

# PS-LX3

## PS-LX3



US Model  
AEP Model  
E Model

## STEREO TURNTABLE SYSTEM

### SPECIFICATIONS

#### 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 or 220-240 V ac adjustable  
50/60 Hz (E model)

**Power Consumption:** 9 W

**Dimensions:** Approx. 430 (w) x 105 (h) x 355 (d) mm  
17 (w) x 4 1/4 (h) x 14 (d) inches  
including projecting parts and controls

**Weight:** Approx. 6.1 kg, 13 lbs 7 oz net  
Approx. 7.4 kg, 16 lbs 5 oz in shipping  
carton

#### TURNTABLE

**Platter:** 31 cm (12 1/4 inches), aluminum-alloy diecast

**Motor:** Linear torque BSL (brushless and slotless)  
motor

**Drive System:** Direct drive

**Control System:** Magnedisc servo control system

**Speed:** 33 1/3 rpm, 45 rpm

**Starting Characteristics:** Comes to nominal speed within a 1/2  
revolution (33 1/3 rpm)

**Wow and Flutter:** 0.02 % (WRMS) \* 0.025 % (WRMS)  
±0.04 % (DIN)

**Signal-to-noise Ratio:** 75 dB (DIN-B)

**Load Characteristics:** 0 % up to 100 g stylus force (at lead-in groove  
of a record)

**Speed Deviation:** Within ±0.003 %

**Automatic System:** Lead-in, return, reject, repeat, record size  
selection

#### TO NEARM

**Type:** Statically balanced

**Pivot-to-stylus Length:** 216.5 mm (8 5/8 inches)

**Overhang:** 16.5 mm (2 1/32 inches)

**Stylus Force Adjust-  
ment Range:** 0 - 3 g

**Cartridge Weight  
Range (including a  
cartridge shell):** 7.5 - 12 g

#### CARTRIDGE XL-150

**Type:** Moving magnet type

**Frequency Response:** 10 Hz to 25 kHz

**Channel Separation:** 20 dB at 1 kHz

**Output Voltage:** 3 mV at 1 kHz, 5 cm/sec.

**Load Impedance:** 50 to 100 kΩ

**Tracking Force:** 1.3 to 2.3 g (1.8 g recommended)

**Stylus:** Sony ND-150G  
(conical 0.6 mil diamond)

**Weight:** 8.8 g

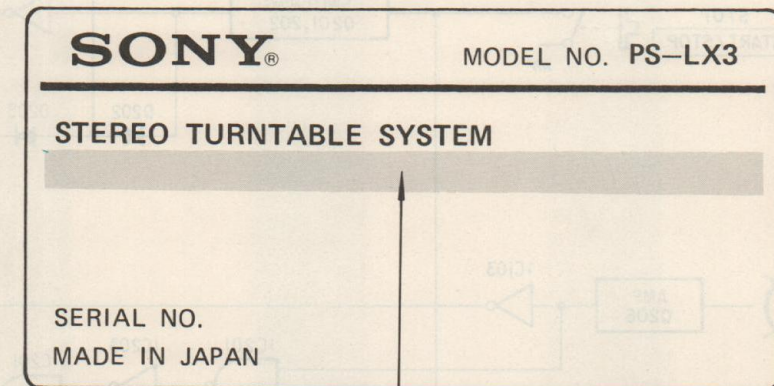
#### Note

Appliance conforms with EEC Directive 76/889 regarding  
interference suppression.

\*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 pickup head.

#### MODEL IDENTIFICATION

— Specification Label —



US model : AC: 120V 60Hz 9W

AEP model : AC: 220V ~ 50/60Hz 9W

E model : AC: 110 - 120V, 220 - 240V ~ 50/60Hz 9W

#### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  
ON THE SCHEMATIC DIAGRAMS, EXPLODED  
VIEWS 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.



MICROFILM

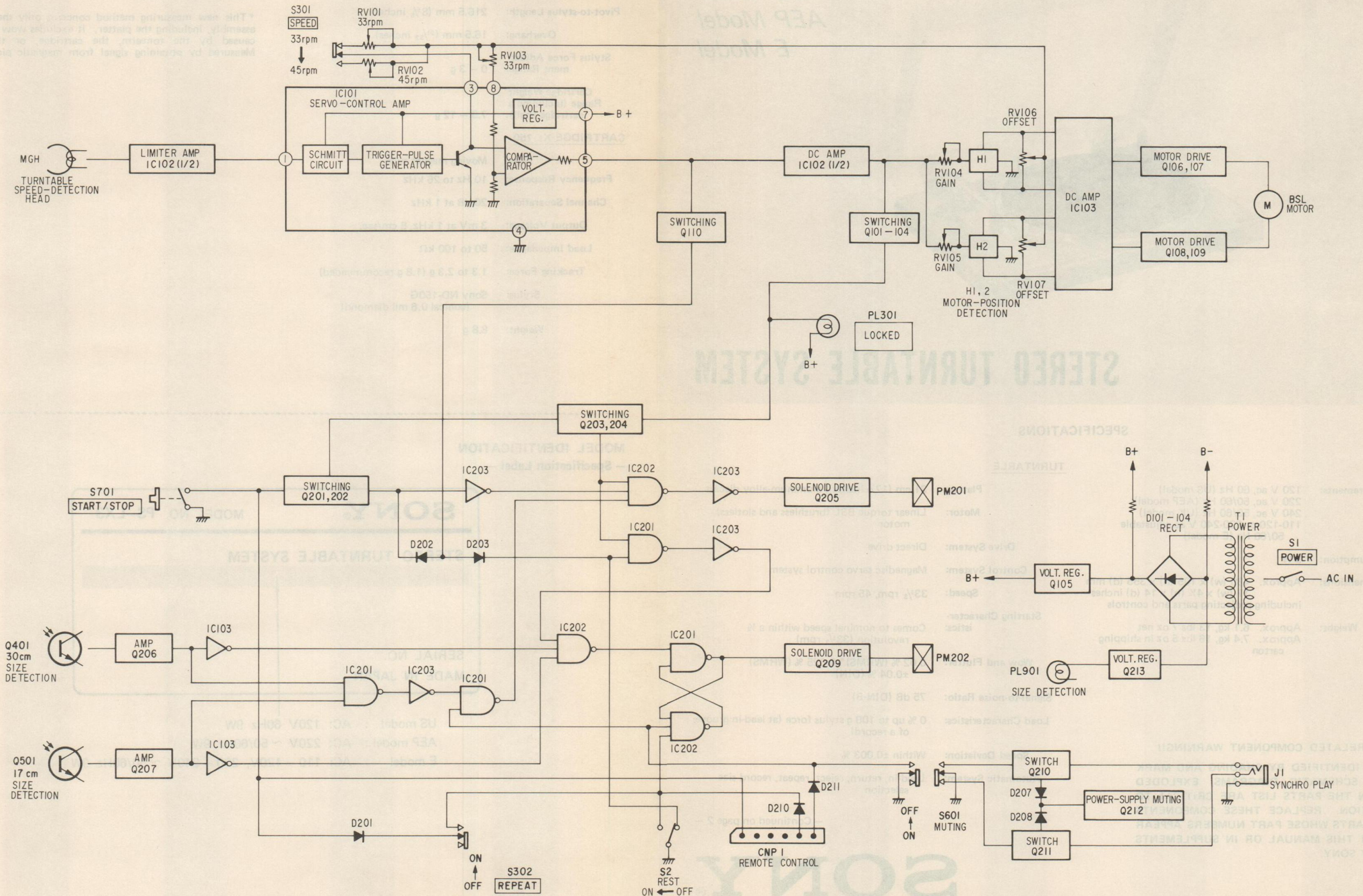
# SONY

## SERVICE MANUAL

— Continued on page 2 —

SECTION 1  
OUTLINE

BLOCK DIAGRAM



## SECTION 2 DISASSEMBLY

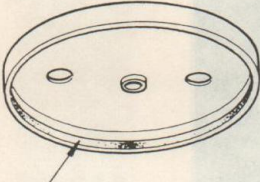
### Note:

- Follow the disassembly procedure in the numerical order given.
- Be sure to note the parts placements/positionings of each other before disassembling them apart.
- Be sure to note the burred side of the washers and retaining rings with bur.

### NOTES ON REPAIRING

#### TURNTABLE HANDLING

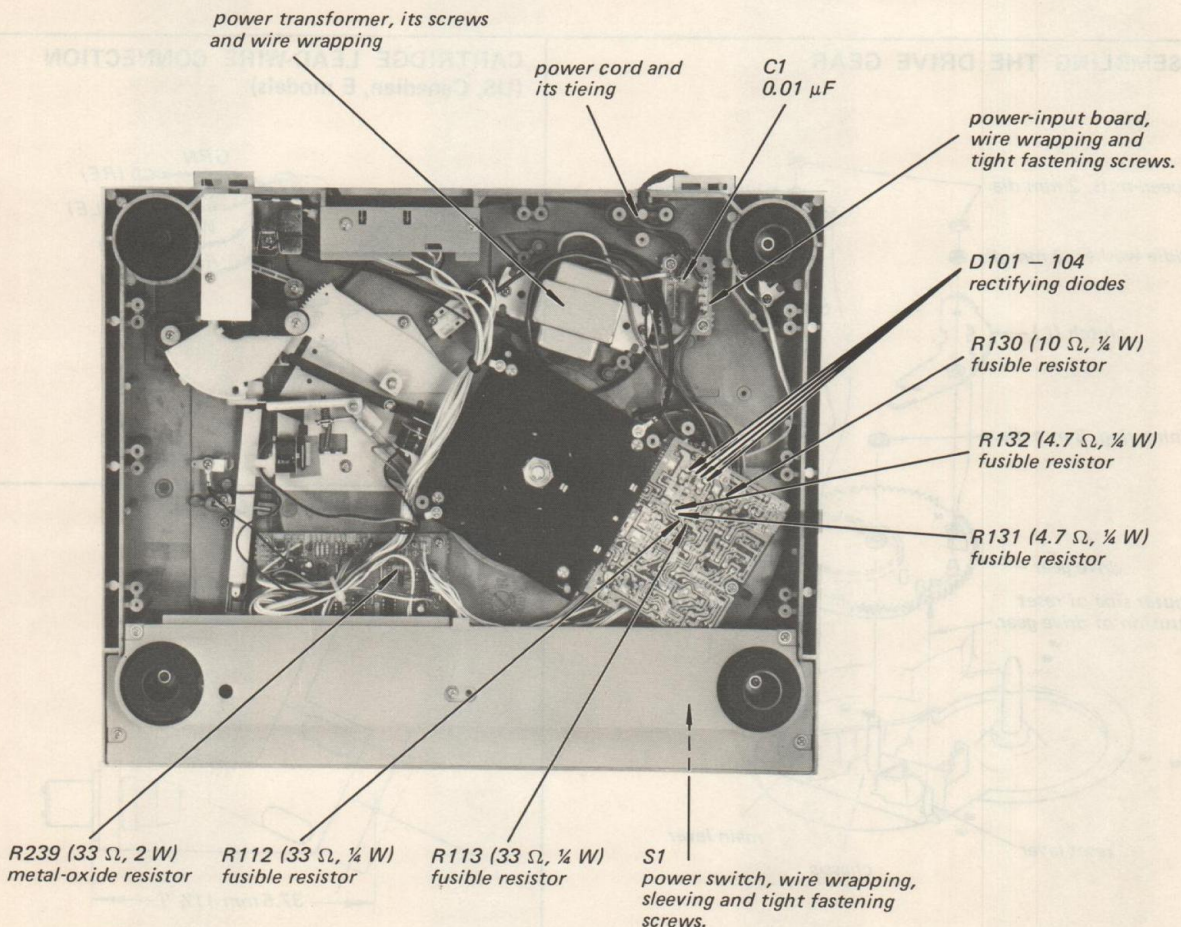
Bottom view of turntable



Be sure not to spoil the magnetic coating (dark brown color).

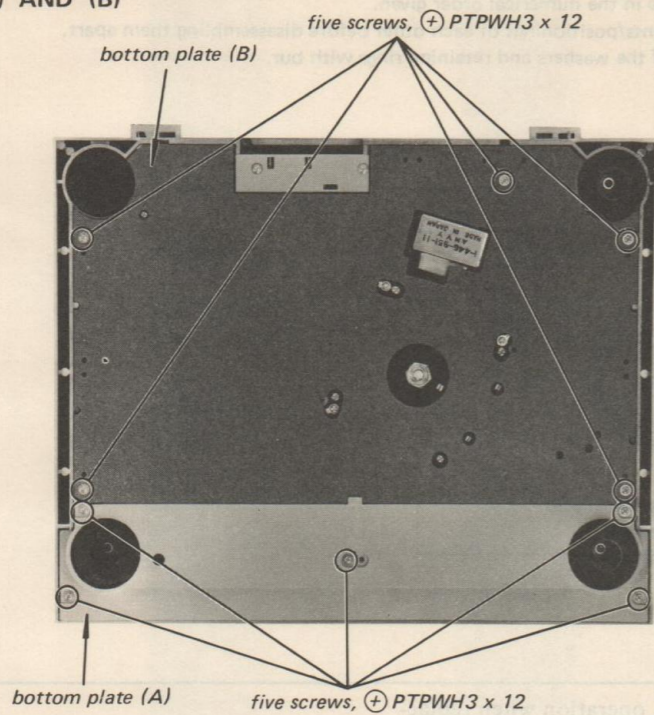
#### SAFETY-RELATED PARTS

Precisely perform a proper operation when replacing or re-wiring the following safety-related parts.

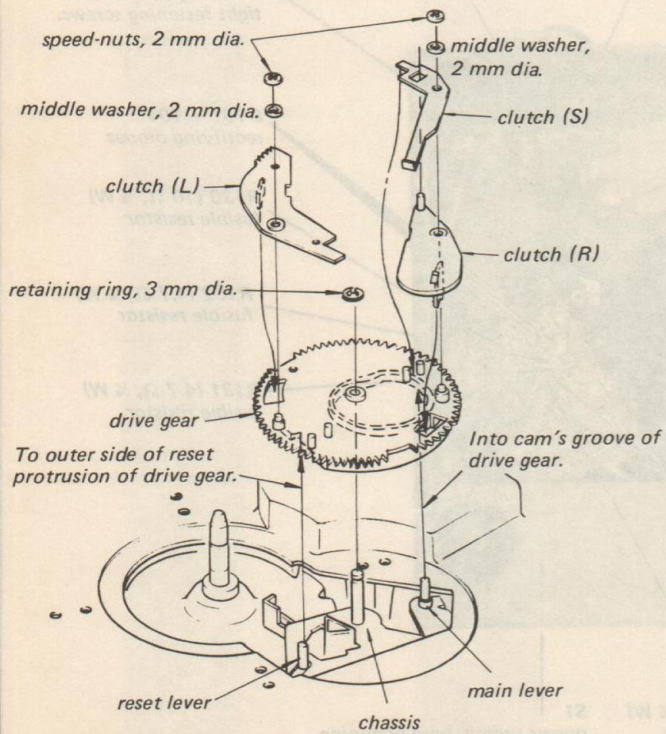


### BOTTOM PLATES (A) AND (B)

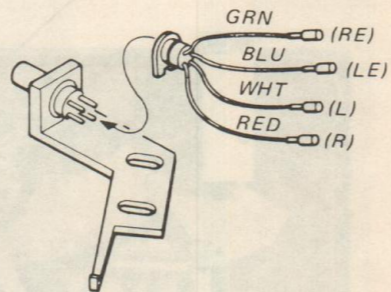
1 Remove rubber mat and turntable.



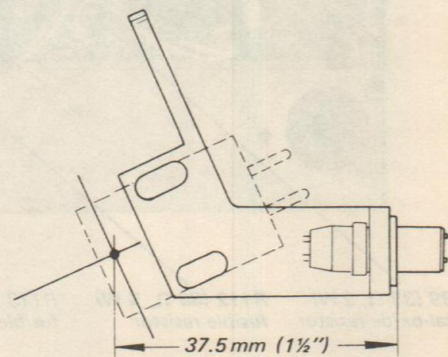
### ASSEMBLING THE DRIVE GEAR



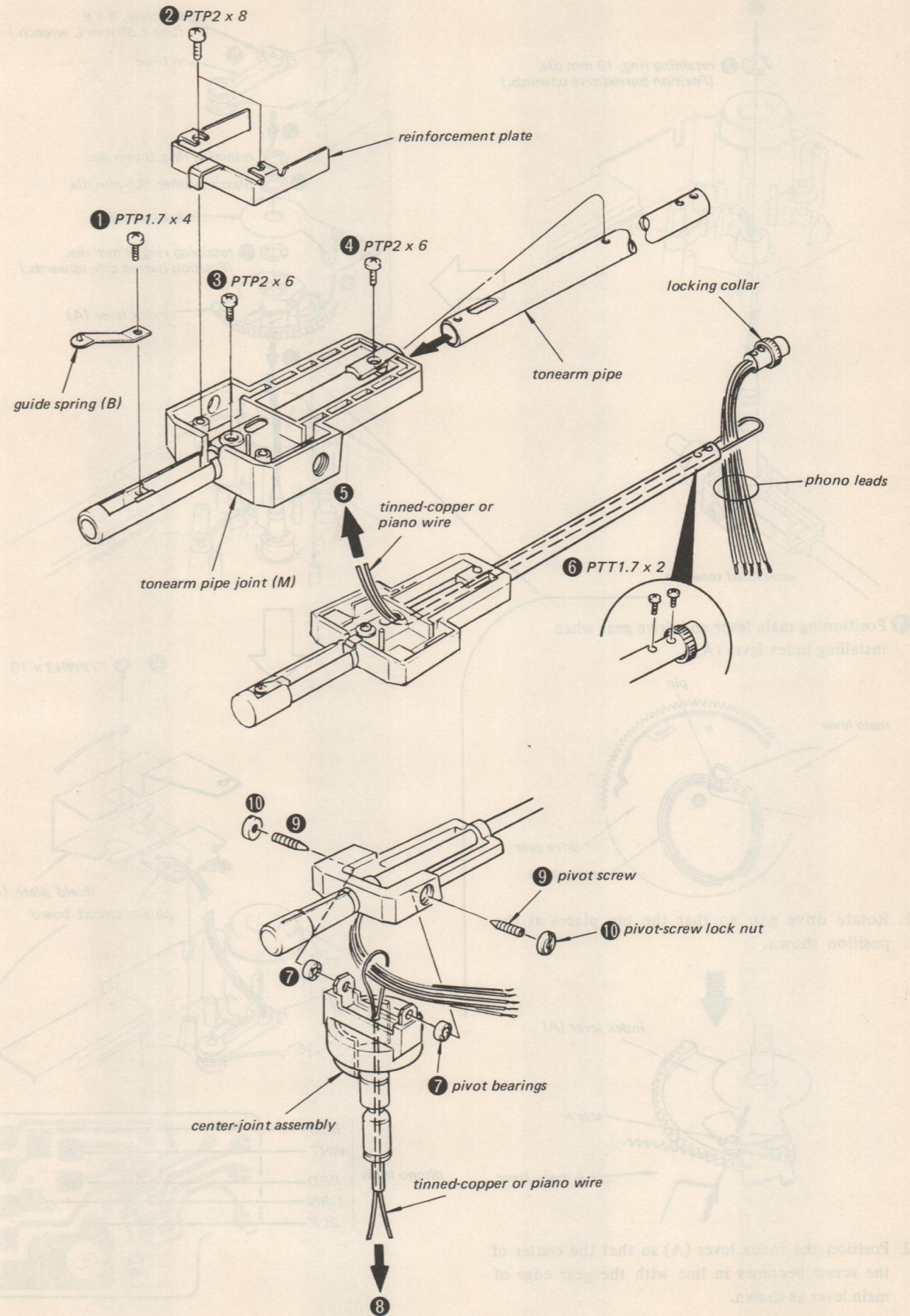
### CARTRIDGE LEAD-WIRE CONNECTION (US, Canadian, E models)



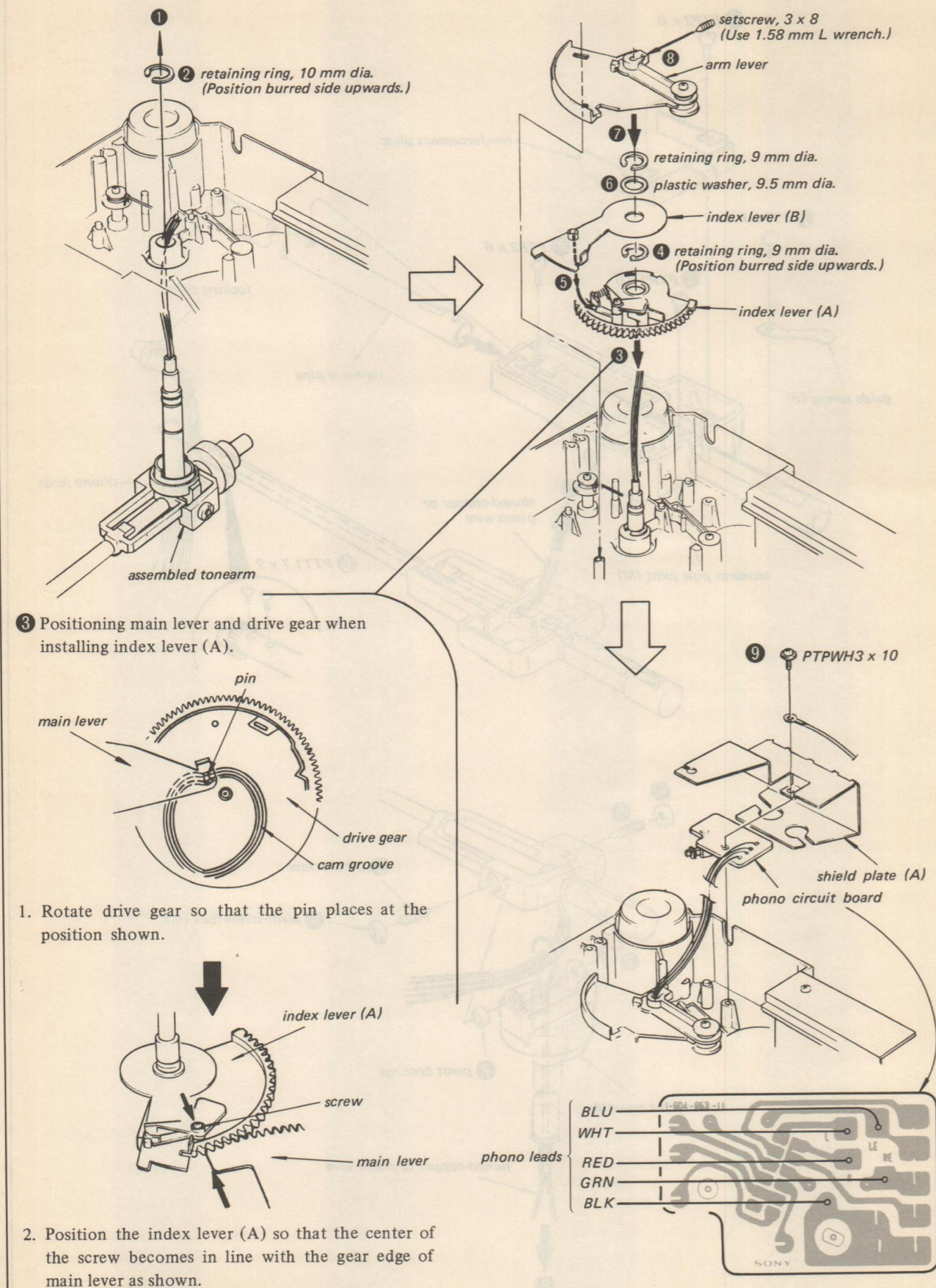
### CARTRIDGE INSTALLATION (US, Canadian, E models)



### ASSEMBLING THE TONEARM



INSTALLING THE TONEARM

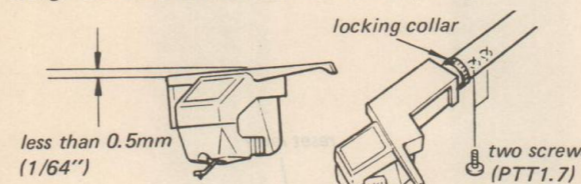


3-1. MECHANICAL ADJUSTMENTS

**Note:** Put a test or an appropriate record on the mat when desired. Unless a record is put on the mat, the turntable does not turn due to the full-automatic design except for the power on/off.

Cartridge Level Adjustment

Loosen the two screws and adjust the position of the locking collar so that the inclination of the cartridge becomes in less than 0.5 mm (1/64").



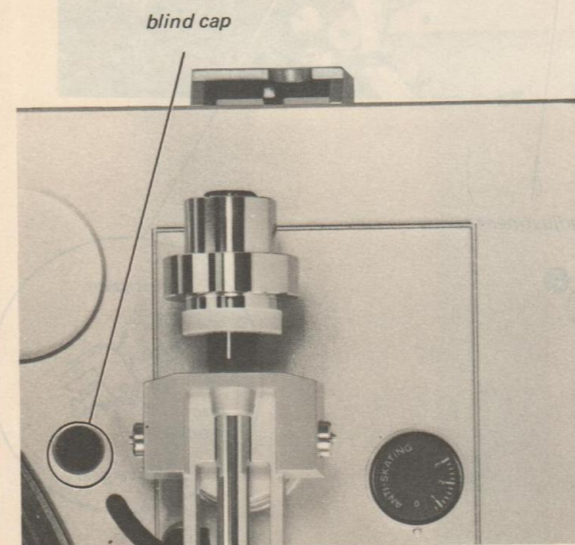
**Note:** Move the tonearm inside to just above the adjustment hole in the frame. The two screws are accessible through the hole from the bottom side using a screwdriver.

Drop Point Adjustment

1. Set the SPEED switch to 33.
2. Remove the blind cap from the adjustment hole.
3. Put a test record (YFSC-16) on the mat.
4. Press the START/STOP button.
5. By using a hex-shaped ordinal pencil or a screwdriver, adjust the drop-point click-stop adjustment screw precisely so that the stylus drops on a groove of between five and nineteen count voice announcements in Japanese.

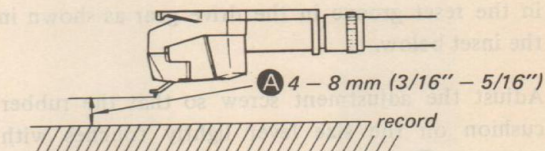
Adjustment screw rotation	Drop point
clockwise	to inside (higher counts)
counterclockwise	to outside (lower counts)

**Note:** The drop point for 17 cm disc is also good when the drop point is properly adjusted for a 30 cm disc.



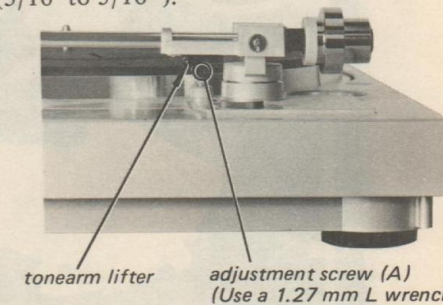
Stylus Height Adjustment

**Note:** Perform both adjustments for manual and automatic operations.



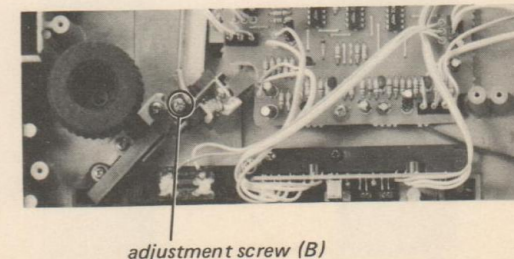
1. Automatic

- 1-a) Put a test record on the mat.
- 1-b) Depress the lifter button to make a lifter-down mode.
- 1-c) Press the START/STOP button to start the operation.
- 1-d) Turn the POWER off just when the tonearm has moved to the automatic-return point and the tonearm lifter has started to lift the tonearm. Stop the turning of the turntable by hand.
- 1-e) Loosen the adjustment screw (A) and adjust the height of the tonearm lifter so that the stylus height A becomes in 4 mm to 8 mm (3/16" to 5/16").



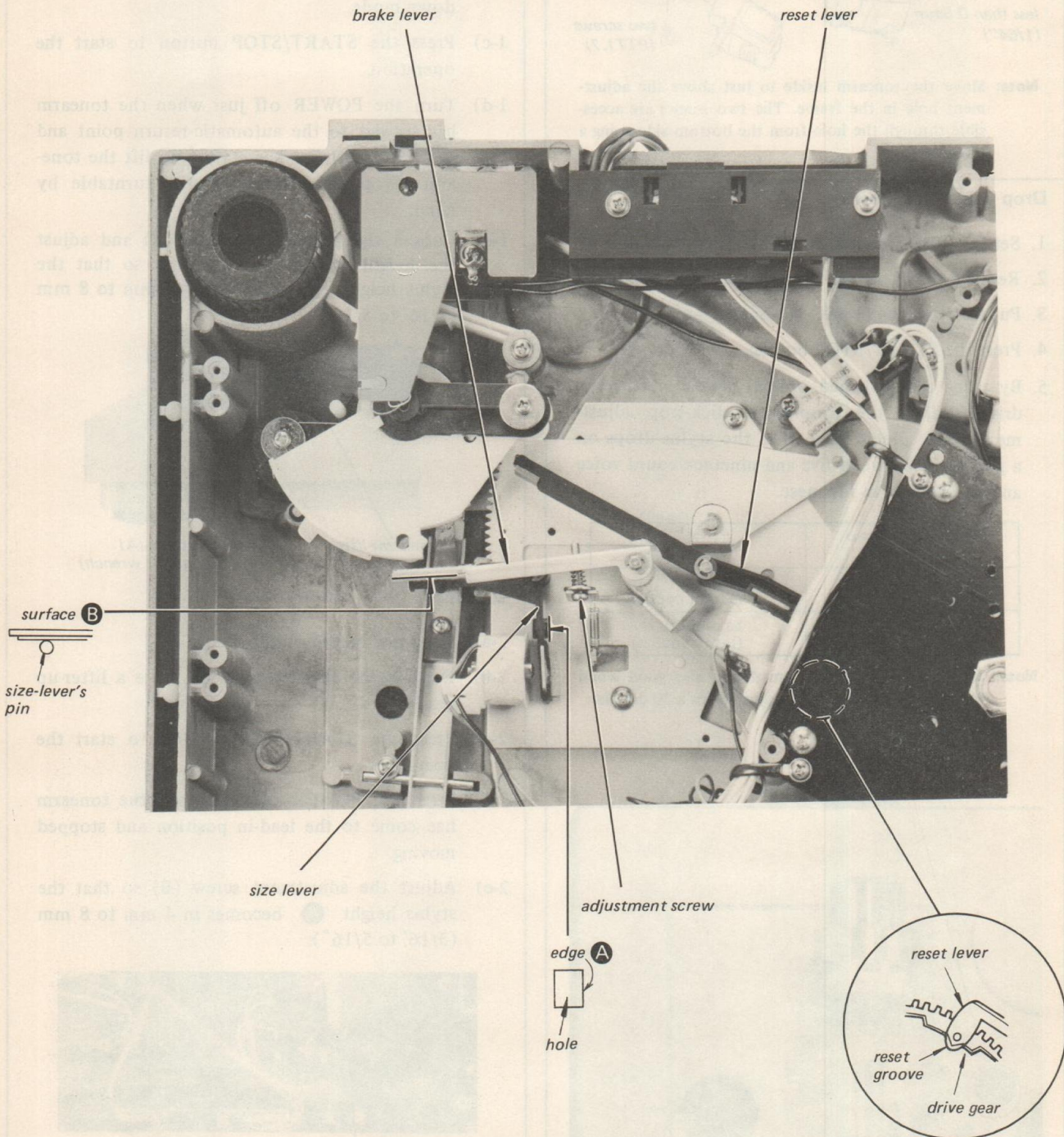
2. Manual

- 2-a) Put a test record on the mat.
- 2-b) Depress the lifter button to make a lifter-up mode.
- 2-c) Press the START/STOP button to start the operation.
- 2-d) Turn the POWER off just when the tonearm has come to the lead-in position and stopped moving.
- 2-e) Adjust the adjustment screw (B) so that the stylus height A becomes in 4 mm to 8 mm (3/16" to 5/16").



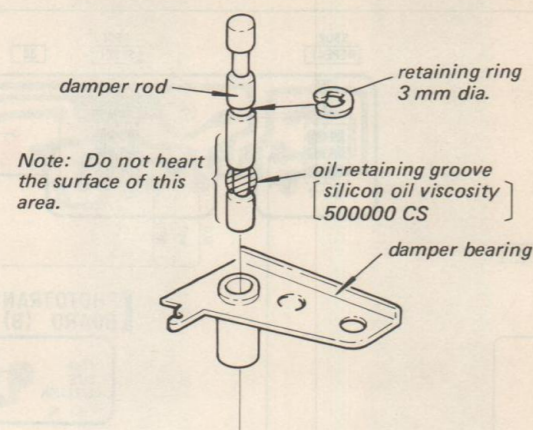
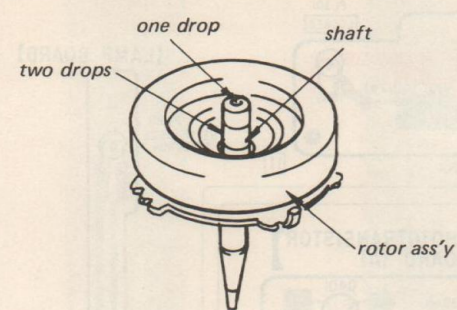
### Brake Adjustment

1. Turn the drive gear and set the reset-lever's pin in the reset groove in the drive gear as shown in the inset below.
2. Adjust the adjustment screw so that the rubber cushion on the size lever lightly touches with the edge **A** of the rectangular hole in the chassis and, at the same time, the surface **B** lightly touches with the size-lever's pin.

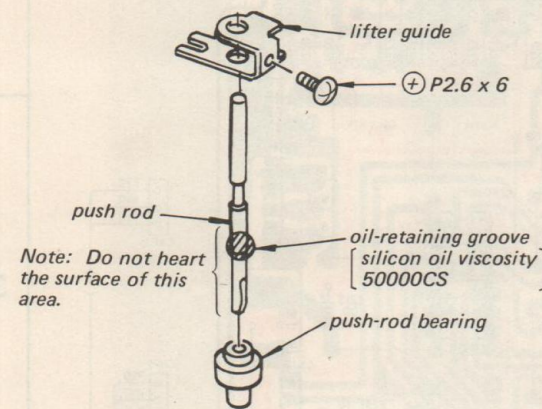


**Lubrication**

1. When the motor rotor ass'y is replaced, apply Sony oil OL-2KA to the rotor shaft as illustrated below.

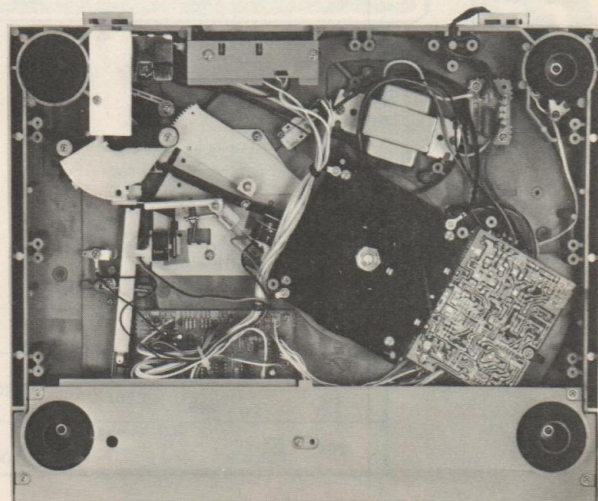


2. When the push rod or damper rod is replaced, apply proper silicon oil to the oil-retaining groove of the shaft as illustrated below.



**Parts Positions In Neutral Mode**

The photograph at the right shows the parts positions when the tonearm is on the tonearm rest, POWER switch turned off and the turntable is in the neutral position.



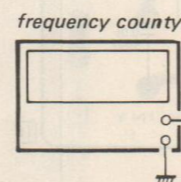
**3-2. ELECTRICAL ADJUSTMENTS**

**Note:** Put a test or an appropriate record on the mat when desired. Unless a record is put on the mat, the turntable does not turn due to the full-automatic design except for the power on/off.

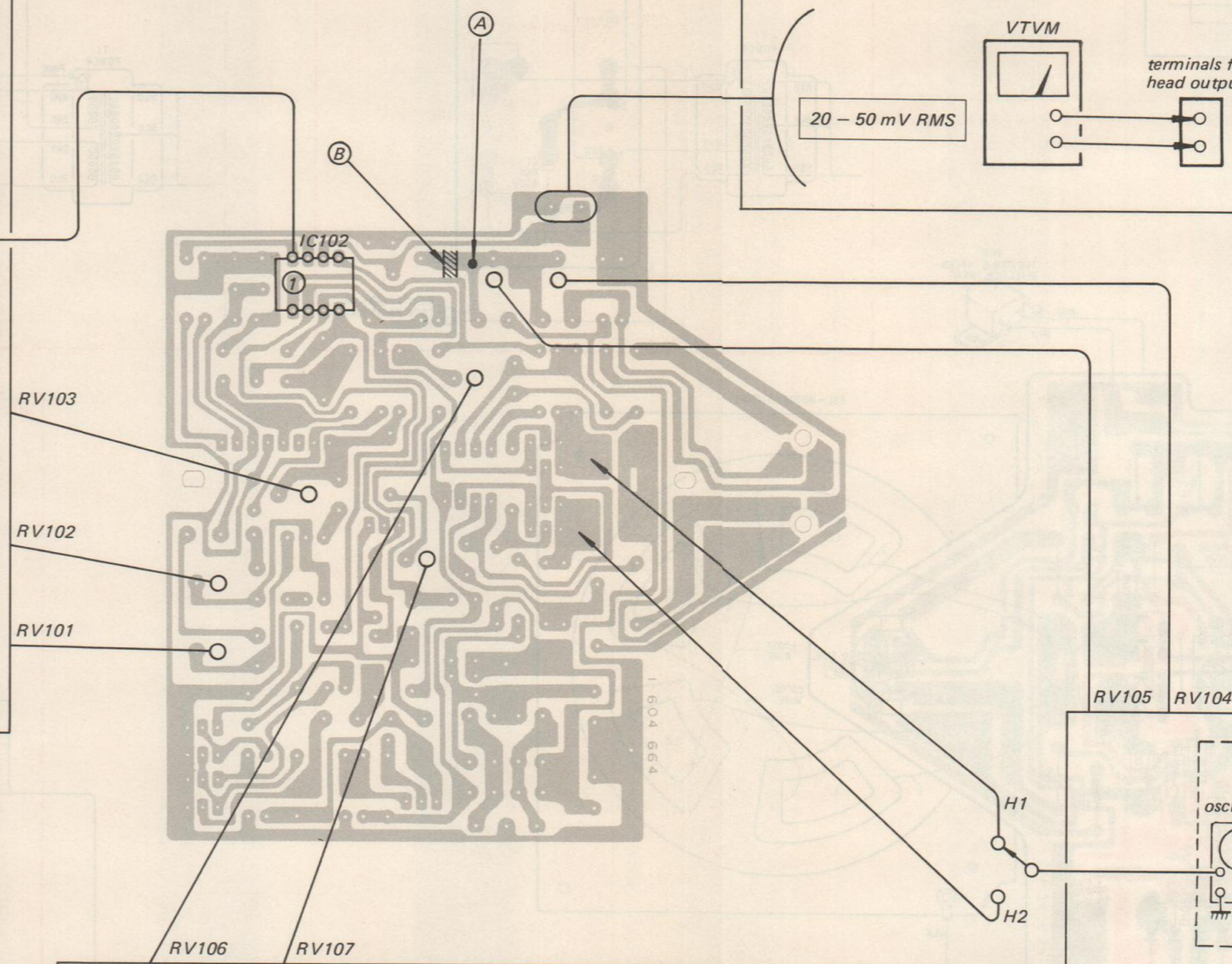
**Speed Adjustment**

**Note:** Use a small-blade screwdriver for the adjustments.

1. Connect a frequency counter to pin ① of IC102.
2. Turn POWER on.

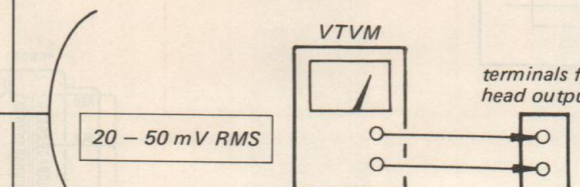


3. Turn the SPEED switch to 33.
4. Adjust the coarse adjustment RV103, which acts both for 33 and 45 rpm, for a 284.0 Hz reading on the frequency counter.
5. Turn the SPEED switch to 45.
6. Adjust the fine adjustment RV102 for a 384.0 Hz reading.
7. Turn the SPEED switch to 33.
8. Adjust the fine adjustment RV101 for a 284.4 Hz reading.

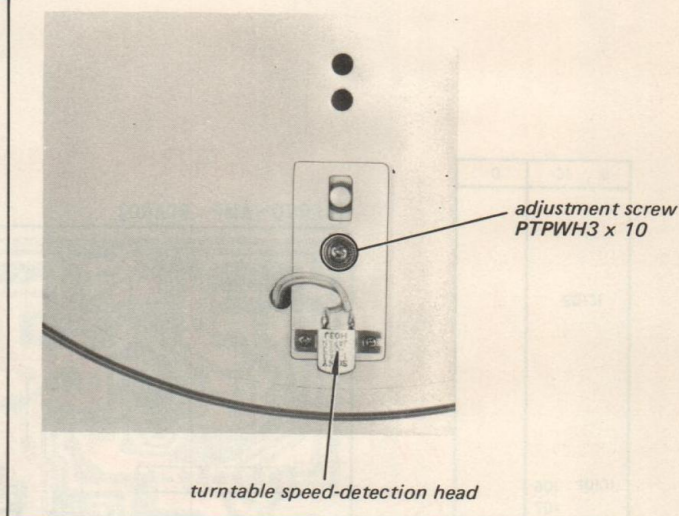


**Speed-detection Head's Position Adjustment**

1. Turn the POWER on.
2. Turn the SPEED switch to 33.
3. Put a test record on the mat.
4. Press the START/STOP button to start the operation. Read the VTVM reading.

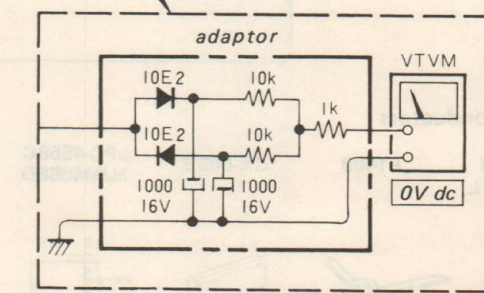
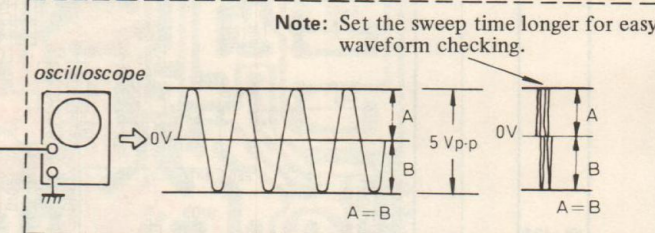


5. With the turntable turning and stopping, and removing it at a time, adjust the position of the speed-detection head's position inside and out by loosening the adjustment screw so that the output-signal level becomes in 20 mV RMS to 50 mV RMS. Note that the output-signal level critically varies in accordance with a little displacement of the head.
6. Check that the head is not touching with the coating of the inside turntable. The clearance between the head and coating should not be less than 0.3 mm or the thickness of an ordinal name-card.



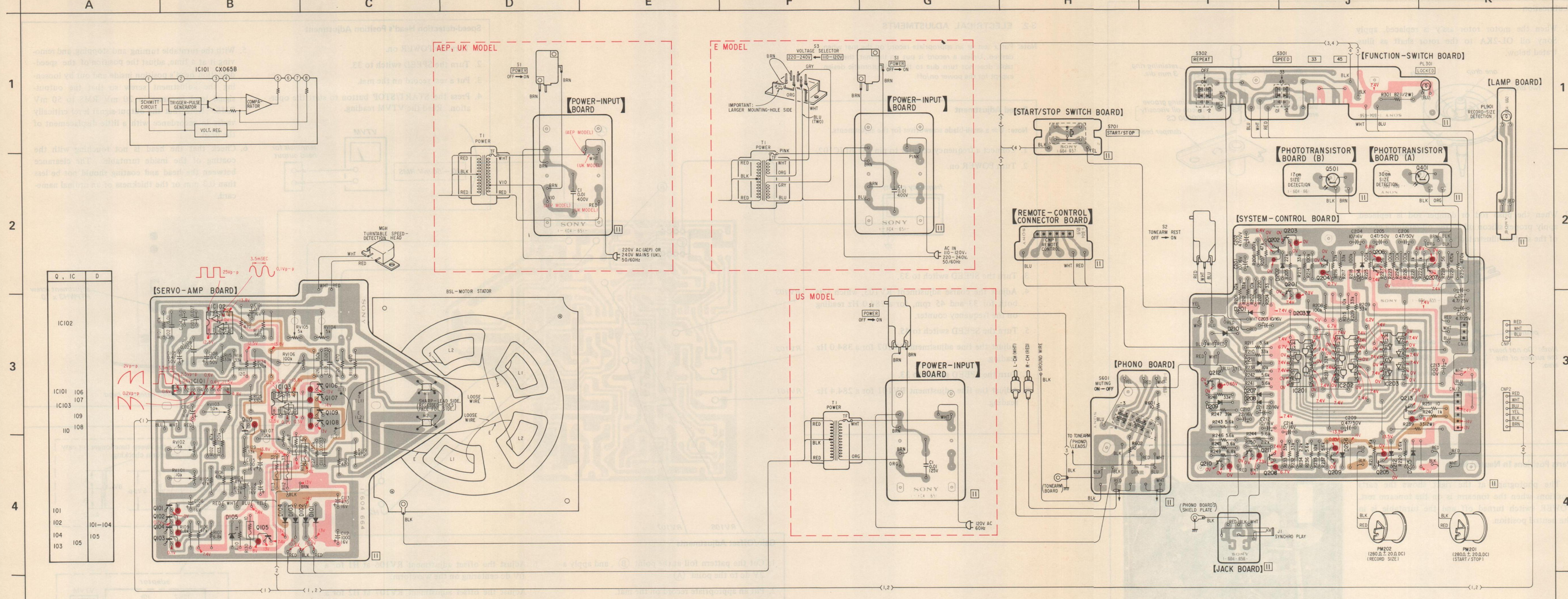
**Gain/Offset Adjustments**

1. Cut the pattern foil at the point (B), and apply a 2V dc to the point (A).
2. Put an appropriate record on the mat.
3. Turn the POWER switch on.
4. Adjust the gain adjustment RV104 at the switch position H1 for a 5 Vp-p reading on the oscilloscope.
5. Adjust the gain adjustment RV105 at H2 for a 5 Vp-p reading.
6. Adjust the offset adjustment RV106 at H1 for a 0V dc centering on the waveform.
7. Adjust the offset adjustment RV107 at H2 for a 0V dc centering.
8. After the adjustments, bridge the opened patterns at the point (B) and remove the dc-voltage connection from the point (A).



SECTION 4  
DIAGRAMS

4-1. MOUNTING DIAGRAM



Q, IC	D
IC102	
IC101	106
IC103	107
	109
	108
	105
101	101-104
102	
104	
103	105

**Semiconductors**

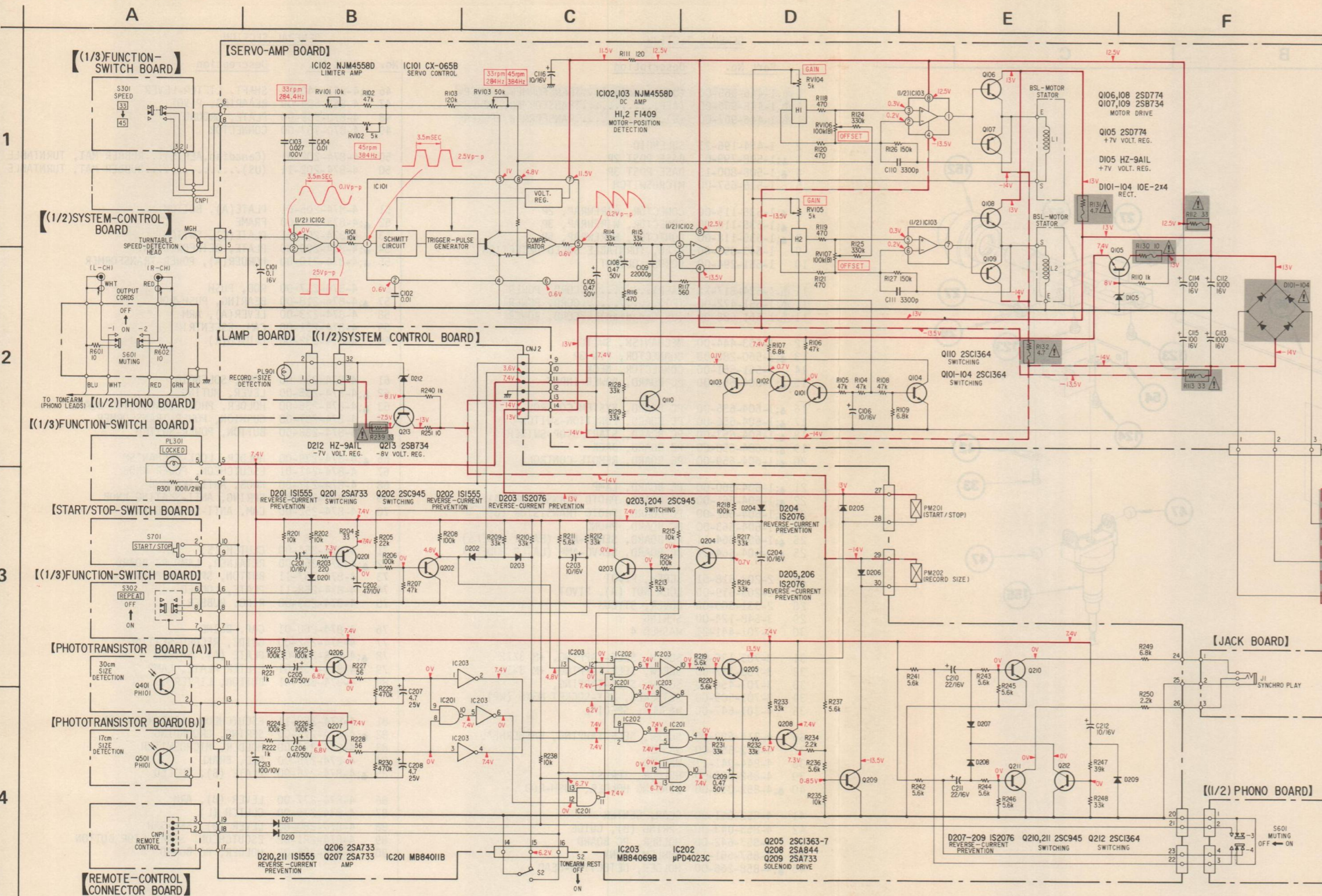
10E-2	F1409	CX-065B	μPC-4558C	μPD4011C	MB84011B	2SC1364	2SD774	2SA844	2SA733	2SC945	PH101
1S1555			NJM4558D	μPD-4023C	MB84069B		2SB734	2SA1026			
HZ9A1L											

**Note:**  
 ● ○ : parts extracted from the component side.  
 ● : B+ pattern  
 ○ : B- pattern

212	202	203	501	206	401	Q
210	211	208	IC201	IC202	IC203	IC
209	201, 211	202	203	204	213	207
	207, 208			206	212	205
						D



4-2. SCHEMATIC DIAGRAM



**Note:**

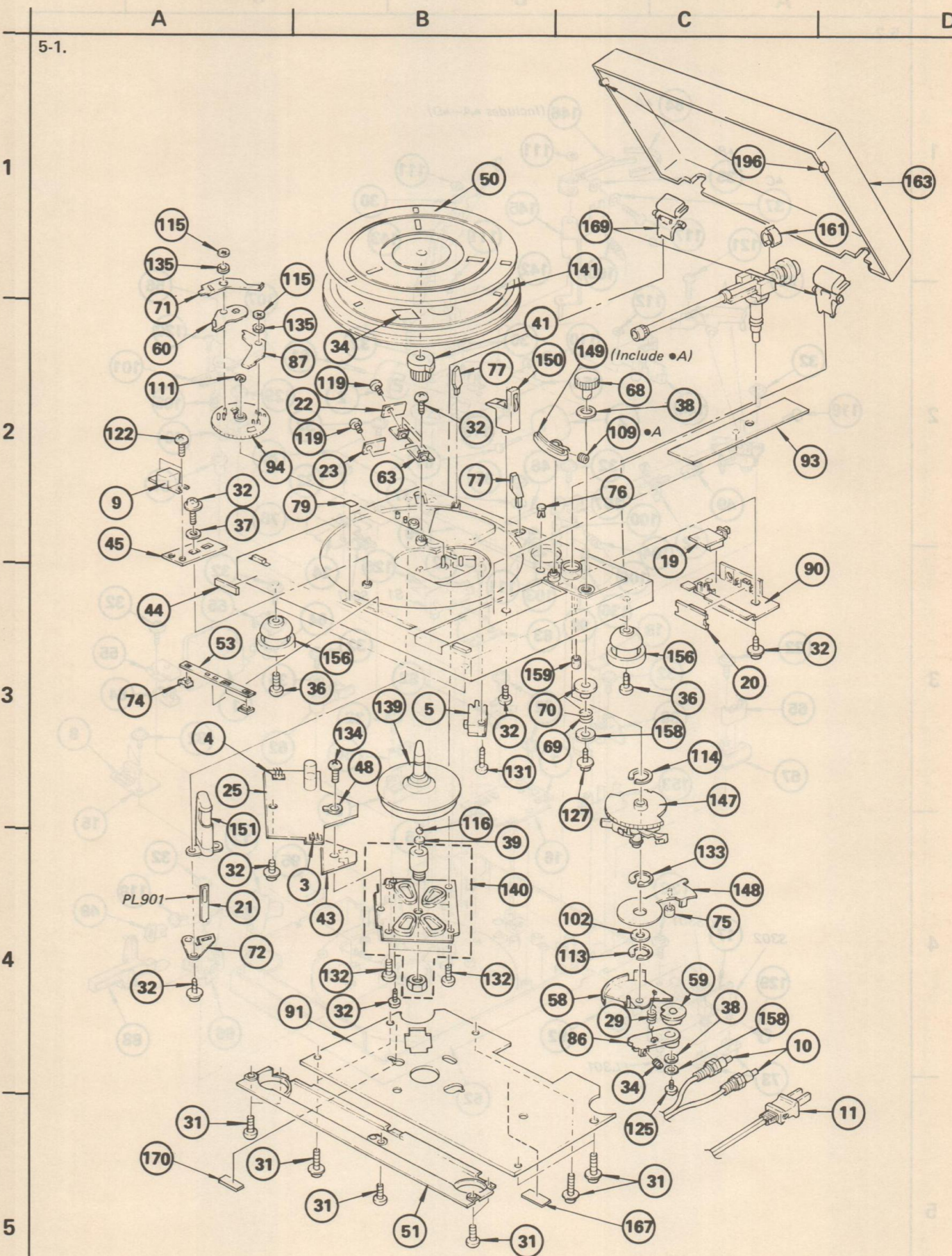
- All resistors are in ohms,  $\frac{1}{4}$  W unless otherwise noted. k $\Omega$  : 1000  $\Omega$ , M $\Omega$  : 1000 k $\Omega$
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal (detuned) conditions with a VOM (20 k $\Omega$ /V).
- : B+ bus.
- - - : B- bus.
- : adjustment for repair.

• Switch

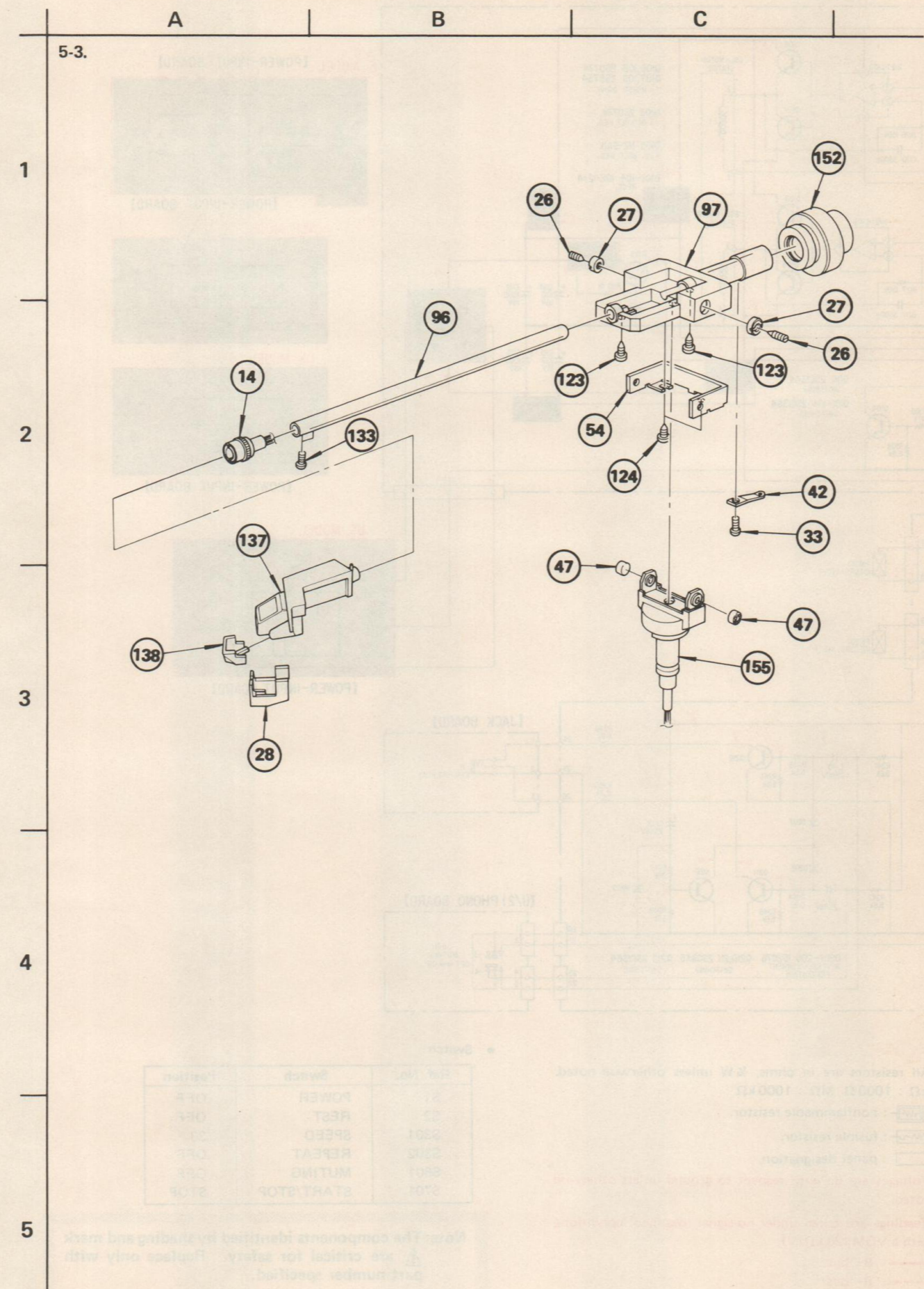
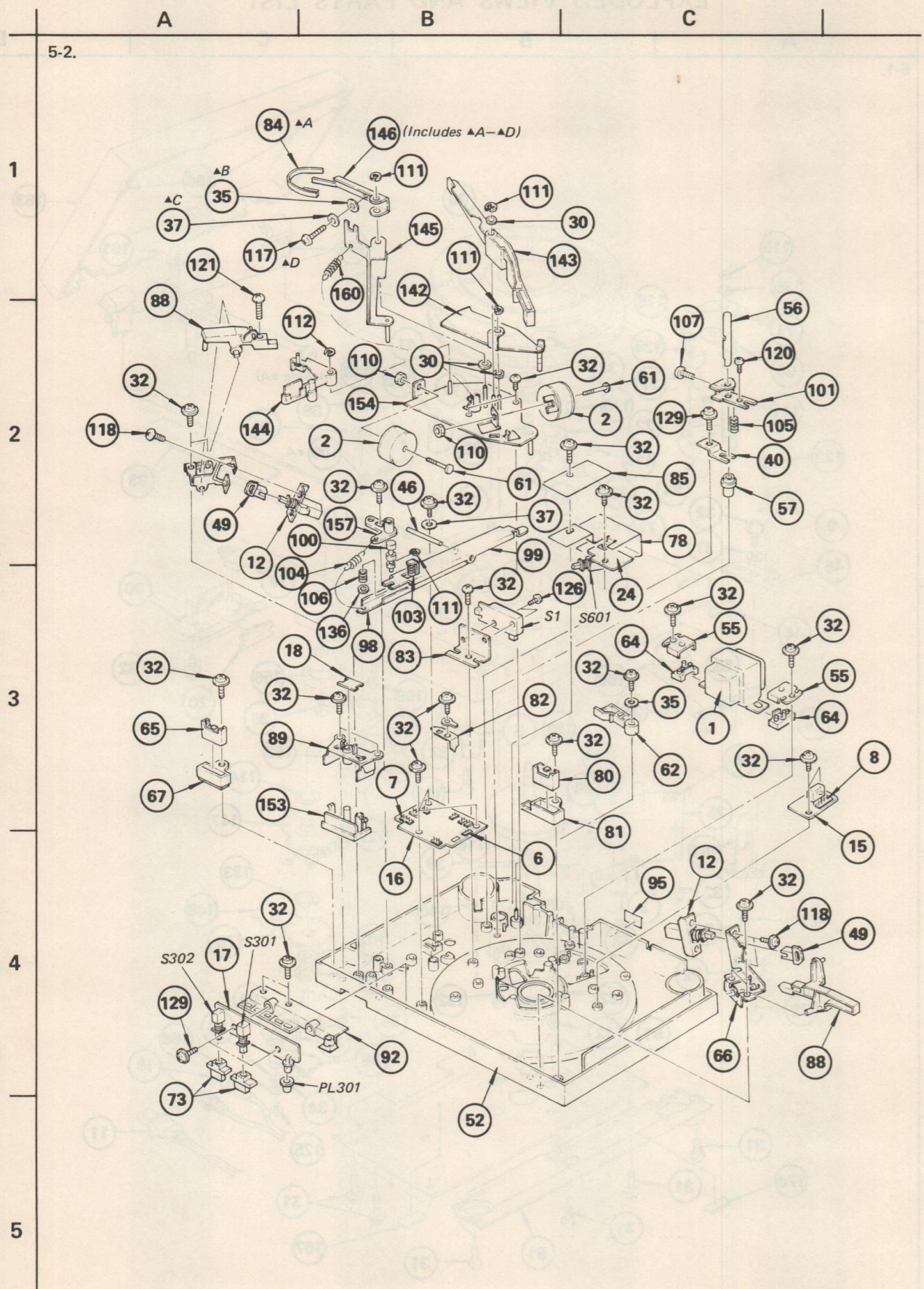
Ref. No.	Switch	Position
S1	POWER	OFF
S2	REST	OFF
S301	SPEED	33
S302	REPEAT	OFF
S601	MUTING	OFF
S701	START/STOP	STOP

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

SECTION 5  
EXPLODED VIEWS AND PARTS LIST



5-1.  
1  
2  
3  
4  
5



GENERAL SECTION

No.	Part No.	Description
1	▲1-446-965-00	(US,Canadian)...TRANSFORMER, POWER
1	▲1-446-966-00	(AEP).....TRANSFORMER, POWER
1	▲1-446-967-00	(E).....TRANSFORMER, POWER
2	1-454-196-31	SOLENOID
3	▲1-508-799-00	BASE POST 2P
4	▲1-508-800-13	BASE POST 3P
5	1-516-657-00	MICROSWITCH
6	▲1-535-115-00	CONNECTOR, WIREWRAP, 2P
7	▲1-535-116-00	CONNECTOR, WIREWRAP, 3P
8	▲1-535-118-00	CONNECTOR, WIREWRAP, 5P
9	1-543-093-00	HEAD, TURNTABLE SPEED DETECTION
10	1-551-294-00	CORDS, OUTPUT
11	▲1-534-817-XX	(AEP).....CORD, POWER
11	▲1-551-472-00	(E).....CORD, POWER
11	▲1-551-628-00	(US,Canadian)...CORD, POWER
12	1-553-444-00	MECHANISM, SWITCH
13	▲1-560-280-00	CONNECTOR, PIN 3P
14	1-561-551-00	CONNECTOR, NECK
15	▲1-604-651-00	PC BOARD, POWER-INPUT
16	▲1-604-655-00	PC BOARD, SYSTEM-CONTROL
17	▲1-604-656-00	PC BOARD, FUNCTION-SWITCH
18	▲1-604-657-00	PC BOARD, START/STOP-SWITCH
19	▲1-604-658-00	PC BOARD, JACK
20	▲1-604-659-00	PC BOARD, REMOTE-CONTROL
21	▲1-604-660-00	PC BOARD, LAMP
22	▲1-604-661-00	PC BOARD, PHOTO TRANSISTOR (A)
23	▲1-604-662-00	PC BOARD, PHOTO TRANSISTOR (B)
24	▲1-604-663-00	PC BOARD, PHONO
25	▲1-604-664-11	PC BOARD, SERVO-AMP (EARLY MODELS)
25	▲1-604-664-12	PC BOARD, SERVO-AMP (LATER MODELS)
26	2-203-518-61	SCREW, PIVOT
27	2-203-519-00	LOCK NUT (A), PIVOT
28	2-331-306-00	COVER, STYLUS
29	3-548-124-00	SPRING
30	3-701-441-21	WASHER 4
31	3-703-136-00	SCREW, SELF-TAPPING, +M 3X12
32	3-703-137-00	SCREW, SELF-TAPPING, +M 3X10
33	3-703-454-00	SCREW, SELF-TAPPING
34	3-701-509-00	SETSCREW, HEX-SOCKET M3X8 (WP)
35	4-301-647-00	WASHER, SPECIAL
36	4-314-529-00	SCREW, SELF-TAPPING, WASHERHEAD
37	4-812-554-00	WASHER
38	4-844-041-11	WASHER
39	4-852-008-00	HOLDER, THRUST
40	▲4-852-033-00	BEARING HOLDER, PUSH-ROD
41	4-852-061-00	GEAR, CENTER
42	4-853-043-00	SPRING (B), GUIDE
43	4-857-642-00	HOLDER, PC BOARD
44	4-857-661-11	EMBLEM, SONY
45	▲4-858-266-00	HOLDER, DETECTION-HEAD

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- 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 (▲-▲▲-▲▲-XX or ▲-▲▲-▲▲-X) may be different from those used in the set.

GENERAL SECTION

No.	Part No.	Description
46	▲4-861-940-00	SHAFT, LIFTER-LEVER
47	4-863-604-00	BEARING, PIVOT
48	4-870-539-00	PLATE, GROUND
49	4-870-757-00	CONNECTOR
50	4-874-202-01	(Canadian,AEP,E)...RUBBER MAT, TURNTABLE
50	4-874-202-11	(US).....RUBBER MAT, TURNTABLE
51	4-874-205-01	PLATE(A), BOTTOM
52	▲4-874-207-00	FRAME
53	4-874-208-01	PLATE(C), SWITCH
54	▲4-874-209-00	PLATE, REINFORCEMENT
55	▲4-874-210-00	HOLDER(A), POWER-TRANSFORMER
56	4-874-217-00	ROD, PUSH
57	▲4-874-218-00	BEARING, PUSH-ROD
58	4-874-223-00	LEVER(A), ARM
59	4-874-231-00	CAM, ESCENTRIC
60	4-874-232-00	CLUTCH(R)
61	4-874-234-00	CORE, SOLENOID
62	▲4-874-235-00	LEVER, MUTING
63	▲4-874-236-00	HOLDER, PHOTO TRANSISTOR BOARD
64	4-874-237-00	CUSHION, POWER-TRANSFORMER
65	4-874-238-00	BUTTON, POWER-SWITCH
66	▲4-874-239-00	HOLDER, LOCK-MECHANISM
67	4-874-241-01	ESCUTCHEON, POWER KNOB
68	4-874-247-00	KNOB, ANTI-SKATING
69	4-874-250-00	SPRING, ANTI-SKATING KNOB
70	4-874-252-00	CAM, ANTI-SKATING KNOB
71	4-874-254-00	CLUTCH (S)
72	▲4-874-255-00	RETAINER, LAMP PC BOARD
73	4-874-257-11	BUTTON, SPEED/REPEAT
74	4-874-258-11	PLATE, LOCKED
75	4-874-259-00	RING, RUBBER
76	4-874-260-01	CAP, BLIND
77	4-874-262-00	GUIDE, RECORD-SETTING
78	▲4-874-263-00	PLATE (A), SHIELD
79	4-874-265-01	FILTER PLATE, LAMP
80	4-874-267-01	BUTTON, LIFTER
81	4-874-269-11	ESCUTCHEON, LIFTER-BUTTON
82	▲4-874-273-00	SPRING, GROUNDING
83	4-874-274-00	HOLDER, MICROSWITCH
84	4-874-275-00	PAD, BRAKE
85	▲4-874-276-00	PLATE (B), SHIELD
86	4-874-277-00	LEVER (B), ARM
87	4-874-279-00	CLUTCH (L)
88	4-874-280-00	LEVER (B), SEE-SAW
89	4-874-281-02	ESCUTCHEON, START/STOP BUTTON
90	4-874-285-02	HOLDER, PC BOARD

CAPACITORS:

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

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH :  $\mu\text{H}$

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

GENERAL SECTION

GENERAL SECTION

ACCESSORIES & PACKING MATERIALS

ELECTRICAL PARTS

ELECTRICAL PARTS

ELECTRICAL PARTS

Table with 3 columns: No., Part No., Description. Lists various mechanical parts like plates, washers, gears, levers, and screws.

Table with 3 columns: No., Part No., Description. Lists various mechanical parts like washers, cartridges, rotor and stator assemblies, and turntable parts.

Table with 3 columns: No., Part No., Description. Lists accessories and packing materials like adaptors, bags, manuals, and cushions.

Table with 3 columns: Ref.No., Part No., Description. Lists electrical parts including diodes, capacitors, and resistors.

Table with 3 columns: Ref.No., Part No., Description. Lists electrical parts including transistors, capacitors, and resistors.

Table with 3 columns: Ref.No., Part No., Description. Lists electrical parts including switches, lamps, and transistors.

NOTE: Items with no part number and no description are not stocked because they are seldom required for routine service.

CAPACITORS: All capacitors are in µF. Common capacitors are omitted. Refer to the following lists for their part numbers.

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

COILS: MMH : mH, UH : µH

NOTE: Items with no part number and no description are not stocked because they are seldom required for routine service.

CAPACITORS: All capacitors are in µF. Common capacitors are omitted. Refer to the following lists for their part numbers.

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

COILS: MMH : mH, UH : µH

NOTE: Items with no part number and no description are not stocked because they are seldom required for routine service.

CAPACITORS: All capacitors are in µF. Common capacitors are omitted. Refer to the following lists for their part numbers.

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

COILS: MMH : mH, UH : µH

1/16 WATT CARBON RESISTOR

ELECTROLYTIC CAPACITORS

Table with columns for RATING (6.3 VOLT., 10 VOLT., 16 VOLT., 25 VOLT., 35 VOLT., 50 VOLT.) and CAP. (μF) values.

Table with columns for RATING (100 VOLT., 160 VOLT., 250 VOLT., 350 VOLT.) and CAP. (μF) values.

CERAMIC CAPACITORS

Table with columns for RATING (50 VOLT., 50 VOLT., 50 VOLT., 50 VOLT.) and CAP. (pF) values.

CERAMIC (SEMICONDUCTOR) CAPACITORS

Table with columns for RATING (25 VOLT., 50 VOLT., 25 VOLT., 50 VOLT.) and CAP. (μF) values.

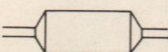
MYLAR CAPACITORS

Table with columns for RATING (50 VOLT., 100 VOLT., 200 VOLT., 50 VOLT., 100 VOLT., 200 VOLT.) and CAP. (μF) values.



TANTALUM CAPACITORS

Table with columns for RATING (3.15 VOLT., 6.3 VOLT., 10 VOLT., 16 VOLT., 20 VOLT., 25 VOLT., 35 VOLT.) and CAP. (μF) values.



TANTALUM CAPACITORS

Table with columns for RATING (3 VOLT., 6.3 VOLT., 10 VOLT., 16 VOLT., 20 VOLT., 35 VOLT.) and CAP. (μF) values.

Large table listing resistor values and part numbers for 1/16 WATT CARBON RESISTOR.

1/8 WATT CARBON RESISTOR

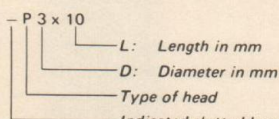
Large table listing resistor values and part numbers for 1/8 WATT CARBON RESISTOR.

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-476-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-477-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-478-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-479-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-480-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-481-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-482-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-483-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-484-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-485-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-486-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-487-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

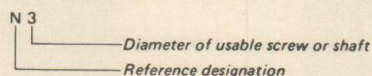
Screw:



Indicated slotted-head only.

Unless otherwise indicated, it means cross-recessed head (Phillips type).

Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
<b>SCREWS</b>			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
<b>SELF-TAPPING SCREWS</b>			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
<b>SET SCREWS</b>			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
<b>NUT</b>			
N		nut	
<b>WASHERS</b>			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
<b>RETAINING RINGS</b>			
E		retaining ring	
G		grip-type retaining ring	

1/2 WATT CARBON RESISTORS

Part No.	Resistance	Part No.	Resistance	Part No.	Resistance	Part No.	Resistance
1-249-421-00	100 Ω	1-249-422-00	150 Ω	1-249-423-00	200 Ω	1-249-424-00	250 Ω
1-249-425-00	300 Ω	1-249-426-00	350 Ω	1-249-427-00	400 Ω	1-249-428-00	450 Ω
1-249-429-00	500 Ω	1-249-430-00	550 Ω	1-249-431-00	600 Ω	1-249-432-00	650 Ω
1-249-433-00	700 Ω	1-249-434-00	750 Ω	1-249-435-00	800 Ω	1-249-436-00	850 Ω
1-249-437-00	1000 Ω	1-249-438-00	1100 Ω	1-249-439-00	1200 Ω	1-249-440-00	1300 Ω
1-249-441-00	1500 Ω	1-249-442-00	2000 Ω	1-249-443-00	2500 Ω	1-249-444-00	3000 Ω
1-249-445-00	3500 Ω	1-249-446-00	4000 Ω	1-249-447-00	4500 Ω	1-249-448-00	5000 Ω
1-249-449-00	5500 Ω	1-249-450-00	6000 Ω	1-249-451-00	6500 Ω	1-249-452-00	7000 Ω
1-249-453-00	7500 Ω	1-249-454-00	8000 Ω	1-249-455-00	8500 Ω	1-249-456-00	9000 Ω
1-249-457-00	10000 Ω	1-249-458-00	11000 Ω	1-249-459-00	12000 Ω	1-249-460-00	13000 Ω
1-249-461-00	15000 Ω	1-249-462-00	20000 Ω	1-249-463-00	25000 Ω	1-249-464-00	30000 Ω
1-249-465-00	35000 Ω	1-249-466-00	40000 Ω	1-249-467-00	45000 Ω	1-249-468-00	50000 Ω
1-249-469-00	55000 Ω	1-249-470-00	60000 Ω	1-249-471-00	65000 Ω	1-249-472-00	70000 Ω
1-249-473-00	75000 Ω	1-249-474-00	80000 Ω	1-249-475-00	85000 Ω	1-249-476-00	90000 Ω
1-249-477-00	100000 Ω	1-249-478-00	110000 Ω	1-249-479-00	120000 Ω	1-249-480-00	130000 Ω
1-249-481-00	150000 Ω	1-249-482-00	200000 Ω	1-249-483-00	250000 Ω	1-249-484-00	300000 Ω
1-249-485-00	350000 Ω	1-249-486-00	400000 Ω	1-249-487-00	450000 Ω	1-249-488-00	500000 Ω
1-249-489-00	550000 Ω	1-249-490-00	600000 Ω	1-249-491-00	650000 Ω	1-249-492-00	700000 Ω
1-249-493-00	750000 Ω	1-249-494-00	800000 Ω	1-249-495-00	850000 Ω	1-249-496-00	900000 Ω
1-249-497-00	1000000 Ω	1-249-498-00	1100000 Ω	1-249-499-00	1200000 Ω	1-249-500-00	1300000 Ω

HARDWARE NOMENCLATURE



Part No.	Description	Quantity
1-249-501-00	SELF TAPPING SCREWS	1
1-249-502-00	SCREWS	1
1-249-503-00	SCREWS	1
1-249-504-00	SCREWS	1
1-249-505-00	SCREWS	1
1-249-506-00	SCREWS	1
1-249-507-00	SCREWS	1
1-249-508-00	SCREWS	1
1-249-509-00	SCREWS	1
1-249-510-00	SCREWS	1
1-249-511-00	SCREWS	1
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1-249-599-00	SCREWS	1
1-249-600-00	SCREWS	1

Part No.	Description	Quantity
1-249-601-00	SCREWS	1
1-249-602-00	SCREWS	1
1-249-603-00	SCREWS	1
1-249-604-00	SCREWS	1
1-249-605-00	SCREWS	1
1-249-606-00	SCREWS	1
1-249-607-00	SCREWS	1
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1-249-616-00	SCREWS	1
1-249-617-00	SCREWS	1
1-249-618-00	SCREWS	1
1-249-619-00	SCREWS	1
1-249-620-00	SCREWS	1
1-249-621-00	SCREWS	1
1-249-622-00	SCREWS	1
1-249-623-00	SCREWS	1
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1-249-699-00	SCREWS	1
1-249-700-00	SCREWS	1