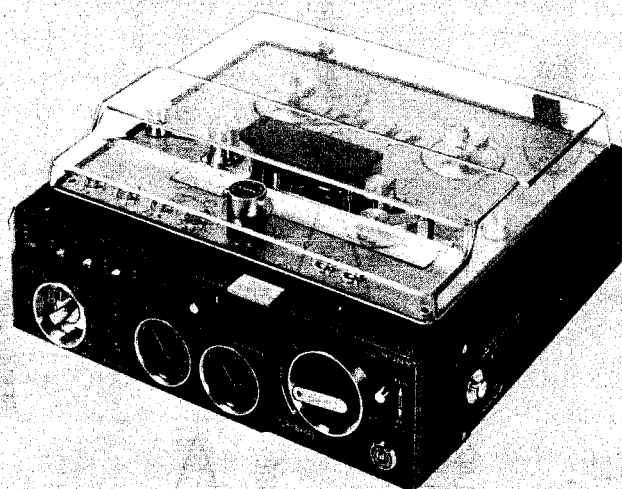


# TC-510-2

AEP Model



## PORTABLE STEREO TAPE DECK

### SPECIFICATIONS

**Power Requirements:** 220 or 240 V ac 50/60 Hz with the Sony AC Power Adaptor AC-26 (optional)  
12 V dc  
8 batteries size D  
Sony Rechargeable Battery Pack BP-55 (optional)  
12 V car or boat battery with the Sony Car Battery Cord DCC-129 (optional)

**Tape Speed:** 19 cm/s (7½ ips) 9.5 cm/s (3¾ ips)

**Recording Time:** 45 mins total at 9.5 cm/s, stereo with 275 m tape

**Fast Winding Time:** Approx. 2 mins. with 275 m tape

**Reel:** Up to 5 inches

**Track System:** 2-track 2-channel stereo

**Motor:** DC servo-controlled motor 1

**Bias Frequency:** 160 kHz

**Equalization:** NAB standard

**Signal-to-noise Ratio:** 64 dB with Sony Ferri-Chrome Tape

**Total Harmonic Distortion:** 0.8%

**Speaker:** 44 x 94 mm, 1½ x ¾ inches

**Power Output:** 500 mW

**Frequency Response:** With Sony Ferri-Chrome Tape  
30 ~ 27,000 Hz at 19 cm/s  
30 ~ 18,000 Hz at 9.5 cm/s  
With SLH tape  
30 ~ 25,000 Hz at 19 cm/s  
30 ~ 16,000 Hz at 9.5 cm/s  
With regular tape  
30 ~ 20,000 Hz at 19 cm/s  
30 ~ 13,000 Hz at 9.5 cm/s

**Wow and Flutter:** ±0.8% at 19 cm/s  
±0.12% at 9.5 cm/s

**Inputs:** MIC..... 2  
sensitivity 0.2 mV (-72 dB)  
for low impedance microphone  
LINE IN..... 2  
sensitivity 0.06 V (-22 dB)  
input impedance 100 k ohms

**Outputs:** LINE OUT..... 2  
output level 0.435 V (-5 dB)  
at load impedance 100 k ohms  
suitable load impedance more  
than 10 k ohms  
HEADPHONES..... 1  
suitable load impedance 8 ohms

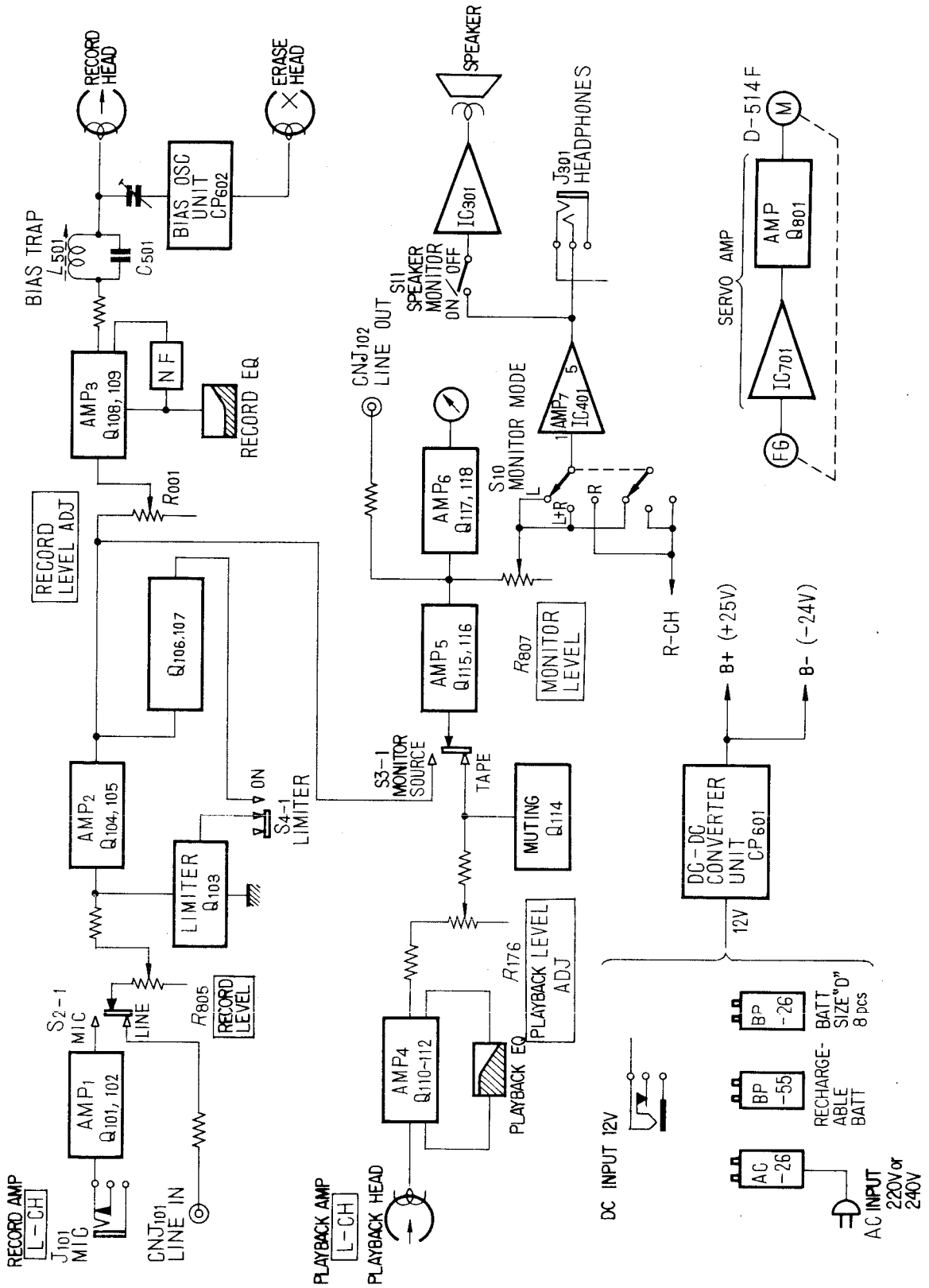
**Dimensions:** Approx. 333 (w) x 136 (h) x 29 (d) mm  
13 (w) x 5⅜ (h) x 1⅞ (d) inches  
including projecting parts and  
controls

**Weight:** Approx. 6.8 kg, 15 lb (with batteries)

**SONY**  
**SERVICE MANUAL**

SECTION 1  
OUTLINE

1-1. BLOCK DIAGRAM



**1-2. EXPLANATION OF TC-510-2**

1. TC-510-2 uses two-track system.  
Do not change the track system to four track in principle.
2. When leaving the tape stopped for a long time, place the set to stop mode otherwise the set consumes electric power.
3. TAPE SELECT switches

Tapes	BIAS	EQ
SONY PR other regular tapes	LOW	NORMAL
SONY SLH MAXELL LNE 35 BASF 35 LH SCOTCH 212, CLASSIC TDK SD 150, AUDUA AGFA PE other Low-noise High-output tapes	NORMAL	SPECIAL
Sony Ferri-Chrome Tape	NORMAL	Fe-Cr
SCOTCH 296, 219	HIGH	NORMAL

**1-3. CAUTION FOR REPAIRS**

1. Chassis of TC-510-2 uses aluminum. Tightening screws too hardly, tapped holes may be damaged.
2. When removing the front panel and right-side cabinet, take care not to cut the lead wires of the level meters and speaker.
3. Lead wires are thin and cut easily.
4. Right channel level meter has a battery check function.
5. Record level control knobs can easily be pulled off with fingers. Pull off other large knobs using a string such as dial cord.
6. Use L-shaped hexagonal wrenches (0.89, 1.27, 1.5, 2 and 2.5 mm) to repair TC-510-2.
7. The screw above the shaft of the pinch roller is used only for ornamental purpose, and the pinch roller cannot be removed by removing this ornamental screw.
8. The tension rollers slip down to the panel when the tension roller caps are removed. However this is normal.
9. When placing the set upside down, put it on a rubber mat to protect the small-diameter reel shafts and the tension arms.
10. Do not use screws longer than 6 mm in length for the top cover hinges and the rear cabinet.
11. When the set is in forward mode with no tape loaded, the take-up reel turns fast as in fast forward mode. The turning torque weakens by placing the tension arm to inside position, because the right tension arm controls the crutch of the take-up reel.

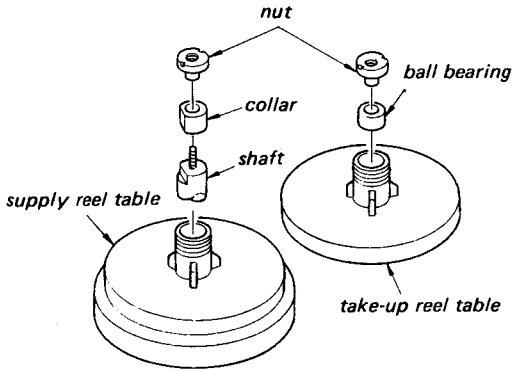
## 1-4. DISASSEMBLY

### Take-up and Supply Reel Table Removal

Remove nuts from the shafts.

Take care not to miss the ball-bearing and collar.

When reattaching the supply reel table, flat surfaces of the collar and supply reel table shaft place the same face.



### Reel Panel Removal

Remove four hex-socket screws (①-1 ~ ①-4) using an L-wrench (2 mm) and remove the tension roller cap (①-5).

### Front Panel Removal

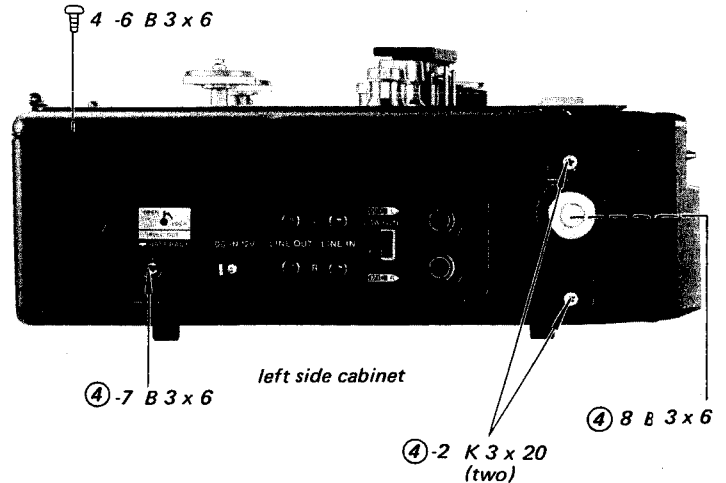
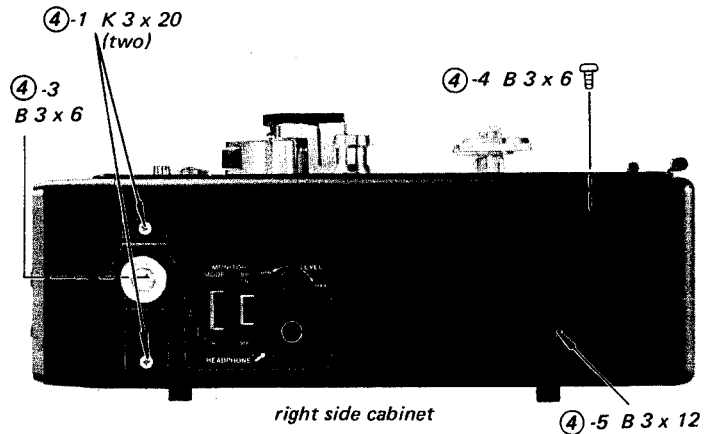
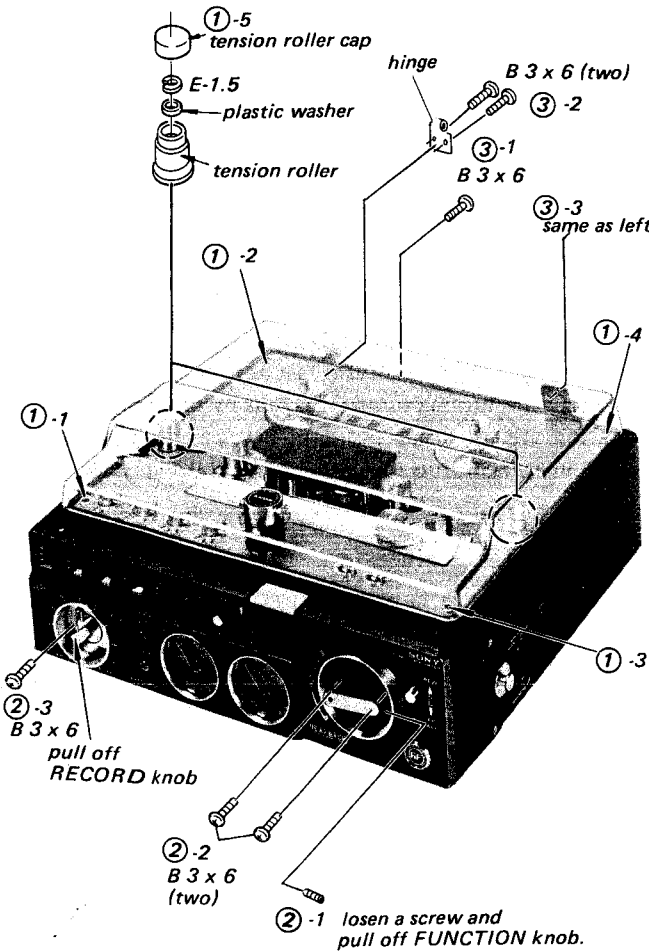
1. Loosen a hex-socket screw (②-1) using an L-wrench (2 mm).
2. Pull off the FUNCTION and RECORD level knobs.
3. Remove three screws (②-2 ~ ②-3).

### Rear Cabinet Removal

Remove six screws (③-1 ~ ③-3).

### Right- and Left-Side Cabinet Removal

1. Remove four screws (④-1, ④-2) and strap retainers.
2. Remove three screws (④-3 ~ ④-8) at each side cabinet.



SECTION 2  
ADJUSTMENTS

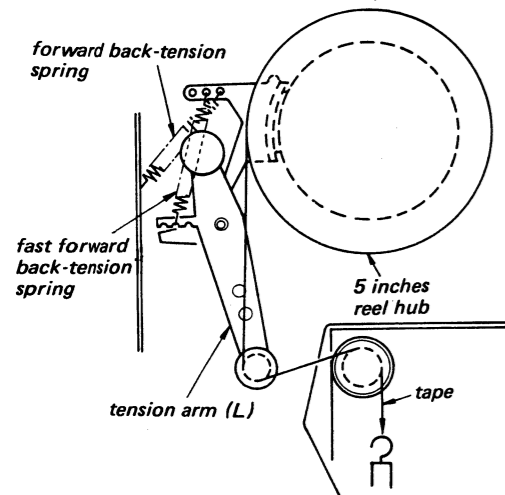
2-1. MECHANICAL ADJUSTMENTS

**Forward and Fast Forward Back-Tension Adjustment**  
— Forward and Fast Forward Mode —

Wind the tape up twice or third on a five inches reel hub and pull the tape out as shown below. Change each spring hooking position to obtain the specifications.

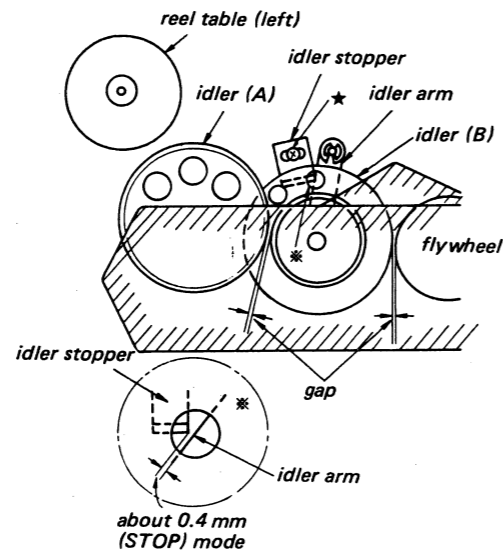
**Specification:**

Forward Mode: 24 ~ 28 g ( $\frac{7}{8}$  ~ 1 oz)  
Fast Forward Mode: 6.4 ~ 9.6 g ( $\frac{7}{32}$  ~  $1\frac{1}{32}$  oz)



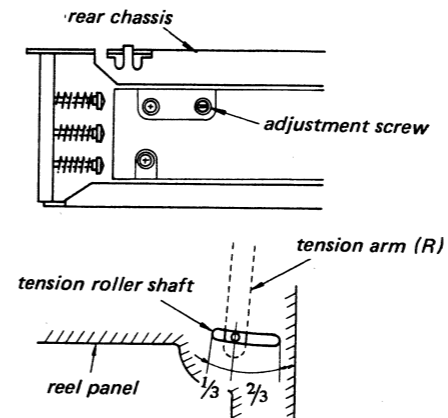
**Rewind Idler Stopper Position Adjustment**  
— Stop Mode —

Push the idler (B) to contact with the flywheel. Adjust the screw (marked ★) to obtain the position of the idler arm and the idler stopper as shown below.



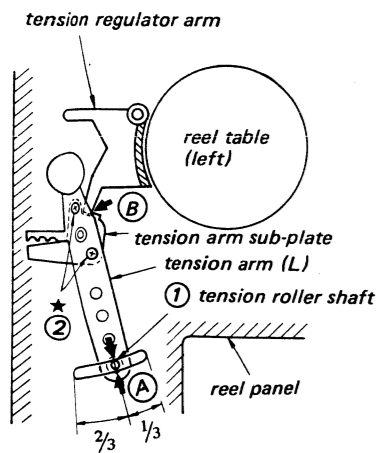
**Tension Arm (R) Position Adjustment**  
— Forward Mode —

Adjust the screw to obtain the position of the tension arm (R) as shown below.



**Tension Regulator Arm Position Adjustment**

1. Place the tension roller shaft (A) position as shown below.
2. Adjust two screws (marked ★) so that the tension arm sub-plate just contacts the tension regulator arm (B position).

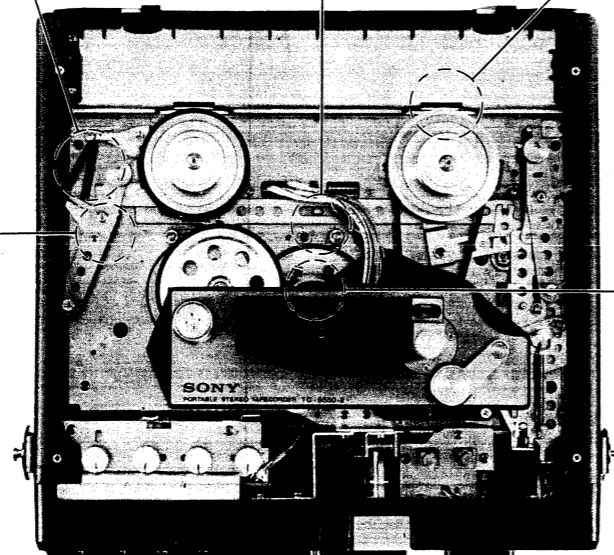
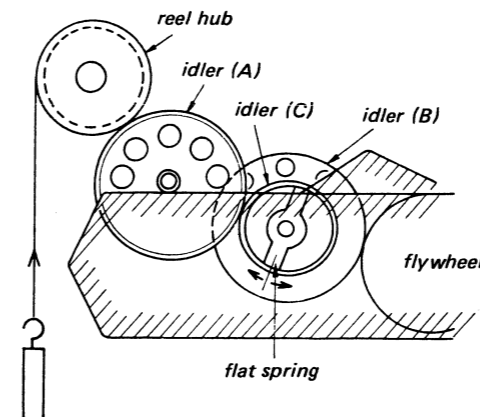


**Rewind Torque Adjustment**  
— Rewind Mode —

Adjust the flat spring to obtain the specifications.

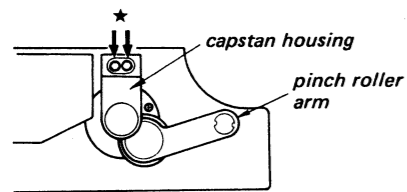
Reel	Rewind torque
Measuring reel	300 ~ 450 g·cm (4.1 ~ 6.1 oz·inch)
5 inches reel	150 ~ 270 g·cm (2.0 ~ 3.7 oz·inch)

**Note:** When measuring torque, move spring scale in arrow direction at about 10 cm/s (4 ips).



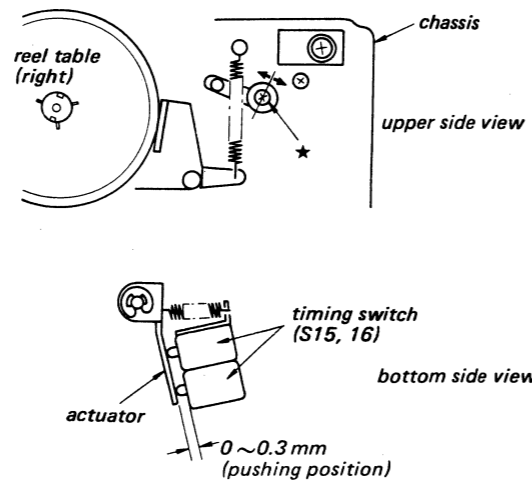
**Capstan Housing Position Adjustment**  
 – Forward and Pause Mode –

1. Loosen two hex-socket screws (marked ★).
2. Adjust the capstan housing position to obtain the maximum dc voltage at the corrector of Q801 (servo transistor circuit board).



**Playback Timing Switches (S15, 16) Adjustment**  
 – Stop Mode –

1. Loosen a screw (marked ★) and adjust the switch position as shown below.
2. The actuator does not contact with these switches in forward mode.

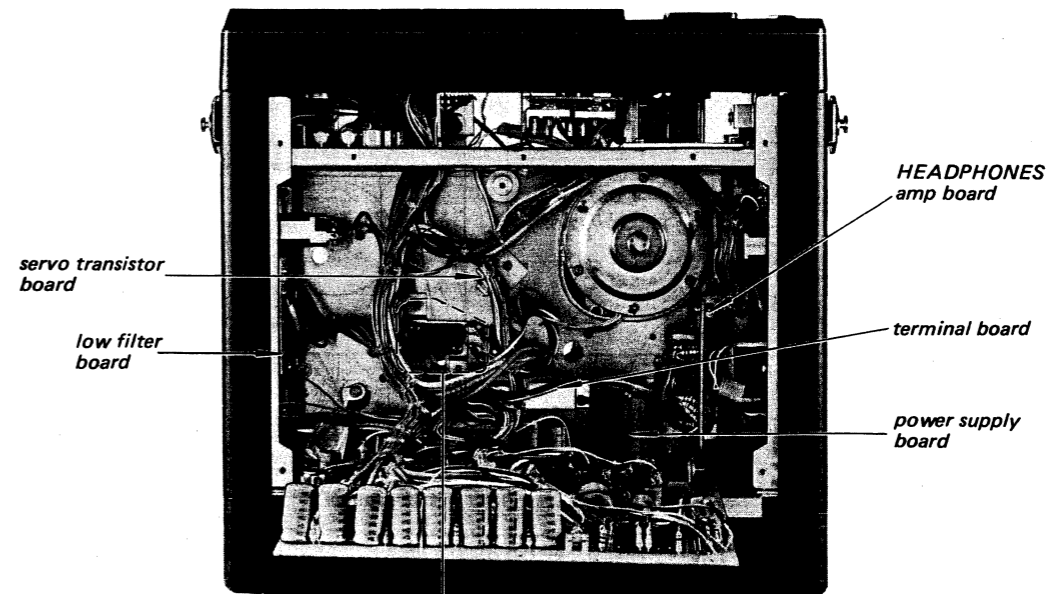
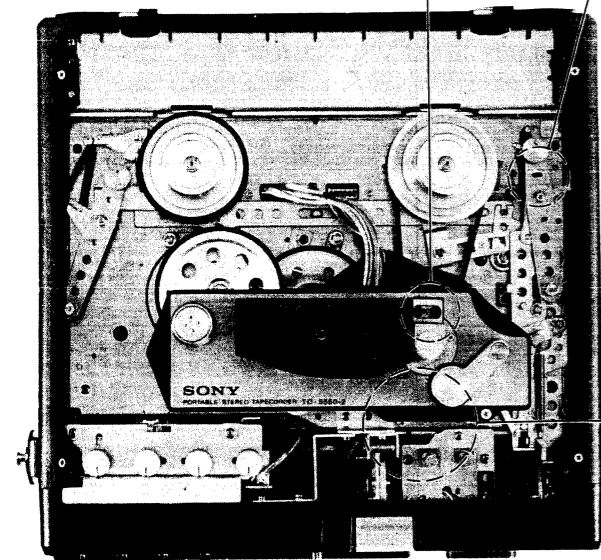
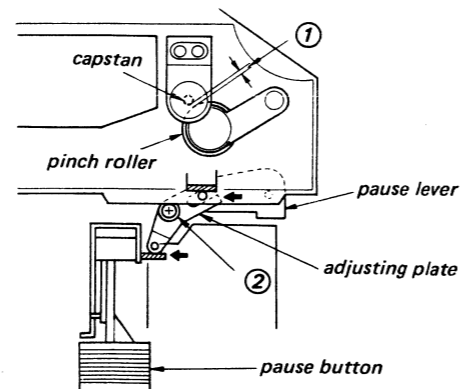


**Pause Lever Adjustment**

1. Put a 1.5 mm spacer into the gap ① and forward mode.
2. Setting in pause mode, adjust the screw ② so that the adjusting plate contacts the shifter lever.

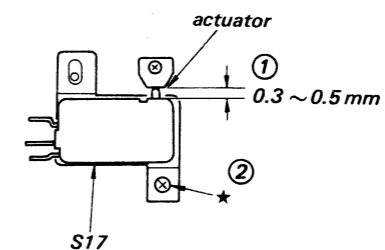
**Specification:**

The gap of the capstan and the pinch roller in pause mode: 0.5 ~ 1.5 mm (1/32 ~ 1/16 inches).



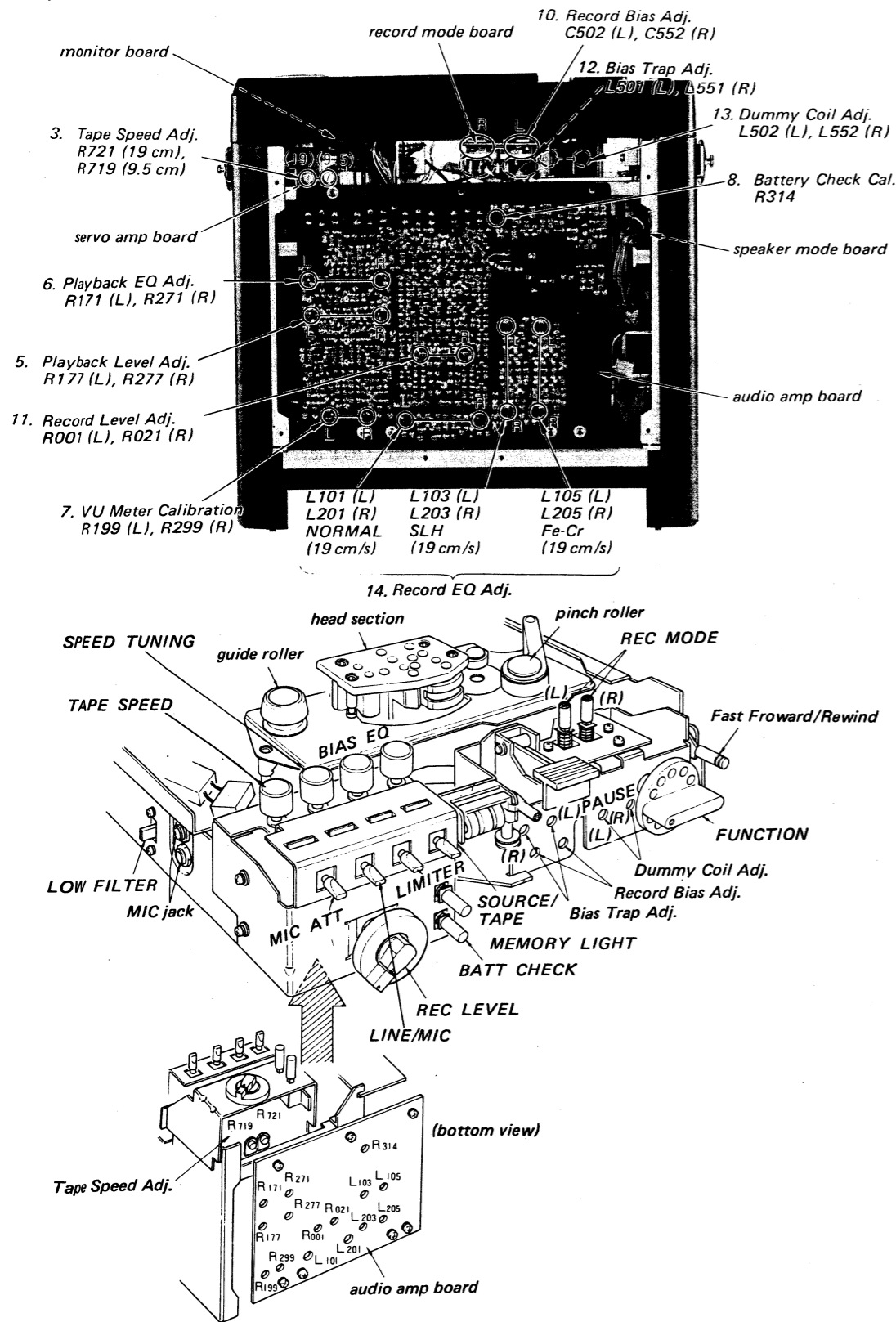
**Fast Forward and Rewind Switch (S17) Position Adjustment**  
 – Stop Mode –

Place the switch as shown below.



2-2. ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

Adjustment Locations



PRECAUTION

- Clean the following parts with an alcohol moistened swab:
  - \* record head
  - \* erase head
  - \* capstans
  - \* idlers
  - \* playback head
  - \* pinch rollers
  - \* rubber belts
- Demagnetize record and playback head with a head demagnetizer.
- Do not use magnetized screwdriver for adjustments.
- After the adjustments, apply a small amount of a locking compound to the parts adjusted.
- The adjustments should be performed in the order arranged in this service manual.
- The adjustments and the measurements should be performed for both L-CH and R-CH with rated power supply voltage unless otherwise specified.
- The record and playback level adjustments should be carefully performed.
- The adjustment tape is only wound on 7-inches reel hub. When adjusting, wind and use the adjustment tape on 5-inches reel hub.
- The switches and the controls should be set as follows unless otherwise specified.

switches	playback	record mode
TAPE SPEED	19 cm/s	19 cm/s
TAPE SELECT EQ*	NORMAL	SLH
TAPE SELECT BIAS*	-----	NORMAL
REC MODE	-----	REC
SOURCE/TAPE	TAPE	TAPE (SOURCE)
LIMITER	-----	OFF
MIC ATT	-----	OFF
LINE/MIC	-----	LINE
LOW FILTER	-----	OFF

\* see page 3.

Normal Input Level

	MIC	LINE IN
source impedance	300 $\Omega$	10 k $\Omega$
input level	-60 dB (0.77 mV)	-10 dB (0.25 V)

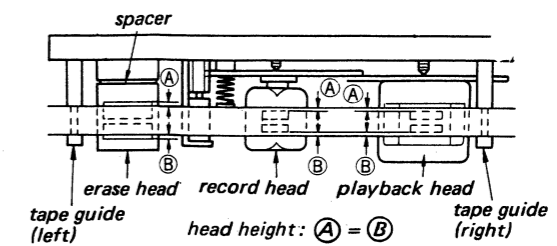
Normal Output Level

	LINE OUT
load impedance	100 k $\Omega$
output level	-5 dB (0.435 V)

1. Record and Playback Head Preadjustment

(Rough adjustment for playback Head Lateral Adjustment and Playback Head Azimuth Adjustment)

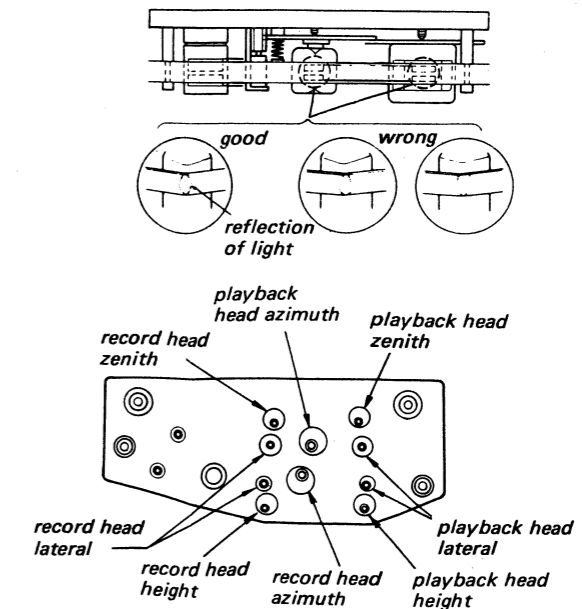
**Note:** This adjustment and the following (Playback Head Lateral Adjustment and Playback Head Azimuth Adjustment) should be repeated alternately several times.



Procedure:

- Turn record and playback head height adjusting screws as shown the figuer.
- Turn zenith adjusting screws by the same angle of turns to the same direction of record and playback head height adjusting screws.
- Thread SONY tape super 150 or PY and place unit in playback mode at 19 cm/s (7½ ips).
- Make the tape loose a little by pushing the tension regulator arm pin in the direction shown by arrow and then adjust playback head and record head zenith adjusting screws to obtain the reflection of light as shown.

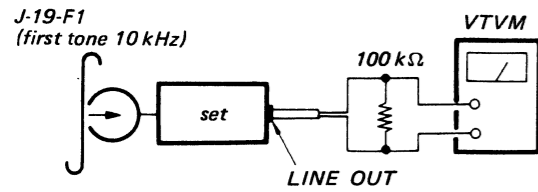
Adjustment Location:



**2. Playback Head Lateral Adjustment**

**Procedure:**

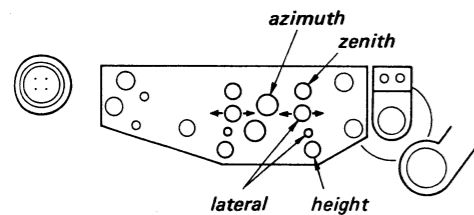
1. Mode: playback



2. Adjust lateral-adjusting screws for maximum VTVM reading.
3. Apply back-tension by holding lightly the supply reel table, reproducing the alignment tape, and then adjust the angle of the head by loosening two lateral-adjusting screws so that VTVM reading on both L-CH and R-CH does not rise.

**Note:** Unless playback head is installed at correct angle, VTVM reading will rise.

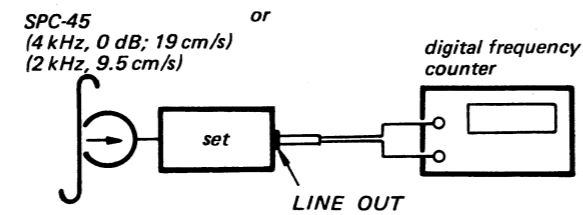
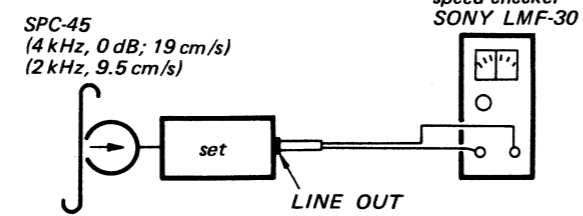
**Adjustment screw positions:**



**3. Tape Speed Adjustment**

**Procedure:**

- Mode: playback

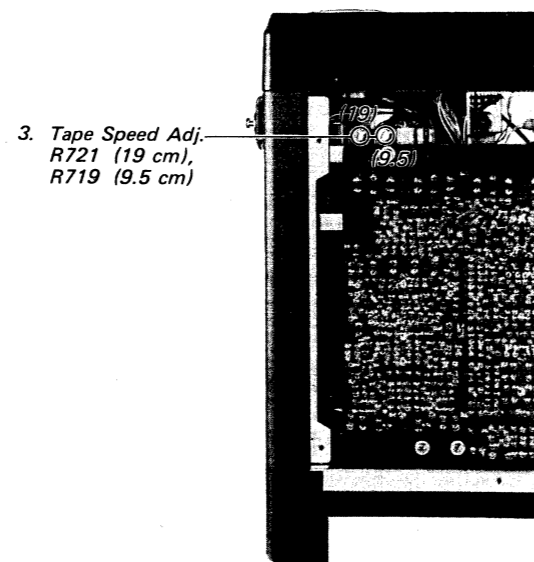


Adjust R721 (19 cm/s) and R719 (9.5 cm/s) to obtain specified checker or counter reading.

**Specification:**

speed checker	digital frequency counter
-0.5 ~ +0.5 %	3,980 ~ 4,020 Hz (19 cm/s) 1,990 ~ 2,010 Hz (9.5 cm/s)

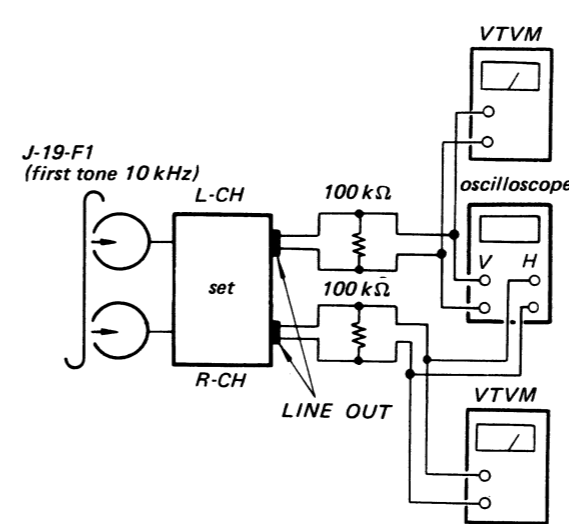
**Adjustment Locations:**





**4. Playback Head Azimuth Adjustment**

**Procedure:**

1. Mode: playback



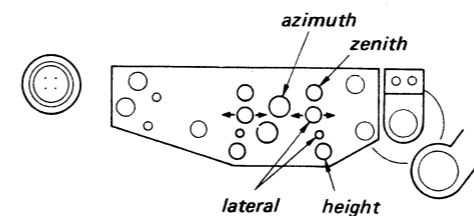
- 2.

Adjust	Oscilloscope patterns
azimuth adjustment screw to obtain the in-phase pattern around the highest VTVM readings.	[Allowance] in-phase  90° out-of-phase  Level drop should be within 0.5 dB.

3. Assure that LINE OUT level difference does not change when the mode is changed from playback to stop several times.

4. After adjustment, apply locking compound to the screw.

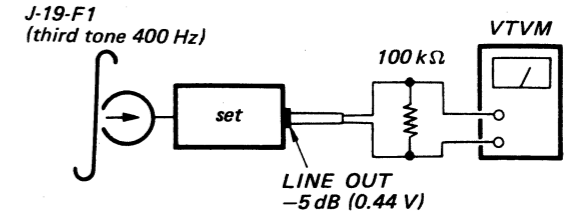
**Adjustment screw positions:**



**5. Playback Level Adjustment**

**Procedure:**

1. Mode: playback



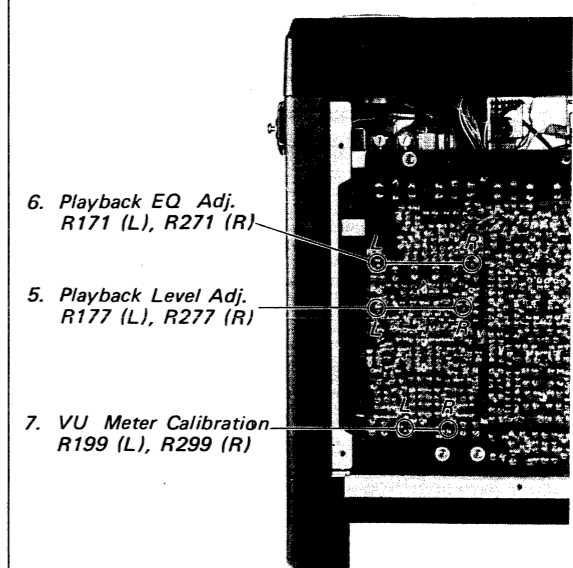
Adjust R177 (L-CH) and R277 (R-CH) to obtain -5 dB (0.44 V) VTVM reading.

2. Assure that the LINE OUT level does not change when the mode is changed from playback to stop several times.

**Specification:**

LINE OUT level: -5 dB (0.44 V)  
Level difference between channels: less than 1 dB

**Adjustment Locations:**

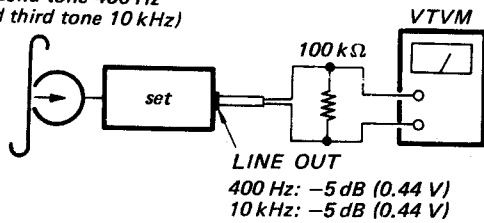




### 6. Playback Equalizer Adjustment

**Procedure:**

J-19-F2  
(second tone 400 Hz  
and third tone 10 kHz)



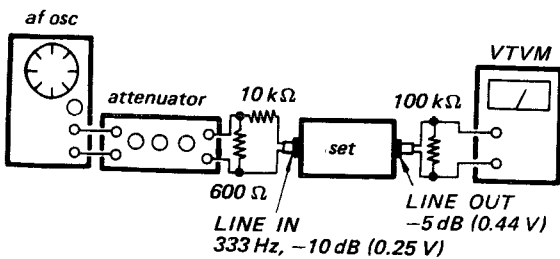
LINE OUT  
400 Hz: -5 dB (0.44 V)  
10 kHz: -5 dB (0.44 V)

Adjust R171 (L-CH) and R271 (R-CH) to obtain -5 dB (0.44 V) at 10 kHz tone.

### 7. VU Meter Calibration

**Procedure:**

1. Mode: Standard record (See page 10.)



- 2.

Adjust	VU meter reading: 0 VU
R199 (L-CH)	
R299 (R-CH)	

### 8. Battery Check Meter Calibration

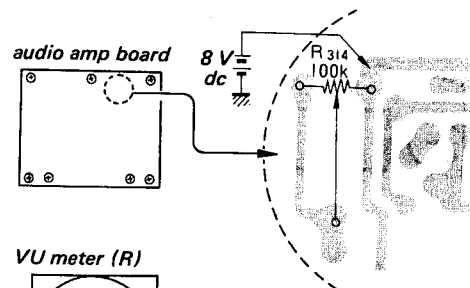
**Settings:**

Power source 8 V dc

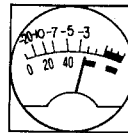
**Procedure:**

Adjust R314 to place the pointer as shown below.

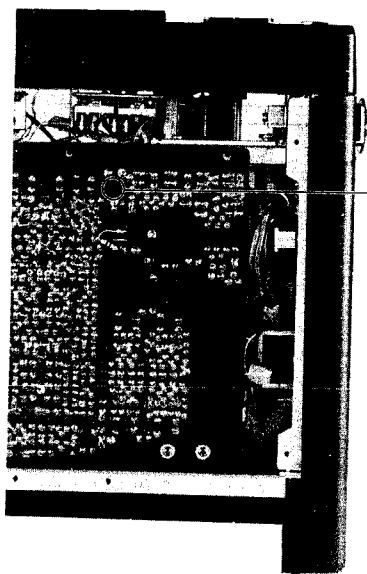
**Note:** Do not use battery pack and AC adapter.



VU meter (R)



**Adjustment Location:**

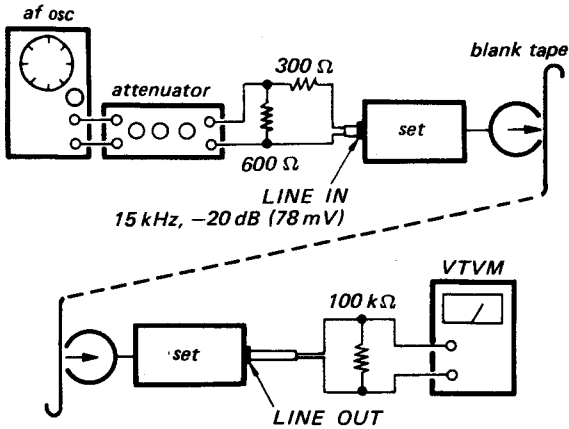


8. Battery Check Cal. R314

**9. Record Head Azimuth Adjustment**

**Procedure:**

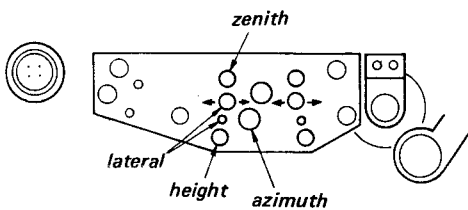
1. Mode: record



2. Adjust azimuth adjusting screw for maximum VTVM reading.

**Note:** If the maximum value of L-CH and R-CH outputs can not be obtained at the same angle, adjust the screw midway between two screw positions. (That value should not be fallen more than 1 dB from the maximum value.)

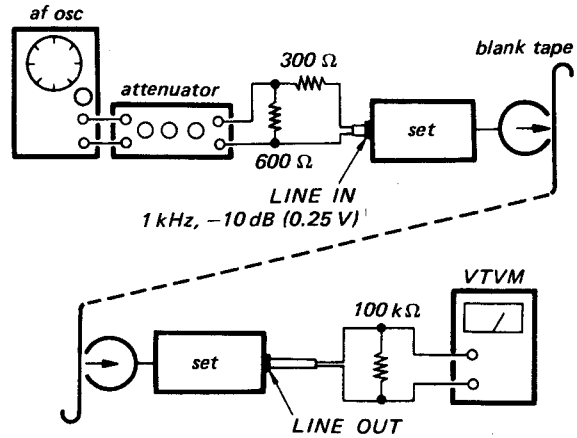
**Adjustment Screw Positions:**



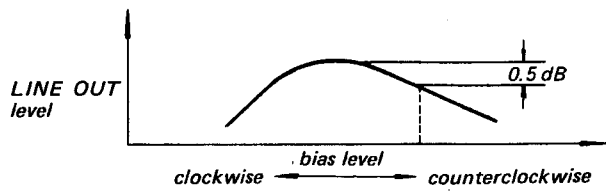
**10. Record Bias Adjustment**

**Procedure:**

1. Be sure that trap coil adjustment has been made.
2. Mode: record



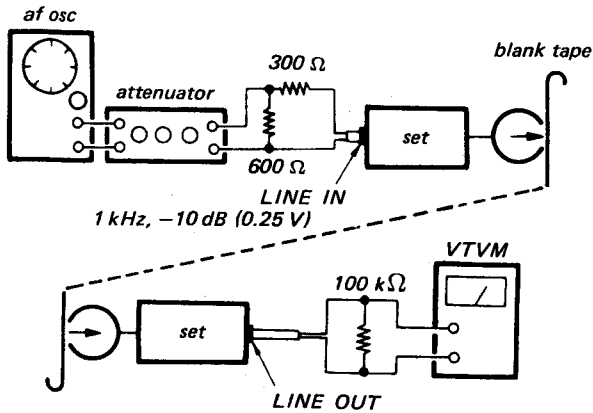
3. Turn the bias adjusting trimmer capacitors C502, C552 counterclockwise for maximum VTVM reading and then turn the capacitor counterclockwise so that VTVM reading drops 0.5 dB from the maximum value.



**11. Record Level Adjustment**

**Procedure:**

1. Mode: record

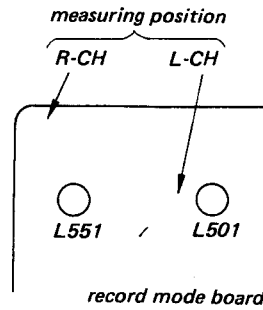


2. Adjust R001 (L-CH) and R021 (R-CH) for -5 dB (0.44 V) VTVM reading.

**12. BIAS Trap Adjustment**

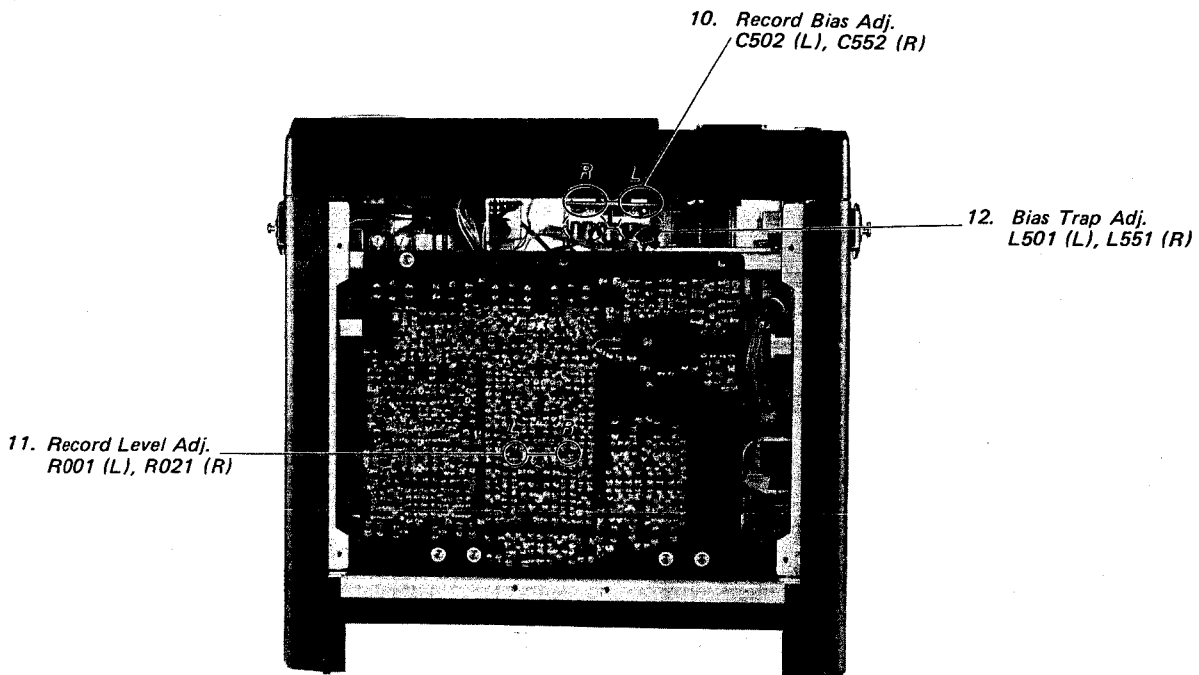
**Procedure:**

1. Connect a VTVM across the check point and ground as shown.



2. Place the set in record mode without tape.
3. Adjust L501, L551 to obtain the minimum VTVM reading (less than -7 dB, 0.35 V).

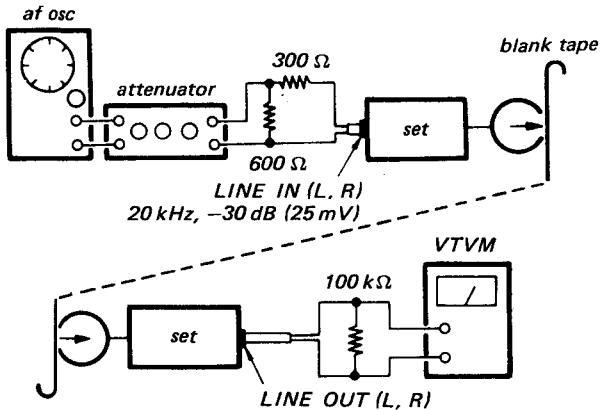
**Adjustment Location:**



**13. Dummy Coil Adjustment**

**Procedure:**

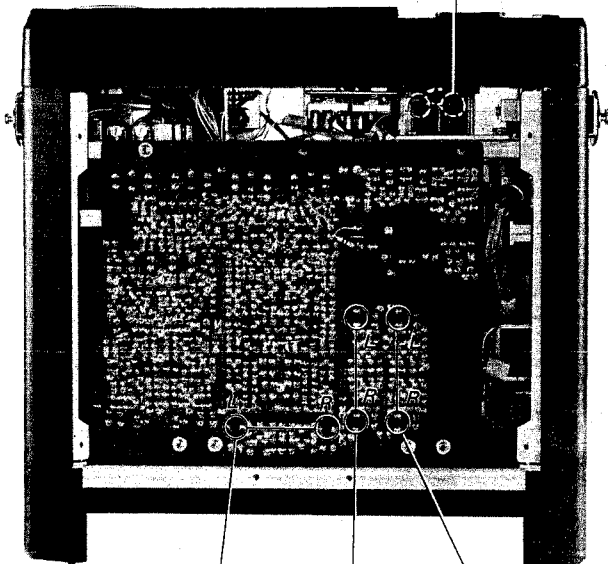
1. Mode: stereo record



2. Memorize VTVM reading.
3. Set L-channel (R-channel) only in record mode.
4. Adjust L502 (L-CH) and L552 (R-CH) with non-magnetic screwdriver, taking care not to break the core so that VTVM reading is the same as that obtained in step 2.

**Adjustment Location:**

13. Dummy Coil Adj.  
L502 (L), L552 (R)



L101 (L) L103 (L) L105 (L)  
L201 (R) L203 (R) L205 (R)  
NORMAL SLH Fe-Cr  
(19 cm/s) (19 cm/s) (19 cm/s)

14. Record EQ Adj.

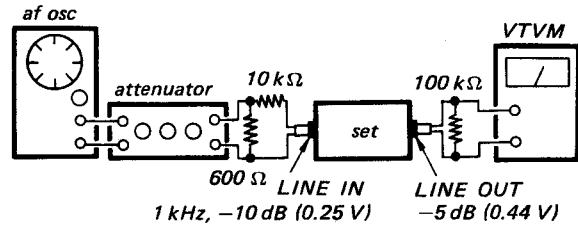
**14. Record Equalizer Adjustment**

**Procedure:**

1. SOURCE/TAPE select

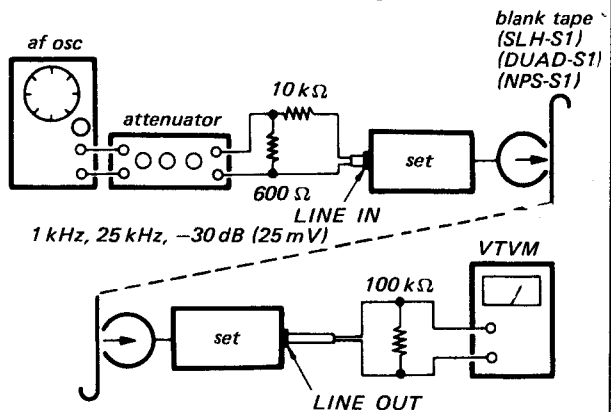
switch: SOURCE position

Adjust RECORD level control to obtain -5 dB (0.44 V) VTVM reading.



2. SOURCE/TAPE select

switch: TAPE position



Adjust trimmers so that 25 kHz level to obtain the 25 kHz level for the same level as the 1 kHz output level.

SLH-S1: Adjust L103 (L-CH) and L203 (R-CH)

BIAS switch	HIGH position
EQ switch	SLH position

DUAD-S1: Adjust L105 (L-CH) and L205 (R-CH)

BIAS switch	HIGH position
EQ switch	Fe-Cr position

NPS-S1: Adjust L101 (L-CH) and L201 (R-CH)

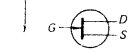
BIAS switch	LOW position
EQ switch	NORMAL position

SECTION 3  
DIAGRAMS

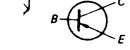
3-1. MOUNTING DIAGRAM (1)  
— Conductor Side —

Q & IC	112 113 114 115 116 117	110	213 214 215 216 217 218	210 211 212	102 104 105 106 108 109	101 103 106 120 119	107	207	201 205 206 219	202 204 205 206 209	301 302	122 222 221	121 224 223	303 304 302	303 IC301
D	1001						101	201				303	304	302	301

1, 201 : 2SK43  
0, 210 : 2SK43

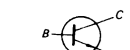


2, 105 : 2SA705  
3, 205 : 2SA677

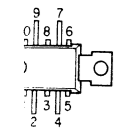


106, 107, 109  
206, 207, 209  
114, 116 ~ 124 : 2SC1363  
214, 216 ~ 224  
302

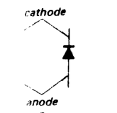
108, 204, 208  
112, 115 : 2SC1361  
212, 215



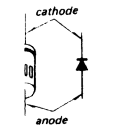
HA1306



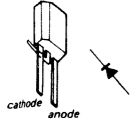
201 : V06C



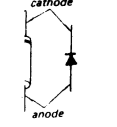
SIB01-02



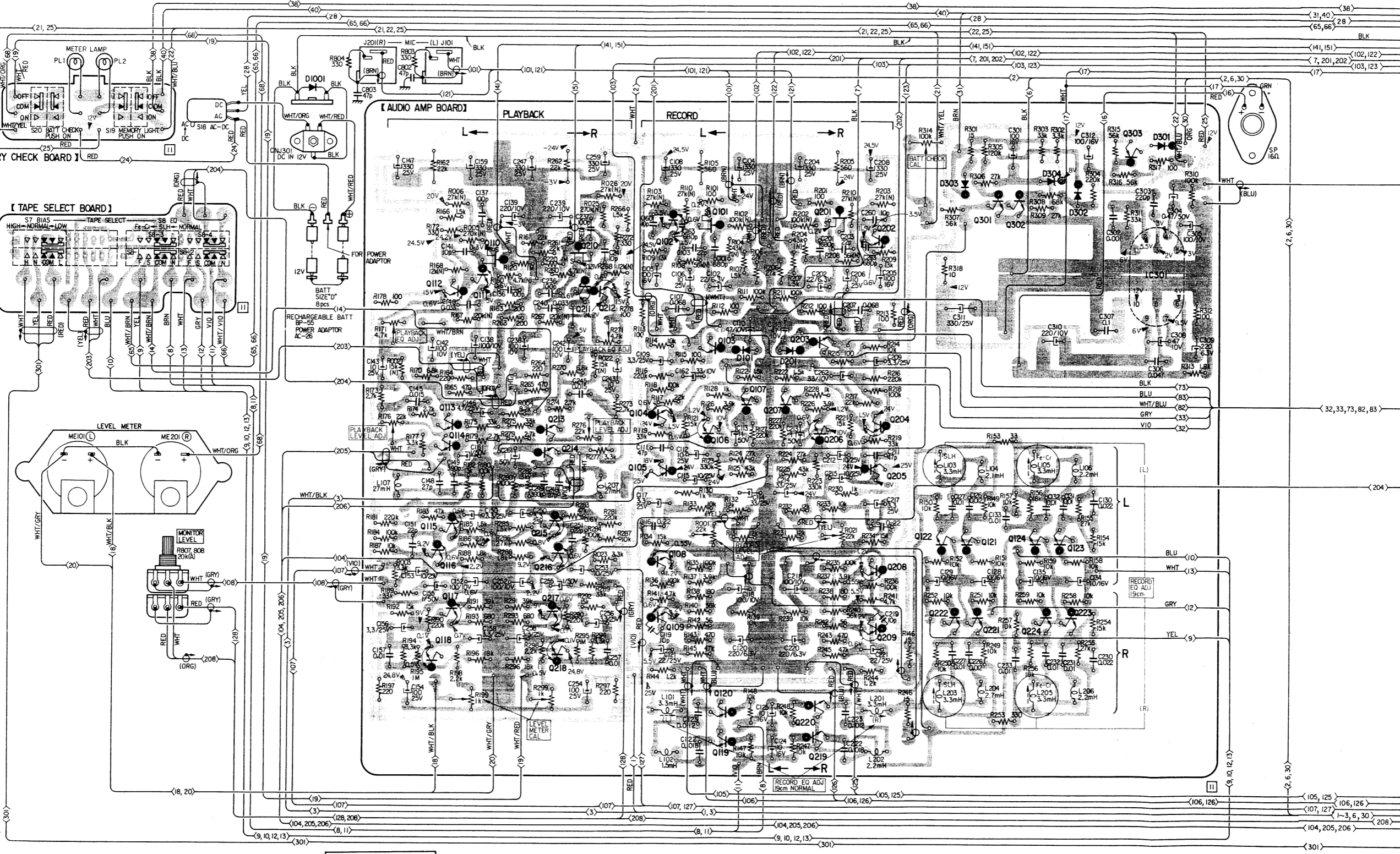
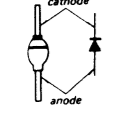
D304 : MZ08



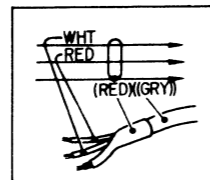
03 : 1T40



D1001 : U05E

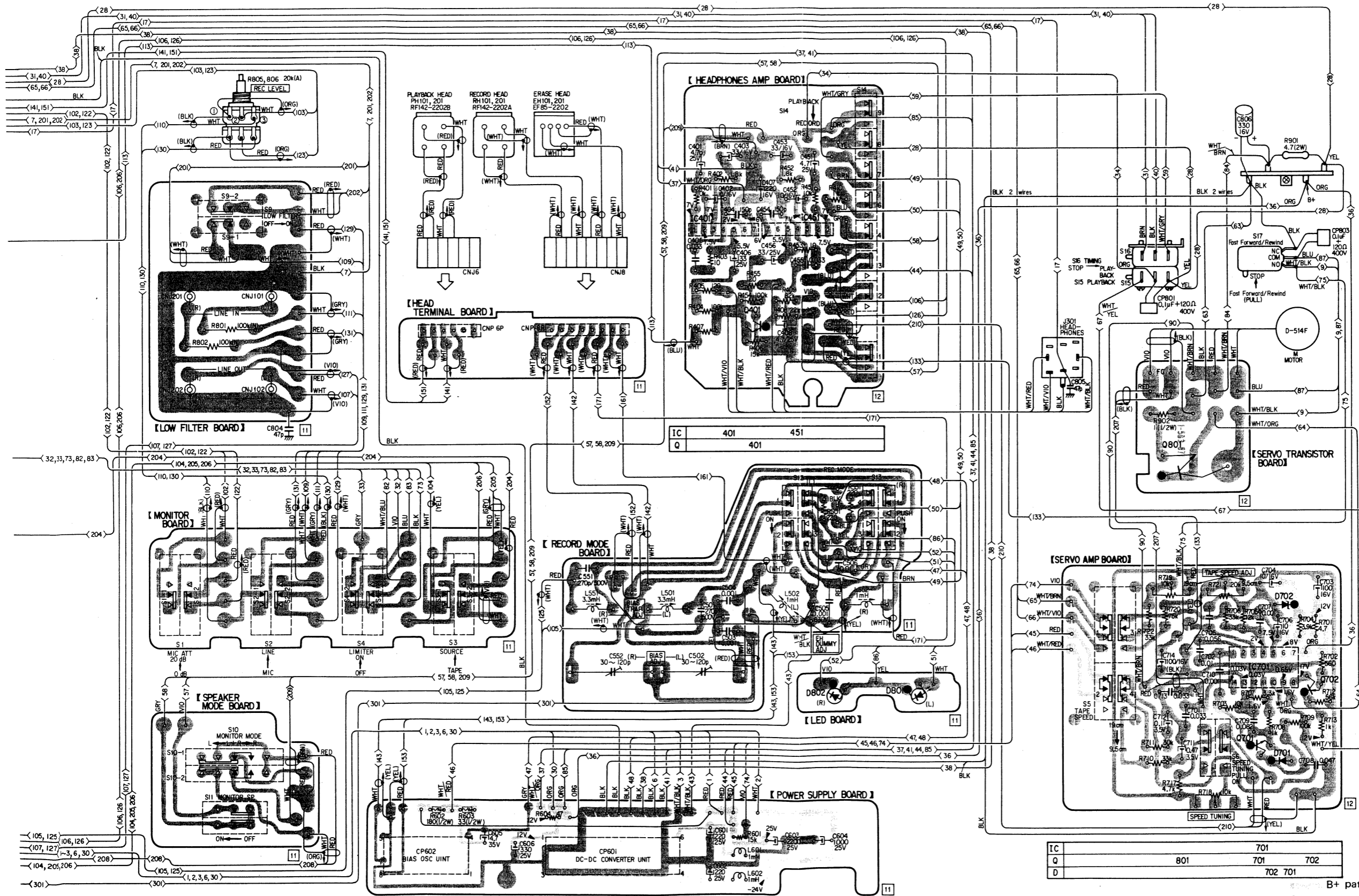


B+ pattern  
B- pattern

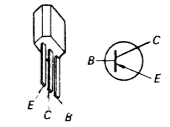


TC-510-2 TC-510-2

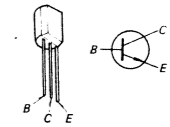
3-2. MOUNTING DIAGRAM (2)  
— Conductor Side —



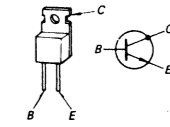
Q702: 2SA677



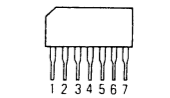
Q401, 701: 2SC1363



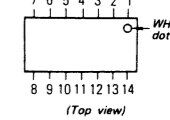
Q801: 2SC1060



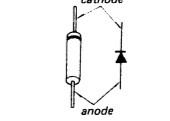
IC401, 451: TA7066P



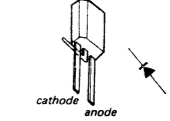
IC701: CX032B



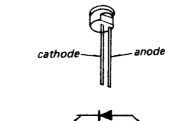
D701: 1T40



D702: MZ08

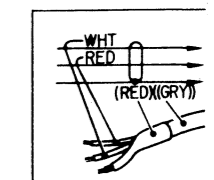


D801, 802: SLP24B



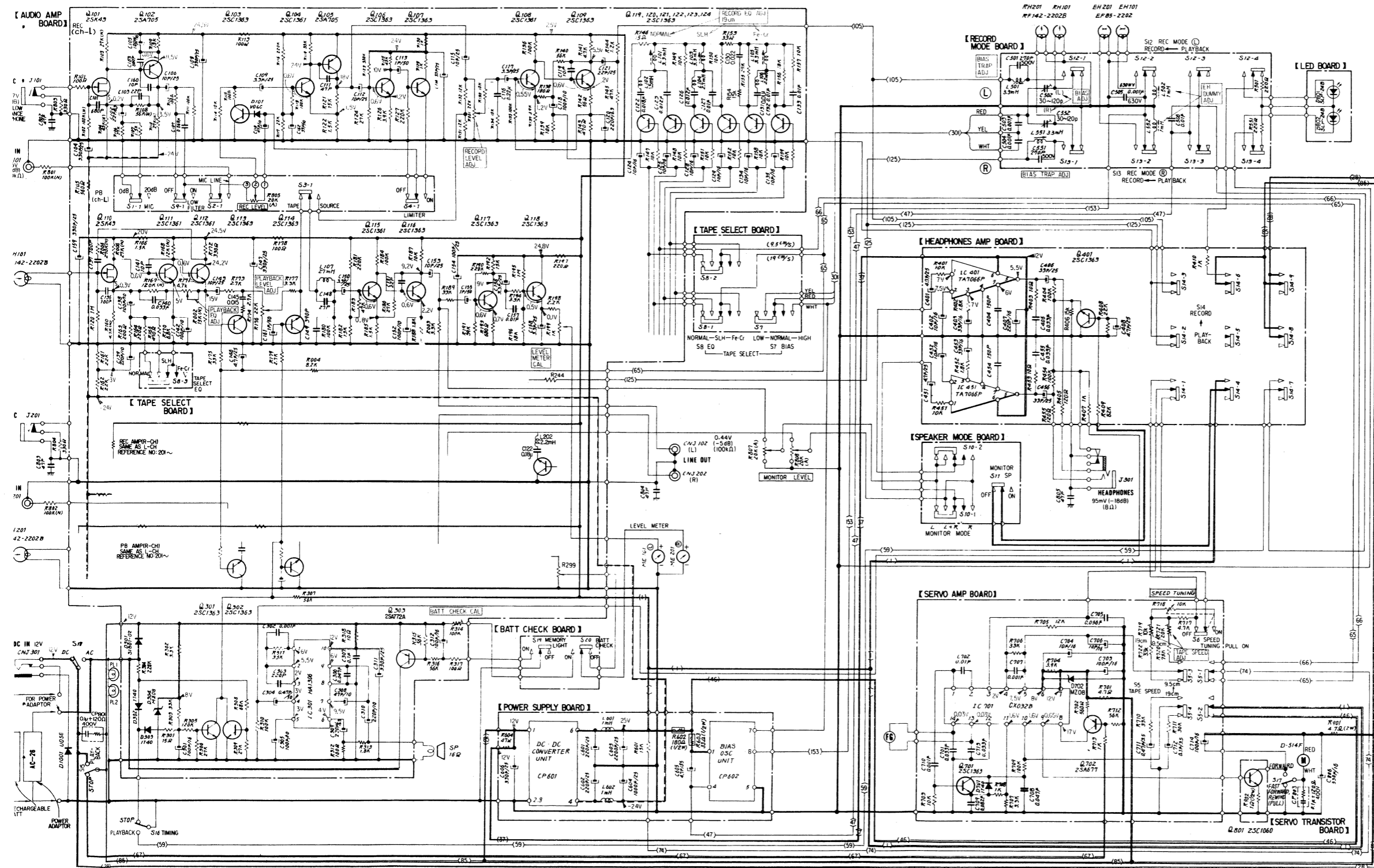
IC		701	
Q	801	701	702
D		702 701	

B+ pattern  
B- pattern



TC-510-2 TC-510-2

3-3. SCHEMATIC DIAGRAM



Note:

- 50 or less working volts are omitted except for electrolytic type.
- $\rho = \mu\text{F}$ ,  $\text{oo}\mu/\text{oo} = \text{oo}\mu\text{FooV}$
- All resistors are in  $\Omega$ ,  $\text{K}$ ,  $\text{W}$ , unless otherwise noted.  $k = 1,000$   $M = 1,000k$
- $\square$  indicates chassis ground.
- $\square$  indicates a low-noise resistor.
- $(N)$  indicates B+ circuit.
- $\square$  indicates B- circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings are taken under no-signal conditions with a VOM (20  $k\Omega/V$ ).
- Voltage variations may be noted due to normal production tolerances.
- Voltage between base and emitter are measured with 2.5 V range.

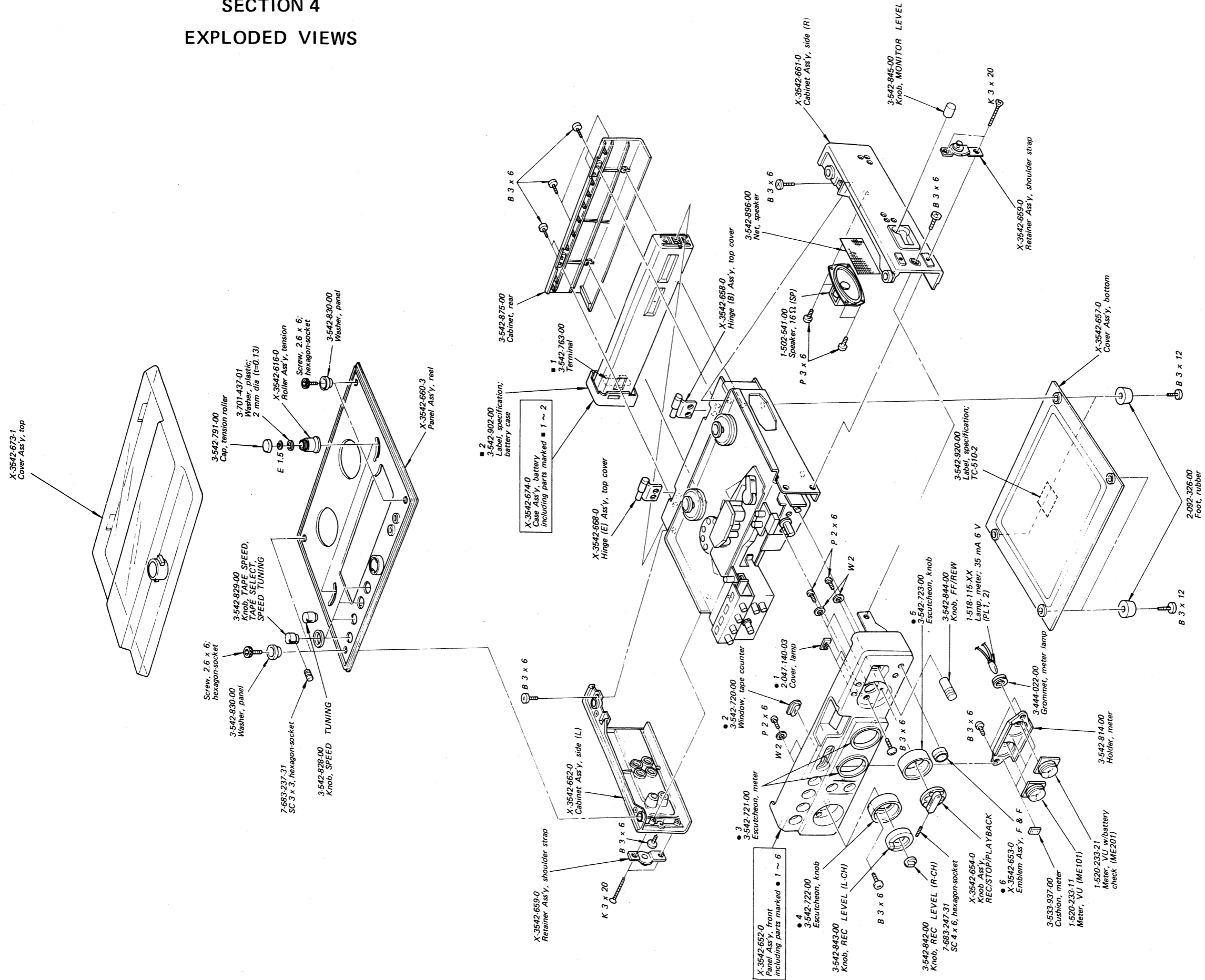
Switch Mode:

Ref. No.	Switch	Position
S1	MIC ATT	0 dB
S2	MIC/LINE	MIC
S3	TAPE/SOURCE	TAPE
S4	LIMITER	OFF
S5	TAPE SPEED	19 cm/s
S6	SPEED TUNING	OFF
S7	TAPE SELECT BIAS	LOW
S8	TAPE SELECT EQ	NORMAL
S9	LOW FILTER	OFF
S10	MONITOR MODE	L-ch
S11	MONITOR SP	OFF
S12	RECORD MODE (L)	playback
S13	RECORD MODE (R)	playback
S14	record/palyback	playback
S15	playback	stop
S16	Timing	stop
S17	Fast Forward/Rewind	stop
S18	ac/dc	dc
S19	MEMORY light	OFF
S20	BATT CHECK	OFF

TC-510-2 TC-510-2

SECTION 4  
EXPLODED VIEWS

4-1.



**Note:**

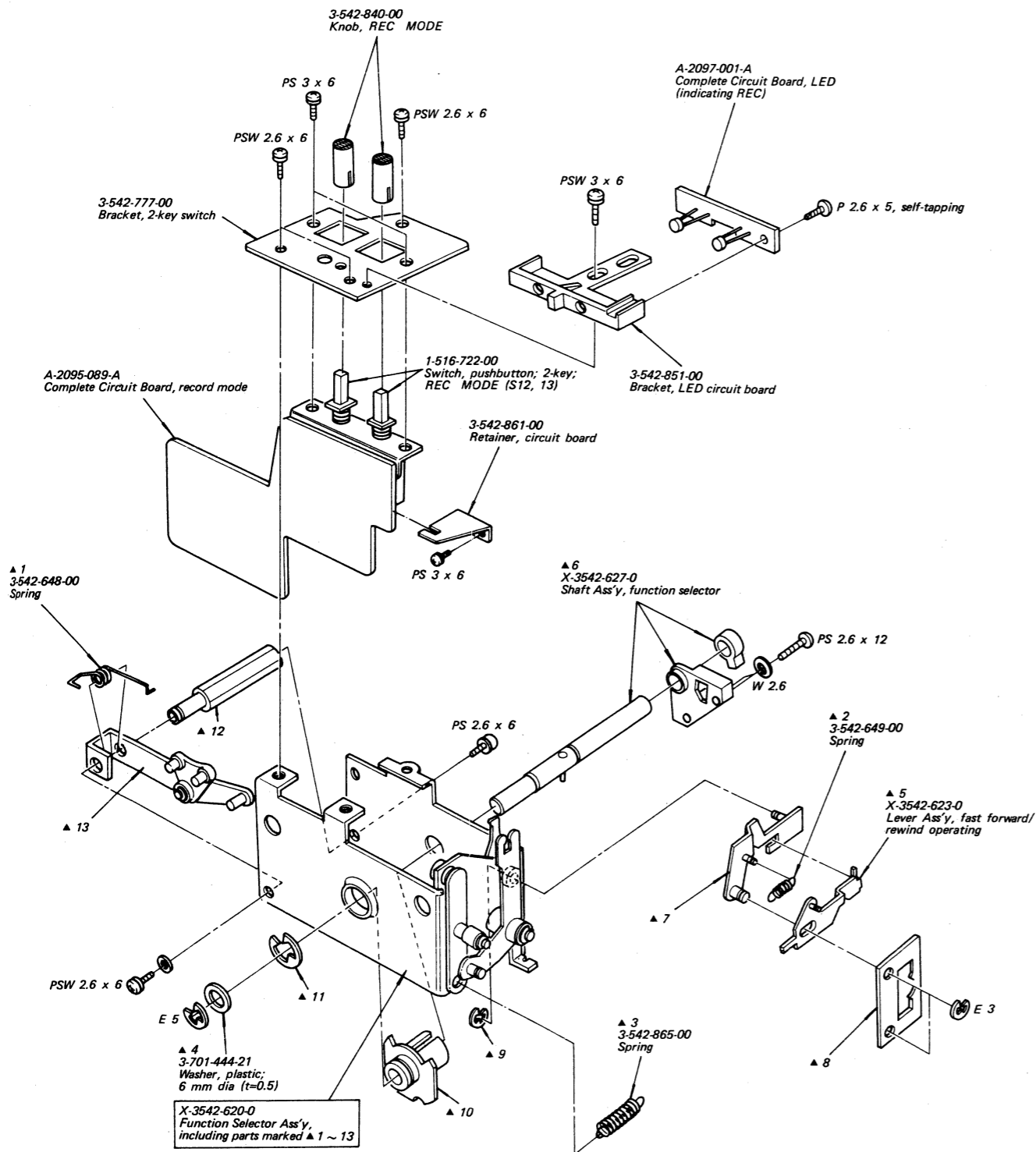
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head





# TC-510-2 TC-510-2

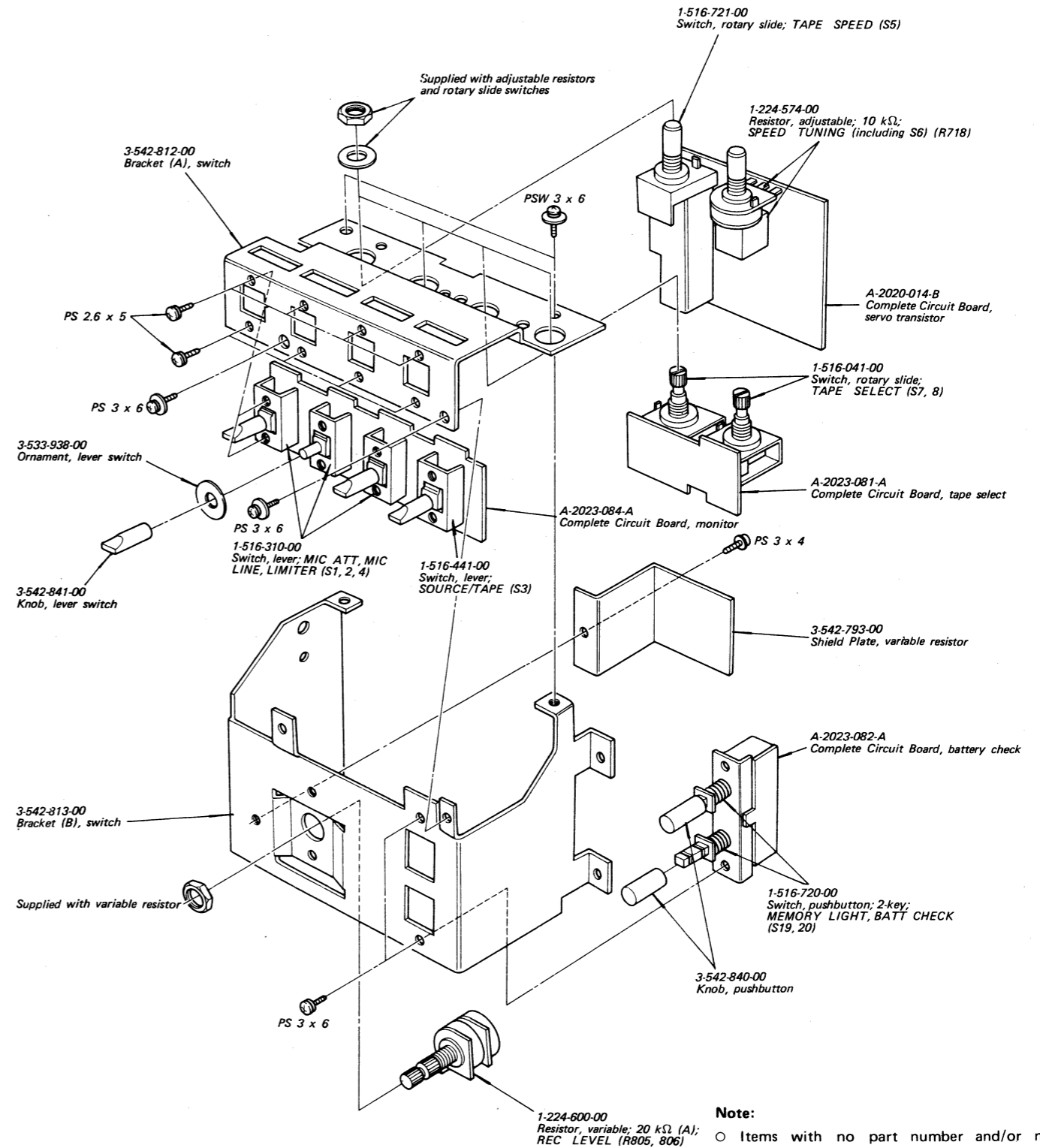
4-3.



**Note:**

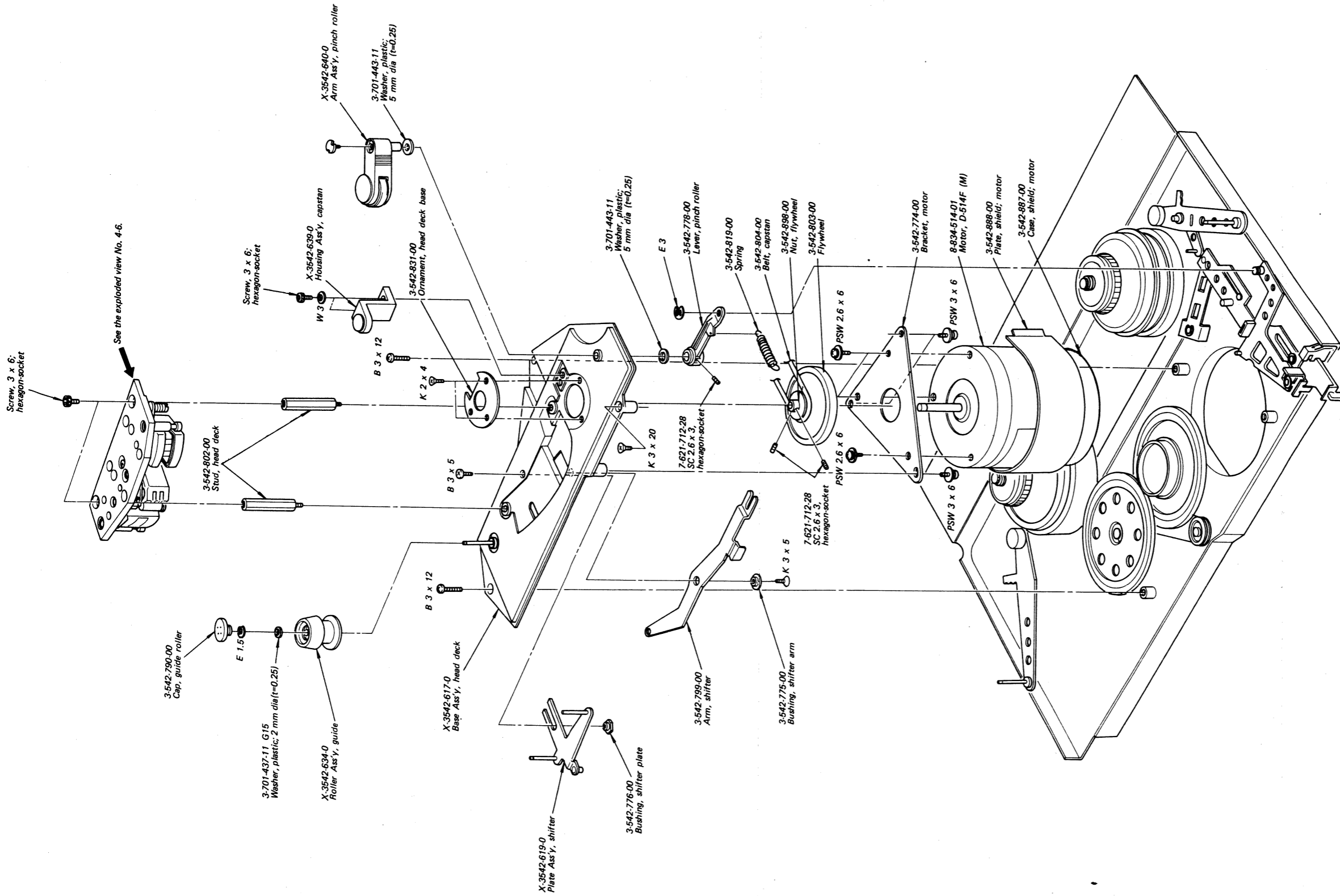
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

4-4.



**Note:**

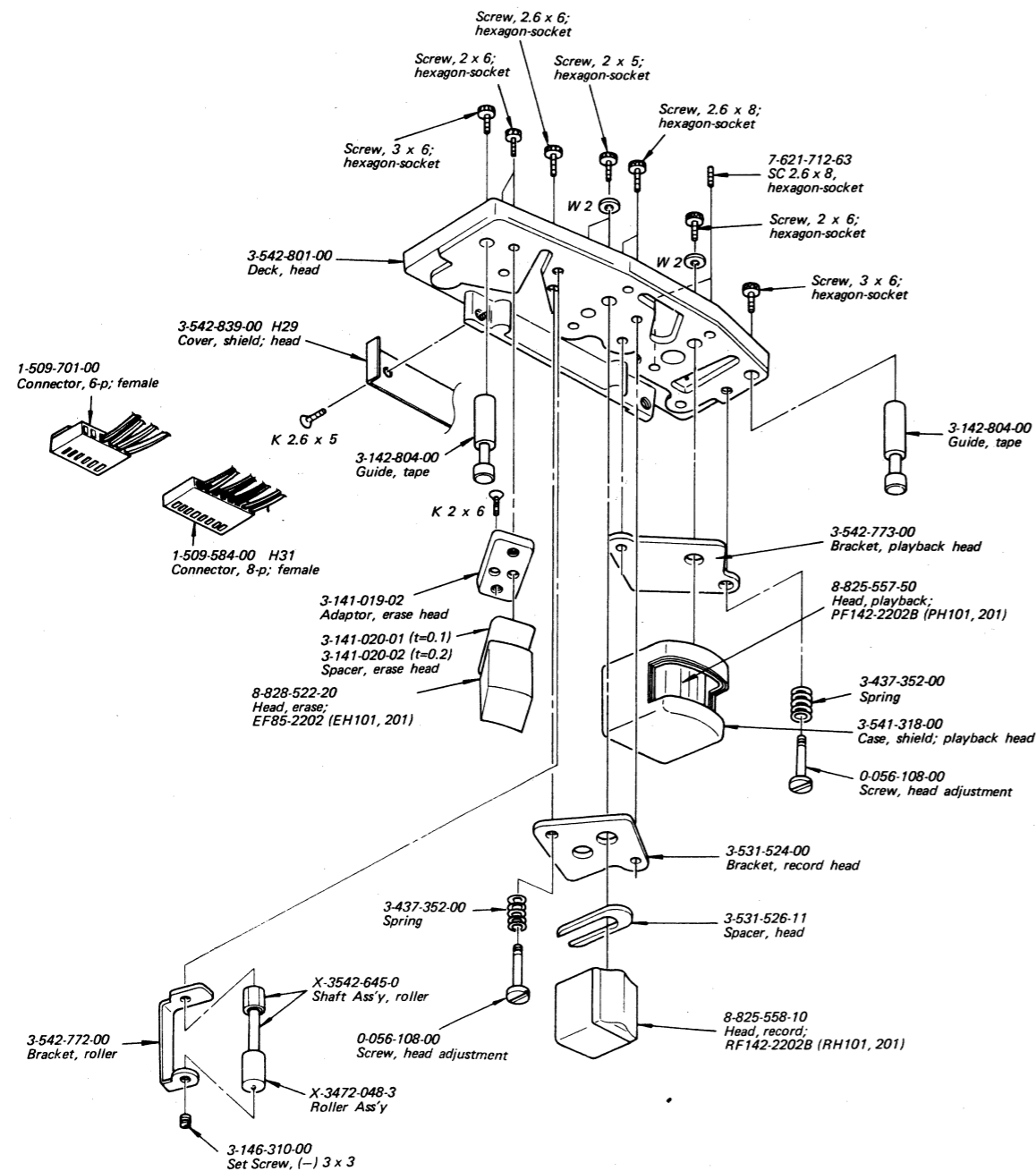
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head



Note:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

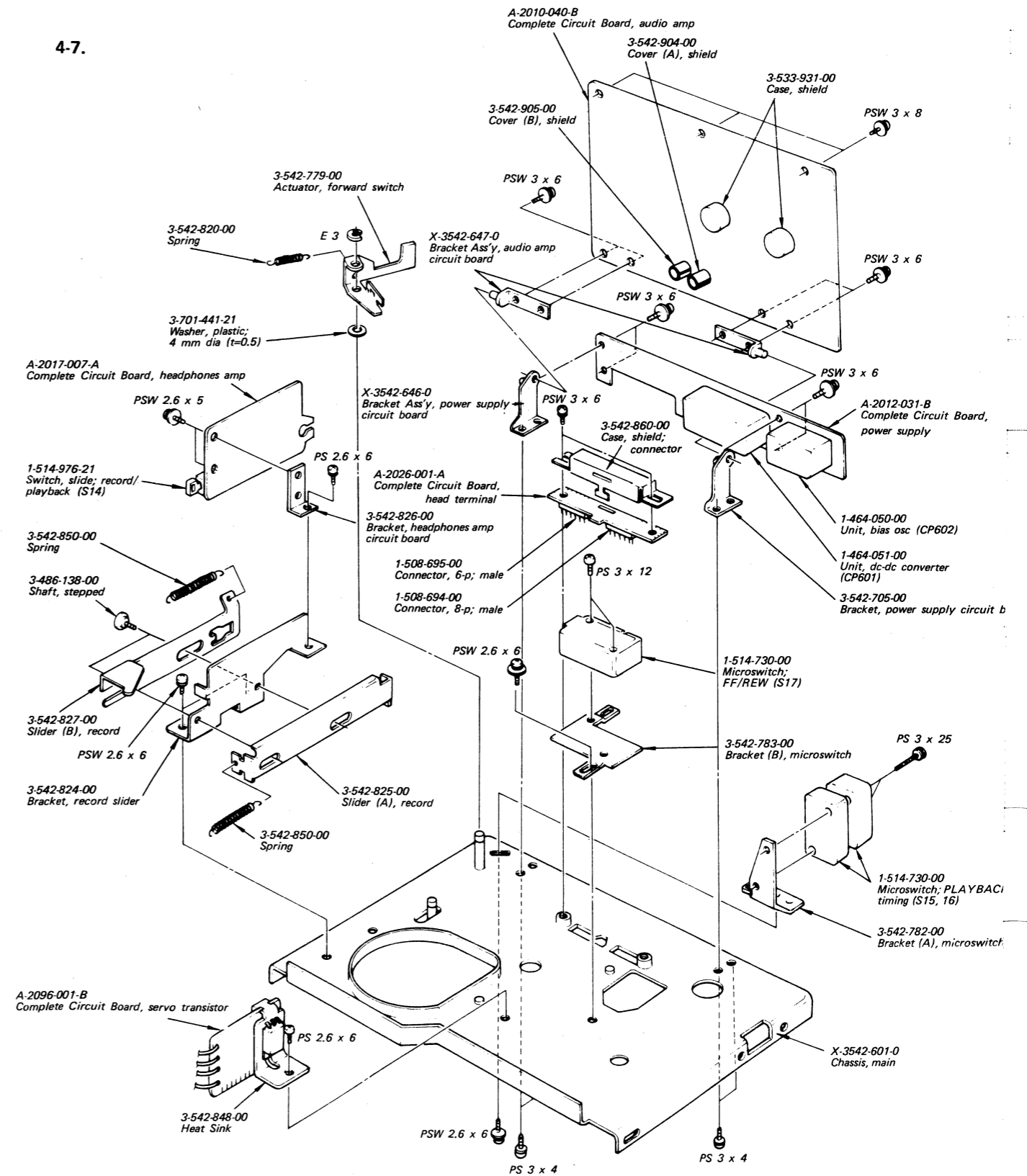
4-6.



**Note:**

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head

4-7.



**Note:**

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
- (-) = slotted head



SECTION 5  
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
<b>COMPLETE CIRCUIT BOARDS</b>			Q801	2SC1060		C102, 202	1-131-190-11	22 6.3 V tantalum	C141, 241	1-107-107-11	10 p silvered mica
A-2010-040-B	Audio Amp			<b>ICs</b>		C103, 203	1-107-115-11	22 p silvered mica	C142, 242	1-121-414-11	100 10 V
A-2012-031-B	Power Supply					C104, 204	1-121-654-11	330 25 V	C143, 243	1-131-238-11	10 25 V tantalum
A-2017-007-A	Headphones Amp		IC301	HA1306		C105, 205	1-121-415-11	100 16 V	C145, 245	1-106-086-12	0.015 mylar
A-2020-014-B	Servo								C146	1-121-395-11	4.7 25 V
A-2023-081-A	Tape Select		IC401, 451	TA7066P		C106, 206	1-131-238-11	10 25 V tantalum	C147, 247	1-121-654-11	330 25 V
A-2023-082-A	Battery Check					C107, 207	1-106-102-12	0.068 mylar	C148, 248	1-107-071-11	27 p silvered mica
A-2023-083-A	Speaker Mode		IC701	CX032B		C108, 208	1-121-654-11	330 25 V	C149, 249	1-102-113-11	390 p ceramic
A-2023-084-A	Monitor			<b>Diodes</b>		C109, 209	1-131-206-11	3.3 25 V tantalum	C150, 250	1-131-206-11	3.3 25 V tantalum
A-2025-019-A	Low Filter					C110, 210	1-121-352-11	47 10 V	C151, 251	1-107-115-11	22 p silvered mica
A-2026-001-A	Head Terminal		D101, 201	VO6C		C111, 211	1-107-123-11	47 p silvered mica	C152, 252	1-121-414-11	100 10 V
A-2095-089-A	Record Mode					C112, 212	1-121-398-11	10 25 V	C153, 253	1-131-238-11	10 25 V tantalum
A-2096-001-B	Servo Transistor		D301	SIB01-02		C113, 213	1-121-391-11	1 50 V	C154, 254	1-121-416-11	100 25 V
A-2097-001-A	LED		D302, 303	IT40		C114, 214	1-121-404-11	33 25 V	C155, 255	1-121-391-11	1 50 V
			D304	MZ08		C115, 215	1-131-238-11	10 25 V tantalum	C156, 256	1-121-392-11	3.3 25 V
						C116, 216	1-106-114-12	0.22 mylar			
			D701	IT40		C117, 217	1-121-392-11	3.3 25 V	C157, 257	1-106-082-12	0.01 mylar
			D702	MZ08		C118, 218	1-121-414-11	100 10 V	C158, 258	1-121-392-11	3.3 25 V
						C119, 219	1-107-107-11	10 p silvered mica	C159, 259	1-121-654-11	330 25 V
Q101, 201	2SK43 (FET)		D801, 802	SLP24B		C120, 220	1-121-419-11	220 6.3 V	C160, 260	1-107-107-11	10 p silvered mica
Q102, 202	2SA705					C121, 221	1-121-408-11	22 25 V	C161, 261	1-121-391-11	1 50 V
Q103, 203	2SC1363		D1001	U05E		C122, 222	1-106-031-12	0.018 mylar	C162, 262	1-121-402-11	33 10 V
Q104, 204	2SC1361					C123, 223	1-106-027-12	0.012 mylar	C163, 263	1-102-116-11	680 p ceramic
Q105, 205	2SA705			<b>COILS</b>		C124, 224	1-121-651-11	10 16 V			
						C125, 225	1-121-651-11	10 16 V	C301	1-121-971-11	100 16 V
Q106, 206	2SC1363		L101, 201	1-407-270-00	3.3 mH, variable inductor				C302	1-106-058-12	0.001 mylar
Q107, 207	2SC1361		L102	1-407-494-21	1.5 mH, microinductor				C303	1-107-139-11	220 p silvered mica
Q108, 208	2SC1363		L202	1-407-198-XX	2.2 mH, microinductor	C126, 226	1-106-027-12	0.012 mylar	C304	1-121-726-11	0.47 50 V
Q109, 209	2SC1363		L103, 203	1-407-270-00	3.3 mH, variable inductor	C127, 227	1-106-025-12	0.01 mylar	C305	1-121-414-11	100 10 V
Q110, 210	2SK43 (FET)		L104, 204	1-407-199-XX	2.7 mH, microinductor	C128, 228	1-121-651-11	10 16 V			
						C129, 229	1-121-651-11	10 16 V	C306	1-106-098-12	0.047 mylar
Q111, 211	2SC1361		L105, 205	1-407-270-00	3.3 mH, variable inductor	C130, 230	1-106-033-12	0.022 mylar	C307	1-106-106-12	0.1 mylar
Q112, 212	2SC1361		L106, 206	1-407-198-XX	2.2 mH, microinductor	C131, 231	1-106-025-12	0.01 mylar	C308	1-121-352-11	47 10 V
			L107, 207	1-407-593-00	27 mH, microinductor	C132, 232	1-106-025-12	0.01 mylar	C309	1-121-419-11	220 6.3 V
Q113, 213	2SC1363					C133, 233	1-106-025-12	0.01 mylar	C310	1-121-420-11	220 10 V
Q114, 214	2SC1361		L501, 551	1-407-270-00	3.3 mH, variable inductor	C134, 234	1-121-651-11	10 16 V			
Q115, 215	2SC1361		L502, 552	1-407-284-00	1 mH, variable inductor	C135, 235	1-121-651-11	10 16 V	C311	1-121-654-11	330 25 V
			L601, 602	1-407-195-XX	1 mH, microinductor				C312	1-121-971-11	100 16 V
Q116 ~ 124	2SC1363										
Q216 ~ 224	2SC1363										
Q301, 302	2SC1363										
Q303	2SA772										
Q401	2SC1363										
Q701	2SC1363		C101, 201	1-102-116-11	680 p ceramic						
Q702	2SA677										

All capacitors are in  $\mu\text{F}$  and of electrolytic unless otherwise noted. (p= $\mu\text{F}$ ) 50 or less working volts are omitted except for electrolytic type.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
C405, 455	1-105-679-12	0.033	mylar
C406, 456	1-121-404-11	33 25 V	
C407	1-121-421-11	220 16 V	
C408	1-121-395-11	4.7 25 V	
C501, 551	1-107-179-11	270 p 500 V	silvered mica
C502, 552	1-141-034-00	30 ~ 120 p	trimmer
C503, 504	1-105-501-12	0.001	mylar
C505	1-129-702-11	0.001 630 V	plastic
C506	1-105-673-12	0.01	mylar
C601, 602	1-121-422-11	220 25 V	
C603	1-123-047-11	2200 25 V	
C604	1-121-657-11	1000 25 V	
C605	1-131-219-11	4.7 35 V	tantalum
C606	1-121-654-11	330 25 V	
C701	1-105-679-12	0.033	mylar
C702	1-105-673-12	0.01	mylar
C703	1-121-415-11	100 16 V	
C704	1-121-561-11	10 16 V	
C705	1-108-908-12	0.056	mylar
C706	1-121-651-11	10 16 V	
C707	1-105-661-12	0.001	mylar
C708	1-106-098-12	0.047	mylar
C709	1-106-104-12	0.082	mylar
C710	1-105-661-12	0.001	mylar
C711	1-131-213-11	0.47 3.5 V	tantalum
C712	1-131-209-11	0.1 3.5 V	tantalum
C713	1-105-679-12	0.033	mylar
C714	1-121-415-11	100 16 V	
C802 ~ 805	1-107-123-11	47 p	silvered mica
C806	1-121-521-11	330 16 V	

**RESISTORS**

All resistors are in ohms. Regular-type 1/4W carbon resistors are omitted. Check schematic diagram for resistance values.  
k = 1000, M = 1000 k

R001, 021	1-224-253-00	22 k	adjustable
R171, 271	1-224-251-00	4.7 k	adjustable

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
R176, 276	1-224-253-00	22 k	adjustable
R199, 299	1-224-249-00	1 k	adjustable
R314	1-222-777-00	100 k	adjustable
R602	1-217-449-11	180 1/2 W	fuse
R603	1-217-440-11	33 k 1/2 W	fuse
R718	1-224-574-00	10 k	adjustable; SPEED TUNING (including S6)
R719	1-224-574-00	10 k	adjustable
R721	1-221-630-00	20 k	adjustable
R805, 806	1-224-600-00	20 k (A)	variable, REC LEVEL
R807, 808	1-222-596-00	20 k (A)	variable, MONITOR LEVEL
R901	1-206-455-11	4.7 2 W	metal-oxide
R902	1-244-801-11	1 1/2 W	carbon

**SWITCHES**

S1, 2	1-516-310-00	Lever, MIC ATT, MIC LINE
S3	1-516-441-00	Lever, SOURCE, TAPE
S4	1-516-310-00	Lever, LIMITER
S5	1-516-721-00	Rotary Slide, TAPE SPEED
S6		included in R718 (SPEED TUNING)
S7, 8	1-516-041-00	Rotary Slide, TAPE SELECT
S9, 10	1-514-448-00	Slide, LOW FILTER/MONITOR MODE
S11	1-514-635-00	Slide, MONITOR SP
S12, 13	1-516-722-00	Pushbutton, 2-key; REC MODE
S14	1-514-976-21	Slide, RECORD/PLAYBACK
S15 ~ 18	1-514-730-00	Microswitch, PLAYBACK/timing FF/REW/ac/dc
S19, 20	1-516-720-00	Pushbutton, 2-key; MEMORY LGHT/ BATT CHECK

**JACKS**

CNJ101, 201	1-536-352-00	Phono, 4-p; LINE IN/LINE OUT
CNJ102, 202		

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
CNJ301	1-507-127-00	DC IN 12 V
J101, 201	1-507-376-00	Phone, MIC
J301	1-507-355-00	Binaural, HEADPHONES

**CONNECTORS**

1-508-694-00	8-p, male
1-508-695-00	6-p, male
1-509-584-00	8-p, female
1-509-701-00	6-p, female

**HEADS**

EH101, 201	8-828-522-20	Erase, EF85-2202
PH101, 201	8-825-557-50	Playback, PF142-2202B
RH101, 201	8-825-558-10	Record, RF142-2202B

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
<b>MISCELLANEOUS</b>		
CP601	1-464-051-00	Unit, dc-dc converter
CP602	1-464-050-00	Unit, bias osc
CP801, 803	1-101-534-31	Encapsulated Component
M	8-834-514-01	Motor, D-514F
ME101	1-520-233-11	Meter, VU
ME201	1-520-233-21	Meter, VU w/battery check
PL1,2	1-518-115-XX	Lamp, meter; 35 mA 6 V
SP	1-502-541-00	Speaker, 16 $\Omega$
	1-535-056-00	Pin, terminal
	1-536-395-00	Terminal Strip, 1L1
	1-536-398-00	Terminal Strip, 2L2

**ACCESSORIES**

<u>Part No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Description</u>
X-3701-018-1	Cleaning Tips	3-793-010-20	Booklet, tape talk
1-528-022-00	Battery, "D" type	3-793-711-01	Card, caution
1-534-049-31	Cord, connection; RK-74	3-793-827-01	Card, caution; function knob
3-533-950-00	Strap, shoulder	8-860-105-00	Reel, R-5A
3-780-859-11	Manual, instruction		