

PS-LX55II

SERVICE MANUAL

*US Model
AEP Model
UK Model
E Model*



The PS-LX55II (AEP, UK, E Model) is supplied with a XL-250G cartridge, while the PS-LX55II (US Model) is not supplied with a cartridge.

SPECIFICATIONS

Turntable

Platter	30 cm (12 in.), aluminum-alloy diecast
Motor	Linear torque BSL (brushless and slotless) motor
Drive system	Direct drive
Control system	Quartz lock servo control system
Speed	33 $\frac{1}{3}$ rpm, 45 rpm
Wow and flutter	0.03% (WRMS)*, 0.035% (WRMS) $\pm 0.045\%$ (DIN)
Signal-to-noise ratio	75 dB (DIN-B)
Automatic system	Lead-in, return, repeat, reject, up/down, record size selection
Load characteristics	0% up to 1.5g tracking force (at lead-in groove of a record)
Speed deviation	Within $\pm 0.003\%$

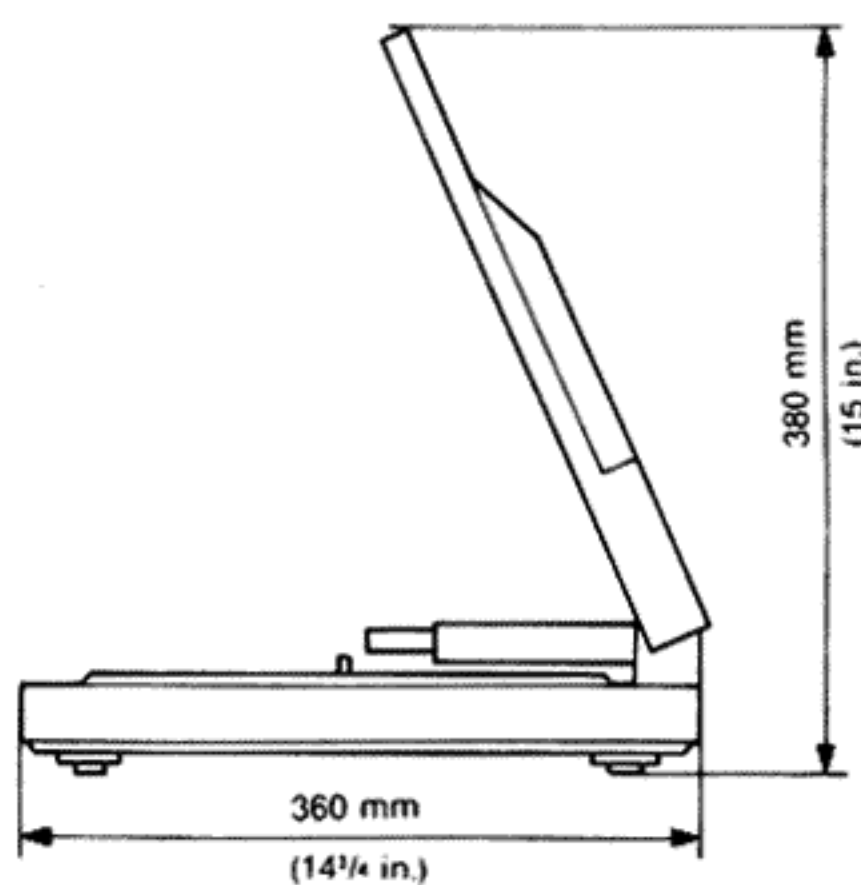
Tonearm

Type	Linear tracking tonearm
Pivot-to-stylus length	75 mm (3 in.)
Tracking error	$\pm 0.1^\circ$
Tracking force adjustment range	± 0.25 g
Usable cartridge	plug-in type, 6 g

General


Power requirements	120 V ac, 60 Hz (US model) 220 V ac, 50/60 Hz (AEP model) 240 V ac, 50/60 Hz (UK model) 110 – 120 V, 220 – 240 V ac, 50/60 Hz (E model)
Power consumption	10 W
Dimensions	Approx. 355 x 85 x 355 mm (w/h/d) (14 x 3 $\frac{3}{8}$ x 14 in.) including projecting parts and controls

With the dust cover opened.



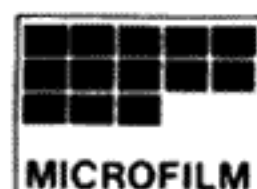
— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

STEREO TURNTABLE SYSTEM
SONY[®]

AUD



Weight **Approx. 5 kg (11 lbs 0 oz), net**
Approx. 6.1 kg (13 lbs 7 oz), in shipping
carton

Design and specifications subject to change without notice.

* This new measuring method concerns only the turntable assembly, including the platter. It excludes wow and flutter caused by the tonearm, the cartridge, or the record. Measured by obtaining signal from magnetic pick-up head.

Cartridge XL-250G (supplied only with AEP, E model)
Type: **Moving magnet**
Frequency Response: **10 Hz — 20 kHz**
Channel Separation: **23 dB at 1 kHz**
Output Voltage: **5 mV at 1 kHz, 5 cm/sec., 45°**
Load Impedance: **50 kΩ — 100 kΩ**
Tracking Force: **1.0 — 1.5 g (1.25 g recommended)**
Stylus: **Sony ND-250G**
Weight: **6 g**

FEATURES

Linear tracking tonearm

Compared with a pivoted tonearm, a linear tracking arm has a very small tracking error (which means greatly reduced harmonic distortion) and almost no pressure on the inside wall of the groove (which means improved tracking ability and channel separation).

Front panel operation with the dust cover closed

The ARM TRANSPORT buttons allow you to move the tonearm easily over the desired point of the record with the dust cover closed. Start/stop of the record play and tonearm up/down can also be controlled using the buttons on the front panel.

Fully automatic system

The movement of the turntable and the tonearm is controlled by a microcomputer and is activated by the "feather-touch" function buttons on the front panel.

Automatic record size selection

The record size is automatically set by a photo sensor system. If no record is on the turntable, the tonearm will not descend but will automatically return to the arm rest.

Muting system

A muting system activates when the tonearm is lifted and is deactivated after the tonearm lowers onto a record so there is no need to turn the amplifier volume down every time a stylus is placed on a record.

Quartz lock servo system

The turntable maintains an accurate and drift-free speed by referring to a frequency generated by a very stable quartz oscillator.

Linear torque BSL motor

Direct drive system with Sony's unique BSL (brushless and slotless) motor which has an extremely low noise level and whose smoothness virtually eliminates wow and flutter. Its high torque assures a quick start to 33 1/3 rpm after only a half revolution.

Synchronized operation with the Sony cassette decks

When the tonearm lowers onto the lead-in groove of a record, the cassette deck stand-by mode is released and the record mode assumed. This synchronized operation is possible with Sony cassette decks equipped with a four-pin remote control jack which is connected with the Sony RM-65 synchro remote control unit.

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

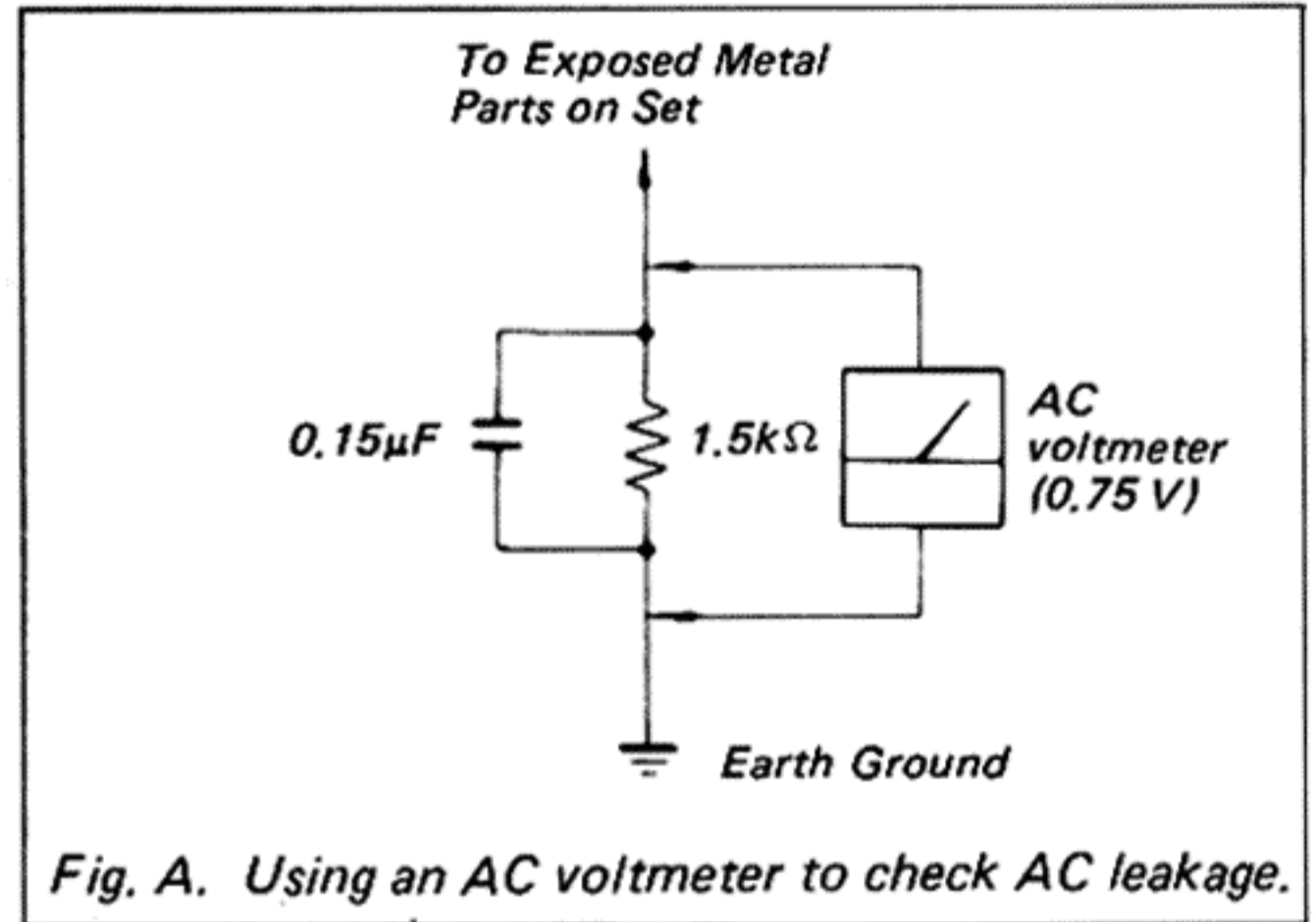
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

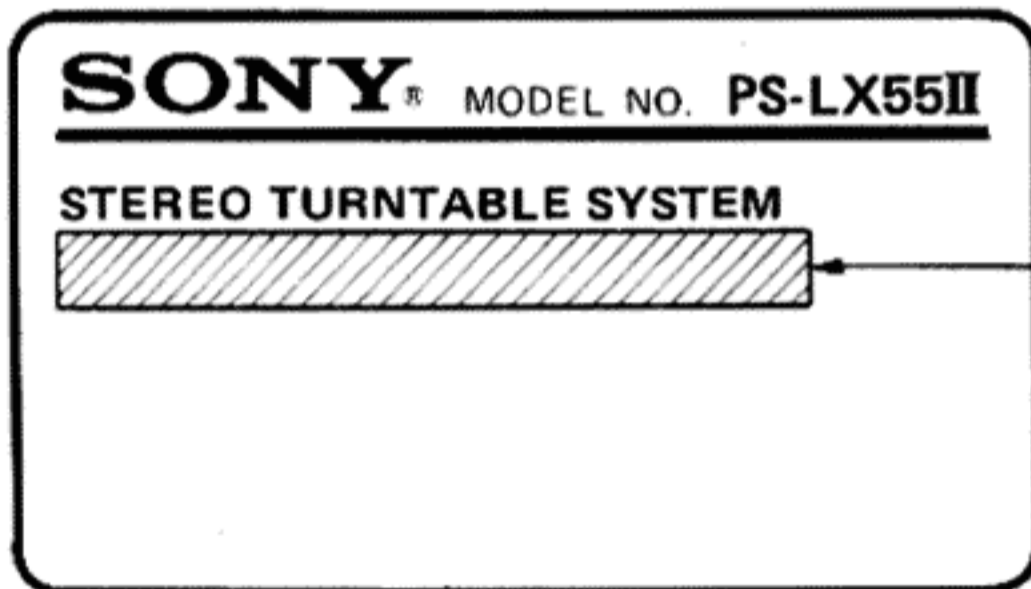
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



MODEL IDENTIFICATION

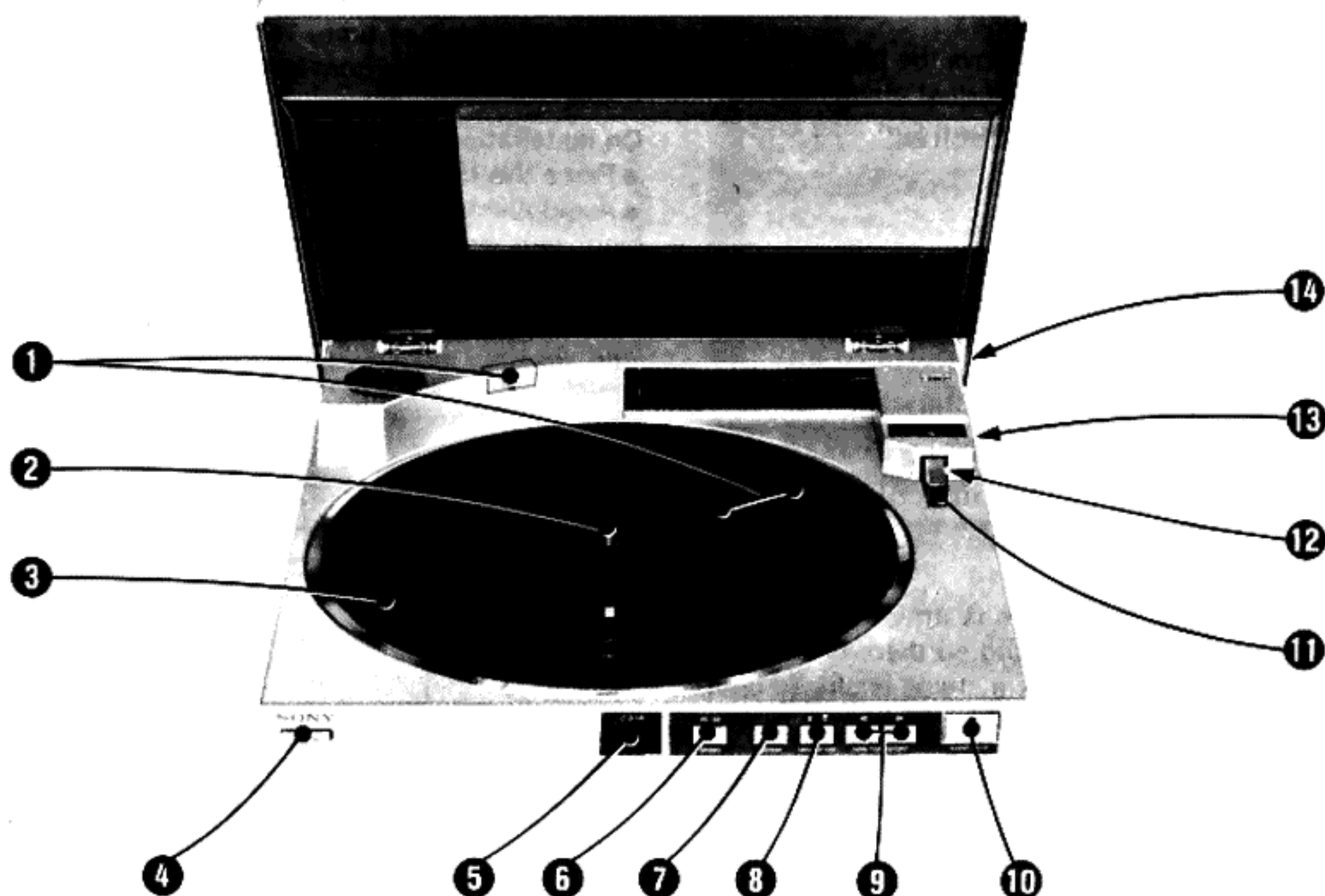
— Specification Label —



US	: AC: 120 V 60 Hz 10 W
AEP	: AC: 220 V ~ 50/60 Hz 10 W
UK	: AC: 240 V ~ 50/60 Hz 10 W
E	: AC: 110 - 220 V, 120 - 240 V ~ 50/60 Hz 10 W

LOCATION AND FUNCTION OF CONTROLS

The photo shows the assembled turntable.
Each number in the text is keyed to that of the photo.



❶ Auto-record-size selection holes and lamp

❷ Center spindle

❸ Rubber mat

❹ POWER switch

Press to turn on the turntable. To turn the turntable off, press it again.

❺ QUARTZ LOCK indicator

The indicator illuminates in green when the turntable rotation is locked to the nominal speed by the quartz lock control system. The indicator goes out when the turntable rotation is out of the nominal speed.

❻ SPEED selector and indicators

Selects the record speed. When the POWER switch is turned on, the speed is always 33 $\frac{1}{3}$ rpm and the indicator on the right illuminates. When the selector is pressed, 45 rpm is selected and the indicator on the left illuminates.

❼ REPEAT button and indicator

Press this button to repeat play. The indicator illuminates and repeat play continues until this button is pressed to stop it. If the START/STOP button is pressed during repeat play, the tonearm returns to the arm rest and the turntable stops rotating.

❽ ARM LIFTER button

This button lifts and lowers the tonearm. When the tonearm is on the arm rest, it cannot be lifted up with this button.

❾ ARM TRANSPORT buttons

To move the tonearm inwards, press the ◀ button. To move it outwards, press the ▶ button. The tonearm is raised automatically and continues to move while the button is depressed. The tonearm will stop when the button is released. For fine adjustment of the tonearm drop-point over a record, press and immediately release the appropriate button. This button is useful for beginning a record partway through, or for skipping to another selection.

❿ START/STOP button and indicator

Press this button to start the record playing, and the indicator illuminates. To stop during play, press it again.

⓫ Cartridge (Sony VL-45G, optional)

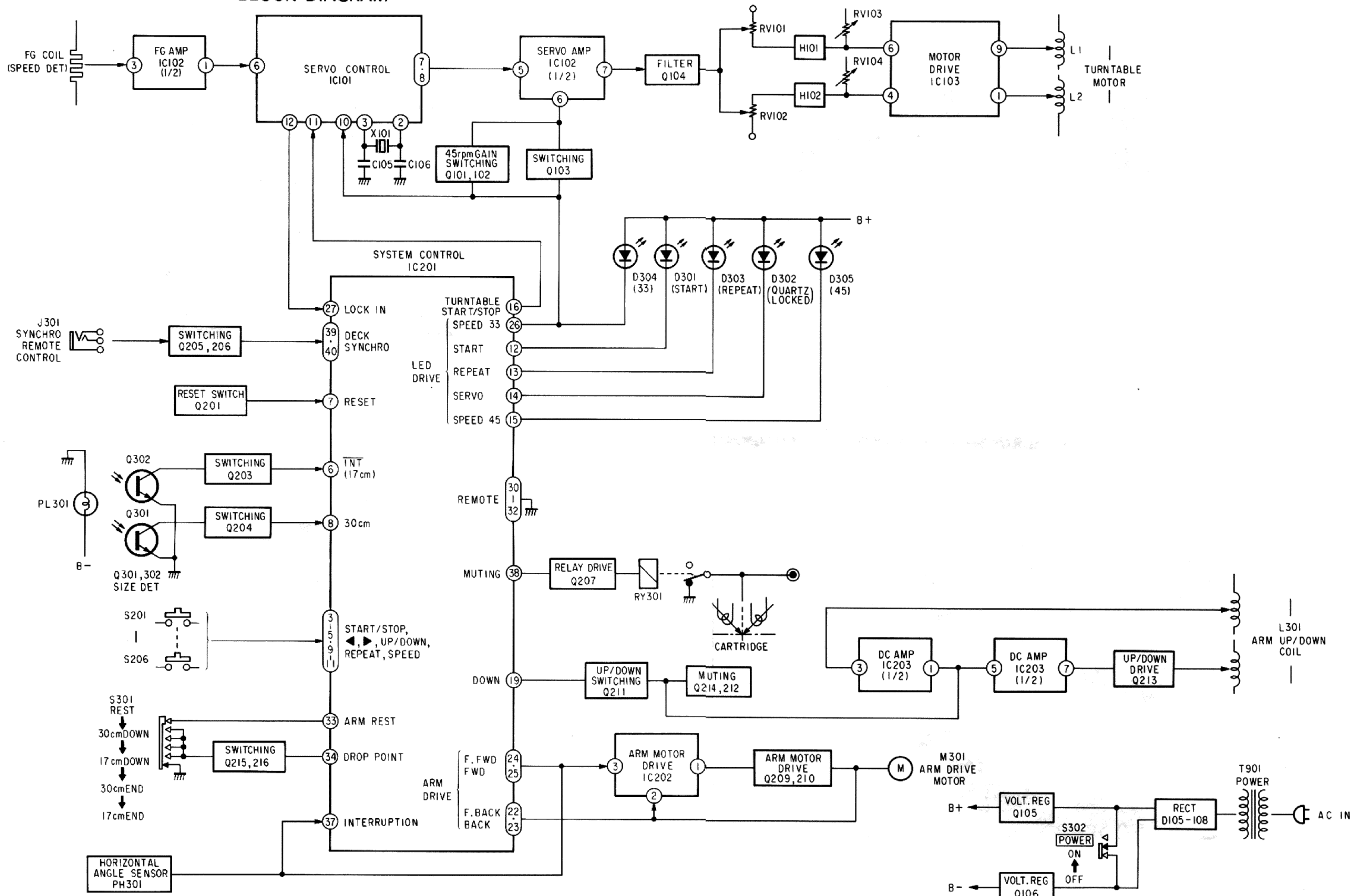
⓬ Cartridge locking screw

⓭ Tracking force adjustment lever

⓮ Synchro remote control jack (rear)

Synchronized recording from disc to tape is possible on specified Sony cassette decks by using the optional RM-65 synchro remote control unit.

SECTION 1 BLOCK DIAGRAM



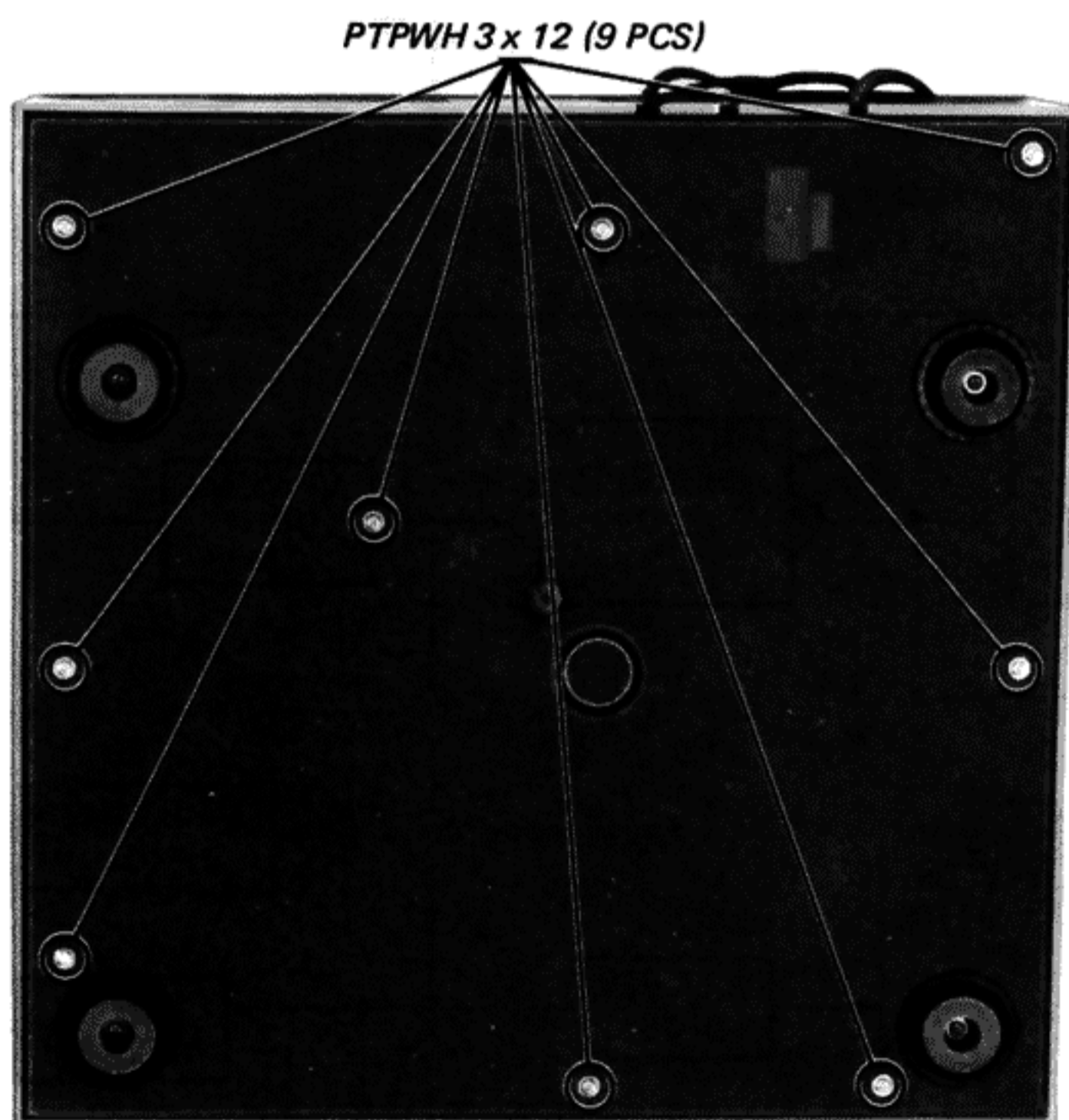
SECTION 2 DISASSEMBLY

2-1. REMOVAL **Note:** Follow the disassembly procedure in the numerical order given.

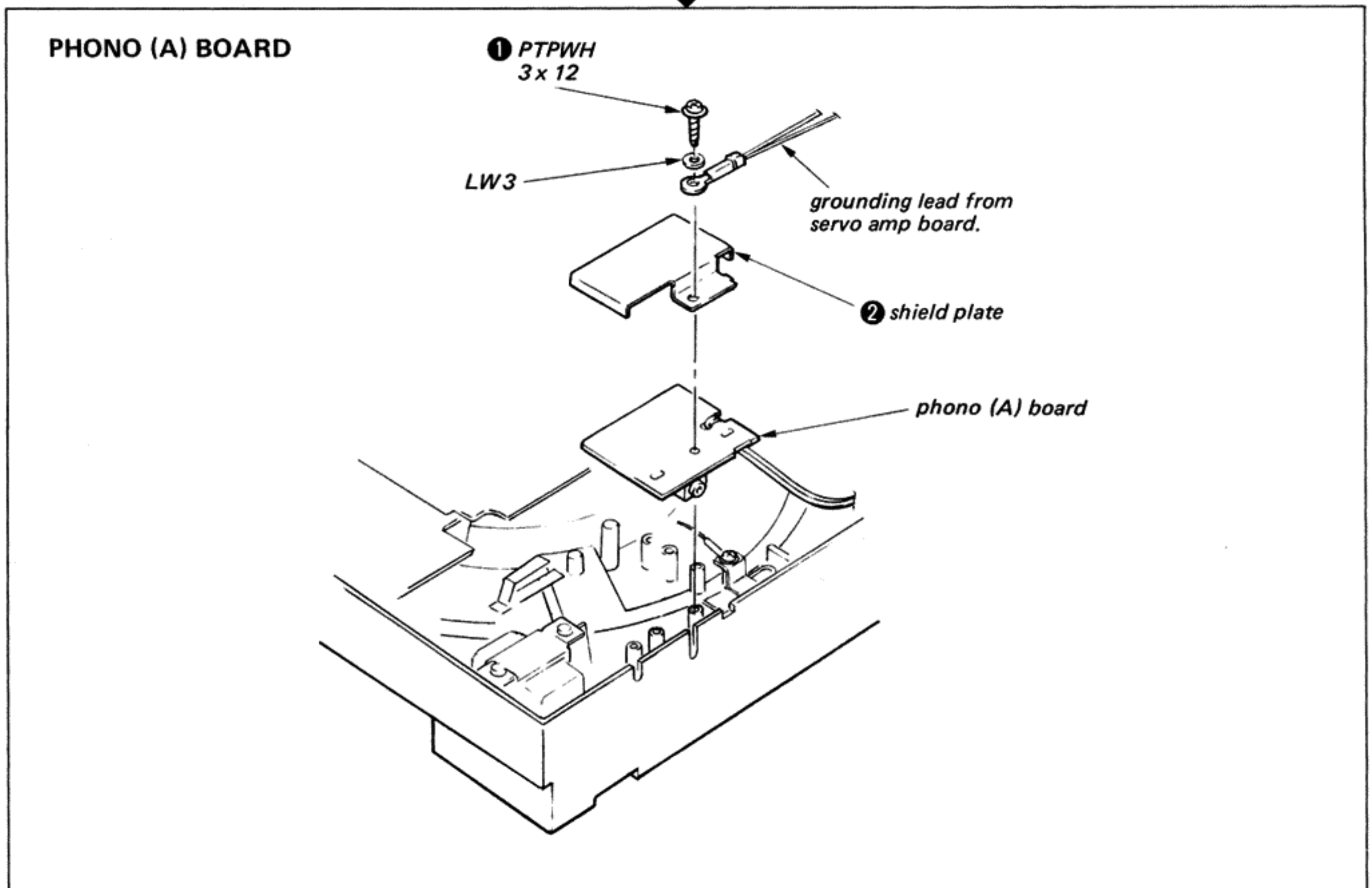
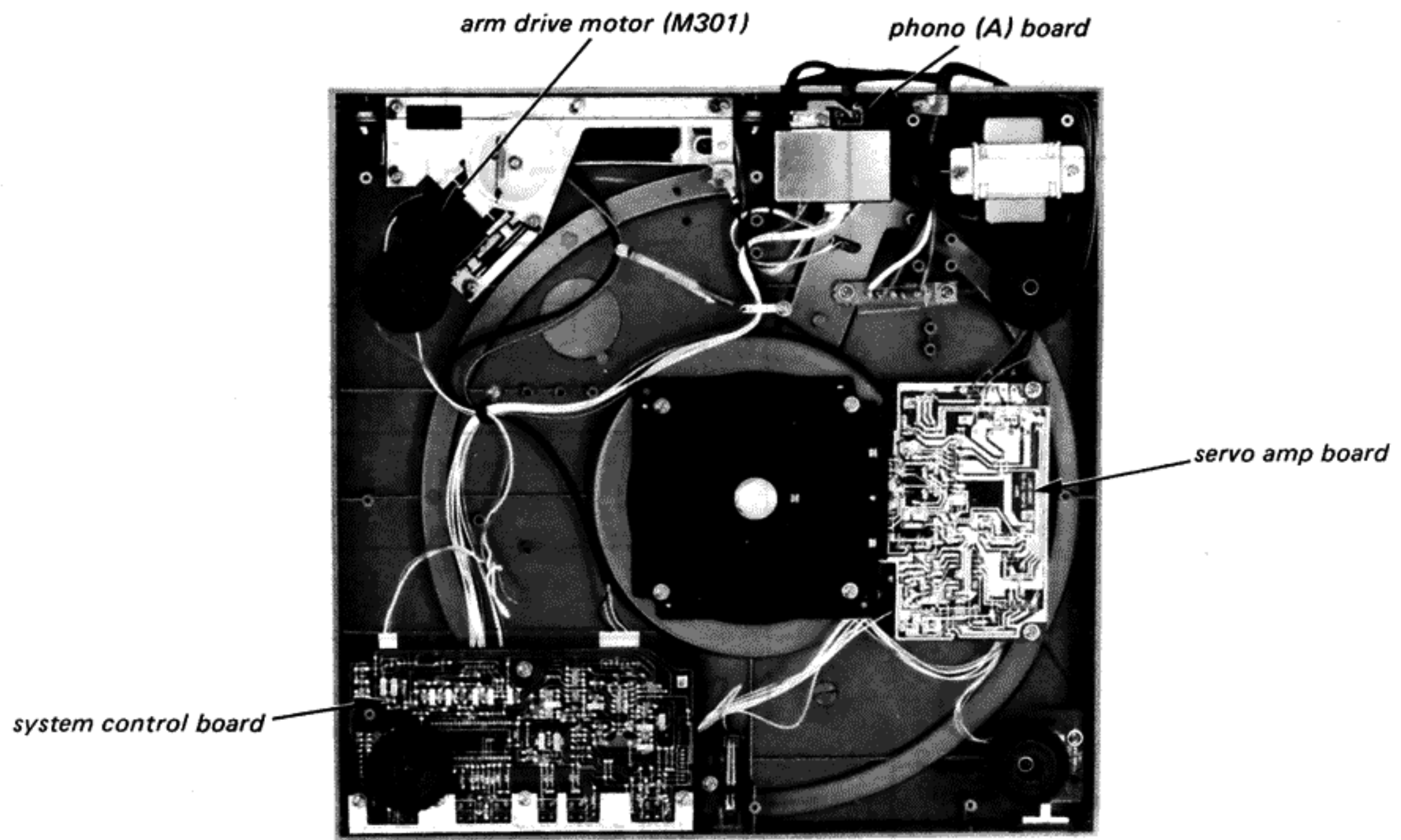
DUST COVER/TURNTABLE



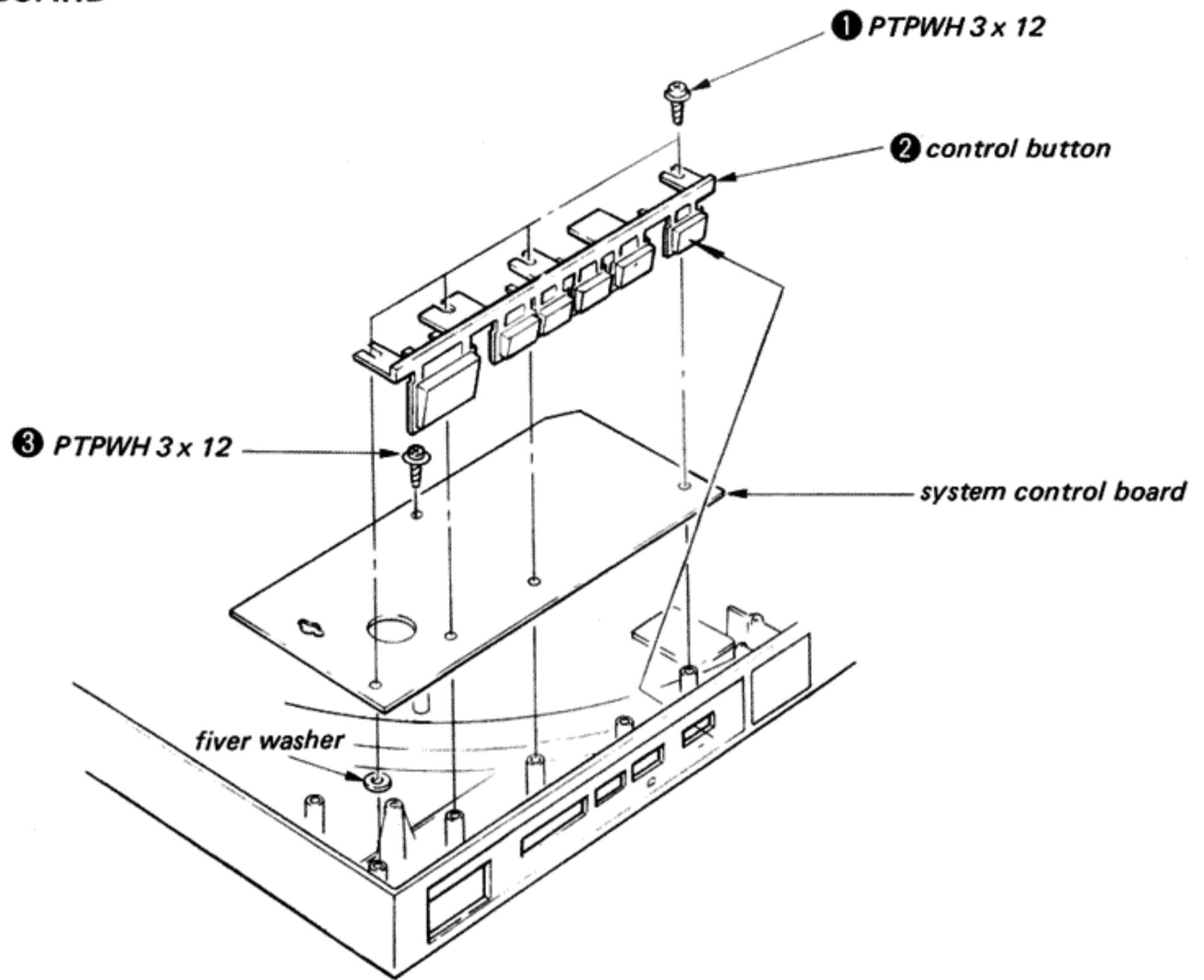
BOTTOM PLATE



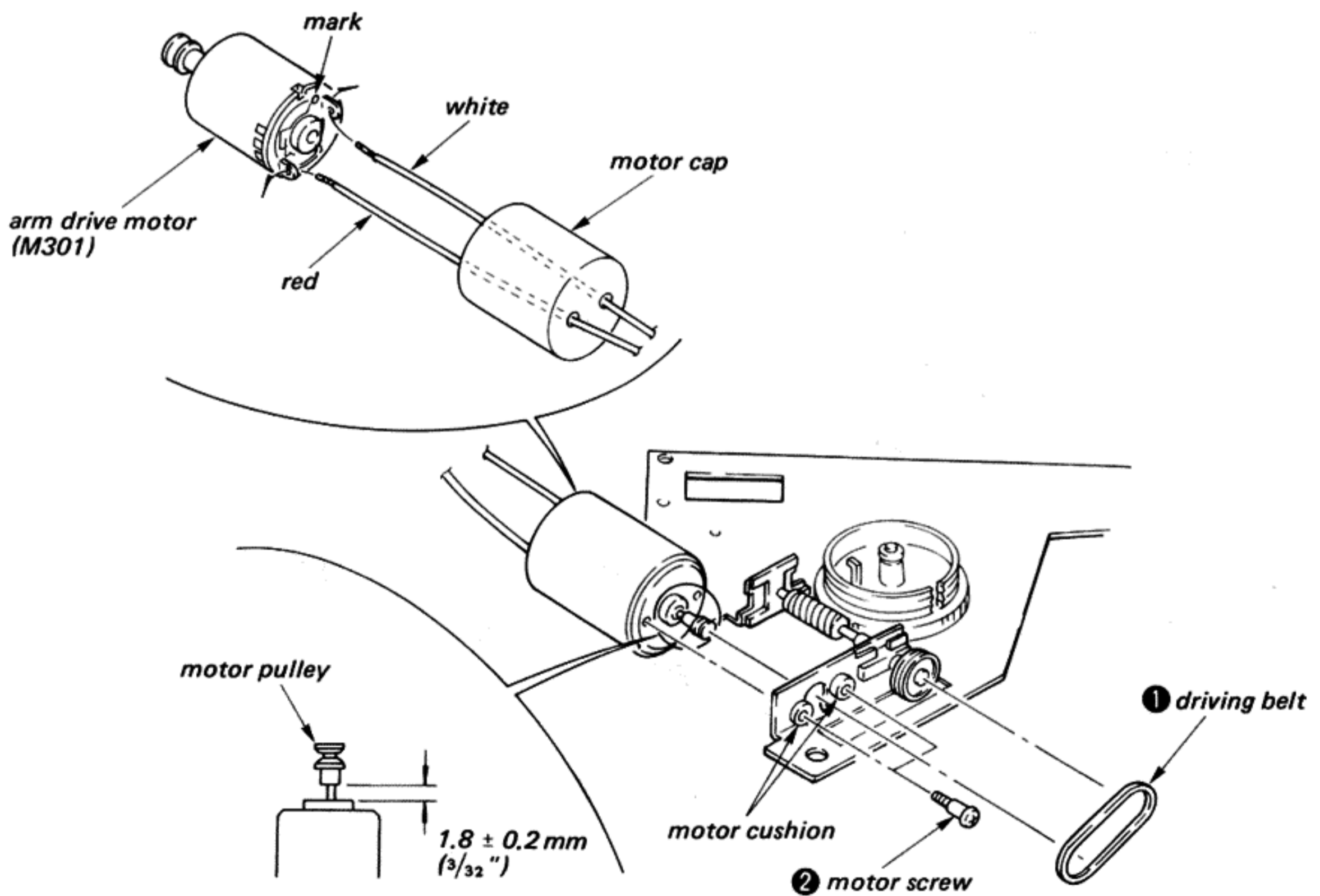
—With bottom plate removed—



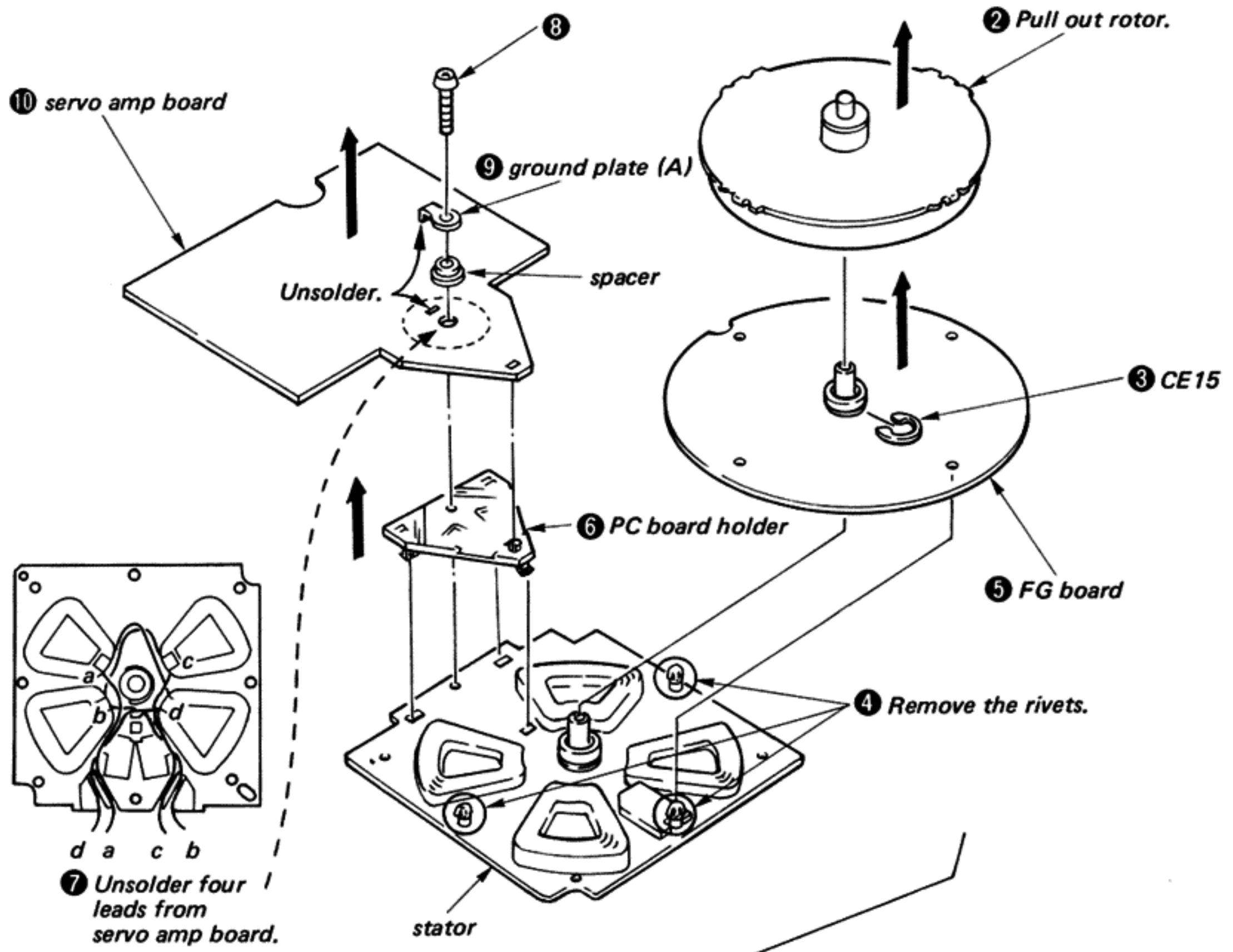
SYSTEM CONTROL BOARD



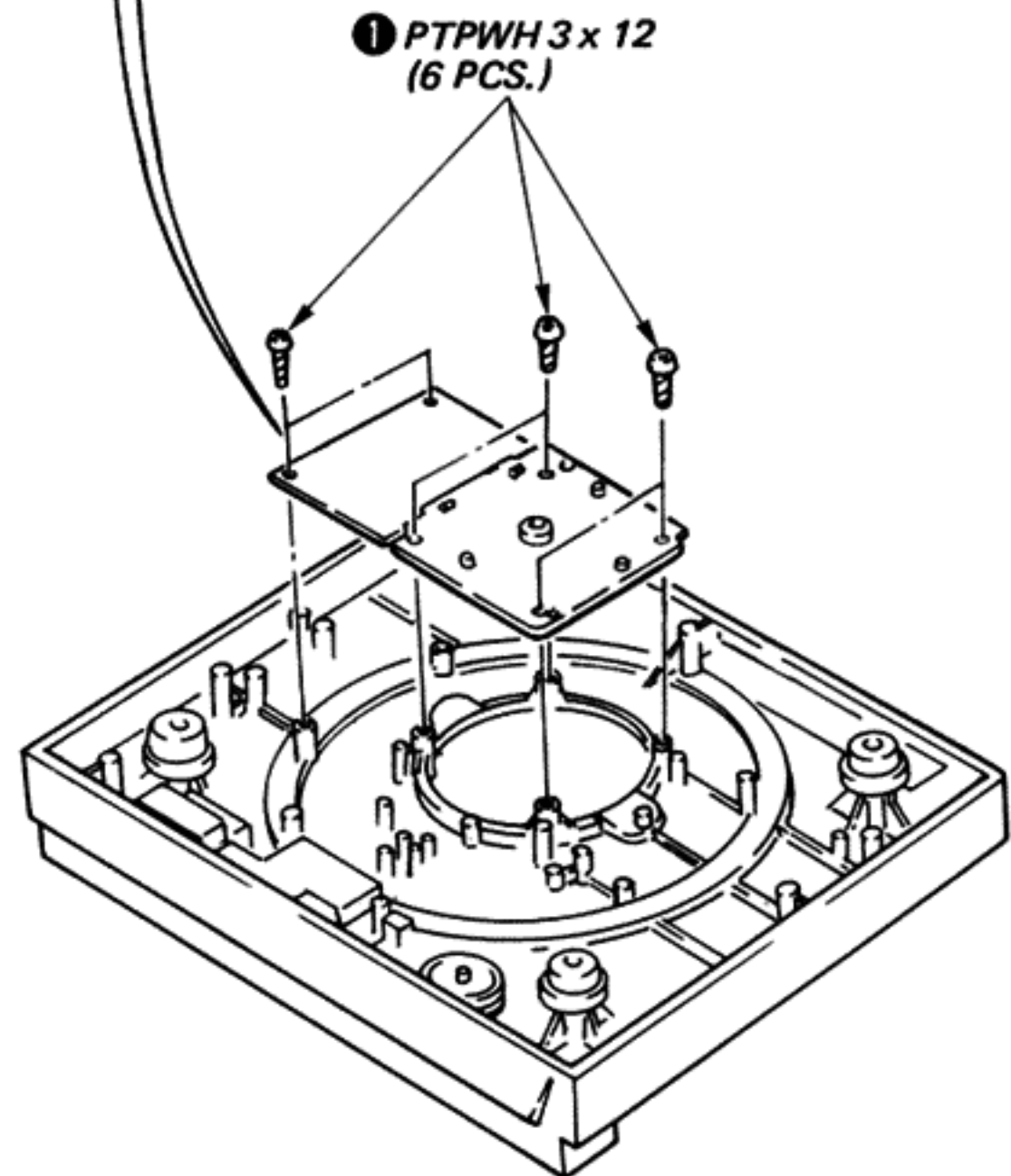
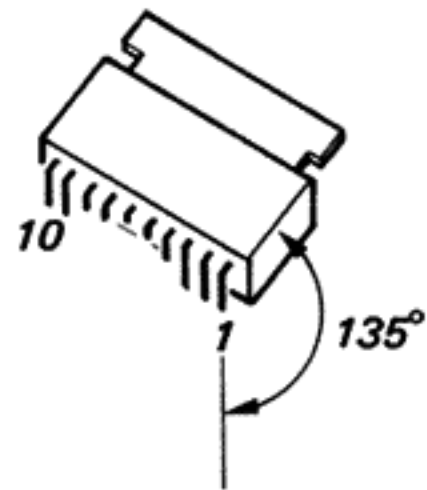
TO NEARM DRIVE MOTOR (M301)



ROTOR/STATOR/FG BOARD/SERVO AMP BOARDS

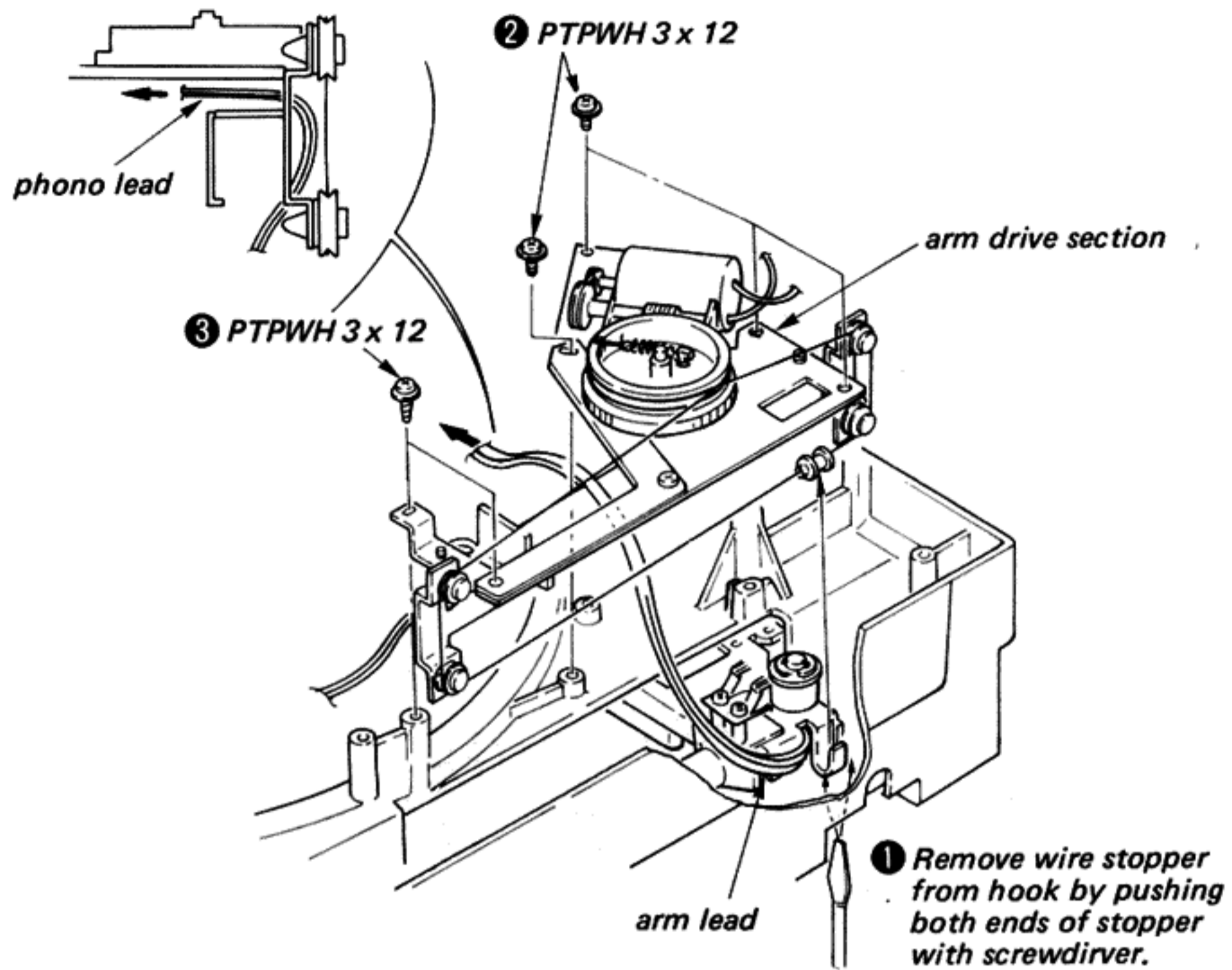


Note: When IC103 on servo amp board is replaced, bend its leads 45° to provide clearance between frame.



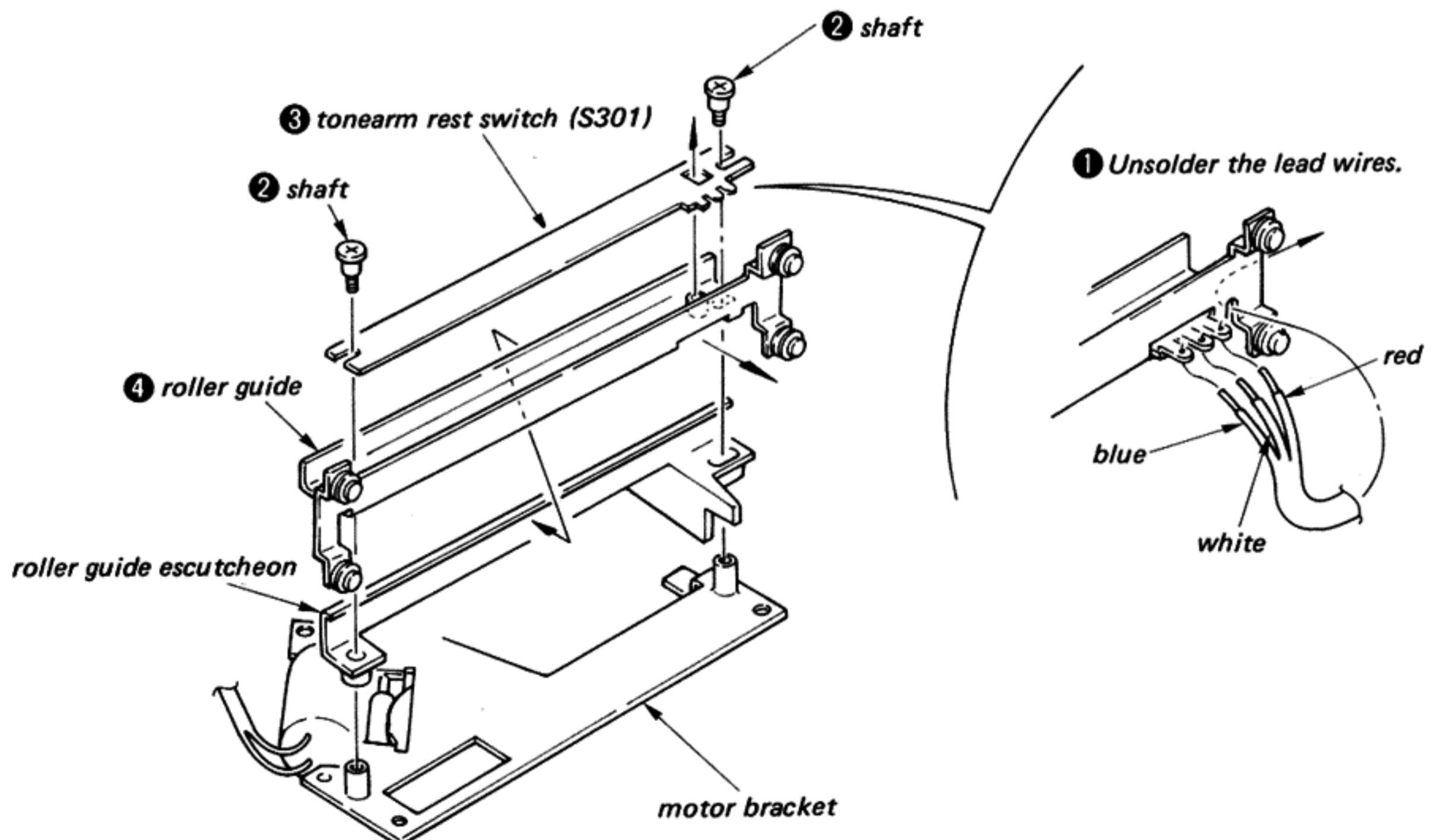
Remove the bottom plate.
(See page 7.)

TONARM DRIVE SECTION

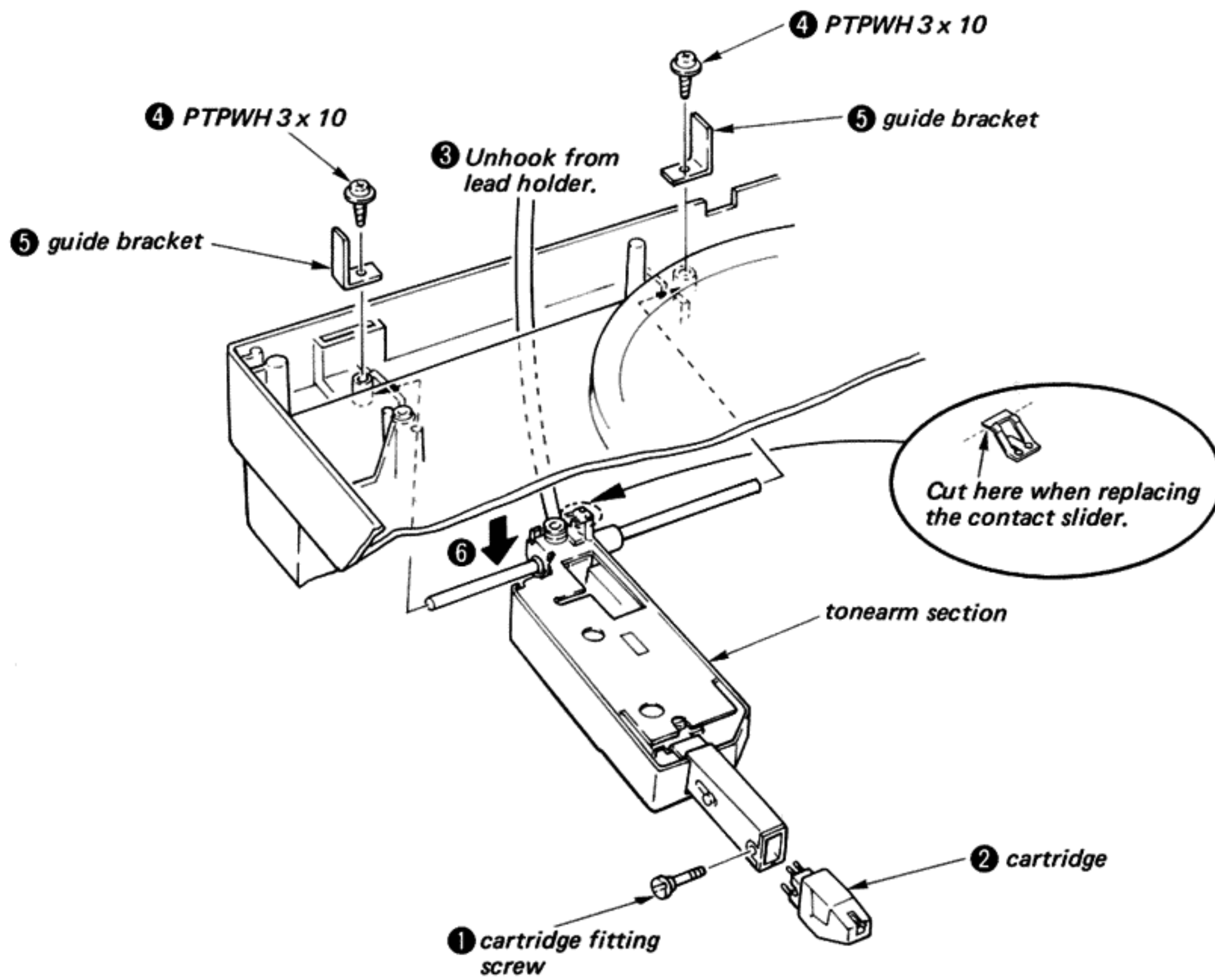


TONARM DRIVE CORD STRINGING
(See page 15.)

TONARM REST SWITCH (S301)/ROLLER GUIDE

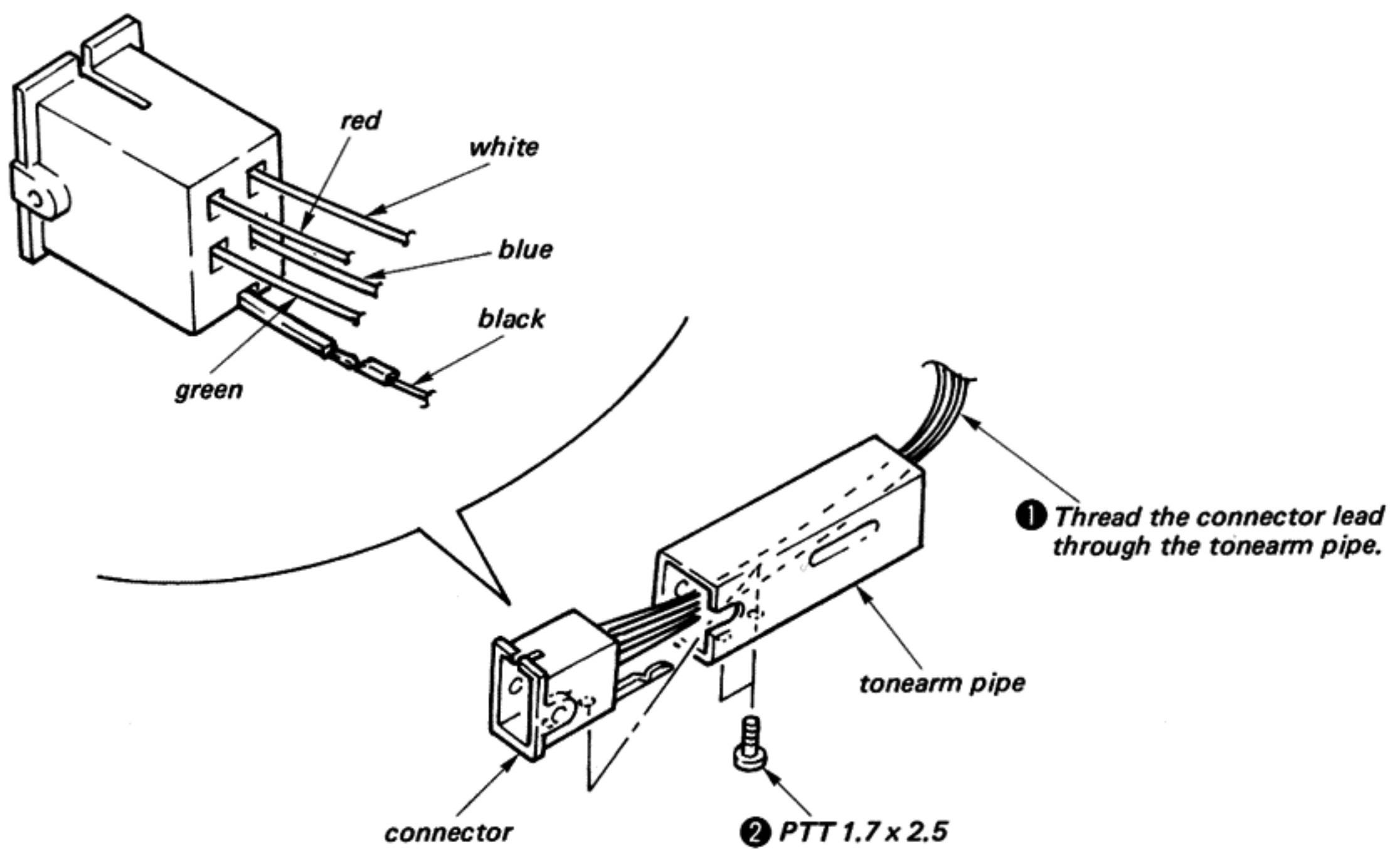


TONEARM

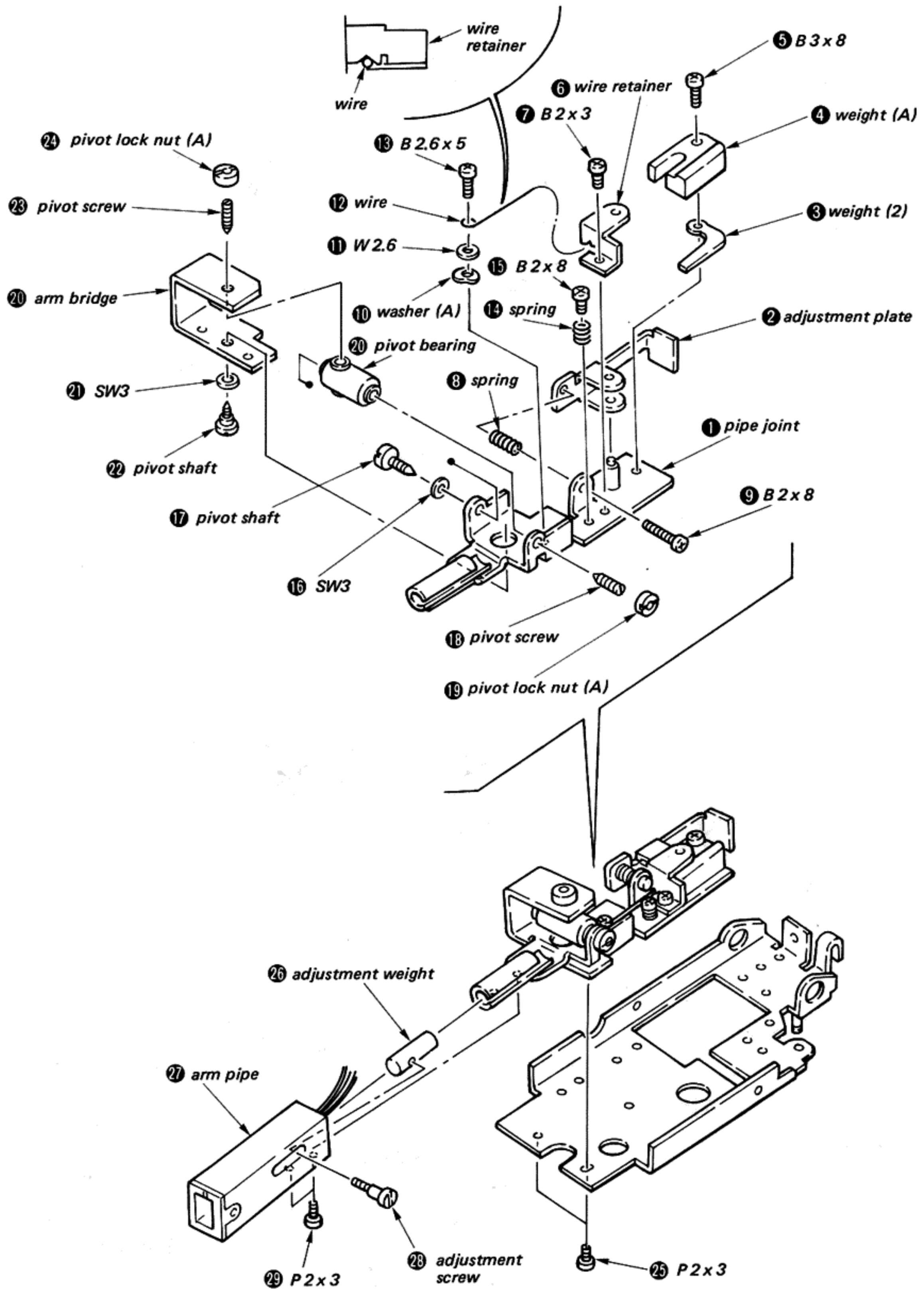


2-2. TONEARM ASSEMBLING

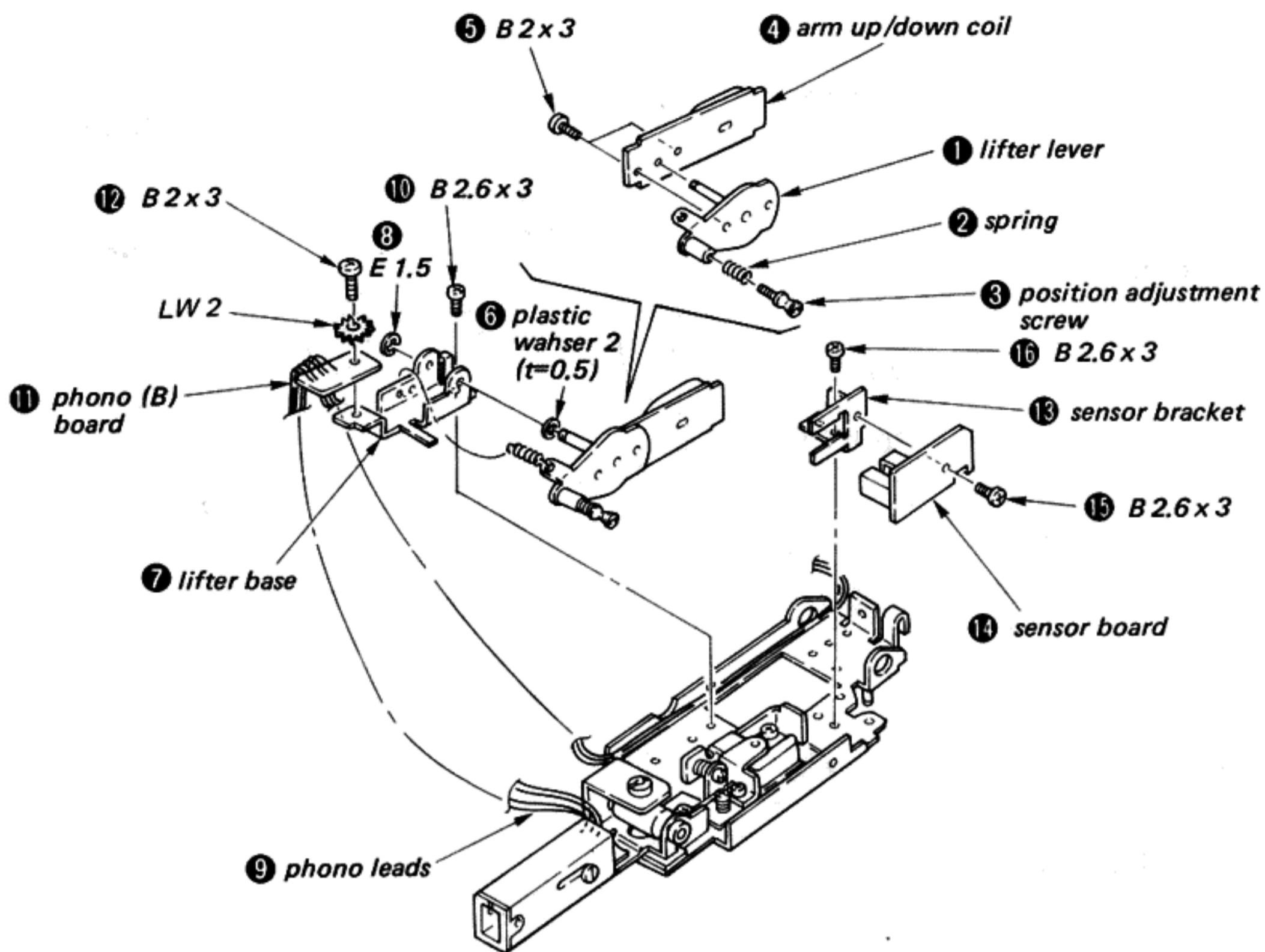
TONEARM ASSEMBLING (1)



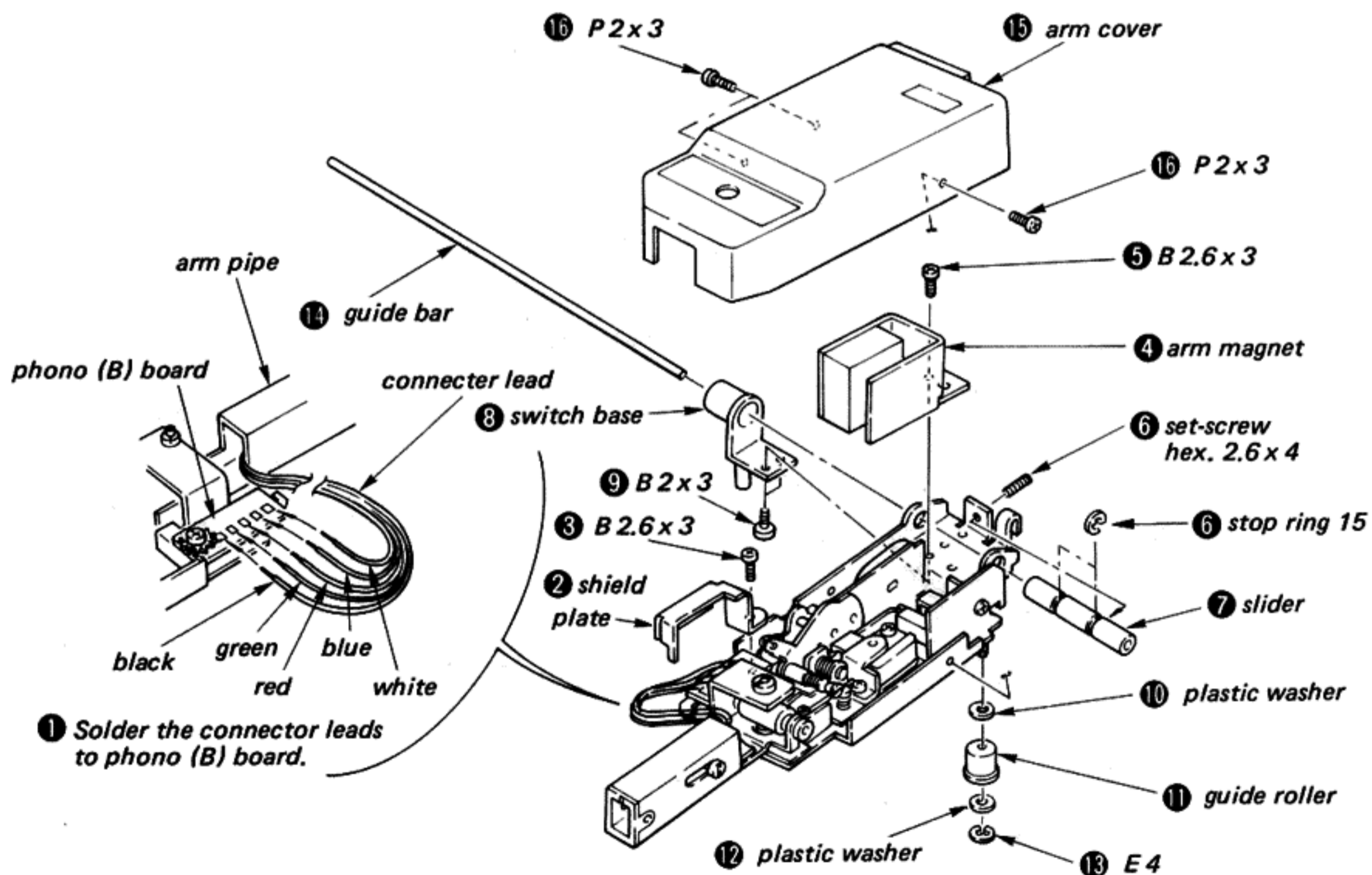
TONARM ASSEMBLING (2)



TONARM ASSEMBLING (3)

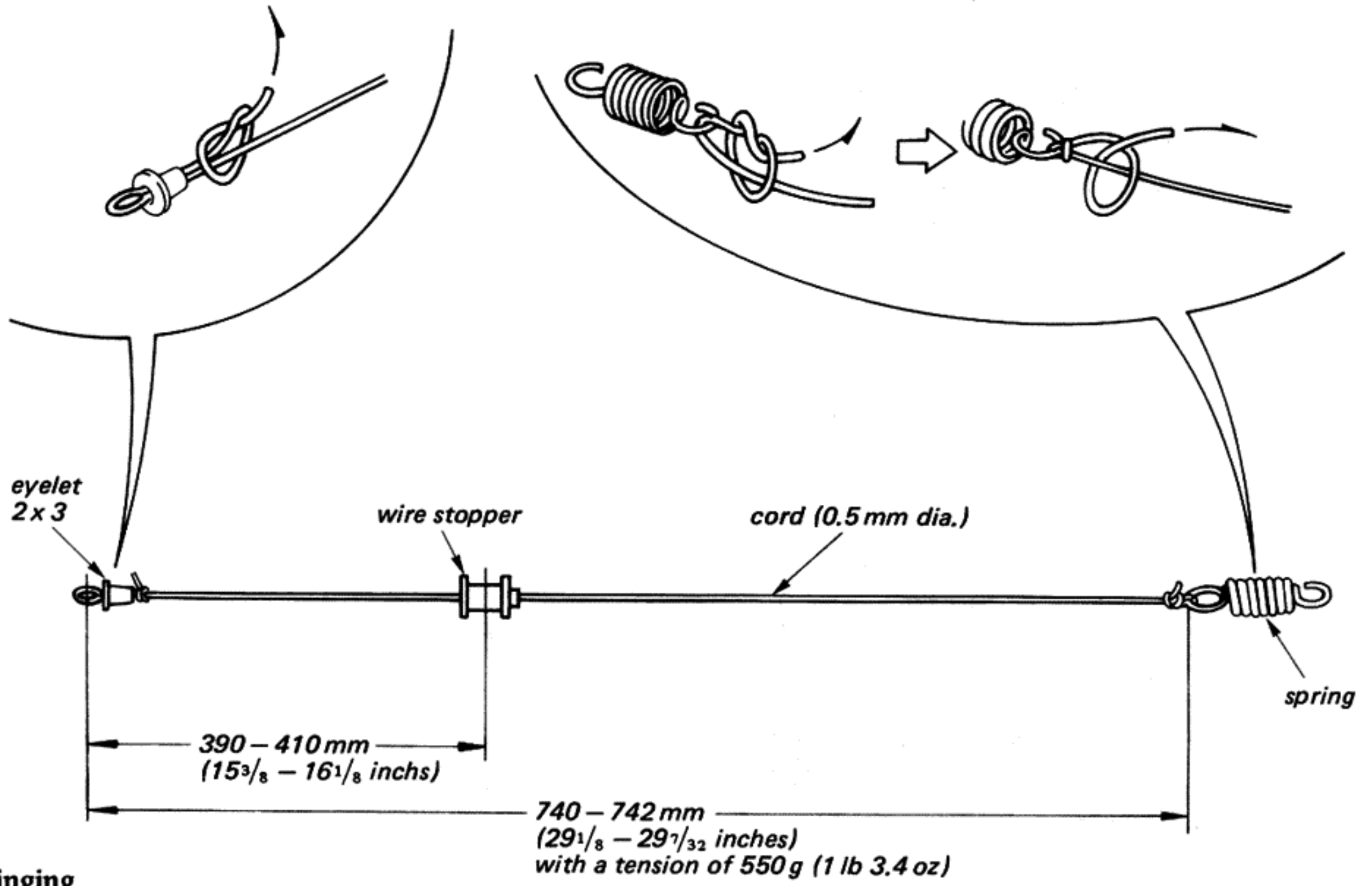


TONARM ASSEMBLING (4)

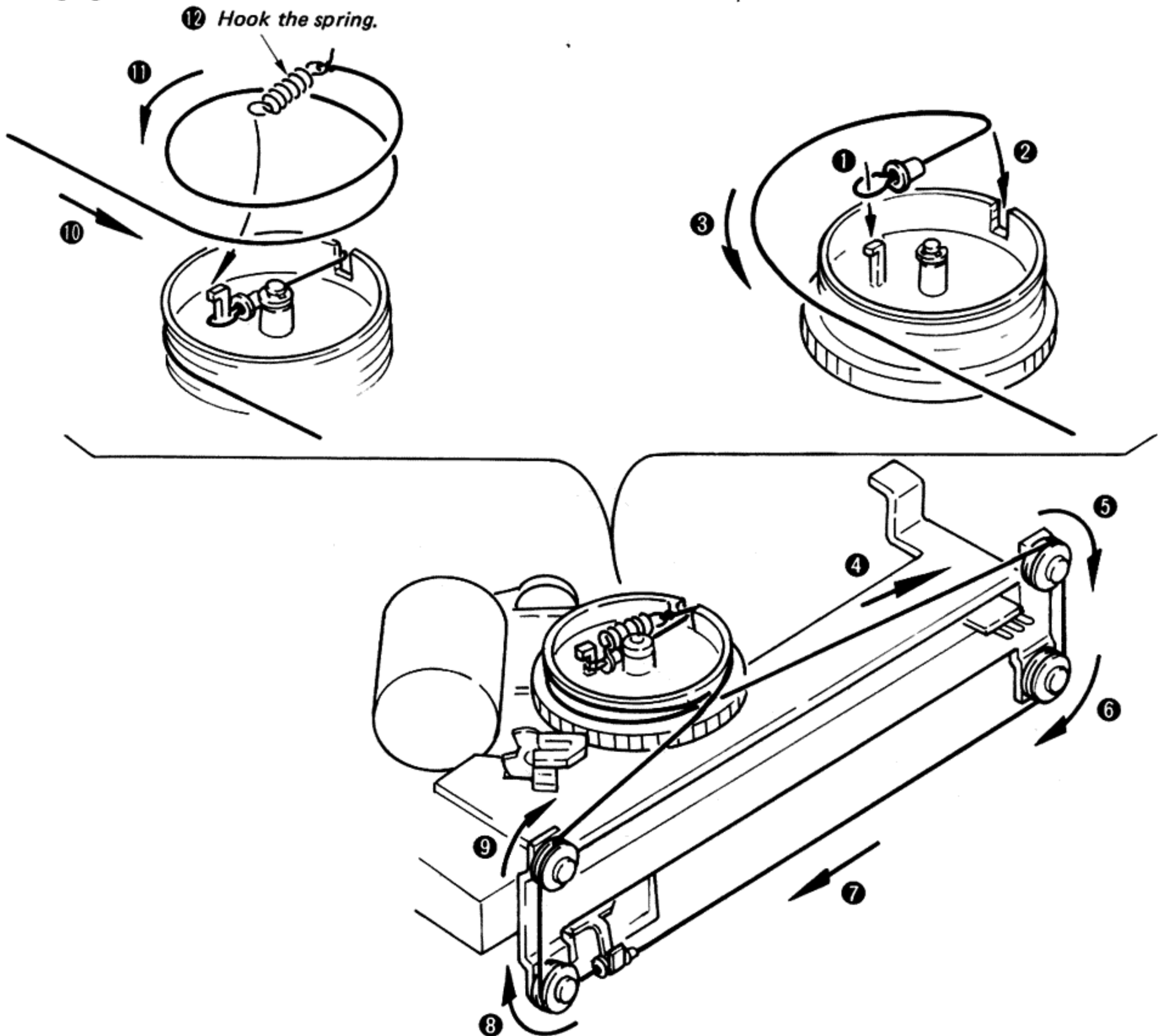


2-3. TONEARM DRIVE CORD STRINGING

(1) Preparation



(2) Stringing

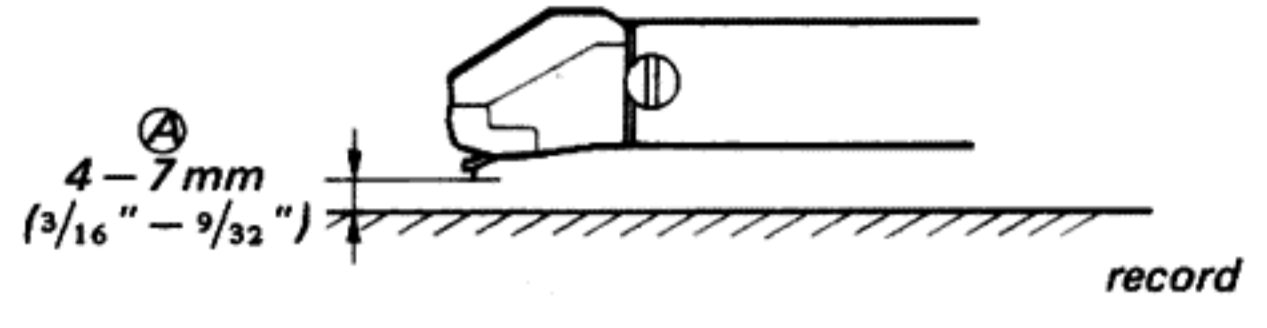


SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

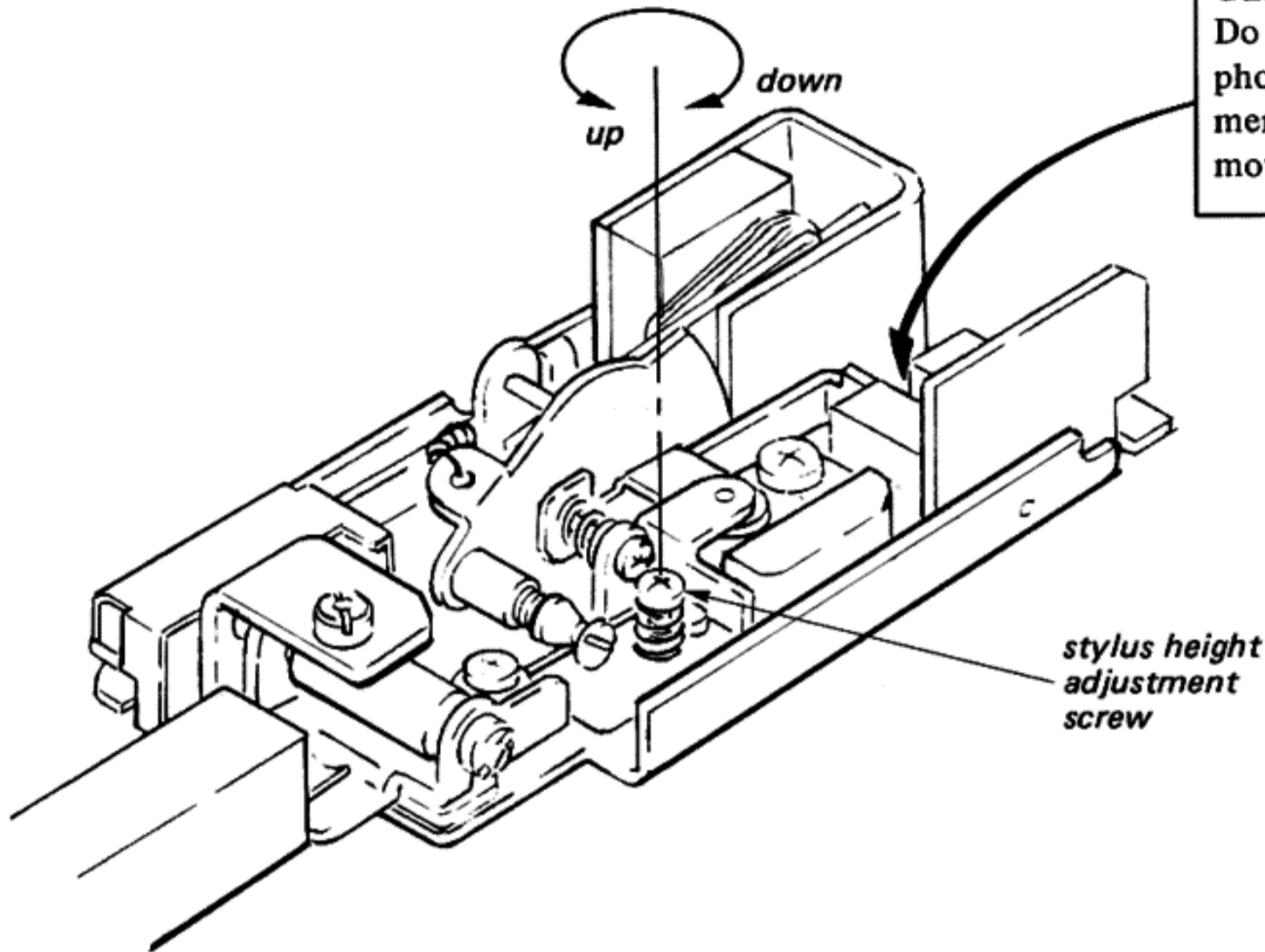
Stylus Height Adjustment

1. Put a record.
2. Press ARM TRANSPORT button (◀) and move the arm outside the record.
3. Make sure that clearance (A) is 4 – 7 mm ($\frac{3}{16}$ – $\frac{9}{32}$ inches). If necessary, adjust the stylus height adjustment screw.



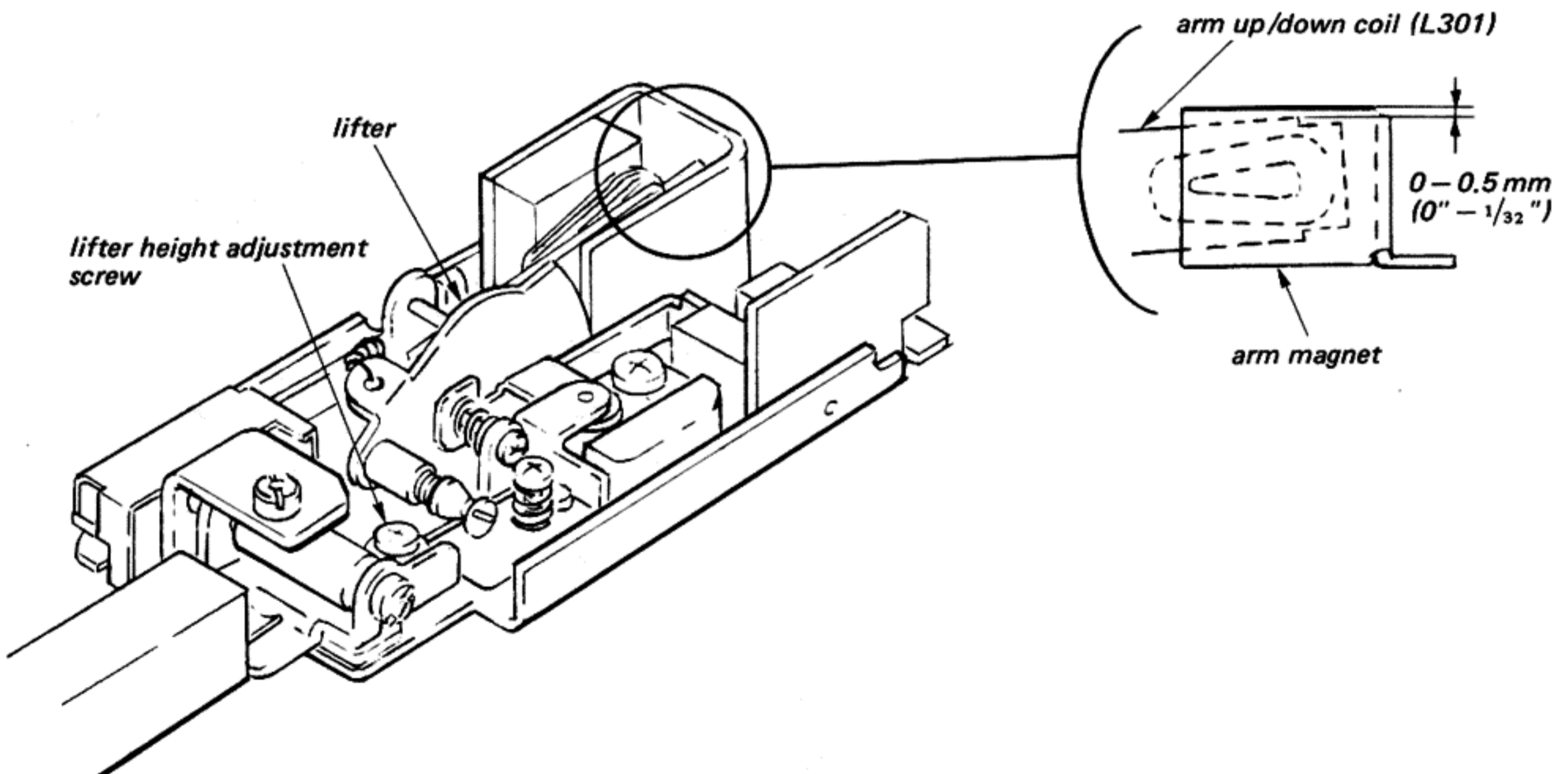
GENERAL NOTE:

Do not let a strong light get in the groove of photo interruptor during mechanical adjustment. Otherwise, misoperation of stoppage or moving may occur to the tonearm base.



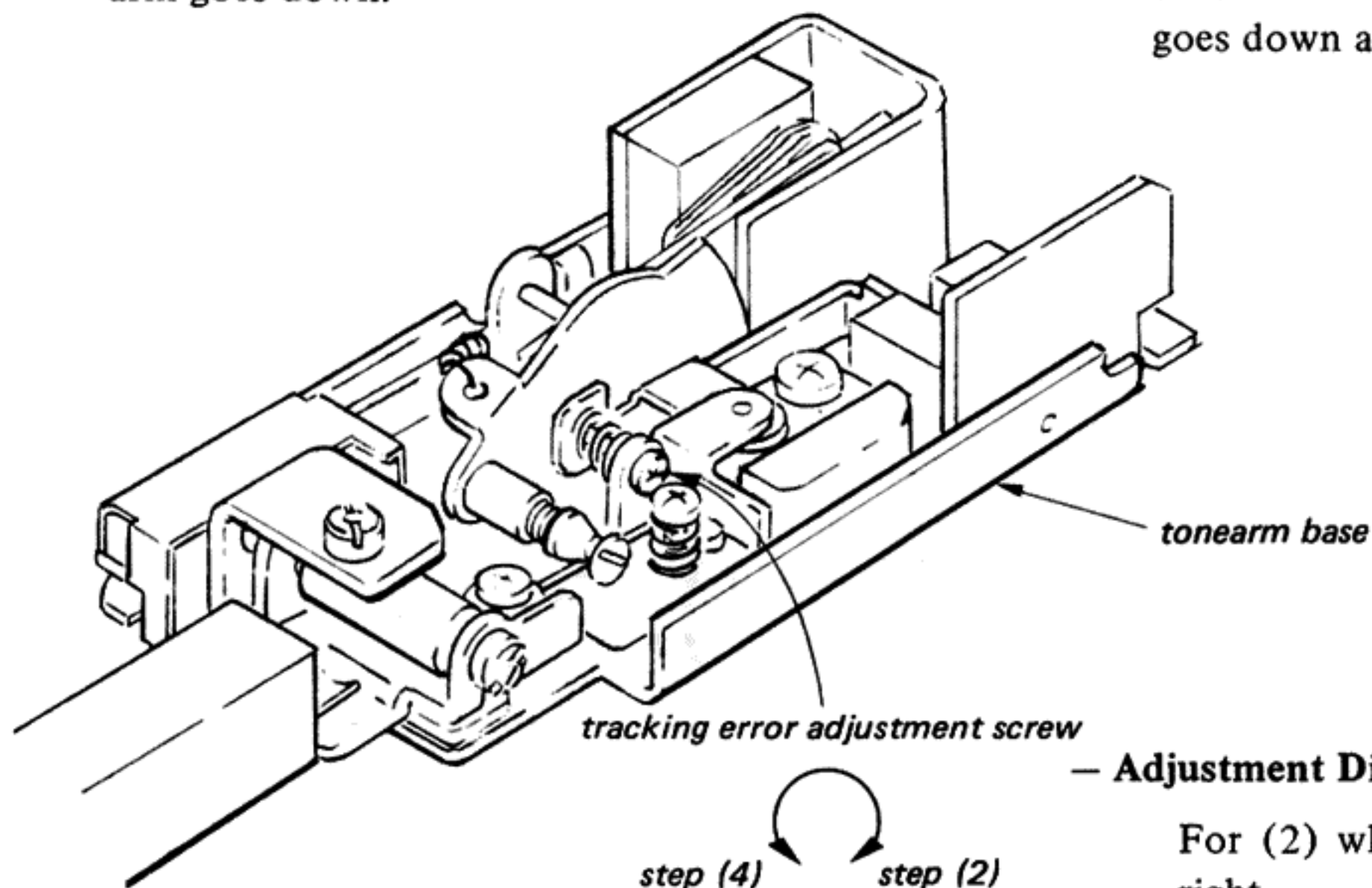
Lifter Height Adjustment

Adjust the lifter height adjustment screw so that the arm up/down coil position is 0 – 0.5 mm (0" – $\frac{1}{32}$ ") as shown below.



Tracking Error Adjustment

- (1) Place a test record (YFSC-16) on the turntable and press the START/STOP button for lead-in.
- (2) Adjust with the adjustment screw so that the tonearm base does not move just after the tonearm goes down.
- (3) After completing step (2), cause the tonearm to lead in, and then go UP after the tonearm base moves.
- (4) Check the count at this time, and then check that the difference in count when the tonearm goes down again is within 5 counts.



— Adjustment Direction —

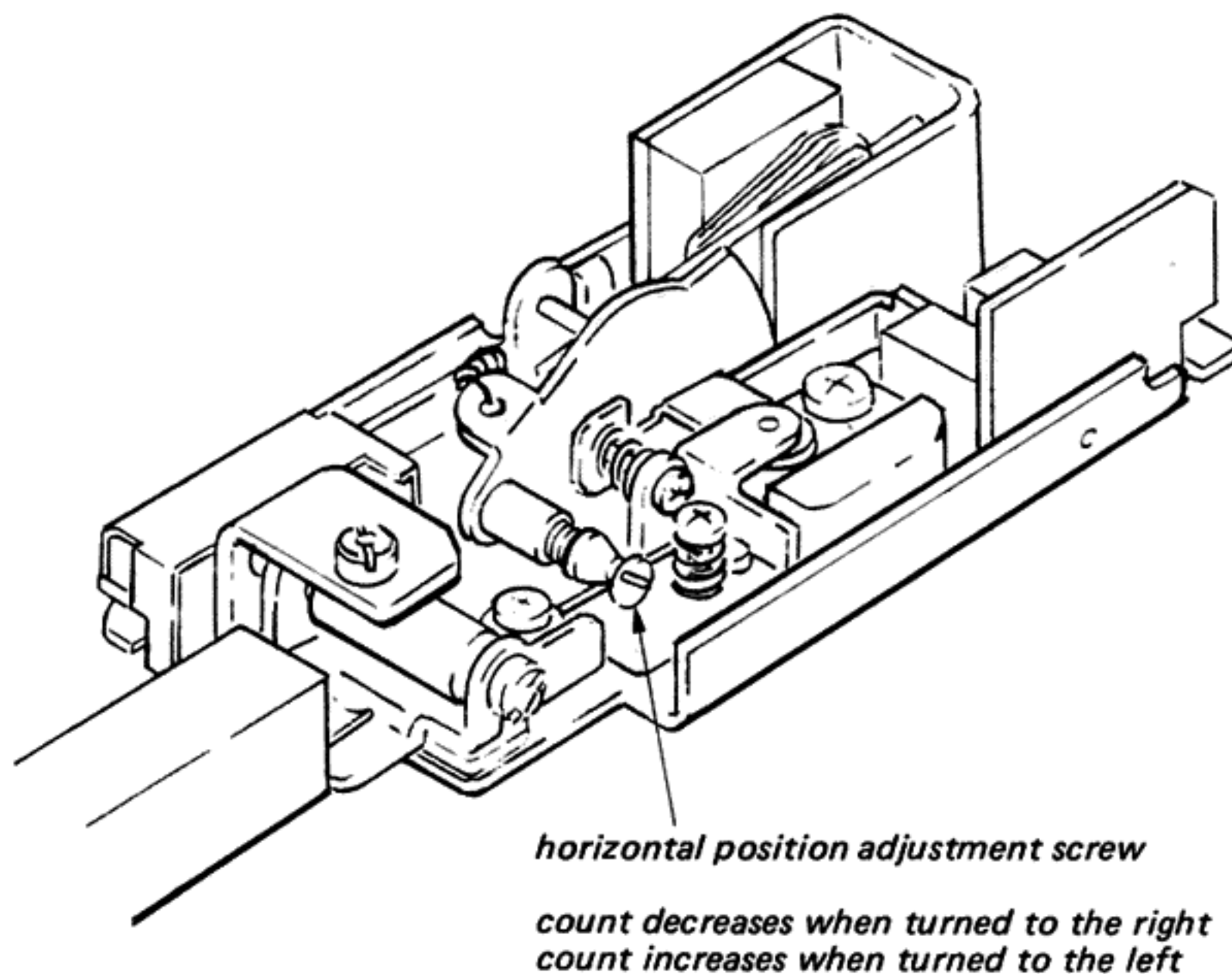
For (2) when the arm base moves, turn to the right.

For (4) when the difference in count is too large, turn to the left.

Drop Point (30 cm) Adjustment

- (1) Place a test record (YFSC-16) on the turntable and press the START/STOP button for lead-in.
- (2) Adjust the horizontal position adjustment screw so that the drop point at this time is within the specification.

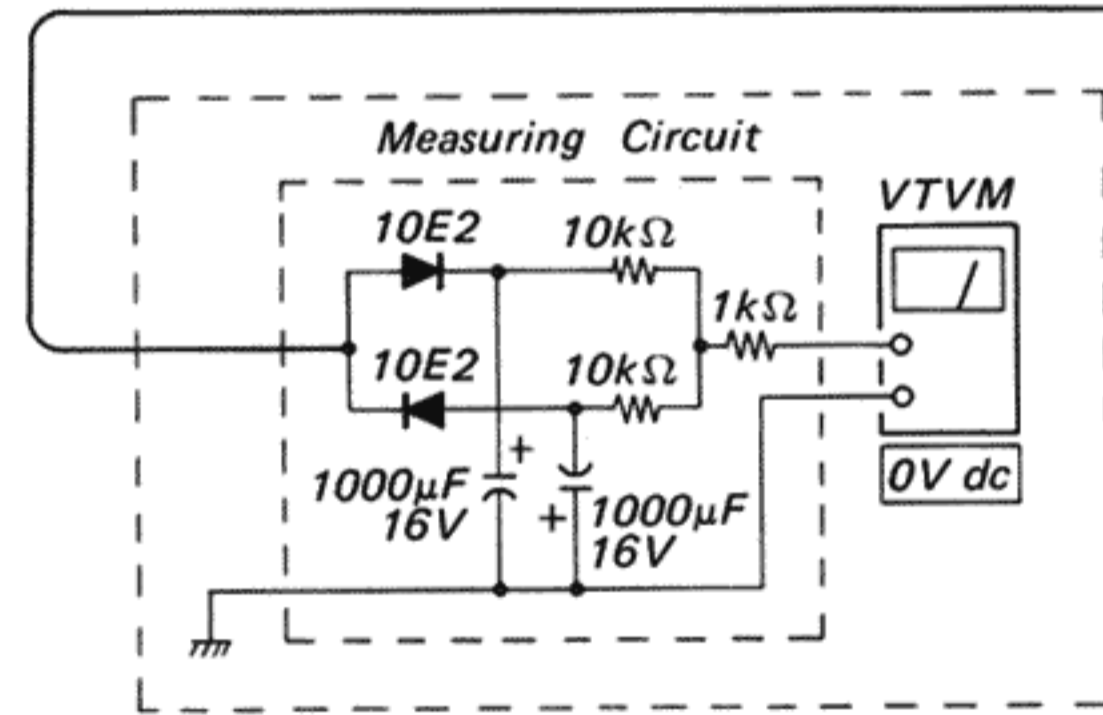
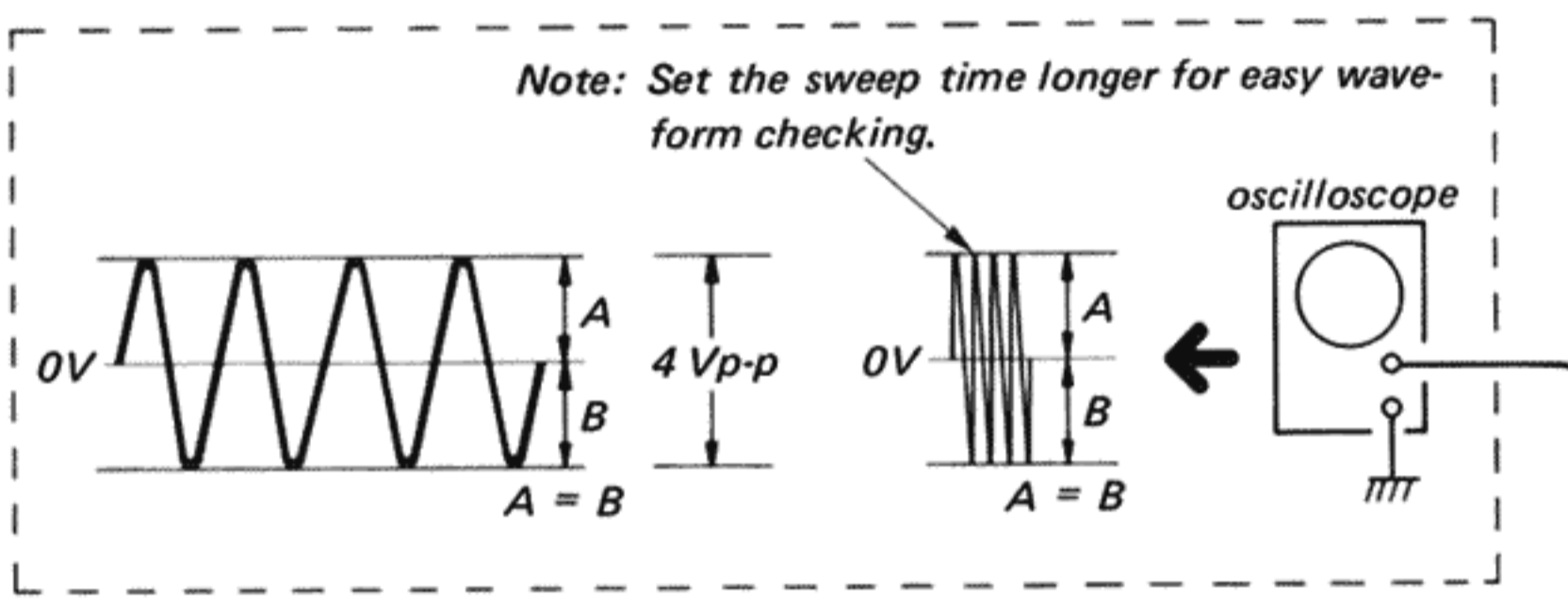
Specification: 9 – 14 counts



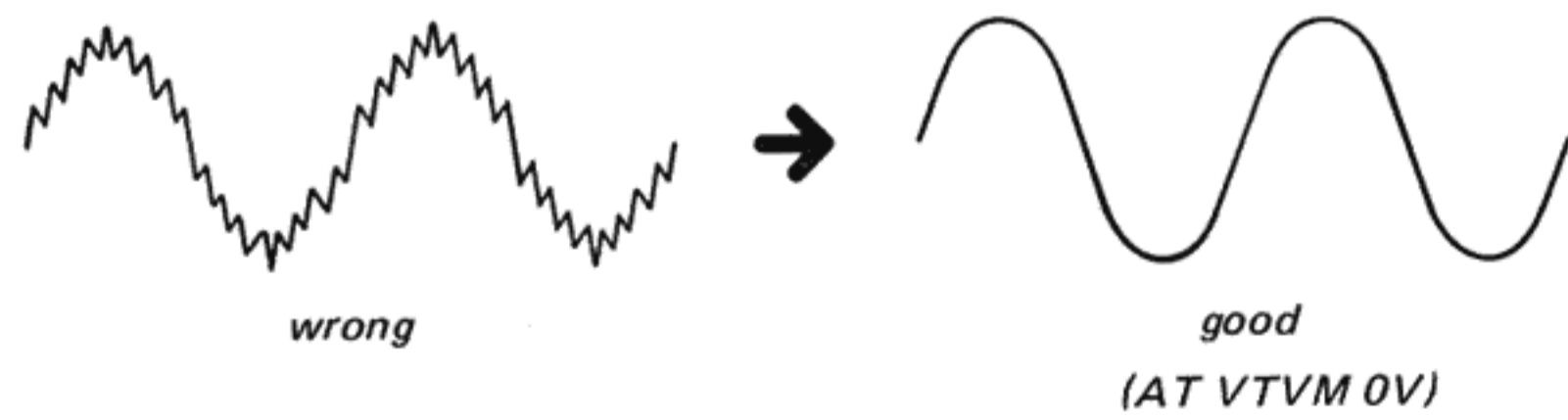
3-2. ELECTRICAL ADJUSTMENT

Gain/Offset Adjustment

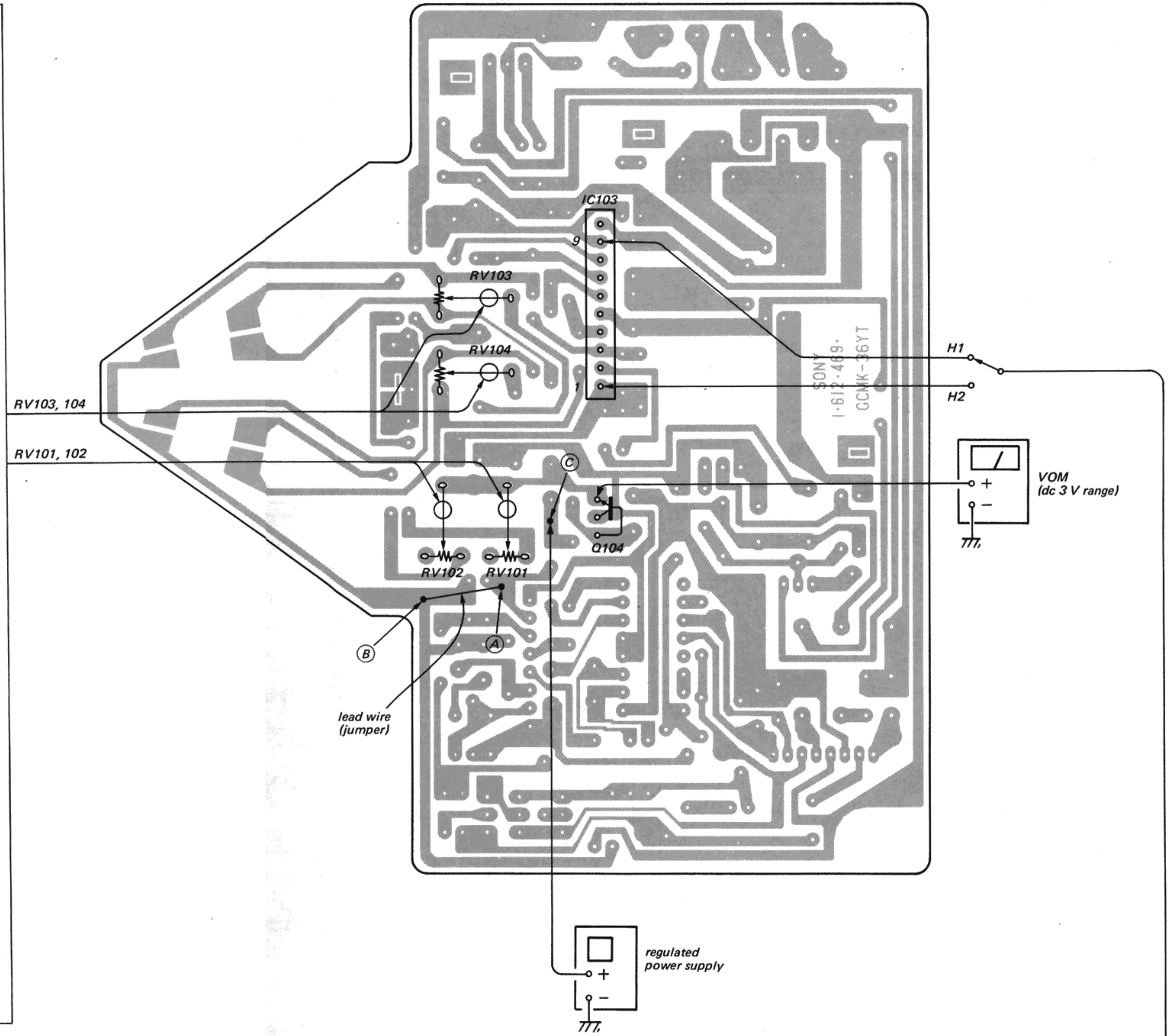
1. Connect the pattern (A) to (B), and apply regulated power supply (0V DC) to point (C).
2. Connect a VOM to the emitter of Q104, and adjust the regulated power supply voltage for 1V DC.
3. Adjust RV101 (H1) and RV102 (H2) so that the terminal voltage of IC103 (9) (H1) and (1) (H2) are 4Vp-p. Gain Adjustment
4. Adjust RV103 (H1) and RV104 (H2) so that the terminal waveforms of IC103 (9) (H1) and (1) (H2) are as shown below (or so that DC potential is 0V). Offset Adjustment
5. After adjustment, remove the lead wire connecting pattern (A) to (B).



Offset Adjustment

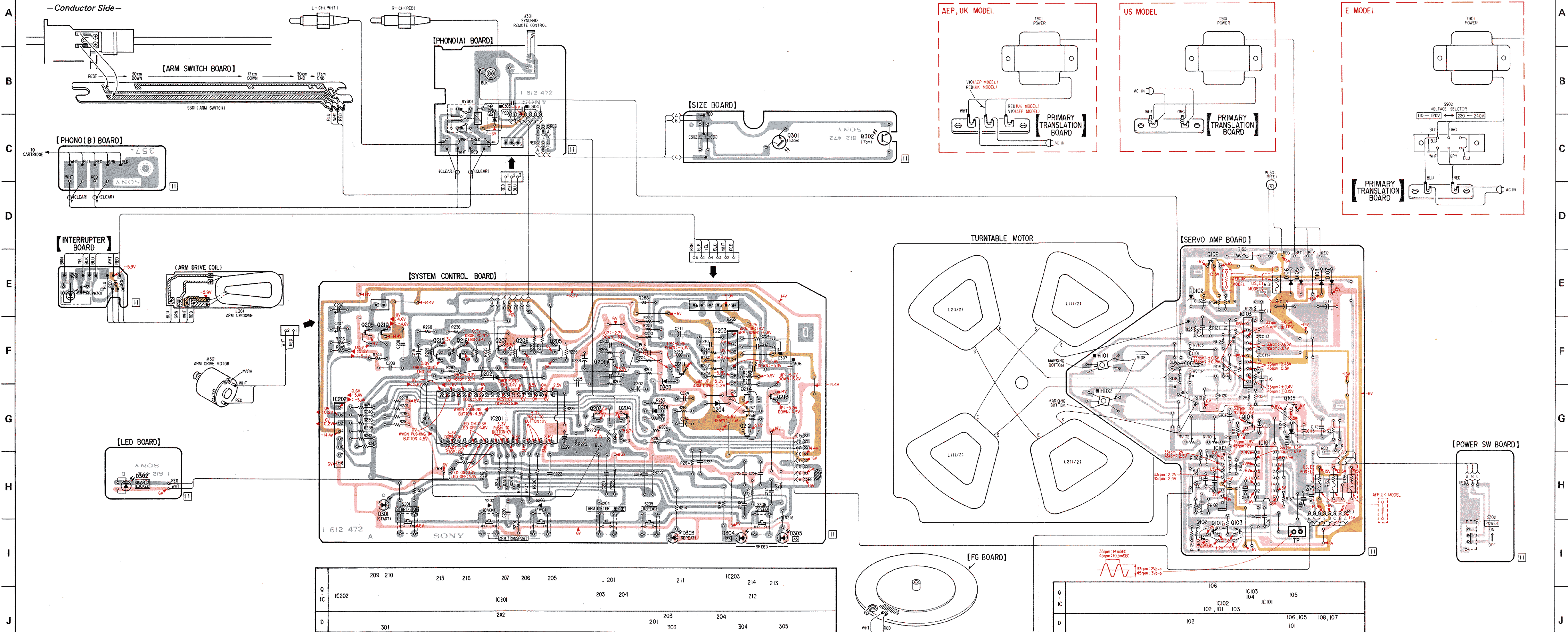


-Servo Amp Board-



SECTION 4 DIAGRAMS

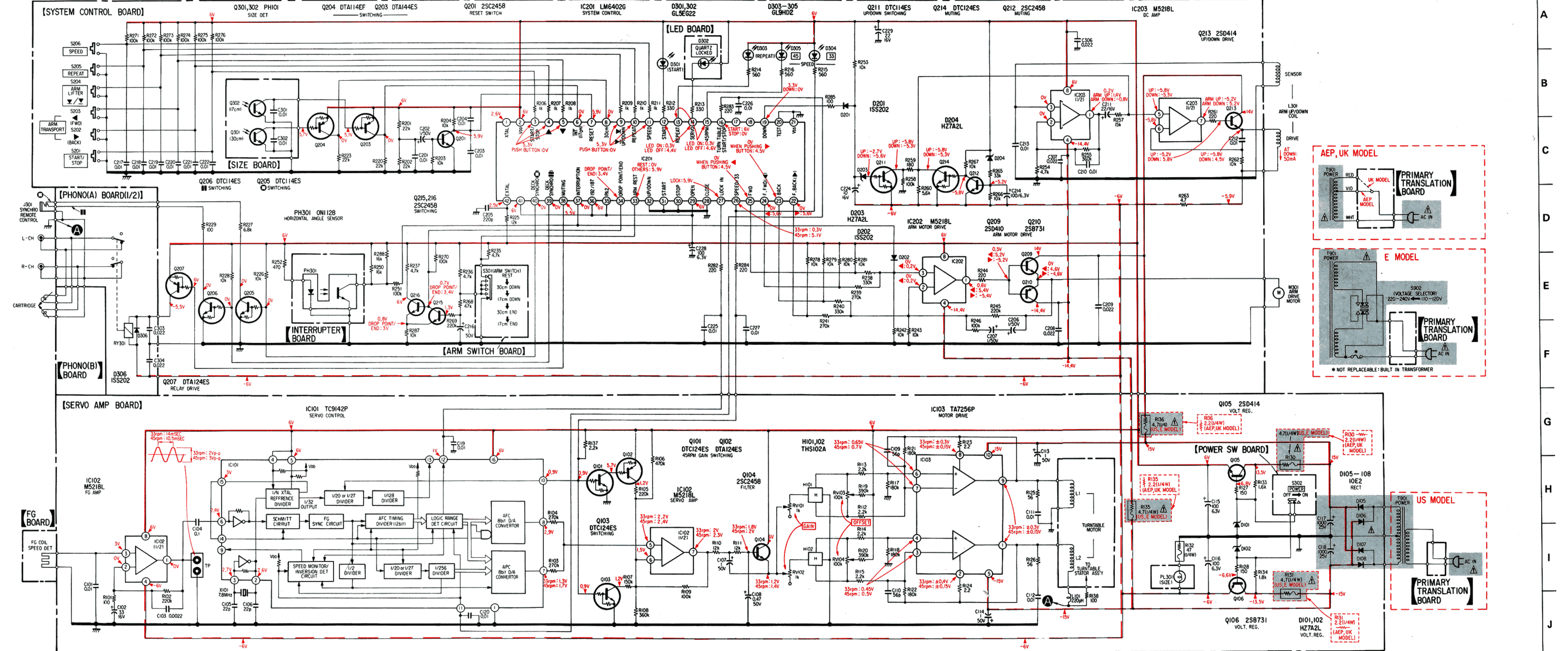
4-1. MOUNTING DIAGRAM • See page 26 for Note and Semiconductor Lead Layouts.



	209	210	215	216	207	206	205	201	211	IC203	214	213
Q												
IC	IC202				IC201			203	204		212	
D					202			201	203	204		
								201	303		304	305

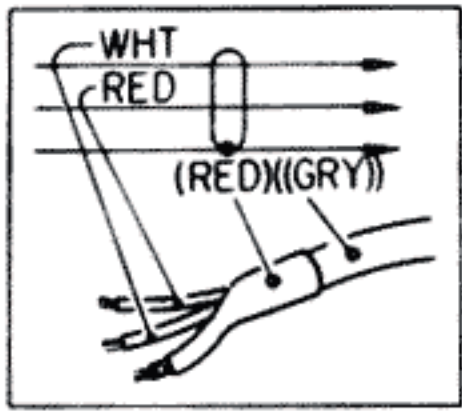
Q												
IC												
D												

4-2. SCHEMATIC DIAGRAM



Note for MOUNTING DIAGRAM:

- Color code of sleeving over the end of the jacket.



- ○ : parts extracted from the component side.
- ● : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- ● (with red dot) : B + pattern
- ● (with grey dot) : B - pattern

Note for SCHEMATIC DIAGRAM:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{6}\text{W}$ unless otherwise noted.
 $\text{k}\Omega$: 1000 Ω , $\text{M}\Omega$: 1000 $\text{k}\Omega$
- : fusible resistor.
- : transistor with resistor
- : adjustment for repair.
- : B+ bus.
- : B- bus.
- Readings are taken under no-signal conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
- Voltage variations may be noted due to normal production tolerances.
- Switches

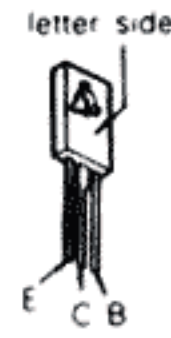
Ref. No.	Switch	Position
S201	START/STOP	OFF
S202	ARM TRANSPORT ►	OFF
S203	ARM TRANSPORT ◀	OFF
S204	ARM LIFTER	OFF
S205	REPEAT	OFF
S206	SPEED	OFF
S301	Arm Position Det.	REST
S302	POWER	OFF

Note: Voltages are measured with a VOM (50 $\text{k}\Omega/\text{V}$).

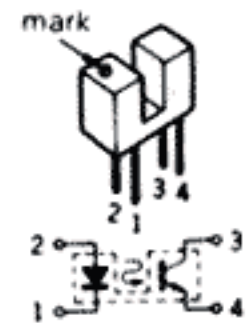
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Semiconductor Lead Layouts

2SB731
2SD809



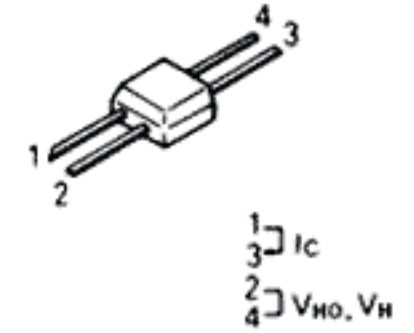
ON1128



2SC2458
DTA114ES
DTA124ES
DTA144ES
DTC124ES



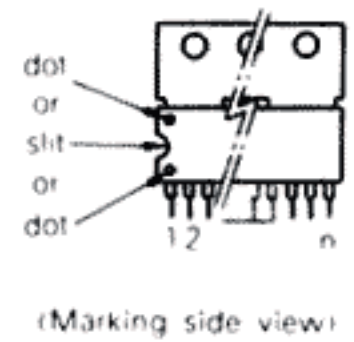
TH102A
THS102A



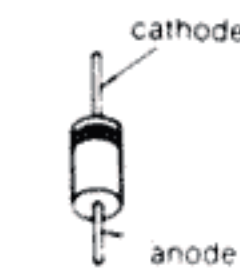
PH101



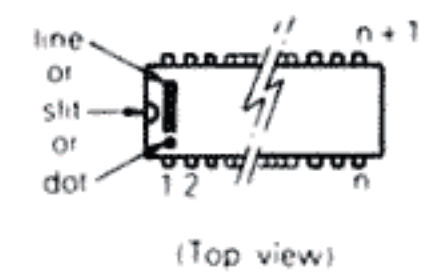
TA7256P



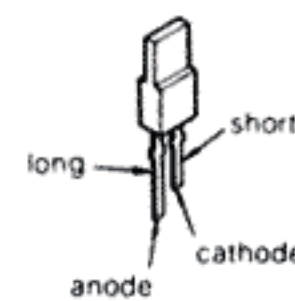
10E2
1SS202-1
RD6.8JN1



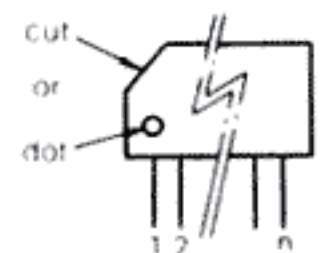
TC9142P
LM6402G-356



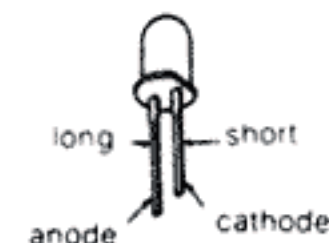
GL-9HD2



M5218L

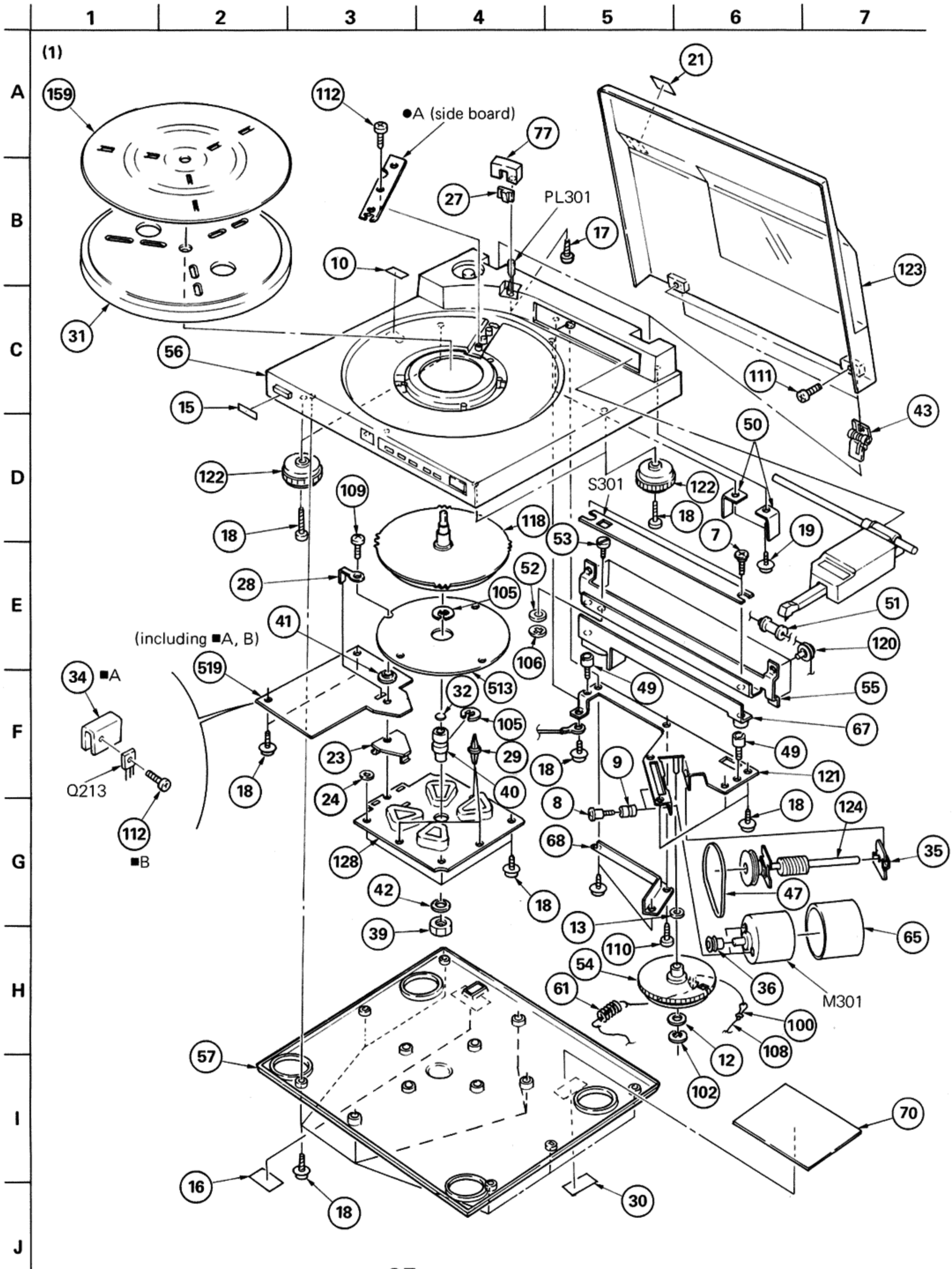


GL-5EG22



SECTION 5

EXPLODED VIEWS AND PARTS LIST



1

2

3

4

5

6

7

(2)

A

B

C

D

E

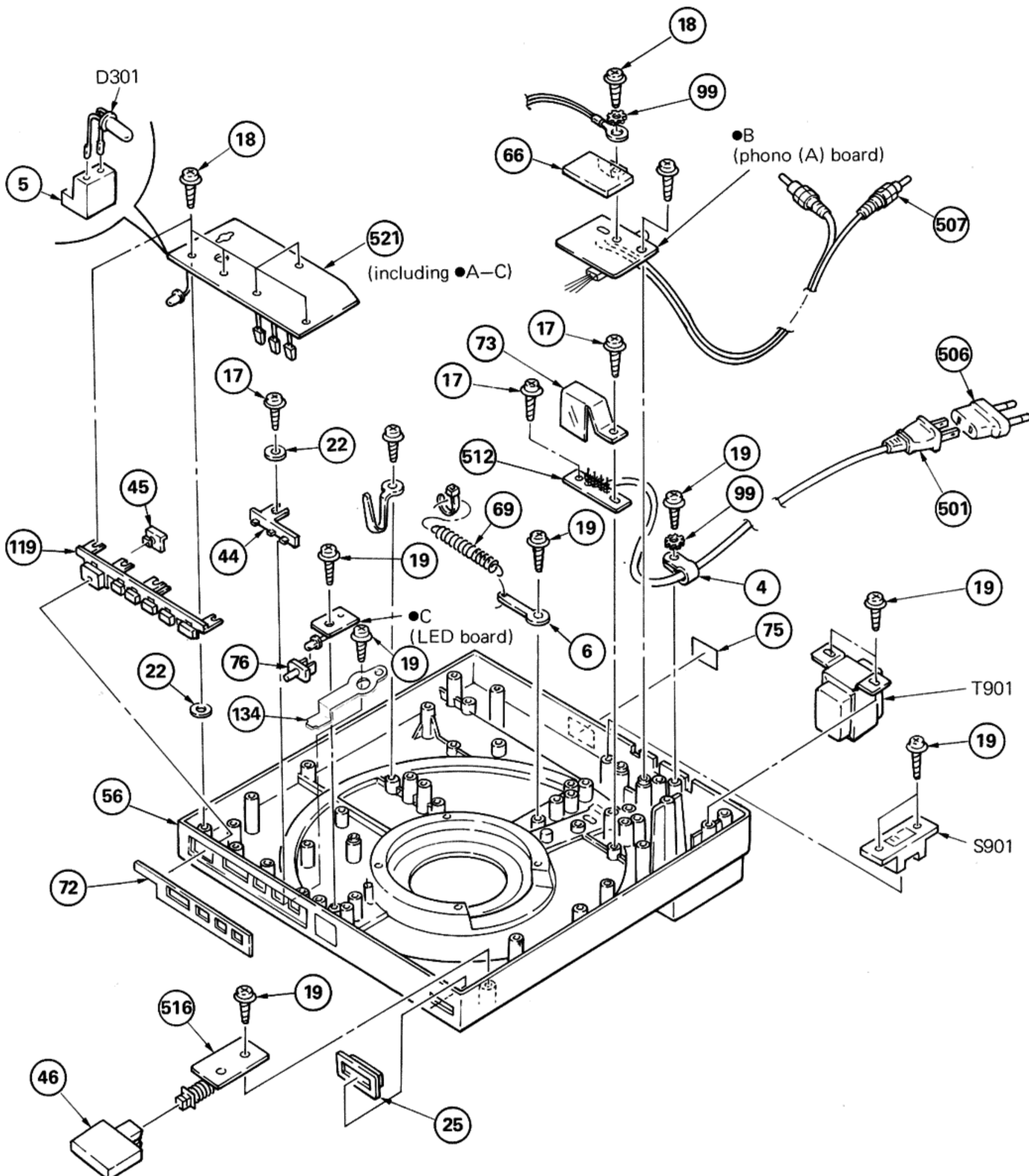
F

G

H

I

J



1

2

3

4

5

6

7

(3)

A

B

C

D

E

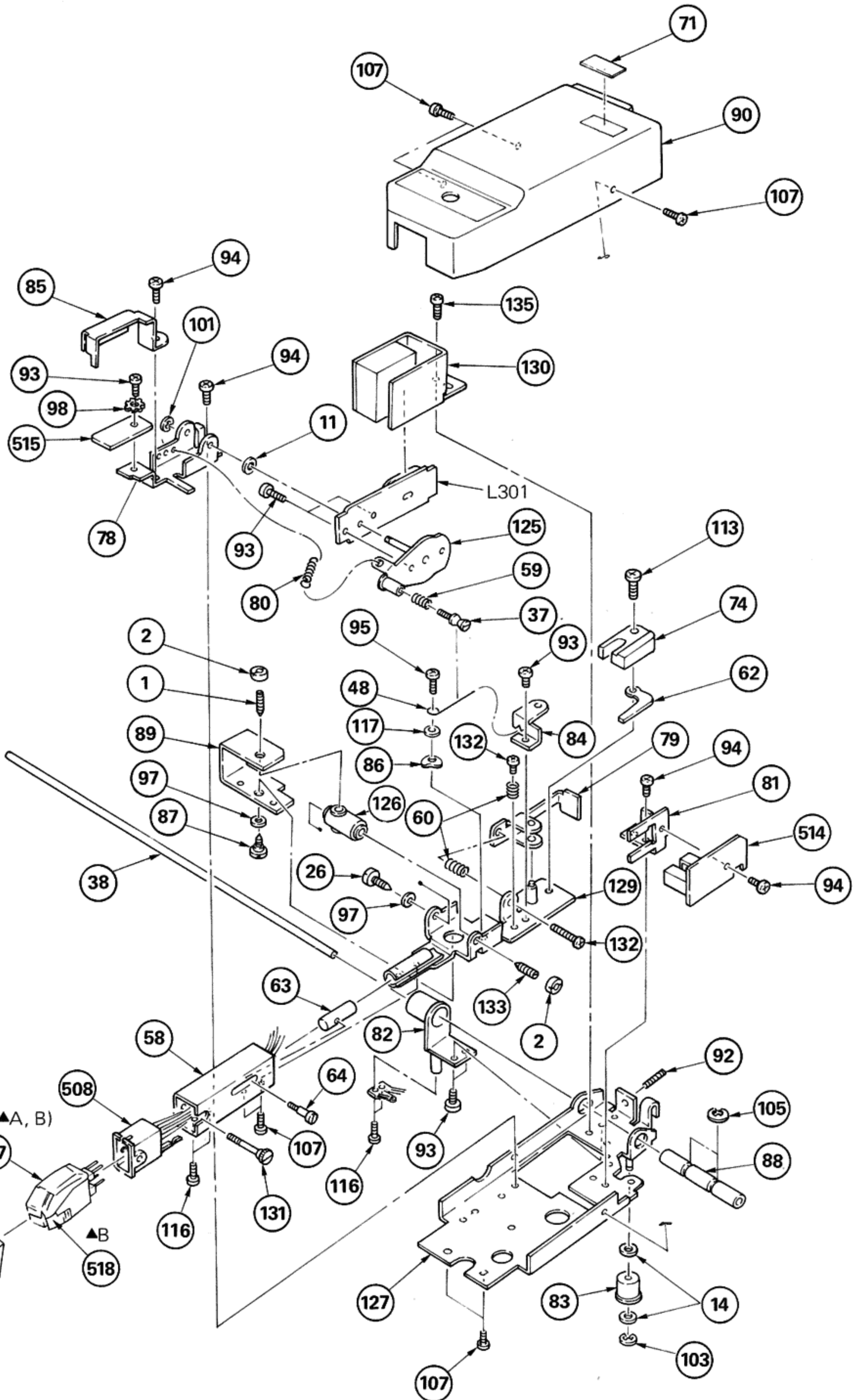
F

G

H

I

J



GENERAL SECTION

No.	Part No.	Description
1	2-203-518-71	SCREW, PIVOT
2	2-203-519-00	NUT (A), LOCK, PIVOT
3	2-231-824-01	(AEP,UK,E)....COVER, STULUS
4	♣;3-001-707-01	HOLDER, WIRE
5	♣;3-317-118-00	HOLDER (A), LED
6	3-460-077-00	CLAMP, WIRE
7	♣;3-465-048-00	SHAFT
8	3-570-027-00	SCREW, MOTOR
9	3-570-118-00	CUSHION, MOTOR
10	3-701-030-00	LABEL, SERIAL NUMBER
11	3-701-437-21	WASHER, 2 (t=0.5)
12	3-701-441-01	WASHER, 4 (t=0.13)
13	3-701-441-21	WASHER, 4 (t=0.5)
14	3-701-443-21	WASHER, 5 (t=0.25)
15	♣;3-701-690-00	(UK)....LABEL, MADE IN JAPAN
16	3-703-043-21	(UK)....LABEL, CAUTION, MAIN
16	3-703-845-01	(US)....LABEL (N), CAUTION
17	3-703-135-00	SCREW, PTPWH 3X8
18	3-703-136-00	SCREW, PTPWH 3X12
19	3-703-137-00	SCREW, PTPWH 3X10
20	♣;3-703-677-00	(US)....LABEL, CAUTION, MAIN NEW UL
21	3-703-705-01	STICKER, SONY SYMBOL (30)
22	4-830-092-00	WASHER, FIBER
23	4-857-642-00	HOLDER, PC BOARD
24	4-866-147-11	SPACER
25	4-875-501-00	GUIDE, POWER KNOB
26	4-877-816-00	SHAFT, PIVOT
27	4-879-741-00	WINDOW, LAMP
28	♣;4-881-629-00	PLATE (A), GROUND
29	4-881-636-11	SUPPORT (TMD), PC
30	♣;4-881-683-00	(E).....LABEL, VOLTAGE
31	4-883-720-00	TURNTABLE
32	4-885-135-00	RETAINER, THRUST
33	4-885-183-00	CUSHION (D)
34	♣;4-885-562-11	HEAT SINK
35	4-885-703-00	GUIDE, WORM SHAFT
36	4-885-704-03	PULLEY, MOTOR
37	4-885-706-04	SCREW, ADJUSTMENT, POSITION
38	4-885-709-00	BAR, GUIDE
39	4-885-723-00	NUT, BEARING
40	4-885-724-00	BEARING
41	4-885-727-00	SPACER
42	4-885-728-00	PACKING
43	4-885-731-00	HINGE
44	4-885-732-11	ESCUTCHEON (A), LED
45	4-885-733-11	ESCUTCHEON (B), LED

GENERAL SECTION

No.	Part No.	Description
46	4-885-734-00	BUTTON, POWER
47	4-885-735-00	BELT, DRIVING
48	4-885-737-00	WIRE
49	4-885-741-00	SPACER
50	♣;4-885-742-00	BRACKET, GUIDE
51	4-885-744-00	STOPPER, WIRE
52	4-885-747-00	WASHER (H)
53	4-885-748-00	PIN, ADJUSTMENT
54	4-885-749-00	WHEEL, WORM
55	♣;4-885-750-00	GUIDE, ROLLER
56	4-885-757-00	FRAME
57	♣;4-885-759-01	(US,AEP,UK)...PLATE, BOTTOM
57	4-885-759-11	(E).....PLATE, BOTTOM
58	4-885-760-00	PIPE, ARM
59	4-885-764-02	SPRING, COMPRESSION
60	4-885-766-00	SPRING, COMPRESSION
61	4-885-767-00	SPRING, TENSION
62	4-885-768-00	WEIGHT (2)
63	4-885-770-00	WEIGHT, ADJUSTMENT
64	4-885-771-00	SCREW, ADJUSTMENT
65	4-885-775-00	CAP, MOTOR
66	♣;4-885-776-00	PLATE (P), SHIELD
67	4-885-777-00	ESCUTCHEON, ROLLER GUIDE
68	♣;4-885-787-00	GUIDE, LEAD WIRE
69	4-885-789-00	SPRING, TENSION
70	♣;4-885-790-11	LABEL, CAUTION, ARM FITTING
71	♣;4-885-792-00	PLUG IN SEAL (A)
72	4-885-796-11	LABEL, PANEL
73	♣;4-885-798-00	COVER, POWER
74	♣;4-887-310-00	WEIGHT (A)
75	4-887-313-01	(AEP)...LABEL, MODEL NUMBER
75	4-887-314-01	(UK)....LABEL, MODEL NUMBER
75	4-887-315-01	(E).....LABEL, MODEL NUMBER
75	4-887-316-01	(US)....LABEL, MODEL NUMBER
76	4-887-317-01	WINDOW, INDICATION, QUARTZ LOCK
77	4-887-412-21	HOLDER, LAMP
78	♣;4-887-437-01	BASE, LIFTER
79	♣;4-887-438-01	PLATE, ADJUSTMENT
80	4-887-439-01	SPRING, TENSION
81	♣;4-887-440-01	BRACKET, SENSOR
82	4-887-442-01	BASE, SWITCH
83	4-887-443-01	ROLLER, GUIDE
84	♣;4-887-444-01	RETAINER, WIRE
85	♣;4-887-446-01	PLATE, SHIELD
86	4-887-448-01	WASHER (A)
87	4-887-449-01	SHAFT, PIVOT

NOTE:

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example:
UA.... : μA..., UPA.... : μPA..., UPC.... : μPC,
UPD.... : μPD...

GENERAL SECTION

No.	Part No.	Description
88	4-887-451-01	SLIDER
89	4-887-454-01	BRIDGE, ARM
90	4-887-456-01	COVER, ARM
91	7-621-255-10	SCREW +P 2X3
92	7-621-735-09	SET-SCT, HEX. 2.6X4
93	7-621-772-00	SCREW +B 2X3
94	7-621-775-00	SCREW +B 2.6X3
95	7-621-775-20	SCREW +B 2.6X5
96	7-621-775-40	SCREW +B 2.6X8
97	7-623-208-22	SW 3, TYPE 2
98	7-623-420-07	LW 2
99	7-623-422-07	LW 3, TYPE B
100	7-623-616-01	EYELET, 2X3
101	7-624-102-04	STOP RING 1.5, TYPE -E
102	7-624-106-04	STOP RING 3.0, TYPE -E
103	7-624-108-04	STOP RING 4.0, TYPE -E
104	7-624-133-24	STOP RING 7, TYPE-CE
105	7-624-133-94	STOP RING 15, TYPE-CE
106	7-624-190-81	STOP RING 2, TYPE-CS
107	7-627-553-37	SCREW, PRECISION +P 2X3
108	9-911-825-42	CORD, TETRON DIAL (0.5MM)
109	7-682-149-13	SCREW +P 3X10
110	7-682-545-04	SCREW +B 3X4
111	7-682-546-04	SCREW +B 3X5
112	7-682-547-09	SCREW +B 3X6
113	7-682-548-09	SCREW +B 3X8
114	7-685-134-14	SCREW +P 2.6X8 TYPE2 NON-SLIT
115	7-685-147-11	SCREW +P 3X10 TYPE2 NON-SLIT
116	7-685-799-04	SCREW +PTT 1.7X2.5
117	7-688-002-01	W 2.6, SMALL
118	A-4608-232-A	ROTOR ASSY
119	A-4675-041-A	BUTTON ASSY, CONTROL
120	X-4856-325-0	PULLEY ASSY
121	X-4885-702-0	BRACKET ASSY, MOTOR
122	X-4885-704-3	INSULATOR ASSY
123	X-4885-708-0	COVER ASSY, DUST
124	X-4885-710-0	WORM ASSY
125	X-4887-409-1	LEVER ASSY, LIFTER
126	X-4887-411-1	BEARING ASSY, PIVOT
127	X-4887-412-1	BASE ASSY, ARM
128	X-4887-413-1	STATOR ASSY
129	X-4887-414-1	JOINT ASSY, PIPE (WITH STYLUS PRESSURE GUIDE)
130	X-4887-415-1	MAGNET ASSY, ARM
131	4-885-746-00	SCREW, FITTING, CARTRIDGE
132	7-621-772-40	SCREW +B 2X8

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MF:μF, PF:μμF.

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- In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

GENERAL SECTION

No.	Part No.	Description
133	2-203-518-61	SCREW, PIVOT
134	4-887-320-01	PLATE, GROUNDING
135	7-628-253-95	SCREW +PS 2.6X4

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
151	3-532-616-00	BAG, POLYETHYLENE
152	3-701-630-00	BAG, POLYETHYLENE
153	3-701-634-00	BAG, POLYETHYLENE
154	3-703-137-00	SCREW, TAPPING
155	3-773-818-11	(AEP,UK,E)...MANUAL, INSTRUCTION
156	3-773-818-21	(US).....MANUAL, INSTRUCTION
157	3-773-818-41	(AEP).....MANUAL, INSTRUCTION
158	4-350-525-00	SHEET, PROTECTION
159	4-883-723-11	SHEET, TURNTABLE
160	4-885-168-00	ADAPTOR, 45
161	4-885-779-00	BOLSTER, ARM
162	4-885-780-00	CUSHION, ARM
163	4-885-781-00	PROTECTOR (A)
164	4-885-782-00	PROTECTOR (B)
165	4-885-784-00	HOLDER, TURNTABLE
166	4-885-785-00	CUSHION (LEFT)
167	4-885-786-00	CUSHION (RIGHT)
168	4-887-309-11	LABEL (A), CAUTION
169	4-887-318-00	INDIVIDUAL CARTON
170	4-887-441-01	COVER, ARM LOCK

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	△.1-551-506-XX	(US)...CORD, POWER
501	△.1-556-562-00	(UK)...CORD, POWER
501	△.1-534-817-XX	(AEP)...CORD, POWER
501	△.1-551-472-00	(E)...CORD, POWER
502	♣;1-508-802-00	BASE POST U TYPE
503	♣;1-508-878-00	BASE POST
504	♣;1-508-880-00	BASE POST, MCD CONNECTOR 6P
505	
506	△.1-526-565-00	(E)...AC PLUG ADAPTOR
507	1-551-294-00	CORD
508	1-556-552-00	CONNECTOR (PLUG IN TYPE)
509	♣;1-560-200-00	BASE POST, MCD CONNECTOR 2P
510	♣;1-564-496-11	PIN, CONNECTOR 3P
511	♣;1-564-501-11	PIN, CONNECTOR 8P
512	♣;1-608-536-00	PC BOARD, PRIMARY TRANSLATION
513	♣;1-608-883-00	PC BOARD, FG
514	♣;1-612-356-11	PC BOARD, SENSOR
515	♣;1-612-357-11	PC BOARD, PHONO (B)
516	♣;1-612-470-11	PC BOARD, PUSH SWITCH
517	A-4505-089-C	(AEP,UK,E)...CARTRIDGE COMPLETE ASSY
518	A-4587-071-C	(AEP,UK,E)...STYLUS ASSY, ND-250G
519	♣;A-4619-241-A	(AEP,UK)...MOUNTED PCB, SERVO
519	♣;A-4619-242-A	(US,E)...MOUNTED PCB, SERVO
520	♣;A-4644-209-A	MOUNTED PCB, SYSTEM CONTROL
C101	1-162-113-00	CERAMIC 0.01MF 30% 16V
C102	1-123-318-00	ELECT 33MF 20% 16V
C103	1-162-111-00	CERAMIC 0.0022MF 30% 25V
C104	1-161-974-00	CERAMIC 0.1MF 0 16V
C105	1-162-052-00	CERAMIC 22PF 5% 50V
C106	1-162-052-00	CERAMIC 22PF 5% 50V
C107	1-123-380-00	ELECT 1MF 20% 50V
C108	1-123-379-00	ELECT 0.47MF 20% 50V
C109	1-162-031-00	CERAMIC 56PF 5% 50V
C110	1-162-031-00	CERAMIC 56PF 5% 50V
C111	1-162-113-00	CERAMIC 0.01MF 30% 16V
C112	1-162-113-00	CERAMIC 0.01MF 30% 16V
C113	1-123-380-00	ELECT 1MF 20% 50V
C114	1-123-380-00	ELECT 1MF 20% 50V
C115	1-123-295-00	ELECT 100MF 20% 6.3V
C116	1-123-295-00	ELECT 100MF 20% 6.3V
C117	△.1-123-337-00	ELECT 1000MF 20% 25V
C118	△.1-123-337-00	ELECT 1000MF 20% 25V
C119	1-130-483-00	MYLAR 0.01MF 5% 50V
C120	1-130-483-00	MYLAR 0.01MF 5% 50V
C201	1-162-113-00	CERAMIC 0.01MF 30% 16V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C202	1-123-380-00	ELECT 1MF 20% 50V
C203	1-162-113-00	CERAMIC 0.01MF 30% 16V
C204	1-162-113-00	CERAMIC 0.01MF 30% 16V
C205	1-162-102-00	CERAMIC 220PF 10% 50V
C206	1-123-380-00	ELECT 1MF 20% 50V
C207	1-123-380-00	ELECT 1MF 20% 50V
C208	1-161-494-00	CERAMIC 0.022MF 30% 25V
C209	1-161-494-00	CERAMIC 0.022MF 30% 25V
C210	1-162-113-00	CERAMIC 0.01MF 30% 16V
C211	1-123-330-00	ELECT 22MF 20% 16V
C212	1-162-113-00	CERAMIC 0.01MF 30% 16V
C213	1-162-113-00	CERAMIC 0.01MF 30% 16V
C214	1-123-295-00	ELECT 100MF 20% 6.3V
C216	1-123-380-00	ELECT 1MF 20% 50V
C217	1-162-113-00	CERAMIC 0.01MF 30% 16V
C218	1-162-113-00	CERAMIC 0.01MF 30% 16V
C219	1-162-113-00	CERAMIC 0.01MF 30% 16V
C220	1-162-113-00	CERAMIC 0.01MF 30% 16V
C221	1-162-113-00	CERAMIC 0.01MF 30% 16V
C222	1-162-113-00	CERAMIC 0.01MF 30% 16V
C224	1-123-356-00	ELECT 10MF 20% 16V
C225	1-162-113-00	CERAMIC 0.01MF 30% 16V
C226	1-162-113-00	CERAMIC 0.01MF 30% 16V
C227	1-162-113-00	CERAMIC 0.01MF 30% 16V
C228	1-123-295-00	ELECT 100MF 20% 6.3V
C301	1-162-113-00	CERAMIC 0.01MF 30% 16V
C302	1-162-113-00	CERAMIC 0.01MF 30% 16V
C306	1-161-494-00	CERAMIC 0.022 30% 16V
C307	1-161-494-00	CERAMIC 0.022 30% 16V
D101	8-719-103-36	DIODE RD6.8JN1
D102	8-719-103-36	DIODE RD6.8JN1
D105	△.8-719-200-02	DIODE 10E-2
D106	△.8-719-200-02	DIODE 10E-2
D107	△.8-719-200-02	DIODE 10E-2
D108	△.8-719-200-02	DIODE 10E-2
D201	8-719-107-94	DIODE 1SS202-1
D202	8-719-107-94	DIODE 1SS202-1
D203	8-719-103-36	DIODE RD6.8JN1
D204	8-719-103-36	DIODE RD6.8JN1
D301	8-719-907-36	DIODE GL-5EG22
D302	8-719-907-36	DIODE GL-5EG22
D303	8-719-902-94	DIODE GL-9HD2
D304	8-719-902-94	DIODE GL-9HD2
D305	8-719-902-94	DIODE GL-9HD2
D306	8-719-107-94	DIODE 1SS202-1

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CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF:μF, PF:μμF.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

- In each case, U : μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by shading and mark △ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
H101	8-719-800-17	THS102A
H102	8-719-800-17	THS102A
IC101	8-759-201-58	IC TC9142P
IC102	8-759-600-02	IC M5218L
IC103	8-759-202-01	IC TA7256P
IC201	8-759-801-03	IC LM6402G-356
IC202	8-759-600-02	IC M5218L
IC203	8-759-600-02	IC M5218L
J301	1-507-813-00	JACK, SYNCHRO REMOTE CONNTROL
L101	1-408-579-00	MICRO INDUCTOR 220UH
L301	1-422-162-11	COIL
M301	1-541-218-00	MOTOR
PH301	8-719-411-28	ON1128
PL301	1-518-169-XX	LAMP, PILOT
Q101	8-729-900-36	TRANSISTOR DTC124ES
Q102	8-729-900-63	TRANSISTOR DTA124ES
Q103	8-729-900-36	TRANSISTOR DTC124ES
Q104	7-729-245-83	TRANSISTOR 2SC2458
Q105	8-729-180-93	TRANSISTOR 2SD809
Q106	8-729-173-13	TRANSISTOR 2SB731
Q201	8-729-245-83	TRANSISTOR 2SC2458
Q203	8-729-900-65	TRANSISTOR DTA144ES
Q204	8-729-900-61	TRANSISTOR DTA114ES
Q205	8-729-900-61	TRANSISTOR DTA114ES
Q206	8-729-900-61	TRANSISTOR DTA114ES
Q207	8-729-900-63	TRANSISTOR DTA124ES
Q209	8-729-180-93	TRANSISTOR 2SD809
Q210	8-729-173-12	TRANSISTOR 2SB731
Q211	8-729-900-61	TRANSISTOR DTA114ES
Q212	8-729-245-83	TRANSISTOR 2SC2458
Q213	8-729-180-93	TRANSISTOR 2SD809
Q214	8-729-900-63	TRANSISTOR DTA124ES
Q215	8-729-245-83	TRANSISTOR 2SC2458
Q216	8-729-245-83	TRANSISTOR 2SC2458
Q301	8-729-101-01	TRANSISTOR PH101
Q302	8-729-101-01	TRANSISTOR PH101
R101	1-247-807-00	CARBON 100 5% 1/6W
R102	1-247-887-00	CARBON 220K 5% 1/6W
R103	1-247-889-00	CARBON 270K 5% 1/6W
R104	1-247-889-00	CARBON 270K 5% 1/6W
R105	1-247-887-00	CARBON 220K 5% 1/6W
R106	1-247-895-00	CARBON 470K 5% 1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R107	1-247-883-00	CARBON 150K 5% 1/6W
R108	1-247-892-00	CARBON 360K 5% 1/6W
R109	1-247-879-00	CARBON 100K 5% 1/6W
R110	1-247-857-00	CARBON 12K 5% 1/6W
R111	1-247-857-00	CARBON 12K 5% 1/6W
R112	1-247-839-00	CARBON 2.2K 5% 1/6W
R113	1-247-839-00	CARBON 2.2K 5% 1/6W
R114	1-247-839-00	CARBON 2.2K 5% 1/6W
R115	1-247-839-00	CARBON 2.2K 5% 1/6W
R117	1-247-885-00	CARBON 180K 5% 1/6W
R118	1-247-885-00	CARBON 180K 5% 1/6W
R119	1-247-893-00	CARBON 390K 5% 1/6W
R120	1-247-893-00	CARBON 390K 5% 1/6W
R121	1-247-885-00	CARBON 180K 5% 1/6W
R122	1-247-885-00	CARBON 180K 5% 1/6W
R123	1-247-767-00	CARBON 2.2 5% 1/6W
R124	1-247-767-00	CARBON 2.2 5% 1/6W
R125	1-247-801-00	CARBON 56 5% 1/6W
R126	1-247-801-00	CARBON 56 5% 1/6W
R127	1-247-811-00	CARBON 150 5% 1/6W
R128	1-247-811-00	CARBON 150 5% 1/6W
R130 Δ	1-212-849-00	(US,E)... FUSIBLE 4.7 5% 1/4W F
R130	1-202-850-00	(AEP,UK)...SOLID 2.2 1/4W
R131 Δ	1-212-849-00	(US,E)... FUSIBLE 4.7 5% 1/4W F
R131	1-202-850-00	(AEP,UK)...SOLID 2.2 1/4W
R132	1-217-395-00	FUSIBLE 47 5% 1/4W F
R133	1-247-836-00	CARBON 1.6K 5% 1/6W
R134	1-247-837-00	CARBON 1.8K 5% 1/6W
R135 Δ	1-212-849-00	(US,E)... FUSIBLE 4.7 5% 1/4W F
R135	1-202-850-00	(AEP,UK)...SOLID 2.2 1/4W
R136 Δ	1-212-849-00	(US,E)... FUSIBLE 4.7 5% 1/4W F
R136	1-202-850-00	(AEP,UK)...SOLID 2.2 1/4W
R137	1-247-839-00	CARBON 2.2K 5% 1/6W
R138	1-247-807-00	CARBON 100 5% 1/6W
R201	1-247-863-00	CARBON 22K 5% 1/6W
R202	1-247-863-00	CARBON 22K 5% 1/6W
R203	1-247-855-00	CARBON 10K 5% 1/6W
R204	1-247-855-00	CARBON 10K 5% 1/6W
R206	1-247-831-00	CARBON 1K 5% 1/6W
R207	1-247-831-00	CARBON 1K 5% 1/6W
R208	1-247-831-00	CARBON 1K 5% 1/6W
R209	1-247-831-00	CARBON 1K 5% 1/6W
R210	1-247-831-00	CARBON 1K 5% 1/6W
R211	1-247-831-00	CARBON 1K 5% 1/6W

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " Δ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -XX or Δ - $\Delta\Delta\Delta$ - $\Delta\Delta\Delta$ -X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

- All capacitors are in μ F. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μ F, PF: $\mu\mu$ F.

COILS

- MMH : mH, UH : μ H

SEMICONDUCTORS

- In each case, U : μ , for example: UA...: μ A..., UPA...: μ PA..., UPC...: μ PC, UPD...: μ PD...

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R212	1-247-819-00	CARBON	330	5%	1/6W
R213	1-247-819-00	CARBON	330	5%	1/6W
R214	1-247-825-00	CARBON	560	5%	1/6W
R215	1-247-825-00	CARBON	560	5%	1/6W
R216	1-247-825-00	CARBON	560	5%	1/6W
R220	1-247-863-00	CARBON	22K	5%	1/6W
R223	1-247-863-00	CARBON	22K	5%	1/6W
R225	1-247-857-00	CARBON	12K	5%	1/6W
R226	1-247-855-00	CARBON	10K	5%	1/6W
R227	1-247-851-00	CARBON	6.8K	5%	1/6W
R228	1-247-855-00	CARBON	10K	5%	1/6W
R229	1-247-807-00	CARBON	100	5%	1/6W
R235	1-247-847-00	CARBON	4.7K	5%	1/6W
R236	1-247-847-00	CARBON	4.7K	5%	1/6W
R237	1-247-847-00	CARBON	4.7K	5%	1/6W
R238	1-247-891-00	CARBON	330K	5%	1/6W
R239	1-247-889-00	CARBON	270K	5%	1/6W
R240	1-247-891-00	CARBON	330K	5%	1/6W
R241	1-247-889-00	CARBON	270K	5%	1/6W
R242	1-247-855-00	CARBON	10K	5%	1/6W
R243	1-247-855-00	CARBON	10K	5%	1/6W
R244	1-247-815-00	CARBON	220	5%	1/6W
R245	1-247-887-00	CARBON	220K	5%	1/6W
R246	1-247-879-00	CARBON	100K	5%	1/6W
R250	1-247-867-00	CARBON	33K	5%	1/6W
R251	1-247-879-00	CARBON	100K	5%	1/6W
R252	1-247-823-00	CARBON	470	5%	1/6W
R253	1-247-855-00	CARBON	10K	5%	1/6W
R254	1-247-847-00	CARBON	4.7K	5%	1/6W
R255	1-247-892-00	CARBON	360K	5%	1/6W
R257	1-247-859-00	CARBON	15K	5%	1/6W
R258	1-247-879-00	CARBON	100K	5%	1/6W
R259	1-247-813-00	CARBON	180	5%	1/6W
R260	1-247-849-00	CARBON	5.6K	5%	1/6W
R261	1-247-815-00	CARBON	220	5%	1/6W
R262	1-247-855-00	CARBON	10K	5%	1/6W
R263	1-247-775-00	CARBON	4.7	5%	1/6W
R265	1-247-867-00	CARBON	33K	5%	1/6W
R266	1-247-855-00	CARBON	10K	5%	1/6W
R267	1-247-855-00	CARBON	10K	5%	1/6W
R268	1-247-871-00	CARBON	47K	5%	1/6W
R269	1-247-887-00	CARBON	220K	5%	1/6W
R270	1-247-879-00	CARBON	100K	5%	1/6W
R271	1-247-879-00	CARBON	100K	5%	1/6W
R272	1-247-879-00	CARBON	100K	5%	1/6W

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:

All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF:μF, PF:μμF.

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R273	1-247-879-00	CARBON	100K	5%	1/6W
R274	1-247-879-00	CARBON	100K	5%	1/6W
R275	1-247-879-00	CARBON	100K	5%	1/6W
R276	1-247-879-00	CARBON	100K	5%	1/6W
R278	1-247-855-00	CARBON	10K	5%	1/6W
R279	1-247-855-00	CARBON	10K	5%	1/6W
R280	1-247-855-00	CARBON	10K	5%	1/6W
R281	1-247-855-00	CARBON	10K	5%	1/6W
R282	1-247-815-00	CARBON	220	5%	1/6W
R283	1-247-815-00	CARBON	220	5%	1/6W
R284	1-247-815-00	CARBON	220	5%	1/6W
R285	1-247-807-00	CARBON	100	5%	1/6W
R287	1-247-855-00	CARBON	10K	5%	1/6W
R288	1-247-867-00	CARBON	33K	5%	1/6W
RV101	1-226-233-00	RES, ADJ, CARBON 1K			
RV102	1-226-233-00	RES, ADJ, CARBON 1K			
RV103	1-226-239-00	RES, ADJ, CARBON 100K			
RV104	1-226-239-00	RES, ADJ, CARBON 100K			
RY301	1-515-519-00	RELAY			
S201	1-553-856-00	SWITCH, KEY BOARD, START/STOP			
S202	1-553-856-00	SWITCH, KEY BOARD, ARM TRANSPORT(BACK)			
S203	1-553-856-00	SWITCH, KEY BOARD, ARM TRANSPORT(FWD)			
S204	1-553-856-00	SWITCH, KEY BOARD, ARM LIFTER			
S205	1-553-856-00	SWITCH, KEY BOARD, REPEAT			
S206	1-553-856-00	SWITCH, KEY BOARD, SPEED			
S301	1-554-817-11	SWITCH			
S302	1-553-331-21	SWITCH, PUSH, POWER			
S902	Δ.1-552-535-00	(E)...SWITCH, POWER & VOLTAGE CHANGE			
T901	Δ.1-447-515-00	(US).....TRANSFORMER, POWER			
T901	Δ.1-447-516-00	(AEP,UK)...TRANSFORMER, POWER			
T901	Δ.1-447-517-21	(E).....TRANSFORMER, POWER			
X101	1-567-259-11	VIBRATOR, CRYSTAL			

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.