DC motor
Turntable platter	Aluminium die-cast, 33 cm (13 inches) diameter
Turntable speeds	33-1/3 and 45 r.p.m.
Speed change method	Electronic change
Pitch controls	Individual adjustment controls, 10% adjustment range
Wow and flutter	0.04% (JIS C5521) W. R.M.S. ±0.055% (DIN 45507) W. zero to peak
Rumble	-58 dB (IEC 179B) -45 dB (DIN 45539A) -70 dB (DIN 45539B)

(GENERAL)

Power supply	~120 V, 50 or 60 Hz
Power consumption	6.5 W
Dimensions	45.3 × 36.6 × 19.9 cm (W × D × H) 17-3/4 × 14-3/8 × 7-27/32 inches
Weight	9.4 kg (20.7 lbs.)

(TONEARM SECTION)

Type	Universal "S" shaped tubular arm, static-balanced type, direct-reading stylus pressure adjustment, with anti-skating force control device and cueing device
Effective length	230 mm (9-1/16 inches)
Overhang	52 mm (2-3/64 inch)
Tracking error angle	Within +3° (at the point 150 mm (5-1/8") from the center)
	Within +1° (at the point 55 mm (2-3/16") from the center)
Offset angle	21.5°
Stylus pressure adjustment range	0 to 3 g
Cartridge weight range	.5 to 11 g
Head-shell weight	9.5 g


Technics
byPanasonic

Matsushita Electric Corp. of America
50 Meadowlands Parkway, Secaucus, N.J. 07094

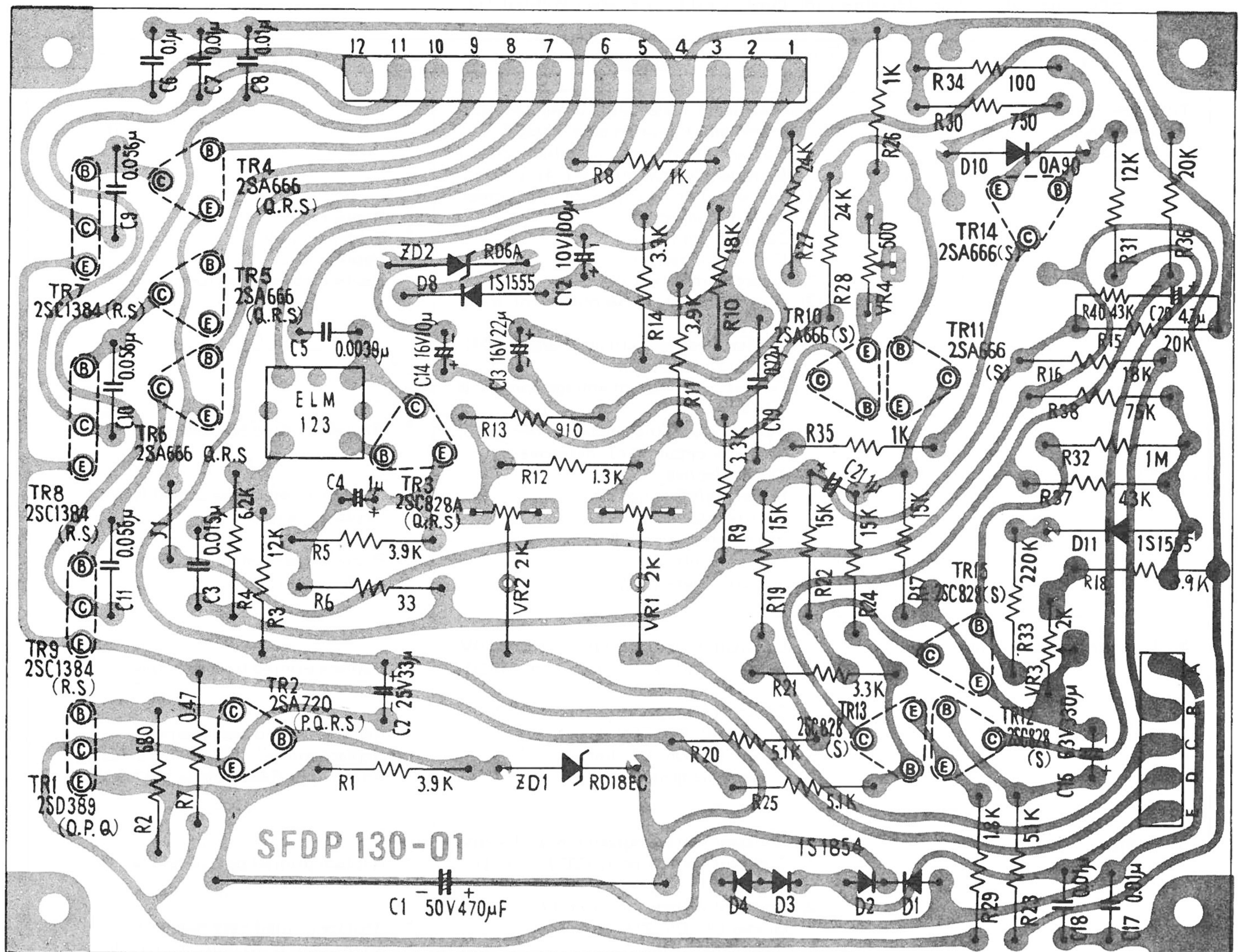
Matsushita Electric of Hawaii, Inc.
320 Waikamilo Road, Honolulu, Hawaii 96817

Matsushita Electric of Canada Ltd.
40 Ronson Drive Rexdale, Ont.

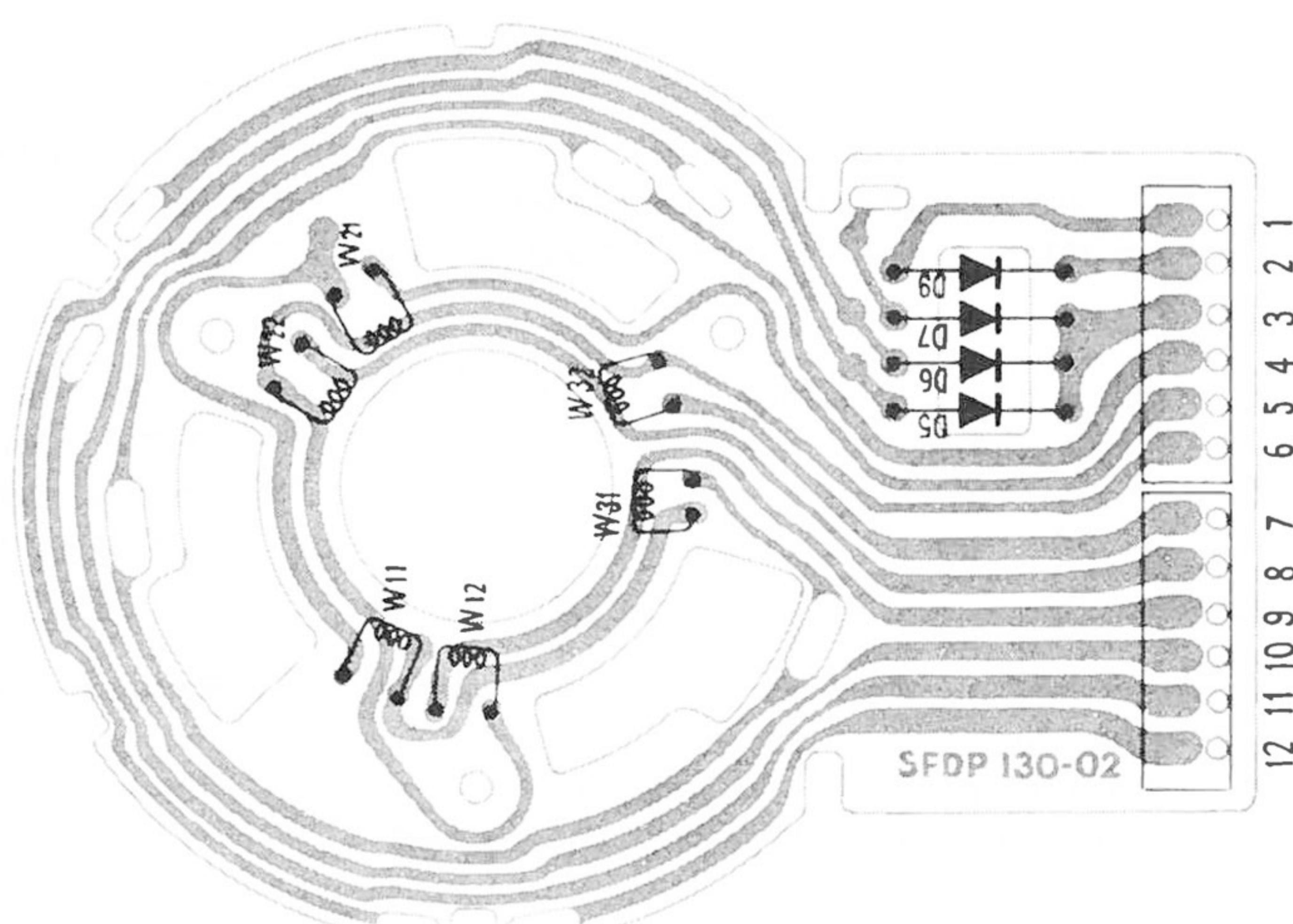
SCHMATIC DIAGRAM MODEL SL-1350



CIRCUIT BOARD



Circuit Plate



Motor

TROUBLE SHOOTING GUIDE

* Except when checking voltage, disconnect the power cord before repair without fail.

TROUBLE	CAUSE	REMEDY
Turntable Speed A. Switching on does not cause turntable to rotate.	<p>Remove back cover and, using DC voltmeter, check printed base voltage:</p> <ol style="list-style-type: none"> No output of constant-voltage circuit (between Tr1 collector and 4) is found. <p>(1) No output on secondary of transformer.</p> <ul style="list-style-type: none"> Cord disconnected. Soldered improperly. Fuse disconnected. Power transformer defective. <p>(2) Output found on secondary of transformer.</p> <ul style="list-style-type: none"> Constant-voltage circuit parts (ZD1), Tr1, Tr2) defective. <ol style="list-style-type: none"> Output of constant-voltage circuit is 17~20V. 3-phase switching circuit (Tr4 ~ Tr9), oscillator circuit (Tr3) defective. Tr14 defective. Power Switch is not ON. Micro switch defective. Speed selector switch defective. Contact faulty Soldered improperly. 	<ul style="list-style-type: none"> Replace cord. Solder securely. Replace fuse. Replace power transformer. <ul style="list-style-type: none"> Replace printed base assembly. <ul style="list-style-type: none"> Replace printed base assembly. Replace micro switch. <ul style="list-style-type: none"> Replace speed selector switch. Solder securely.
B. Turntable speed too fast.	<ol style="list-style-type: none"> Constant-voltage output is not 17~20V. Constant-voltage circuit parts (ZD1, Tr1, Tr2) defective. Constant-voltage output is 17V~20V. Diodes D8, D9, ZD2 defective. Diodes D5, D6, D7 shorted. Speed maladjusted. 	<ul style="list-style-type: none"> Replace printed base assembly. <ul style="list-style-type: none"> Replace printed base assembly. Replace motor. (Stator frame Ass'y). Adjust semi-fixed resistor VR1 & VR2.
C. Turntable speed too slow.	<ol style="list-style-type: none"> Constant-voltage output is not 17~20V. Constant-voltage parts (ZD1, Tr1, Tr2, defective.) Constant-voltage output is 17~20V. Diodes D8, D9, ZD2 defective. Speed unadjusted. 	<ul style="list-style-type: none"> Replace printed base assembly. <ul style="list-style-type: none"> Replace printed base assembly. Adjust semi-fixed resistor VR1 & VR2.
D. Turntable speed varies too much.	* Trouble in 3-phase switching circuit.	* Replace printed base assembly.
E. Turntable, after stopped by hand, will not turn or starts turning but will stop soon.	* 3-phase switching circuit defective.	* Replace printed base assembly.
F. Operative at only one of two speeds. (33-1/3 rpm, 45 rpm)	<ul style="list-style-type: none"> Selector switch defective. Lead disconnected or unsoldered. Contact of Vr1, Vr2 insufficient. 	<ul style="list-style-type: none"> Replace selector switch. Replace lead, or solder securely. Replace printed base assembly.
G. When actuating, turntable speed is unsteady for along time.	<ul style="list-style-type: none"> Semi-fixed resistor VR3 & VR4 unadjusted. 	<ul style="list-style-type: none"> Make it become 50mV at both ends of C15 with semi-fixed resistor VR3. Make it become 2.2V at both ends of R38 with semi-fixed resistor VR4.
Noise Offensive noise is hears.	<ul style="list-style-type: none"> Power transformer makes loud noise of vibration. Broken part of rotor magnet of iron chips attracted by magnet and rubbed by motor case. 	<ul style="list-style-type: none"> Replace power transformer. Remove iron chips.

ADJUSTMENT INSTRUCTION

① PITCH CONTROLS (See Fig. 1)

*Turn either knob clockwise or counterclockwise, as necessary, to reduce or increase the speed of turntable rotation.

Clockwise rotation The speed of the turntable platter will decrease.

Rotate counterclockwise if the dots seem to be "running ahead"; i.e., seem to be moving clockwise, until they appear stationary.

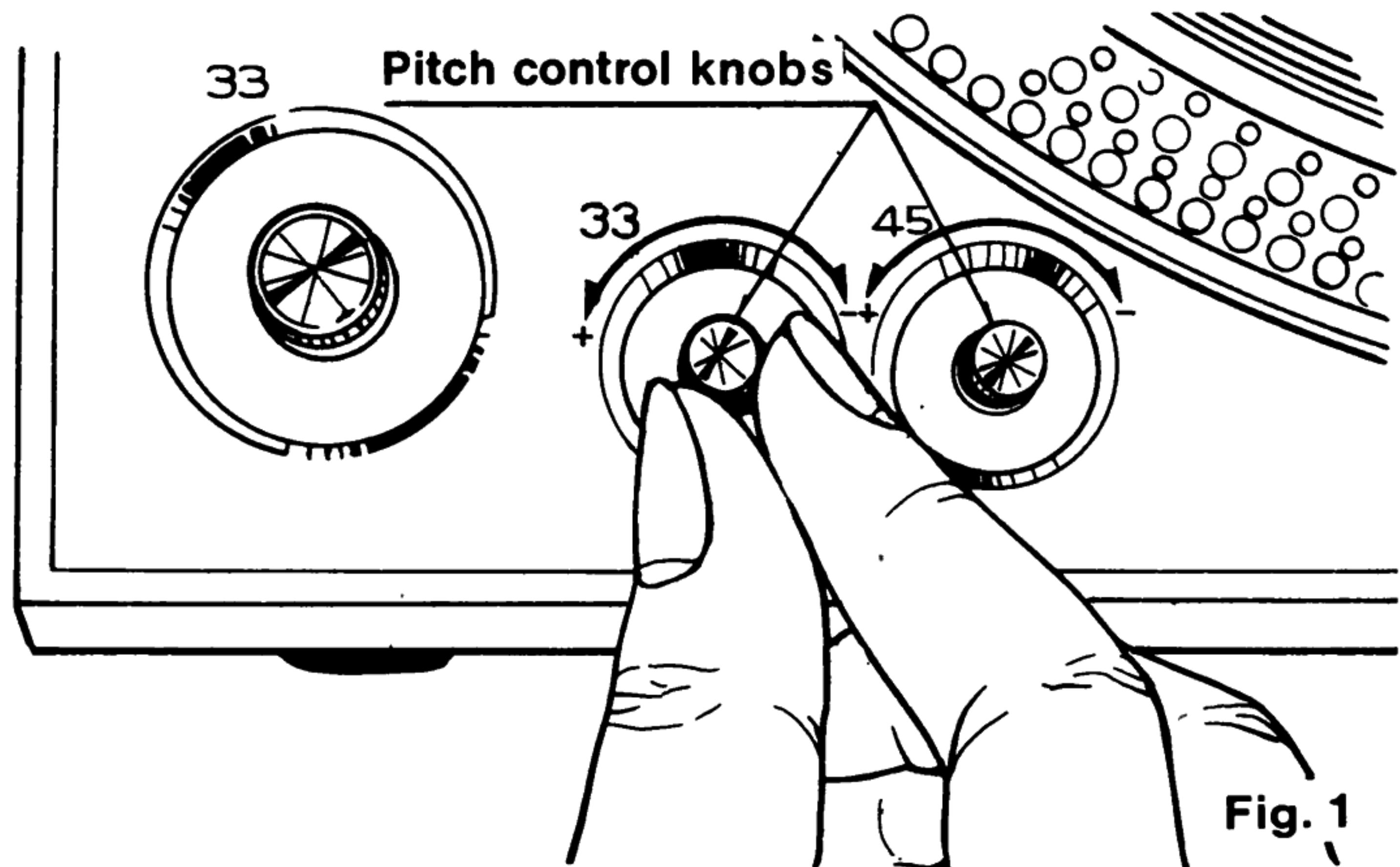


Fig. 1

Counterclockwise

rotation The speed of the turntable platter will increase.

Rotate clockwise if the strobe dots illuminated by strobe illuminator/pilot lamp, seem to be "falling back"; i.e., seem to be moving counterclockwise. When the dots appear to be stationary, turntable speed is accurate.

NOTE

Any change in powerline frequency will also cause a change of the fluctuation rate of the neon lamp or fluorescent lamp used for illumination of the strobe dots.

In such case the strobe dots will appear to move very slightly under normal conditions. The powerline frequency from electric utility companies is normally extremely stable without frequency fluctuation. Under certain abnormal conditions, however, changes in line frequency have been observed, averaging to about 0.2% when measured over a period of time.

If this happens, the strobe dots will move very slowly. Such change in line frequency will in no way affect the quality of the sound reproduction, as line frequency change does not change the rate of turntable rotation.

② SPEED ADJUSTMENT (See Fig. 2)

If for any reason, the speed adjustment cannot be made by the pitch control knobs, turn these screws clockwise or counterclockwise with a (-) screw driver.

Clockwise The speed will slow down.

Counterclockwise The speed will speed up.

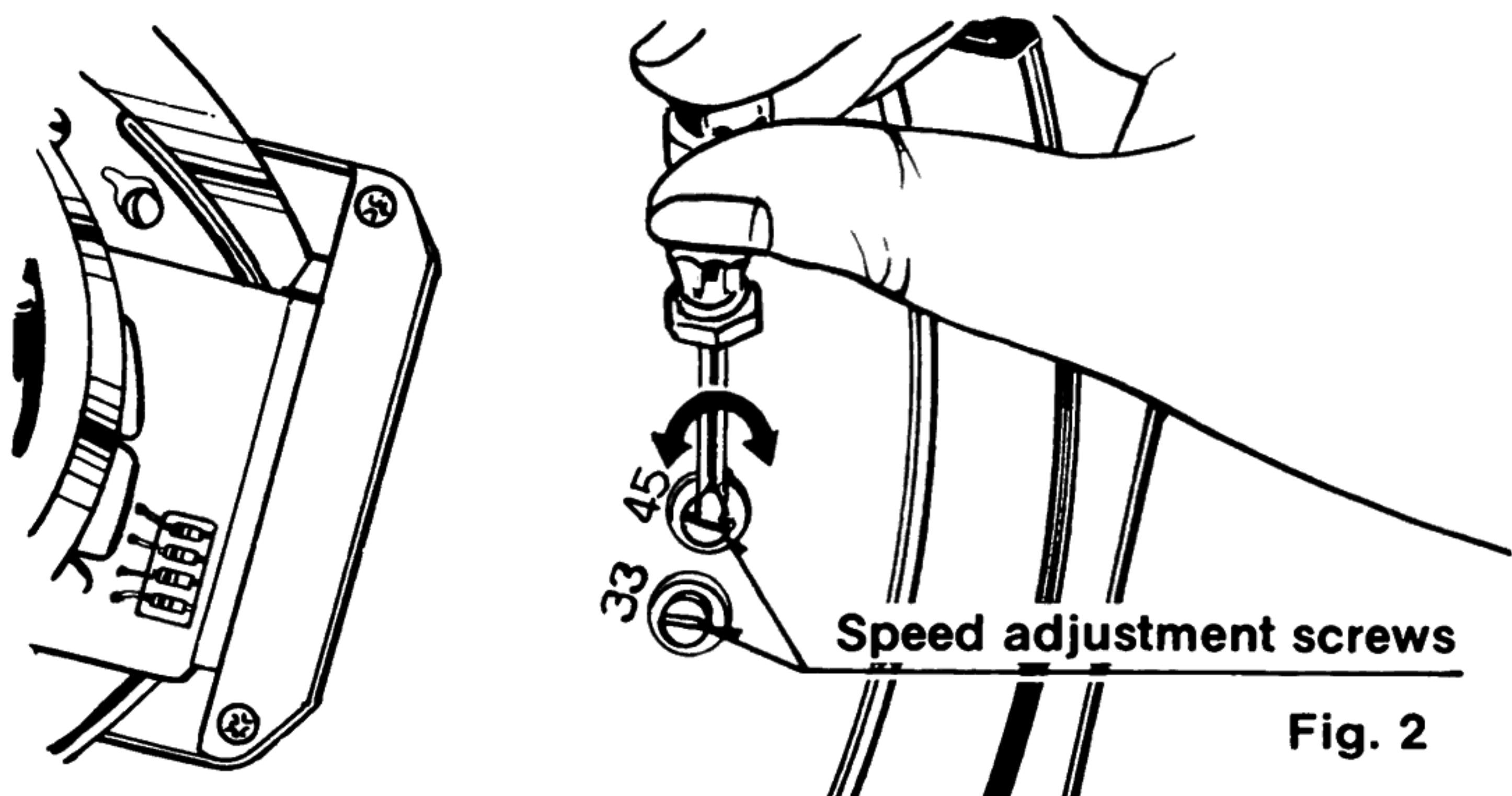


Fig. 2

③ ARM LIFT HEIGHT (CUEING LEVER) (See Figs. 3 and 4)

The space between the stylus tip and record surface, when the cueing lever is raised, has been adjusted from 5 to 10 mm (3/16" to 25/64").

5 to 10 mm (3/16" to 25/64")

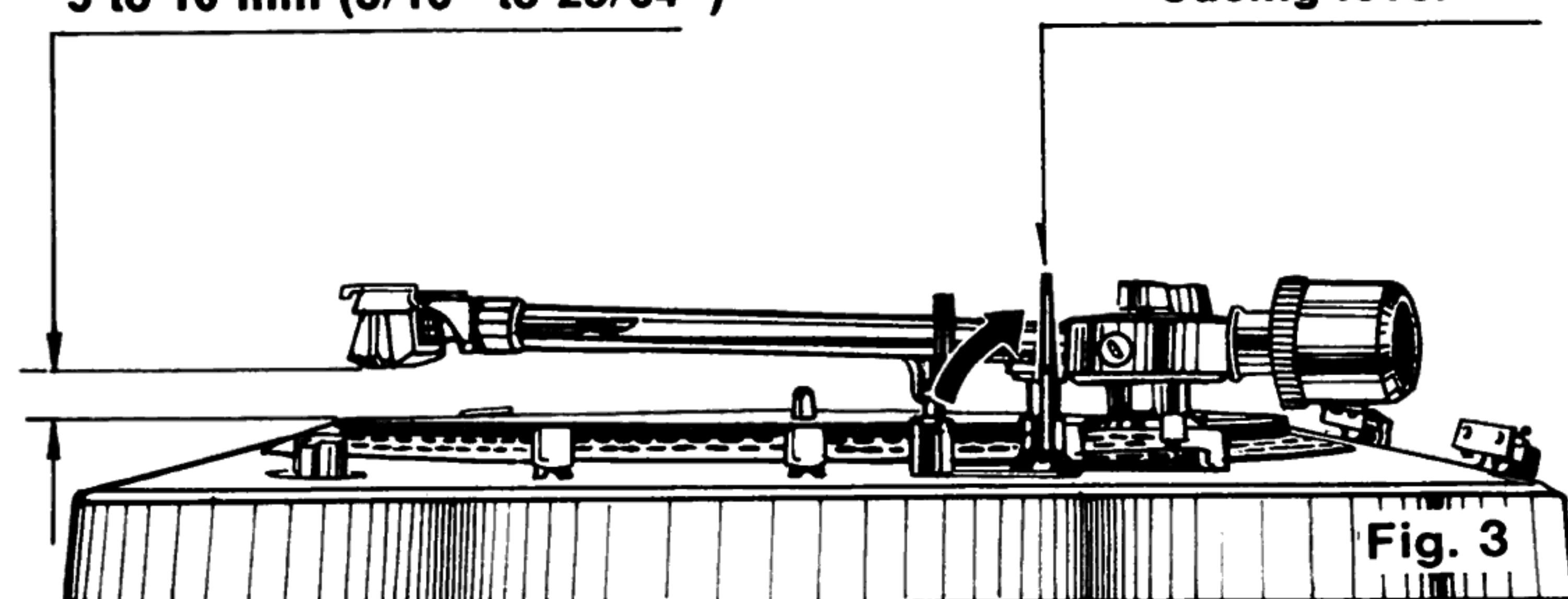


Fig. 3

If, for any reason, it is not correct, turn the adjustment screw clockwise or counterclockwise while pushing down on the arm lift.

NOTE

*Be sure to push down on the arm lift when you turn this screw.

Clockwise to lower the arm.

Counterclockwise to raise the arm.

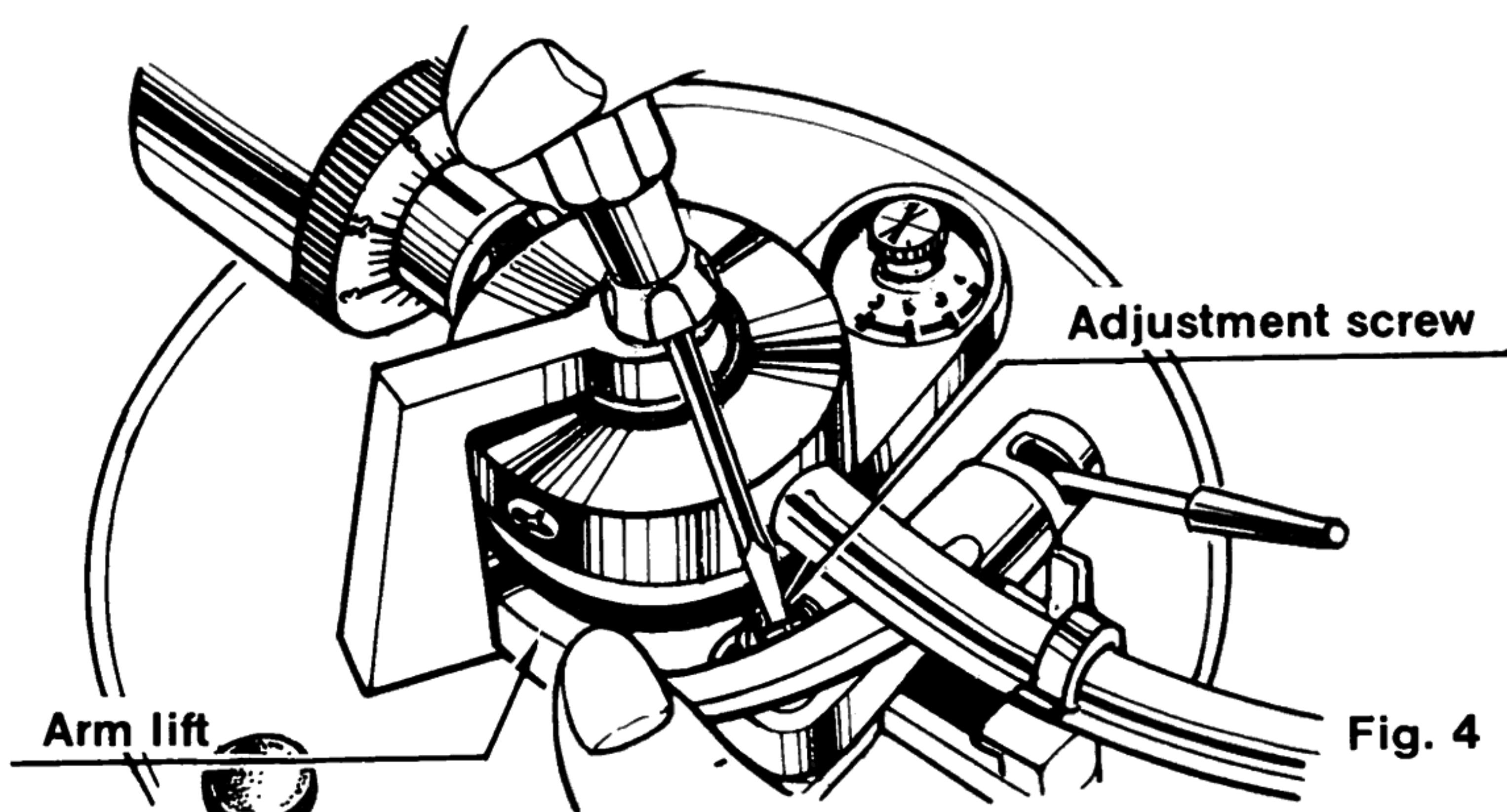


Fig. 4

④ STYLUS SET-DOWN POINT (See Fig. 5)

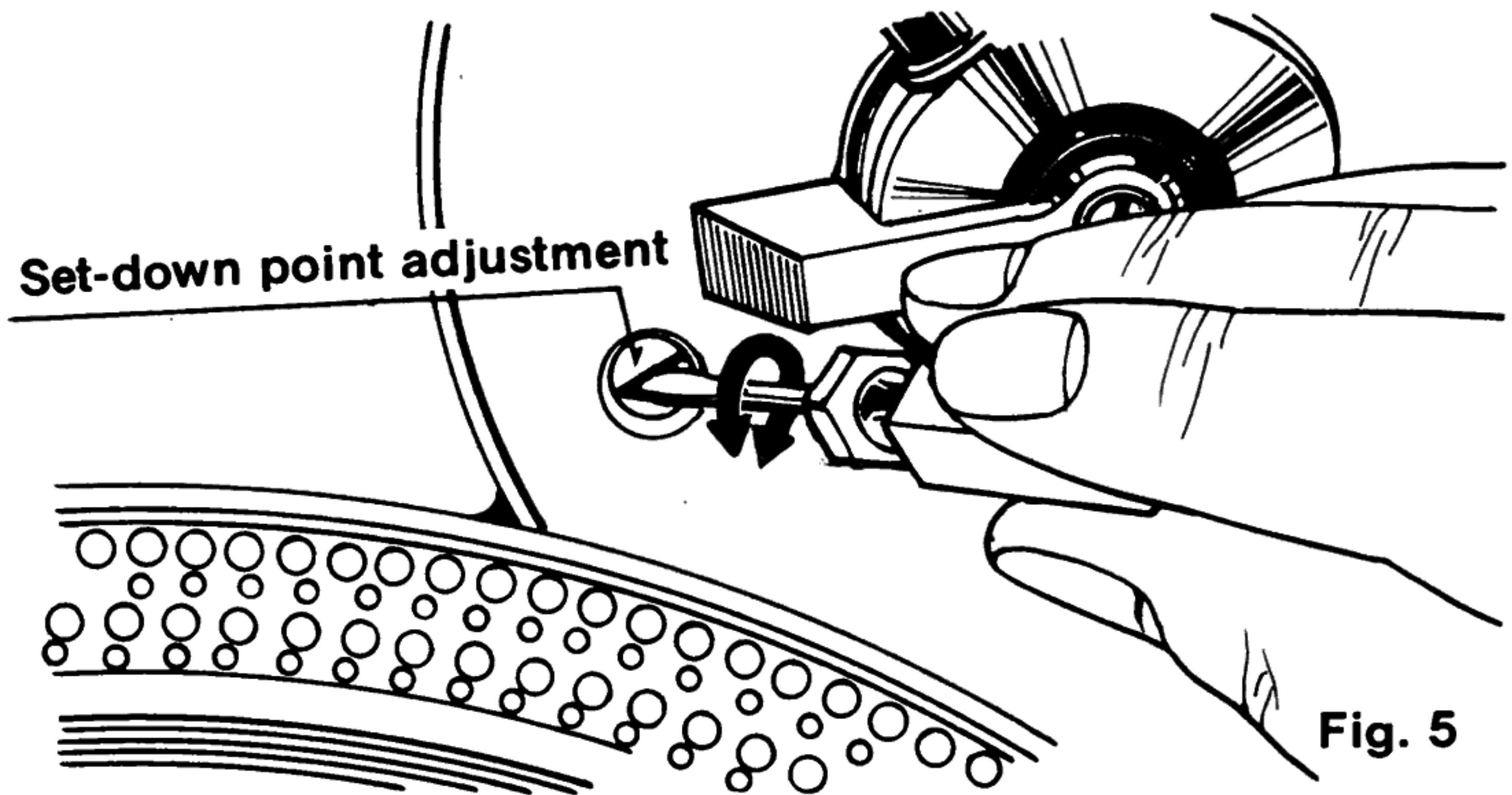
*To be adjusted if the tonearm fails to set-down at the right starting point at the beginning of the record.

Rubber cap above adjustment must be removed.

Clockwise rotation This will move the set-down point inward, toward the record center.

Counterclockwise

rotation This will move the set-down point outward, away from the record center.



⑤ TONEARM RETURN POINT (See Fig. 6)

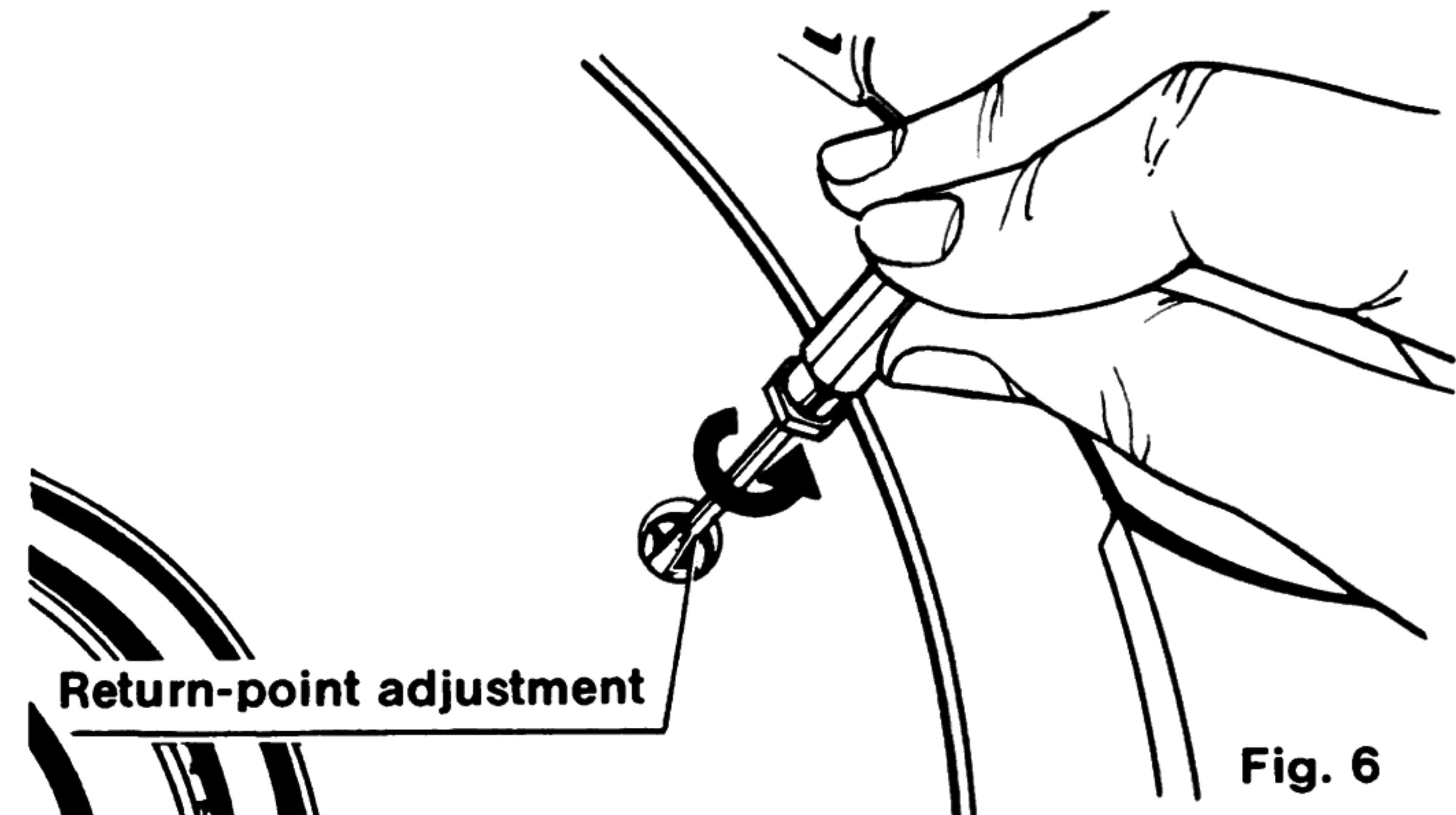
*In some cases, the tonearm will tend to return to its rest position before playing has finished. In other cases, it may fail to return to the rest position even after playing the last groove of the record.

*Rotate this screw to correct for either condition.

Clockwise rotation The tonearm will return to its rest later.

Counterclockwise


rotation The tonearm will return to its rest earlier.




MEMO

EXPLODED VIEW OF DIRECT DRIVE PLAYER

MODEL SL-1350





PARTS LIST

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
1	SFTE135-01A	Turntable platter	1	O	56-3	SFUPWR005	Washer for canceler cam	1	
2	SFTG135-01	Turntable mat	1	O	56-4	XTW26+5DFU	Screw for canceler cam	1	
3	SFMZ135-01Z	Stater frame assembly	1	O	57	SFPJK13003	Ccanceler cam B	1	
3-2	XYN4+C10FUS	Screw for stater frame	3		57-2	SFXW551D2	Washer for canceler cam B	1	
4	SFAC135M01E	Player case	1	O	58	SFPJK15002	Cam shaft	1	
5	SFAT120-01E	Hinge assembly	2		59	SFPSP13001	Spring for canceler	1	
5-2	XTV3+8BFZ	Screw for hinge assembly	4		60	SFPRT13001K	Arm rest	1	
7	SFUM130-02	Switch cam assembly	1		60-2	TT-3030NF	Screw for arm rest	1	
7-2	XUC4FT	E-shaped ring	1		61	SFPJK13007K	Cueing lever assembly	1	
8	SFQA130-11	Click spring	1		62	SFPAB12002	Knob for cueing lever	1	
9	SFYB5-32	Steel ball	1		63	SFXG829-1	Screw for adjustment of arm lift height	1	
10	SFUP130-07E	Switch plate assembly	1		64	SFQA829-03	Spring for arm lift	1	
10-2	XTN3+6BFU	Screw for switch plate	2		65	SFPRT13003K	Arm lift	1	
11	SFUM130-03	Change lever for switch	1		66	SFPAB13008K	Arm lift base assembly	1	
11-2	XUC3FT	E-shaped ring	1		66-2	XYN3+C5FU	Screw for arm lift base	3	
12	AM7620-44	Micro switch	1		67	SFPAB13009K	Tone arm fixing plate assembly	1	
12-2	XTN3+16BFU	Screw for micro switch	2		67-2	XWA3BFU	Spring washer for tone arm fixing plate	2	
13	SFUP130-01	Mounting plate for variable resistor	1		67-3	XNG3HFU	Nut for tone arm fixing plate	2	
13-2	XTN3+6BFU	Screw for mounting plate	1		68	SFGPM13001	Cueing rubber	1	
14	EVHBOAK15B62	Variable resistor	2		69-1	SFCZV8800	Screw for cartridge	2	
15	SFDJ12805S	5-pin connector	1		69-2	SFPEV7800	Screw for cartridge	2	
16-1	SFUP110X04E	Terminal strip	1		70	SFUK135-11E	Automatic mechanism base	1	O
16-2	ECQM6473MZ	Capacitor	1		71	SFUB135-11A	Operating plate assembly	1	O
16-3	ERD12TJ4R7	Carbon film resistor	1		71-2	SFXW130-13	Washer for operating plate ass'y	1	O
16-4	ERG2ANJ472	Carbon film resistor for strobo illuminator	1		71-3	SFXW890B01	Washer for operating plate ass'y	1	
16-5	XBAS2B0201	Fuse	1		71-4	XUC5FT	E-shaped ring for operating plate ass'y	1	
16-6	XTN3+8BFU	Screw for terminal strip ass'y	2		72	SFUG130-12A	Main gear assembly	1	
17	SFUP130-04	Fixing plate for AC power cord	1		72-2	SFXW890B01	Washer for main gear	1	
17-2	XTN3+8BFU	Screw for fixing plate	2		72-3	XUC5FT	E-shaped for main gear	1	
18	SFHK040L	Bushing for AC power cord	1		73	SFUM130-23	Gear setting plate	1	
19	SPT-1	AC power cord	1		73-2	XUC3FT	E-shaped ring for gear set plate	1	
20	SFUP130-03	Mounting plate for transformer	1		74	SFQS130-11	Gear setting spring	1	
20-2	SFXW120-02	Washer for mounting plate	1		75	SFDS78009	Micro switch	1	
20-3	XYN3+C8FUS	Screw for mounting plate	3		75-2	XTN3+20BFU	Screw for micro switch	1	
20-4	SFXW750-01	Washer for mounting plate	3		76	SFUP130-11	Insulating plate	1	
20-5	SHE36	Cord holder	1		77	SFUM130-15	Cover for switch	1	
21	MPT-006	Power transformer	1		78	SFUM130-17	Start setting plate	1	
21-2	XYN4+C8FUS	Screw for transformer	2		79	SFUM135-11	Repeat cam	1	
21-3	XNG4HFUS	Nut for transformer	2		79-2	SFXW829T01	Washer for repeat cam	1	
22	SFGC827M01	Cushion rubber for transformer	3		79-3	XUC3FT	E-shaped ring for repeat cam	1	
23	SFEB6UT	Vinyle tube for transformer and mechanism black	1		80	SFUM130-21	Select cam	1	
24	SFGZ120-02	Clamping rubber for lead wires	4		80-2	SFXW829T01	Washer for select cam	1	
25	SFDP130-01A	Circuit plate assembly	1		80-3	XUC3FT	E-shaped ring for select cam	1	
25-2	XTN3+6BFU	Screw for circuit plate assembly	3		81	SFUM130-22	Start cam	1	
26	SFKT130-01A	Variable pitch control knob ass'y	2		81-2	SFXW829T01	Washer for start cam	1	
26-2	SFUZ130-03	Felt for variable pitch control knob	2		81-3	XUC3FT	E-shaped ring for start cam	1	
27	SFKT130-03A	Operation knob assembly	3		82	SFUM130-18	Start plate A	1	
28	SFKT130-05A	Start lever assembly	1		83	SFUM130-19	Start plate B	1	
29	SFUM130-01	Neon lamp base	1		84	SFQH130-12	Spring for start plate	1	
29-2	XTN3+8BFU	Screw for neon lamp	1		85	SFUM130-26	Cut plate	1	
29-3	XYN3+C6FZS	Screw for neon lamp	1		85-2	SFXW130-12	Washer for cut plate	1	
29-4	XTV3+6BFU	Screw for neon lamp base	1		85-3	XUC5FT	E-shaped ring	1	
30	SFUP130-05	Neon lamp holder	1		86	SFQH130-13	Spring for cut plate	1	
31	SFDN130-01A	Neon lamp assembly	1		87	SFUP130-12E	Index plate assembly	1	
32	SFUP130-06	Print base cover	1		88	SFUM130-25	Select lever	1	
32-2	XTN3+6BFU	Screw for print base cover	2		88-2	SFXW130-12	Washer for select lever	1	
33-1	SFEL028-01E	Ground wire	1		88-3	XUC5FT	E-shaped ring for select lever	1	
33-2	SFDH028-01	Phono cable	1		89	SFUM130-24	Switch lever	1	
33-3	SFNZ029L1	Ground label	1		89-2	XUC3FT	E-shaped ring	1	
34	SFER130-01	Terminal strip for phono cable	1		90	SFUM130-16	Supporting plate for switch	1	
34-2	XTN3+6BFU	Screw for terminal strip	2		90-2	XUC3FT	E-shaped ring for supporting plate	1	
35	SFGT028-01	Cord clammer for phono cable	1		91	SFQH10-11	Spring for supporting plate	1	
36	SFUP130-08	Shield cover	1		92	SFUC130-11E	Actuating plate assembly	1	
36-2	XTN3+6BFU	Screw for shield cover	2		92-2	XUC3FT	E-shaped ring for actuating plate	1	
37-2	XYN3+C12FUS	Screw for tone arm assembly	3		92-3	SFXW910J02	Washer for actuating plate	1	
38	SP-135	Automatic mechanism assembly	1		95	SFUM135-02	Spindle connector	1	
38-2	XTN3+8BFU	Screw for automatic mechanism assembly	6		96	SFUM135-01	Spindle cam	1	O
39	SFUP154A1	Clamper for AC cord	1		97	SFUP135-01	Holder for spindle cam	1	O
40	SFAD135M01A	Dust cover assembly	1	O	97-2	XYN3+C8FU	Screw for holder	3	
41	SFAU135-01A	Bottom cover assembly	1	O					
41-2	SFUM135-03A	Audio insulator assembly	4	O	101	SFVS135-02	ACCESSORY PARTS		
41-3	SFXW022-01	Washer for audio insulator	4	O	102	SFVS135-01Z	Manual Spindle	1	O
41-4	XWA3BF	Spring washer for audio insulator	4	O	103	SFWE154A1	Spindle assembly	1	O
41-5	XNG6BFU	Nut for audio insulator	4	O	104	SFVA135M01Z	45 r.p.m manual spindle	1	O
41-7	XTN3+10BFZ	Screw for bottom cover	6	O	105	SFKO135M01E	45 r.p.m spindle	1	O
41-8	SFXW120-01	Washer for bottom cover	11	O	106	SFWO010	Overhang gauge assembly	1	
41-9	XTN3+50BFZ	Screw for bottom cover	5	O					
42	SFGK829-1	Cap, Rubber	1						
50	SFPCC13001K	Head shell assembly	1		P1	SFHPI135M01	PACKING MATERIALS		
51	SFP·AM13003K	Arm unit assembly	1		P2	SFHH135-01	Packing case	1	O
51-2	XYN3+C12FU	Screw for arm base	2		P3	SFHH135-02	Side pad	2	O
52	SFPWG15001K	Balance weight assembly	1		P4	SFHD135-02	Turntable pad, Bottom	1	O
54	SFPKD13002	Arm base	1		P5	SFHD135-01	Turntable pad, Top	1	O
55	SFPJK13001K	Anti-skating force control knob	1		P6	SFHH135-03	Magnet cover	1	O
56	SFPJK13002	Canceler cam A	1		P7	SFHH135-04	Part box	1	O
56-2	SFPEW1100	Washer for canceler cam	1		P8	SFHZ135-01	Lid, part box	1	O
					P9	SFNU135M01	Case, part box	1	O
					P9	SFNU135C01	Printed Matter	1	O
					P10	SFHK100-1	Printed Matter (for Canada)	1	O

COMPONENT PACKING PROCEDURE

