PS-X60

US Model
Canadian Model
AEP Model
UK Model
E Model

STEREO TURNTABLE SYSTEM

SPECIFICATIONS

GENERAL

Power Requirements: 120, 220 V ac, 50/60 Hz (AEP, E model)
220, 240 V ac, 50/60 Hz (UK model)
120 V ac, 60 Hz (US, Canadian model)

Power Consumption: 8 W (US, Canadian model)
12 W (AEP, E, UK model)

Dimensions: 480 (w) x 165 (h) x 420 (d) mm
$18\frac{7}{8}$ (w) x $6\frac{1}{2}$ (h) x $16\frac{1}{2}$ (d) inches
including projecting parts and controls

Weight: Approx. 12 kg, 26 lb 7 oz (net)
Approx. 13.3 kg, 29 lb 5 oz
(in shipping carton)

TURNTABLE

Platter: 32 cm ($12\frac{5}{8}$ inches), diecasting aluminum alloy

Motor: DC servo-controlled linear BSL motor

Drive System: Direct drive, crystal lock control system

Speeds: $33\frac{1}{3}$, 45 rpm.

Starting Characteristics: Comes to nominal speed within a half revolution ($33\frac{1}{3}$ rpm)

Wow and Flutter: ±0.045 % (DIN)
0.025 % (WRMS)

S/N Ratio: 75 dB (DIN-B)

Initial Drift: Within 0.0003 %

Load Characteristics: 0 % up to 150 g tracking force

Automatic System: Lead-in, return, reject, repeat

TONEARM

Type: Statically balanced, universal

Arm Length: 330 mm (13 inches), overall
235 mm ($9\frac{1}{4}$ inches), pivot-to-stylus

Overhang: 14 mm ($\frac{9}{16}$ inches)

Tracking Error: +2° 27′, −1° 30′

Tracking-force Adjustment Range: 0 – 2.5 g

Shell Weight: 11 g

Cartridge Weight Range (including shell): 11.0 – 19.5 g
(19.0 – 27.5 g with extra weight)

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ !

LES COMPOSANTS IDENTIFIÉS PAR UN TRAMÉ ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DES SUPPLÉMENTS PUBLIÉS PAR SONY.

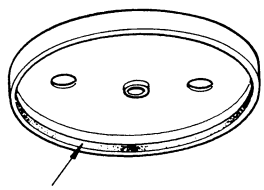
SONY®

SERVICE MANUAL

SERVICING NOTE

1. Wait a few minutes after the power switch is turned on.
2. When replacing the lamp of automatic-return detection, make the automatic-return adjustment (page 13).
3. Platter handling.

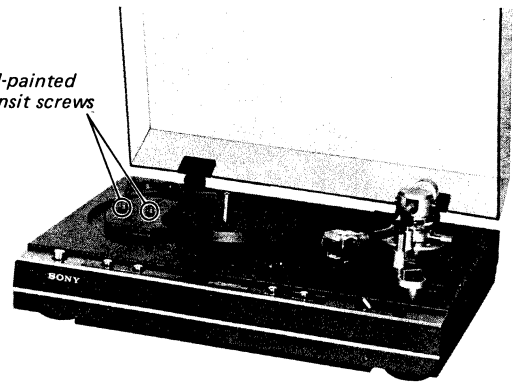
Bottom view of platter



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

4. When operating the set, confirm that the transit screws are removed.

red-painted transit screws



MODEL IDENTIFICATION

– Specification Label –

(US, Canadian model)

SONY	STEREO TURNTABLE SYSTEM MODEL NO,PS-X60 AC 120V 60Hz 8W SERIAL NO. MADE IN JAPAN

(AEP, E1 and E2 model)

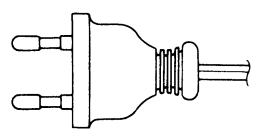
SONY	STEREO TURNTABLE SYSTEM MODEL NO,PS-X60 ~120,220V 50/60Hz 12W SERIAL NO. MADE IN JAPAN

(UK model)

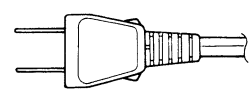
SONY	STEREO TURNTABLE SYSTEM MODEL NO,PS-X60 ~220,240V 50/60Hz 12W SERIAL NO. MADE IN JAPAN

– Power Cord –

E1 model: euro-plug 1-551-530-00

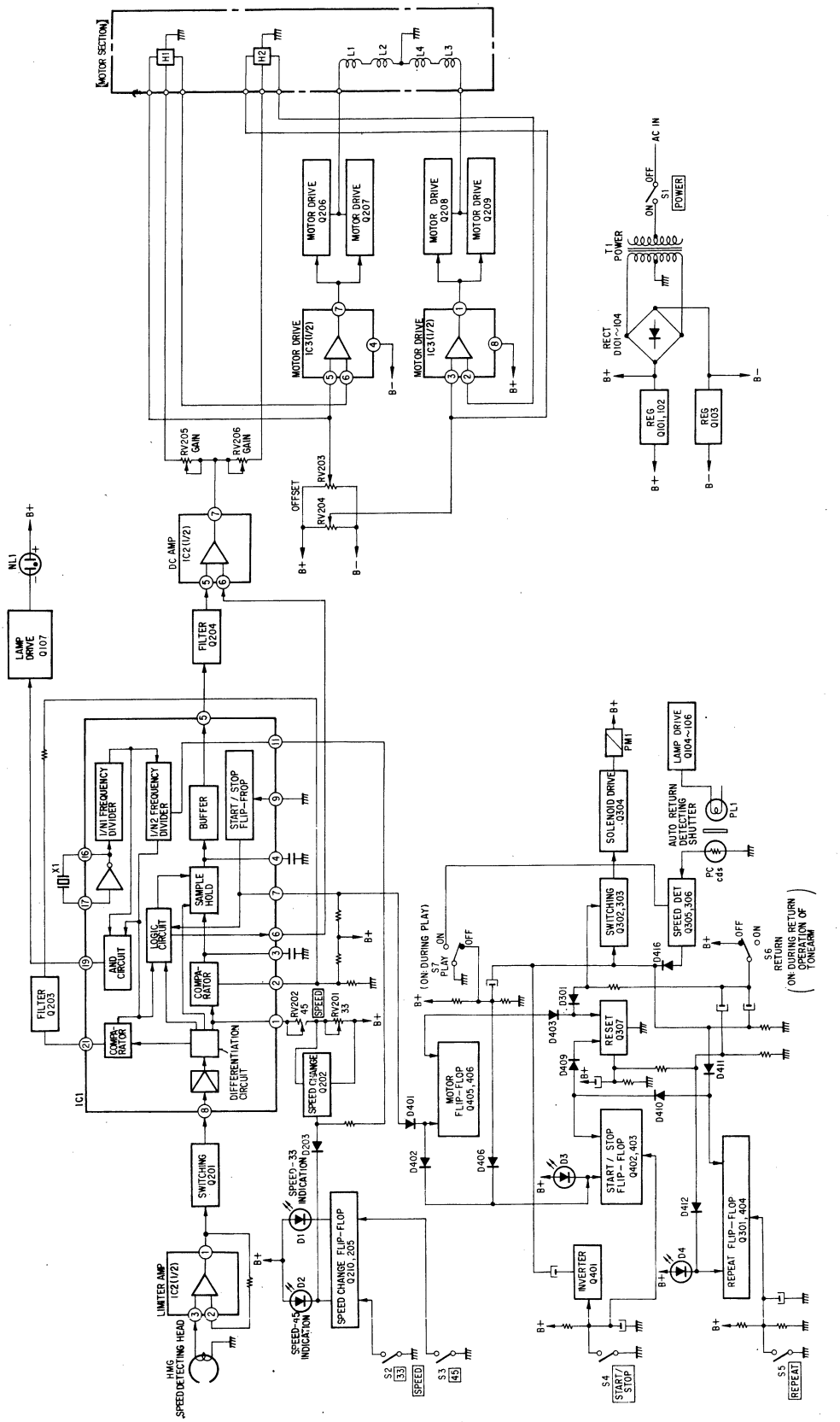


E2 model: parallel-blade plug 1-534-487-XX



SECTION 1
OUTLINE

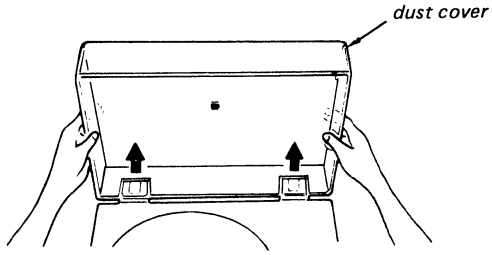
1. BLOCK DIAGRAM

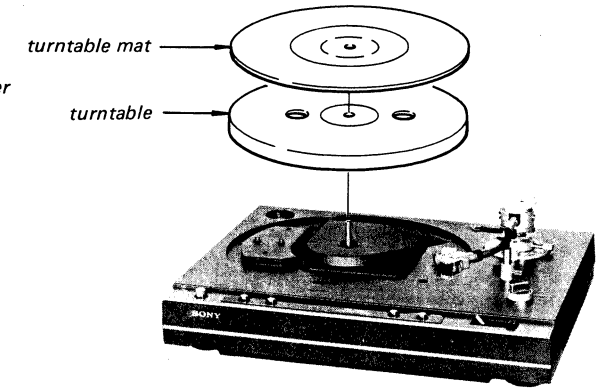


SECTION 2
DISASSEMBLY

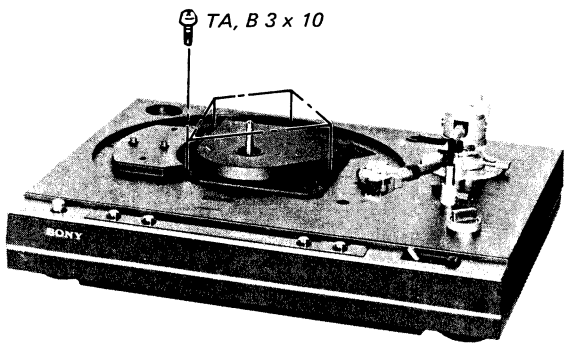
- Follow the disassembly or the installation procedure in the numerical order given.

Dust Cover, Turntable Mat and Turntable Removal



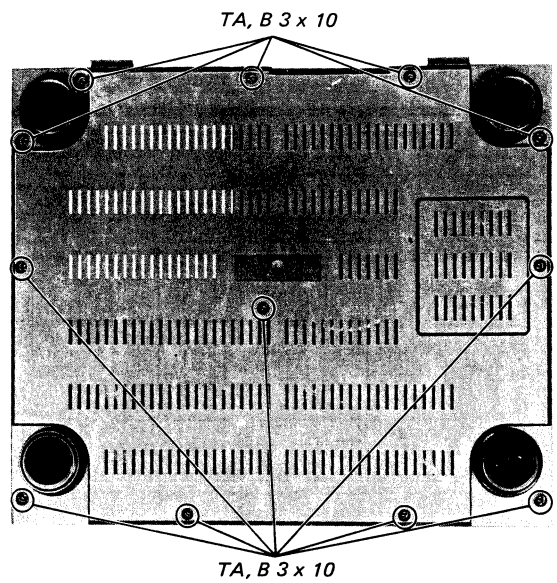


Top Cover Removal



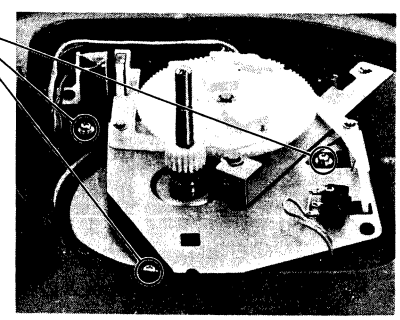
After this removal, drive gear, miniature switch (S6) and solenoid (PM) can be replaced.
(See page 7.)

Bottom Plate Removal

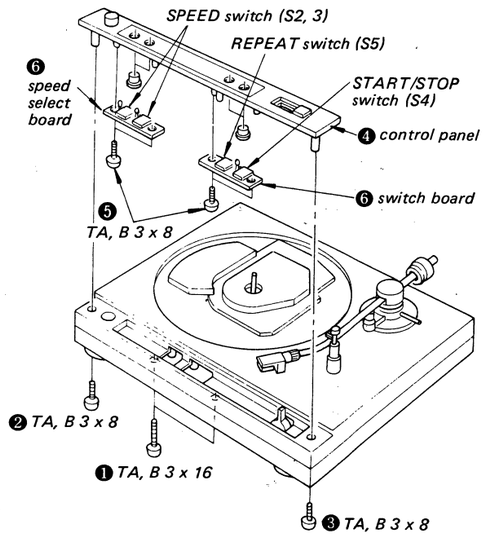


Motor Removal

1. Disconnect the moter lead-wires from the servo amp/system control board.
2. Remove the three screws (PSW 3 x 12).
3. Remove the motor.

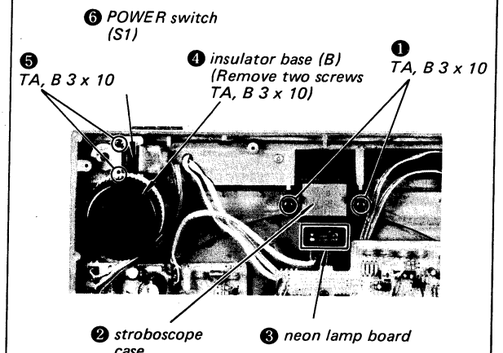


SPEED Switch (S2, 3), START/STOP Switch (S4) and REPEAT Switch (S5) Removal

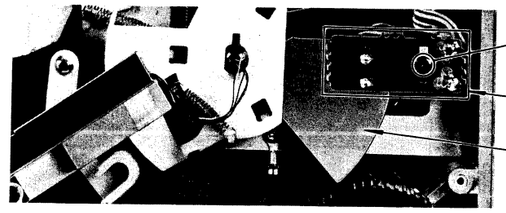


Neon Lamp (NL1) and POWER Switch (S1) Removal

❶ – ❸ : neon lamp
❹ – ❻ : POWER switch (S1)

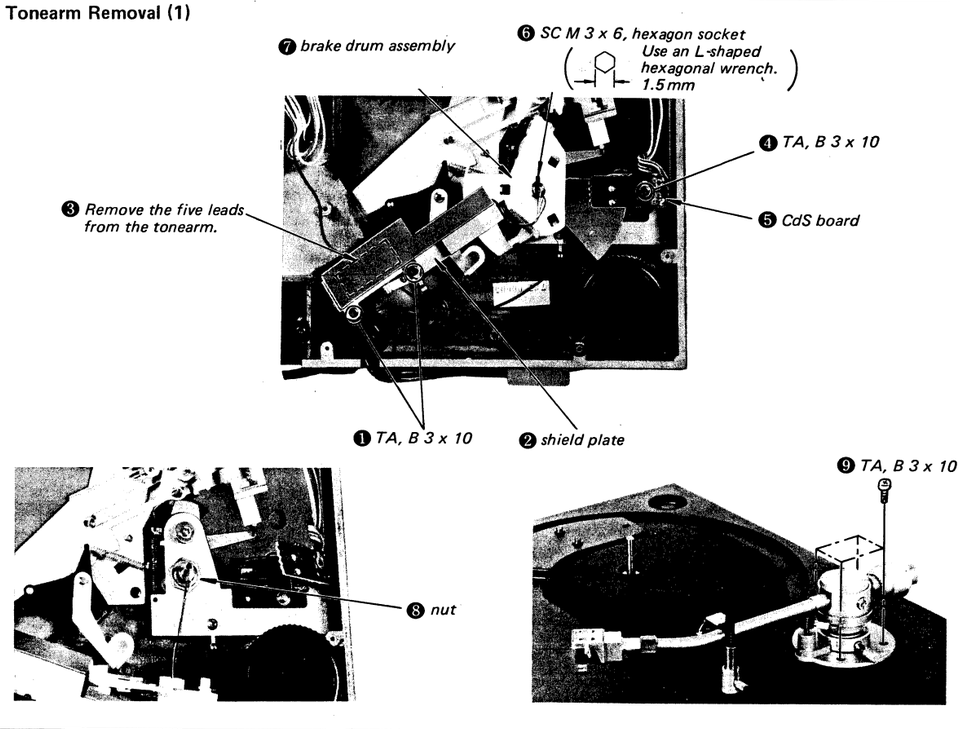


Automatic Return Detecting Lamp (PL1) Replacement

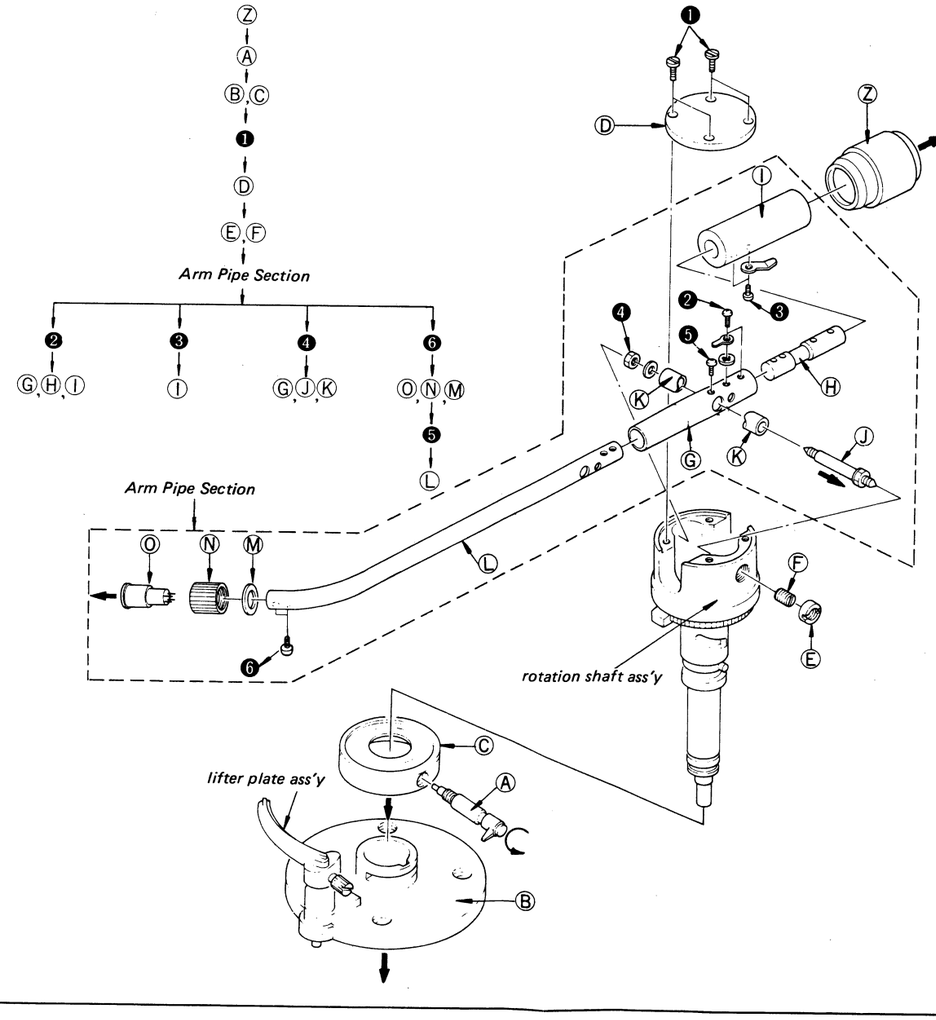


❸ Bring the tonearm toward center spindle side.
❹ Remove the lamp from the lamp holder.

Tonearm Removal (1)

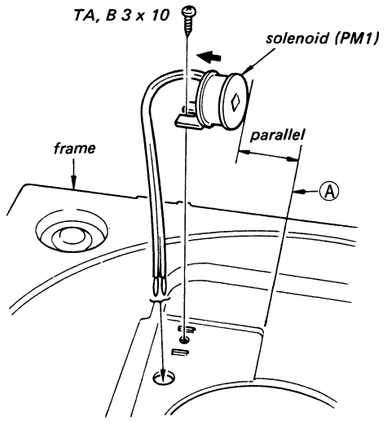


Tonearm Removal (2)

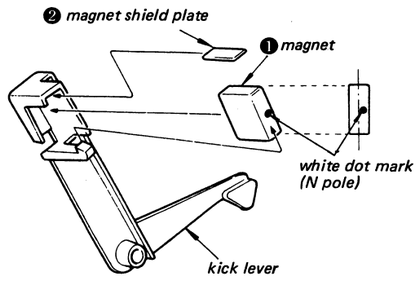


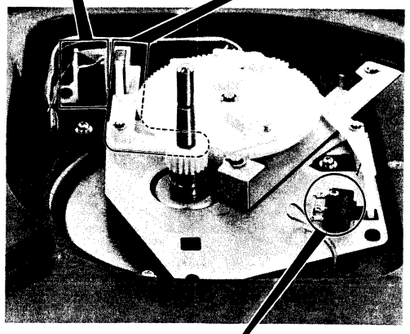
Solenoid (PM1) Installation

Note: Install the solenoid (PM1) in parallel to the line Ⓐ.

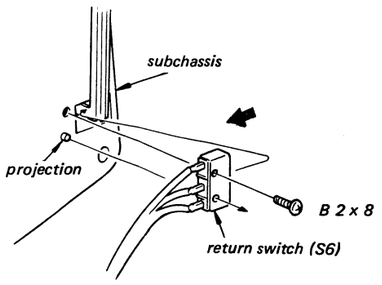


Brake Magnet Installation





Return Switch (S6) Installation

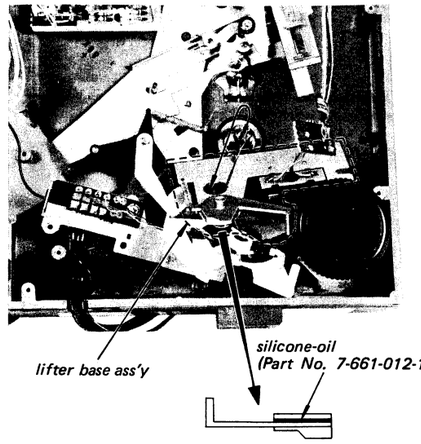


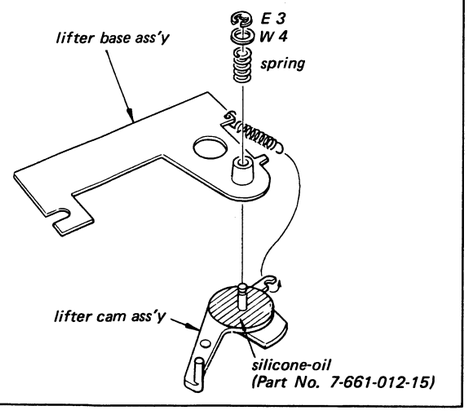
Note on Arm Lifter Mechanism

The arm lifter mechanism of this set uses silicone-oil as damper between the lifter cam assembly and the lifter base assembly.

If the arm lifter moves down too quickly, apply silicone-oil in the numerical order given.

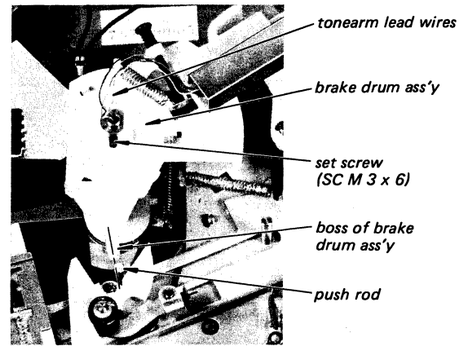
1. Perform the tonearm removal (1) on page 5.
2. Remove the lifter base assembly.
3. Remove E3 and the lifter cam assembly from the lifter base assembly.
4. Wipe off the silicone-oil on the lifter cam assembly and the lifter base assembly.
5. Apply silicone-oil (7-661-012-15) on the lifter cam assembly.
6. Install the lifter cam assembly on the lifter base assembly.



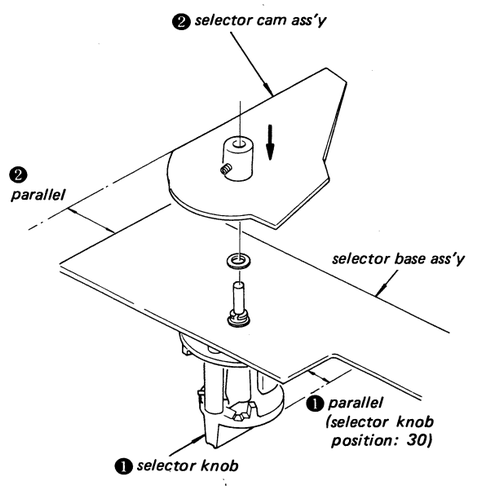


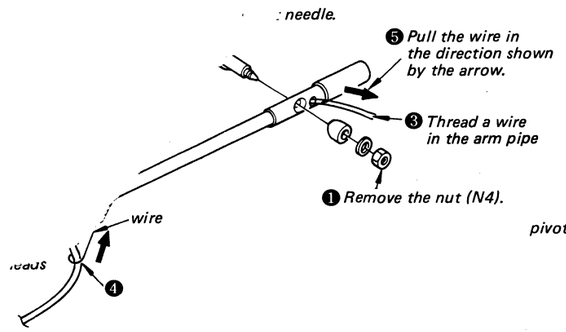
Brake Drum Assembly Installation

1. Thread the lead wires of tonearm in the brake drum assembly.
2. Insert the brake drum assembly in the rotation shaft of tonearm.
3. Place the boss of brake drum assembly as shown below and fix the brake drum assembly with a set screw (SC M 3 x 6).
4. Perform the automatic return adjustment (Refer to the page 13).



Selector Cam Assembly Installation





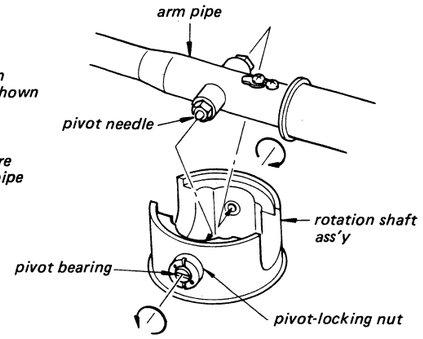
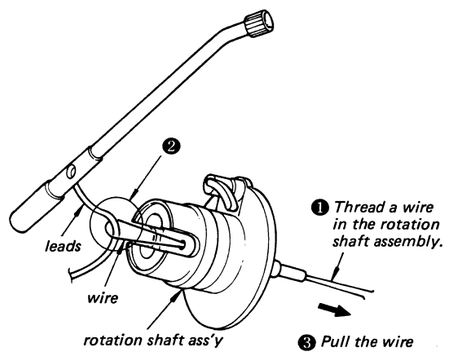


Fig. A

2. Lead Wire Threading (2)



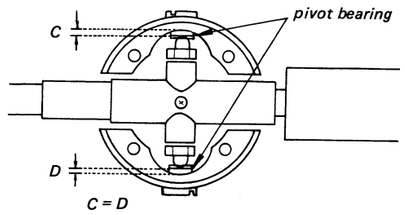
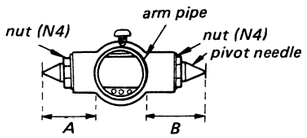


Fig. B

4) Install the tonearm on the set and make the longitudinal sensitivity adjustment as described in the step (5).

5) Adjust the pivot bearings so that the tonearm sinks 5 mm when the 60 mg weight is placed on the shell as shown in Fig. C, and the tonearm is in a horizontally balanced position when the weight is removed. (Fig. D)

3. Pivot Needle Installation



Turn the nuts so that A is equal to B.

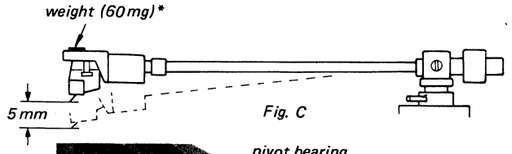


Fig. C

4. ARM PIPE INSTALLATION

1) Loosen the pivot-locking nuts and the pivot bearings.

2) Install the pivot needle to the pivot bearings as shown in Fig. A.

3) Tighten the pivot bearings temporarily as shown in Fig. B.

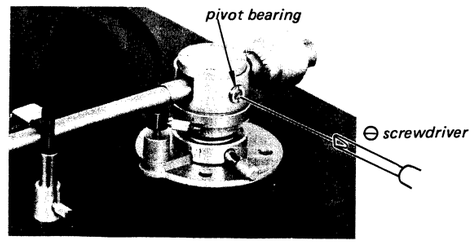
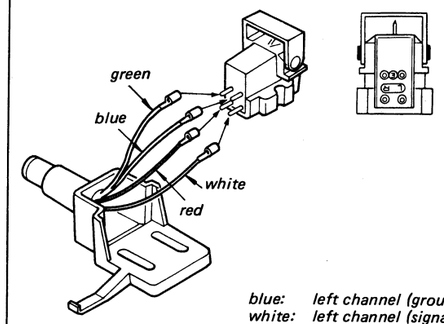


Fig. D

Cartridge-Lead Wire Replacement

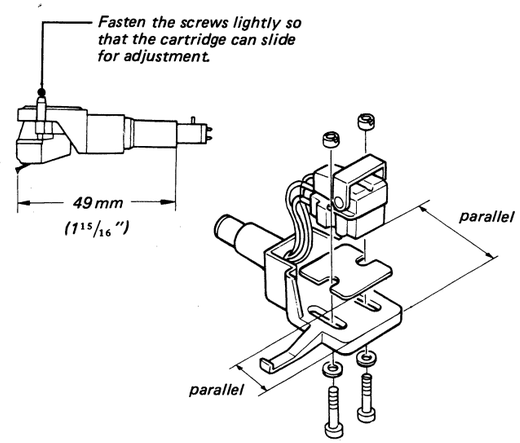
1. Cartridge-Lead Wire Connection



blue: left channel (ground)
white: left channel (signal)
green: right channel (ground)
red: right channel (signal)

2. Cartridge Installation

Install the cartridge into the shell with the mounting screws so that the distance between the shell end and the stylus tip is 49 mm ($1^{15}/_{16}$ inches).

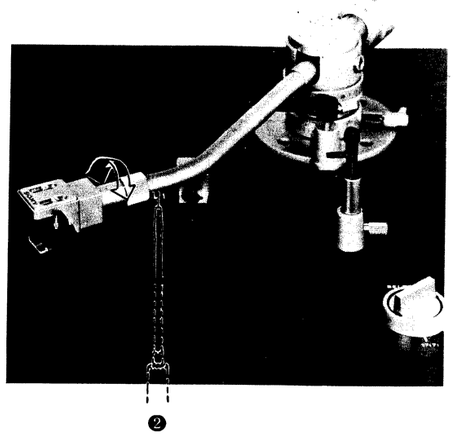


SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

Head Shell Angle Adjustment

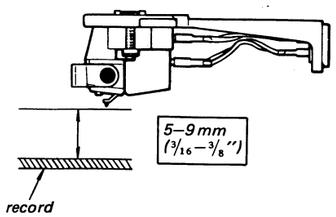
❶ Remove the bottom plate and turntable.

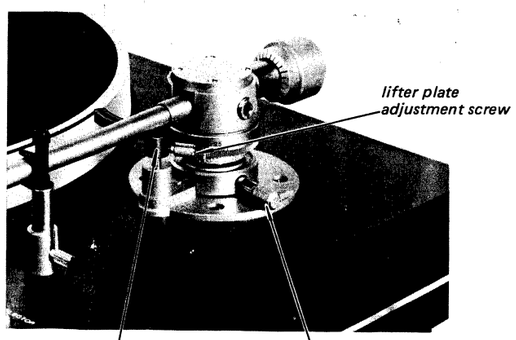


❷

Stylus Height Adjustment

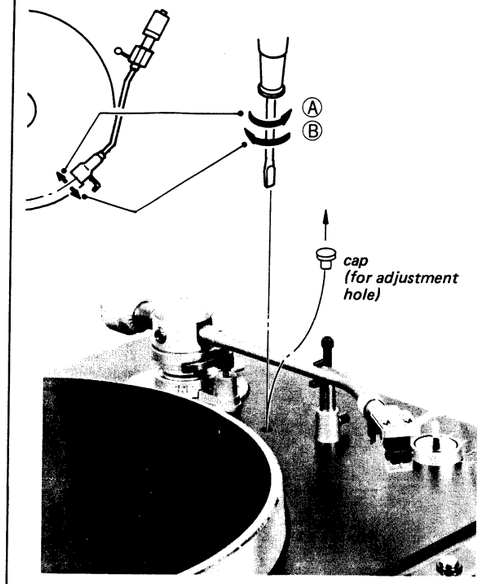
1. Bring the tonearm above the record.
2. Lift the cueing lever up and make sure that the clearance between the stylus tip and the record is 5–9 mm (3/16–3/8 inches).
3. If necessary, loosen the lifter plate adjustment screw and adjust the lifter height.





Stylus Drop-point Adjustment

- Remove the cap from the adjustment hole.



1. Set the record size selector lever to the 30 (12") position and make sure that the stylus gets down on the specified point of the test record.

   test record: YFSC-16

Record size selector lever position	Count of drop-point
30 (12")	4 to 16
25 (10")	6 to 24
17 (7")	7 to 25

2. If necessary, insert the screwdriver into the hole and adjust the drop-point by turning the adjustment screw.

   To change the drop-point inward
   Turn the adjustment screw slightly counterclockwise Ⓐ.
   To change the drop-point outward:
   Turn the adjustment screw slightly clockwise Ⓑ.

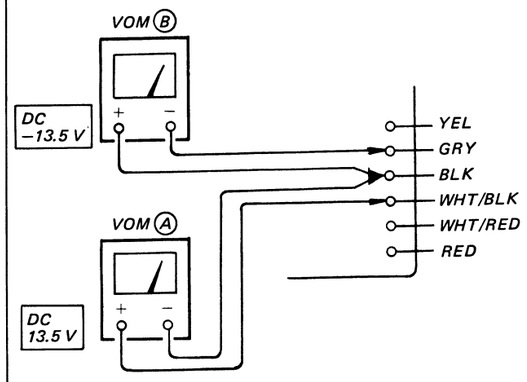
3. Once it is properly adjusted with a 30 cm (12") record, the drop-point will be correct for 17 cm (7") and 25 cm (10") records as well.

Note: The stylus drop-point is changed to about 12 mm (1/2") by one turn of the adjustment screw.

3-2. ELECTRICAL ADJUSTMENTS

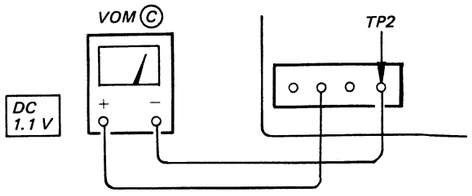
B+ Voltage Adjustment

Adjust RV101 for 13.5 V dc reading on the VOM Ⓐ , and −13.5 V dc reading on the VOM Ⓑ .

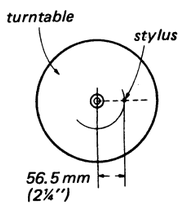


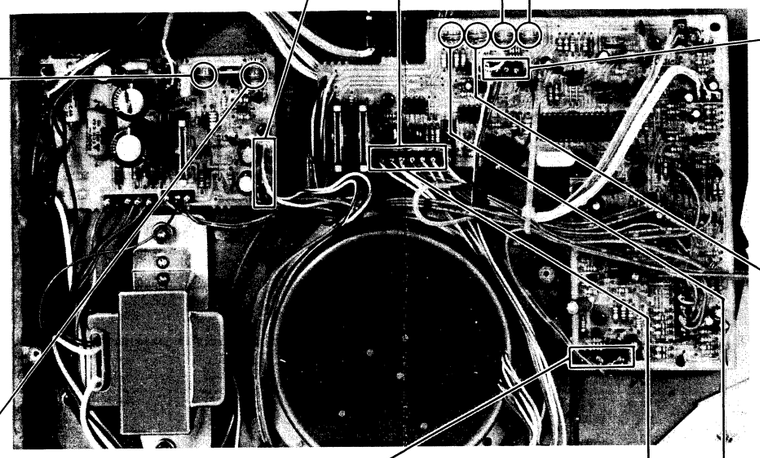
Automatic Return Adjustment

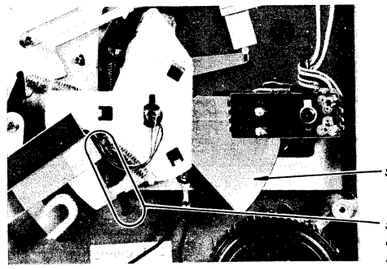
1. Set the power switch on.
2. Bring the tonearm toward the center spindle side.
3. Adjust RV102 for 1.1 V dc reading on the VOM Ⓒ .



4. Set the stylus position as shown below. Adjust the shutter adjustment screw for 7.3 V dc reading on the VOM Ⓒ .



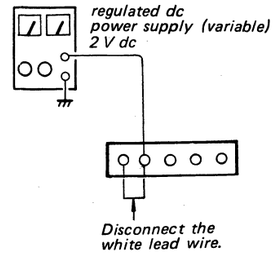




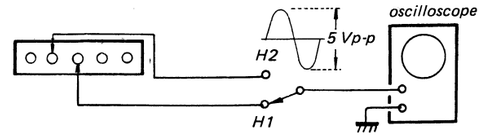
5. Play the test record (YFSC-6, BAND 2, 33 rpm).
6. Turn the shutter adjustment screw so that tonearm starts to return at count of 15–17.
7. Play the test record (YFSC-6, BAND 3, 33 rpm).
8. Adjust RV102 so that the tonearm starts to return when only 1 kHz playback signal is heard.
9. If RV102 is turned, readjust the steps 4 to 7 serveral times.

Hall Device Gain Adjustment (33⅓ rpm)

1. Disconnect the white lead wire and connect the regulated power supply as shown below.

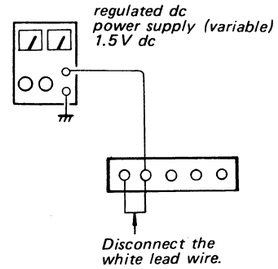


2. Connect an oscilloscope to H1 and adjust RV205 for the specified waveform on the oscilloscope.
3. Connect an oscilloscope to H2 and adjust RV206 for the specified waveform on the oscilloscope.

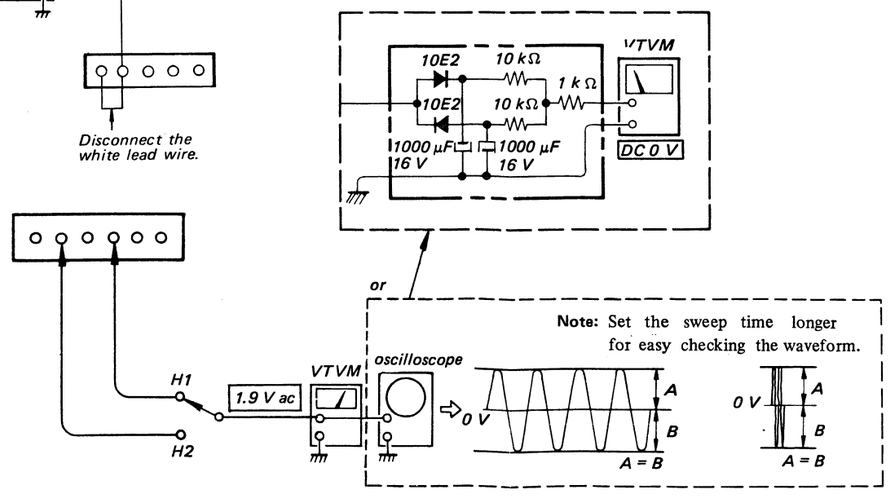


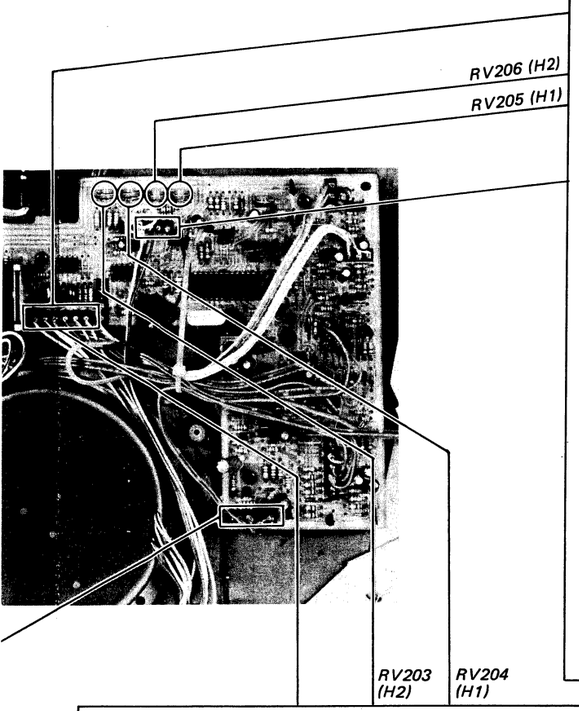
Motor Amp Offset Adjustment (33 rpm)

1. Disconnect the white lead wire and connect the regulated power supply as shown below.



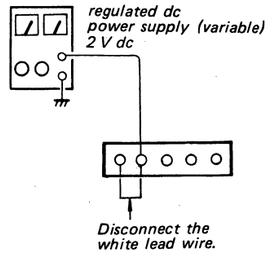
2. Connect VTVM or oscilloscope to H1 and adjust RV204 for 0 V dc VTVM reading or the waveform on oscilloscope as shown below.
3. Connect VTVM or oscilloscope to H2 and adjust RV203 for 0 V dc VTVM reading or the waveform on oscilloscope as shown below.



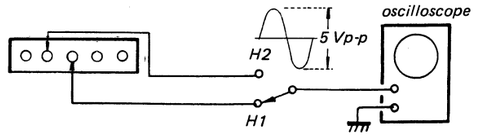


Hall Device Gain Adjustment (33⅓ rpm)

1. Disconnect the white lead wire and connect the regulated power supply as shown below.

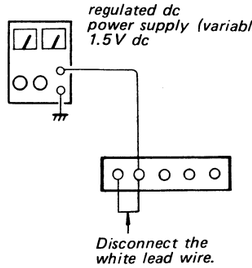


2. Connect an oscilloscope to H1 and adjust RV205 for the specified waveform on the oscilloscope.
3. Connect an oscilloscope to H2 and adjust RV206 for the specified waveform on the oscilloscope.

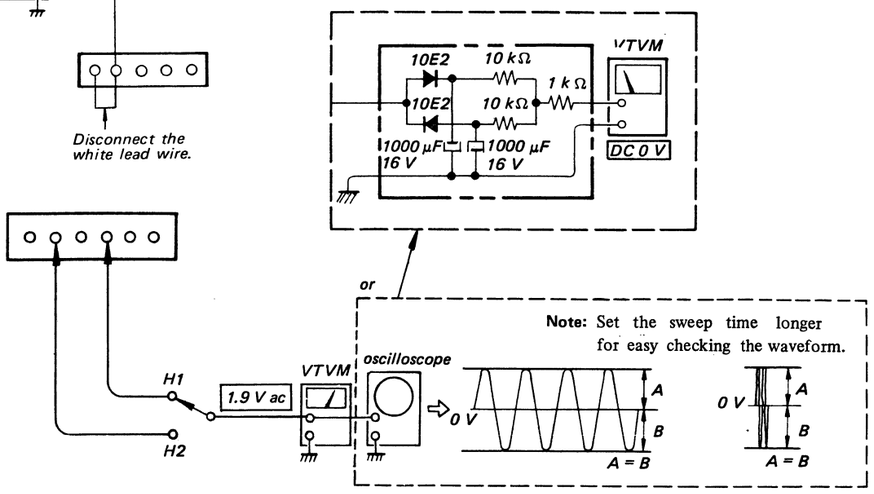


Motor Amp Offset Adjustment (33 rpm)

1. Disconnect the white lead wire and connect the regulated power supply as shown below.

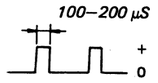


2. Connect VTVM or oscilloscope to H1 and adjust RV204 for 0 V dc VTVM reading or the waveform on oscilloscope as shown below.
3. Connect VTVM or oscilloscope to H2 and adjust RV203 for 0 V dc VTVM reading or the waveform on oscilloscope as shown below.



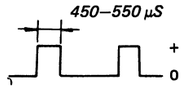
Turntable Speed Adjustment

1. Set the SPEED switch (S2, 3) to "45" position.
2. Reference waveform:



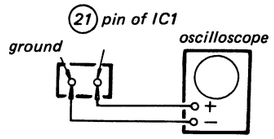
Note: Waveform must appear ⊕ side.

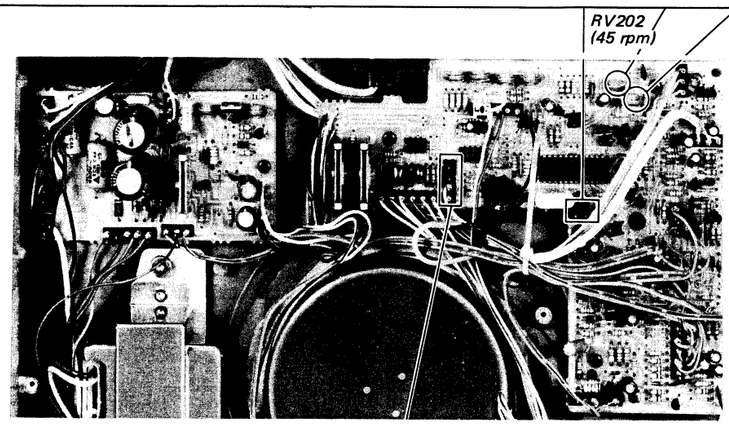
3. If the correct waveform does not appear, adjust RV202 (45 rpm).
4. Set the SPEED switch (2, 3) to "33" position.
5. Reference waveform:



Note: Waveform must appear ⊕ side.

6. If the correct waveform does not appear, adjust RV201 (33 rpm) so that the stroboscope pattern appears stationary.



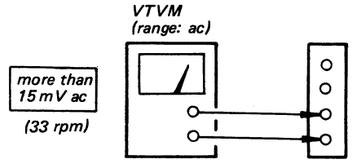


Speed Detecting Head Output Level Adjustment

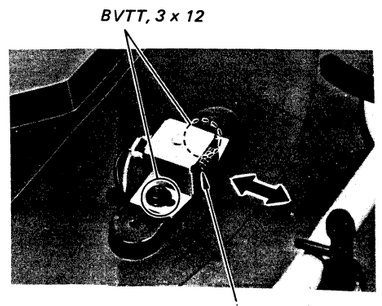
Power switch: ON

1. Adjust the position of the head so that the VTVM reading is more than 15 mV ac at 33 rpm.
2. Make sure that the head does not touch the turntable and tighten the screws securely.

Note: The clearance between the magnet coated rim and the speed detecting head must be more than 0.3 mm.



— Adjustment Location —



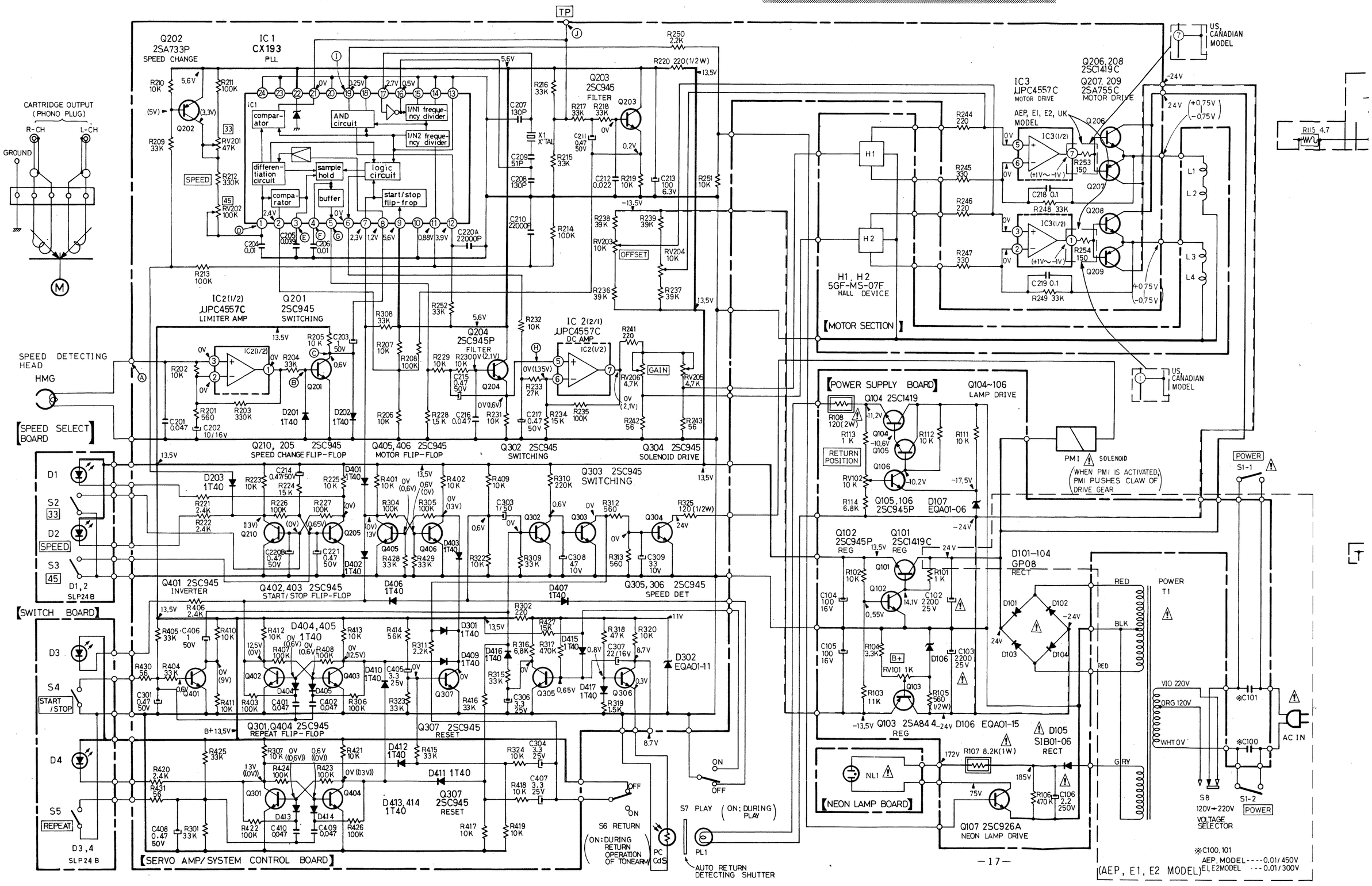
PS-X60 PS-

SECTION 4
DIAGRAMS

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

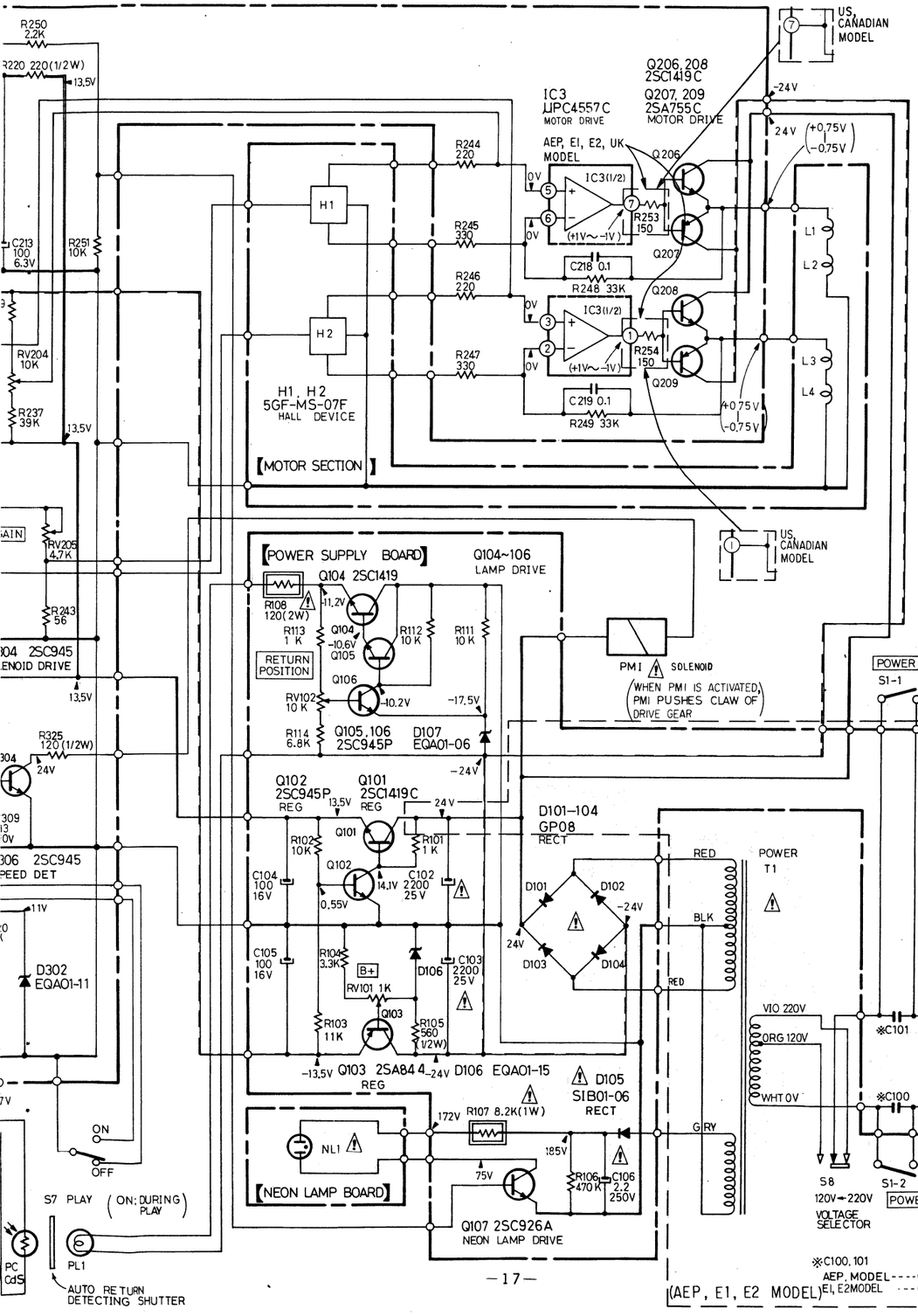
Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

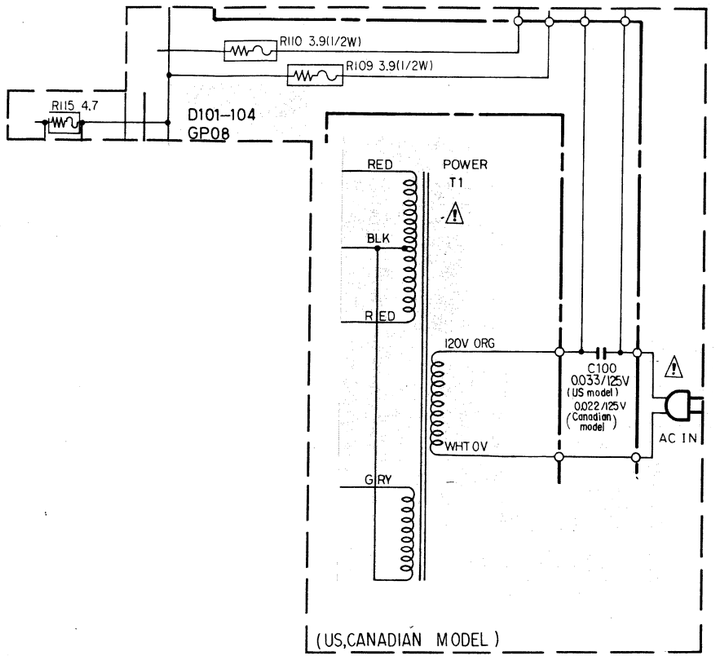
4-1. SCHEMATIC DIAGRAM

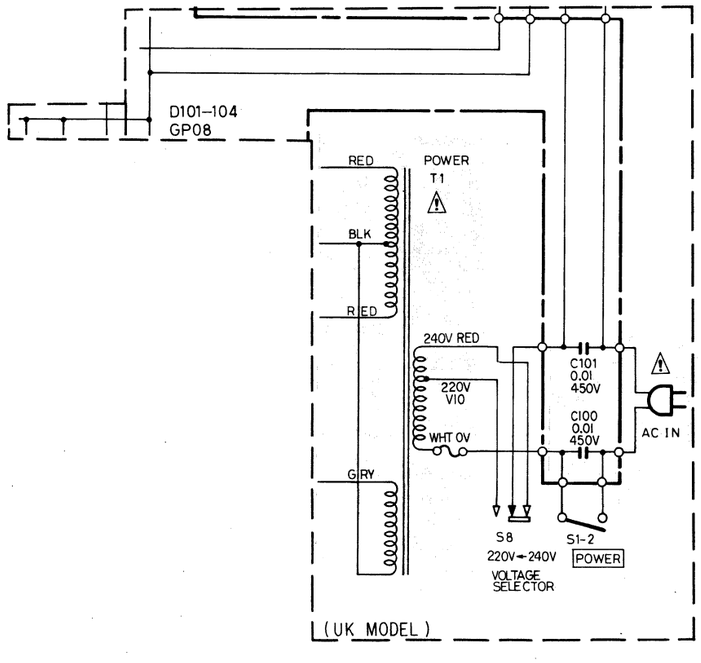


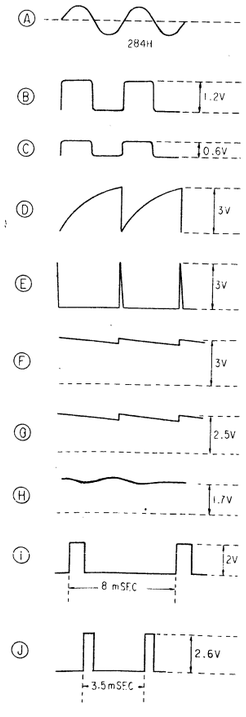
and mark
nly with

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.









Note.

- All capacitors are in μF unless otherwise noted. pF : μμF 50 WV or less are not indicated except for electrolytics.
- All resistors are in Ω, ¼ W unless otherwise noted. KΩ : 1000 Ω; MΩ : 1000 kΩ
- ⚠ : nonflammable resistor.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- All adjustable resistors have characteristic curve B, unless otherwise noted.
- ——— : B+ bus.
- — — — : B—bus.
- Readings are taken under no-signal conditions with a VOM (20 kΩ/V).
  - no mark : Tonearm is on arm rest.
    S1 (POWER) · · · · · · · · · · ON
  - ( ) : S2 (SPEED 33) · · · · · · · · · · ON
    Tonearm is on arm rest.
    Selector knob · · · · · · · · · · MANUAL
    S1 (POWER) · · · · · · · · · · ON
    S4 (START/STOP) · · · · · · · · ON
  - (( )) When S5 (REPEAT) is pressed during play at 33 rpm.
- Switch

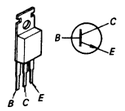
Ref. No.	Switch	Position
S1	POWER	OFF
S2	SPEED 33	OFF
S3	SPEED 45	OFF
S4	START/STOP	OFF
S5	REPEAT	OFF
S6	RETURN	OFF
S7	PLAY	OFF
S8	VOLTAGE SELECTOR	220 V (AEP, E1, E2 model) 240 V (UK model)

4-2. MOUNTING DIAGRAM — *Conductor Side* —

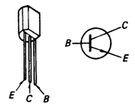
- **Replacement Semiconductors**

For replacement, use semiconductors except in ( ).

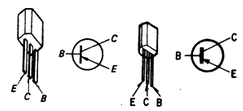
Q101, Q206, 208) 2SC1061 (2SC1419C)
Q104 2SC1061 (2SC1419)



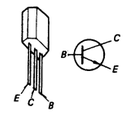
Q102, 105, Q106, 204, Q201, 203, Q205, 210, Q301–307, Q401–406 } 2SC1364 (2SC945P) / 2SC1364 (2SC945)



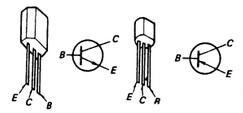
Q103: 2SA678 (2SA844)



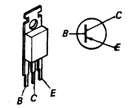
Q107: 2SC926A



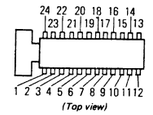
Q202: 2SA678 (2SA733P)



Q207, 209: 2SA671 (2SA755C)

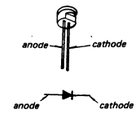


IC1: CX193

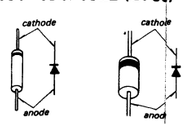


IC2, 3: μPC4557C

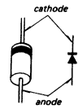
D1–4: SLP24B



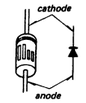
D101–104: 10E2 (GP08)



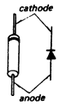
D105: 10D6 (SIB01–06)



D106: EQB01–15 (EQA01–15)
D107: EQB01–06 (EQA01–06)
D302: EQB01–11 (EQA01–11)

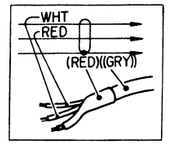


D201–203, D301, D401–407, D409–417 } 1S1555 (1T40)

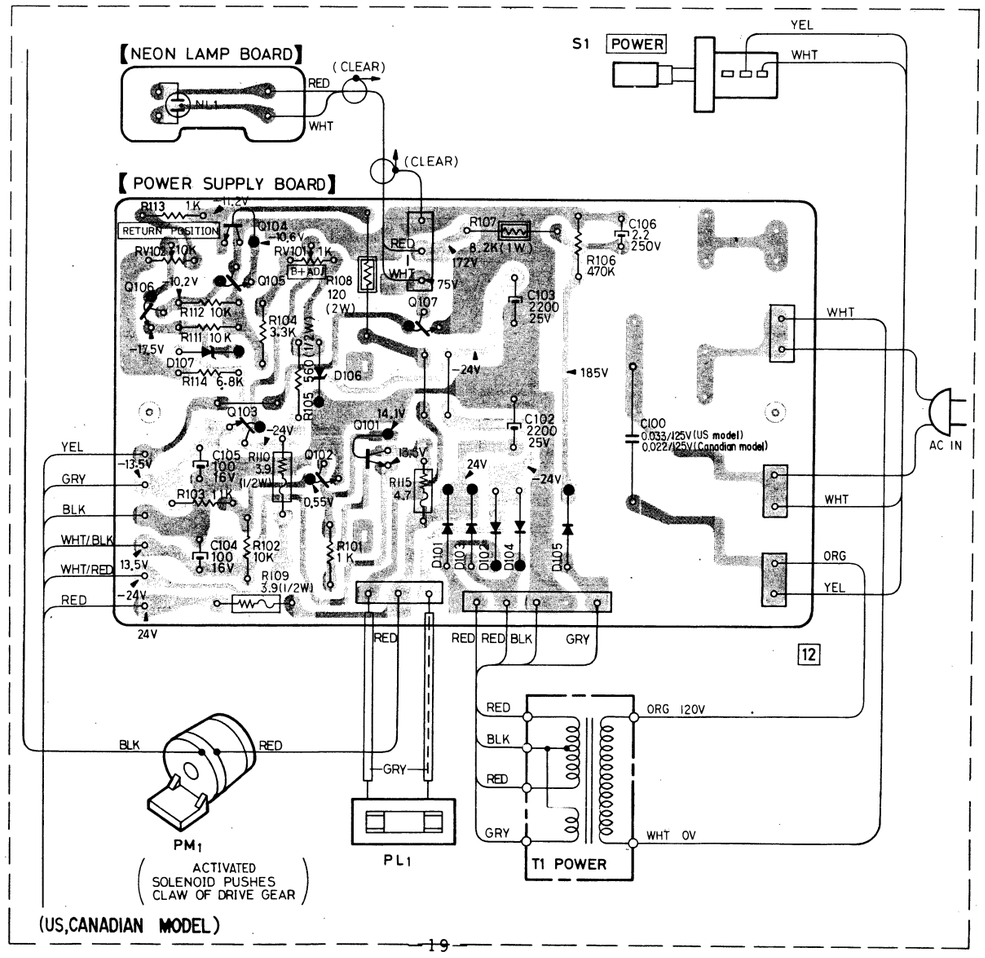


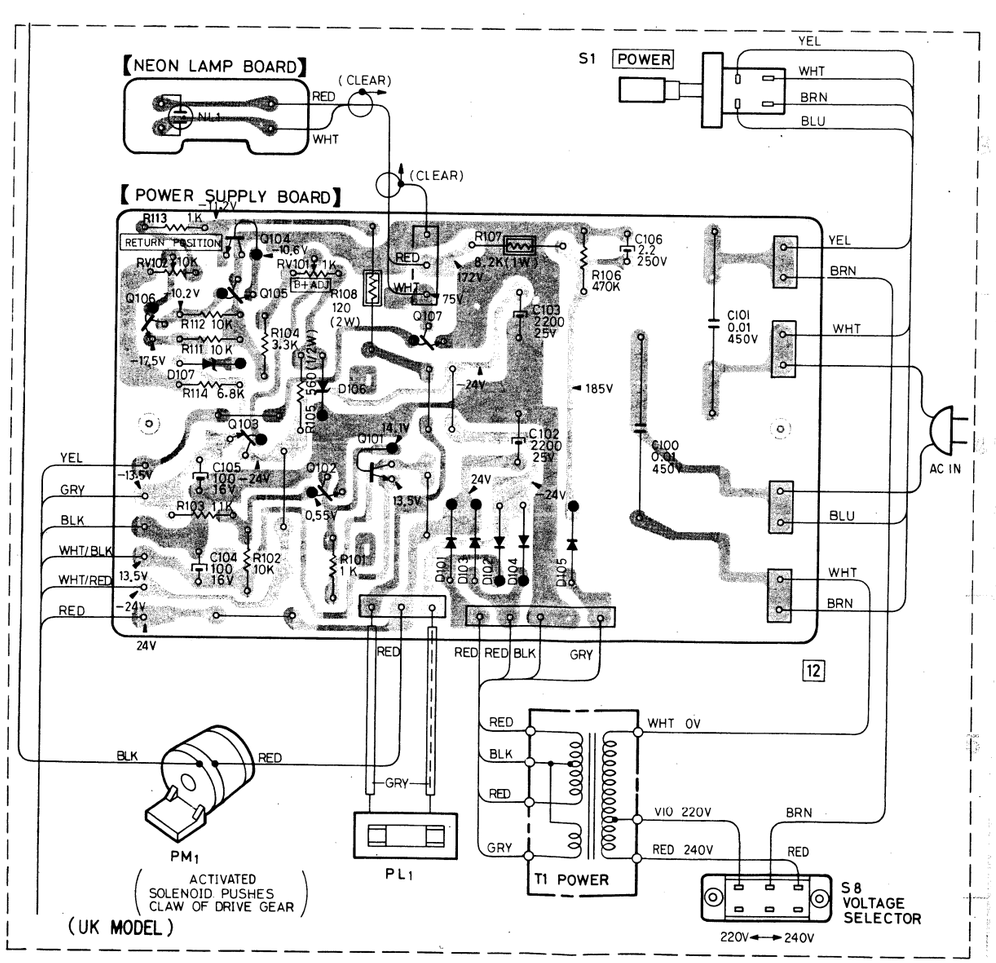
H1, 2: 5GF-MS-07F

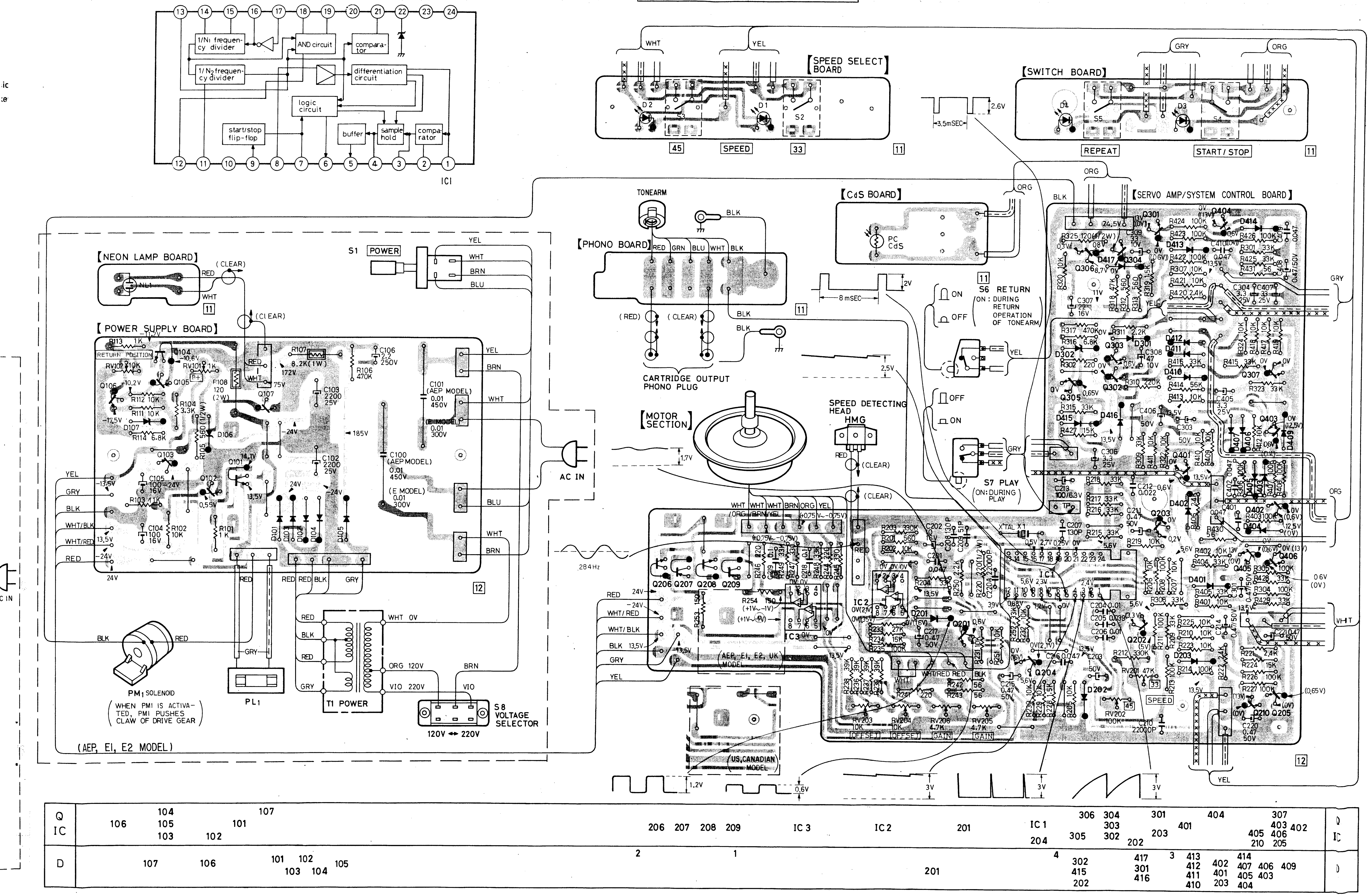
- ○— : parts extracted from the component side.
- Color code of sleeving over the end of the jacket.



- : B+pattern



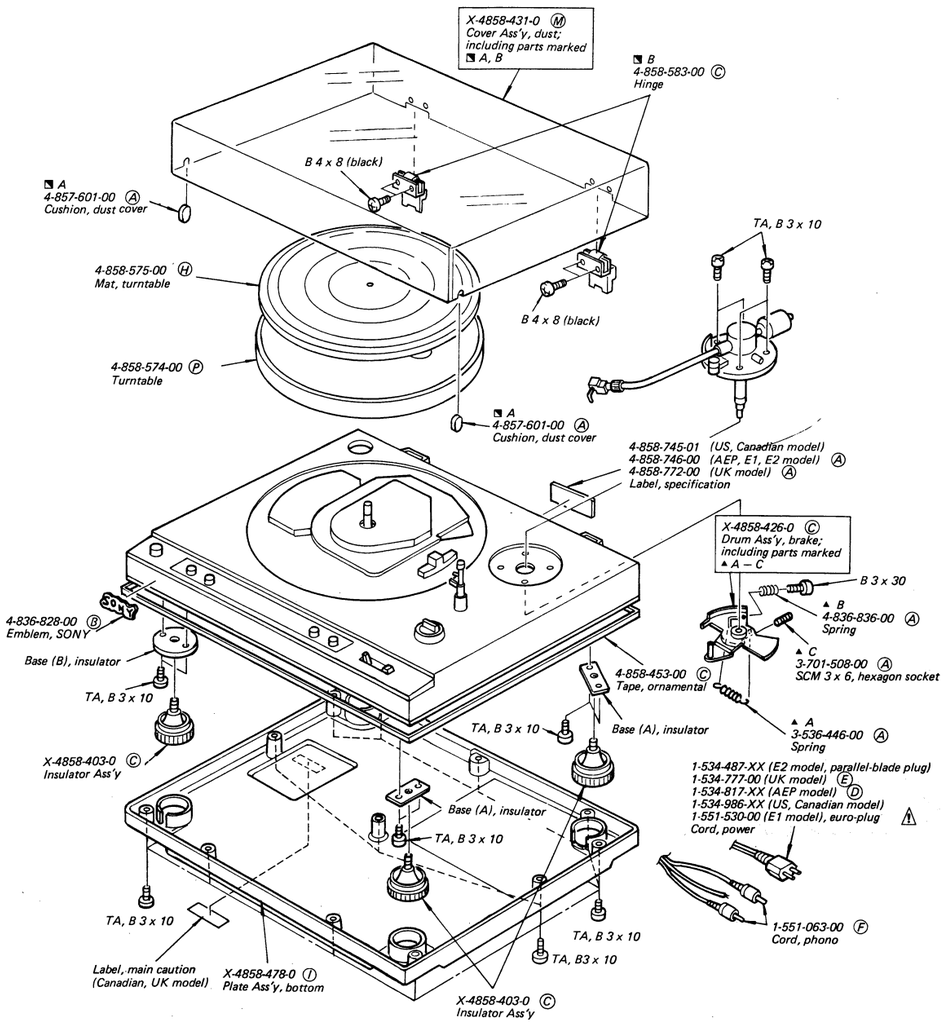



1/N1 frequency divider
1/N2 frequency divider
AND circuit
comparator
differentiation circuit
logic circuit
start/stop flip-flop
buffer
sample hold
comparator
IC1
[SPEED SELECT BOARD]
SPEED
[SWITCH BOARD]
REPEAT
START/STOP
[NEON LAMP BOARD]
S1 POWER
[POWER SUPPLY BOARD]
[PHONO BOARD]
TONEARM
CARTRIDGE OUTPUT PHONO PLUG
[CdS BOARD]
S6 RETURN
(ON: DURING RETURN OPERATION OF TONEARM)
S7 PLAY
(ON: DURING PLAY)
[SERVO AMP/SYSTEM CONTROL BOARD]
[MOTOR SECTION]
SPEED DETECTING HEAD
HMG
AC IN
PM1 SOLENOID
(WHEN PM1 IS ACTIVATED, PM1 PUSHES CLAW OF DRIVE GEAR)
PL1
T1 POWER
S8 VOLTAGE SELECTOR
120V ↔ 220V
(AEP, E1, E2 MODEL)
(US, CANADIAN MODEL)
OFFSET
GAIN
Q
IC
D

SECTION 5

EXPLODED VIEWS

5-1.



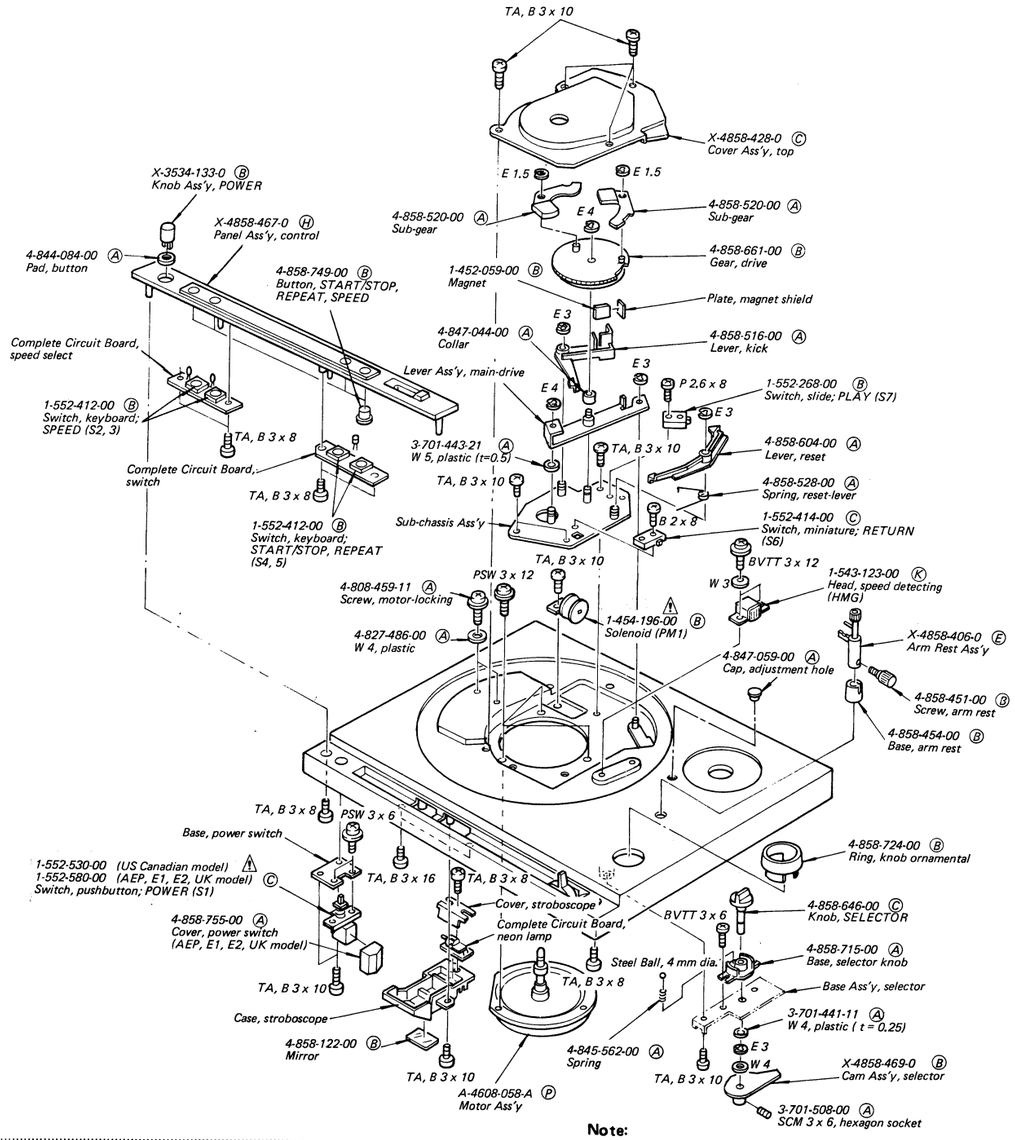
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note:

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.
- 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

5-2.



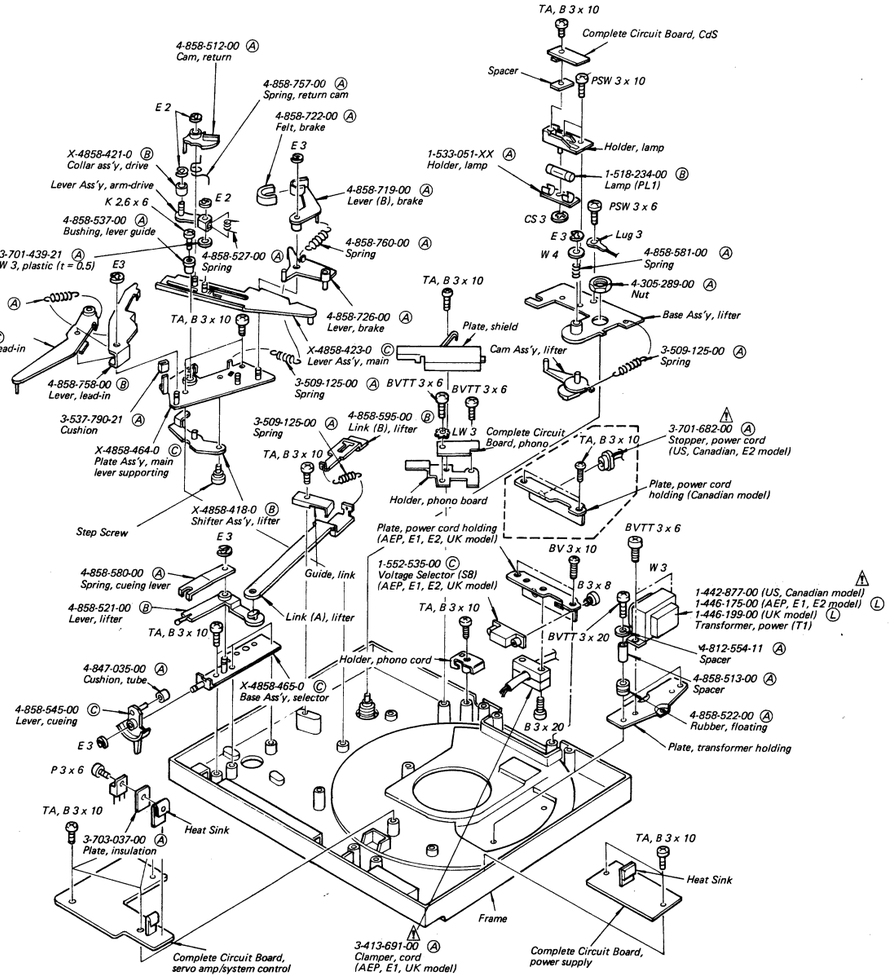
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note:

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.
- 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

5-3.



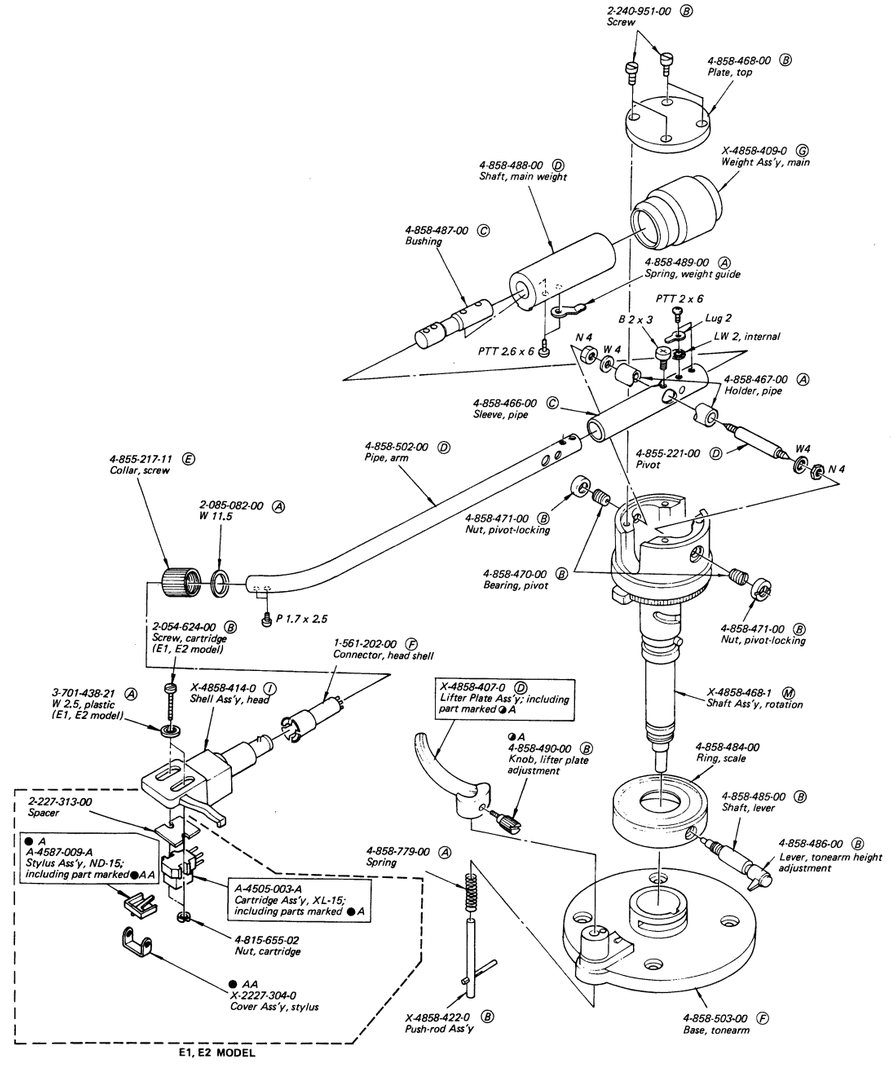
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Note:

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.
- 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

5-4.



Note:

- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.
- 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 6

ELECTRICAL PARTS LIST

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	Part No.	Description
		SEMICONDUCTORS
		Transistors
⇒ Q101	8-729-316-12 Ⓓ	2SC1061
⇒ Q102	8-729-663-47 Ⓑ	2SC1364
⇒ Q103	8-727-788-00 Ⓑ	2SA678
⇒ Q104	8-729-316-12 Ⓓ	2SC1061
⇒ Q105, 106	8-729-663-47 Ⓑ	2SC1364
Q107	8-720-950-03 Ⓒ	2SC926A
⇒ Q201	8-729-663-47 Ⓑ	2SC1364
⇒ Q202	8-727-788-00 Ⓑ	2SA678
⇒ Q203–205	8-729-663-47 Ⓑ	2SC1364
⇒ Q206	8-729-316-12 Ⓓ	2SC1061
⇒ Q207	8-729-317-12 Ⓔ	2SA671
⇒ Q208	8-729-316-12 Ⓓ	2SC1061
⇒ Q209	8-729-317-12 Ⓔ	2SA671
⇒ Q210	8-729-663-47 Ⓑ	2SC1364
⇒ Q301–307	8-729-663-47 Ⓑ	2SC1364
⇒ Q401–406	8-729-663-47 Ⓑ	2SC1364
		ICs
IC1	8-751-930-00 Ⓚ	CX193
IC2, 3	8-759-145-57 Ⓒ	μPC4557C
		Diodes
D1–4	8-719-900-24 Ⓒ	SLP24B
⇒ D101–104	⚠8-719-200-02 Ⓑ	10E2
⇒ D105	⚠8-719-210-06 Ⓑ	10D6
⇒ D106	8-719-931-15 Ⓑ	EQB01-15
⇒ D107	8-719-931-06 Ⓑ	EQB01-06
⇒ D201–203	8-719-815-55 Ⓑ	1S1555
⇒ D301	8-719-815-55 Ⓑ	1S1555
⇒ D302	8-719-930-11 Ⓑ	EQB01-11
⇒ D401–407	8-719-815-55 Ⓑ	1S1555
⇒ D409–417	8-719-815-55 Ⓑ	1S1555
		Hall Devices
H1, 2	8-719-905-07 Ⓓ	5GF-MS-07F

Ref. No.	Part No.	Description
		TRANSFORMERS
T1	⚠1-442-877-00	Power (US, Canadian model)
T1	⚠1-446-175-00 Ⓛ	Power (AEP, E1, E2 model)
T1	⚠1-446-199-00 Ⓛ	Power (UK model)
		CAPACITORS

All capacitors are in μF and ceramic unless otherwise noted.
50 WV or less are not indicated except for electrolytics.
p : μμF, elect : electrolytic

C100, 101	⚠1-108-779-00	0.01	300 V	mylar (E1, E2 model)
C100, 101	⚠1-115-148-00 Ⓒ	0.01	450 V	paper (AEP, UK model)
C100	⚠1-130-098-00	0.022	125 V	polyethylene (Canadian model)
C100	⚠1-108-750-00	0.033	125 V	mylar (US model)
C102, 103	⚠1-123-047-00 Ⓒ	2200	25 V	elect
C104, 105	1-121-415-00 Ⓐ	100	16 V	elect
C106	⚠1-123-027-00 Ⓑ	2.2	250 V	elect
C201	1-101-925-00 Ⓐ	0.047		
C202	1-121-651-00 Ⓐ	10	16 V	elect
C203	1-121-391-00 Ⓐ	1	50 V	elect
C204	1-108-804-00 Ⓐ	0.01		mylar
C205	1-108-360-00 Ⓐ	0.039		mylar
C206	1-108-804-00 Ⓐ	0.01		mylar
C207, 208	1-101-081-00 Ⓐ	130 p		
C209	1-102-491-00 Ⓐ	51 p		
C210, 220A	1-101-924-00 Ⓐ	22000 p		
C211	1-121-726-00 Ⓐ	0.47	50 V	elect
C212	1-108-242-00 Ⓐ	0.022		mylar
C213	1-124-413-00 Ⓐ	100	6.3 V	elect
C214, 215	1-121-726-00 Ⓐ	0.47	50 V	elect
C216	1-108-812-00 Ⓐ	0.047		mylar
C217	1-121-726-00 Ⓐ	0.47	50 V	elect
C218, 219	1-108-870-00 Ⓐ	0.1		mylar
C220B, 221	1-121-726-00 Ⓐ	0.47	50 V	elect
C301	1-121-726-00 Ⓐ	0.47	50 V	elect

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

⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description
C303	1-121-391-00 Ⓐ	1 50 V elect
C304, 306	1-121-392-00 Ⓐ	3.3 25 V elect
C307	1-121-479-00 Ⓐ	22 16 V elect
C308	1-121-352-00 Ⓐ	47 10 V elect
C309	1-121-402-00 Ⓐ	33 10 V elect
C401, 402	1-101-952-00 Ⓐ	0.047
C405	1-121-392-00 Ⓐ	3.3 25 V elect
C406	1-121-391-00 Ⓐ	1 50 V elect
C407	1-121-392-00 Ⓐ	3.3 25 V elect
C408	1-121-726-00 Ⓐ	0.47 50 V elect
C409, 410	1-101-925-00 Ⓐ	0.047
		RESISTORS

All resistors are in ohms. Common ¼ W carbon resistors are omitted.
All adjustable resistors have characteristic curve B, unless otherwise noted. kΩ : 1000 Ω, MΩ : 1000 kΩ

R105	1-244-867-00 Ⓐ	560	½ W	carbon
R107	⚠1-213-154-00 Ⓐ	8.2 k	1 W	metal oxide (nonflammable)
R108	⚠1-206-642-00 Ⓐ	120	2 W	metal oxide (nonflammable)
R109, 110	⚠1-212-948-00	3.9	½ W	fusible (US, Canadian model)
R115	⚠1-217-383-00	4.7	¼ W	fusible (US, Canadian model)
R220	1-244-857-00 Ⓐ	220	½ W	carbon
R325	1-244-851-00 Ⓐ	120	½ W	carbon

RV101	1-224-631-00 Ⓐ	1 k, adjustable; B+ VOLTAGE
RV102	1-224-645-XX Ⓐ	10 k, adjustable; RETURN POSITION
RV201	1-224-636-00 Ⓐ	47 k, adjustable; SPEED 33
RV202	1-224-648-XX Ⓑ	100 k, adjustable; SPEED 45
RV203, 204	1-224-634-00 Ⓑ	10 k, adjustable; OFFSET
RV205, 206	1-224-633-00 Ⓑ	4.7 k, adjustable; GAIN
		SWITCHES
S1	⚠1-552-530-00	Pushbutton, power (US, Canadian model)
S1	⚠1-552-580-00 Ⓒ	Pushbutton, power (AEP, UK, E1, E2 model)

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

Note: Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

Ref. No.	Part No.	Description
S2–5	1-552-412-00 Ⓑ	Keyboard, SPEED, START/STOP, REPEAT
S6	1-552-414-00 Ⓑ	Miniature, RETURN
S7	1-552-268-00 Ⓑ	Slide, PLAY
S8	⚠1-552-535-00 Ⓒ	Voltage Selector (AEP, E1, E2, UK model)
		MISCELLANEOUS
HMG	1-543-123-00 Ⓚ	Head, speed detecting
NL1	⚠1-519-152-00 Ⓑ	Lamp, neon
PC	1-800-652-00 Ⓑ	CdS
PL1	1-518-234-00 Ⓑ	Lamp
PM1	⚠1-454-196-00 Ⓑ	Solenoid
X1	1-527-380-21 Ⓓ	Crystal
	A-4505-003-A	Cartridge Ass'y, XL-15 (E1, E2 model)
	A-4608-058-A Ⓟ	Motor Ass'y
	1-452-059-00 Ⓑ	Magnet
	1-533-051-XX Ⓐ	Holder, lamp
	⚠1-534-487-XX	Cord, power; E2 model; parallel-blade plug
	⚠1-534-777-00 Ⓑ	Cord, power (UK model)
	⚠1-534-817-XX Ⓓ	Cord, power (AEP model)
	⚠1-534-986-XX	Cord, power (US, Canadian model)
	1-551-063-00 Ⓕ	Cord, phono
	⚠1-551-530-00	Cord, power; E1 model; euro-plug
	1-561-202-00 Ⓕ	Connector, head shell

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ACCESSORIES AND PACKING MATERIALS

Part No.	*Description*
2-056-532-00	(B) Screw (A), cartridge (AEP, US, Canadian, UK model)
2-224-081-00	(A) Screw (E), cartridge (AEP, US, Canadian, UK model)
2-227-313-00	(A) Spacer (AEP, US, Canadian, UK model)
3-701-438-21	(A) W 2.5, plastic (AEP, US, Canadian, UK model)
3-701-613-00	(A) Bag, plastic
3-701-614-00	(A) Bag, plastic (AEP, US, Canadian, UK model)
3-701-616-00	(A) Bag, plastic
3-701-630-00	(A) Bag, plastic
3-701-634-00	(A) Bag, plastic
3-710-806-00	(A) Adaptor, 45 r.p.m.
3-770-585-11	(D) Manual, instruction (AEP, E1, E2, UK model)
3-770-585-21	Manual, instruction (US, Canadian model)
3-794-265-11	Sheet, XL-15 (E1, E2 model)
3-749-284-31	Manual, instruction; French (Canadian model)
4-815-655-00	(A) Nut (A), cartridge (AEP, US, Canadian, UK model)
4-848-002-00	(A) Cushion, arm pipe
4-858-407-00	(A) Drop-point Adjustment Key
4-858-483-00	(C) Extra Weight
4-858-585-00	(C) Cushion, right
4-858-586-00	(C) Cushion, left
4-858-587-00	(B) Case, accessory
4-858-588-00	(C) Bag, protection
4-858-589-00	(A) Plate, protection
4-858-590-00	(C) Box, accessory
4-858-593-00	(A) Cushion, main weight shaft
4-858-735-00	(F) Carton

Note: Circled letters ((A) to (Z)) are applicable to European models only.

Specifications for Cartridge XL-15

(E model)

Type: Moving-magnet

Frequency Response: 10 – 30, 000 Hz

Channel Separation: 25 dB at 1 kHz

Output Voltage: 4 mV at 1 kHz, 5 cm/sec, 45°

Load Impedance: 50 kΩ

Tracking Force: 1.2 – 2.5 g (1.7 g recommended)

Stylus: Sony ND-15G (conical 0.5 mil diamond)

Weight: 5.2 g

1/4 WATT CARBON RESISTORS Ⓐ

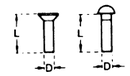
Note: Circled letter (A) is applicable to European models only.

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	1-246-576-00	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	1-246-577-00	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	1-246-578-00	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	1-246-579-00	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	1-246-580-00	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	1-246-581-00	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	1-246-582-00	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	1-246-583-00	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	1-246-584-00	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	1-246-585-00	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	1-246-586-00	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	1-246-587-00	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:

P 3 x 10
- *L: Length in mm*
- *D: Diameter in mm*
- *Type of head*
- *Indicated slotted-head only.*
- *Unless otherwise indicated, it means cross-recessed head (Phillips type)*



Nut, Washer, Retaining ring:

N 3
- *Diameter of usable screw or shaft*
- *Reference designation*

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 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
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	

9-958-558-11

Sony Corporation

79A05103-1
Printed in Japan

STEREO TURNTABLE SYSTEM

PS-X60

US Model
Canadian Model
AEP Model
UK Model
E Model

CORRECTION

: Corrected Portion. Correct the service manual as shown below.

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January, 1979

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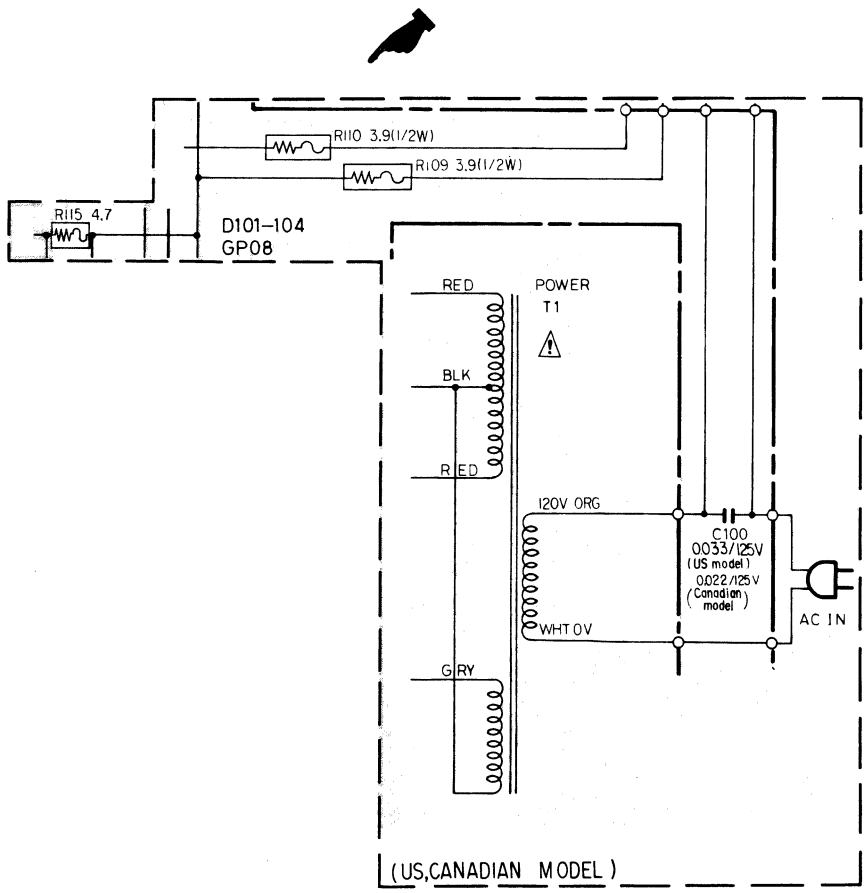

SONY
SERVICE MANUAL

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