CDP-102

SERVICE MANUAL

Refer to RM-D302/D502 Service Manual issued separately for information of the remote controller supplied with this set.

US Model
Canadian Model
AEP Model
UK Model
E Model

COMPACT disc DIGITAL AUDIO

SPECIFICATIONS

System	Compact disc digital audio system
Disc	Compact disc
Laser diode properties	
	Material : GaAlAs
	Wavelength : 780 nm
	Emission duration : Continuous
	Laser output : Max. 0.6 mW*

*This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the optical pick-up block.

Spindle speed	500 r.p.m. to 200 r.p.m. (CLV)
Scan velocity	1.2 - 1.4 m/sec.
Error correction	Sony Super Strategy Cross Interleave Reed Solomon Code
Number of channels	2
D-A conversion	16-bit linear
Frequency response	2 - 20,000 Hz ±0.5 dB
Harmonic distortion	Less than 0.003 % (1 kHz)
Dynamic range	More than 96 dB
Channel separation	More than 95 dB
Wow and flutter	Below measurable limit

Outputs	Line outputs Output level 2 V rms (at MSB) Load impedance over 10 kilohms
Other jack	Remote control connector (4 pin) Function control connector (2 pin)

Disc

Track pitch	1.6 μm
Sampling frequency	44.1 kHz
Quantization	16 bit linear quantizing/channel
Modulation system	EFM
Transfer rate	2.03 Mbit/sec. (before modulation)

General

Power requirements	AEP Model: 220 V ac 50/60 Hz UK model: 240 V ac 50/60 Hz US, Canadian model: 120 V ac 60 Hz E model: 110, 120, 220, or 240 V ac adjustable, 50/60 Hz
Power consumption	15 W
AC outlet	US, Canadian, AEP, E model: 1 unswitched, 100 watts max. UK model: 1 switched, 100 watts max.
Dimensions	Approx. 355 × 80 × 335 mm (w/h/d) (14 × 3¹/₄ × 13¹/₄ in.) including projecting parts and controls
Weight	Approx. 5.7 kg (12 lb 9 oz), net

SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES 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 DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MICROFILM

COMPACT DISC PLAYER

SONY®

AUD

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 0.6 mW*

     * This output is the value measured at a distance of about 1.6 mm from the objective lens surface on the Optical Pick-up Block.
   - Classification: Class IIIb
2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

LASER WARNING LABELS

The labels shown below are affixed.

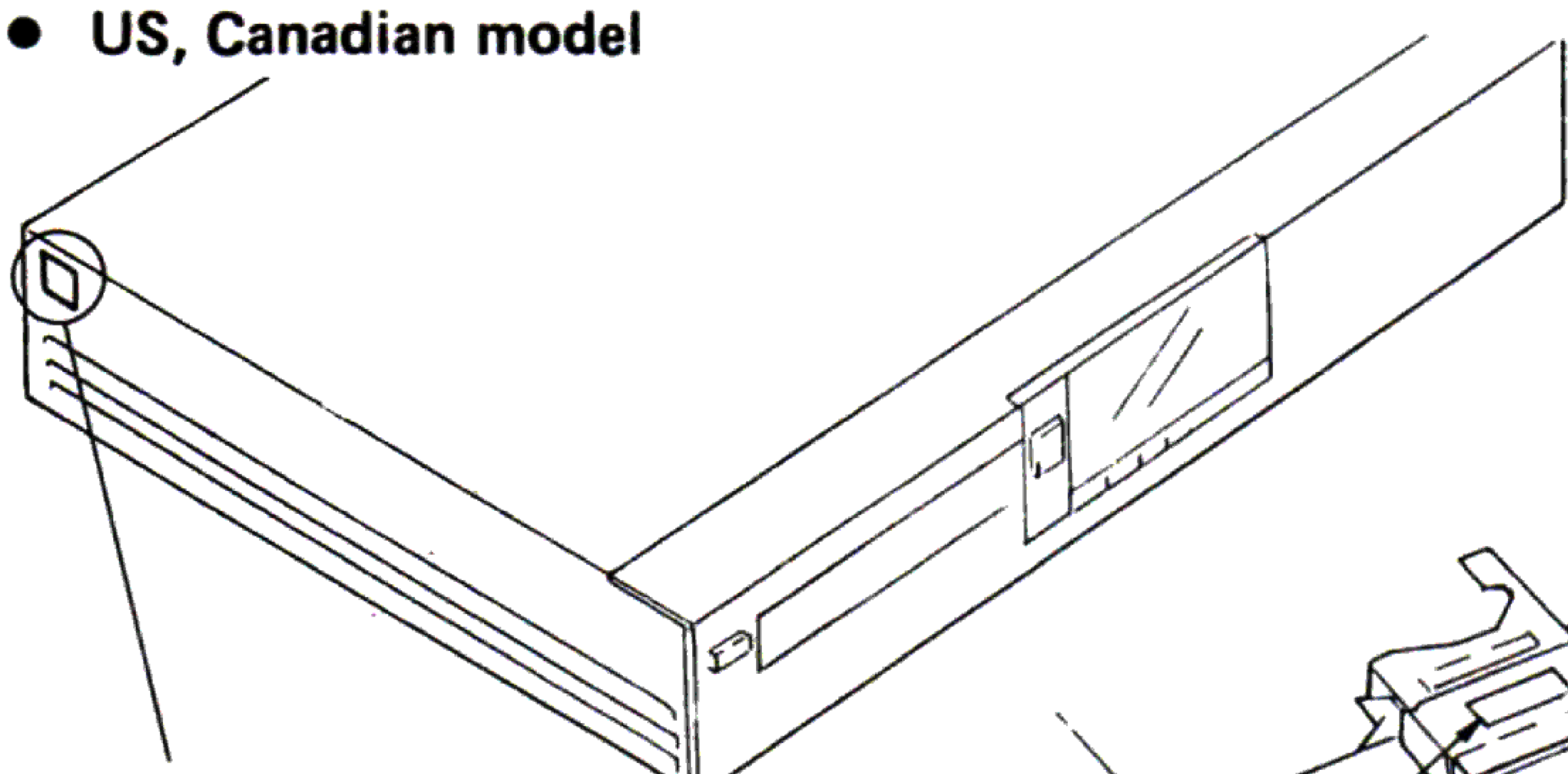
1. Protective Housing Label
   DHHS Non-Interlocked Protective Housing Label
   ..... (US, Canadian model)

DANGER
INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM. 4-908-401-01

2. Interlock defeatable Label
   ..... (US, Canadian model)

DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.
4-908-402-01

- **US, Canadian model**



Non-Interlocked Protective Housing Label

DANGER
INVISIBLE LASER RADIATION WHEN OPEN.
AVOID DIRECT EXPOSURE TO BEAM. 4-908-401-01

Interlock defeatable Label

DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.
4-908-402-01

2. Aperture Label...... (AEP, UK, E model)

AVOID EXPOSURE
INVISIBLE LASER RADIATION IS EMITTED FROM THIS APERTURE.
4-908-404-01

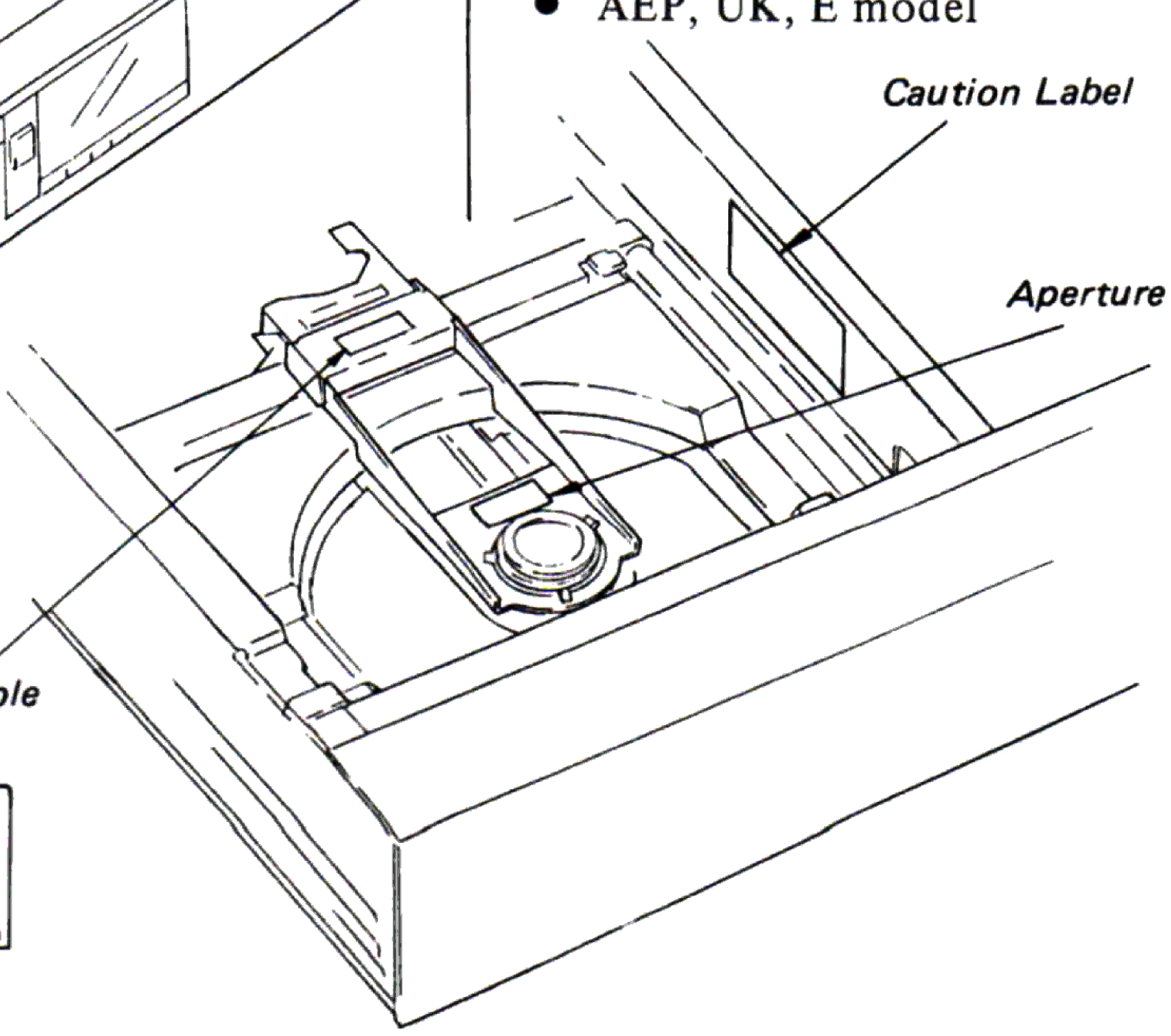
- See figure on next page for location of label.

3. Caution Label ...... (AEP, UK, E model)

CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

- AEP, UK, E model



Caution Label

Aperture Label

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 30 cm fra den optiske pick-up.

1. Data for Laser Diode
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laser Output: max. 0.6 mW*

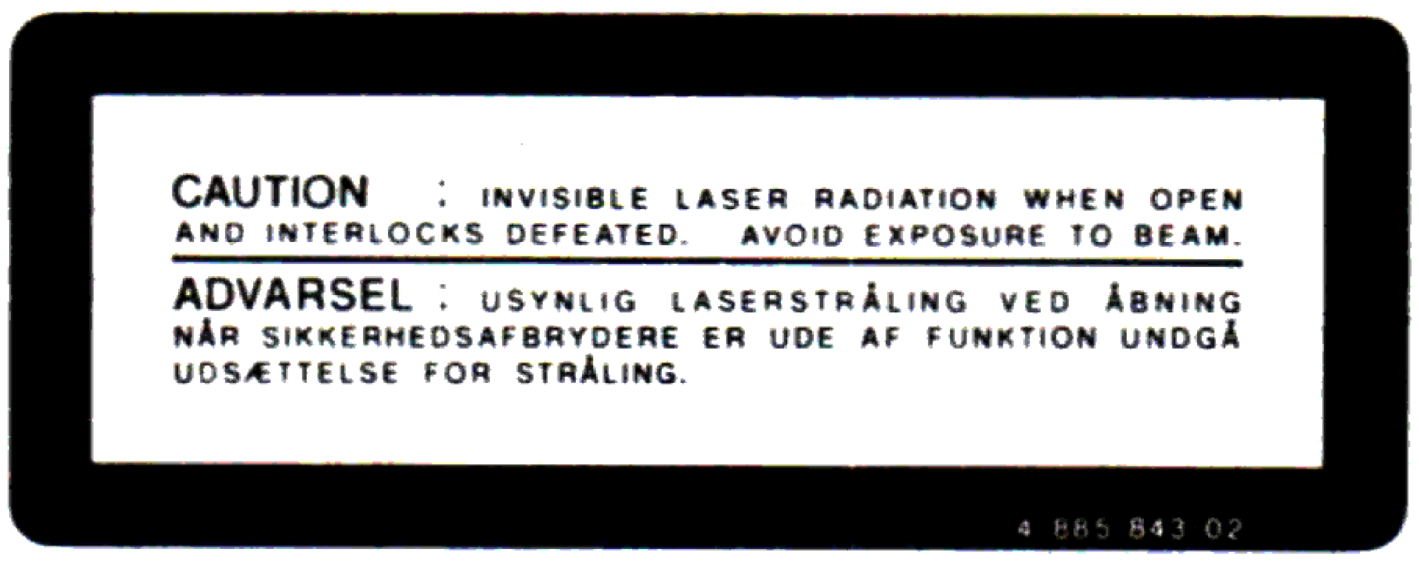
     * målt i 1.6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhsd.
   - Klassifikation: Svarende til klasse IIIb

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

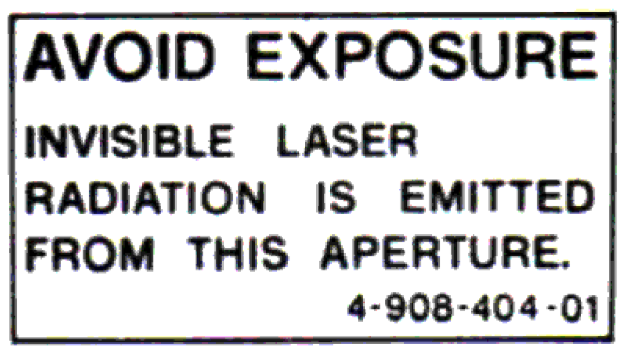
LASER ADVARSEL MÆRKNING (AEP model)

Følgende mærkning findes indvendig i apparatet:

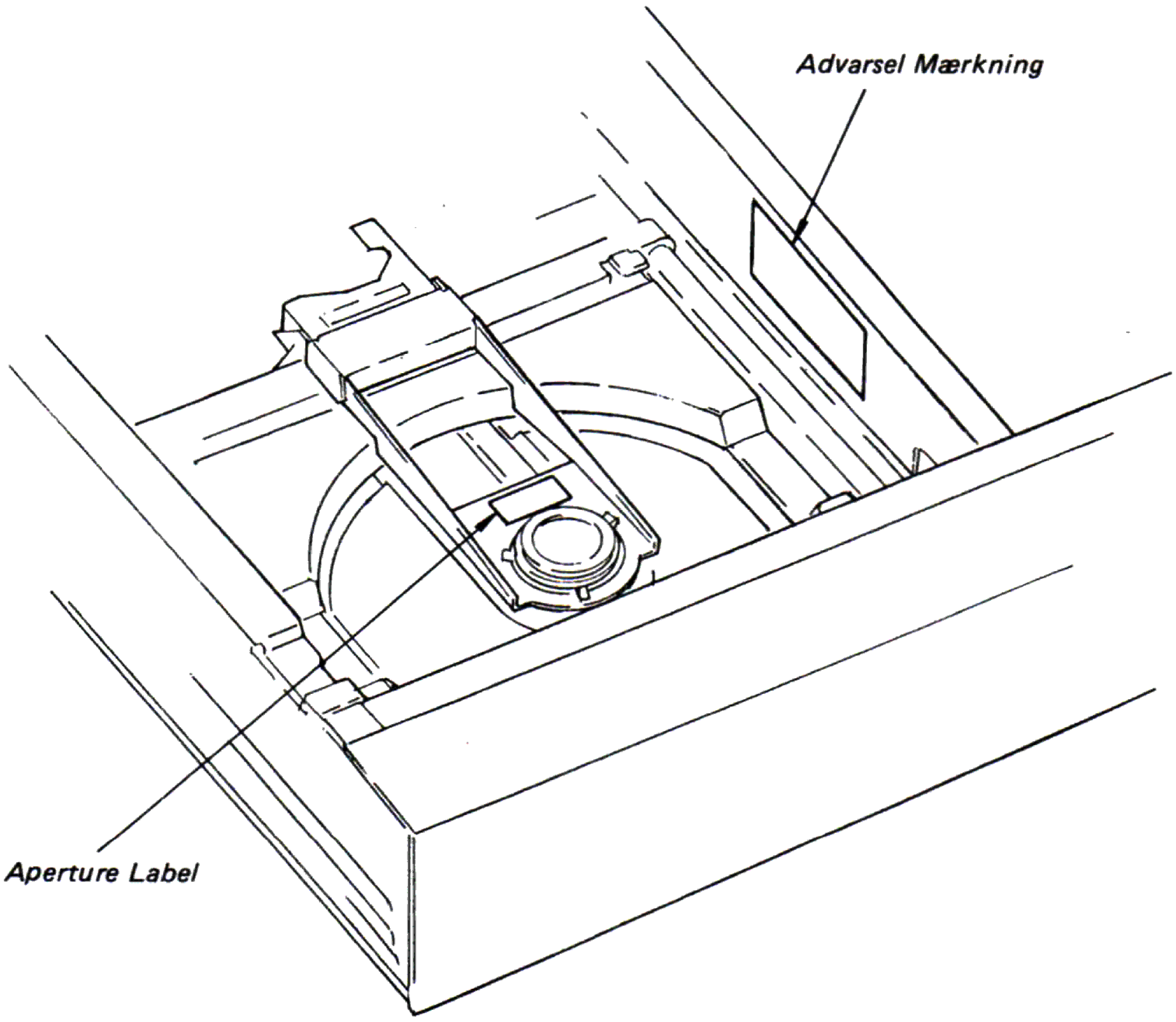
1. Advarsel Mærkning



2. Aperture Label



- **AEP, UK model**



SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

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

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

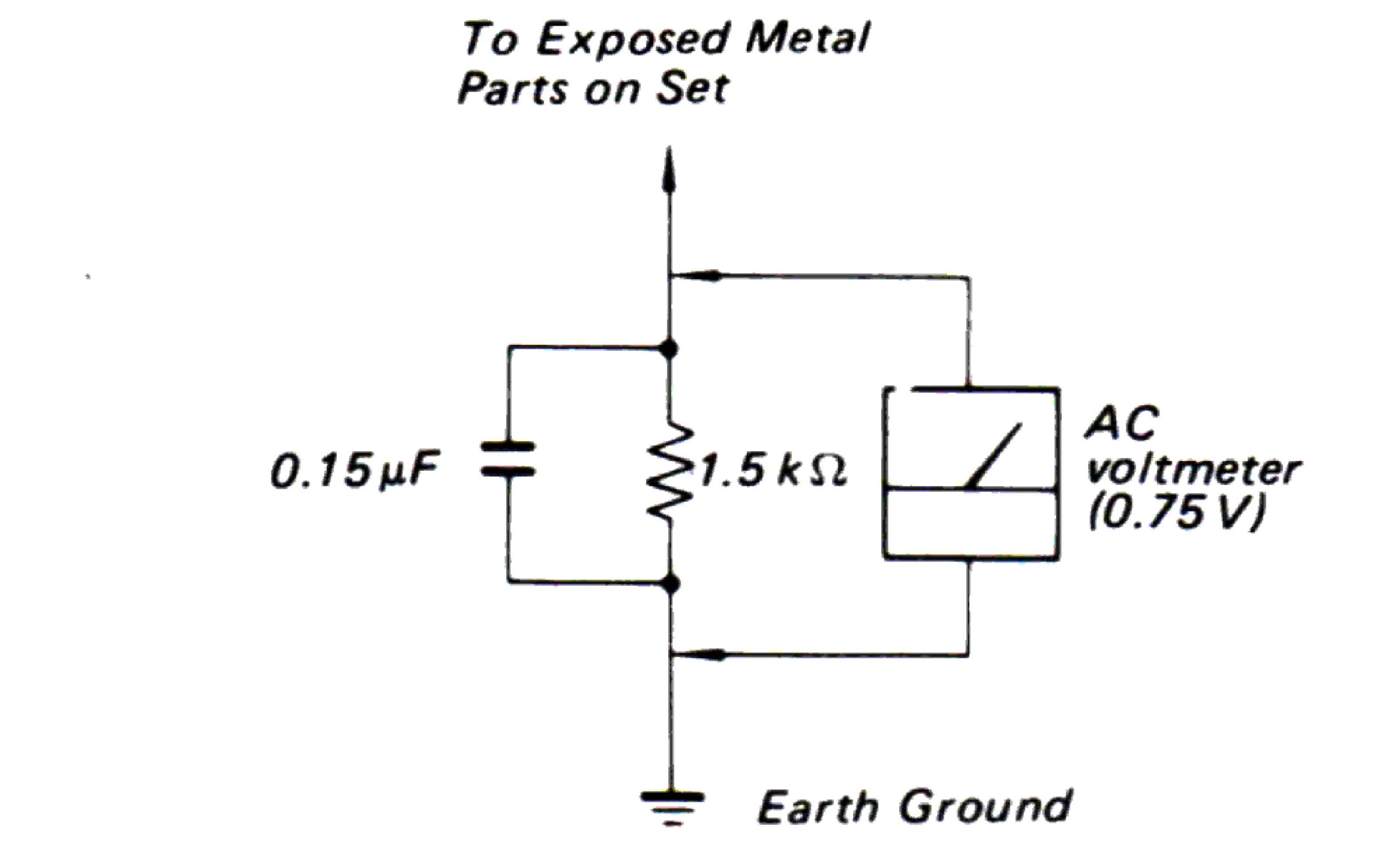


Fig. A. Using an AC voltmeter to check AC leakage.

FEATURES

Quick operation

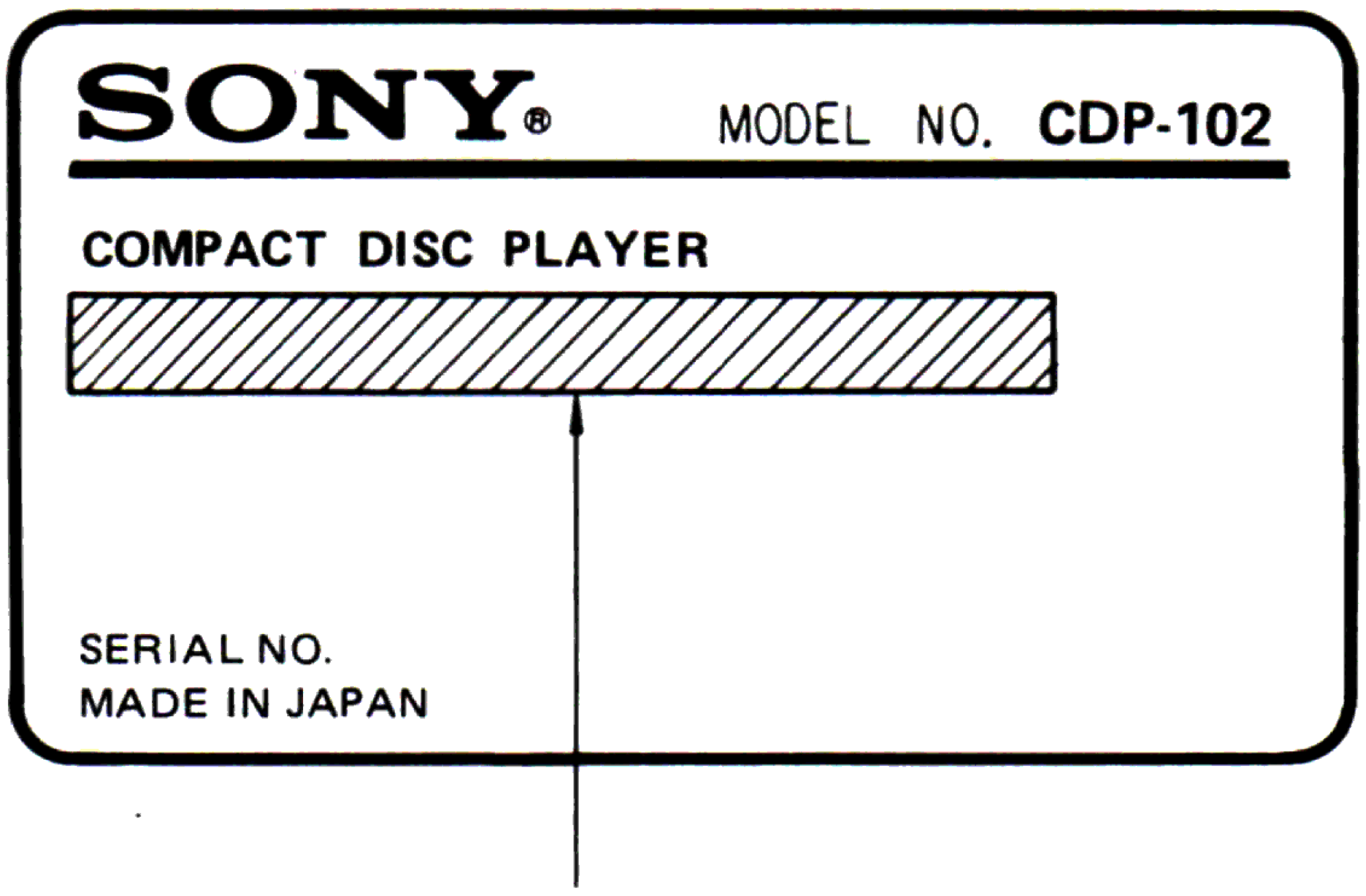
- Feather-touch function keys for direct mode change.
- Linear motor for quick selection search.

Various functions

- AMS (Automatic Music Sensor) for quick selection location.
- Index function for quick location of the part you want.
- Full repeat functions for one selection, the whole disc and a particular portion.
- Large and easy-to-read digital display for elapsed playing time and remaining playing time.

MODEL IDENTIFICATION

– Specifcations Labels –



AEP model: AC: 220 V ~ 50/60 Hz 15 W
UK model: AC: 240 V ~ 50/60 Hz 15 W
US, Canadian model: AC: 120 V 60 Hz 15 W
E model: AC: 110, 120, 220, 240 V ~ 50/60 Hz 15 W

– CAUTION FOR ELECTROSTATIC BREAKDOWN –

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (BU-1)

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

The printed matter below is included in the repair parts. During repair, use the procedure in the printed matter.

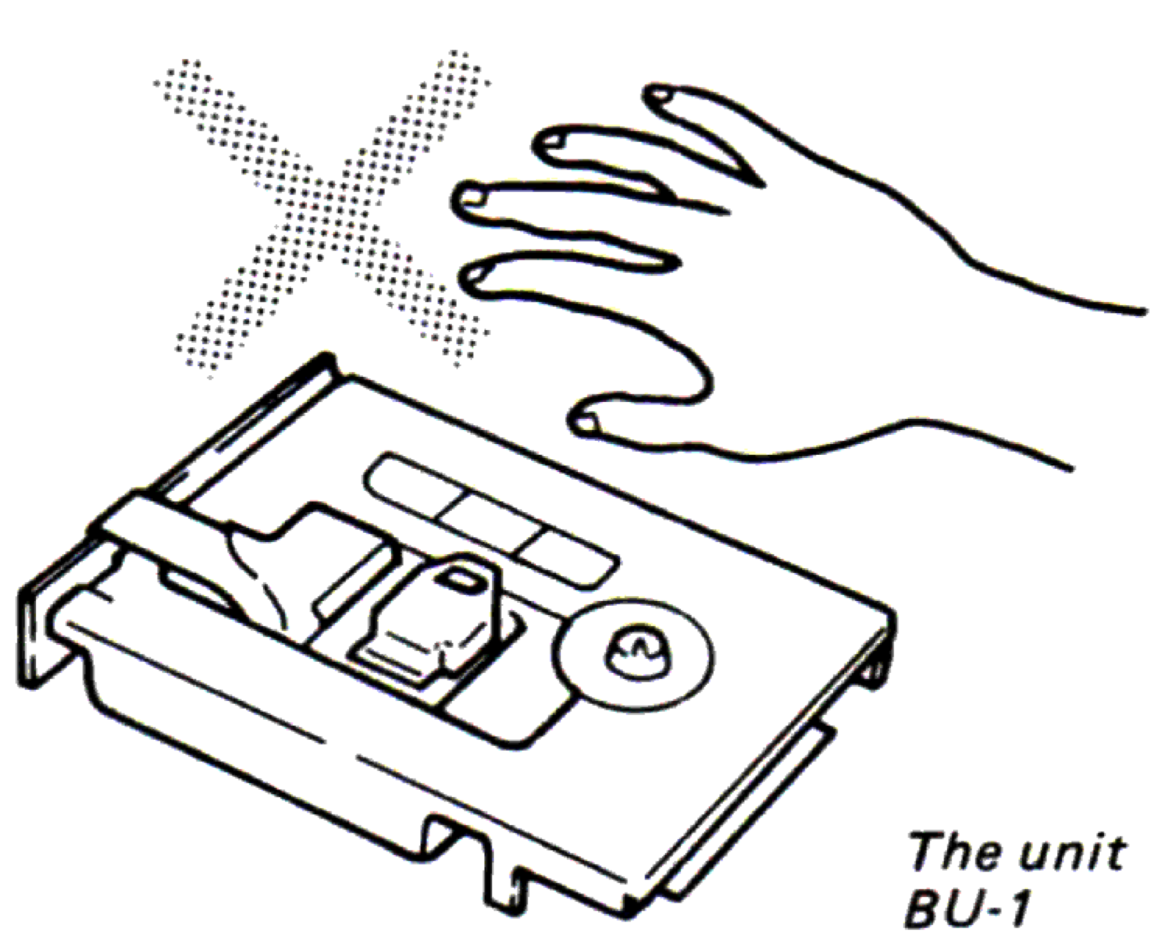
The following method is an example for reference purposes:

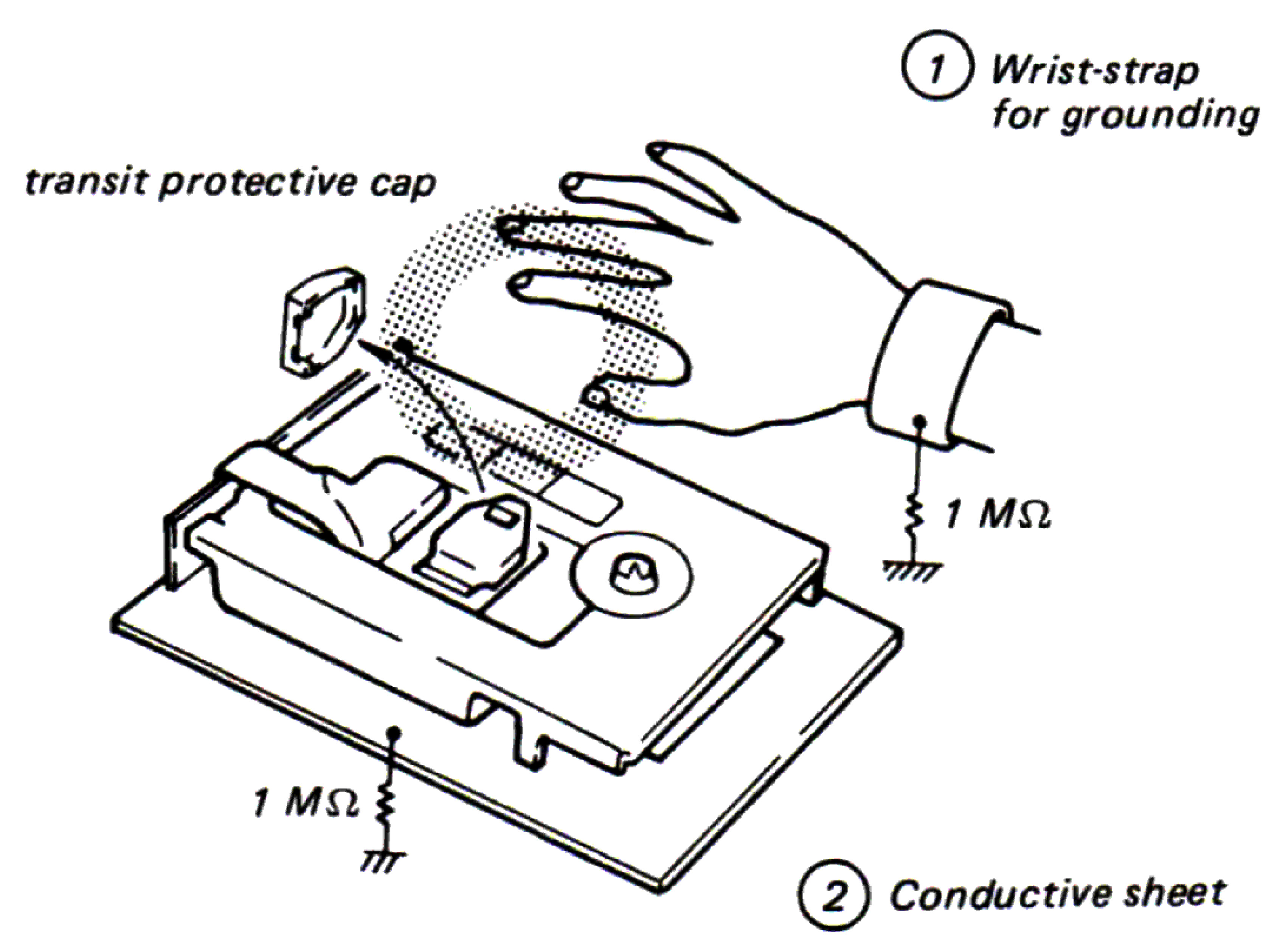
1. Place a conductive sheet on the workbench. (The black sheet used as repair parts wrapping).
2. Place the set on the conductive sheet so that the chassis touches the sheet. (This makes it the same potential as the conductive sheet).
3. Place your hands on the conductive sheet. (This makes them the same potential as the sheet).
4. Remove the optical pick-up block.
5. Perfrom work on top of the conductive sheet. Be careful that clothing does not touch the optical pick-up block.

Printed Matter Included in the Repair Parts

When opening or repairing a BU-1, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. Grounding for the human body.
   Be sure to put on a wrist-strap for grounding (with impedance lower than $10^8 \Omega$) whose other end is grounded The strap works to drain away the static electricity built-up on the human body.
2. Grounding for the work table.
   Be sure to lay on the table a cunductive sheet (with impedance lower than $10^9 \Omega$) such as sheet of copper which is grounded.
3. As static electricity built-up on clothes is not drained away, be careful not to let your clothes touch the BU-1.



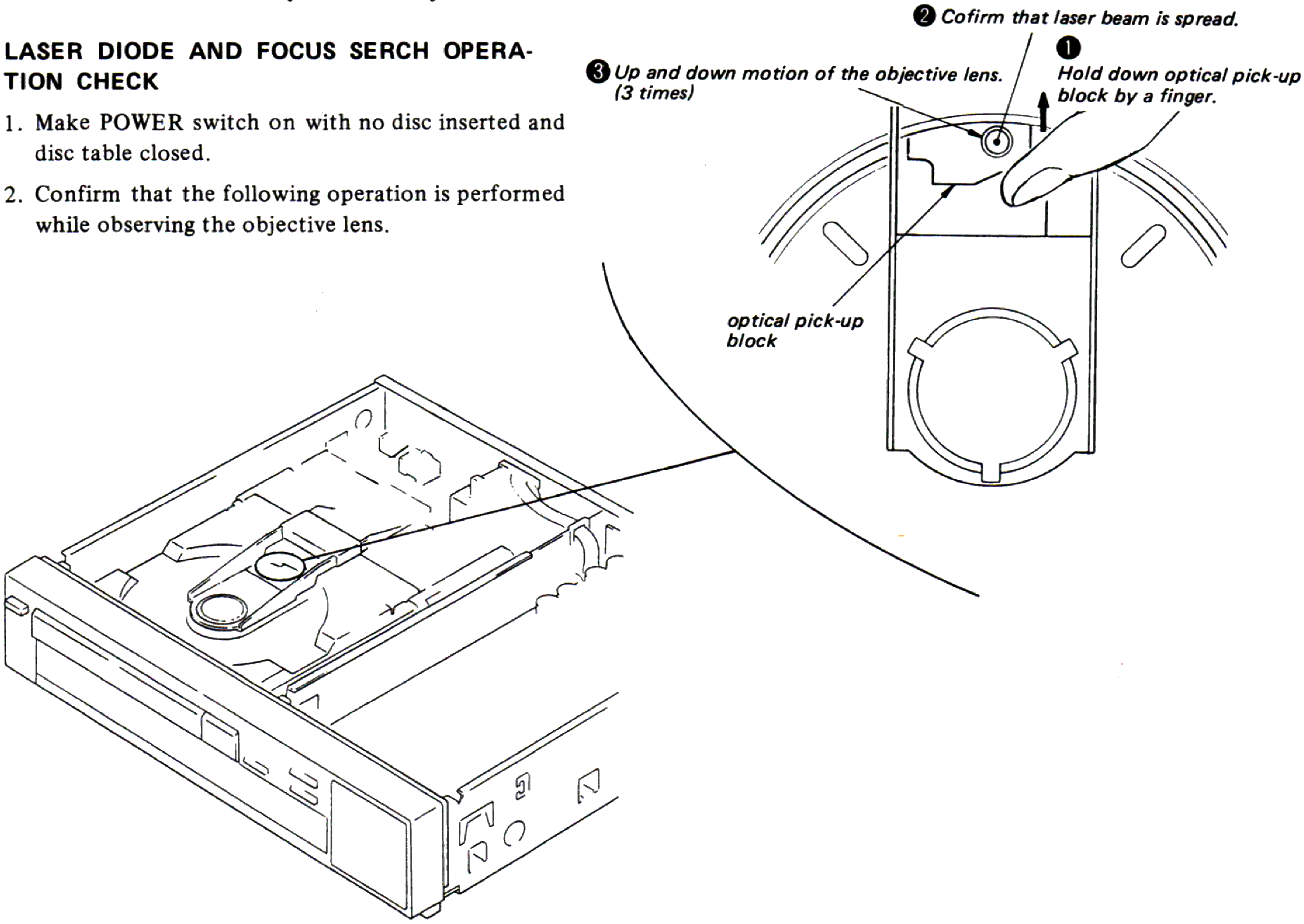


NOTES ON LASER DIODE EMISSION CHECK

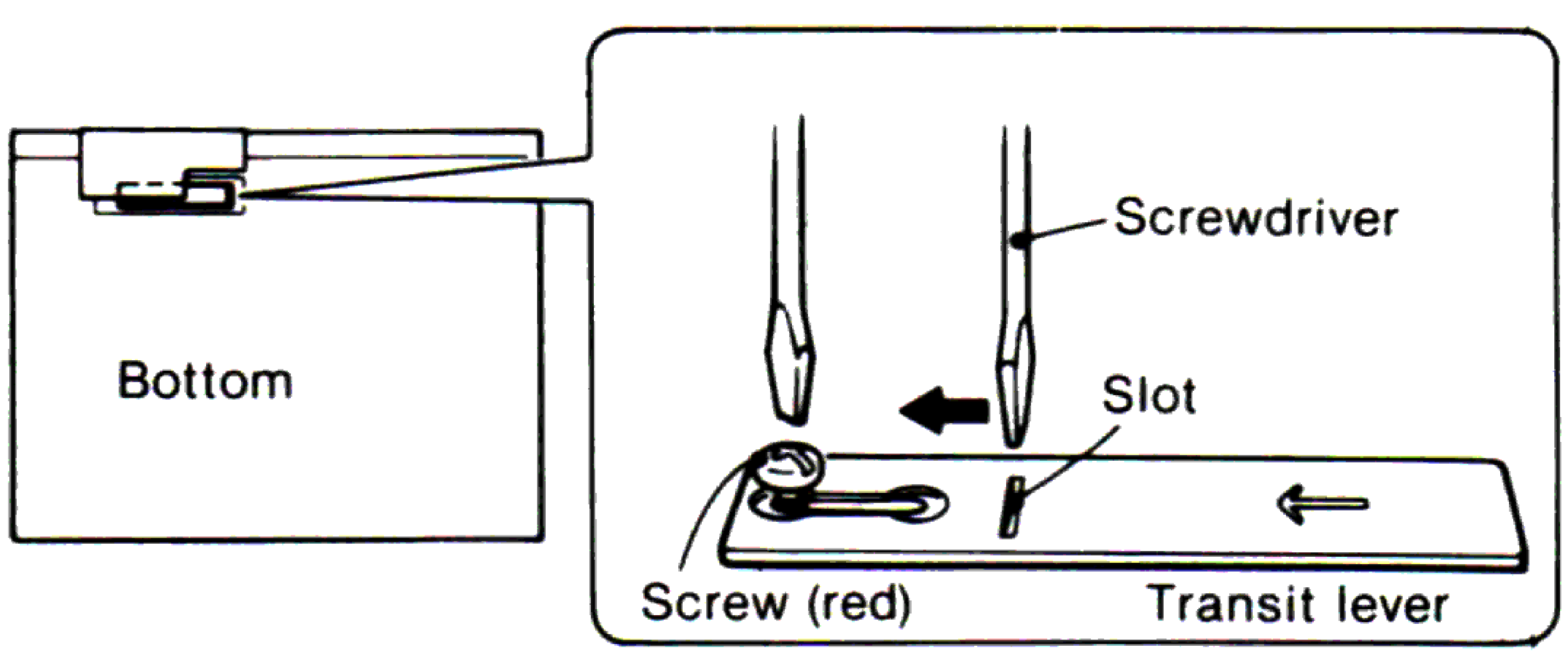
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe, from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



A transit lever is provided at the bottom of the unit to protect the optical system against shock during transportation. Before starting repairing, make following procedures.



1 Loosen the screw (red) with the screwdriver.
2 Insert the screwdriver into the slot in the lever and move it in the direction of the arrow until it stops.
3 Tighten the screw.

FLOW CHART OF BU-1 (BASE UNIT) TROUBLE SHOOTING

- Confirm all connectors around BU-1 (base unit) are secured before teh following check.

POWER ON

CHECK OPERATION WITH NO DISC INSERTED.

- IS OPTICAL PICK-UP SET AT INNERMOST CIRCUMFERENCE?
  - NO → ❶ SLED MOTOR DRIVE CIRCUIT IS –1.4 VOLTAGE OUTPUT AT THE EMITTERS OF Q205 AND Q206? — NO → CHECK THE SET. / YES → REPLACE BU-1
  - YES → DO NOT OBSERVE LASER BEAM NEAR THE OBJECTIVE LENS. BE SURE TO OBSERVE MORE THAN 30 CM AWAY FROM LENS.
- DOES LASER DIODE GO ON? SEE PAGE 6 FOR OPERATION CHECK.
  - NO → ❷ DO +B (+5 V) AND –B (–5 V) VOLTAGES APPLY TO BU-1 (BASE UNIT)? — NO → CHECK THE SET. / YES → ❸ IS THE VOLTAGE OF IC303 TERMINAL ㊳ +5 V? — NO → CHECK THE SET. / YES → REPLACE BU-1
  - YES
- DOES FOCUS SEARCH OPERATE? SEE PAGE 6 FOR OPERATION CHECK.
  - NO → ❹ FOCUS COIL DRIVE CIRCUIT DOES VOLTAGE OUTPUT APPLY TO EMITTERS OF Q201 AND Q202? (THREE CYCLE SEARCH OPERATION IS SHOWN.) +1V / 0V / –1V — NO → CHECK THE SET. / YES → REPLACE BU-1
  - YES

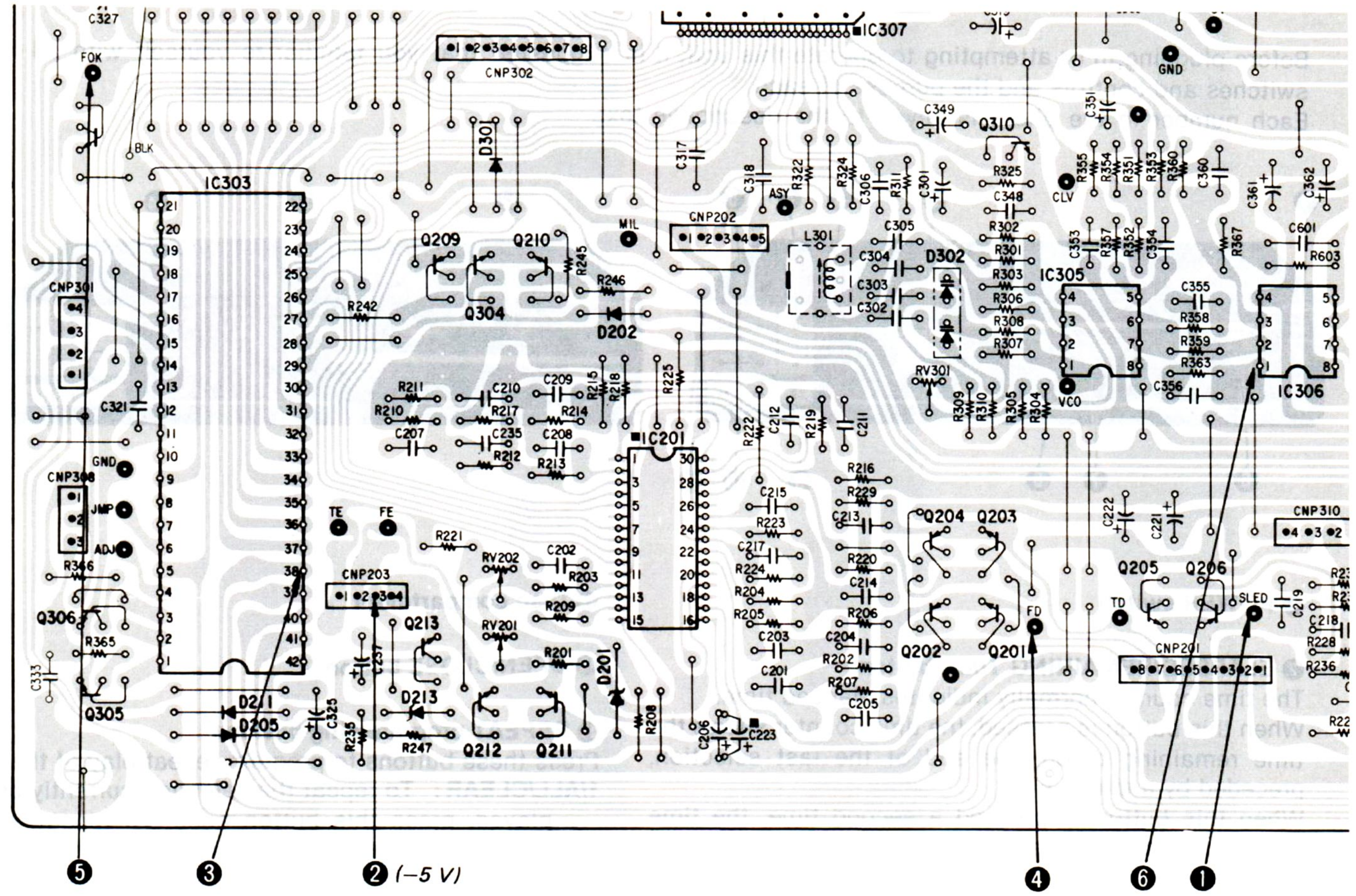
CHECK OPERATION WITH DISC INSERTED.

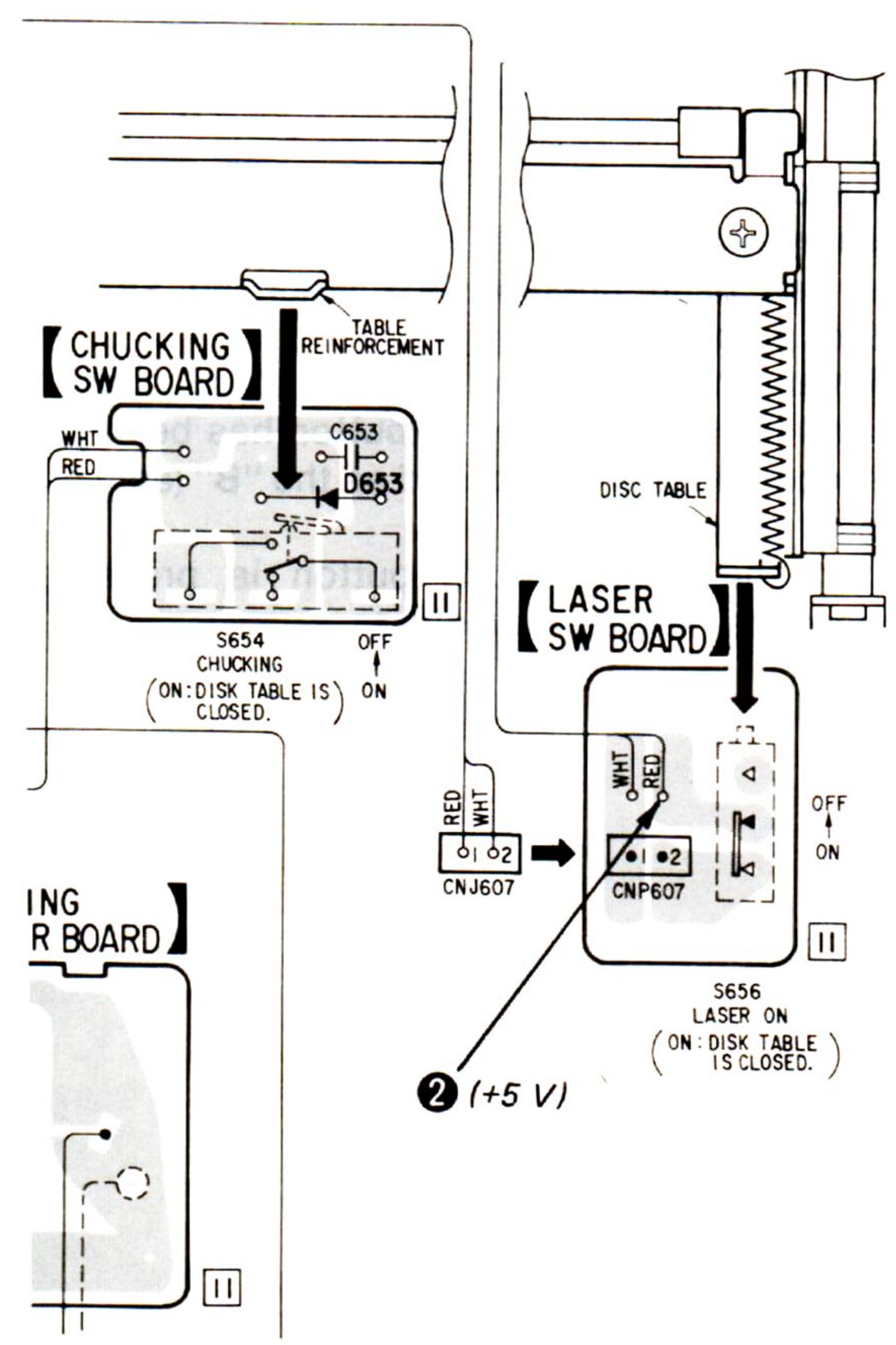
- DOES DISC MOTOR ROTATE?
  - NO → ❺ CHECK FOK SIGNAL. IS THE BASE OF Q303 4.7 V? — NO → REPLACE BU-1 / YES → ❻ IS IC306 TERMINAL ① –0.6 V? — NO → CHECK THE SET. / YES → REPLACE BU-1
  - YES → READ TOC INFORMATION
- CONFIRM THAT TOC IS READ.
  - NO → ❼ CHECK RF SIGNAL. CONFIRM THAT THE WAVEFORM BELOW IS OBSERVED. RF SIGNAL WAVEFORM. 1.3V / 1Vp-p / 0.3V / 0V. THE DIAMOND SHAPE (◇) IN THE CENTER OF THE WAVEFORM SHOULD BE CLEARLY DISTINGUISHED. — NO → REPLACE BU-1 / YES → CHECK THE SET.
  - YES → BU-1 OPERATION CHECK IS OVER.

REPLACE BU-1

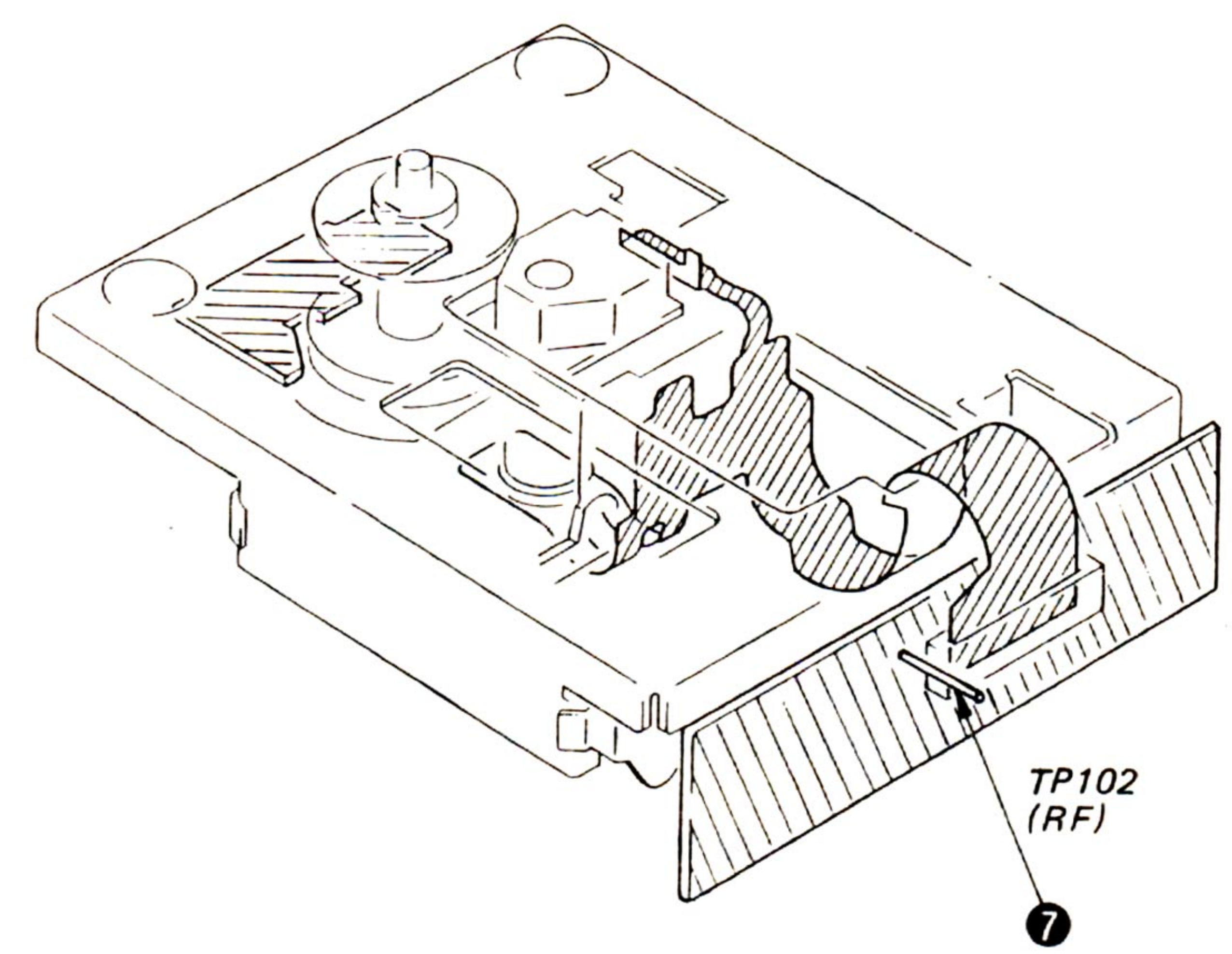
CHECK THE SET.

MAIN BOARD



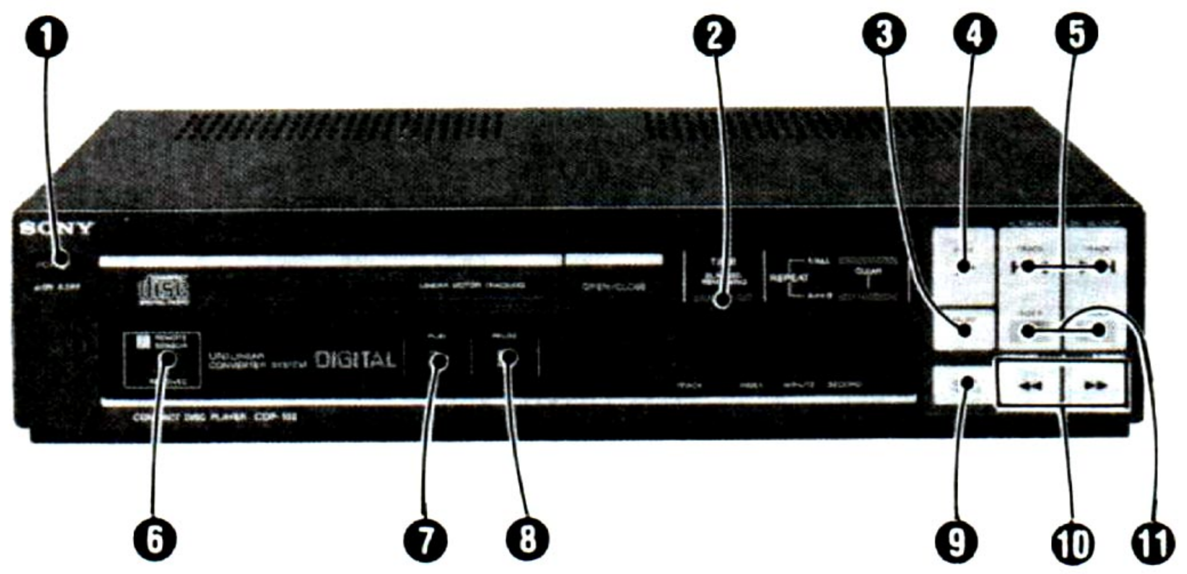


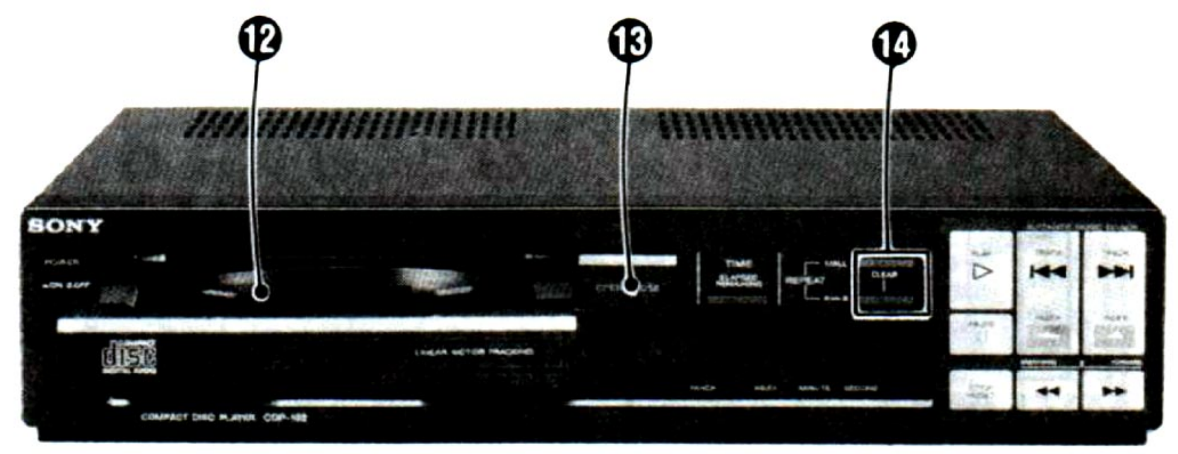
BU-1 (BASE UNIT)



LOCATION AND FUNCTION OF CONTROLS

Before plugging in or attempting to operate this unit, it is suggested that you familiarize yourself with all its switches and controls and the purpose of each.
Each number in the photo is keyed to the descriptive text.





1 POWER switch

2 ELAPSED/REMAINING TIME button
The time counter normally indicates elapsed time.
When this button is pressed, the time counter shows the time remaining before the end of the last selection, preceded by a minus sign.
When this button is pressed a second time, the time counter reverts to the elapsed time.

3 ▮▮ PAUSE key

4 ▶ PLAY key

5 AUTOMATIC MUSIC SENSOR keys

6 REMOTE SENSOR and indicator (for remote control)

7 ▶ PLAY indicator

8 ▮▮ PAUSE indicator

9 STOP (RESET) key

10 Manual search keys

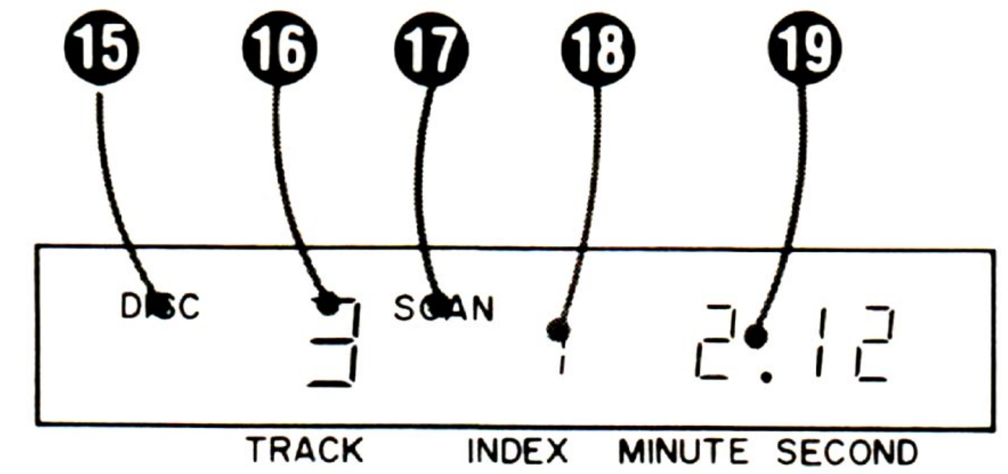
11 INDEX keys
Press one of these keys to search for a particular index number so that playback can begin at that point.
Index numbers will be displayed in the display window.
When a key is pressed and immediately released, the index number will increase or decrease by one. When the key is kept depressed, the index number will change continuously.
If a key is pressed during playback of a disc on which no index numbers have been recorded, playback will begin from the beginning of the current selection.

12 Disc compartment

13 OPEN/CLOSE button

14 REPEAT programming buttons
Press these buttons to program repeat play of the disc.
1/ALL/CLEAR: To repeat the selection currently being played, press this button once. To repeat all the selections on the disc, press the button again. To release repeat play, press the button again.
The selected repeat mode is displayed in the display window.
A↔B : To repeat play between specific points on the disc.
With one touch of this button the indicator in the display window flickers and the point where the button has been pressed is memorized as the "A" (start) point of repeat play.
With another touch, the indicator illuminates steadily and the point where the button has been pressed a second time is memorized as the "B" (end) point of repeat play.
When the 1/ALL/CLEAR button is pressed, this repeat play will be cancelled.

Display window



15 DISC indicator
The indicator illuminates steadily when the disc compartment is moving, when the disc compartment has closed with a disc in place (in the standby mode) and during disc playing.

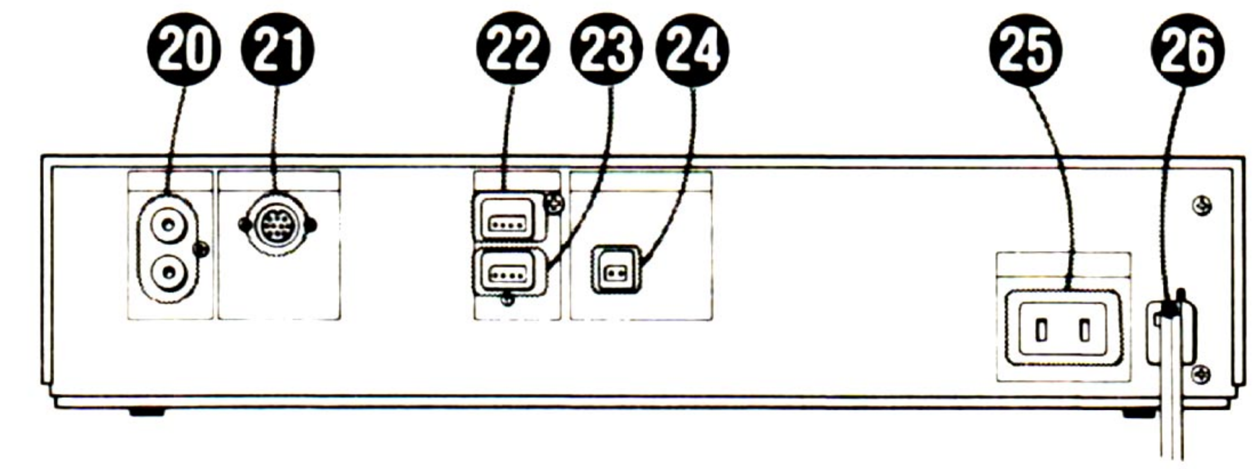
16 TRACK indicator
When the disc is placed in the disc compartment and the disc compartment is closed by pressing the OPEN/CLOSE button or the disc compartment, this indicator shows for a few seconds the total number of the selections recorded on the disc.
During play, this indicator shows the track number of the selections being played.

17 SCAN indicator
This indicator illuminates while the player is searching for the point on the disc you have programmed.

18 INDEX indicator
If index signals are recorded on the disc to allow significant parts of a program to be easily located, the index numbers are shown here.

19 Time counter
When the disc is placed in the disc compartment and the disc compartment is closed by pressing the OPEN/CLOSE button or the disc compartment, this indicator shows for a few seconds the total playing time of the disc. During play, this time counter shows the location in a particular selection by means of actual elapsed time. When the ELAPSED/REMAINING TIME button is pressed, the time counter shows how much playing time is left on the disc. The first two digits of the counter show playing time of the selection in minutes, and the last two digits show the seconds.

Rear panel



20 LINE OUT jacks
These jacks can be connected to the line input jacks of an amplifier using the supplied connecting cord.

21 SUBCODE OUT connector
This connector is provided to extend the utility of this compact disc player by allowing for the connection of optional equipment which will be available in the future.

22 REMOTE IN (remote control input) connector
Use this connector to remotely control the whole audio system with the optional Sony ST-V77 FM stereo/FM-AM system control tuner. For details, refer to the operating instructions of the ST-V77.

23 REMOTE OUT (remote control output) connector
Use this connector to remotely control the whole audio system with the optional Sony ST-V77 FM stereo/FM-AM system control tuner. For details, refer to the operating instructions of the ST-V77.

24 FUNCTION CONTROL connector
This connector can be connected to the CD connector of the optional Sony ST-V77 FM stereo/FM-AM system control tuner.

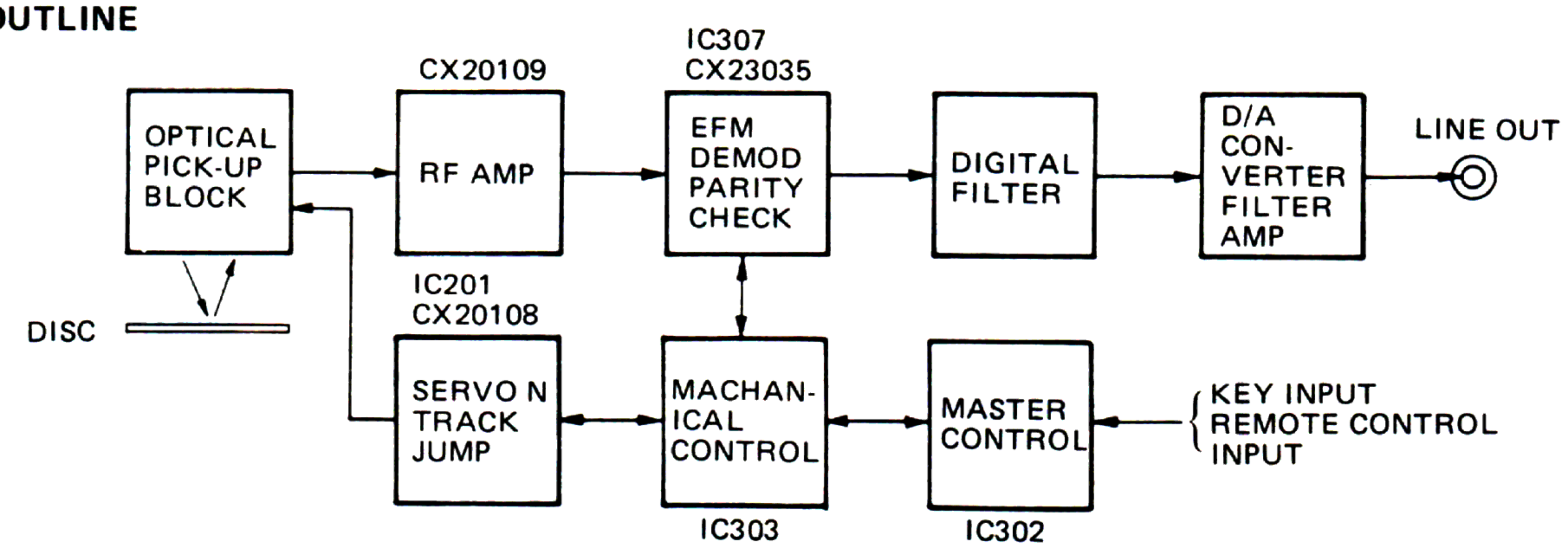
25 AC OUTLET (unswitched)

26 Power cord

SECTION 1
OUTLINE

CIRCUIT DESCRIPTION

1-1. OUTLINE



Above block diagram shows configuration of this set. Master control IC (IC302) serves as the center of all operation. Master control IC (IC302) assumes interface between man and machine like key input and remote control input. Mechanical control IC (IC303) assumes interface between master control IC (IC302) and machine.

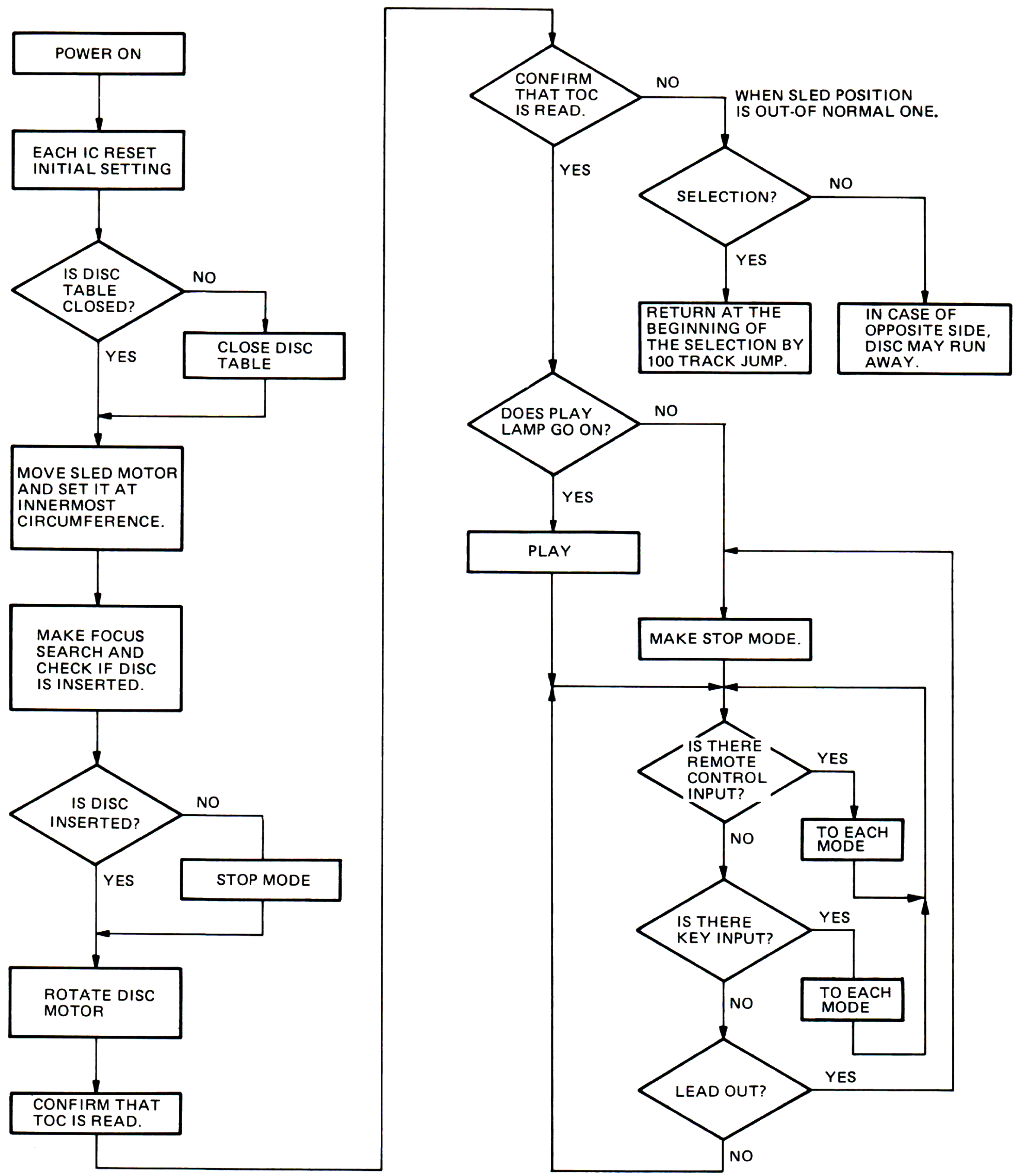
For example, if PLAY button is pressed from key input, master control (IC302) gives mechanical control IC (IC303) a command to make PLAY mode. When this command is given, mechanical control IC (IC303) works in routine operation to make PLAY mode. It gives every kind of commands for IC201, 307 and they are in PLAY mode.

Through IC201 and IC307 use common data bus, they distinguish a command for IC201 or IC307 by a higher rank 4 bit value of each command from mechanical control IC (IC303).

Command for IC201: higher rank 4 bit 0000-0011 (0-3 with sexadecimal number system) are used.

Command for IC307: higher rank 4 bit 1010-1110 (A-E with sexadecimal number system) are used.
IC201 controls servo (focus, tracking, sled) mainly.
IC307 checks EFM demodulation and CRC.

The illustration below shows flow chart of simple operation after power is ON.



1-2. MASTER CONTROL IC (IC302)

Master control IC (IC302) controls all of the operations of this set. Besides inputting key input and remote control input and data from mechanism control IC (IC303), it outputs display output and commands to mechanism control IC303.

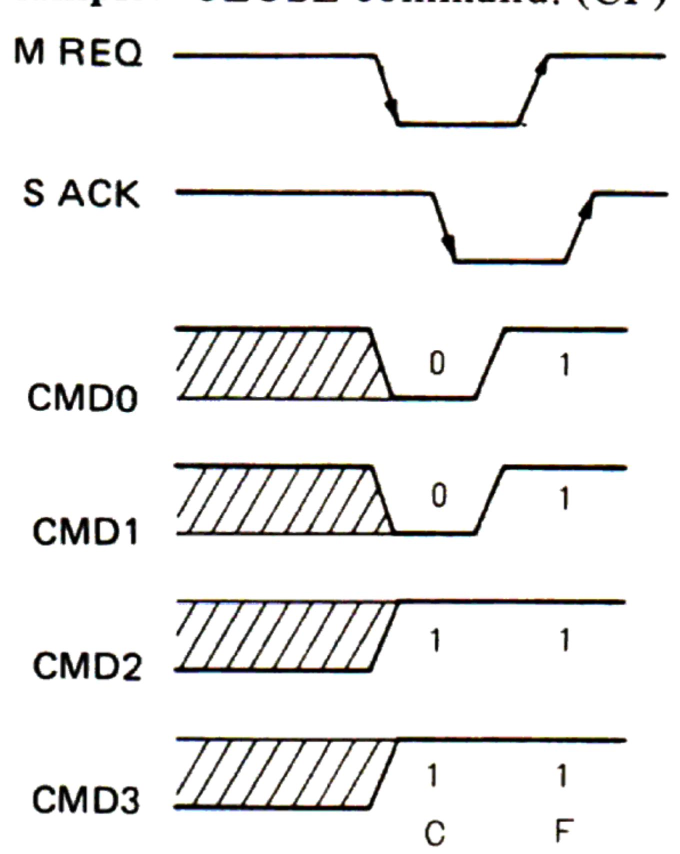
Pin Functions

Pin. No.	I/O	Pin Name	Operation
1–4	OUT	D0–D3	Data output pin for key scan digit signal and to display tube drive IC (IC801)
5–8	IN	K0–K3	Key scan data input pin.
9	IN	OSC	Clock input pin.
11	IN	RESET	Reset input pin. Goes high about 1.5 seconds after power on.
13	IN	Q INT	Trigger input pin when data is transferred from IC303 to IC302.
14	IN	OUT SW	Input pin, goes low when disc compartment opens. When this pin goes high, IC302 outputs load in command to IC303.
15	–	H. L.	When this pin is low, IC302 does not output load in command to IC303 even if pin 14 is high.
17	IN	REC M	Syncro REC signal input pin.
18	IN	SI CLK	Clock input pin from remote control decoder.
19	IN	IN SW	Input pin, goes low when disc compartment closes.
20	IN	SI DATA	Serial data input pin from remote control decoder.
21	–	GND	Ground
29	OUT	CD F	Direct function output pin. High is output for 600 msec when PLAY, PAUSE button is pressed during STOP mode.
30–33	IN/OUT	CMD0–CMD3	I/O pin for data with IC303.
34	OUT	M REQ	Control (request) signal output pin for commands to IC303.
35	IN	S ACK	IC303 acknowledge signal input pin.
36	OUT	RST	Reset output pin to display tube drive IC (IC810).
37	OUT	CTL	Clock output pin to display tube drive IC (IC801).
38	OUT	IDP	Output pin for data which controls display tube drive IC (IC801) characters.
39	OUT	RMS LED	RMS LED output pin.
40	OUT	PAUSE LED	PAUSE LED output pin.
41	OUT	PLAY LED	PLAY LED output pin.
42	OUT	VDD	Power supply pin (5 V)

When commands are sent from the master control IC (IC302) to the mechanism control IC, the master control IC sets the data to be sent and makes the M REQ pin go low from high, as shown in the figure. When the M REQ pin goes low, the mechanism control IC (IC303) makes the S ACK pin go low from high. At the time data is taken in to the mechanism control IC (IC303).

When the master control IC (IC302) confirms that the S ACK pin has gone low, it sets the next data and makes the M REQ pin high. When the M REQ pin goes high, the mechanism control IC (IC303) makes the S ACK pin high and reads in the data.

Example: CLOSE command. (CF)



Command from master control IC (IC302) to mechanism control IC (IC303).

Command		
OPEN	DF	Opens disc compartment.
CLOSE	CF	Closes disc compartment.
AMS	A * * 01F (* * = TRACK NO)	Perform AMS. If for the 5th selection: A0501F
INDEX	A * * * * F (TRACK NO, INDEX NO)	Perfroms index search. When the INDEX key is pressed, TRACK NO and INDEX NO are input and sent.
LOCATION	B * * * * * * * * * OF (TRACK NO, INDEX NO, MIN, SEC, FRAME)	Performs A→B repeat. The place for A is memorized, that data is put into the * section and set out, the pick-up is returned to the place with that vavlue, and repeats play between that point and the point where B was pressed.
STOP	1F	Stops spindle motor and sled motor.
manual search	4F–9F	Sends out during FF and REW.
	4F	FF during PAUSE. Performs 40 track jump after a certain time passes.
	5F	REW during PAUSE.
	6F	FF Performs 10 track jump after a certain time passes.
	7F	REW
	8F, 9F	not used
PAUSE	3F	PAUSE
PLAY	2F	normal PLAY command
TOC REQ	* * * * * * * * * * (F) (H, L, MIN, SEC (Selection N), MIN, SEC (Selection N + 1))	This command is sent out when the TOC data in the mechanism control IC is desired, and is sent out during random access, when selection changes, etc.

The above signals are sent from CMD0-CMD3 to the mechanism control IC.

The mechanism control IC executes these commands.

Commands sent from the mechanism control IC (IC303) to the master control IC (IC302).

TOC, Q data	C * * * * * * * * * * * * * F (TRACK NO, INDEX NO, MIN, SEC (elapsed time in the track), FRAME, MIN, SEC (elapsed time from beginning of disc))	TOC data or Q data is sent.
TOC READ END	A (F)	Sent out when TOC data read-in is finished.
LEAD OUT	B (F)	Sent out when disc ends.
NO DISC	E (F)	Sent out when there is no disc in the disc compartment.
OPEN	D (F)	Sent out when the disc compartment is open.

The mechanism control IC (IC303) keeps the TOC data and Q data read in from the disc, and sends it to the master control IC (IC302) as required.

1-3. MECHANISM CONTROL IC (IC303)

Mechanism control IC303 sends commands to IC201 (servo IC CX20108) and IC307 (digital processing/CLV servo IC CX23035) via the DATA, CLOCK and LATCH pins, and also memorizes TOC and Q data, and performs direct search, etc. based on this data.

Pin Functions

Pin No.	I/O	Pin Name	Operation
1	OUT	REC MUTE	Synchro REC MUTE signal output pin.
2	OUT	PAUSE	Synchro PAUSE release signal output pin.
3	IN	$\overline{\text{REC M}}$	Synchro REC signal input pin.
4	–	$\overline{\text{ADJ}}$	By making this pin low, IC303 will not load the disc out even if servo or other abnormalities are detected. Used for servo and PLL adjustment.
5	OUT	MUTE	Muting control output pin.
6	–	$\overline{\text{JMP}}$	By making this pin low, direct search is not performed and access is done by track jump. Used for track jump check.
9	IN	OSC	Clock input pin.
11	IN	$\overline{\text{RESET}}$	Reset input pin. Goes high about 1.5 seconds after power on.
13	IN	SCOR	SUB Q sync signal input pin.
15	IN	$\overline{\text{IN SW}}$	Input pin; goes low when disc compartment closes.
16	IN	$\overline{\text{OUT SW}}$	Input pin; goes low when disc compartment opens.
17	IN	$\overline{\text{FOK}}$	Focus OK signal input pin.
18	IN	WFCK	WFCK (Write Frame Clock) input pin.
19	IN	GFS	Guard Frame Sync input pin. High is input when disc data can be read in normally.
20	IN	SUB Q	SUB Q signal (selection address, emphasis data, etc.) input pin.
21	–	GND	Ground
22	IN	SENSE	IC201, IC301 SENS output input pin.
23	IN	Q CHECK	Input pin for SUB Q CRC results output from IC307.
24	OUT	LATCH	Latch output pin for serial data to IC201, 307.
25	OUT	$\overline{\text{DIRECT}}$	Output pin to IC201 during track jump. Normally high, reverses track jump pulse direction at low. Next, for high set to normal tracking mode. Outputs low for a set time at detection of TZC rise and fall.
26	OUT	DATA	Serial data output pin to IC201, 307.
27	OUT	CLOCK	Serial data transmission clock output pin to IC201, 307.
28	OUT	$\overline{\text{SLED G}}$	Output pin; controls sled motor gain. Normally high. Low during access.
29	IN	SLED S	Low when sled motor operates. Inputs high when it stops.
31	OUT	Q INT	Trigger output pin for data sent to IC302.
32	OUT	S ACK	Acknowledge signal output pin for IC302 M REQ signal.
33	IN	M REQ	IC302 M REQ signal input pin.
34–37	IN/OUT	CMD0–CMD3	I/O pin with IC302 data.
38	OUT	LD ON	Output pin; controls laser diode ON/OFF.
39	OUT	LOAD IN	Output pin; drives loading motor to the close side.
40	OUT	LOAD OUT	Output pin; dirves loading motor to the open side.
41	OUT	EPS	Detects disc emphasis, switches emphasis ON/OFF. Output pin.
42	–	VDD	Power supply pin (5 V)

The Q data called SUB Q is used for the TOC Table of Contents) data in the lead-in area, mode control signals such as preemphasis during the selections, and track number (TNO), index number, play time, etc. display and address data.

This data is input to mechanism control IC (IC303) SUB Q pin from IC307, and is written into the RAM by 8 bit units. Data is sent from the mechanism control IC (IC303) to the master control IC (IC302) as required, and is displayed. Data is sent from the mechanism control IC to the master control IC about 8 times in 1 second.

1-4. DIRECT SEARCH

On this set, a linear motor is used for the sled motor, so that besides 100, 10 and 1 track jump, the optical pick-up can be moved directly to the address specified by the microcomputer. (direct search). (On the conventional CD player, only the objective lens moves, and the optical pick-up follows it by servo in order to perform 100, 10 and 1 track jump only.) Higher performance access is enabled on this set.

On the convertional CD player, only three data, A0 (MNR of first selection on the disc), A1 (MNR of last selection on the disc) and A2 (leadout track start point) were memorized when TOC data was read in to the microcomputer. However, on this model, the absolute time from the first to the 21st selection is memorized in the microcomputer. This absolute time is converted to track numbers inside the microcomputer, and the track number to be jumped is obtained by subtracting the current address track number from the track number of the selection to be jumped to.

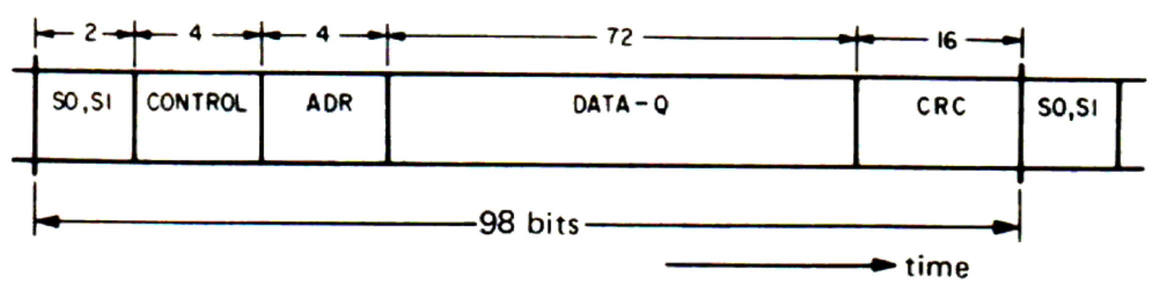
Frame number	POINT	PMIN, PSEC, RFRAME
n	01	00, 02, 32
n + 1	01	00, 02, 32
n + 2	01	00, 02, 32
n + 3	02	10, 15, 12
n + 4	02	10, 15, 12
n + 5	02	10, 15, 12
n + 6	03	16, 28, 63
n + 7	03	16, 28, 63
n + 8	03	16, 28, 63
n + 9	04	· ·
n + 10	04	· ·
n + 11	04	· ·
n + 12	05	· ·
n + 13	05	· ·
n + 14	05	· ·
n + 15	06	49, 10, 03
n + 16	06	49, 10, 03
n + 17	06	49, 10, 03
n + 18	A0	01, 00, 00
n + 19	A0	01, 00, 00
n + 20	A0	01, 00, 00
n + 21	A1	06, 00, 00
n + 22	A1	06, 00, 00
n + 23	A1	06, 00, 00
n + 24	A2	52, 48, 41
n + 25	A2	52, 48, 41
n + 26	A2	52, 48, 41
n + 27	01	00, 02, 32 repeat
n + 28	01	00, 03, 32
·	·	· ·
·	·	· ·
·	·	· ·

- Frame number: 98 symbol, 1 block No.
- POINT = For A0, PMIN indicates MNR of first selection on the disc. PSEC, PFRAME are "00".
- POINT = For A1, PMIN indicates MNR of last selection on the disc. PSEC, PFRAME are "00".
- POINT = For A2, PSEC, PFRAME indicate lead-out track start point.
- POINT = For 01–06, PMIN, PSEC indicate the absolute time of the selection.

Table A. TOC Structure (Example of a 6 selection disc)

Direct search is performed as follows:

When the search command is input to the mechanism control to (IC303) from the master control IC (IC302) due to key input or remote control input, the mechanism control IC303 converts the current address to track number from the data Q of the current address channel Q (Figure 1) data. (This data Q is always input from pin 20 SUB Q during play.) The address to be jumped to is also converted to a track number, the track numbers are compared, and the number of tracks to be jumped is calculated.



S0, S1: parts of sync pattern.

CONTROL: Indicates channel number and preemphasis ON/OFF.
Output from MSB
0000 – 2CH, no preemphasis
1000 – 4CH, no preemphasis
0001 – 2CH, preemphasis
1001 – 4CH, preemphasis
LSB = 0 at lead-in and lead-out portions.

ADR: Control bit for DATA-Q. Output from MSB.

DATA-Q: 72 bits of data; output from MSB.

CRC: CRC for CONTROL, ADR, DATA-Q. Refer to PCM-F1 Operation Manual for details on CRC.
Output from MSB.
Generation multinominal is
$P(x) = X^{16} + X^{12} + X^5 + 1$

Figure 1. Channel Q Structure

– Data Form on Lead-in Track (indicate TOC) –

MNR (00)	POINT	MIN	SEC	FRAME	ZERO	PMIN	PSEC	PFRAME
8	8	8	8	8	8	8	8	8

72 bits data-Q

– Data Form of Music Signal and Lead-out Track –

MNR	X	MIN	SEC	FRAME	ZERO	AMIN	ASEC	AFRAME
8	8	8	8	8	8	8	8	8

72 bits data-Q

MNR: Expresses Music Number as 2 digits of BCD.
00 → Lead-in track
01-99 → Music number
AA → Lead-out track

X: MNR index, expressed as 2 digits of BCD.
1 MNR is divided into 100. The method of division is determined by the software, and numbering is in order from "00-99". Does not exist on lead-in track.
00 → Pause encoding
Applies pause. There is 2-3 seconds of pause encoding at the top of the selection.
01-99 → Sub-division number.
X = 01 on the lead-out track, MNR = 01-99 and X ≒ 00 during a selection. Initial value is "01", then increases by ones.

ZERO: All these 8 bits are "0".

MIN, SEC, FRAME: Selection running time is expressed by BCD 6 digits. All "0" at beginning of selection. Time increases during the selection, stops at pause. Become "0" at end of pause. Time increases on lead-in and lead-out tracks. 1MIN = 60 SEC, 1SEC = 75 FRAME (00-74)

AMIN, ASEC, AFRAME: Disc running time is expressed as BCD 6 digits. At start of disc program area, time is "0" and MNR is the first value of that disc.
1AMIN = 60 ASEC, 1ASEC = 75 AFRAME (00-74)

POINT, PMIN, PSEC, PFRAME: Disc table of contents is on this part of the lead-in track. As shown in the table, it is recorded continuously and repeatedly on the lead-in track, or MNR = 00 portion. Also, each content is recorded 3 times each.
PMIN, PSEC, PFRAME values each express selection start point. There is ±1 second precision on AMIN, ASEC, AFRAME time axes.

Figure 2. Data Q Structure

Next, the mechanism control IC puts the digital signal processing/CLV servo IC (IC307) CX23035 into counter set mode. By doing this, CX23035 outputs the CNIN pin 17 input signal CNIN/2h (Hz) signal from SENSE pin 18 (COUNT). At this time 41 is set in n, so a signal which is the input signal divided by 82 is output from the SENSE pin.

Then tracking and sled servo go off, focus servo goes on and the optical pick-up is moved quickly by the linear (sled) motor. When this happens the RF amp (IC201) CX20109 MIRR pin 18 mirror output is as shown in Figure 3. (For example, if there are 20000 tracks from the innermost to outermost circumference, and access is done in 0.5 seconds, mirror output is 40 kHz, which is too fast for the mechanism control IC to read.)

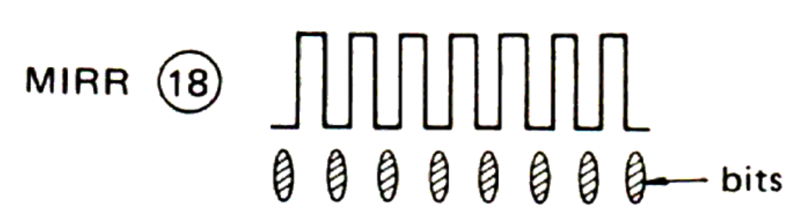


Figure 3. Mirror Output for Direct Search

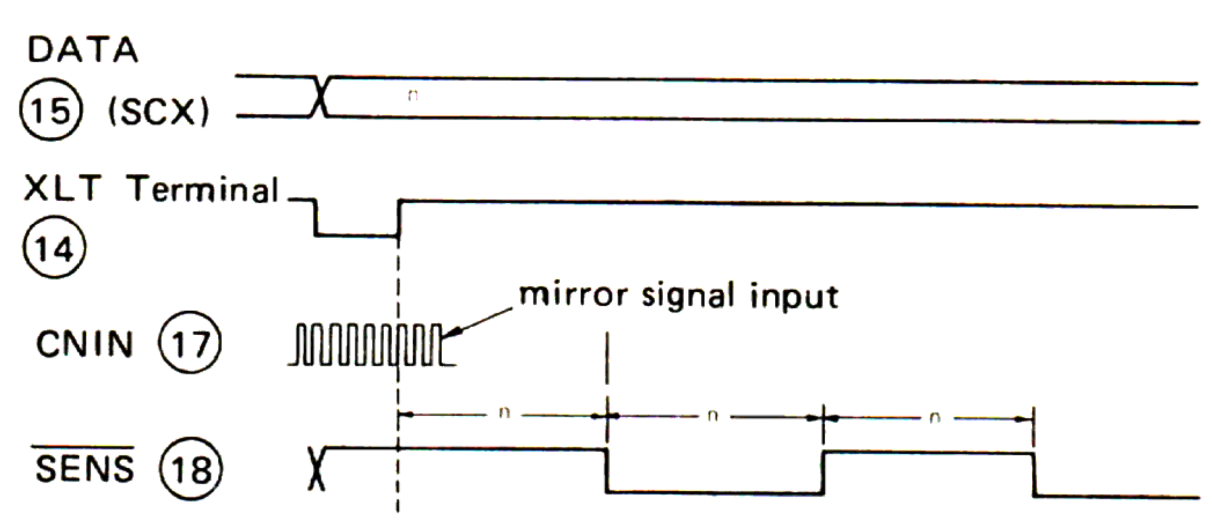
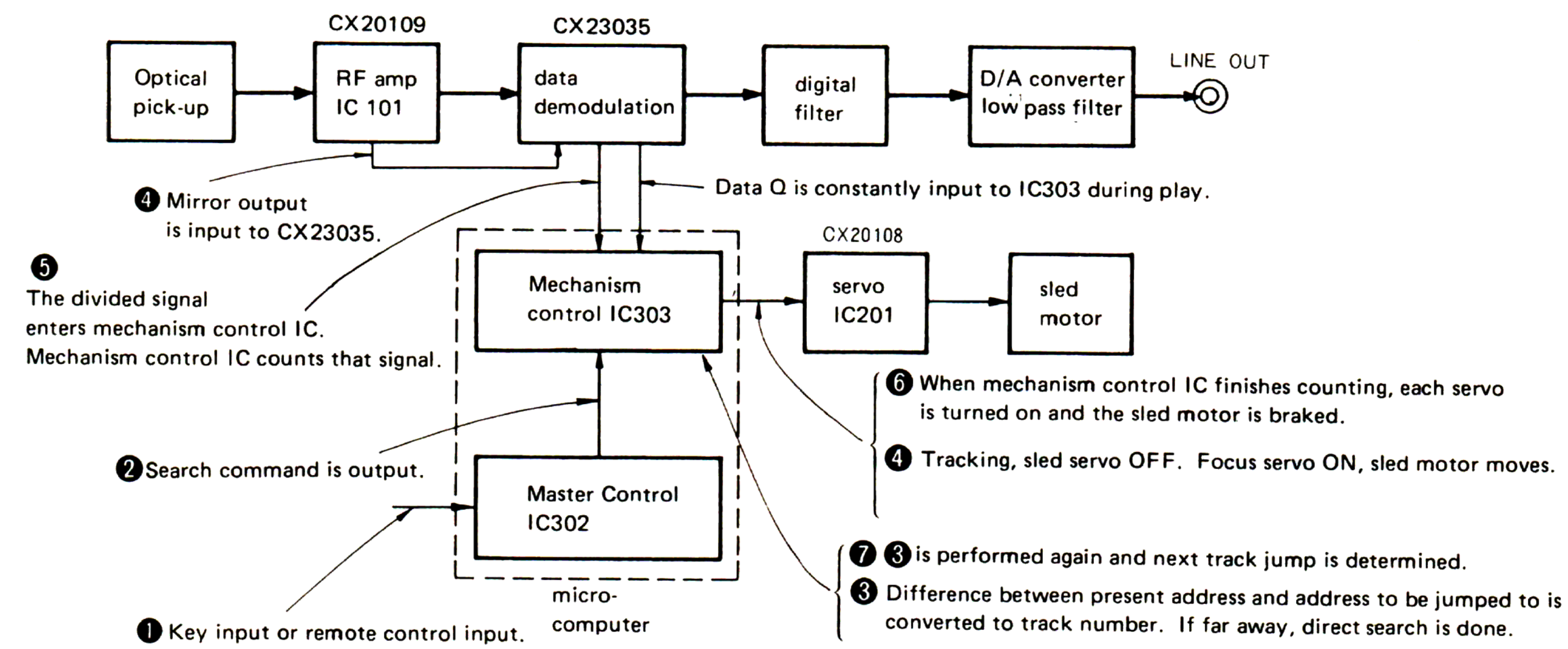


Figure 4. Count Signal Timing

This mirror output is input to CX23035 CNIN pin 17, then is divided into 41 and output from SENSE pin 18 to the mechanism control IC SENS pin 22. (At this time, it is divided and can be read.) This input signal is counted by the mechanism control IC at rise or fall and is converted to the number of tracks to be jumped. For example, for a 1000 track jump, consecutive cmparison, such as 1000/82 ≒ 12 is done and when that value is reached, each servo is turned on and the optical pick-up is braked. Then DATA-Q is read, converted to track number, and if within a certain range, 100, 10, 1 track jump are performed and convergence is done. Outside of that range, direct search is performed again.



1-5. LINEAR MOTOR AND SERVO CIRCUITS

A linear motor is used for optical pick-up transportation mechanism on this model.

Figure a shows the optical pick-up transportation mechanism. The linear motor drive coil (sled coil) is part of the optical pick-up and performs transportation operation. There is a sensor coil mounted on the opposite side of the linear motor. This detects when the optical pick-up reaches the innermost circumference and stops the linear motor.

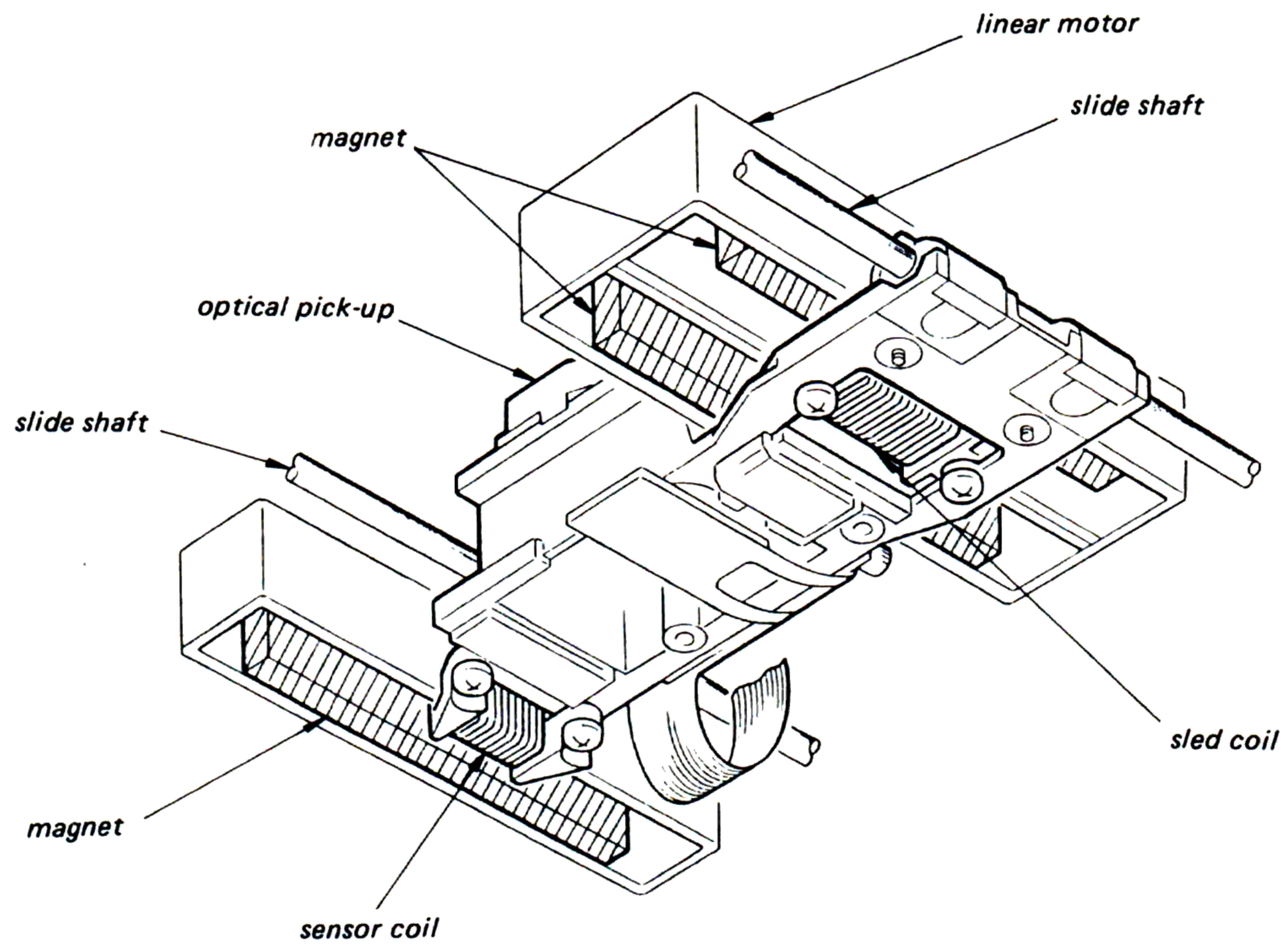


Figure a. Optical Pick-up Transportation Mechanism

The linear motor is structured with a coil wound around a yoke plate and a magnet at both ends. Figure b shows the theory of operation. The coil receives force in the direction of Ⓐ when current flows to the coil in the magnetic field.

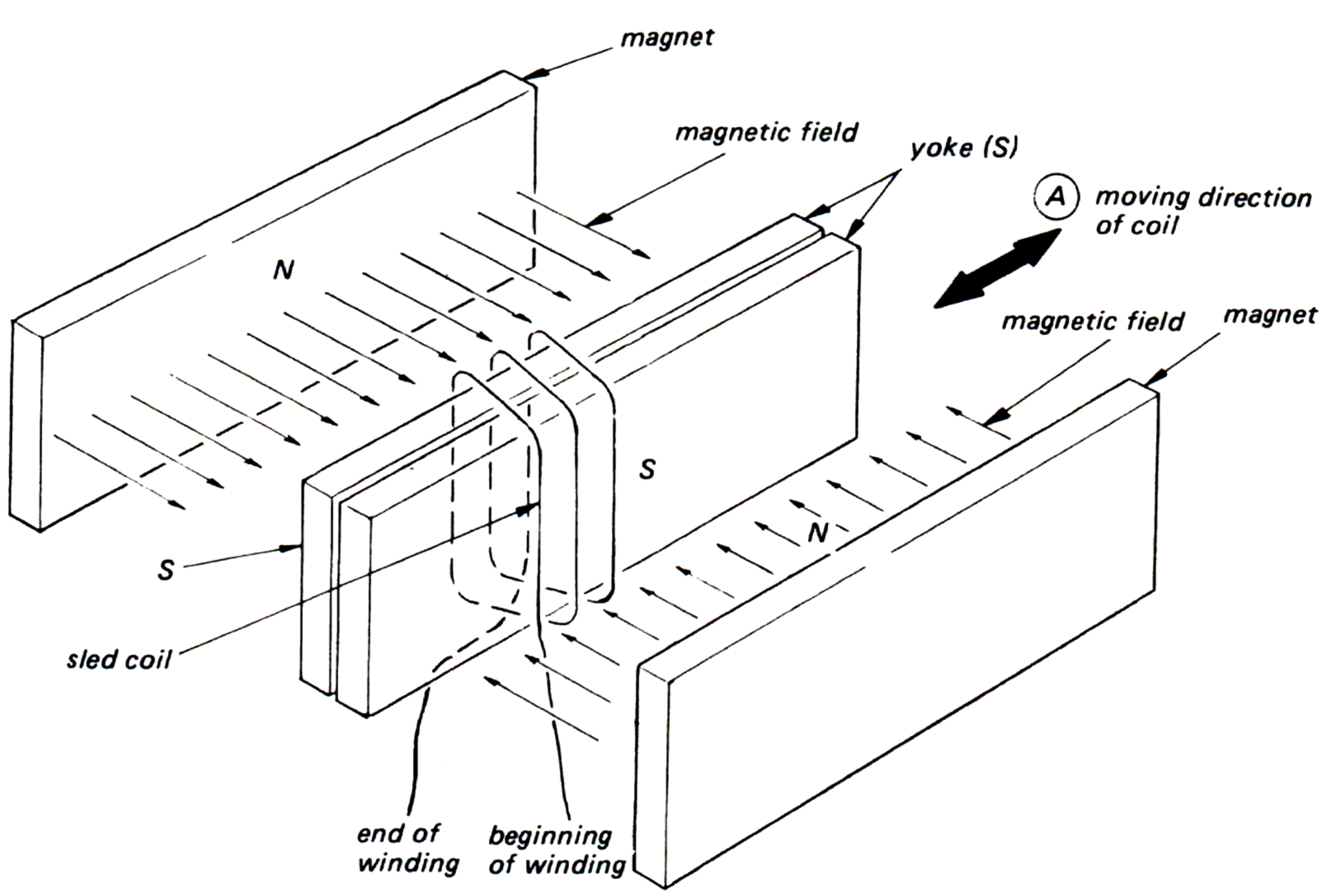
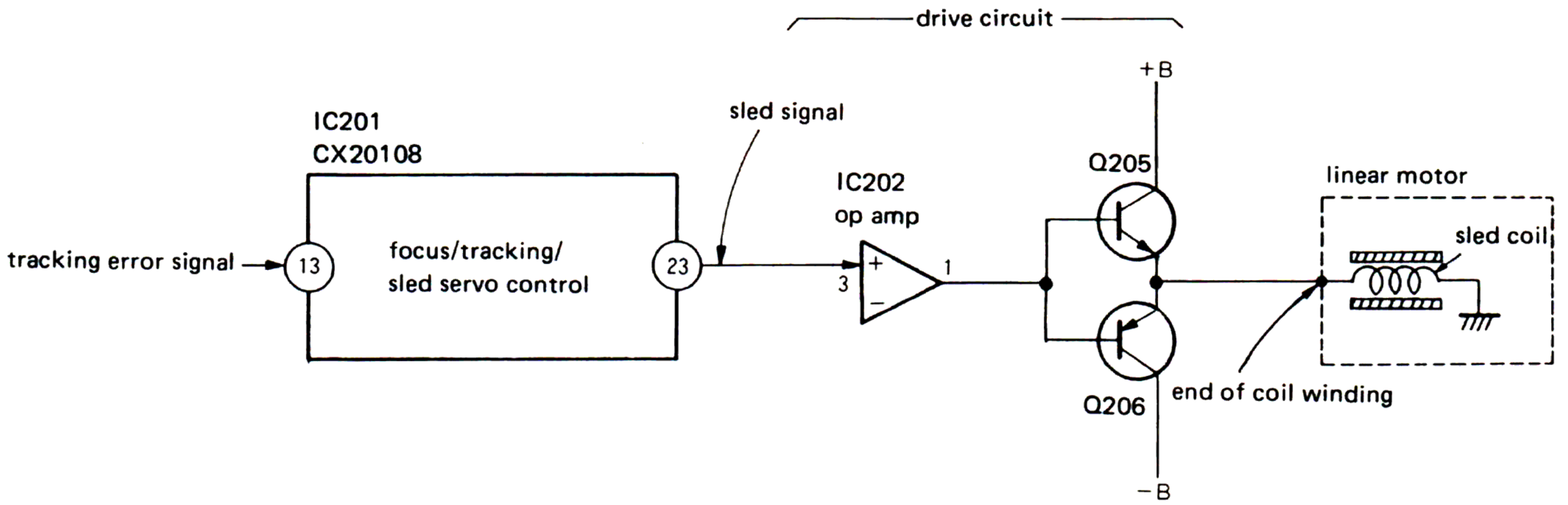


Figure b. Theory of Linear Motor Operation

The linear motor servo circuit receives a tracking error signal at CX20108 (IC201) servo control in order to prevent the optical pick-up laser spot from leaving the pit track, and outputs a sled signal. This sled signal drive controls the linear motor. Also, to perform 1, 10, 100 track jump, the signal from IC303 (mechanism control) is controlled at IC201 (CX20108) and the linear motor is driven by the sled signal. This allows 1, 10, 100 track jump to be performed smoothly.



Linear Motor Servo Circuit Structure

SECTION 2
BLOCK DIAGRAM

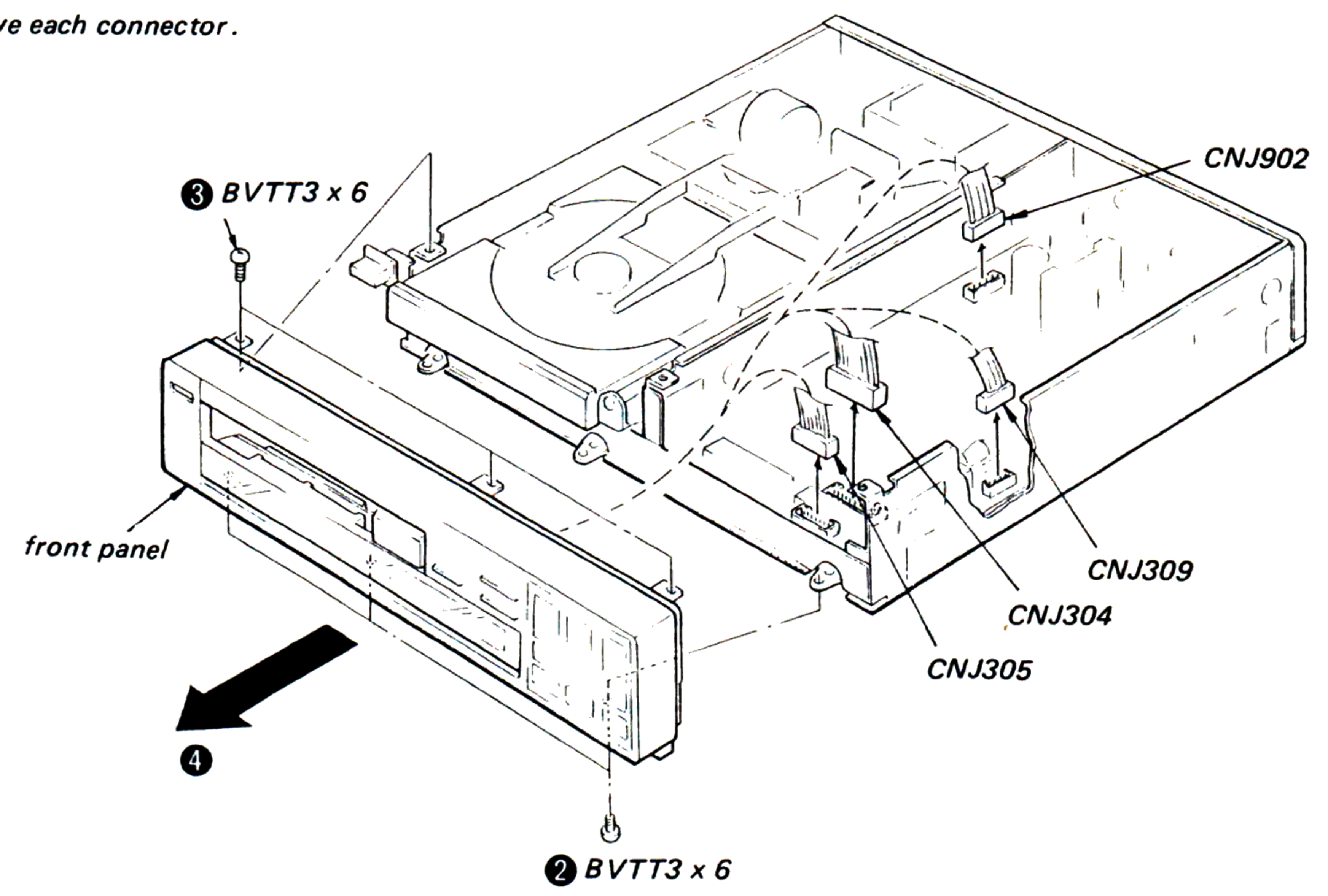
SECTION 3
DISASSEMBLY

3-1. DISASSEMBLY

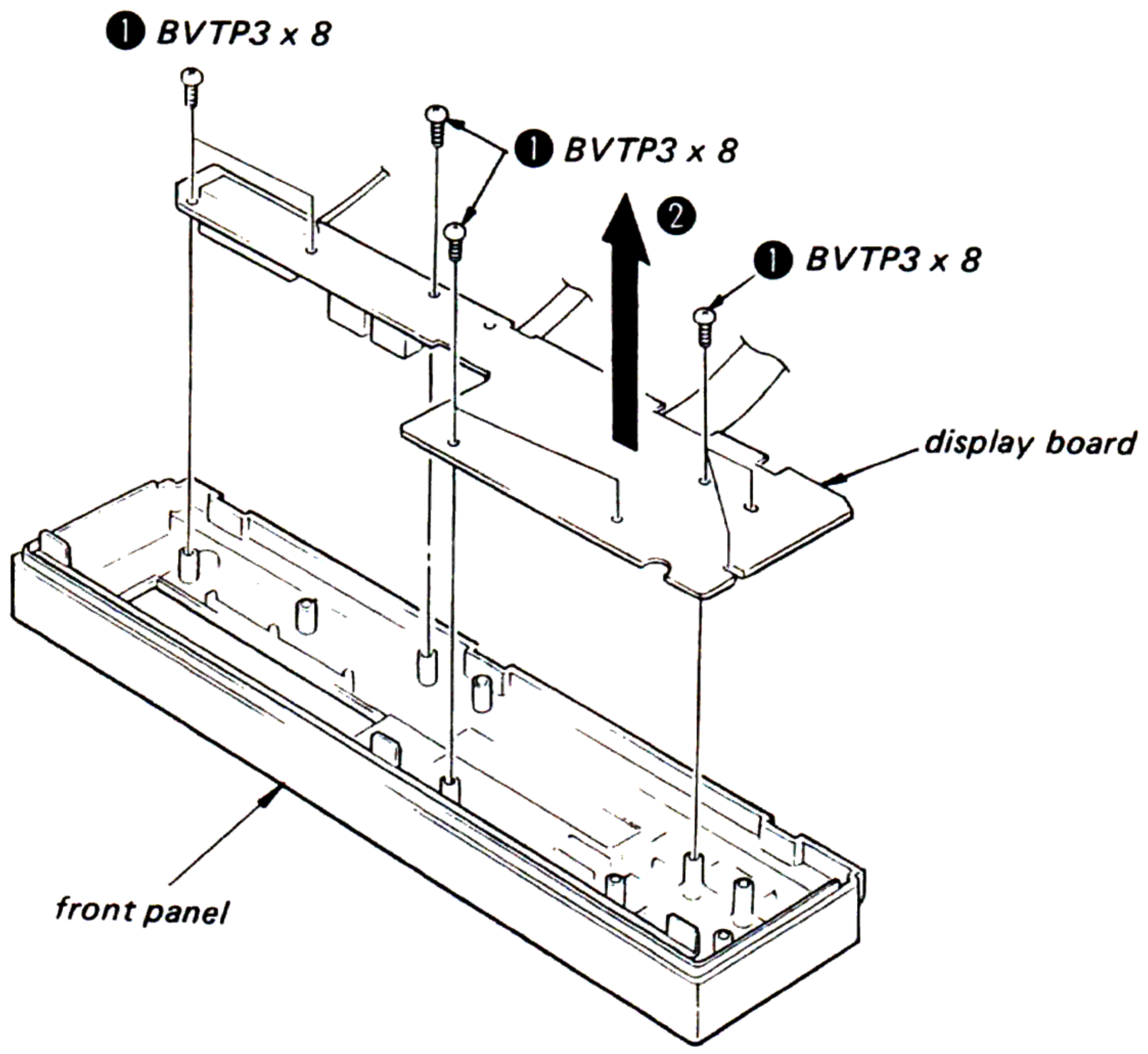
Note: Follow the disassembly procedure in the numerical order given.

- Remove the case.
  (4 case retaining screws with claw.)

FRONT PANEL

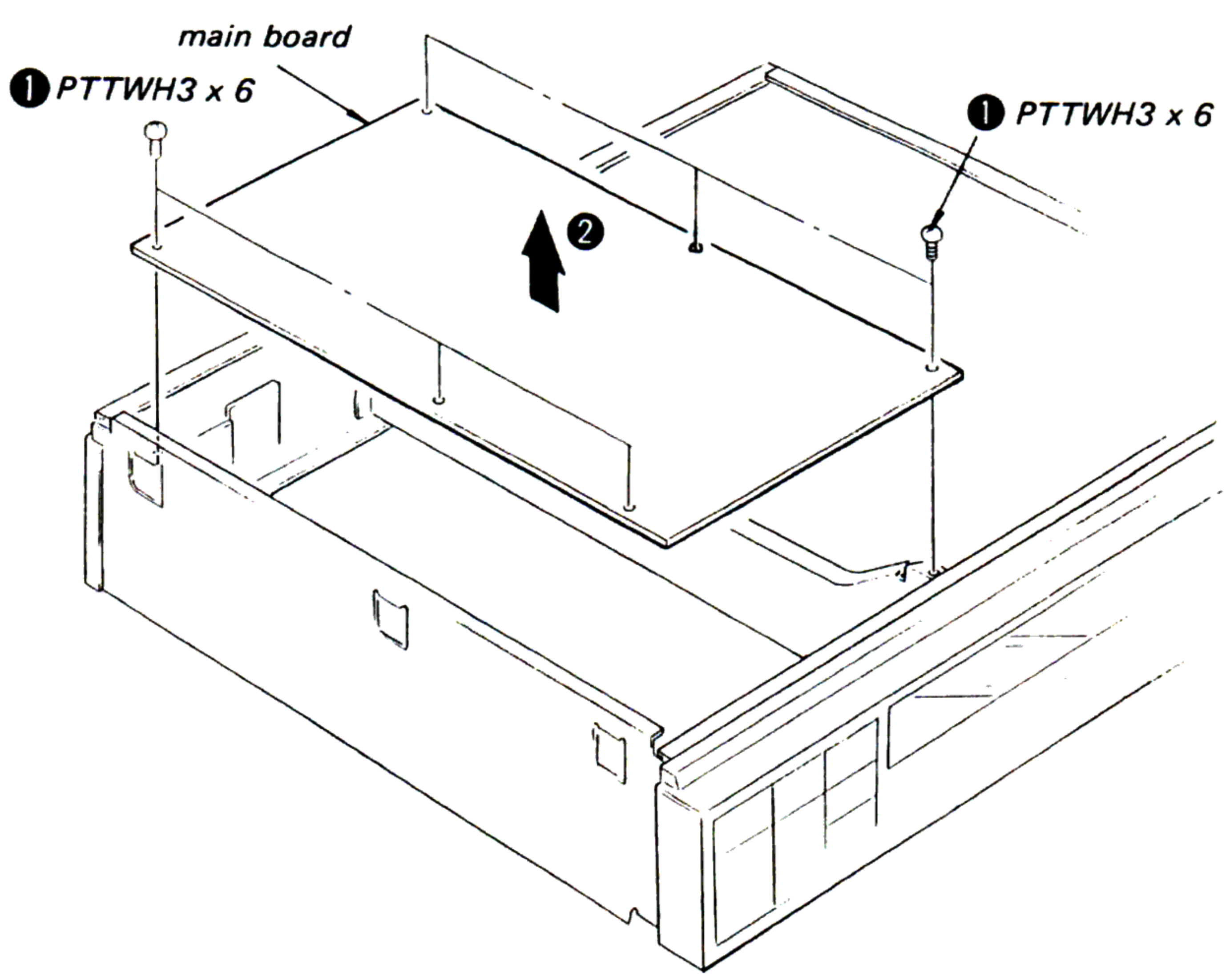


DISPLAY BOARD

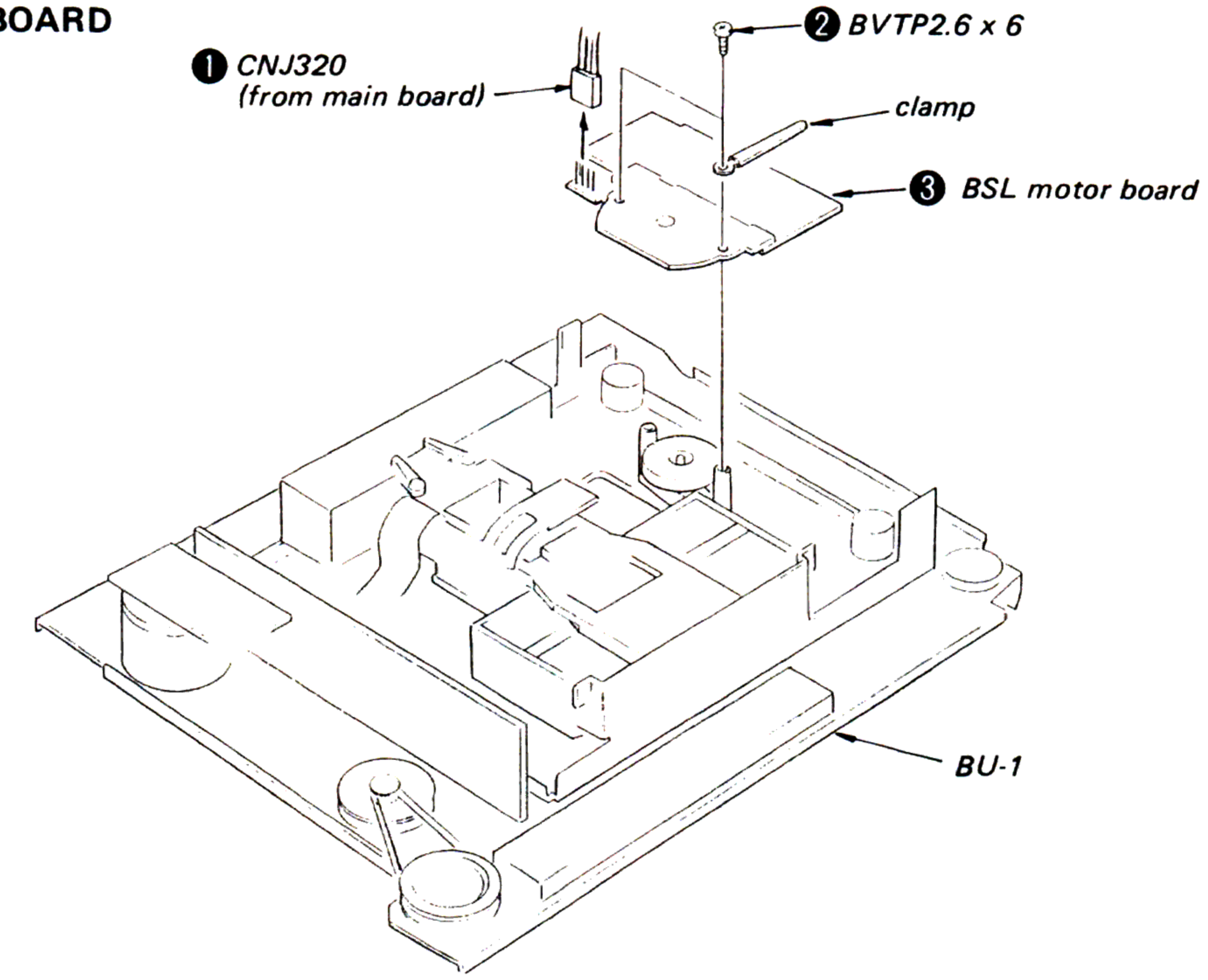


- Remove the bottom plate.
  (+BVTT3 x 6 8 screws)

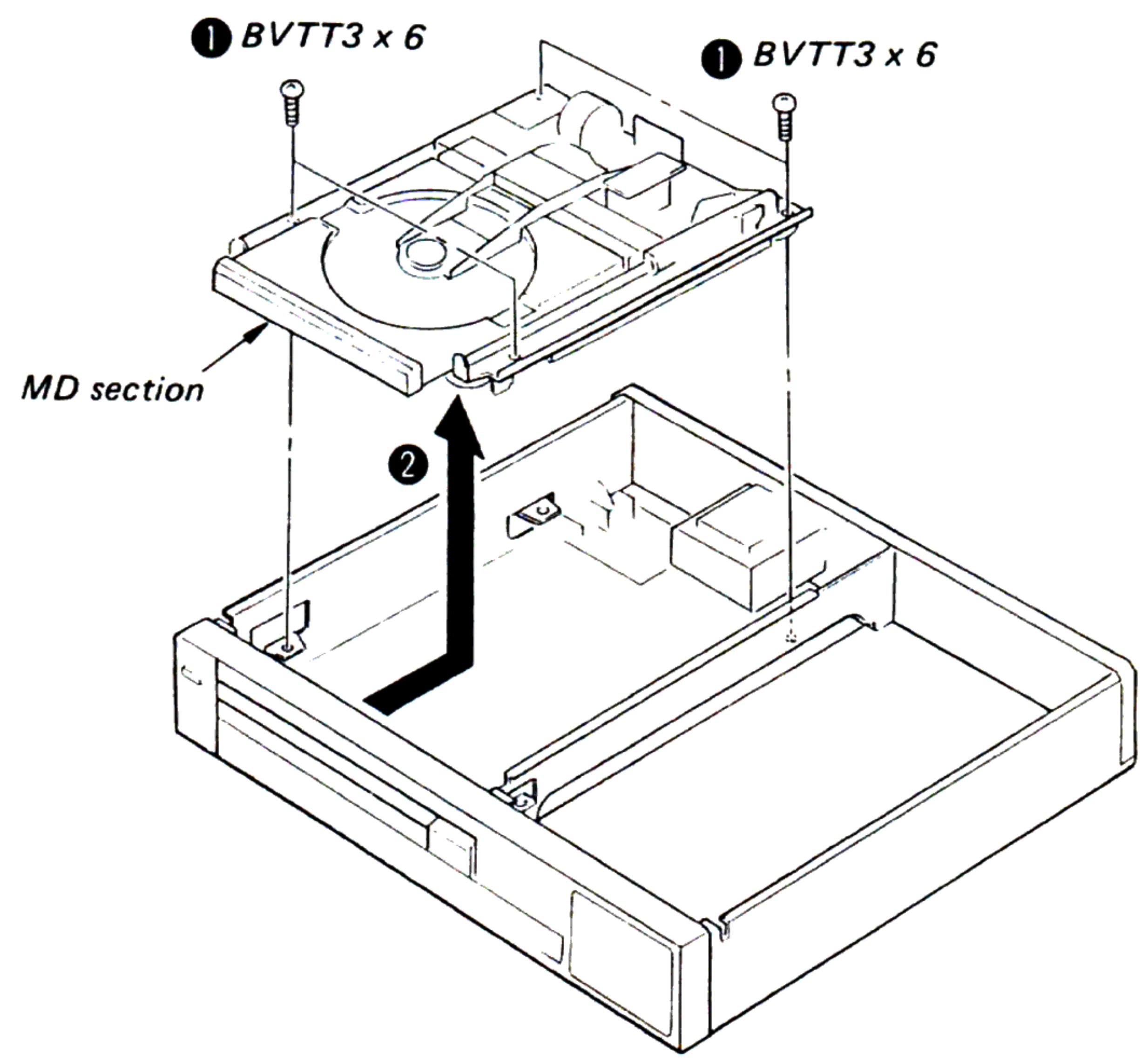
MAIN BOARD



BSL MOTOR BOARD

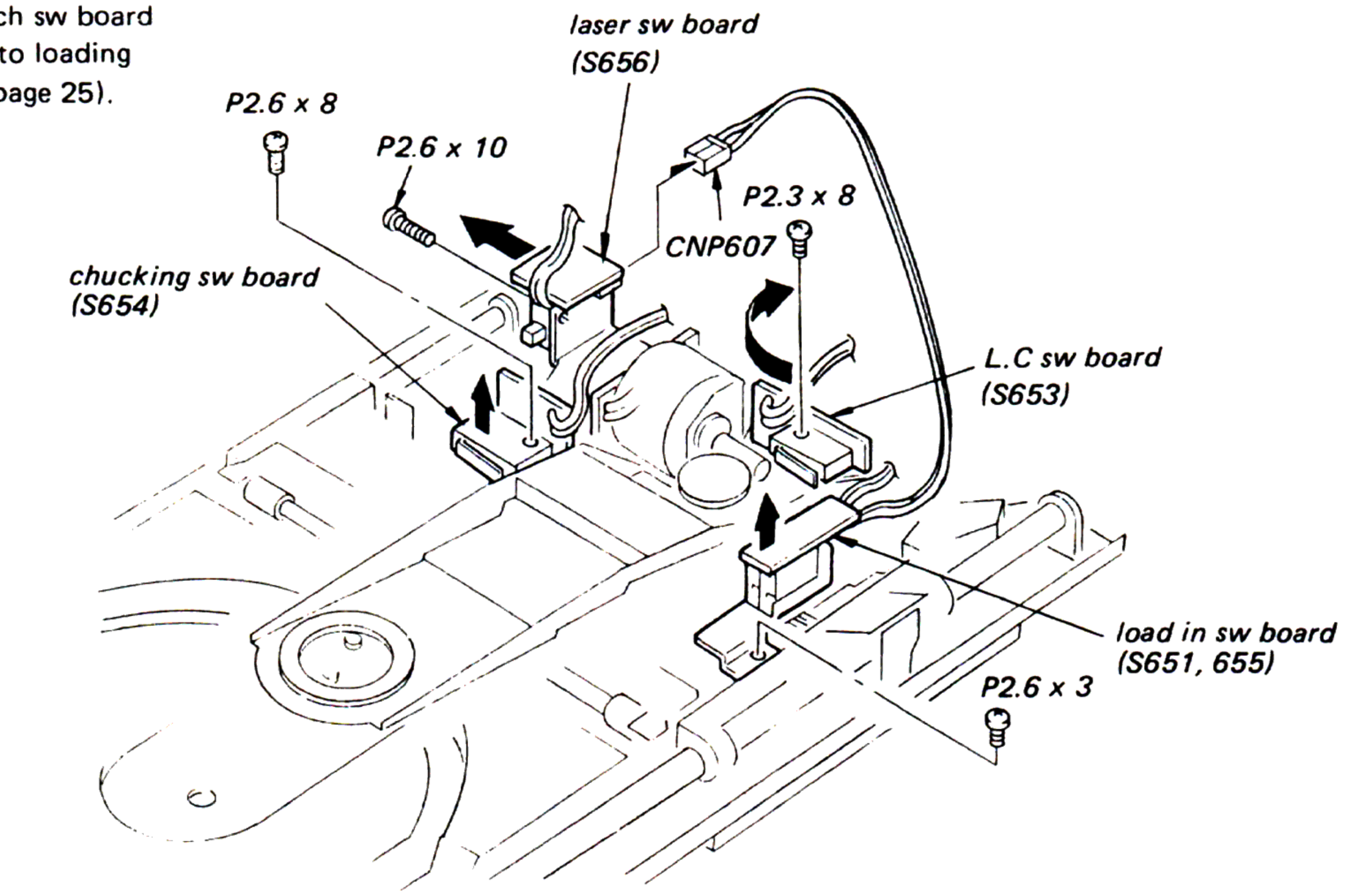


MD SECTION

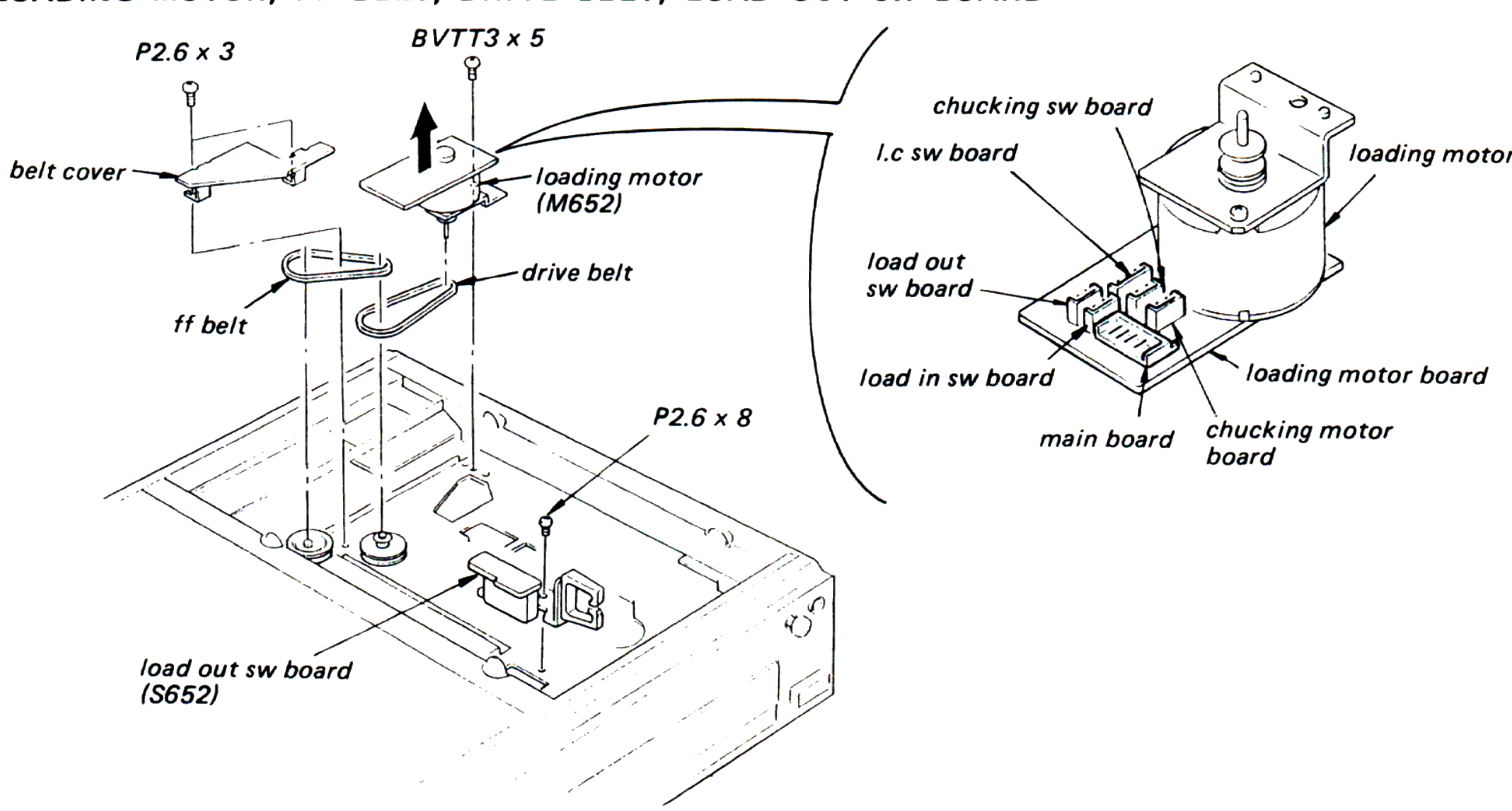


SWITCH BOARDS

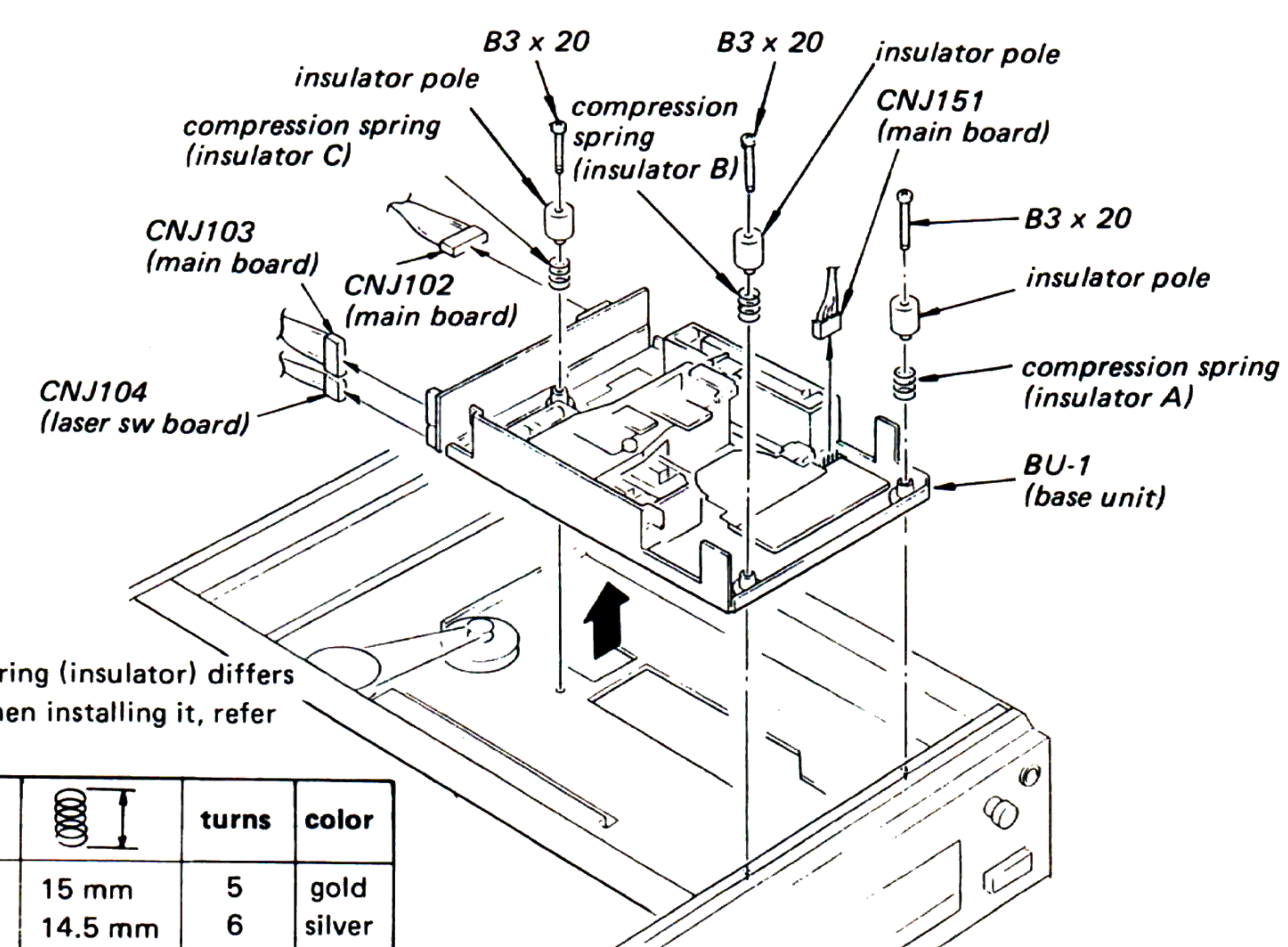
- All wires of each sw board are connected to loading motor board (page 25).



LOADING MOTOR, FF BELT, DRIVE BELT, LOAD OUT SW BOARD



BU-1 (BASE UNIT)



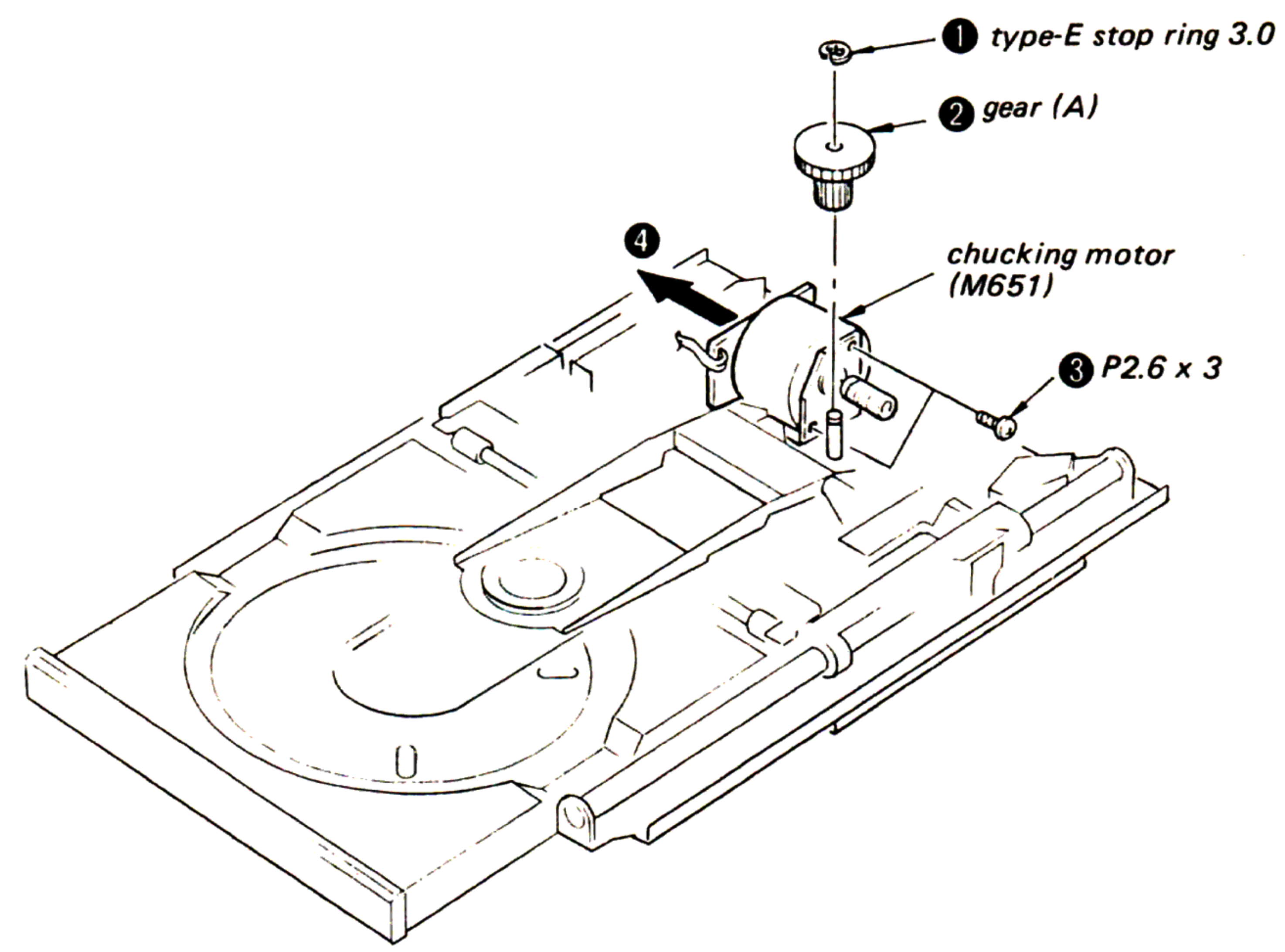
Note (1): When replacing BU-1, refer to "NOTES ON HANDLING BU-1 (BASE UNIT) on page 5 to prevent damage caused by static electricity.

Note (2): Each compression spring (insulator) differs in size and turns. When installing it, refer to the following list.

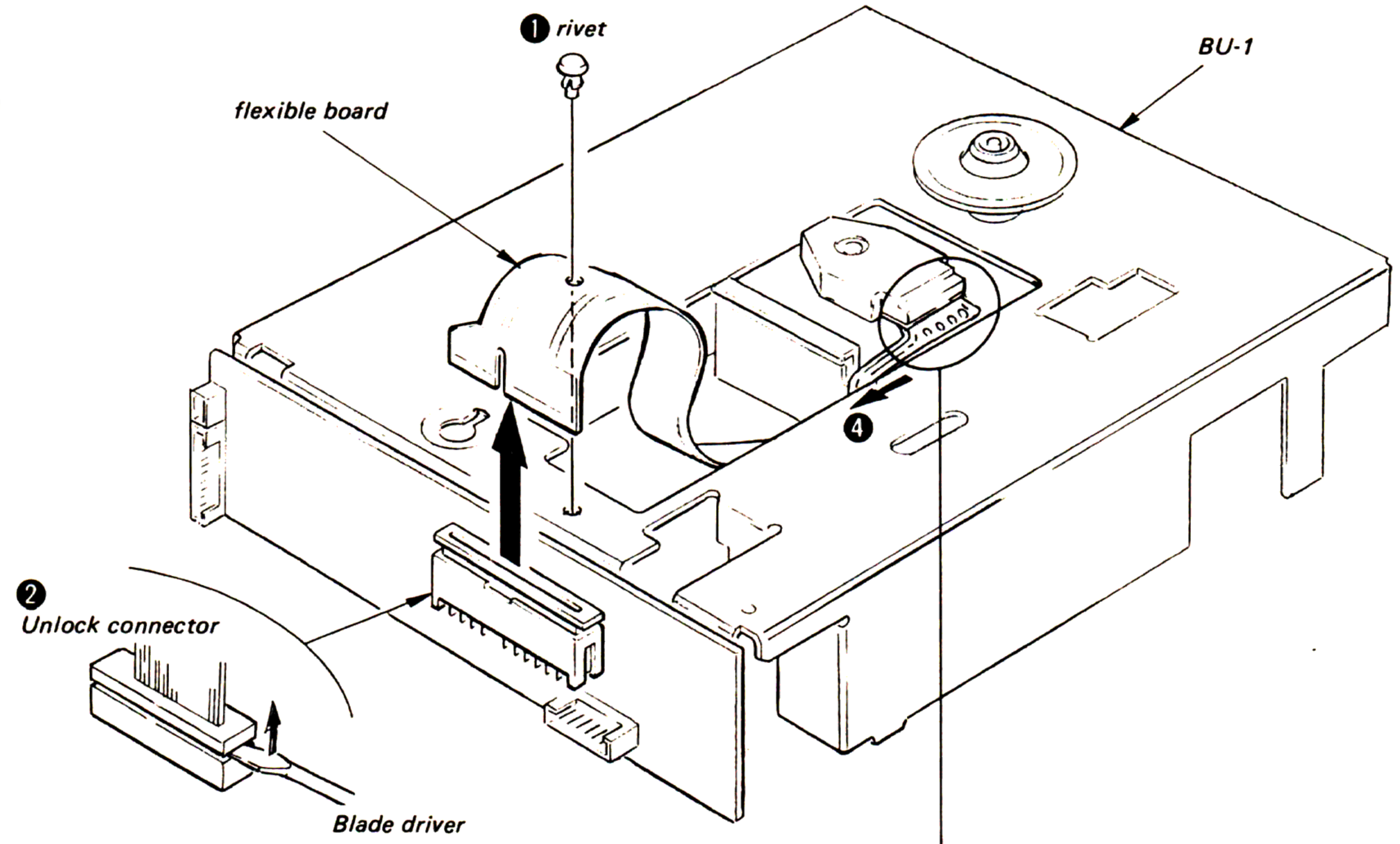
compression spring (insulator)		turns	color
A	15 mm	5	gold
B	14.5 mm	6	silver
C	20.5 mm	5	black

Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.

CHUCKING MOTOR (M651)

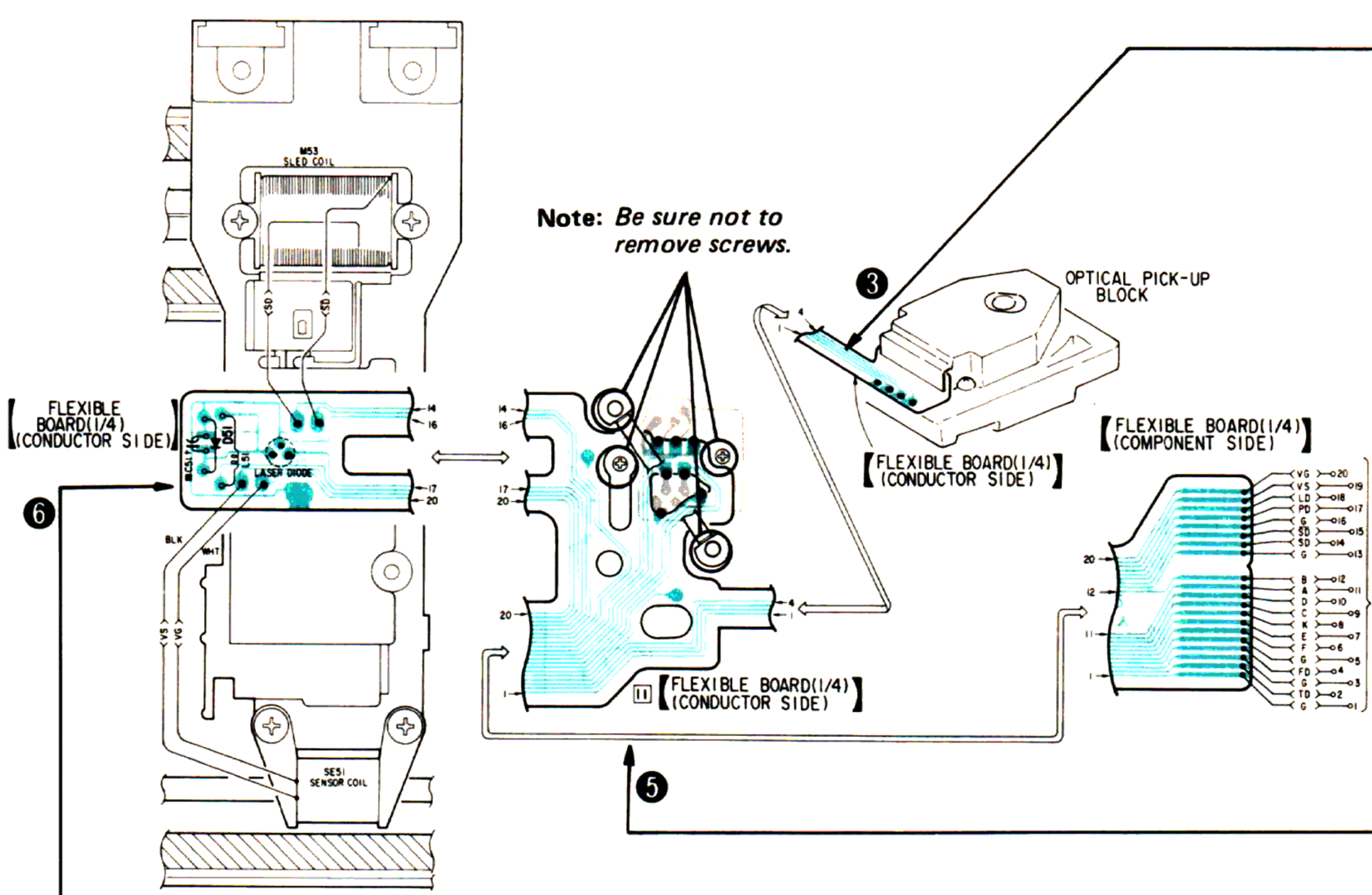


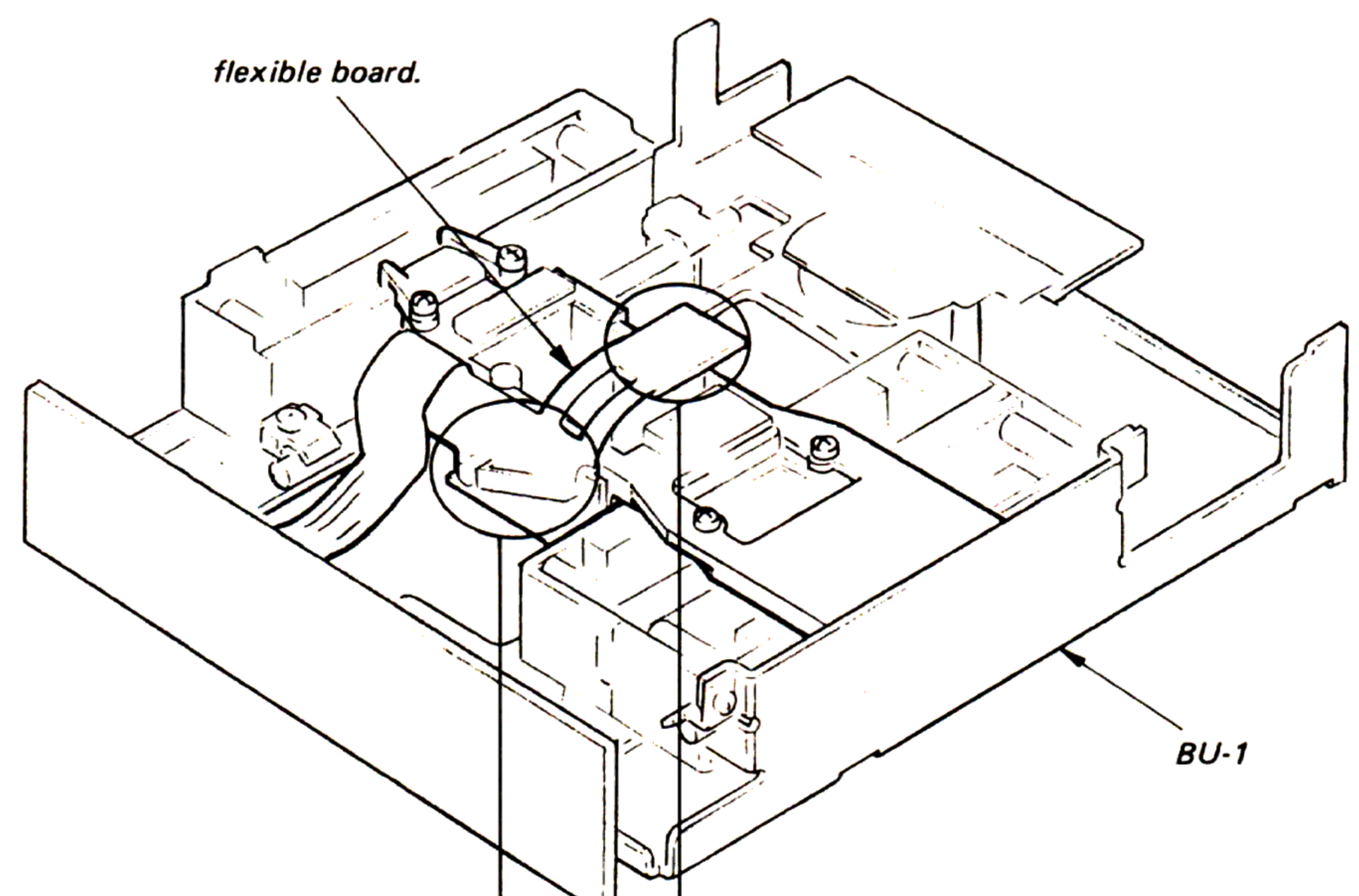
Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.



FLEXIBLE BOARD

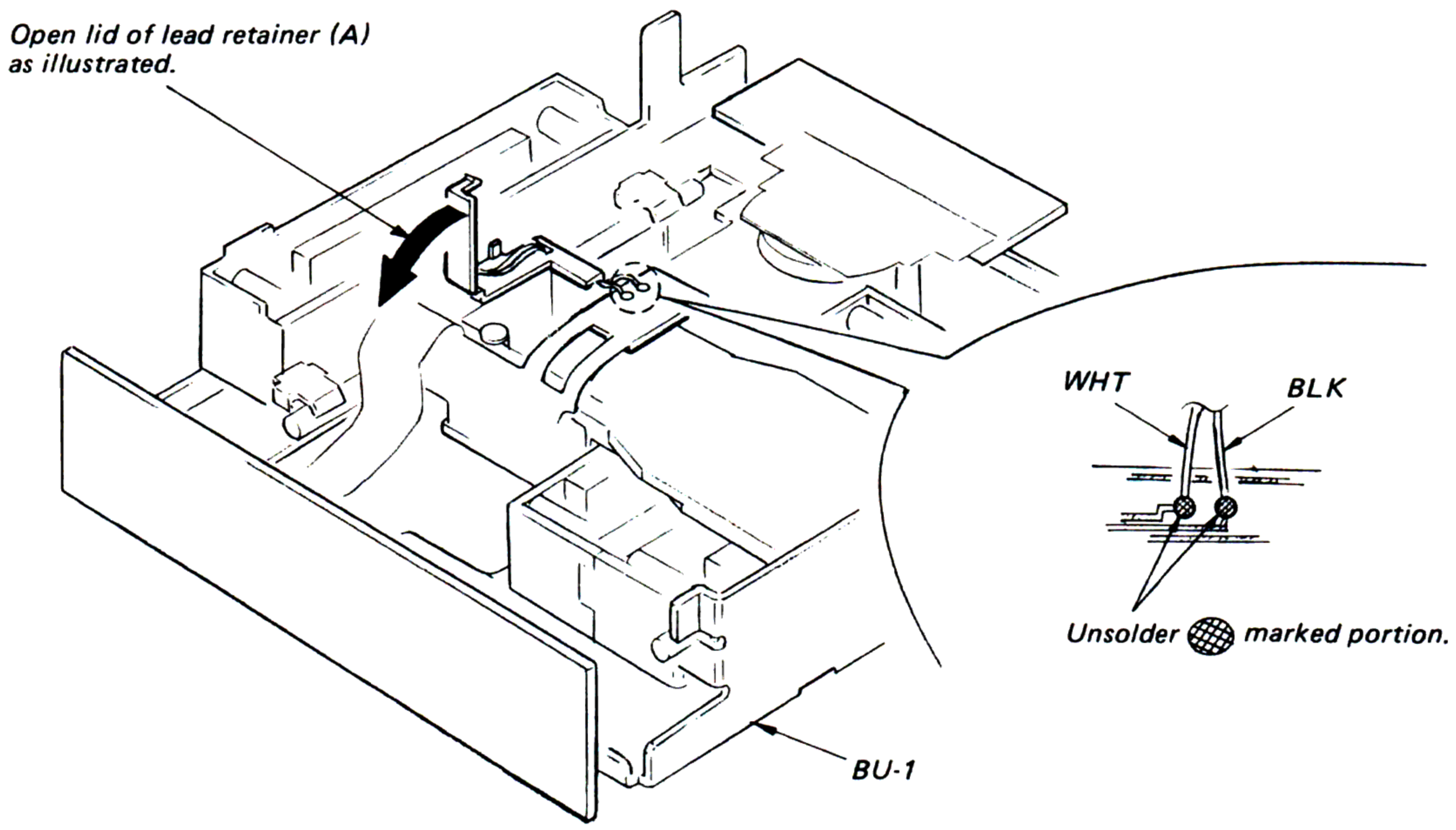
Unsolder ● marked portion of ref. no. ❸, ❺, and ❻ and remove flexible board.

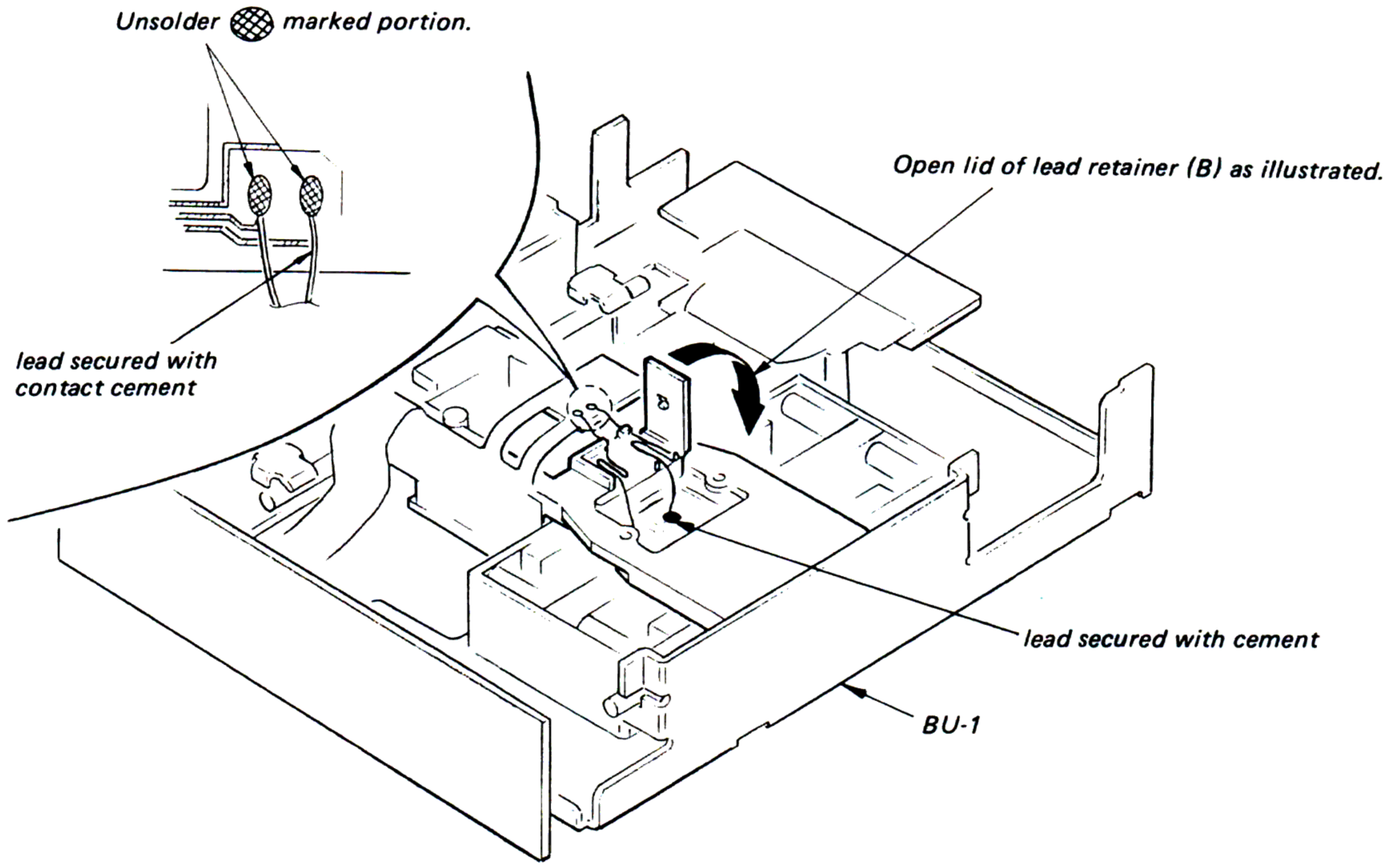




Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.

SLED/SENSOR COIL (1)

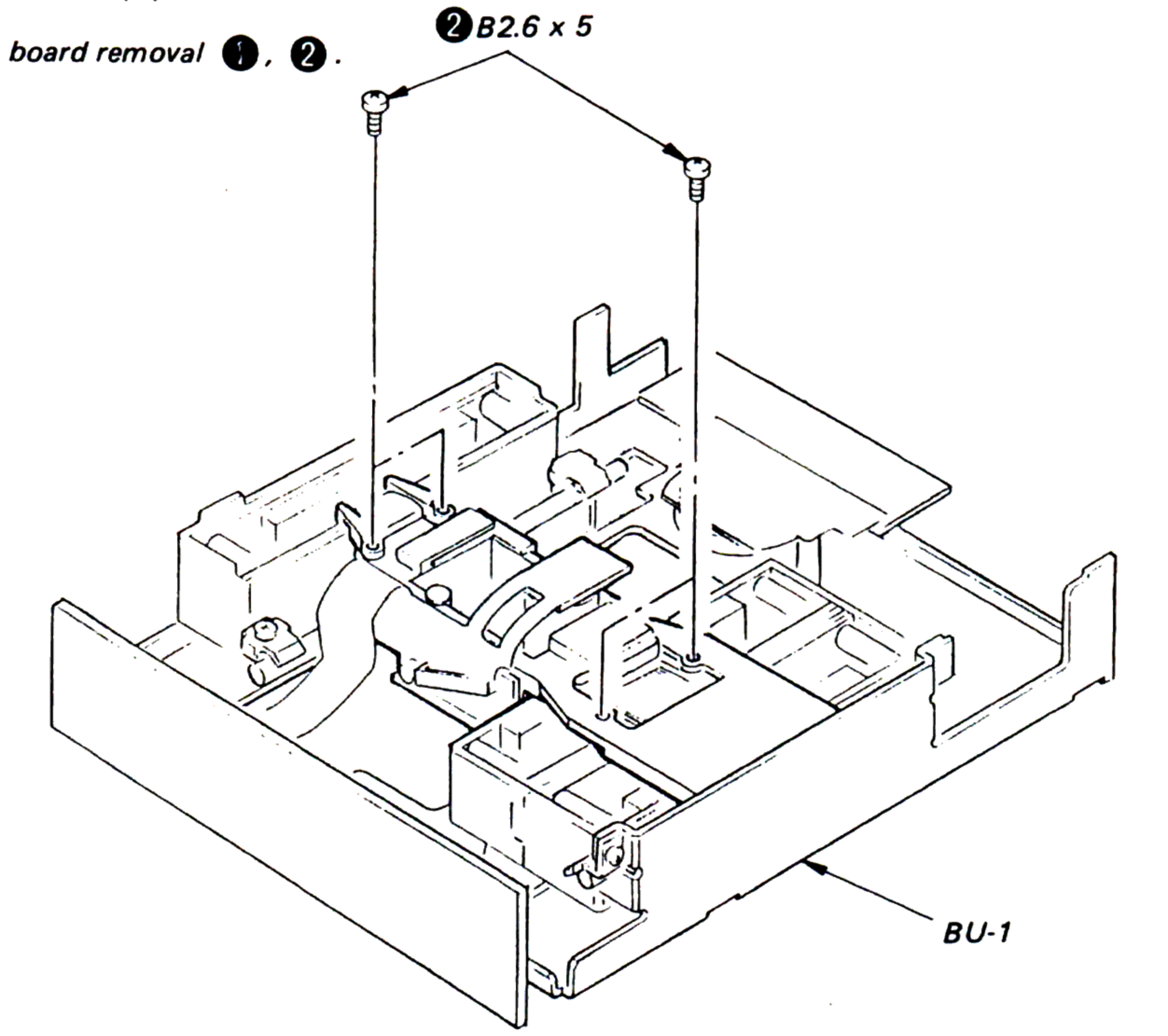




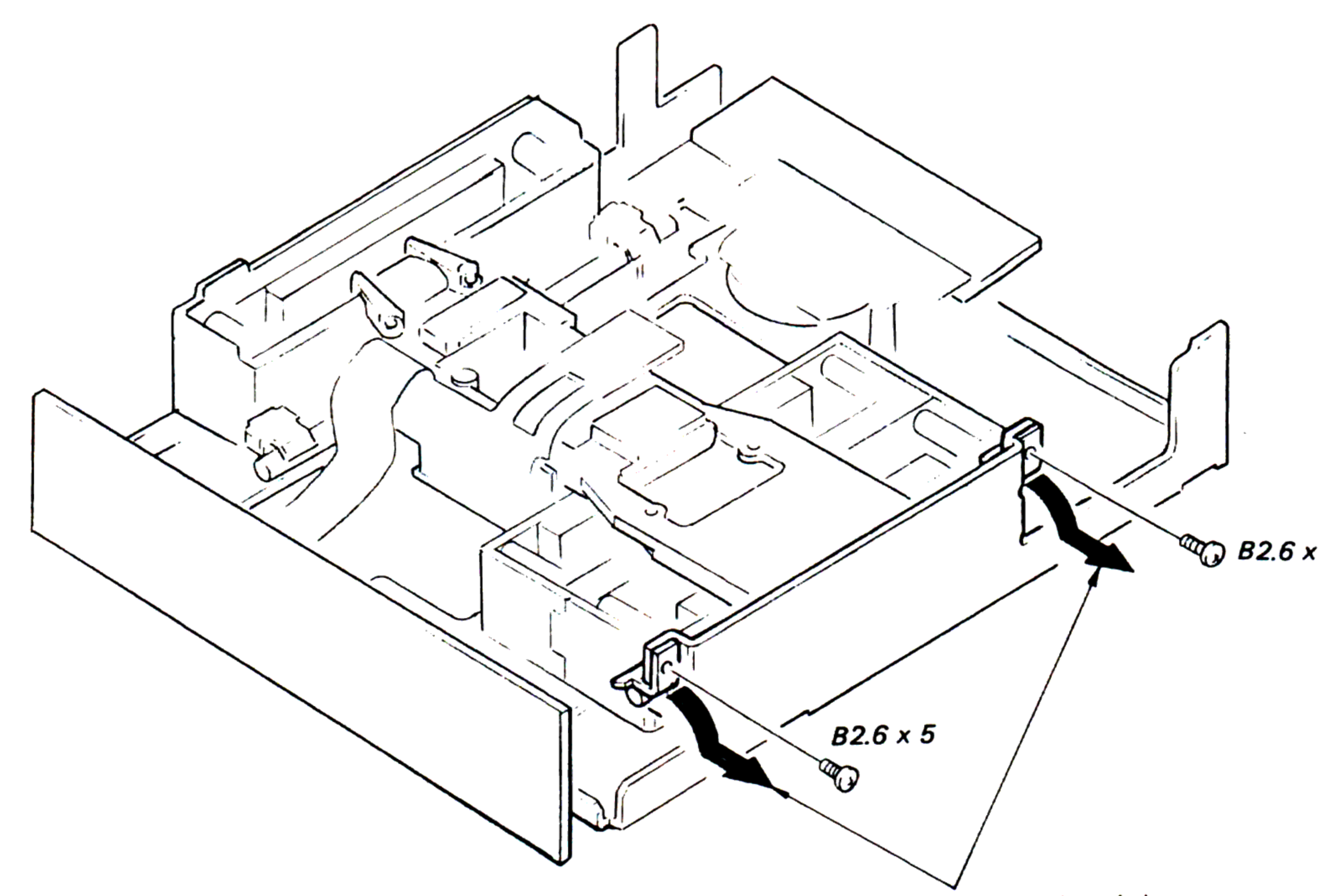
Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.

SLED/SENSOR COIL (2)

❶ Perfrom flexible board removal ❶, ❷.

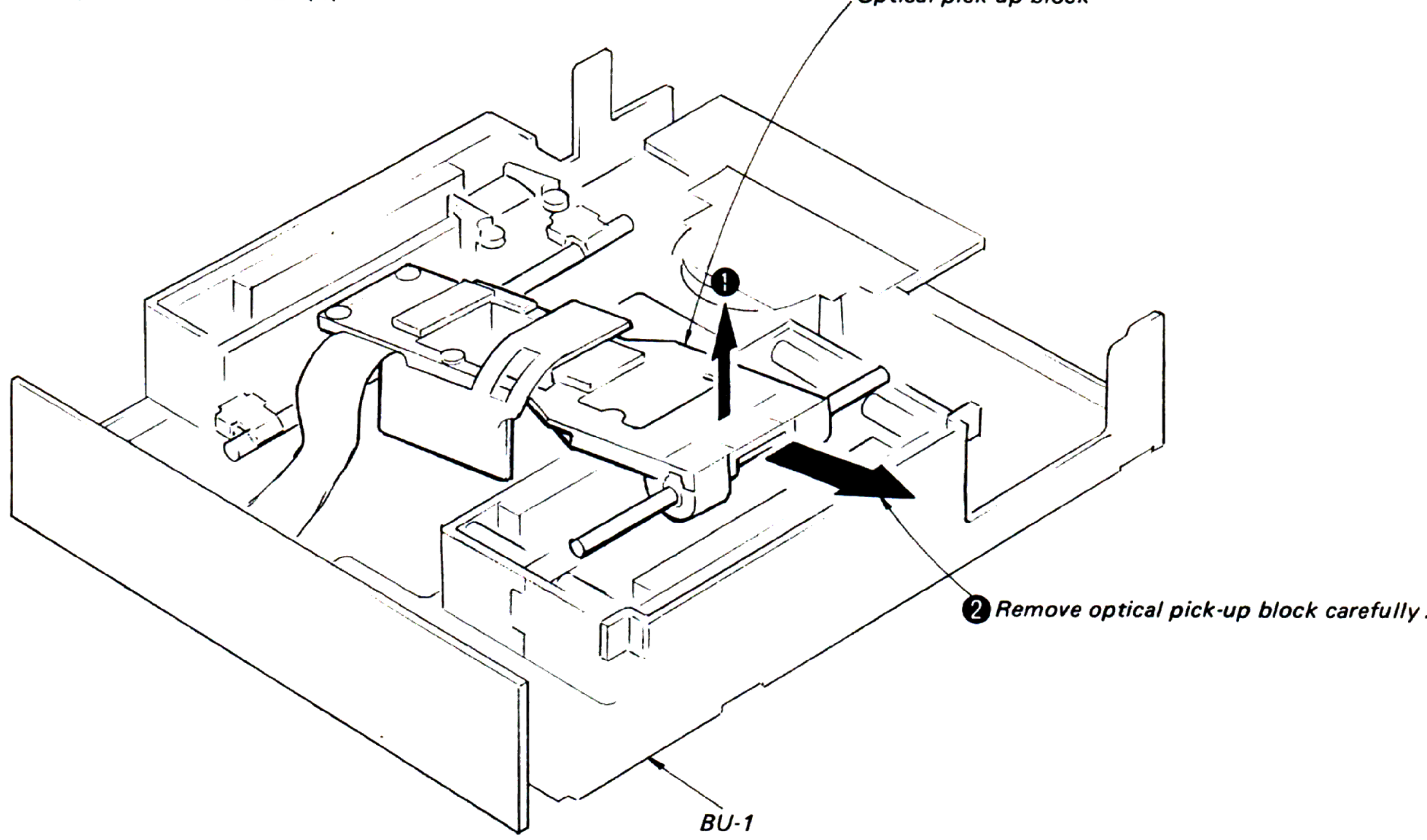


SLED/SENSOR COIL (3)



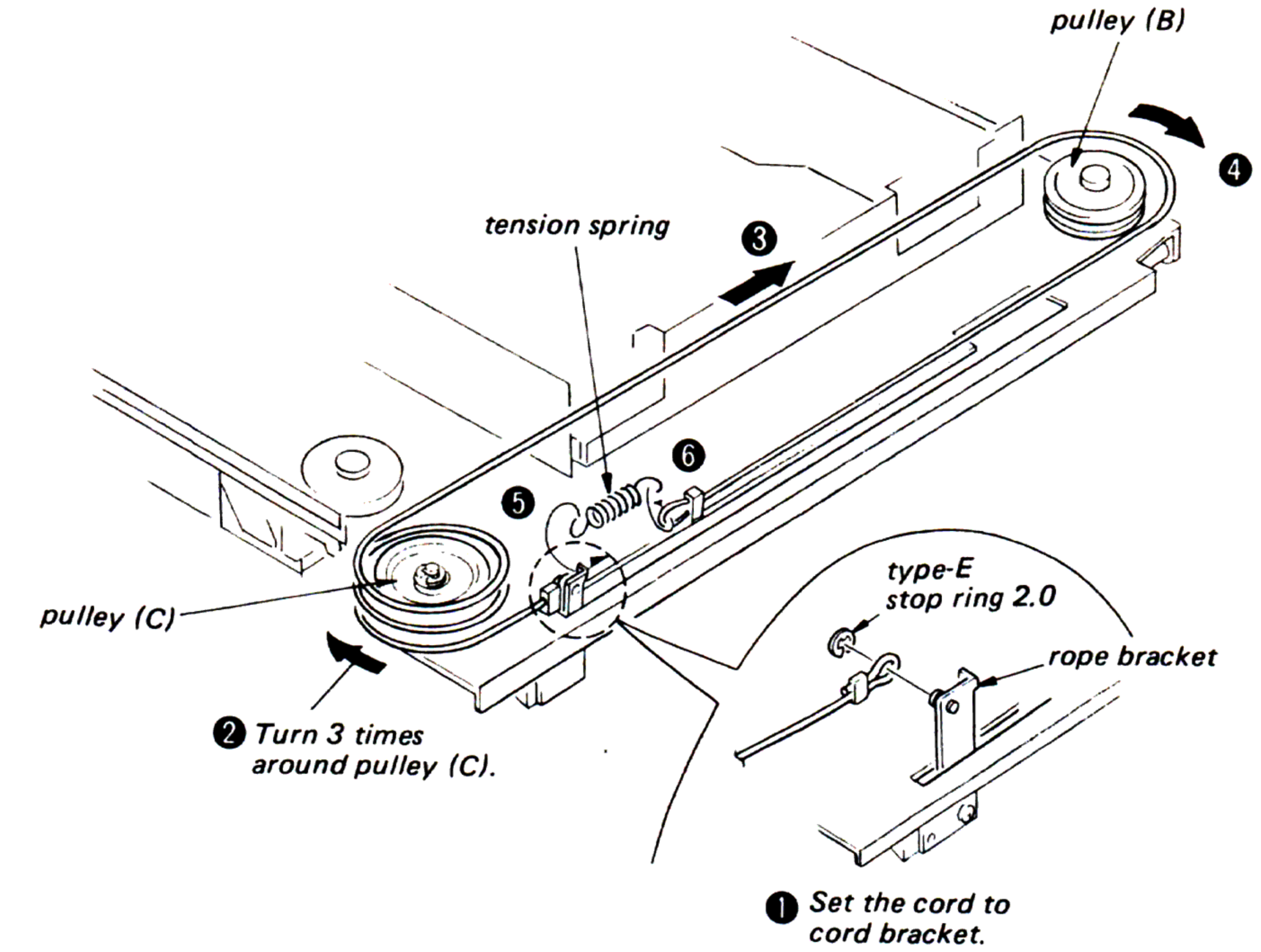
Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.

SLED/SENSOR COIL (4)

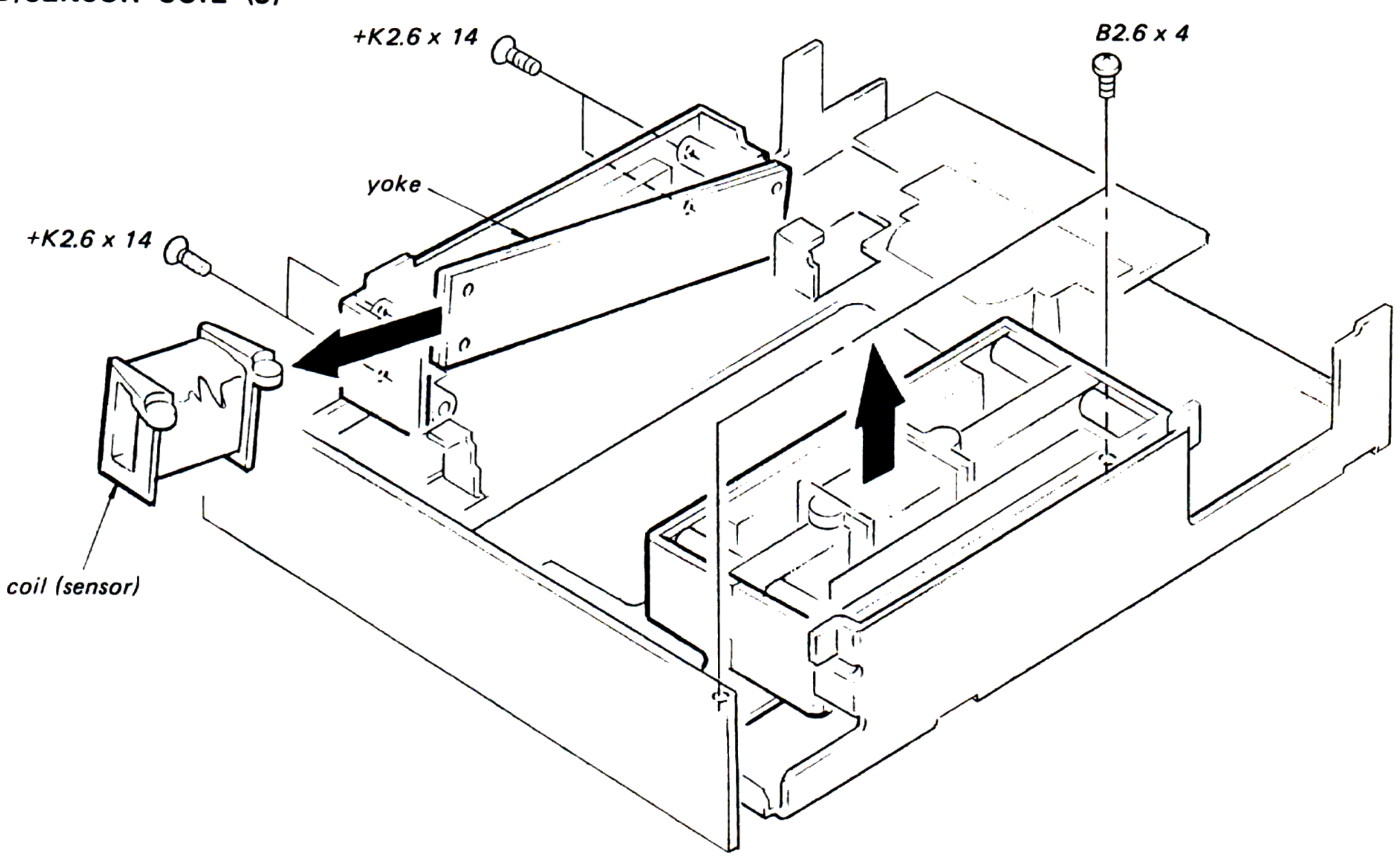


Refer to "NOTES ON HANDLING BU-1 (BASE UNIT)" on page 5 to prevent damage caused by static electricity.

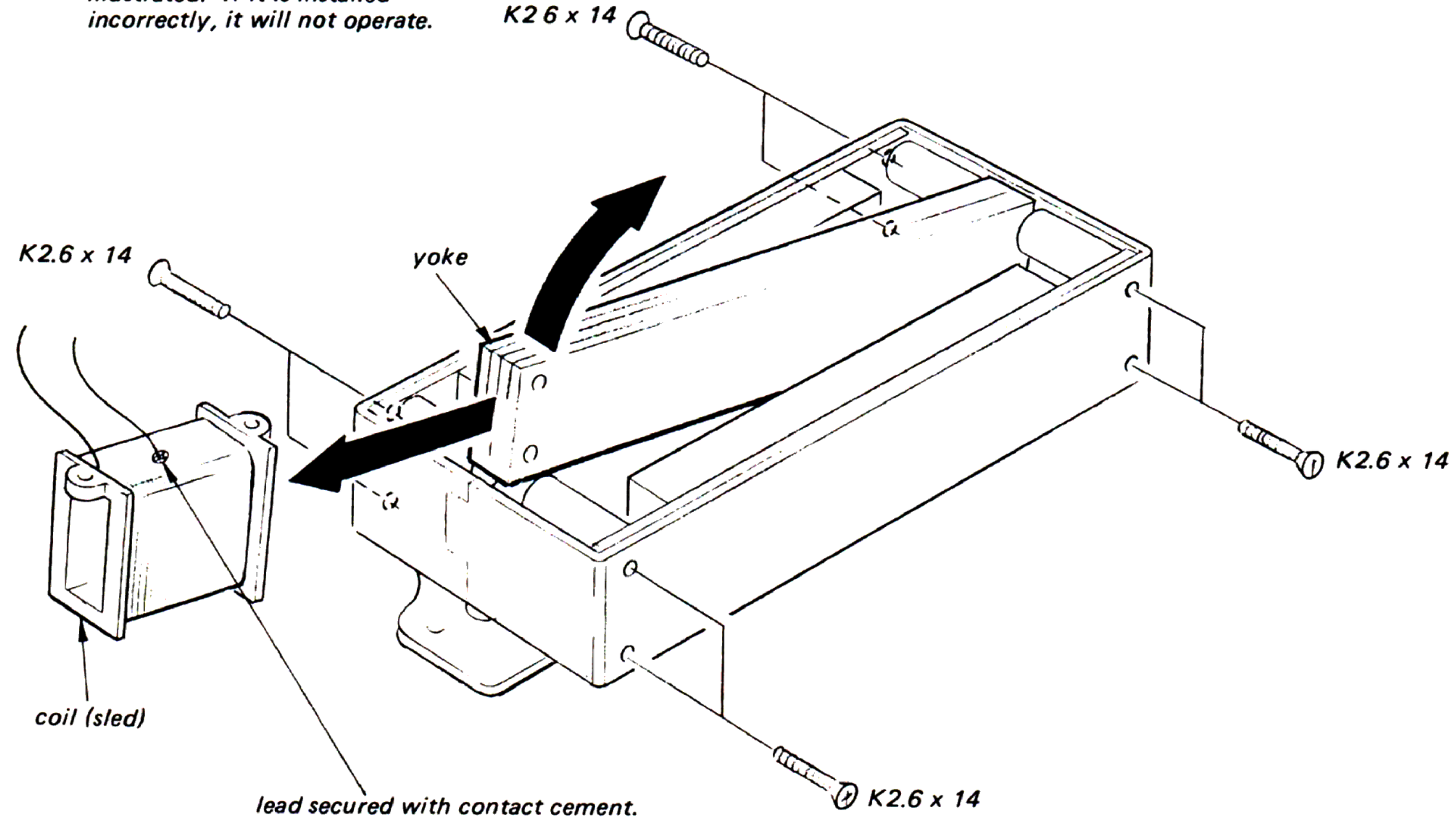
ROPE STRINGING



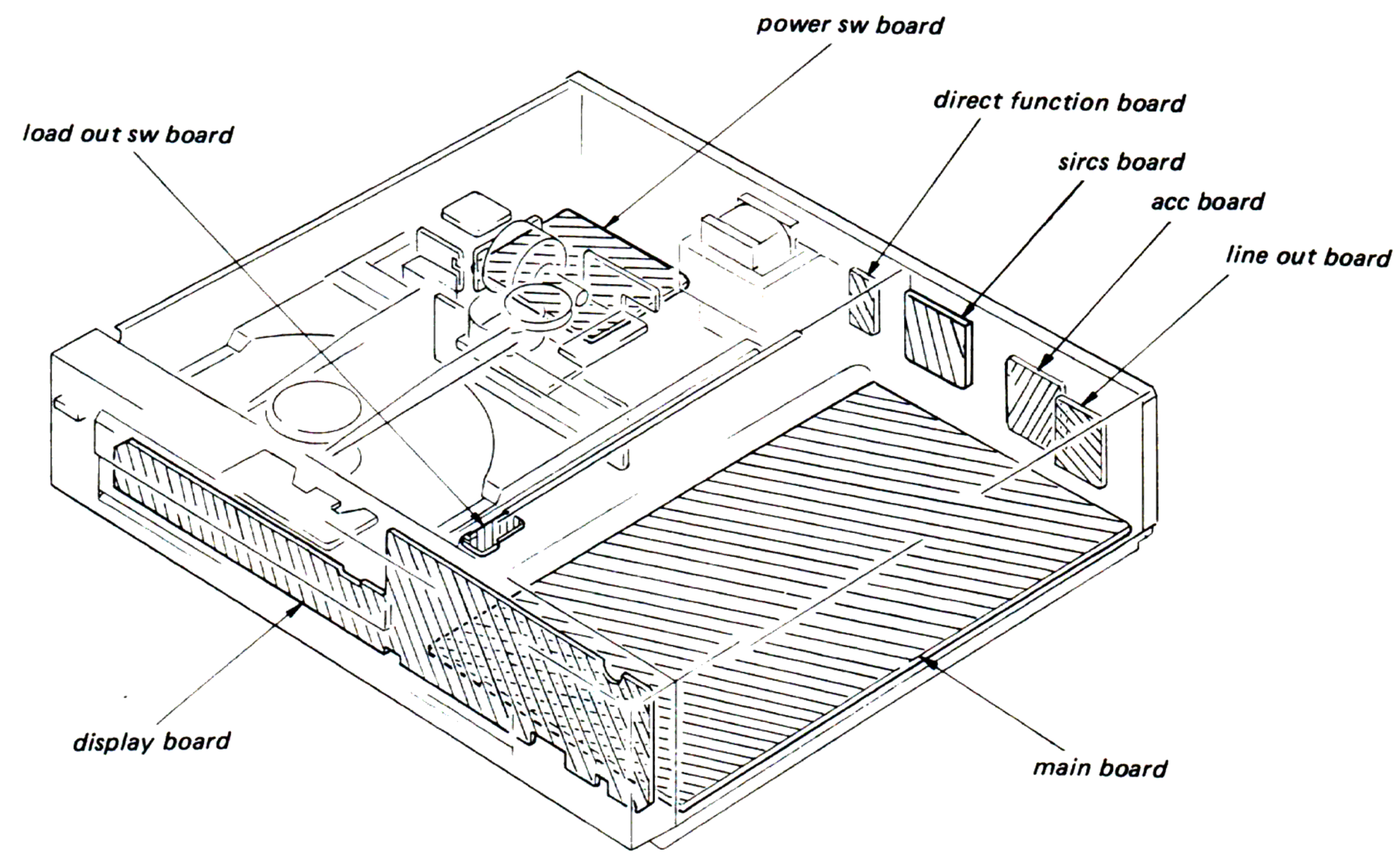
SLED/SENSOR COIL (5)



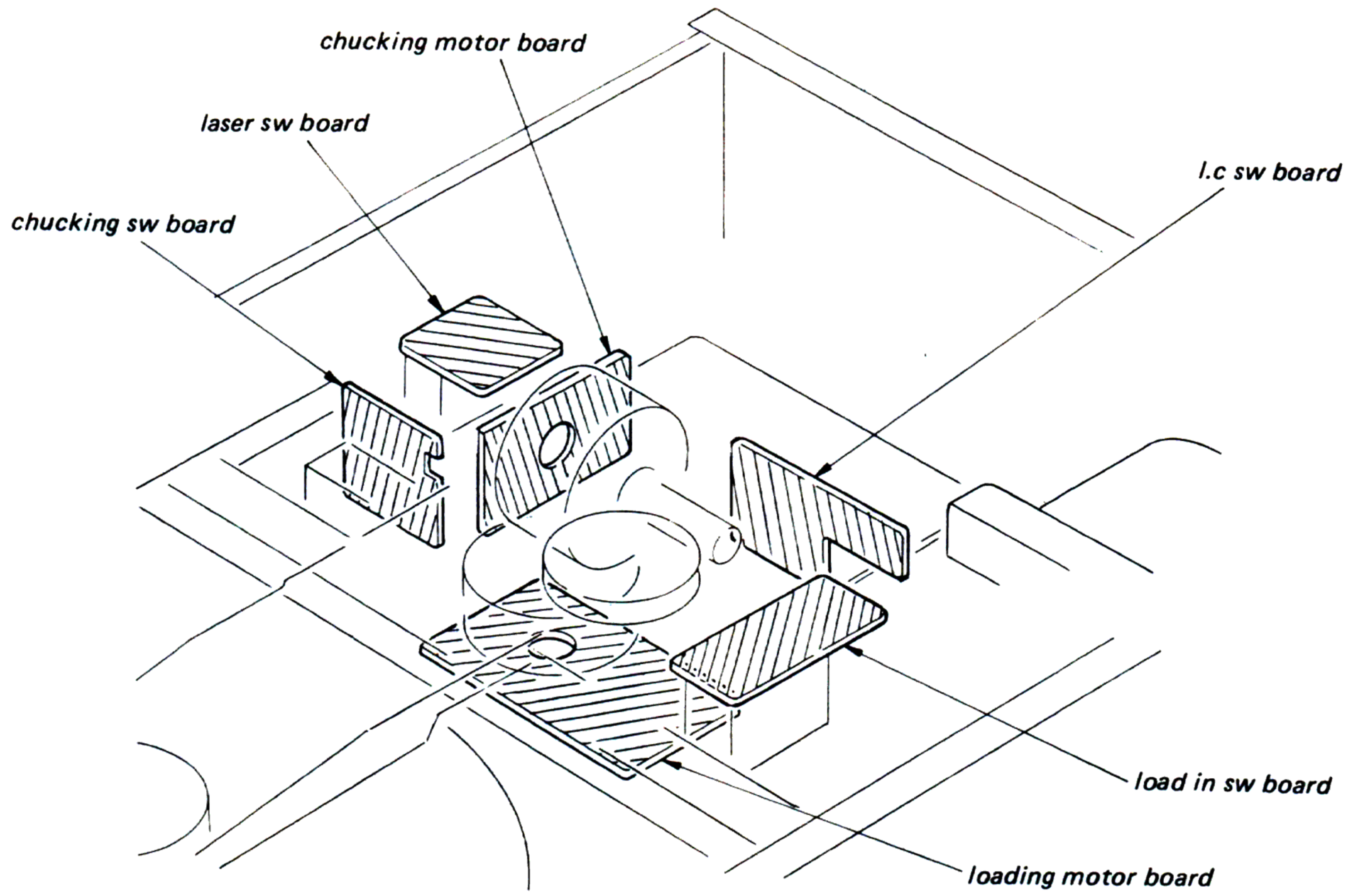
Note: *When installing sled coil, install as illustrated. If it is installed incorrectly, it will not operate.*



3-2. PC BOARDS LAYOUTS



MECHANICAL SECTION



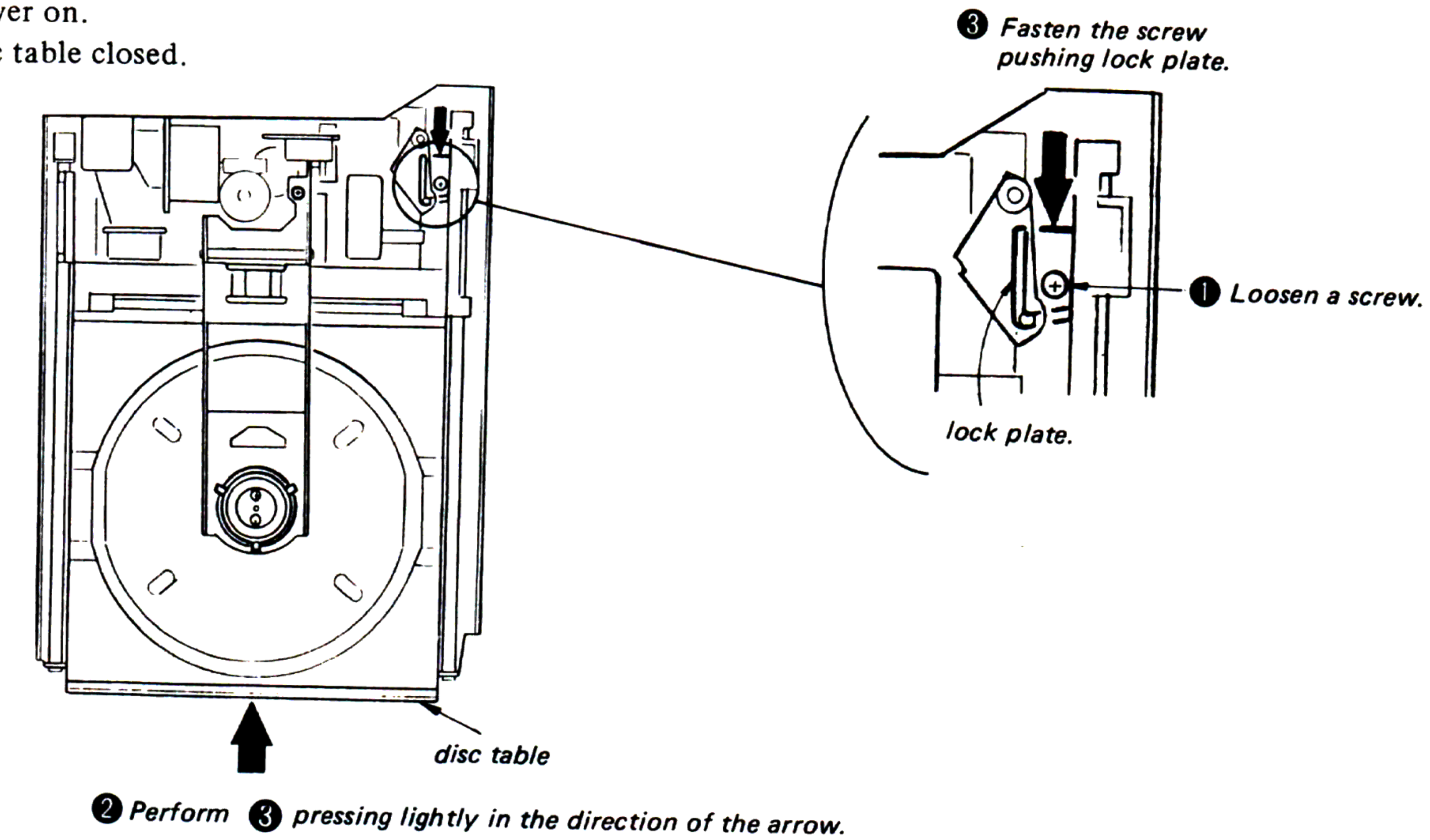
SECTION 4
ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENT

DISC TABLE POINT ADJUSTMENT

Setting:

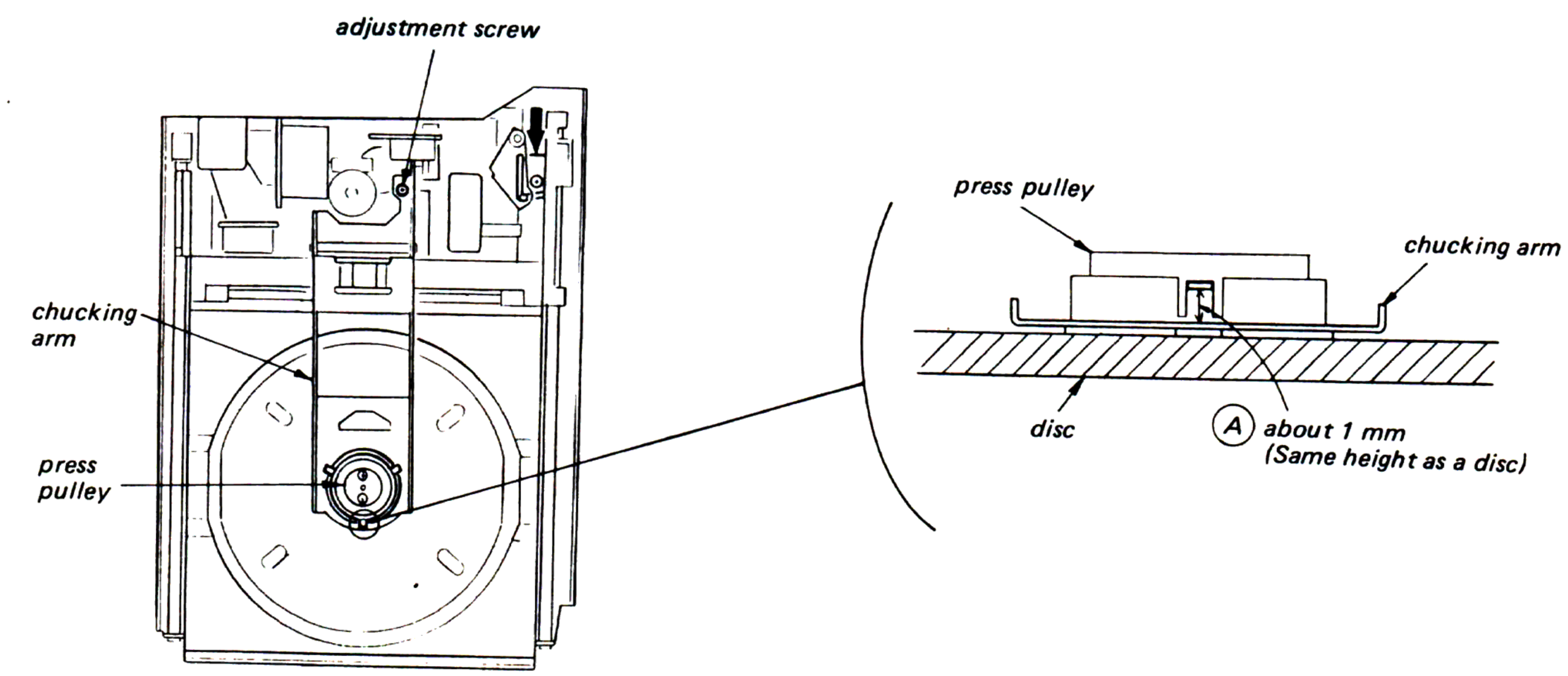
- Turn power on.
- Keep disc table closed.



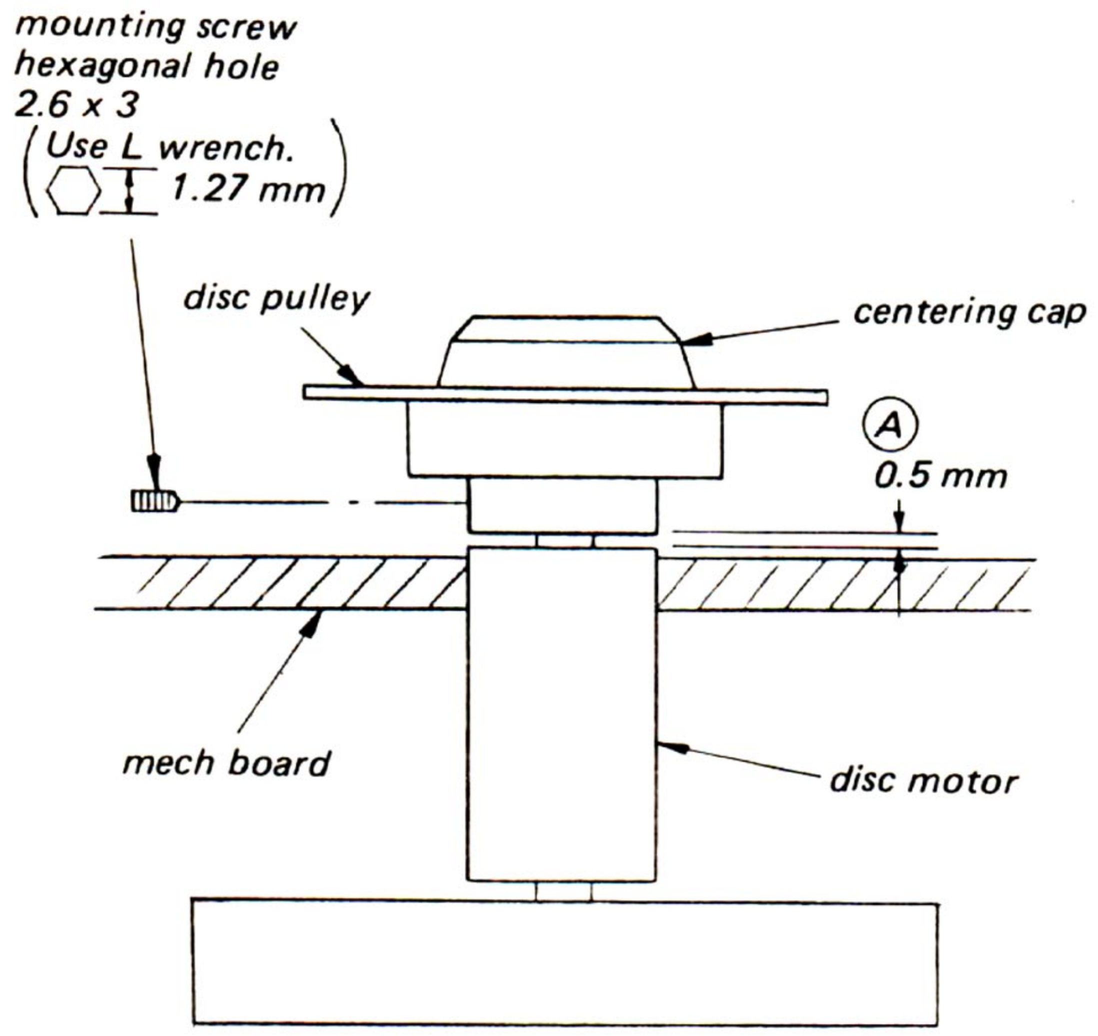
CHUCKING ARM HEIGHT ADJUSTMENT

Adjust the height of portion Ⓐ with disc inserted and disc table closed.

Repeat loading and confirm that chucking arm does not touch disc pulley.



Disc Pully Height Adjustment



Install the disc pulley so that clearance (A) is 0.5 mm.

Confirm that centering cap moves up and down.

4-2. ELECTRICAL ADJUSTMENTS

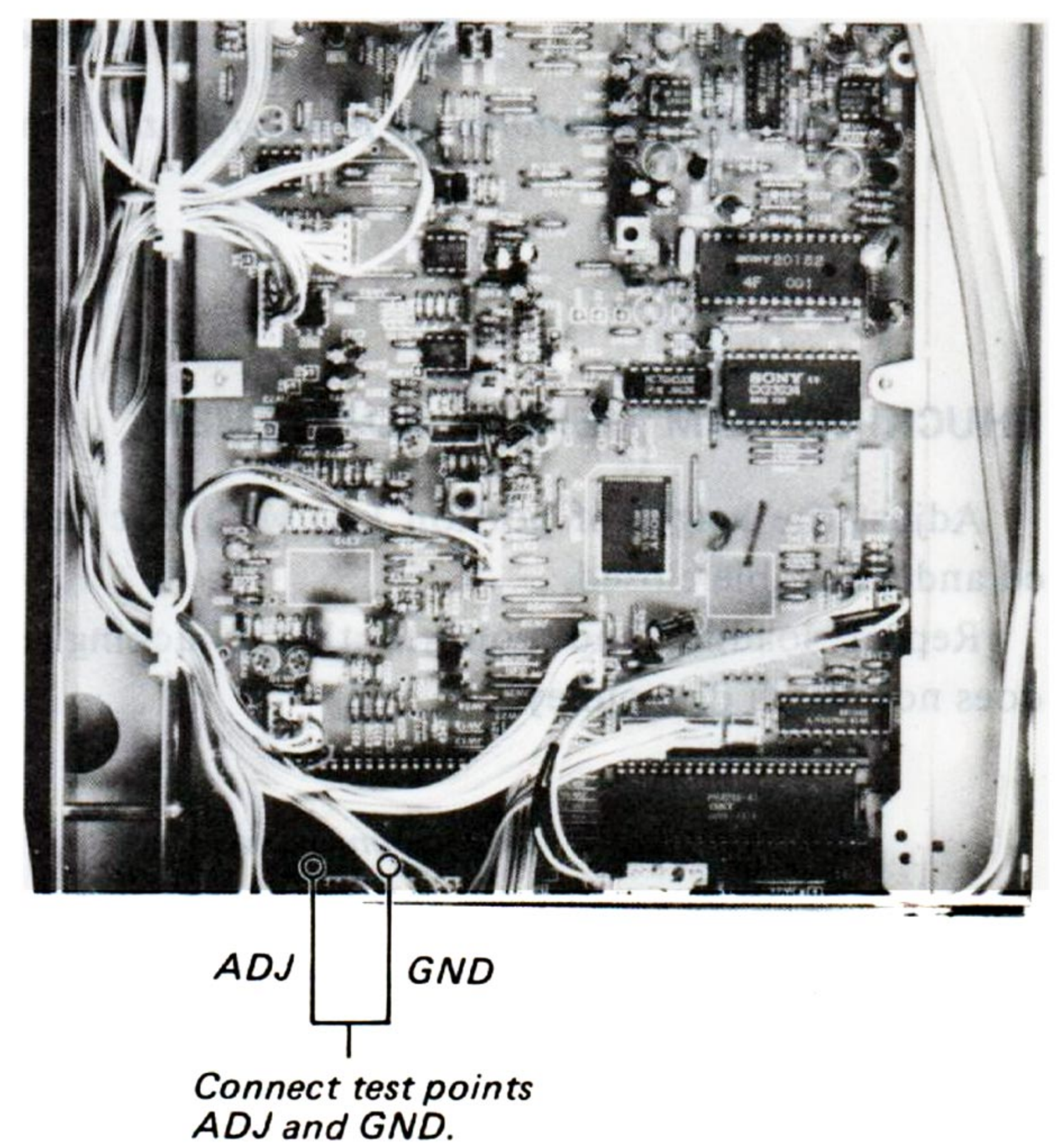
1. Perform adjustments in the order given.
2. Use YEDS-1 disc unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.

Adjustment Mode

1. Connect main amp board test point ADJ and GND.
   (This is to prevent the disc table from opening even though pits are not read, by making microcomputer IC303 pin (4) low.)
2. Turn POWER switch on.
   (To reset microcomputer.)

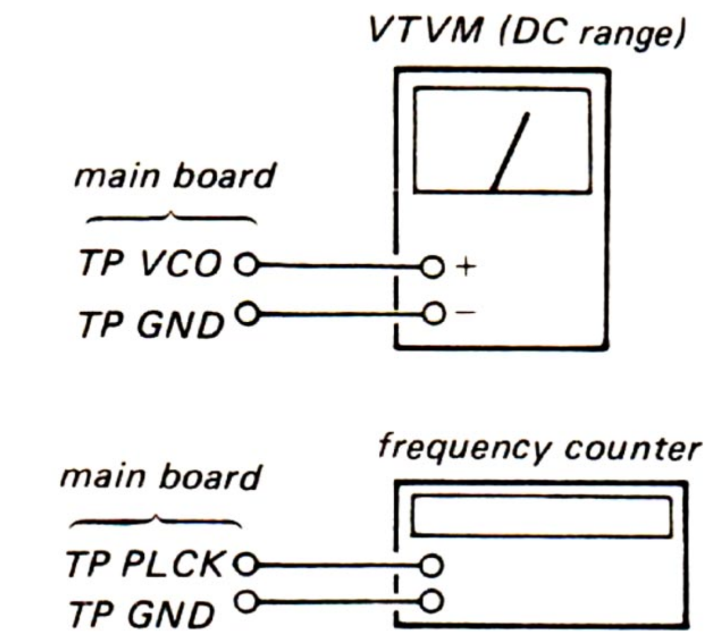
After adjustment, remove the lead wire connecting test points ADJ and GND.

Adjustment Location: main board.



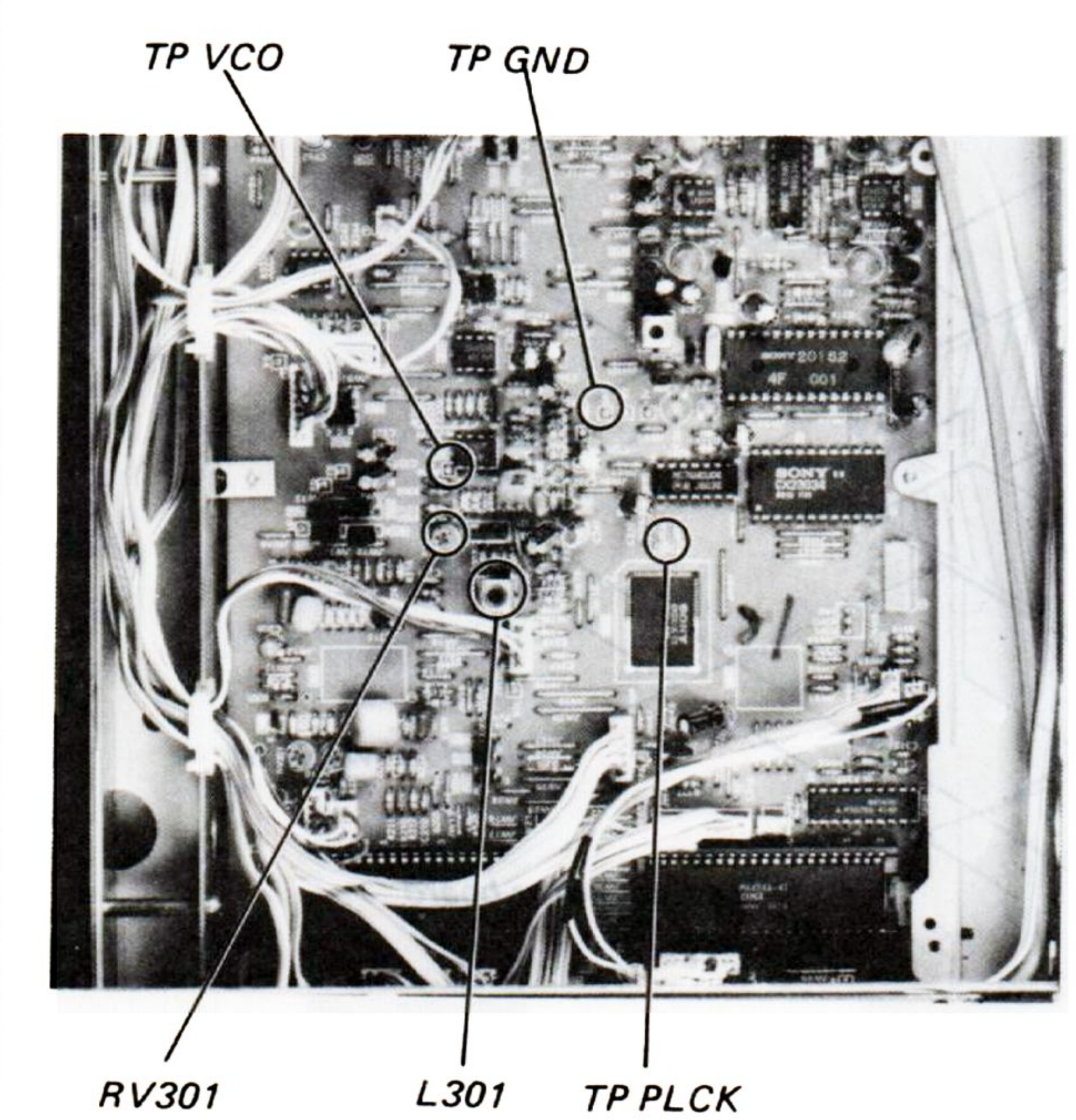
RF PLL Adjustment

Procedure:



1. Turn POWER switch ON. (stop mode).
2. Keep disc table opened.
3. Put set into adjustment mode (See page 35.)
4. Connect VTVM to main board test points T˺ VCO and TP GND.
5. Adjust main board RV301 so that reading on VTVM is OV ± 50 mV.
6. Connect the frequency counter to main board test points TP PLCK and TP GND.
7. Adjust main board L301 so that reading on frequency counter is 4.2818 MHz ± 10 KHz.
8. Reconnect lead wires connected in adjustment mode.
9. Put disc (YEDS-1) in and press ▷ PLAY button.
10. Confirm that reading on frequency counter is 4.3218 MHz.

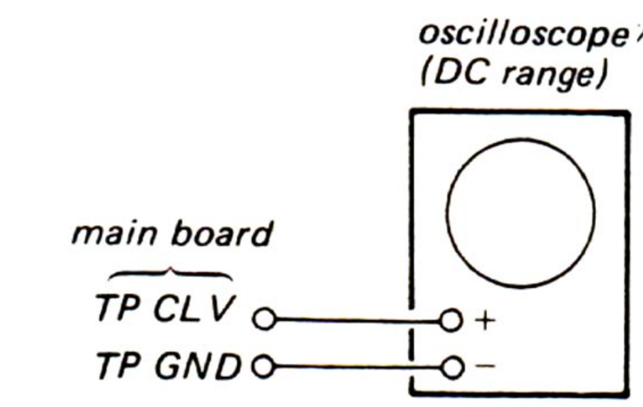
Adjustment Location: main board.



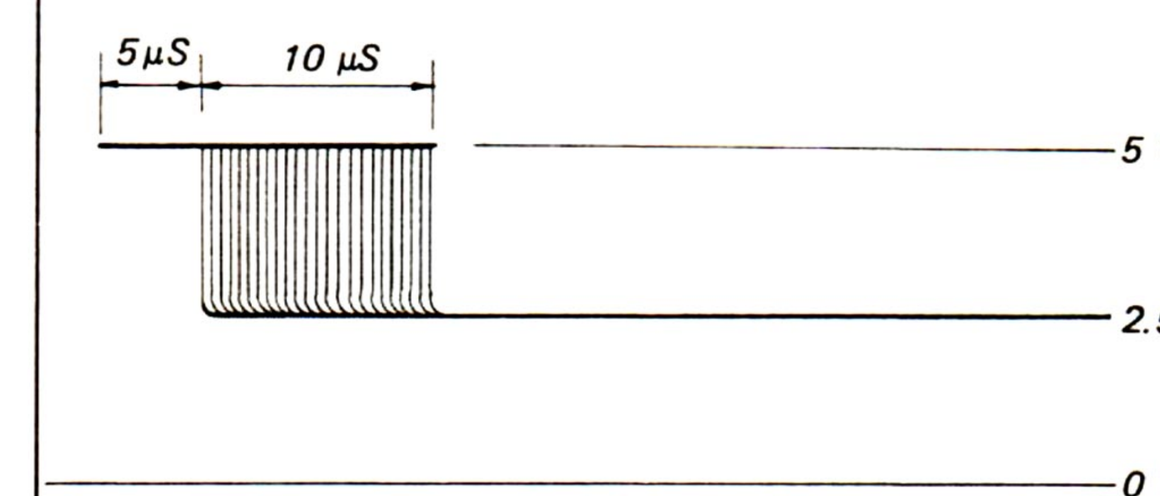
CLV Phase Lock Check

Perform this check when replacing BU-1 (base unit) and press pully in chucking arm section.)

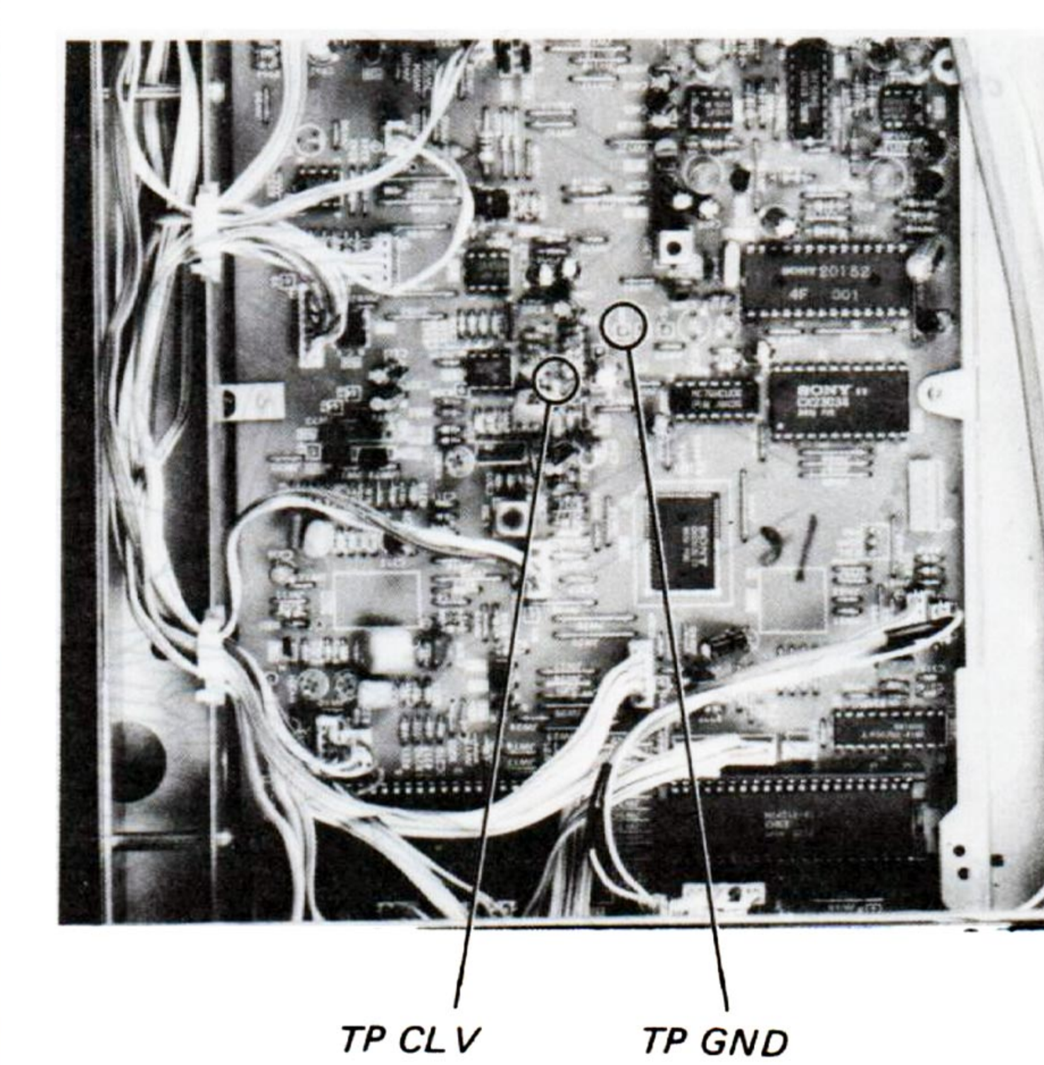
Procedure:



1. Put disc (YEDS-1) in.
2. Connect oscilloscope to main board test points TP CLV and TP GND.
3. Press ▷ PLAY button in TLACK 1 mode.
4. Confirm that the waveform is as shown in the figure below.



Adjustment Location: main board.



Focus/Tracking Gain Adjustment

A frequency responce analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

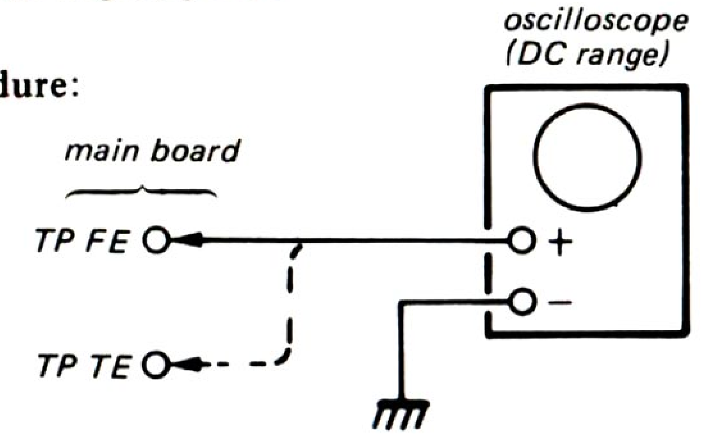
Gain / Symptoms	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮, ⏭ buttons pressed. (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP→▷PLAY or automatic selection (⏮, ⏭ buttons pressed.)	–	low
• Disc table opens shortly after STOP→▷PLAY.	low or high	–
• Sound is interrupted during PLAY. Or time counter display stops progressing.	–	low
• More poise during 2-axis device operation.	high	high

The following is a simple adjustment method.

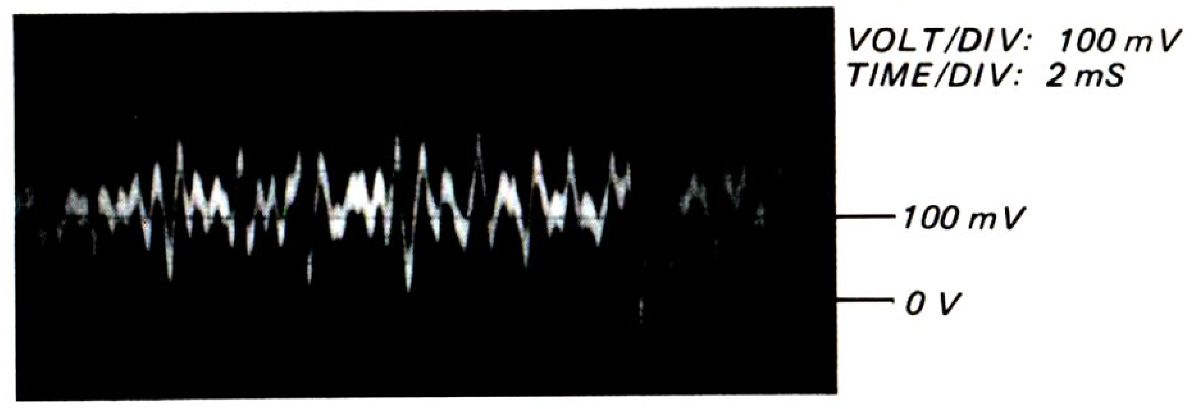
– Simple Adjustment –

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

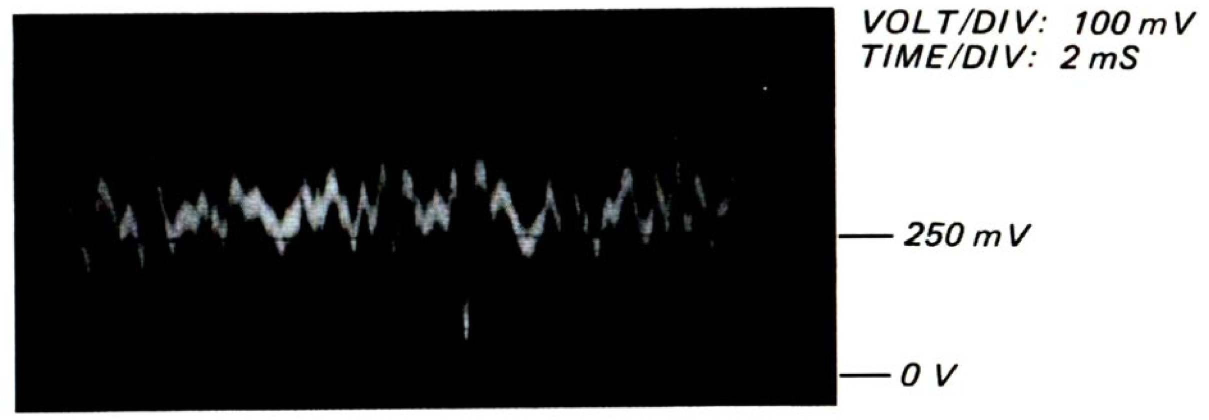


1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Put set in adjustment mode. (see page 35)
3. Insert disc (YEDS-1) and press ▷PLAY button.
4. Connect oscilloscope to main amp board TP FE.
5. Adjustment RV201 so that the waveform is as shown in the figure below. (focus gain adjustment)

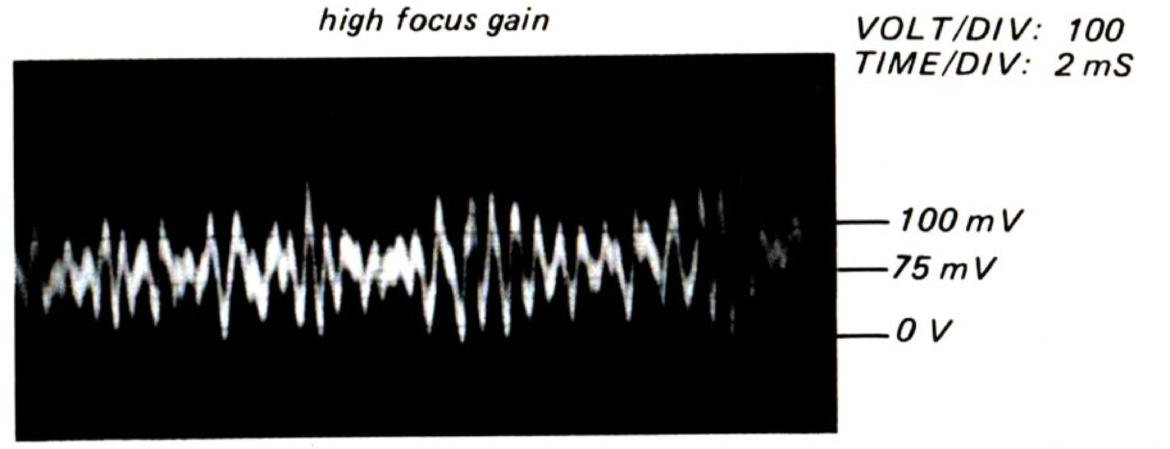


- Incorrent Examples (DC level changes more than on adjusted waveform)

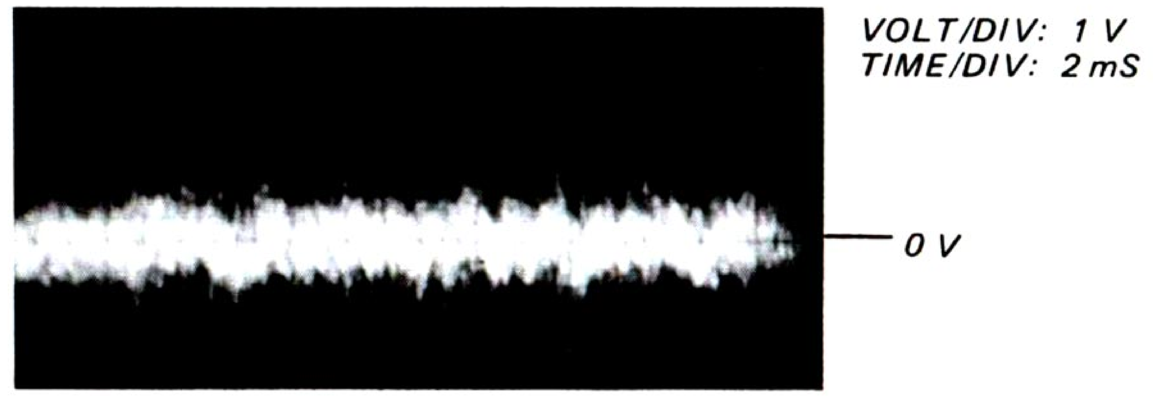
low focus gain



high focus gain

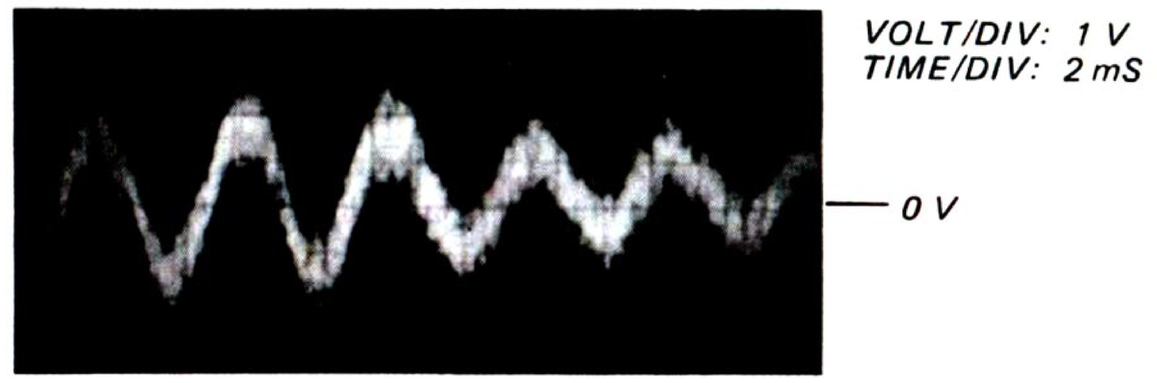


6. Connect oscilloscope to main board TP TE.
7. Adjust RV202 so that the waveform is as shown in the figure below. (tracking gain adjustment)

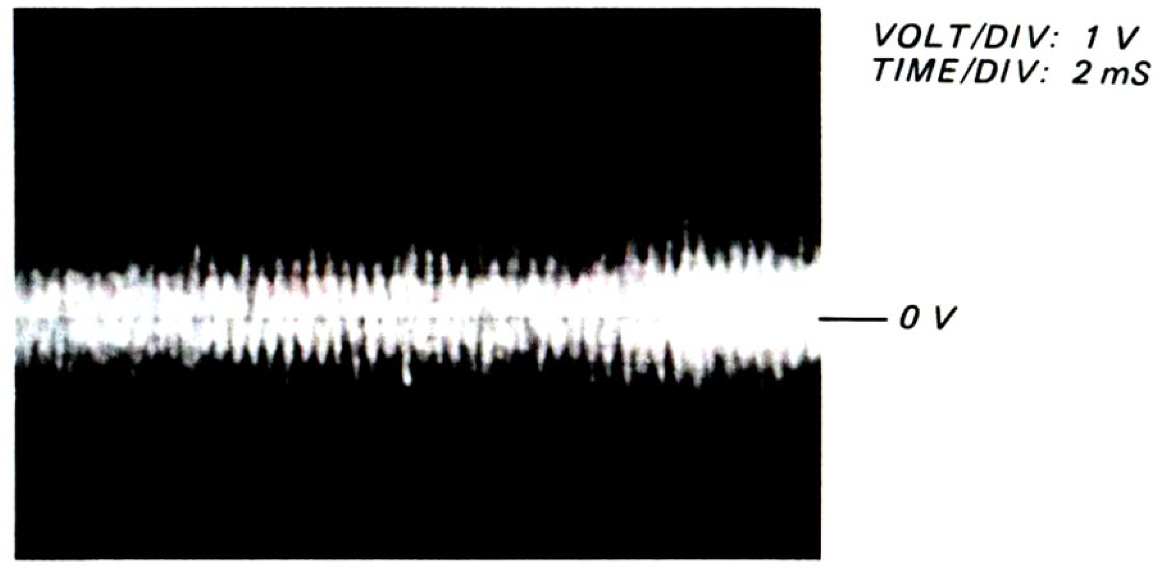


- Incorrect Examples (fundamental wave appears)

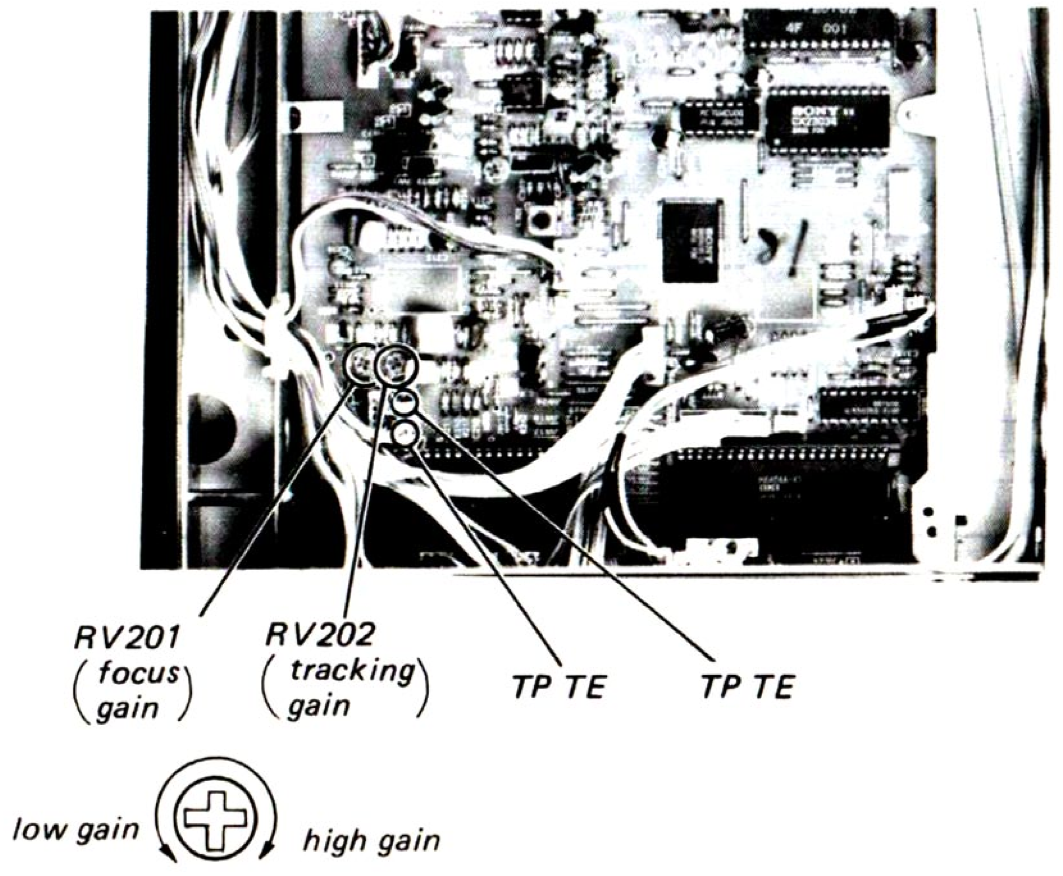
low tracking gain



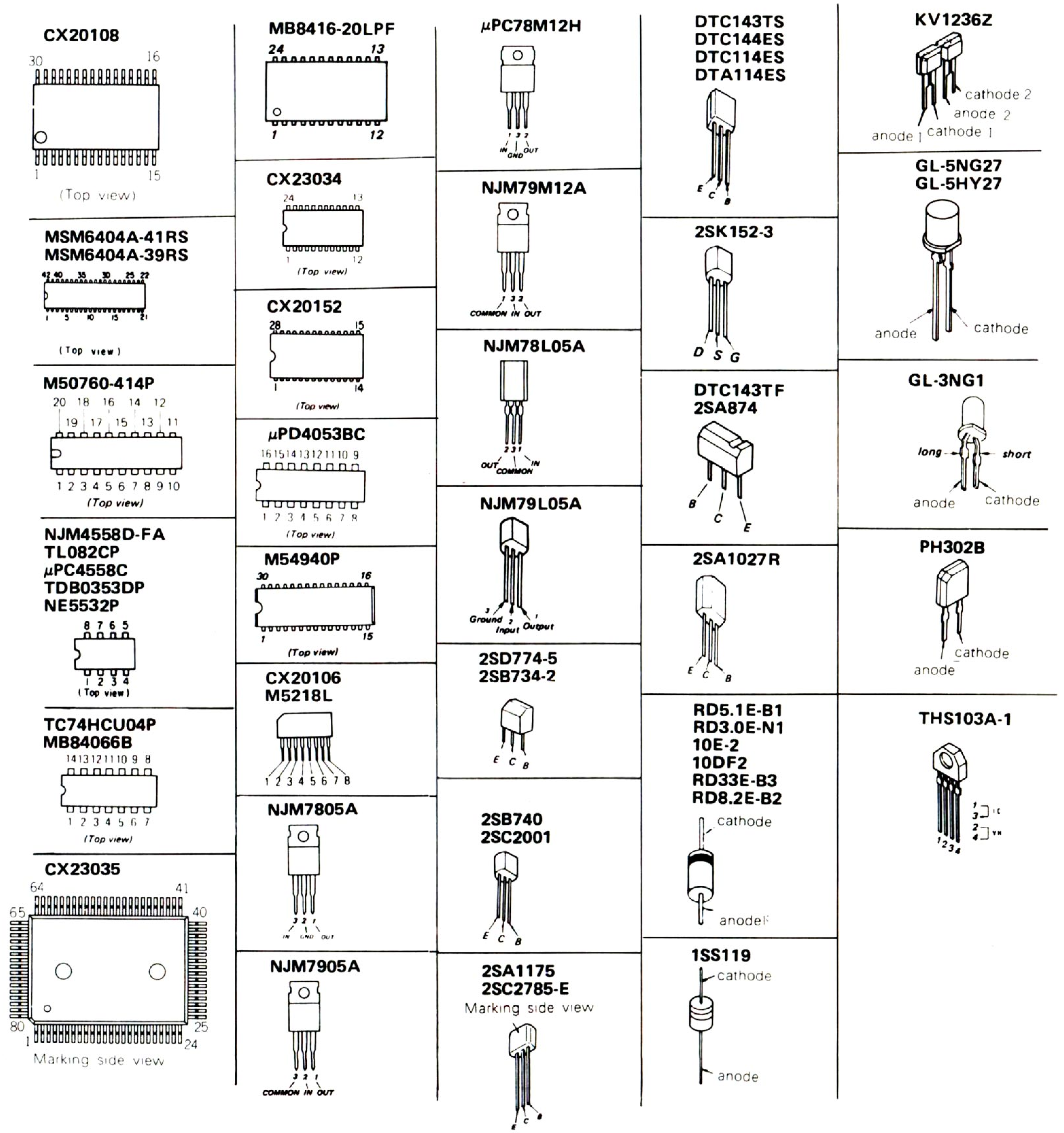
high tracking gain
(higher fundamental wave than for low gain)



Adjustment Location: main board



- **Semiconductor Lead Layouts**



SECTION 5 DIAGRAMS

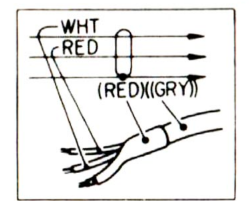
5-1. MOUNTING DIAGRAM
— BU-1 (BASE UNIT) Section —

5-2. MOUNTING DIAGRAM

- See page 52, 53 for power supply section of AEP, G-AEP, UK, E models.
- See page 39 for semiconductor Lead Layouts.

Note:

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



- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- : indicates side identified with part number.
- : signal path
- : L-CH signal path
- : R-CH signal path
- : B + pattern
- : B – pattern

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : signal path.
- Components for right channel have same values as for left channel. Reference numbers are coded from
- : fusible resistor.
- : B+ bus.
- : B– bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (50 kΩ/V).
  no mark: STOP
  (   ): PLAY
- Waveforms are taken to ground in PLAY mode by using oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S651	LOAD IN DET	ON
S652	LOAD OUT DET	OFF
S653	MOTOR SWITCHING	CHUCKING SIDE
S654	CHUCKING	ON
S655	LASER ON (CHUCKING SIDE)	ON
S656	LASER ON (LOADING SIDE)	ON
S801	▶	OFF
S802	▮▮	OFF
S803	STOP	OFF
S804	OPEN/CLOSE	OFF
S806	◀◀	OFF
S807	▶▶	OFF
S809	▶▶▏	OFF
S810	▕◀◀	OFF
S811	→	OFF
S812	←	OFF
S813	A → B	OFF
S814	I/ALL	OFF
S816	TIME	OFF
S991	POWER	OFF

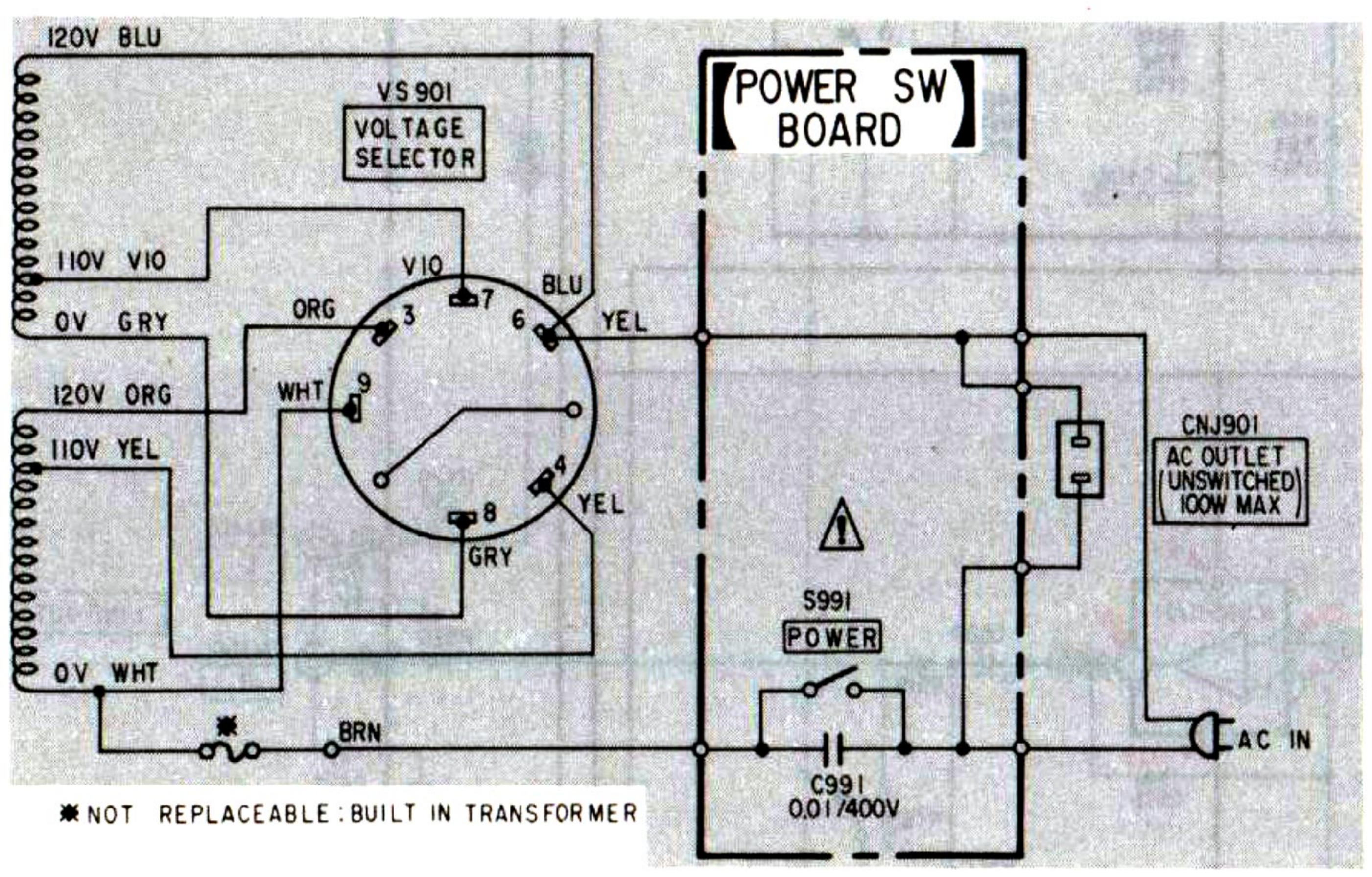
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

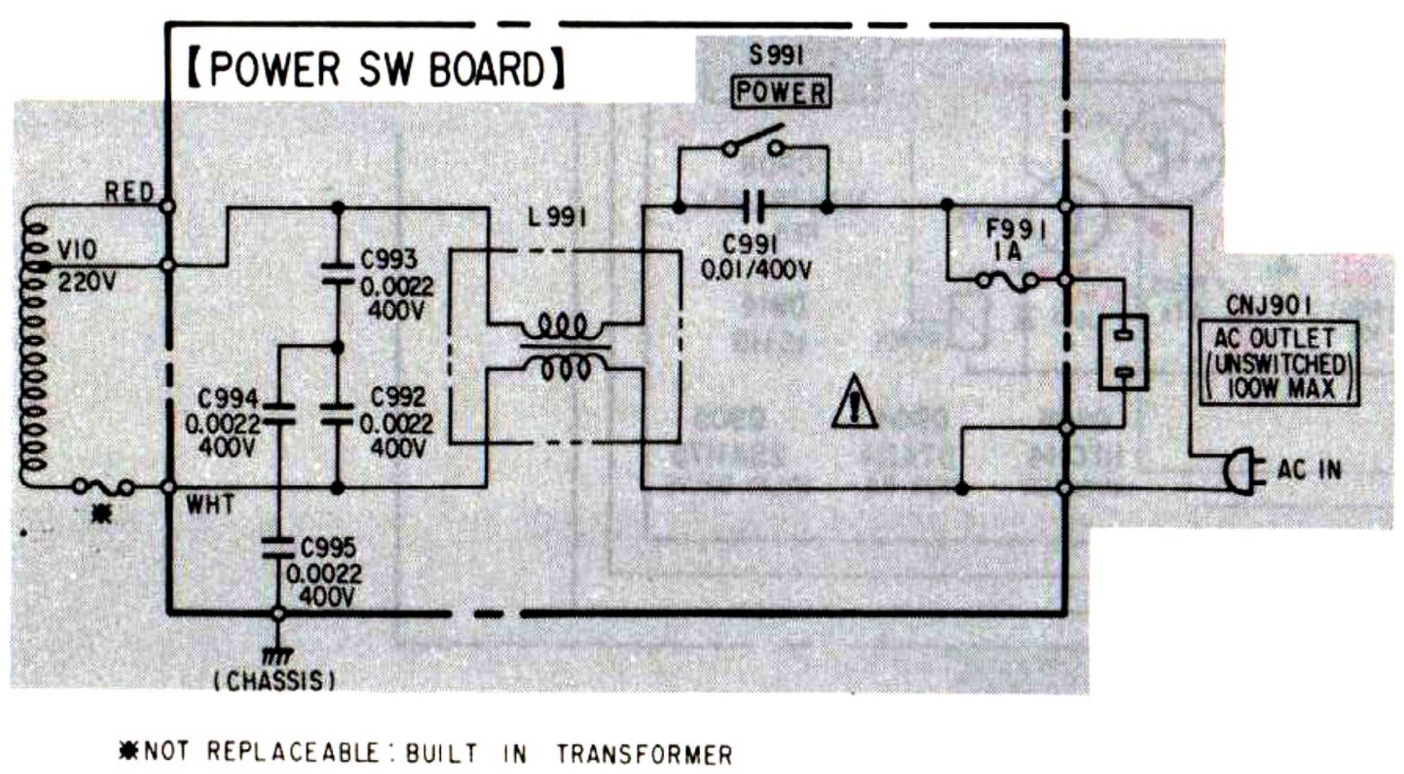
Note: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

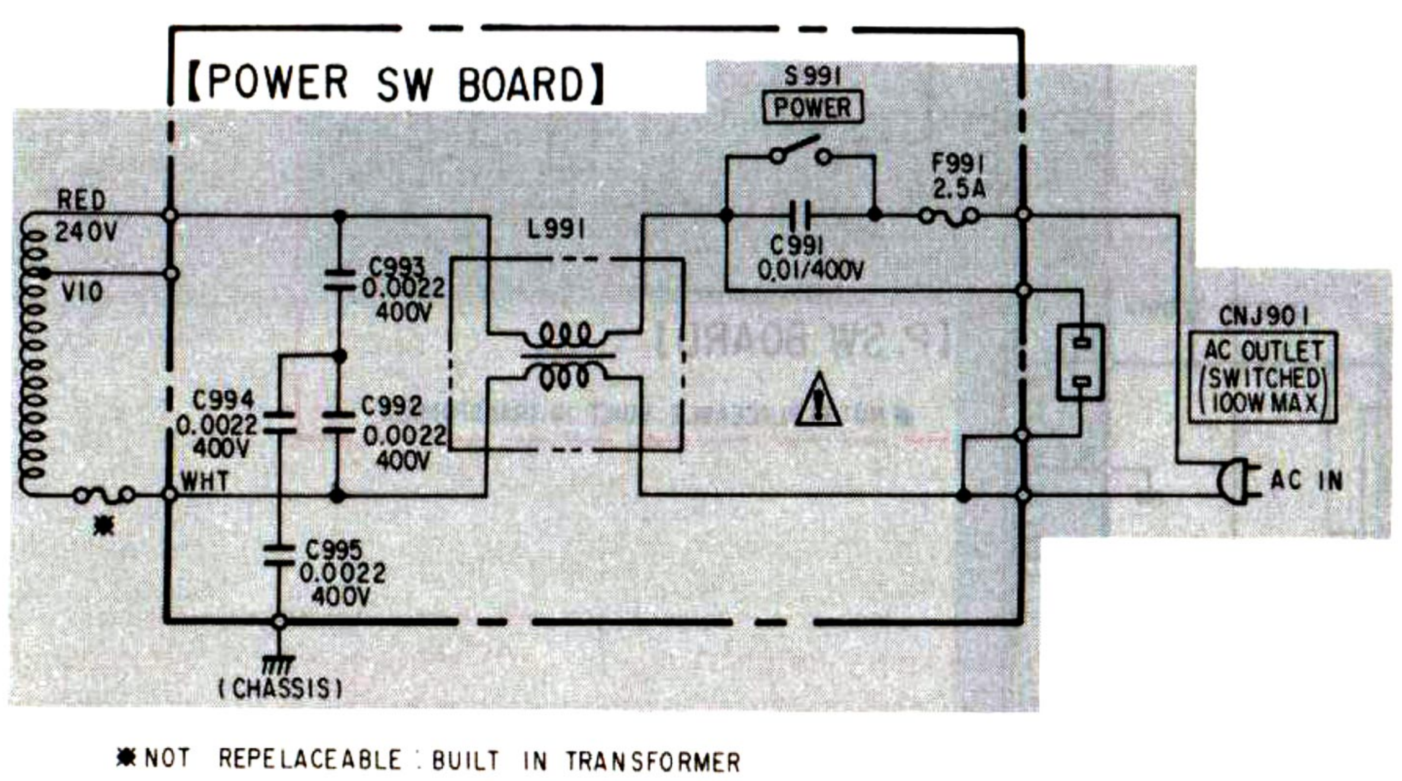
5-4. SCHEMATIC/MOUNTING DIAGRAMS

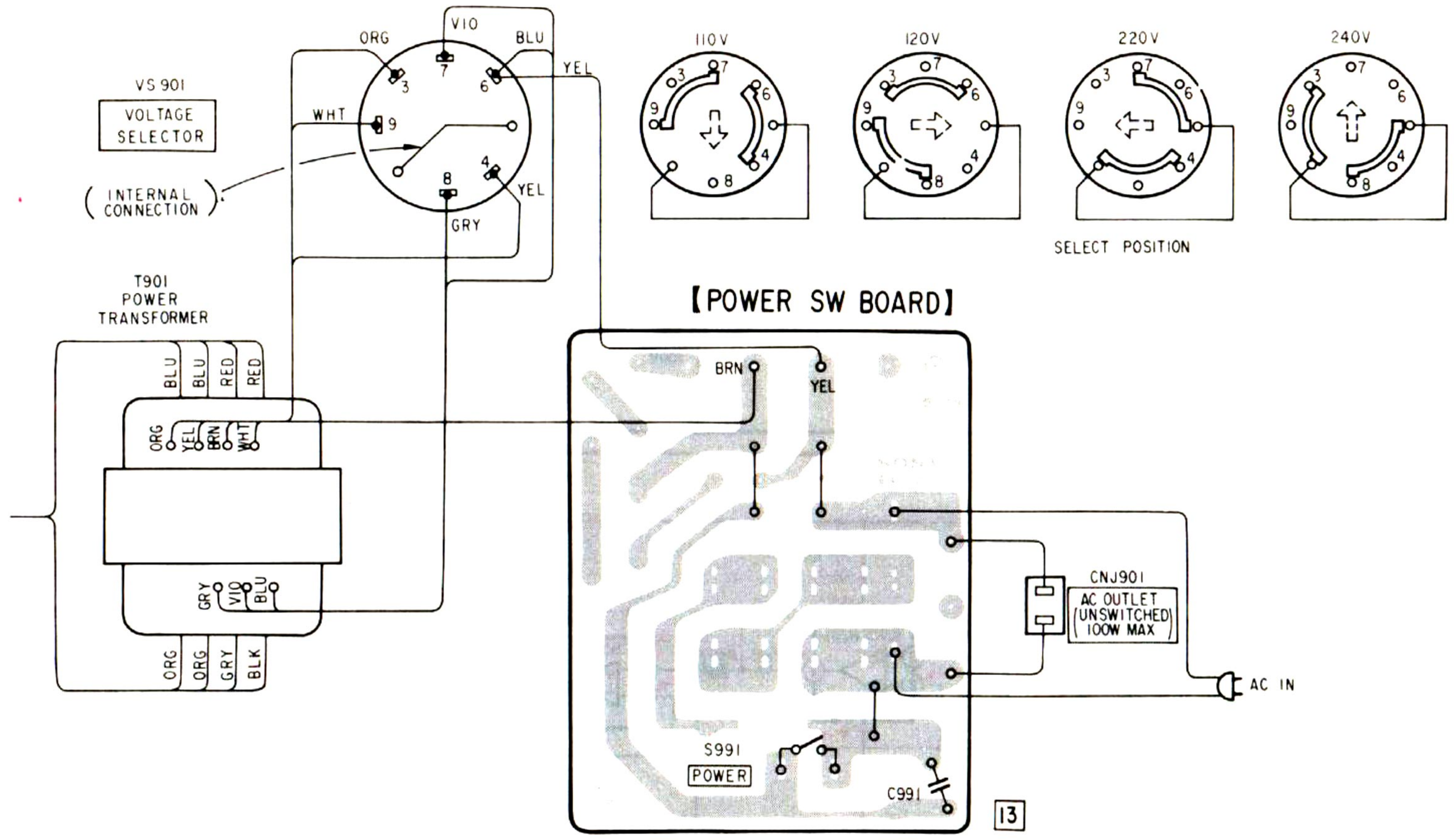
— Power Supply Section —

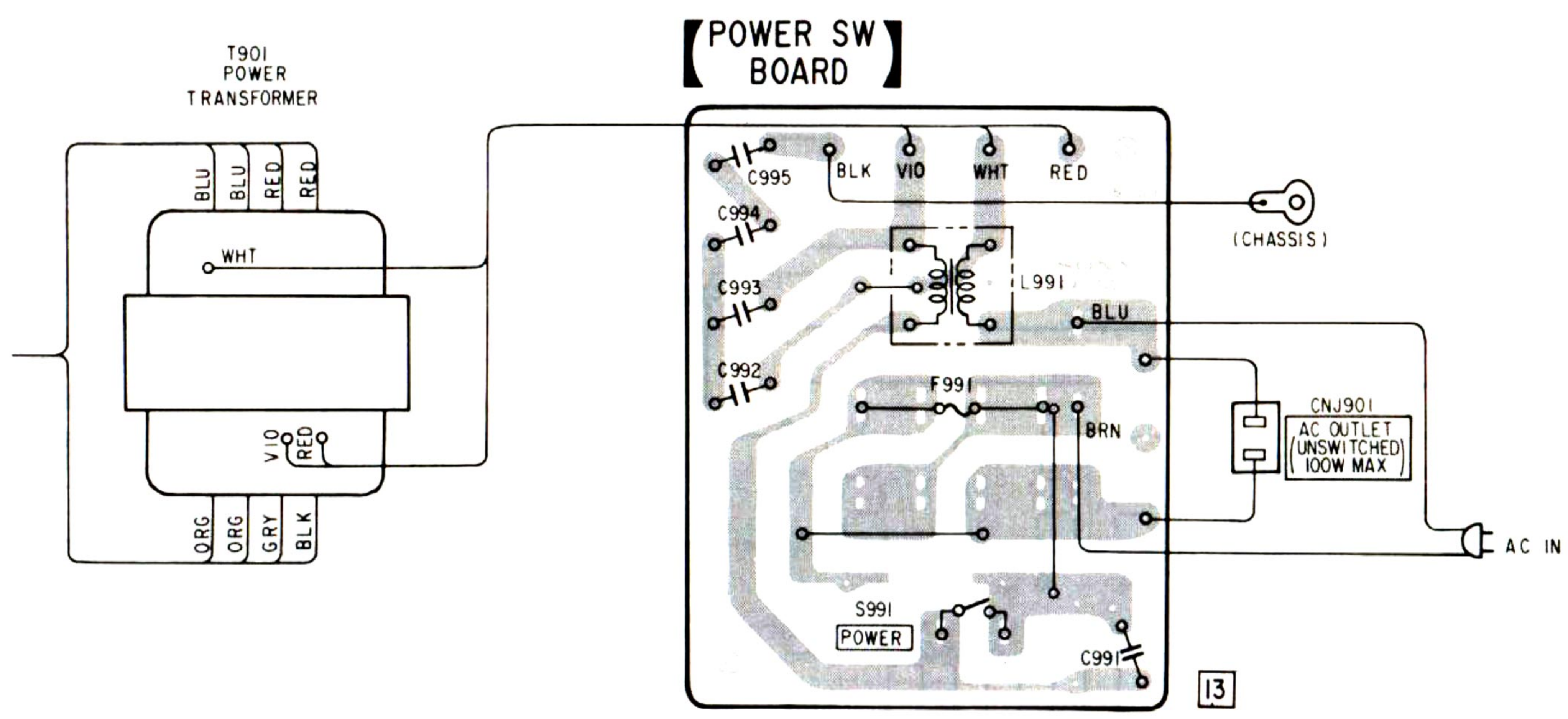
• See page 42 for Notes.

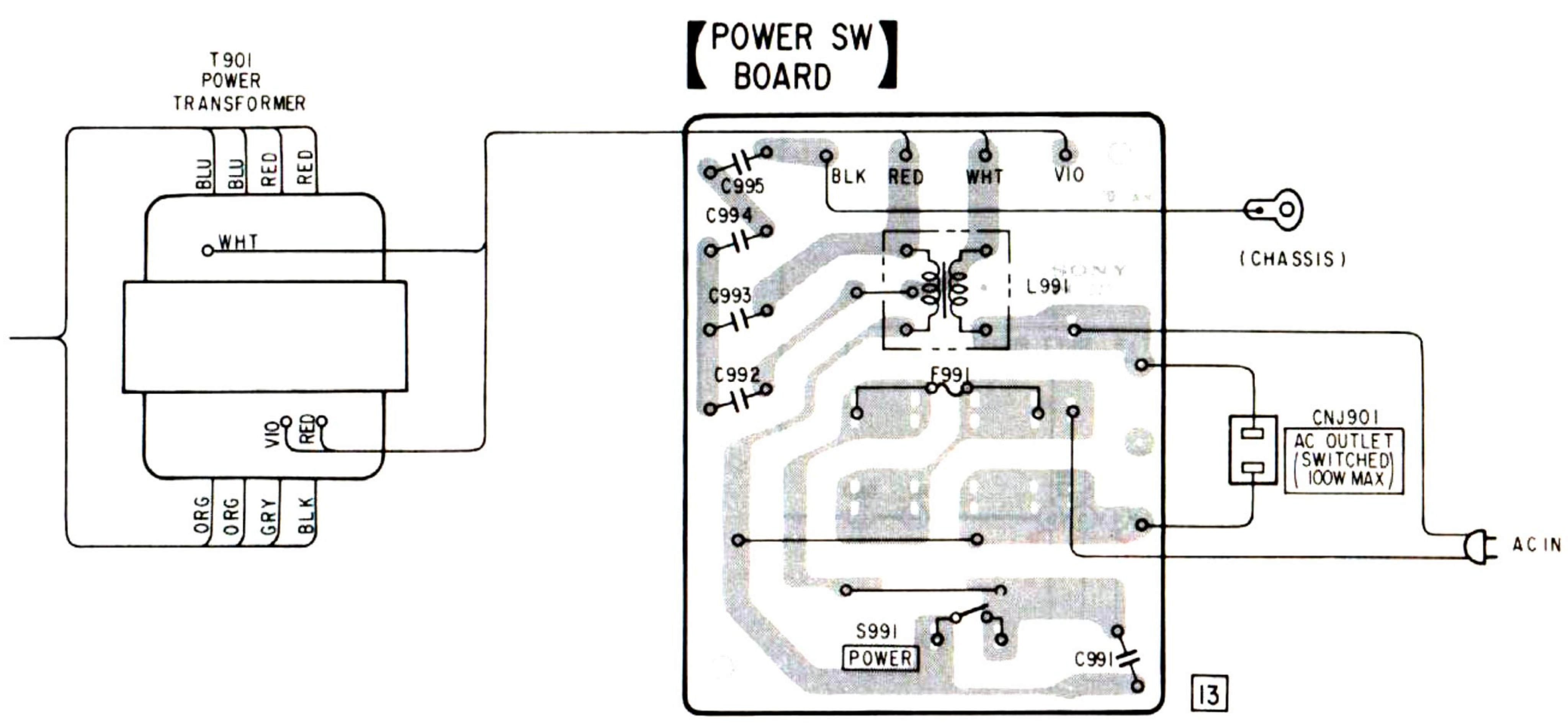












Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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.

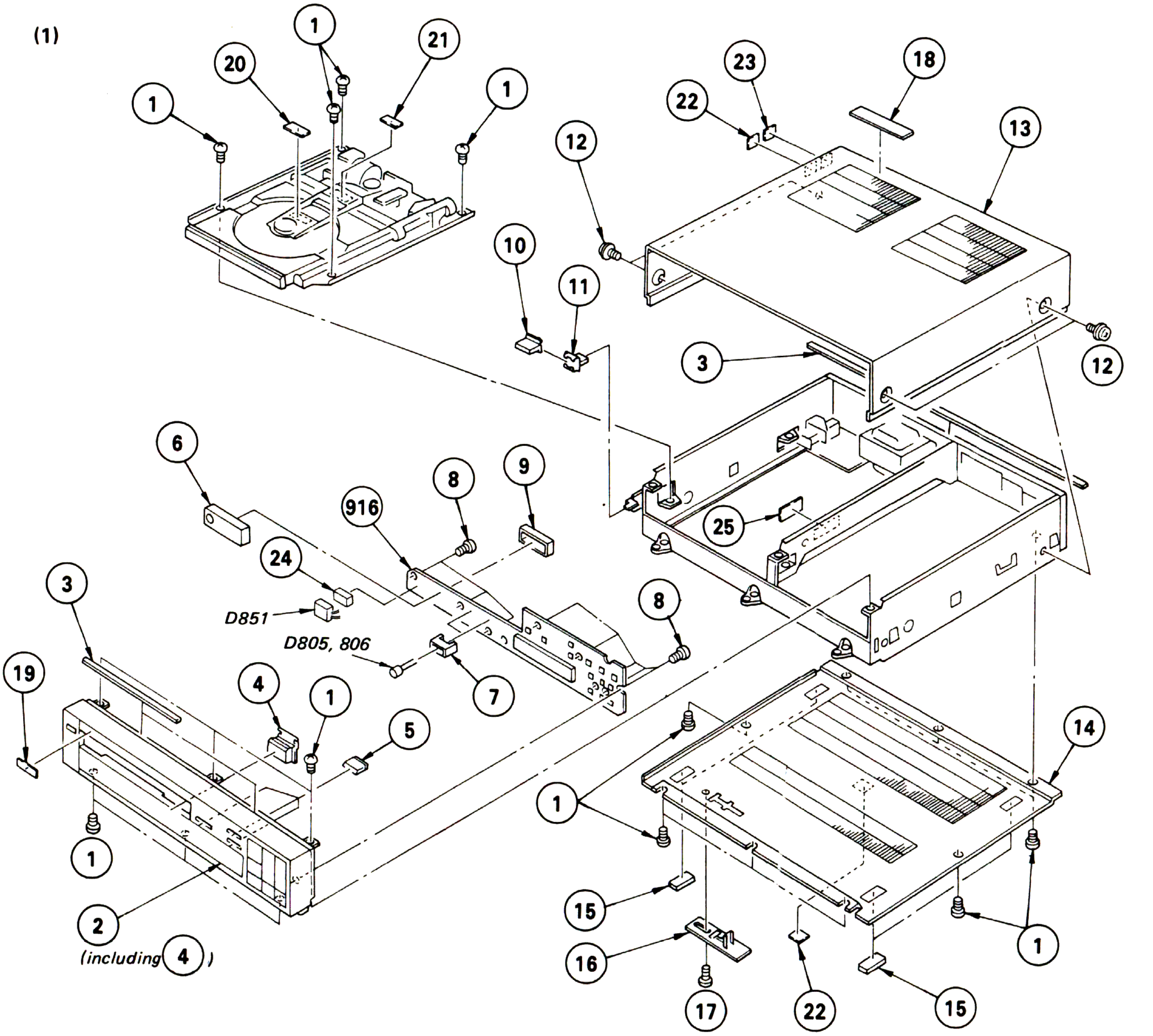
SECTION 6
EXPLODED VIEWS AND PARTS LIST

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The construction parts of an assembled part are indicated with a collation number on the remark column.

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

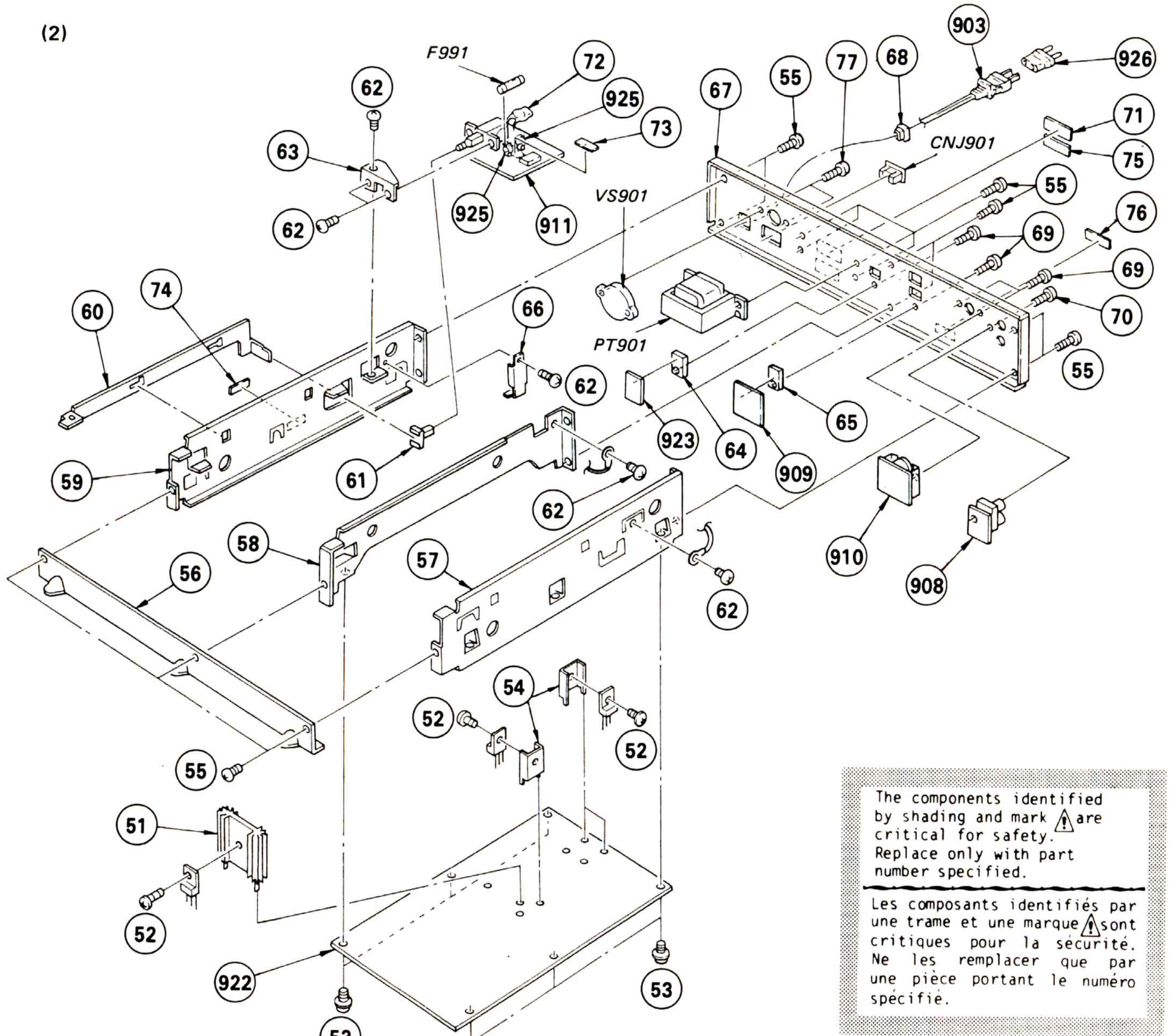
Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1)



No.	Part No.	Description	REMARKS
1	7-685-871-01	SCREW +BVTT 3X6 (S)	
2	X-4908-512-1	PANEL ASSY, F	
3	3-831-441-XX	FELT, PANEL	
4	X-4908-505-1	BUTTON ASSY, OPEN/CLOSE	
5	4-908-566-01	BUTTON, REPEAT	
6	*4-908-557-01	CASE (A), SHIELD	
7	4-908-554-01	HOLDER, LED	
8	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S	
9	*4-908-558-01	CASE (B), SHIELD	
10	4-907-611-01	KNOB, POWER	
11	4-908-569-01	JOINT, SWITCH, POWER	
12	4-886-821-01	SCREW, M3 CASE	
13	4-908-587-01	CASE	
14	*4-908-588-01	PLATE, BOTTOM	
15	4-902-017-00	LEG, RUBBER	
16	*4-908-600-01	LEVER, LOCK, TRANSPORT	
17	3-323-470-01	SCREW (B3X6), (+ -)	
18	4-885-831-00	LABEL, CAUTION	
19	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)	
20	4-908-404-01	(AEP,G-AEP,UK,E)... LABEL, APARTURE, LASER, DHHS	
21	4-908-402-01	(US,Canadian)...LABEL, INTERLOCK, DHHS	
22	3-703-680-00	LABEL, CAUTION, SUB, NEW UL	
23	4-908-401-01	(US,Canadian)......LABEL, HOUSING, DHHS	
24	*4-908-613-01	CUSHION, SENSOR	
25	4-885-843-02	(AEP,G-AEP,UK,E)...LABEL, CAUTION, LASER	
916	*1-614-027-11	PC BOARD, DISPLAY	

(2)



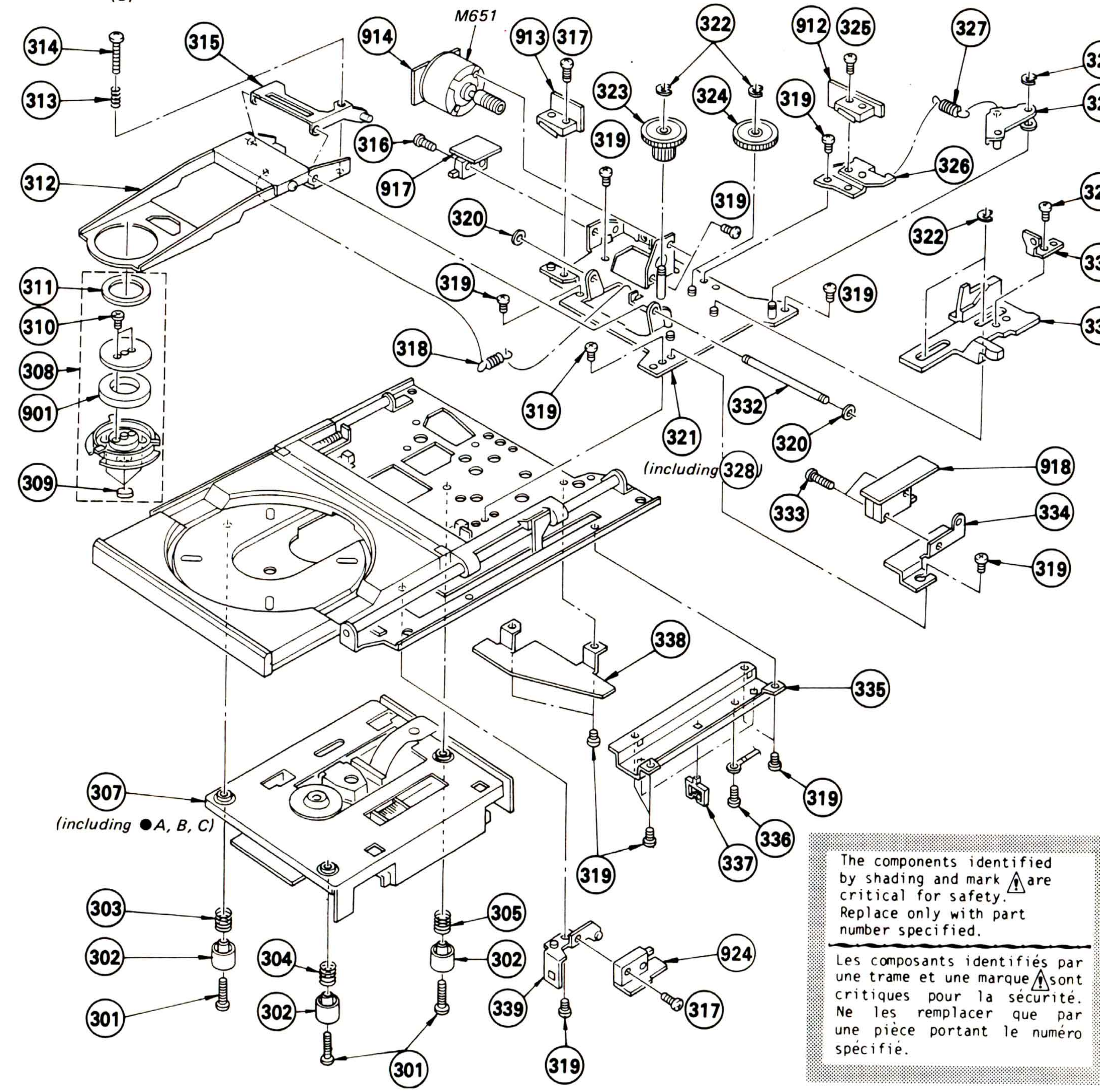
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

No.	Part No.	Description	REMARKS
51	*4-908-502-01	HEAT SINK	
52	2-259-121-00	SCREW, TR	
53	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6	
54	*4-902-345-01	HEAT SINK	
55	7-685-751-09	SCREW +BVTT 3X6 (S)	
56	*4-908-580-01	PANEL (LOWER), SUB	
57	*4-908-578-01	PLATE (RIGHT), SIDE	
58	*X-4908-515-1	PLATE (RIGHT), SIDE	
59	*4-908-576-01	PLATE (LEFT), SIDE	
60	*4-908-568-01	LEVER, SWITCH, POWER	
61	4-866-342-00	JOINT (B), KNOB	
62	7-685-871-01	SCREW +BVTT 3X6 (S)	
63	*4-908-509-01	BRACKET, POWER PC BOARD	
64	*3-323-401-01	HOLDER (2 PIN), CONNECTOR	
65	*3-322-818-01	HOLDER, CONNECTOR	
66	4-908-615-01	(AEP,G-AEP,UK)...STOPPER	
67	*4-908-601-01	(US)..........PLATE, JACK	
	*4-908-601-12	(Canadian)....PLATE, JACK	
	*4-908-601-21	(AEP,G-AEP)...PLATE, JACK	
	*4-908-601-31	(UK)..........PLATE, JACK	
	*4-908-601-42	(E)...........PLATE, JACK	
68	⚠.3-703-244-00	(AEP,G-AEP,UK,Canadian)...BUSHING, CORD	
	⚠.3-703-571-11	(US,E)...BUSHING (S), CORD	
69	7-685-133-19	SCREW +P 2.6X6 TYPE2 NON-SLIT	
70	3-703-473-00	SCREW, TERMINAL	

No.	Part No.	Description	REMARKS
71	4-908-624-01	(US)..........LABEL, MODEL NUMBER (U/CA)	
	*4-908-625-01	(AEP).........LABEL, MODEL NUMBER (AE)	
	4-908-626-01	(G-AEP).......LABEL, MODEL NUMBER (AE4)	
	4-908-627-01	(UK)..........LABEL, MODEL NUMBER (UK)	
	4-908-628-01	(E)...........LABEL, MODEL NUMBER (E2/3)	
	4-908-630-01	(Canadian)....LABEL, MODEL NUMBER (CA)	
72	⚠.4-875-455-01	(AEP,G-AEP,UK)..COVER (DIA.20), CAPACITOR	
73	*3-701-948-14	(AEP,G-AEP)...LABEL, FUSE (T1A)	
	*3-701-948-18	(UK)..........LABEL, FUSE (T2.5A)	
74	*3-701-030-00	LABEL, SERIAL NUMBER	
75	*4-885-838-00	(AEP,G-AEP,UK,E)...LABEL, CLASS 1	
76	*4-884-680-00	(Canadian)...LABEL	
77	7-621-775-20	SCREW +B 2.6X5	
903	⚠.1-556-874-00	(US)..........CORD, POWER	
	⚠.1-555-795-00	(AEP,G-AEP)...CORD, POWER	
	⚠.1-556-035-00	(UK)..........CORD, POWER	
	⚠.1-556-091-00	(E)...........CORD, POWER	
	⚠.1-557-577-11	(Canadian)....CORD, POWER	
908	*1-614-019-11	PC BOARD, LINE OUT	
909	*1-614-020-11	PC BOARD, SIRCS	
910	*1-614-021-11	PC BOARD, ACC	
911	*1-614-022-11	PC BOARD, POWER SW	
922	*A-4651-033-A	MOUNTED PCB, MAIN	
923	*1-614-140-11	PC BOARD, DIRECT FUNCTION	
925	1-533-131-00	(AEP,G-AEP,UK)...HOLDER, FUSE	
926	⚠.1-526-565-00	(E3)...AC PLUG ADAPTOR	

(3)



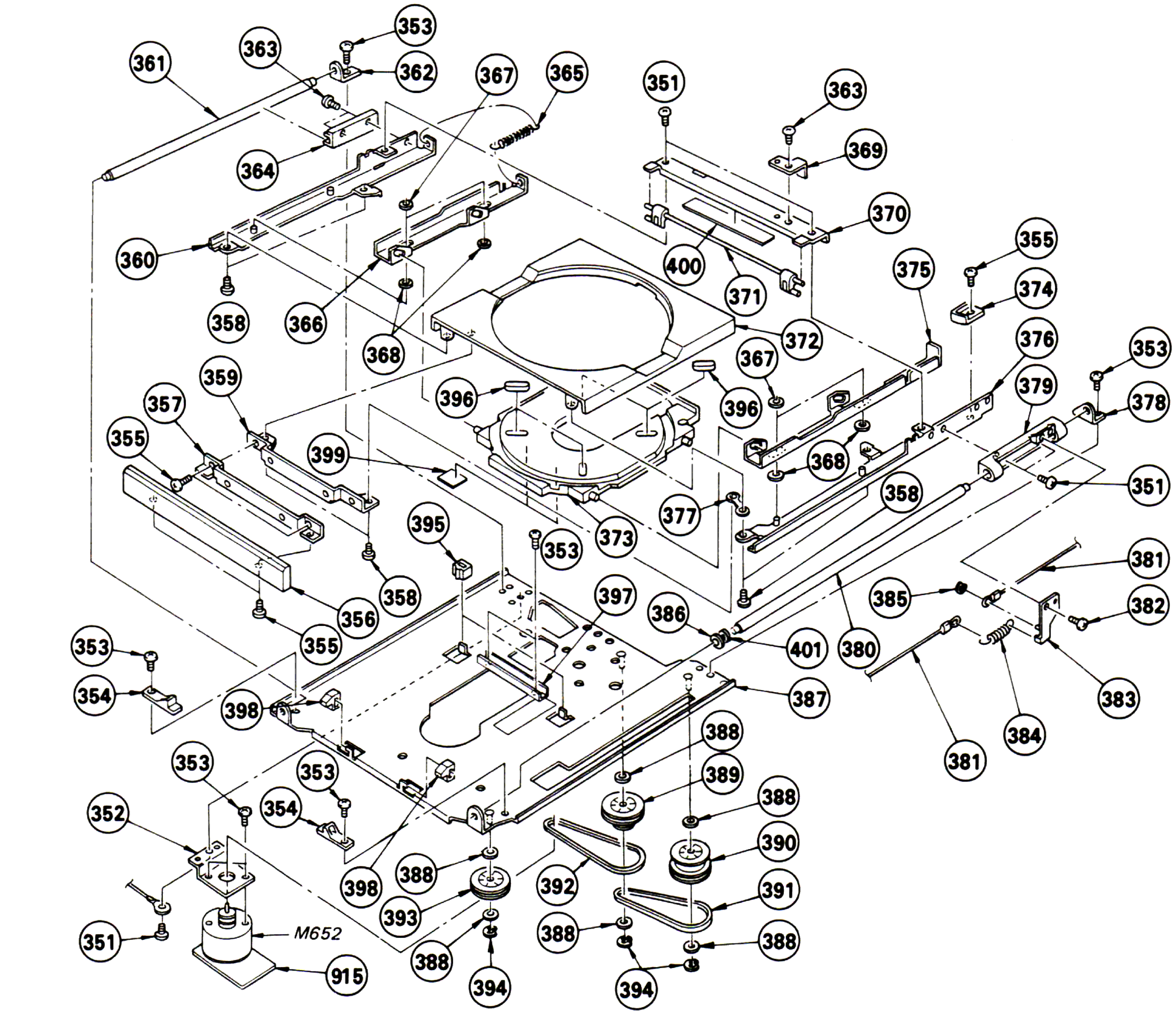
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

No.	Part No.	Description	REMARKS
301	7-682-553-09	SCREW +B 3X20	
302	4-908-592-01	POLE (A), INSULATOR	
303	4-908-594-01	SPRING, COMPRESSION	
304	4-908-595-01	SPRING, COMPRESSION	
305	4-908-596-01	SPRING, COMPRESSION	
307	⚠.X-4908-203-1	BU-1 (BASE UNIT)	
308	A-4675-077-A	PULLEY ASSY, PRESS	
309	4-908-537-01	FELT, PRESS	
310	4-908-618-01	SCREW (+BTP)(2X4)	
311	4-908-551-01	CUSHION	
312	*X-4908-510-1	ARM ASSY, C	
313	4-908-559-01	SPRING, COMPRESSION	
314	7-621-775-80	SCREW +B 2.6X16	
315	X-4908-513-1	PLATE ASSY, ADJUSTMENT, ARM	
316	7-685-864-01	SCREW +BVTT 2.6X10 (S)	
317	7-621-284-30	SCREW +P 2.6X8	
318	4-908-555-01	SPRING, TENSION (C ARM)	
319	7-621-259-10	SCREW +P 2.6X3	
320	3-558-708-21	WASHER, STOPPER	
321	*X-4908-509-1	CHASSIS ASSY, SUB	
322	7-624-106-04	STOP RING 3.0, TYPE -E	
323	4-908-528-01	GEAR (A)	
324	4-908-529-01	GEAR (B)	

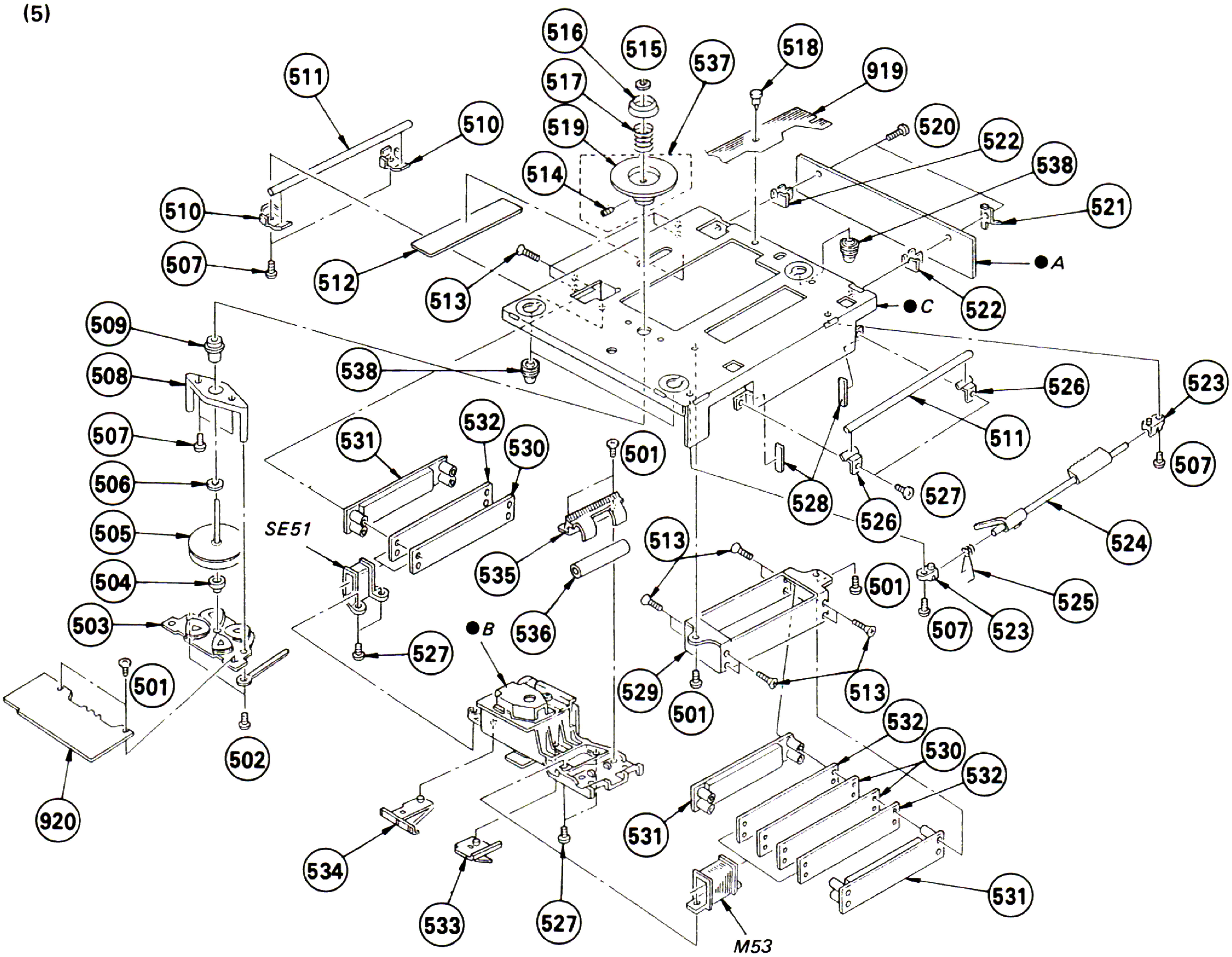
No.	Part No.	Description	REMARKS
325	7-621-257-55	SCREW +P 2.3X8	
326	*4-908-522-01	BRACKET (B), SWITCH	
327	4-908-556-01	SPRING, TENSION (LOCK LEVER)	
328	*X-4908-504-1	LEVER ASSY, LOCK	
329	7-685-132-19	SCREW +BTP 2.6X8 TYPE2 N-S	
330	*4-908-521-01	PLATE, SWITCH	
331	4-908-570-01	CAM, C	
332	4-908-513-01	SHAFT, FULCRUM, C ARM	
333	7-621-259-80	SCREW +P 2.6X14	
334	*4-908-532-01	BRACKET (A), SWITCH	
335	*4-908-508-01	COVER, ROPE	
336	7-685-751-04	SCREW +PTT 3X6 (S)	
337	4-308-840-00	HOLDER, WIRE	
338	*4-908-597-01	COVER, BELT	
339	*4-908-541-01	BRACKET (C), SWITCH	
340	4-908-621-01	SHEET	
901	1-452-340-11	MAGNET	
912	*1-614-023-11	PC BOARD, L.C SW	
913	*1-614-024-11	PC BOARD, CHUCKING SW	
914	*1-614-025-11	PC BOARD, CHUCKING MOTOR	
917	*1-614-028-11	PC BOARD, LASER SW	
918	*1-614-029-11	PC BOARD, LOAD IN SW	
924	*1-614-030-11	PC BOARD, LOAD OUT SW	

(4)



No.	Part No.	Description	REMARKS
351	7-685-870-09	SCREW +BVTT 3X5 (S)	
352	*4-908-523-01	BRACKET, MOTOR	
353	7-621-259-10	SCREW +P 2.6X3	
354	4-908-540-01	GUIDE, ASSIST	
355	7-621-775-20	SCREW +B 2.6X5	
356	4-908-571-11	PANEL, LOADING	
357	*4-908-539-01	BRACKET (B), LOADING PANEL	
358	7-685-646-29	SCREW +BVTP 3X8 TYPE2 SLIT	
359	*4-908-538-01	BRACKET (A), LOADING PANEL	
360	X-4908-508-1	PLATE ASSY (LEFT), SIDE, TABLE	
361	4-908-505-01	SHAFT (LEFT), GUIDE	
362	*4-908-530-01	PLATE (LEFT), BEARING	
363	7-685-861-09	SCREW +BVTT 2.6X5 (S)	
364	4-908-572-01	BEARING (LEFT), GUIDE	
365	4-908-552-01	SPRING, COMPRESSION	
366	*4-908-562-01	PLATE (LEFT), CAM, DISK	
367	3-558-708-21	WASHER, STOPPER	
368	3-701-439-11	WASHER	
369	*4-908-609-01	PLATE (B), GROUND	
370	*4-908-533-01	REINFORCEMENT, TABLE	
371	4-908-534-01	LEVER, FUNCTION	
372	4-908-584-01	TABLE, DISK	
373	X-4908-506-1	PLATE ASSY, DISK	
374	4-908-520-01	PLATE, LOCK	
375	*4-908-561-01	PLATE (RIGHT), CAM, DISK	
376	X-4908-507-1	PLATE ASSY (RIGHT), SIDE,TABLE	
377	*4-908-608-01	PLATE (A), GROUND	
378	*4-908-531-01	PLATE (RIGHT), BEARING	
379	4-908-574-01	BEARING (RIGHT), GUIDE	
380	4-908-503-01	SHAFT (RIGHT), GUIDE	
381	4-908-544-01	ROPE	
382	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S	
383	*X-4908-502-1	BRACKET ASSY, ROPE	
384	4-908-553-01	SPRING, COMPRESSION (ROPE)	
385	7-624-104-04	STOP RING 2.0, TYPE -E	
386	4-908-550-01	STOPPER, RUBBER	
387	*X-4908-511-1	CHASSIS ASSY, MECHANICAL	
388	3-701-441-21	WASHER	
389	4-908-519-01	PULLEY (A)	
390	4-908-525-01	PULLEY (C)	
391	3-671-077-00	BELT, FF	
392	4-908-591-01	BELT, DRIVING	
393	4-908-524-01	PULLEY (B)	
394	7-624-106-04	STOP RING 3.0, TYPE -E	
395	4-887-175-00	RUBBER, STOPPER	
396	4-908-543-01	RETAINER, DISK	
397	*4-908-598-01	REINFORCEMENT, CHASSIS	
398	4-908-590-01	RETAINER, TABLE	
399	*4-908-964-01	SHEET, PS, DT	
400	*4-908-965-01	SHEET	
401	4-908-622-01	CUSHION (S)	
915	*1-614-026-11	PC BOARD, LOADING MOTOR	

(5)



No.	Part No.	Description	REMARKS
501	7-621-775-10	SCREW +B 2.6X4	
502	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S	
503	A-4675-068-A	BRACKET ASSY, MOTOR (L151,152)	
504	2-622-105-01	RETAINER, THRUST	
505	A-4675-069-A	ROTOR ASSY	
506	3-701-439-21	WASHER	
507	7-621-773-95	SCREW +B 2.6X6	
508	4-908-216-01	HOLDER, STATOR	
509	4-908-206-01	BEARING, SPINDLE	
510	4-908-205-01	RETAINER (A), SLIDE SHAFT	
511	4-908-201-01	SHAFT, SLIDE	
512	2-270-836-00	RUBBER, RETAINER	
513	7-621-559-80	SCREW +K 2.6X14	
514	7-621-734-09	SET-SCT, HEX. 2.6X3	
515	3-558-708-21	WASHER, STOPPER	
516	4-908-212-01	CAP, CENTERING	
517	4-908-213-01	SPRING, COMPRESSION	
518	3-531-576-01	RIVET	
519	4-908-211-02	PULLEY, DISK	
520	7-621-259-65	SCREW +P 2.6X10	

No.	Part No.	Description	REMARKS
521	*4-908-232-01	LUG	
522	4-908-222-01	HOLDER, PC BOARD	
523	4-908-220-01	HOLDER, ROD	
524	4-908-227-01	LEVER, LOCK	
525	4-908-230-01	SPRING	
526	4-908-217-01	RETAINER (B), SLIDE SHAFT	
527	7-621-775-20	SCREW +B 2.6X5	
528	*3-548-366-02	CUSHION	
529	4-908-203-01	YOKE (A)	
530	4-908-214-01	YOKE (C)-1	
531	A-4675-070-A	MAGNET ASSY, LINEAR	
532	4-908-215-01	YOKE (C)-2	
533	4-908-225-01	RETAINER (A), LEAD	
534	4-908-219-01	RETAINER (B), LEAD	
535	4-908-224-01	HOLDER, BEARING	
536	4-908-221-01	BEARING	
537	X-4908-202-1	PULLEY ASSY, DISK	
538	4-908-593-01	INSULATOR	
919	A-4646-215-A	MOUNTED PCB, FLEXIBLE	
920	1-614-086-11	PC BOARD, BSL MOTOR	

NOTE:

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuitsin a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF:μF, PF:μμF.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

COILS
- MMH : mH, UH : μH

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

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

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
901	1-452-340-11	MAGNET			
903	⚠.1-556-874-00	(US)..........CORD, POWER			
	⚠.1-555-795-00	(AEP,G-AEP)...CORD, POWER			
	⚠.1-556-035-00	(UK)..........CORD, POWER			
	⚠.1-556-091-00	(E)...........CORD, POWER			
	⚠.1-557-577-11	(Canadian)....CORD, POWER			
908	*1-614-019-11	PC BOARD, LINE OUT			
909	*1-614-020-11	PC BOARD, SIRCS			
910	*1-614-021-11	PC BOARD, ACC			
911	*1-614-022-11	PC BOARD, POWER SW			
912	*1-614-023-11	PC BOARD, L.C SW			
913	*1-614-024-11	PC BOARD, CHUCKING SW			
914	*1-614-025-11	PC BOARD, CHUCKING MOTOR			
915	*1-614-026-11	PC BOARD, LOADING MOTOR			
916	*1-614-027-11	PC BOARD, DISPLAY			
917	*1-614-028-11	PC BOARD, LASER SW			
918	*1-614-029-11	PC BOARD, LOAD IN SW			
919	A-4646-215-A	MOUNTED PCB, FLEXIBLE			
920	1-614-086-11	PC BORAD, BSL MOTOR			
922	*A-4651-033-A	MOUNTED PCB, MAIN			
923	*1-614-140-11	PC BOARD, DIRECT FUNCTION			
924	*1-614-030-11	PC BOARD, LOAD OUT SW			
925	1-533-131-00	(AEP,G-AEP,UK)...HOLDER, FUSE			
926	⚠.1-526-565-00	(E3)...AC PLUG ADAPTOR			
927	*1-535-140-00	(E)....BASE POST 22MM (10MM PITCH) 3P			
928	*1-535-137-00	BASE POST 14MM (10MM PITCH)			
C51	1-135-008-00	TANTALUM(CHIP)2.2MF		20%	6.3V
C151	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C152	1-162-302-31	CERAMIC	0.0022MF	20%	16V
C153	1-161-494-00	CERAMIC	0.022MF	30%	25V
C154	1-161-494-00	CERAMIC	0.022MF	30%	25V
C201	1-136-169-00	FILM	0.22MF	5%	50V
C202	1-162-302-31	CERAMIC	0.0022MF	30%	16V
C203	1-136-165-00	FILM	0.1MF	5%	50V
C204	1-162-290-31	CERAMIC	470PF	10%	50V
C205	1-130-475-00	MYLAR	0.0022MF	5%	50V
C206	1-131-371-00	TANTALUM	10MF	10%	16V
C207	1-136-159-00	FILM	0.033MF	5%	50V
C208	1-136-169-00	FILM	0.22MF	5%	50V
C209	1-136-161-00	FILM	0.047MF	5%	50V
C210	1-162-294-31	CERAMIC	0.001MF	10%	50V
C211	1-162-302-31	CERAMIC	0.0022MF	30%	16V
C212	1-130-487-00	MYLAR	0.022MF	5%	50V
C213	1-162-291-31	CERAMIC	560PF	10%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C214	1-130-475-00	MYLAR	0.0022MF	5%	50V
C215	1-136-165-00	FILM	0.1MF	5%	50V
C216	1-130-487-00	MYLAR	0.022MF	5%	50V
C217	1-136-165-00	FILM	0.1MF	5%	50V
C218	1-162-304-31	CERAMIC	0.0047MF	30%	16V
C219	1-136-163-00	FILM	0.068MF	5%	50V
C221	1-123-318-00	ELECT	33MF	20%	10V
C222	1-123-318-00	ELECT	33MF	20%	10V
C223	1-131-369-00	TANTALUM	4.7MF	10%	16V
C235	1-162-294-31	CERAMIC	0.001MF	10%	50V
C236	1-136-169-00	FILM	0.22MF	5%	50V
C237	1-136-161-00	FILM	0.047MF	5%	50V
C301	1-123-356-00	ELECT	10MF	20%	50V
C302	1-162-302-31	CERAMIC	0.0022MF	30%	16V
C303	1-162-302-31	CERAMIC	0.0022MF	30%	16V
C304	1-102-725-00	CERAMIC	36PF	5%	50V
C305	1-102-658-00	CERAMIC	180PF	5%	50V
C306	1-102-647-00	CERAMIC	39PF	5%	50V
C307	1-102-523-00	CERAMIC	56PF	5%	50V
C308	1-162-294-31	CERAMIC	0.001MF	10%	50V
C309	1-102-514-00	CERAMIC	22PF	5%	50V
C310	1-123-318-00	ELECT	33MF	20%	16V
C311	1-123-318-00	ELECT	33MF	20%	16V
C312	1-123-318-00	ELECT	33MF	20%	16V
C313	1-123-318-00	ELECT	33MF	20%	16V
C314	1-162-284-31	CERAMIC	150PF	10%	50V
C315	1-162-284-31	CERAMIC	150PF	10%	50V
C316	1-123-318-00	ELECT	33MF	20%	16V
C317	1-162-306-31	CERAMIC	0.01MF	30%	16V
C318	1-162-306-31	CERAMIC	0.01MF	30%	16V
C319	1-123-318-00	ELECT	33MF	20%	16V
C321	1-130-487-00	MYLAR	0.022MF	5%	50V
C323	1-162-294-31	CERAMIC	0.001MF	10%	50V
C324	1-123-318-00	ELECT	33MF	20%	16V
C325	1-123-318-00	ELECT	33MF	20%	16V
C327	1-123-318-00	ELECT	33MF	20%	16V
C330	1-101-005-00	CERAMIC	0.022MF		50V
C331	1-101-005-00	CERAMIC	0.022MF		50V
C332	1-131-374-00	TANTALUM	33MF	10%	16V
C333	1-101-005-00	CERAMIC	0.022MF		50V
C334	1-101-005-00	CERAMIC	0.022MF		50V
C348	1-130-483-00	MYLAR	0.01MF	5%	50V
C349	1-123-380-00	ELECT	1MF	20%	50V
C351	1-123-380-00	ELECT	1MF	20%	50V
C353	1-136-165-00	FILM	0.1MF	5%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C354	1-130-481-00	MYLAR	0.0068MF	5%	50V
C355	1-136-169-00	FILM	0.22MF	5%	50V
C356	1-162-290-31	CERAMIC	470PF	10%	50V
C360	1-136-165-00	FILM	0.1MF	5%	50V
C361	1-123-330-00	ELECT	22MF	20%	25V
C362	1-123-330-00	ELECT	22MF	20%	25V
C363	1-161-974-00	CERAMIC	0.1MF	20%	16V
C364	1-161-974-00	CERAMIC	0.1MF	20%	16V
C365	1-102-114-81	CERAMIC	470PF	10%	50V
C366	1-161-974-00	CERAMIC	0.1MF	20%	16V
C367	1-161-974-00	CERAMIC	0.1MF	20%	16V
C401	1-104-230-00	POLYSTYRENE	0.0015MF	5%	50V
C402	1-123-384-00	ELECT	10MF	20%	50V
C403	1-123-384-00	ELECT	10MF	20%	50V
C404	1-123-384-00	ELECT	10MF	20%	50V
C405	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C406	1-123-384-00	ELECT	10MF	20%	50V
C407	1-130-967-00	FILM	0.0027MF	3%	100V
C408	1-136-230-00	FILM	0.0022MF	3%	100V
C409	1-123-318-00	ELECT	33MF	20%	16V
C410	1-136-257-00	FILM	0.0039MF	3%	100V
C411	1-136-252-00	FILM	0.0015MF	3%	100V
C412	1-123-334-00	ELECT	220MF	20%	25V
C413	1-130-955-00	FILM	0.01MF	3%	100V
C414	1-104-260-11	POLYSTYRENE	510PF	2%	125V
C415	1-130-340-00	FILM	0.018MF	3%	100V
C416	1-130-340-00	FILM	0.018MF	3%	100V
C417	1-136-252-00	FILM	0.0015MF	3%	100V
C419	1-123-356-00	ELECT	10MF	20%	50V
C420	1-123-330-00	ELECT	22MF	20%	25V
C421	1-101-005-00	CERAMIC	0.022MF		50V
C501	1-104-230-00	POLYSTYRENE	0.0015MF	5%	50V
C502	1-123-384-00	ELECT	10MF	20%	50V
C503	1-123-384-00	ELECT	10MF	20%	50V
C504	1-123-384-00	ELECT	10MF	20%	50V
C505	1-104-233-00	POLYSTYRENE	220PF	5%	125V
C506	1-123-384-00	ELECT	10MF	20%	50V
C507	1-130-967-00	FILM	0.0027MF	3%	100V
C508	1-136-230-00	FILM	0.0022MF	3%	100V
C509	1-123-318-00	ELECT	33MF	20%	16V
C510	1-136-257-00	FILM	0.0039MF	3%	100V
C511	1-136-252-00	FILM	0.0015MF	3%	100V
C512	1-123-334-00	ELECT	220MF	20%	25V
C513	1-130-955-00	FILM	0.01MF	3%	100V
C514	1-104-260-11	POLYSTYRENE	510PF	2%	125V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C515	1-130-340-00	FILM	0.018MF	3%	100V
C516	1-130-340-00	FILM	0.018MF	3%	100V
C517	1-136-252-00	FILM	0.0015MF	3%	100V
C519	1-123-356-00	ELECT	10MF	20%	50V
C520	1-123-330-00	ELECT	22MF	20%	25V
C521	1-101-005-00	CERAMIC	0.022MF		50V
C601	1-162-294-31	CERAMIC	0.001MF	10%	50V
C602	1-162-294-31	CERAMIC	0.001MF	10%	50V
C651	1-136-157-00	FILM	0.022MF	5%	50V
C652	1-136-157-00	FILM	0.022MF	5%	50V
C653	1-136-157-00	FILM	0.022MF	5%	50V
C654	1-130-479-00	MYLAR	0.0047MF	5%	50V
C655	1-130-479-00	MYLAR	0.0047MF	5%	50V
C701	1-101-004-00	CERAMIC	0.01MF		50V
C801	1-162-294-31	CERAMIC	0.001MF	10%	50V
C851	1-123-611-00	ELECT	1MF	20%	50V
C852	1-123-613-00	ELECT	3.3MF	20%	50V
C853	1-162-288-31	CERAMIC	330PF	10%	50V
C854	1-123-821-00	ELECT	47MF	20%	16V
C902	1-123-339-00	ELECT	3300MF	20%	25V
C903 ⚠	1-124-348-00	ELECT	470MF	20%	35V
C905	1-123-491-51	ELECT	4700MF	20%	16V
C906 ⚠	1-123-311-00	ELECT	1000MF	20%	10V
C911	1-123-346-00	ELECT	220MF	20%	35V
C912	1-123-360-00	ELECT	100MF	20%	50V
C913	1-123-345-00	ELECT	100MF	20%	35V
C951	1-130-789-00	FILM	1MF	10%	100V
C952	1-123-339-00	ELECT	3300MF	20%	25V
C953 ⚠	1-124-348-00	ELECT	470MF	20%	35V
C955	1-123-326-00	ELECT	3300MF	20%	16V
C956 ⚠	1-123-311-00	ELECT	1000MF	20%	10V
C961	1-136-173-00	FILM	0.47MF	5%	50V
C962	1-123-307-00	ELECT	100MF	20%	10V
C991 ⚠	1-161-744-00	CERAMIC	0.01MF		400V
C992 ⚠	1-161-742-00	(US,Canadian,AEP,G-AEP,UK).... CERAMIC	0.0022MF	20%	400V
C993 ⚠	1-161-742-00	(AEP,G-AEP,UK)... CARAMIC	0.0022MF	20%	400V
C994 ⚠	1-161-742-00	(AEP,G-AEP,UK)... CARAMIC	0.0022MF	20%	400V
C995 ⚠	1-161-742-00	(AEP,G-AEP,UK)... CARAMIC	0.0022MF	20%	400V
CNJ151*	1-560-073-00	PIN, CONNECTOR (U TYPE)			
CNJ301	1-562-677-11	SOCKET, CONNECTOR			
CNJ401	1-507-912-11	JACK, PIN 2P			
CNJ501	1-507-912-11	JACK, PIN 2P			

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

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
⚠CNJ901.	1-526-609-00	(US,E)........CONNECTOR, AC OUTLET
⚠CNJ901.	1-526-794-11	(AEP,G-AEP)...CONNECTOR, AC OUTLET
⚠CNJ901.	1-526-882-00	(Canadian)....CONNECTOR, AC OUTLET
⚠CNJ901.	1-526-751-00	(UK)..........CONNECTOR, AC OUTLET
CNP201	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CNP202*	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P
CNP203*	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P
CNP301*	1-564-507-41	PLUG, CONNECTOR 4P
CNP302	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CNP303*	1-560-064-00	PIN, CONNECTOR 6P
CNP304*	1-564-712-11	PIN, CONNECTOR (SMALL TYPE) 10P
CNP305	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CNP306*	1-564-505-11	PLUG, CONNECTOR 2P
CNP307*	1-564-507-21	PLUG, CONNECTOR 4P
CNP308*	1-564-506-11	PLUG, CONNECTOR 3P
CNP309*	1-564-506-11	PLUG, CONNECTOR 3P
CNP310*	1-564-507-31	PLUG, CONNECTOR 4P
CNP401*	1-564-507-41	PLUG, CONNECTOR 4P
CNP402*	1-564-509-11	PLUG, CONNECTOR 6P
CNP601*	1-564-519-11	PLUG, CONNECTOR 4P
CNP602*	1-564-505-11	PLUG, CONNECTOR 2P
CNP603*	1-564-505-21	PLUG, CONNECTOR 2P
CNP604*	1-564-505-31	PLUG, CONNECTOR 2P
CNP605*	1-564-505-41	PLUG, CONNECTOR 2P
CNP606*	1-564-506-11	PLUG, CONNECTOR 3P
CNP607*	1-564-517-11	PLUG, CONNECTOR 2P
CNP702*	1-564-519-11	PLUG, CONNECTOR 4P
CNP703*	1-564-517-11	PLUG, CONNECTOR 2P
CNP705*	1-560-039-00	PIN, CONNECTOR
CNP706*	1-560-039-00	PIN, CONNECTOR
CNP707*	1-560-286-00	CONNECTOR PIN 2P
CNP708*	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P
CNP901*	1-564-505-11	PLUG, CONNECTOR 2P
CNP902*	1-564-507-11	PLUG, CONNECTOR 4P
D51	8-719-911-19	DIODE 1SS119
D201	8-719-100-29	DIODE RD5.1E-B1
D202	8-719-911-19	DIODE 1SS119
D205	8-719-911-19	DIODE 1SS119
D211	8-719-911-19	DIODE 1SS119
D213	8-719-102-49	DIODE RD3.0E-N1
D301	8-719-911-19	DIODE 1SS119
D302	8-719-902-79	DIODE KV1236Z
D651	8-719-200-02	DIODE 10E-2
D652	8-719-200-02	DIODE 10E-2
D653	8-719-200-02	DIODE 10E-2
D701	8-719-911-19	DIODE 1SS119

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D702	8-719-911-19	DIODE 1SS119
D703	8-719-911-19	DIODE 1SS119
D805	8-719-918-57	DIODE GL-5NG27
D806	8-719-914-39	DIODE GL-5HY27
D809	8-719-919-08	DIODE GL-3NG1
D851	8-719-110-32	DIODE PH302B
D901⚠.	8-719-210-12	DIODE 10DF2
D902⚠.	8-719-210-12	DIODE 10DF2
D903⚠.	8-719-210-12	DIODE 10DF2
D904⚠.	8-719-210-12	DIODE 10DF2
D905⚠.	8-719-210-12	DIODE 10DF2
D906⚠.	8-719-210-12	DIODE 10DF2
D907⚠.	8-719-210-12	DIODE 10DF2
D908⚠.	8-719-210-12	DIODE 10DF2
D909⚠.	8-719-200-02	DIODE 10E-2
D910⚠.	8-719-200-02	DIODE 10E-2
D911⚠	8-719-911-19	DIODE 1SS119
D912⚠	8-719-911-19	DIODE 1SS119
D913	8-719-101-07	DIODE RD33E-B3
D914	8-719-911-19	DIODE 1SS119
D915	8-719-100-48	DIODE RD8.2E-B2
D916	8-719-911-19	DIODE 1SS119
D917	8-719-911-19	DIODE 1SS119
F991⚠.	1-532-286-00	(UK)....FUSE, TIME-LAG 2.5A TIME LAG
F991⚠.	1-532-078-00	(AEP,G-AEP)...FUSE, TIME-LAG 1.0A TIME LAG
FLD201	1-519-304-00	INDICATOR TUBE, FLUORESCENT
H151	8-719-800-31	DIODE THS103A-1
H152	8-719-800-31	DIODE THS103A-1
IC151	8-759-600-02	IC M5218L
IC201	8-752-010-80	IC CX20108
IC202	8-759-700-58	IC NJM4558D-FA
IC301	8-759-602-25	IC M50760-414P
IC302	8-759-913-84	IC MSM6404A-41RS
IC303	8-759-913-82	IC MSM6404A-39RS
IC304	8-759-202-13	IC TC74HCU04P
IC305	8-759-990-82	IC TL082CP
IC306	8-759-145-58	IC UPC4558C
IC307	8-759-912-52	IC CX23035
IC308	8-759-913-72	IC MB8416-20LPF
IC309	8-759-912-53	IC CX23034
IC310	8-752-015-20	IC CX20152
IC311	8-759-140-53	IC UPD4053BC

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Ref.No.	Part No.	Description
IC312	8-759-984-66	IC MB84066B
IC401	8-759-910-75	IC TDB0353DP
IC402	8-759-900-72	IC NE5532P
IC403	8-759-900-72	IC NE5532P
IC501	8-759-910-75	IC TDB0353DP
IC502	8-759-900-72	IC NE5532P
IC503	8-759-900-72	IC NE5532P
IC801	8-759-600-35	IC M54940P
IC851	8-752-010-60	IC CX20106
IC901⚠	**8-759-700-51**	**IC NJM7805A**
IC902⚠	**8-759-700-28**	**IC NJM7905A**
IC903⚠	**8-759-170-12**	**IC UPC78M12H**
IC904⚠	**8-759-700-24**	**IC NJM79M12A**
IC905⚠	**8-759-708-05**	**IC NJM78L05A**
IC906⚠	**8-759-700-65**	**IC NJM79L05A**
L51	1-408-563-00	MICRO INDUCTOR 10UH
L301	1-426-212-11	COIL (RF)
L302	1-406-123-11	COIL (OSC)
L303	1-408-597-00	MICRO INDUCTOR 3.3UH
L304	1-408-597-00	MICRO INDUCTOR 3.3UH
L305	1-408-597-00	MICRO INDUCTOR 3.3UH
L601	1-408-117-00	MICRO INDUCTOR 10UH
L991 ⚠	**1-421-340-00**	**(AEP,G-AEP,UK)...TRANSFORMER, LINE FILTER (LFT)**
L991 ⚠	**1-421-580-00**	**(US,Canadian)....TRANSFORMER, LINE FILTER (LFT)**
M53	1-422-197-13	COIL (SLED)
M651	X-4902-019-1	MOTOR ASSY, CHUCKING
M652	A-4608-303-A	MOTOR ASSY, LOADING
PT901⚠	**1-448-025-11**	**(US,Canadian)....TRANSFORMER, POWER**
PT901⚠	**1-448-026-11**	**(E).............TRANSFORMER, POWER**
PT901⚠	**1-448-027-11**	**(AEP,G-AEP,UK)...TRANSFORMER, POWER**
PS901⚠	**1-532-675-00**	**LINK, IC**
PS902⚠	**1-532-675-00**	**LINK, IC**
PS951⚠	**1-532-675-00**	**LINK, IC**
PS952⚠	**1-532-675-00**	**LINK, IC**
Q151	8-729-177-44	TRANSISTOR 2SD774-5
Q152	8-729-103-43	TRANSISTOR 2SB734-2
Q153	8-729-177-44	TRANSISTOR 2SD774-5
Q154	8-729-103-43	TRANSISTOR 2SB734-2
Q201	8-729-177-44	TRANSISTOR 2SD774-5
Q202	8-729-374-02	TRANSISTOR 2SB740
Q203	8-729-177-44	TRANSISTOR 2SD774-5
Q204	8-729-374-02	TRANSISTOR 2SB740
Q205	8-729-177-44	TRANSISTOR 2SD774-5

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q206	8-729-374-02	TRANSISTOR 2SB740			
Q209	8-729-117-54	TRANSISTOR 2SA1175			
Q210	8-729-100-13	TRANSISTOR 2SC2001			
Q211	8-729-900-74	TRANSISTOR DTC143TS			
Q212	8-729-900-74	TRANSISTOR DTC143TS			
Q213	8-729-900-89	TRANSISTOR DTC144ES			
Q301	8-729-177-44	TRANSISTOR 2SD774-5			
Q302	8-729-374-02	TRANSISTOR 2SB740			
Q303	8-729-900-80	TRANSISTOR DTC114ES			
Q304	8-729-900-80	TRANSISTOR DTC114ES			
Q305	8-729-900-80	TRANSISTOR DTC114ES			
Q306	8-729-900-80	TRANSISTOR DTC114ES			
Q307	8-729-900-61	TRANSISTOR DTA114ES			
Q308	8-729-900-80	TRANSISTOR DTC114ES			
Q309	8-729-178-55	TRANSISTOR 2SC2785-E			
Q310	8-729-900-80	TRANSISTOR DTC114ES			
Q401	8-729-800-43	TRANSISTOR 2SK152-3			
Q501	8-729-800-43	TRANSISTOR 2SK152-3			
Q801	8-729-900-46	TRANSISTOR DTC143TF			
Q802	8-729-900-46	TRANSISTOR DTC143TF			
Q804	8-729-987-42	TRANSISTOR 2SA874			
Q901	8-729-177-44	TRANSISTOR 2SD774-5			
Q902	8-729-178-55	TRANSISTOR 2SC2785-E			
Q903	8-729-178-55	TRANSISTOR 2SC2785-E			
Q904	8-729-900-61	TRANSISTOR DTA114ES			
Q905	8-729-612-77	TRANSISTOR 2SA1027R			
Q906	8-729-900-80	TRANSISTOR DTC114ES			
R151	1-247-831-00	CARBON	1K	5%	1/6W
R152	1-247-831-00	CARBON	1K	5%	1/6W
R153	1-247-831-00	CARBON	1K	5%	1/6W
R154	1-247-831-00	CARBON	1K	5%	1/6W
R155	1-247-831-00	CARBON	1K	5%	1/6W
R156	1-247-831-00	CARBON	1K	5%	1/6W
R157	1-247-887-00	CARBON	220K	5%	1/6W
R158	1-247-887-00	CARBON	220K	5%	1/6W
R159	1-247-887-00	CARBON	220K	5%	1/6W
R160	1-247-887-00	CARBON	220K	5%	1/6W
R201	1-247-863-00	CARBON	22K	5%	1/6W
R202	1-247-851-00	CARBON	6.8K	5%	1/6W
R203	1-247-867-00	CARBON	33K	5%	1/6W
R204	1-247-847-00	CARBON	4.7K	5%	1/6W
R205	1-247-819-00	CARBON	330	5%	1/6W
R206	1-247-865-00	CARBON	27K	5%	1/6W
R207	1-247-807-00	CARBON	100	5%	1/6W
R208	1-247-851-00	CARBON	6.8K	5%	1/6W

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R209	1-247-864-00	CARBON	24K	5%	1/6W
R210	1-247-851-00	CARBON	6.8K	5%	1/6W
R211	1-247-831-00	CARBON	1K	5%	1/6W
R212	1-247-859-00	CARBON	15K	5%	1/6W
R213	1-247-855-00	CARBON	10K	5%	1/6W
R214	1-247-837-00	CARBON	1.8K	5%	1/6W
R215	1-247-879-00	CARBON	100K	5%	1/6W
R216	1-247-869-00	CARBON	39K	5%	1/6W
R217	1-247-855-00	CARBON	10K	5%	1/6W
R218	1-247-903-00	CARBON	1M	5%	1/6W
R219	1-247-831-00	CARBON	1K	5%	1/6W
R220	1-247-807-00	CARBON	100	5%	1/6W
R221	1-247-863-00	CARBON	22K	5%	1/6W
R222	1-247-857-00	CARBON	12K	5%	1/6W
R223	1-247-841-00	CARBON	2.7K	5%	1/6W
R224	1-247-869-00	CARBON	39K	5%	1/6W
R225	1-247-843-00	CARBON	3.3K	5%	1/6W
R226	1-247-859-00	CARBON	15K	5%	1/6W
R227	1-247-845-00	CARBON	3.9K	5%	1/6W
R228	1-247-815-00	CARBON	220	5%	1/6W
R229	1-247-865-00	CARBON	27K	5%	1/6W
R231	1-247-883-00	CARBON	150K	5%	1/6W
R232	1-247-899-00	CARBON	680K	5%	1/6W
R235	1-247-855-00	CARBON	10K	5%	1/6W
R236	1-247-855-00	CARBON	10K	5%	1/6W
R242	1-247-855-00	CARBON	10K	5%	1/6W
R243	1-247-895-00	CARBON	470K	5%	1/6W
R244	1-247-839-00	CARBON	2.2K	5%	1/6W
R245	1-247-855-00	CARBON	10K	5%	1/6W
R246	1-247-831-00	CARBON	1K	5%	1/6W
R247	1-247-871-00	CARBON	47K	5%	1/6W
R301	1-247-847-00	CARBON	4.7K	5%	1/6W
R302	1-247-841-00	CARBON	2.7K	5%	1/6W
R303	1-215-453-00	METAL	22K	1%	1/6W
R304	1-215-453-00	METAL	22K	1%	1/6W
R305	1-247-851-00	CARBON	6.8K	5%	1/6W
R306	1-247-857-00	CARBON	12K	5%	1/6W
R307	1-247-867-00	CARBON	33K	5%	1/6W
R308	1-247-831-00	CARBON	1K	5%	1/6W
R309	1-247-879-00	CARBON	100K	5%	1/6W
R310	1-247-879-00	CARBON	100K	5%	1/6W
R311	1-247-879-00	CARBON	100K	5%	1/6W
R313	1-214-741-00	METAL	3.3K	1%	1/4W
R314	1-214-745-00	METAL	4.7K	1%	1/4W
R315	1-214-769-00	METAL	47K	1%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R316	1-214-745-00	METAL	4.7K	1%	1/4W
R317	1-247-855-00	CARBON	10K	5%	1/6W
R318	1-247-855-00	CARBON	10K	5%	1/6W
R319	1-247-903-00	CARBON	1M	5%	1/6W
R320	1-247-843-00	CARBON	3.3K	5%	1/6W
R321	1-247-871-00	CARBON	47K	5%	1/6W
R322	1-247-855-00	CARBON	10K	5%	1/6W
R323	1-247-855-00	CARBON	10K	5%	1/6W
R324	1-247-855-00	CARBON	10K	5%	1/6W
R325	1-247-863-00	CARBON	22K	5%	1/6W
R326	1-247-863-00	CARBON	22K	5%	1/6W
R327	1-247-855-00	CARBON	10K	5%	1/6W
R351	1-215-441-00	METAL	6.8K	1%	1/6W
R352	1-215-441-00	METAL	6.8K	1%	1/6W
R353	1-247-903-00	CARBON	1M	5%	1/6W
R354	1-247-856-00	CARBON	11K	5%	1/6W
R355	1-247-856-00	CARBON	11K	5%	1/6W
R357	1-247-863-00	CARBON	22K	5%	1/6W
R358	1-247-843-00	CARBON	3.3K	5%	1/6W
R359	1-247-869-00	CARBON	39K	5%	1/6W
R360	1-215-453-00	METAL	22K	1%	1/6W
R361	1-247-815-00	CARBON	220	5%	1/6W
R362	1-247-815-00	CARBON	220	5%	1/6W
R363	1-247-887-00	CARBON	220K	5%	1/6W
R365	1-247-851-00	CARBON	6.8K	5%	1/6W
R366	1-247-807-00	CARBON	100	5%	1/6W
R367	1-215-449-00	METAL	15K	1%	1/6W
R368	1-247-807-00	CARBON	100	5%	1/6W
R401	1-214-733-00	METAL	1.5K	1%	1/4W
R402	1-214-742-00	METAL	3.6K	1%	1/4W
R403	1-214-759-00	METAL	18K	1%	1/4W
R404	1-214-745-00	METAL	4.7K	1%	1/4W
R405	1-214-741-00	METAL	3.3K	1%	1/4W
R406	1-214-737-00	METAL	2.2K	1%	1/4W
R407	1-214-737-00	METAL	2.2K	1%	1/4W
R408	1-214-737-00	METAL	2.2K	1%	1/4W
R409	1-214-737-00	METAL	2.2K	1%	1/4W
R410	1-214-738-00	METAL	2.4K	1%	1/4W
R411	1-214-738-00	METAL	2.4K	1%	1/4W
R412	1-214-742-00	METAL	3.6K	1%	1/4W
R413	1-214-731-00	METAL	1.2K	1%	1/4W
R414	1-214-964-00	METAL	1M	1%	1/4W
R415	1-214-742-00	METAL	3.6K	1%	1/4W
R416	1-214-743-00	METAL	3.9K	1%	1/4W
R417	1-214-777-00	METAL	100K	1%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R418	1-214-705-00	METAL	100	1%	1/4W
R419	1-214-761-00	METAL	22K	1%	1/4W
R420	1-214-717-00	METAL	330	1%	1/4W
R421	1-247-815-00	CARBON	220	5%	1/6W
R501	1-214-733-00	METAL	1.5K	1%	1/4W
R502	1-214-742-00	METAL	3.6K	1%	1/4W
R503	1-214-759-00	METAL	18K	1%	1/4W
R504	1-214-745-00	METAL	4.7K	1%	1/4W
R505	1-214-741-00	METAL	3.3K	1%	1/4W
R506	1-214-737-00	METAL	2.2K	1%	1/4W
R507	1-214-737-00	METAL	2.2K	1%	1/4W
R508	1-214-737-00	METAL	2.2K	1%	1/4W
R509	1-214-737-00	METAL	2.2K	1%	1/4W
R510	1-214-738-00	METAL	2.4K	1%	1/4W
R511	1-214-738-00	METAL	2.4K	1%	1/4W
R512	1-214-742-00	METAL	3.6K	1%	1/4W
R513	1-214-731-00	METAL	1.2K	1%	1/4W
R514	1-214-964-00	METAL	1M	1%	1/4W
R515	1-214-742-00	METAL	3.6K	1%	1/4W
R516	1-214-743-00	METAL	3.9K	1%	1/4W
R517	1-214-777-00	METAL	100K	1%	1/4W
R518	1-214-705-00	METAL	100	1%	1/4W
R519	1-214-761-00	METAL	22K	1%	1/4W
R520	1-214-717-00	METAL	330	1%	1/4W
R521	1-247-815-00	CARBON	220	5%	1/6W
R601	1-247-881-00	CARBON	120K	5%	1/6W
R602	1-247-881-00	CARBON	120K	5%	1/6W
R603	1-247-885-00	CARBON	180K	5%	1/6W
R604	1-247-885-00	CARBON	180K	5%	1/6W
R605	1-247-815-00	CARBON	220	5%	1/6W
R701	1-247-807-00	CARBON	100	5%	1/6W
R702	1-247-783-00	CARBON	10	5%	1/6W
R801	1-247-815-00	CARBON	220	5%	1/6W
R802	1-247-819-00	CARBON	330	5%	1/6W
R804	1-247-815-00	CARBON	220	5%	1/6W
R851	1-247-775-00	CARBON	4.7	5%	1/6W
R852	1-214-784-00	METAL	200K	1%	1/4W
R853	1-247-863-00	CARBON	22K	5%	1/6W
R854	1-247-799-00	CARBON	47	5%	1/6W
R901 ⚠	**1-247-200-00**	**CARBON**	**22**	**5%**	**1/2W F**
R911 ⚠	**1-247-083-00**	**CARBON**	**10**	**5%**	**1/4W F**
R912	1-247-839-00	CARBON	2.2K	5%	1/6W
R913	1-244-837-00	CARBON	33	5%	1/2W
R961	1-247-855-00	CARBON	10K	5%	1/6W
R962	1-247-859-00	CARBON	15K	5%	1/6W

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
R963	1-247-881-00	CARBON 120K 5% 1/6W
R964	1-247-855-00	CARBON 10K 5% 1/6W
R965	1-247-847-00	CARBON 4.7K 5% 1/6W
RV201	1-226-773-00	RES, ADJ, METAL GLAZE 22K
RV202	1-226-703-00	RES, ADJ, METAL GLAZE 10K
RV301	1-226-772-00	RES, ADJ, METAL GLAZE 4.7K
RY901	1-515-529-11	RELAY
S651	1-554-205-00	SWITCH, PUSH
S652	1-554-205-00	SWITCH, PUSH
S653	1-553-636-00	SWITCH, MICRO
S654	1-553-636-00	SWITCH, MICRO
S655 ⚠	**1-554-205-00**	**SWITCH, PUSH**
S656 ⚠	**1-554-205-00**	**SWITCH, PUSH**
S801	1-554-174-00	SWITCH, KEY BOARD
S802	1-554-174-00	SWITCH, KEY BOARD
S803	1-554-174-00	SWITCH, KEY BOARD
S804	1-554-174-00	SWITCH, KEY BOARD
S806	1-554-174-00	SWITCH, KEY BOARD
S807	1-554-174-00	SWITCH, KEY BOARD
S809	1-554-174-00	SWITCH, KEY BOARD
S810	1-554-174-00	SWITCH, KEY BOARD
S811	1-554-174-00	SWITCH, KEY BOARD
S812	1-554-174-00	SWITCH, KEY BOARD
S813	1-554-174-00	SWITCH, KEY BOARD
S814	1-554-174-00	SWITCH, KEY BOARD
S816	1-554-174-00	SWITCH, KEY BOARD
S991 ⚠	**1-553-318-00**	**SWITCH, PUSH (AC POWER)(1 KEY)**
SE51	1-422-198-11	COIL (SENSOR)
TB901	*1-535-121-00	TERMINAL
VS901 ⚠	**1-552-963-00**	**(E)...SWITCH, POWER/VOLTAGE SELECT**
X301	1-527-532-00	OSCILLATOR, CERAMIC
X302	1-567-336-11	VIBRATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-551-734-11	CORD, CONNECTION (RK-74A)
1-556-372-41	CORD, CONNECTION (4 CORE)
1-557-109-21	CORD, CONNECTION
1-564-085-00	(UK)...PLUG, AC
3-701-630-00	BAG, POLYETHYLENE
3-703-390-01	(US)....INSTRUCTION
3-703-680-00	(US)....LABEL, CAUTION, SUB, NEW UL
3-760-138-11	(AEP,G-AEP,UK,E)...MANUAL, INSTRUCTION
3-760-138-21	(US,Canadian)......MANUAL, INSTRUCTION
3-760-138-31	(Canadian).........MANUAL, INSTRUCTION
3-760-138-41	(AEP,G-AEP)........MANUAL, INSTRUCTION
*3-795-629-11	(AEP,G-AEP)......INSTRUCTION
4-859-064-00	SHEET, PROTECTION
4-884-695-03	CLEANER, DISK
4-907-610-01	JOINT
4-908-602-01	HOLDER, COMMANDER
4-908-603-11	INDIVIDUAL CARTON
4-908-604-01	CUSHION (RIGHT), UPPER
4-908-605-01	CUSHION (LEFT), UPPER
4-908-606-01	CUSHION, LOWER
A-4600-438-A	COMMANDER COMPLETE ASSY (RM-D302)

Sony Corporation