SPECIFICATIONS

Power Requirements: 110, 120, 220, 240V ac, 50/60 Hz

Power Consumption: 35W

Dimensions: Approx. 430 (w) x 170 (h) x 310 (d) mm
17 (w) x 6¾ (h) x 12¼ (d) inches
Including projecting parts and controls

Weight: Approx. 10 kg, 22 lb 1 oz

Track: 4-track 2-channel stereo

Fast Forward and Rewind Time: Approx. 70 seconds with Sony cassette C-60

Frequency Response:
DOLBY NR OFF
With Ferri-Chrome cassette
20–18,000 Hz (NAB)
30–16,000 Hz ± 3 dB (NAB)
30–16,000 Hz (DIN)
With chromium dioxide cassette
20–17,000 Hz (NAB)
30–15,000 Hz ± 3 dB (NAB)
30–15,000 Hz (DIN)
With regular cassette
20–15,000 Hz (NAB)
30–13,000 Hz (DIN)

Wow and Flutter: 0.045% WRMS (NAB), ± 0.12% (DIN)

S/N Ratio:
DOLBY NR OFF
With Ferri-Chrome cassette
60 dB at peak level (NAB)
59 dB (DIN, 1975 rev.)
51 dB (DIN, old)
With chromium dioxide cassette
56 dB at peak level (NAB)
DOLBY NR ON
Improved by 5 dB at 1 kHz, 10 dB above 5 kHz

Total Harmonic Distortion: 1.3%

Record Bias Frequency: 105 kHz

Inputs:
MIC (two phone jacks)
Sensitivity: 0.2 mV (–72 dB)
for low-impedance microphone
LINE IN (stereo binaural jack, two phono jacks)
Sensitivity: 0.06V (–22 dB)
Impedance: 100 kΩ

— Continued on page 2 —

SERVICE MANUAL

Outputs: LINE OUT (two phono jacks)
Normal level: 0.775 V (0 dB)
Load impedance: 100 kΩ
with LINE OUT level control at "10"
suitable load impedance more than 10 kΩ
HEADPHONES (binaural jack)
output level 3.9 mV to 0.12 V (–46 to –16 dB)
at load impedance 8Ω

Record/playback jack: Input impedance less than 10 kΩ
Output impedance less than 10 kΩ

Remote control connector: 11-pin connector

0 dB = 0.775V

MODEL IDENTIFICATIONS

— Specification Label —

AEP, E model

TC-K7II

SONY

TAPECORDER TC-K7II
110,120,220,240V~50/60Hz 35W
NO.
MADE IN JAPAN

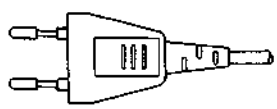
TC-K7BII

SONY

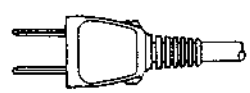
TAPECORDER TC-K7BII
110,120,220,240V~50/60Hz 35W
NO.
MADE IN JAPAN

— Power Cord —

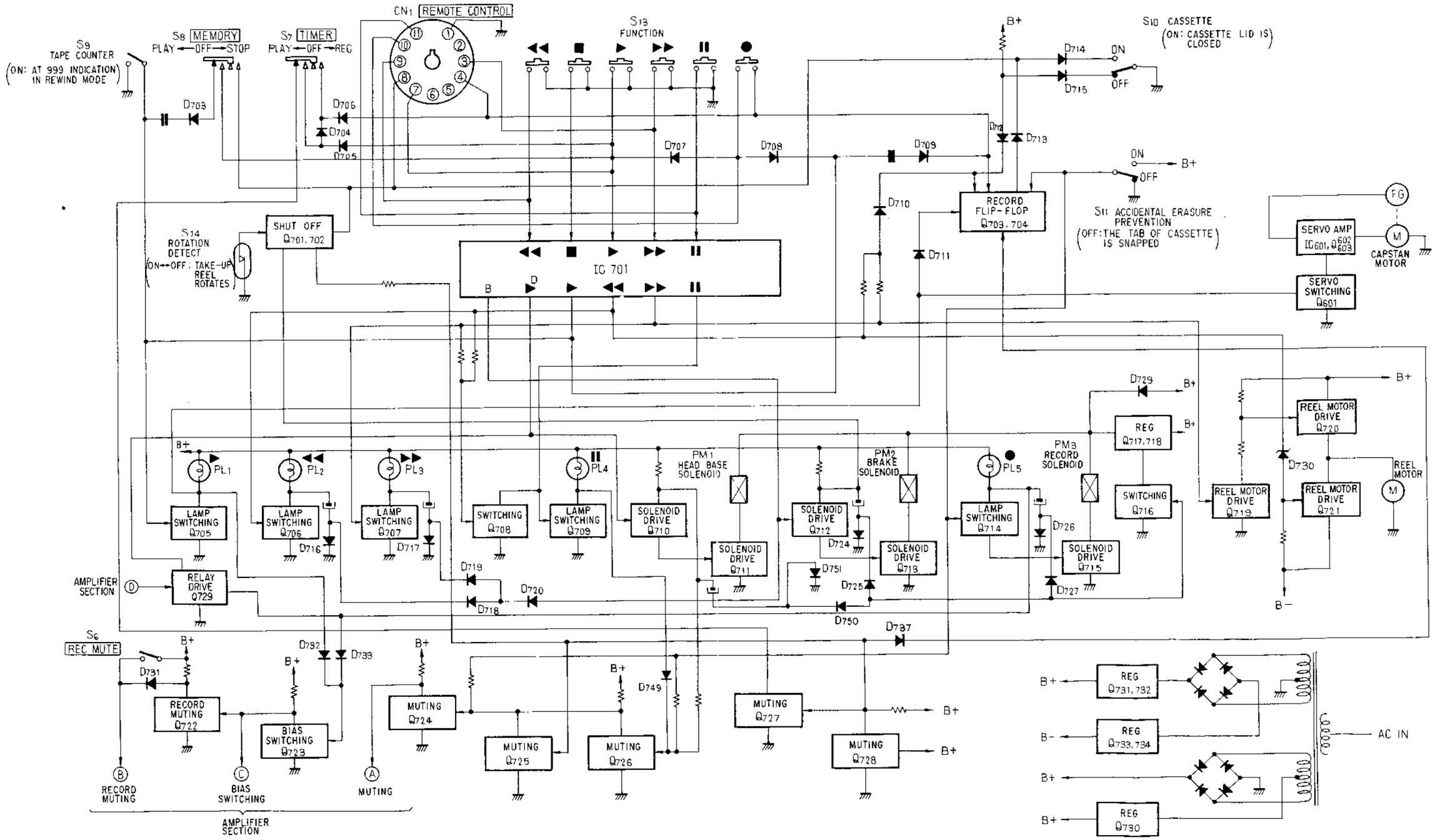
E model: euro-plug (Part No. 1-551-216-00)



E model: parallel blade plug (Part No. 1-534-754-00)



1-2. BLOCK DIAGRAM – System Control Section –

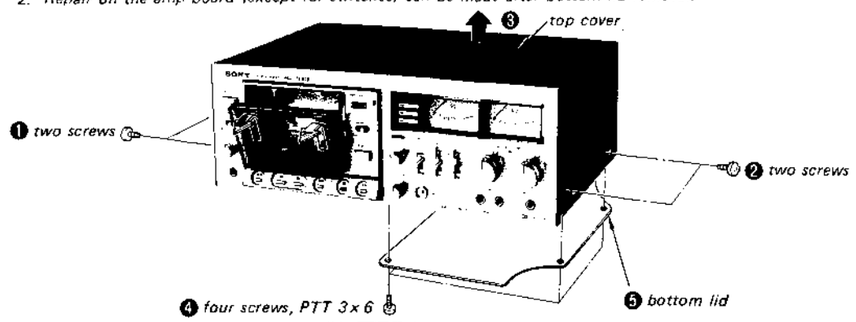


SECTION 2
DISASSEMBLY

Note: Remove the parts in the numerical order.

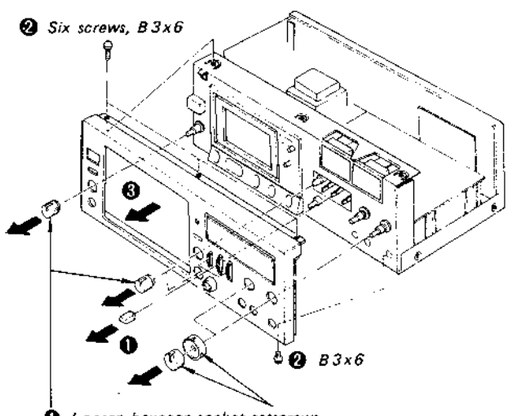
TOP COVER AND BOTTOM LID REMOVAL

Note: 1. *Checkouts on the amp, system control and servo amp boards can be made after top cover removal.*
2. *Repair on the amp board (except for switches) can be made after bottom lid removal.*

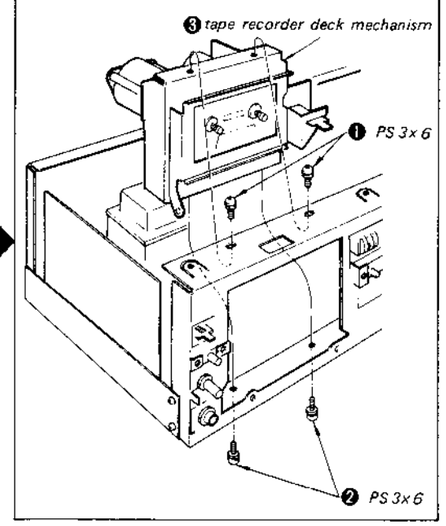


FRONT PANEL REMOVAL

Note: *Replacements of jacks and variable resistors can be made after front panel removal.*

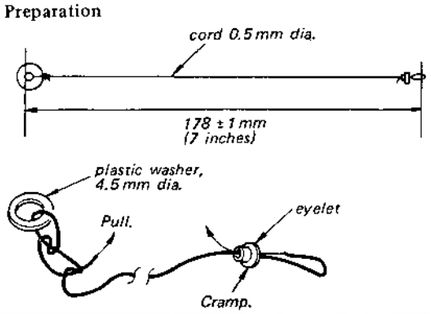


TAPE RECORDER DECK REMOVAL

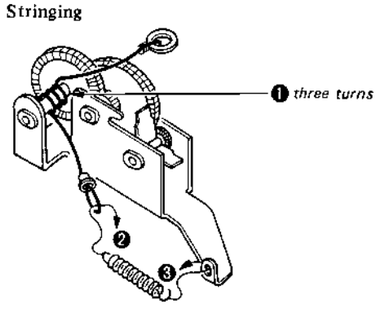


STRINGING OF CASSETTE LID DAMPER

1. Preparation



2. Stringing



SECTION 3
ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

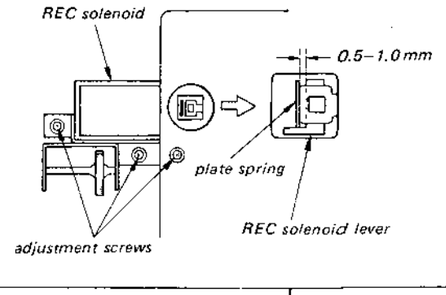
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply a suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

3-1. MECHANICAL ADJUSTMENTS

Record Solenoid Position Adjustment

Adjust the record solenoid position to obtain the specified clearance between plate spring and record solenoid lever.

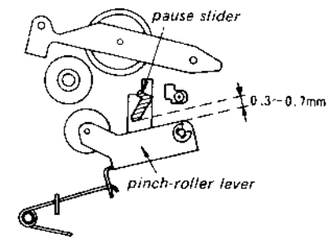


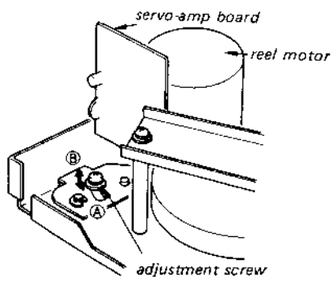
Pause Lever Position Adjustment

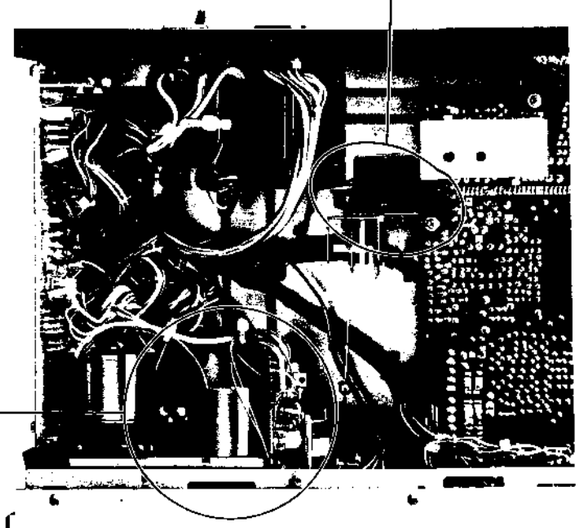
– PAUSE mode –

Loosen the adjustment screw and slide it in the direction Ⓐ or Ⓑ to obtain the specified clearance as shown below.

Sliding direction of adjustment screw	Interval
direction Ⓐ	narrow
direction Ⓑ	wide



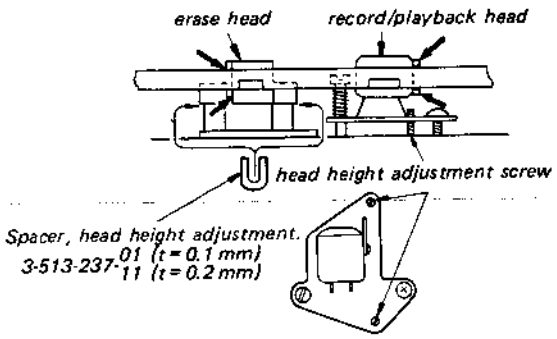




Tape Path Adjustment

– playback mode –

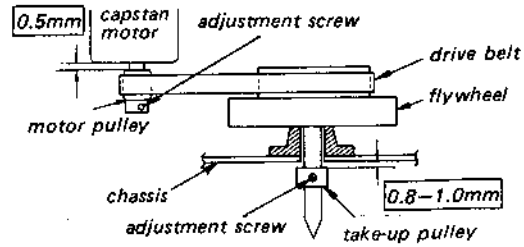
1. Adjust erase head height by adding or removing spacer to eliminate tape curl at the erase head.
2. Adjust record/playback head height adjustment screw to eliminate tape curl at the record/playback head.

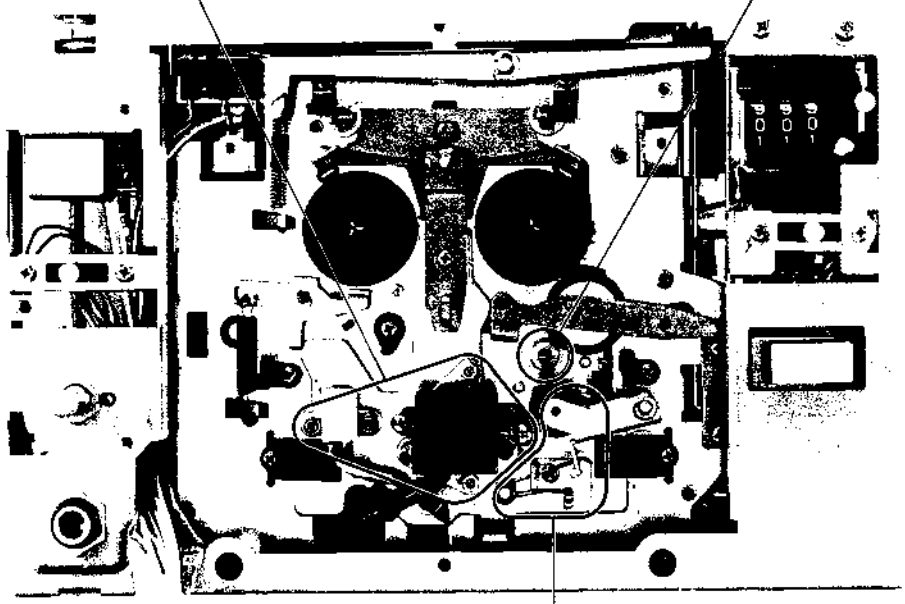


Pulley Height Adjustment

– stop mode –

Adjust position of capstan motor pulley and take-up pulley to obtain the specified clearances as shown below.

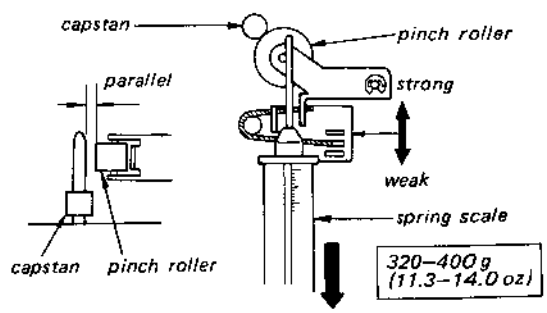




Pinch Roller Pressure Adjustment

– playback mode –

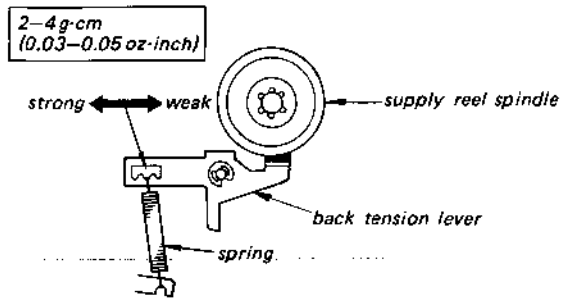
1. Pull the spring scale.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts to rotate.
3. If necessary, change the hooking position.



Forward Back Tension Torque Adjustment

– playback mode –

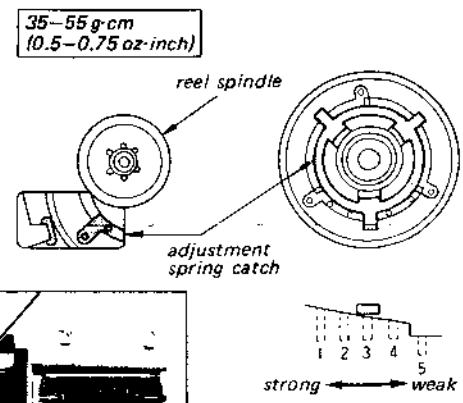
1. Place the type CQ-101 cassette torque meter in the set.
2. Adjust the spring-hook position to obtain the specified torque.

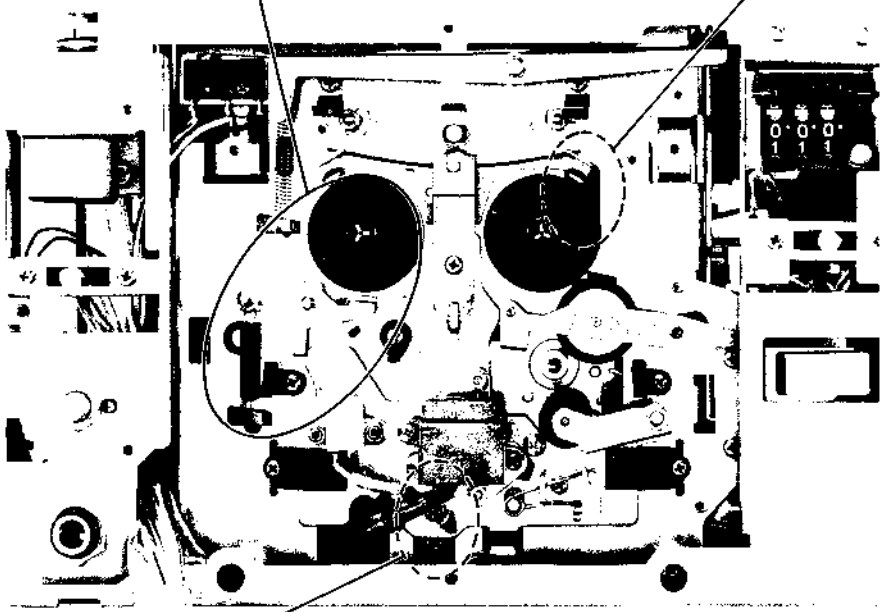


Forward Torque Adjustment

– playback mode –

1. Place the type CQ-101 cassette torque meter in the set.
2. Adjust the position of the adjustment spring catch using a suitable pin and turning the reel spindle to obtain the specified torque.

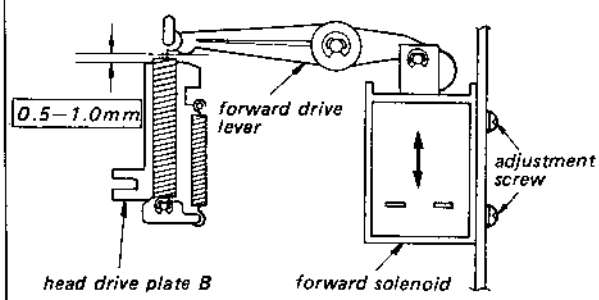




Forward Solenoid Position Adjustment

– playback mode –

Adjust the position of the forward solenoid to obtain the indicated clearance between the forward drive lever and head drive plate B.



Fast Forward and Rewind Torque Measurement

Use type CQ-201 cassette torque meter.

Fast Forward Torque:	75–130 g·cm (1.1–1.8 g·cm)
Rewind Torque:	75–130 g·cm (1.1–1.8 g·cm)

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.

Test Equipment/Tools Required:

audio oscillator (af osc)
VTVM
digital frequency counter
speed checker SONY LFM-30
oscilloscope
attenuator (600 Ω)
non-magnetic screwdriver
resistors ... 600 Ω (1/4 W), 10 kΩ (1/4 W), 100 kΩ (1/4 W)
blank tapes (completely erased with bulk eraser)
SONY CS-10 (HF), CS-20 (CrO_2), CS-30 (Fe-Cr)

BIAS and EQ switch settings in accordance with tape used are as follows.

Tape	BIAS switch	EQ switch
CS-10	NORMAL	NORMAL
CS-20	HIGH	CrO_2
CS-30	NORMAL	Fe-Cr

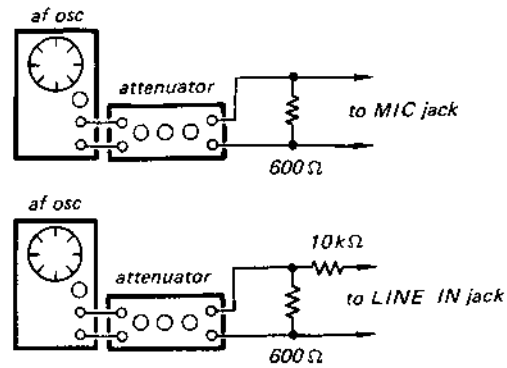
SONY test tapes
P-4-A81S (6.3 kHz, −10 dB)
P-4-A82 (10 kHz, −10 dB)
P-4-L81 (333 Hz, 0 dB)
WS-48 (3 kHz, 0 dB)

Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF
LINE OUT control: MAX
EQ switch: NORMAL
BIAS switch: NORMAL
HEADPHONE LEVEL: MAX
TIMER switch: OFF
MEMORY switch: OFF
LIMITER switch: OFF
REC MUTE switch: OFF

Test Equipment Connections:

Input side:



Standard Record:

Deliver the standard input signal level to the input jack and set the MIC or LINE control to obtain the standard output signal level. Set the LINE control to MIN when MIC is used or set MIC control to MIN when LINE IN is used.

Standard Input Level

	MIC	LINE IN
source impedance	300Ω	10 kΩ
input level	0.77 mV (−60 dB)	0.25 V (−10 dB)

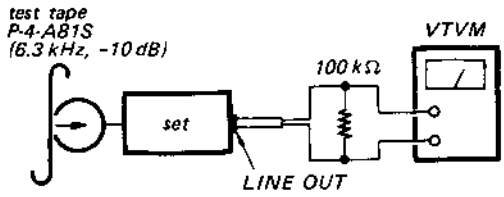
Standard Output Level

	LINE OUT	HEADPHONES
load impedance	100 kΩ	8Ω
output level	0.775 V (0 dB)	0.12 V (−16 dB)

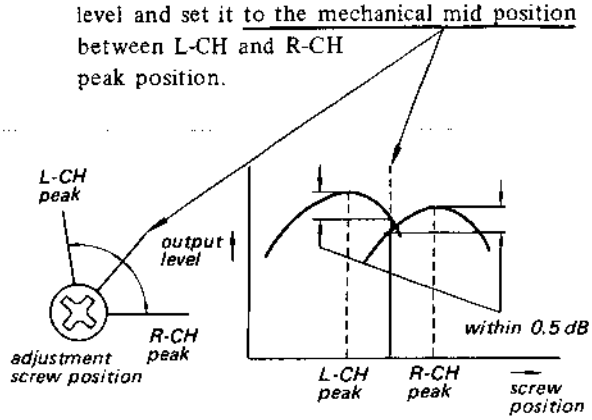
Record/playback Head Azimuth Adjustment

Procedure:

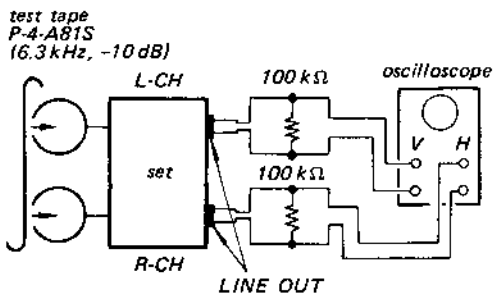
1. Mode: Playback

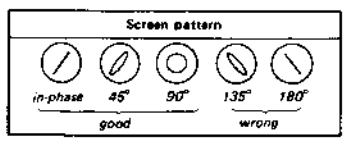


2. Turn the adjustment screw for the maximum level and set it to the mechanical mid position between L-CH and R-CH peak position.

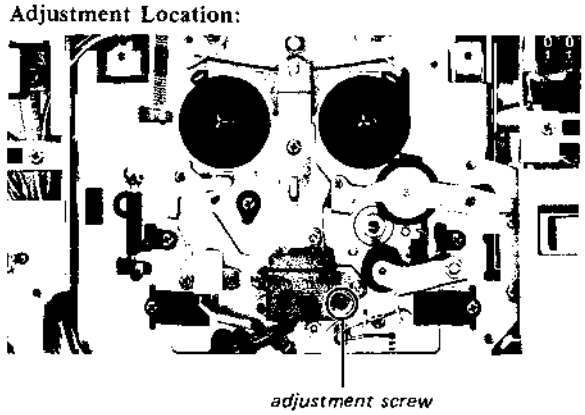


3. Mode: Playback





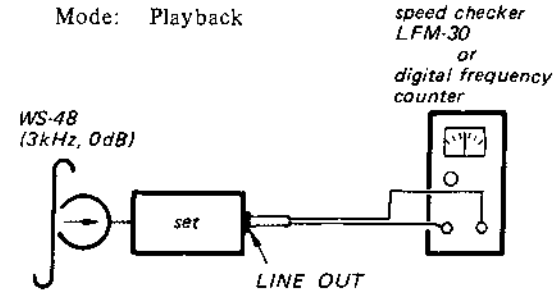
Adjustment Location:



Tape Speed Adjustment

Procedure:

Mode: Playback



Adjust RV601 to obtain the specified values below.

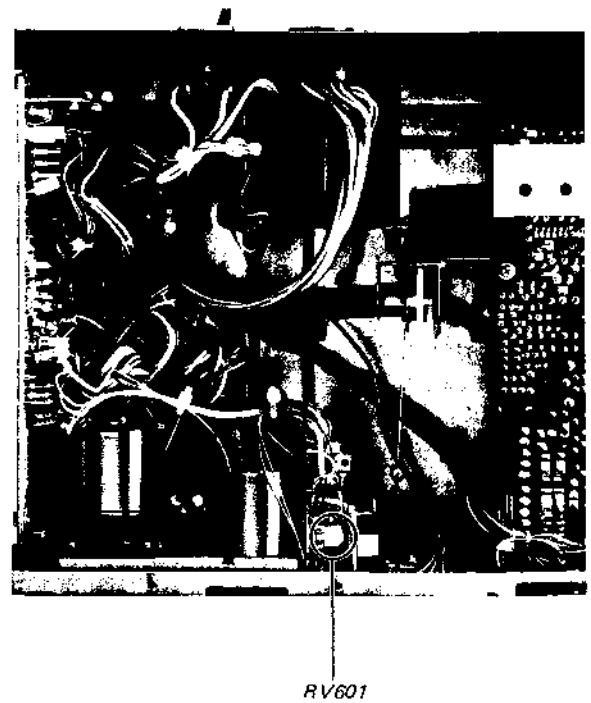
Specification:

Speed checker	Digital frequency counter
-0.7–+0.7%	2,980–3,020 Hz

Frequency difference between beginning and end of tape should be within 0.7% (20 Hz).

Adjustment Location:

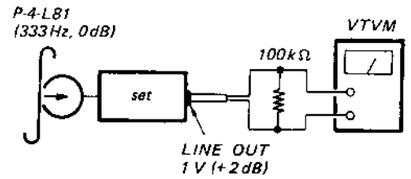
– servo amp board –



Playback Level Adjustment

Procedure:

1. Mode: Playback



Adjust RV101 (L-CH) and RV201 (R-CH) to obtain 1 V (+2 dB) VTVM reading.

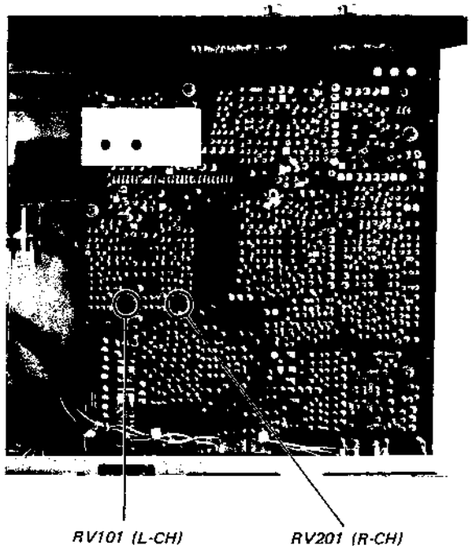
2. Assure that the LINE OUT level does not change when the mode is changed from playback to stop several times.

Specification:

LINE OUT level: 0.92–1.05 V (+1.5–2.5 dB)
Level difference between channels: less than 0.5 dB

Adjustment Location:

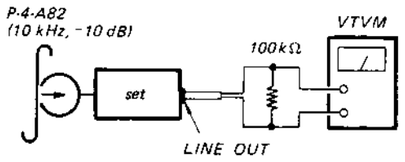
– record/playback board –



Playback Equalizer Adjustment

Procedure:

Mode: Playback

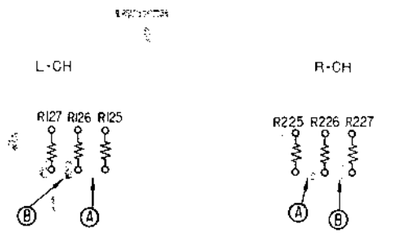


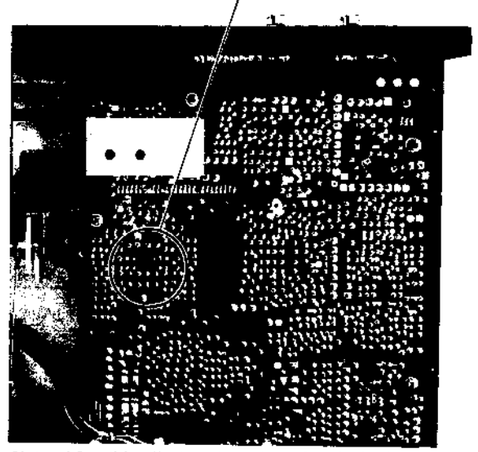
Adjust pattern connections for 0.27–0.37 V (-9.5 – -7.5 dB) VTVM reading.

Adjustment Location:

– record/playback board –

Pattern connection	VTVM reading
(open)	↑ up
Ⓐ	
Ⓐ and Ⓑ	↓ down



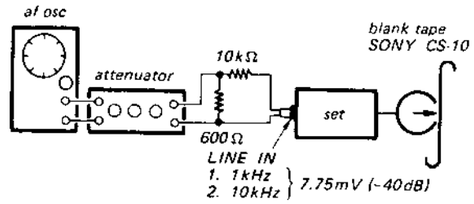


Note: After this adjustment, confirm the playback level.

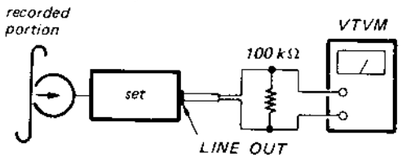
Record Bias Adjustment

Procedure:

1. Mode: Standard record (See page 11.)



2. Mode: Playback



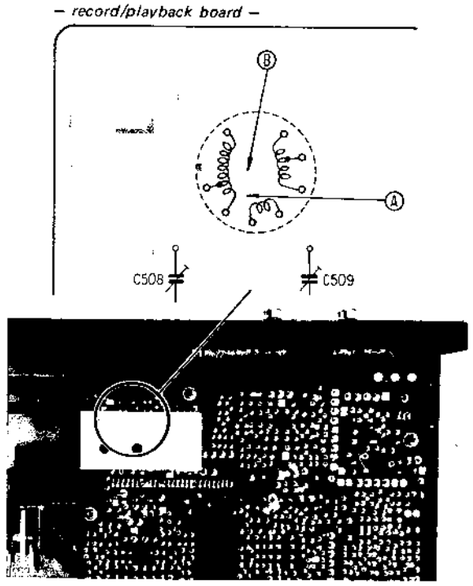
Adjust C508 (L-CH) and C509 (R-CH) to make 10 kHz and 1 kHz signal output levels equal.

Level difference between the two output levels: within 0.5 dB

Adjustment Location:

Note: Normally, patterns at Ⓐ are bridged. If adjustment is not made with trimmers fully tightened, remove solder bridge at Ⓐ and bridge patterns at Ⓑ, and repeat the adjustment.

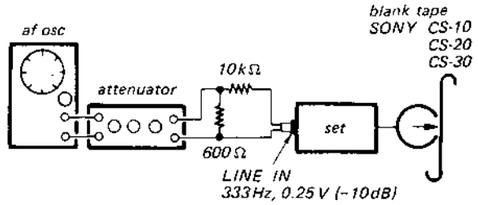
– record/playback board –



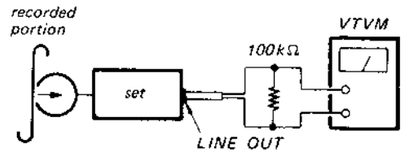
Record Level Adjustment

Procedure:

1. Mode: Standard record (See page 11.)



2. Mode: Playback



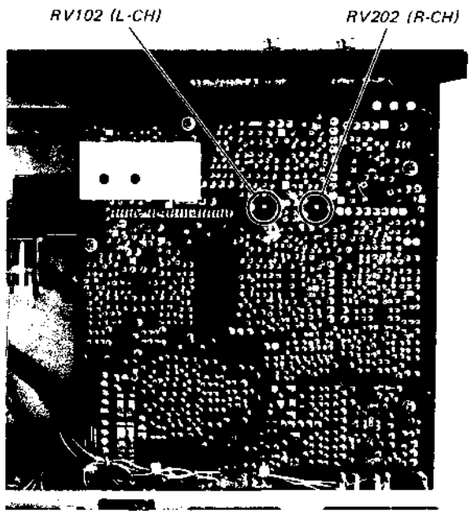
Adjust RV102 (L-CH) and RV202 (R-CH) to obtain 0.775 V (0 dB) VTVM reading.

Specification:

LINE OUT level: 0.73–0.89 V (0 dB ±0.5 dB)

Adjustment Location:

– record/playback board –



1.)

lank tape
ONY CS-10
CS-20
CS-30

'B)

'VM

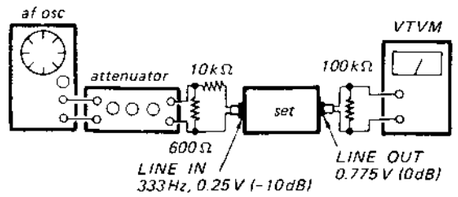
(R-CH) to

202 (R-CH)

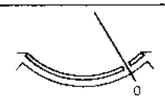
Level Meter Calibration

Procedure:

1. Mode: Standard record (See page 11.)



2.

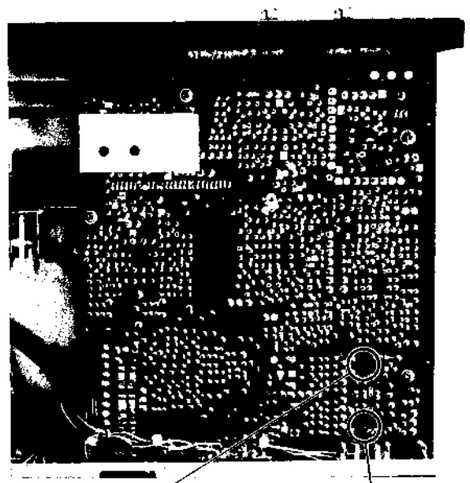
Adjust	Level meter reading: 0VU
RV103 (L-CH) RV203 (R-CH)	

Specification:

When the LINE IN level is adjusted to make 0VU indication, VTVM reading should be 0.73–0.89V (-0.5–+0.5 dB).

Adjustment Location:

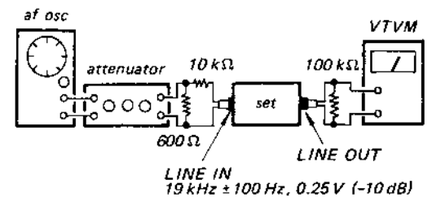
– record/playback board –



MPX Filter Adjustment

Procedure:

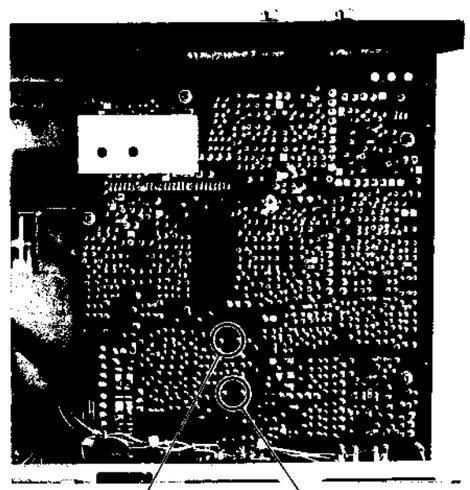
Mode: Standard record (See page 11.)
DOLBY NR switch: ON



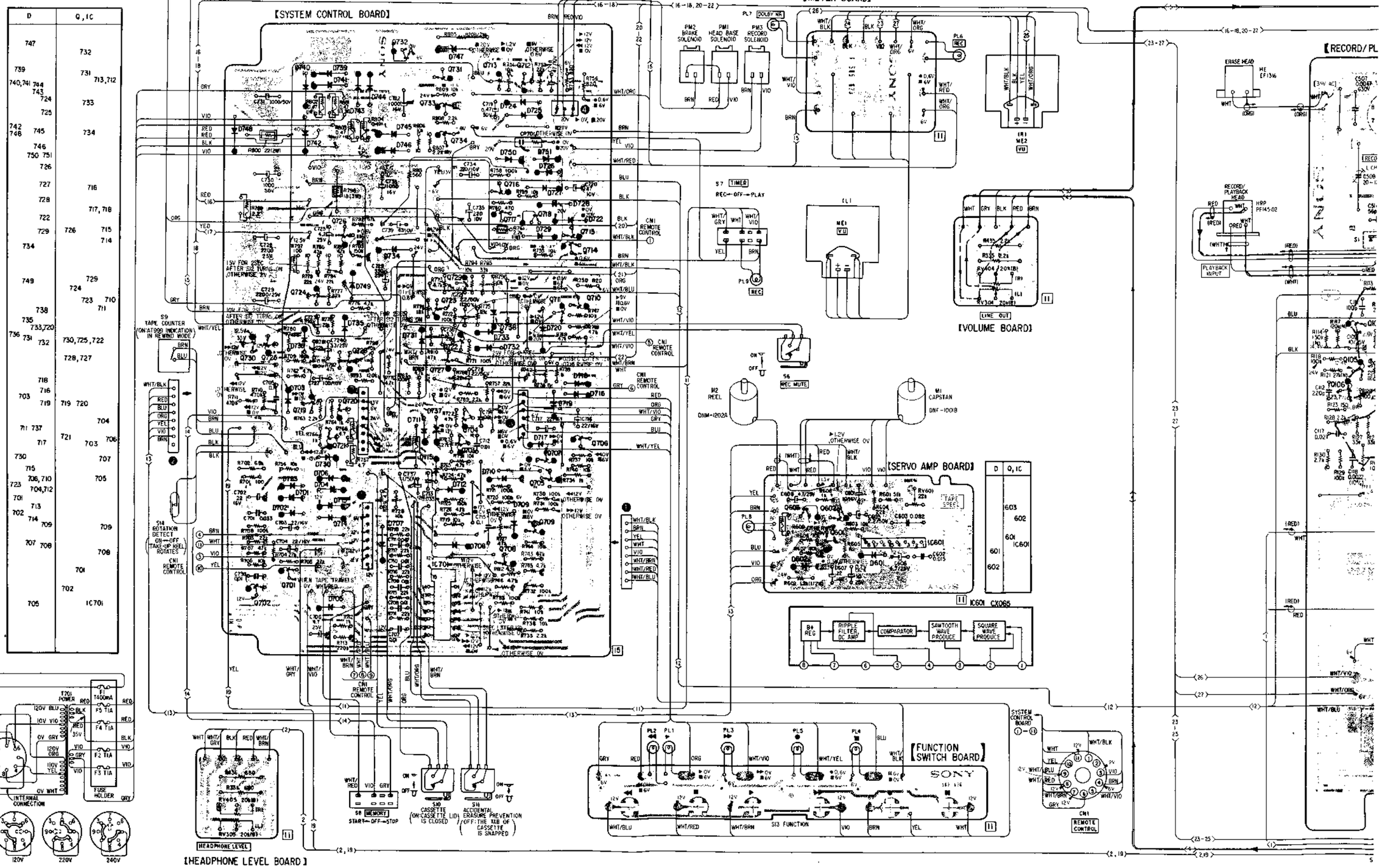
Adjust L102 (L-CH) and L202 (R-CH) for 25 mV (–30 dB) or less VTVM reading.

Adjustment Location:

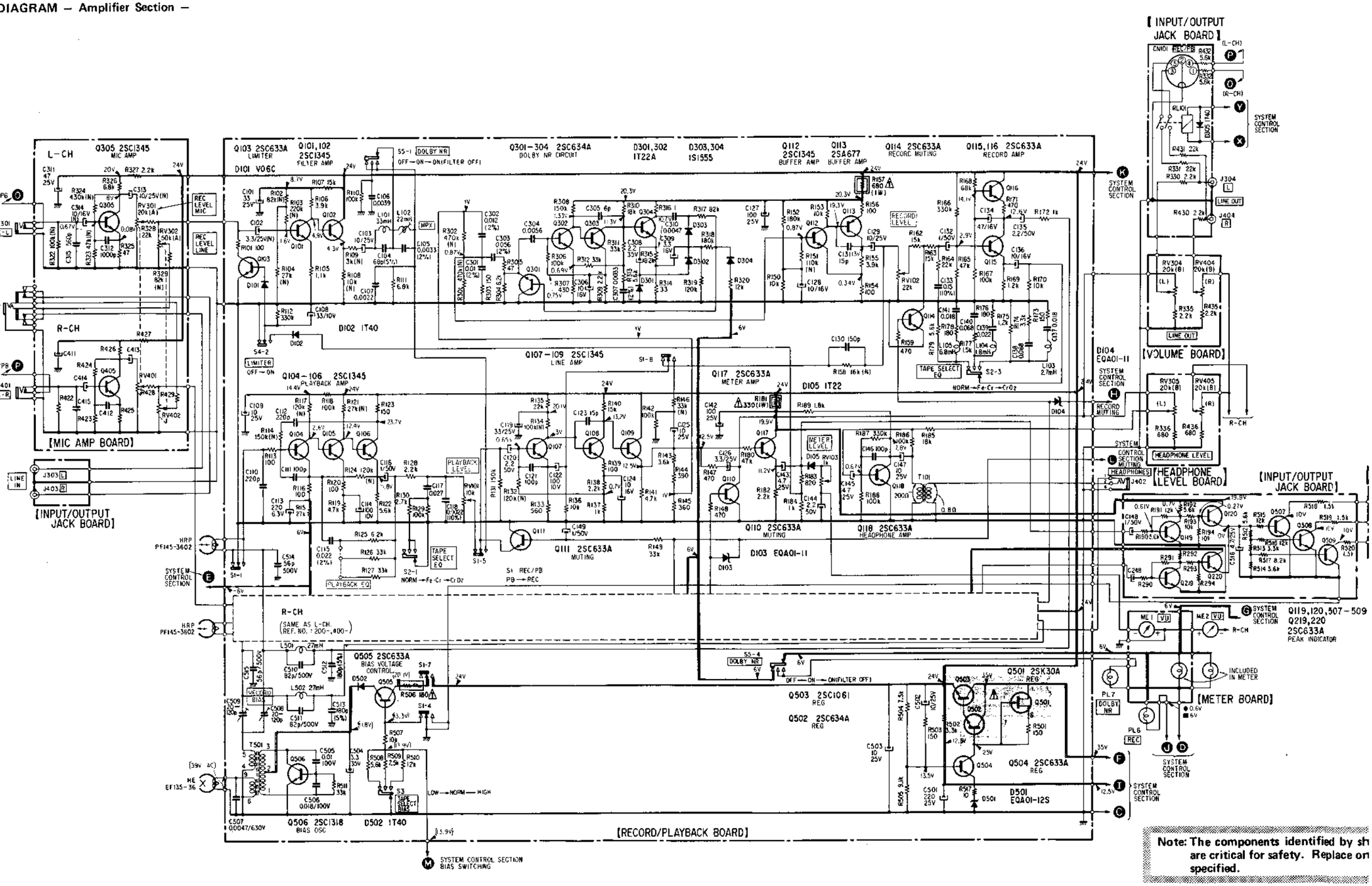
– record/playback board –



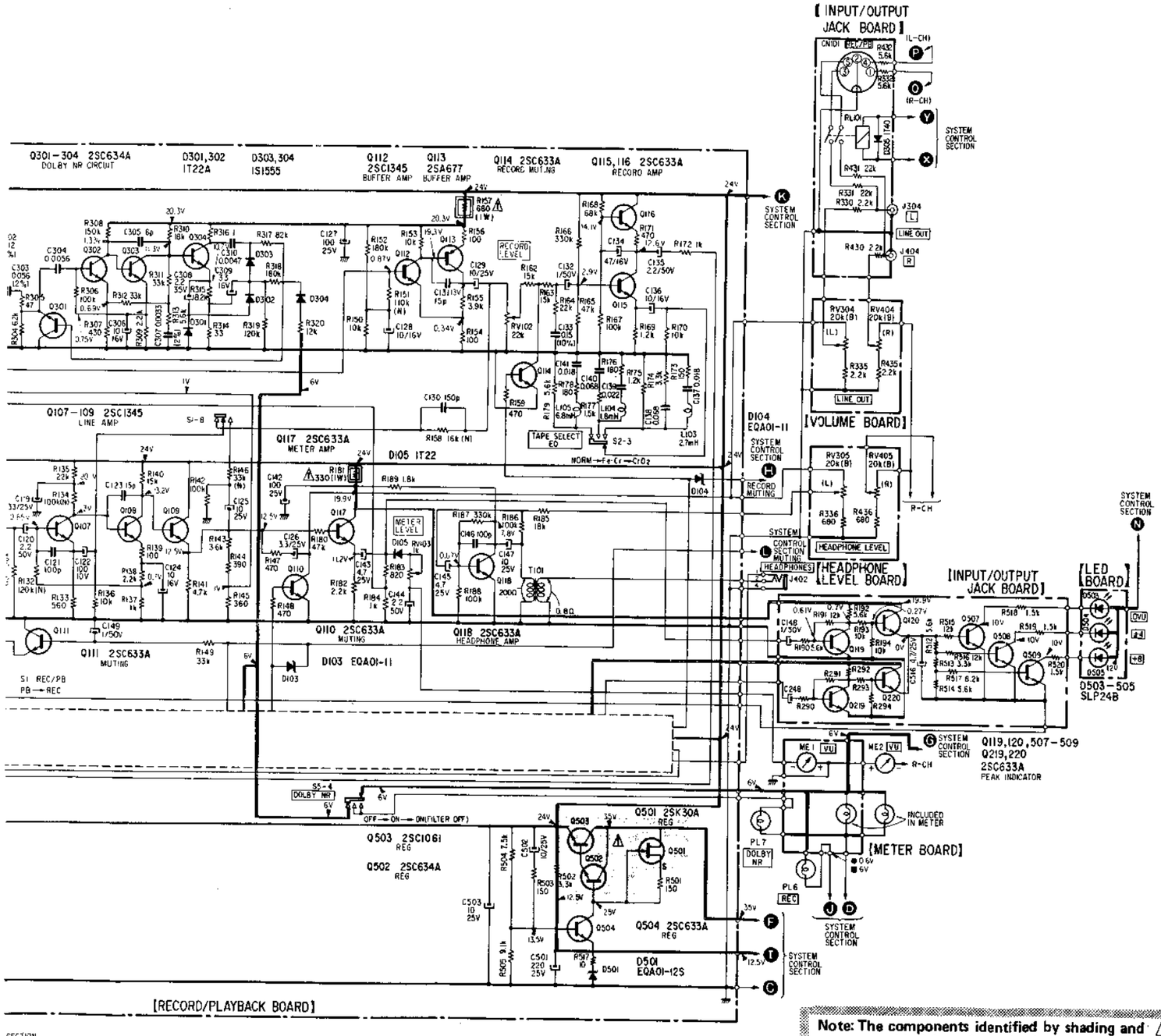
SECTION 4 DIAGRAMS 4-1. MOUNTING DIAGRAM – *Conductor Side* –



4-2. SCHEMATIC DIAGRAM – Amplifier Section –



Note: The components identified by sh
are critical for safety. Replace on
specified.



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

Replacement Semiconductors

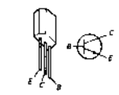
For replacement, use semiconductors except in ( ).

Q101, 102, 104–107, Q112, 201, 202, Q204–207, 212, Q305, 405: 2SC632A (2SC1345)

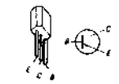
Q108, 109, 208, 209: 2SC634A (2SC1345)

Q103, 110, 111, Q114–120, 203, 210, Q211, 214–220, Q301–304, 401–404, Q504, 505, 507–509: 2SC634A (2SC633A)

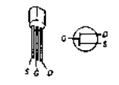
Q502: 2SC634A



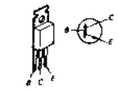
Q113, 213: 2SA678 (2SA677)



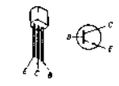
Q501: 2SK30A



Q503: 2SC1061



Q506: 2SC1475 (2SC1318)



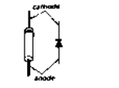
D101, 201: 10E2 (V06C)

D102, 202, D502: 1S1555 (1T40)

D105, 205: 1T22AM (1T22)

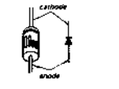
D301, 302, D401, 402: 1T22AM

D303, 304, D403, 404: 1S1555

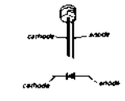


D103, 104, D203, 204: EQB01-11Z (EQA01-11)

D501: EQB01-12Z (EQA01-12S)



D503–505: SLP24B [LED]



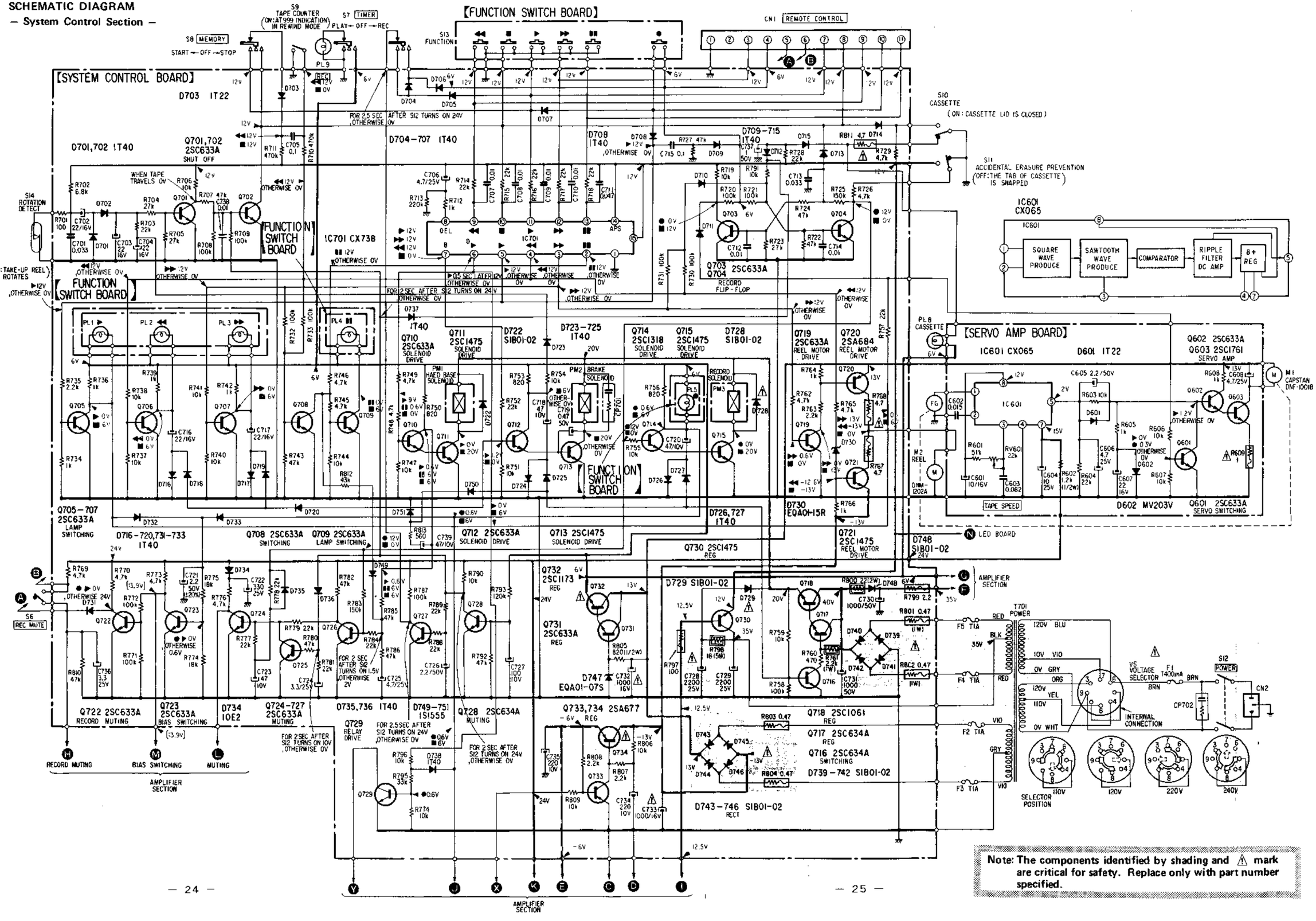
Notes:

- All capacitors are in μF unless otherwise noted. pF = μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000kΩ
- All varisble and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- (N) : low-noise capacitor and resistor.
- 2% indicates component tolerance.
- : B+ bus.
- : B- bus.
- : panel designation.
- : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken in playback mode (indicated by ▶) with a VOM (20kΩ/V).
  [ ]: record mode
- AC voltage readings in the bias oscillator circuit are taken with a VTVM.
- Switch

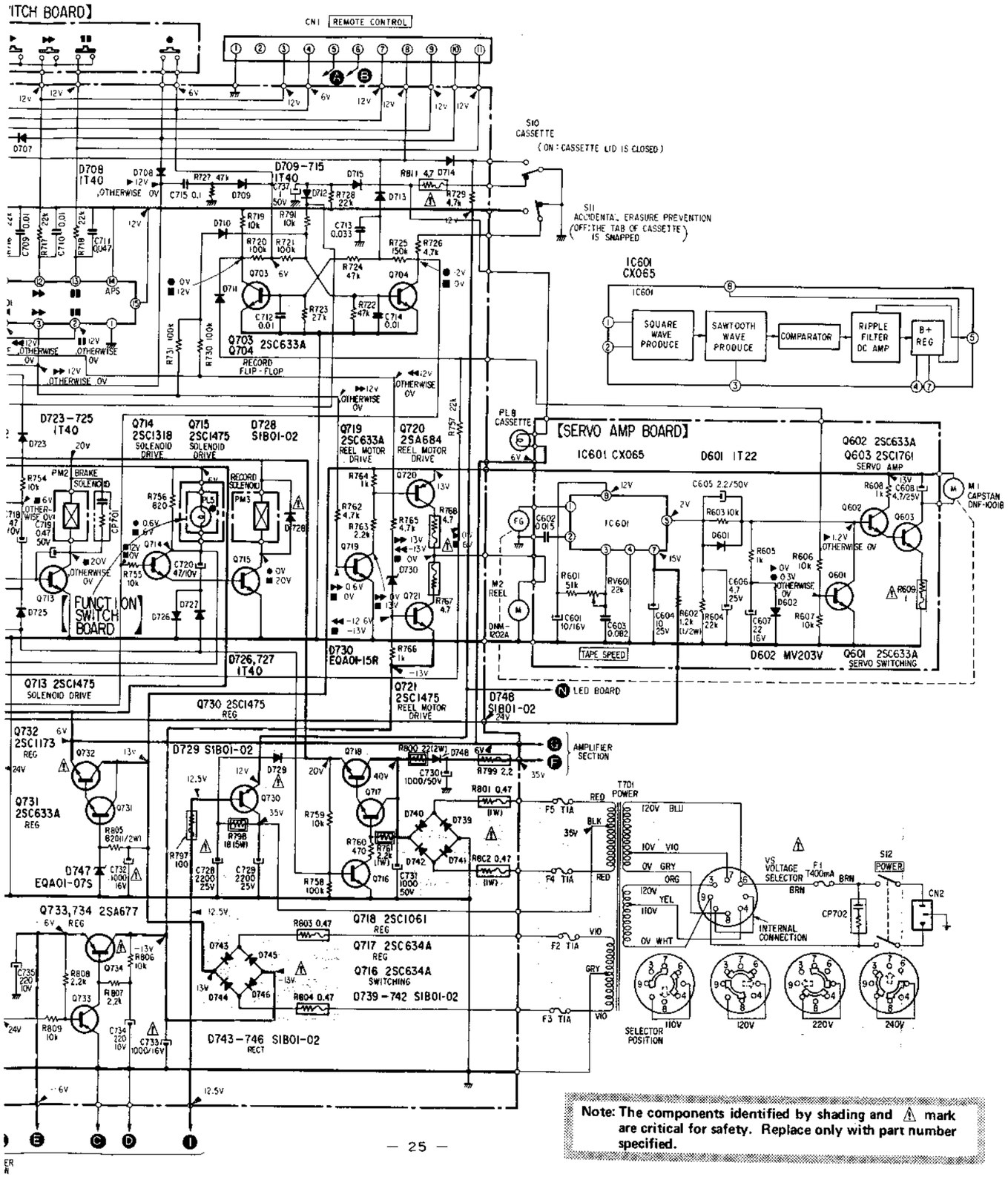
Ref. No.	Switch	Position
S1	REC/PB	PB
S2	TAPE SELECT EQ	NORMAL
S3	TAPE SELECT BIAS	LOW
S4	LIMITER	OFF
S5	DOLBY NR	OFF

4-3. SCHEMATIC DIAGRAM

— System Control Section —



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



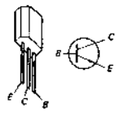
Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

Replacement Semiconductors

For replacement, use semiconductors except in ( ).

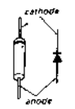
Q601, 602
Q701–710
Q712, 219
Q722–727
Q729, 731 : 2SC634A (2SC633A)

Q716, 717, 728: 2SC634A

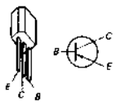


D701, 702, 704–708
D709–720, 723–727
D731–733, 735–738 : 1S1555 (1T40)

D749–751: 1S1555 (1T40)
D601, 703: 1T22AM (1T22)
Q734: 10E2

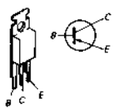


Q733, 734: 2SA678 (2SA677)

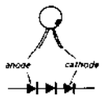


D722, 728, 729
D739–746, 748 : 10E2 (S1B01-02)

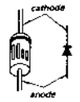
Q718: 2SC1061
Q732: 2SC1173



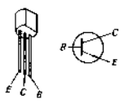
D602: MV203V



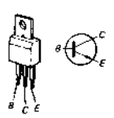
D730: EQB01-15 (EQA01-15R)
D747: EQB01-07 (EQA01-07S)



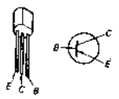
Q711, 713–715
Q721, 730 : 2SC1475



Q603: 2SC1760 (2SC1761)

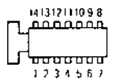


Q720: 2SA684



IC601: CX065A (CX065)

IC701: CX738A (CX738)



(Top view)

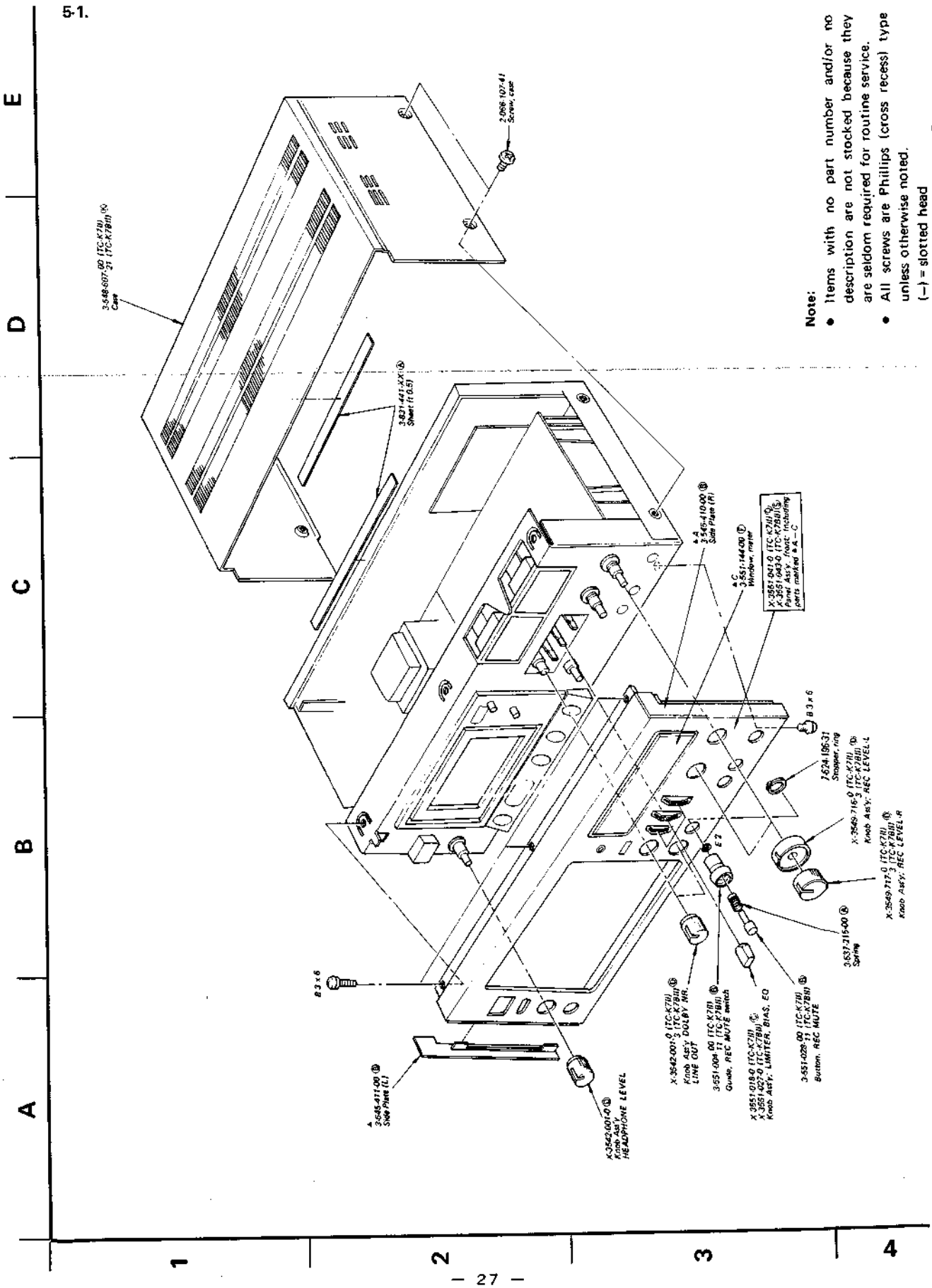
Note:

- All capacitors are in μF unless otherwise noted. pF = μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000 kΩ
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⚠: nonflammable resistor.
- ⚠: fusible resistor.
- 2% indicates component tolerance.
- ▬: B+ bus.
- ▬ ▬ ▬: B- bus.
- ▭: panel designation.
- ▭: adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken in playback mode (indicated by ▶) with a VOM (20 kΩ/V). [ ]: record mode
  - ■: STOP
  - ▶: FORWARD
  - ▶▶: FAST FORWARD
  - ◀◀: REWIND
  - ❚❚: PAUSE
  - ●: RECORD
- Switch

Ref. No.	Switch	Position
S6	REC MUTE	OFF
S7	TIMER	OFF
S8	MEMORY	OFF
S9	TAPE COUNTER	OFF
S10	CASSETTE	OFF
S11	ERASURE PROOF	OFF
S12	POWER	OFF
S13	FUNCTION	OFF
S14	ROTATION DETECT	OFF

SECTION 6
EXPLODED VIEWS

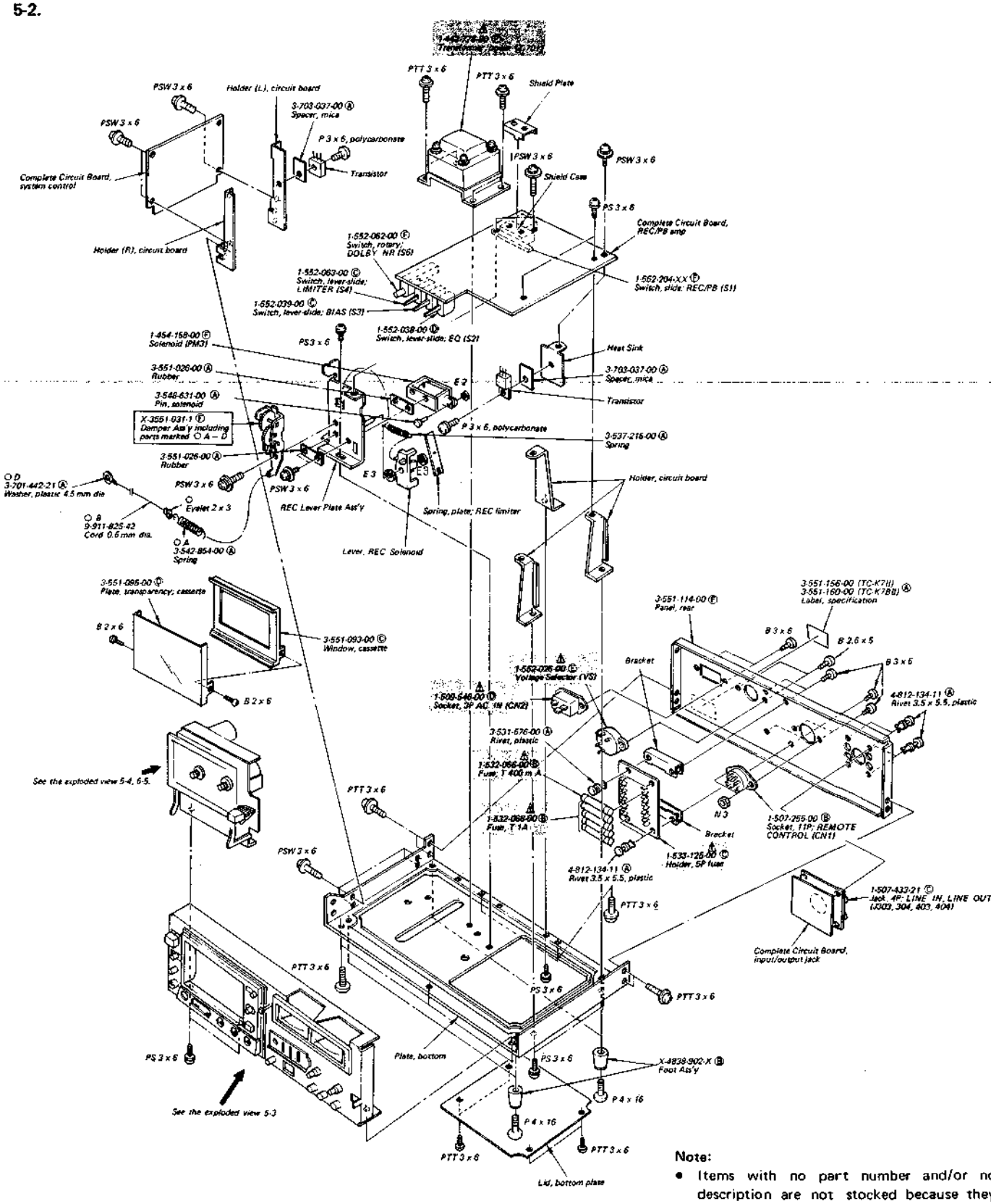
5-1.



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

5-2.

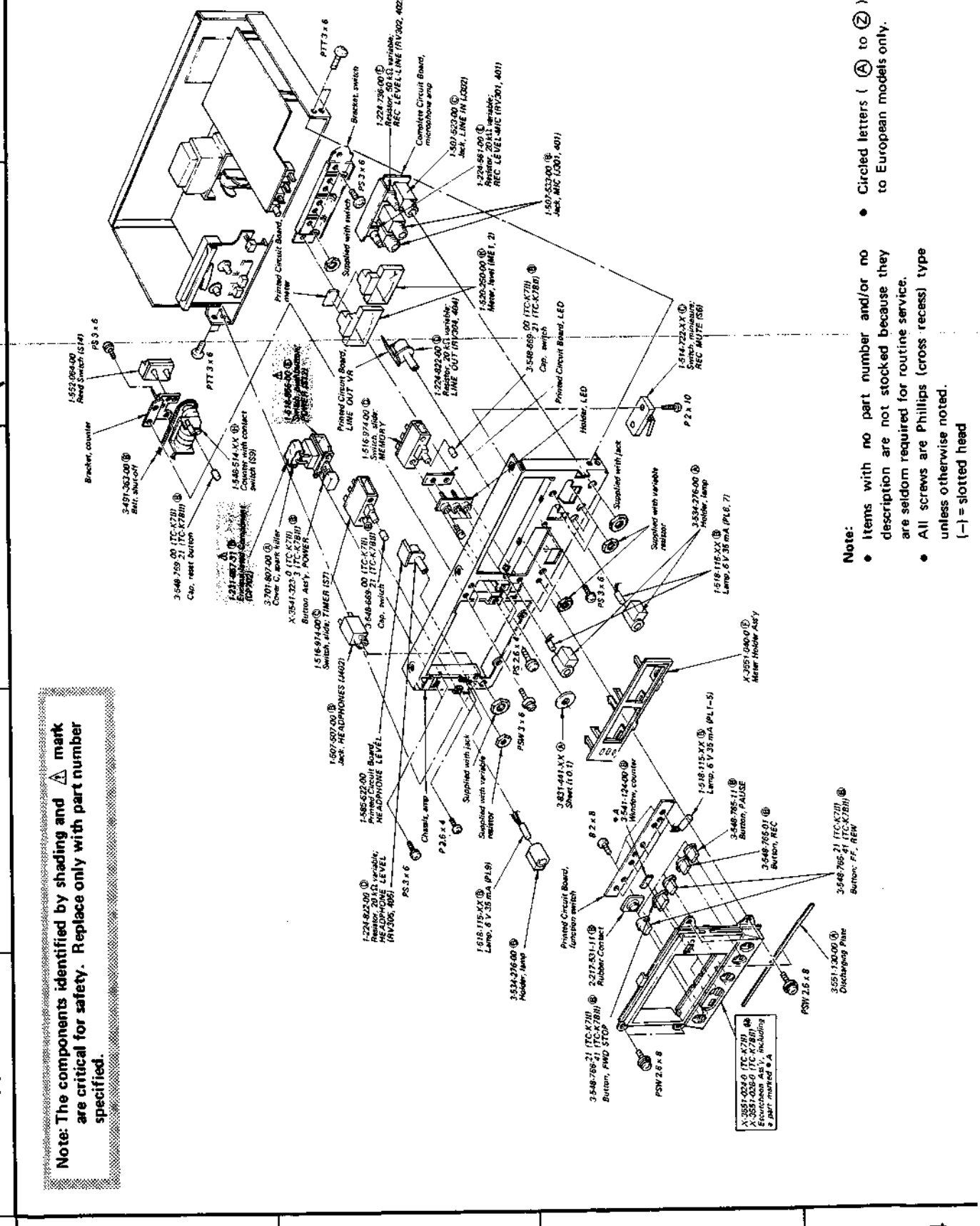


Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

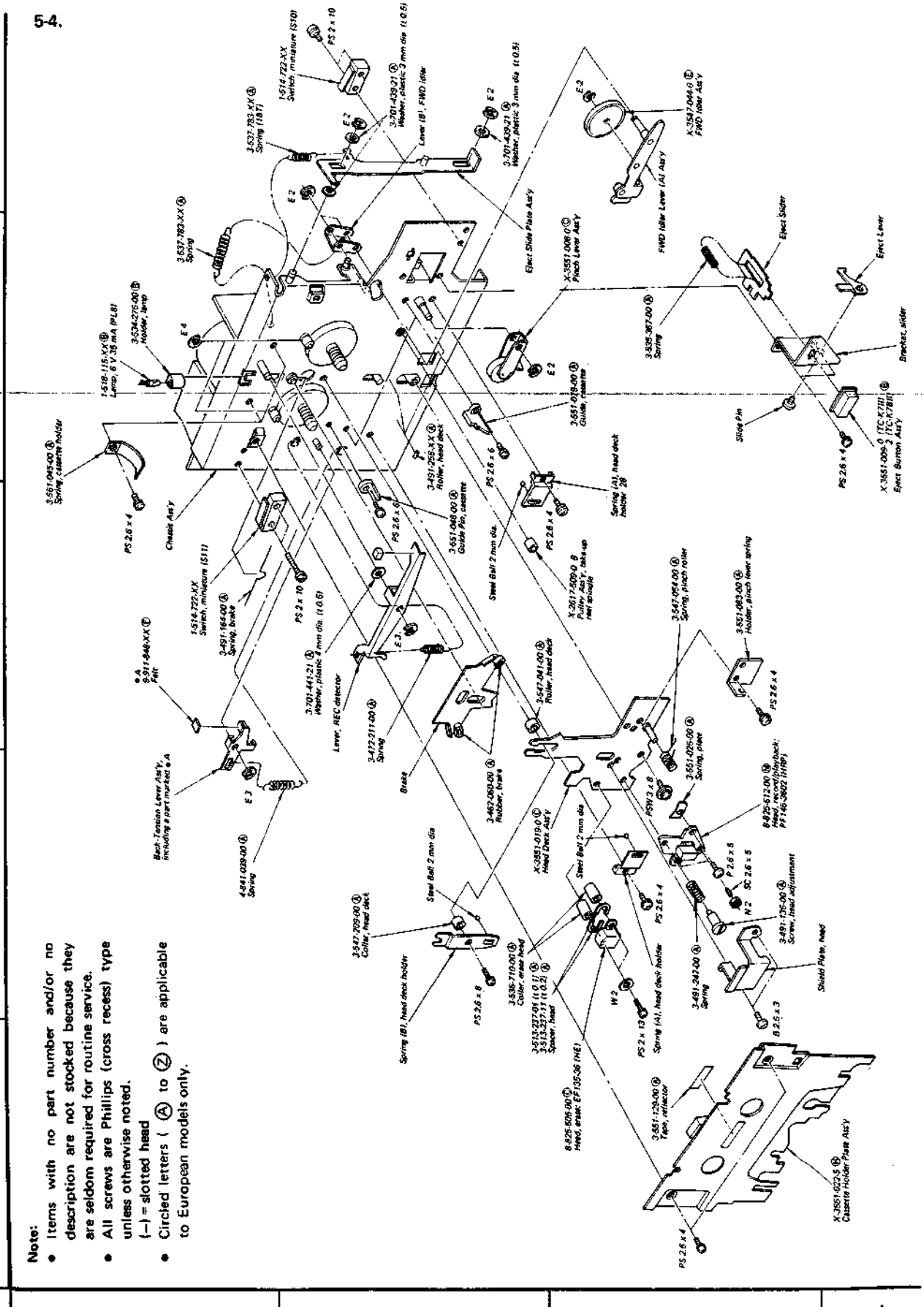
Note:

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

5-3.


A
B
C
D
E
1
2
3
4
Note: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.
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
• Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

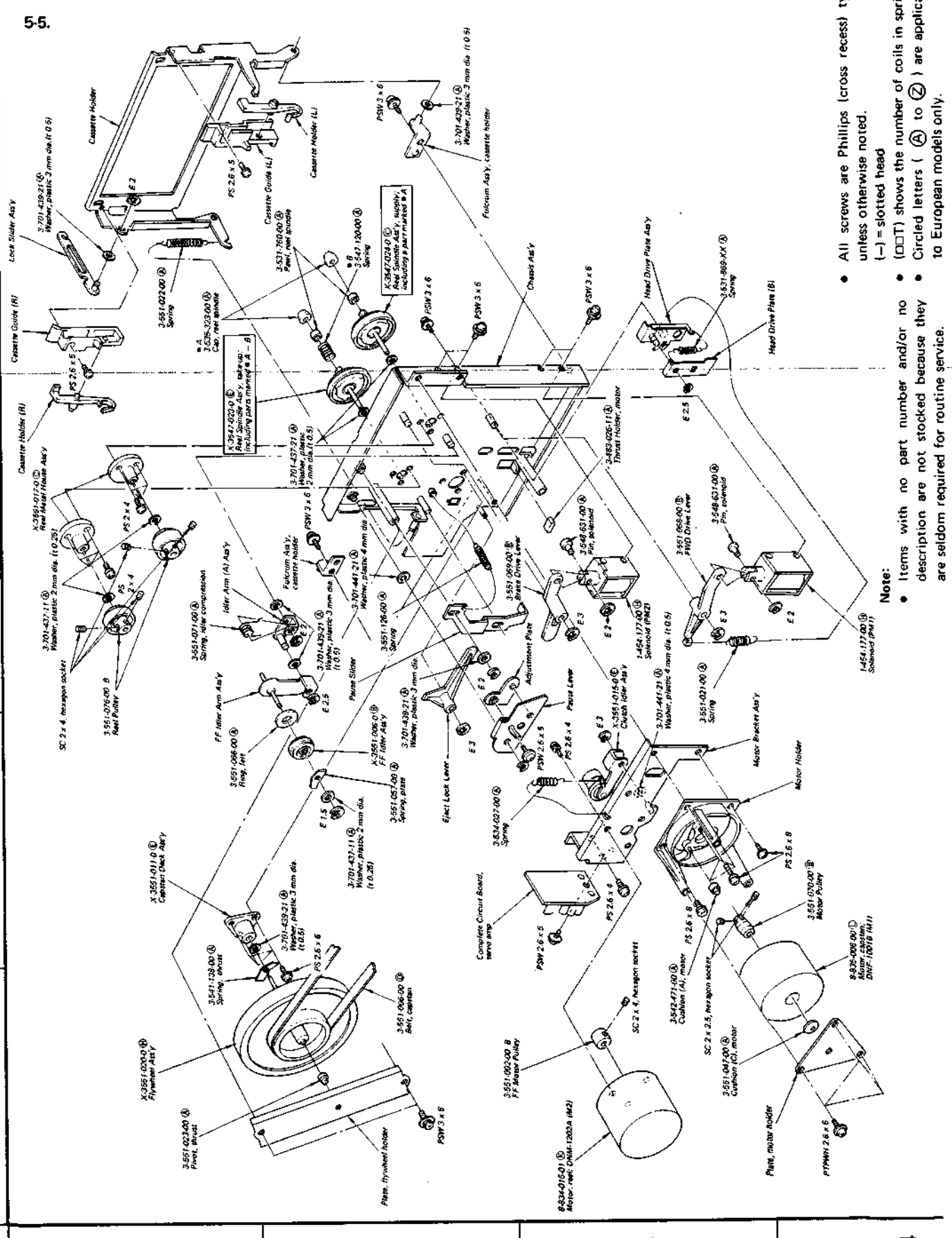
5-4.



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

5-5.



Note:

- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- (□□T) shows the number of coils in spring.
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

SECTION 6
ELECTRICAL PARTS LIST

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

Ref. No.	Part No.	Description
		SEMICONDUCTORS
		Transistors
⇒ Q101, 201, Q102, 202		Ⓑ 2SC632A
⇒ Q103, 203		Ⓑ 2SC634A
⇒ Q104 – 107, Q204 – 207		Ⓑ 2SC632A
⇒ Q108 – 111, Q208 – 211		Ⓑ 2SC634A
⇒ Q112, 212		Ⓑ 2SC632A
⇒ Q113, 213		Ⓒ 2SA678
⇒ Q114 – 120, Q214 – 220		Ⓑ 2SC634A
⇒ Q301 – 304, Q401 – 404		Ⓑ 2SC634A
⇒ Q305, 405		Ⓑ 2SC632A
Q501		⚠ Ⓑ 2SK30A
Q502		⚠ Ⓑ 2SC634A
Q503		⚠ Ⓓ 2SC1061
⇒ Q504, 505		Ⓑ 2SC634A
⇒ Q506		Ⓒ 2SC1475
⇒ Q507 – 509		Ⓑ 2SC634A
⇒ Q601, 602		Ⓑ 2SC634A
⇒ Q603		Ⓒ 2SC1760
⇒ Q701 – 710		Ⓑ 2SC634A
Q711		Ⓒ 2SC1475
⇒ Q712		Ⓑ 2SC634A
Q713 – 715		Ⓒ 2SC1475
Q716, 717		Ⓑ 2SC634A
Q718		⚠ Ⓓ 2SC1061
⇒ Q719		Ⓑ 2SC634A
Q720		Ⓒ 2SA684
Q721		Ⓒ 2SC1475
⇒ Q722 – 727		Ⓑ 2SC634A
Q728		Ⓑ 2SC634A
⇒ Q729		Ⓑ 2SC634A
Q730		Ⓒ 2SC1475
⇒ Q731		Ⓑ 2SC634A
Q732		⚠ Ⓒ 2SC1473
⇒ Q733		Ⓒ 2SA678
⇒ Q734		⚠ Ⓒ 2SA678
		ICs
⇒ IC601		Ⓕ CX065A
⇒ IC701		Ⓙ CX738A
		Diodes
⇒ D101, 201		Ⓑ 10E2
⇒ D102, 202		Ⓑ 1S1555
⇒ D103, 104, D203, 204		Ⓑ EQB01-11Z
⇒ D105, 205		Ⓑ 1T22AM
D301, 401, D302, 402		Ⓑ 1T22AM
D303, 403, D304, 404		Ⓑ 1S1555
⇒ D501		Ⓑ EQB01-12Z
⇒ D502		Ⓑ 1S1555
D503 – 505		Ⓒ SLP24B (LED)
⇒ D601		Ⓑ 1T22AM
D602		Ⓑ MV203V
⇒ D701, 702		Ⓑ 1S1555
⇒ D703		Ⓑ 1T22AM
⇒ D704 – 708		Ⓑ 1S1555
⇒ D709 – 720		Ⓑ 1S1555
⇒ D722		Ⓑ 10E2
⇒ D723 – 727		Ⓑ 1S1555
⇒ D728, 729		⚠ Ⓑ 10E2
⇒ D730		Ⓑ EQB01-15
⇒ D731 – 733		Ⓑ 1S1555
D734		Ⓑ 10E2
⇒ D735 – 738		Ⓑ 1S1555
⇒ D739 – 746		⚠ Ⓑ 10E2
⇒ D747		Ⓑ EQB01-07

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

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

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

Ref. No.	Part No.	Description
⇒ D748		Ⓑ 10E2
⇒ D749 – 751		Ⓑ 1S1555

COILS

L101, 201	1-407-879-00	Ⓑ 33 mH, microinductor
L102, 202	1-407-240-00	Ⓑ Variable inductor 22 mH
L103, 203	1-407-199-XX	Ⓑ 2.7 mH, microinductor
L104, 204	1-407-197-XX	Ⓑ 1.8 mH, microinductor
L105, 205	1-407-204-XX	Ⓑ 6.8 mH, microinductor
L501, 502	1-407-211-XX	Ⓑ 27 mH, microinductor

TRANSFORMERS

T101, 201	1-427-284-00	Ⓑ Output
T501	1-433-132-11	Ⓒ OSC
T701	⚠1-442-778-00	Ⓟ Power

CAPACITORS

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

C101, 201	1-121-404-11	Ⓐ 33	25 V	elect
C102, 202	1-121-913-11	Ⓐ 3.3	25 V	elect
C103, 203	1-121-398-11	Ⓐ 10	25 V	elect
C104, 204	1-107-081-11	Ⓐ 68 p		silvered mica
C105, 205	1-129-794-11	Ⓑ 0.0033	100 V	polyethylene
C106, 206	1-108-569-12	Ⓑ 0.0039		mylar
C107, 207	1-108-563-12	Ⓑ 0.0022		mylar
C108, 208	1-121-402-11	Ⓐ 33	10 V	elect
C109, 209	1-121-398-11	Ⓐ 10	25 V	elect
C110, 210	1-102-110-11	Ⓐ 220 p		
C111, 211	1-102-106-11	Ⓐ 100 p		
C112, 212	1-102-110-11	Ⓐ 220 p		
C113, 213	1-121-419-11	Ⓑ 220	6.3 V	elect
C114, 214	1-121-414-11	Ⓐ 100	10 V	elect
C115, 215	1-130-072-11	Ⓑ 0.022	100 V	polyethylene
C116, 216	1-121-391-11	Ⓐ 1	50 V	elect
C117, 217	1-108-589-12	Ⓑ 0.027		mylar
C118, 218	1-108-230-12	Ⓐ 0.0022		mylar
C119, 219	1-121-404-11	Ⓐ 33	25 V	elect
C120, 220	1-121-450-11	Ⓐ 2.2	50 V	elect
C121, 221	1-102-106-11	Ⓐ 100 p		
C122, 222	1-121-414-11	Ⓐ 100	10 V	elect
C123, 223	1-102-956-11	Ⓐ 15 p		
C124, 224	1-121-651-11	Ⓐ 10	16 V	elect
C125, 225	1-121-398-11	Ⓐ 10	25 V	elect
C126, 226	1-121-392-11	Ⓐ 3.3	25 V	elect
C127, 227	1-121-416-11	Ⓑ 100	25 V	elect
C128, 228	1-121-651-11	Ⓐ 10	16 V	elect
C129, 229	1-121-398-11	Ⓐ 10	25 V	elect
C130, 230	1-102-108-11	Ⓐ 150 p		
C131, 231	1-102-956-11	Ⓐ 15 p		
C132, 232	1-121-391-11	Ⓐ 1	50 V	elect
C133, 233	1-108-252-12	Ⓑ 0.15		mylar
C134, 234	1-121-409-11	Ⓐ 47	16 V	elect
C135, 235	1-121-450-11	Ⓐ 2.2	50 V	elect
C136, 236	1-121-651-11	Ⓐ 10	16 V	elect
C137, 237	1-108-587-12	Ⓑ 0.018		mylar
C138, 238	1-108-559-12	Ⓑ 0.068		mylar
C139, 239	1-108-587-12	Ⓑ 0.022		mylar
C140, 240	1-108-559-12	Ⓑ 0.068		mylar
C141, 241	1-108-585-12	Ⓑ 0.018		mylar
C142, 242	1-121-416-11	Ⓑ 100	25 V	elect
C143, 243	1-121-395-11	Ⓐ 4.7	25 V	elect
C144, 244	1-121-450-11	Ⓐ 2.2	50 V	elect
C145, 245	1-121-395-11	Ⓐ 4.7	25 V	elect
C146, 246	1-102-106-11	Ⓐ 100 p		
C147, 247	1-121-398-11	Ⓐ 10	25 V	elect
C148, 248 C149, 249	1-121-391-11	Ⓐ 1	50 V	elect
C301, 401	1-129-701-11	Ⓑ 0.01	100 V	polyethylene
C302, 402	1-129-896-11	Ⓑ 0.012	100 V	polyethylene
C303, 403	1-129-899-11	Ⓑ 0.056	100 V	polyethylene

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

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

Ref. No.	Part No.	Description		
C304, 404	1-108-573-12	Ⓐ 0.0056		mylar
C305, 405	1-102-943-11	Ⓐ 6 p		
C306, 406	1-121-651-11	Ⓐ 10	16 V	elect
C307, 407	1-129-794-11	Ⓑ 0.0033		polyethylene
C308, 408	1-131-217-11	Ⓑ 2.2	35 V	tantalum
C309, 409	1-131-197-11	Ⓑ 3.3	16 V	tantalum
C310, 410	1-108-571-12	Ⓐ 0.0047		mylar
C311, 411	1-121-410-11	Ⓑ 47	25 V	elect
C312, 412	1-102-074-11	Ⓐ 0.001		
C313, 413	1-121-748-11	Ⓐ 10	25 V	elect
C314, 414	1-121-916-11	Ⓑ 10	16 V	elect
C315, 415	1-102-115-11	Ⓐ 560 p		
C501	1-121-422-11	Ⓑ 220	25 V	elect
C502, 503	1-121-398-11	Ⓐ 10	25 V	elect
C504	1-131-218-11	Ⓑ 3.3	35 V	tantalum
C505	1-108-377-12	Ⓐ 0.01	100 V	mylar
C506	1-108-380-12	Ⓐ 0.018	100 V	mylar
C507	1-129-710-11	Ⓐ 0.0047	630 V	polyethylene
C508, 509	1-141-010-XX	Ⓑ		trimmer
C510, 511	1-107-037-11	Ⓐ 82 p	500 V	silvered mica
C512, 513	1-107-137-11	Ⓐ 180 p		silvered mica
C514, 515	1-107-165-11	Ⓐ 56 p	500 V	silvered mica
C516	1-121-395-11	Ⓐ 4.7	25 V	elect
C601	1-121-651-11	Ⓐ 10	16 V	elect
C602	1-108-583-12	Ⓑ 0.015		mylar
C603	1-130-134-11	Ⓑ 0.082	100 V	polyethylene
C604	1-121-398-11	Ⓐ 10	25 V	elect
C605	1-121-986-11	Ⓐ 2.2	50 V	elect
C606	1-121-395-11	Ⓐ 4.7	25 V	elect
C607	1-121-990-11	Ⓐ 22	16 V	elect
C608	1-121-395-11	Ⓐ 4.7	25 V	elect
C701	1-161-019-11	Ⓐ 0.033		(boundary layer)
C702	1-131-201-11	Ⓑ 22	16 V	tantalum
C703	1-121-990-11	Ⓐ 22	16 V	elect
C704	1-121-479-11	Ⓐ 22	16 V	elect
C705	1-161-025-11	Ⓑ 0.1		(boundary layer)

Ref. No.	Part No.	Description		
C706	1-121-395-11	Ⓐ 4.7	25 V	elect
C707 – 710	1-161-013-11	Ⓐ 0.01		(boundary layer)
C711	1-161-021-11	Ⓐ 0.047		(boundary layer)
C712	1-161-013-11	Ⓐ 0.01		(boundary layer)
C713	1-161-019-11	Ⓐ 0.033		(boundary layer)
C714	1-161-013-11	Ⓐ 0.01		(boundary layer)
C715	1-161-025-11	Ⓑ 0.1		(boundary layer)
C716, 717	1-121-479-11	Ⓐ 22	16 V	elect
C718	1-121-352-11	Ⓐ 47	10 V	elect
C719	1-121-726-11	Ⓐ 0.47	50 V	elect
C720	1-121-352-11	Ⓐ 47	10 V	elect
C721	1-121-986-11	Ⓐ 2.2	50 V	elect
C722	1-121-654-11	Ⓑ 330	25 V	elect
C723	1-121-975-11	Ⓐ 47	10 V	elect
C724	1-121-392-11	Ⓐ 3.3	25 V	elect
C725	1-121-968-11	Ⓐ 10	16 V	elect
C726	1-121-986-11	Ⓐ 2.2	50 V	elect
C727	1-121-976-11	Ⓐ 100	10 V	elect
C728, 729	⚠ 1-123-067-11	Ⓓ 2200	25 V	elect
C730, 731	⚠ 1-123-061-11	Ⓒ 1000	50 V	elect
C732, 733	⚠ 1-121-944-11	Ⓔ 1000	16 V	elect
C734, 735	1-121-420-11	Ⓑ 220	10 V	elect
C736	1-121-392-11	Ⓐ 3.3	25 V	elect
C737	1-121-391-11	Ⓐ 1	50 V	elect
C738	1-161-013-11	Ⓐ 0.01		(boundary layer)
C739	1-121-352-11	Ⓐ 47	10 V	elect

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted. Check schematic diagram for their values.

R157, 257	⚠ 1-213-141-11	Ⓐ 680	1 W	metal oxide
R181, 281	⚠ 1-213-137-11	Ⓐ 330	1 W	metal oxide
R504	1-214-153-11	Ⓑ 7.5 k	¼ W	1% metal oxide
R505	1-214-155-11	Ⓐ 9.1 k	¼ W	1% metal oxide
R506	⚠ 1-217-402-11	Ⓑ 180	¼ W	fusible
R601	1-214-173-11	Ⓑ 51 k	¼ W	metal oxide

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

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

Ref. No.	Part No.	Description
R602	1-244-875-11 Ⓐ	1.2 k ½ W carbon
R609	⚠1-217-375-11 Ⓑ	1 ¼ W fusible
R761	⚠1-213-147-11 Ⓐ	2.2 k 1 W 5% metal oxide
R767, 768	⚠1-217-383-11 Ⓑ	4.7 ¼ W 5% fusible
R797	⚠1-217-399-11 Ⓑ	100 ¼ W 5% fusible
R798	⚠1-217-301-11 Ⓑ	18 5 W wirewound
R799	⚠1-217-379-11 Ⓑ	2.2 ¼ W 5% fusible
R800	⚠1-206-471-11 Ⓐ	22 2 W 5% metal oxide
R801, 802	⚠1-217-465-11 Ⓑ	0.47 1 W fusible
R803, 804	⚠1-217-371-11 Ⓑ	0.47 ¼ W fusible
R805	1-244-871-11 Ⓐ	820 ½ W carbon
R811	⚠1-217-383-11 Ⓑ	4.7 ¼ W 5% fusible
RV101, 201	1-224-645-XX Ⓑ	10 k, adjustable
RV102, 202	1-224-646-XX Ⓑ	22 k, variable
RV103, 203	1-224-642-XX Ⓑ	1 k, adjustable
RV301, 401	1-224-561-00 Ⓔ	20 k, variable; REC LEVEL MIC
RV302, 402	1-224-736-00 Ⓔ	50 k, variable; REC LEVEL LINE
RV304, 404 RV305, 405	1-224-822-00 Ⓓ	20 k, variable; LINE OUT HEADPHONE LEVEL
RV601	1-224-491-00 Ⓑ	22 k, adjustable

SWITCHES

S1	1-552-204-00 Ⓕ	Slide, REC/PB
S2	1-552-038-00 Ⓓ	Lever-slide, EQ
S3	1-552-039-00 Ⓒ	Lever-slide, BIAS
S4	1-552-063-00 Ⓒ	Lever-slide, LIMITER
S5	1-552-062-00 Ⓕ	Rotary, DOLBY NR
S6	1-514-722-XX Ⓒ	Miniature, REC MUTE
S7, 8	1-516-974-00 Ⓒ	Slide, TIMER MEMORY
S9	1-548-514-XX Ⓗ	Counter with contact switch
S10, 11	1-514-722-XX Ⓒ	Miniature; Cassette/Accidental Erasure prevention
S12	⚠1-516-855-00 Ⓔ	Pushbutton, POWER
S14	1-552-064-00 Ⓔ	Reed, rotation detection

Ref. No.	Part No.	Description

JACKS

J301, 401	1-507-533-00 Ⓑ	MIC
J302	1-507-523-00 Ⓒ	LINE IN
J303, 403 J304, 404	1-507-433-00 Ⓒ	4 p; LINE IN, LINE OUT
J402	1-507-507-00 Ⓑ	HEADPHONES
VS	⚠1-552-026-00 Ⓔ	Voltage Selector

FUSES

F1	⚠1-532-066-00 Ⓑ	T400 mA
F2 – 5	⚠1-532-078-00 Ⓑ	T1A

MISCELLANEOUS

CN1	1-507-255-00 Ⓑ	Socket, 11 p; REMOTE CONTROL
CN2	⚠1-509-546-00 Ⓓ	Socket, 3 p AC IN
CN101	1-509-549-00 Ⓑ	Connector, REC/PB
CP701	1-231-057-31 Ⓑ	Encapsulated Component
CP702	⚠1-231-057-31 Ⓑ	Encapsulated Component
HE	8-825-506-00 Ⓒ	Head, erase; EF135-36
HRP	8-825-612-00 Ⓜ	Head, record/playback; PF145-3602
M1	8-835-006-00 Ⓛ	Motor, DNF1001B; capstan
M2	8-834-015-01 Ⓚ	Motor, DNM1202A; reel
ME1, 2	1-520-250-00 Ⓚ	Meter, level
PL1 – 9	1-518-115-XX Ⓑ	Lamp, 6 V 35 mA
PM1, 2	1-454-177-00 Ⓗ	Solenoid; head base, brake
PM3	1-454-158-00 Ⓕ	Solenoid; record
RL101	1-515-267-00 Ⓕ	Reel Relay
	⚠1-533-125-00 Ⓒ	Holder, 5 p fuse

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

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

ACCESSORIES & PACKING MATERIALS

Part No.	*Description*
X-3549-745-0	Ⓒ Cushion (top) Ass'y
X-3701-105-0	Ⓐ Tips Ass'y, head cleaning
1-534-049-31	Ⓕ Cord, connection; RK-74H
1-534-754-00	⚠ Ⓔ Cord, power; with parallel-blade plug (E model)
1-551-216-00	⚠ Ⓗ Cord, power; with euro-plug (E model)
3-429-126-00	Ⓑ Bag, plastic; set (TC-K7II)
3-451-250-00	Ⓐ Sticker, loading
3-548-780-00	Ⓒ Cushion
3-548-781-00	Ⓒ Cushion
3-551-158-00	Ⓕ Carton (TC-K7II)
3-551-161-00	Ⓕ Carton (TC-K7BII)
3-701-630-00	Ⓐ Bag, plastic; printed matters
3-701-684-11	Ⓐ Card, power requirement
3-770-355-11	Ⓕ Manual, instruction
3-793-749-11	Ⓑ Card, Dolby cassette
3-793-828-11	Ⓐ Card, caution; cassette
4-837-003-00	Ⓒ Bag, plastic; set (TC-K7BII)

1/4 WATT CARBON RESISTORS

Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*	Ω	*Part No.*
1.0	1-244-601-11	10	1-244-625-11	100	1-244-649-11	1.0k	1-244-673-11	10k	1-244-697-11	100k	1-244-721-11	1.0M	1-244-745-11
1.1	1-244-602-11	11	1-244-626-11	110	1-244-650-11	1.1k	1-244-674-11	11k	1-244-698-11	110k	1-244-722-11	1.1M	1-244-746-11
1.2	1-244-603-11	12	1-244-627-11	120	1-244-651-11	1.2k	1-244-675-11	12k	1-244-699-11	120k	1-244-723-11	1.2M	1-244-747-11
1.3	1-244-604-11	13	1-244-628-11	130	1-244-652-11	1.3k	1-244-676-11	13k	1-244-700-11	130k	1-244-724-11	1.3M	1-244-748-11
1.5	1-244-605-11	15	1-244-629-11	150	1-244-653-11	1.5k	1-244-677-11	15k	1-244-701-11	150k	1-244-725-11	1.5M	1-244-749-11
1.6	1-244-606-11	16	1-244-630-11	160	1-244-654-11	1.6k	1-244-678-11	16k	1-244-702-11	160k	1-244-726-11	1.6M	1-244-750-11
1.8	1-244-607-11	18	1-244-631-11	180	1-244-655-11	1.8k	1-244-679-11	18k	1-244-703-11	180k	1-244-737-11	1.8M	1-244-751-11
2.0	1-244-608-11	20	1-244-632-11	200	1-244-656-11	2.0k	1-244-680-11	20k	1-244-704-11	200k	1-244-728-11	2.0M	1-244-752-11
2.2	1-244-609-11	22	1-244-633-11	220	1-244-657-11	2.2k	1-244-681-11	22k	1-244-705-11	220k	1-244-729-11	2.2M	1-244-753-11
2.4	1-244-610-11	24	1-244-634-11	240	1-244-658-11	2.4k	1-244-682-11	24k	1-244-706-11	240k	1-244-730-11	2.4M	1-244-754-11
2.7	1-244-611-11	27	1-244-635-11	270	1-244-659-11	2.7k	1-244-683-11	27k	1-244-707-11	270k	1-244-731-11	2.7M	1-244-755-11
3.0	1-244-612-11	30	1-244-636-11	300	1-244-660-11	3.0k	1-244-684-11	30k	1-244-708-11	300k	1-244-732-11	3.0M	1-244-756-11
3.3	1-244-613-11	33	1-244-637-11	330	1-244-661-11	3.3k	1-244-685-11	33k	1-244-709-11	330k	1-244-733-11	3.3M	1-244-757-11
3.6	1-244-614-11	36	1-244-638-11	360	1-244-662-11	3.6k	1-244-686-11	36k	1-244-710-11	360k	1-244-734-11	3.6M	1-244-758-11
3.9	1-244-615-11	39	1-244-639-11	390	1-244-663-11	3.9k	1-244-687-11	39k	1-244-711-11	390k	1-244-735-11	3.9M	1-244-759-11
4.3	1-244-616-11	43	1-244-640-11	430	1-244-664-11	4.3k	1-244-688-11	43k	1-244-712-11	430k	1-244-736-11	4.3M	1-244-760-11
4.7	1-244-617-11	47	1-244-641-11	470	1-244-665-11	4.7k	1-244-689-11	47k	1-244-713-11	470k	1-244-737-11	4.7M	1-244-761-11
5.1	1-244-618-11	51	1-244-642-11	510	1-244-666-11	5.1k	1-244-690-11	51k	1-244-714-11	510k	1-244-738-11	5.1M	1-244-762-11
5.6	1-244-619-11	56	1-244-643-11	560	1-244-667-11	5.6k	1-244-691-11	56k	1-244-715-11	560k	1-244-739-11		
6.2	1-244-620-11	62	1-244-644-11	620	1-244-668-11	6.2k	1-244-692-11	62k	1-244-716-11	620k	1-244-740-11		
6.8	1-244-621-11	68	1-244-645-11	680	1-244-669-11	6.8k	1-244-693-11	68k	1-244-717-11	680k	1-244-741-11		
7.5	1-244-622-11	75	1-244-646-11	750	1-244-670-11	7.5k	1-244-694-11	75k	1-244-718-11	750k	1-244-742-11		
8.2	1-244-623-11	82	1-244-647-11	820	1-244-671-11	8.2k	1-244-695-11	82k	1-244-719-11	820k	1-244-743-11		
9.1	1-244-624-11	91	1-244-648-11	910	1-244-672-11	9.1k	1-244-696-11	91k	1-244-720-11	910k	1-244-744-11		

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