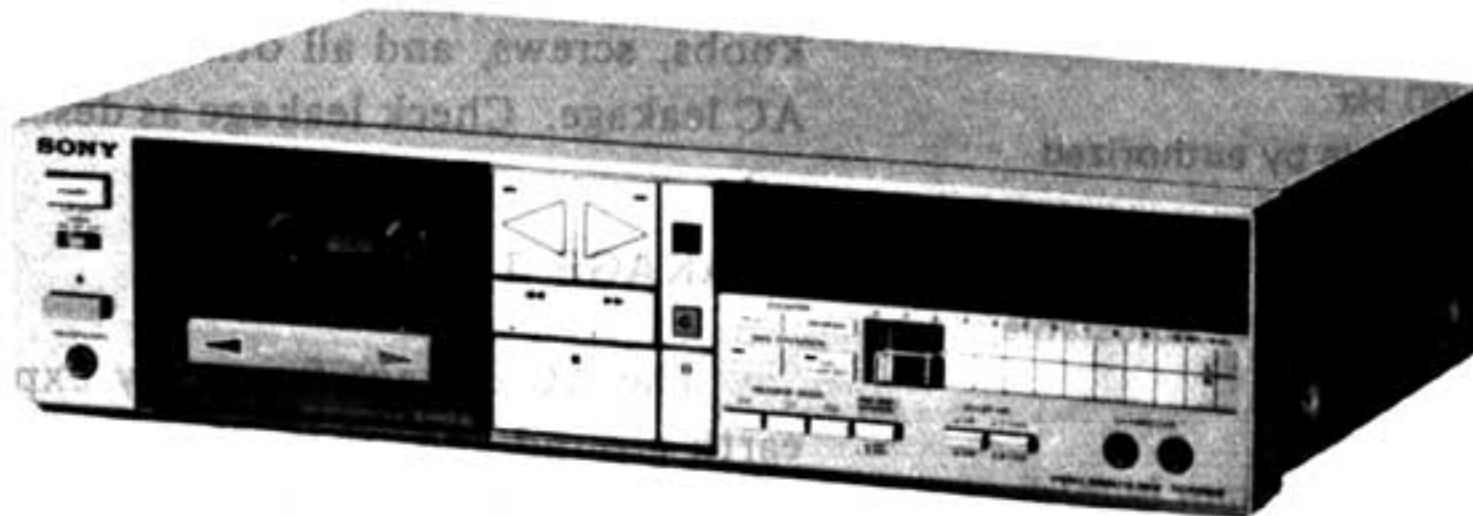


TC-FX510R

SERVICE MANUAL

US Model
 Canadian Model
 AEP Model
 UK Model
 E Model



'Dolby' and the double-D symbol are the trade marks of Dolby Laboratories Licensing Corporation. Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.

SPECIFICATIONS


Tape Transport Mechanism Type	TCM-150R1
-------------------------------	-----------

Recording system 4-track 2-channel stereo
 Fast-forward and rewind time Approx. 90 sec. (with C-60 cassette)
 Bias frequency 105 kHz
 Signal-to-noise ratio (NAB, at peak level)


Cassette	Dolby NR button	OFF	B-TYPE ON	C-TYPE ON
TYPE IV (Sony METALLIC)		58 dB	65 dB	71 dB
TYPE II (Sony UCX)		56 dB	63 dB	69 dB
TYPE I (Sony BHF)		54 dB	61 dB	67 dB

Total harmonic distortion 1.0% (with Sony METALLIC cassettes)

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.

Frequency response DOLBY NR OFF
 • With TYPE IV cassette (Sony METALLIC)
 20 - 18,000 Hz
 30 - 17,000 Hz (±3 dB)
 30 - 13,000 Hz (±3 dB, 0 VU recording)
 • With TYPE II cassette (Sony UCX)
 20 - 18,000 Hz
 30 - 17,000 Hz (±3 dB)
 • With TYPE I cassette (Sony BHF)
 20 - 16,000 Hz

Wow and flutter 0.045% WRMS (NAB)
 ±0.15% (DIN)

Inputs
 Microphone inputs (phone jacks)
 Sensitivity 0.25 mV (-70 dB)
 For a low-impedance microphone
 Line inputs (phono jacks)
 Sensitivity 77.5 mV (-20 dB)
 Input impedance 50 k ohms

Outputs
 Line outputs (phono jacks)
 Output level 0.44 V (-5 dB) at load impedance 50 k ohms
 Load impedance over 10 k ohms
 Headphone output (stereo phone jack)
 Output level -28 dB at a load impedance of 8 ohms

0 dB = 0.775 V

— Continued on page 2 —



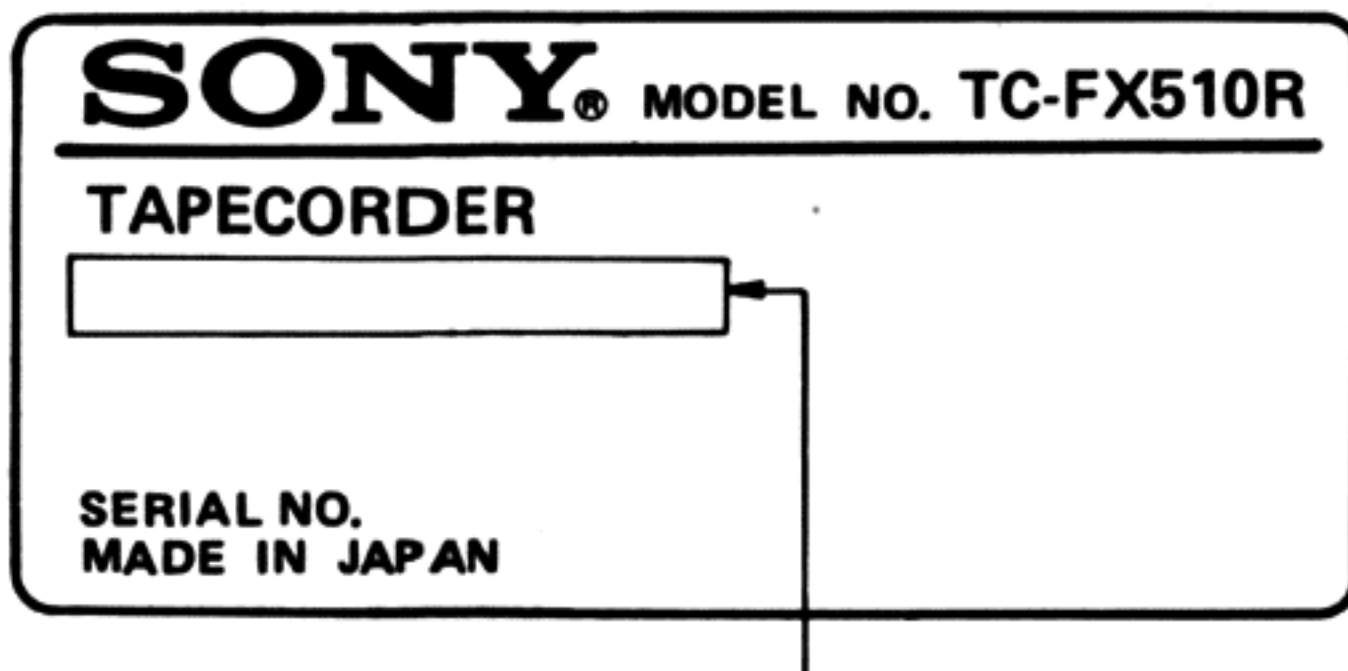
STEREO CASSETTE DECK
SONY[®]

General

Power requirements	US, Canadian Model: 120 V ac, 60 Hz AEP, G-AEP Model: 220 V ac, 50/60 Hz (240 V ac adjustable by authorized Sony personnel) UK Model: 240 V ac, 50/60 Hz (220 V ac adjustable by authorized Sony personnel) E Model: 110, 120, 220 or 240 V ac adjustable, 50/60 Hz
Power consumption	24 watts
Dimensions	Approx. 430 x 105 x 275 mm (w/h/d) (17 x 4 $\frac{1}{4}$ x 10 $\frac{7}{8}$ inches) including projecting parts and controls
Weight	Approx. 4.7 kg (10 lbs 6 oz)

MODEL IDENTIFICATION

— Specification Label —



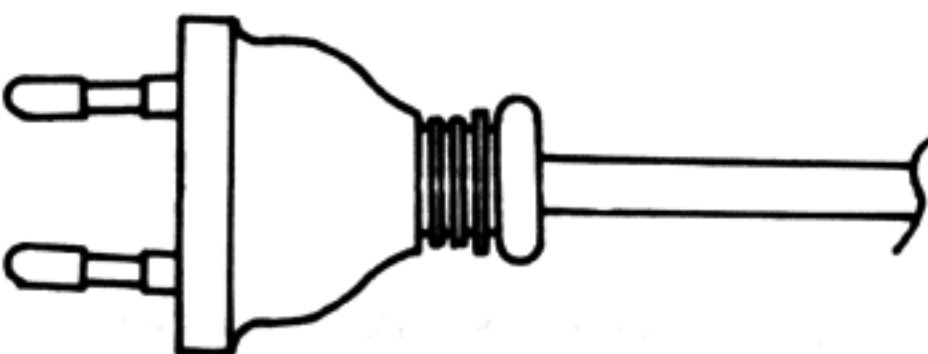
US, Canadian model:	AC: 120 V 60 Hz 24 W
AEP, G-AEP model:	AC: 220 V ~50/60 Hz 24W
UK model:	AC: 240 V ~50/60 Hz 24 W
E model:	AC: 110, 120, 220, 240 V ~50/60 Hz 24 W

— Power Cord —

E2 Model
Parallel-blade plug
1-551-472-00



E3 Model
Euro-plug
1-555-734-00



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 microamperes). 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 2V AC range are suitable. (See Fig. A)

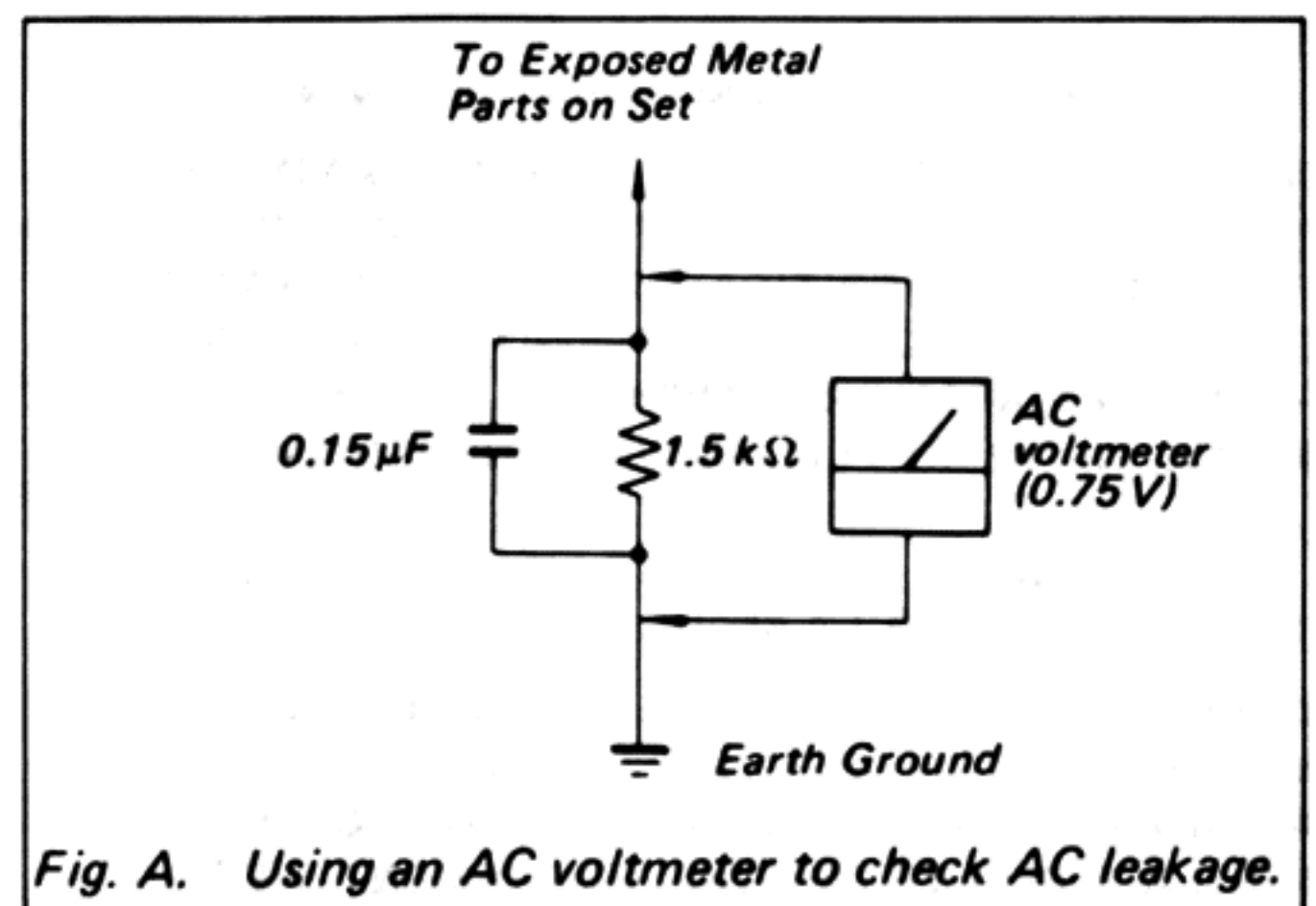


Fig. A. Using an AC voltmeter to check AC leakage.

FEATURES

Auto-reverse recording and playback

Continuous recording and playback of both sides of the cassette is possible without turning the cassette over. When the tape reaches its end, the roto-bilateral record/playback head reverses position and the other side of the cassette will be recorded or played back automatically.

The roto-bilateral head assures the same performance characteristics in either tape transport direction.

Pre-end reverse function

The head reverses position automatically near the end of the tape if there is a pause of 1.8 seconds or more in the program source being recorded or when the remaining recording time is about one minute, or if there is a blank space of 1.5 seconds or more on a recorded tape during playback.

DIRECTION MODE select buttons

Recording/playback on one side of the cassette (one-direction), recording/playback on both sides (one-cycle), or five-cycle playback can be selected.

AMS (Automatic Music Sensor)

The AMS locates the beginning of the selection being played or the following selection and plays back the selection automatically.

Blank skip function

Blank spaces of 10 seconds or more can be skipped in either fast-forward or fast-reverse mode so that only the recorded portions of the tape are played back.

C-type Dolby NR (noise reduction) system

In addition to the conventional B-type Dolby NR system, the cassette deck employs the newly-developed C-type Dolby NR system which reduces tape noise twice as effectively as the B-type system. The C-type system also incorporates an anti-saturation network to improve the high-frequency dynamic range by 4 dB at 10 kHz.

Automatic tape select system

Type I, II or IV tape is automatically detected and the recorder is adjusted to its optimum bias current for recording and the optimum equalization for both recording and playback by simply inserting the cassette in the cassette holder.

Auto play

The auto play function makes automatic replay possible promptly after the tape is rewound to the beginning.

Cassette stabilizer

The cassette stabilizer holds the cassette firmly to suppress vibration and makes the reproduced sound clear and the location of the sound image stable.

Music scan function

The first 10 seconds or so of all the selections on one side of a cassette can be played back in sequence. Thus the particular selection can be located easily.

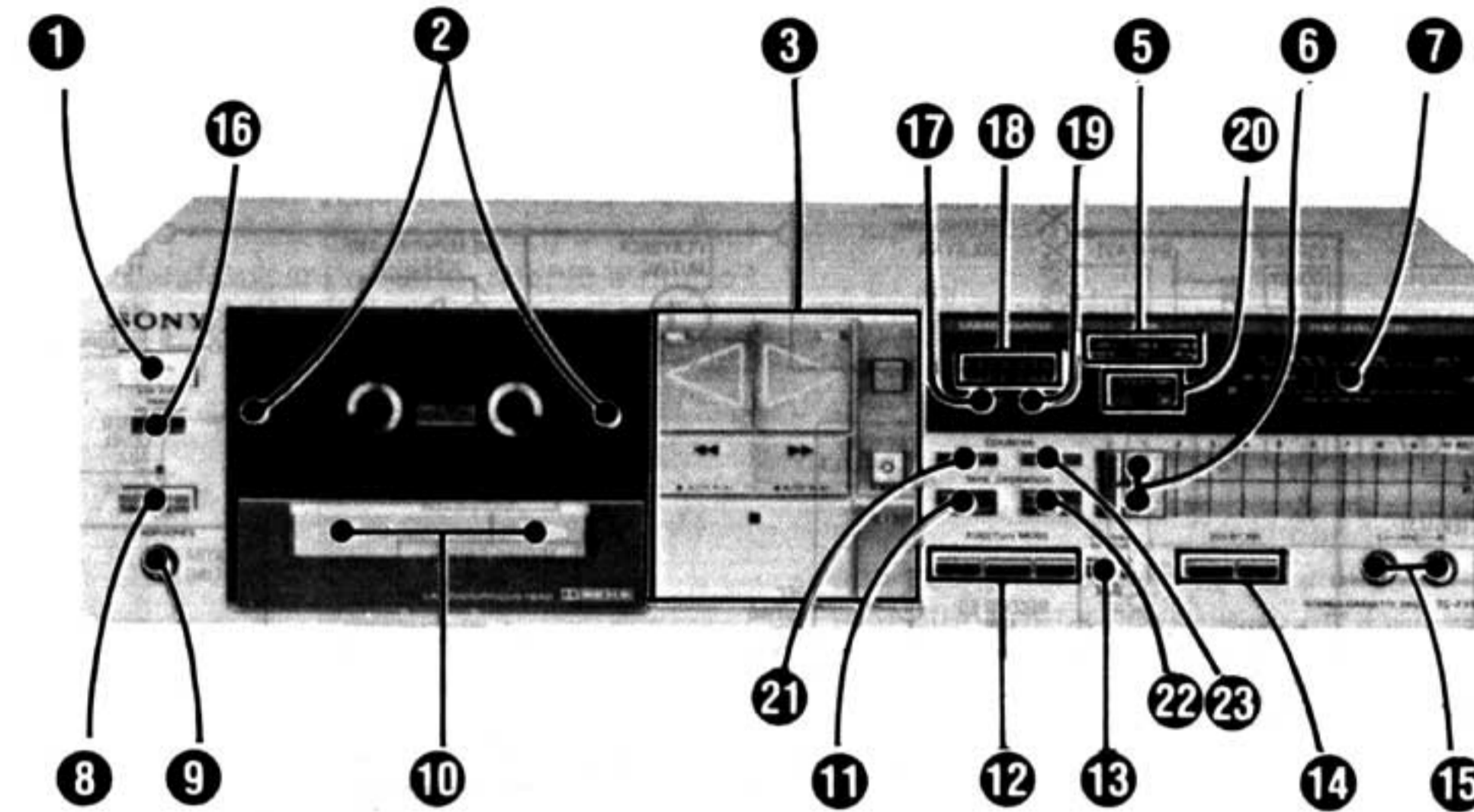
Digital linear counter

The digital linear counter indicates the elapsed or remaining recording or playback time in minutes and seconds. The digits on the counter blink, warning that the tape is about to run out during recording (pre-end winker).

Timer-activated recording or playback

A timer switch is provided to turn the deck on and off at times preset on an optional timer.

FUNCTION OF CONTROLS



1 POWER switch

This turns the power on or off.

2 Cassette stabilizer

3 Function buttons

It is possible to switch directly from one mode to another.

▷ (forward) button: Press this button to play the front side of the cassette. To record, press this button while holding the ● button down. The tape is transported to the right.

◁ (reverse play) button: Press this button to play back the reverse side of the cassette. To record on the reverse side, press this button while holding the ● button down. The tape will be transported to the left.

▶▶ (fast-forward) button: Press this button to advance the tape rapidly to the right. It is also used for the auto play, AMS and music scan functions.

◀◀ (fast-reverse) button: Press this button to advance the tape rapidly to the left. It is also used for the auto play, AMS and music scan functions.

■ (stop) button: Press this button to stop the tape.

● (record) button: Press this button together with the ▷ or ◁ button to start recording. When this button is pressed for recording level adjustment, the deck will detect the tab of the cassette and the indicators of the ◁ and ▷ buttons will blink to indicate that a recording can be made. If the tab on one side is removed, the corresponding indicator will not light.

○ (record muting) button: Press this button to eliminate unwanted material and to insert a blank space during recording.

⏸ (pause) button: Press this button to stop the tape running for a moment during recording or playback.

4 TAPE COUNTER and RESET button

The tape counter provides a numerical reference point while recording which can be used to index a recorded cassette. To reset to zero, press the RESET button.

5 TAPE type indicators

When a cassette is inserted, the appropriate TAPE type indicator lights and the optimum recording and playback settings of the tape are set by the automatic tape select system.

6 REC LEVEL (recording level) controls

These controls adjust the recording level.

7 Peak level meters

These meters show the peak input level of each channel during recording, and recorded levels in the playback mode.

8 (eject) button

Press this button to open the cassette holder.

9 HEADPHONES jack (stereo phone jack)

Connect a pair of headphones either to monitor the input signals to be recorded or to listen to a recording in the playback mode.

10 Direction indicators

FWD ▷ (forward) indicator: Lights to show that the front side of the cassette is being played back or recorded on.

REV ◁ (reverse) indicator: Lights to show that the reverse side of the cassette is being played back or recorded on.

11 AMS/BLANK SKIP button and indicator

To activate the AMS and blank skip functions, press this button. The indicator of the button lights. To cancel these functions, press it again. The indicator goes off.

12 DIRECTION MODE buttons

Depress one of the buttons to select the mode of tape movement for recording and playback.

↔ (one-direction) button: To record or play back one side of the cassette.

↻ (one-cycle) button: To record or play back both sides of the cassette. If this button is pressed when the reverse side of the cassette is being recorded or played back, the tape will stop at the end of that side.

↻ (five-cycle) button: To play back both sides of the cassette five times. If this button is pressed when the reverse side of the cassette is being recorded or played back, the tape will stop at the end of the 5th playback of the reverse side so that the front side will have been played back only four times. The recording will stop at the end of the reverse side.

13 PRE-END REVERSE button

Depress this button (ON) to automatically reverse the direction of the tape during recording or playback when the tape approaches the end. To cancel the pre-end reverse function, press the button again to release (OFF). The tape reverses the direction at the very end.

The pre-end reverse function operates only in the direction from the front side to the reverse side.

14 DOLBY NR switches

To record or play back using the Dolby NR* (Noise Reduction) system, depress the left ON/OFF switch (ON), then select either the B-type or C-type Dolby NR system with the right switch.

Depress the switch for the C-type system (C-TYPE), or press to release it for the B-type system (B-TYPE).

To record or play back without the Dolby NR process, press to release the ON/OFF switch (OFF).

15 MIC jacks (phone jack)

Any low-impedance microphone equipped with a phone plug may be used.

16 TIMER switch

You can set the unit to record or playback at a predetermined time by connecting any commercially available timer.

17 MEMORY indicator

When the COUNTER MEMORY button is pressed, this indicator lights to show the memory counter function is engaged.

18 Digital linear counter

Indicates the tape running time.

19 PER (pre-end reverse) indicator

When the PRE-END REVERSE button is depressed (ON), this indicator lights to show the pre-end reverse function is engaged.

20 DOLBY NR indicators

The selected Dolby NR B or C type indicator lights.

21 COUNTER RESET button

Press to reset the tape counter to zero.

22 MUSIC SCAN button

To activate the music scan function, press this button. The indicator of the button lights. To cancel this function, press it again or press the AMS/BLANK SKIP button. The indicator goes off.

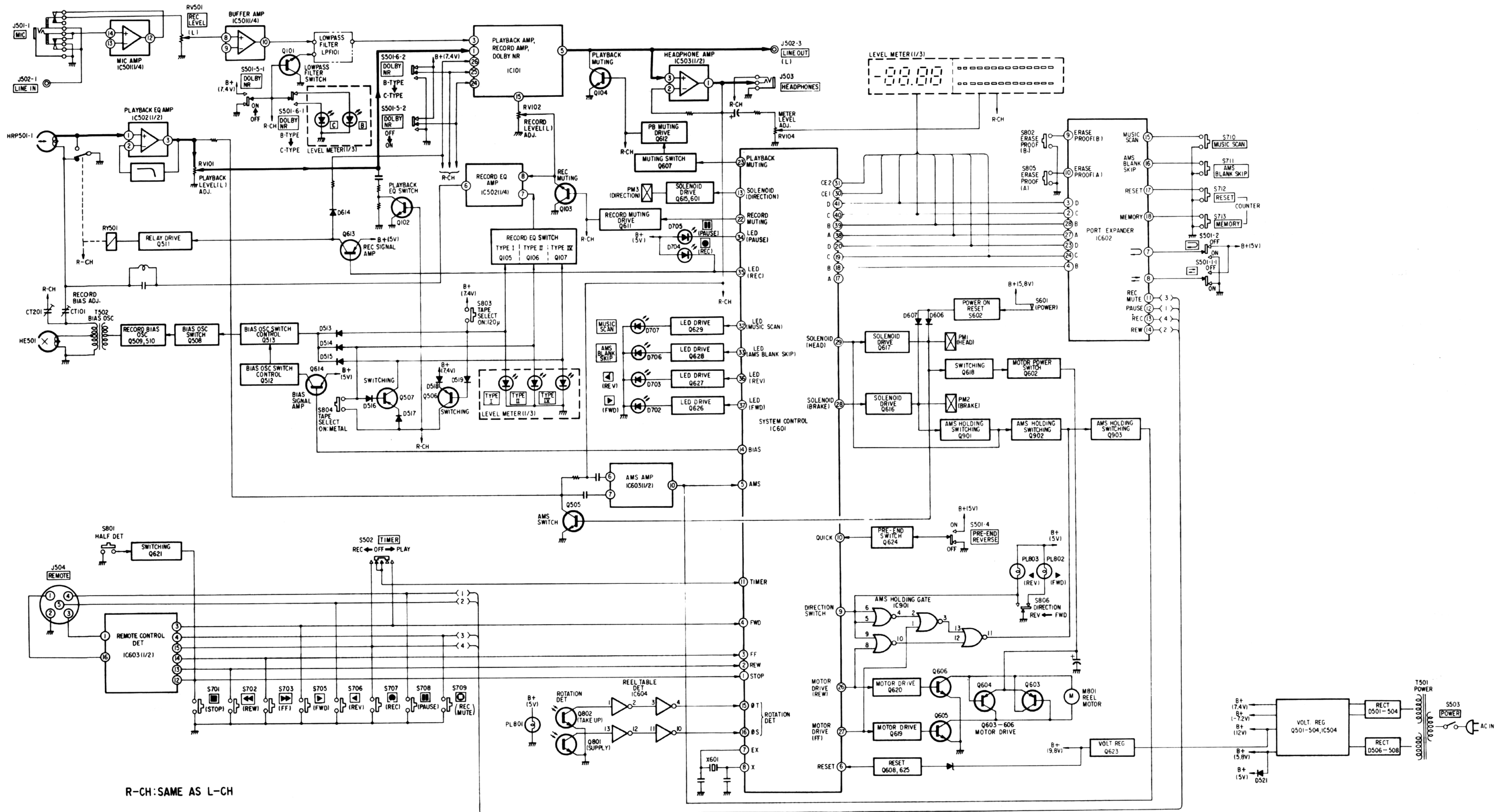
23 COUNTER MEMORY button

Used for the memory stop/play.

When this button is pressed, the MEMORY indicator lights on the display.

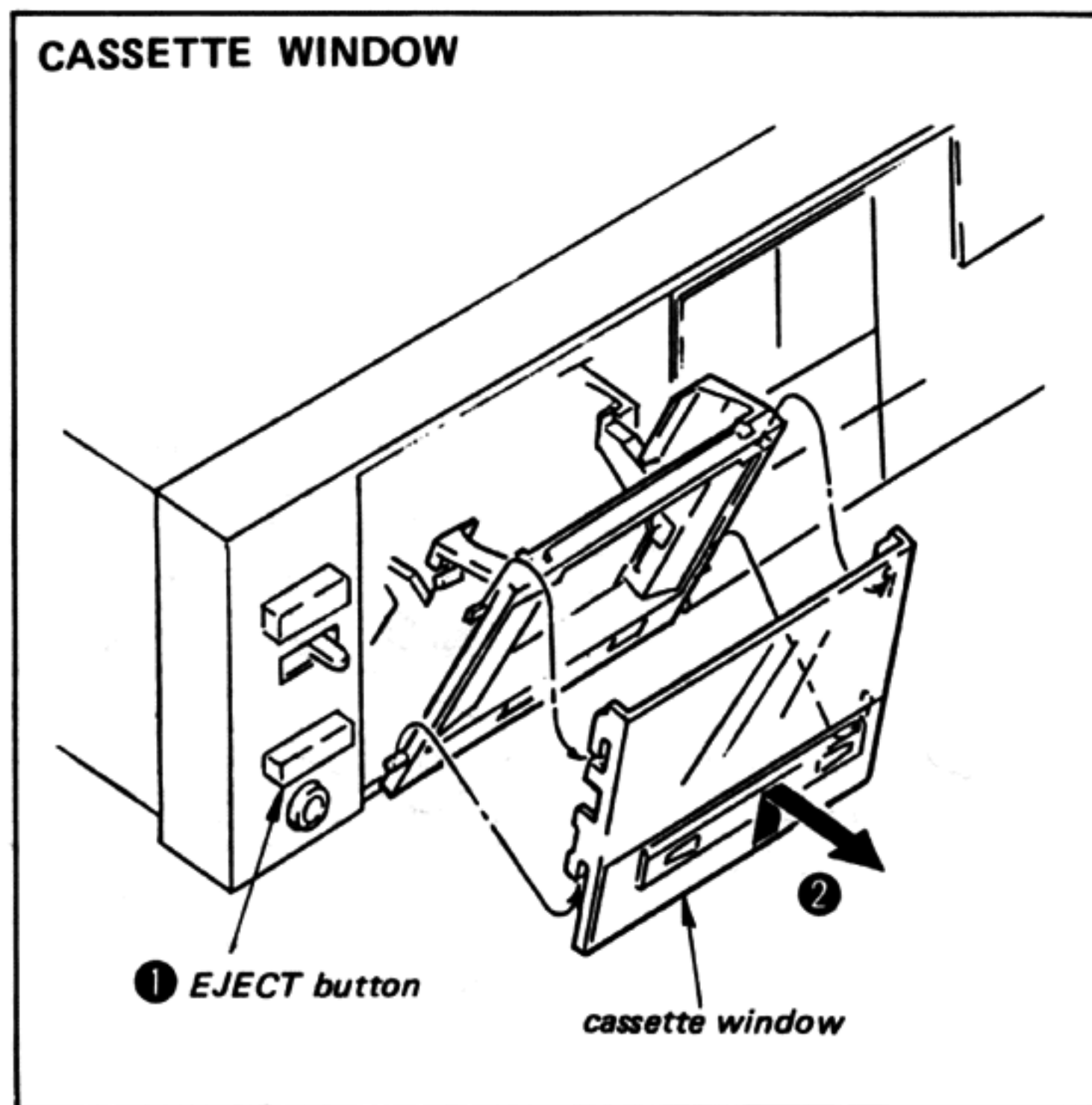
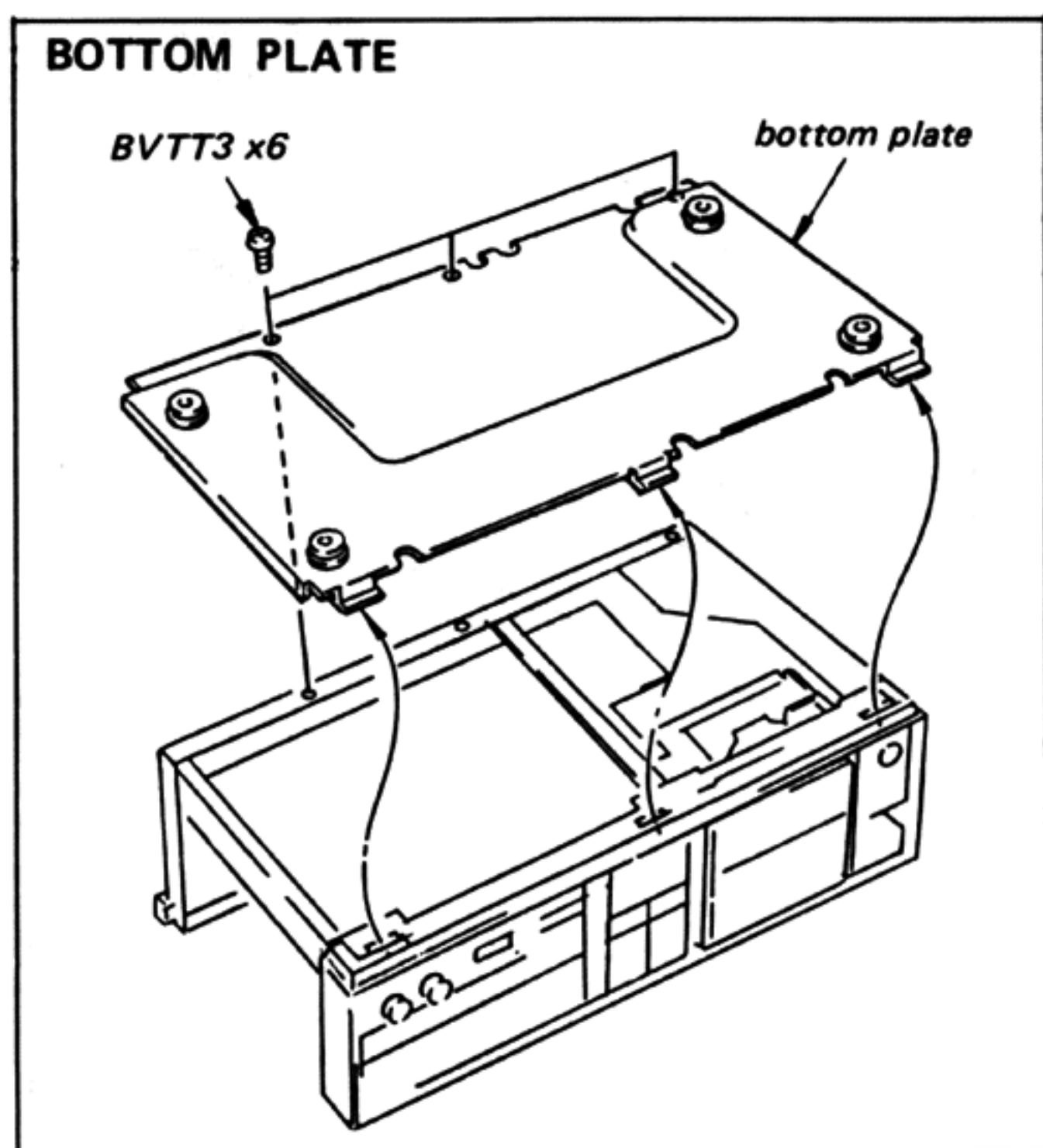
SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM



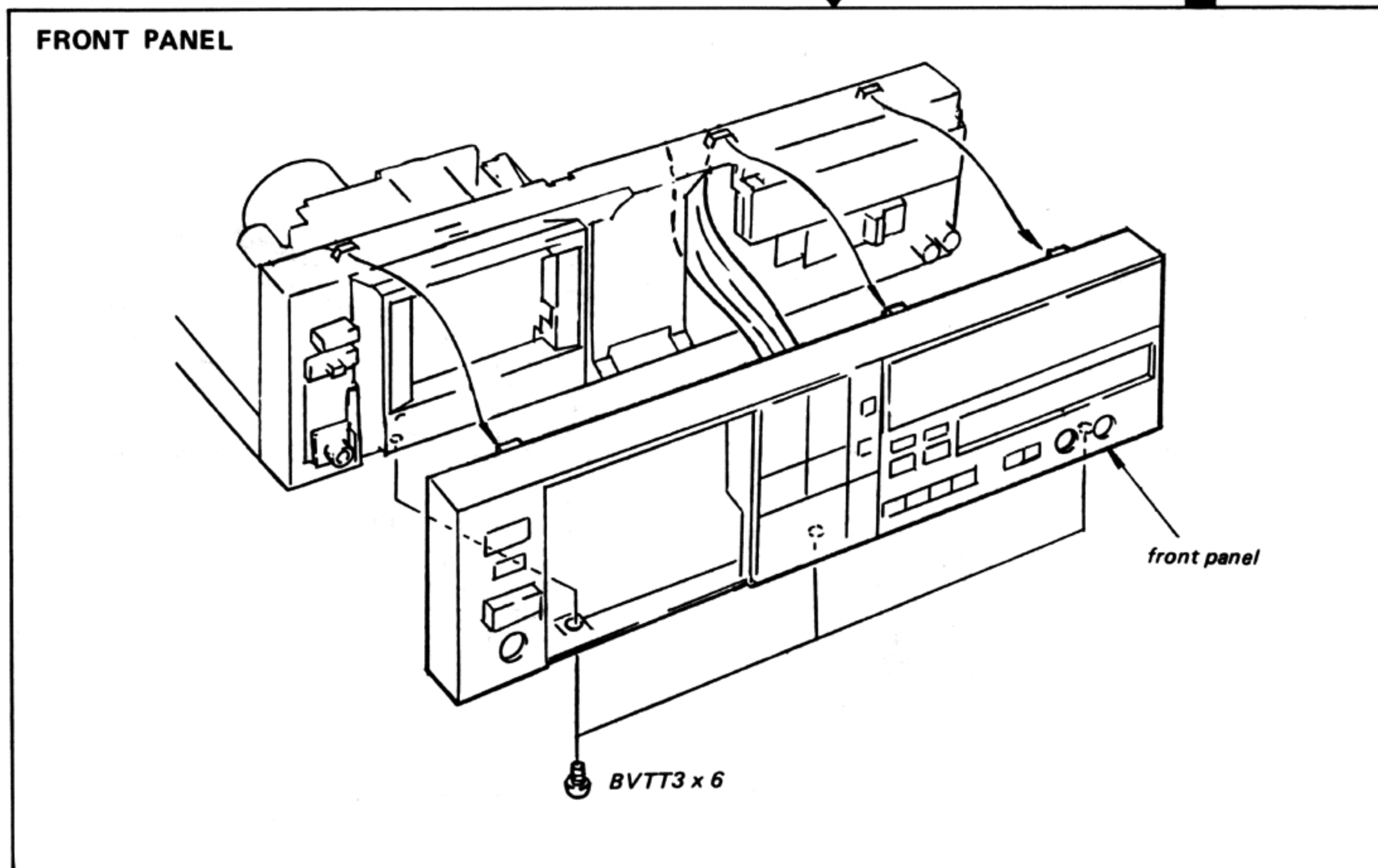
SECTION 2 DISASSEMBLY

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

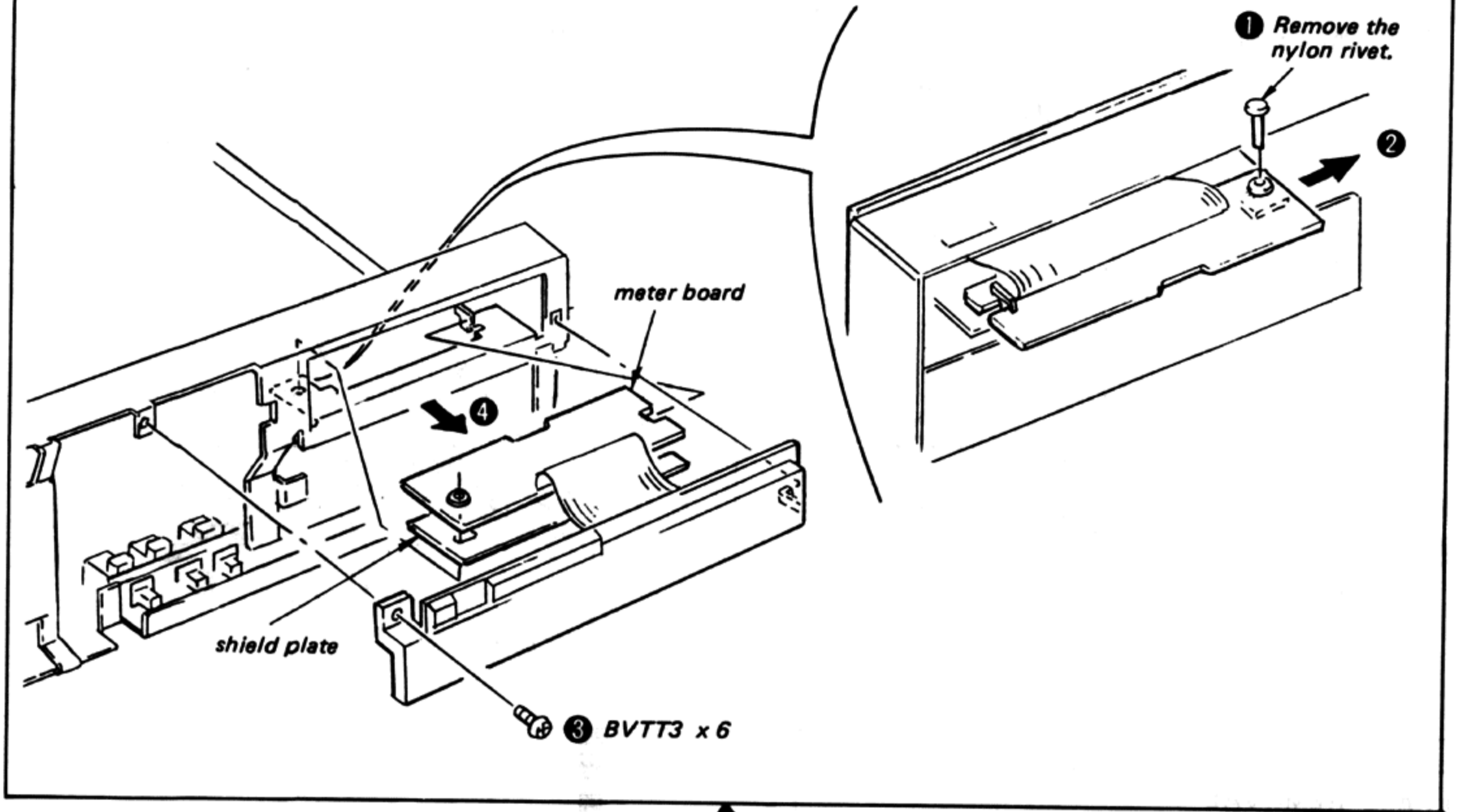


CASE REMOVAL

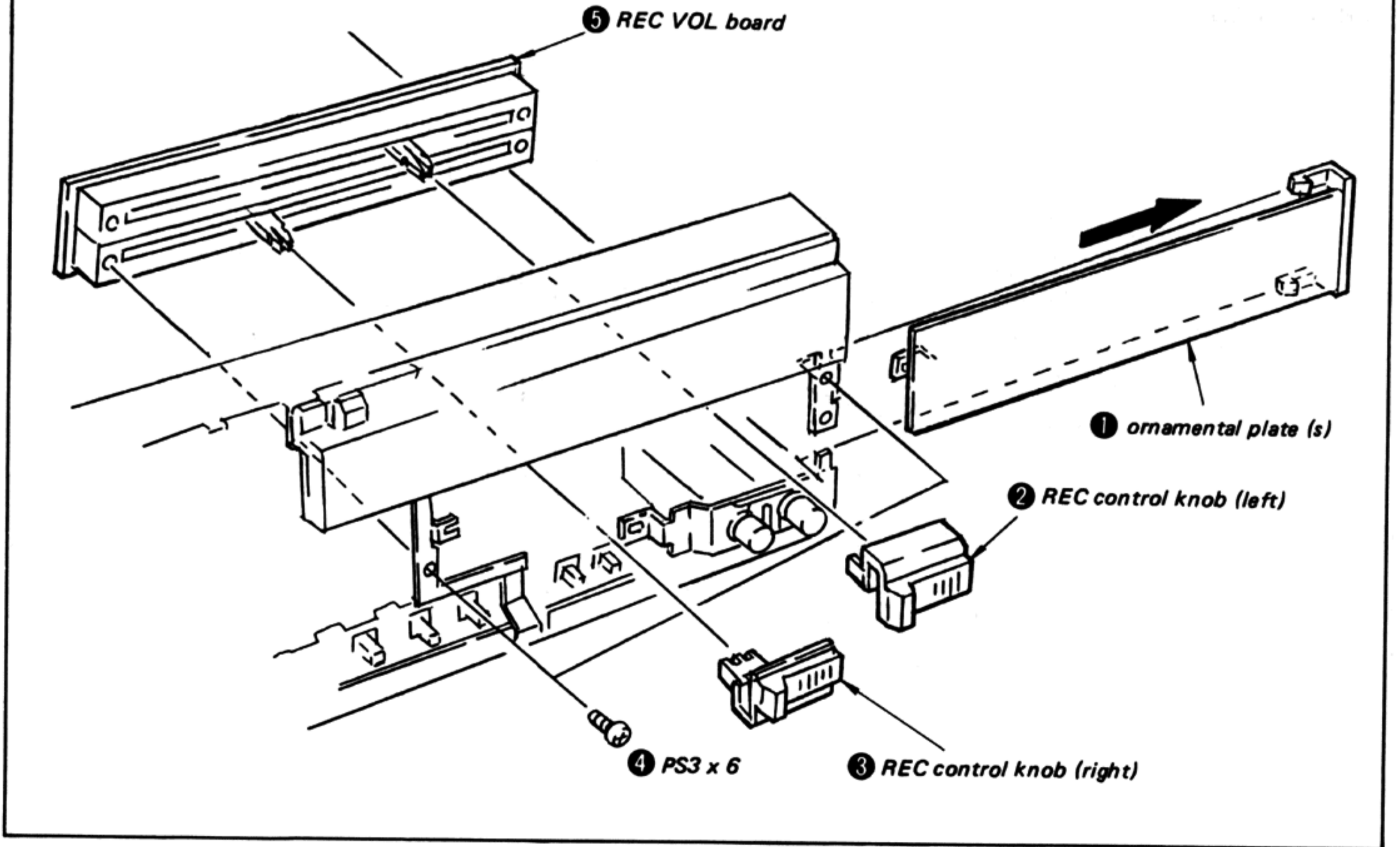
Remove case by taking out four screws securing case.



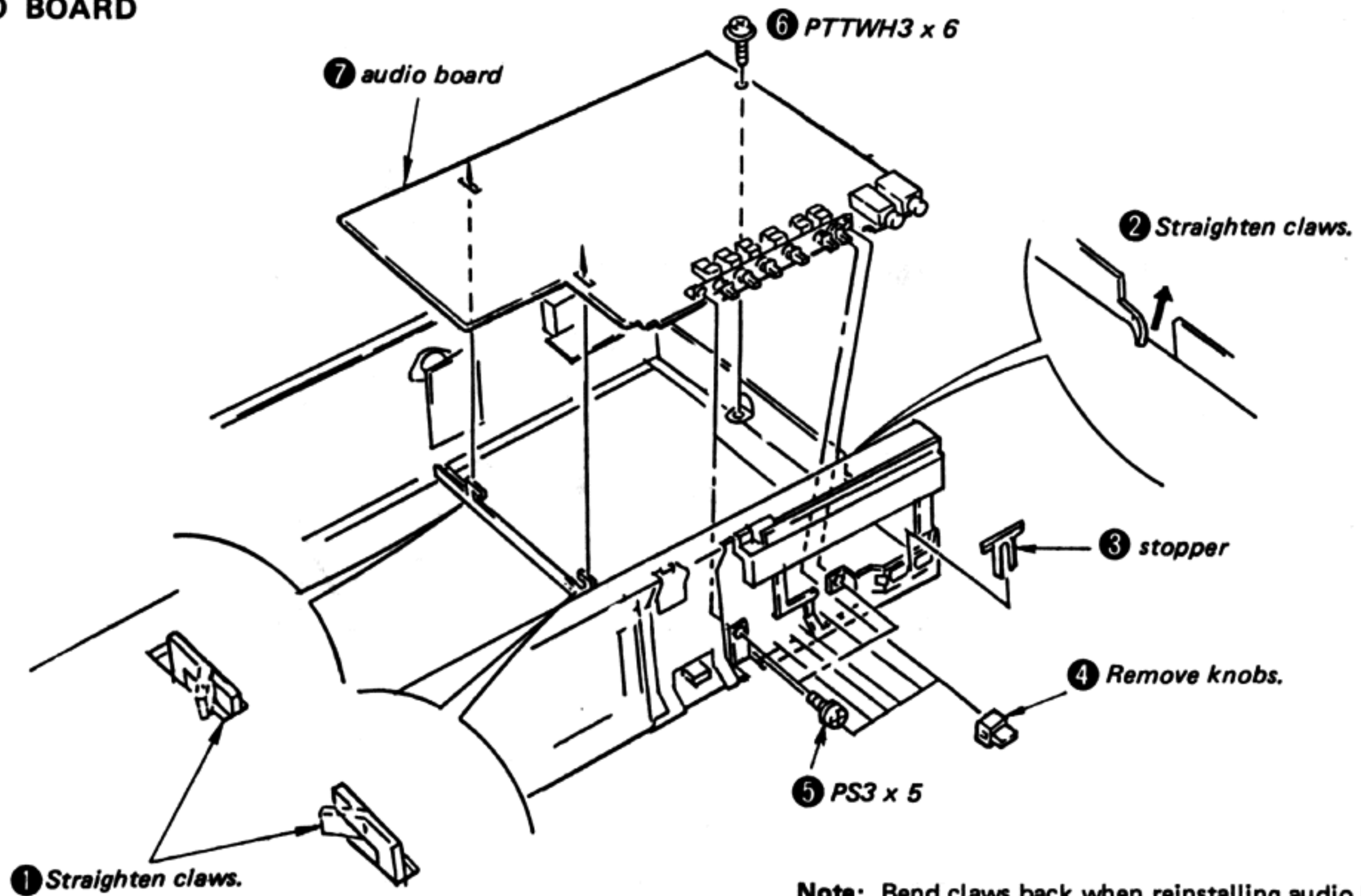
METER BOARD



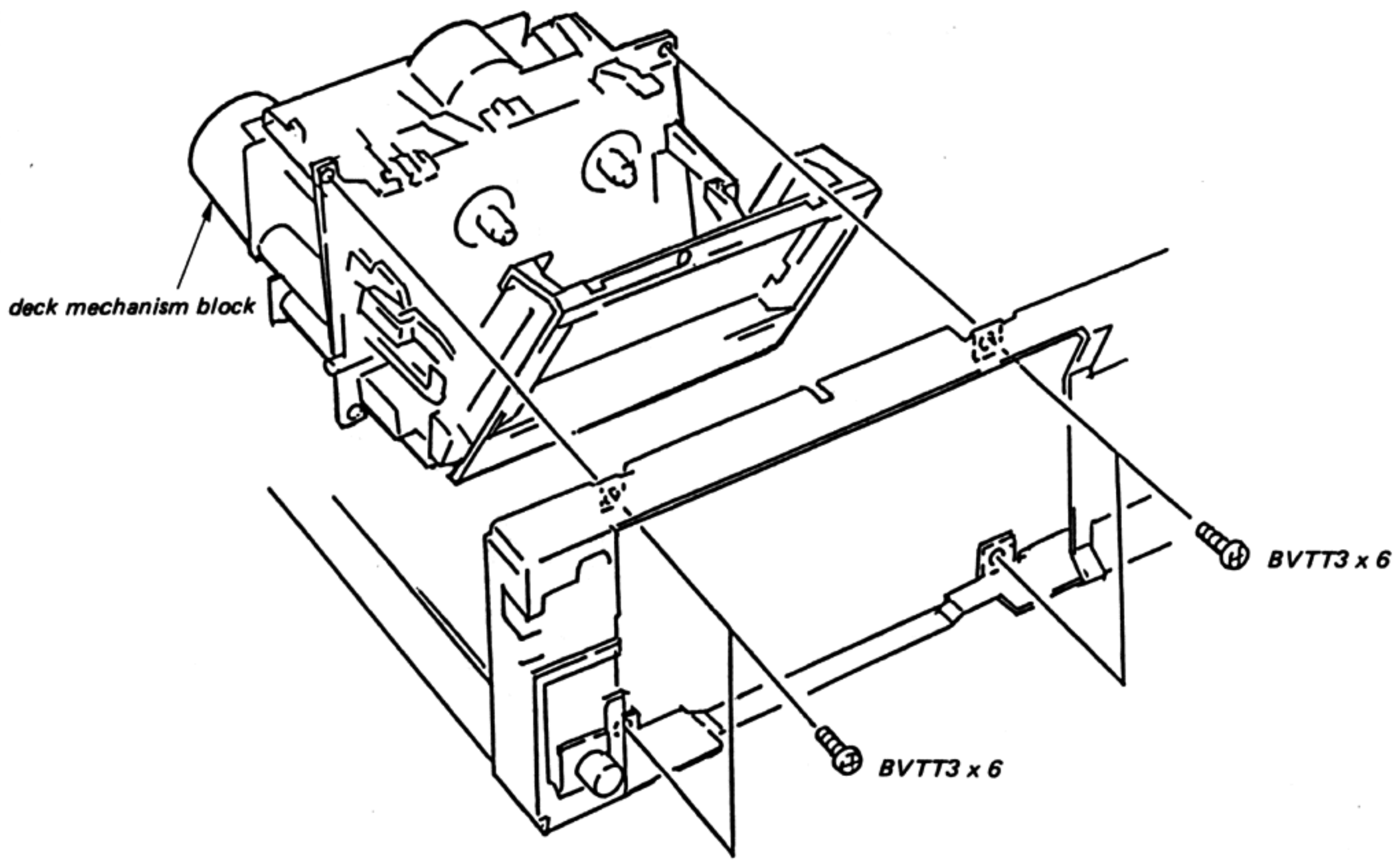
REC VOL BOARD



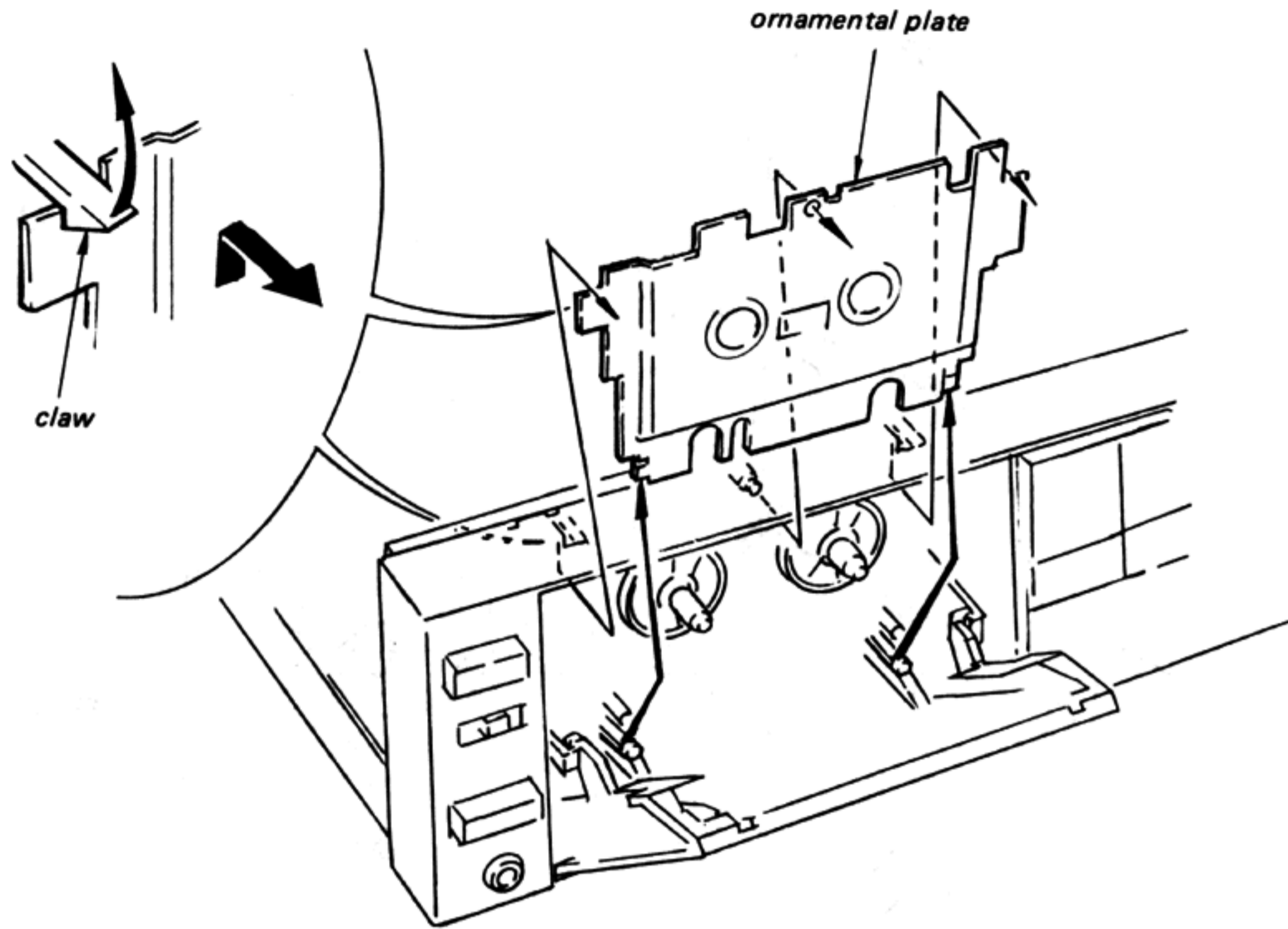
AUDIO BOARD



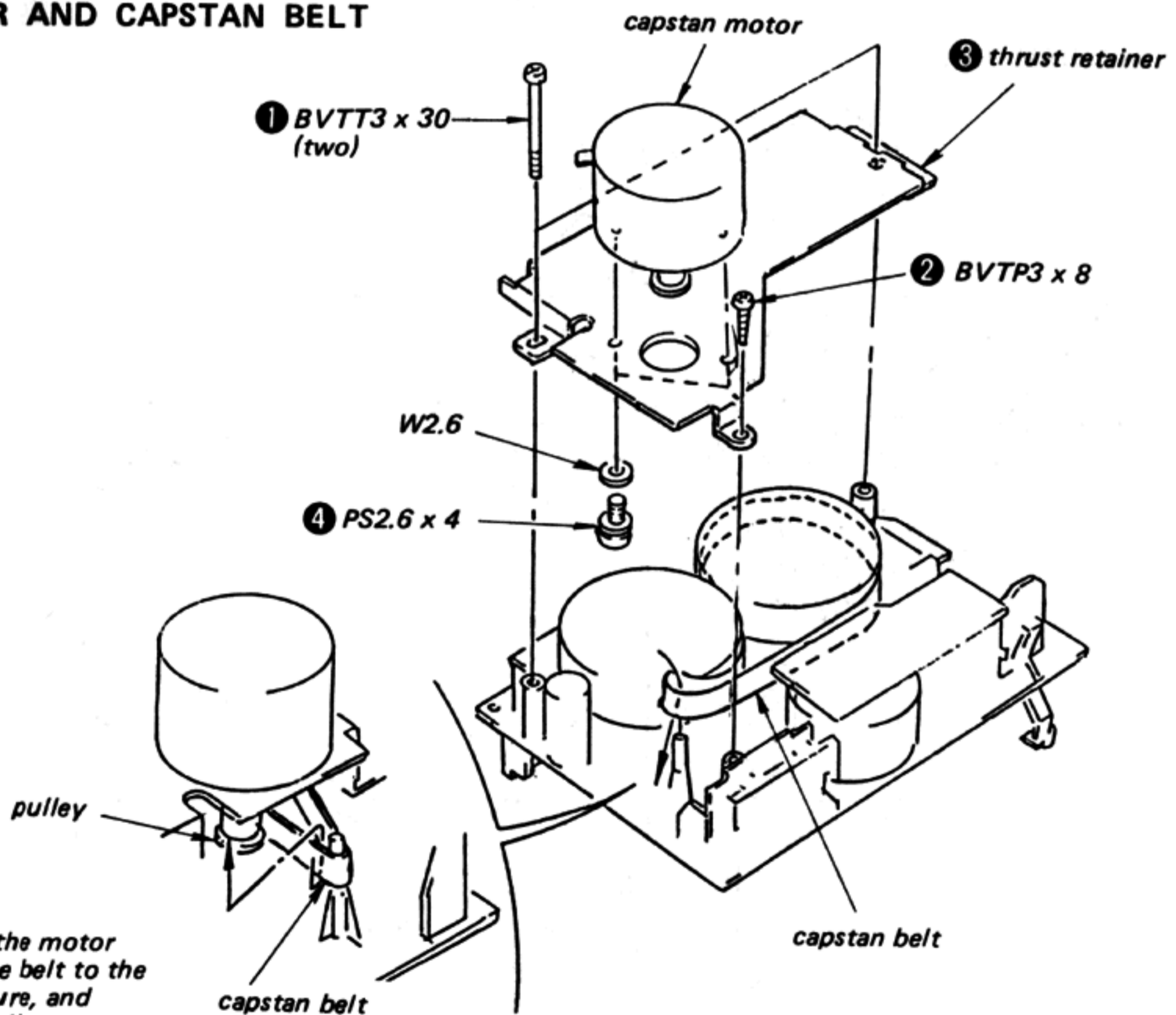
DECK MECHANISM BLOCK



ORNAMENTAL PLATE

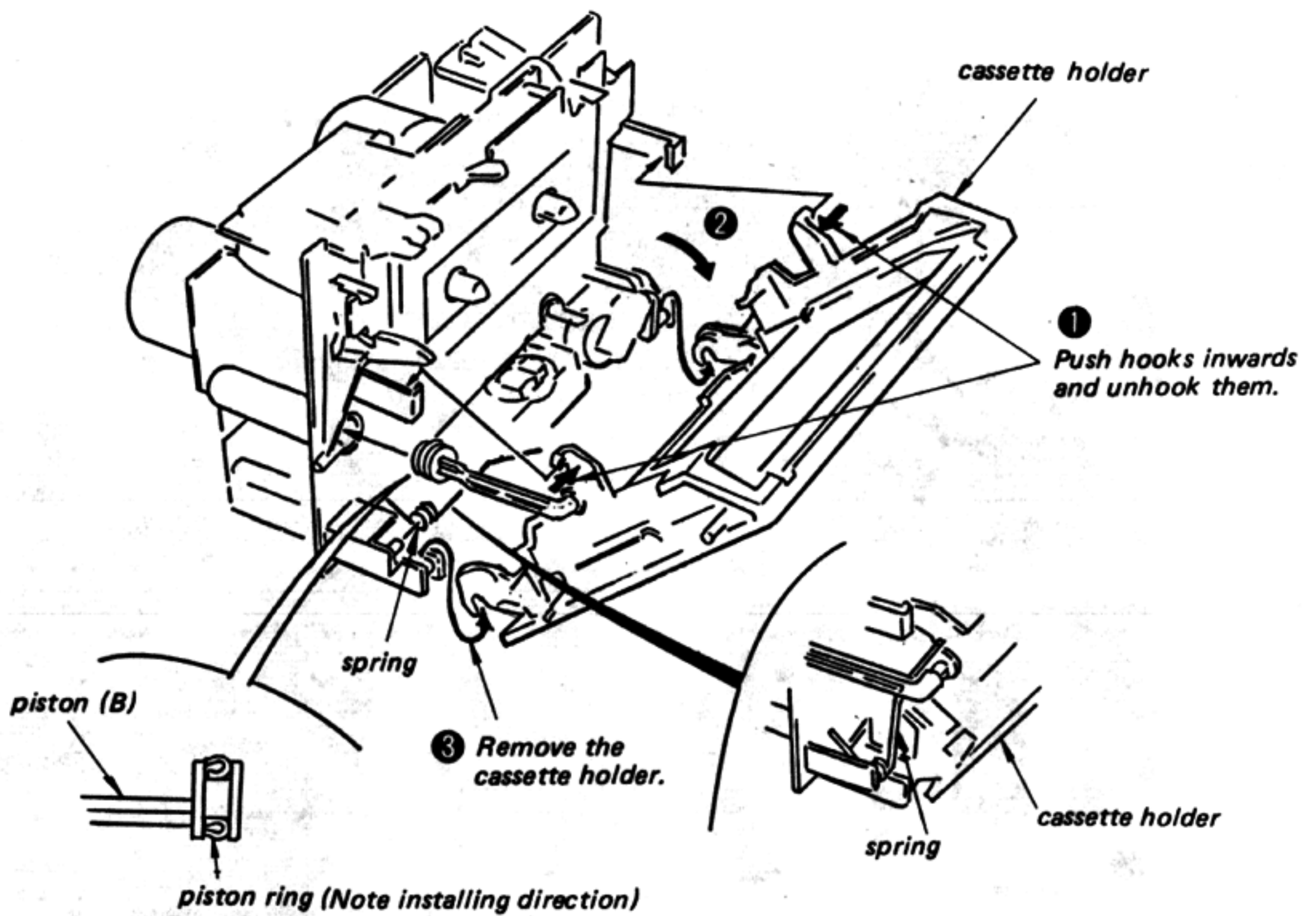


CAPSTAN MOTOR AND CAPSTAN BELT

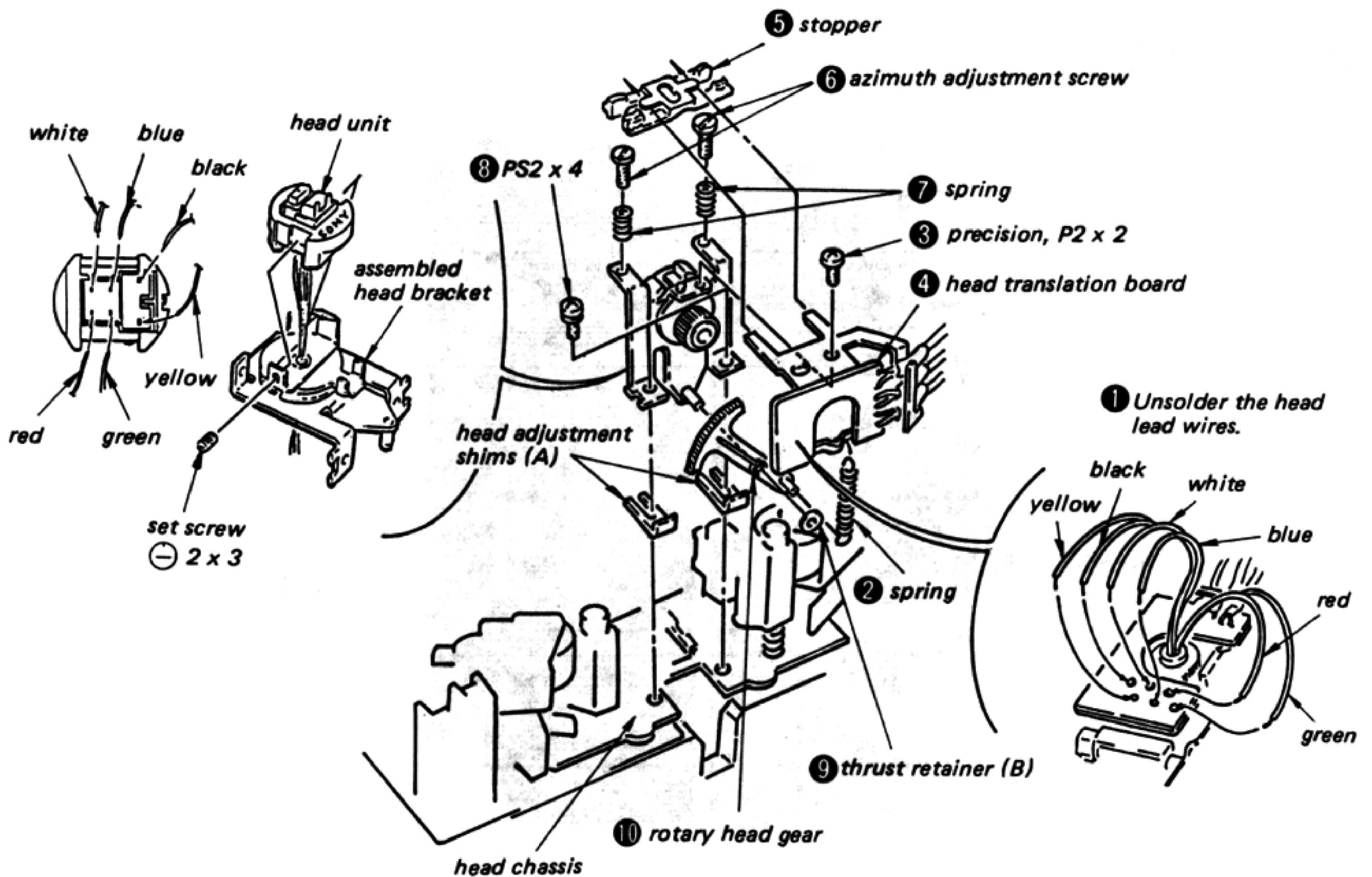


When reassembling, set the motor section after hooking the belt to the stud as shown in the figure, and then hook belt to the pulley.

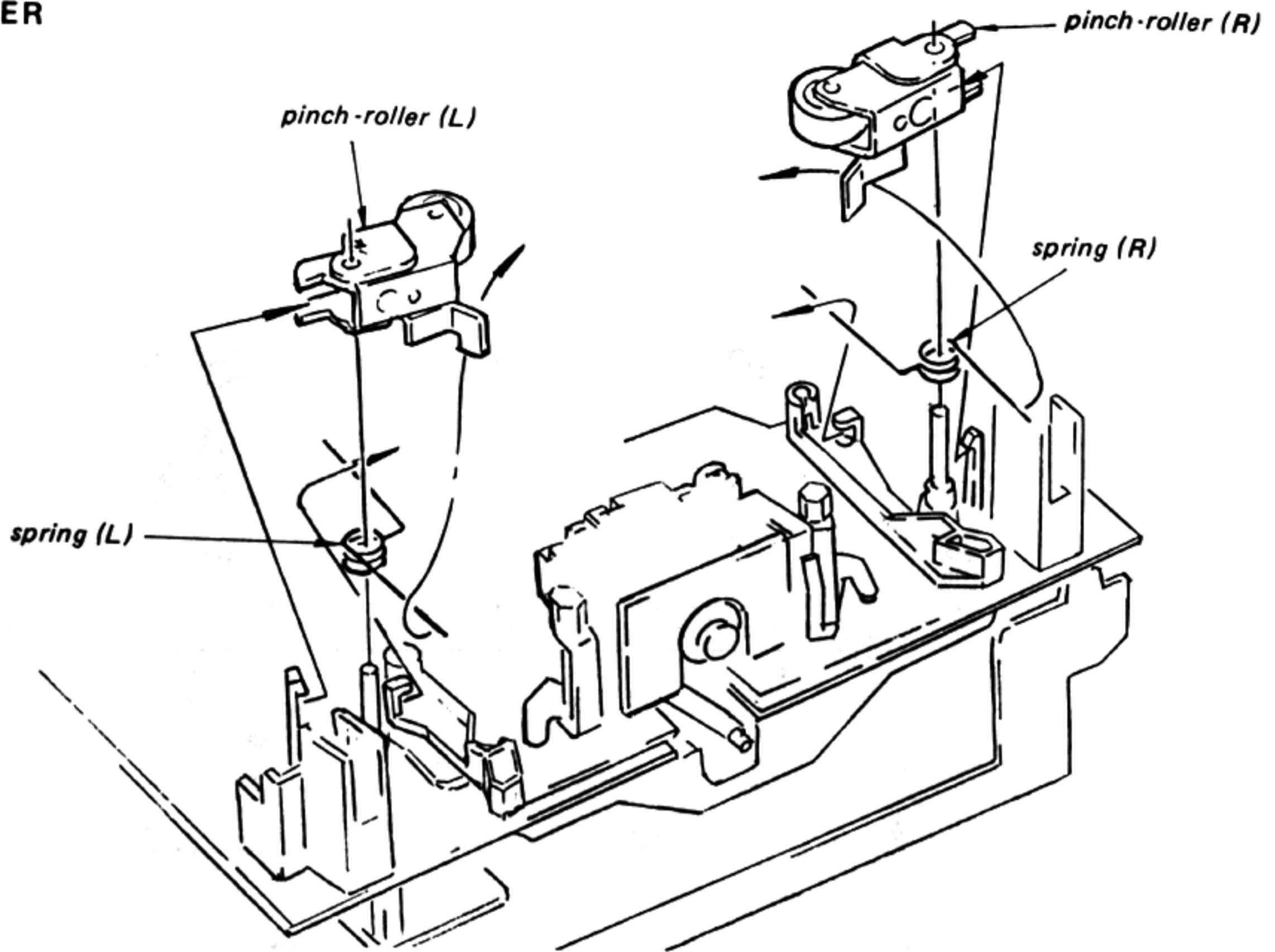
CASSETTE HOLDER



HEAD UNIT



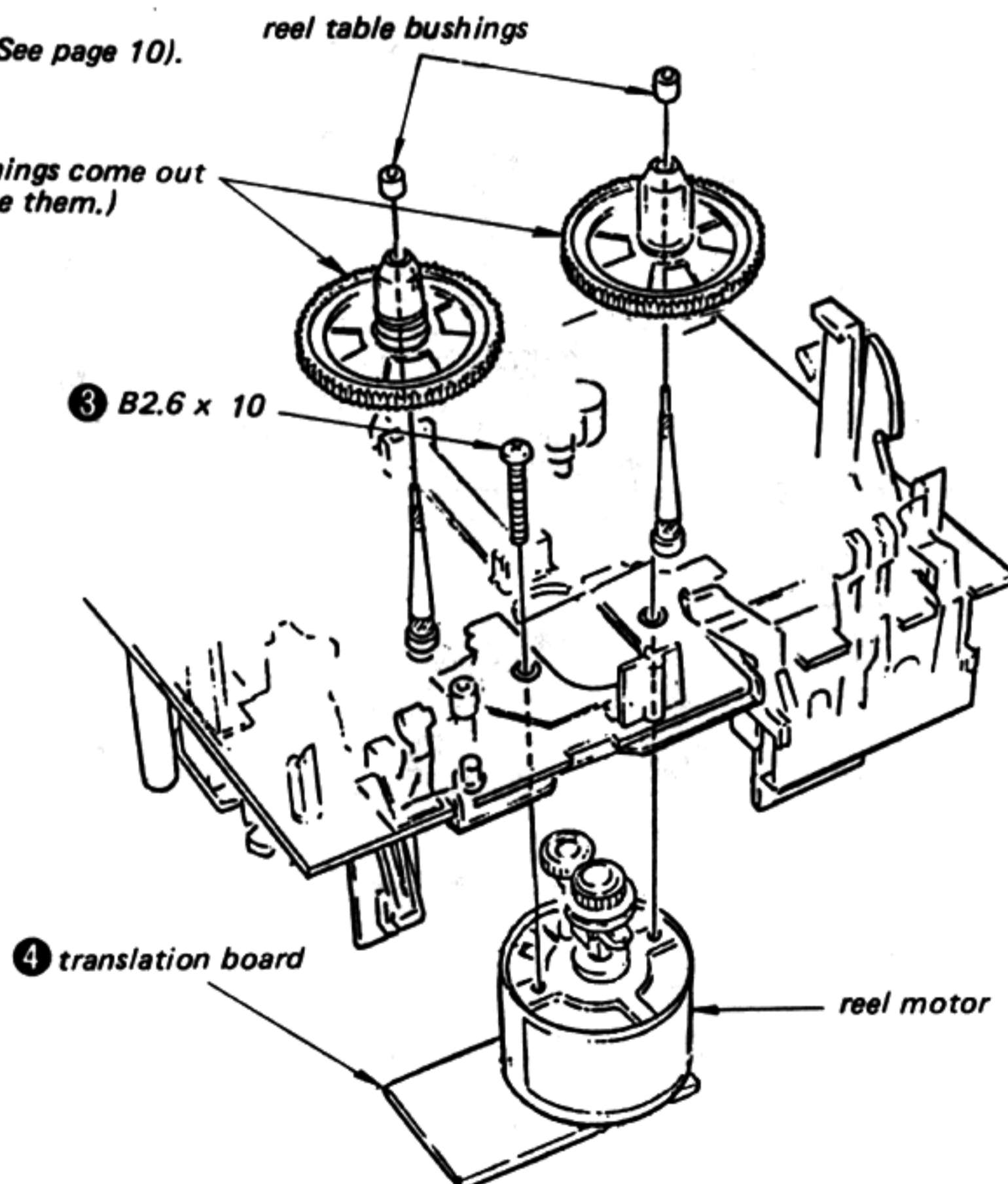
PINCH-ROLLER



REEL MOTOR

① Remove the ornamental plate (See page 10).

② Pull off reel tables.
(Note: reel-table bushings come out together. Do not lose them.)

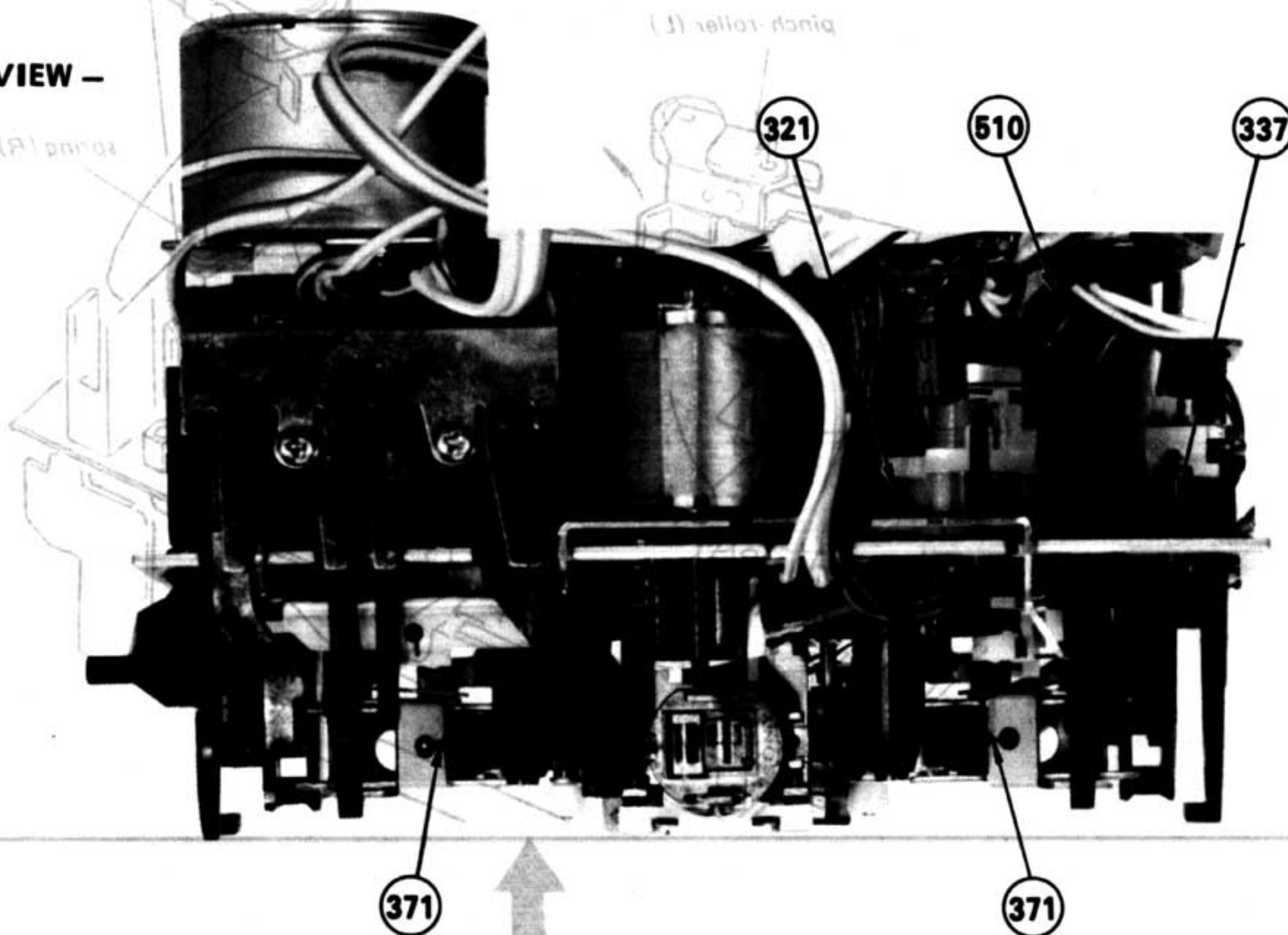


● REFERENCE PHOTOS FOR MECHANISM DECK

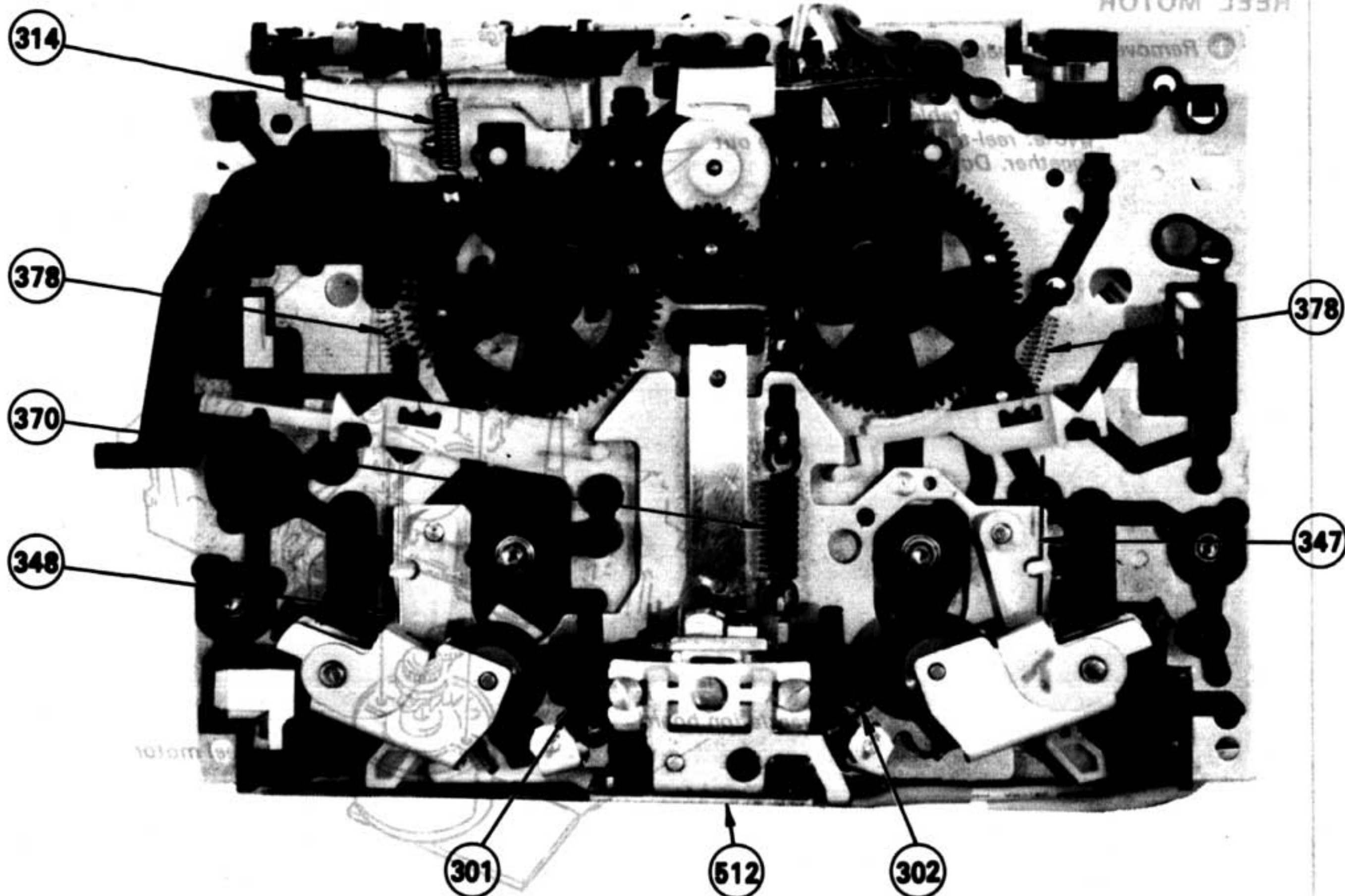
Note: Numbers coincide with those of the exploded views and parts list.

PINCH-ROLLER

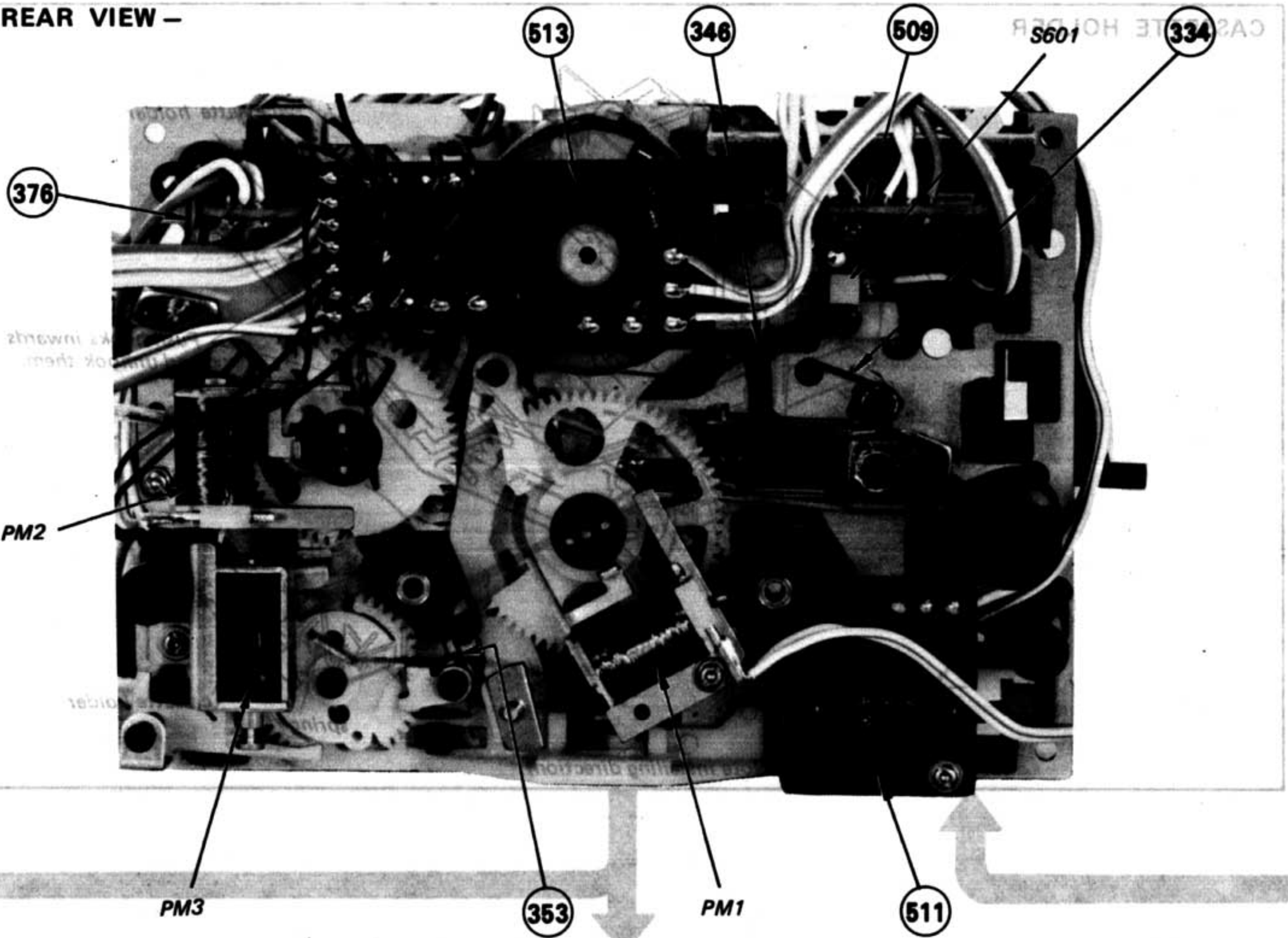
— TOP VIEW —



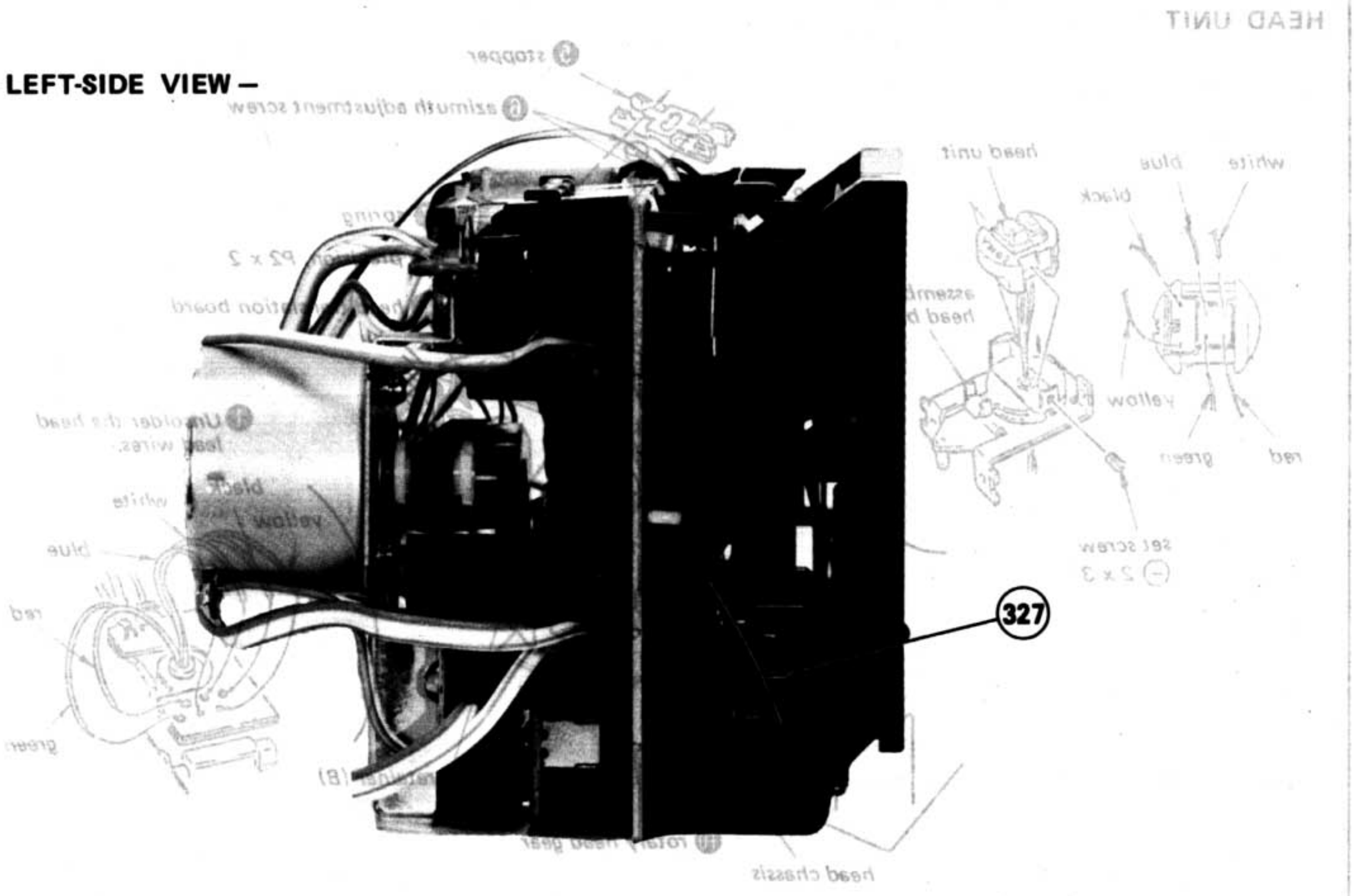
— FRONT VIEW —



- REAR VIEW -



- LEFT-SIDE VIEW -



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:
 record/playback/erase head rubber belts
 capstan
 pinch roller
2. Demagnetize the head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

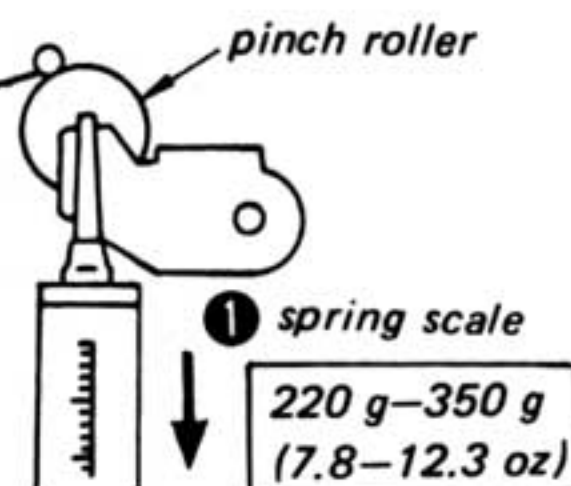
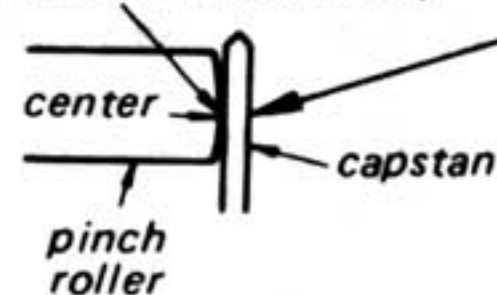
Torque	Torque meter	Meter reading
Forward	CQ-102C	30–60 g·cm (0.41–0.82 oz·inch)
Reverse	CQ-102RB	
Fast Forward and Rewind	CQ-201B	90–150 g·cm (1.3–2.1 oz·inch)
Brake	TOHNICHI Torque Gauge	10–100 g·cm (0.15–1.35 oz·inch)



Pinch Roller Pressure Measurement

— Playback Mode —

② Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating. (The capstan should first contacts here.)

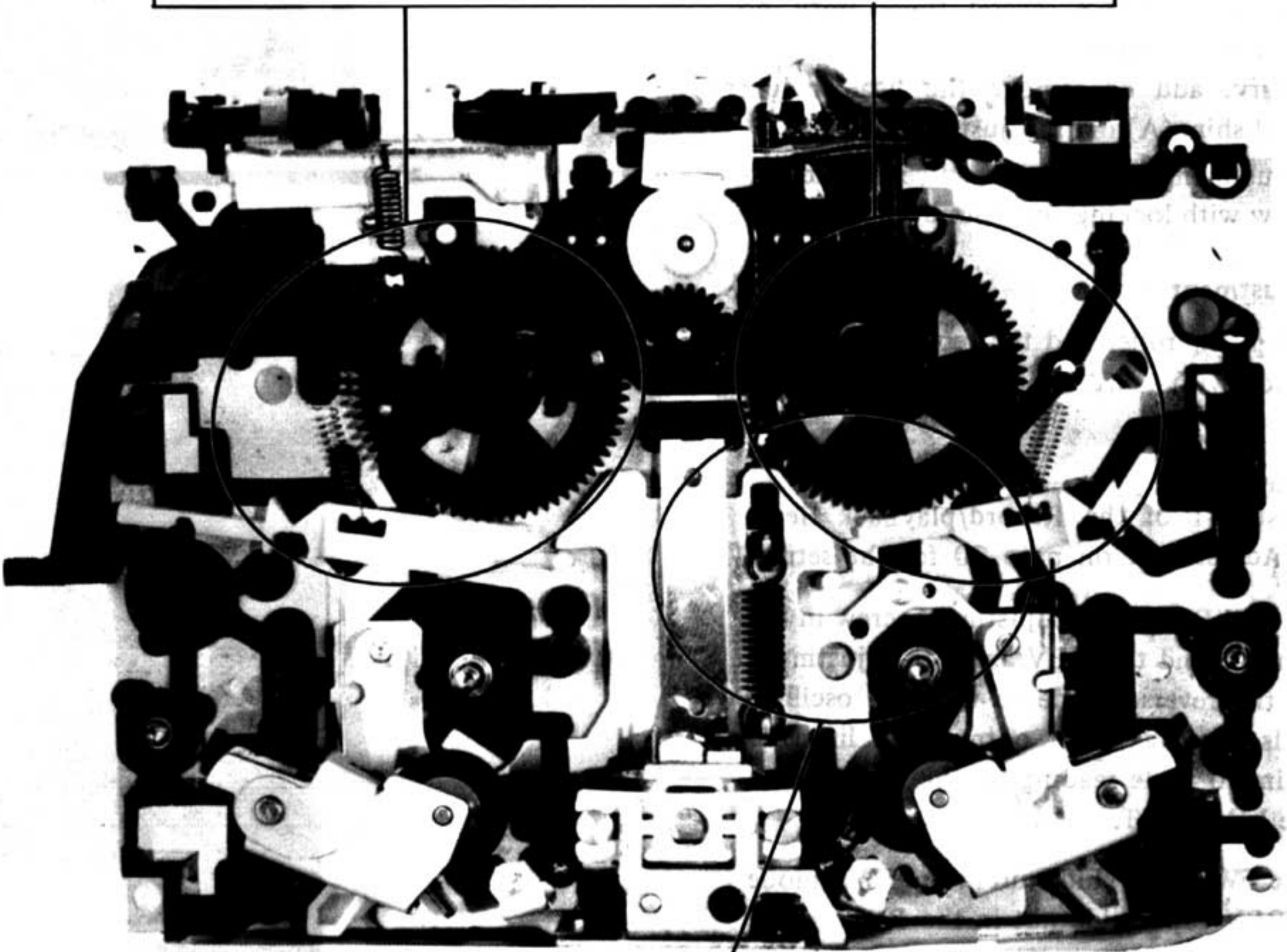
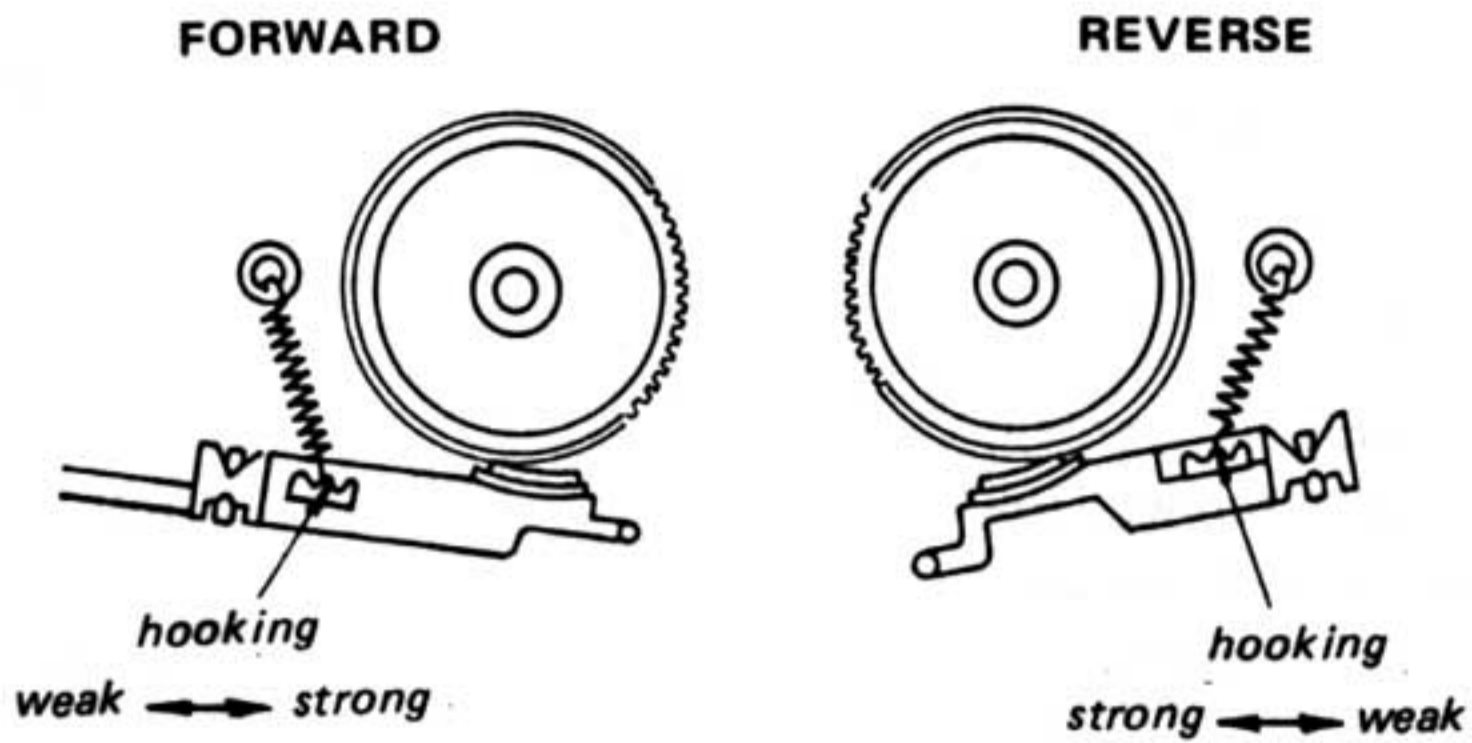


BACK TENSION ADJUSTMENT

— Forward and Reverse Playback Modes —

Forward : Torque Meter CQ-102C, Torque 2.5–4.5 g.cm
(0.03–0.06 oz.inch)

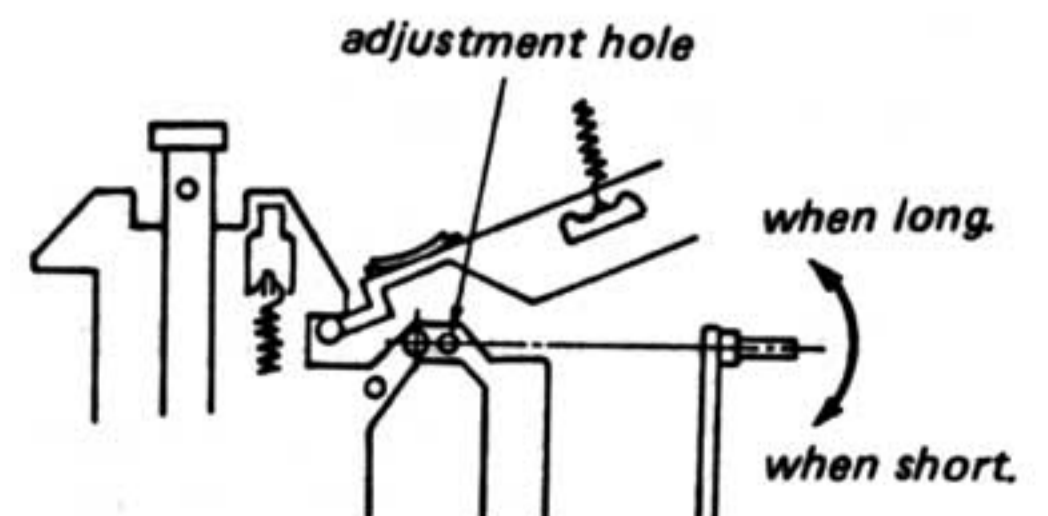
Reverse : Torque Meter CQ-102RB, Torque 2.5–4.5 g.cm
(0.03–0.06 oz.inch)



HEAD-BASE MOVING DISTANCE ADJUSTMENT

— Forward Pause, Reverse Pause and AMS Modes —

Adjust by bending head-base plate using a small screwdriver so that head base displaces $2\text{ mm} \pm 0.1\text{ mm}$ ($3/32''$).



Precaution on Replacing

As the head center adjustment and the tape pass adjustment are affected each other, do not perform them at the same time.

Note: When the record/playback/erase head is replaced, be sure to perform the preliminary adjustment first.

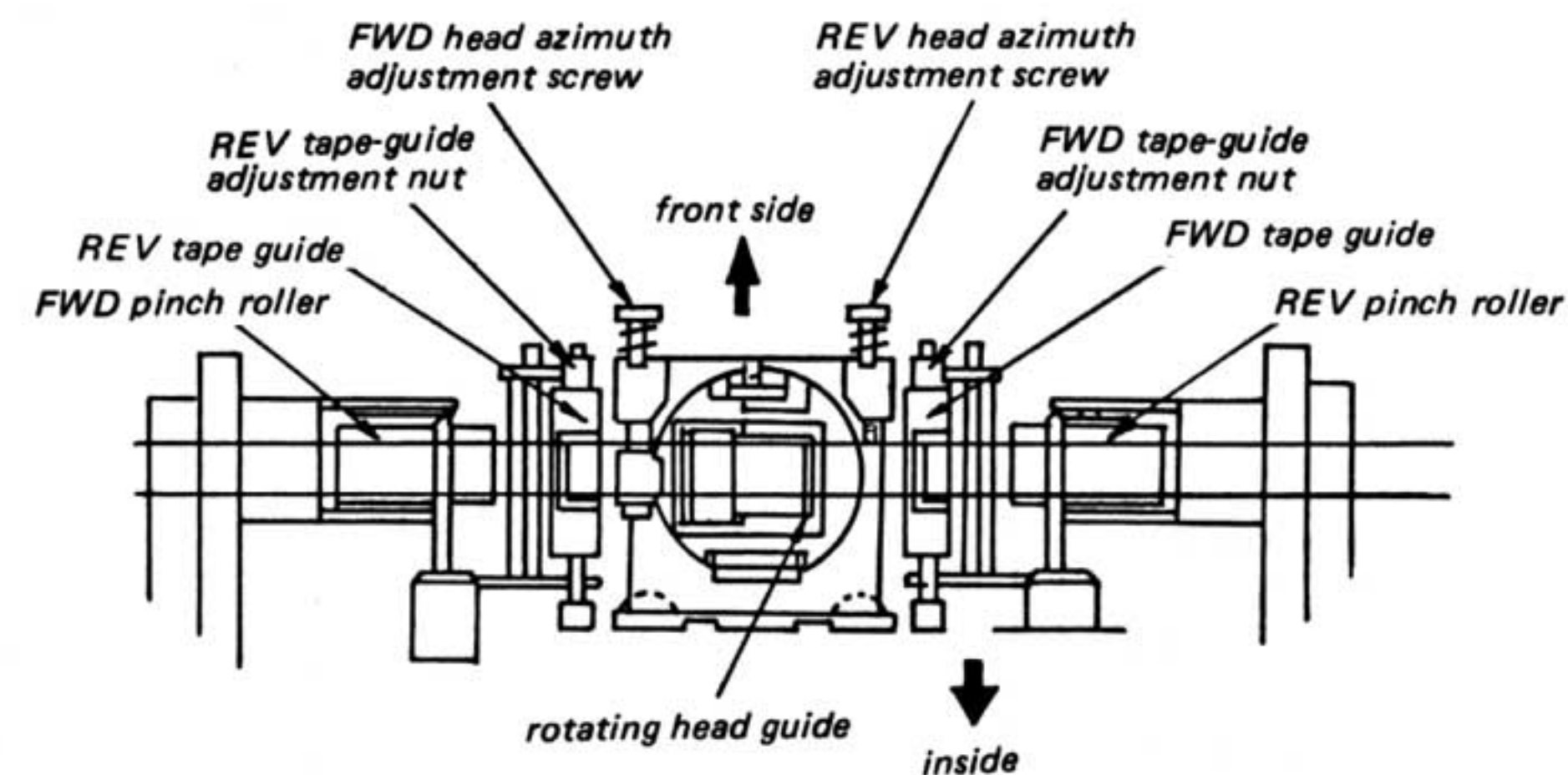
Head Center Adjustment

1. Insert a mirror tape cassette, CQ-009C or CQ-012C.
2. Place the unit in forward play mode.
3. When the lower part of the tape is warped, loosen the head center adjustment screw. Reversely, the upper part of the tape is warped, secure the adjustment screw by changing the mode back to forward play again.
4. Repeat steps 2 and 3 several times until no improvement is obtained. If necessary, add or remove the head height adjustment shim (A) and readjust.
5. After adjustment, lock the head-center adjustment screw with locking compound.

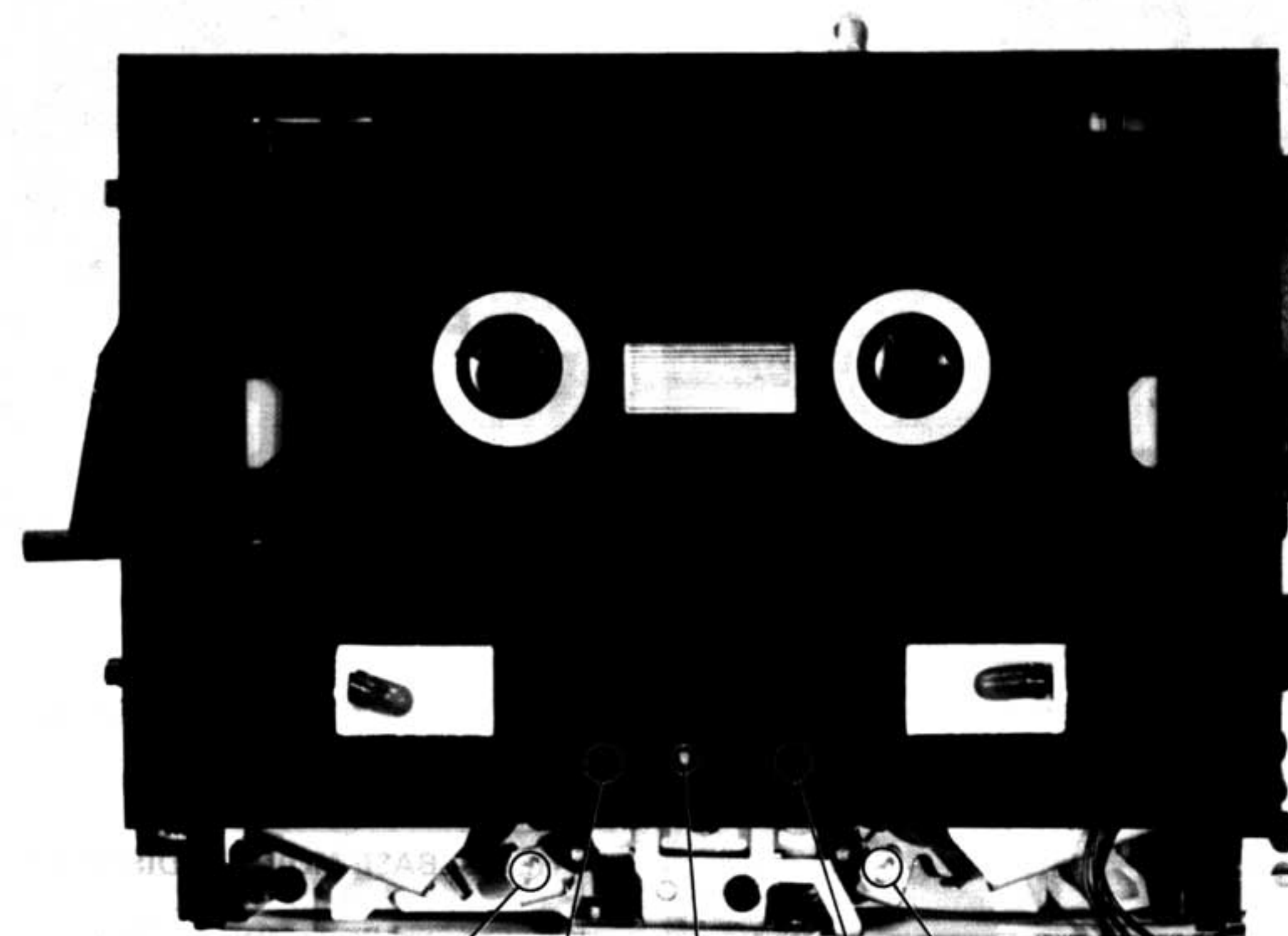
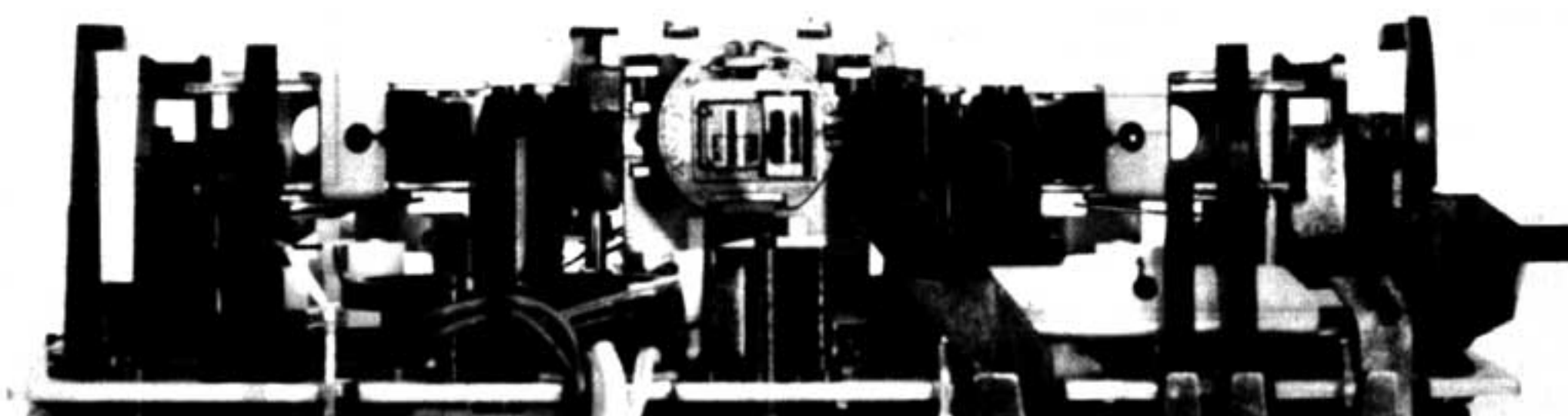
Tape Path Adjustment

1. Clean the pinch roller and the record/playback/erase head with soft cloth moistened with alcohol.
2. Mode : playback
Refer to step 1 of the Record/playback Head Azimuth Adjustment on page 20 for the setup.
3. Adjust the FWD azimuth adjustment screw in the forward mode and the REV azimuth adjustment screw in the reverse mode so that the oscilloscope reads the maximum output and lissajous figure is in 30 angle reading on the oscilloscope across the LINE OUT.
4. Adjust the FWD tape-guide nut in the FWD mode and the REV tape-guide nut in the REV mode for an in-phase lissajous pattern. The turning amount of the nuts should be within 3/4 turns.
5. Repeat steps 3 and 4 several times until no improvement is obtained.
6. Play a mirror tape cassette in the forward mode.
7. Confirm there is no tape curl at the tape guides.

Note: After these adjustments, be sure to perform the Record/playback Head Azimuth Adjustment on page 20.



VIEWED FROM TOP



FWD tape guide adjustment nut

REV tape guide adjustment nut

REV head azimuth adjustment screw

FWD head azimuth adjustment screw

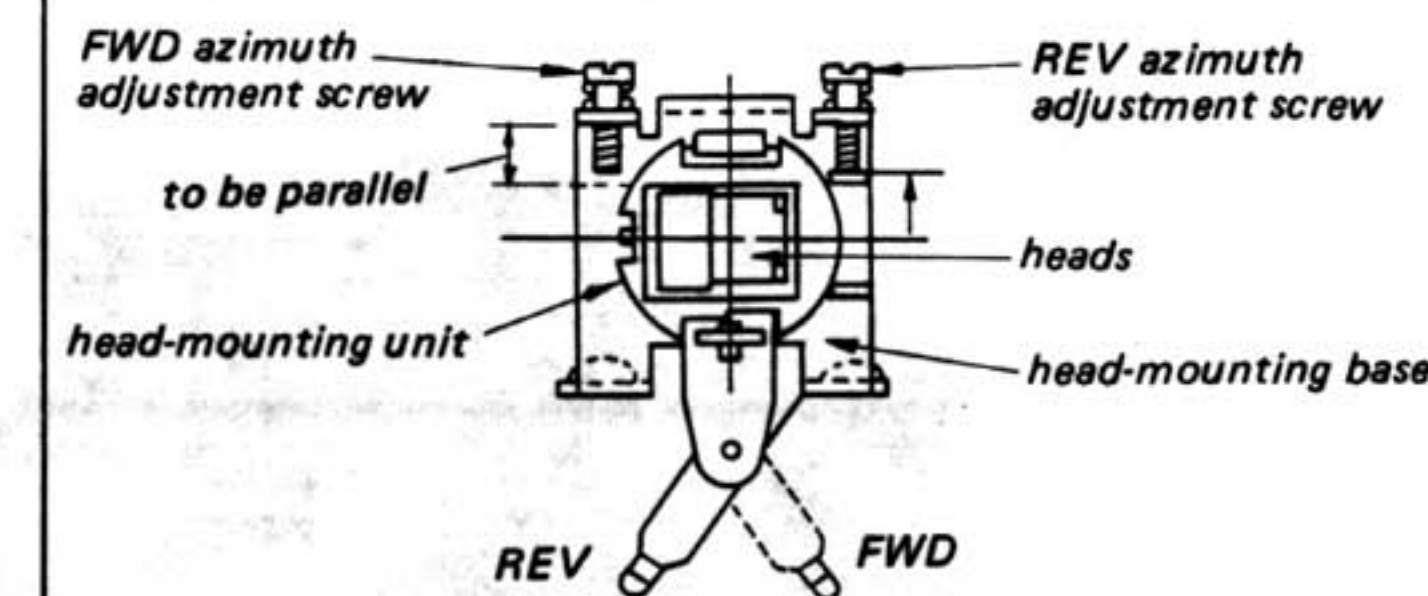
head center adjustment screw (FWD mode only)

HEAD UNIT ADJUSTMENT WHEN REPLACED

Perform the following preliminary adjustments before proceeding to the Head Center and Tape Path Adjustments.

Preliminary Adjustment

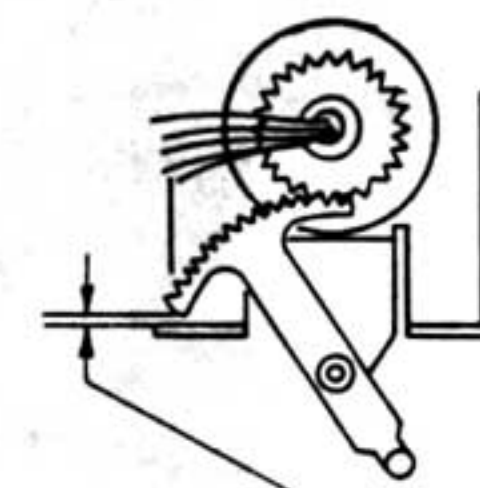
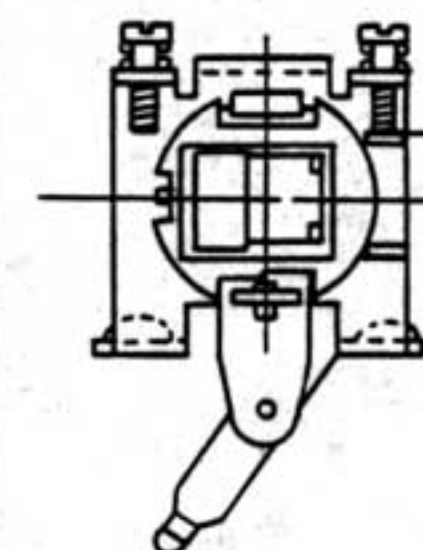
1. Install head-mounting unit on the head-mounting base by threading head lead wires through the round hole in the head-mounting base. Also refer to page 11.
2. By adjusting both head-azimuth adjustment screws in both forward- and reverse-mode head positions, align the head-compartment edge line in parallel with the edge line of the head-mounting unit at the azimuth adjustment screws. (visual adjustment)



Be sure to orient the rotary-head gear as shown below.

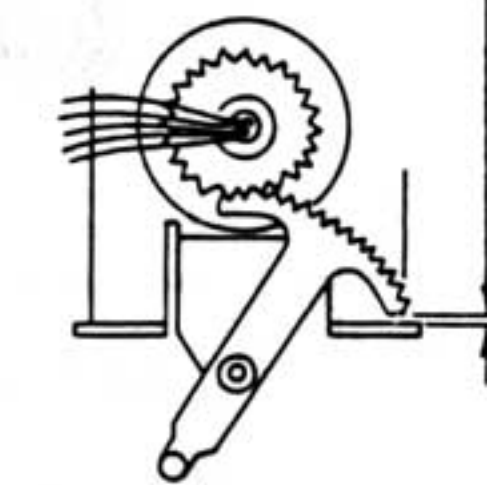
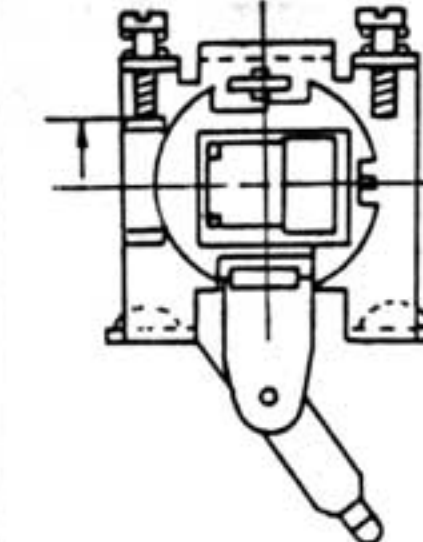
Head is positioned at REV mode

Install rotary head gear.



Head is positioned at FWD mode

same clearance



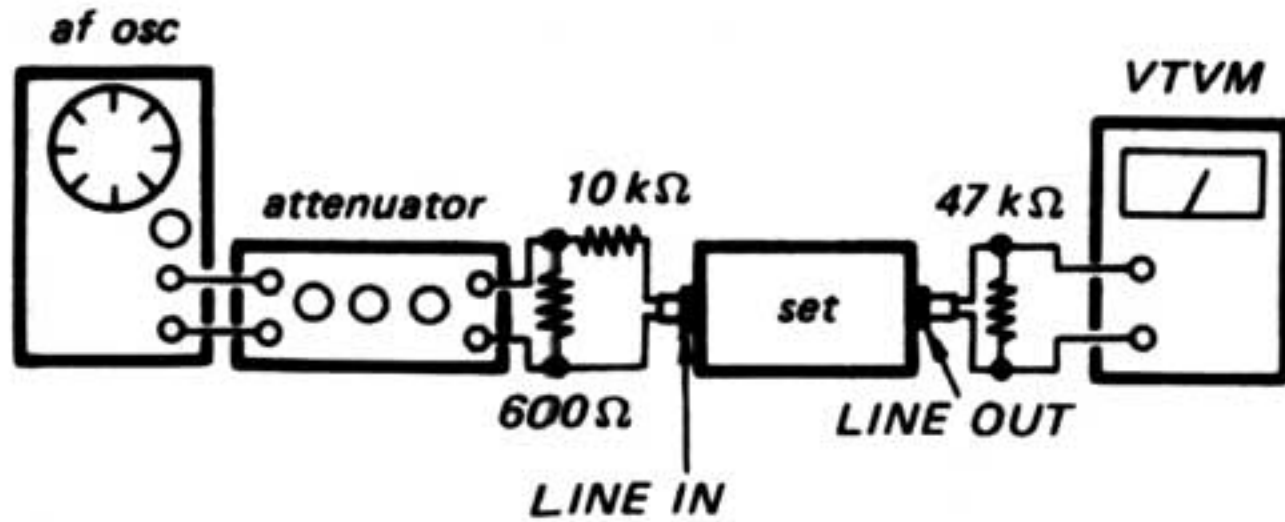
3. Reassemble the head assembly, head translation board, head-height adjustment shims (A), etc. in the reverse manner of disassembly on page 11.
4. Perform the Head-Center and Tape-Path Adjustments on pages 17 and 18.
5. Perform the Head-Azimuth Adjustment on page 20.

3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual.
The adjustments should be performed for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
DOLBY NR switch: OFF
TIMER switch: OFF
- Standard Record:
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

— Record Mode —



Standard Input Level

	LINE IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

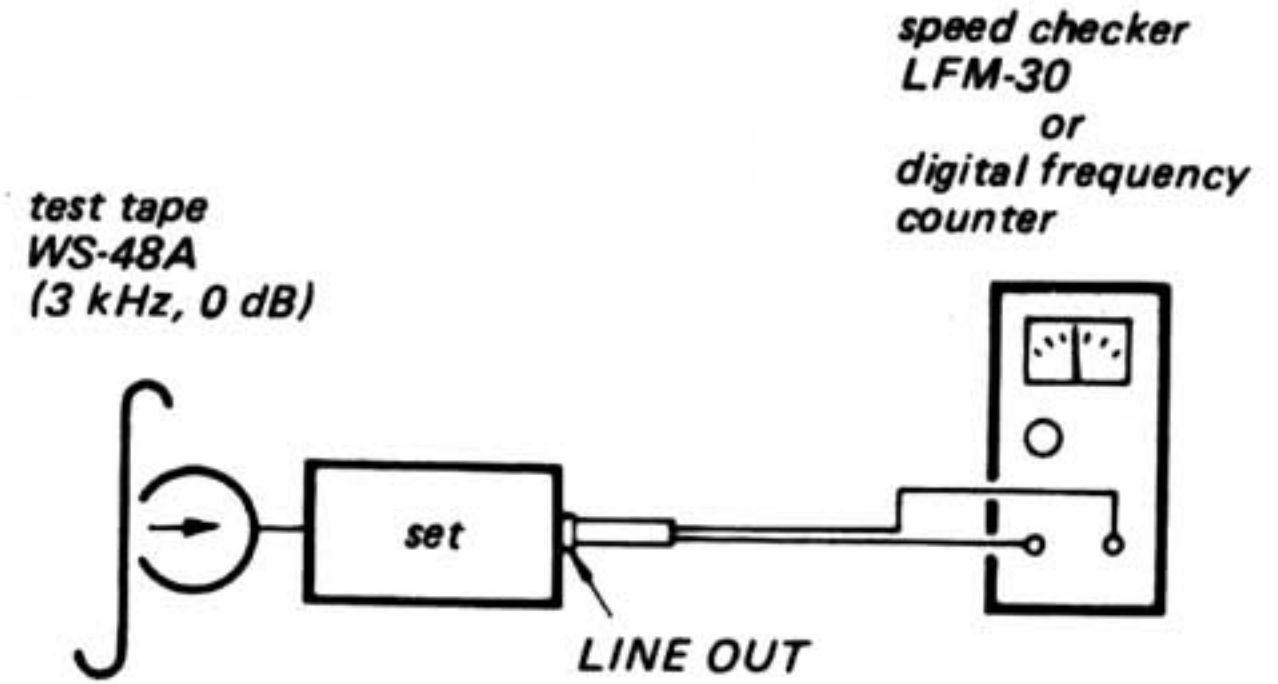
Standard Output Level

	LINE OUT
load impedance	47 kΩ
output level	0.44 V (-5 dB)

Tape Speed Adjustment

Procedure:

Mode: forward playback



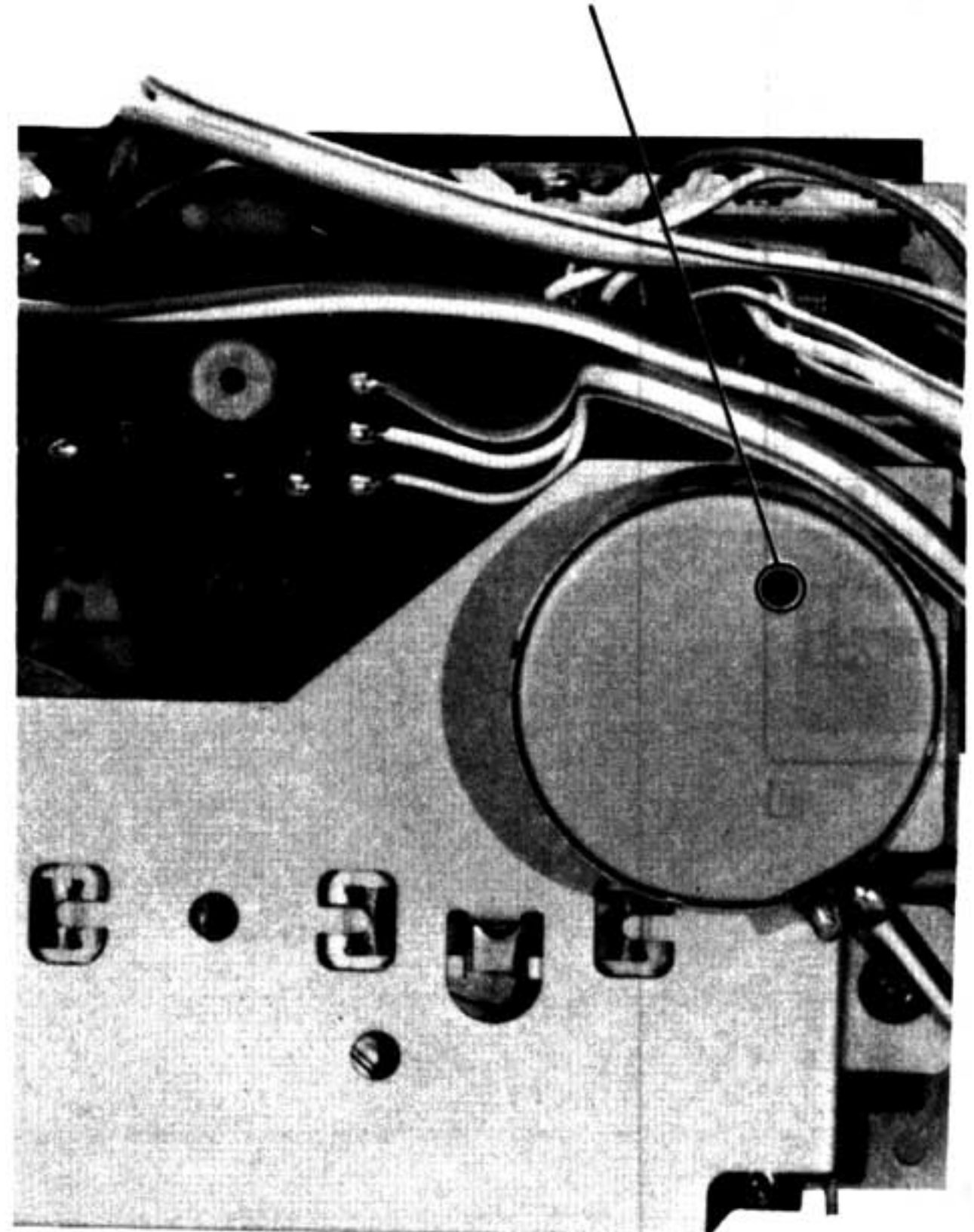
Specification:

Speed checker	Digital frequency counter
-1 +1 %	2,970 Hz to 3,030 Hz

Frequency difference between the beginning and the end of the tape should be within 0.8% (25Hz).

Adjustment Location: Motor (M802)

*Built-in adjustable resistor
(Adjust the speed by using screwdriver.)
When turning the screw clockwise,
speed is faster.*

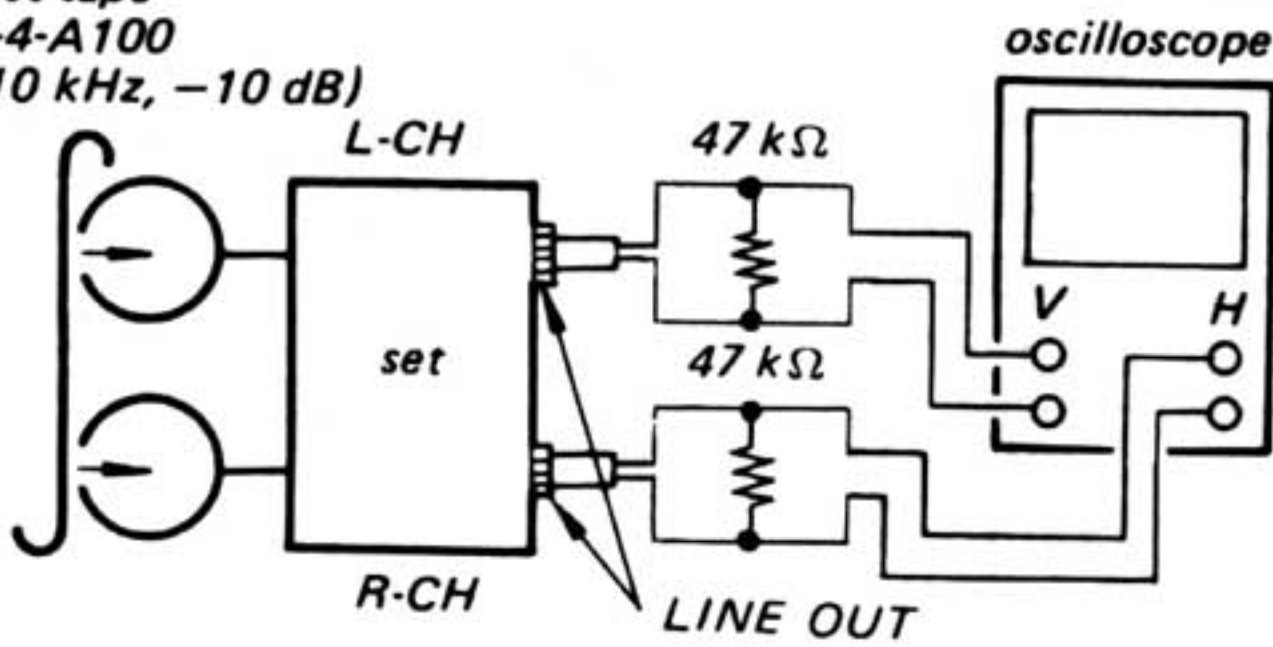


Record/playback Head Azimuth Adjustment

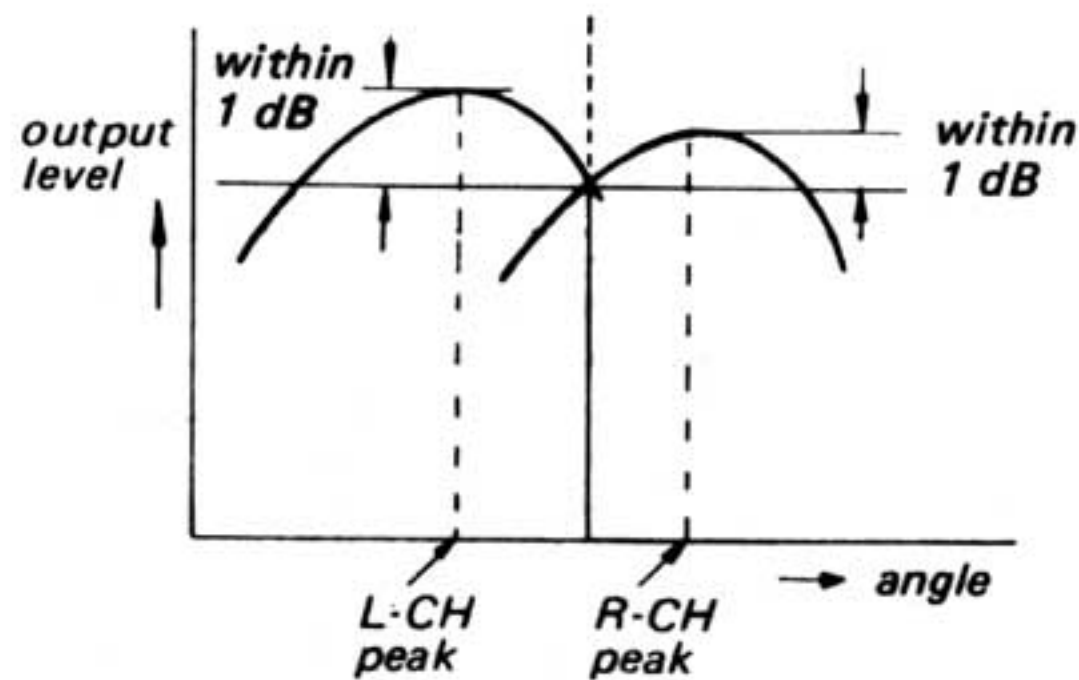
Procedure:

1. Mode: forward playback

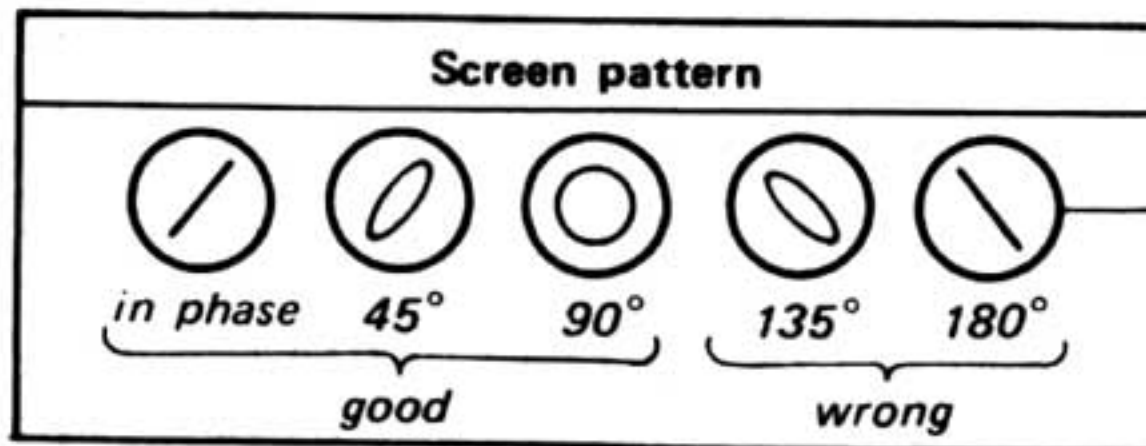
test tape
P-4-A100
(10 kHz, -10 dB)



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screws until both of output levels match together within 1 dB.

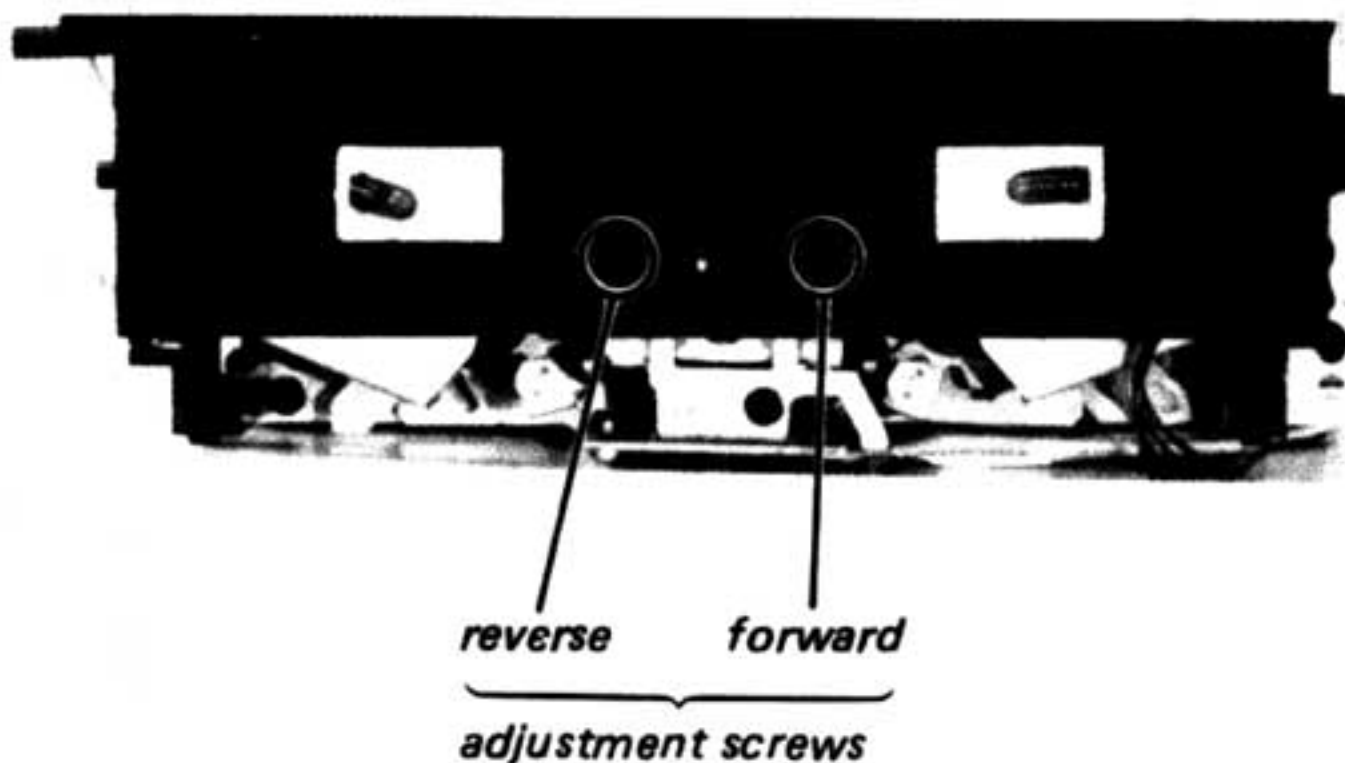


● Phase Check



3. Set in the reverse mode and repeat the steps 1-2.
4. After the adjustment, lock the screws with locking compound.

Adjustment Location:

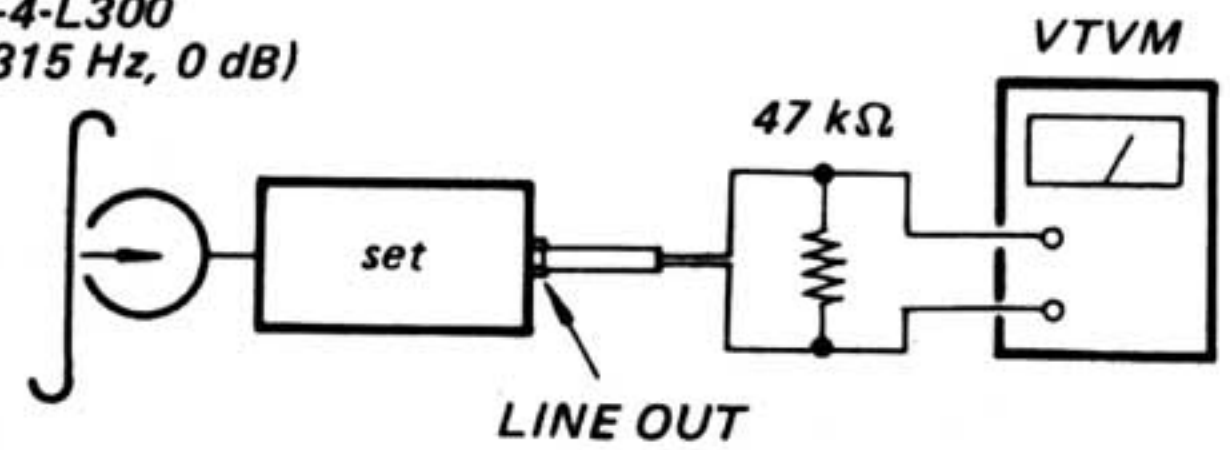


Playback Level Adjustment

Procedure:

Mode: forward playback

test tape
P-4-L300
(315 Hz, 0 dB)



Adjust the RV101 (L-CH) and RV201 (R-CH) so that the specification is met.

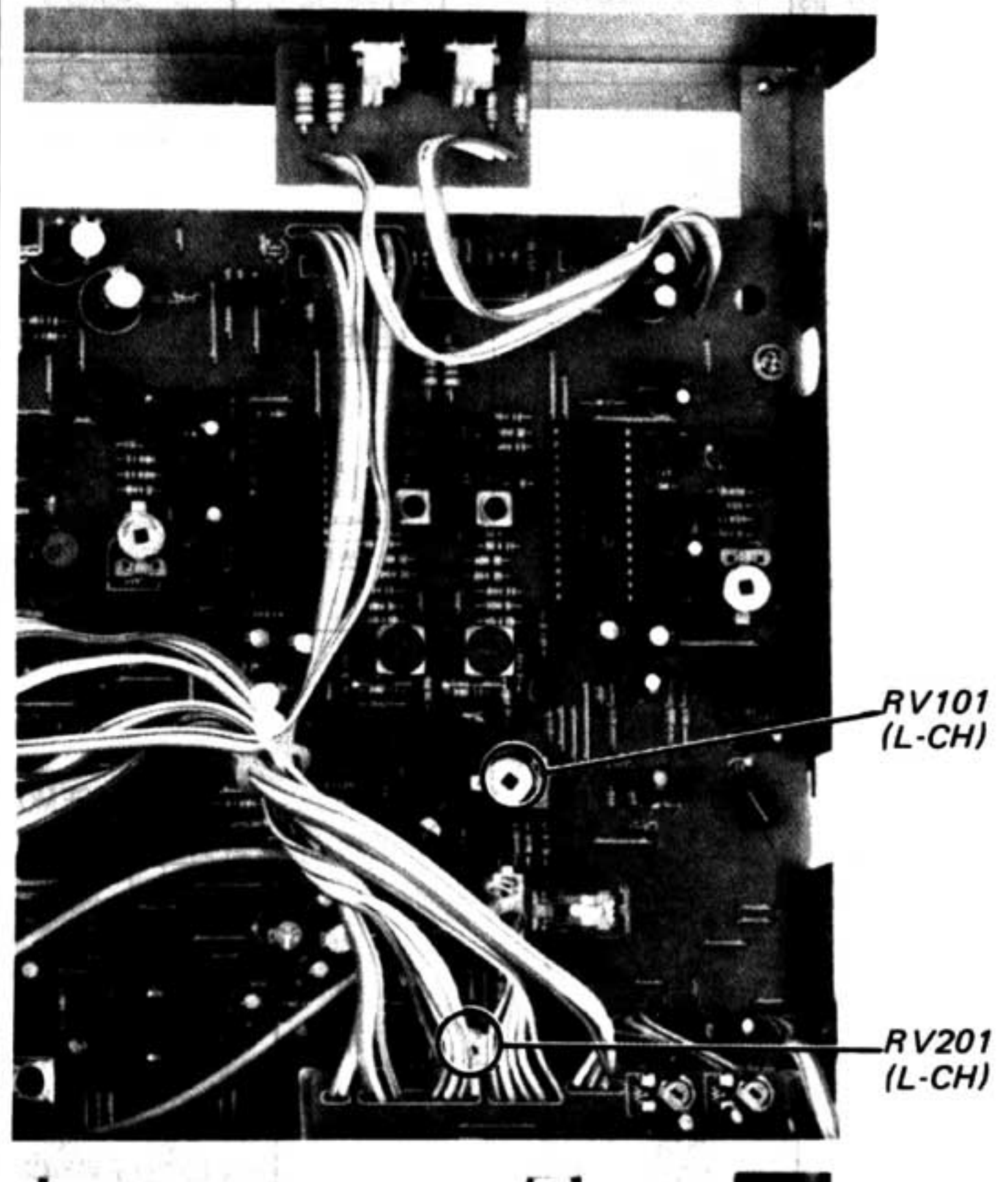
Specification:

LINE OUT level: 0.41 to 0.46 V
(-5.5 to -4.5 dB)

Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location: audio board



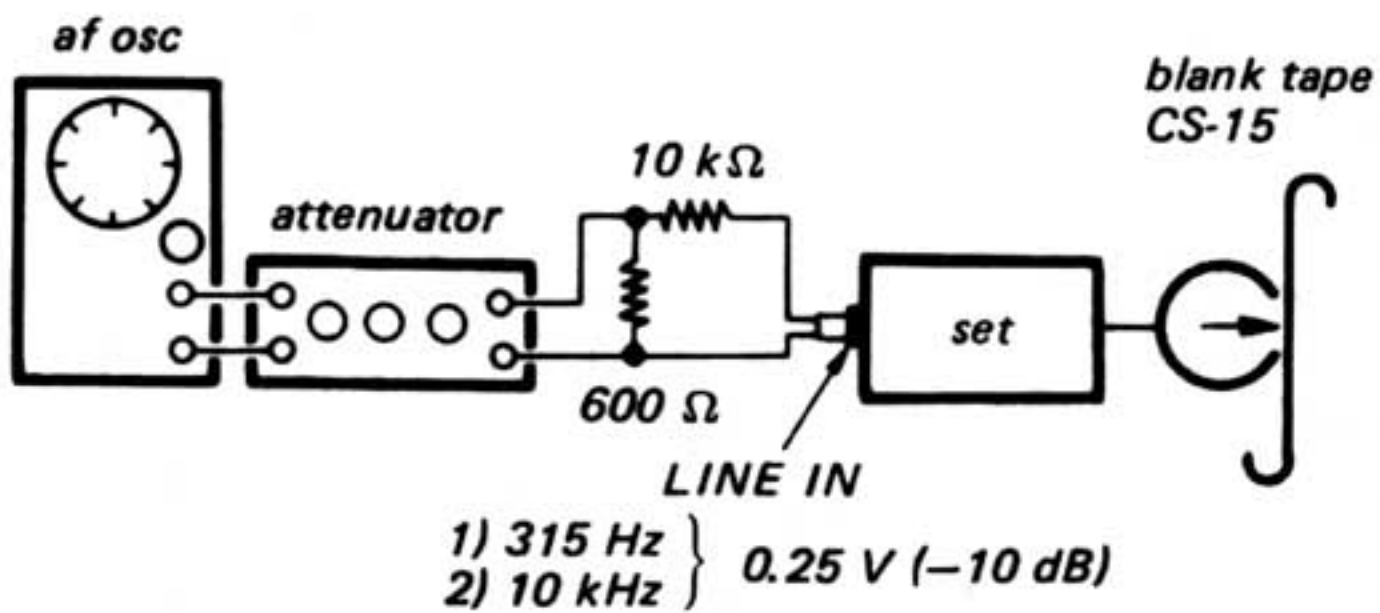
Record Bias Adjustment

Setting:

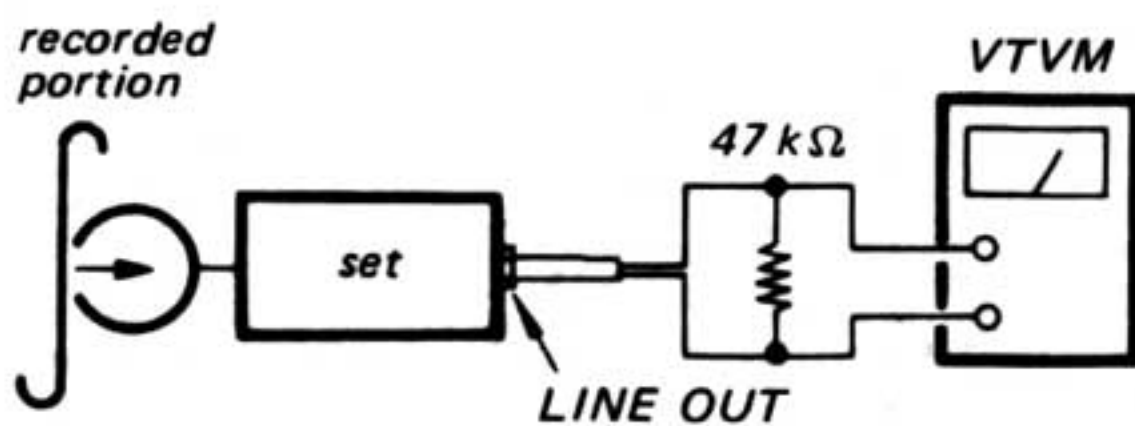
REC LEVEL control: standard record
(See page 19.)

Procedure:

1. Mode: record

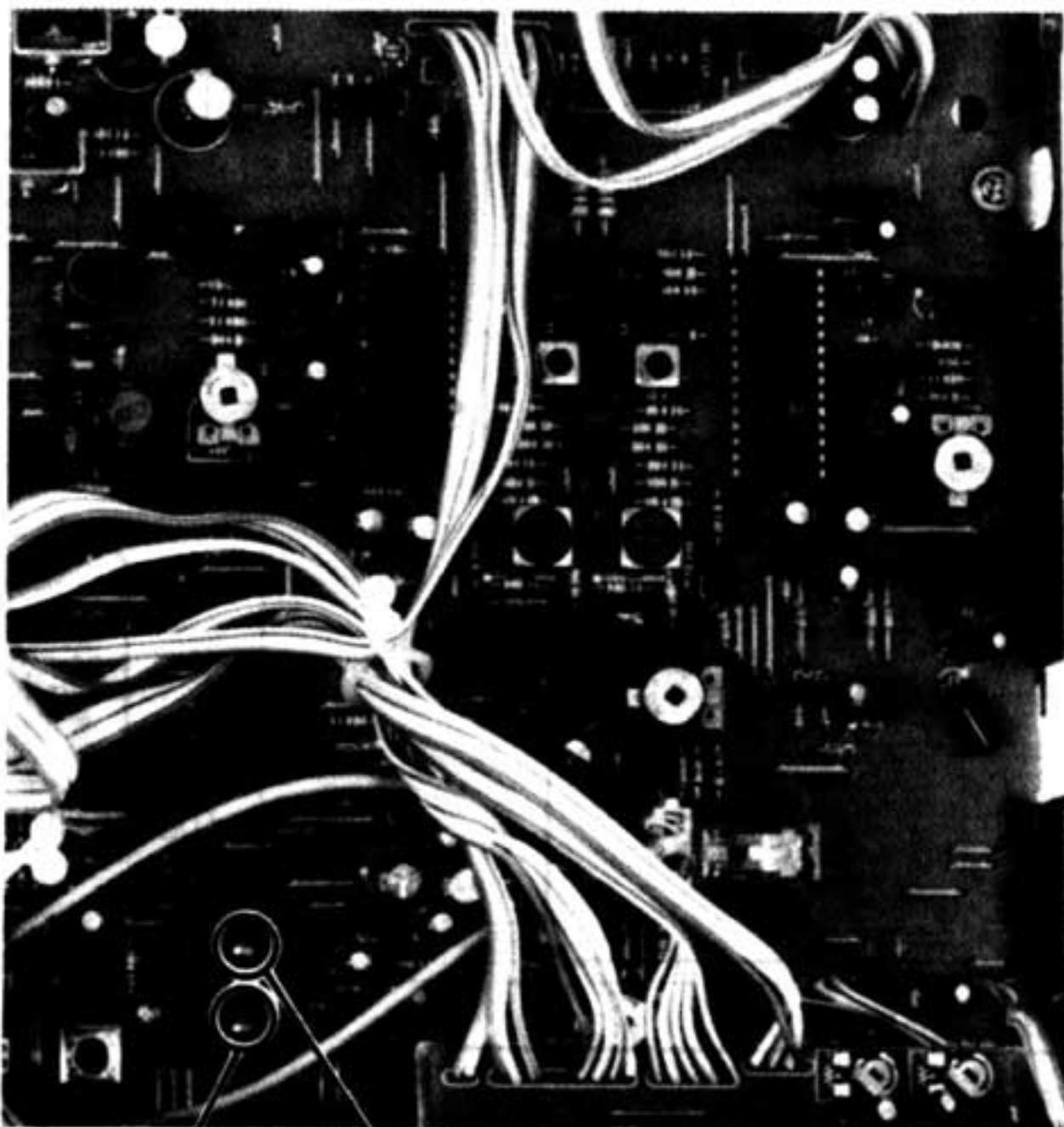


2. Mode: playback



Confirm that the 10 kHz playback output is 0 dB relative to the 315 Hz output. If necessary, adjust CT101 (L-CH), CT201 (R-CH) and repeat the steps given above.

Adjustment Location: audio board



CT201
(R-CH)

CT101
(L-CH)

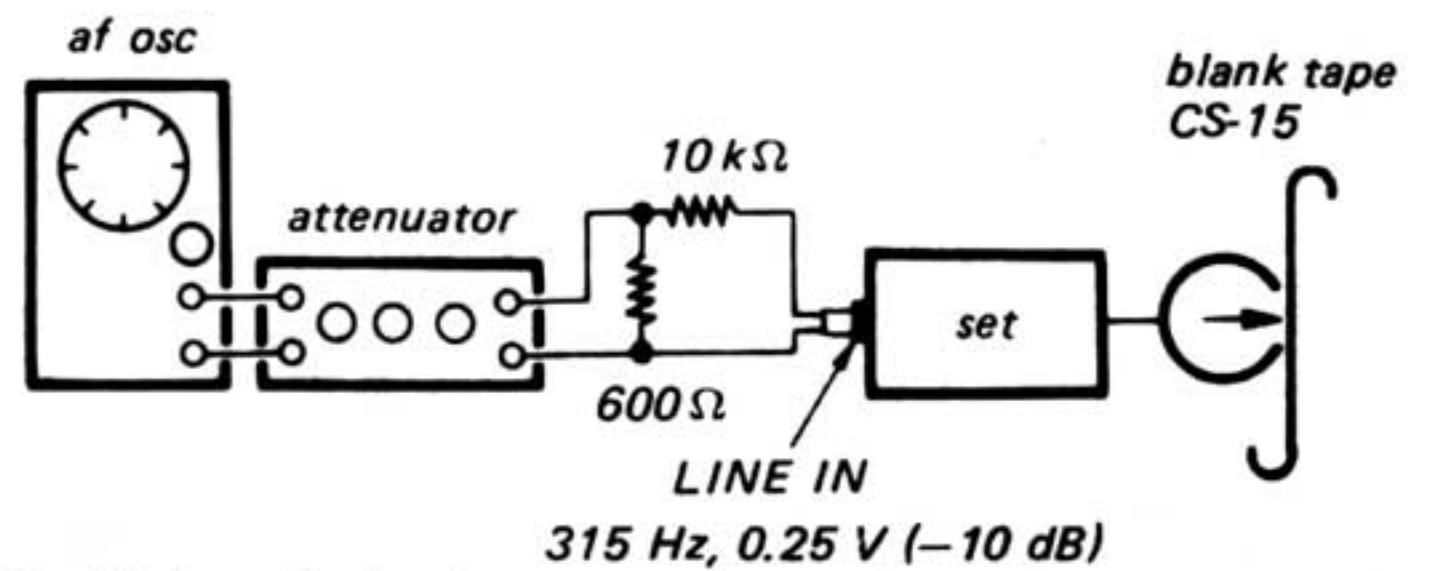
Record Level Adjustment

Setting:

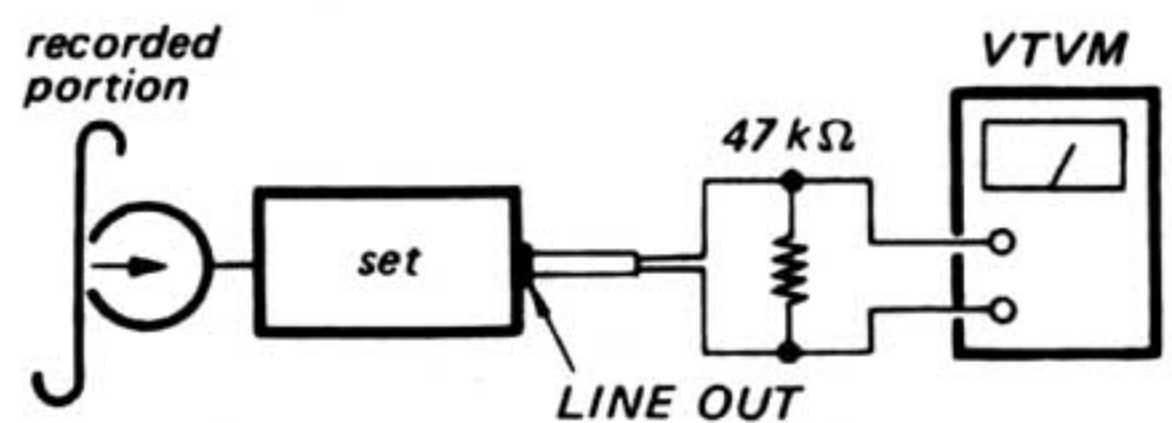
REC LEVEL control: standard record
(See page 19.)

Procedure:

1. Mode: record



2. Mode: playback

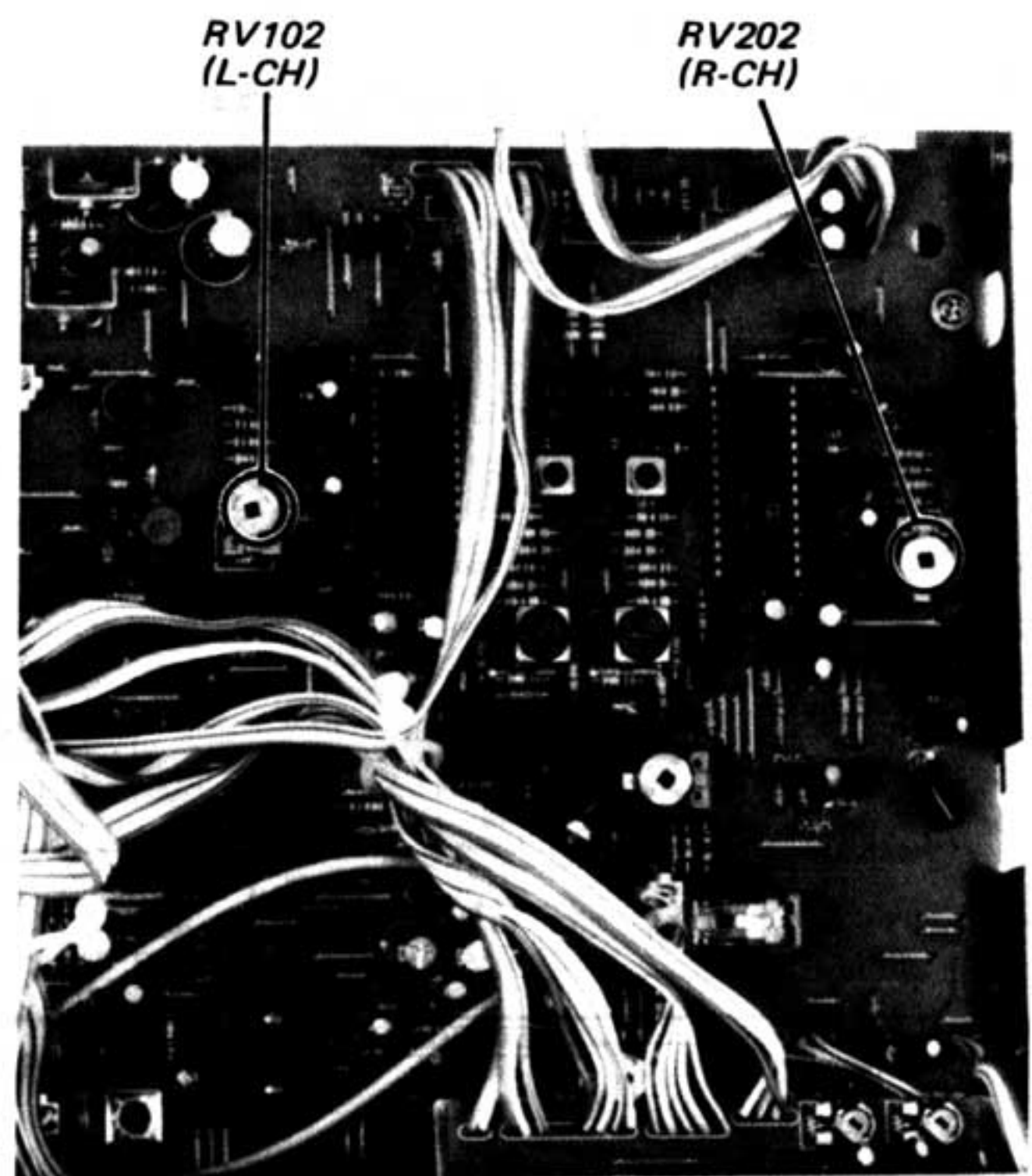


3. Play back the signal recorded in step 1.
Confirm that the signal level is within the specification below. If necessary, adjust RV102 (L-CH), RV202 (R-CH) and repeat the step 1-3.

Specification:

LINE OUT level: 0.41–0.46 V
(-5.5 to -4.5 dB)

Adjustment Location: audio board



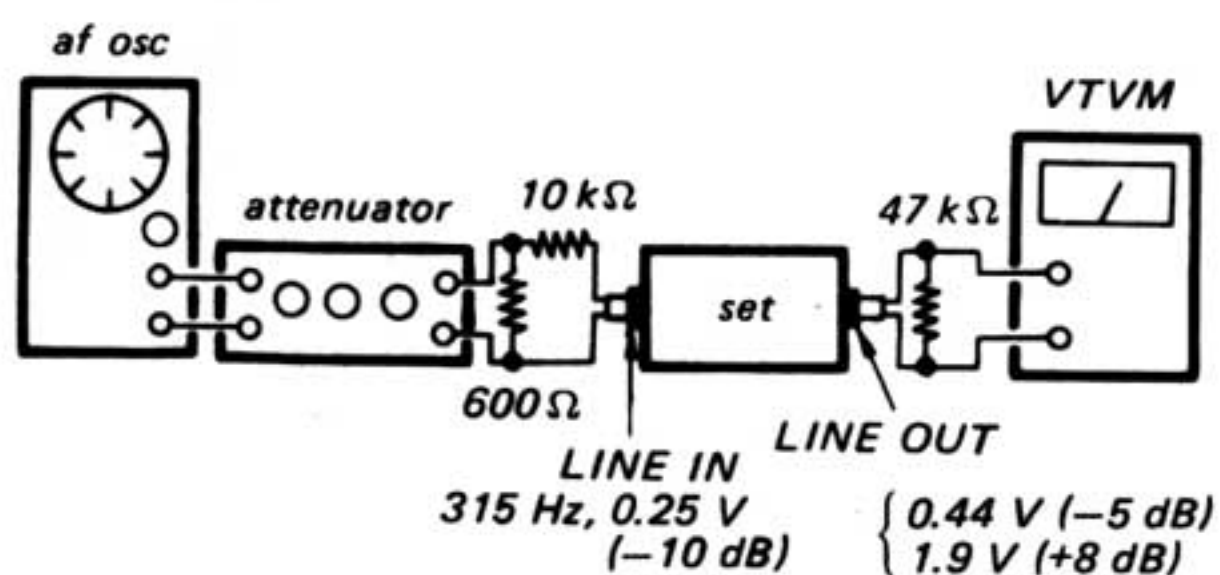
RV102
(L-CH)

RV202
(R-CH)

Level Meter Calibration

Procedure:

1. Mode: record



2. Set the REC LEVEL control so that the LINE OUT level is 0.44 V (-5 dB).

3. Adjust RV104 (L-CH), RV204 (R-CH) so that the 0VU (-4 dB) segment of the level meter goes on.

Note: The adjustment should be made while increasing the level.

4. Set the REC LEVEL control so that the LINE OUT level is 1.9 V (+8 dB). Make sure that all the lights in the segments go on.

Adjustment Location: audio board



RV204 (R-CH) RV104 (L-CH)

● Semiconductor Lead Layouts

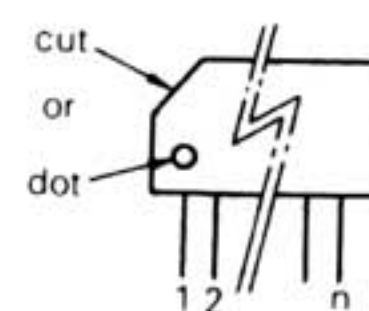
2SA952
2SC1475
2SC2001



2SD774



M5218L



2SD1406

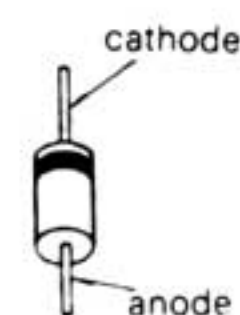


2SB731

letter side



10E-2
1SS202-1
HZ9A2L
HZ11B2L



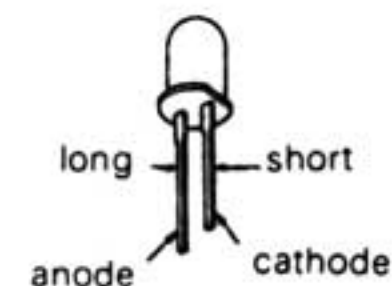
PH102



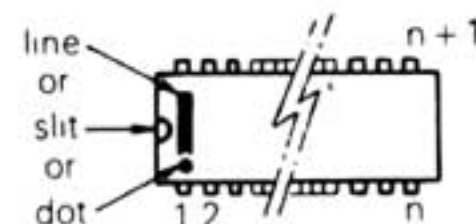
2SC2458
2SC2603
2SD809
2SD1012
DTA114ES
DTA124ES
DTA144ES
DTC114ES
DTC124ES
DTC143TS



AA5535S
BG5535S
PR5535S

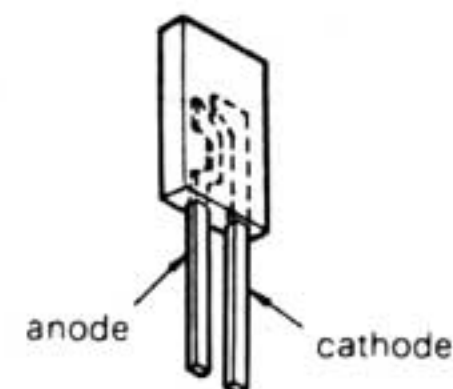


CX564-071
CX10032A
CX10033A
CX10034
CX10035
CX20027
CX20028
M50783SP
MB84069UB
TC4001BP

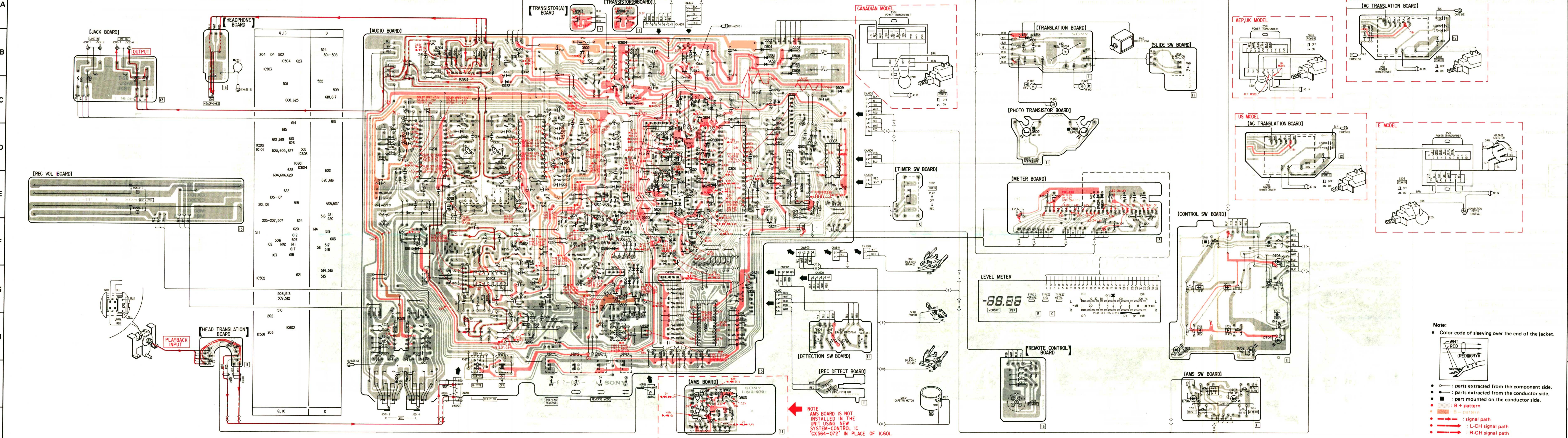


(Top view)

PY5531K



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

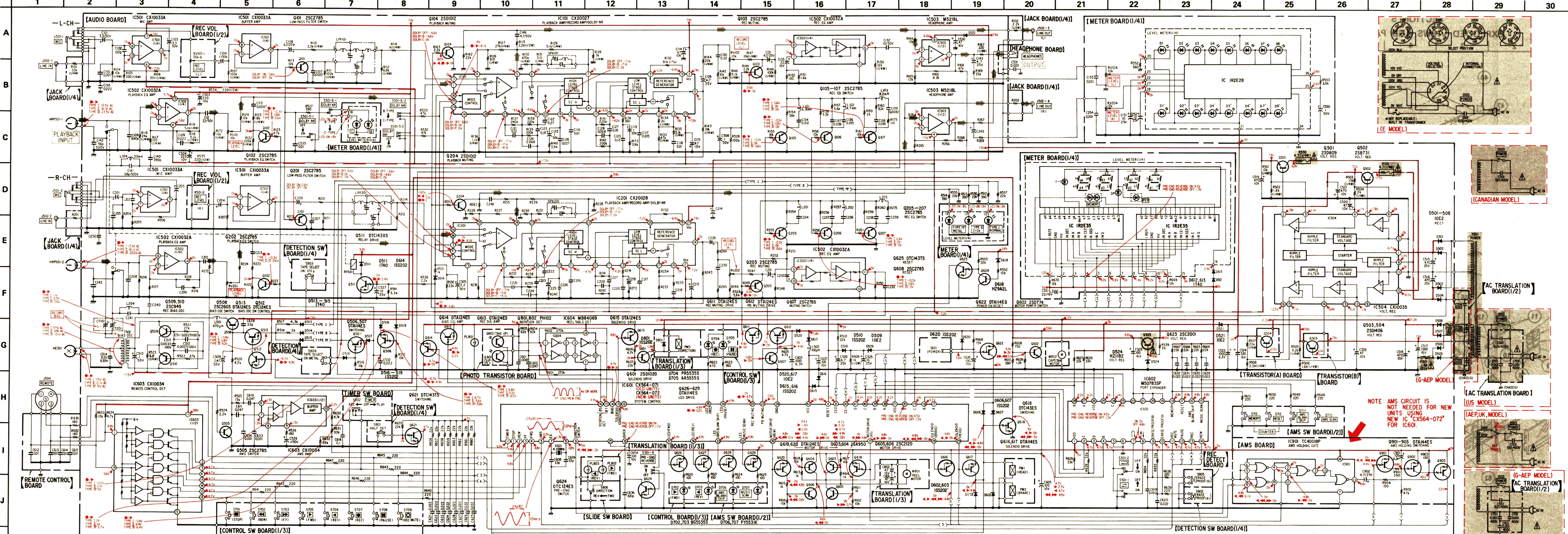


Q, IC	D
204 104 502 IC503	524 501-508
501 IC503	522 509
608,625	618,617
614 615	
601,619 613 626 IC201 IC101	505 506 IC603
628 602 IC601 IC604	602 606,607
604,606,629	620,616
622	
105-107 616	606,607
205-207,507 624	516 520
511 620 614 519	
506 602 611 603	
103 618 511 517 518	
IC502 621	514,513 515
508,513 509,512	
202 510	
IC501 203 IC602	
Q, IC	D

NOTE:
 AMS BOARD IS NOT
 INSTALLED IN THE
 UNIT USING NEW
 SYSTEM-CONTROL IC
 'CX564-072' IN PLACE OF IC601.

- 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.
 - : B+ pattern
 - : B- pattern
 - : signal path
 - : L-CH signal path
 - : R-CH signal path

4-2. SCHEMATIC DIAGRAM



- Note:**
- Components for right channel have same values as for left channel. Reference numbers are coded from 201.
 - All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. k Ω : 1000 Ω , M Ω : 1000 k Ω
 - \square : fusible resistor.
 - \square : internal component.
 - \square : signal path.
 - \square : panel designation.
 - AMS circuit is not needed for new units using new system-control IC "CX564-072" for IC601. In that unit, all components for AMS circuit are not installed.
 - \square : adjustment for repair.
 - \square : B+ bus.
 - \square : B- bus.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal conditions with a VOM:

Switch

Ref. No.	Switch	Position
S501-1	STOP	ON
S501-2	STOP	OFF
S501-3	STOP	OFF
S501-4	PRE-END REVERSE	OFF
S501-5	DOLBY NR ON/OFF	OFF
S501-6	DOLBY NR C-TYPE/B-TYPE	B-TYPE
S502	TIMER	OFF
S503	POWER	OFF
S601	POWER	OFF
S701	STOP	OFF
S702	REW	OFF
S703	FF	OFF
S705	FWD	OFF
S706	REV	OFF
S707	REC	OFF
S708	PAUSE	OFF
S709	REC MUTE	OFF
S710	MUSIC SCAN	OFF
S711	AMS BLANK SKIP	OFF
S712	RESET	OFF
S713	MEMORY	OFF
S801	HALF DET	OFF
S802	ERASE PROOF (A)	OFF
S803	TAPE SELECT (120 μ)	OFF
S804	TAPE SELECT (METAL)	OFF
S805	ERASE PROOF (B)	OFF
S806	DIRECTION	FWD

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

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

SECTION 5

EXPLODED VIEWS AND PARTS LIST

1

2

3

4

5

6

7

(1)

A

B

C

D

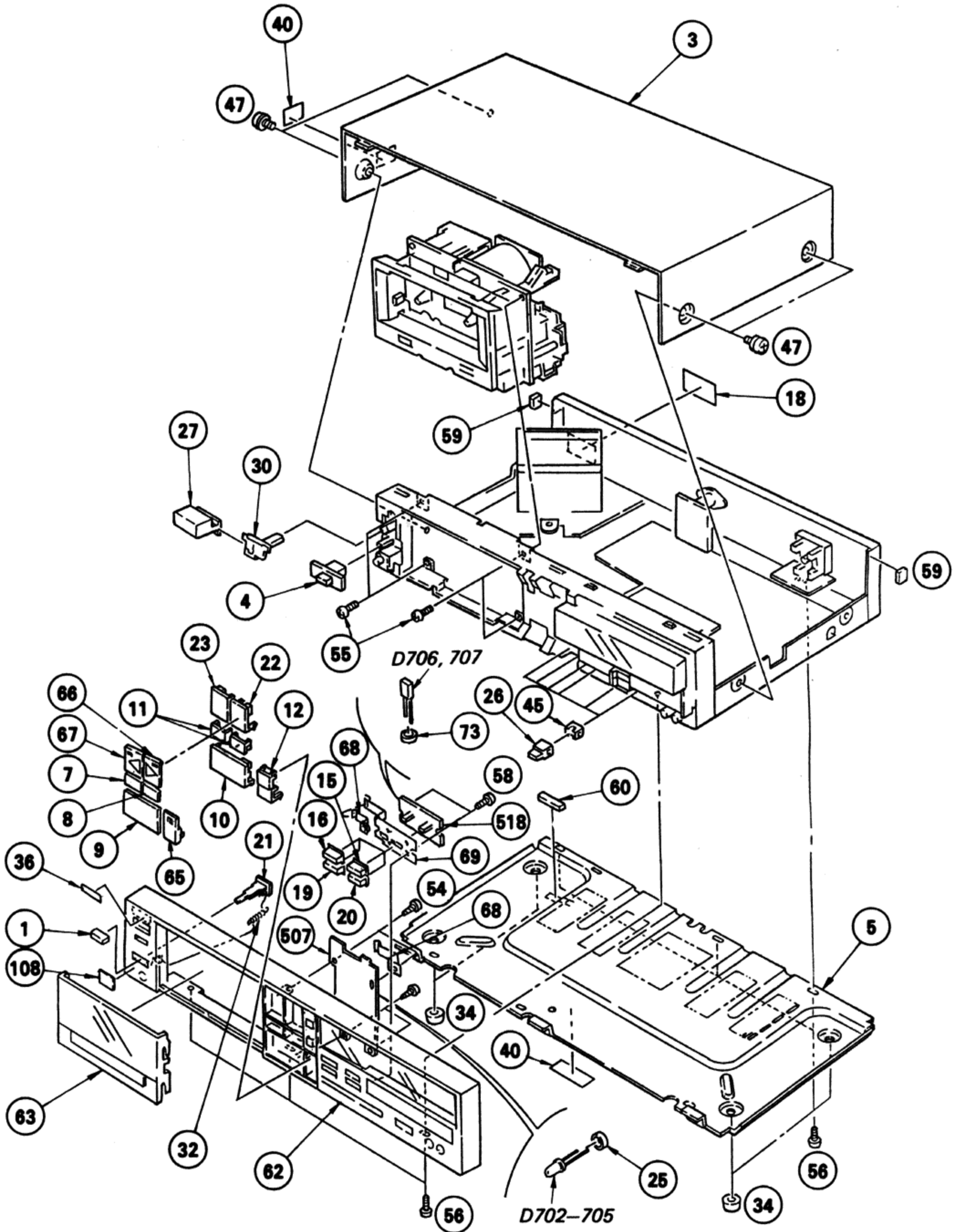
E

F

G

H

I



1

2

3

4

5

6

7

(2)

A

B

C

D

E

F

G

H

■ G
(TRANSISTOR (B) BOARD)

■ H
(TRANSISTOR (A) BOARD)

■ F
(TIMER BOARD)

■ E (HEADPHONE BOARD)

■ B
(REMOTE CONTROL BOARD)

■ C
(REC VOL BOARD)

■ D
(METER BOARD)

(US, G-AEP Model)

(Canadian, AEP, UK Model)

(G-AEP, US Model)

Q501, 502

T501

S501

J501

Q504

Q503

(E MODEL)

■ E (HEADPHONE BOARD)

J502

■ A
(JACK BOARD)

S501

RV501

J503

44

53

56

28

29

53

502

17

■ G
(TRANSISTOR (B) BOARD)

■ H
(TRANSISTOR (A) BOARD)

■ F
(TIMER BOARD)

■ E (HEADPHONE BOARD)

■ B
(REMOTE CONTROL BOARD)

■ C
(REC VOL BOARD)

■ D
(METER BOARD)

(US, G-AEP Model)

(Canadian, AEP, UK Model)

(G-AEP, US Model)

Q501, 502

T501

S501

J501

Q504

Q503

(E MODEL)

■ E (HEADPHONE BOARD)

J502

■ A
(JACK BOARD)

S501

RV501

J503

44

53

56

28

29

53

502

17

1

2

3

4

5

6

7

(3)

A

B

C

D

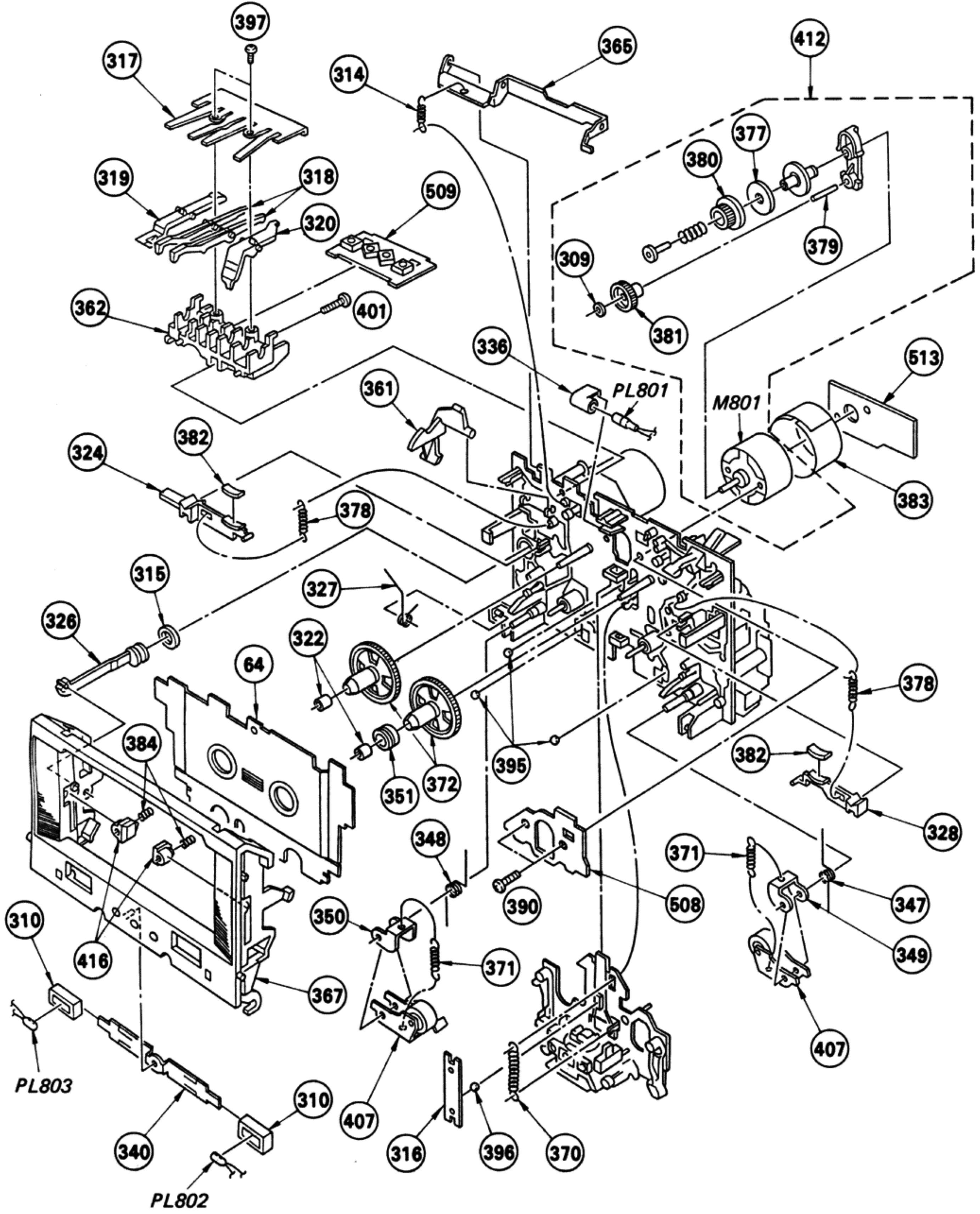
E

F

G

H

I



1

2

3

4

5

6

7

(4)

A

B

C

D

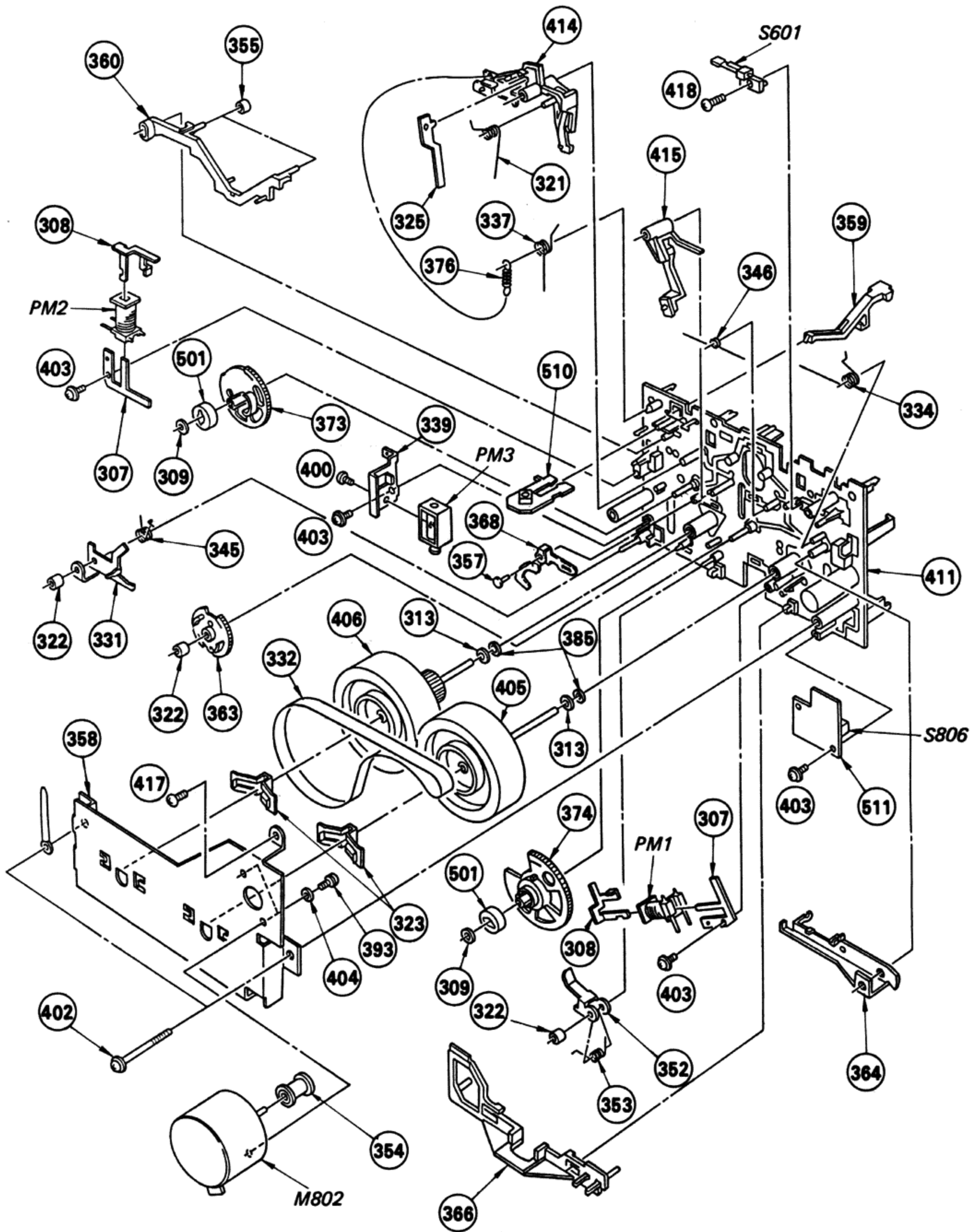
E

F

G

H

I



1

2

3

4

5

6

(5)

A

B

C

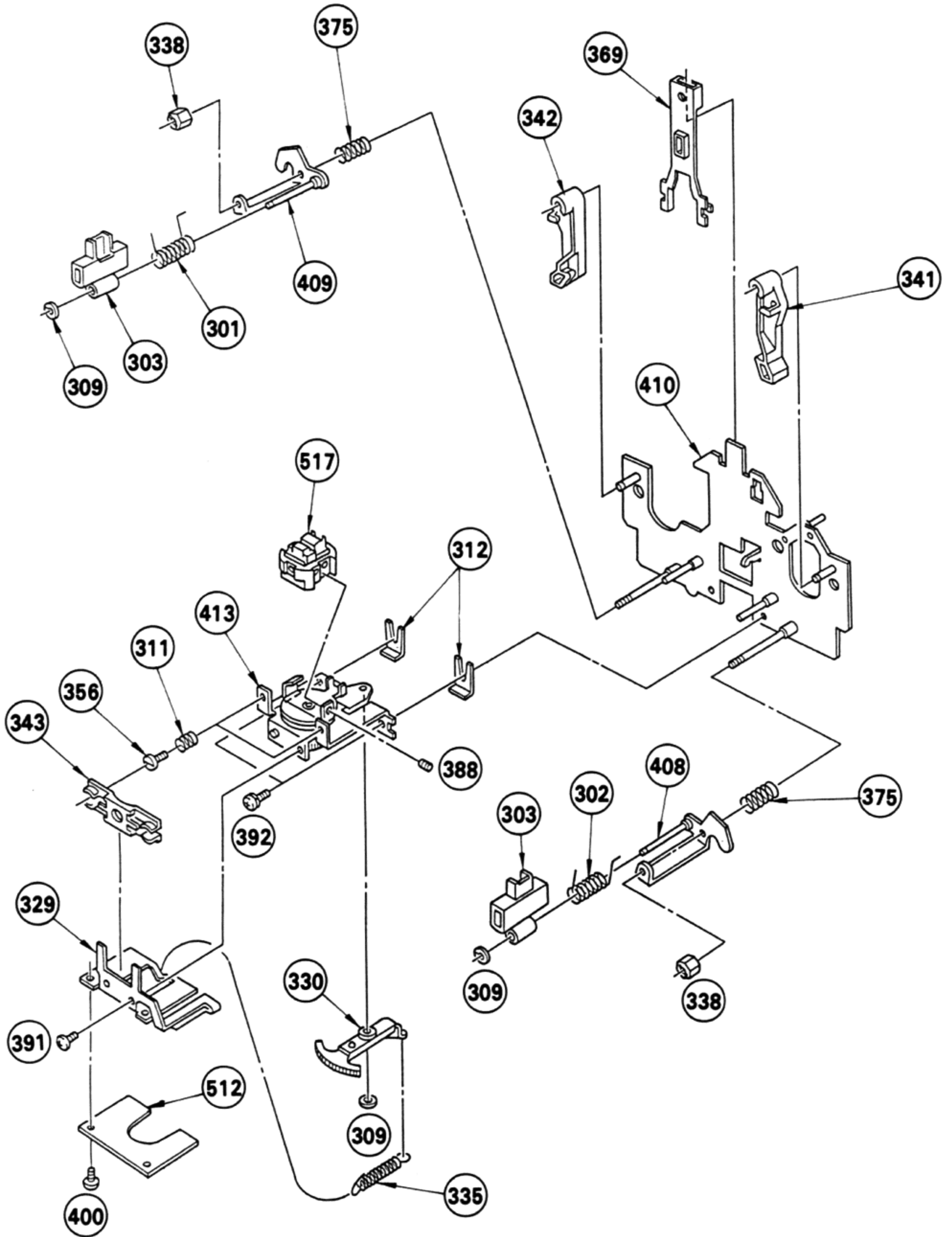
D

E

F

G

H



GENERAL SECTION

No.	Part No.	Description
1	3-304-419-00	(SILVER)...BUTTON, EJECT
1	3-304-419-31	(BLACK)...BUTTON, EJECT
2	*3-307-525-21	PLATE, SIDE, LEFT
3	3-307-532-11	(SILVER)...CASE
3	3-307-532-31	(BLACK)...CASE
4	3-307-538-11	(SILVER)...KNOB, SWITCH, TIMER
4	3-307-538-21	(BLACK)...KNOB, SWITCH, TIMER
5	*3-307-540-00	PLATE, BOTTOM
6	*3-312-615-31	HEAT SINK
7	3-318-804-31	(SILVER)...KNOB (REW), T MOLD
7	3-318-804-41	(BLACK)...KNOB (REW), T MOLD
8	3-318-804-61	(SILVER)...KNOB (FF), T MOLD
8	3-318-804-71	(BLACK)...KNOB (FF), T MOLD
9	3-318-805-01	(SILVER)...KNOB (STOP), T MOLD
9	3-318-805-11	(BLACK)...KNOB (STOP), T MOLD
10	3-318-814-01	MOLD, KNOB, FWD
11	3-318-815-01	MOLD, KNOB, FF.REW.
12	3-318-816-11	MOLD, KNOB, PAUSE
13	*3-318-827-01	PLATE, SIDE, RIGHT
14	*3-318-828-01	PLATE, RELAY
15	3-318-834-01	(SILVER)...BUTTON (S), MEMORY
15	3-318-834-21	(BLACK)...BUTTON (B), MEMORY
16	3-318-834-11	(SILVER)...BUTTON (S), RESET
16	3-318-834-31	(BLACK)...BUTTON (B), RESET
17	*3-318-837-01	PLATE, SHIELD
18	*3-318-838-01	(US,Canadian)...LABEL, MODEL NUMBER
18	*3-318-839-01	(AEP)...LABEL, MODEL NUMBER
18	*3-318-840-01	(UK)...LABEL, MODEL NUMBER
18	*3-318-841-01	(E)...LABEL, MODEL NUMBER
18	*3-318-862-01	(G-AEP)...LABEL, MODEL NUMBER
19	3-318-847-11	(SILVER)...BUTTON (S), AMS
19	3-318-847-31	(BLACK)...BUTTON (B), AMS
20	3-318-847-21	(SILVER)...BUTTON (S), MS
20	3-318-847-41	(BLACK)...BUTTON (B), MS
21	*3-318-848-01	SLIDER, EJECT
22	3-318-851-01	MOLD, KNOB, FWD.S
23	3-318-852-01	MOLD, KNOB, REV
24	*3-318-857-11	CHASSIS, AMPLIFIER
25	3-318-865-01	WASHER, NYLON
26	3-318-909-11	(BLACK)...KNOB, PUSH
26	3-318-909-21	(SILVER)...KNOB, PUSH
27	3-318-911-01	(SILVER)...KNOB (POWER.L), T
27	3-318-911-11	(BLACK)...KNOB (POWER.L), T

GENERAL SECTION

No.	Part No.	Description
28	3-318-913-11	(BLACK)...KNOB (LEFT), REC CONTROL
28	3-318-913-21	(SILVER)...KNOB (LEFT), REC CONTROL
29	3-318-914-11	(BLACK)...KNOB (RIGHT), REC CONTROL
29	3-318-914-21	(SILVER)...KNOB (RIGHT), REC CONTROL
30	3-318-915-01	JOINT (P), KNOB
31	*3-318-919-41	(US,Canadian)...PLATE, JACK
31	*3-318-919-51	(AEP,UK,G-AEP)...PLATE, JACK
31	*3-318-919-61	(E)...PLATE, JACK
32	3-540-244-00	SPRING, TENSION
33	3-575-524-00	COVER, POWER SWITCH
34	3-576-731-00	FELT (H)
35	3-701-682-00	(US,Canadian,E)...STOPPER, CORD
35	3-703-244-02	(AEP,UK,G-AEP)...BUSHING, CORD
36	3-701-690-01	(UK)...LABEL (MADE IN JAPAN)
37	3-701-748-00	CLAMP
38	*3-701-946-22	(US,Canadian)...LABEL, FUSE
38	*3-701-948-16	(AEP,UK,E,G-AEP)...LABEL, FUSE
39	3-703-044-26	(US,Canadian)...LABEL, CAUTION
40	3-703-680-00	(US)...LABEL, CAUTION, SUB, NEW UL
40	3-703-079-21	(UK)...LABEL, CAUTION (BACK)
41	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6
42	3-703-473-00	(US)...SCREW, TERMINAL
43	4-807-341-00	HOLDER, FUSE
44	4-812-134-11	RIVET NYLON, 3.5
45	4-864-307-00	RING
46	4-875-455-01	(US,AEP,UK,G-AEP)...COVER (DIA.20), CAPACITOR
46	4-875-455-22	(E)...COVER (DIA.20), CAPACITOR
47	4-889-321-01	(SILVER)...SCREW
47	4-889-321-11	(BLACK)...SCREW
48	7-621-775-10	SCREW +B 2.6X4
49	7-623-210-22	SW 4, TYPE 2
50	7-623-508-01	LUG, 3
51	7-628-254-05	SCREW +PS 2.6X5
52	
53	7-682-646-01	SCREW +PS 3X5
54	7-685-146-19	SCREW +BTP 3X8 TYPE2 N-S
55	7-685-751-09	SCREW +BVTT 3X6 (S)
56	7-685-871-01	SCREW +BVTT 3X6 (S)
57	7-685-872-01	SCREW +BVTT 3X8
58	7-687-204-11	TOTSU PTPWH 2X6 NON-SLIT, TYPE2
59	9-911-840-XX	RUBBER (B)
60	9-911-851-XX	CUSHION
61	X-3318-803-1	(SILVER)...PLATE ASSY (S), ORNAMENTAL
61	X-3318-804-1	(BLACK)...PLATE ASSY (B), ORNAMENTAL

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.
- If there are two or more same circuits in 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:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: $\mu\mu F$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

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

GENERAL SECTION

MECHANISM SECTION

No.	Part No.	Description
62	X-3318-814-1	(SILVER)...PANEL ASSY (S), FRONT
62	X-3318-815-1	(BLACK)...PANEL ASSY (B), FRONT
63	X-3318-817-1	(SILVER)...WINDOW ASSY (S), CASSETTE
63	X-3318-818-1	(BLACK)...WINDOW ASSY (B), CASSETTE
64	X-3318-819-1	RETAINER ASSY, CASSETTE
65	X-3318-821-2	(SILVER)...KNOB (PAUSE) ASSY, T
65	X-3318-821-5	(BLACK)...KNOB (PAUSE) ASSY, T
66	X-3318-823-1	(SILVER)...KNOB (FWD.S) ASSY, T
66	X-3318-823-2	(BLACK)...KNOB (FWD.S) ASSY, T
67	X-3318-824-1	(SILVER)...KNOB (REV) ASSY, T
67	X-3318-824-2	(BLACK)...KNOB (REV) ASSY, T
68	*3-318-866-01	SPRING, CONDUCTIVE
69	*3-318-867-01	SHEET, CONDUCTIVE
70	*4-861-614-51	HOLDER, PC BOARD
71	7-682-547-09	SCREW +B 3X6
72	7-685-870-01	SCREW +BVTT 3X5
73	3-318-865-11	WASHER, NYLON

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	3-315-149-00	CUSHION (LEFT), LOWER
102	3-315-150-00	CUSHION (RIGHT), LOWER
103	3-315-151-00	CUSHION (LEFT), UPPER
104	3-315-152-00	CUSHION (RIGHT), UPPER
105	3-318-863-01	INDIVIDUAL CARTON
106	*3-701-328-00	LABEL, PRODUCT COLOR
107	3-701-630-00	BAG, POLYETHYLENE
108	3-703-713-01	STICKER, SONY SYMBOL (10)
109	3-773-865-11	(Canadian,AEP,UK,E)...MANUAL, INSTRUCTION
110	3-773-865-21	(US)...MANUAL, INSTRUCTION
111	3-773-865-41	(G-AEP)...MANUAL, INSTRUCTION
112	3-793-828-11	QUESTIONNAIRE
113	3-795-878-21	CARD, CUSTOMER INQUIRY
114	4-876-352-00	SHEET, PROTECTION
115	8-890-454-10	(Canadian)...TAPE (UCX-S), DEMO
116	8-915-122-90	CORD, CONNECTION (RK- 74A)
117	X-3701-105-0	ROD ASSY, CLEANING, HEAD

No.	Part No.	Description
301	3-306-249-00	SPRING (LEFT)
302	3-306-250-00	SPRING (RIGHT)
303	3-306-269-01	GUIDE, TAPE
304	
305	3-307-315-00	ARBOR, MOVABLE
306	3-307-315-01	ARBOR, MOVABLE
307	3-307-332-00	ARBOR, FIXED
308	3-307-333-00	ARBOR, TRIGGER
309	3-307-394-00	RETAINER (B), THRUST
310	3-307-459-00	RUBBER, HOLDER
311	3-307-460-00	SPRING, COMPRESSION
312	3-307-477-01	SHIM (A), HEAD ADJUSTMENT
312	3-307-477-11	SHIM (A), HEAD ADJUSTMENT
312	3-307-477-21	SHIM (A), HEAD ADJUSTMENT
312	3-307-477-31	SHIM (A), HEAD ADJUSTMENT
312	3-307-477-41	SHIM (A), HEAD ADJUSTMENT
313	3-307-482-00	WASHER, LUMILER
314	3-312-432-00	SPRING, TENSION
315	3-312-441-00	RING, PISTON
316	3-319-601-01	SPRING
317	3-319-602-01	SPRING
318	3-319-603-01	LEVER, REC DETECTION
319	3-319-604-01	LEVER, HALF DETECTION
320	3-319-605-01	LEVER, METAL DETECTION
321	3-319-606-01	SPRING
322	3-319-607-01	BUSHING, REEL TABLE
323	3-319-608-01	RETAINER, THRUST
324	*3-319-611-01	LEVER (LEFT), BACK TENSION
325	3-319-612-01	SPRING
326	3-319-613-01	PISTON (B)
327	3-319-614-01	SPRING
328	*3-319-615-01	LEVER (RIGHT), BACK TENSION
329	3-319-620-01	PLATE, ORNAMENTAL, HEAD
330	3-319-625-01	GEAR, ROTARY HEAD
331	*3-319-628-01	LEVER, REVERSE TRIGGER
332	3-319-630-01	BELT (R), CAPSTAN
333	
334	3-319-633-01	SPRING
335	3-319-634-01	SPRING, TENSION
336	3-319-636-01	RUBBER, LAMP HOLDER
337	3-319-637-01	SPRING (R)
338	3-319-638-01	NUT, ADJUSTMENT
339	*3-319-639-01	BRACKET, TRIGGER PM
340	3-319-640-01	HOLDER, LAMP
341	3-319-642-01	LEVER (R), P ROLLER SELECTION
342	3-319-643-01	LEVER (L), P ROLLER SELECTION

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CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: $\mu\mu\text{F}$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

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

MECHANISM SECTION

No.	Part No.	Description
343	3-319-644-01	STOPPER
344	
345	3-319-648-01	SPRING
346	3-319-649-01	SPRING
347	3-319-650-01	SPRING (R)
348	3-319-651-01	SPRING (L)
349	*3-319-652-01	PLATE (RIGHT), LIMITER
350	*3-319-653-01	PLATE (LEFT), LIMITER
351	3-319-657-01	PULLEY (B), CB
352	*3-319-658-01	LEVER, TRIGGER KICK
353	3-319-660-01	SPRING
354	3-319-661-01	PULLEY, MOTOR
355	3-319-662-01	RUBBER, BRAKE
356	3-319-663-01	SCREW, ADJUSTMENT, AZIMUTH
357	*3-319-664-01	SHAFT, CONTROL LEVER
358	*3-319-665-01	RETAINER, THRUST
359	3-319-666-01	LEVER (RIGHT), REC DETECTION
360	*3-319-668-01	PLATE, BRAKE
361	3-319-669-01	LEVER, EJECT
362	3-319-670-01	HOLDER, SWITCH, DETECTION
363	3-319-674-01	GEAR, REVERSE CAM
364	*3-319-676-01	LEVER, FWD
365	*3-319-678-01	LEVER, SWITCH LIFT
366	*3-319-681-01	SLIDER, REVERSE
367	3-319-682-01	HOLDER, CASSEETTE
368	*3-319-683-01	LEVER, CONTROL, TRIGGER
369	3-319-684-01	PROTECTOR, EDGE
370	3-319-685-01	SPRING, TENSION
371	3-319-686-01	SPRING, TENSION
372	3-319-687-01	TABLE, REEL
373	3-319-688-01	GEAR, PAUSE CAM
374	3-319-689-01	GEAR, FWD CAM
375	3-537-215-00	SPRING, COMPRESSION
376	3-555-124-00	SPRING, TENSION
377	3-564-027-11	FELT, LIMITER
378	3-570-892-00	SPRING, TENSION
379	3-575-304-00	SHAFT, GEAR, FR
380	3-575-324-00	GEAR, LIMITER
381	3-575-332-00	GEAR, FR
382	3-575-346-01	FELT, BREKE
383	3-575-457-00	PLATE (B), SHIELD, MOTOR
384	3-610-808-00	SPRING (1)
385	3-701-438-21	WASHER
386	3-701-748-00	CLAMP
387	3-703-150-11	CLAMP

MECHANISM SECTION

No.	Part No.	Description
388	7-621-710-26	SET-SCREW, SLOT 2X3 FLAT POINT
389	7-621-714-16	SET-SCREW, SLOT 1.7X2.5
390	7-621-775-50	SCREW +B 2.6X10
391	7-627-553-17	SCREW, PRECISION +P 2X2
392	7-628-253-05	SCREW +PS 2X4
393	7-628-253-95	SCREW +PS 2.6X4
394	7-671-111-11	BALL, STEEL, 1.5MM
395	7-671-112-01	BALL, STEET
396	7-671-112-11	BALL, STEEL
397	7-685-102-19	SCREW +P 2X4 TYPE2 SLIT
398	7-685-132-21	SCREW +P 2.6X5 TYPE2 SLIT
399	7-685-645-11	SCREW +BVTP 3X6 TYPE2 N-S
400	7-685-850-01	SCREW +BVTT 2X3 (S)
401	7-685-865-01	SCREW +BVTT 2.6X12 (S)
402	7-685-879-01	SCREW +BVTT 3X30 (S)
403	7-687-204-21	TOTSU PTPWH 2X6 NON-SLIT,TYPE2
404	7-688-002-01	W 2.6, SMALL
405	X-3319-601-2	FLYWHEEL ASSY
406	X-3319-606-1	FLYWHEEL (T) ASSY
407	X-3319-607-1	PINCH LEVER ASSY
408	*X-3319-608-1	LEVER (RIGHT) ASSY, GUIDE
409	*X-3319-609-1	LEVER (LEFT) ASSY, GUIDE
410	*X-3319-610-1	CHASSIS ASSY, REVERSE HEAD
411	X-3319-611-1	CHASSIS ASSY, MECHANICAL
412	X-3319-612-1	MOTOR ASSY, REEL
413	X-3319-613-1	BRACKET COMPLETE ASSY, HEAD
414	*X-3319-614-1	LEVER ASSY, PAUSE
415	*X-3319-615-1	LEVER ASSY, FWD LOCK
416	3-319-693-01	RUBBER, CASSETTE HOLDER
417	7-685-794-01	SCREW +PTT 2.6X10
418	7-685-646-21	SCREW +BVTP 3X8

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CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: $\mu\mu\text{F}$.

COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-452-202-00	MAGNET
502	1-520-472-11	METER, LEVEL (LED INDICATOR)
503	▲ 1-526-576-51	(E)....SELECTOR, POWER VOLTAGE
504	▲ 1-535-506-00	(E)....TERMINAL, CRIMPING
505	▲ 1-551-884-32	(UK).....CORD, POWER
505	▲ 1-551-472-00	(E2).....CORD, POWER
505	▲ 1-551-628-00	(US,Canadian)...CORD, POWER
505	▲ 1-555-734-00	(E3).....CORD, POWER
505	▲ 1-534-817-XX	(AEP,G-AEP)....CORD, POWER
506	*1-562-544-11	SOCKET, CONNECTOR
507	*1-612-104-11	PC BOARD, CONTROL SWITCH (B)
508	*1-612-725-11	PC BOARD, PHOTO TRANSISTOR
509	*1-612-726-11	PC BOARD, DETECTION SWITCH
510	*1-612-727-11	PC BOARD, REC DETECT
511	*1-612-728-11	PC BOARD, SLIDE SWITCH
512	*1-612-729-11	PC BOARD, HEAD TRANSLATION
513	*1-612-730-11	PC BOARD, TRANSLATION
514	*1-612-978-11	(US,G-AEP)...PC BOARD, AC TRANSLATION
515	*1-612-979-11	(OLD UNITS) ...PC BOARD, AMS
516	*A-2056-228-A	PC BOARD ASSY, AUDIO
517	X-3319-616-1	HEAD UNIT ASSY
518	*1-612-102-00	PC BOARD, AMS SWITCH
C101	1-123-382-00	ELECT 3.3MF 20% 50V
C102	1-162-037-00	CERAMIC 100PF 5% 50V
C103	1-123-382-00	ELECT 3.3MF 20% 50V
C104	1-123-380-00	ELECT 1MF 20% 50V
C106	1-123-369-00	ELECT 4.7MF 20% 25V
C107	1-162-111-00	CERAMIC 0.0022MF 30% 25V
C108	1-162-108-00	CERAMIC 680PF 10% 50V
C109	1-136-157-00	FILM 0.022MF 5% 50V
C112	1-124-184-00	ELECT 3.3MF 20% 50V
C113	1-108-571-00	MYLAR 0.0047MF 5% 50V
C114	1-123-306-00	ELECT 47MF 20% 10V
C115	1-123-306-00	ELECT 47MF 20% 10V
C116	1-136-153-00	FILM 0.01MF 5% 50V
C117	1-136-155-00	FILM 0.015MF 5% 50V
C118	1-136-153-00	FILM 0.01MF 5% 50V
C119	1-123-380-00	ELECT 1MF 20% 50V
C120	1-136-166-00	FILM 0.12MF 5% 50V
C121	1-136-166-00	FILM 0.12MF 5% 50V
C122	1-136-170-00	FILM 0.27MF 5% 50V
C123	1-136-168-00	FILM 0.18MF 5% 50V
C124	1-136-163-00	FILM 0.068MF 5% 50V
C125	1-123-380-00	ELECT 1MF 20% 50V
C126	1-136-158-00	FILM 0.027MF 5% 50V
C127	1-136-168-00	FILM 0.18MF 5% 50V
C128	1-136-163-00	FILM 0.068MF 5% 50V

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CAPACITORS:

All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μF , PF: μpF .

COILS

MMH : mH, UH : μH

SEMICONDUCTORS

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C129	1-123-369-00	ELECT 4.7MF 20% 25V
C130	1-136-169-00	FILM 0.22MF 5% 50V
C131	1-123-369-00	ELECT 4.7MF 20% 25V
C132	1-124-186-00	ELECT 10MF 20% 50V
C133	1-123-330-00	ELECT 22MF 20% 16V
C134	1-136-154-00	FILM 0.012MF 5% 50V
C136	1-136-155-00	FILM 0.015MF 5% 50V
C137	1-136-160-00	FILM 0.039MF 5% 50V
C138	1-136-160-00	FILM 0.039MF 5% 50V
C139	1-108-577-00	MYLAR 0.0082MF 5% 50V
C140	1-162-105-00	CERAMIC 390PF 10% 50V
C141	1-107-036-00	MICA 68PF 5% 500V
C142	1-107-165-00	MICA 56PF 5% 500V
C143	1-123-369-00	ELECT 4.7MF 20% 25V
C146	1-124-185-00	ELECT 4.7MF 20% 50V
C150	1-161-494-00	CERAMIC 0.022MF 30% 25V
C151	1-123-356-00	ELECT 10MF 20% 25V
C153	1-162-110-00	CERAMIC 0.001MF 10% 50V
C155	1-162-110-00	CERAMIC 0.001MF 10% 50V
C501	▲ 1-161-744-00	CERAMIC 0.01MF 400V
C503	1-123-308-00	ELECT 220MF 20% 10V
C504	1-123-308-00	ELECT 220MF 20% 10V
C505	1-123-381-00	ELECT 2.2MF 20% 50V
C508	1-123-380-00	ELECT 1MF 20% 50V
C509	1-123-379-00	ELECT 0.47MF 20% 50V
C510	1-123-380-00	ELECT 1MF 20% 50V
C511	1-130-023-00	FILM 0.0027MF 5% 100V
C512	1-130-023-00	FILM 0.0027MF 5% 100V
C513	1-130-285-00	FILM 0.0033MF 5% 100V
C514	1-129-714-00	FILM 0.01MF 10% 630V
C515	1-123-336-00	ELECT 470MF 20% 25V
C516	1-123-336-00	ELECT 470MF 20% 25V
C517	1-123-324-00	ELECT 1000MF 20% 16V
C518	1-123-348-00	ELECT 470MF 20% 35V
C519	1-123-310-00	ELECT 470MF 20% 10V
C520	1-123-306-00	ELECT 47MF 20% 10V
C521	1-123-310-00	ELECT 470MF 20% 10V
C522	1-123-306-00	ELECT 47MF 20% 10V
C523	1-123-299-00	ELECT 1000MF 20% 6.3V
C524	1-123-322-00	ELECT 330MF 20% 16V
C525	1-123-356-00	ELECT 10MF 20% 25V
C526	1-123-369-00	ELECT 4.7MF 20% 25V
C527	1-123-356-00	ELECT 10MF 20% 25V
C528	1-123-380-00	ELECT 1MF 20% 50V
C529	1-123-333-00	ELECT 100MF 20% 16V
C530	1-123-306-00	ELECT 47MF 20% 10V

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			
C531	1-161-494-00	CERAMIC	0.022MF	30%	25V
C532	1-161-494-00	CERAMIC	0.022MF	30%	25V
C535	1-162-113-00	CERAMIC	0.01MF	30%	16V
C550	1-123-380-00	ELECT	1MF	20%	50V
C551	1-123-330-00	ELECT	22MF	20%	16V
C601	1-162-112-00	CERAMIC	0.0047MF	30%	25V
C602	1-162-112-00	CERAMIC	0.0047MF	30%	25V
C603	1-123-299-00	ELECT	1000MF	20%	6.3V
C604	1-123-307-00	ELECT	100MF	20%	10V
C605	1-123-307-00	ELECT	100MF	20%	10V
C608	1-162-025-00	CERAMIC	33PF	5%	50V
C609	1-162-025-00	CERAMIC	33PF	5%	50V
C610	1-136-161-00	FILM	0.047MF	5%	50V
C611	1-136-161-00	FILM	0.047MF	5%	50V
C612	1-162-113-00	CERAMIC	0.01MF	30%	16V
C613	1-162-113-00	CERAMIC	0.01MF	30%	16V
C614	1-162-113-00	CERAMIC	0.01MF	30%	16V
C615	1-162-113-00	CERAMIC	0.01MF	30%	16V
C616	1-136-165-00	FILM	0.1MF	5%	50V
C619	1-161-494-00	CERAMIC	0.022MF	30%	25V
C620	1-161-494-00	CERAMIC	0.022MF	30%	25V
C621	1-161-494-00	CERAMIC	0.022MF	30%	25V
C622	1-161-494-00	CERAMIC	0.022MF	30%	25V
C623	1-161-494-00	CERAMIC	0.022MF	30%	25V
C624	1-161-494-00	CERAMIC	0.022MF	30%	25V
C625	1-161-494-00	CERAMIC	0.022MF	30%	25V
C626	1-161-494-00	CERAMIC	0.022MF	30%	25V
C627	1-161-494-00	CERAMIC	0.022MF	30%	25V
C628	1-161-494-00	CERAMIC	0.022MF	30%	25V
C629	1-161-494-00	CERAMIC	0.022MF	30%	25V
C630	1-161-494-00	CERAMIC	0.022MF	30%	25V
C631	1-161-494-00	CERAMIC	0.022MF	30%	25V
C632	1-161-494-00	CERAMIC	0.022MF	30%	25V
C633	1-162-110-00	CERAMIC	0.001MF	10%	50V
C634	1-162-110-00	CERAMIC	0.001MF	10%	50V
C635	1-123-307-00	ELECT	100MF	20%	10V
C636	1-162-037-00	CERAMIC	100PF	5%	50V
C637	1-123-307-00	ELECT	100MF	20%	10V
C638	1-162-025-00	CERAMIC	33PF	5%	50V
C701	1-161-741-00	(US,G-AEP)...CERAMIC	0.001MF	10%	400V
C702	1-161-741-00	(US,G-AEP)...CERAMIC	0.001MF	10%	400V
C703	1-161-741-00	(G-AEP)...CERAMIC	0.001MF	10%	400V
C704	1-161-494-00	(G-AEP)...CERAMIC	0.022MF	10%	25V
C705	1-161-494-00	(G-AEP)...CERAMIC	0.022MF	10%	25V
C706	1-161-494-00	(G-AEP)...CERAMIC	0.022MF	10%	25V

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COILS

- MMH : mH, UH : μH

SEMICONDUCTORS

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C801	1-123-483-00	ELECT	47MF	20%	16V
C802	1-123-483-00	ELECT	47MF	20%	16V
C901	1-123-307-00	(OLD UNITS)...ELECT	100MF	20%	6.3V
C902	1-123-369-00	(OLD UNITS)...ELECT	4.7MF	20%	25V
CNP501*	1-560-605-00	PIN, CONNECTOR	6P		
CNP502*	1-560-708-00	PIN, CONNECTOR	2P		
CNP503*	1-560-062-00	PIN, CONNECTOR	4P		
CNP601*	1-560-063-00	PIN, CONNECTOR	5P		
CNP602*	1-560-339-00	PIN, CONNECTOR	9P		
CNP603*	1-560-338-00	PIN, CONNECTOR	7P		
CNP604*	1-560-060-00	PIN, CONNECTOR	2P		
CNP605*	1-560-062-00	PIN, CONNECTOR	4P		
CNP606*	1-560-061-00	PIN, CONNECTOR	3P		
CNP607*	1-560-063-00	PIN, CONNECTOR	5P		
CNP608*	1-560-063-00	PIN, CONNECTOR	5P		
CNP609*	1-560-060-00	PIN, CONNECTOR	2P		
CNP610*	1-560-060-00	PIN, CONNECTOR	2P		
CT101	1-141-225-00	CAP, TUNING, TRIMMER			
CT201	1-141-225-00	CAP, TUNING, TRIMMER			
D501	8-719-200-02	DIODE	10E-2		
D502	8-719-200-02	DIODE	10E-2		
D503	8-719-200-02	DIODE	10E-2		
D504	8-719-200-02	DIODE	10E-2		
D505	8-719-200-02	DIODE	10E-2		
D506	8-719-200-02	DIODE	10E-2		
D507	8-719-200-02	DIODE	10E-2		
D508	8-719-200-02	DIODE	10E-2		
D509	8-719-200-02	DIODE	10E-2		
D510	8-719-107-94	DIODE	1SS202-1		
D511	8-719-107-94	DIODE	1SS202-1		
D513	8-719-107-94	DIODE	1SS202-1		
D514	8-719-107-94	DIODE	1SS202-1		
D515	8-719-107-94	DIODE	1SS202-1		
D516	8-719-107-94	DIODE	1SS202-1		
D517	8-719-107-94	DIODE	1SS202-1		
D518	8-719-107-94	DIODE	1SS202-1		
D519	8-719-107-94	DIODE	1SS202-1		
D520	8-719-200-02	DIODE	10E-2		
D521	8-719-200-02	DIODE	10E-2		
D522	8-719-107-94	DIODE	1SS202-1		
D524	8-719-970-94	DIODE	HZ11B2L		
D602	8-719-107-94	DIODE	1SS202-1		
D603	8-719-107-94	DIODE	1SS202-1		
D606	8-719-107-94	DIODE	1SS202-1		
D607	8-719-107-94	DIODE	1SS202-1		
D612	8-719-107-94	DIODE	1SS202-1		

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ELECTRICAL PARTS

Ref.No.	Part No.	Description
D613	8-719-107-94	DIODE 1SS202-1
D614	8-719-107-94	DIODE 1SS202-1
D615	8-719-107-94	DIODE 1SS202-1
D616	8-719-107-94	DIODE 1SS202-1
D617	8-719-200-02	DIODE 10E-2
D618	8-719-910-92	DIODE HZ9A2L
D620	8-719-107-94	DIODE 1SS202-1
D702	8-719-907-81	DIODE BG5535S
D703	8-719-907-81	DIODE BG5535S
D704	8-719-907-84	DIODE PR5535S
D705	8-719-907-80	DIODE AA5535S
D706	8-719-905-31	DIODE PY5531K
D707	8-719-905-31	DIODE PY5531K
D801	8-719-107-94	DIODE 1SS202-1
F501	1-532-259-00	(AEP, UK, E, G-AEP)... FUSE, TIME-LAG (1.6A)
F501	1-532-555-00	(US, Canadian)... FUSE, GLASS TUBE (1.6A NORMAL)
F502	1-532-259-00	(AEP, UK, E, G-AEP)... FUSE, TIME-LAG (1.6A)
F502	1-532-555-00	(US, Canadian)... FUSE, GLASS TUBE (1.6A NORMAL)
HE501	X-3319-616-1	HEAD UNIT ASSY
HRP501	X-3319-616-1	HEAD UNIT ASSY
IC101	8-752-002-70	IC CX20027
IC201	8-752-002-80	IC CX20028
IC501	8-759-101-56	IC CX10033A
IC502	8-759-101-55	IC CX10032A
IC503	8-759-600-02	IC M5218L
IC504	8-759-700-47	IC CX10035
IC601	8-755-640-71	(OLD UNITS) ... IC CX564-071
IC601	8-755-640-72	(NEW UNITS) ... IC CX564-072
IC602	8-759-600-54	IC M50783SP
IC603	8-759-700-46	IC CX10034
IC604	8-759-984-69	IC MB84069UB
IC901	8-759-240-01	(OLD UNITS) ... IC TC4001BP
J501-1	1-507-797-21	JACK, LARGE TYPE (MIC)
J501-2	1-507-797-21	JACK, LARGE TYPE (MIC)
J502	1-507-908-11	JACK, PIN 4P (LINE IN/LINEOUT)
J503	1-507-796-21	JACK (HEADPHONES)
L101	1-408-922-00	MICRO INDUCTOR 6.8MMH
L102	1-408-920-00	MICRO INDUCTOR 4.7MMH
L103	1-408-923-00	MICRO INDUCTOR 8.2MMH
L104	1-408-930-00	MICRO INDUCTOR 33MMH
L501	1-407-177-XX	MICRO INDUCTOR 470UH
L502	1-407-169-XX	MICRO INDUCTOR 100UH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
LPF101	1-231-388-00	FILTER, LOW PASS
LPF201	1-231-388-00	FILTER, LOW PASS
M801	1-541-163-00	MOTOR (REEL)
M802	1-541-239-00	MOTOR (CAPSTAN)
PM1	1-454-316-00	SOLENOID, PLUNGER (HEAD)
PM2	1-454-316-00	SOLENOID, PLUNGER (BRAKE)
PM3	1-454-374-11	SOLENOID, PLUNGER (DIRECTION)
PL801	1-518-563-11	LAMP, PILOT
PL802	1-518-562-11	LAMP, PILOT
PL803	1-518-561-11	LAMP, PILOT
Q101	8-729-245-83	TRANSISTOR 2SC2458
Q102	8-729-245-83	TRANSISTOR 2SC2458
Q103	8-729-245-83	TRANSISTOR 2SC2458
Q104	8-729-811-24	TRANSISTOR 2SD1012
Q105	8-729-245-83	TRANSISTOR 2SC2458
Q106	8-729-245-83	TRANSISTOR 2SC2458
Q107	8-729-245-83	TRANSISTOR 2SC2458
Q201	8-729-245-83	TRANSISTOR 2SC2458
Q202	8-729-245-83	TRANSISTOR 2SC2458
Q203	8-729-245-83	TRANSISTOR 2SC2458
Q204	8-729-811-24	TRANSISTOR 2SD1012
Q205	8-729-245-83	TRANSISTOR 2SC458
Q206	8-729-245-83	TRANSISTOR 2SC2458
Q207	8-729-245-83	TRANSISTOR 2SC2458
Q501	8-729-180-93	TRANSISTOR 2SD809
Q502	8-729-173-13	TRANSISTOR 2SB731
Q503	8-729-201-78	TRANSISTOR 2SD1406
Q504	8-729-201-78	TRANSISTOR 2SD1406
Q505	8-729-245-83	TRANSISTOR 2SC2458
Q506	8-729-900-61	TRANSISTOR DTA114ES
Q507	8-729-900-61	TRANSISTOR DTA114ES
Q508	8-729-606-33	TRANSISTOR 2SC2603-F
Q509	8-729-663-47	TRANSISTOR 2SC1364
Q510	8-729-663-47	TRANSISTOR 2SC1364
Q511	8-729-900-74	TRANSISTOR DTC143TS
Q512	8-729-900-36	TRANSISTOR DTC124ES
Q513	8-729-900-63	TRANSISTOR DTA124ES
Q601	8-729-811-24	TRANSISTOR 2SD1012
Q602	8-729-177-43	TRANSISTOR 2SD774
Q603	8-729-195-23	TRANSISTOR 2SA952
Q604	8-729-195-23	TRANSISTOR 2SA952
Q605	8-760-413-10	TRANSISTOR 2SC1475
Q606	8-760-413-10	TRANSISTOR 2SC1475
Q607	8-729-245-83	TRANSISTOR 2SC2458
Q608	8-729-245-83	TRANSISTOR 2SC2458
Q611	8-729-900-63	TRANSISTOR DTA124ES

NOTE:

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- If there are two or more same circuits in 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:

- All capacitors are in μ F. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μ F, PF: μ μ F.

COILS

- MMH : mH, UH : μ H

SEMICONDUCTORS

- In each case, U : μ , for example:
UA... : μ A..., UPA... : μ PA..., UPC... : μ PC,
UPD... : μ PD...

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

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q612	8-729-900-65	TRANSISTOR DTA144ES
Q613	8-729-900-63	TRANSISTOR DTA124ES
Q614	8-729-900-63	TRANSISTOR DTA124ES
Q615	8-729-900-63	TRANSISTOR DTA124ES
Q616	8-729-900-61	TRANSISTOR DTA114ES
Q617	8-729-900-61	TRANSISTOR DTA114ES
Q618	8-729-900-80	TRANSISTOR DTC114ES
Q619	8-729-900-63	TRANSISTOR DTA124ES
Q620	8-729-900-63	TRANSISTOR DTA124ES
Q621	8-729-900-74	TRANSISTOR DTC143TS
Q622	8-729-900-61	TRANSISTOR DTA114ES
Q623	8-729-100-13	TRANSISTOR 2SC2001
Q624	8-729-900-36	TRANSISTOR DTC124ES
Q625	8-729-900-74	TRANSISTOR DTC143TS
Q626	8-729-900-61	TRANSISTOR DTA114ES
Q627	8-729-900-61	TRANSISTOR DTA114ES
Q628	8-729-900-61	TRANSISTOR DTA114ES
Q629	8-729-900-61	TRANSISTOR DTA114ES
Q801	8-729-110-21	TRANSISTOR PH102
Q802	8-729-110-21	TRANSISTOR PH102
Q901	8-729-900-65	(OLD UNITS) ... TRANSISTOR DTA144ES
Q902	8-729-900-65	(OLD UNITS) ... TRANSISTOR DTA144ES
Q903	8-729-900-65	(OLD UNITS) ... TRANSISTOR DTA144ES
R101	1-247-167-00	CARBON 33K 5% 1/4W
R102	1-247-248-00	CARBON 2.2K 5% 1/2W
R104	1-247-155-00	CARBON 10K 5% 1/4W
R105	1-247-119-00	CARBON 330 5% 1/4W
R106	1-247-166-00	CARBON 30K 5% 1/4W
R107	1-247-179-00	CARBON 100K 5% 1/4W
R110	1-247-143-00	CARBON 3.3K 5% 1/4W
R111	1-247-179-00	CARBON 100K 5% 1/4W
R112	1-247-151-00	CARBON 6.8K 5% 1/4W
R113	1-247-855-00	CARBON 10K 5% 1/6W
R114	1-247-131-00	CARBON 1K 5% 1/4W
R115	1-247-248-00	CARBON 2.2K 5% 1/2W
R116	1-247-164-00	CARBON 24K 5% 1/4W
R117	1-247-107-00	CARBON 100 5% 1/4W
R118	1-247-148-00	CARBON 5.1K 5% 1/4W
R119	1-246-524-00	CARBON 130K 5% 1/4W
R122	1-246-529-00	CARBON 220K 5% 1/4W
R123	1-247-161-00	CARBON 18K 5% 1/4W
R124	1-247-157-00	CARBON 12K 5% 1/4W
R125	1-247-847-00	CARBON 4.7K 5% 1/6W
R126	1-247-130-00	CARBON 910 5% 1/4W
R127	1-247-165-00	CARBON 27K 5% 1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R128	1-247-142-00	CARBON 3K 5% 1/4W
R129	1-247-148-00	CARBON 5.1K 5% 1/4W
R130	1-246-537-00	CARBON 470K 5% 1/4W
R131	1-247-124-00	CARBON 510 5% 1/4W
R132	1-214-776-00	METAL 91K 1% 1/4W
R133	1-247-171-00	CARBON 47K 5% 1/4W
R134	1-247-138-00	CARBON 2K 5% 1/4W
R135	1-247-148-00	CARBON 5.1K 5% 1/4W
R136	1-247-132-00	CARBON 1.1K 5% 1/4W
R137	1-247-888-00	CARBON 240K 5% 1/6W
R138	1-247-887-00	CARBON 220K 5% 1/6W
R139	1-247-886-00	CARBON 200K 5% 1/6W
R140	1-247-845-00	CARBON 3.9K 5% 1/6W
R141	1-247-887-00	CARBON 220K 5% 1/6W
R142	1-247-886-00	CARBON 200K 5% 1/6W
R143	1-247-155-00	CARBON 10K 5% 1/4W
R144	1-247-163-00	CARBON 22K 5% 1/4W
R145	1-247-155-00	CARBON 10K 5% 1/4W
R146	1-247-148-00	CARBON 5.1K 5% 1/4W
R147	1-247-155-00	CARBON 10K 5% 1/4W
R148	1-247-179-00	CARBON 100K 5% 1/4W
R149	1-247-839-00	CARBON 2.2K 5% 1/6W
R150	1-247-157-00	CARBON 12K 5% 1/4W
R151	1-247-836-00	CARBON 1.6K 5% 1/6W
R152	1-247-807-00	CARBON 100 5% 1/6W
R154	1-247-849-00	CARBON 5.6K 5% 1/6W
R155	1-247-855-00	CARBON 10K 5% 1/6W
R156	1-247-843-00	CARBON 3.3K 5% 1/6W
R157	1-247-844-00	CARBON 3.6K 5% 1/6W
R158	1-247-855-00	CARBON 10K 5% 1/6W
R159	1-247-838-00	CARBON 2K 5% 1/6W
R160	1-247-853-00	CARBON 8.2K 5% 1/6W
R161	1-247-855-00	CARBON 10K 5% 1/6W
R162	1-247-863-00	CARBON 22K 5% 1/6W
R163	1-247-839-00	CARBON 2.2K 5% 1/6W
R164	1-247-855-00	CARBON 10K 5% 1/6W
R165	1-247-857-00	CARBON 12K 5% 1/6W
R166	1-247-853-00	CARBON 8.2K 5% 1/6W
R167	1-247-115-00	CARBON 220 5% 1/4W
R168	1-247-871-00	CARBON 47K 5% 1/6W
R169	1-247-867-00	CARBON 33K 5% 1/6W
R172	1-247-155-00	CARBON 10K 5% 1/4W
R173	1-247-845-00	CARBON 3.9K 5% 1/6W
R174	1-247-820-00	CARBON 360 5% 1/6W
R175	1-247-808-00	CARBON 110 5% 1/6W
R501	1-247-155-00	CARBON 10K 5% 1/4W

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- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μF , PF: $\mu\mu\text{F}$.

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 Δ are critical for safety. Replace only with part number specified.

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ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R502	1-247-137-00	CARBON	1.8K	5%	1/4W
R503	1-247-158-00	CARBON	13K	5%	1/4W
R504	1-247-138-00	CARBON	2K	5%	1/4W
R505	1-247-150-00	CARBON	6.2K	5%	1/4W
R506	1-246-478-00	CARBON	1.6K	5%	1/4W
R507	1-247-162-00	CARBON	20K	5%	1/4W
R508	1-247-139-00	CARBON	2.2K	5%	1/4W
R509	1-247-240-00	CARBON	1K	5%	1/2W
R510	1-247-863-00	CARBON	22K	5%	1/6W
R512	1-247-821-00	CARBON	390	5%	1/6W
R513	1-247-821-00	CARBON	390	5%	1/6W
R514	1-247-821-00	CARBON	390	5%	1/6W
R515	1-247-855-00	CARBON	10K	5%	1/6W
R516	1-247-855-00	CARBON	10K	5%	1/6W
R517	1-247-846-00	CARBON	4.3K	5%	1/6W
R518	1-247-838-00	CARBON	2K	5%	1/6W
R520	1-247-847-00	CARBON	4.7K	5%	1/6W
R521	1-247-865-00	CARBON	27K	5%	1/6W
R522	1-247-865-00	CARBON	27K	5%	1/6W
R523	1-246-421-00	CARBON	6.8	5%	1/4W
R524	1-247-839-00	CARBON	2.2K	5%	1/6W
R525	1-247-859-00	CARBON	15K	5%	1/6W
R526	1-247-813-00	CARBON	180	5%	1/6W
R527	1-247-821-00	CARBON	390	5%	1/6W
R528	1-247-879-00	CARBON	100K	5%	1/6W
R529	1-247-849-00	CARBON	5.6K	5%	1/6W
R530	1-247-863-00	CARBON	22K	5%	1/6W
R531	1-247-831-00	CARBON	1K	5%	1/6W
R532	1-247-871-00	CARBON	47K	5%	1/6W
R533	1-247-871-00	CARBON	47K	5%	1/6W
R534	1-244-857-00	CARBON	220	5%	1/2W
R535	1-244-857-00	CARBON	220	5%	1/2W
R536	1-247-839-00	CARBON	2.2K	5%	1/6W
R539	1-247-838-00	CARBON	2K	5%	1/6W
R541	1-247-843-00	CARBON	3.3K	5%	1/6W
R550	1-217-383-00	FUSIBLE	4.7	5%	1/4W F
R551	1-217-383-00	FUSIBLE	4.7	5%	1/4W F
R552	1-247-855-00	CARBON	10K	5%	1/6W
R553	1-247-863-00	CARBON	22K	5%	1/6W
R555	1-247-863-00	CARBON	22K	5%	1/6W
R556	1-247-863-00	CARBON	22K	5%	1/6W
R557	1-247-863-00	CARBON	22K	5%	1/6W
R601	1-247-889-00	CARBON	270K	5%	1/6W
R602	1-247-889-00	CARBON	270K	5%	1/6W
R603	1-247-874-00	CARBON	62K	5%	1/6W
R604	1-247-874-00	CARBON	62K	5%	1/6W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R605	1-247-847-00	CARBON	4.7K	5%	1/6W
R606	1-247-847-00	CARBON	4.7K	5%	1/6W
R607	1-247-863-00	CARBON	22K	5%	1/6W
R608	1-247-828-00	CARBON	750	5%	1/6W
R609	1-247-833-00	CARBON	1.2K	5%	1/6W
R610	1-247-821-00	CARBON	390	5%	1/6W
R611	1-247-831-00	CARBON	1K	5%	1/6W
R612	1-247-855-00	CARBON	10K	5%	1/6W
R613	1-247-831-00	CARBON	1K	5%	1/6W
R614	1-247-831-00	CARBON	1K	5%	1/6W
R615	1-247-831-00	CARBON	1K	5%	1/6W
R616	1-247-855-00	CARBON	10K	5%	1/6W
R617	1-247-855-00	CARBON	10K	5%	1/6W
R618	1-247-855-00	CARBON	10K	5%	1/6W
R620	1-247-807-00	CARBON	100	5%	1/6W
R621	1-247-807-00	CARBON	100	5%	1/6W
R622	1-247-823-00	CARBON	470	5%	1/6W
R623	1-247-820-00	CARBON	360	5%	1/6W
R624	1-247-807-00	CARBON	100	5%	1/6W
R625	1-247-807-00	CARBON	100	5%	1/6W
R626	1-247-867-00	CARBON	33K	5%	1/6W
R627	1-247-867-00	CARBON	33K	5%	1/6W
R628	1-247-867-00	CARBON	33K	5%	1/6W
R629	1-247-867-00	CARBON	33K	5%	1/6W
R630	1-247-847-00	CARBON	4.7K	5%	1/6W
R631	1-247-867-00	CARBON	33K	5%	1/6W
R632	1-247-869-00	CARBON	39K	5%	1/6W
R633	1-247-855-00	CARBON	10K	5%	1/6W
R634	1-247-847-00	CARBON	4.7K	5%	1/6W
R635	1-247-863-00	CARBON	22K	5%	1/6W
R638	1-247-815-00	CARBON	220	5%	1/6W
R639	1-247-815-00	CARBON	220	5%	1/6W
R640	1-247-815-00	CARBON	220	5%	1/6W
R641	1-247-815-00	CARBON	220	5%	1/6W
R642	1-247-815-00	CARBON	220	5%	1/6W
R643	1-247-815-00	CARBON	220	5%	1/6W
R644	1-247-815-00	CARBON	220	5%	1/6W
R645	1-247-815-00	CARBON	220	5%	1/6W
R646	1-247-815-00	CARBON	220	5%	1/6W
R647	1-247-815-00	CARBON	220	5%	1/6W
R648	1-247-815-00	CARBON	220	5%	1/6W
R649	1-247-815-00	CARBON	220	5%	1/6W
R650	1-247-815-00	CARBON	220	5%	1/6W
R651	1-247-815-00	CARBON	220	5%	1/6W
R654	1-247-863-00	CARBON	22K	5%	1/6W

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CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF , PF: $\mu\mu\text{F}$.

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 Δ are critical for safety. Replace only with part number specified.

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R655	1-247-863-00	CARBON	22K	5%	1/6W
R656	1-247-863-00	CARBON	22K	5%	1/6W
R657	1-247-863-00	CARBON	22K	5%	1/6W
R658	1-247-863-00	CARBON	22K	5%	1/6W
R659	1-247-863-00	CARBON	22K	5%	1/6W
R660	1-247-863-00	CARBON	22K	5%	1/6W
R661	1-247-863-00	CARBON	22K	5%	1/6W
R662	1-247-863-00	CARBON	22K	5%	1/6W
R663	1-247-863-00	CARBON	22K	5%	1/6W
R664	1-247-863-00	CARBON	22K	5%	1/6W
R665	1-247-863-00	CARBON	22K	5%	1/6W
R666	1-247-863-00	CARBON	22K	5%	1/6W
R667	1-247-863-00	CARBON	22K	5%	1/6W
R668	1-247-859-00	CARBON	15K	5%	1/6W
R669	1-247-857-00	CARBON	12K	5%	1/6W
R670	1-247-857-00	CARBON	12K	5%	1/6W
R681	1-247-813-00	CARBON	180	5%	1/6W
R682	1-247-813-00	CARBON	180	5%	1/6W
R901	1-247-821-00	CARBON	390	5%	1/6W
R902	1-247-871-00	CARBON	47K	5%	1/6W
R903	1-247-879-00	CARBON	100K	5%	1/6W
R904	1-247-807-00	CARBON	100	5%	1/6W
RV101	1-226-236-00	RES, ADJ, CARBON 10K			
RV102	1-226-851-00	RES, ADJ, CARBON 10K			
RV104	1-226-236-00	RES, ADJ, CARBON 10K			
RV201	1-226-236-00	RES, ADJ, CARBON 10K			
RV202	1-226-851-00	RES, ADJ, CARBON 10K			
RV204	1-226-236-00	RES, ADJ, CARBON 10K			
RV501	1-226-991-00	RES, VAR, SLIDE 20K/20K (REC LEVEL)			
RY501	1-515-535-11	RELAY			

ELECTRICAL PARTS

Ref.No.	Part No.	Description
S501	1-554-773-11	SWITCH, PUSH (6 KEY)
S502	1-554-208-00	SWITCH, SLIDE
S503	1-553-318-00	SWITCH, PUSH (POWER)
S601	1-553-410-00	SWITCH, LEAF (POWER)
S701	1-554-303-00	SWITCH, KEY BOARD
S702	1-554-303-00	SWITCH, KEY BOARD
S703	1-554-303-00	SWITCH, KEY BOARD
S705	1-554-303-00	SWITCH, KEY BOARD
S706	1-554-303-00	SWITCH, KEY BOARD
S707	1-554-303-00	SWITCH, KEY BOARD
S708	1-554-303-00	SWITCH, KEY BOARD
S709	1-554-303-00	SWITCH, KEY BOARD
S710	1-554-303-00	SWITCH, KEY BOARD
S711	1-554-303-00	SWITCH, KEY BOARD
S712	1-554-303-00	SWITCH, KEY BOARD
S713	1-554-303-00	SWITCH, KEY BOARD
S801	1-553-856-00	SWITCH, KEY BOARD
S802	1-553-856-00	SWITCH, KEY BOARD
S803	1-553-856-00	SWITCH, KEY BOARD
S804	1-553-856-00	SWITCH, KEY BOARD
S805	1-553-856-00	SWITCH, KEY BOARD
S806	1-554-883-11	SWITCH, SLIDE
SPK101	1-235-186-00	ENCAPSULATED COMPONENT
SPK201	1-235-186-00	ENCAPSULATED COMPONENT
T501	1-447-779-11	(US, Canadian) TRANSFORMER, POWER
T501	1-447-780-11	(E) TRANSFORMER, POWER
T501	1-447-781-11	(AEP, UK, G-AEP) TRANSFORMER, POWER
T502	1-433-283-11	TRANSFORMER, BIAS OSCILLATION
X601	1-567-160-00	OSCILLATOR, CERAMIC

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.
- If there are two or more same circuits in 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:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
MF: μF , PF: $\mu\mu\text{F}$.

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 Δ are critical for safety. Replace only with part number specified.

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