

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

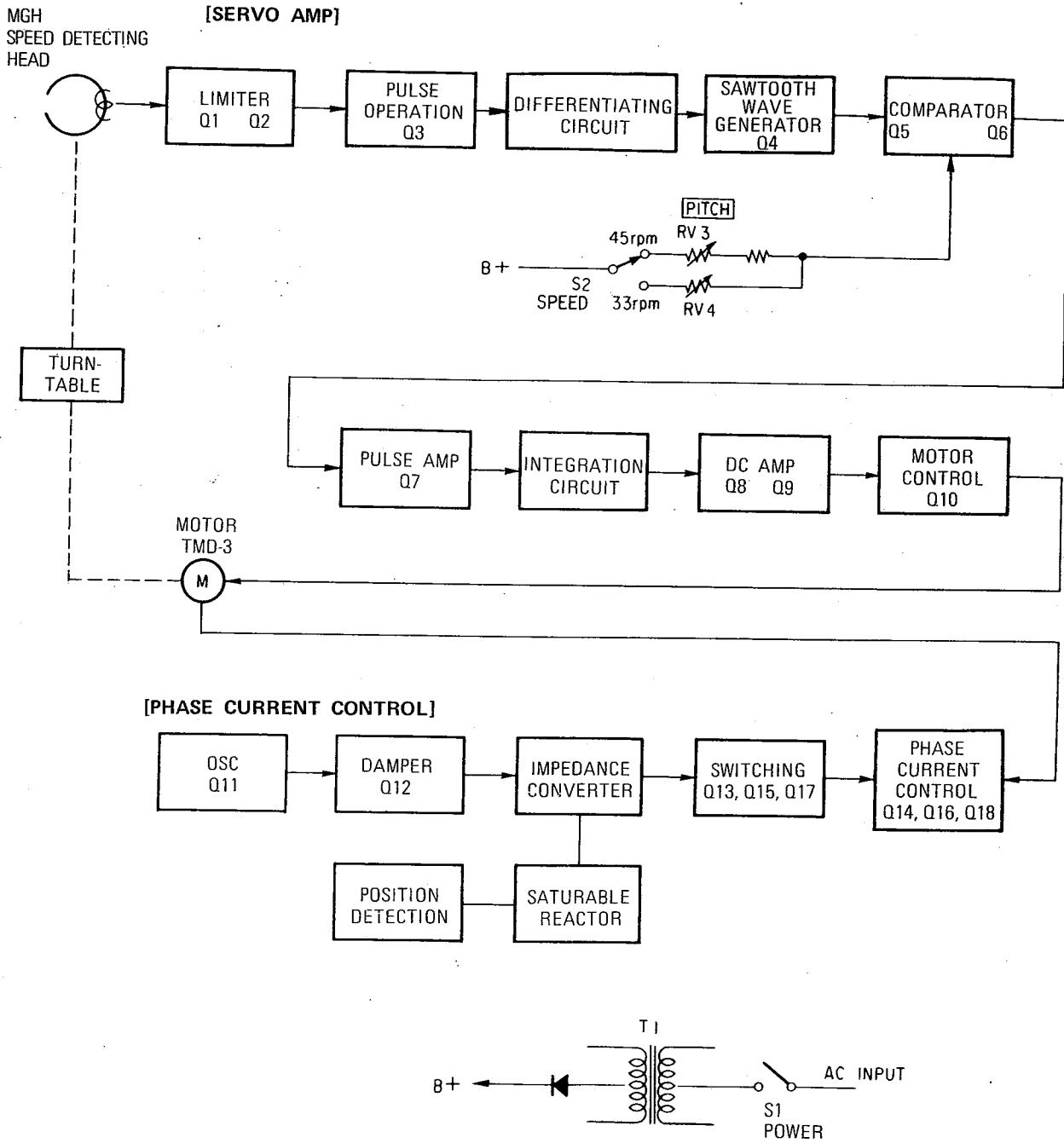
Cartridge Weight Range: 4 – 10 g

Cartridge is not supplied with this turntable system.

PS3300

SONY[®] SERVICE MANUAL

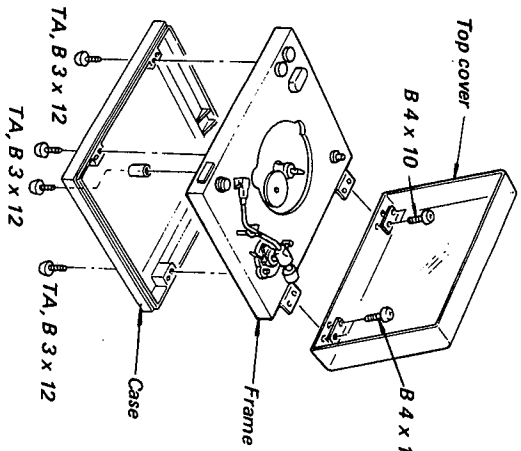
SECTION 1 BLOCK DIAGRAM



000000

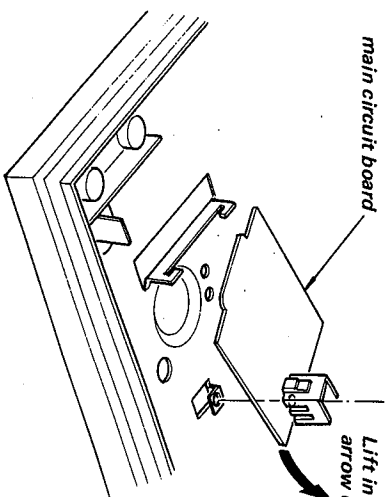
DISASSEMBLY AND REPLACEMENT

TOP COVER AND CASE REMOVAL



MAIN CIRCUIT BOARD REMOVAL AND CHECKS

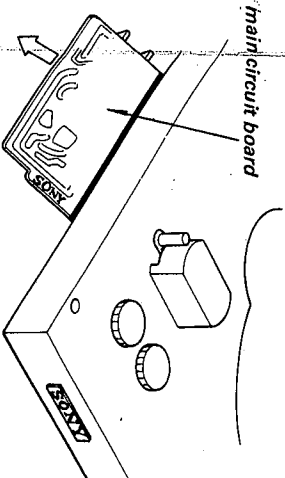
1. Removal



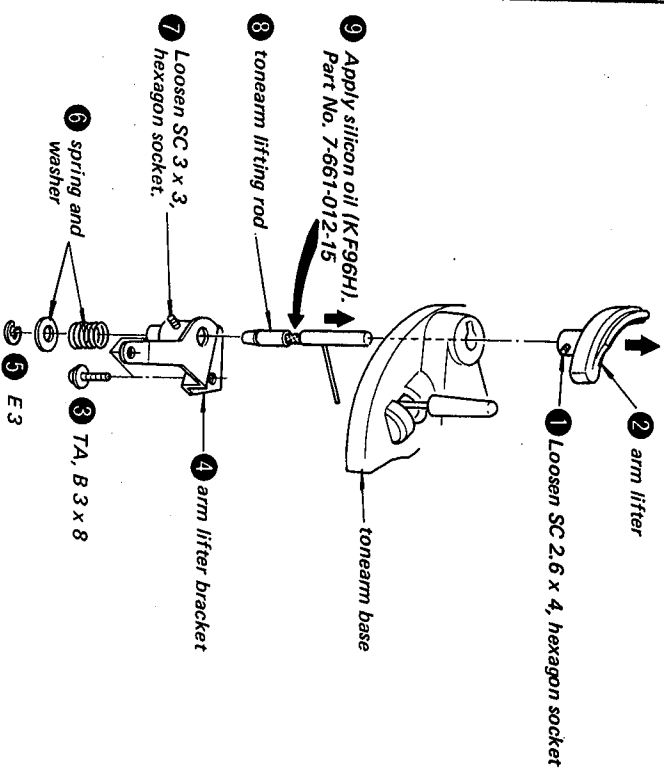
2. Checks

1) Position the main circuit board as shown below.

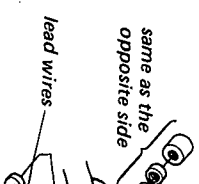
2) Start the turntable and check the board.



DAMPER OIL LUBRICATION



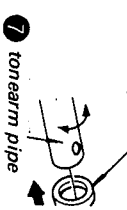
TONEARM PIPE



same as the opposite side

lead wires

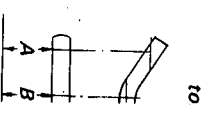
9 con
8 washer



7 tonearm pipe

Installation

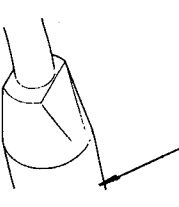
Note: Adjust the ball and tighten the...



to

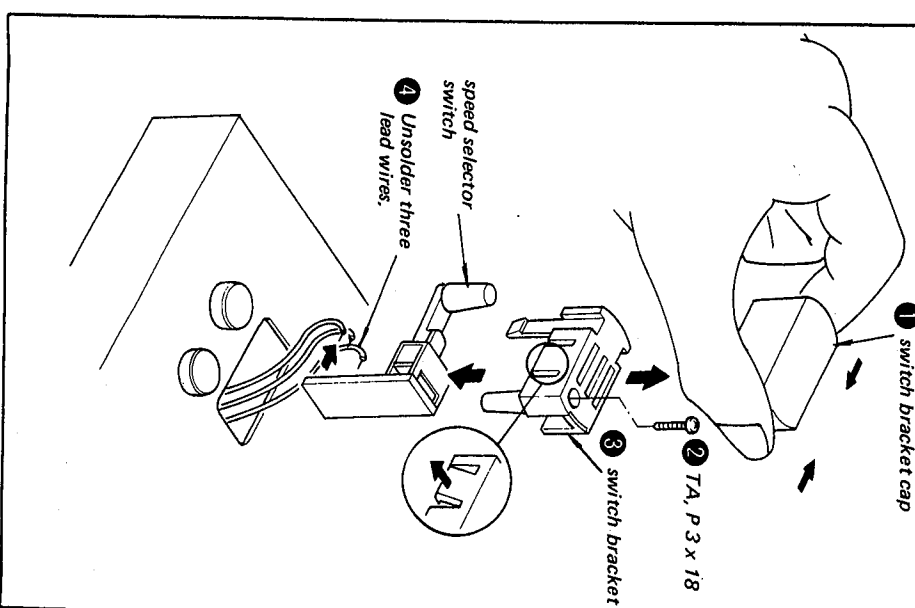
COUNTERWEIGHT

tonearm body

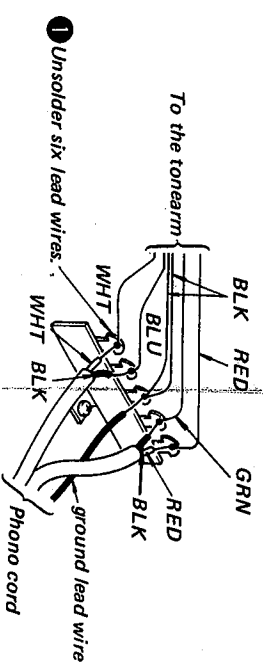


TOP COVER AND CASE REMOVAL

SPEED SELECTOR SWITCH REPLACEMENT

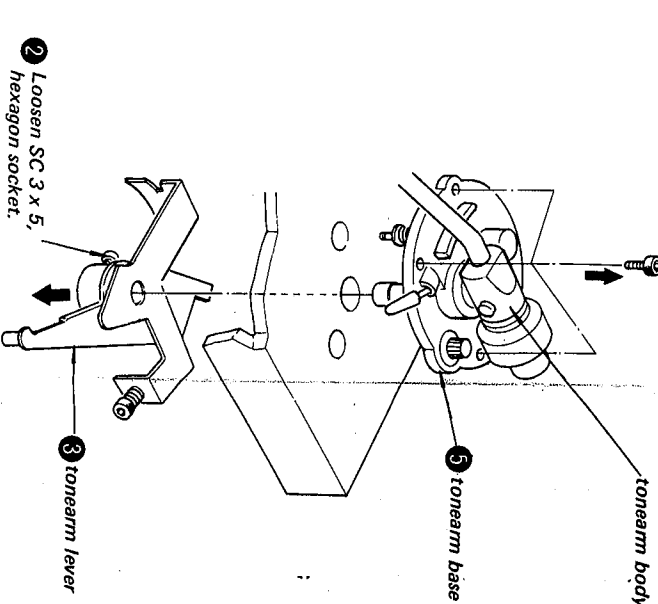


TONEARM BASE REMOVAL



1) Unsolder six lead wires.

4 Bolt 3 x 16, hexagon socket.

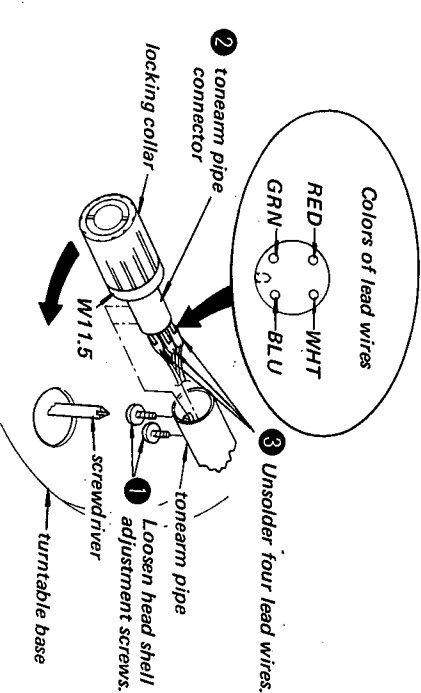


5 tonearm base

3 tonearm lever

2 Loosen SC 3 x 5, hexagon socket.

TONEARM PIPE CONNECTOR REPLACEMENT



3 Unsolder four lead wires.

2 tonearm pipe connector

locking collar

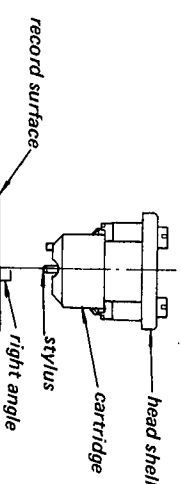
1 tonearm pipe adjustment screws.

screwdriver

turntable base

Installation

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



head shell

cartridge

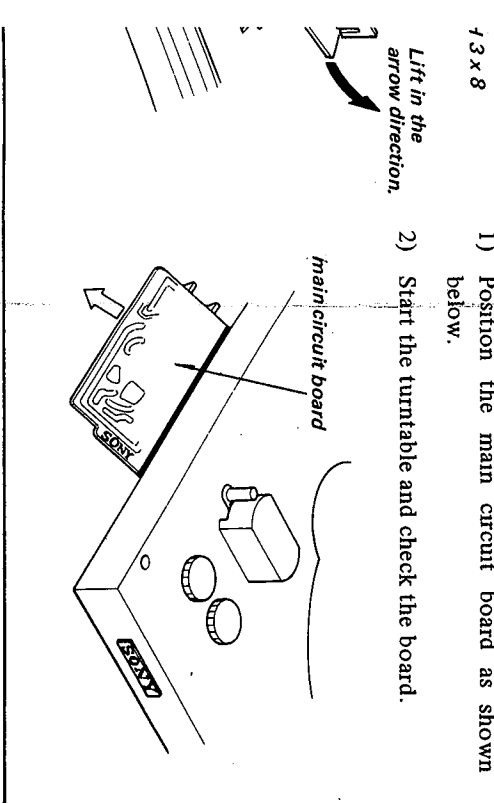
stylus

record surface

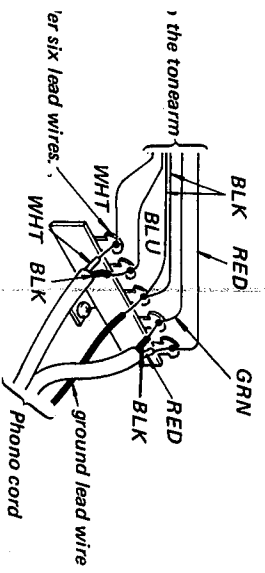
PL AND CHECKS

2. Checks

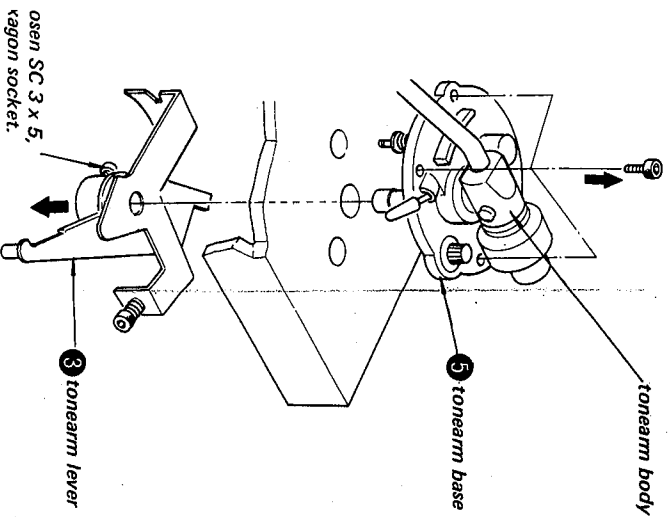
- 1) Position the main circuit board as shown below.
- 2) Start the turntable and check the board.



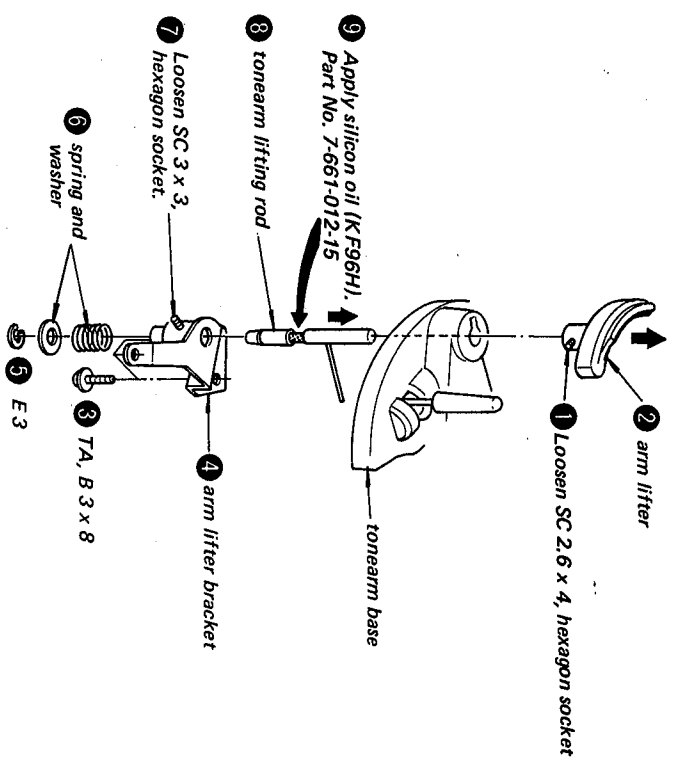
TONEARM BASE REMOVAL



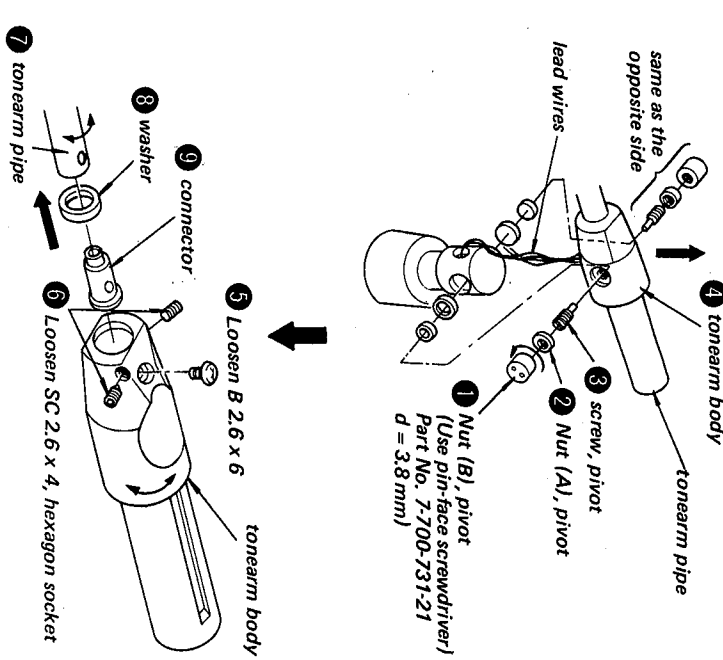
- 1 Bolt 3 x 16, hexagon socket.



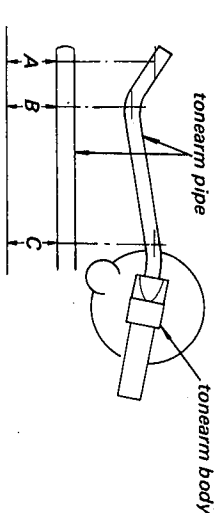
DAMPER OIL LUBRICATION



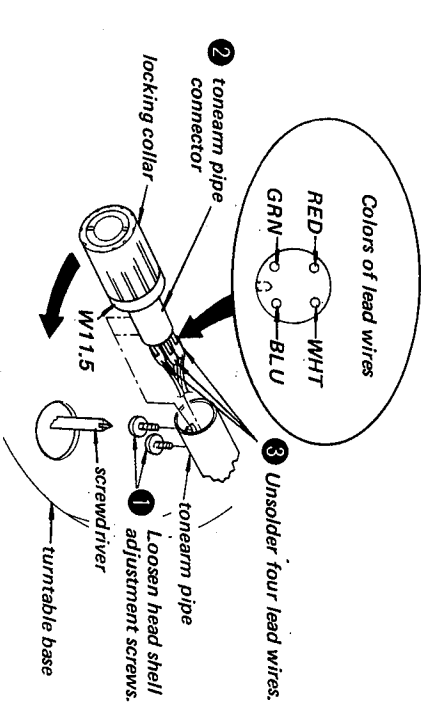
TONEARM PIPE REPLACEMENT



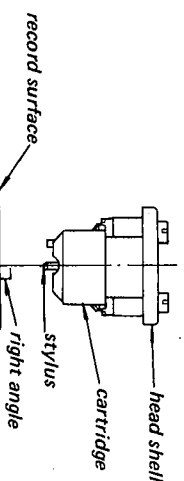
Installation
Note: Adjust the balance of the tonearm as shown below and tighten three screws (5 , 6).



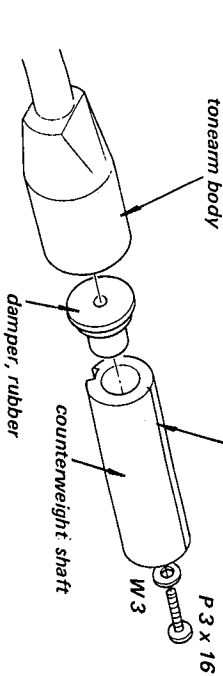
TONEARM PIPE CONNECTOR REPLACEMENT



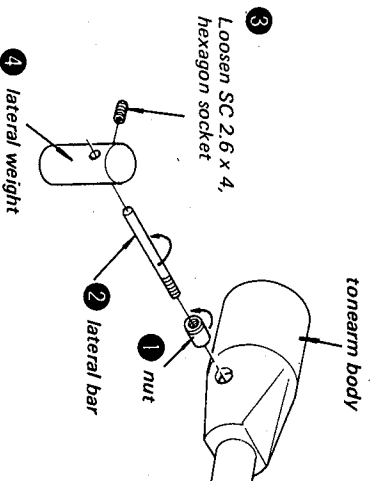
Installation
Note: Install the head shell and the cartridge as shown below and tighten two head shell adjustment screws (1).



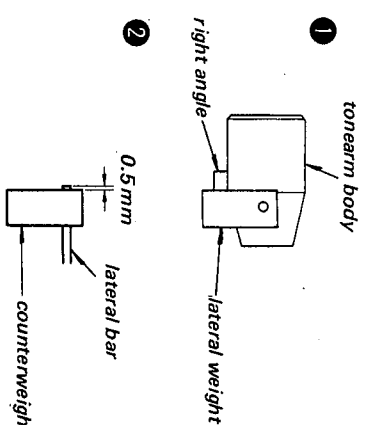
COUNTERWEIGHT SHAFT REMOVAL



LATERAL WEIGHT REMOVAL



Installation
— Side View —

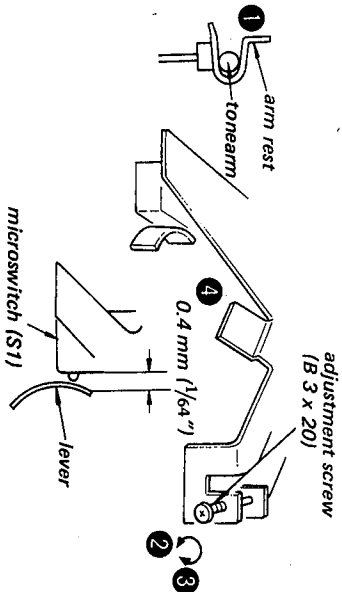


SECTION 3
ADJUSTMENTS

MICROSWITCH (S1) ADJUSTMENT

1. Secure the tonearm to the arm rest (①).
2. Turn the adjustment screw (B 3 x 20) so that the clearance between the microswitch (S1) and the lever is 0.4 mm ($1/64''$) (④) as shown below.

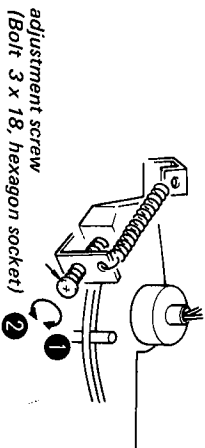
Turning direction	clearance
②	narrow
③	wide



AUTOMATIC RETURN ADJUSTMENT

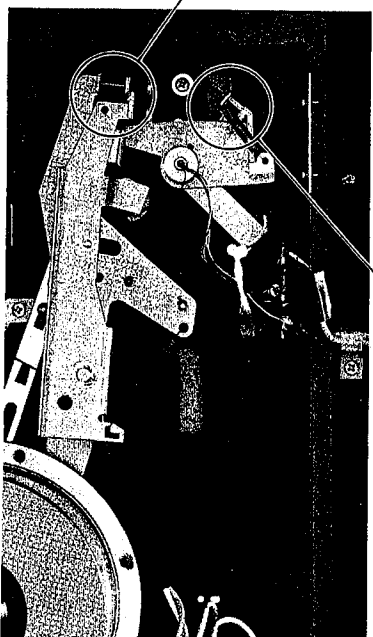
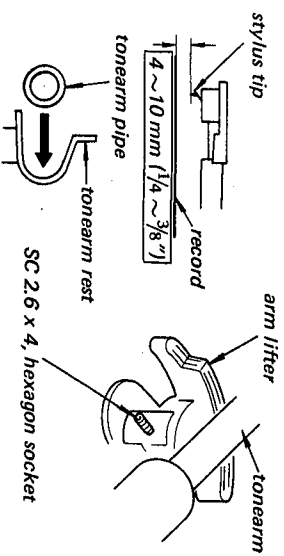
If the automatic return operation does not work properly, adjust by turning the adjustment screw (Bolt 3 x 18, hexagon socket) as shown below.

Turning direction	Automatic return position
①	slow
②	fast



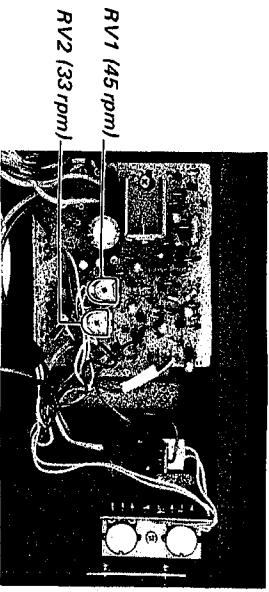
TONEARM HEIGHT ADJUSTMENT

1. Lift the cueing lever and confirm that the clearance between the stylus tip and the record on the turntable is 4 - 10 mm as shown below. If necessary, adjust the height of the arm lifter by loosening the set screw.
2. After the adjustment, confirm that the tonearm smoothly returns to the tonearm rest as shown below.



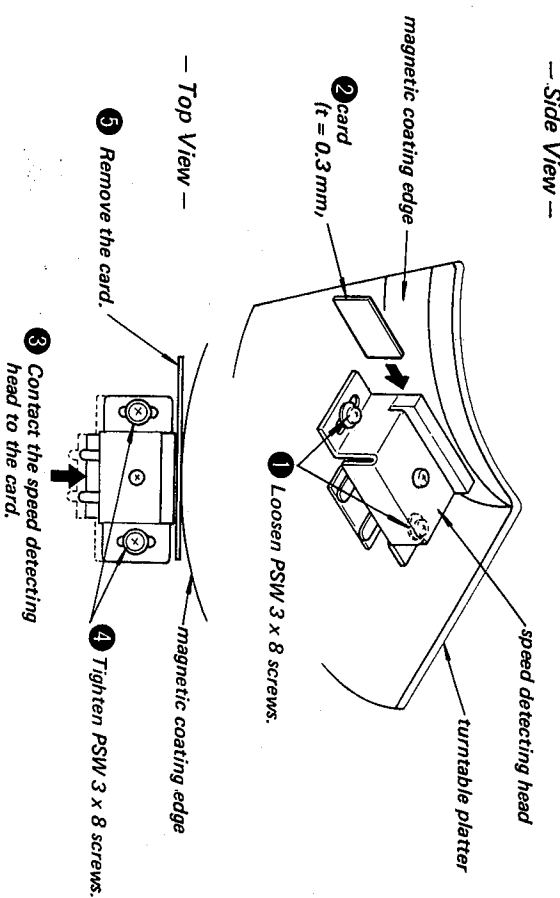
TURNABLE SPEED ADJUSTMENT

1. Set the two pitch control knobs (33 and 45) to the mechanical-mid position.
2. Adjust RV1 (45 rpm) and RV2 (33 rpm) so that the stroboscope pattern appears stationary.



SPEED DETECTING HEAD ADJUSTMENT

1. Proceed in the numerical order (① - ⑤)



2. By viewing the stroboscope, adjust the speed with the pitch control until the pattern appears stationary.

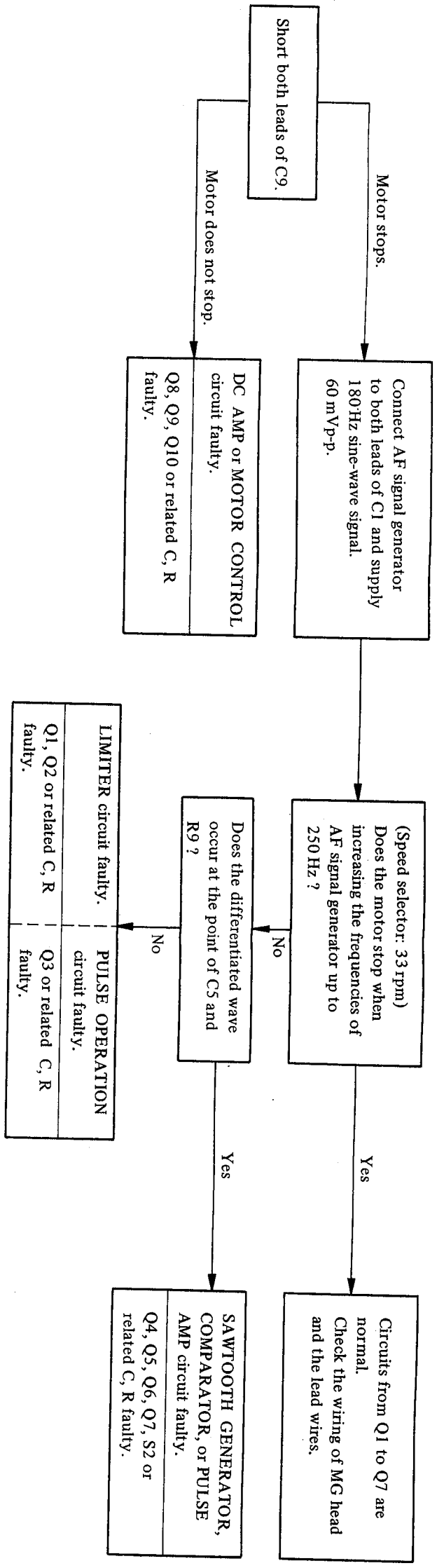
Note: Confirm that the head does not contact the magnetic coating of the platter.



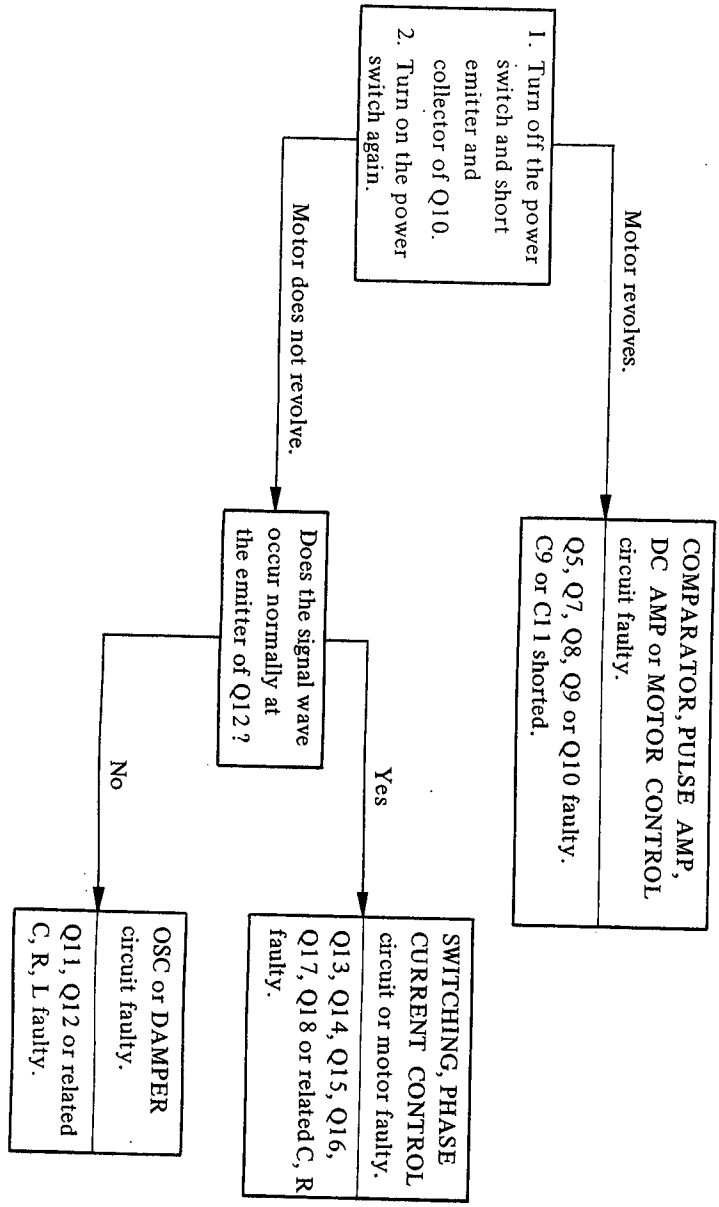
TROUBLESHOOTING CHARTS

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

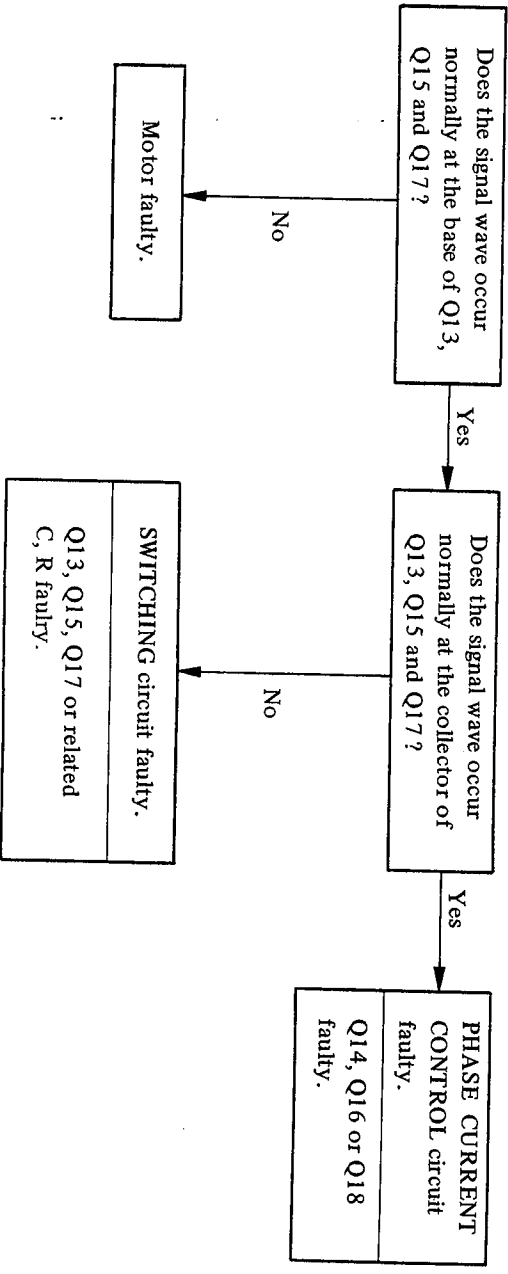
1. Turntable runs excessively fast.



2. Turntable will not start.



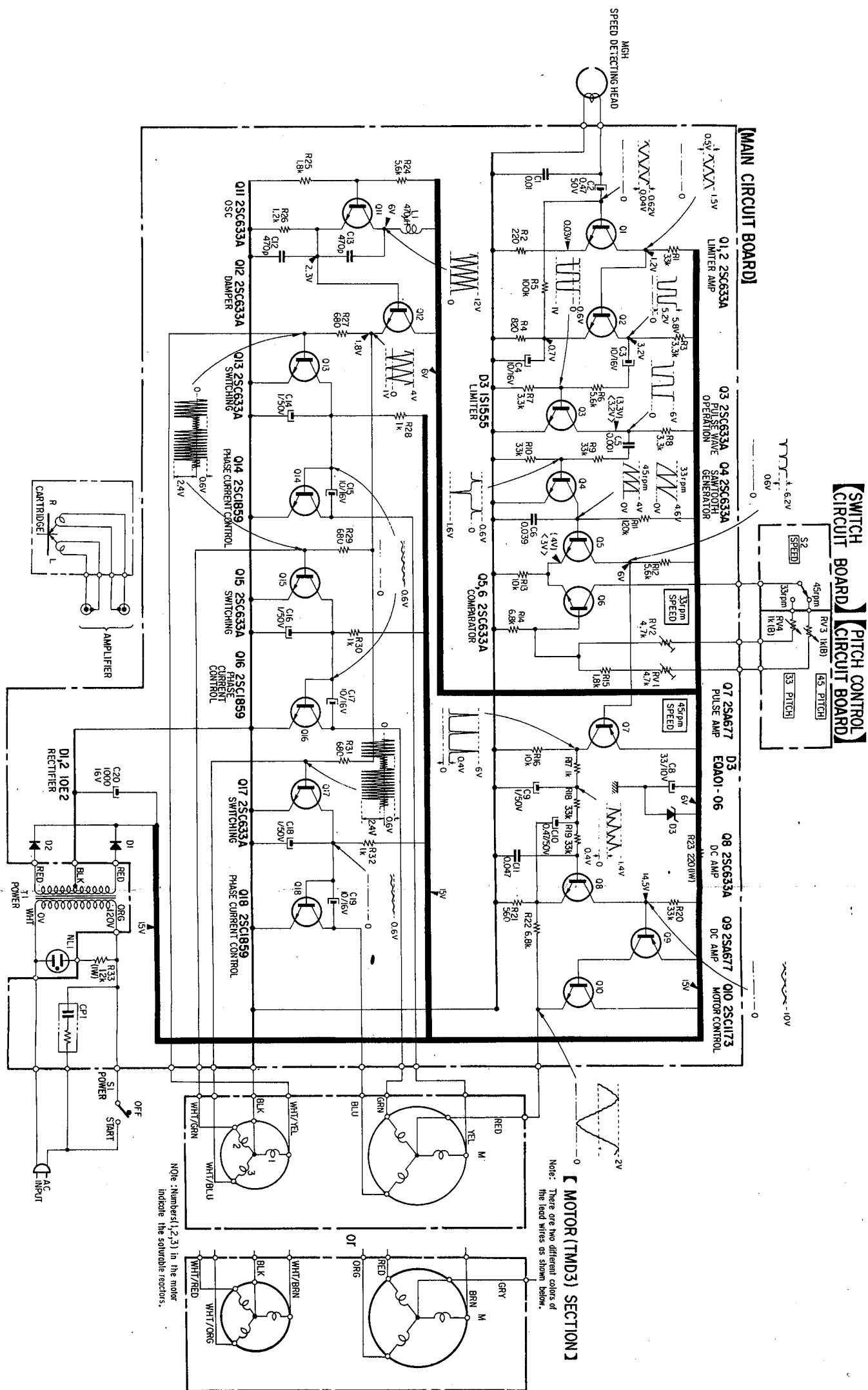
3. Turntable runs excessively fast or slow.



1383
1859

SECTION 5
DIAGRAMS

5-1. SCHEMATIC DIAGRAM



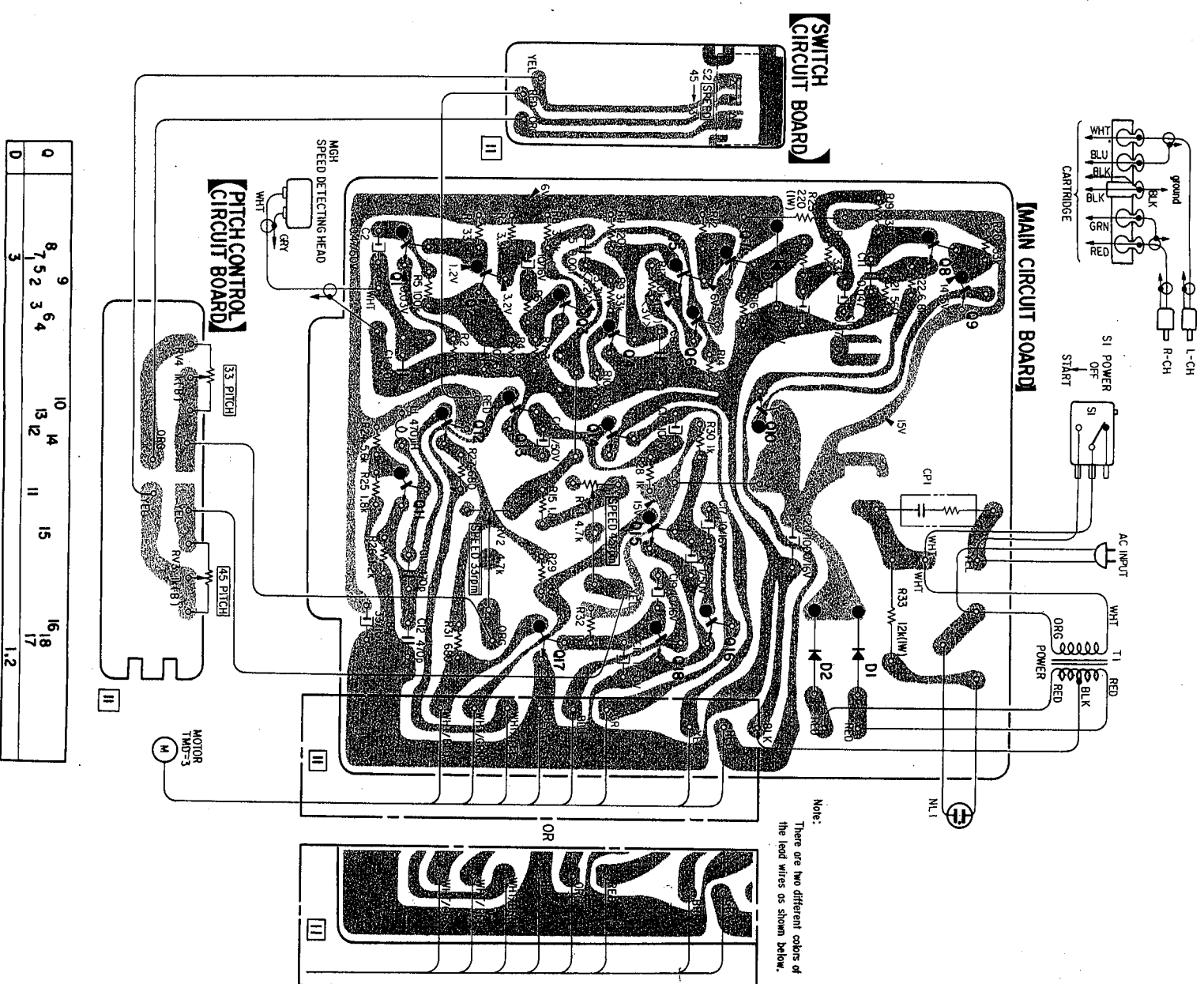
- Q1 ~ 6, 8
- Q11 ~ 13: 2SC633A
- Q15, 17
- Q7, 9: 2SA677
- Q10: 2SC1173
- Q14, 16: 2SC1859
- Q18
- D1, 2: 10E2
- D3: EQA01-06

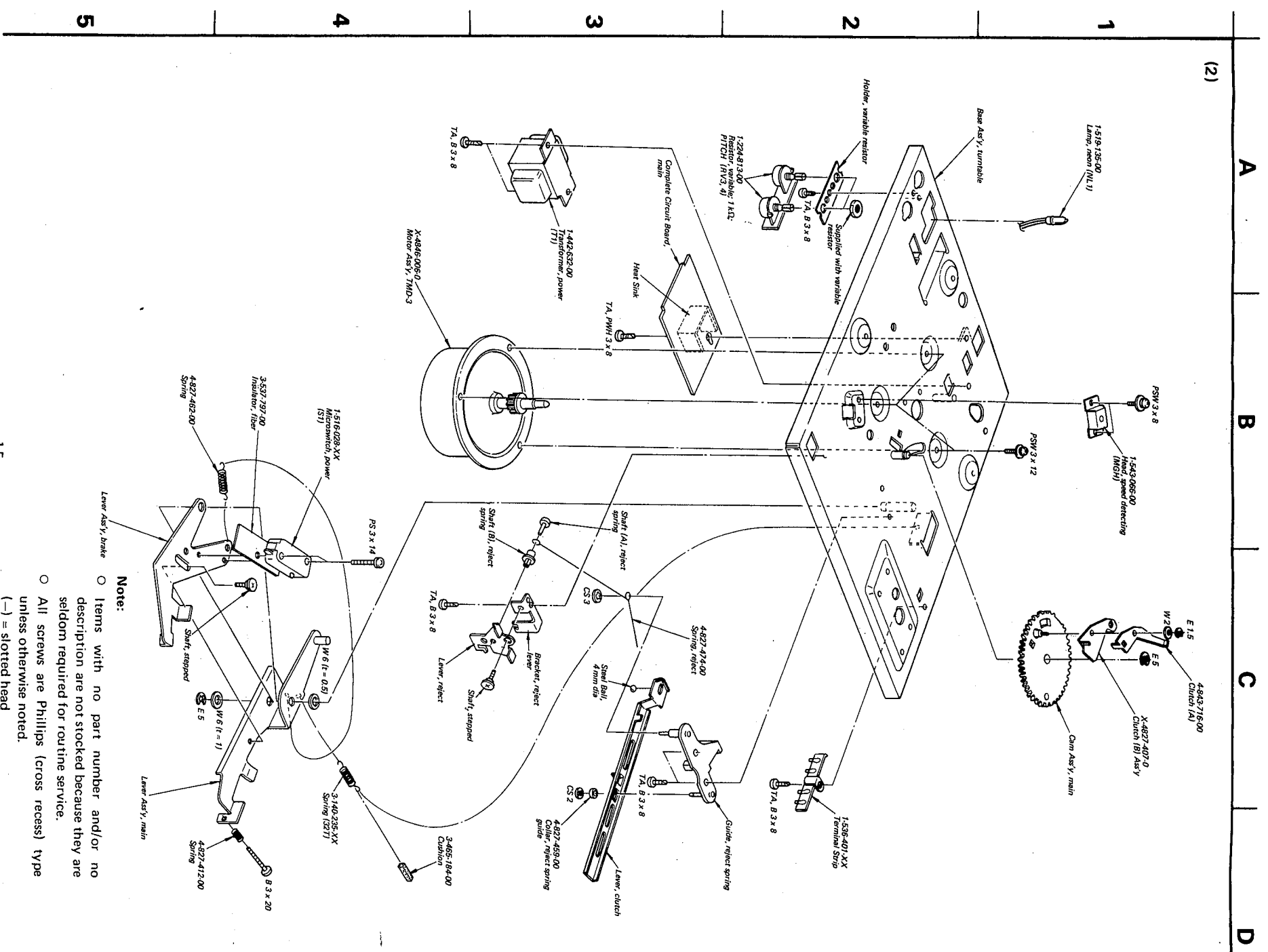


- Note:**
- All capacitors are in μF unless otherwise noted. 50 or less working voltages are not indicated except for electrolytic type. $\mu = \mu\text{F}$
 - All resistors are in Ω , $\%W$, unless otherwise noted. $k = 1,000$ $M = 1,000 k$
 - --- indicates chassis ground.
 - --- indicates B+ circuit.
 - 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).
 - () : common
 - < : 33 rpm
 - > : 45 rpm
 - 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 —





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

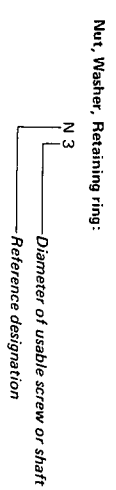
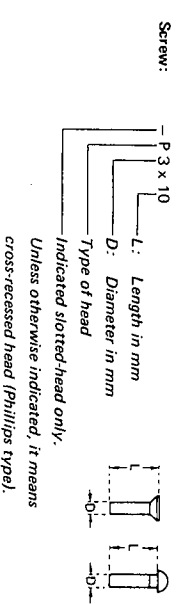
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
SEMICONDUCTORS					
Transistors					
⇒ Q1 ~ 6	2SC634A		C14	1-121-391-11	1 50 V
⇒ Q7	2SA678		C15	1-121-651-11	10 16 V
⇒ Q8	2SC634A		C16	1-121-391-11	1 50 V
⇒ Q9	2SA678		C17	1-121-651-11	10 16 V
Q10	2SC1173		C18	1-121-391-11	1 50 V
⇒ Q11 ~ 13	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 1 W metal-oxide (nonflammable)
Q18	2SC1859		R33	1-213-156-11	12k 1 W 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
C12, 13	1-102-114-11	470 p ceramic		1-536-401-XX	Terminal Strip

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

ACCESSORIES AND PACKING MATERIALS

Part No.	Description	Part No.	Description
2-054-619-00	Spacer, cartridge	4-834-105-00	Sheet, plastic, turntable
3-701-806-00	Adaptor, 45 rpm	4-834-720-00	Cover, turntable
3-780-969-21	Manual, instruction	4-843-577-00	Sheet, protection: top cover
4-815-654-00	Screw, cartridge	4-846-054-00	Cushion, side
4-815-655-00	Nut, cartridge	4-847-314-00	Bag, plastic: unit
4-841-044-00	Washer, cartridge	4-847-703-00	Cushion, turntable
		4-847-911-00	Carton

HARDWARE NOMENCLATURE



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	

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	

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	---	-

