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7453

PS-3300

*USA Model
Canada Model*



TURNTABLE SYSTEM

SPECIFICATIONS

GENERAL

Power Requirements: 120 V ac, 60 Hz

Power Consumption: 6W

Dimensions: 455 (w) x 153 (h) x 352 (d) mm
18 (w) x 6 (h) x 13⁷/₈ (d) inches
including projecting parts and controls

Weight: Approx. 8.0 kg, 17 lb 11 oz (net)
Approx. 9.7 kg, 21 lb 7 oz (in shipping carton)

TURNTABLE

Platter: 30.8 cm (12¹/₈ inches), Aluminum — alloy diecast

Motor: DC servo-controlled motor (brushless)

Drive System: Direct drive

Speeds: 33¹/₃, 45 rpm

Wow and Flutter: 0.04 % (WRMS)

S/N Ratio: 65 dB (DIN-B)

TONEARM

Type: Statically balanced, universal

Pivot-to-Stylus Length: 216.5 mm (8⁵/₈ inches)

Overhang: 16.5 mm (2¹/₃₂ inches)

**Tracking-Force
Adjustment Range:** 0 — 3 g

Shell Weight: 7.5 g

Cartridge Weight Range: 4 — 10 g

Cartridge is not supplied with
this turntable system.

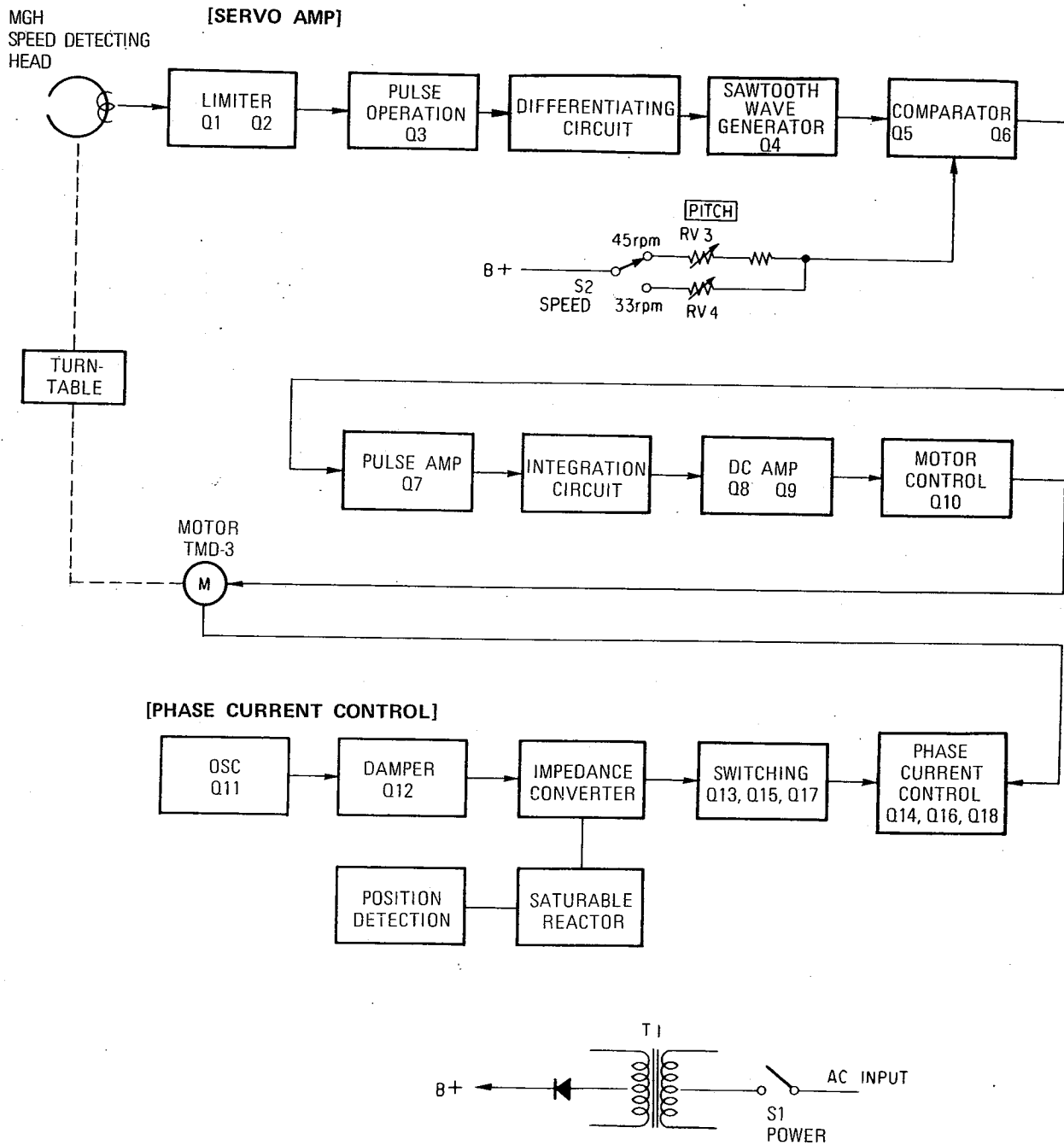
SONY[®]

SERVICE MANUAL

PS3300

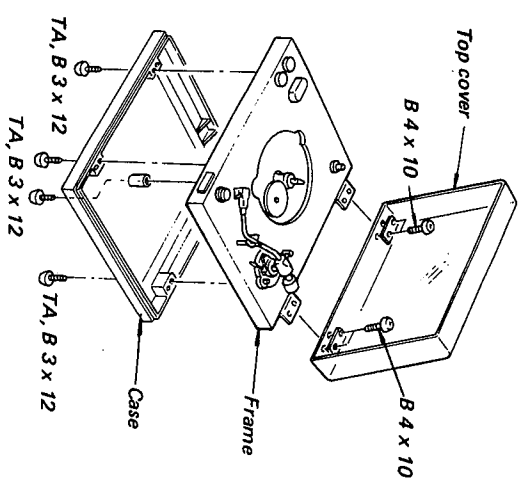
SECTION 1

BLOCK DIAGRAM



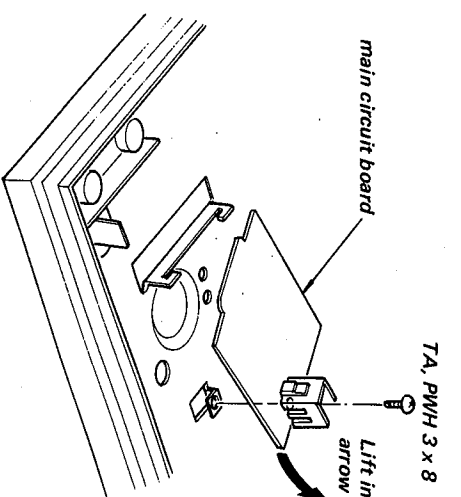
DISASSEMBLY AND REPLACEMENT

TOP COVER AND CASE REMOVAL



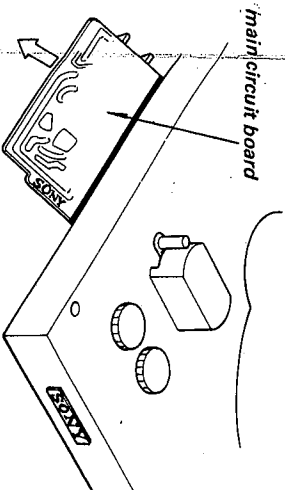
MAIN CIRCUIT BOARD REMOVAL AND CHECKS

1. Removal

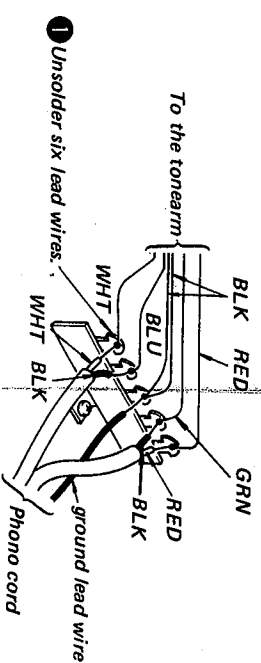


2. Checks

- 1) Position the main circuit board as shown below.
- 2) Start the turntable and check the board.

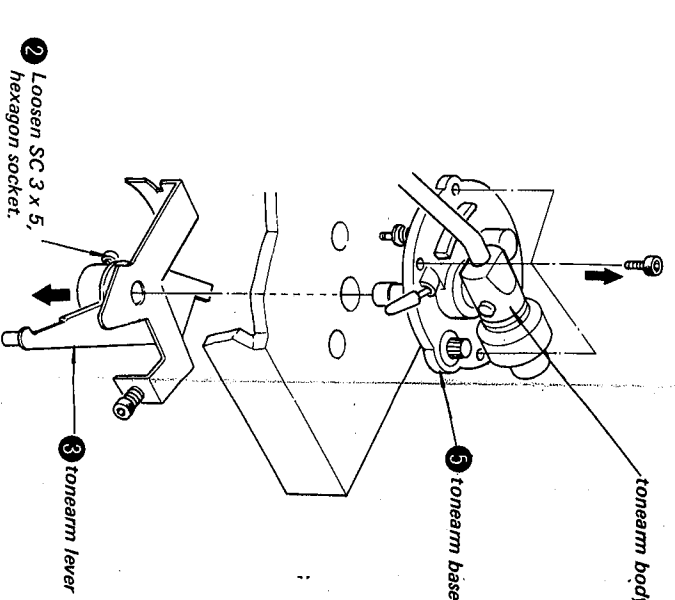


TONEARM BASE REMOVAL

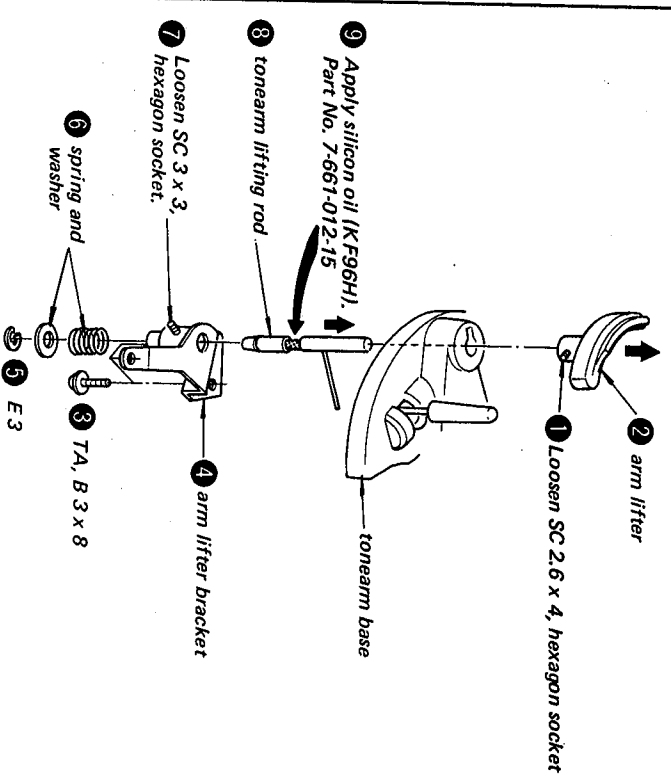


1) Unsolder six lead wires.

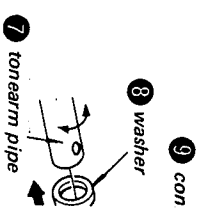
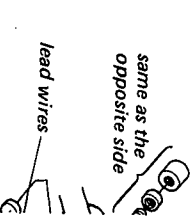
- 4) Bolt 3 x 16, hexagon socket.



DAMPER OIL LUBRICATION

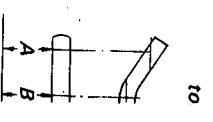


TONEARM PIPE

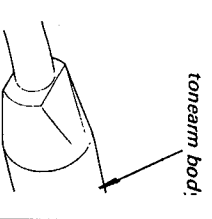


Installation

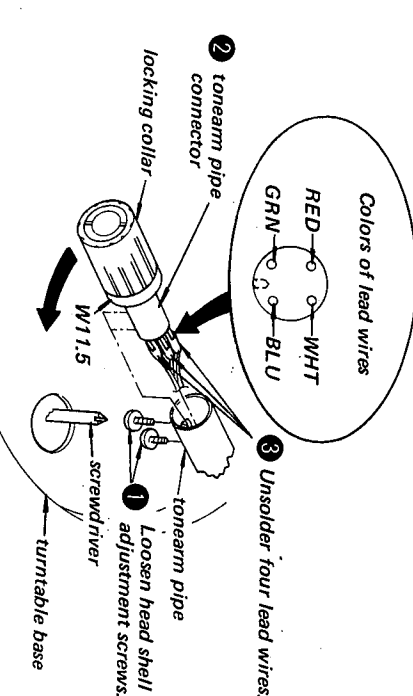
Note: Adjust the balance and tighten the...



COUNTERWEIGHT

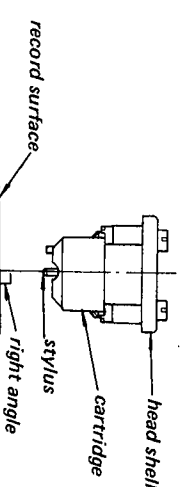


TONEARM PIPE CONNECTOR REPLACEMENT

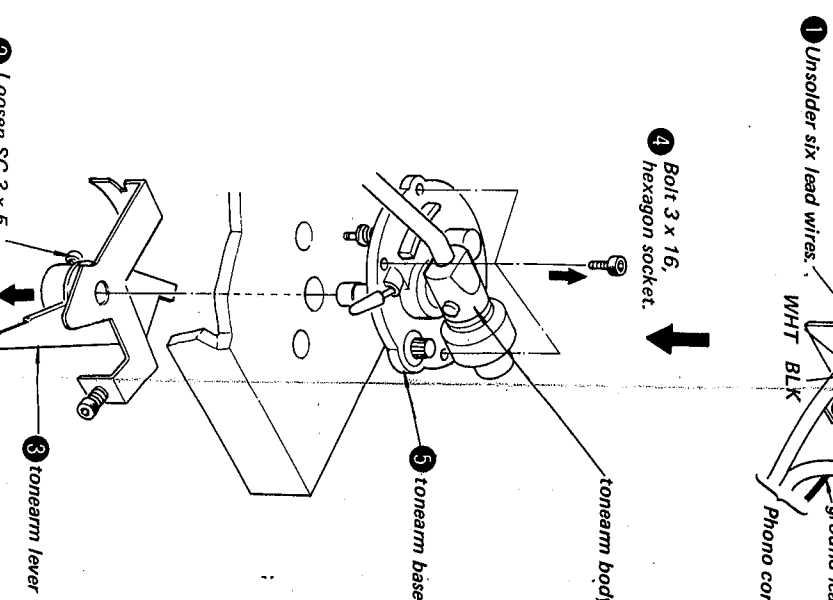


Installation

Note: Install the head shell and the cartridge as shown below and tighten two head shell adjustment screws (1).



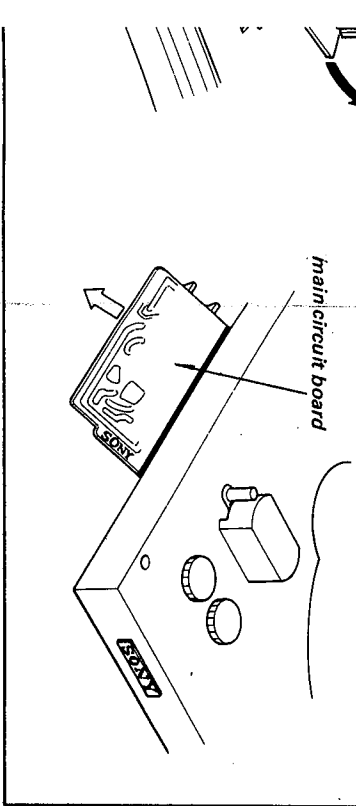
SPEED SELECTOR SWITCH REPLACEMENT



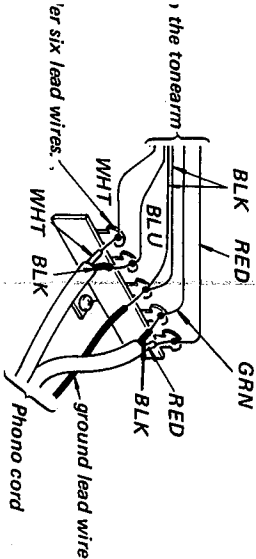
1. INITIAL AND CHECKS

2. Checks

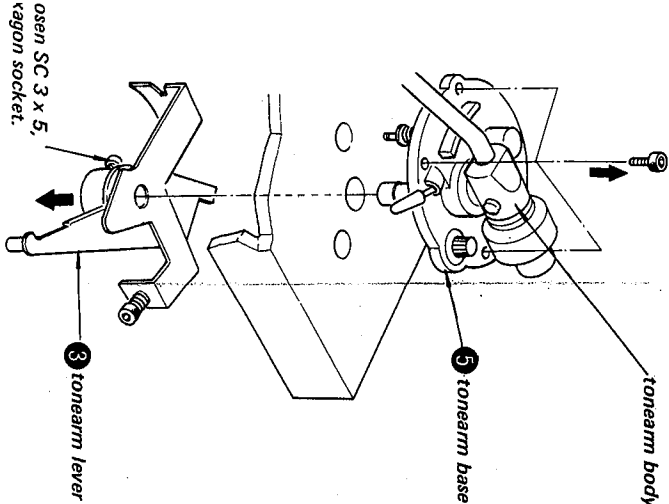
- 1) Position the main circuit board as shown below.
- 2) Start the turntable and check the board.



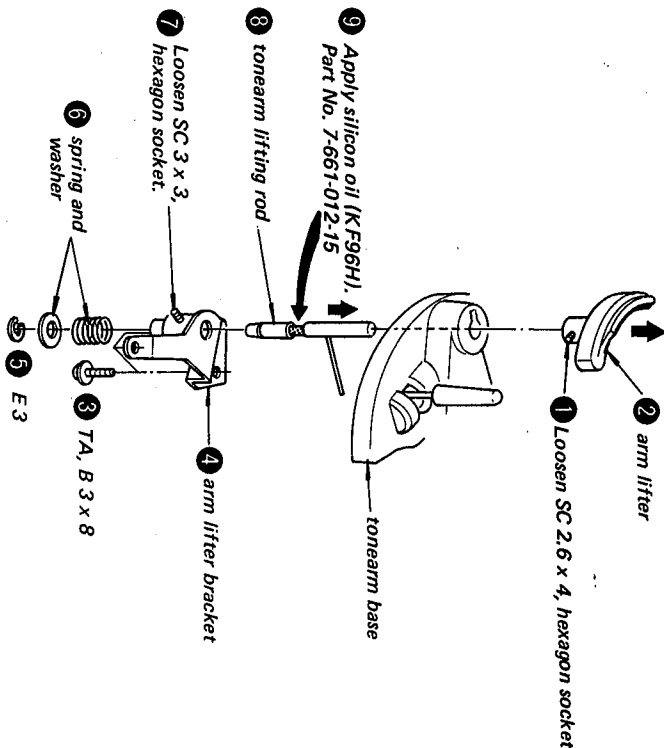
3. TONEARM BASE REMOVAL



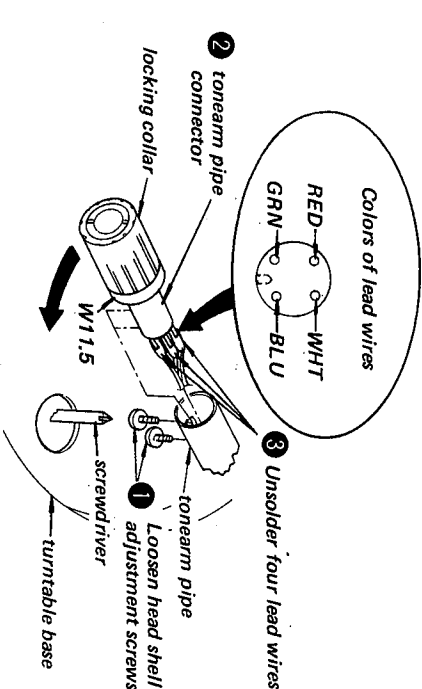
- 1 Bolt 3 x 16, hexagon socket.



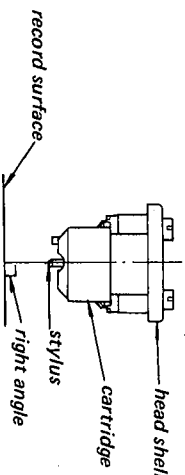
DAMPER OIL LUBRICATION



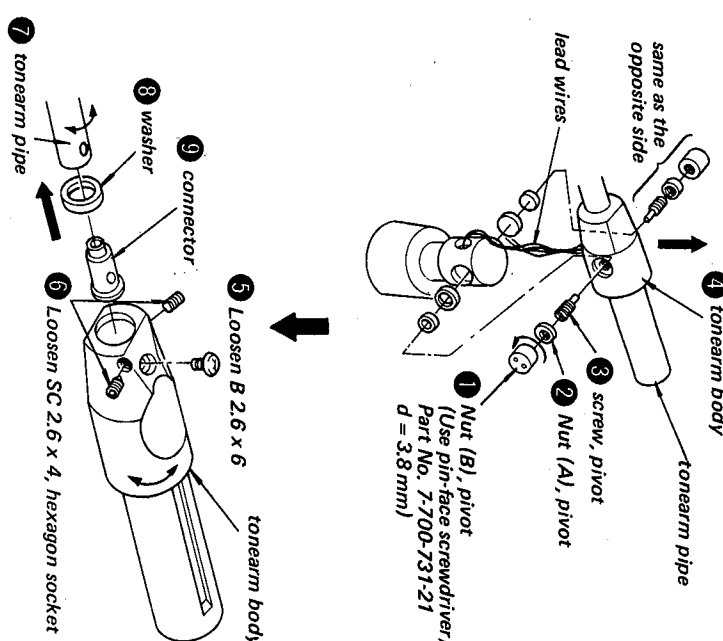
TONEARM PIPE CONNECTOR REPLACEMENT



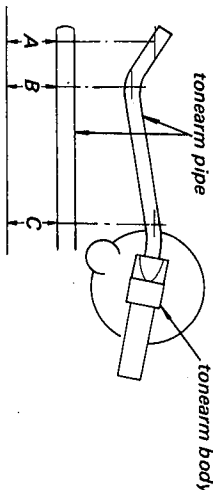
Installation
Note: Install the head shell and the cartridge as shown below and tighten two head shell adjustment screws (1).



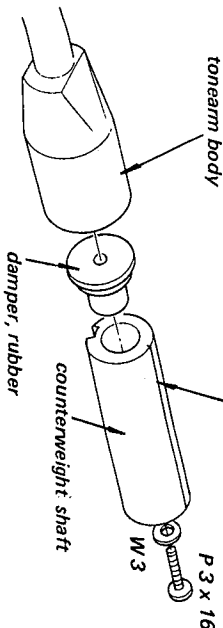
TONEARM PIPE REPLACEMENT



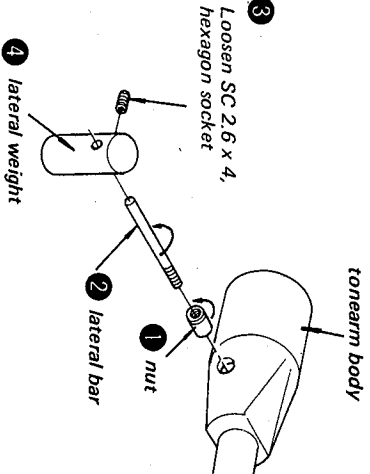
Installation
Note: Adjust the balance of the tonearm as shown below and tighten three screws (5, 6).



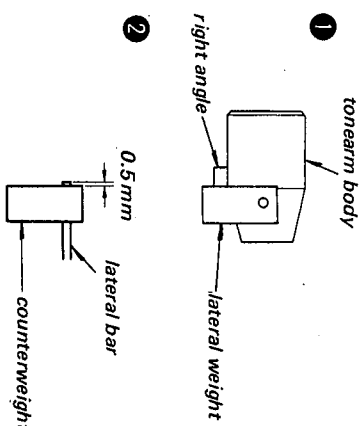
COUNTERWEIGHT SHAFT REMOVAL





LATERAL WEIGHT REMOVAL

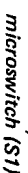


Installation
— Side View —

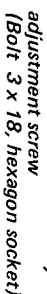


MICROSWITCH (S1) ADJUSTMENT

- | | |
|-------------------|-------------------------------------------------------------------------------------|
| clearance |  |
| Turning direction |  |



| Turning direction | Automatic return position |
|-------------------|---------------------------|
| | |



2. After the adjustment, confirm that the tonearm smoothly returns to the tonearm rest as shown below.

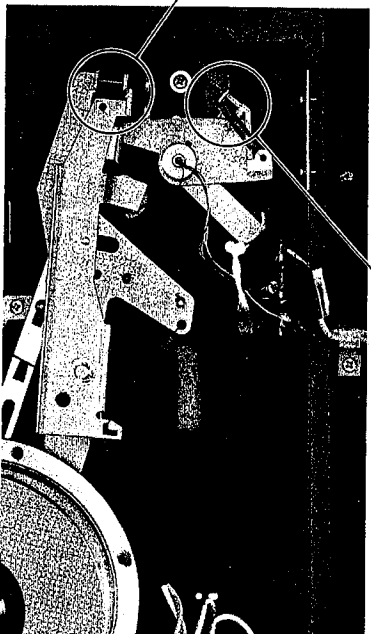
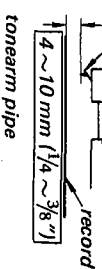
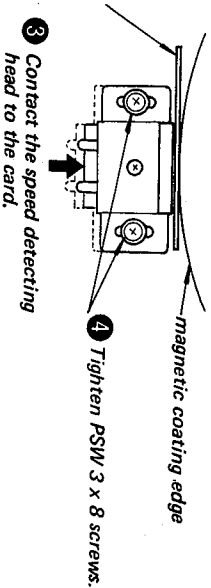


Diagram illustrating the assembly of the turntable. The components shown are:

- speed detecting head**: The top component, which is mounted onto the turntable platter.
- turntable platter**: The main rotating component, which is mounted onto the motor assembly.
- card**: A component labeled with a circled 2, which is mounted onto the speed detecting head. Its thickness is specified as $t = 0.3 \text{ mm}$.
- magnetic coating edge**: The edge of the card that is positioned near the turntable platter.
- Loosen PSM 3 x 8 screws**: A label with a circled 1 pointing to the screws that hold the speed detecting head in place.

5 Remove the card.

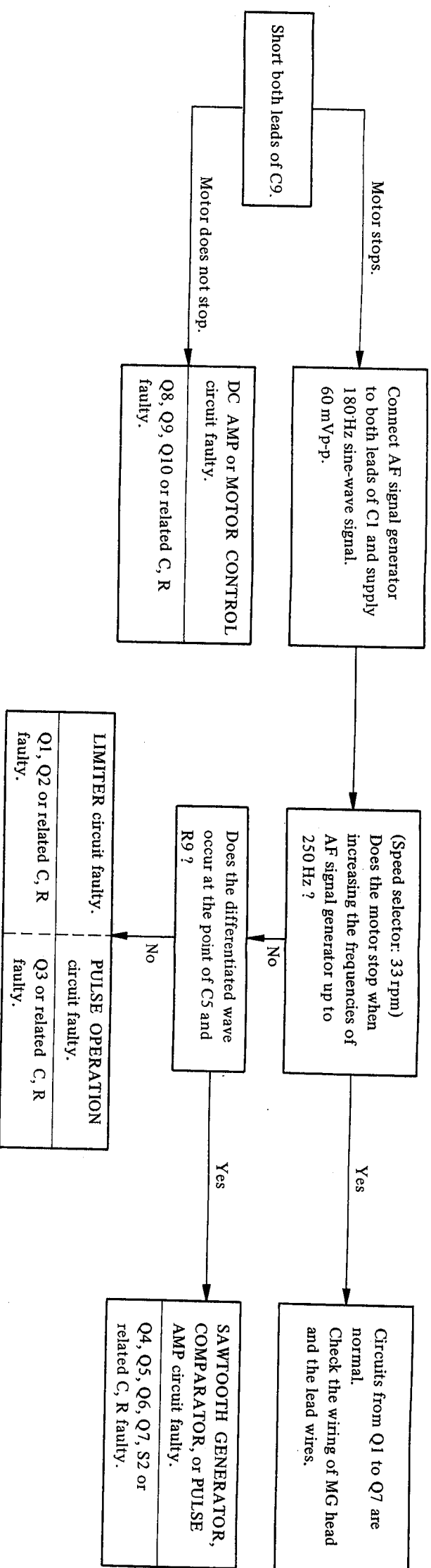


- Note:** Confirm that the head does not contact the magnetic coating of the platter.

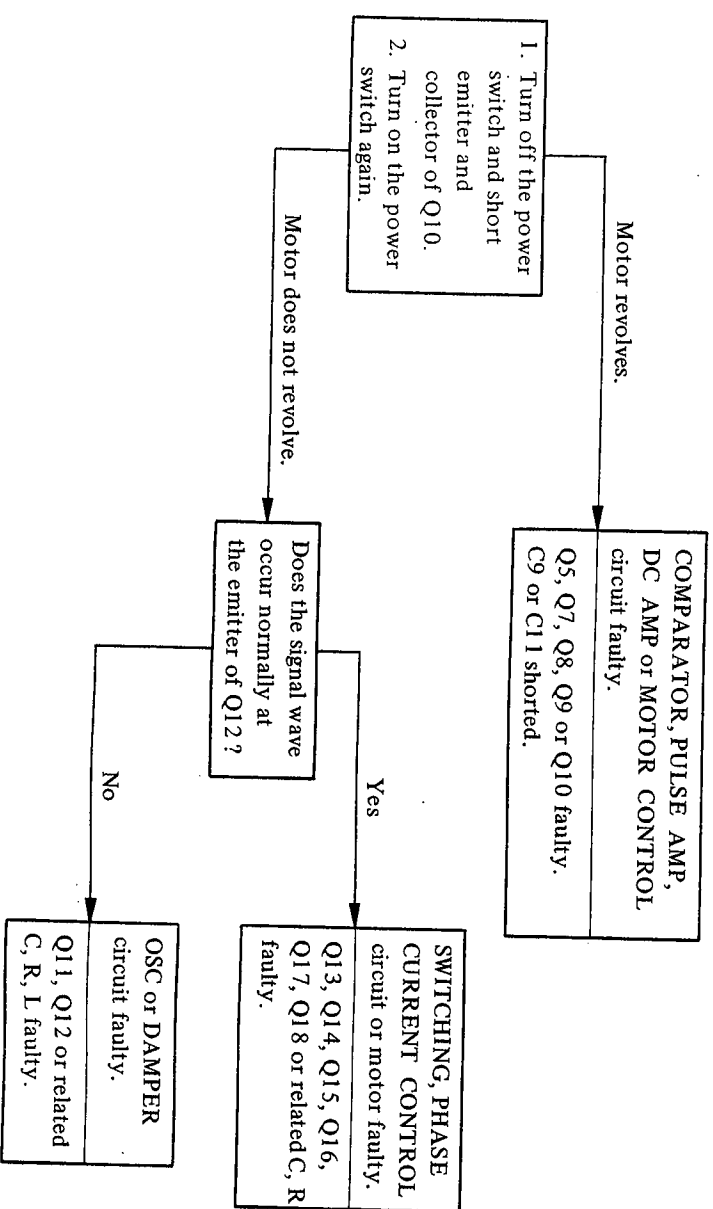
TROUBLESHOOTING CHARTS

Remove the turntable platter before performing the following steps.
Refer to the waveform and dc voltage in the schematic diagram.

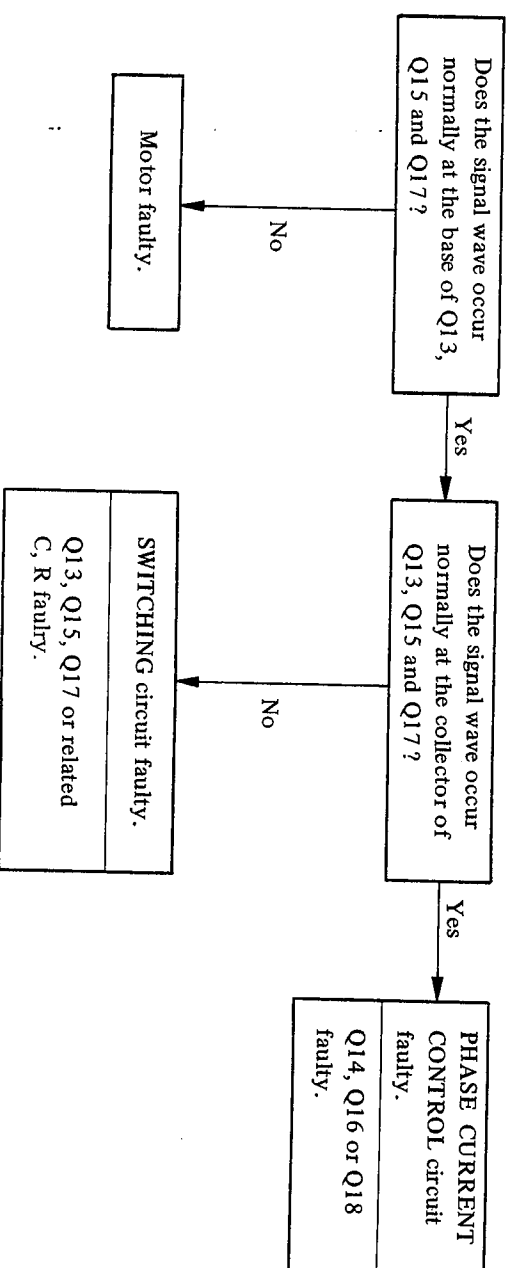
1. Turntable runs excessively fast.



2. Turntable will not start.



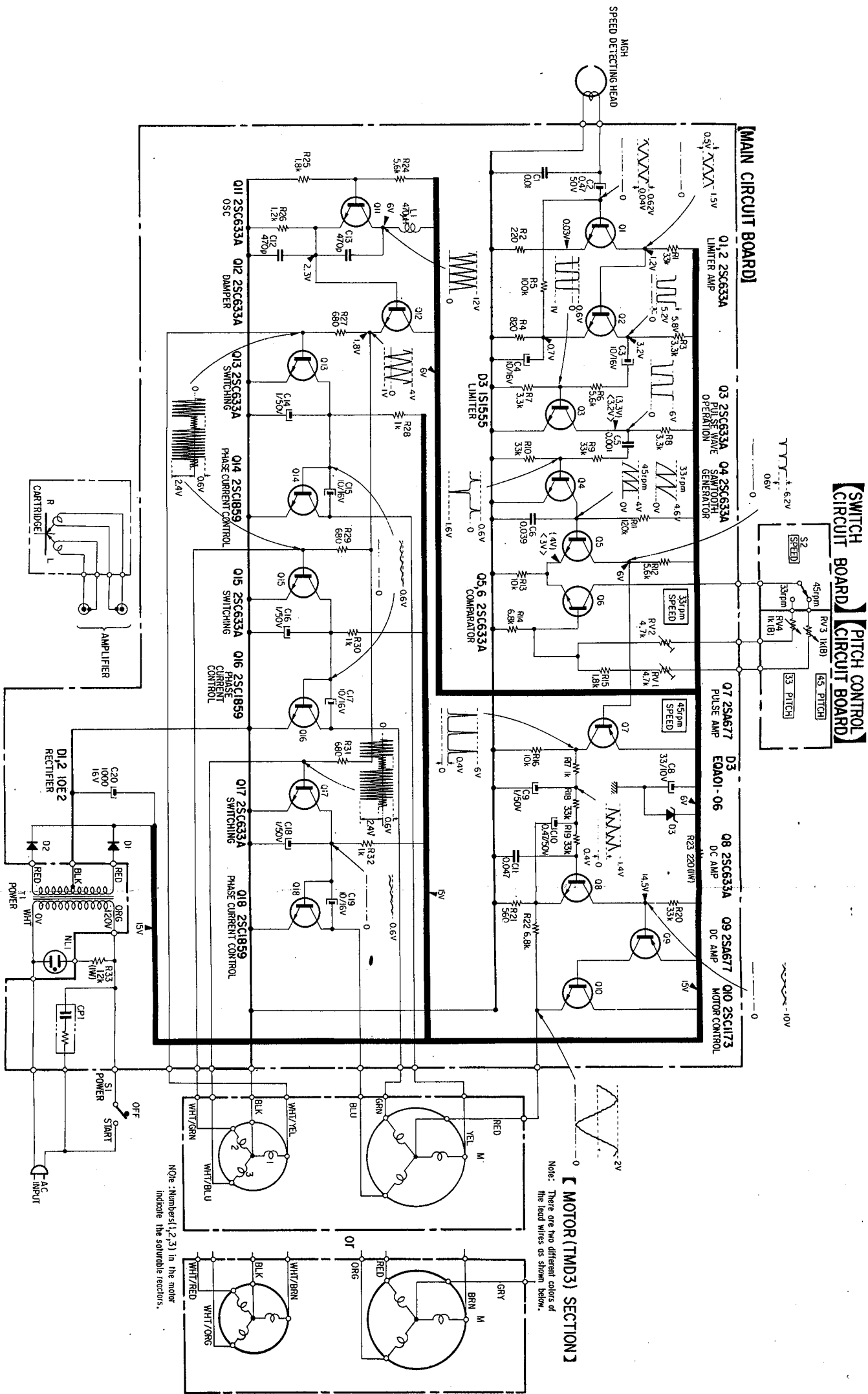
3. Turntable runs excessively fast or slow.



1383
1859

SECTION 5
DIAGRAMS

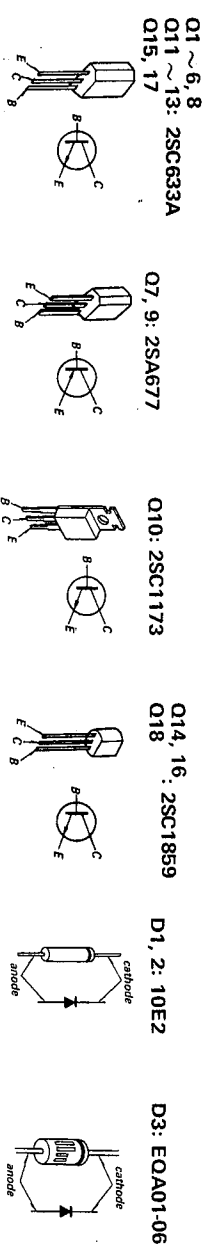
5-1. SCHEMATIC DIAGRAM



Note:

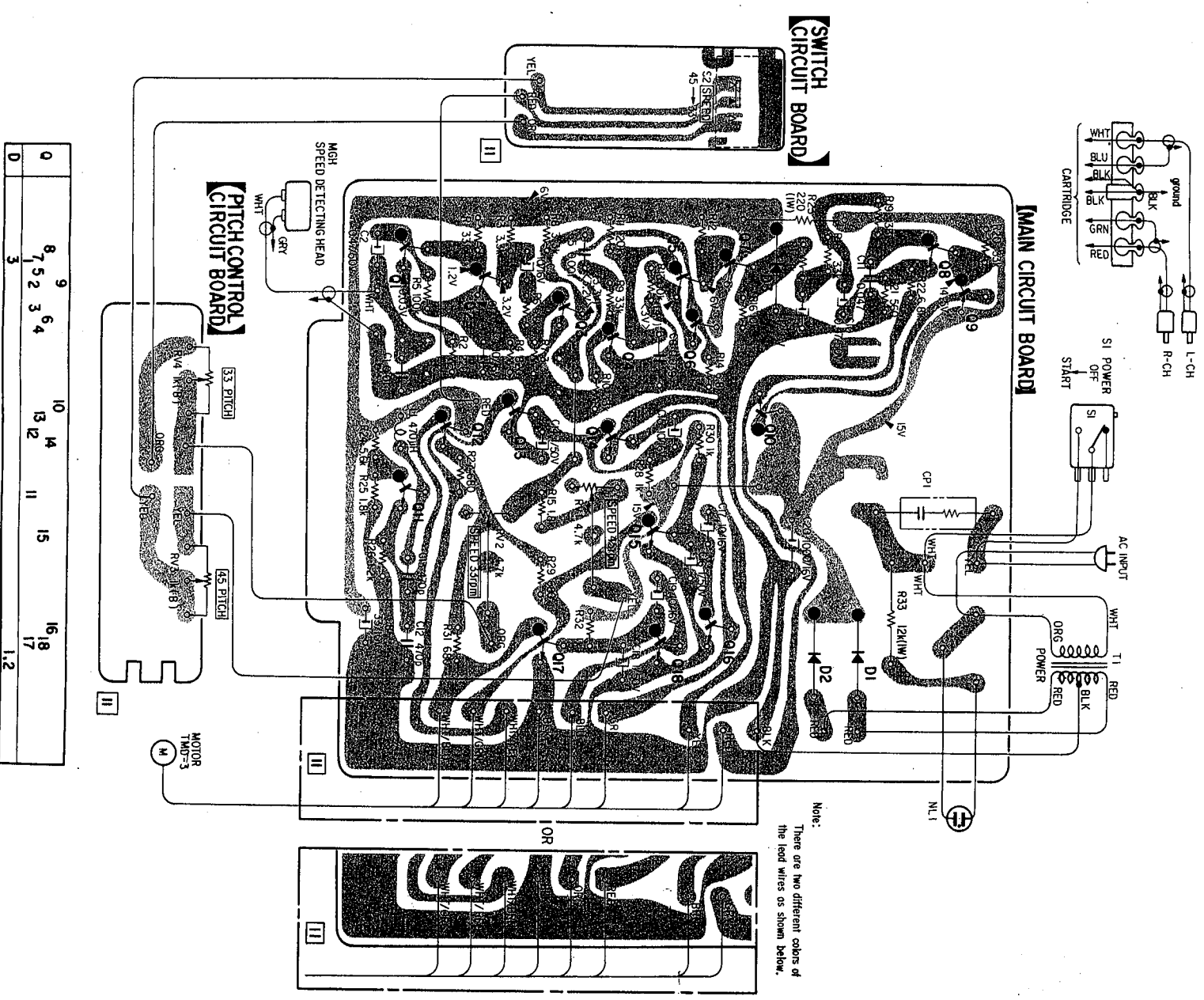
- All capacitors are in μF unless otherwise noted. 50 or less working voltages are not indicated except for electrolytic type. $\mu = \mu\text{F}$
- All resistors are in Ω , $\frac{1}{2}\text{W}$, unless otherwise noted.
- $k = 1,000$ $M = 1,000,000$
- --- indicates chassis ground.
- --- indicates B+ circuit.
- Waveforms are measured with oscilloscope.
- Vertical scale: voltage
- Horizontal scale: time
- Voltages are DC with respect to ground unless otherwise noted. Readings are taken under no-signal conditions with a VOM (20 k Ω /V).
- Voltage variations may be noted due to normal production tolerances.
- Voltage between base and emitter are measured with 2.5 V range.
- Switch Mode:

| Ref. No. | Switch | Position |
|----------|--------|----------|
| S1 | POWER | OFF |
| S2 | SPEED | 45 rpm |



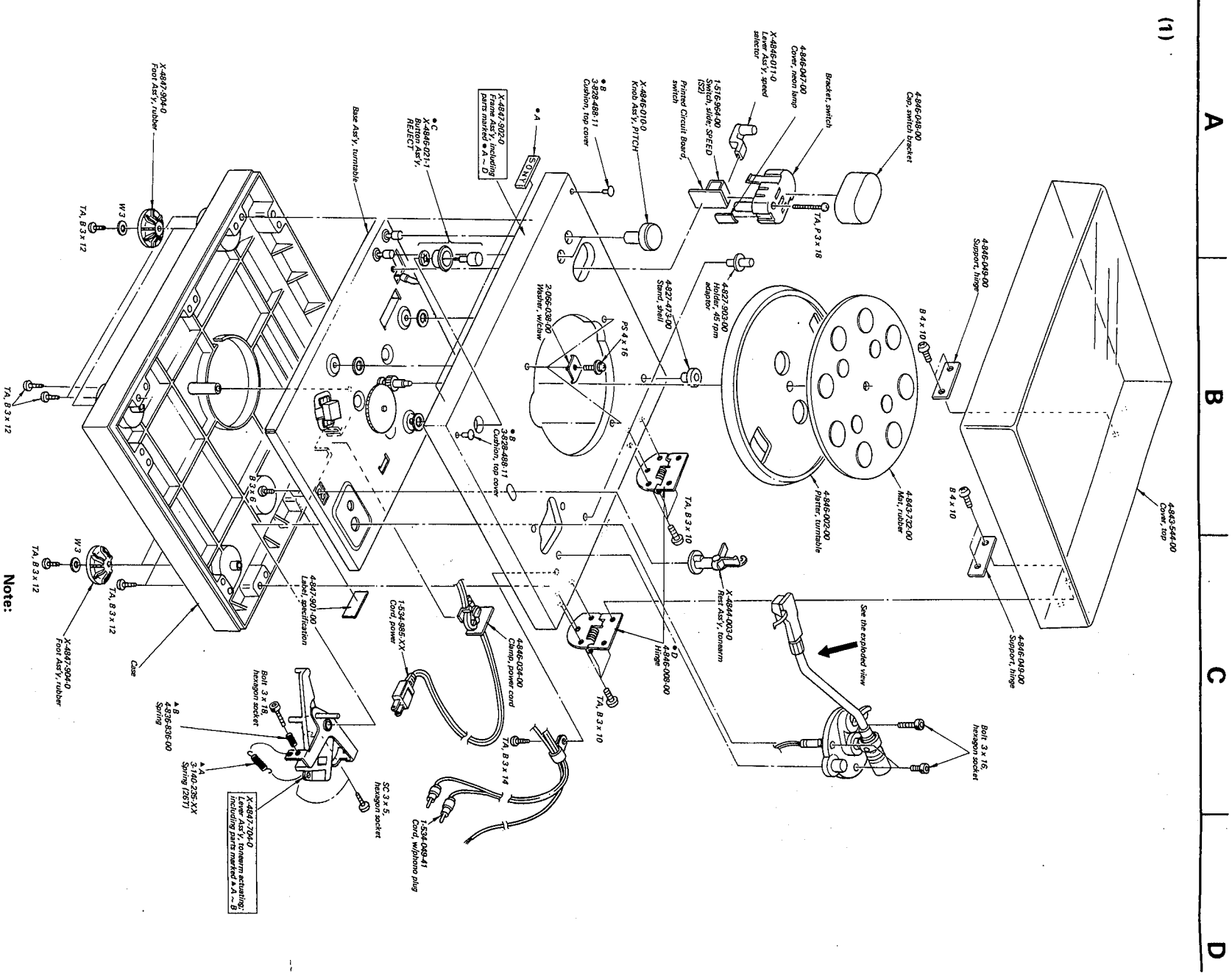
5-2. MOUNTING DIAGRAM

— Conductor Side —



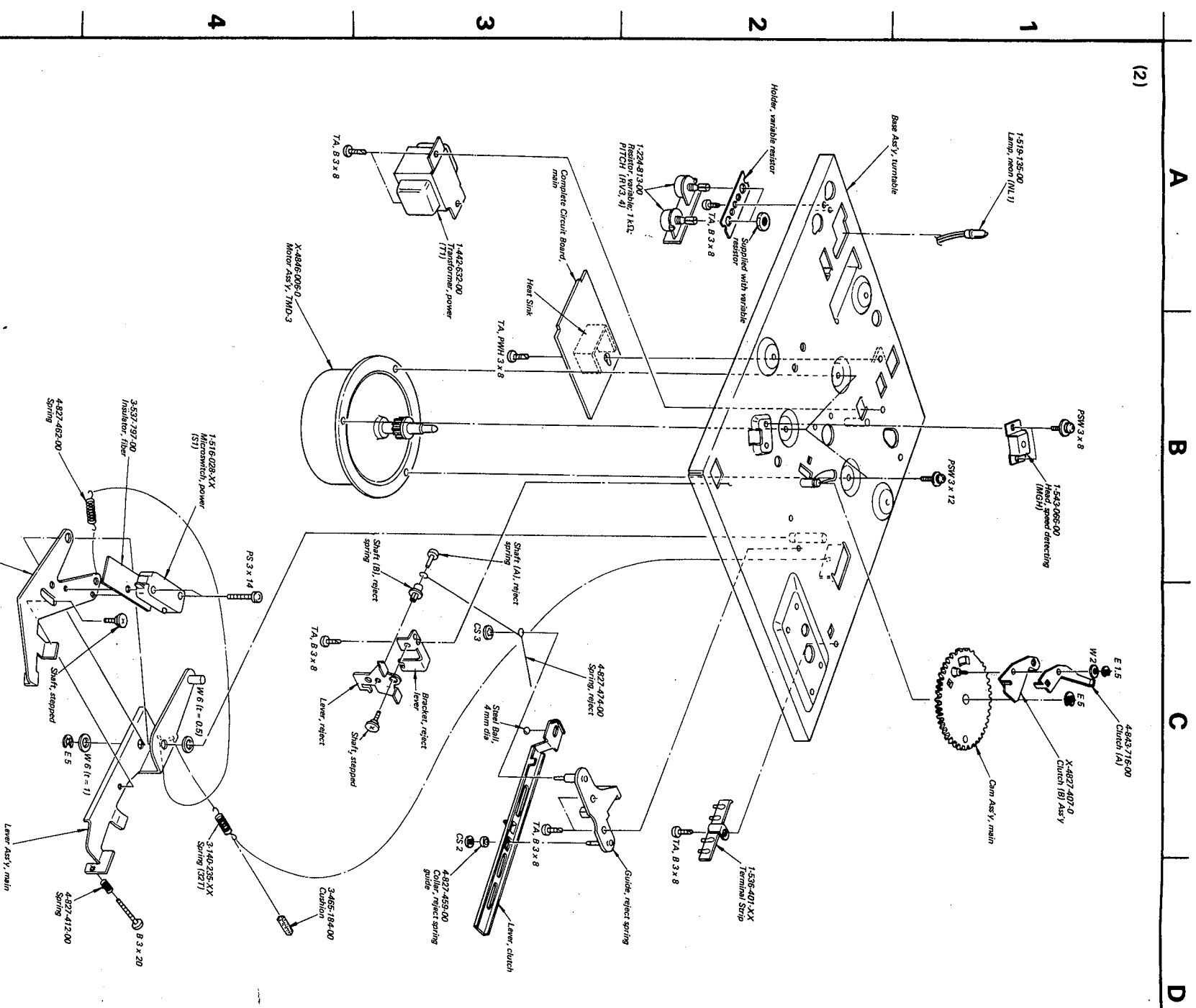
SECTION 6

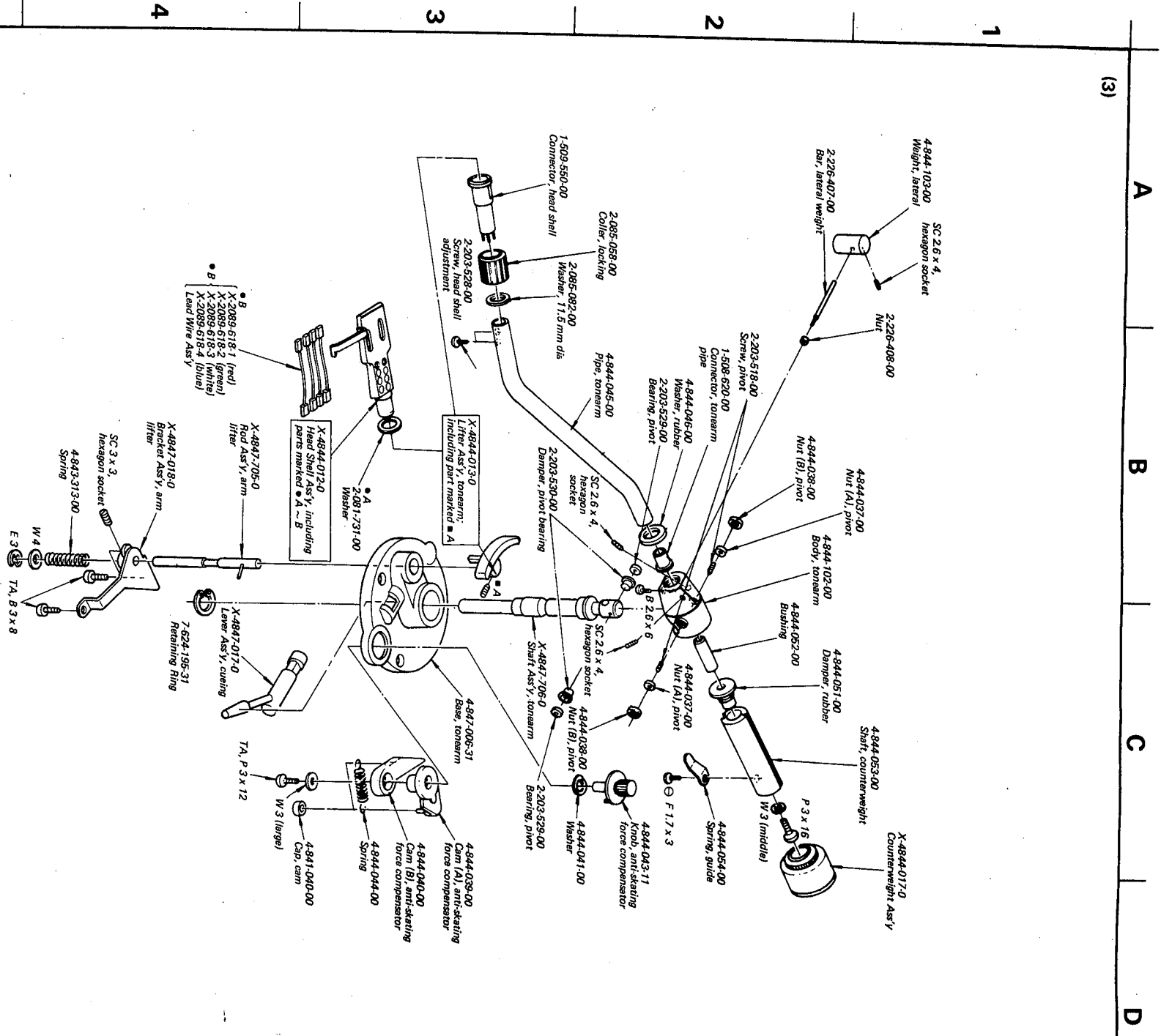
EXPLODED VIEWS



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (—) = slotted head





Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (—) = slotted head

SECTION 7
ELECTRICAL PARTS LIST

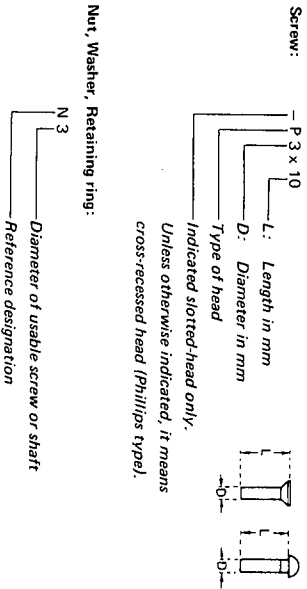
| <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> | <u>Ref. No.</u> | <u>Part No.</u> | <u>Description</u> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------|
| SEMICONDUCTORS | | | | | |
| Transistors | | | | | |
| ⇒ Q1 ~ 6 | | 2SC634A | C14 | 1-121-391-11 | 1 50 V |
| ⇒ Q7 | | 2SA678 | C15 | 1-121-651-11 | 10 16 V |
| ⇒ Q8 | | 2SC634A | C16 | 1-121-391-11 | 1 50 V |
| ⇒ Q9 | | 2SA678 | C17 | 1-121-651-11 | 10 16 V |
| Q10 | | 2SC1173 | C18 | 1-121-391-11 | 1 50 V |
| ⇒ Q11 ~ 13 | | 2SC634A | C19 | 1-121-651-11 | 10 16 V |
| Q14 | | 2SC1859 | C20 | 1-121-245-00 | 1000 16 V |
| ⇒ Q15 | | 2SC634A | RESISTORS | | |
| Q16 | | 2SC1859 | All resistors are in ohms. Regular-type 1/4 W carbon and composition resistors are omitted. Check the schematic diagram for the resistance values. (k = 1000) | | |
| ⇒ Q17 | | 2SC634A | R23 | 1-213-135-11 | 220 1W metal-oxide (nonflammable) |
| Q18 | | 2SC1859 | R33 | 1-213-156-11 | 12k 1W metal-oxide (nonflammable) |
| Diodes | | | | | |
| ⇒ D1, 2 | | 10D2 | RV1, 2 | 1-224-644-XX | 4.7 k adjustable |
| ⇒ D3 | | 10QB01-06 | RV3, 4 | 1-224-813-00 | 1k variable, PITCH |
| COIL | | | | | |
| L1 | 1-407-177-00 | Microinductor, 470 μH | SWITCHES | | |
| CAPACITORS | | | | | |
| All capacitors are in μF and of electrolytic unless otherwise noted. (p = μμF) 50 and/or less working voltages are not noted except for electrolytic type. | | | | | |
| C1 | 1-101-923-11 | 0.01 ceramic | CP1 | 1-231-057-31 | Encapsulated Component |
| C2 | 1-121-726-11 | 0.47 50 V | M | X-4846-006-0 | Motor Assy, TMD-3 |
| C3, 4 | 1-121-651-11 | 10 16 V | MGH | 1-543-066-00 | Head, speed detecting |
| C5 | 1-102-074-11 | 0.001 ceramic | NL1 | 1-519-135-00 | Lamp, neon |
| C6 | 1-108-811-12 | 0.039 mylar | T1 | 1-442-632-00 | Transformer, power |
| C8 | 1-121-402-11 | 33 10 V | | 1-508-620-00 | Connector, tonearm pipe |
| C9 | 1-121-952-11 | 1 50 V | | 1-509-550-00 | Connector, head shell |
| C10 | 1-121-951-11 | 0.47 50 V | | 1-534-049-41 | Cord, w/phone plug |
| C11 | 1-161-036-11 | 0.047 ceramic | | 1-534-985-XX | Cord, power |
| | | | | 1-536-401-XX | Terminal Strip |
| C12, 13 | 1-102-114-11 | 470 p ceramic | | | |

⇒ : Due to replacement parts, the descriptions are different from the diagrams.

| ACCESSORIES AND PACKING MATERIALS | | |
|-----------------------------------|---------------------|-------------------------------------------|
| <i>Part No.</i> | <i>Description</i> | |
| 2-054-619-00 | Spacer, cartridge | |
| 3-701-806-00 | Adaptor, 45 rpm | |
| 3-780-969-21 | Manual, instruction | |
| 4-815-654-00 | Screw, cartridge | 4-834-720-00 Cover, turntable |
| 4-815-655-00 | Nut, cartridge | 4-843-577-00 Sheet, protection: top cover |
| 4-841-044-00 | Washer, cartridge | 4-846-054-00 Cushion, side |
| | | 4-847-314-00 Bag, plastic: unit |
| | | 4-847-703-00 Cushion, turntable |
| | | 4-847-911-00 Carton |

HARDWARE NOMENCLATURE

| Reference Designation | Shape | Description | Remarks |
|-----------------------|-------|------------------------------------------------|-------------------------------------------------------------------------|
| SELF-TAPPING SCREWS | | | |
| 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 |
| SET SCREWS | | | |
| SC | | set screw | |
| SC | | hexagon-socket set screw | ex: SC 2.6 x 4, hexagon socket |
| NUT | | | |
| N | | nut | |
| WASHERS | | | |
| W | | flat washer | |
| SW | | spring washer | |
| LW | | internal-tooth lock washer | ex: LW3, internal |
| LW | | external-tooth lock washer | ex: LW3, external |
| RETAINING RINGS | | | |
| E | | retaining ring | |
| G | | grip-type retaining ring | |



| Reference Designation | Shape | Description | Remarks |
|-----------------------|-------|---------------------------------------------|--------------------------------------------------------------------|
| SCREWS | | | |
| 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 | | pan-head screw with spring washer | binding-head (B) screw and spring washer for replacement |
| PSW | | 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-filister-head screw | |
| RF | | fillister-head screw | |
| BV | | brazer-head screw | |

SONY

hi-fi Service Bulletin No. 81

SONY CORPORATION OF AMERICA

Technical Publications Department
47-47 Van Dam Street, Long Island City, New York 11101

Model: PS-3300

Subject: Improved tone arm

Date: May 11, 1979

Several parts in the tone arm have been changed to improve performance and reliability. As the following table shows, the changes may involve a change in the number of parts as well as the shape of the part. Note also that the part number for the new Tonearm Shaft Assembly is the same as that of the old one. The new type will be supplied whenever this item is ordered.

| Description | Part Number of Original | Qty. | Part Number of Replacement | Qty. |
|-----------------------|-------------------------|------|----------------------------|------|
| Shaft ass'y, tonearm | X-484-770-60 | 1 | X-484-770-60 | 1 |
| Bearing, pivot | 2-203-529-00 | 2 | 4-847-716-00 | 1 |
| Screw, pivot | 2-203-518-00 | 2 | 2-203-518-11 | 2 |
| Screw, pivot bearing | --- | - | 3-701-506-01 | 1 |
| Damper, pivot bearing | 2-203-530-00 | 2 | --- | - |

