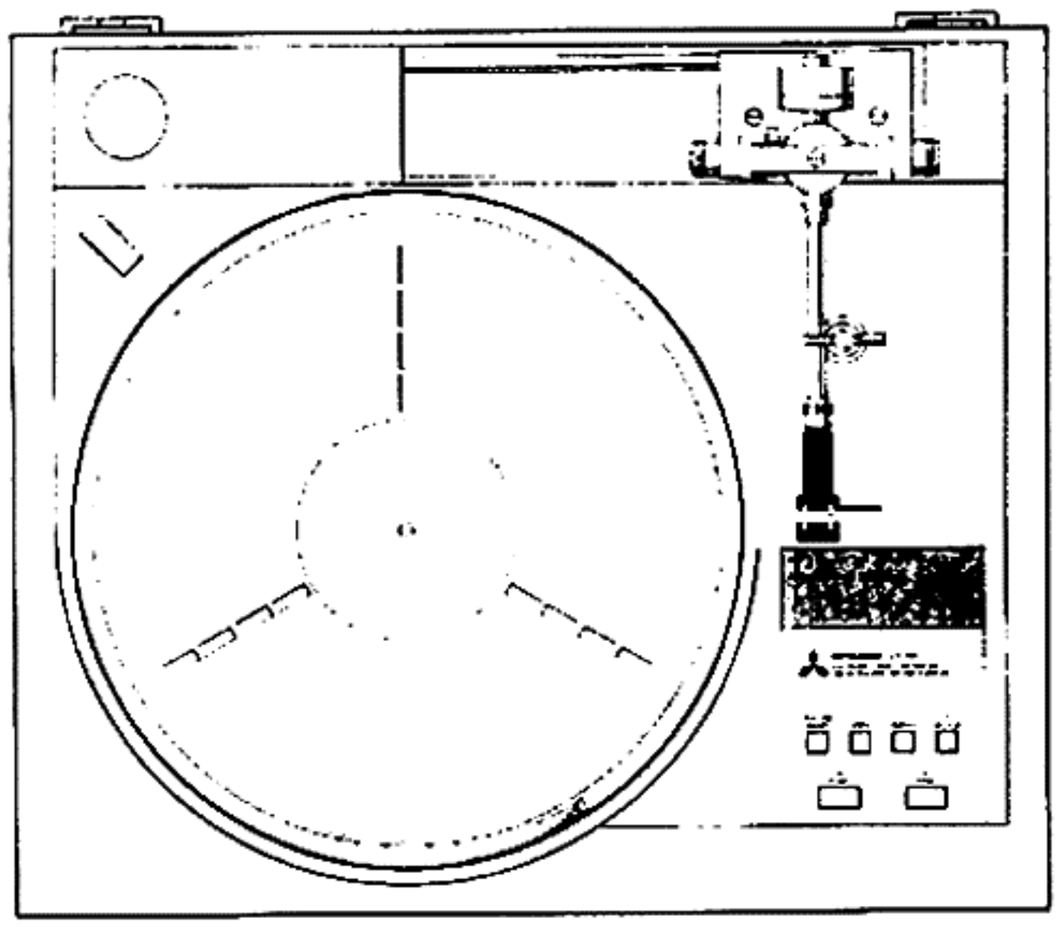
MITSUBISHI
AUDIO SYSTEMS

SERVICE MANUAL

# TURNTABLE

## MODEL LT-30



**CONTENTS**




**MELCO SALES INC.**
**3030 East Victoria Street Compton, California 90221**

## SPECIFICATIONS

### 1. PHONO MOTOR SECTION

**Type**. . . . . .Electronically controlled fully automatic operation
**Drive mechanism**. . . . . .Direct drive
**Motor** . . . . . .Quartz PLL DC servo motor
**Platter** **Diameter** . . . .312 mm (12-5/16")
**Weight**. . . . . .1.5 kg (3.3 lbs)
**Material**. . . . .Aluminum die-cast
**Platter speed**. . . . . .33-1/3, 45 r.p.m.
**Wow and flutter** . . . . . .0.025% (Wrms)
±0.04% (Wp-p, DIN 45-507)
**Signal to noise ratio**. . . . . .65 dB (IEC-B)
78 dB (DIN 450539)

### 2. TONEARM SECTION

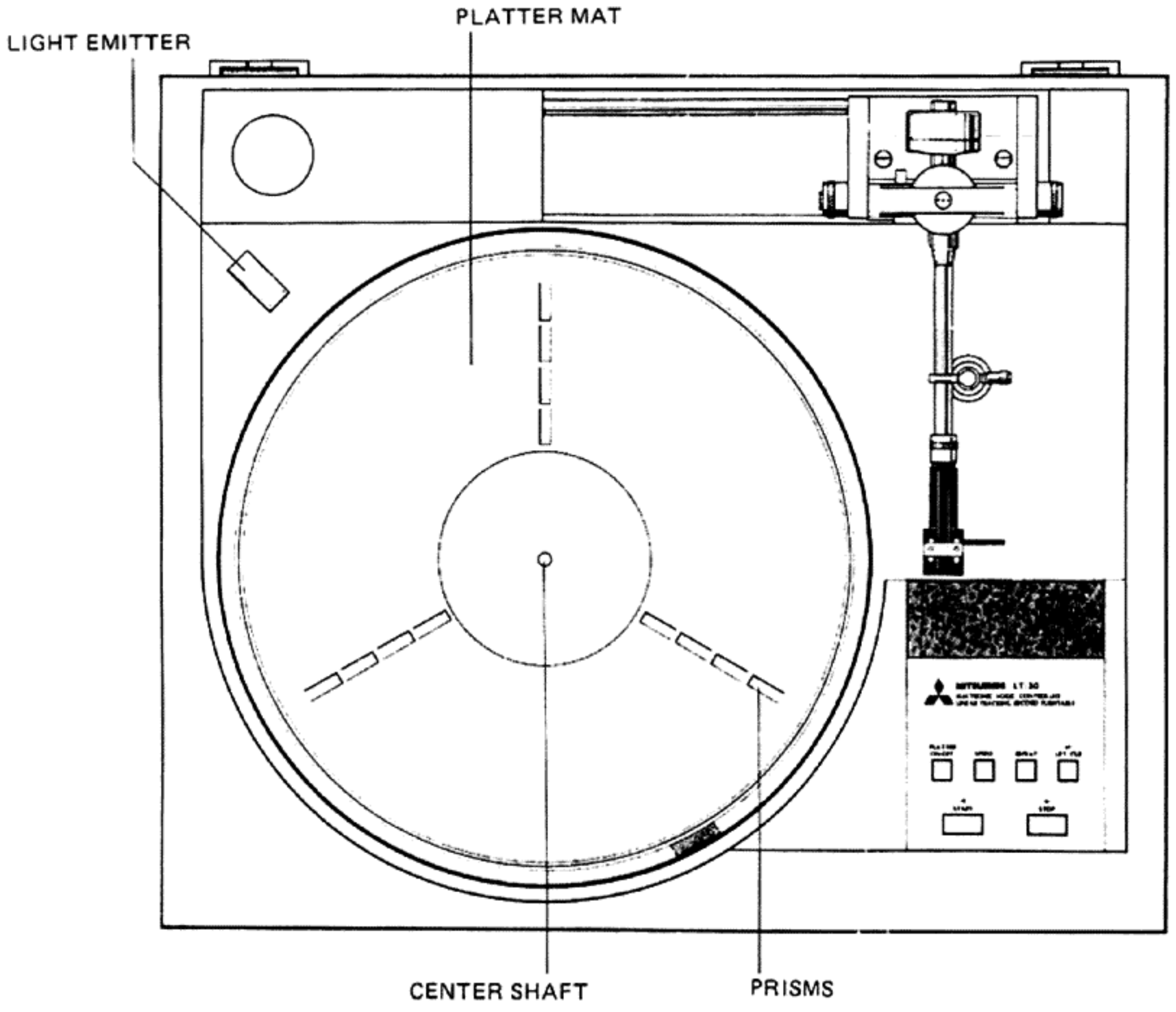
**Type**. . . . . .Straight type universal static balanced
**Overall length** . . . . . .225 mm (8-7/8")
**Effective length**. . . . . .175 mm (6-7/8")
**Tracking error**. . . . . .Less than 0.05°
**Head shell** **Meterial**. . . . .Magnesium die-cast
**Weight**. . . . . .6g
**Possible cartridge weight**. . . .10g to 16g
**(with head shell)** (16g to 20g with sub-weight)

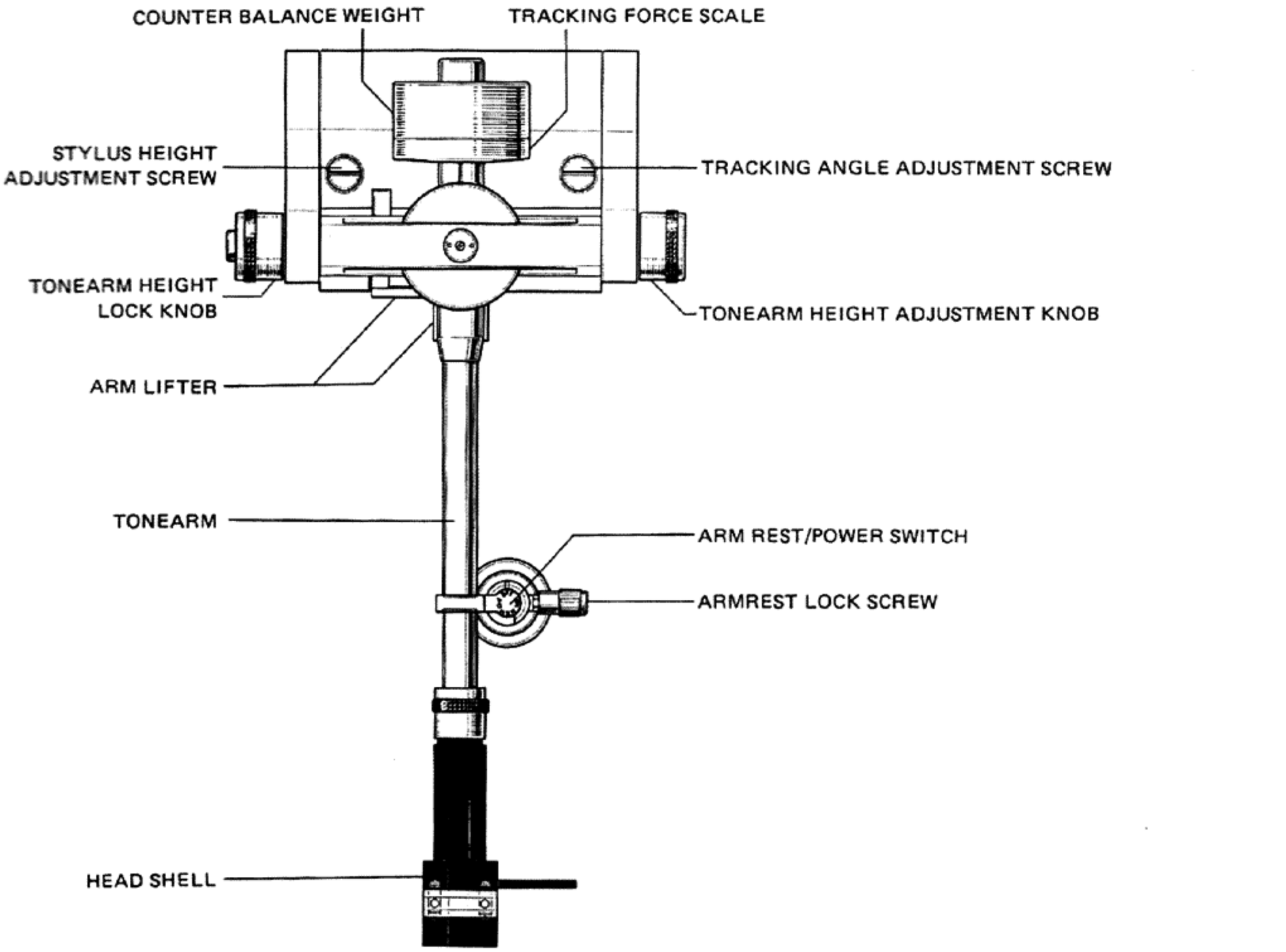
### 3. GENERAL

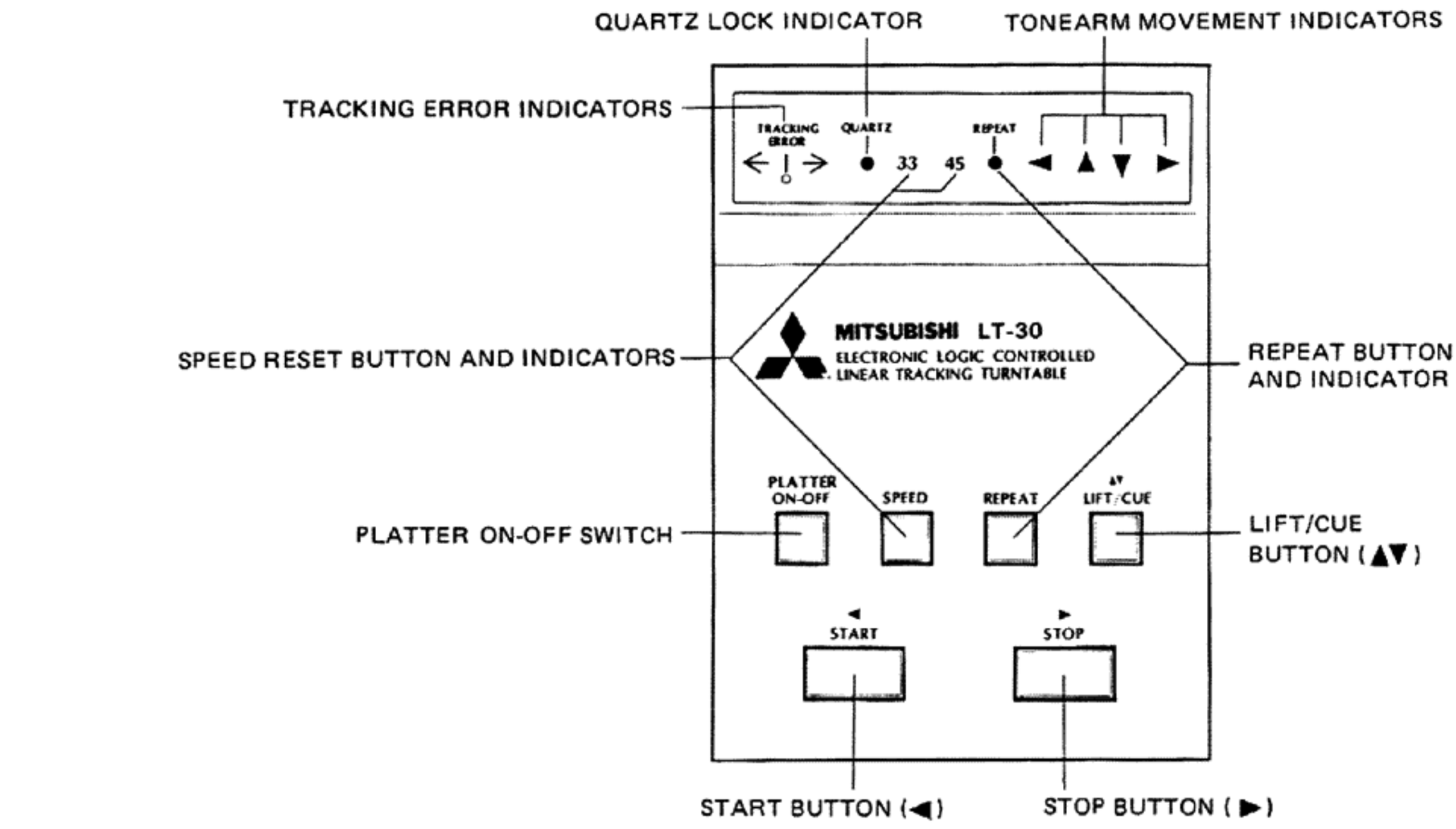
**Power consumptoin** . . . . . .15W
**Dimensions (W x H x D)** . . . .485 x 177 x 413 mm (19-1/8 x 7 x 16-1/4")
**Weight**. . . . . .15 kg (33 lbs)

Design and specifications are subject to change without notice for improvement.

## DISCRIPTION AND FUNCTION




COUNTER BALANCE WEIGHT
TRACKING FORCE SCALE
STYLUS HEIGHT ADJUSTMENT SCREW
TRACKING ANGLE ADJUSTMENT SCREW
TONEARM HEIGHT LOCK KNOB
TONEARM HEIGHT ADJUSTMENT KNOB
ARM LIFTER
TONEARM
ARM REST/POWER SWITCH
ARMREST LOCK SCREW
HEAD SHELL


QUARTZ LOCK INDICATOR
TONEARM MOVEMENT INDICATORS
TRACKING ERROR INDICATORS
TRACKING ERROR
QUARTZ
REPEAT
33
45
MITSUBISHI LT-30
ELECTRONIC LOGIC CONTROLLED LINEAR TRACKING TURNTABLE
SPEED RESET BUTTON AND INDICATORS
REPEAT BUTTON AND INDICATOR
PLATTER ON-OFF
SPEED
REPEAT
LIFT/CUE
PLATTER ON-OFF SWITCH
LIFT/CUE BUTTON (▲▼)
START
STOP
START BUTTON (◀)
STOP BUTTON (▶)

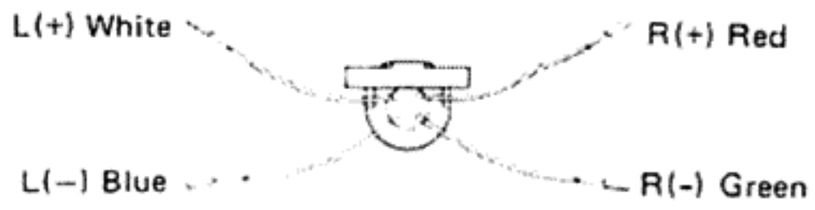
## CARTRIDGE INSTALLATION:

The cartridge is not supplied with this unit.

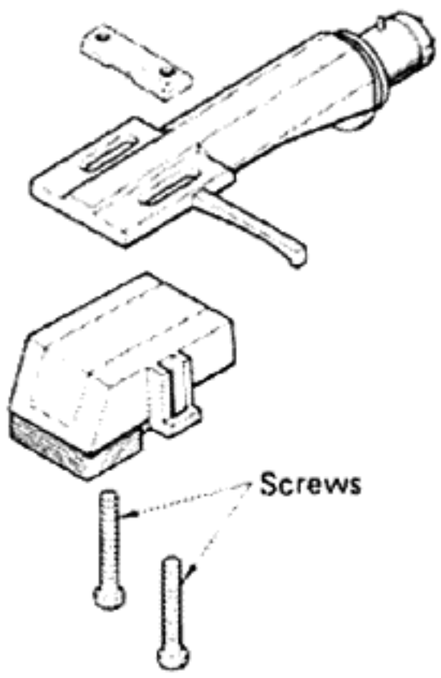
### 1. LEAD CONNECTIONS

Attach the lead wires to the proper terminals on the cartridge.

White Lead. . . . . L (+)
Blue Lead . . . . . L (–)
Red Lead. . . . . R (+)
Green Lead . . . . . R (–) (G) (E)

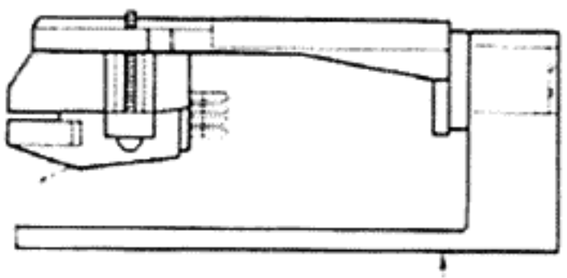



2. Choose the proper length screws from those supplied and attach the cartridge to the head shell as shown below.

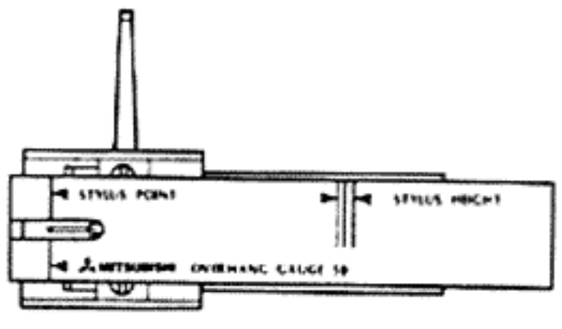



### 3. STYLUS TIP ADJUSTMENT

Using the supplied overhang gauge, adjust the stylus tip so that it comes just to the positioning line ( ◄ ) on the gauge and fasten it in place.



Overhang Gauge



## DISASSEMBLY:

### 1. REMOVAL OF TONEARM ASS'Y

1) Turn the set over and remove the bottom plate.
2) Disconnect clampers A and B shown in Fig. 1 and remove connectors CONN-5 and CONN-6.
3) Using a soldering iron, disconnect the following wires from the tonearm base: lead wires (red and black) leading to terminals ④ and ⑤ of the logic P. C. board, and the shield wires (red and white) and the black wire leading to the relay terminal P. C. board.

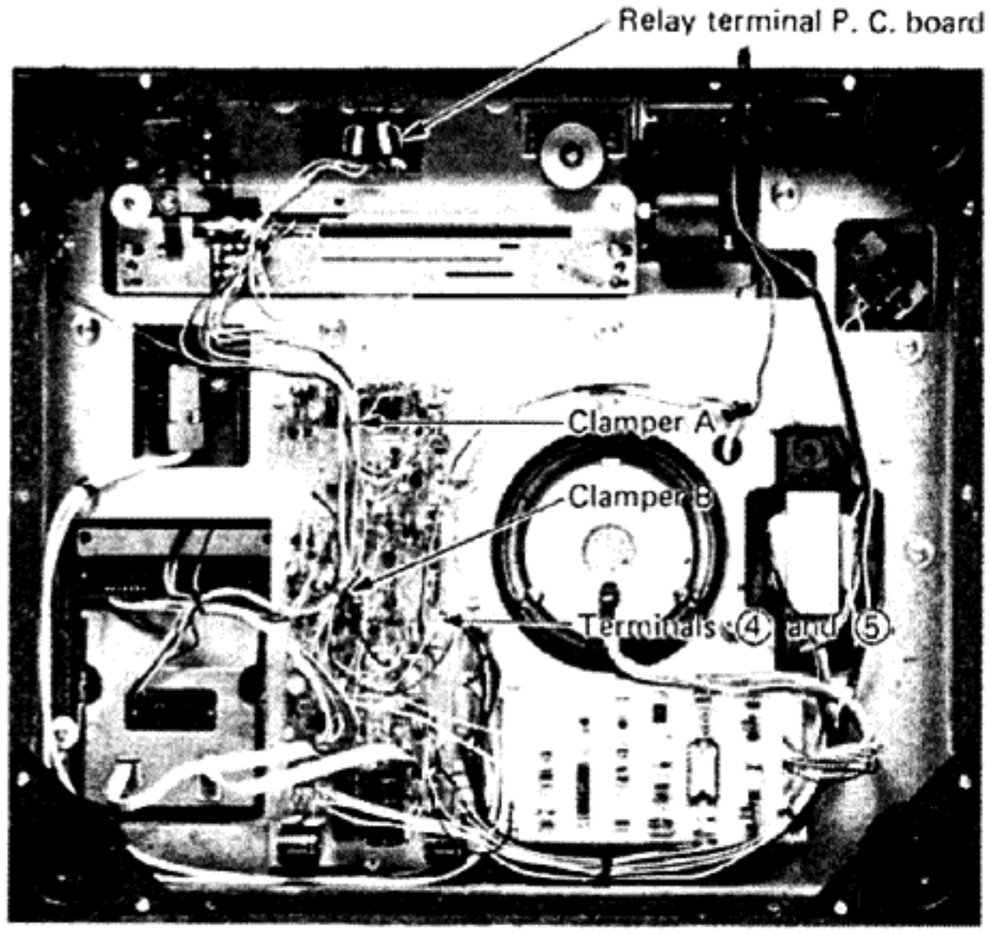



Fig. 1

4) Remove the two screws Ⓒ shown inFig. 2 and take off the lamp P. C. board's holder. As a wire used for driving the tonearm base is stretched across the area above the screws, keep this wire out of the way with your fingers.
5) Remove screw Ⓓ shown in Fig. 2 and detach the LEAD-IN-POSITION adjusting plate.
6) The slit plate's spring, which is fixed to the body by a gear-shaped washer, is removed by removing the washer first.
7) Remove the two screws Ⓔ shown in Fig. 2 and remove the slit plate.

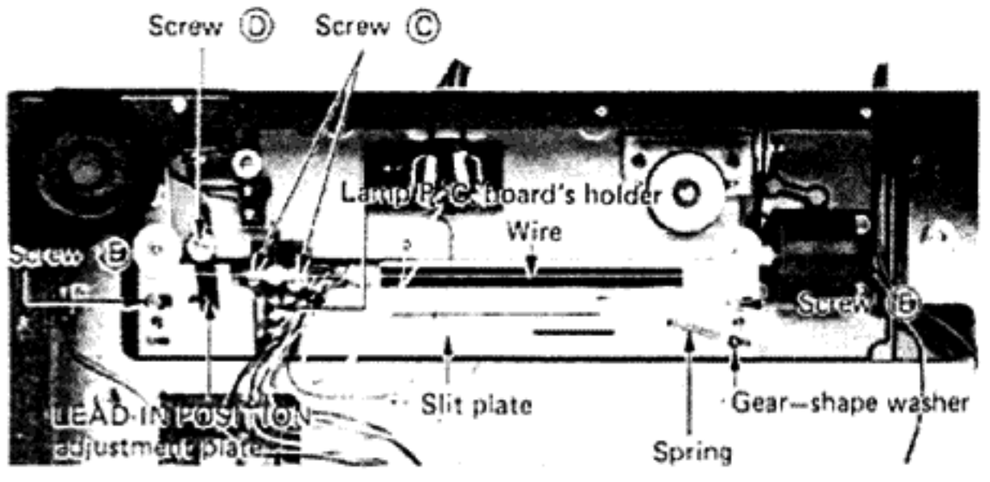



Fig. 2

8) Unscrew screw Ⓕ shown in Fig. 3 and detach the sensor P. C. board's holder. (For assembly, refer to "ASSEMBLY PRECAUTIONS - 4".)
9) Using a hexagon wrench (1.5mm) loosen the two screws Ⓖ shown in Fig. 3, and draw the tonearm base moving shaft to the extreme right.

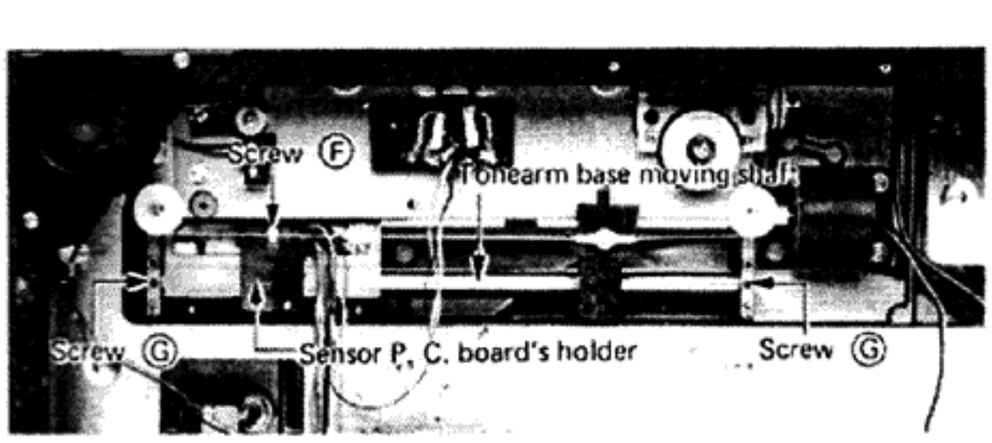



Fig. 3

10) With the set placed in its normal position, remove the two screws Ⓗ and detach the L-shape holder. (Refer to Fig. 4)
11) Now, the tonearm ass'y can be removed in the following manner. Dismount the tonearm from the arm rest and remove the ass'y by lifting up the tonearm base diagonally toward the back.

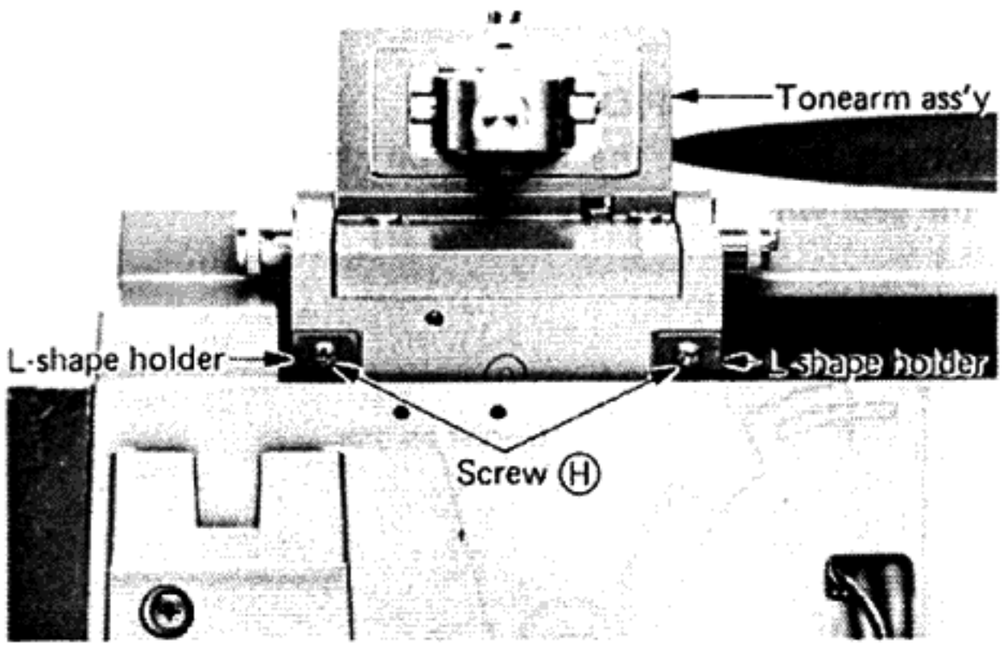



Fig. 4

## 2. REMOVAL OF VERTICAL DRIVE MOTOR AND TONEARM

1) Following the instructions given in Step 1, remove the tonearm ass'y from the body.
2) Using a soldering iron, disconnect the five lead wires connected to the muting switch P. C. board from the tonearm. (Refer to Fig. 5)
3) After removing the two E-rings shown in Fig. 5, pull out the UP/DOWN cam. (for assembly, refer to "ASSEMBLY PRECAUTIONS - 2".)
4) In this condition, the tonearm can be removed together with the base. (For assembly, refer to "ASSEMBLY PRECAUTIONS-1".)

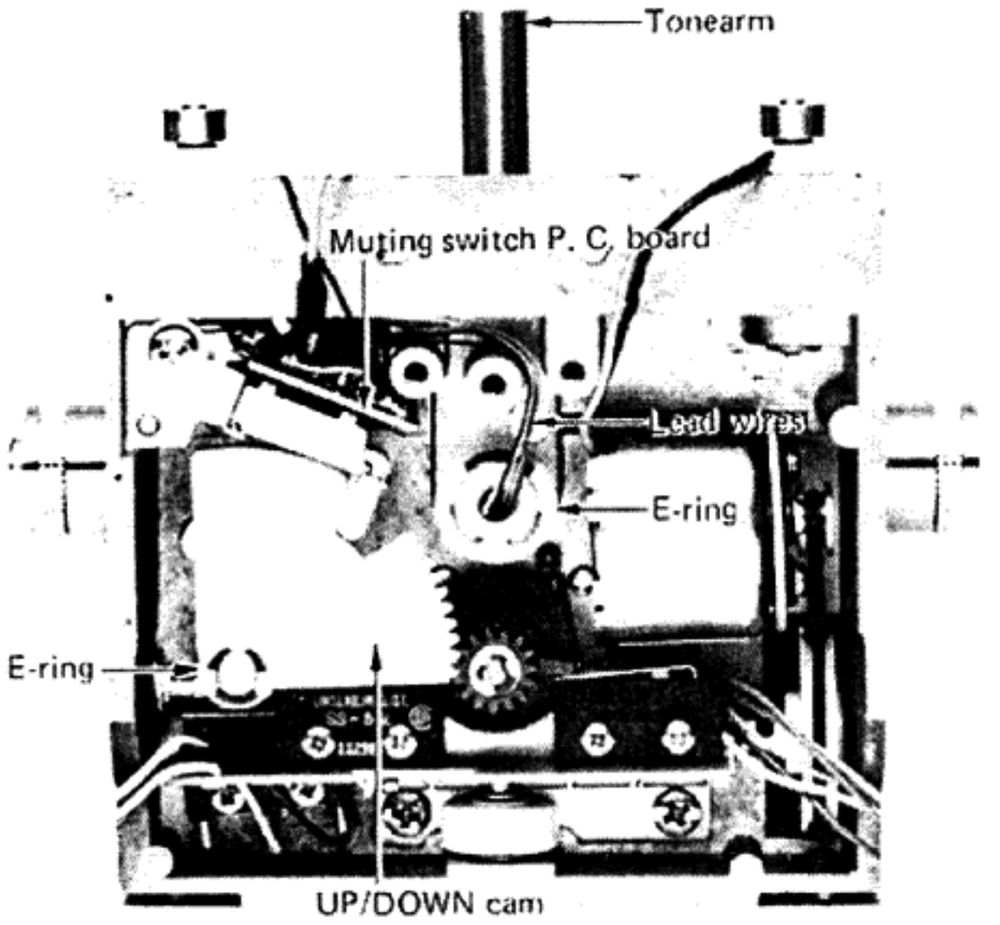



Fig. 5

5) The vertical drive motor can now be removed by removing screws Ⓘ shown in Fig. 6.

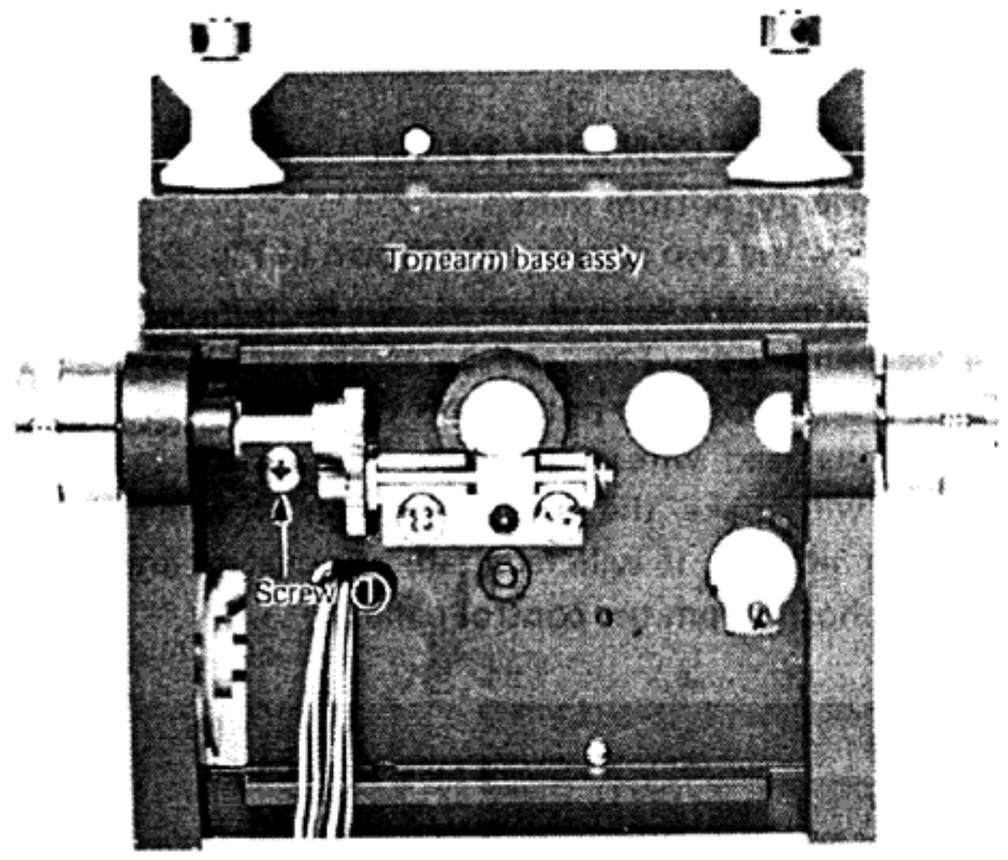



Fig. 6

6) Remove the E-ring, two screws Ⓙ and two screws Ⓚ and Ⓛ, referring to Fig. 7. Now, the tonearm can be taken off.

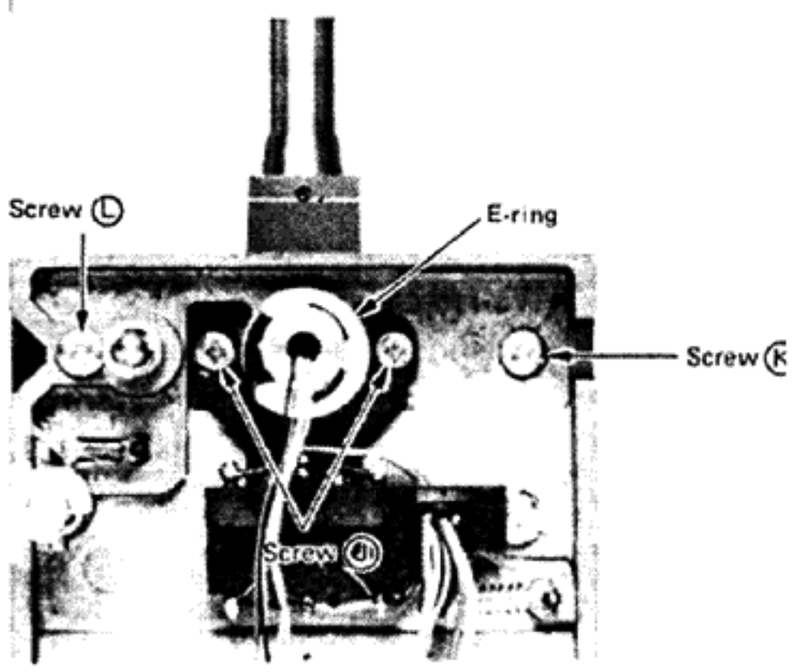



Fig. 7

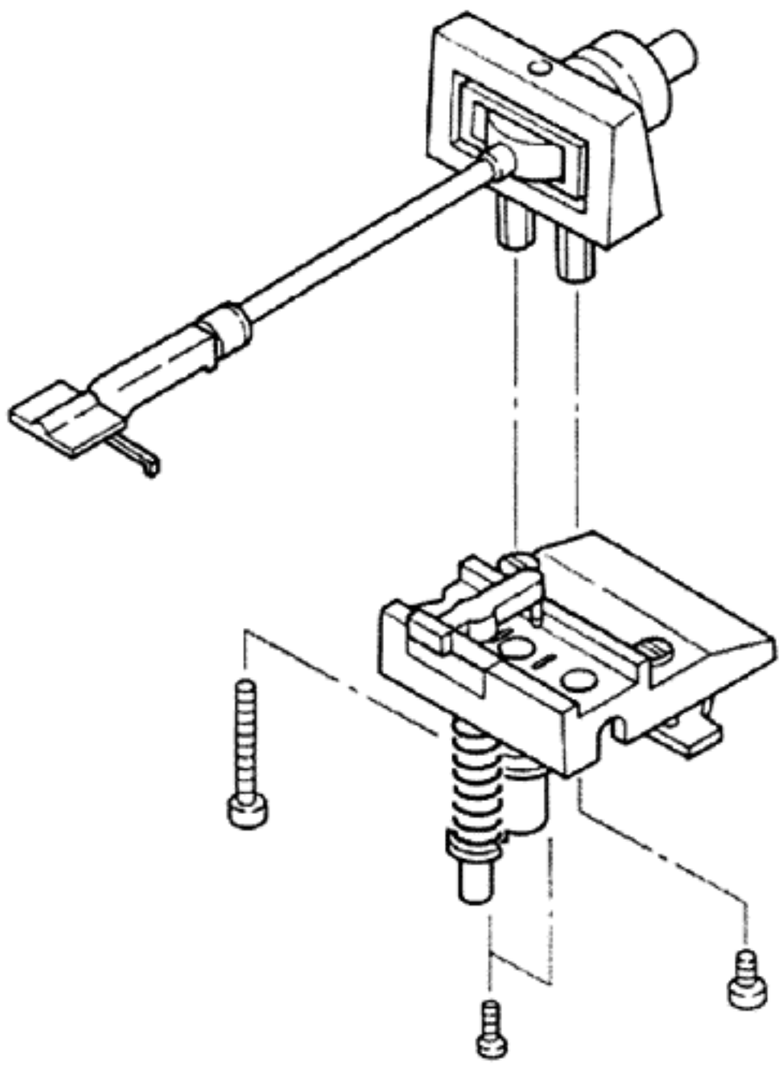


Fig. 8

### 3. REMOVAL OF CONTROL PANEL

1) Remove the bottom plate.
2) Unscrew the two screws Ⓜ shown in Fig. 9.
3) With this, the control panel can be removed toward the panel side. The lead wires are clamped together with a clamper. Do not cut off this clamper but stretch out the lead wires leading to the control panel. As this will make the lead wires longer when the set is set upright, it will facilitate removal of the switch P. C. board from the control panel.

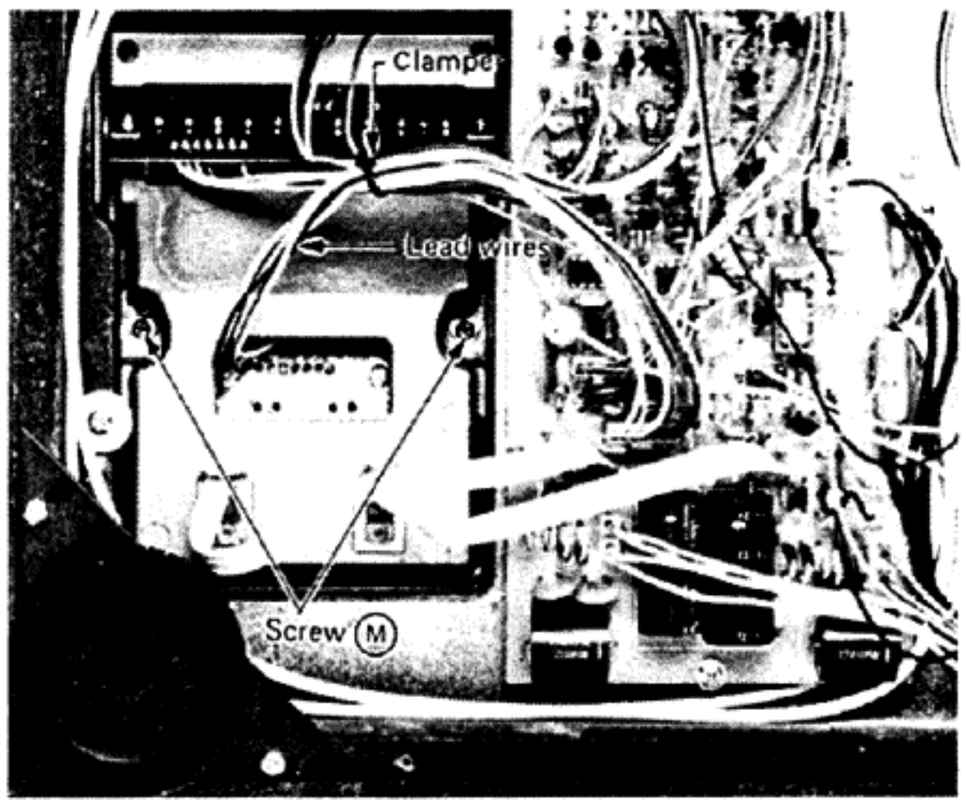



Fig. 9

## ASSEMBLY PRECAUTIONS:

Assembly is performed by reversing the sequence of disassembly. In assembly, particular attention should be paid to the following points.

1. **When assembling tonearm into tonearm base ass'y**
   When assembling the tonearm into the tonearm base ass'y, you will touch a projection which is a lock used for the tonearm height adjustment. Keep this lock pushed outward (in arrow direction) when assembling the tonearm.

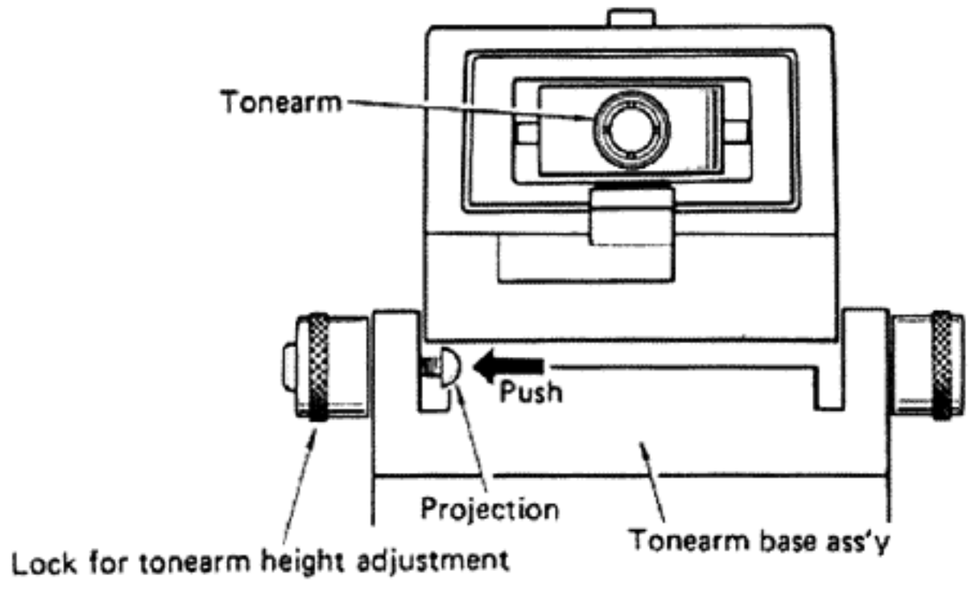



Fig. 10

2. **When attaching UP/DOWN cam**
   Attach it so that the marker on the cam and that on the gear will be properly aligned.

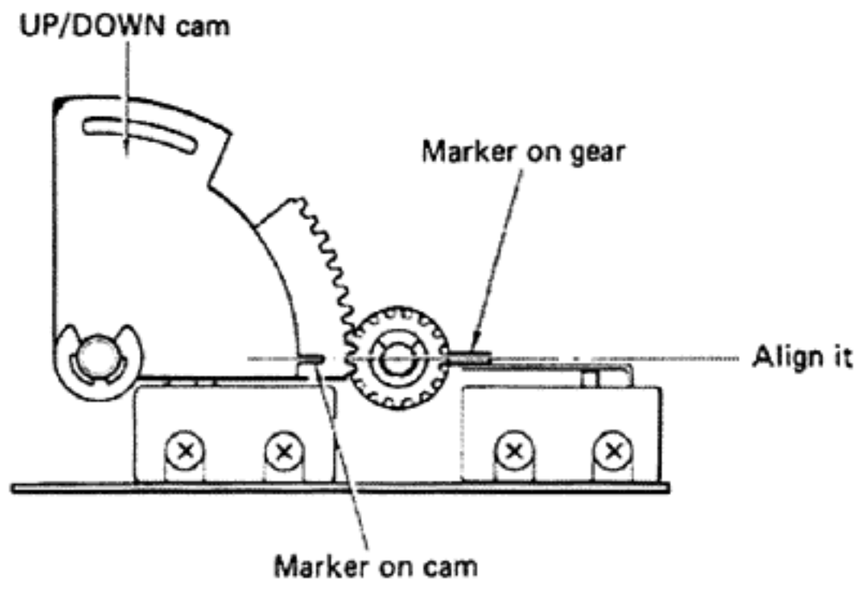



Fig. 11

3. **When attaching tonearm ass'y to body**
   After attaching the tonearm ass'y to the body with the set positioned upright so that the REST position will be at the lower side of the set, insert the tonearm base moving shaft into its regular position. Fix the shaft in place by means of a heaxagon wrench (1.5mm). Turn over the set.

**4. When attaching the sensor P. C. board's holder**

As there is a large number of lead wires coming from the tonearm base, refer to Fig. 12 and pay special attention in handling them.

1) Bunch the lead wires together using the sensor P. C. board's holder.
2) Attach the sensor P. C. board's holder, referring to Fig. 12, taking care not to let the lead wires get pinched between the tonearm base and sensor P. C. board's holder.

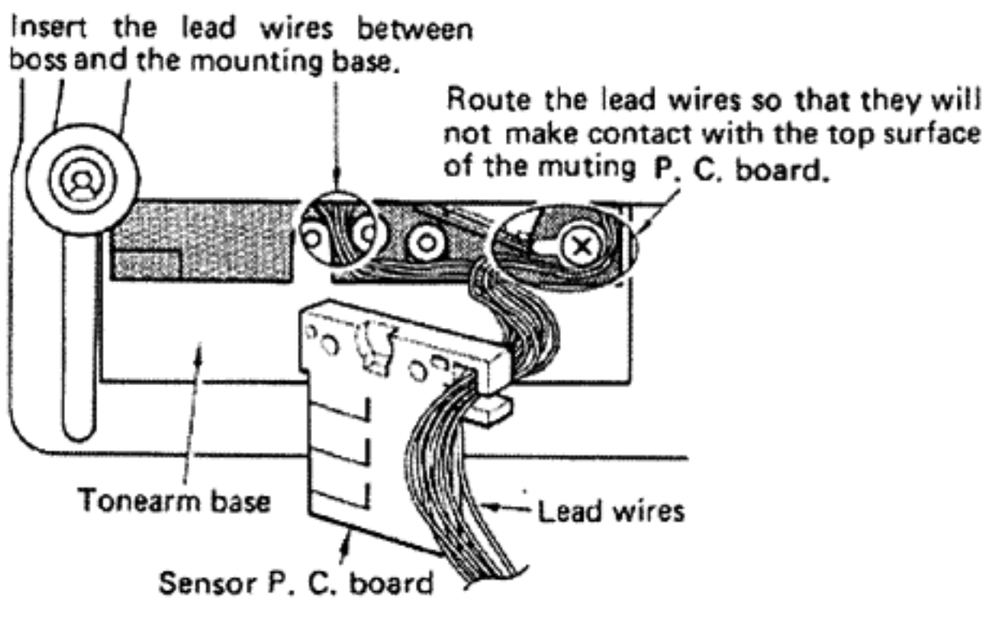
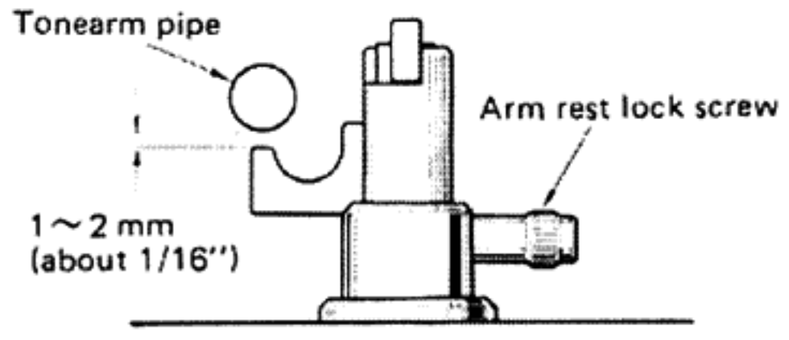



**Fig. 12**

3) The proper distance between the stylus and the record in the UP position is 5mm (3/16"). If this distance is different from the above value, adjust by turning the stylus height adjustment screw.
4) The stylus will be raised by turning this screw in a clockwise direction and lowered by turning in a counter-clockwise direction.

## ARM REST HEIGHT ADJUSTMENT

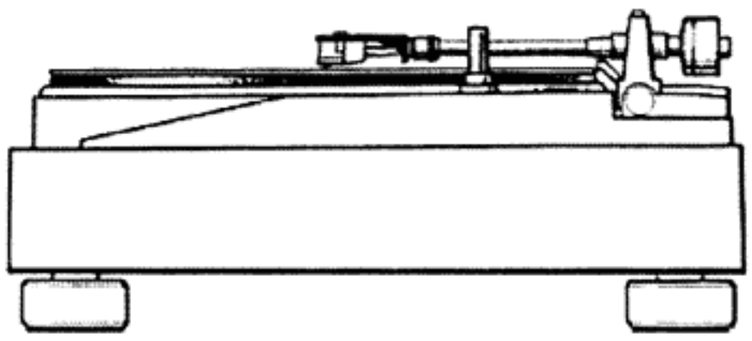
1) After the stylus height adjustment, loosen the arm rest lock screw and set the arm rest to the lower position.
2) When the tonearm is in the UP position above a record, press the lift/cue button and then press the stop button.
3) The tonearm will return to the arm rest.
4) Press the lift/cue button again and set the tonearm in the UP position.
5) The propper space between the arm pipe and the arm rest is 1 to 2 mm (about 1/16"). Adjust the height of the arm rest so as to get the proper space and then turn the arm rest lock screw in a clockwise direction to lock the arm rest.
6) Press the lift/cue button again.

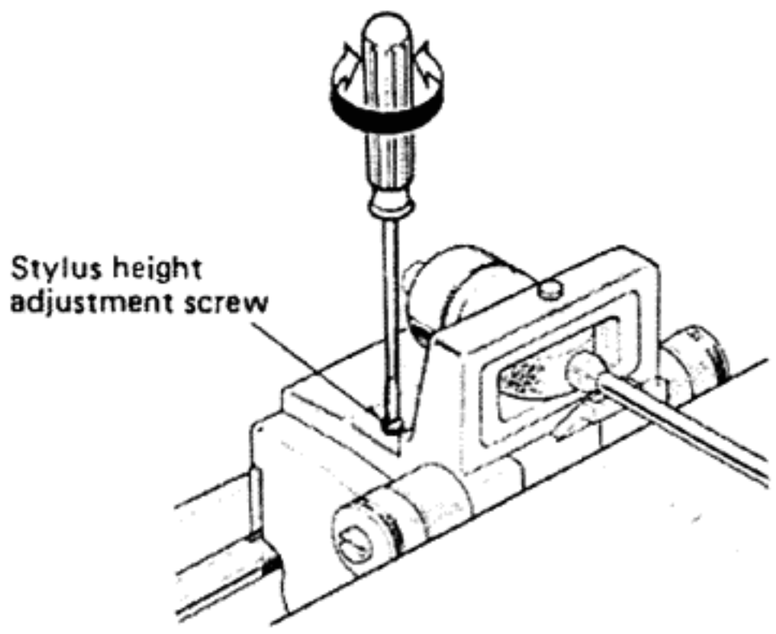


## ADJUSTMENTS:

### STYLUS HEIGHT ADJUSTMENT

1) After the tonearm height adjustment, press the lift/cue button when playing a record.
2) The tonearm will lift itself and will be in the UP position.

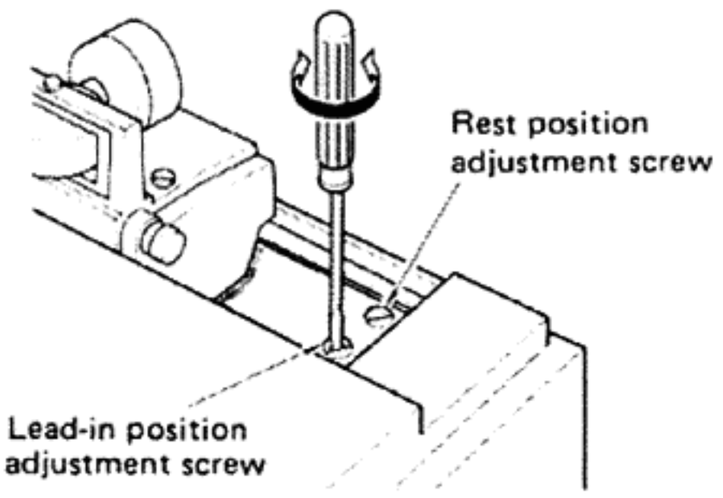





### LEAD-IN POSITION ADJUSTMENT

When the stylus does not set down on the record at the correct position in automatic play, adjust the lead-in position of the tonearm by using a screwdriver to turn the lead-in adjustment screw.

1) Place a 30cm (12 in.) record on the platter.
2) Press the start button ( ◄ ) to play the record and check the lead-in position.
3) Turn the lead-in position adjustment screw either clockwise to move the lead-in position toward the outside or counterclockwise to move the lead-in position toward the inside and then press the stop button ( ► ).

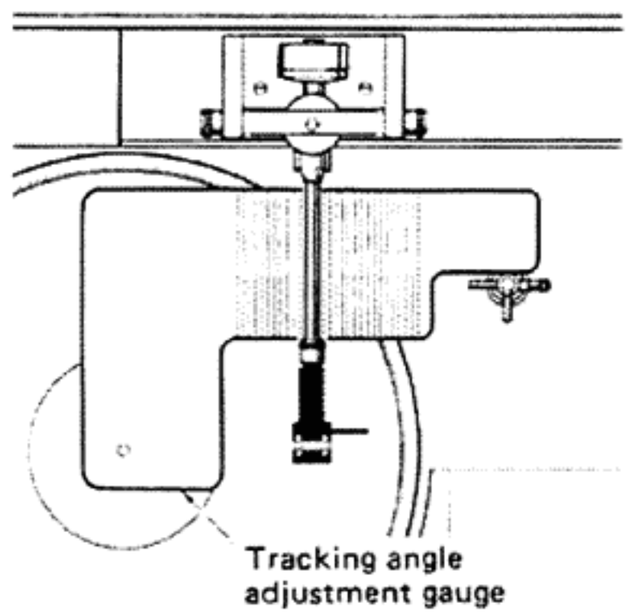


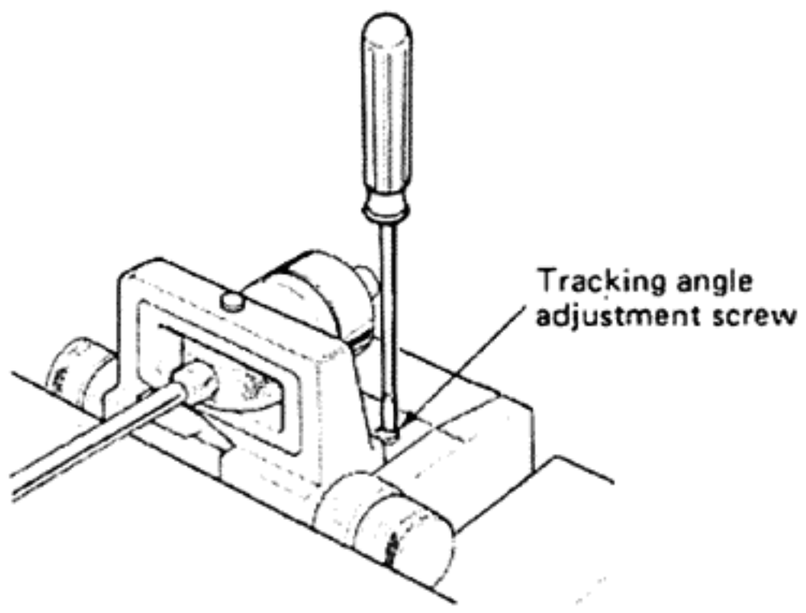

4) The tonearm will return to the arm rest.
5) Press the start button ( ◄ ) again to play the record and check the lead-in position. If the lead-in position is not correct, repeat procedures 3) to 5) until the correct lead-in position is obtained.

### TRACKING ANGLE ADJUSTMENT

The tracking angle has been adjusted at the factory. But when the " ← " or " → " mark of the tracking error indicators are illuminated while playing a record, adjust the tracking angle as follows.

1) Place a 30 cm (12 in.) record on the platter.
2) Place the gauge for the tracking angle adjustment on the record as shown. The gauge is packed with the instruction book.



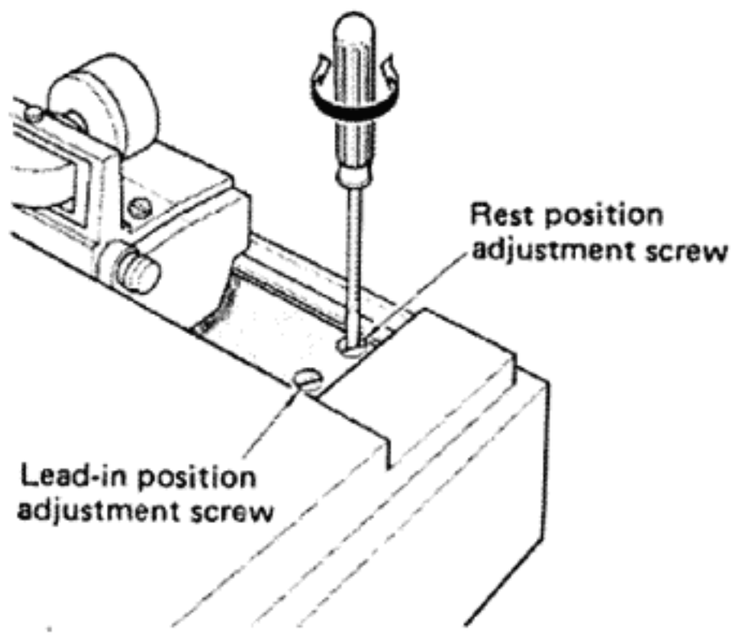



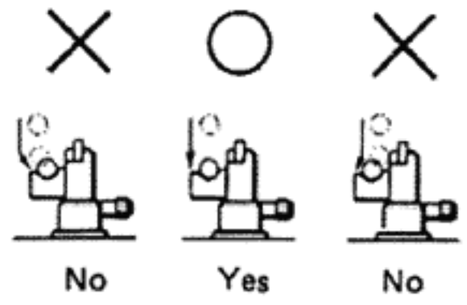

3) Press the start button ( ◄ ) and continue to press. When the stylus reaches the spot which is 10 to 20 mm (3/8" to 3/4") from the outer groove of the record, release the start button ( ◄ ) and press the lift/cue button ( ▼ ) to play the record.
4) Press the T/T ON-OFF switch to stop the rotation of the platter.
5) After ensuring that the edge of the gauge is contacting the arm rest, observe the parallel lines on the gauge and arm pipe from above.
6) If the lines on the gauge and arm pipe are not parallel, adjust the tracking angle by turning the tracking angle adjustment screw carefully with a screwdriver.
7) Press the stop button ( ► ) after adjustment.
8) Remove the gauge for the tracking angle adjustment.

## REST POSITION ADJUSTMENT

If the tonearm does not descend to the arm rest in returning, adjustment is needed. Adjustment procedure are as follows:

1) Place a record on the platter.
2) Press the start button ( ◄ ) to play the record.
3) Turn the rest position adjustment screw clockwise to adjust the rest position to the right or counterclockwise to adjust the rest position to the left with a screwdriver.



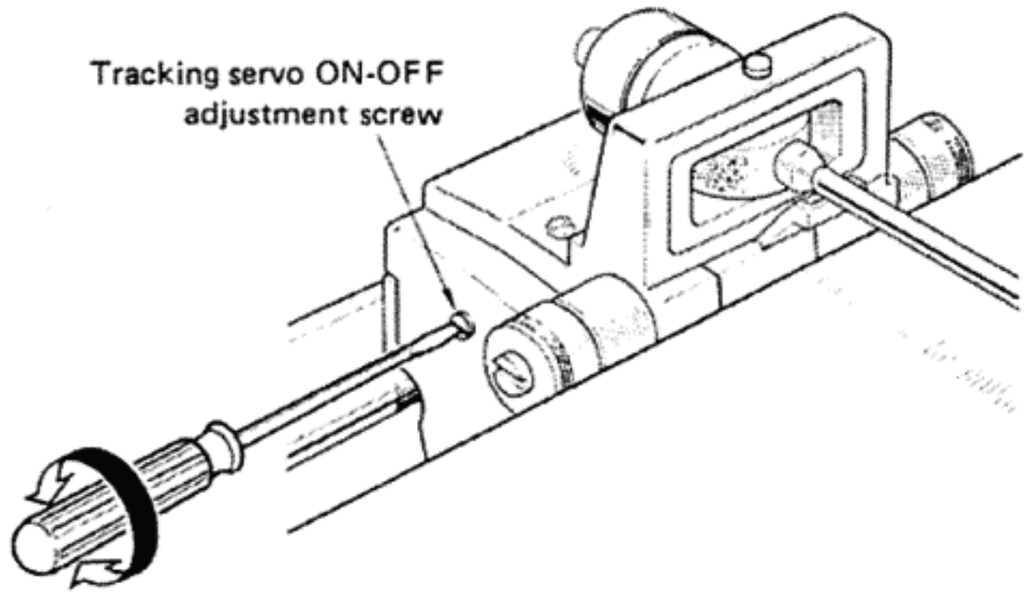

4) Press the stop button ( ► ) to return the tonearm to the arm rest.
5) Check the lowering position of the tonearm to ensure whether it is just on the hollow of the arm rest or not. If not, repeat the procedures 1) to 5) until the correct rest position can be obtained.

   Note: When this adjustment has been performed re-adjustment of the lead-in position is necessary.

## ON-OFF ADJUSTMENT OF TRACKING SERVO

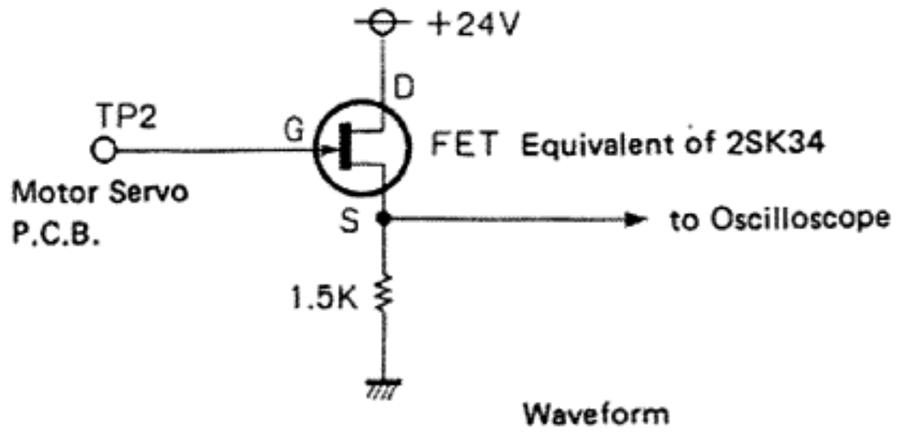
This adjustment should be carried out when the tracking servo fails to turn on, or when it turns on before it should, when the stylus drops onto the disc surface, or when it fails to turn off at the tonearm's "UP" position. The following describes the adjusting procedures.

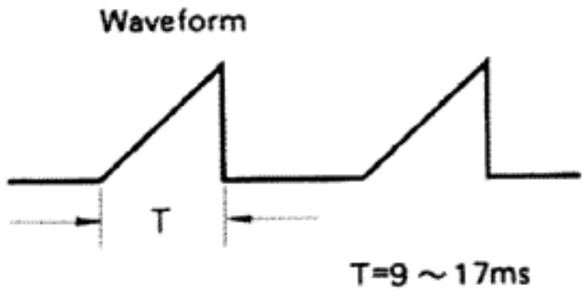
1) When the trcking servo fails to turn on (ON-timing is too slow) when the stylus drops onto the disc surface, turn the tracking servo ON-OFF adjustment screw counterclockwise by 90 degrees (for quarter turn).
2) When it fails to turn off at the tonearm's "UP" position, or when the ON-timing is too fast at the "DOWN" position, turn the ON-OFF adjustment screw clockwise by 90 degrees (for a quarter turn).
3) With a disc placed on the platter, depress the START ( ◄ ) button and effect LEAD-IN of tonearm.
4) Check the ON-OFF timing of the tracking servo.
5) Lift the tonearm by depressing the LIFT/CUE ( ▲▼ ) button. If the ON-OFF timing is too fast, turn the ON-OFF adjustment screw counterclockwise. If it is too slow, turn the screw clockwise. Then, depress the LIFT/CUE ( ▲▼ ) button and lower the tonearm.
6) Repeat steps 4) and 5) so that the tracking servo will turn on at an exact timing with the drop of the stylus onto the disc surface.



**CONFIRMATION OF SYNCHRONIZING PHASE PULSE WIDTH (Motor Servo P. C. Board)**

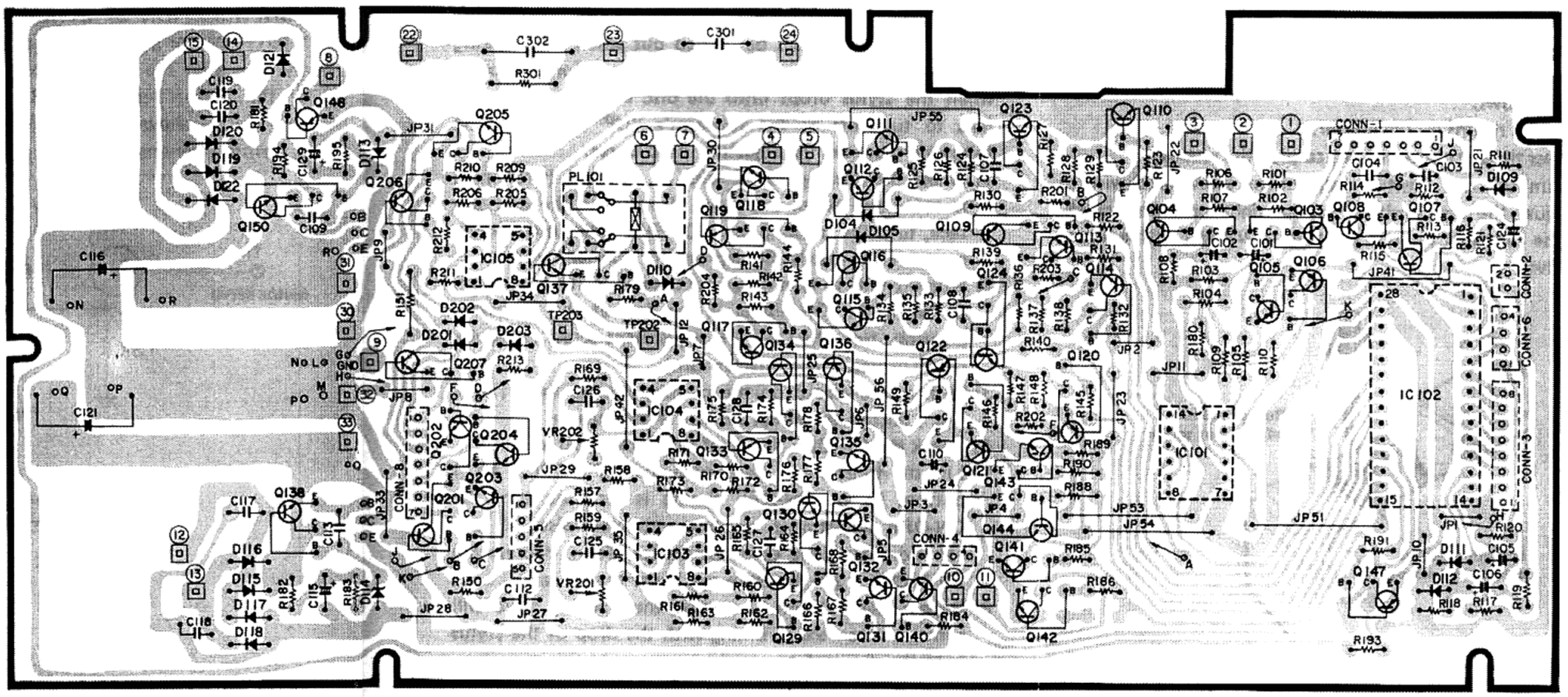
By observing the output waveform of the TP2 terminal of the Motor Servo P. C. Board by way of the buffer amplifier as shown in the following drawing, confirm that it is within the range of T=9 ~ 17ms.



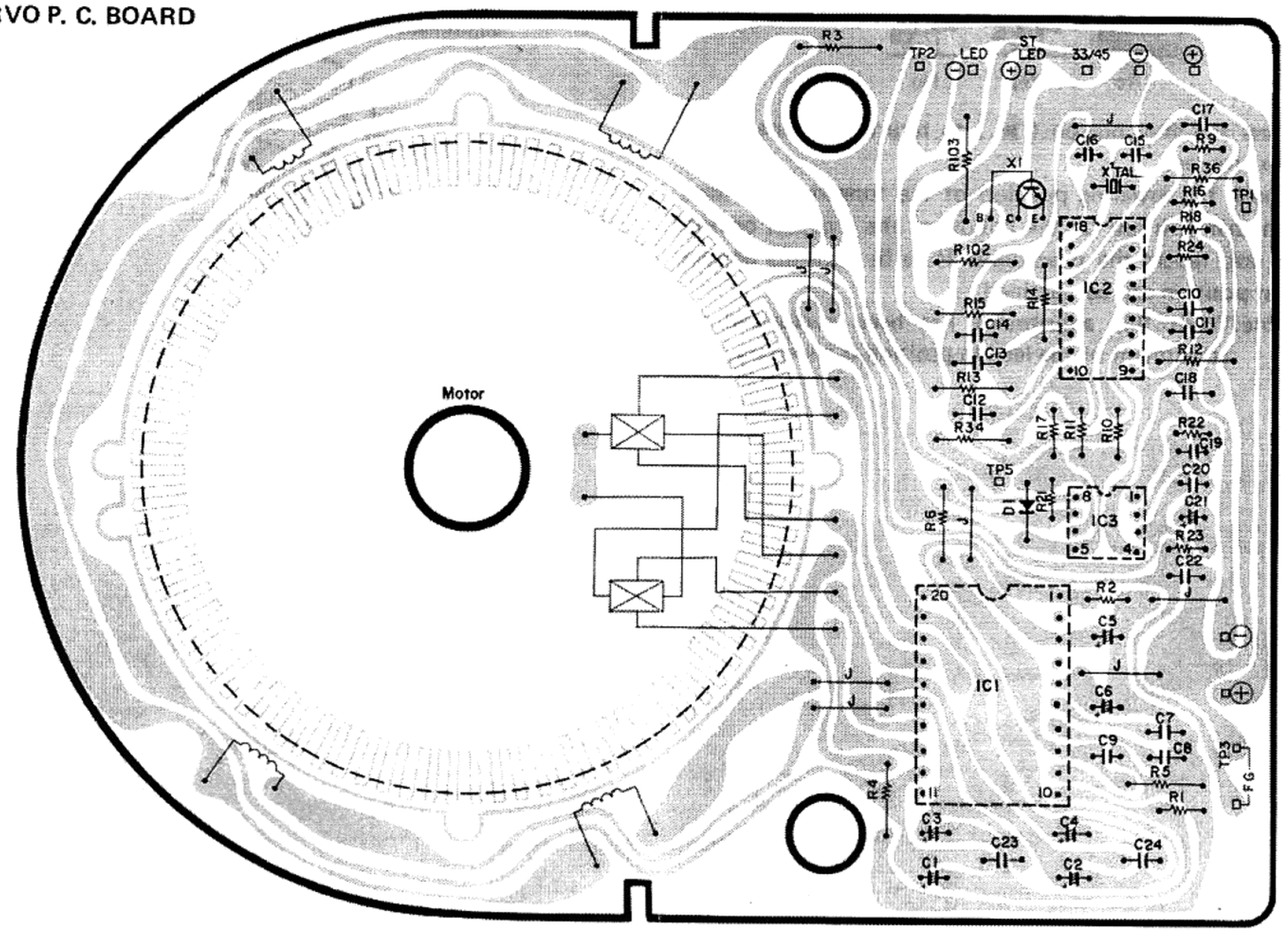




T=9 ~ 17ms

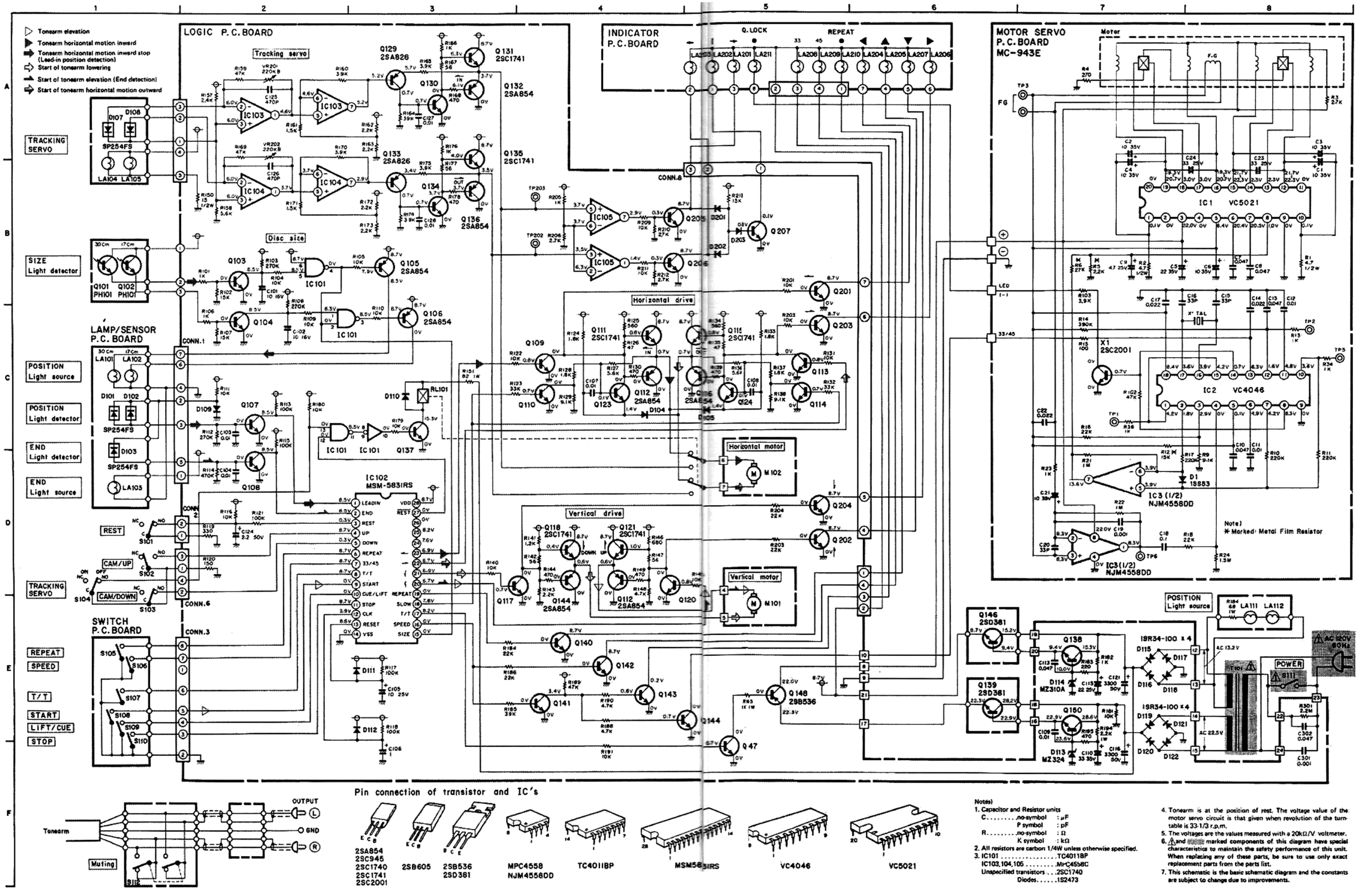
## LOGIC P. C. BOARD




## MOTOR SERVO P. C. BOARD



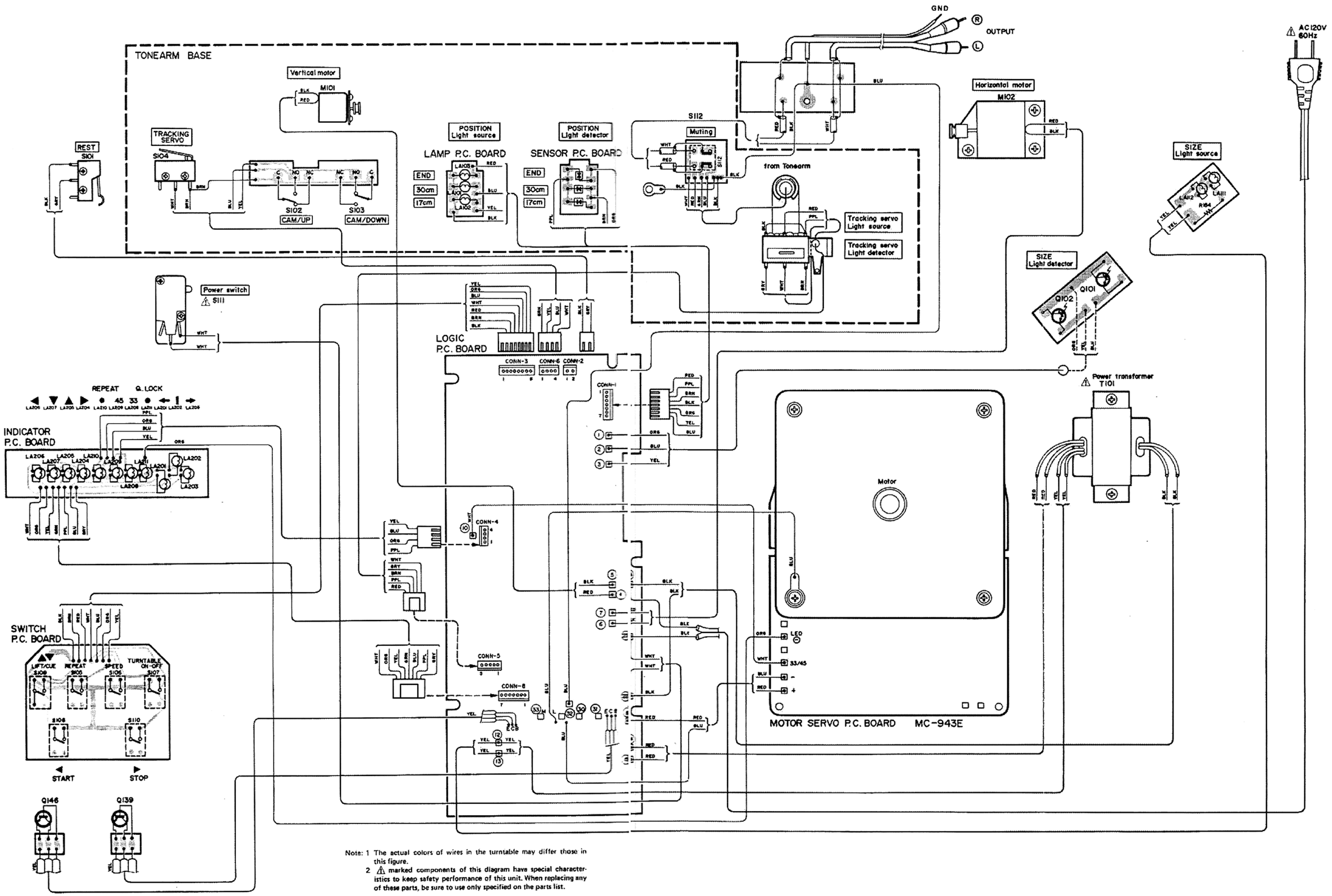
## SCHEMATIC DIAGRAM




Notes)
1. Capacitor and Resistor units
   C.....no-symbol : μF
   P symbol : pF
   R.....no-symbol : Ω
   K symbol : kΩ
2. All resistors are carbon 1/4W unless otherwise specified.
3. IC101 .....TC4011BP
   IC103,104,105 .....MnC4558C
   Unspecified transistors ...2SC1740
   Diodes.....1S2473
4. Tonearm is at the position of rest. The voltage value of the motor servo circuit is that given when revolution of the turntable is 33-1/3 r.p.m.
5. The voltages are the values measured with a 20kΩ/V voltmeter.
6. ⚠ and ▨ marked components of this diagram have special characteristics to maintain the safety performance of this unit. When replacing any of these parts, be sure to use only exact replacement parts from the parts list.
7. This schematic is the basic schematic diagram and the constants are subject to change due to improvements.

Note)
* Marked: Metal Film Resistor

## WIRING DIAGRAM




Note: 1 The actual colors of wires in the turntable may differ those in this figure.
2 ⚠ marked components of this diagram have special characteristics to keep safety performance of this unit. When replacing any of these parts, be sure to use only specified on the parts list.

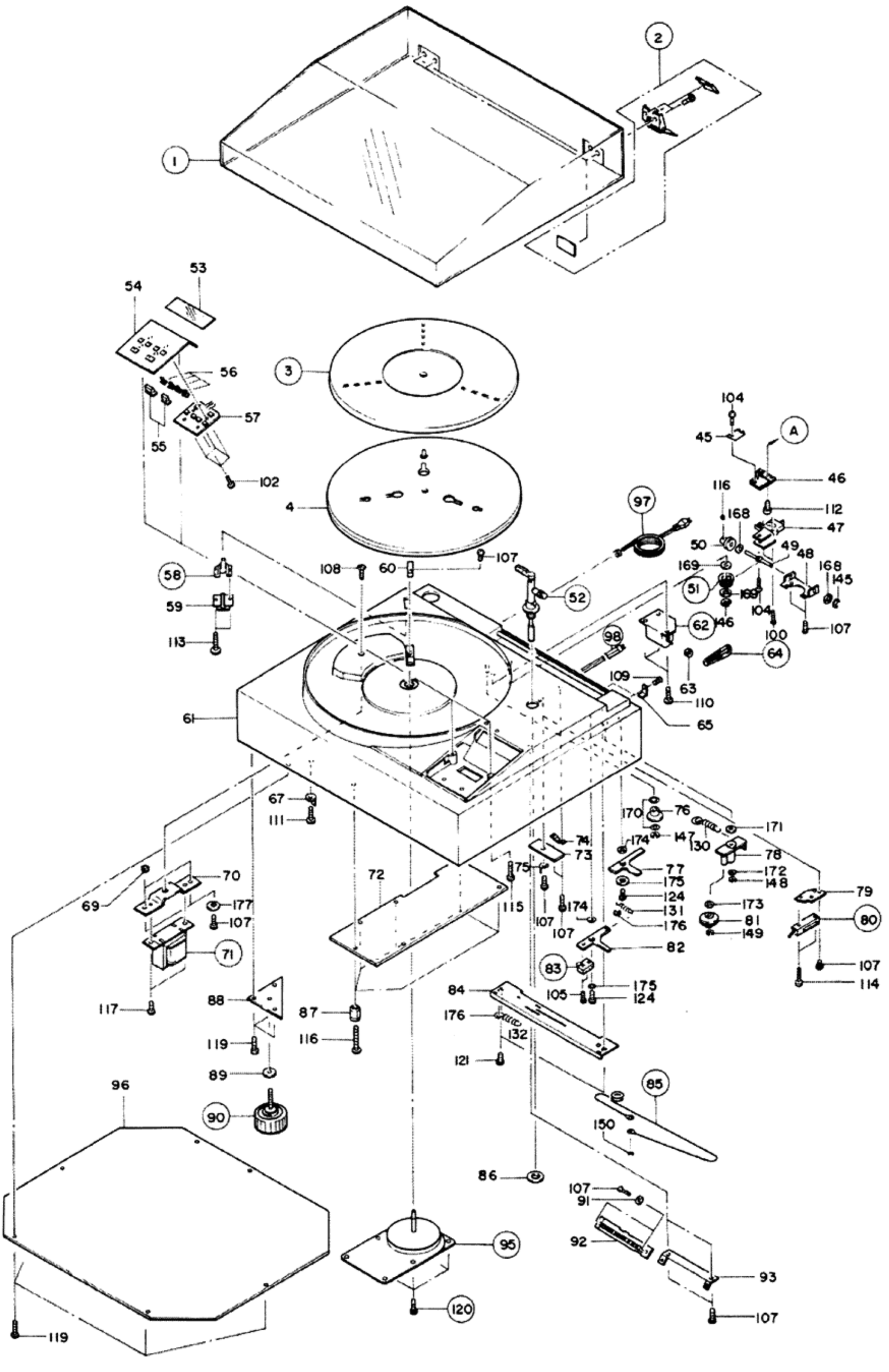
## PARTS LIST

**NOTE:** ⚠ and [redacted] marked components on parts list have special characteristics to keep safety performance of this unit. When replacing any of these parts, be sure to use only specified parts.

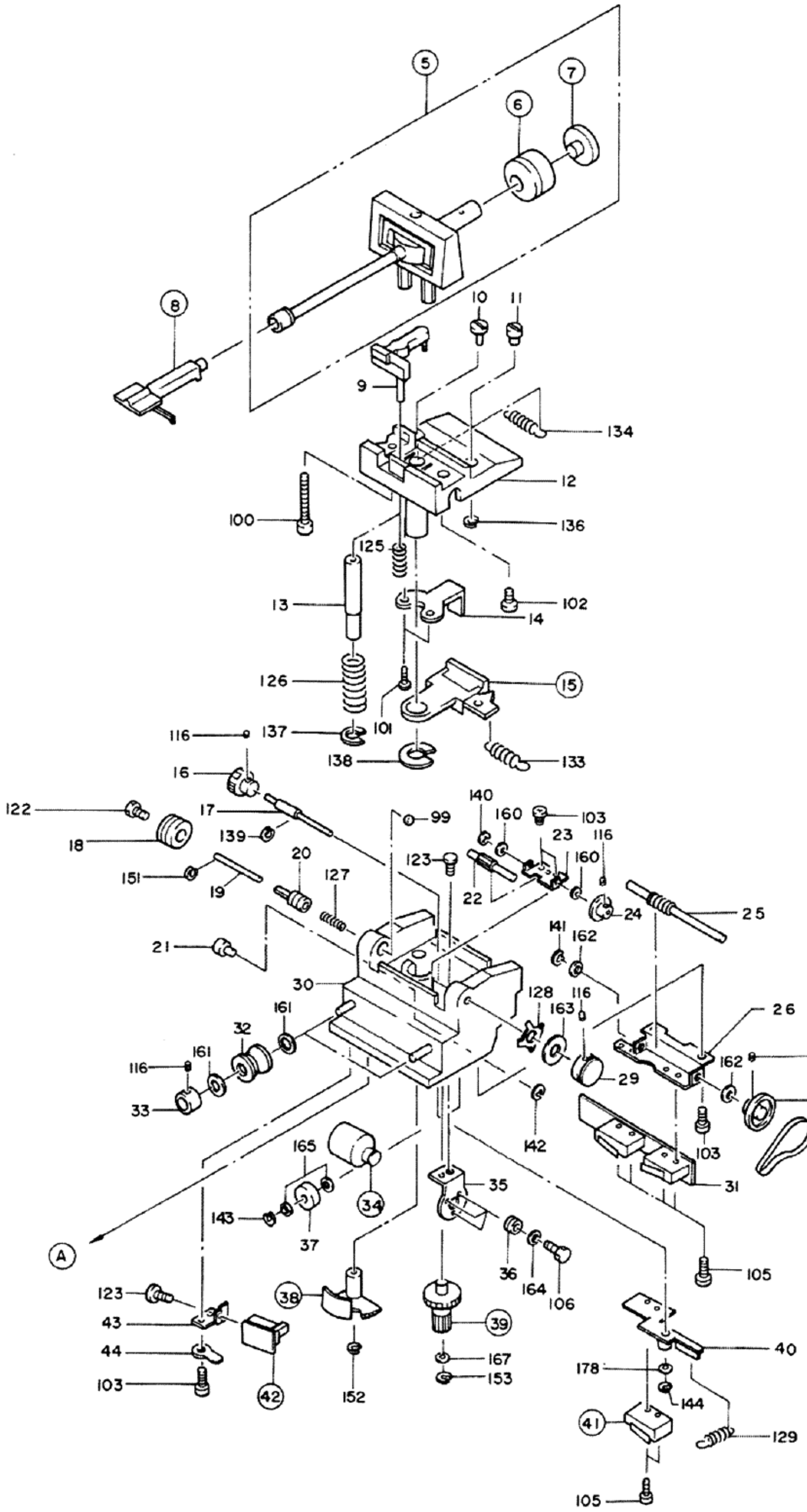
| Symbol No. | Parts No. | Description |
|---|---|---|
| **Transistors** | | |
| Q101 | M07137303 | PH-101 |
| Q102 | M07137303 | PH-101 |
| Q103 | M05104313 | 2SC1740 |
| Q104 | M05104313 | 2SC1740 |
| Q105 | M07137308 | 2SA854 |
| Q106 | M07137308 | 2SA854 |
| Q107 | M05104313 | 2SC1740 |
| Q108 | M05104313 | 2SC1740 |
| Q109 | M05104313 | 2SC1740 |
| Q110 | M05104313 | 2SC1740 |
| Q111 | M07137307 | 2SC1741 |
| Q112 | M07137308 | 2SA854 |
| Q113 | M05104313 | 2SC1740 |
| Q114 | M05104313 | 2SC1740 |
| Q115 | M07137307 | 2SC1741 |
| Q116 | M07137308 | 2SA854 |
| Q117 | M05104313 | 2SC1740 |
| Q118 | M07137307 | 2SC1741 |
| Q119 | M07137308 | 2SA854 |
| Q120 | M05104313 | 2SC1740 |
| Q121 | M07137307 | 2SC1741 |
| Q122 | M07137308 | 2SA854 |
| Q123 | M05104313 | 2SC1740 |
| Q124 | M05104313 | 2SC1740 |
| Q129 | M07137306 | 2SA826 |
| Q130 | M05104313 | 2SC1740 |
| Q131 | M07137307 | 2SC1741 |
| Q132 | M07137308 | 2SA854 |
| Q133 | M07137306 | 2SA826 |
| Q134 | M05104313 | 2SC1740 |
| Q135 | M07137307 | 2SC1741 |
| Q136 | M07137308 | 2SA854 |
| Q137 | M05104313 | 2SC1740 |
| Q138 | M05104313 | 2SC1740 |
| Q139 | M07462303 | 2SD381 |
| Q140 | M05104313 | 2SC1740 |
| Q141 | M05104313 | 2SC1740 |
| Q142 | M05104313 | 2SC1740 |
| Q143 | M05104313 | 2SC1740 |
| Q144 | M05104313 | 2SC1740 |
| Q146 | M07462303 | 2SD381 |
| Q147 | M05104313 | 2SC1740 |
| Q148 | M07462304 | 2SB536 |
| Q150 | M05104313 | 2SC1740 |
| Q201 | M05104313 | 2SC1740 |
| Q202 | M05104313 | 2SC1740 |
| Q203 | M05104313 | 2SC1740 |
| Q204 | M05104313 | 2SC1740 |
| Q205 | M05104313 | 2SC1740 |
| Q206 | M05104313 | 2SC1740 |
| Q207 | M05104313 | 2SC1740 |
| X 1 | M07299301 | 2SC2001 |
| **Diodes** | | |
| D 1 | M07297323 | 1SS53 |
| D101 | M07297320 | SP254FS |
| D102 | M07297320 | SP254FS |
| D103 | M07297320 | SP254FS |
| D104 | M07060320 | 1S2473VE |
| D105 | M07060320 | 1S2473VE |
| D107 | M07297320 | SP254FS |
| D108 | M07297320 | SP254FS |
| D109 | M07060320 | 1S2473VE |
| D110 | M07060320 | 1S2473VE |
| D111 | M07060320 | 1S2473VE |
| D112 | M07060320 | 1S2473VE |
| D113 | M07288320 | MZ324 |
| D114 | M07171322 | MZ310 |
| D115 | M07391320 | 1SR34-100 |
| D116 | M07391320 | 1SR34-100 |
| D117 | M07391320 | 1SR34-100 |
| D118 | M07391320 | 1SR34-100 |
| D119 | M07391320 | 1SR34-100 |
| D120 | M07391320 | 1SR34-100 |
| D121 | M07391320 | 1SR34-100 |
| D122 | M07391320 | 1SR34-100 |
| D201 | M07060320 | 1S2473VE |
| D202 | M07060320 | 1S2473VE |
| D203 | M07060320 | 1S2473VE |
| **ICs** | | |
| IC 1 | M07437344 | VC5021 |
| IC 2 | M07437346 | VC4046 |
| IC 3 | M07314313 | NJM4558DD |
| IC101 | M07297343 | TC4011BP |
| IC102 | M07437343 | MSM-5831RS |
| IC103 | M07370343 | MPC4558C |
| IC104 | M07370343 | MPC4558C |
| IC105 | M07370343 | MPC4558C |
| **Miscellaneous** | | |
| S101 | M07297450 | Micro switch (Rest) |
| S102 | M05129431 | Micro switch (Cam/up) |
| S103 | M05129431 | Micro switch (Cam/down) |

| Symbol No. | Parts No. | Description |
|---|---|---|
| S104 | M05129431 | Micro switch (Tracking servo) |
| S105 | M07445660 | Push switch (Repeat) |
| S106 | M07445660 | Push switch (speed) |
| S107 | M07445660 | Push switch (T/T ON-OFF) |
| S108 | M07445660 | Push switch (Start) |
| S109 | M07445660 | Push switch (Lift/Cue) |
| S110 | M07445660 | Push switch (Stop) |
| S112 | M07445661 | Slide switch (Muting) |
| VR201 | M05104360 | Variable resistor (220kΩ-B) |
| VR202 | M05104360 | Variable resistor (220kΩ-B) |
| LA101 | M07374251 | Lamp 12V 0.05A |
| LA102 | M07374251 | Lamp 12V 0.05A |
| LA103 | M07374251 | Lamp 12V 0.05A |
| LA104 | M07374251 | Lamp 12V 0.05A |
| LA105 | M07374251 | Lamp 12V 0.05A |
| LA111 | M07297250 | Lamp 5V 0.06A |
| LA112 | M07297250 | Lamp 5V 0.06A |
| LA201 | M07374251 | Lamp 12V 0.05A |
| LA202 | M07374251 | Lamp 12V 0.05A |
| LA203 | M07374251 | Lamp 12V 0.05A |
| LA204 | M07374251 | Lamp 12V 0.05A |
| LA205 | M07374251 | Lamp 12V 0.05A |
| LA206 | M07374251 | Lamp 12V 0.05A |
| LA207 | M07374251 | Lamp 12V 0.05A |
| LA208 | M07374251 | Lamp 12V 0.05A |
| LA209 | M07374251 | Lamp 12V 0.05A |
| LA210 | M07374251 | Lamp 12V 0.05A |
| LA211 | M07374251 | Lamp 12V 0.05A |
| RL101 | M07215465 | Relay |
| | | |
| 201 | M07469931 | Parts bag (For dust cover) |
| 202 | M07469910 | Cushion-mold |
| 203 | M07486930 | Packing bag |
| 204 | M07490900 | Packing box |
| 205 | M07469911 | Cushion-Assy |
| | M07137603 | Adapter (Accessory) |
| | M07137011 | Driver (Accessory) |
| | M07490012 | Stylus gauge (Accessory) |
| | M07469013 | Tracking angle gauge (Accessory) |
| 206 | U871B005H36 | Instruction book (I/B) |

## EXPLODED VIEW
## CABINET



# EXPLODED VIEW
# TONEARM



## MECHANICAL PARTS DESCRIPTION

**NOTE:** Encircled parts are prepared as a servicing parts.

| Symbol No. | Parts No. | Description |
|---|---|---|
| ① | M07486690 | **Dust cover** |
| ② | M07469772 | **Hinge-Assy** |
| ③ | M07490757 | **Platter mat** |
| 4 | | Platter |
| ⑤ | M07486610 | **Tonearm** (With main weight and sub weight) |
| ⑥ | M07469635 | **Main weight** |
| ⑦ | M07469936 | **Sub weight** |
| ⑧ | M07490734 | **Head shell-Assy** |
| 9 | | Arm lifter |
| 10 | | Screw |
| 11 | | Pin |
| 12 | | Arm base (Upper) |
| 13 | | Post |
| 14 | | Holder-L |
| ⑮ | M07490320 | **Diode-Assy** (For tonearm) |
| 16 | | Gear |
| 17 | | Shaft |
| 18 | | Knob |
| 19 | | Shaft |
| 20 | | Screw |
| 21 | | Pin |
| 22 | | Gear |
| 23 | | Holder |
| 24 | | Pulley |
| 25 | | Shaft-Assy |
| 26 | | Holder |
| 27 | | Pulley |
| ㉘ | M07496629 | **Belt** (For Tonearm) |
| 29 | | Knob |
| 30 | | Arm base (Lower) |
| 31 | | P.C.B.-Assy |
| 32 | | Pulley |
| 33 | | Boss |
| ㉞ | M07496638 | **Motor** (M101: Vertical drive) |
| 35 | | Holder |
| 36 | | Rubber bush |
| 37 | | Pulley |
| ㊳ | M07469647 | **Cam** (Vertical drive) |
| ㊴ | M07469646 | **Gear** (Vertical drive) |
| 40 | | Holder |
| ㊶ | M05129431 | **Micro switch** (S104) |
| 42 | | P.C.B.-Assy (Muting SW.) |
| 43 | | Holder |
| 44 | | Lug terminal |
| 45 | | P.C.B.-Assy (Lamp P.C.B.) |
| 46 | | Holder |
| 47 | | Holder |
| 48 | | Holder |
| 49 | | Shaft-Assy |
| 50 | | Pulley |

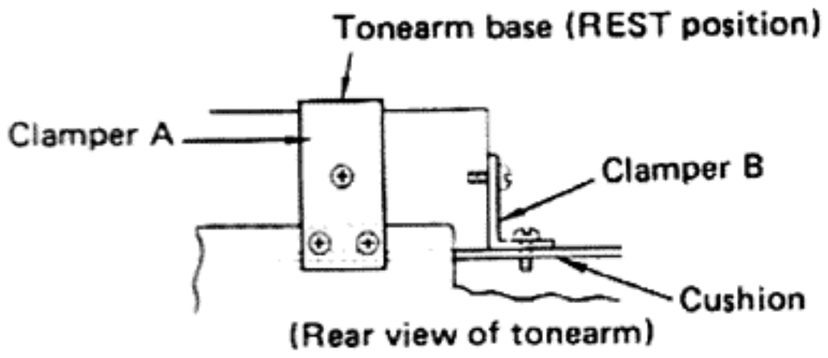
| Symbol No. | Parts No. | Description |
|---|---|---|
| ㊶ | M07469645 | **Gear** (Horizontal drive) |
| ㊷ | M07469618 | **Arm rest-Assy** |
| 53 | | Cover |
| 54 | U712C187G02 | Panel-Assy |
| 55 | | Knob |
| 56 | | Knob |
| 57 | | P.C.B.-Assy (Switch P.C.B.) |
| ㊽ | M07469605 | **Reflector** |
| 59 | | Holder |
| 60 | | P.C.B.-Assy |
| 61 | | Cabinet |
| ㊷ | M07469639 | **Motor** (Horizontal drive) |
| 63 | | Pulley |
| ㊹ | M07469628 | **Belt** |
| 65 | | Holder-L |
| 66 | | — |
| 67 | | Lug terminal |
| 68 | | — |
| 69 | | Rubber bush |
| 70 | | Holder |
| ㊶ | M07490549 | **Trans-power** |
| 72 | | P.C.B.-Assy (Logic P.C.B.) |
| 73 | | P.C.B.-Assy (Output P.C.B.) |
| 74 | | Holder |
| 75 | | Lug terminal |
| 76 | | Pulley |
| 77 | | Lever |
| 78 | | Lever-Assy |
| 79 | | Holder |
| ㊸ | M07179660 | **Micro switch** (S111: Power) |
| 81 | | Pulley |
| 82 | | Lever |
| ㊸ | M07297450 | **Micro switch** (S101) |
| 84 | | Slit plate |
| ㊺ | M07490686 | **Wire** |
| 86 | | Nut |
| 87 | | Boss |
| 88 | | Holder-F |
| 89 | | Rubber washer |
| ㊿ | M08486694 | **Leg** |
| 91 | | Washer |
| 92 | | P.C.B.-Assy (Indicator P.C.B.) |
| 93 | | Holder |
| 94 | | — |
| ㊺ | M07486637 | **Phono motor** (MC-943E) |
| 96 | | Bottom plate |
| ㊼ | M07475440 | **Power cord** |
| ㊽ | M07490680 | **Output cord** |
| 99 | | Pointer |
| 100 | | Bind head screw M3 x 20 |
| 101 | | Bind head screw M2 x 3 |

| Symbol No. | Parts No. | Description |
|---|---|---|
| 102 | | Bind head screw M3 x 6 |
| 103 | | Bind head screw M3 x 5 |
| 104 | | Bind head screw M2.6 x 4 |
| 105 | | Bind head screw M2 x 8 |
| 106 | | Bind head screw M2 x 5 |
| 107 | | Tapping-screw 2 - 3 x 8 |
| 108 | | Bind head screw M4 x 12 |
| 109 | | Screw-F M3 x 6 |
| 110 | | Screw-metal |
| 111 | | Tapping-screw 1 - 3 x 14 |
| 112 | | Bind head screw M3 x 8 |
| 113 | | Screw-metal 3 x 16 |
| 114 | | Bind head screw M3 x 16 |
| 115 | | Screw-metal |
| 116 | | Screw M2.6 x 3 |
| 117 | | Bind head screw M4 x 6 |
| 118 | | — |
| 119 | | Tapping-screw 1 - 3 x 16 |
| 120 | | Bind head screw M5 x 8 |
| 121 | | Screw-metal M3 x 6 |
| 122 | | Screw-metal |
| 123 | | Bind head screw M2.6 x 5 |
| 124 | | Screw-metal M3 x 5 |
| 125 | | Spring |
| 126 | | Spring |
| 127 | | Spring |
| 128 | | Spring |
| 129 | | Spring |
| 130 | | Spring |
| 131 | | Spring |
| 132 | | Spring |
| 133 | | Spring |
| 134 | | Spring |
| 135 | | — |
| 136 | | E-ring |
| 137 | | E-ring |
| 138 | | E-ring |
| 139 | | E-ring |
| 140 | | E-ring |
| 141 | | E-ring |
| 142 | | E-ring |
| 143 | | E-ring 2.4 |
| 144 | | E-ring |
| 145 | | E-ring 1.5 |
| 146 | | E-ring |
| 147 | | E-ring |
| 148 | | E-ring |
| 149 | | E-ring |
| 150 | | E-ring |
| 151 | | E-ring 1.2 |
| 152 | | E-ring |

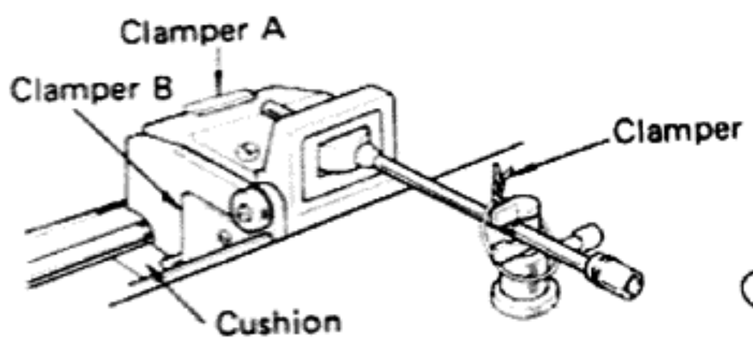
| Symbol No. | Parts No. | Description |
|---|---|---|
| 153 | | E-ring 2.4 |
| 154 | | — |
| 155 | | — |
| 156 | | — |
| 157 | | — |
| 158 | | — |
| 159 | | — |
| 160 | | Washer |
| 161 | | Washer |
| 162 | | Washer |
| 163 | | Washer |
| 164 | | Washer |
| 165 | | Washer-PL 3.1Φ |
| 166 | | Washer |
| 167 | | Washer-PL 3.1Φ |
| 168 | | Washer-PL 2.1Φ |
| 169 | | Washer-PL 2.1Φ |
| 170 | | Washer-PL 2.1Φ |
| 171 | | Washer-PL 2.1Φ |
| 172 | | Washer-PL 2.1Φ |
| 173 | | Washer-PL 2.1Φ |
| 174 | | Washer-PL 2.1Φ |
| 175 | | Washer-PL 2.1Φ |
| 176 | | Toothed lock washer |
| 177 | | Washer |
| 178 | | Washer |
| 179 | | — |
| 180 | | — |

## PACKING INSTRUCTION

- **Fasten the tonearm in place following the instructions given below.**




(Rear view of tonearm)




1) Place the tonearm in the REST position.
2) After switching off the power switch, tie the tonearm with the binder. Lock the tonearm height adjusting lock at the tonearm's lowest position.
3) Insert the cushion underneath the tonearm base and fasten the base with the clampers A and B. (Clamper A is fastened on by pushing it downward and seeing to it that the forward end of the metal makes contact with the tonearm base.)