CEC TURNTABLE

Service Manual

BD-5200

CEC International Inc.

CONTENTS

Model	Destination
A	USA (UL Approval)
C	Canada (CSA Approval)
E	Europe (Scandinavian Approval)
G	General territories

TECHNICAL SPECIFICATIONS

Description	Condition	Nominal	Limit
Type		2-speed, belt drive, auto-return system	
Platter		Aluminum alloy die-cast, 30.8 cm outer diameter featuring stroboscopic calibrated rim with neon lamp	
Motor		FG servo DC motor	
Speed		2-speeds: 33-1/3 rpm, 45 rpm	
Speed calibration	Measured at 3 kHz signal	±3%	±2.5%
S/N ratio	DIN 45539A	40 dB	36 dB
	DIN 45539B	65 dB	60 dB
Wow & Flutter	Measured at 3 kHz signal	0.045% WRMS	0.055% WRMS
	DIN 45507	0.07%	0.095%
Tone arm			
Headshell		Plug-in type, tubular	
Overall length		300 mm	
Effective length		215 mm	
Overhang		15 mm	
Adjustable force range		0 to 2.5g/l turn of the scale ring (directly readable in 0.5g steps)	
Acceptable cartridge weight		4 to 12 g	
Cartridge (Model G)		MC-20 Moving Magnet type.	
Frequency response		20 – 20,000 Hz	
Output voltage		3.5 mV at 1 kHz 50 mm/sec.	2.5 – 4.9 mV at TRS-1004 record
Channel difference		2 dB at 1 kHz	
Channel separation		20 dB at 1 kHz	16 dB at 1 kHz at TTR-102 record
Tracking force		2 grams	
Stylus tip		0.6 mil diamond stylus	
Power source	Model A and C	117 Volts, 60 Hz AC	
	Model E	117/220 Volts switchable 50/60 Hz	
	Model G	117/220 Volts switchable 50/60 Hz	
Power consumption		3 watts	
Dimension		139(H) x 456(W) x 335(D) mm	
Weight		7.5 kg (Net)	

DISASSEMBLY INSTRUCTIONS

1. TOOLS REQUIRED FOR DISASSEMBLY

Phillips-head screwdrivers (for M5, M3 and M2.6)
Slotted-head screwdrivers (medium and small sizes)
Radio pliers
Hexagon-head wrench (for M3 and M4)
Nippers
Soldering iron
Hexagon box type screwdrivers (for M5 and M3)

2. DO THE FOLLOWING PRIOR TO DISASSEMBLY:

(1) Remove the dust cover.
(2) Remove the turntable plater and prepare the unit to be moved by locking the mechanism in place with the three red screws.
(3) Fix the tone arm in place with the lock lever of the arm rest.
(4) Place the set on a suitable bench with the bottom base upward. (Fig. 1)

3. REMOVE THE CABINET

(1) Remove with a Phillips-head screwdriver the eight screws which hold the bottom base. (Fig. 2).
(2) Remove the two screws which hold the cord mounting plate of the cabinet (Fig. 3).
(3) When the six screws which hold the cabinet are removed, the cabinet and panel board can be lifted off. (Fig. 4).

4. REMOVE THE MOTOR

(1) Remove the two screws D which fasten the servo control circuit board of motor.
(2) Cut the nearest portion to the servo control circuit board of two wires from printed circuit board and three wires from rotaly switch.
(3) Cut the nearest portion to the lug terminal of motor grounding wire.
(4) Remove from the surface of panel board the three screws (M2.6)E which hold the motor. Then the motor can be removed. (Fig. 5).

5. REMOVE THE SUB-CHASSIS FROM THE UNIT.

(1) Remove the arm support.
(2) Remove the three red screws.
(3) Remove the shield case.
(4) Disconnect from the lug terminal plate the five leads coming from the tone arm.
(5) Turn the drive gear 180° so that the return plate moves over the nut and remove the arm rest fixing nut. And pull out the arm rest.
(6) Loosen the screw of the tone arm fixing plate boss and remove the tone arm fixing plate.
(7) Remove the tone arm fixing nut and remove the tone arm.
(8) Disconnect the release wire from the lifter base (Fig. 6).
(9) Remove the reject spring spacer (Fig. 7)
(10) Remove the terminal angle B from the panel board.
(11) Turn the set over and remove nuts A, B and C shown in Fig. 5.
(12) Remove the suspension spring and cushion rubber.
(13) Hold the turntable shaft and lift, and remove the sub-chassis.

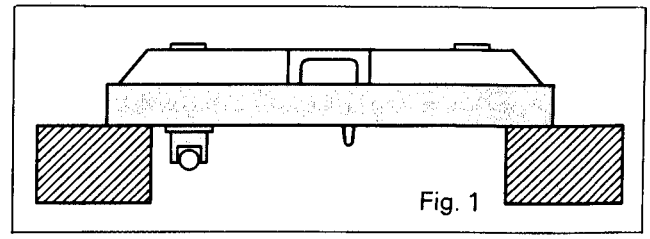


Fig. 1

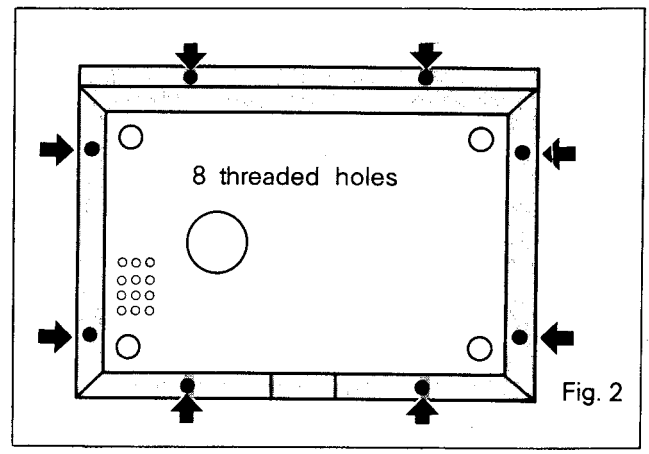


Fig. 2

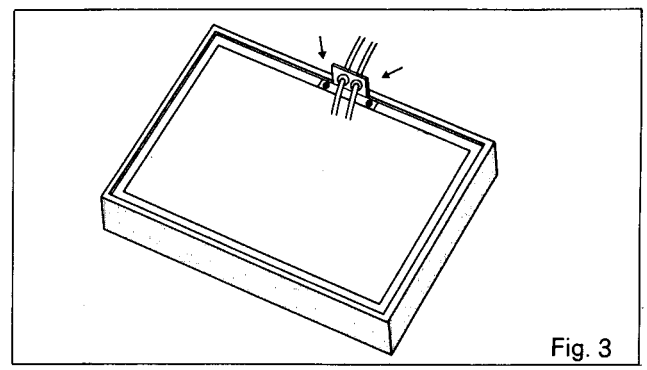


Fig. 3

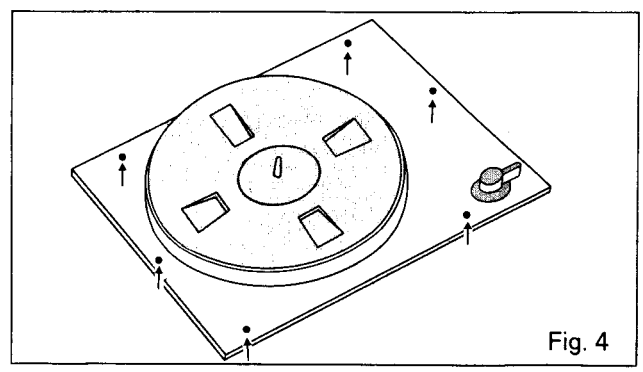


Fig. 4

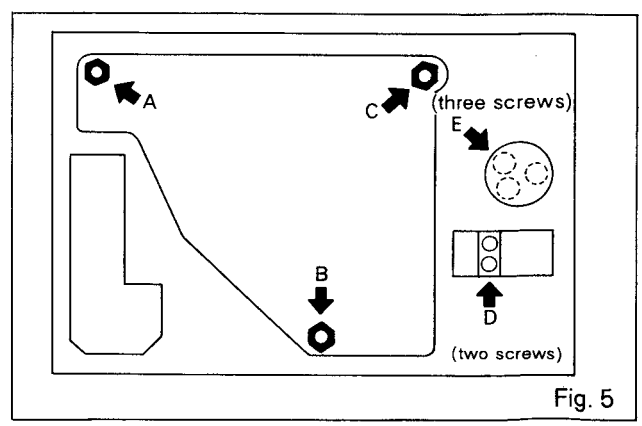


Fig. 5

6. REMOVE THE LIFTER LEVER A AND B (Fig. 8)

(1) Loosen the screw **A** of the lifter lever B, remove the E type washer, pull out the lifter lever A, remove the screws **B** and **C**, and remove the lifter lever mounting plate B.

7. REMOVE THE VARIABLE RESISTOR AND ROTALY SWITCH

(1) Remove the lifter lever A and B as described in the above step.
(2) Pull out the speed-change lever A and variable resistor knob.
(3) Cut the wires which is soldered to the lug terminal, remove the screws **B** and **C**, and remove the nuts which fasten the variable resistor and rotaly switch. (Fig. 8)

ADJUSTMENTS

1. TOOLS REQUIRED FOR ADJUSTMENTS

Small level indicator
Hexagon box type screwdrivers(M5 and M4)
Phillips-head screwdriver (M3)
Slotted-head screwdrivers (M3 and smaller size)

Note: Be sure to set the bench for adjustment level.

2. TURNTABLE HEIGHT AND LEVEL

(1) Place the set with the bottom base removed on a stable table, set the turntable, the platter mat and a record, and adjust the height and level of the turntable with the nuts **A**, **B** and **C** in Fig. 5 to the dimensions shown in Fig. 9.
Note: Since the four points are slightly different in height due to panel board distortion, etc., be sure to adjust the turntable to the required level.
(2) After height adjustment, put a level indicator on the turntable, turn the nuts **A**, **B** and **C**, and adjust the level of the turntable. (Fig. 5). Adjusted turntable height should be within a range of 21 +0.5∿−1.5 mm.

3. STYLUS POINT HEIGHT

(1) Auto Up
Adjust the height from the record surface to the stylus point in the following order so that it conforms to the dimensions shown in Fig. 10 during auto return:
(a) Turn the nut **A** of the return plate support and adjust the mounting dimensions of the return plate. For the fixed type, insert a plain washer (4.7 ϕ x 10 ϕ x 0.5 t − 0.3 t) and then make this adjustment (Fig. 11).
(b) When the tone arm reaches the position shown in Fig. 13 in auto return operation, stop the rotation of the turntable (turn off the power) and measure the gap between the stylus point and record surface.
(c) If the gap is not within the dimensions specified in Fig. 10, turn the nut **A** in Fig. 11 and make another adjustment.

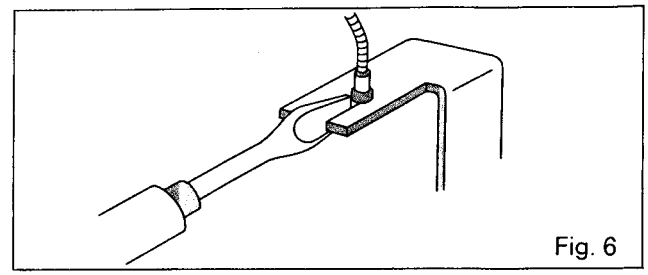


Fig. 6

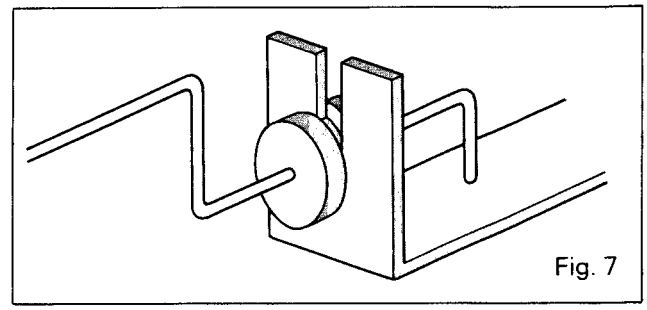


Fig. 7

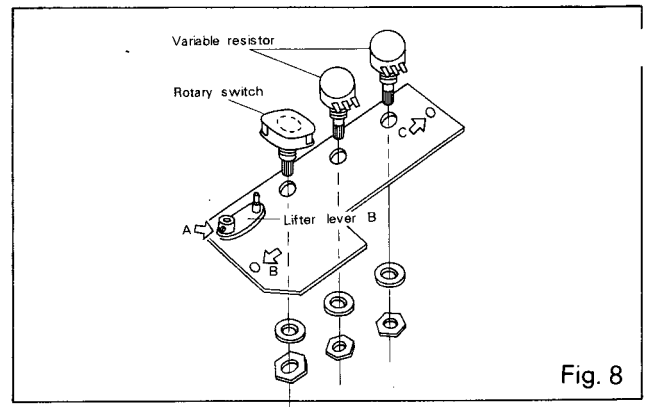


Fig. 8

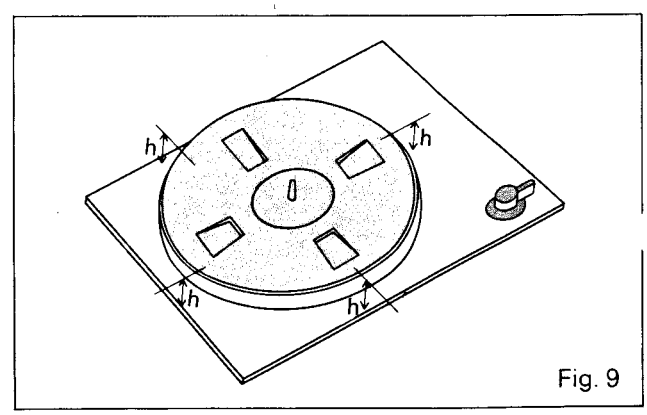


Fig. 9

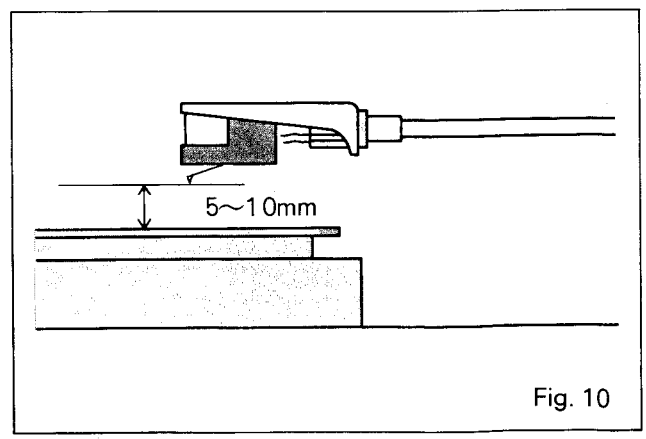


Fig. 10

Less than 5 mm	Turn clockwise
More than 10 mm	Turn counter-clockwise

Note: Do not give more than two turns.

(d) If the gap between the record surface and stylus point does not yet fall within the dimension specified in Fig. 10, return the nut **A**, in Fig. 11 into the original position, slightly loosen the arm support attaching screw, fix the arm support about 0.5 – 1 mm higher, and make gap adjustment as specified in Fig. 13.

(2) Manual Up
Adjust by turning the screw **a** in Fig. 14 so that the gap between the stylus point and record surface becomes equal to that at the time of auto up when the cueing lever is set to the ▼ position.

4. TURNTABLE SHAFT MOUNTING POSITION

(1) Loosen the three screws which hold the turntable shaft.
(2) Push ratchets A and BJ attached to the drive gear as far as possible in the direction of the arrow shown in Fig. 15.
(3) Move the turntable shaft so that the gap between the turntable gear and ratchet A becomes as shown in Fig. 15. and tighten the screws.
(4) Turn the turntable shaft by hand to make sure the turntable gear and ratchet A do not touch each other. If they come in contact, move the turntable shaft slightly forward.
Keep the gap between the turntable and ratchet to the dimensions shown in Fig. 15,

5. AUTO RETURN MECHANISM

(1) Make sure the tone arm fixing plate is properly installed as shown in Fig. 16.
(2) Put on a record and let the stylus drop slightly outside the end groove or 65 – 70 R from the center of the turntable. When the record ends, make sure the tone arm automatically returns from any of the following positions:
  (a) For LP records, a click is heard when the stylus is between 53 and 57.5 R and then the tone arm automatically returns.
  (b) For EP records, a click is heard when the stylus is between 48.5 and 53 R and then the tone arm automatically returns.
  (c) For the auto return test record (CEC RG-652), a click is heard when the stylus is between 55 and 61 R and then the tone arm automatically returns.
(3) If the tone arm does not automatically return from all of the above positions, turn the adjusting screw in Fig. 16 to adjust the tone arm return position.
Clockwise turning of the screw brings the return position close to the center of the turntable and counter-clockwise turning of the screw moves the return position away from the center of the turntable.

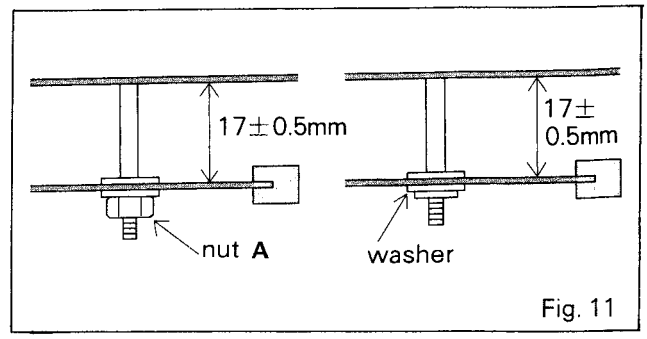


Fig. 11

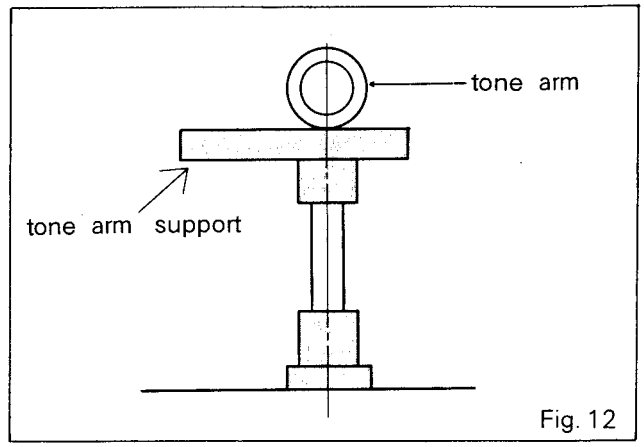


Fig. 12

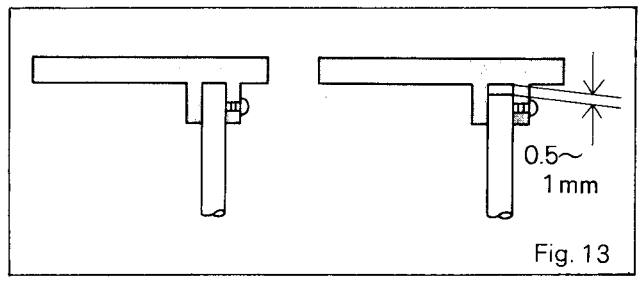


Fig. 13

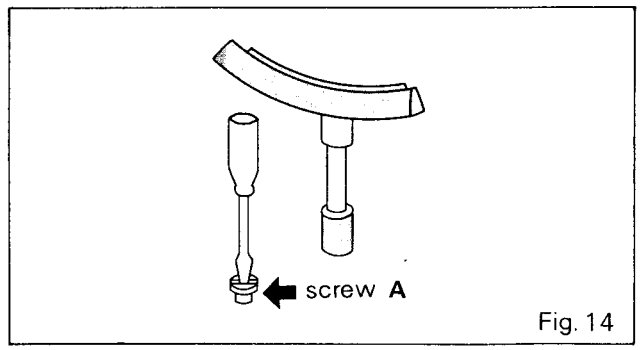


Fig. 14

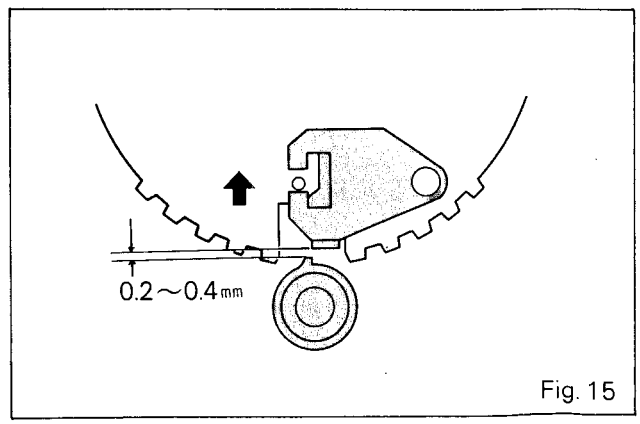


Fig. 15

6. CUEING LEVER

Adjust the cueing lever so that it returns to the original position before auto return operation ends.

(1) Remove the bottom base from the set and put the set on a stable table.
(2) Fully loosen the screw in Fig. 17.
(3) Adjust the screw in Fig. 17 so that the cueing lever returns at the same time as the tone arm when the speed change lever is set to 33 rpm and auto return operation is effected.
Note: Overtightening the screw causes the tone arm to return suddenly in mid-record, and under-tightening the screw makes the cueing lever fail to return.
Adjust so that the tone arm works smoothly and the cueing lever returns completely.

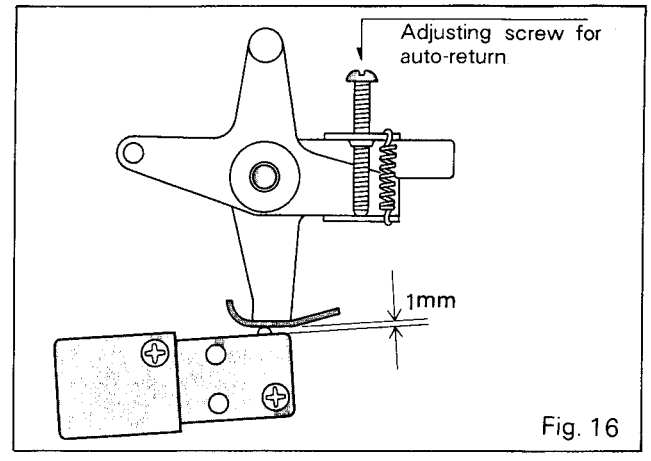


Fig. 16

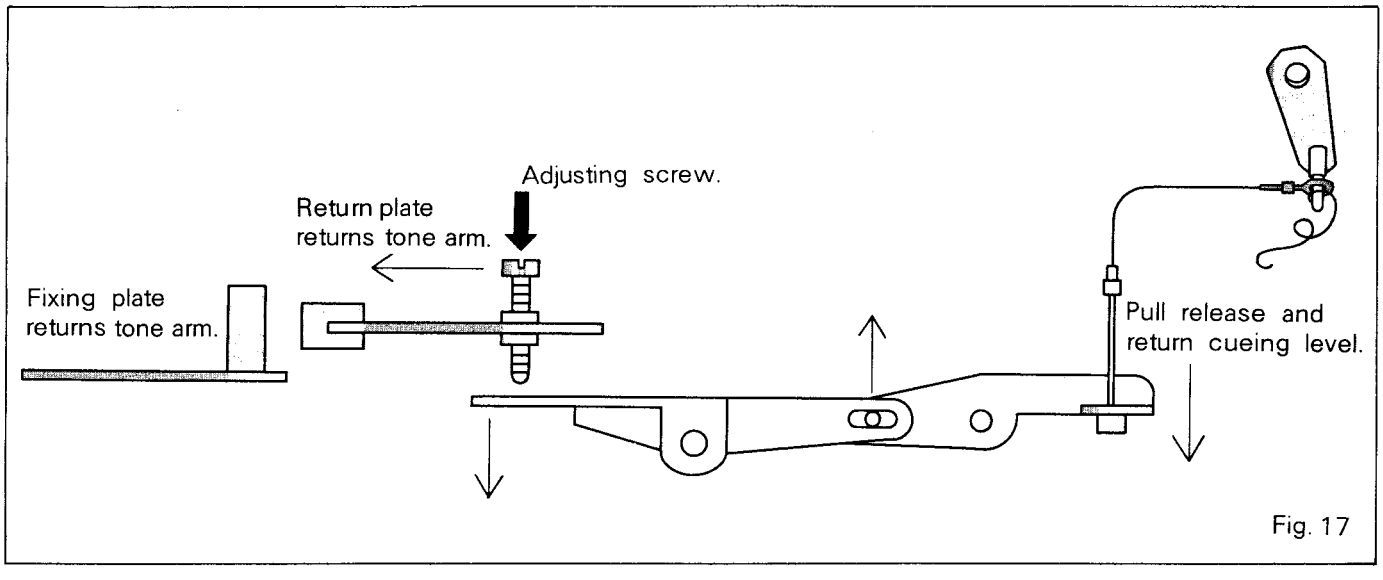


Fig. 17

7. TURNTABLE SPEED

The rotating speeds of the turntable can be adjusted to minimum ±2.5% with the variable resistor knob. If the specified adjusting range cannot be obtained, adjust as follows:

(1) Place the variable resistor knob at the center (150°) of rotating possible angle (300°).
(2) Remove the platter and put the speed adjusting lebel off from the panel board.
(3) Rotate from the two holes beneath the speed adjusting label the semi-fixed variable resistors. Check to see if the strobo indexes appear stationary after placing turntable platter and belt. (Fig. 18)

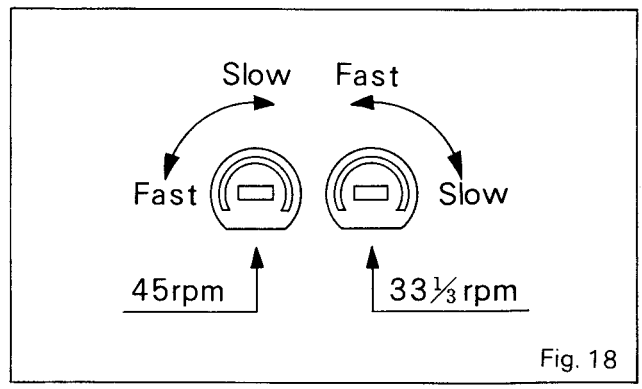


Fig. 18

8. VOLTAGE CHANGEOVER (MODEL E AND G)

(1) Remove the turntable platter, remove the screw which fasten the protector and remove the protector. (Fig. 19)
(2) Withdraw the plug and reinsert it in such a way that the desired voltage marking is exposed in the cut of the plug.
(3) Fasten the protector with the screw.

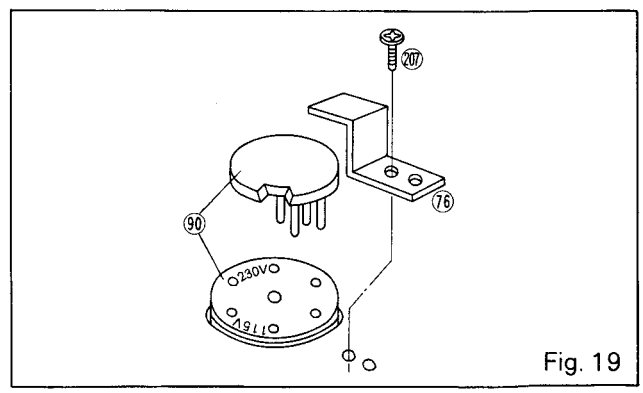


Fig. 19

TROUBLE SHOOTING

1. The tone arm will not automatically return.

Remove the turntable platter and check to see that the clearance between gear of center shaft and ratchet is reasonable. (Fig. 15)

- No: Loosen three screws which fasten the center shaft, and adjust.
- Yes: Rotate adjusting screw(Fig. 16) of tone arm fixing plate counter-clockwise.

2. The tone arm returns some seconds after the end of the performance.

Rotate adjusting screw (Fig. 16) of tone arm fixing plate counter-clockwise.

3. The tone arm returns before the end of the performance.

Rotate adjusting screw (Fig.16)of tone arm fixing plate clockwise.

4. The turntable platter will not rotate even though the tone arm is above the disc.

Check to see that the strobo light is ON.

- Yes: Check to see that the belt is in place on the pulley.
  - Yes: Check to see that the motor is rotating.
    - Yes: Check the turntable bearing.
      - Yes: Motor defective.
      - No: Check to see that proper voltage is available at the primary of the transformer.
    - No: Check to see that 10±1V is available from the secondary of the transformer.
      - Yes: Transformer defective.
      - No: Check the leads from the AC circuit board to the primary of the transformer.
  - No: Fit the belt.
- No: Check to see that the power plug is securely connected.
  - Yes: Check the fuse.
    - Ok: Check the microswitch.
      - No: Replace the microswitch.
    - No: Replace the fuse.
  - No: Connect the plug.

5. The turntable platter will not stop rotating.

Check to see if the turntable will stop rotating when knob of microswitch is sufficiently pushed.

- Yes: Adjust the clearance between the knob of microswitch and tip of tone arm fixing plate to 1 mm. (Fig. 16)
- No: Check the wiring.
  - No: Replace wiring according to the circuit diagram.
  - Yes: Check the microswitch.
    - No: Microswitch defective.
    - Yes: Capacitor defective.

6. Adjustment of turntable speed cannot be made.

- Strobo indexes appear not to stand still.
  Readjust semi-fixed variable resistors referring to TURNTABLE SPEED of ADJUSTMENTS.

- No speed adjustments with variable resistor knob.
  Check the wirings including the motor servo control circuit.
  - No: Replace wiring according to the wiring diagrams.
  - Yes: Check the variable resister.
    - No: Variable resister defective.
    - Yes: Check the rotaly switch.
      - No: Rotaly switch defective.
      - Yes: Motor defective.

7. Noise from turntable.

Check for noise with turntable platter removed.

- Yes: Check motor.
- No: Check if turntable platter touches the other parts.
  - Yes: Adjust the height of turntable platter.
  - No: Turntable shaft is defective.

8. No sound from the speaker.

Check to see that the output cords are securely connected to the amplifier (receiver).

- No: Connect the cord.
- Yes: Check to see that connections are made to the PHONO input terminals of the amplifier.
  - No: Connect to PHONO.
  - Yes: Check to see that the select switch of the amplifier is placed to PHONO.
    - No: Place select switch to PHONO.
    - Yes: Remove the headshell, touch the upper two pins at the end of the arm with a metal screwdriver and listen for the speaker to produce a humming noise. (Fig. 20)
      - No: Perform continuity test between the arm and output cords.
      - Yes: Check the connections between the cartridge and headshell.
        - No: Make correct connections.
        - Yes: Cartridge defective.

9. The tone arm will not go down even with the lifter lever in ▼ position.

Check to see that release assy (No. 22) moves to cooperate with operating plate assy (No. 20) when the lifter lever A is pushed down.

- No: Check to see that the screw (No. 211) is correctly fastened to lifter lever B.
  - No: Fasten the screw.
  - Yes: Check to see that the release is correctly mounted.
    - No: Mount the release.
    - Yes: The release is defective.
- Yes: Check to see that the lifter shaft assy (No. 22) moves down when the lifter lever A is pushed down.
  - No: Replace lifter shaft assy or lifer boss (No. 23).
  - Yes: Loosen the screw which fastens tone arm support and adjust the clearance between stylus point and record surface to 5–10mm when lifter lever is in position, referring to STYLUS POINT HEIGHT of ADJUSTMENTS.

10. The turntable is rotating but the strobo light will not light.

Check the 12 kΩ resistor which is connected with neon lamp in series.

- Yes: Neon lamp is defective.
- No: Replace 12 kΩ resistor.

PARTS REPLACEMENT

1. **TONE ARM**
   Remove tone arm referring to DISASSEMBLY INSTRUCTIONS, 5 step (1) to (7) and replace. To reassemble, use DIASSEMBLY INSTRUCTIONS in reverse. Adjust the tone arm referring to ADJUSTMENTS, 3, 5 and 6.
2. **TURNTABLE SHAFT**
   Remove the three screws which hold the turntable shaft, and adjust the gap between the turntable gear and ratchet A referring to the ADJUSTMENTS, 4. Be sure to check auto return operation.
3. **MOTOR**
   Remove bottom base in accordance with DISASSEMBLY INSTRUCTIONS, 3. Remove the motor as shown in DISASSEMBLY INSTRUCTIONS, 4. Replace the new motor and fasten it by screws. After binding the wires to lug terminal tightly and solder them.
4. **LIFTER LEVER A (CUEING LEVER)**
   With DISASSEMBLY INSTRUCTIONS, 6 as a guide, remove lifter lever A. Replace the lifter lever A so that it becomes parallel with the edge of panel board when cueing lever lines up to ▼ position (Fig. 21).
5. **CUEING (LIFTER SHAFT)**
   Remove return plate (No. 36 in EXPLODED VIEW) from sub-chassis. Remove lifter base (No. 17), and remove tone arm support (No. 27) from lifter shaft. Pull out the lifter shaft in the direction of downward. Replace new lifter shaft after adhering 10^5 CS silicon oil. After finishing reassembling, be sure to check the gap between stylus point and record surface referring to ADJUSTMENTS, 3. (Fig. 22)

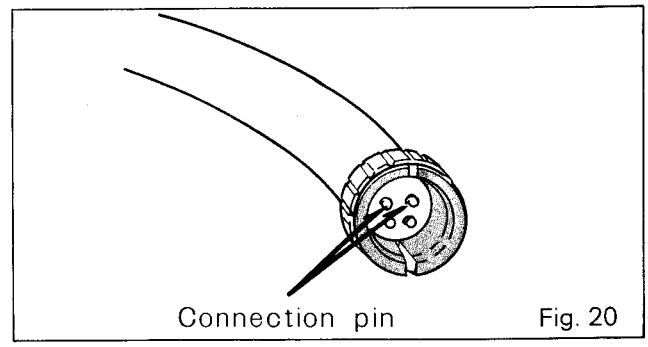


Fig. 20

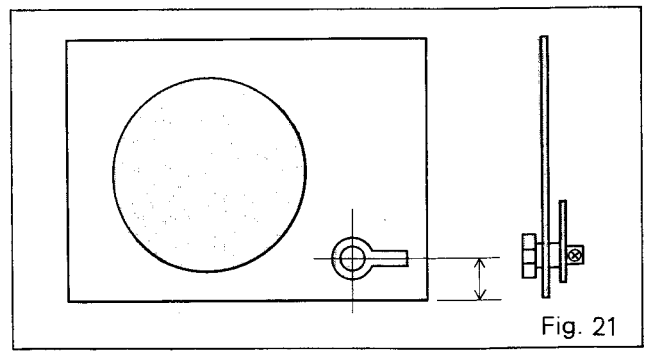


Fig. 21

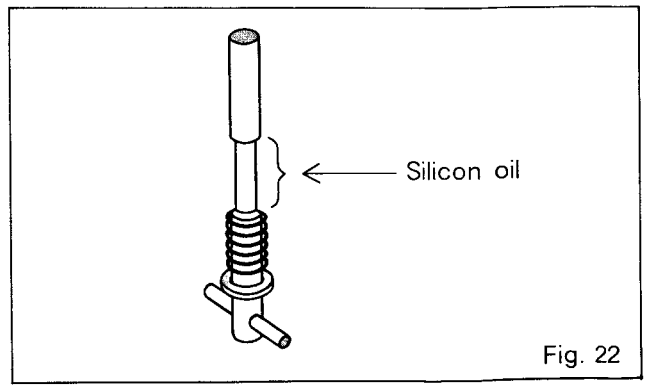
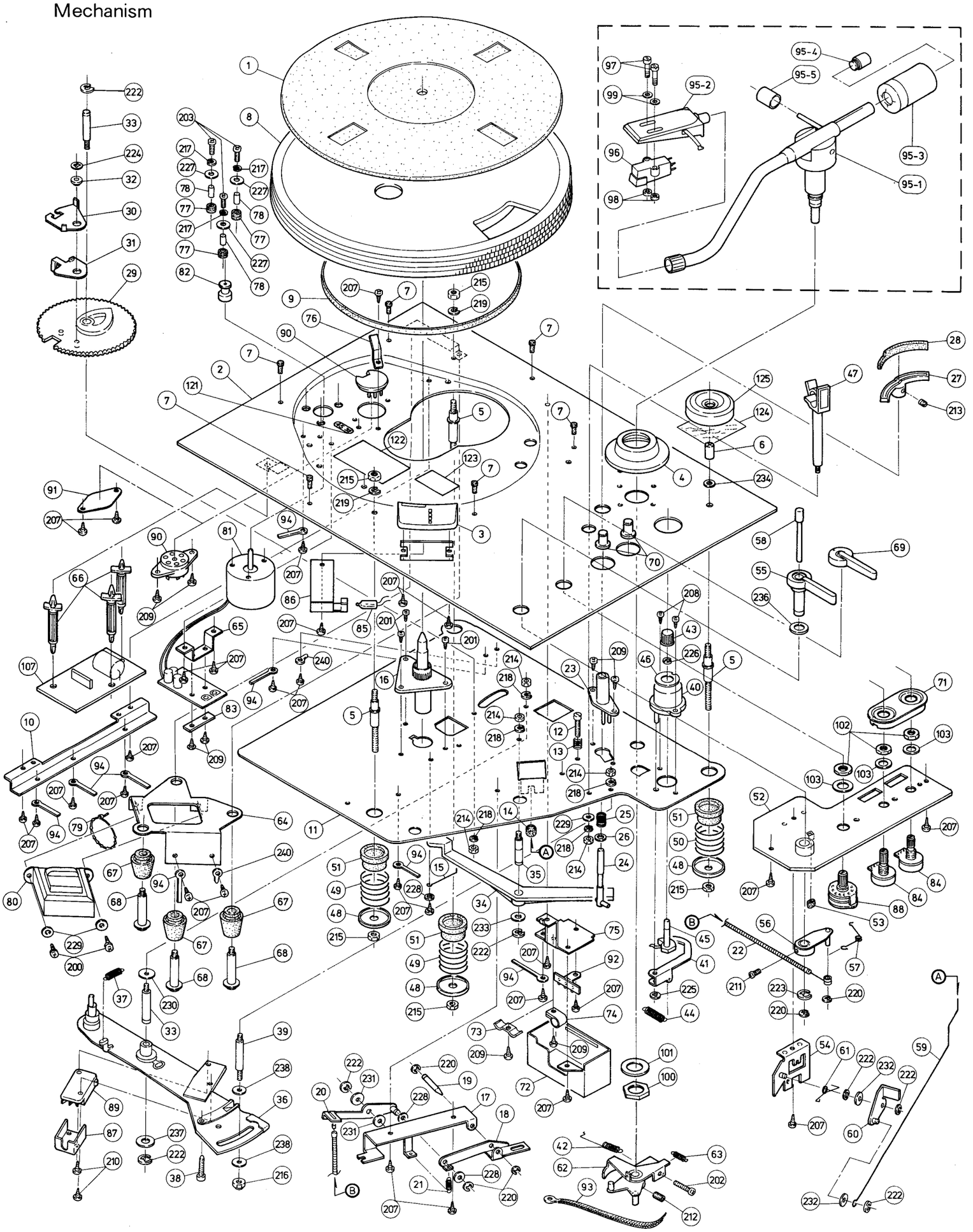


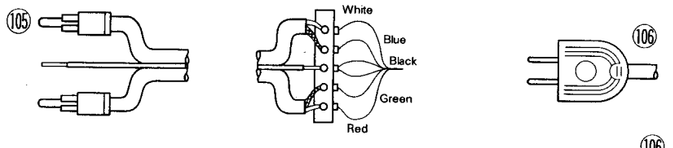
Fig. 22

EXPLODED VIEW

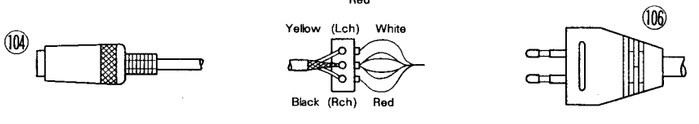
Mechanism



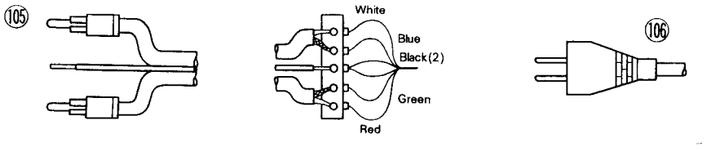
Model A . C

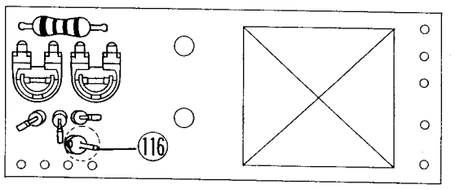


Model E

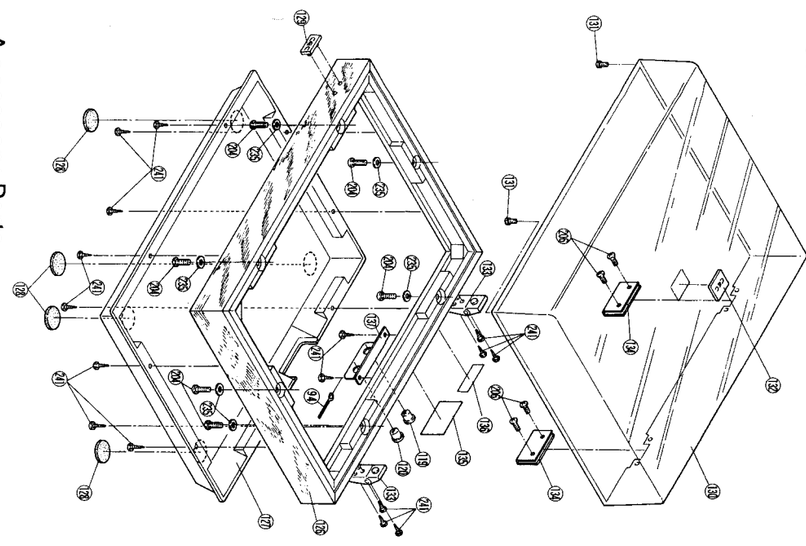


Model G

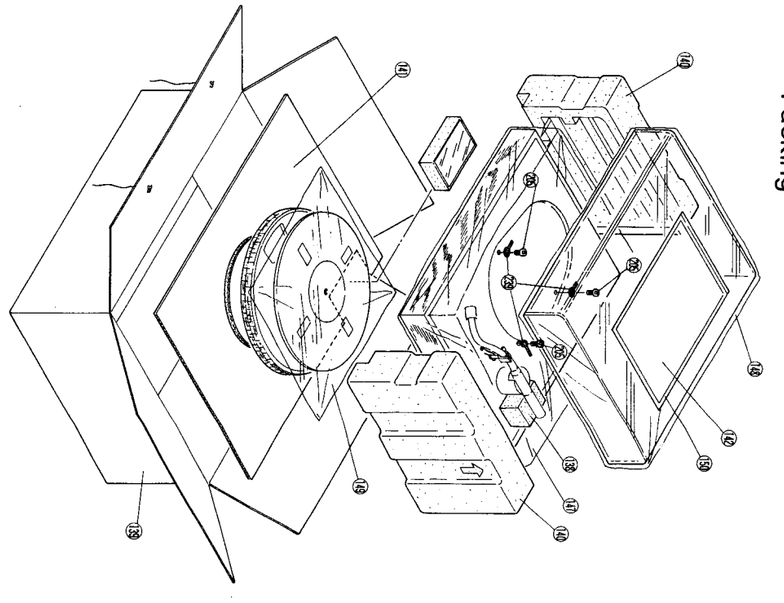




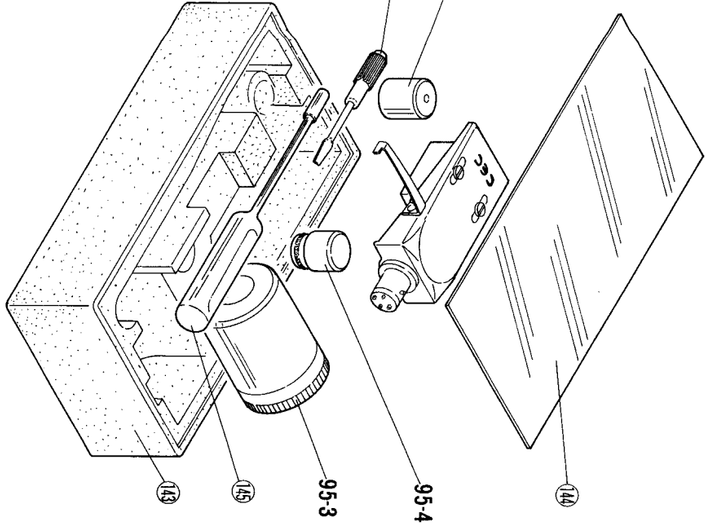
Cabinet



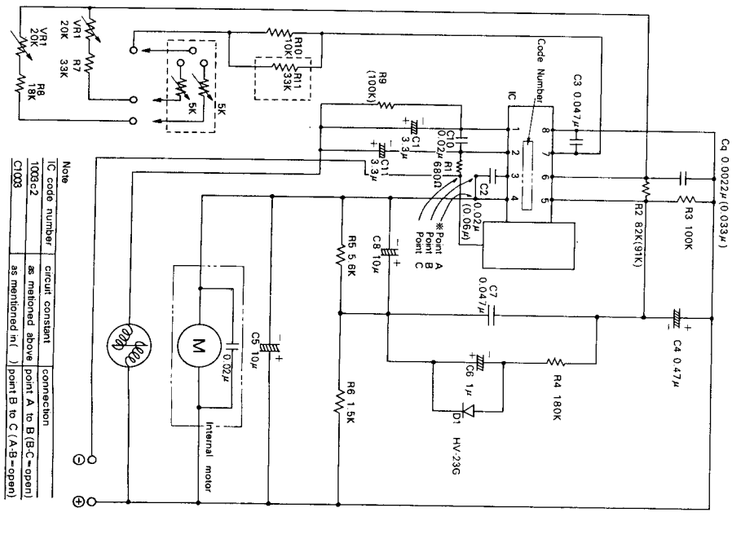
Packing



Accessory Parts

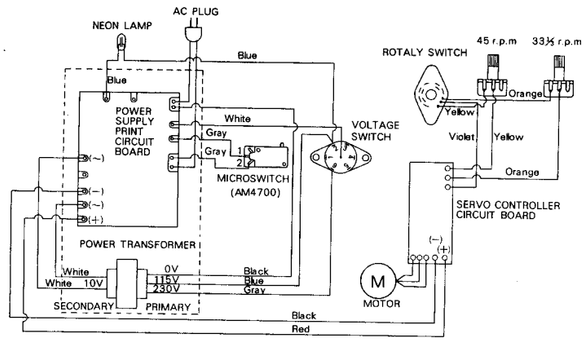


Servo Controller Circuit Diagram



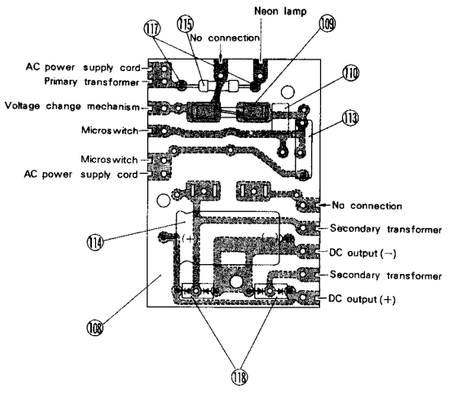
Wiring Diagrams

Model E

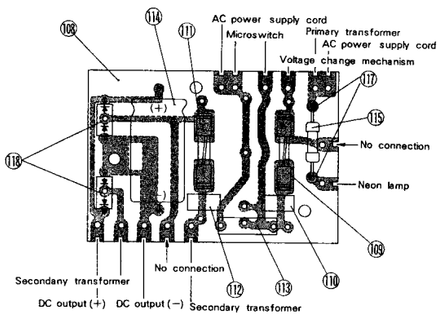


Printed Circuit Boards

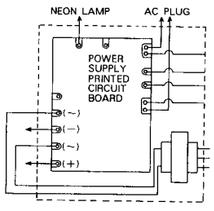
Model G



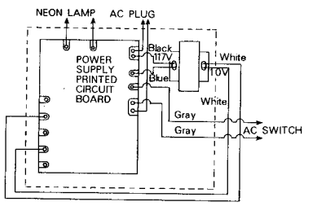
Model E



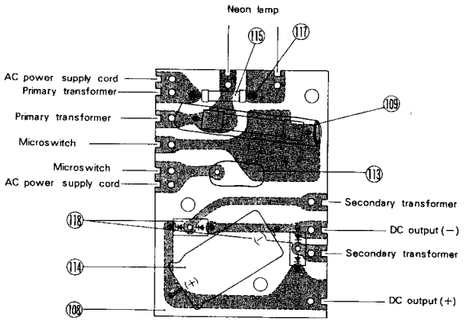
Model G



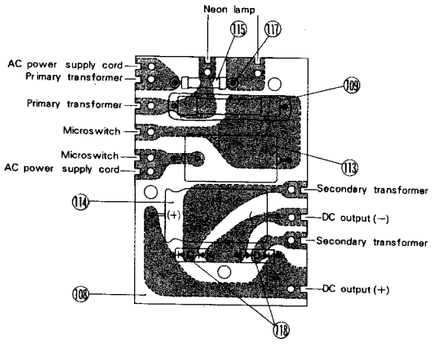
Model A and C



Model A



Model C



PARTS LIST

Ref. No.	Parts No.	Description	Model
1	CD 20455	Turntable platter mat	C. E. G.
1	CD 20518	Turntable platter mat	A.
2	C 20438s	Panel board assy.	
3	CD 30360	Lamp cover.	
4	CD 43979	Tone arm base	
5	CR 43933	Stud	
6	CR 43943	Adapter pin	
7	CD 44545	Panel board protector	
8	CD 20454	Turntable platter	
9	CD 44128	Rubber belt	
10	CA 30394	Mounting angle F	
11	CA 20440	Sub-chassis	
12	CB 43913	Height adjusting screw	
13	CE 44021	Adjusting spring	
14	CD 43972	Reject spring spacer	
15	CE 44400	Ratchet spring	
16	C 30370s	Turntable shaft assy.	
17	C 44025s	Lifter base assy.	
18	CA 43916	Pushing plate.	
19	CB 43918	Pushing plate pin	
20	C 44026s	Operating plate assy.	
21	CE 43917	Pushing spring	
22	C 43919s	Release assy.	
23	CD 30386	Lifter boss assy.	
24	C 43926s	Lifter shaft assy.	
25	CE 43928	Lifter spring	
26	CA 43846	Spring mounting	
27	CD 43023	Tone arm support	
28	CD 44027	Tone arm support rubber	
29	CD 20443	Drive gear	
30	CA 30130	Ratchet A	
31	CD 42671	Ratchet BJ	
32	CB 41801	Ratchet collar	
33	CB 43945	Drive gear shaft	
34	CD 41808	Return arm	
35	CB 41809	Return arm shaft	
36	C 20444s	Return plate assy.	C. E. G.
36	C 20519s	Return plate assy.	A.
37	CE 41827	Return plate spring	
38	CB 42638	Adjusting screw	
39	CB 43959	Return plate support	
40	CD 30387	Anti-skating base	
41	CA 44028	Anti-skating lever	
42	CE 44031	Anti-skating spring	
43	CB 44032	Anti-skating knob	
44	CE 44227	Spring	
45	CD 44029	Anti-skating cam	
46	CK 44030	Anti-skating nameplate	
47	CD 30384	Tone arm rest assy.	
48	CA 43931	Spring mounting	
49	CE 43932	Cushion spring	
50	CE 44203	Cushion spring	
51	CD 44341	Cushion rubber	
52	C 43937s	Lifter mechanism mounting plate A assy.	
53	CD 44457	Cushion stopper	
54	C 43930s	Reject base assy.	
55	CD 30385	Lifter lever A assy.	
56	C 43939s	Lifter lever B assy.	
57	CE 44022	Reversed spring	
58	CD 43952	Reject button assy.	
59	CE 43957	Reject spring A	
60	C 43954s	Reject lever assy.	
61	CE 43958	Reject spring B	
62	C 44017s	Tone arm fixing plate assy.	
63	CE 41817	Tone arm fixing plate spring	
64	CA 44331	Transformer mounting plate	
65	CA 43989	Printed circuit board (P.C.B.) mounting plate	
66	CD 43440	P.C.B. support	
67	CD 41875	Cushion rubber	
68	CR 43201	Stud	
69	CD 43968	Speed-change lever A	
70	CB 43969	Variable resistor (V.R.) knob	
71	CD 43970	V.R. spacer	C. E. G.
71	CD 43970-1	V.R. spacer	A.
72	CA 43936	Shield case	
73	CA 44547	Cord clamping	A. C. G.
74		Cord clamping 3N	E.
75	CA 43975	Terminal angle B	
76	CA 43966	Protector	
77	CD 43786	Motor cushion rubber	
78	CB 44335	Spacer	
79	CD 43890	Plastic tic	
80	CF 30372	Power transformer assy.	E. G.
80	CF 30494	Power transformer assy.	C.
80	CF 30391	Power transformer assy.	A.
81	CF 20453	Motor	
82	CB 43960	Pulley	
83	CF 44045	Insulation board	
84	CF 30373	Variable resistor	
85	CF 43965-2	Neon lamp	
86	CA 44024	Neon lamp mounting	
87	CD 41833	Switch cover	C. E. G.
87	CD 44297	Switch cover	A.

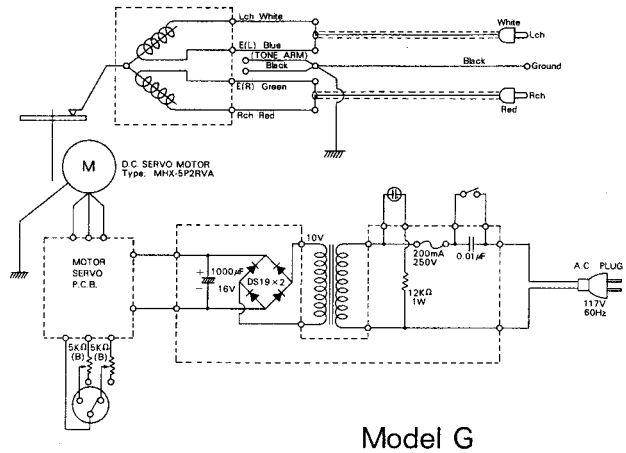
Ref. No.	Parts No.	Description	Model
88	CF 43967	Rotaly switch	
89	CF 30218	Microswitch	E. G.
89	CF 30266	Microswitch	A. C.
90	CF 43533	Voltage change mechanism	E. G.
91	CH 44336	Blind	A. C.
92		Lug terminal plate IL-4P	A. C. G.
92		Lug terminal plate IL-2P	E.
93	CF 44074	Wirings	
94	CA 42667	Metalic cord clamping	
95	CF 30371	Tone arm assy.	C. E. G.
95	CF 30371-1	Tone arm assy.	A.
95-1		Tone arm	
95-2		Head shell	
95-3		Counter weight	
95-4		Sub-weight	
95-5		Lateral weight	
96	C 30255s	MC-20 cartridge	G.
97	CB 43212-0	Cartridge mounting screw	G.
97	CB 43212-5	Cartridge mounting screw	E.
98	CB 43213	Cartridge mounting nut	G.
99	CB 43214	Cartridge mounting washer	G.
100		Tone arm mounting nut	
101		Tone arm mounting washer	
102		Mounting nut	
103		Mounting washer	
104	CF 42851	DIN plug shielded cord	E.
105	CF 43581-0	Output shielded cord	C. G.
105	CF 44821	Output shielded cord	A.
106	CF 43888	AC power supply cord	G.
106	CF 30332	AC power supply cord	E.
106	CF 42920	AC power supply cord	A. C.
107	C 44675s	Printed circuit board assy.	G.
107	C 44669s	Printed circuit board assy.	E.
107	C 44646s	Printed circuit board assy.	C.
107	C 44862s	Printed circuit board assy.	A.
108	CF 44676s	Printed circuit board	G.
108	CF 44668s	Printed circuit board	E.
108	CF 43964s	Printed circuit board	C.
108	CF 44863s	Printed circuit board	A.
109	CF 43532	Fuse 250VT 100 mA (Primaly)	E. G.
109	CF 44886	Fuse 250V 200 mA (Primaly)	A. C.
110	CH 43548	Fuse label A.	E. G.
110	CH 43732-1	Fuse label A.	A. C.
111	CF 44674	Fuse 250VT 400mA (Secondary)	E.
112	CH 44666	Fuse label B	E.
113	CF 42734	Condenser	E. G.
113	CF 43838	Condenser	C.
113	CF 43562	Condenser	A.
114		Tubular type condenser 1000 μF	
115		Resistor 12 kΩ	
116		Resistor 33 kΩ	
117	CD 43534	Spacer	
118	CF 44163	Diode	
119	CD 44421	AC cord bushing	E.
119	CD 41850	AC cord bushing	A. C. G.
120	CD 44573	Shield cord bushing	E.
120	CD 43767	Shield cord bushing	A. C. G.
121	CH 44399-1	Speed adjusting label	
122	CH 44345	Clamp caution label	
123	CH 42574	Stylus change label	G.
124	CH 43179	Polyethylene sheet	
125	CD 43100	45 rpm adapter	
126	CM 20447	Cabinet	
127	CD 20448	Bottom bse	
128	CK 42928	Tranleg	
129	CD 44461	Cabinet badge	E. G.
129	CD 43582-1	Cabinet badge W.	C.
129		Cabinet badge	A.
130	CD 20446	Dust cover	
131	CD 44205	Dust cover cushion	
132	CK 44143	Dust cover nameplate	
133	CK 43202	Free-stop hinge	
134	CK 43203	Lock plate	
135	CH 44296	Rating label	G.
135	CH 44665	Rating label	E.
135	CK 44630	Rating label (CSA Monogram)	C.
135		Rating label	A.
136	CH 44312	Serial number label	
137	CA 43976	Cord mounting plate	E.
137	CA 43951	Cord mounting plate	A. C. G.
138	CH 44222	Tone arm packing cushion	
139	CH 44173-1	Carton box	E. G.
139	CH 44173-7	Carton box	C.
139		Carton box	A.
140	CD 20476	Styrol packing	
141	CH 44035	Turntable platter packing	
142		Owner's manual	
143	CD 30417	Parts box	
144	CH 44216	Parts box cover	
145	CK 41930	Oil tube	
146	CD 44217	Screw driver	
147	CH 44220	Polyethylene bag	
148	CH 44221	Polyethylene bag	
149	CH 40112	Polyethylene bag	
150	CH 41211	Polyethylene bag	

SCREWS, WASHERS AND NUTS

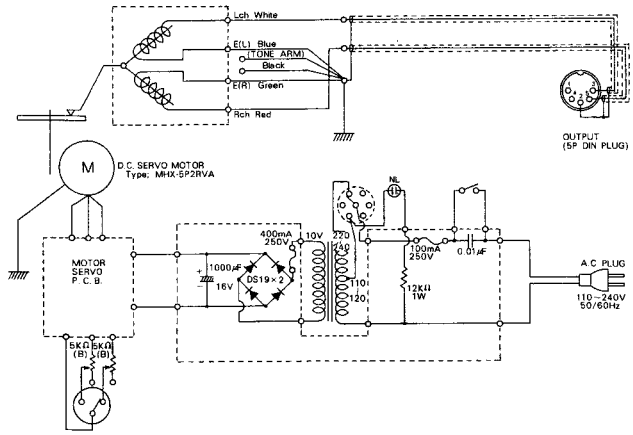
Ref. No.	Description	Ref. No.	Description
200	⊕ Pan head (Sems A) screw M3 x 6	221	E type washer 3ϕ
201	⊕ Pan head taptite screw M3 x 8	222	E type washer 4ϕ
202	⊕ Pan head screw M3 x 25	223	E type washer 5ϕ
203	⊕ Pan head screw M2,6 x 8	224	Stop ring CSTW-3
204	⊕ Pan head screw M5 x 30	225	Stop ring CSTW-2.4
205	⊕⊖ Pan head screw (Red) M4 x 10	226	Stop ring S-6
206	⊕ Oval countersunk head screw M4 x 10	227	Plain washer 2.6ϕ x 10ϕ x 0.5t
207	⊕ Pan head tapping screw 3ϕ x 6	228	Plain washer 3ϕ x 8ϕ x 0.5t
208	⊕ Pan head tapping screw (Bronze) 3ϕ x 6	229	Plain washer 3ϕ x 8ϕ x 1t
209	⊕ Pan head tapping screw 3ϕ x 8	230	Plain washer 3ϕ x 14ϕ x 1t
210	⊕ Pan head tapping screw 3ϕ x 18	231	Plain washer 4ϕ x 10ϕ x 0.5t
211	⊕ Pan head screw M3 x 6	232	Plain washer 4ϕ x 10ϕ x 1t
212	Hexagon slotted screw M4 x 5	233	Plain washer 4.5ϕ x 10ϕ x 0.3t
213	⊕ Slotted set screw M3 x 3	234	Plain washer 5ϕ x 10ϕ x 0.5t
214	Hexagon nut M3	235	Plain washer 5ϕ x 14ϕ x 1.6t
215	Hexagon nut M5	236	Plain washer 6ϕ x 10ϕ x 0.8t
216	Hexagon nylon nut M4	237	Plain washer 6ϕ x 16ϕ x 1t
217	Spring washer 2.6ϕ	238	Plain washer 4ϕ x 10ϕ x 1t
218	Spring washer 3ϕ	240	oval lug 3ϕ
219	Spring washer 5ϕ	241	Pan tapping screw 3ϕ x 14 (Bronze)
220	E type washer 2ϕ		

Circuit Diagrams

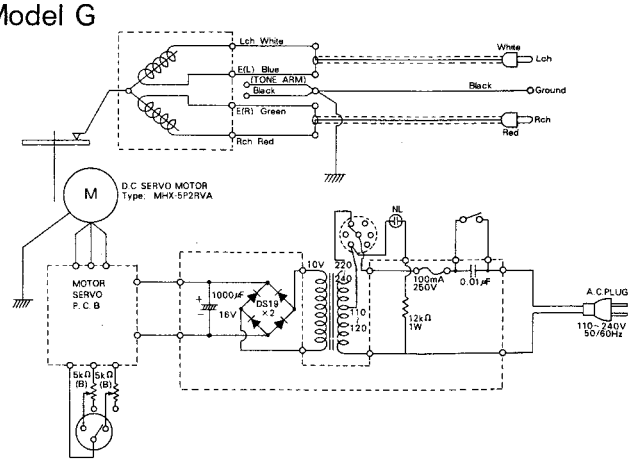
Model A and C



Model E



Model G



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