

ANALOG RECORDING



TEAC®

SERVICE MANUAL

PX-550

Direct-Drive Turntable

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1. SPECIFICATIONS

Type Fully-Automatic System
 Drive System Direct-Drive System
 Motor Brushless and Slotless, DC Servo Motor
 Speed 33-1/3 & 45 rpm
 Pitch Control $\pm 5\%$
 Turntable 308 mm Diameter, Aluminum Alloy Diecast
 Wow and Flutter 0.05% (WRMS)
 Signal-to-Noise Ratio 63 dB (DIN-B)
 Tonearm

Type Static Balanced, S-shaped with EIA Standard Connector
 Effective Length 222 mm
 Overhang 16.8 mm
 Tracking Error Angle $+2^{\circ}30'$ to $-1^{\circ}20'$
 Stylus Pressure Range 0 – 4 g
 Usable Cartridge Weight 4.5 – 7 g

*Cartridge

Type Moving Magnet Type
 Frequency Response 20 – 20 kHz
 Output Voltage 2.8 mV
 Channel Separation More than 15 dB at 1 kHz
 Appropriate Stylus Pressure 2 g
 Stylus 0.6 mil Spherical Diamond
 Load Impedance 47 k ohms
 Cartridge Weight 5 g ± 0.5 g

Power Requirements

100/120/220/240 V AC 50/60 Hz (General Export Model)
 120 V AC 60 Hz (U.S.A./Canada)
 220 V AC 50 Hz (Europe)
 240 V AC 50 Hz (U.K./Australia)

Power Consumption

6W

Weight 5.5 kg (12-2/16lbs) net

*U.K. model: supplied without cartridge

• Improvements may result in features or specifications changing without notice.

CAUTION

△Parts marked with this sign are safety critical components. They must always be replaced with identical components - refer to the TEAC Parts List and ensure exact replacement.

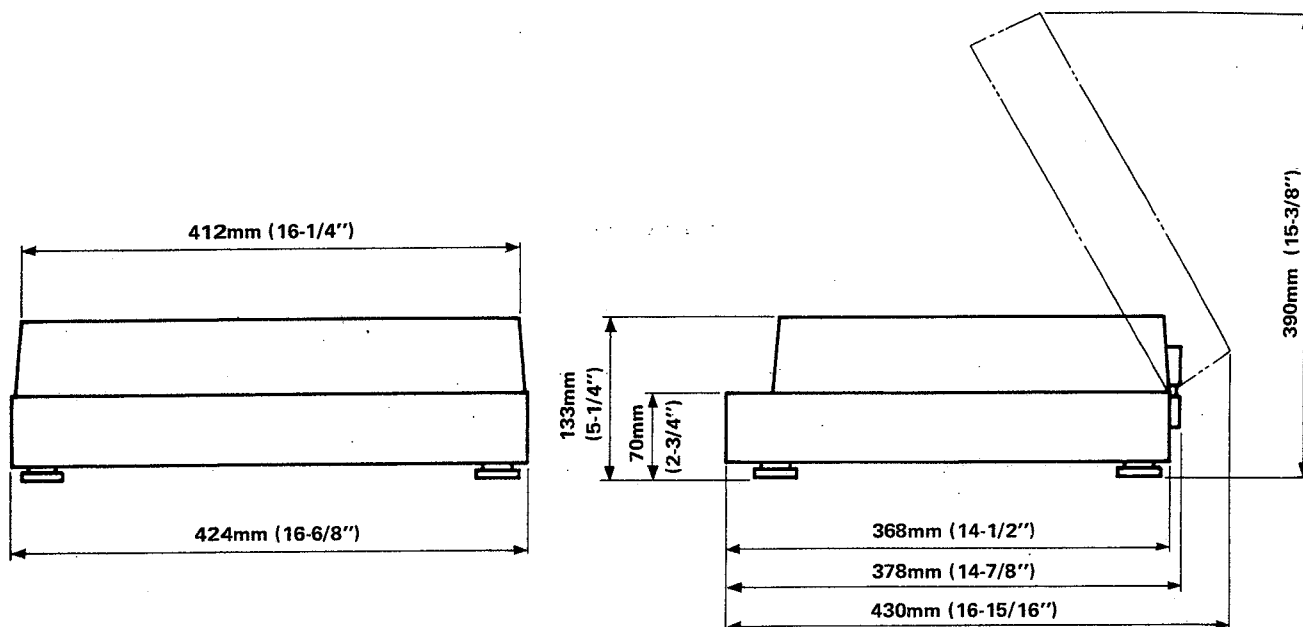


Fig. 1-1 Dimensions

2. PARTS LOCATION

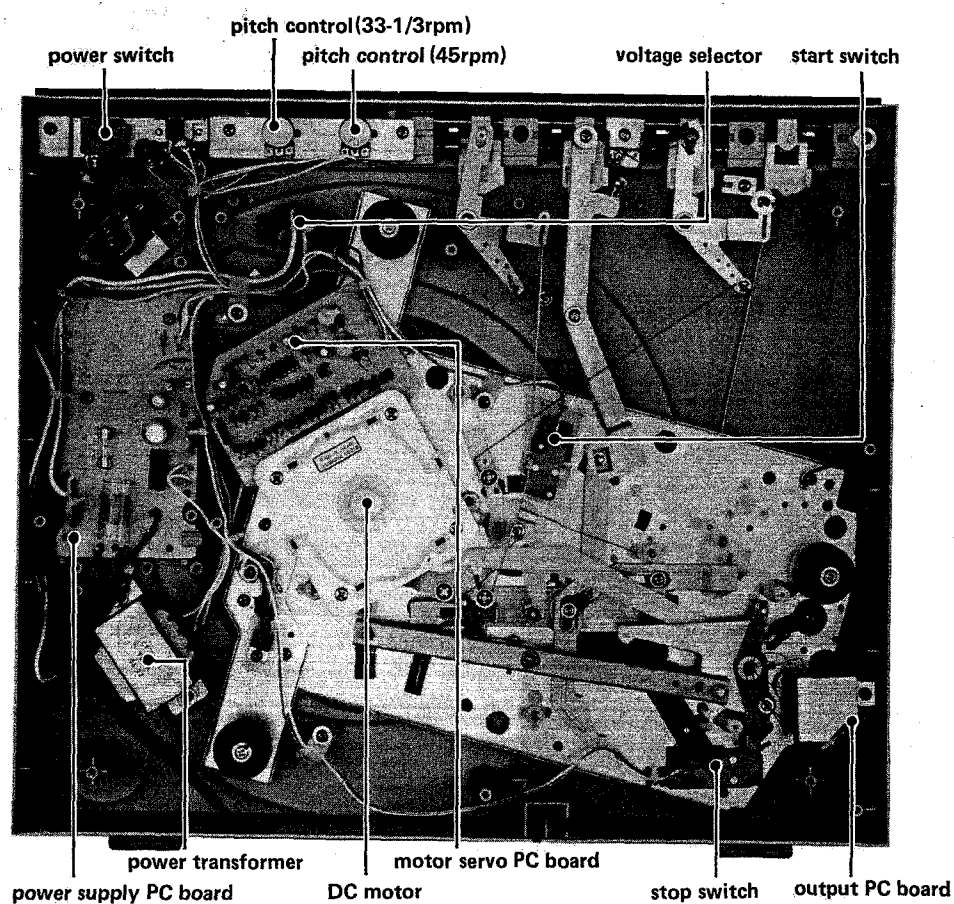


Fig. 2-1

3. DISASSEMBLY INSTRUCTIONS

PRECAUTIONS

1. Disconnect the power cord and phono plugs.
2. Fasten the tonearm to the armrest and make sure the stylus cover is in place.
3. Remove the dust cover.
4. Remove the rubber mat and turntable platter.

3-1. BOTTOM COVER

1. Remove the eight screws (marked A and B) from the bottom cover as shown in Fig. 3-1.
2. Carefully lift the bottom cover up from the cabinet.

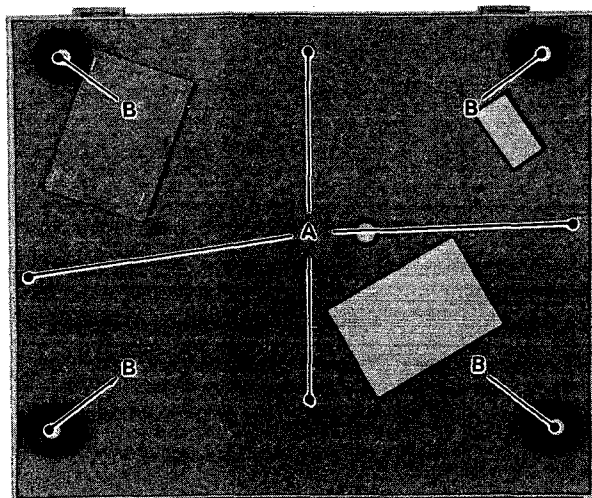


Fig. 3-1

3-2. TONEARM

(Refer to Fig. 3-2 and 3-3)

1. Remove the shielded cover by unscrewing screw C.
2. Unsolder the pickup lead wires from the output PC board.
3. Remove the seesaw arm by unscrewing screw D.
4. Loosen the two hex socket screws and remove the IFC spring.
5. Remove the pickup plate from the tonearm pipe.
6. The tonearm can be removed when the hex nut (12 mm) is removed from the tonearm pipe.

NOTE: When replacing the tonearm, follow the adjustment procedures below while referring to Fig. 3-4:

1. Lock the tonearm to the armrest.
2. Adjust the lock plate assembly so that pin A is centered directly over line B.
3. Slightly tighten either hex socket screw.
4. Adjust the auto lead-in and auto return operations and the frictional shaft height (refer to sections 4-4, 4-5, and 4-6).
5. After these adjustments, securely tighten both hex socket screws.

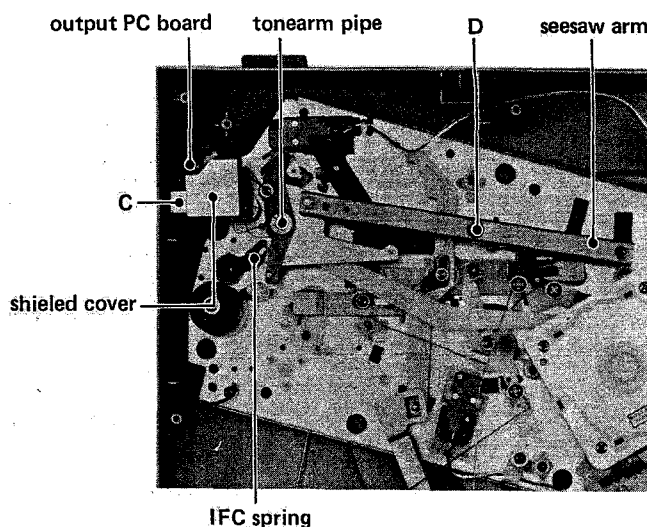


Fig. 3-2

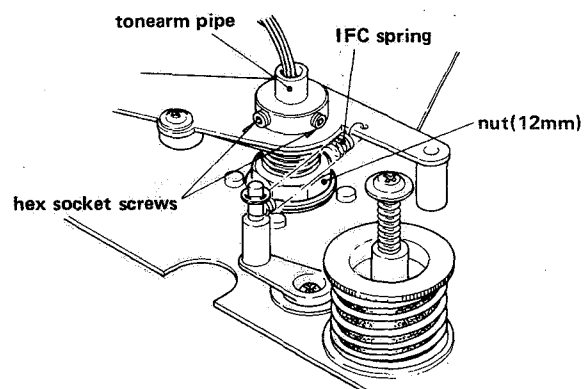


Fig. 3-3

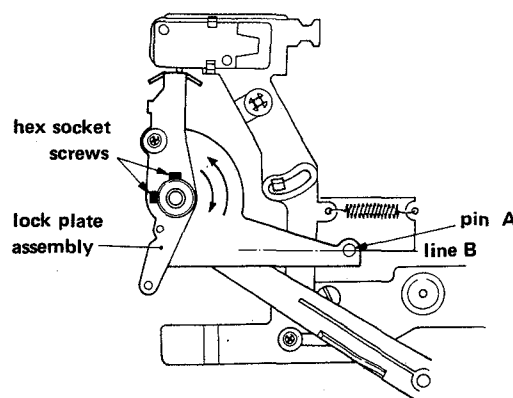


Fig. 3-4

3-3. MOTOR

1. Disconnect the wires from the motor control PC board.
2. Remove the motor by unscrewing the four screws (E). (See Fig. 3-5.)

NOTE: Make sure the * screw is removed with the collar.

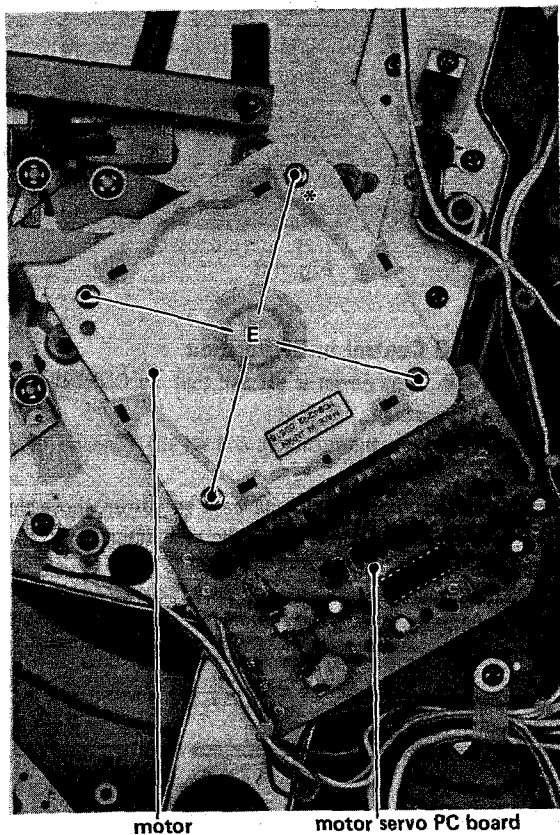


Fig. 3-5

3-4. MICROSWITCH (START AND STOP SWITCH)

1. Unsolder the lead wires from the microswitch.
2. The microswitch can be removed by expanding the corresponding hooks (refer to Fig. 3-6).

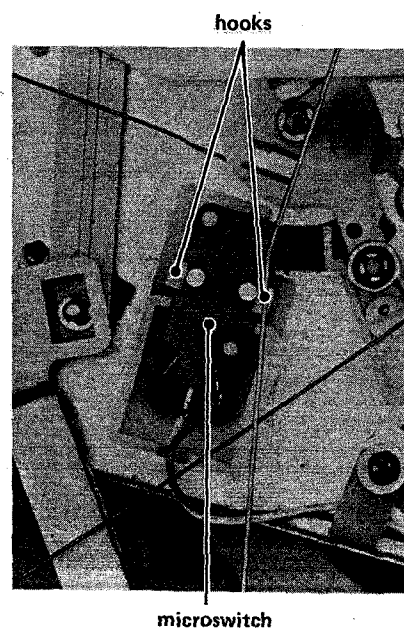
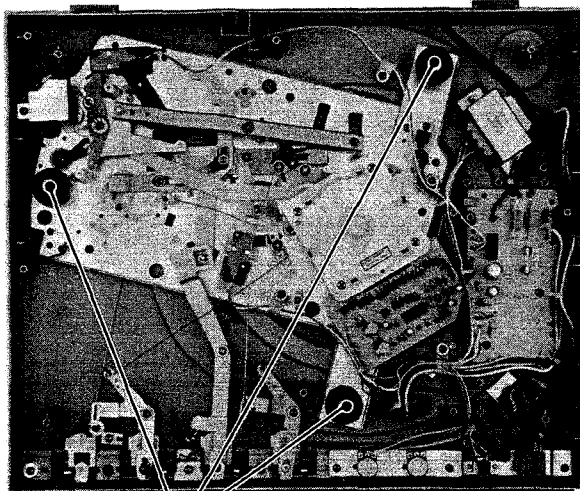


Fig. 3-6

4. ADJUSTMENTS

4-1. TURNTABLE PLATTER AND HEIGHT ADJUSTMENT

1. Place a record on the turntable.
2. Make sure that the record is 16 to 17.5 mm from the top of the cabinet (refer to Fig. 4-2).
3. If this distance is not within specification, adjust the spring holders accordingly (refer to Fig. 4-1).



spring holder

Fig. 4-1

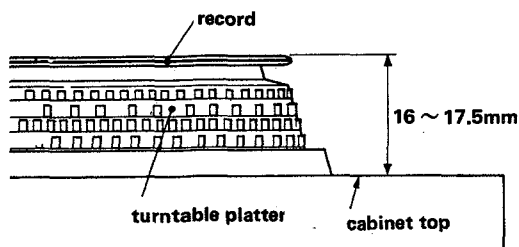


Fig. 4-2

4-2. STYLUS HEIGHT ADJUSTMENT

4-2-1. CUEING Control In DOWN Position

1. Make sure that the power is off and that the CUEING control is in the DOWN position.
2. Place a record on the turntable.
3. Place the tonearm on the record and set the START/REJECT switch to REJECT.
4. Manually turn the turntable clockwise slowly so that the tonearm lifts and returns halfway towards the armrest, then stop the turntable.
5. At this point, the stylus should be 6 to 10 mm above the record. If not, adjust screw F on the arm lifter (refer to Fig. 4-3).

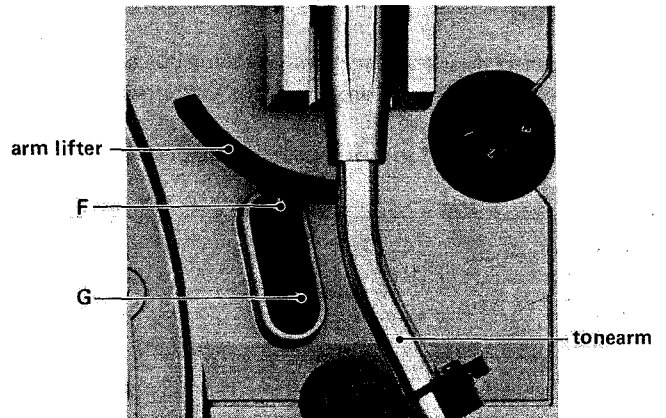


Fig. 4-3

4-2-2. CUEING Control In UP Position

1. Make sure that the power is off and that the CUEING control is in the UP position.
2. Place a record on the turntable and set the tonearm over the record.
3. At this point, the stylus should be 6 to 10mm above the record. If not, adjust screw G on the arm lifter (refer to Fig. 4-3 and 4-4).

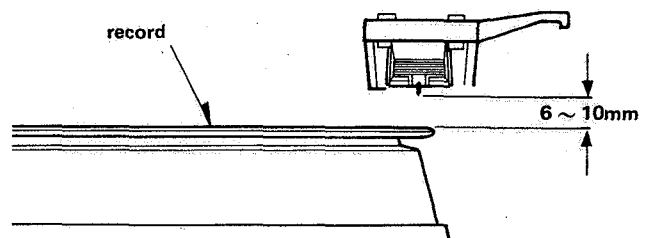


Fig. 4-4

4-3. TURNTABLE GEAR AND TRIGGER POSITION

1. There should be a clearance of 0.3 to 0.4 mm between the hook on the turntable gear and the trigger on the drive gear.
2. If the clearance is not within specification, turn the adjusting pin until the proper clearance is obtained (refer to Fig. 4-5).

NOTE: This adjustment must be made whenever the motor is replaced.

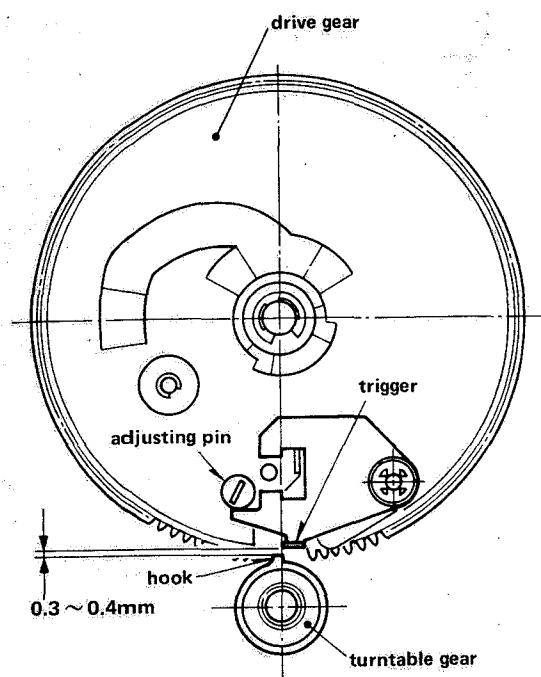


Fig. 4-5

4-4. AUTO LEAD-IN ADJUSTMENT

1. Place a record on the turntable and set the START/REJECT switch to START.
2. If the tonearm is not automatically brought to the lead-in groove and lowered to begin play (for either 17 cm or 30 cm record size selection), turn the appropriate lead-in adjustment pin until proper operation is obtained (refer to Fig. 4-6).

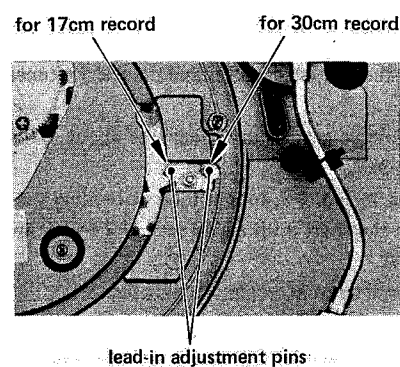


Fig. 4-6

4-5. AUTO RETURN ADJUSTMENT

1. Set the REPEAT switch to OFF and play a record.
2. If the tonearm does not automatically return to the armrest at the end of the record, or returns before the record has ended, turn the return adjustor until proper operation is obtained (refer to Fig. 4-7).

NOTE: This adjustment should be made after the auto lead-in adjustment.

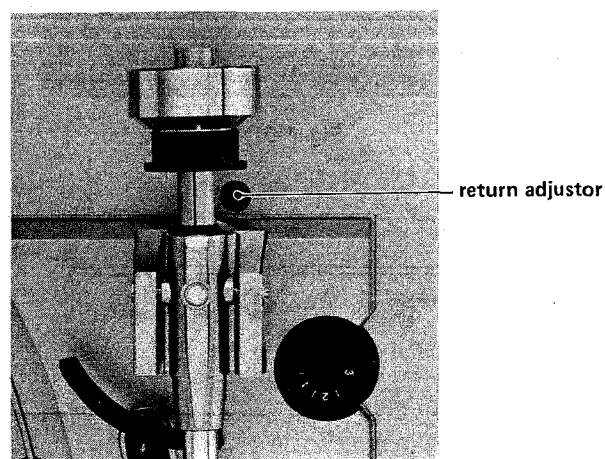


Fig. 4-7

4-6. FRICTIONAL SHAFT HEIGHT ADJUSTMENT

1. Remove the turntable platter and unlock the tonearm from the armrest.
2. Turn the drive gear counterclockwise about 120 degrees (refer to Fig. 4-8).
3. Referring to Fig. 4-9, loosen the nut holding the seesaw shaft and turn the shaft until a clearance of 1 to 1.5 mm is obtained at point A.
4. Retighten the nut and apply locking paint.

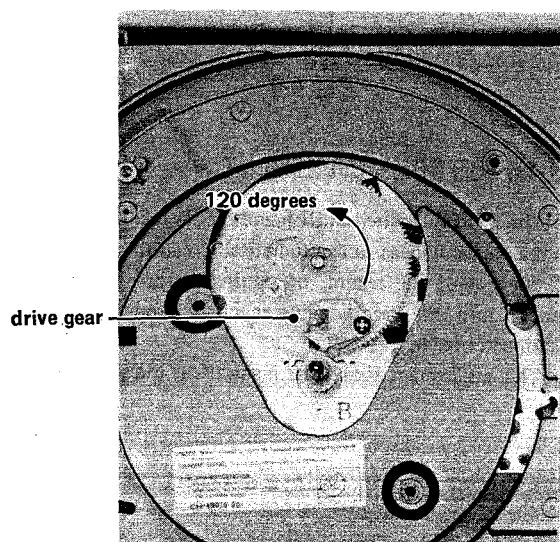


Fig. 4-8

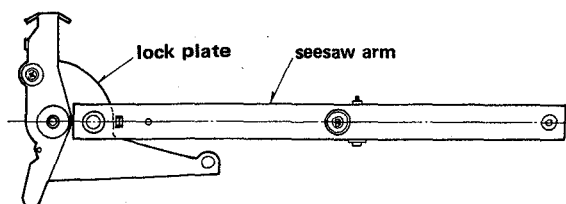
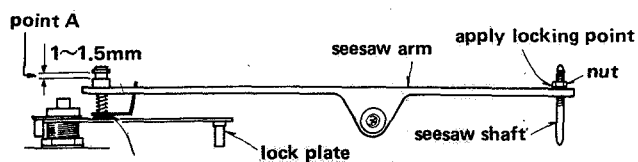


Fig. 4-9

4-7. TURNTABLE SPEED ADJUSTMENT

1. Make sure that the PITCH CONT knobs are in the "no variation" (midpoint) position.
2. Adjust VR1 (33-1/3 rpm) and/or VR2 (45 rpm) on the motor control PC board so that the strobe markings on the appropriate row appear to be stationary.

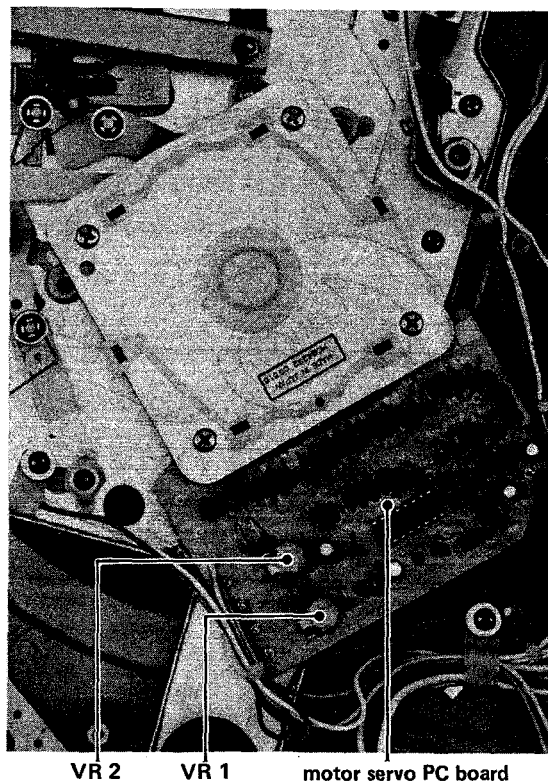


Fig. 4-10

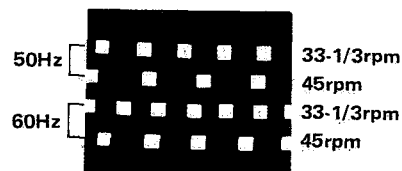


Fig. 4-11

4-8. START SWITCH POSITION

1. Set the START/REJECT switch to START.
2. Referring to Fig. 4-12, check that there is a clearance of 0.7 to 1 mm at point A.
3. If the clearance is not within specification, turn the adjusting pin on the start lever assembly with a screwdriver until the proper clearance is obtained.

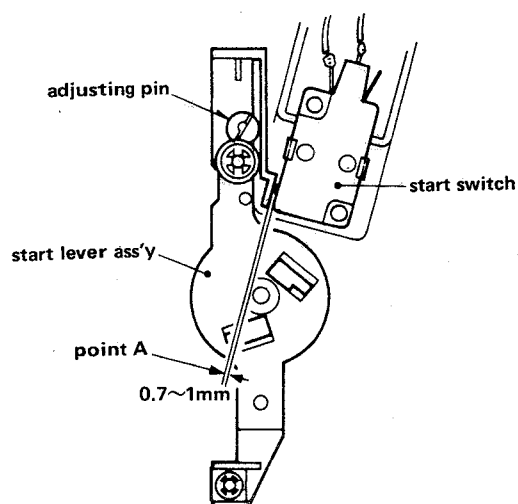


Fig. 4-12

4-9. STOP SWITCH POSITION

1. Set the tonearm on the armrest.
2. Referring to Fig. 4-13, check that there is a clearance of 0.7 to 1 mm at point A. If not, turn the adjusting pin on the return plate assembly with a screwdriver until the proper clearance is obtained.

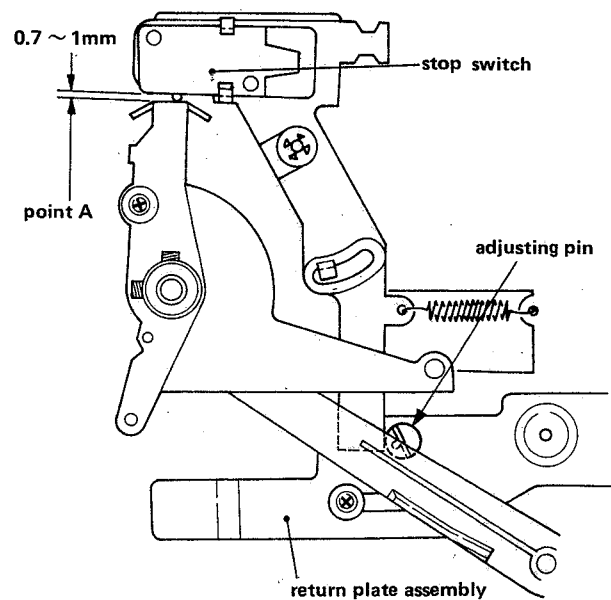


Fig. 4-13

4-10. VOLTAGE SETTING

If the turntable is a general export model, and it is necessary to set the voltage to match the voltage requirements of your area, use a suitably-sized screwdriver and simply turn the screw until the voltage indication matches the voltage requirement of your area.

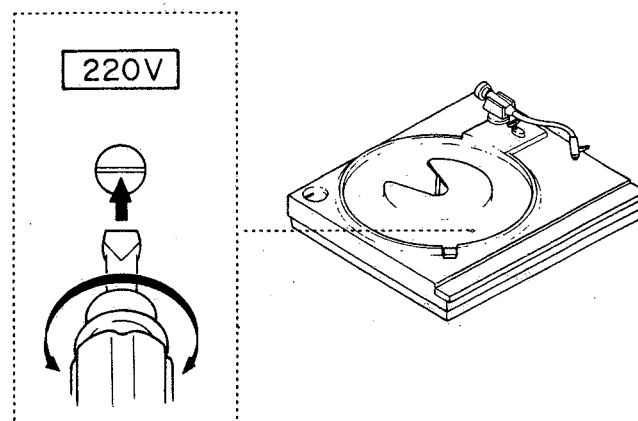
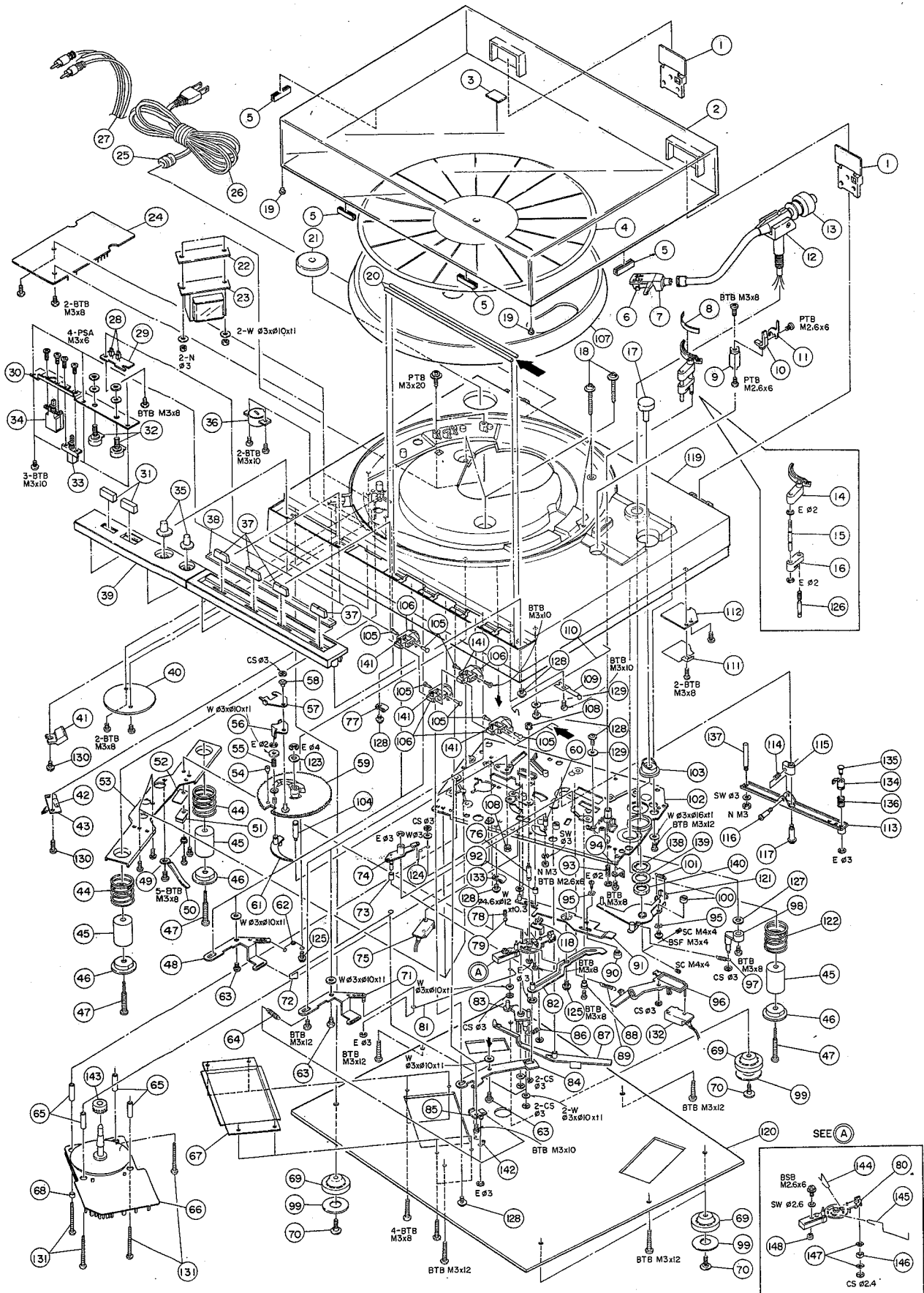


Fig. 4-14

5. EXPLODED VIEW AND PARTS LIST



Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	*5760031200	Hinge	
2	*5760030900	Dust Cover	
3	*5760031000	Name Plate	
4	*5760025900	Mat, Turntable	
5	*5760032900	Protector	
6	5760021200	Cartridge	
7	5760033100	Headshell	
8	*5760021400	Rubber, Lifter	
9	*5760022100	Rod, Armrest	
10	*5760021900	Armrest	
11	*5760022000	Hook, Armrest	
12	*5760021100	Tonearm Assy	
13	5760033200	Weight Assy	
14	*5760021300	Lifter, Arm	
15	*5760021700	Screw, Adjusting	
16	*5760021800	Rod, Actuating	
17	5760022200	Knob, IFC	
18	*5760036300	Screw, Clamp	
19	*5760031100	Cushion	
20	*5760023400	Guide; A	
21	*5760034500	Adaptor, 45 rpm	
22	*5760028800	Spacer	
23	△ *5760028400	Power Transformer	C
	△ *5760028500	Power Transformer	GE, L
	△ *5760028600	Power Transformer	E
	△ *5760028700	Power Transformer	A, UK
24	*5760027510	PCB Assy, POWER SUPPLY	C
	*5760027520	PCB Assy, POWER SUPPLY	GE, L
	*5760027530	PCB Assy, POWER SUPPLY	E, UK, A
25	*5800136400	Bushing	C, GE, L
	*5800136500	Bushing	E, UK, A
26	△ *5760029200	AC Power Cord	C
	△ *5760029300	AC Power Cord	GE, L
	△ *5760029400	AC Power Cord	E
	△ *5760029500	AC Power Cord	UK
	△ *5760029600	AC Power Cord	A
27	*5760026600	Cord, Phono Pin	
28	5760027100	LED SCB-15UR	
29	*5760027000	PCB, LED	
30	*5760029600	Bracket, SW	
31	5760025000	Knob	
32	5760035000	Var. Res., 50 k ohm (B)	
33	5760034900	Switch, Push	
34	△ 5760034800	Switch, Power	GE, E, UK, A, L
	△ 5760034700	Switch, Power	C
35	5760029700	Knob, Pitch Control	
36	△ *5760028900	Selector, Voltage	GE
37	5760024900	Knob, Slide	
38	*5760023300	Escutcheon	
39	*5760023200	Name Plate, Control	
40	*5760026900	Cover, Blind	
41	*5760030300	Filter, Stroboscope	
42	△ 5760028300	Lamp, Neon	
43	*5760028220	PCB, NEON	
44	*5760030500	Spring, Floating	
45	*5760030700	Cushion	
46	*5760030600	Holder, Spring	
47	*5760030800	Screw, Adjust	
48	*5760024500	Lever; A	
49	*5760028000	Bushing	
50	*5760026800	Clamper, Cord	
51	*5042528000	Transistor	

[U]: U.S.A.
[A]: AUSTRALIA
[L]: LIMITED AREA

[C]: CANADA
[E]: EUROPE

[GE]: GENERAL EXPORT
[UK]: U.K.

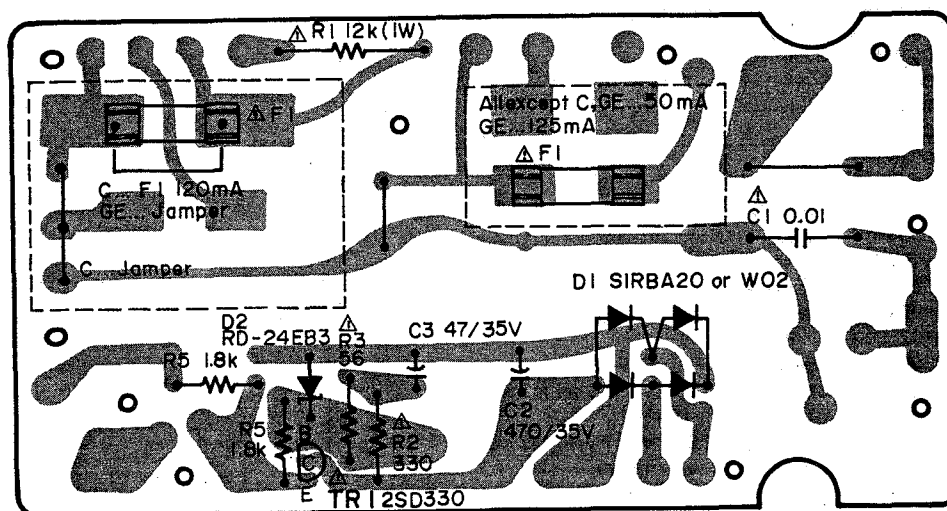
Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
52	*5760027900	Sheet, Insulator	
53	*5760017300	Bracket, Spring	
54	*5760017800	Pin, Adjusting	
55	*5760018000	Spring, Guide	
56	*5760017500	Trigger	
57	*5760017600	Frictional Plate, Trigger	
58	*5760017700	Collar	
59	*5760017400	Drive Gear	
60	*5760015700	Shaft	
61	*5760017900	Cam Assy, Guide	
62	*5760024700	Spring; I	
63	*5760036200	Screw (Speciality Screw)	
64	*5760024200	Spring; H	
65	*5760025600	Spacer	
66	5760025400	Motor Assy	
67	*5760031400	Cover, PCB	
68	*5760025700	Collar	
69	*5760031500	Insulator	
70	*5760031700	Screw (Speciality Screw)	
71	*5760024100	Lever Assy; A	
72	*5760024600	Link; R	
73	*5760015500	Sleeve	
74	*5760015400	Lever Ass'y; Reverse Turn	
75	5760029100	Microswitch AM41009	
76	*5760017000	Shaft; RA	
77	*5760026000	Cord Stopper; 6N	
78	*5760016900	Spring; C	
79	*5760016800	Steel Boll	
80	*5760020200	Lever	
81	*5760024300	Link; S	
82	*5760016100	Lead-in Arm	
83	*5760017100	Arm, Change	
84	*5760024400	Plate, Connecting	
85	*5760023800	Plate Ass'y	
86	*5760017200	Spring; D	
87	*5760016600	Return Arm	
88	*5760033400	Spacer; D	
89	*5760033000	Spring; J	
90	*5760018800	Pin, Adjusting	
91	*5760018700	Plate Ass'y, Return	
92	*5760016000	Spacer	
93	*5760021600	Lifter Spring	
94	*5760026500	Terminal Lug	
95	*5785150400	Washer, Wave	
96	*5760016200	Plate, SW	
97	*5760022500	Spring, IFC	
98	*5760022400	Lever, IFC	
99	*5760031600	Felt	
100	*5760020900	Pin	
101	*5760021000	Spring; F	
102	*5760015100	Chassis	
103	*5760022300	Holder, IFC Knob	
104	*5760015300	Shaft; A	
105	*5760023700	Cushion	
106	*5760023500	Thrust Lever	
107	*5760025800	Turntable	
108	*5760036400	Nut	
109	*5760024000	Spring; G	
110	*5760023900	Link; L	
111	*5760026400	Cover, Shield	
112	*5760026320	PCB Ass'y, OUTPUT	

Parts marked with *require longer delivery time.

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
113	*5760019300	Arm Ass'y, Seesaw	
114	*5760016500	Spring; B	
115	*5760016400	Boss	
116	*5760035900	Shaft	
117	*5760036000	Shaft	
118	*5760015900	Plate	
119	*5760030200	Cabinet	
120	*5760031300	Bottom Cover	
121	*5760022600	Lock Plate Ass'y, PU	
122	*5760030400	Spring, Floating	
123	*5760036500	Washer; $\phi 6.2 \times \phi 12 \times +1$	
124	*5760015600	Spring; A	
125	*5760024800	Shaft; B	
126	*5760021500	Shaft, Lifter	
127	*5760036100	Washer, Wave	
128	*5760038100	Brazier SEMS Screw (B Type) M3 x 10	
129	*5760036900	Washer; $\phi 3 \times \phi 12 \times +1$	
130	*5760036800	Brazier SEMS Screw (B Type) M3 x 8	
131	*5760037200	Brazier (S Type) M4 x 20	
132	5760029000	Microswitch AM47009	
133	*5760026200	Cord Stopper 2N	
134	*5760019900	Shaft Assy, Friction	
135	*5760020000	Cap, Friction	
136	*5760019500	Spring, E	
137	*5760019600	Shaft, Seesaw; B	
138	*5785111200	Lock Washer	
139	*5760037800	Washer, M12	
140	*5760037700	Nut, M12	
141	*5760023600	Holder, Knob	
142	*5760015600	Spring	
143	*5760025500	Gear, Turntable	
144	*5760020300	Link; A	
145	*5760020400	Link; B	
146	*5760020500	Magnet	
147	*5760020600	Washer, Square	
148	*5760018800	Cam, Return Adj.	

POWER SUPPLY PCB ASS'Y



POWER SUPPLY PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760027510	POWER SUPPLY PCB ASSY C
	5760027520	POWER SUPPLY PCB ASSY GE
	5760027530	POWER SUPPLY PCB ASSY A,E,UK
	5760027300	POWER SUPPLY PCB
DIODES		
D1	5760035200	IS2372A
D2	△ 5760035100	Zener, RD24EB3
CARBON RESISTORS		
All resistors are rated ±5% tolerance and ¼ watt.		
R1	△ 5241207600	12kΩ, 1 W Nonflammable
R2	△ 5057270000	330Ω
R3	△ 5057252000	56Ω
R4	5057286000	1.5kΩ
R5	5057288000	1.8kΩ
TRANSISTORS		
TR1	△ 5042528000	2SD330D
CAPACITORS		
C1	△ 5760035300	Ceramic 0.01μF 630V C
C1	5760035400	Ceramic 0.01μF 630V GE
C1	5760035500	Ceramic 0.01μF 630V A,E,UK
C2	5055462000	Elec. 470μF 35V
C3	5055452000	Elec. 47μF 35V
FUSE		
F1	△ 5760038600	160 mA 250V C
F1	△ 5142180000	125 mA 250V GE
F1	△ 5142177000	50 mA 250V A,E,UK
MISCELLANEOUS		
	5760027200	Wire Lap. Terminal
	5760027700	Receptacle
	5760027800	Fuse Holder
	5760040600	Fuse Holder, 1P
		All except C

LED PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION
	5760027400	LED PCB ASSY
	5760027000	LED PCB
D3	5760027100	LED SLB-15UR
D4	5760027100	LED SLB-15UR
	5760027200	Wire Lap Terming

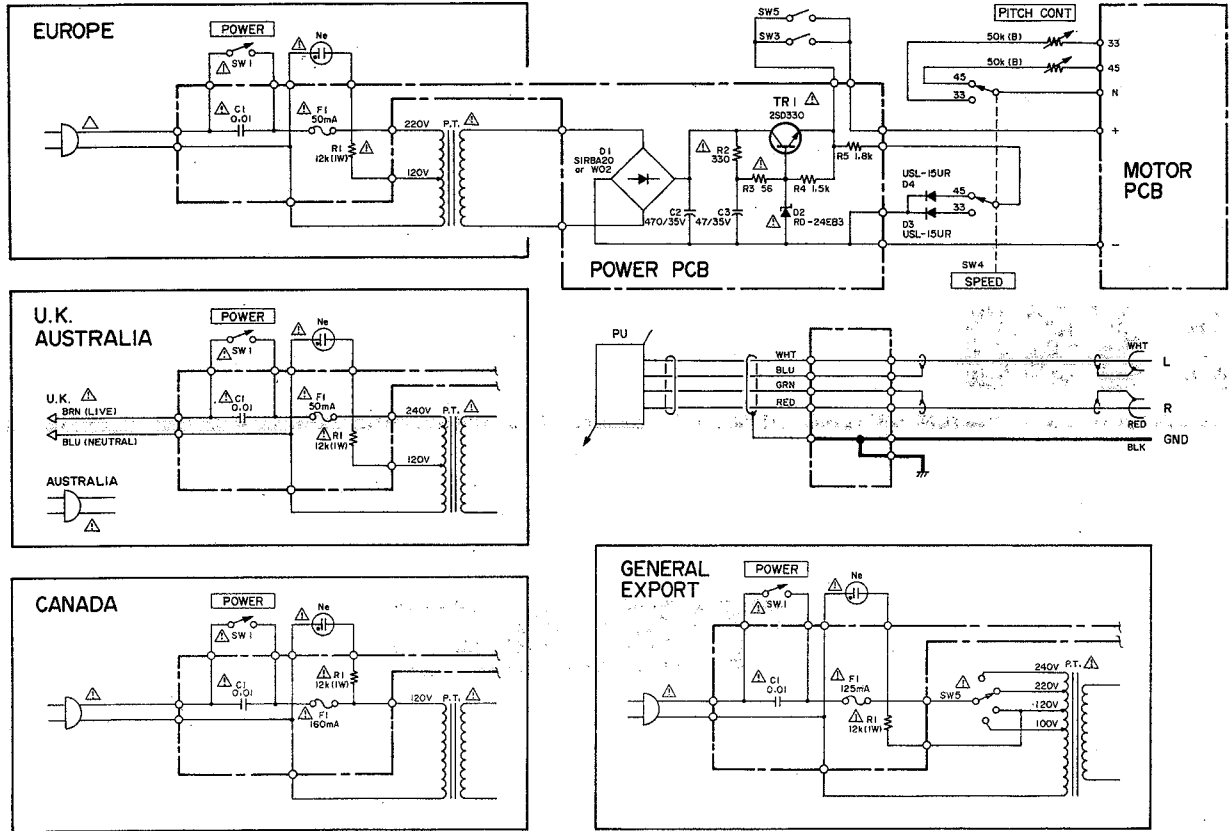
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[C]: CANADA
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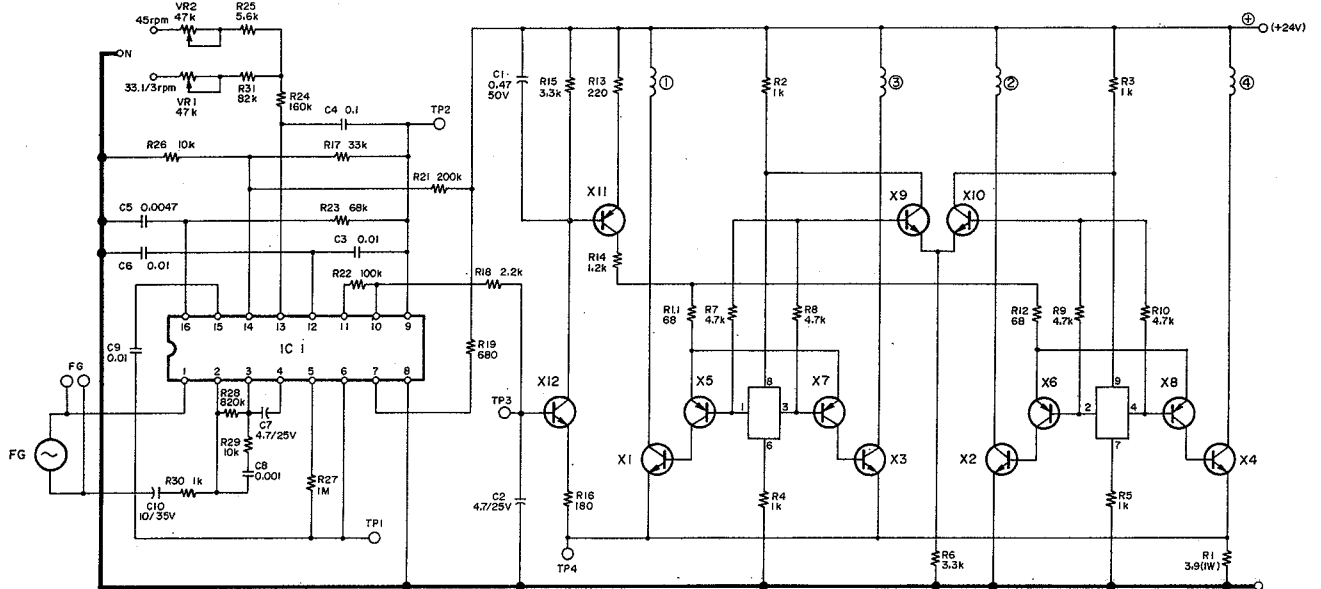
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6. SCHEMATICS

1. POWER SUPPLY



2. MOTOR CIRCUIT



IC 1 VC1029
 X1~X4 2SC2001 (LorKerM) or 2SD571 (KorLorM)
 X5~X8 2SA733 (PorkerK)
 X11 X9,X10,X12 2SC945 (PorkerQ)