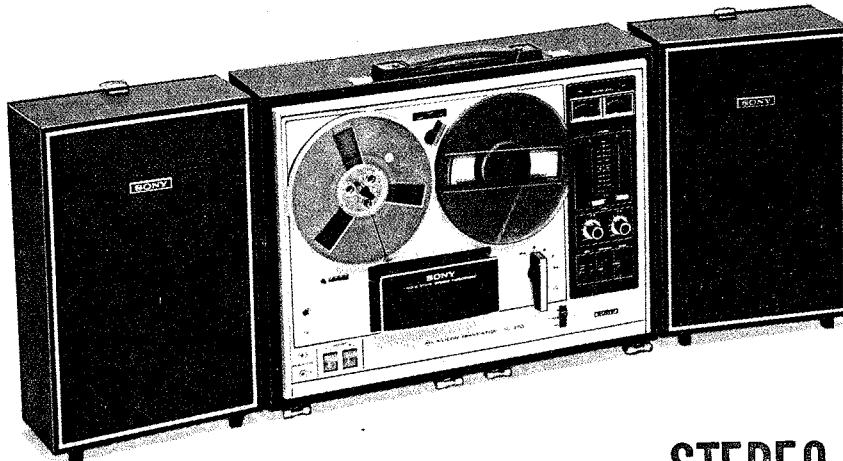


# TC-270

*AEP Model*



## STEREO TAPECORDER

### SPECIFICATIONS

**Power Requirements:** AC 50/60 Hz, 110V, 127V, 220V, 240V 55W

**Track System:** Four-track stereo and mono

**Reel Size:** 7" (18 cm) maximum

**Tape Speed:** 7½ ips, 3¾ ips and 1⅞ ips  
(19 cm/s, 9.5 cm/s and 4.8 cm/s)

**Frequency Response:**

	NAB	DIN
30 ~ 18,000 Hz, at 7½ ips (19 cm/s)	30 ~ 18,000 Hz	30 ~ 16,000 Hz
30 ~ 13,000 Hz, at 3¾ ips (9.5 cm/s)	30 ~ 13,000 Hz	40 ~ 12,500 Hz
30 ~ 7,000 Hz, at 1⅞ ips (4.8 cm/s)	30 ~ 7,000 Hz	

**Signal-to-Noise Ratio:** 50 dB or more

**Wow and Flutter:**

	NAB	DIN
at 7½ ips (19 cm/s)	0.12%	0.18%
at 3¾ ips (9.5 cm/s)	0.15%	0.25%
at 1⅞ ips (4.8 cm/s)	0.2%	

**Frequency:** Approx. 85 kHz

**Power Output:** 5W maximum per channel

**Inputs:** MIC  
Input impedance: low impedance  
Maximum sensitivity: 0.19 mV (-72 dB)  
REC/PB connector  
Input impedance: 3.9 k ohms  
Input level: 17.4 mV (-33 dB)

**Outputs:** LINE OUTputs  
Load impedance: more than 10 k ohms  
Output level: -5 dB (0.43V)  
SPEAKER outputs  
Load impedance: 8Ω  
REC/PB connector  
Output impedance: 80 ohms  
Output level: 0 dB (0.775V)  
Headphone output  
Load impedance: 8Ω

**Semiconductors:** 18 transistors and 4 diodes

**Dimensions:** 20<sup>13</sup>/<sub>16</sub> (W) x 10<sup>3</sup>/<sub>16</sub> (H) x 15<sup>1</sup>/<sub>4</sub> (D)  
(513 x 260 x 387 mm)

**Weight:** 36 lb 6 oz (16.5 kg)

# SONY®

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# SERVICE MANUAL

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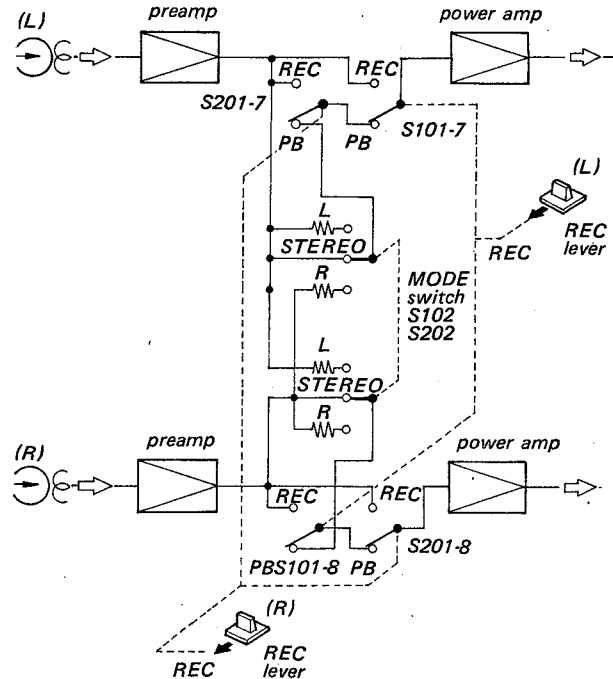
*When ordering replacement parts, you should use PART NUMBER listed on the Parts Lists or shown in the EXPLODED VIEW. The reference number should not be used for ordering purposes.*

## SECTION 1 OUTLINE

### 1-1. GENERAL DESCRIPTION

The SONY model TC-270 is a 4-track 2-channel stereo-phonics and monaural tape recorder. The special circuit is equipped as follows:

- \* **S102, S202 (Playback Mode Switch)**  
(Mode switch is disconnected in recording mode.)

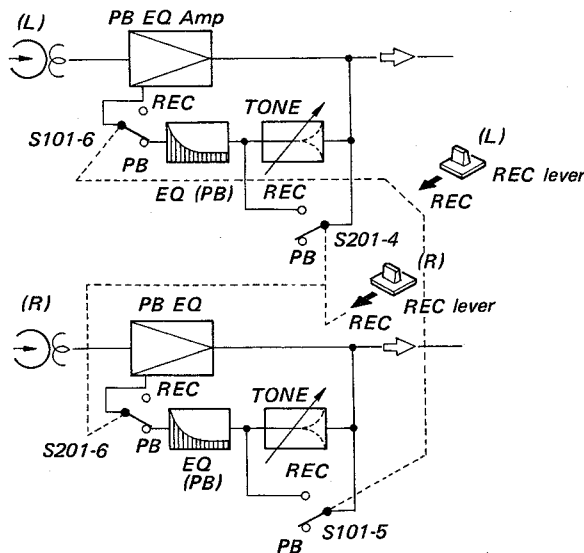


In the monaural playback mode, power amplifiers of both channels are connected in parallel to increase output power.

- \* **S201-4, S101-5 (TONE Defeat Switch)**

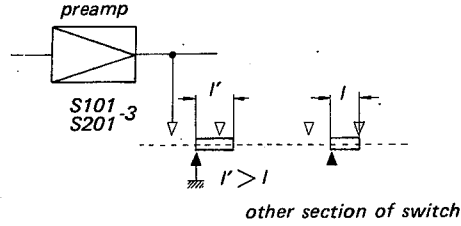
TONE controls are worked when both channels are in playback mode and disconnected when one channel is in record mode.

When one channel is in record mode, the other playback channel picks up a leakage of recording bias and recording signals. To prevent such a high frequency leakage from boosting, S201-4 or S101-5 short-circuits TONE control.


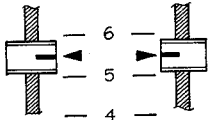


**\* S101-3, S201-3**

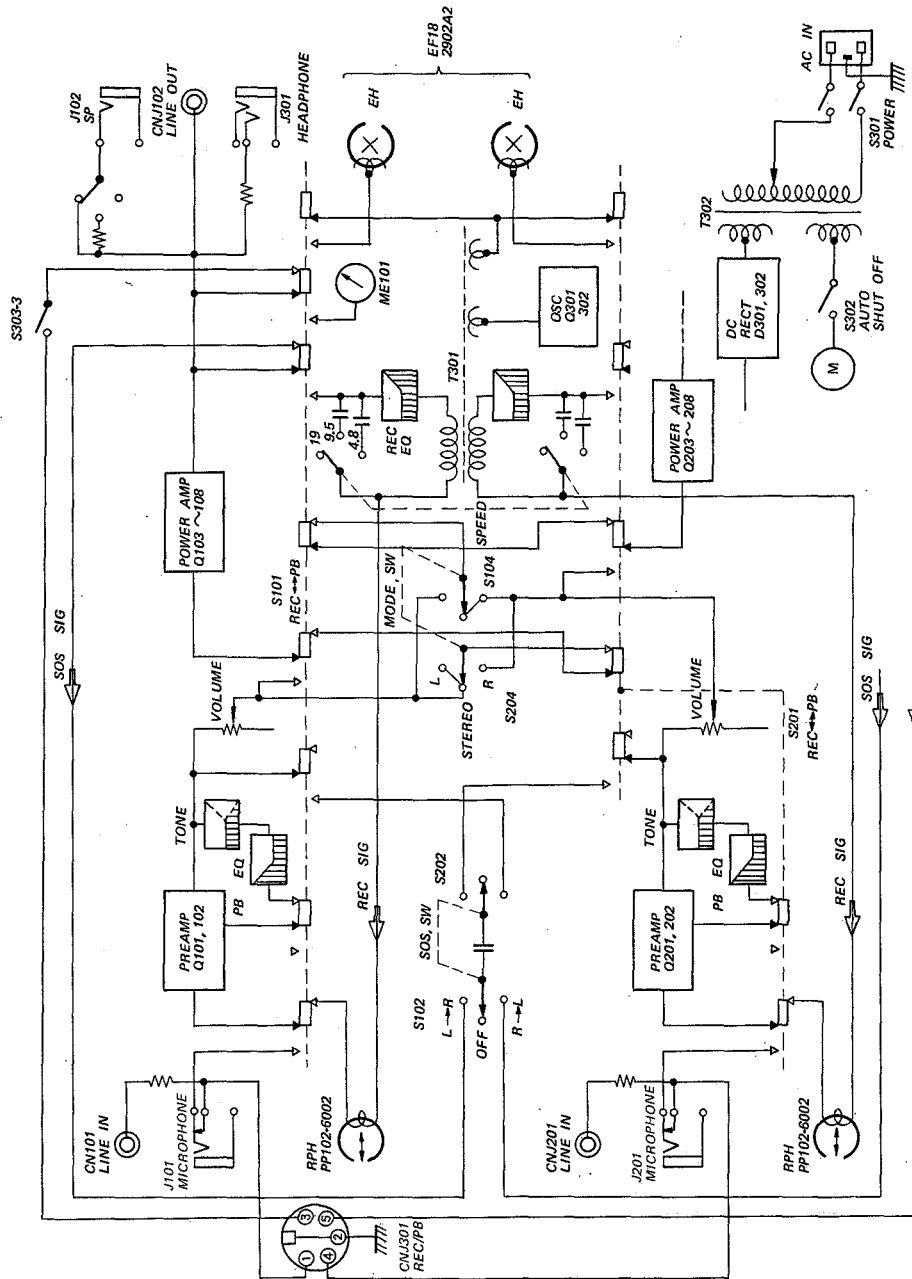
S101-3 or S201-3, one section of record/playback switch, grounds preamplifier output until the other section is completely changed over to avoid switching click noise.



**Note:**

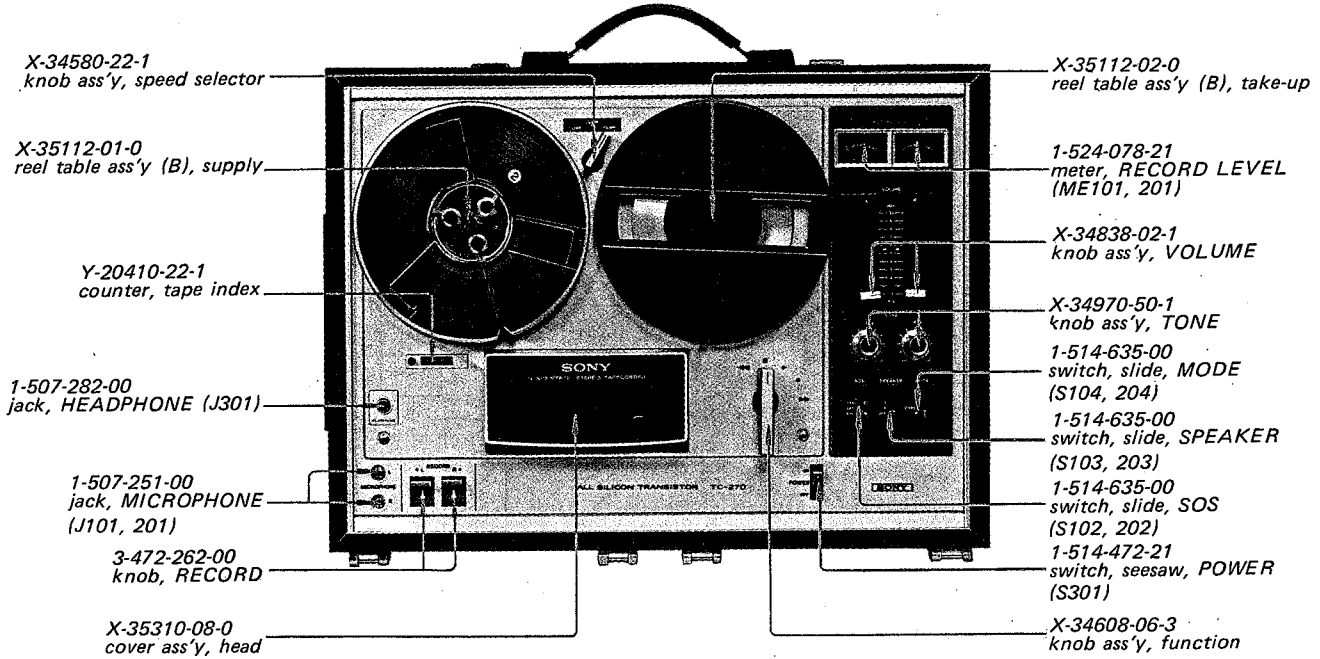
	Electrical Mid Position	Remarks
TONE control	 <div style="text-align: right;">▼ on the panel</div>	flat frequency response
VOLUME control	 <div style="text-align: right;">▼ on the panel</div>	-5 dB (0.44V) at LINE OUT jack

1-2. BLOCK DIAGRAM

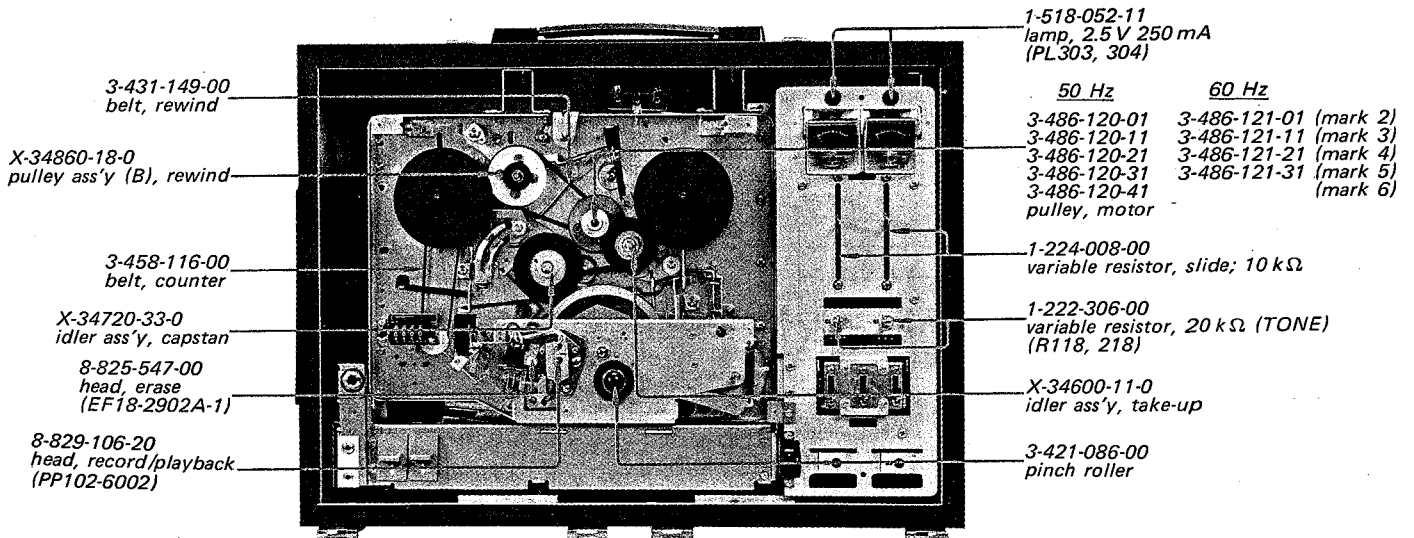


**1-3. MAJOR PARTS LOCATJON**

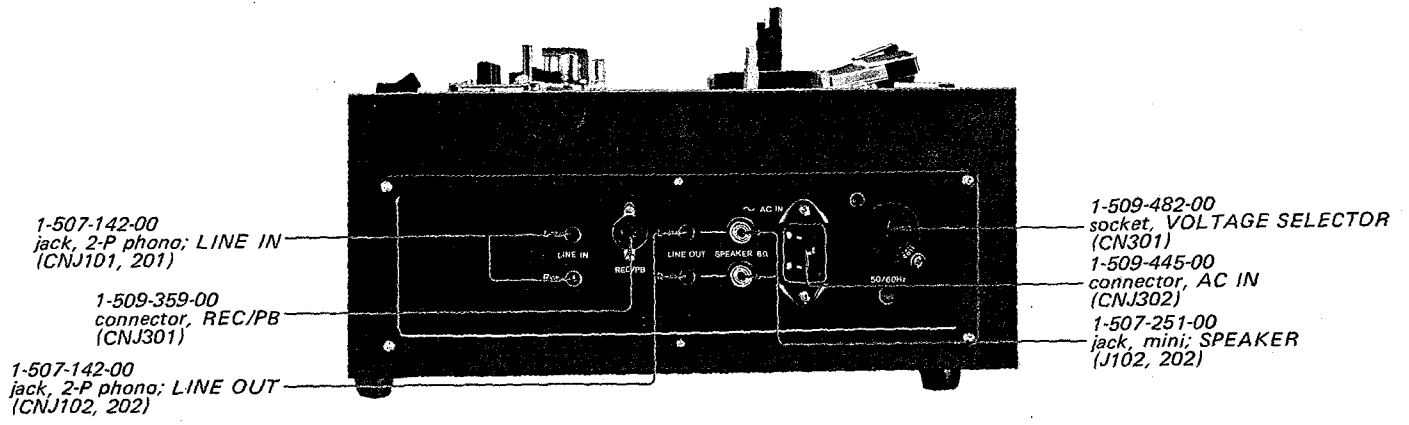
**Front Panel**



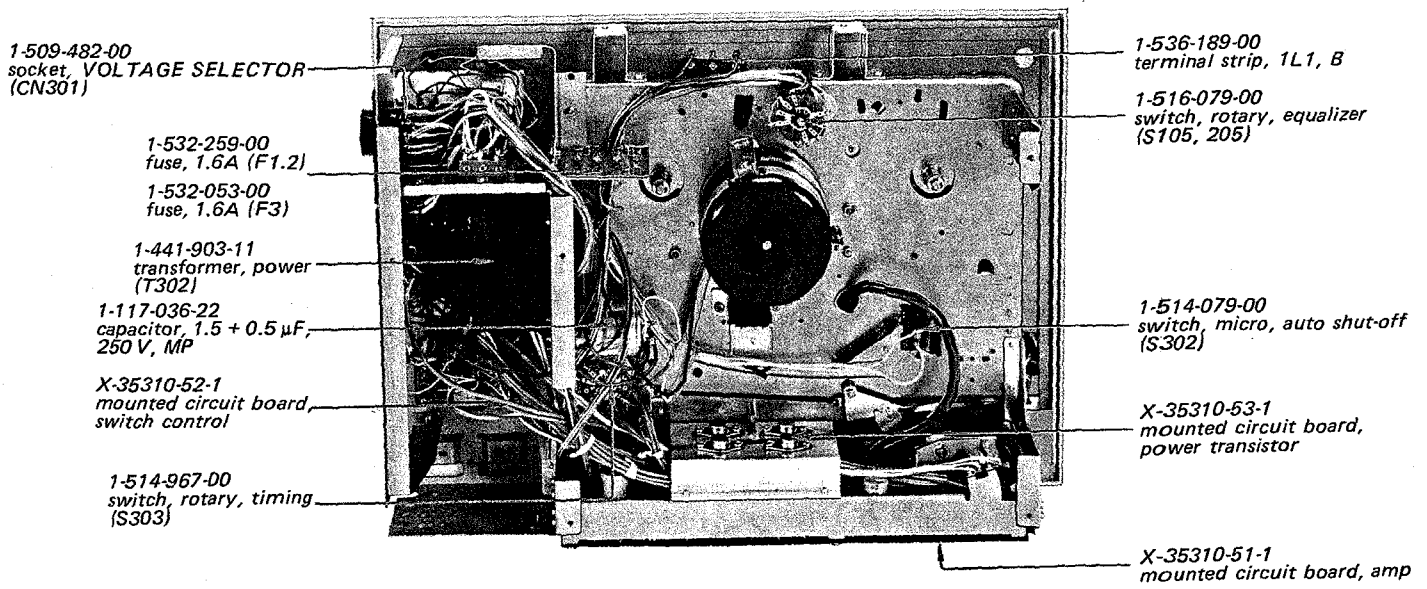
**Chassis Front**



**Side Panel**

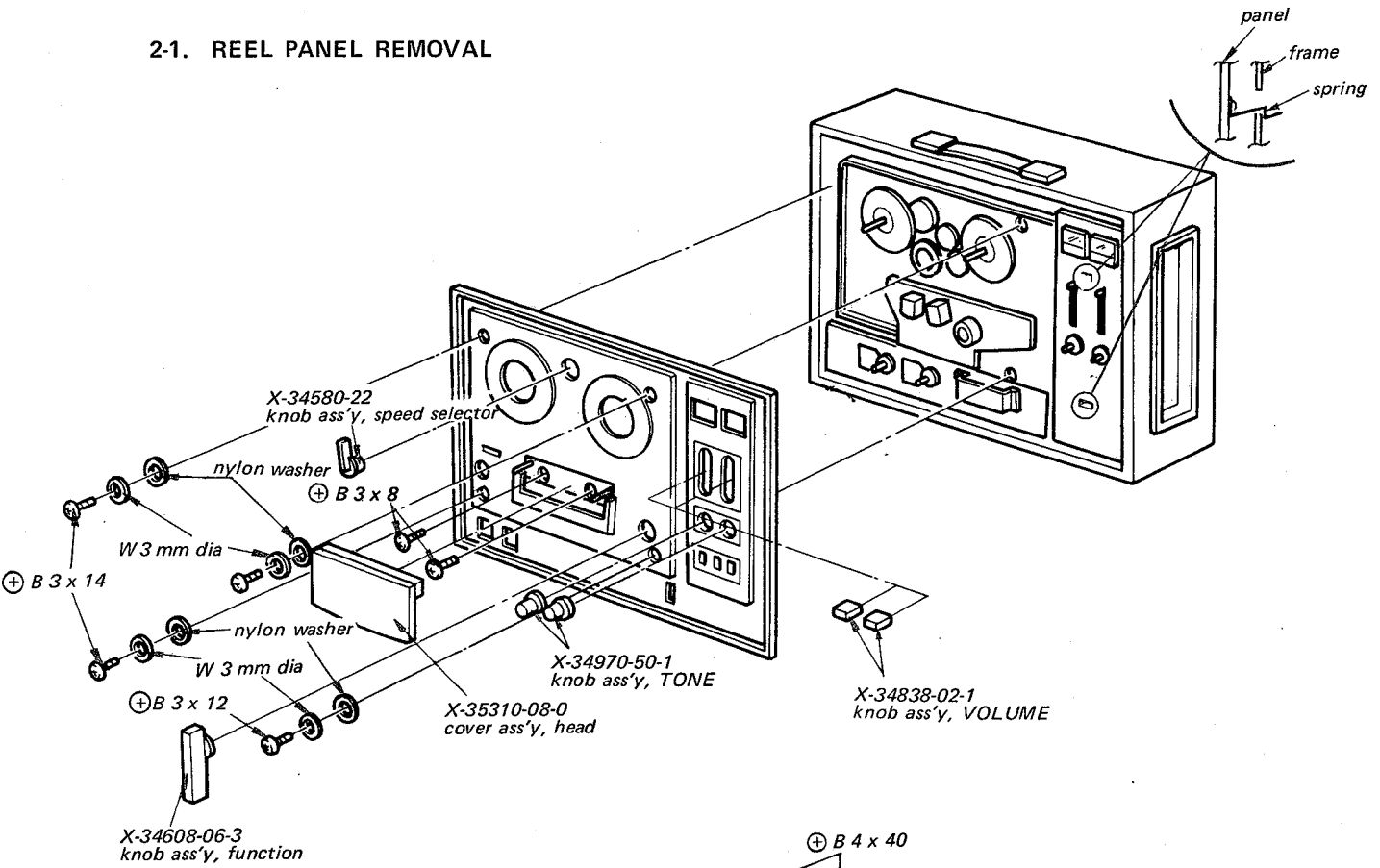


**Chassis Bottom**

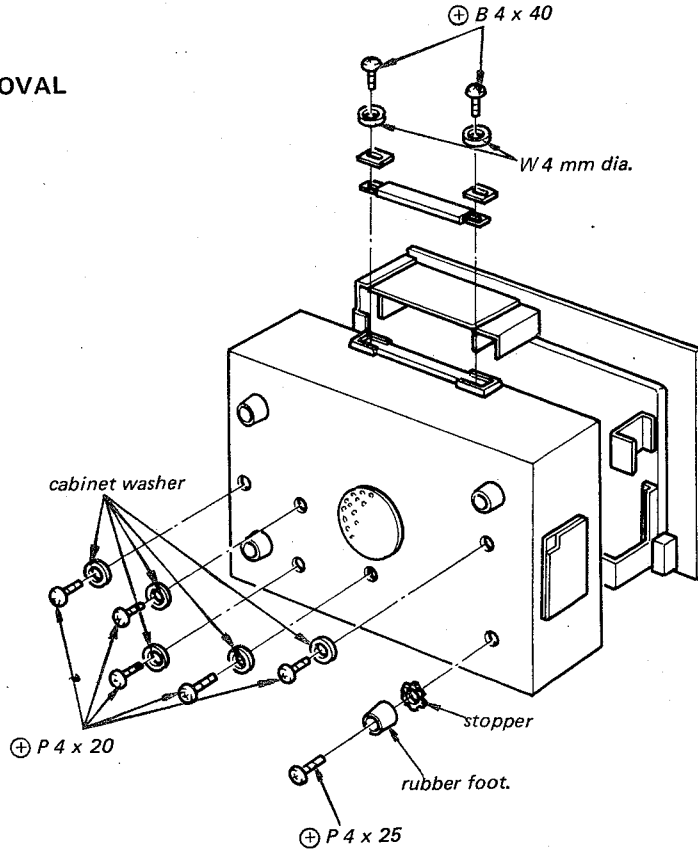


## SECTION 2 DISASSEMBLY

### 2-1. REEL PANEL REMOVAL



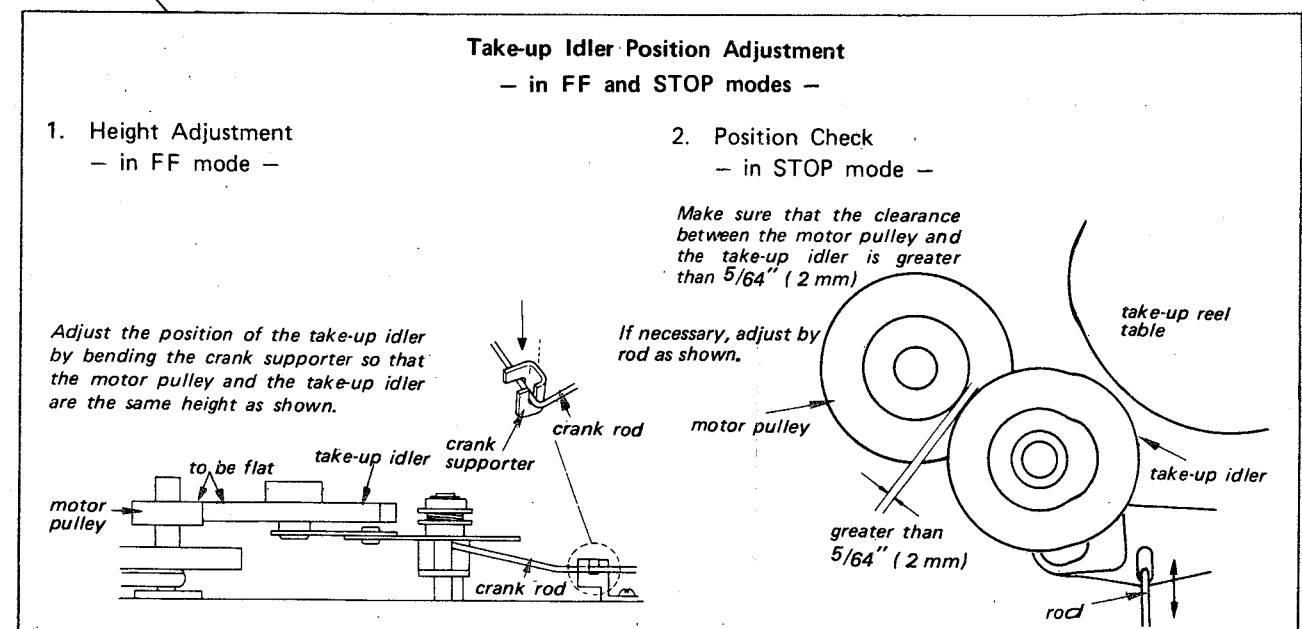
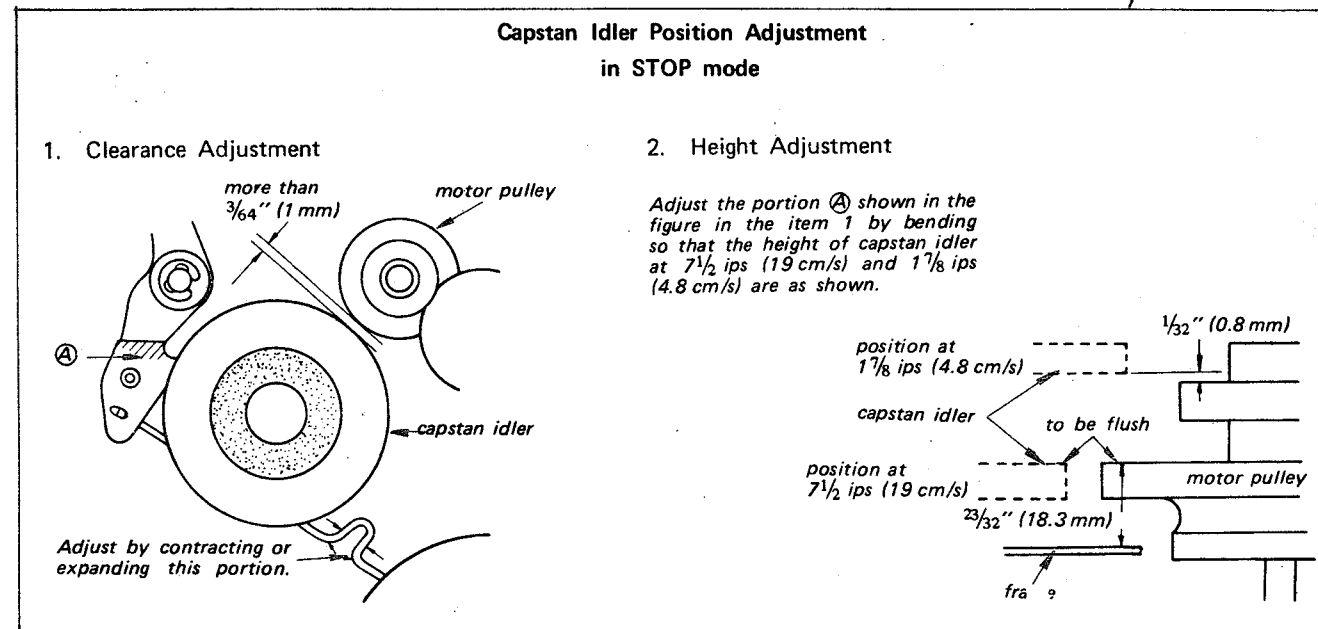
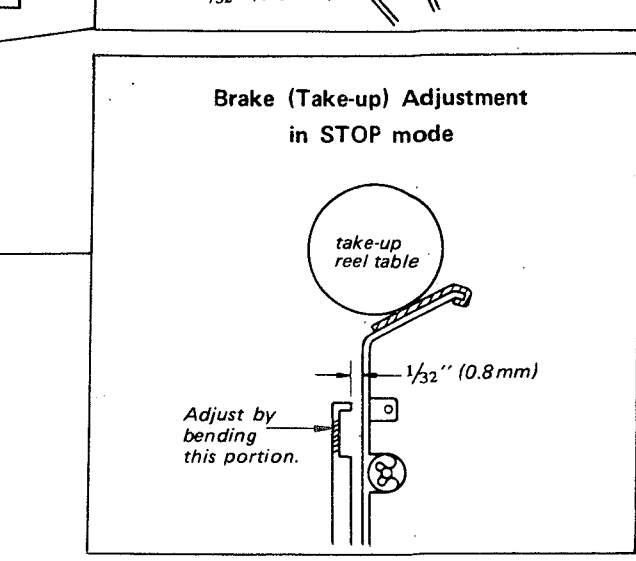
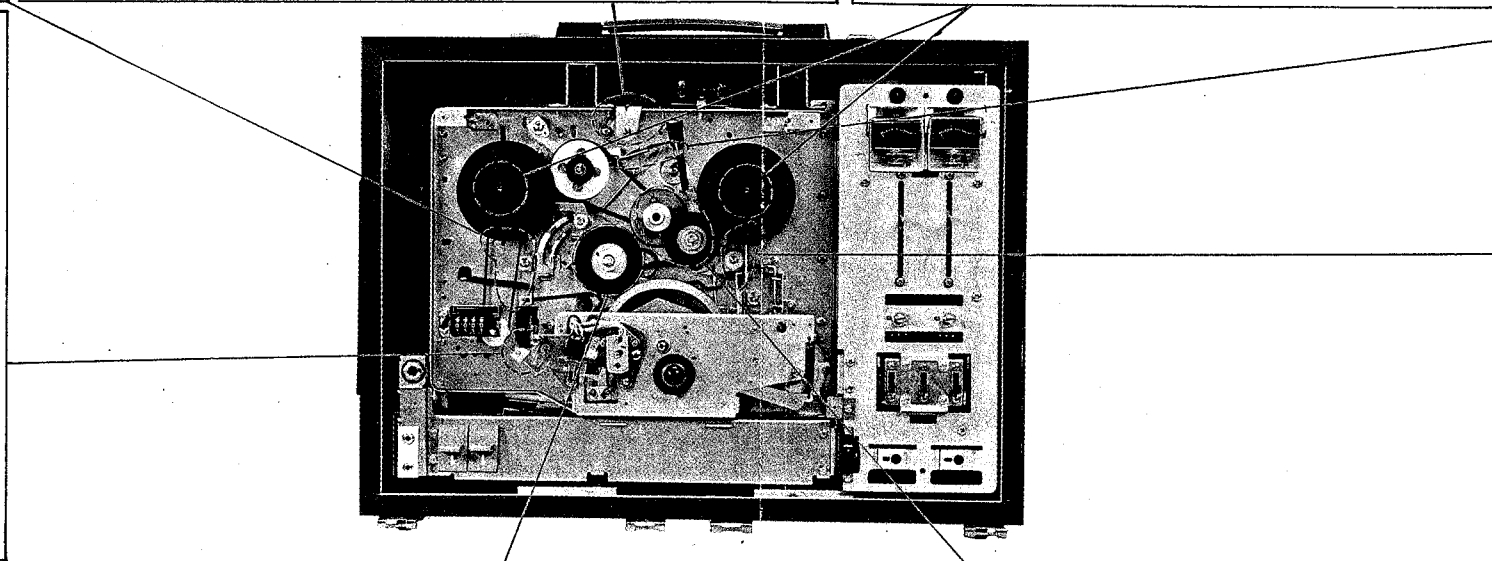
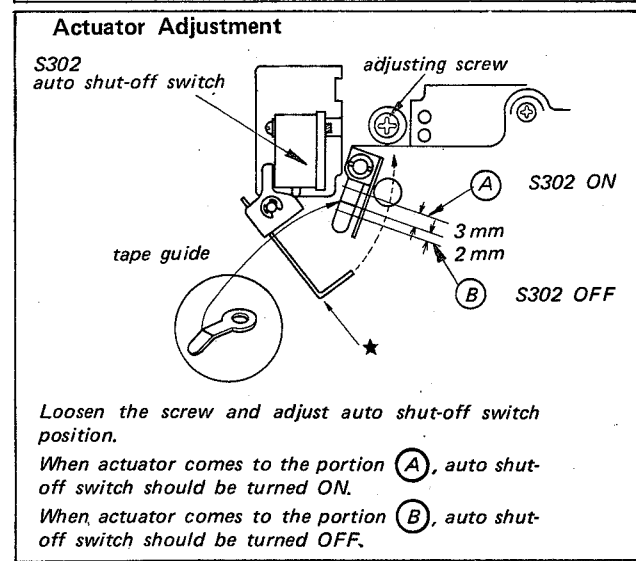
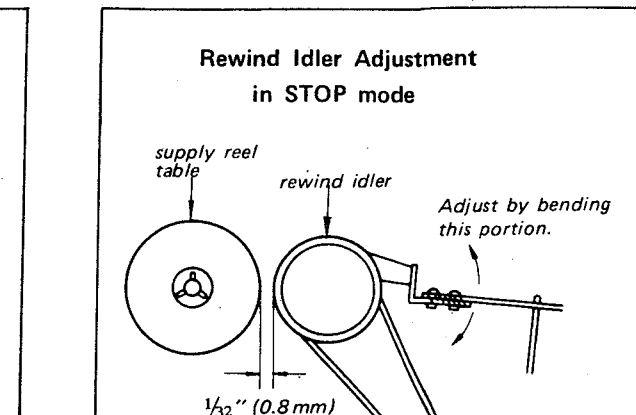
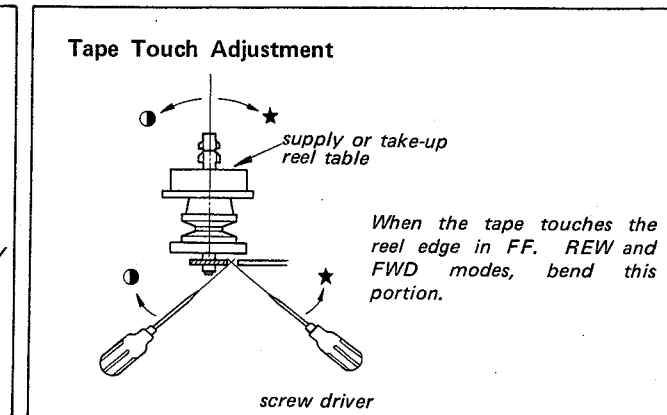
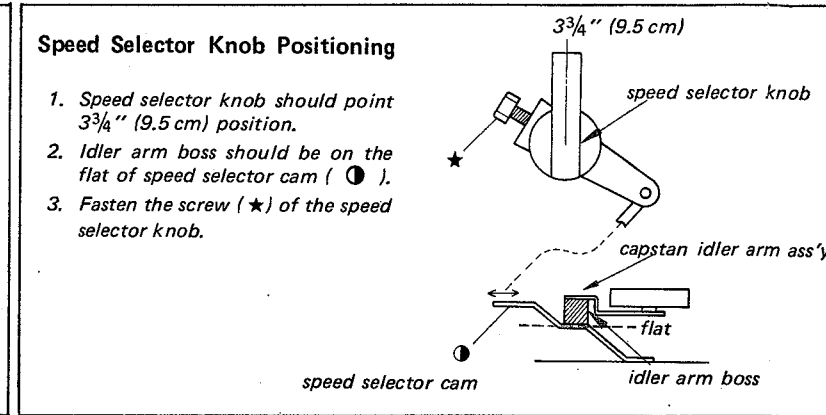
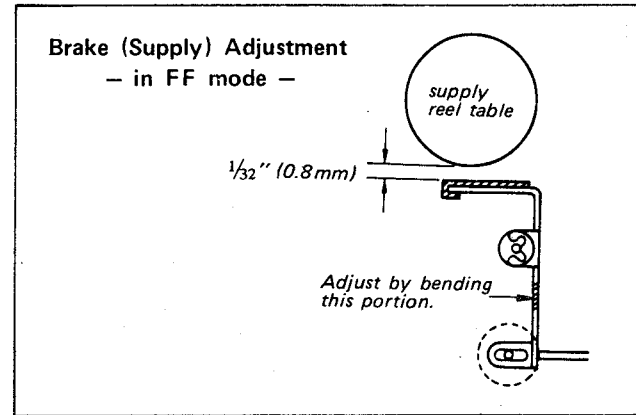
### 2-2. CABINET REMOVAL

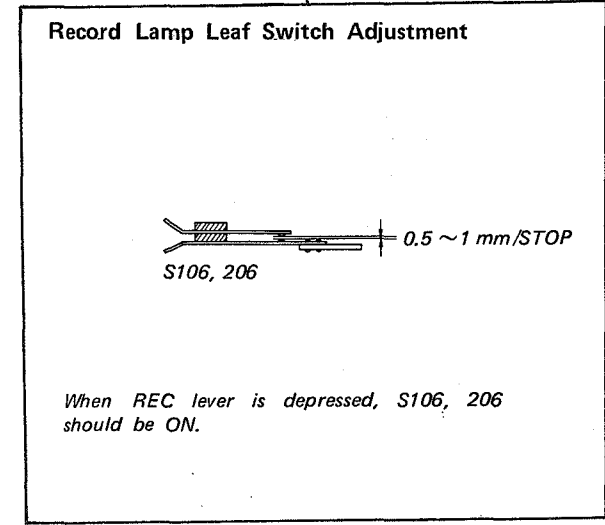
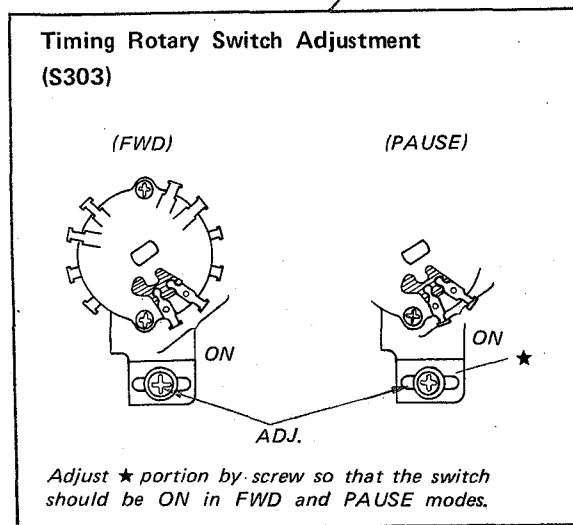
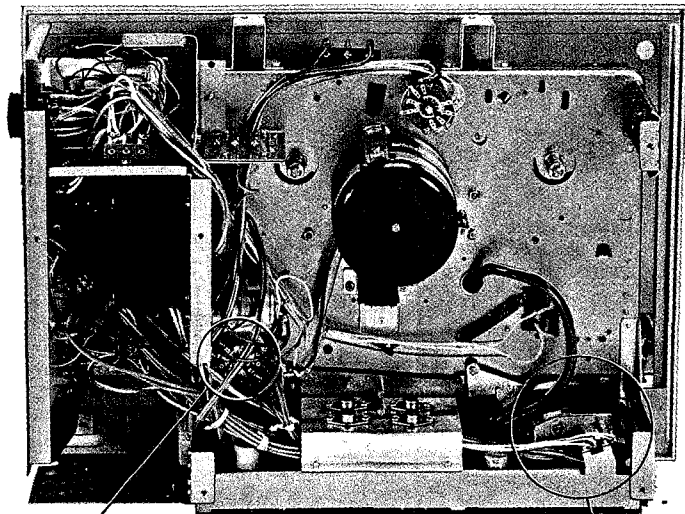




SECTION 3  
ADJUSTMENT PROCEDURES

3-1. MECHANICAL ADJUSTMENTS





**Torque Measurement**

- Take-up torque: 300 ± 25 g-cm (4.2 ± 0.3 oz-inch)
- Fast forward torque: 1,200 ± 100 g-cm (16.8 ± 1.4 oz-inch)
- Rewind torque: 1,400 ± 100 g-cm (19.6 ± 1.4 oz-inch)

**Back Tension (supply reel table) Measurement**

In forward mode: 80 ~ 120 g-cm (1.1 ~ 1.7 oz-inch)

**Pinch Roller Pressure Measurement**

1,200 ~ 1,500 g (2.6 ~ 3.3 lb)

**3-2. ELECTRICAL ADJUSTMENTS/ MEASUREMENTS**

**Precautions:**

1. Clean the following parts with alcohol moistened swab:
  - record/playback head
  - erase head
  - capstan
  - pinch roller
  - rubber belts
  - idlers
  - tape guides
2. Demagnetize record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for adjustments.
4. Perform the following adjustments in numerical order.
5. Perform the following adjustments for each channel, unless otherwise noted.
6. After adjustment, fix adjusted parts with locking compound.

**Test Equipment Required:**

- audio oscillator (af osc)
- attenuator 600 Ω (att)
- VTVM
- digital frequency counter

- wow meter
- 1-kHz bandpass filter
- resistors;
  - 10W type ..... 8 Ω
  - ¼W type ..... 300 Ω, 600 Ω
  - 10 k Ω, 100 k Ω
- blank tape (erased by bulk eraser)
- SONY alignment tapes:

J-19-F1

	1	2	3	4	5	6	7
Frequency (Hz)	10k	400	400	10k	7k	80	40
Level (dB)	-10	0	-10	-10	-10	-10	-10

- SPC-47 (4 kHz, 0 dB)
- WS-19-7 (3 kHz, 0 dB)
- WS-9-7 (3 kHz, 0 dB)

**Normal Operating Level**

	Signal Level	Impedance
MICROPHONE	-60 dB (0.77 mV)	600 Ω
LINE IN	-10 dB (0.25 V)	10 k Ω
LINE OUT	-5 dB (0.44 V)	100 k Ω load
SPEAKER (REC MODE)	+3 dB (1.1 V)	8 Ω load
(playback MODE)	+9 dB (2.2 V)	

**Tape Speed Adjustment**

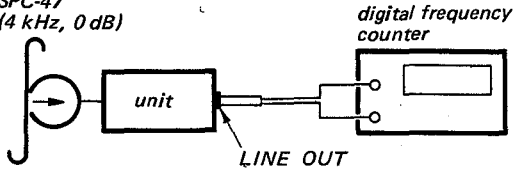
**Control/Switch Setting:**

- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s
- SPEAKER switch: OFF
- MODE switch: STEREO
- TONE control: ▼ position
- VOLUME control: mechanical mid.

**Procedure:**

Mode: playback

SPC-47  
(4 kHz, 0 dB)

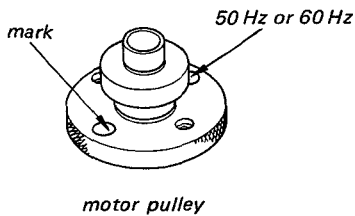


**Specification:**

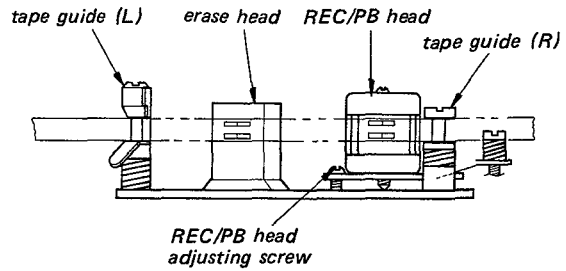
counter reading: 3,920 ~ 4,080 Hz

**Note:** If the counter reading is out of the specified range, replace motor pulley.

Motor Pulley			
Mark	Diameter	50 Hz Part No.	60 Hz Part No.
2	bigger	3-486-120-01	3-486-121-01
3	↑ ↓	3-486-120-11	3-486-121-11
4		3-486-120-21	3-486-121-21
5	smaller	3-486-120-31	3-486-121-31

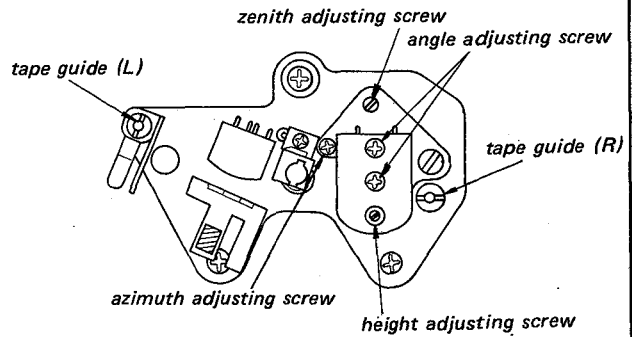


**Tape Path Adjustment**

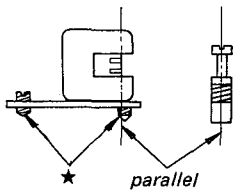


**Procedure:**

1. Thread a tape and place the unit in playback mode.
2. Align the upper edge of the erase head core and record/playback head core for that of the tape by turning the tape guides (R, L).
3. Turn the tape guides (R, L) clockwise by approximately 35 degrees.



**Record/Playback Head Height Adjustment**



**Procedure:**

1. Parallel the face of the head and tape guide by adjusting the screws (marked ★).
2. Align the upper edge of the record/playback head core and that of the tape by evenly turning the screws (marked ★).
3. Turn the screws (marked ★) counterclockwise by 20 degrees.

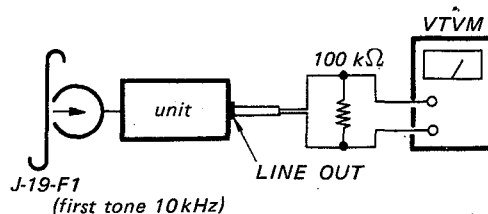
**Record/Playback Head Angle Adjustment**

**Control/Switch Setting:**

tape speed selector: 7½ ips 19 cm/s

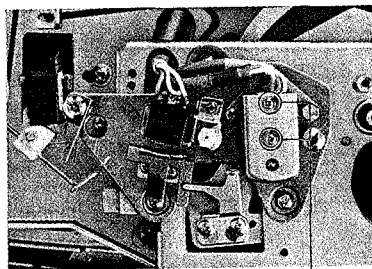
**Procedure:**

1. Mode: playback



2. Adjust the angle adjusting screws for maximum VTVM reading.

**Adjustment Location:**



*angle adjusting screw*

**Playback Head Azimuth Adjustment**

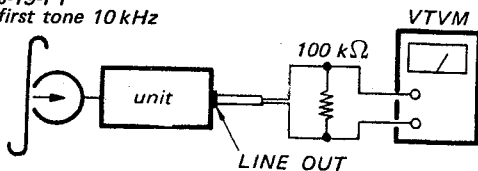
**Control/Switch Setting:**

- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s
- SPEAKER switch: OFF
- MODE switch: STEREO
- TONE control: ▼ position
- VOLUME control: mechanical mid.

**Procedure:**

1.

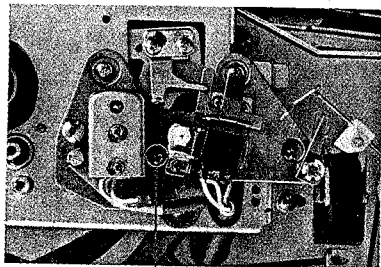
Mode: playback  
 J-19-F1  
 first tone 10 kHz



2. Adjust the azimuth adjusting screw for maximum VTVM reading.

**Note:** If the azimuth angles of L-CH and R-CH are not the same, set the screw midway between two screw positions.

**Adjustment Location:**



azimuth adjusting screw

**Playback Signal-to-Noise Ratio Measurement**

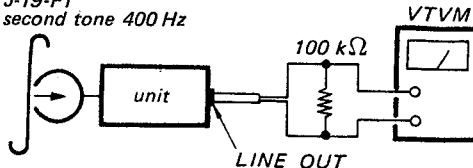
**Control/Switch Setting:**

- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s  
 3¾ ips 9.5 cm/s
- SPEAKER switch: OFF
- MODE switch: STEREO
- TONE control: ▼ position

**Procedure:**

1.

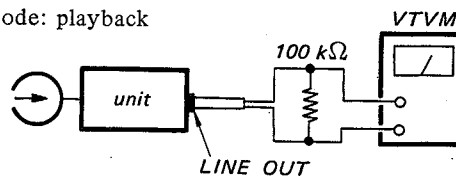
Mode: playback  
 J-19-F1  
 second tone 400 Hz



2. Adjust VOLUME control for -5 dB (0.44V) VTVM reading.

3. With no tape threaded

Mode: playback



4. 
$$-5 \text{ dB} - \frac{\text{VTVM reading (dB) in step 3}}{\phantom{VTVM reading (dB) in step 3}} = \text{S/N Ratio}$$

5. Specification

tape speed	S/N ratio
19 cm/s	46 dB or greater
9.5 cm/s	44 dB or greater

**Bias Adjustment**

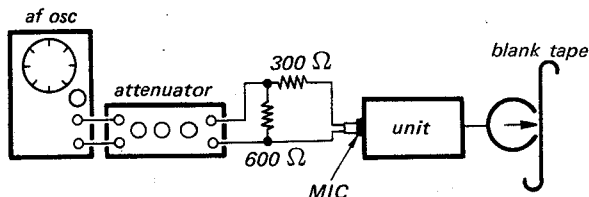
**Control/Switch Setting:**

- tape speed switch: 7½ ips 19 cm/s
- TONE control: ▼ position
- VOLUME control: Position to obtain -5 dB (0.44V) LINE OUTPUT for 1 kHz, -60 dB (0.78 mV) MIC input in record mode.

**Procedure:**

1.

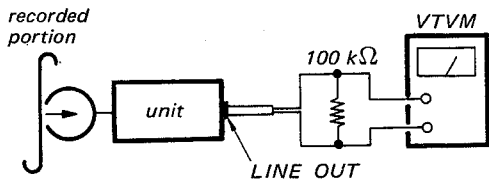
Mode: record



- 1 kHz, -80 dB (77.5 μV)
- 10 kHz, -80 dB (77.5 μV)

2.

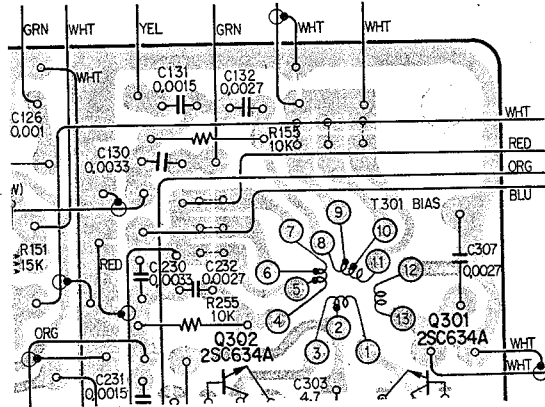
Mode: playback



Output level difference should be within 3 dB.

3. If the difference is more than 3 dB, change the tap of T301, (5) ~ (7), (9) ~ (11) as shown in the following figure.

**Amp. Circuit Board**



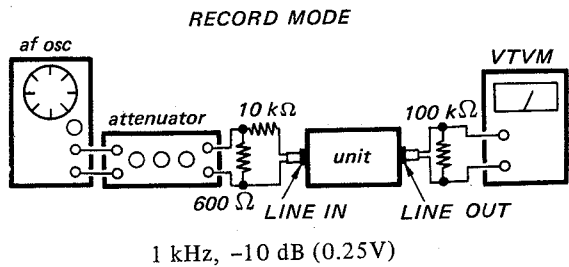
**Level Meter Calibration**

**Control/Switch Setting:**

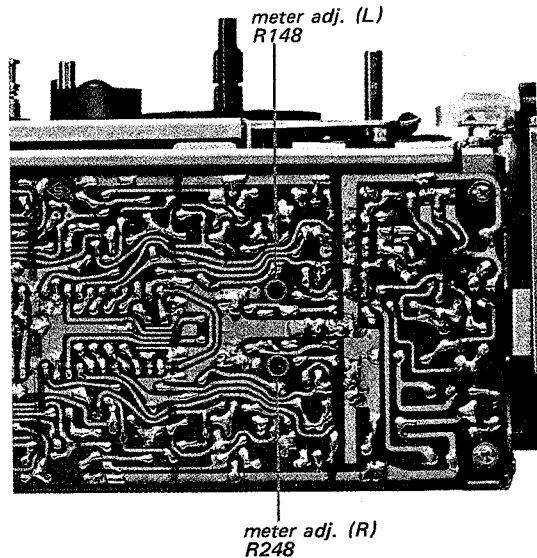
- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s
- SPEAKER switch: OFF
- MODE switch: STEREO
- TONE control: ▼ position

**Procedure:**

1.



- 2. Adjust VOLUME control for -5 dB (0.44V) VTVM reading.
- 3. Adjust R148 (L), R248 (R) for 0 reading on the RECORD LEVEL meter.



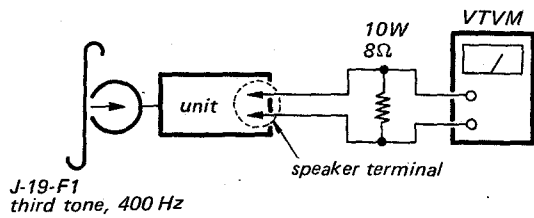
**Maximum Output Measurement**

**Control/Switch Setting:**

- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s
- SPEAKER switch: 2 position
- MODE switch: STEREO
- TONE control: ▼ position
- VOLUME control: 10 max.

**Procedure:**

1. Mode: playback



**Specification:**

more than +18.5 dB (6.25V)

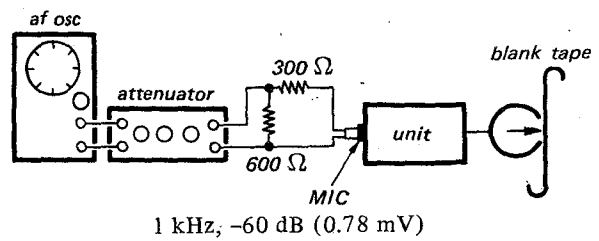
**Overall Signal-to-Noise Ratio Measurement**

**Control/Switch Setting:**

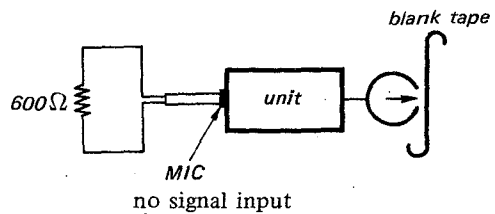
- tape speed switch: 7½ ips 19 cm/s
- TONE control: ▼ position
- VOLUME control: Position to obtain -5 dB (0.44V) LINE OUTPUT for 1 kHz, -60 dB (0.78 mV) MIC input in record mode.

**Procedure:**

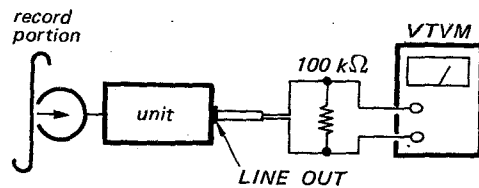
1. Mode: record



2. Mode: record



3. Mode: playback



Recorded Signal	VTVM Reading
1 kHz	Adjust VOLUME control for -5 dB (0.44V)
no signal	-48 dB (3.08 mV) or less

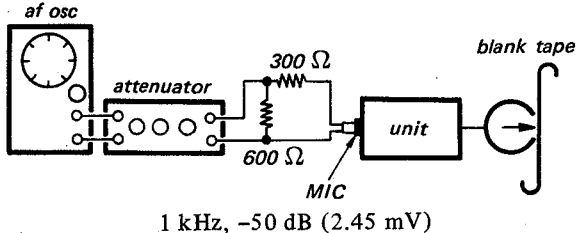
**Erase Ratio Measurement**

**Control/Switch Setting:**

- tape speed switch: 7½ ips 19 cm/s
- TONE control: ▼ position
- VOLUME control: Position to obtain -5 dB (0.44V) LINE OUTput for 1 kHz, -60 dB (0.78 mV) MIC input in record mode.

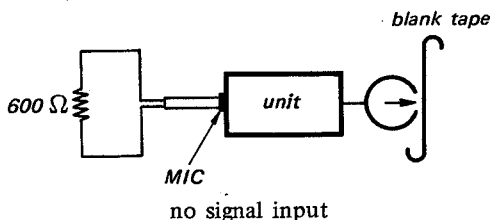
**Procedure:**

1. Mode: record

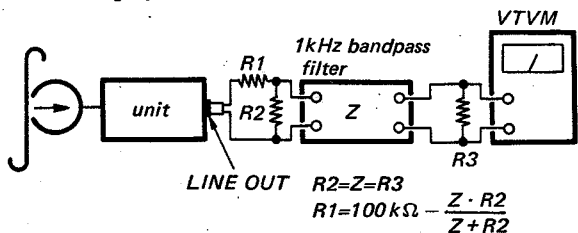


2. Rewind half of the recorded part.

3. Mode: record



4. Mode: playback



Recorded Signal	VTVM Reading
1 kHz	Adjust VOLUME control for -5 dB (0.44V)
no signal	-70 dB (0.25 mV) or less

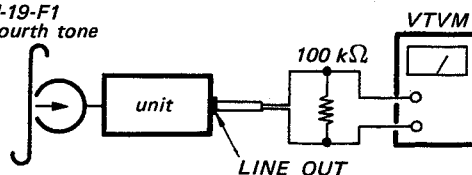
**TONE Control Range Check**

**Control/Switch Setting:**

- SOS switch: OFF
- tape speed selector: 7½ ips 19 cm/s
- SPEAKER switch: OFF
- MODE switch: STEREO
- TONE control: ▼ position
- VOLUME control: mechanical mid.

**Procedure:**

1. Mode: playback



- 2.

TONE Control Setting	Output Level Difference
▼ position	0 dB
HIGH max.	approx. +10 dB
LOW max.	approx. -10 dB



**Wow and Flutter Measurement**

**Control/Switch Setting:**

VOLUME control: 5 position

TONE control: mechanical mid position

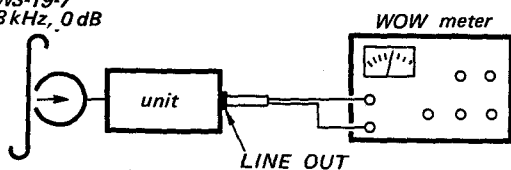
**Procedure:**

**Note:** Measure wow and flutter for beginning, midway and end portion of tapes in both vertical and horizontal set positions.

1. at 7 1/2 ips (19 cm/s)

Mode: playback

WS-19-7  
3 kHz, 0 dB

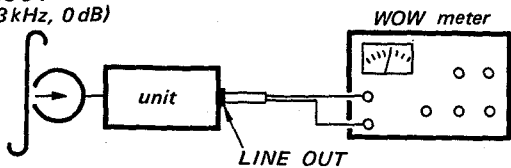


Specification: 0.19% RMS or less

2. at 3 3/4 ips (9.5 cm/s)

Mode: playback

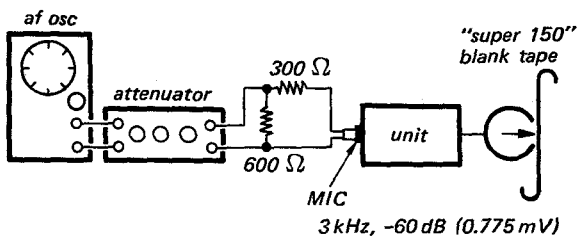
WS-9-7  
(3 kHz, 0 dB)



Specification: 0.24% RMS or less

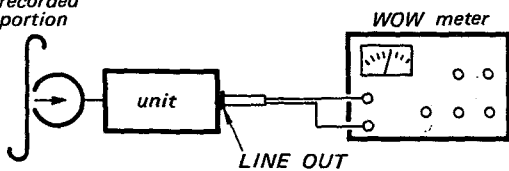
3. at 1 7/8 ips (4.8 cm/s)

Mode: record



Mode: playback

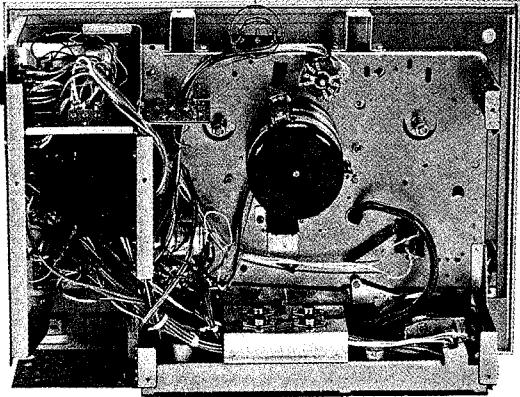
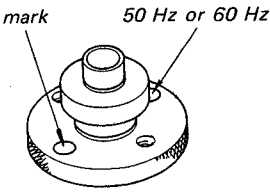
recorded portion



Specification: 0.4% RMS or less

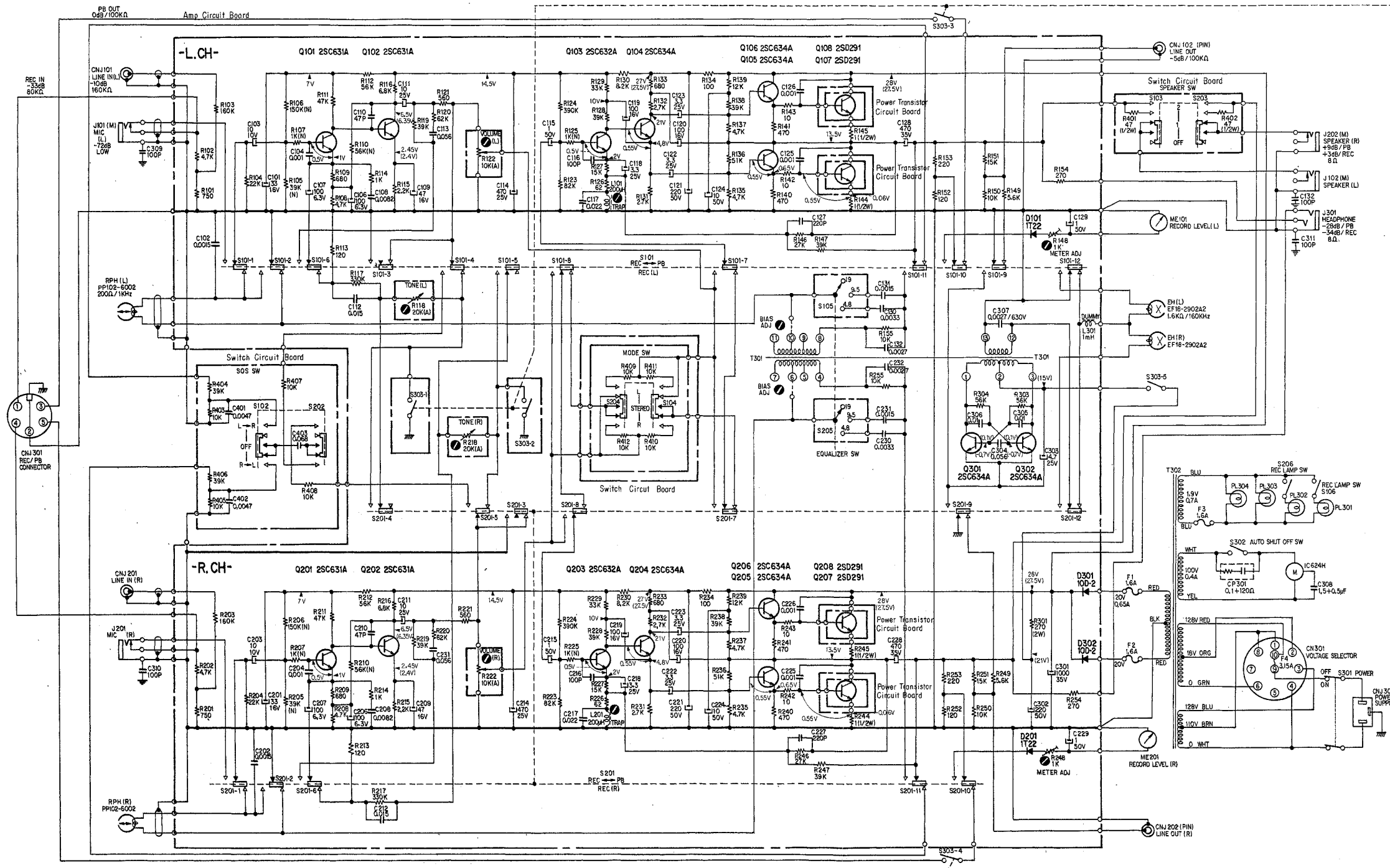
**POWER FREQUENCY ADAPTATION**

The MOTOR PULLEY and tapping of the MOTOR STARTING CAPACITOR TERMINALS must be altered if the line frequency differs from what the recorder is set for.

Connection of Motor Starting Capacitor	Motor Pulley
<p>green jumper wire is connected ..... 50 Hz  green jumper wire is removed ..... 60 Hz</p> <p style="text-align: center;"><i>green jumper wire</i></p> 	<p>Change motor pulley.  Use motor pulley with same mark of 2~6.</p> <p>50 Hz  (mark) (Part No.)  2 ..... 3-486-120-01  3 ..... 3-486-120-11  4 ..... 3-486-120-21  5 ..... 3-486-120-31</p> <p>60 Hz  (mark) (Part No.)  2 ..... 3-486-121-01  3 ..... 3-486-121-11  4 ..... 3-486-121-21  5 ..... 3-486-121-31</p>  <p style="text-align: center;"><i>motor pulley</i></p>



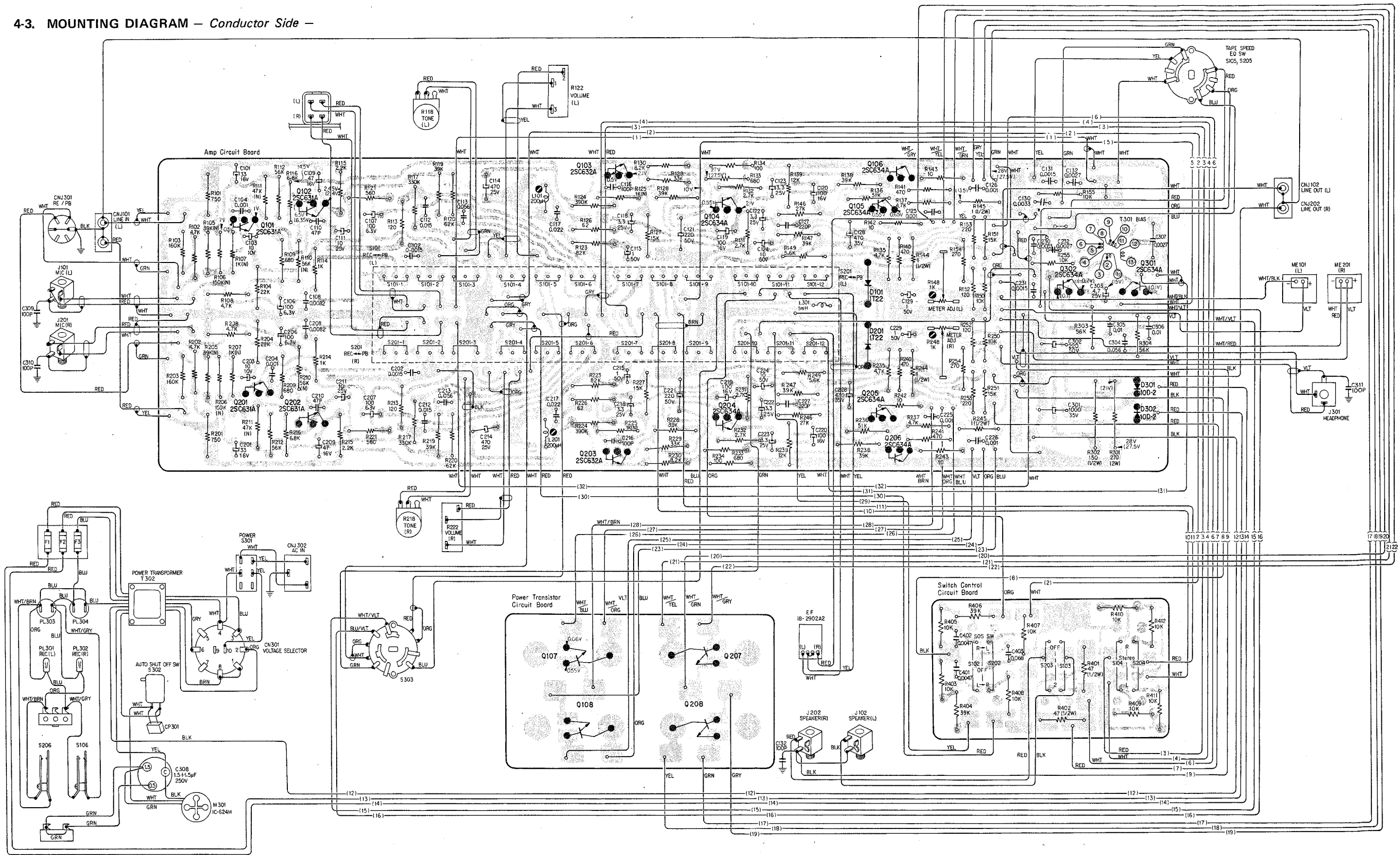
**4-2. SCHEMATIC DIAGRAM**



**Note:** 1. All resistors and capacitors are rated in  $\Omega$  and  $\mu F$ , unless otherwise specified.  
 2. Voltage values shown are measured with a voltmeter (20 k $\Omega$ /V) in playback mode. Voltage values in ( ) are measured in record mode. Variations may be noted because of normal production tolerances.  
 3. Symbols  
 ⊥ ..... Chassis ground  
 ⏏ ..... Common ground on circuit board  
 N ..... Low noise resistor

4. Switch position (Ref. No.)	(Description)	(Position)
S101, 201	record/playback switch	PB
S102, 202	SOS switch	OFF
S103, 203	SPEAKER switch	OFF
S104, 204	MODE switch	STEREO
S105, 205	equalizer	19 cm/sec
S106, 206	record lamp switch	OFF
S301	POWER switch	ON
S302	auto shut-off switch	OFF
S303	timing switch	forward

4-3. MOUNTING DIAGRAM - Conductor Side -

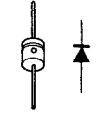
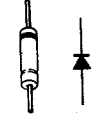
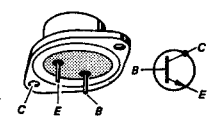
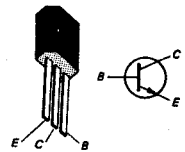


2SC631A Q101, 102, 103, 104, 105, 106  
 2SC632A Q201, 202, 203, 204, 205, 206  
 2SC634A Q301, 302

2SD291 Q107, 108, 207, 208

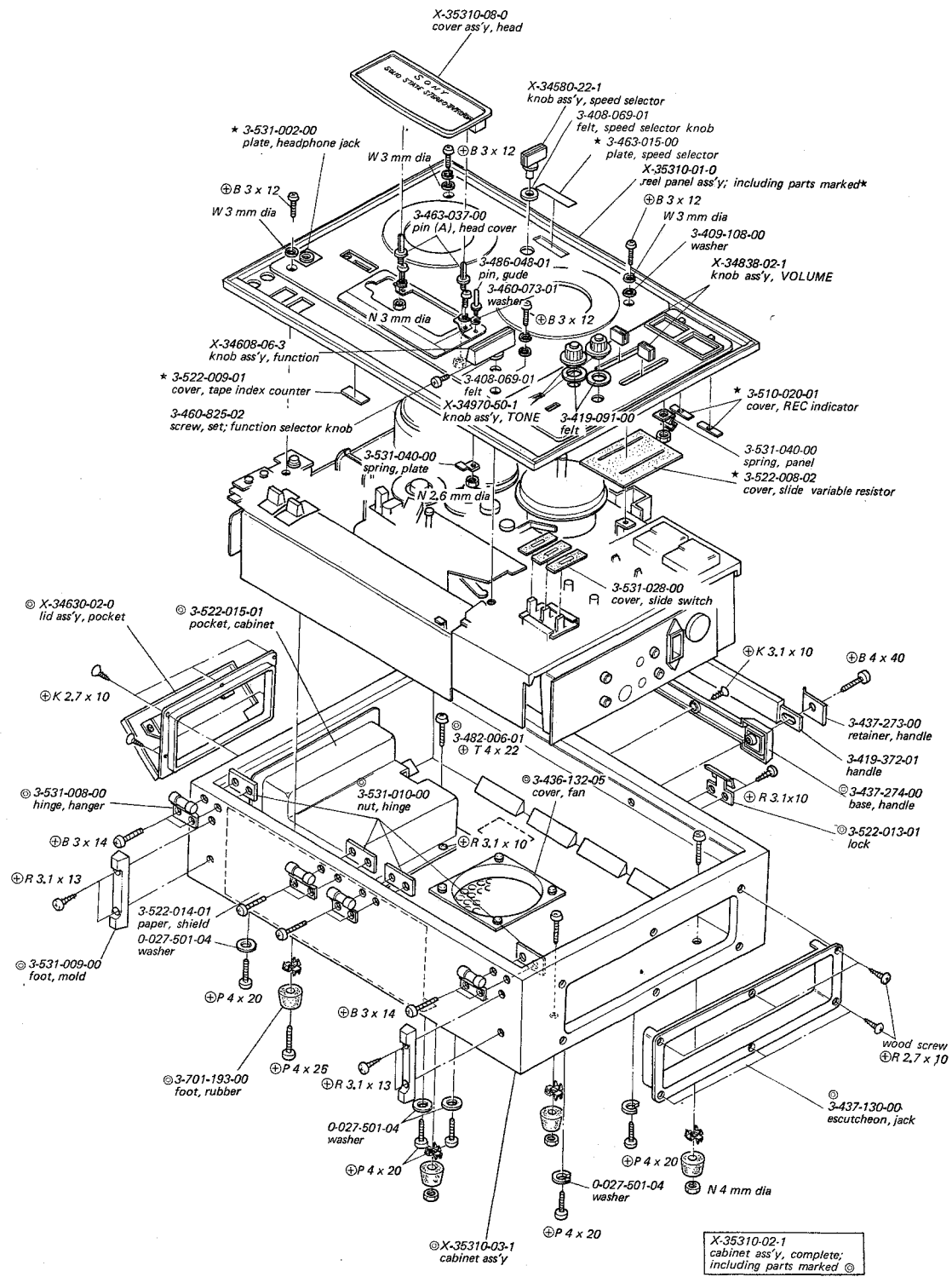
1T-22 D101, 201

10D-2 D301, 302

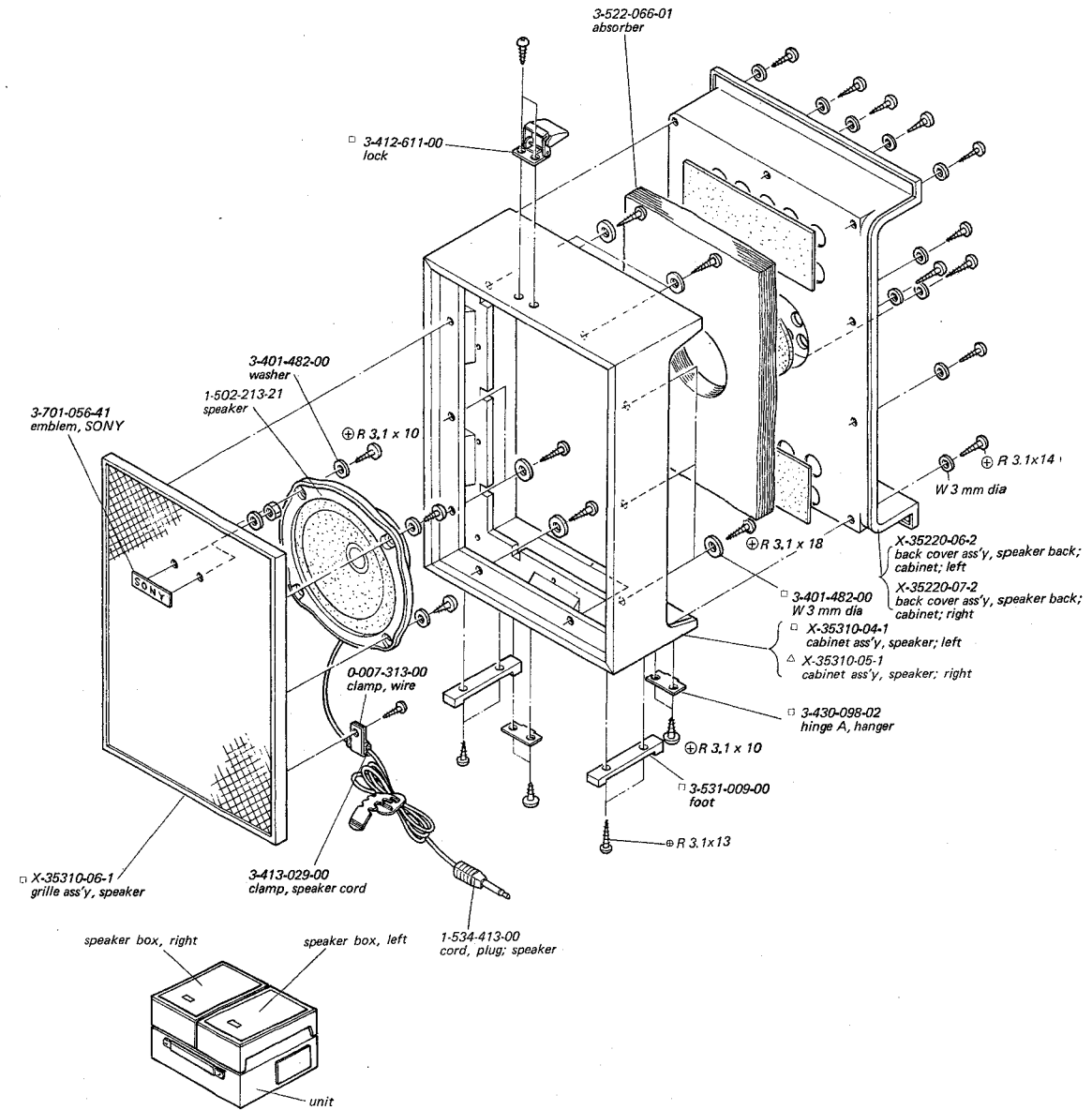


SECTION 5  
EXPLODED VIEWS

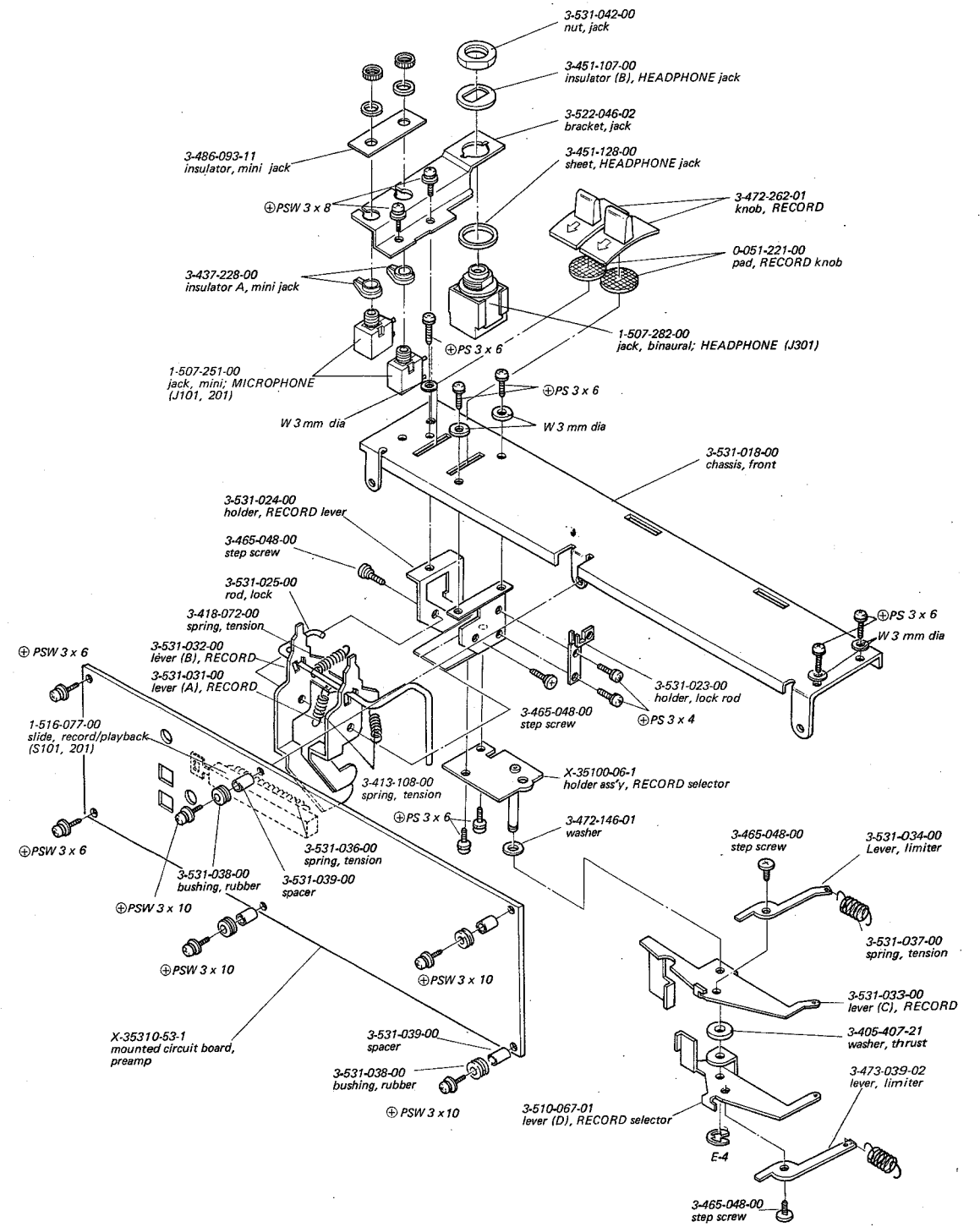
5-1. CABINET — Top View —



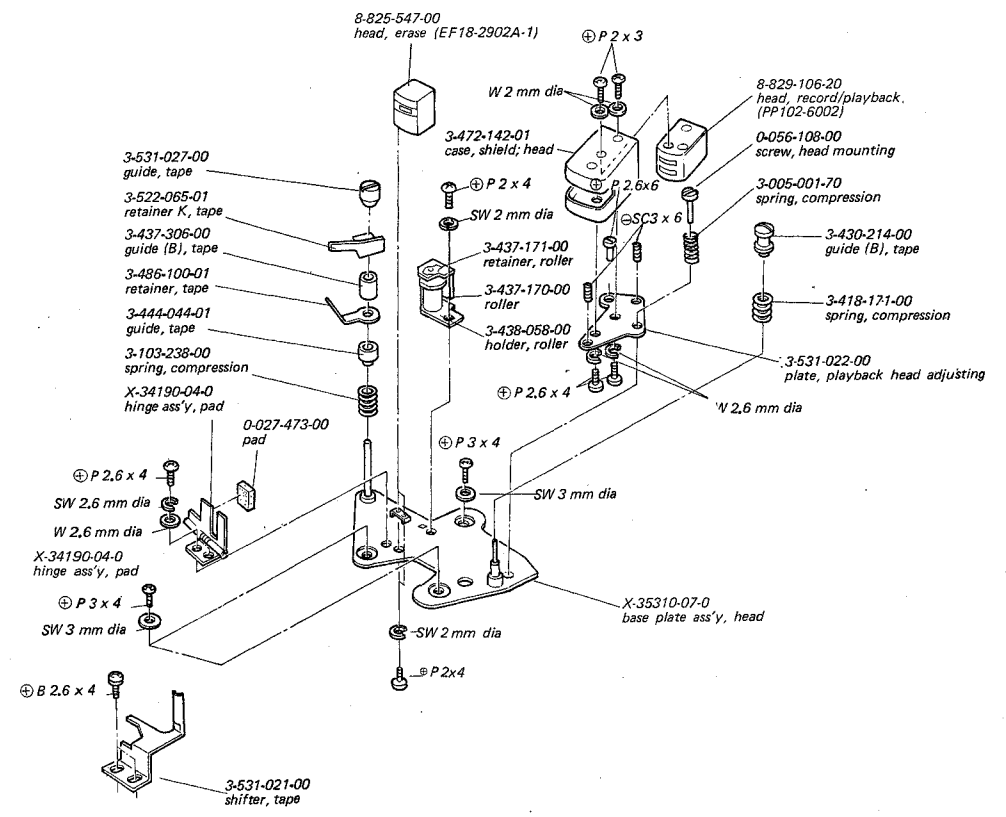
5-2. SPEAKER



5-3. FRONT CHASSIS

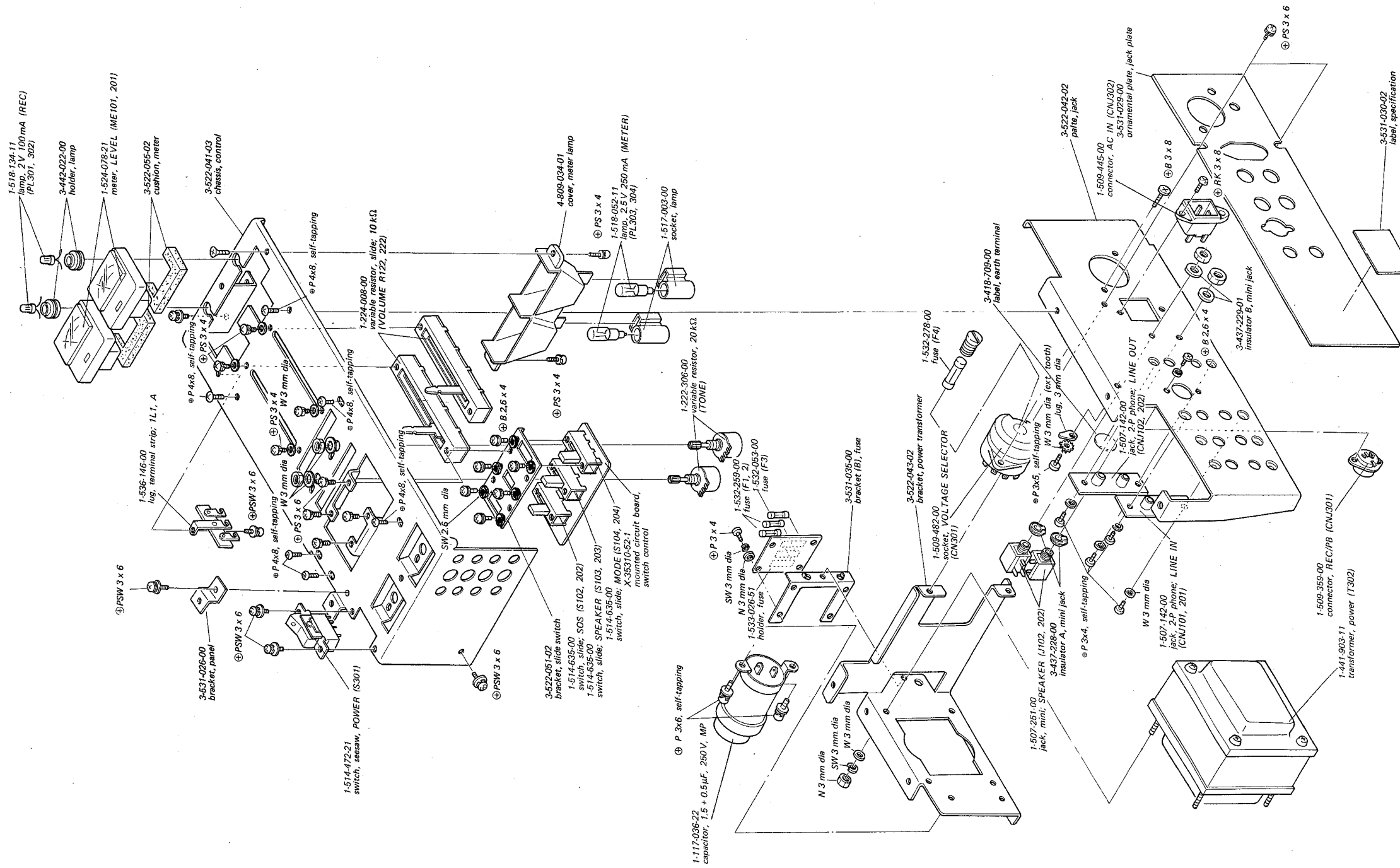


**5-4. HEAD DECK – Upper –**



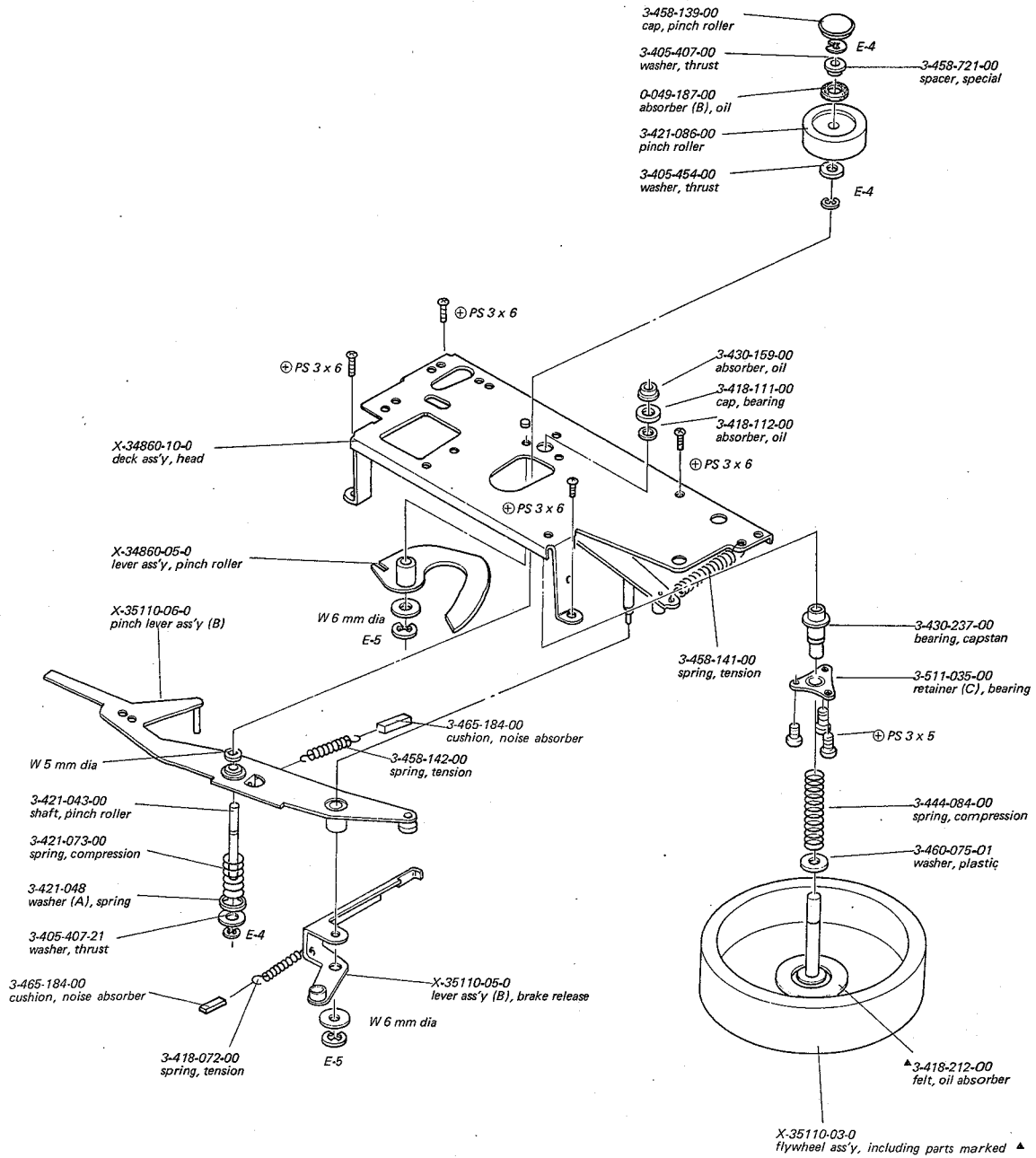


5-5. CONTROL CHASSIS

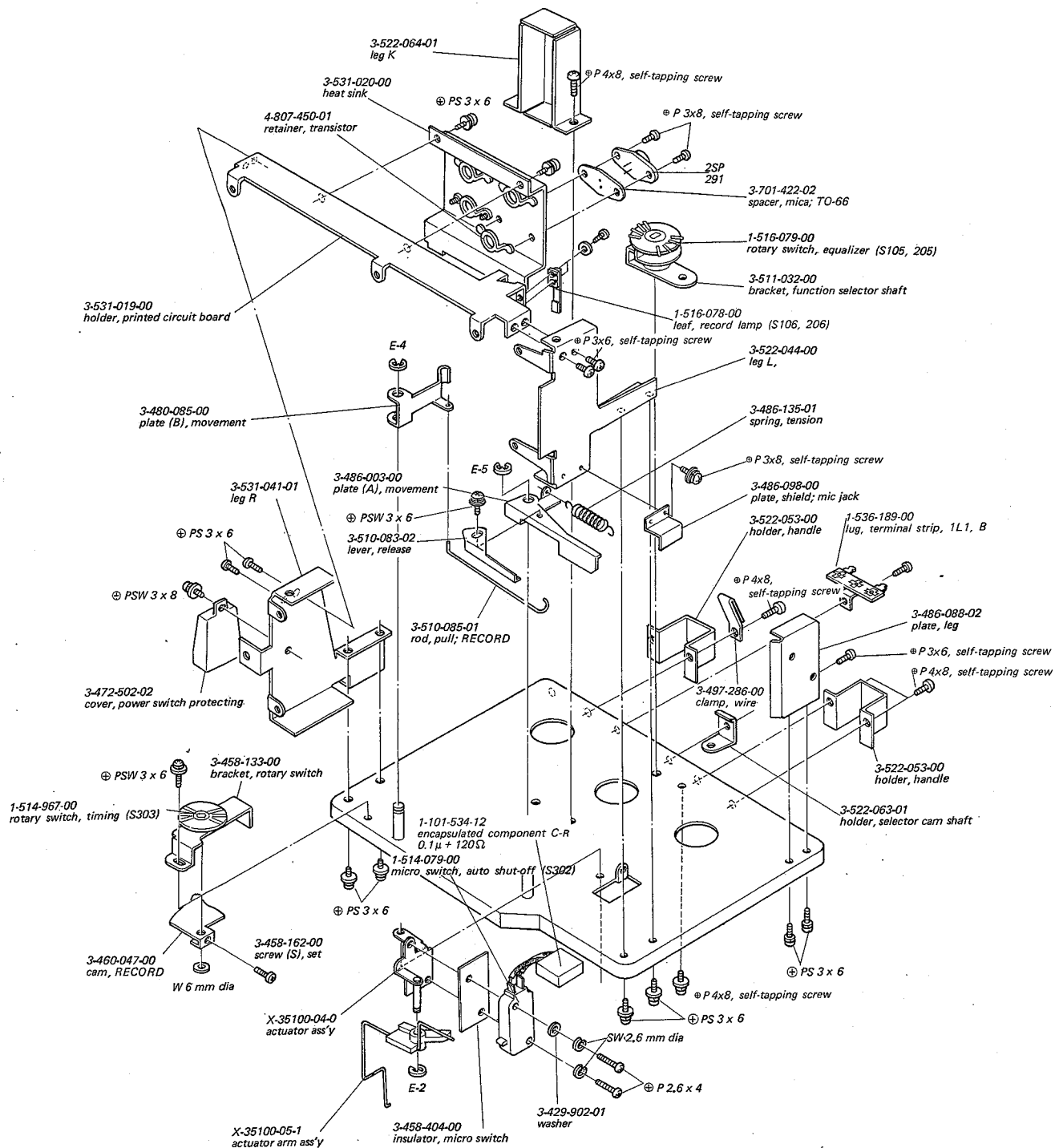




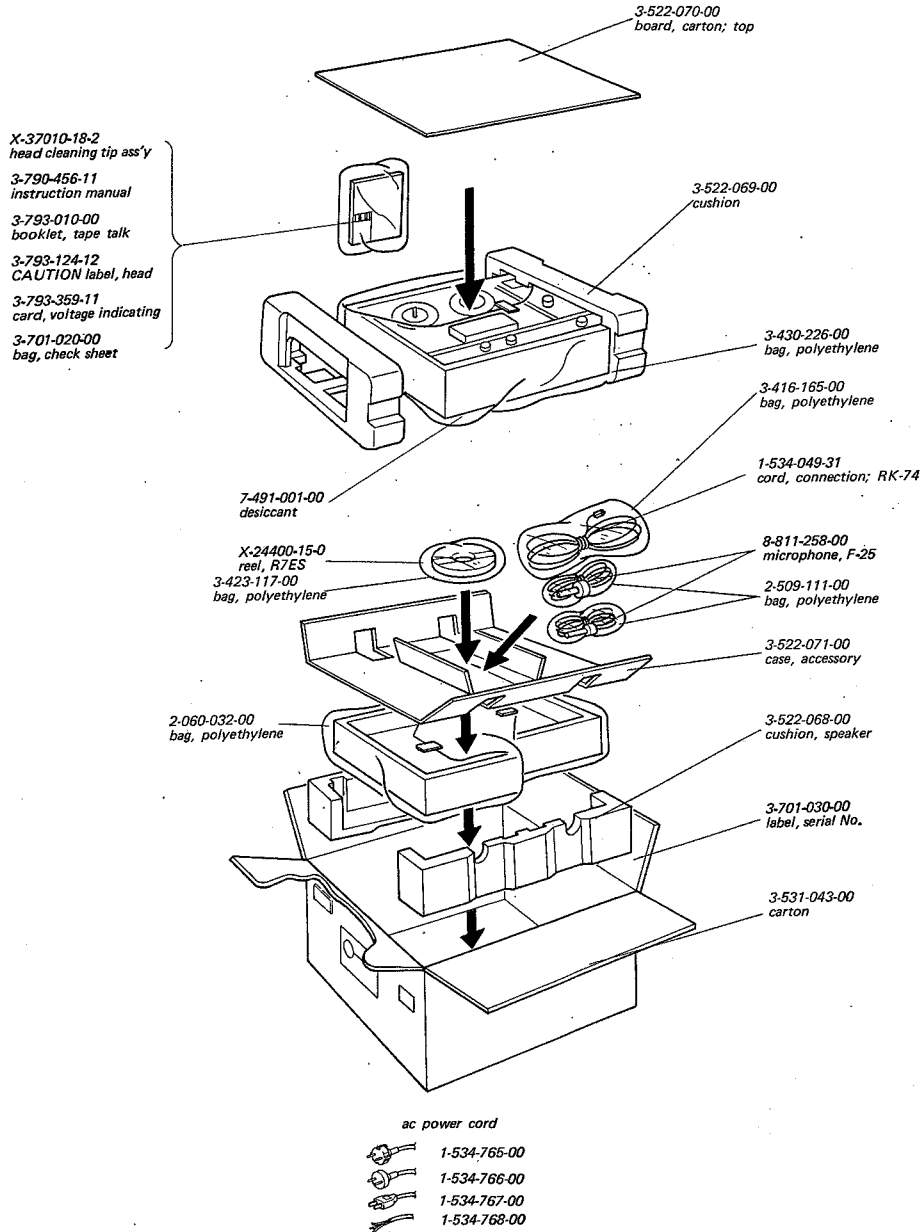
**5-7. HEAD DECK – Lower –**



**5-8. CHASSIS — Lower —**



5.9. PACKING



## SECTION 6 ELECTRICAL PARTS LIST

Ref. No.    Part No.    Description

### MOUNTED CIRCUIT BOARDS

X-35310-51-1    power transistor  
 X-35310-52-1    switch control  
 X-35310-53-1    amp

### SEMICONDUCTORS

Q101, 201		transistor	2SC631A
Q102, 202		transistor	2SC631A
Q103, 203		transistor	2SC632A
Q104, 204		transistor	2SC634A
Q105, 205		transistor	2SC634A
Q106, 206		transistor	2SC634A
Q107, 207		transistor	2SD291
Q108, 208		transistor	2SD291
Q301, 302		transistor	2SC634A
D101, 201		diode	1T-22
D301, 302		diode	10D-2

### COILS

L101, 201	1-409-132-00	trap	200 $\mu$ H
L301	1-431-038-00	dummy	1 mH

### TRANSFORMERS

T301	1-433-136-00	bias osc
T302	1-441-903-11	power

### CAPACITORS

All capacitors are in  $\mu$ F unless otherwise indicated.  
 (p =  $\mu$ , elect = electrolytic)

C101, 201	1-121-403-11	33	16 V	elect
C102, 202	1-105-663-12	0.0015	50 V	mylar
C103, 203	1-121-469-11	10	10 V	elect
C104, 204	1-105-661-12	0.001	50 V	mylar
C105, 205		-----		
C106, 206	1-121-413-11	100	6.3V	elect
C107, 207	1-121-413-11	100	6.3V	elect
C108, 208	1-105-672-12	0.0082	50V	mylar
C109, 209	1-121-409-11	47	16V	elect
C110, 210	1-107-123-11	47 p	50V	silvered mica
C111, 211	1-121-398-11	10	25V	elect
C112, 212	1-105-675-12	0.015	50V	mylar
C113, 213	1-105-682-12	0.056	50V	mylar
C114, 214	1-121-733-11	470	25V	elect
C115, 215	1-121-391-11	1	50V	elect
C116, 216	1-107-131-11	100 p	50V	silvered mica
C117, 217	1-105-677-12	0.022	50V	mylar
C118, 218	1-121-392-11	3.3	25V	elect

Ref. No.    Part No.    Description

C119, 219	1-121-415-11	100	16V	elect
C120, 220	1-121-415-11	100	16V	elect
C121, 221	1-121-423-11	220	50V	elect
C122, 222	1-121-392-11	3.3	25V	elect
C123, 223	1-121-392-11	3.3	25V	elect
C124, 224	1-121-738-11	10	50V	elect
C125, 225	1-105-661-12	0.001	50V	mylar
C126, 226	1-105-661-12	0.001	50V	mylar
C127, 227	1-107-139-11	220 p	50V	silvered mica
C128, 228	1-121-361-11	470	35V	elect
C129, 229		-----		
C130, 230	1-105-667-12	0.0033	50V	mylar
C131, 231	1-105-663-12	0.0015	50V	mylar
C132, 232	1-105-666-12	0.0027	50V	mylar
C301	1-121-388-11	1000	35V	elect
C302	1-121-423-11	220	50V	elect
C303	1-121-395-11	4.7	10V	elect
C304	1-105-682-12	0.056	50V	mylar
C305	1-105-673-12	0.01	50V	mylar
C306	1-105-673-12	0.01	50V	mylar
C307	1-129-707-11	0.0027	630V	polypropylene film
C308	1-117-036-22	1.5 + 0.5	250V	MP
C309	1-107-004-11	100 p	50V	silvered mica
C310	1-107-004-11	100 p	50V	silvered mica
C311	1-107-004-11	100 p	50V	silvered mica
C312	1-107-004-11	100 p	50V	silvered mica
C401	1-105-669-12	0.0047	50V	mylar
C402	1-105-669-12	0.0047	50V	mylar
C403	1-105-683-12	0.0047	50V	mylar

### RESISTORS

All resistors are  $\frac{1}{4}$  W, carbon type and in  $\Omega$  unless otherwise indicated. (k = 1000)

R101, 201	1-244-705-11	750
R102, 202	1-244-689-11	4.7k
R103, 203	1-244-726-11	160k
R104, 204	1-244-705-11	22k
R105, 205	1-244-711-11	39k
R106, 206	1-244-725-11	150k
R107, 207	1-244-673-11	1k
R108, 208	1-244-689-11	4.7k
R109, 209	1-244-669-11	680
R110, 210	1-244-715-11	56k
R111, 211	1-244-713-11	47k
R112, 212	1-244-715-11	56k
R113, 213	1-244-651-11	120
R114, 214	1-244-673-11	1k
R115, 215	1-244-681-11	2.2k
R116, 216	1-244-693-11	6.8k

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R117, 217	1-244-733-11	330 k
R118, 218	1-222-306-11	20 k variable (TONE)
R119, 219	1-244-711-11	39 k
R120, 220	1-244-716-11	62 k
R121, 221	1-244-667-11	560
R122, 222	1-224-008-00	10 k variable (VOUUME)
R123, 223	1-244-719-11	82 k
R124, 224	1-244-735-11	390 k
R125, 225	1-244-673-11	1 k
R126, 226	1-244-644-11	62
R127, 227	1-244-701-11	15 k
R128, 228	1-244-711-11	39 k
R129, 229	1-244-709-11	33 k
R130, 230	1-244-695-11	8.2 k
R131, 231	1-244-683-11	2.7 k
R132, 232	1-244-683-11	2.7 k
R133, 233	1-244-669-11	680
R134, 234	1-244-649-11	100
R135, 235	1-244-689-11	4.7 k
R136, 236	1-244-714-11	51 k
R137, 237	1-244-689-11	4.7 k
R138, 238	1-244-711-11	39 k
R139, 239	1-244-699-11	12 k
R140, 240	1-244-665-11	470
R141, 241	1-244-665-11	470
R142, 242	1-244-625-11	10
R143, 243	1-244-625-11	10
R144, 244	1-244-801-11	1 ½W
R145, 245	1-244-801-11	1 ½W
R146, 246	1-244-707-11	27 k
R147, 247	1-244-711-11	39 k
R148, 248	1-222-771-00	1 k (B), semi-fixed
R149, 249	1-244-691-11	5.6 k
R150, 250	1-244-697-11	10 k
R151, 251	1-244-701-11	15 k
R152, 252	1-244-651-11	120
R153, 253	1-244-657-11	220
R154, 254	1-244-659-11	270
R155, 255	1-244-697-11	10 k
R301	1-244-859-11	270
R302	1-244-853-11	150
R303		-----
R304	1-244-715-11	56 k
R305	1-244-715-11	56 k
R401	1-244-841-11	47
R402	1-244-841-11	47
R403	1-244-697-11	10 k
R404	1-244-711-11	39 k
R405	1-244-697-11	10 k

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
R406	1-244-711-11	39 k
R407	1-244-697-11	10 k
R408	1-244-697-11	10 k
R409	1-244-697-11	10 k
R410	1-244-697-11	10 k

**SWITCHES**

S101, 201	1-516-077-00	slide, record/playback
S102, 202	1-514-635-00	slide, SOS
S103, 203	1-514-635-00	slide SPEAKER
S104, 204	1-514-635-00	slide, MODE
S105, 205	1-516-079-00	rotary, equalizer
S106, 206	1-516-078-00	leaf, record lamp
S301	1-514-472-21	seesaw, POWER
S302	1-514-079-00	micro, auto shut-off
S303	1-514-967-00	rotary, timing

**JACKS**

J101, 201	1-507-251-00	mini, MICROPHONE
J102, 202	1-507-251-00	mini, SPEAKER
J301	1-507-282-00	binaural, HEADPHONE
CNJ 101 } 201 }	1-507-142-00	2 p phono, LINE IN
CNJ 102 } 202 }		
CNJ 301	1-509-359-00	connector, REC/PB
CNJ 302	1-509-445-00	connector, AC IN

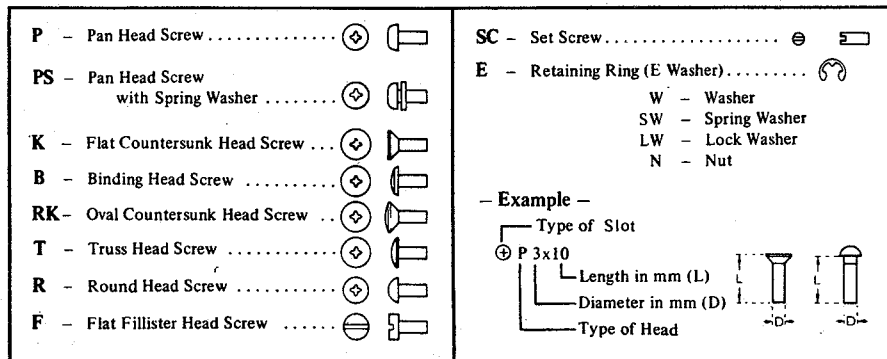
**MISCELLANEOUS**

CN301	1-509-482-00	socket, VOLTAGE SELECTOR
PL303, 304	1-518-052-11	lamp, 2.5 V 250 mA (METER)
PL301, 302	1-518-134-11	lamp, 2 V 100 mA (REC)
ME101, 201	1-524-078-21	meter, RECORD LEVEL
F1, 2	1-532-259-00	fuse, 1.6 AT
F3	1-532-053-00	fuse, 1.6 A
F4	1-532-278-00	fuse, 3.15A
	1-533-026-51	holder, fuse
	1-534-413-00	cord, plug; speaker
CP301	1-101-534-12	encapsulated component C-R 0.1 μ + 120Ω
EH	8-825-547-00	head, erase (EF18-2902A-1)
R PH	8-829-106-20	head, record/playback (PP102-6002)
	1-536-146-00	lug, terminal strip; 1-L-1. A
	1-536-189-00	lug, terminal strip; 1-L-1. B
M	8-832-624-25	motor, IC624H
SP	1-502-213-21	speaker
	1-517-003-00	socket, lamp

**SECTION 7  
HARDWARE**

<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
<b>SCREWS</b>			
7-621-255-15	⊕ P 2 x 3	7-685-145-51	⊕ P 3 x 6
7-621-255-25	⊕ P 2 x 4	7-685-159-51	⊕ P 4 x 8
7-621-255-35	⊕ P 2 x 5	7-685-547-21	⊕ B 3 x 10
7-621-259-25	⊕ P 2.6 x 4	<b>NUTS</b>	
7-621-259-35	⊕ P 2.6 x 5	7-622-307-02	2.6 mm dia
7-621-259-37	⊕ P 2.6 x 5	7-684-013-01	3 mm dia
7-621-259-45	⊕ P 2.6 x 6	7-684-014-01	4 mm dia
7-621-259-85	⊕ P 2.6 x 14	7-684-033-01	3 mm dia
7-621-773-86	⊕ B 2.6 x 4	<b>WASHERS</b>	
7-621-843-25	⊕ R 3.1 x 10	7-623-105-12	2 mm dia
7-621-843-35	⊕ R 3.1 x 13	7-623-107-12	2.6 mm dia
7-621-843-45	⊕ R 3.1 x 16	7-623-108-02	3 mm dia
7-628-254-05	⊕ P 2.6 x 5	7-623-108-12	3 mm dia
7-682-145-01	⊕ P 3 x 4	7-623-108-20	3 mm dia
7-682-146-01	⊕ P 3 x 5	7-623-110-09	4 mm dia
7-682-147-01	⊕ P 3 x 6	7-623-110-12	4 mm dia
7-682-149-01	⊕ P 3 x 10		5 mm dia
7-682-165-05	⊕ P 4 x 16	7-623-113-18	6 mm dia
7-682-347-04	⊕ RK 3 x 6	7-623-113-27	6 mm dia
7-682-351-04	⊕ RK 3 x 14	7-623-205-22	2 mm dia (small)
7-682-547-01	⊕ B 3 x 6	7-623-207-22	2.6 mm dia (small)
7-682-548-05	⊕ B 3 x 8	7-623-208-22	3 mm dia (small)
7-682-549-04	⊕ B 3 x 10	7-623-208-27	3 mm dia (small)
7-682-569-05	⊕ B 4 x 35	7-623-210-28	4 mm dia (small)
7-682-547-14	⊕ B 3 x 6	7-623-308-05	3 mm dia, int. tooth
7-682-562-01	⊕ B 4 x 10	7-623-408-05	3 mm dia, ext. tooth
7-682-647-01	⊕ PS 3 x 6	<b>RETAINING RINGS</b>	
7-682-661-01	⊕ PS 4 x 8	7-624-104-01	E-2
7-682-662-01	⊕ PS 4 x 10	7-624-106-05	E-3
7-682-947-01	⊕ PSW 3 x 6	7-624-108-05	E-4
7-682-948-01	⊕ PSW 3 x 8	7-624-109-05	E-5
7-682-949-01	⊕ PSW 3 x 10	<b>LUG</b>	
7-683-137-00	⊖ SC 3 x 3	7-623-505-01	3 mm dia
7-683-140-20	⊖ SC 3 x 6		
7-685-144-51	⊕ P 3 x 5		
7-685-145-31	⊕ P 3 x 6, self-tapping		

Hardware Nomenclature



**Sony Corporation**

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