TC-K51

AEP Model
UK Model
E Model
US Model
Canadian Model

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

STEREO CASSETTE DECK

SPECIFICATIONS

GENERAL

Power Requirements:
US, Canadian model
120 V ac, 60 Hz
AEP model
220 V ac, 50/60 Hz
(or 220 V ac adjustable by authorized Sony personnel)
UK model
240 V ac, 50/60 Hz
(or 220 V ac adjustable by authorized Sony personnel)
E model
110, 120, 220 or 240 V ac adjustable, 50/60 Hz

Power Consumption: 12 W

Dimensions: Approx. 430 (w) x 130 (h) x 290 (d) mm
17 (w) x 5 1/8 (h) x 11 1/2 (d) inches
(US, AEP, UK, E model)
Approx. 460 (w) x 130 (h) x 290 (d) mm
18 1/8 (w) x 5 1/8 (h) x 11 1/2 (d) inches
(Canadian model)
including projecting parts and controls

Weight: Approx. 5.7 kg, 12 lb 9 oz
(US, AEP, UK, E model)
Approx. 6.5 kg, 14 lb 5 oz (Canadian model)

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS 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 PAR LA MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES, LES VUES EXPLOSÉES 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.

Tape Transport Mechanism Type	TCM-91V7	
	Specification	Test Equipment
Forward Torque	28—55g·cm (0.39—0.76oz·inch)	Sony torque meter CQ-102C
Fast Forward Torque, Rewind Torque	60—120g·cm (0.84—1.66oz·inch)	Sony torque meter CQ-201B
Back Tension Torque	2.0—4.5g·cm (0.02—0.06oz·inch)	Sony torque meter CQ-102C

SONY®

SERVICE MANUAL

TC-K51

TAPE RECORDER SECTION

Recording System: 4-track 2-channel stereo

Fast-forward and Rewind Time: Approx. 90 sec. (with C-60)

Frequency Response: DOLBY NR OFF

US, Canadian model
- With Type IV cassette (Sony METALLIC)
  20–17,000 Hz
  30–15,000 Hz (±3 dB)
  30–13,000 Hz (±3 dB, 0 VU recording)
- With TYPE III cassette (Sony Fe-Cr)
  20–17,000 Hz
  30–15,000 Hz (±3 dB)
- With TYPE II cassette (Sony EHF)
  20–16,000 Hz
  30–14,000 Hz (±3 dB)
- With TYPE I cassette (Sony HFX)
  20–15,000 Hz

AEP, UK, E model
- With TYPE IV cassette (Sony METALLIC)
  20–17,000 Hz
  30–15,000 Hz (±3 dB)
  30–13,000 Hz (±3 dB, 0 VU recording)
  30–15,000 Hz (DIN)
- With TYPE III cassette (Sony Fe-Cr)
  20–17,000 Hz
  30–15,000 Hz (±3 dB)
  30–15,000 Hz (DIN)
- With TYPE II cassette (Sony CD-α)
  20–16,000 Hz
  30–14,000 Hz (±3 dB)
  30–14,000 Hz (DIN)
- With TYPE I cassette (Sony BHF)
  20–15,000 Hz
  30–13,000 Hz (DIN)

Wow and Flutter: 0.045 % WRMS (US, Canadian model)
0.045 % WRMS (NAB)
±0.14 % (DIN) } (AEP, UK, E model)

S/N Ratio: DOLBY NR OFF

US, Canadian model
- With TYPE III cassette (Sony Fe-Cr)
  59 dB at peak level
- With TYPE II cassette (Sony EHF)
  57 dB at peak level

AEP, UK, E model
- With TYPE III cassette (Sony Fe-Cr)
  59 dB at peak level (NAB)
  57 dB (DIN, 1975, rev.)
- With TYPE II cassette (Sony CD-α)
  57 dB at peak level (NAB)

DOLBY NR ON
Improved by 5 dB at 1 kHz, 10 dB above 5 kHz

Total Harmonic Distortion: 1.0 % (with Sony Fe-Cr cassette)

Record Bias Frequency: 105 kHz

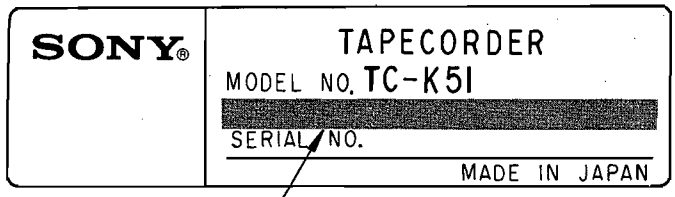
Inputs:
Microphone inputs (phone jacks) 2
sensitivity 0.25 mV (–70 dB)
for a low-impedance microphone
Line inputs (phono jacks) 2
sensitivity 77.5 mV (–20 dB)
input impedance 50 kΩ
REC/PB (connector) . . . (AEP, UK, E model)
input impedance less than 10 kΩ

Outputs:
Variable line outputs (phono jacks)..... 2
output level 0.435 V (–5 dB)
at load impedance 50 kΩ
with LINE OUT level control at "10"
suitable load impedance more than
10 kΩ
Fixed line outputs (phono jacks) 2
output level 0.435 V (–5 dB)
at load impedance 50 kΩ
Suitable load impedance
more than 10 kΩ
Headphone output 1
output level –52 to –22 dB
(1.9 – 62 mV) at load impedance 8 Ω
REC/PB (connector) . . . (AEP, UK, E model)
output impedance less than 10 kΩ

0 dB = 0.775 V

MODEL IDENTIFICATION

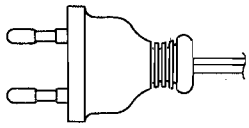
– Specification Label –



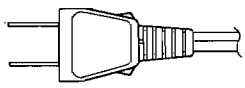
US, Canadian model	*: AC 120V*	*60Hz*	*12W*
AEP model	*: AC 220V*	*~50/60Hz*	*12W*
UK model	*: AC 240V*	*~50/60Hz*	*12W*
E model	*: AC 110, 120, 220, 240V*	*~50/60Hz*	*12W*

– Power Cord –

E model: euro-plug 1-551-530-00



E model: parallel-blade plug 1-551-473-31



SECTION 1
OUTLINE

1-1. CIRCUIT DESCRIPTION

Muting Circuit Operation when Power Switch is turned on/off

Figure 1 shows the circuit to mute LINE OUT until power (±10V) gets sufficiently stabilized after the power switch is turned on. Muting is also performed when the power switch is turned off.

1. LINE OUT Muting Circuit (See Fig. 1)

1) Operation just after the power switch is turned on:
   Q308 remains off until C309 and C310 are charged soon after the power switch is turned on. Since Q308 is off, Q104 and Q204 turn on to mute LINE OUT.
2) Resetting muting:
   Q308 turns on when the voltages across C309 and C310 being charged reach a sufficient level. As a result, Q104 and Q204 turn off to release muting.
3) Operation after the power switch is turned off:
   When the power switch is turned off, C403 is quickly discharged via R403, and D305 conducts. As a result, C309 and C310 are also quickly discharged via R403. Q308 then turns off to turn on Q104 and Q204. The LINE OUT is muted.

2. Charging/Discharging Circuit

1) D305
   D305 acts as a part in quickly discharging C309 and C310 via R403 when the power switch is turned off, thereby muting LINE OUT.
   It also serves to prepare the charging needed when the power switch is turned on.
2) D405, D406, and C403
   D405 and D406 take part in cutting off D305 when the power switch is turned on so that D305 can be active only during discharging.
   To cut off D305 quickly when the power switch is turned on, D405 is supplied with the power coming immediately from the rectifier next to the power transformer because this power rises more quickly than the stabilized power (10V).

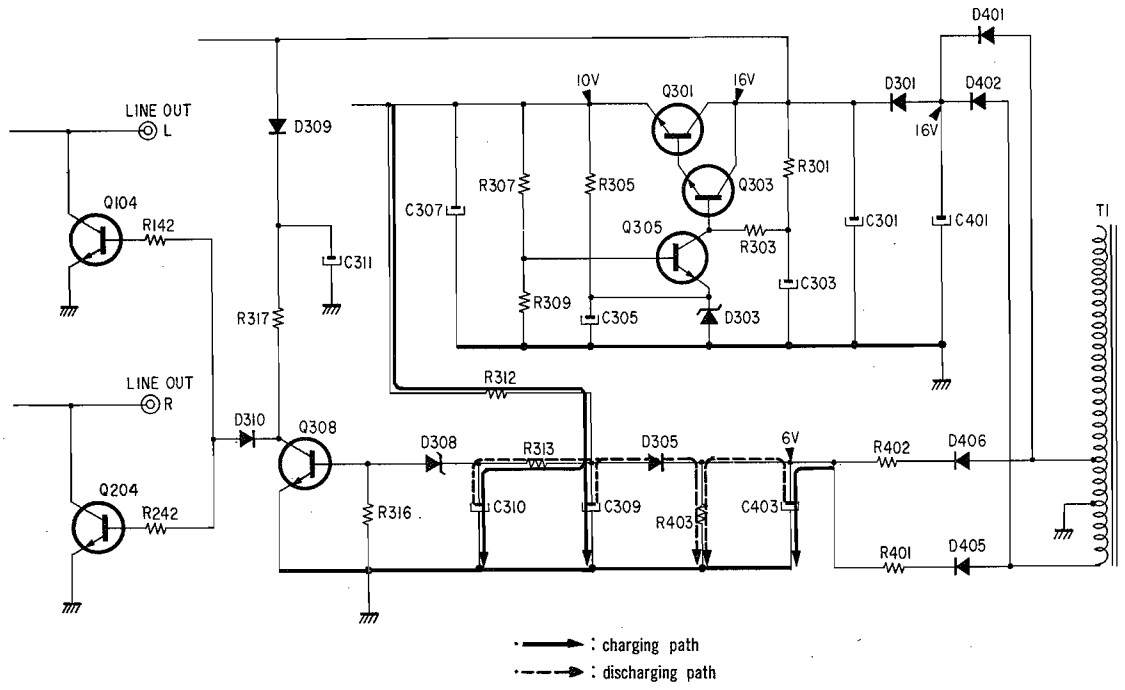


Fig. 1

Bias Oscillator Drive Circuit

Figure 2 shows the bias-oscillator drive circuit. The bias voltage develops when the B+ power (10V) is supplied to the emitter of Q309 and Q309 is turned on.

The operation is as follows.

When the REC button is pressed, S1002 turns on, and S1-3 switches to recording (10V is supplied to the emitter of Q309). Q307 then turns off, and Q310 turns on. As a result, the bias oscillator is supplied with power and generates the bias voltage.

Muting LINE OUT when Buttons are pressed (See Fig. 3)

1) Muting at the moment a button is pressed:
   When a button is pressed, S1001 turns on, and Q308 turns off. As a result, Q104 and Q204 turn on to mute the LINE OUT (flow denoted by ❸).
2) Muting at the time of STOP, REW, and FF:
   S1002 is off, and Q307 turns on. The flow is then divided into two paths:
   Flow ❶: Q310 turns off, Q309 turns off, and no bias voltage develops.
   Flow ❷: Q308 turns off, and Q104 and Q204 turn on to mute the LINE OUT.

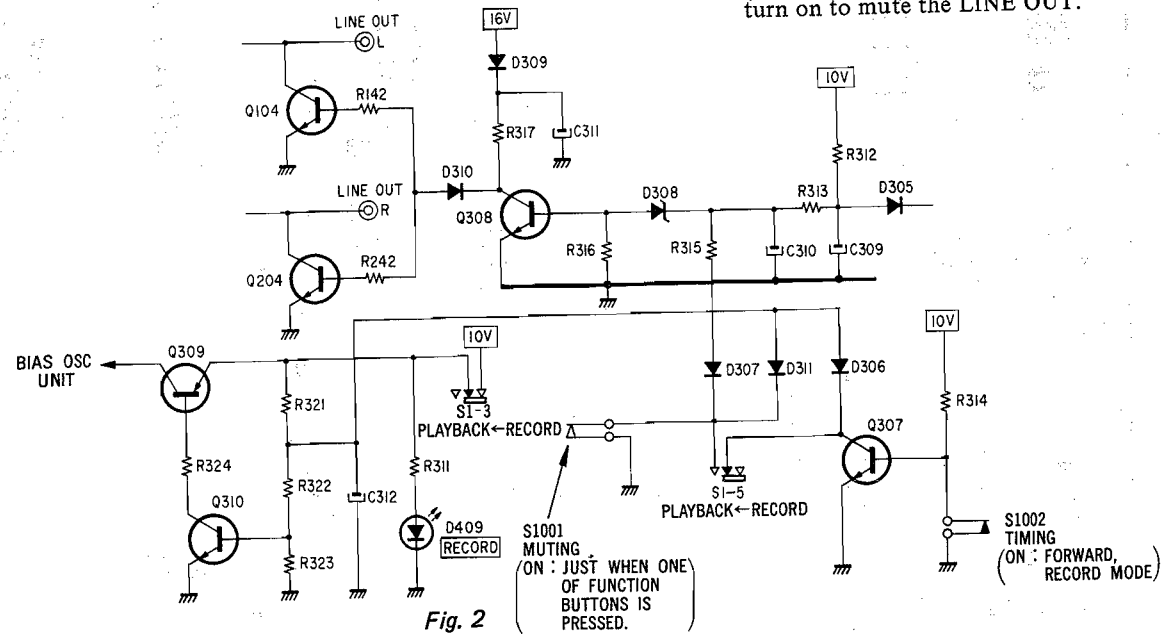


Fig. 2

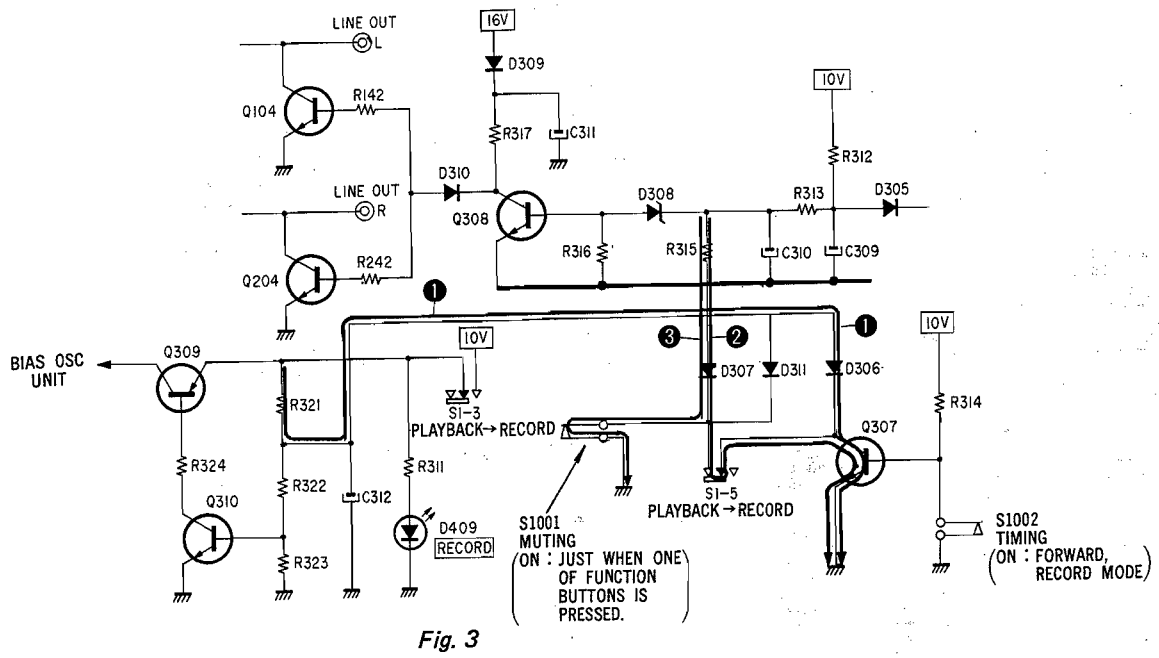
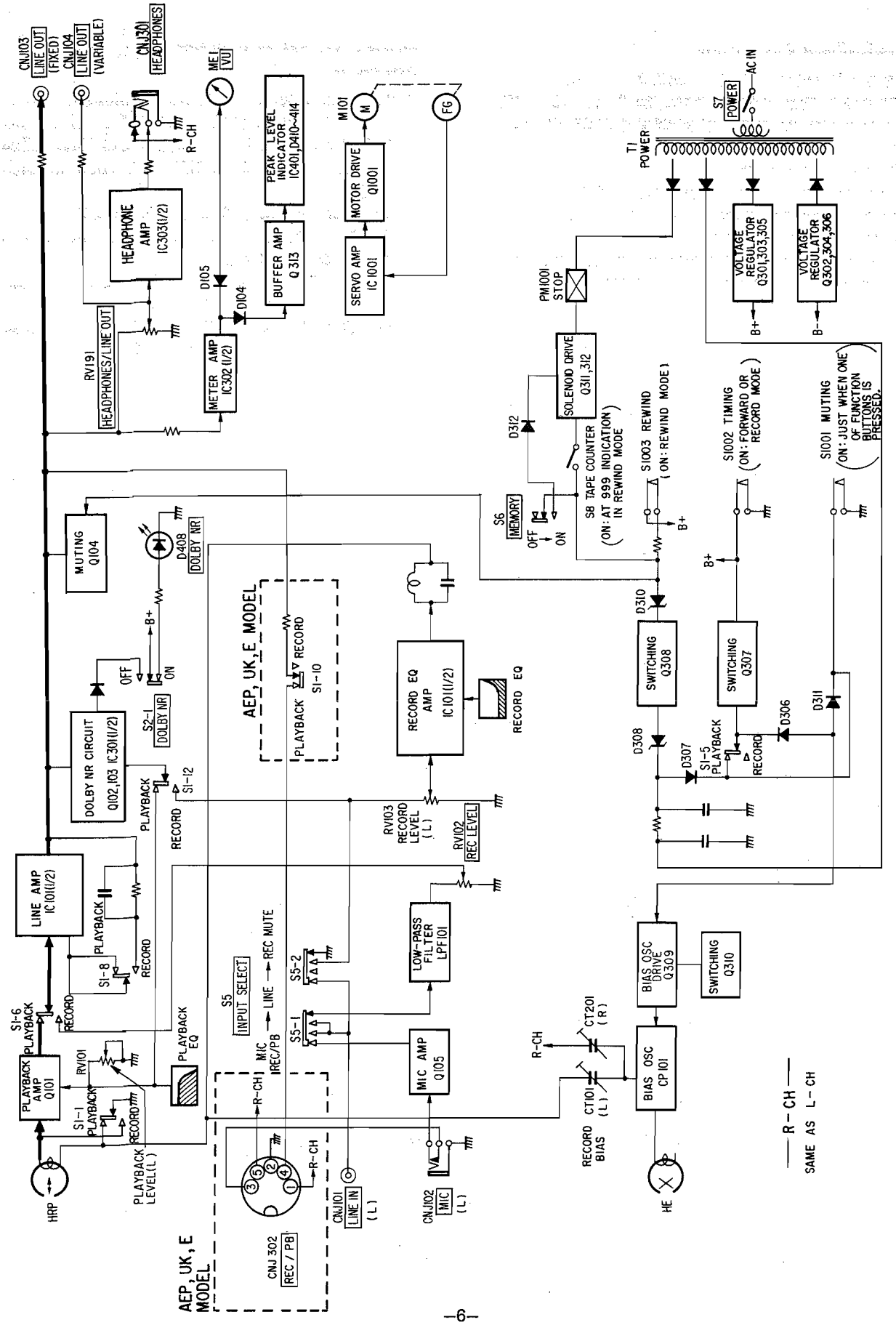


Fig. 3

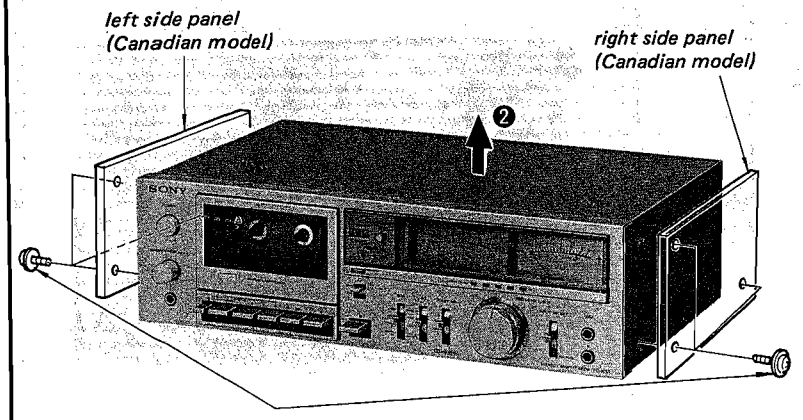
1-2. BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

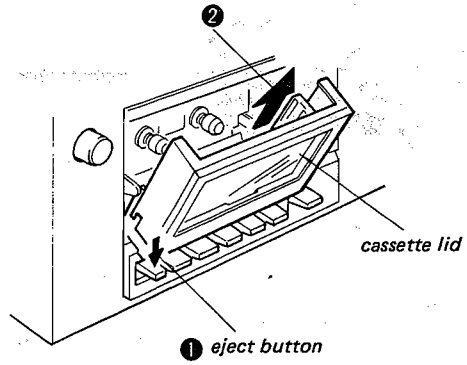
Note: Follow the disassembly procedure in the numerical order given.

TOP COVER REMOVAL

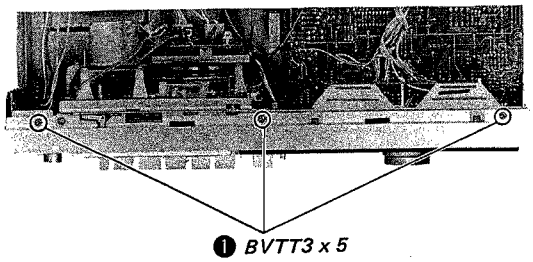


❶ { (±) BW4 x 12 (US, AEP, UK, E model)
(±) BW4 x 22 (Canadian model)

CASSETTE LID REMOVAL

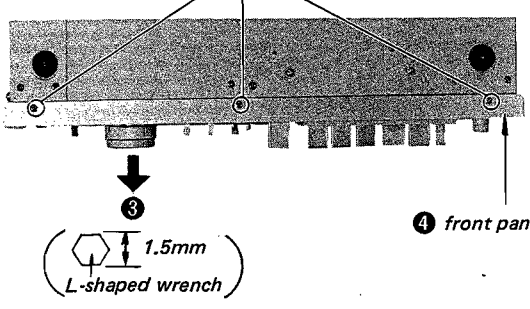


FRONT PANEL REMOVAL

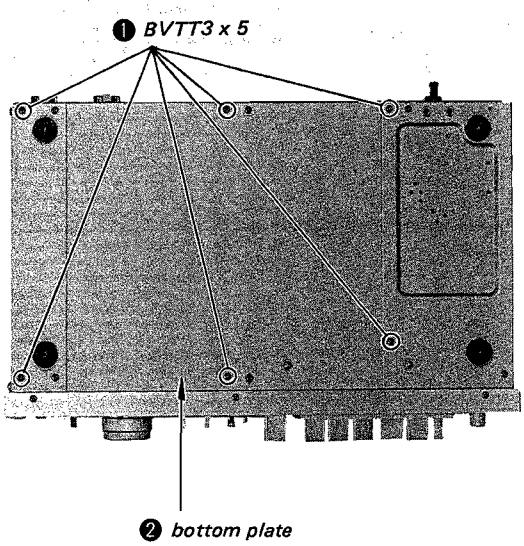


❶ BVTT3 x 5

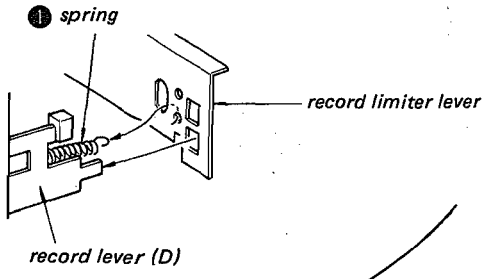
❷ BVTT3 x 5

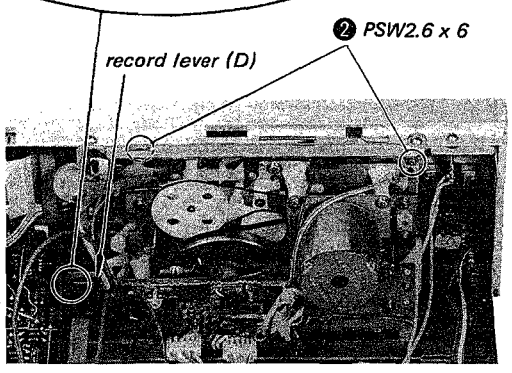


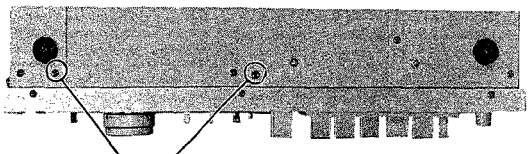
BOTTOM PLATE REMOVAL



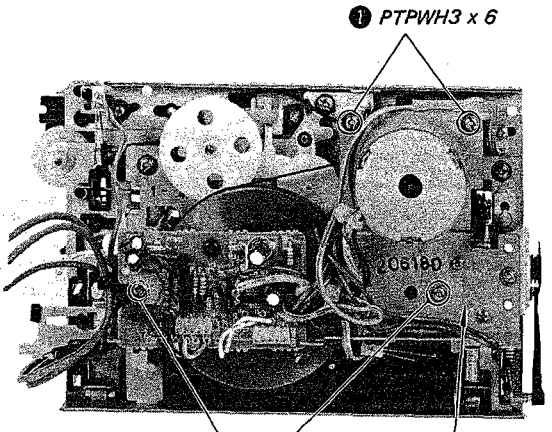
MECHANICAL BLOCK REMOVAL



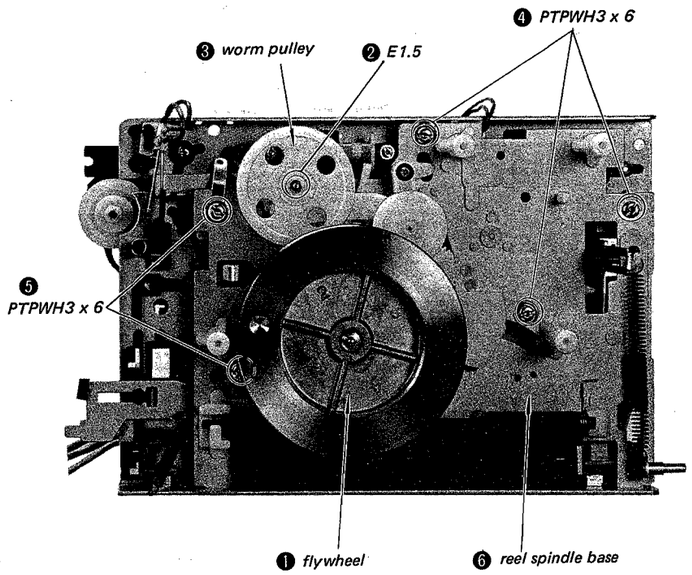




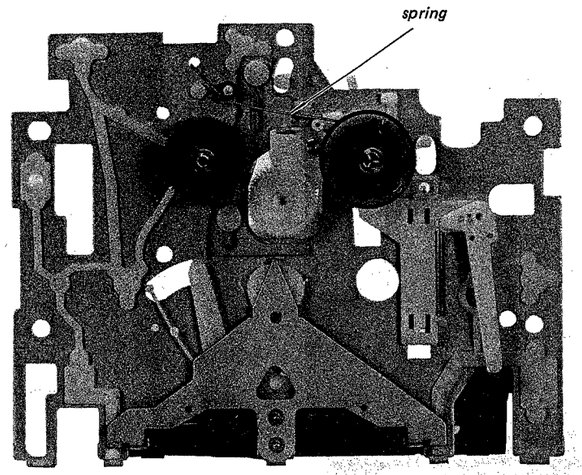
FLYWHEEL RETAINER REMOVAL



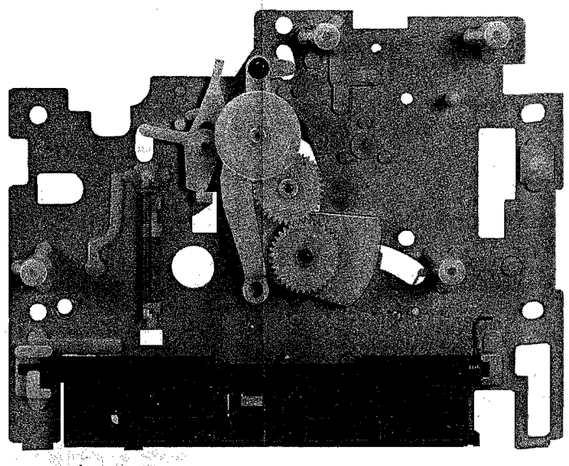
REEL SPINDLE BASE REMOVAL



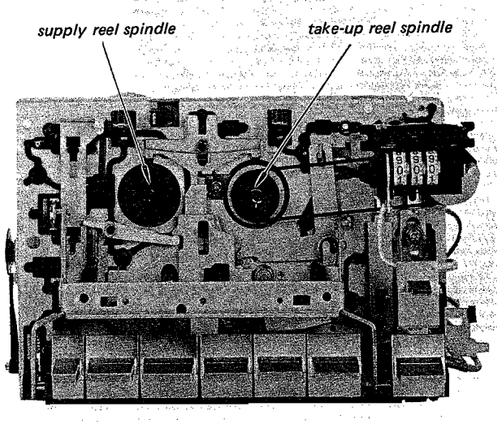
Reel spindle base front view



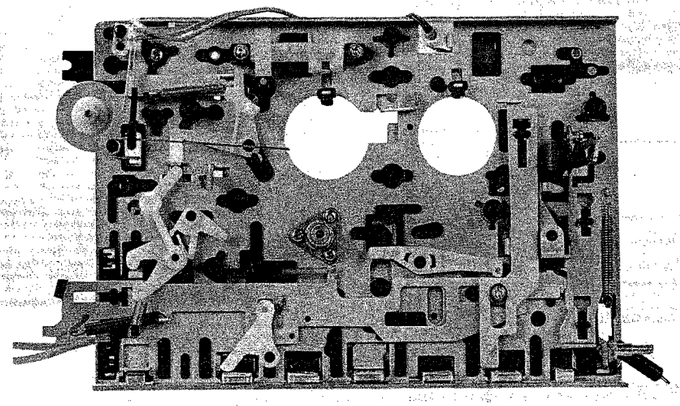
Reel spindle base view



Reel spindle base is not removed.
(front view)



Reel spindle base is removed.
(rear view)



SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

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

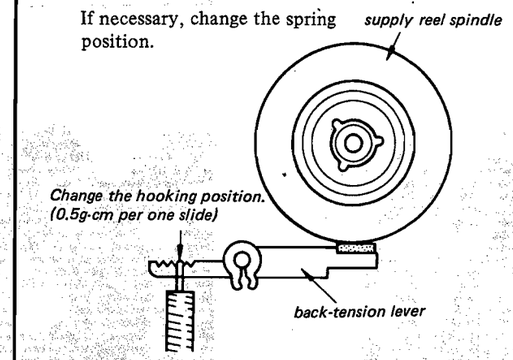
record/playback head	pinch roller
erase head	rubber belts
capstan	idlers

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 suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Back Tension Torque Adjustment
– playback mode –

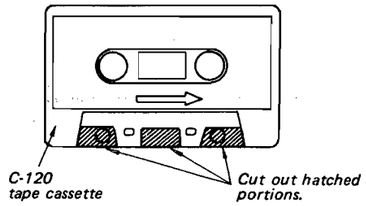
Torque meter	Meter reading
CQ-102C	2.0 – 4.5g·cm (0.02 – 0.06 oz·inch)

If necessary, change the spring position.

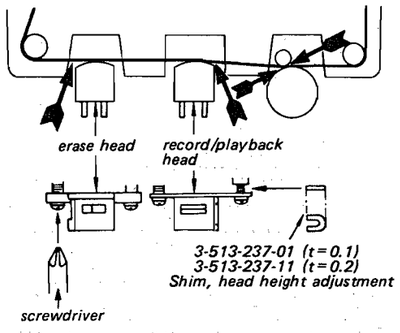


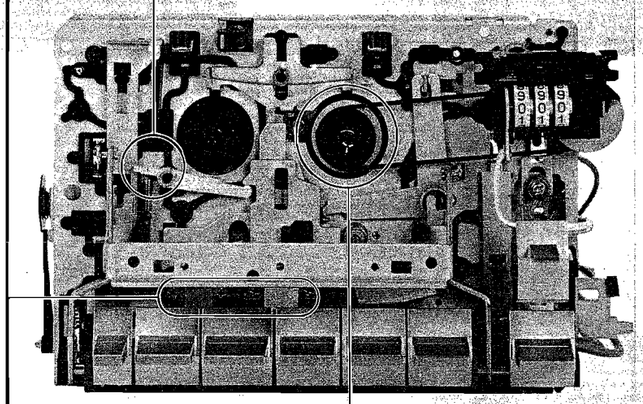
Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by arrows.

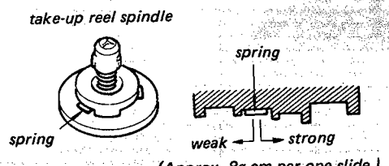




Forward Torque Adjustment
– playback mode –

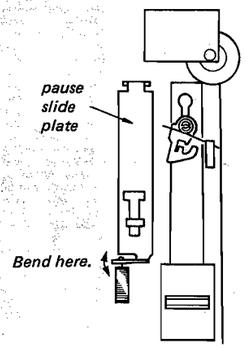
Torque meter	Meter reading
CQ-102C	28 – 55g·cm (0.39 – 0.76 oz·inch)

If necessary, change the spring position.

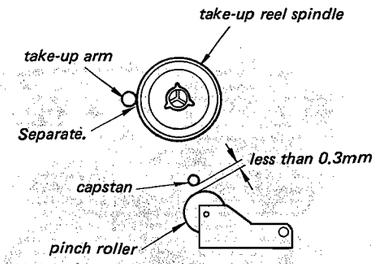


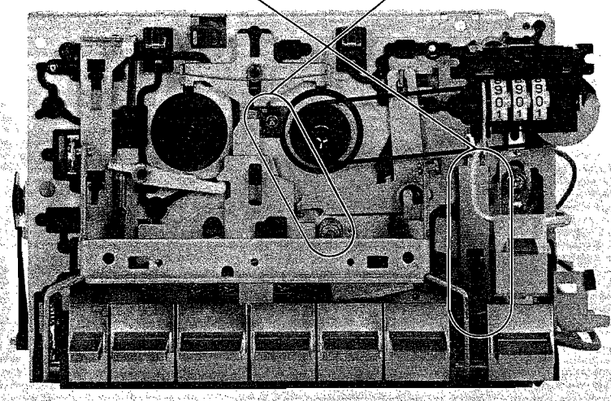
Pause Timing Adjustment
– playback mode –

1. Press the pause button slowly.
2. Bend the pause slide plate so that the take-up reel spindle and the take-up arm separate just when or just after the capstan and the pinch roller separate.

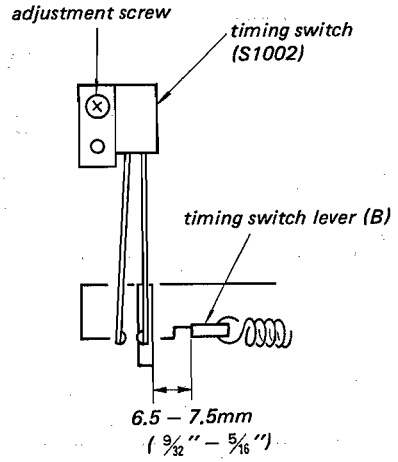


Note: When the take-up reel spindle is away from the take-up arm, the clearance should be less than 0.3mm.

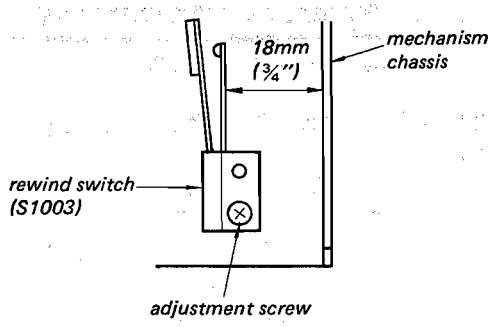


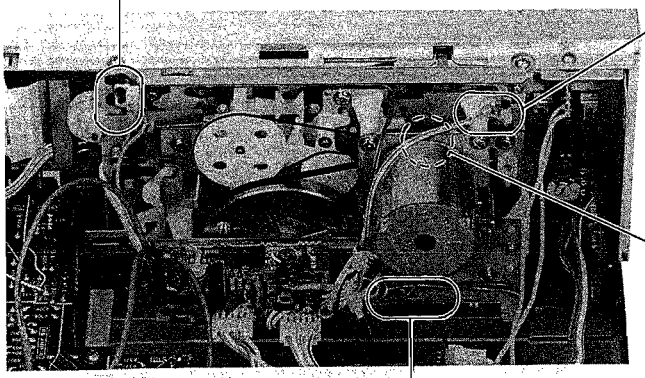


Timing Switch (S1002) Position Adjustment
– stop mode –

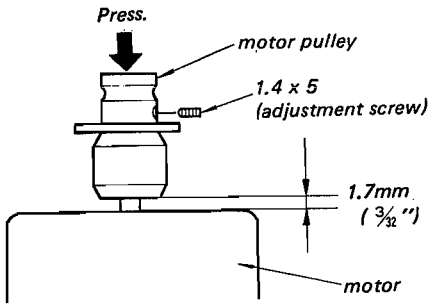


Rewind Switch (S1003) Position Adjustment
– stop mode –

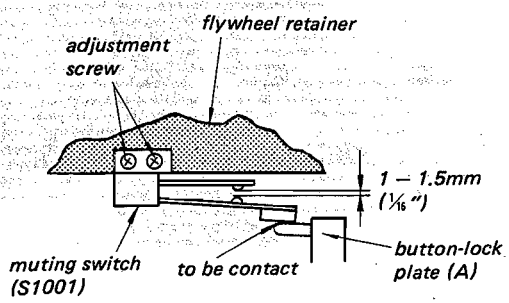




Pulley Height Adjustment
– stop mode –



Muting Switch (S1001) Position Adjustment
– stop mode –



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.

- Set the BIAS and EQ switches according to the tape as follows.

Tape	BIAS switch	EQ switch
CS-10	MED (I/III)	TYPE I
CS-25	HIGH (II)	TYPE II
CS-30	MED (I/III)	TYPE III
CS-40	METAL	TYPE IV

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

DOLBY NR switch:	OFF
EQ switch:	TYPE I
BIAS switch:	MED (I/III)
INPUT SELECT switch:	LINE
MEMORY 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.

Standard Input Level

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

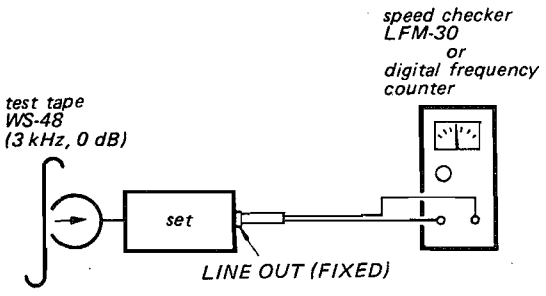
Standard Output Level

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

Tape Speed Adjustment

Procedure:

Mode: playback



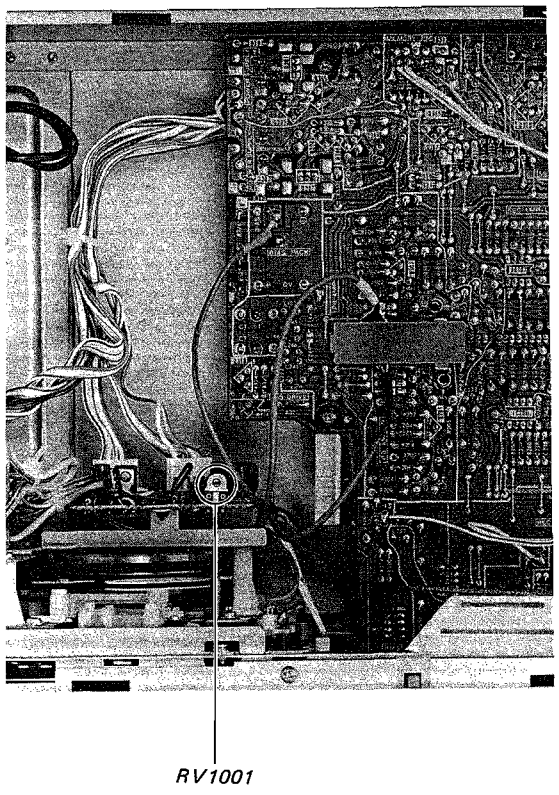
Specification:

Speed checker	Digital frequency counter
−0.33 to +0.33%	2990 – 3010Hz

Frequency difference between the beginning and the end of the tape should be within 0.33% (10Hz).

Adjustment Location:

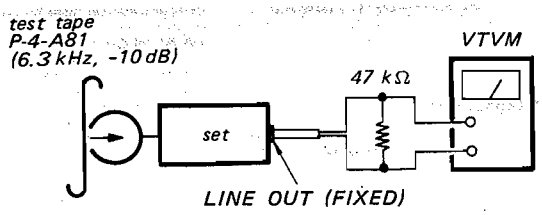
– servo amp board –



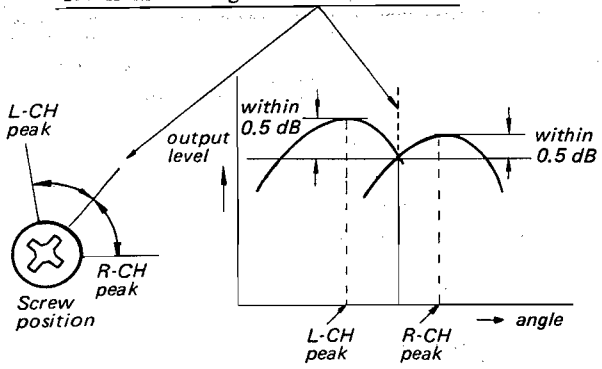
Record/playback Head Azimuth Adjustment

Procedure:

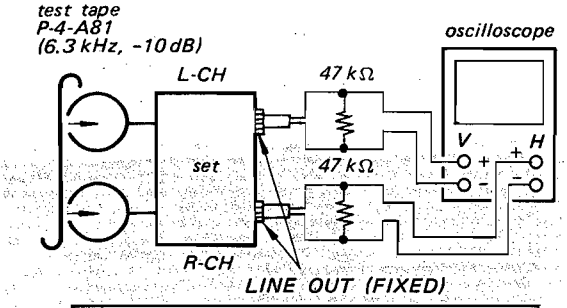
1. Mode: playback

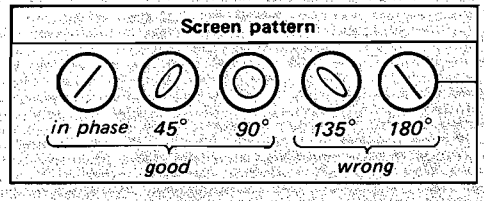


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

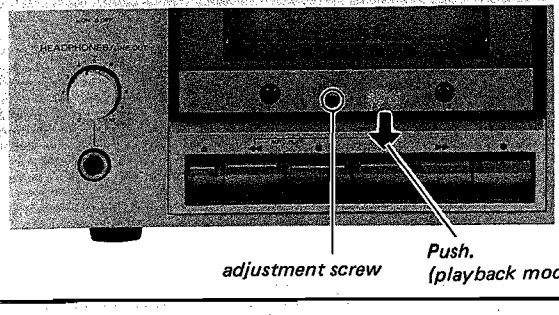


3. Phase Check
   Mode: playback





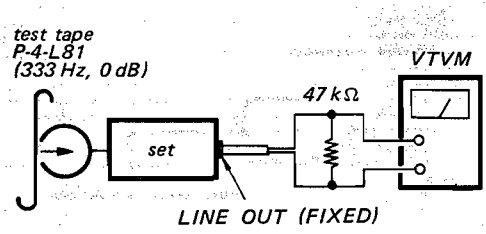
Adjustment Location:



Playback Level Adjustment

Procedure:

Mode: playback



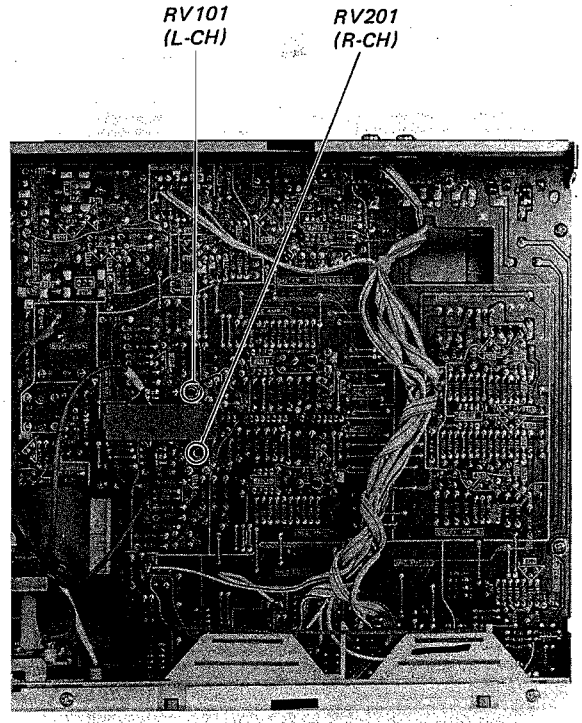
Specification:

LINE OUT level: 0.52 – 0.59V
(–3.5 to –2.5dB)

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

Adjustment Location:

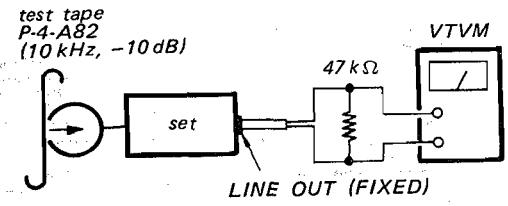
– audio amp board –



Playback Equalizer Adjustment

Procedure:

Mode: playback



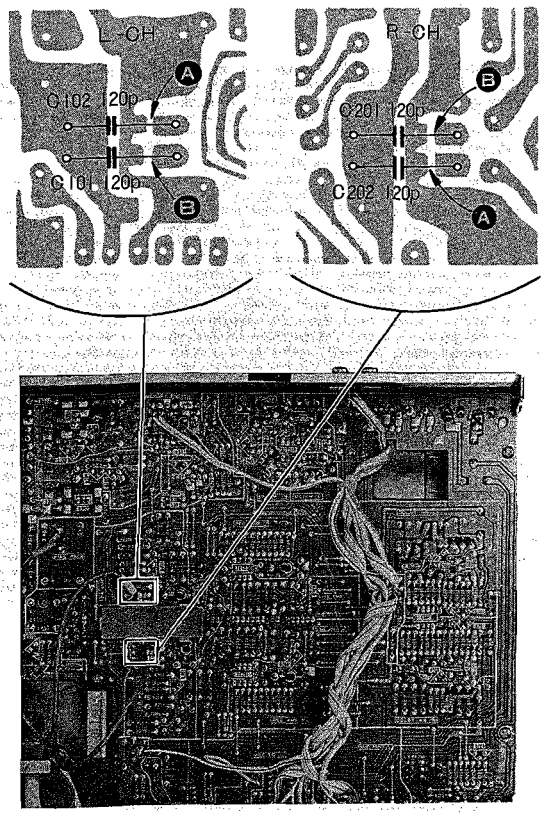
Specification:

EQ switch	LINE OUT (FIXED) level
TYPE I	0.14 – 0.22V (–15 to –11dB)
TYPE II	0.074 – 0.13V (–20.5 to –15.5dB)

Adjustment Location:

– audio amp board –

Bridge patterns	High frequency level
(open)	down
Ⓐ or Ⓑ	↕
Ⓐ and Ⓑ	up



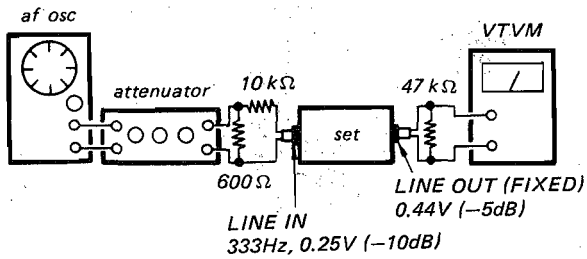
LED Peak Program Meter Calibration

Setting:

REC LEVEL control: standard record
(See page 14.)

Procedure:

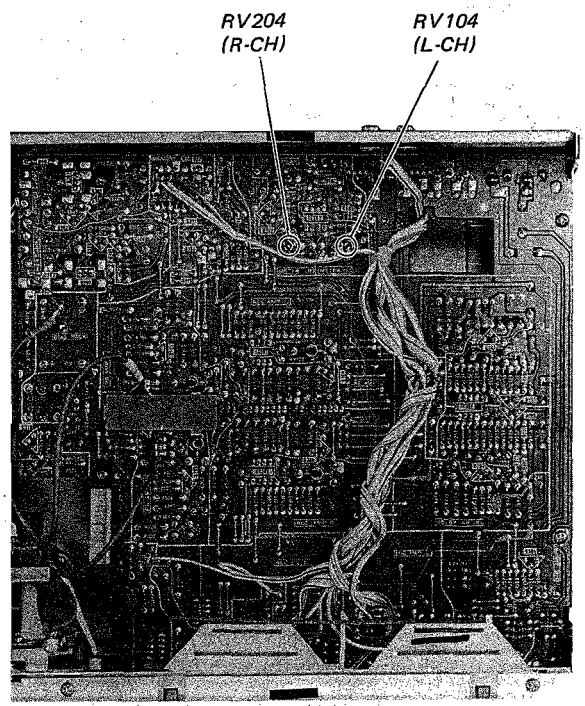
1. Mode: record



Adjust RV104 (L-CH) and RV204 (R-CH) to obtain 0 VU reading on the level meter.

Adjustment Location:

– audio amp board –



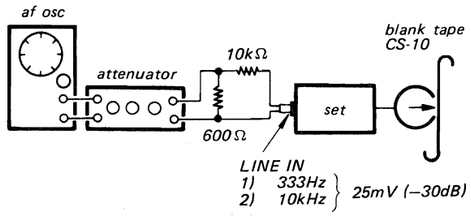
Record Bias Adjustment

Setting:

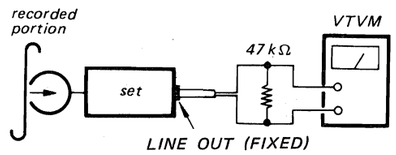
REC LEVEL control: standard record
(See page 14.)

Procedure:

1. Mode: record



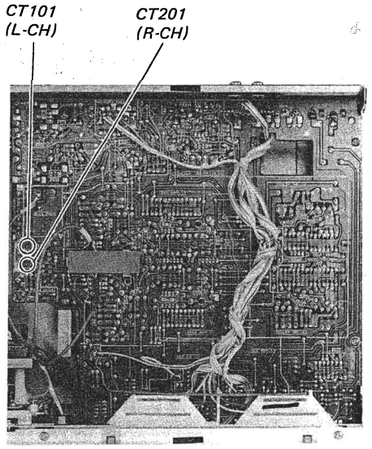
2. Mode: playback



Adjust CT101 (L-CH) and CT201 (R-CH) to make 333Hz and 10kHz signal output levels equal.

Adjustment Location:

– audio amp board –



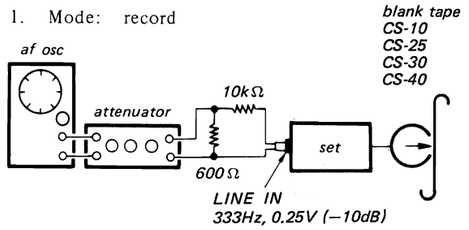
Record Level Adjustment

Setting:

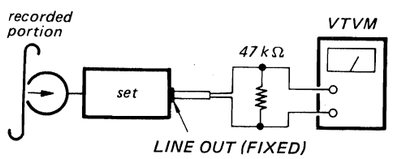
REC LEVEL control: standard record
(See page 14.)

Procedure:

1. Mode: record



2. Mode: playback

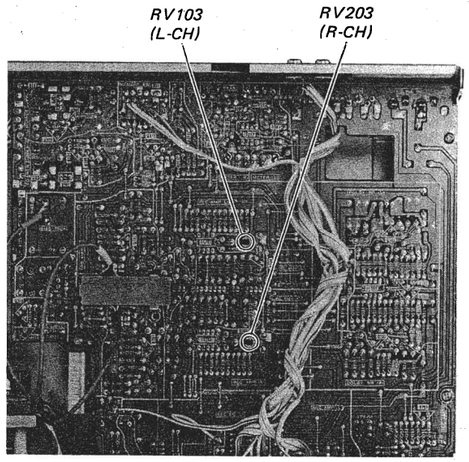


Specification:

tape	LINE OUT (FIXED) level
CS-10	0.41 – 0.46V (–5.5 to –4.5dB)
CS-25 CS-30 CS-40	0.37 – 0.52V (–6.5 to –3.5dB)

Adjustment Location:

– audio amp board –



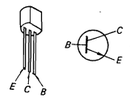
Replacement Semiconductors

For replacement, use semiconductors except in ( ).

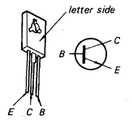
Q101, 201
Q102, 202
Q105, 205 : 2SC1345

Q103, 203
Q307, 308
Q310, 311
Q313 : 2SC1364

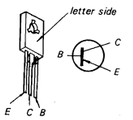
Q104, 204 : 2SC2001
Q312 : 2SC1475 (2SD789)



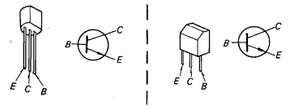
Q301, 1001: 2SD414



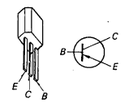
Q302: 2SB548



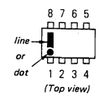
Q303, 305: 2SC1364 (2SC458)



Q304, 306 : 2SA1027R (2SA844)
Q309 : 2SA1027R (2SA1026)



IC101, 201 : NJM4560D
IC401 : TL489CP



IC301 : μPC4556C
IC302, 303 : μPC4557C

IC1001: CX069

D101, 201
D103, 203
D305–307
D311, 312
D405, 406 : 1S1555 (1T40)

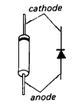
D102, 202
D104, 204 : 1T22AM (1T22A)

D105, 205 : 1S1555

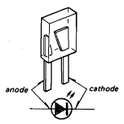
D301, 302
D309
D401–404
D407, 1001 : 10E2

D303, 304
D310 : HZ6B2L (HZ6B1L)

D308 : RD3.0E



D408 : SEL1720Y
D409
D411–414 : SEL1120R
D410 : SEL1320G



Replacement Semiconductors

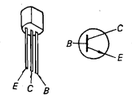
For replacement, use semiconductors except in ( ).

Q101, 201
Q102, 202 : 2SC1345
Q105, 205

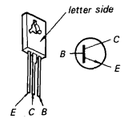
Q103, 203
Q307, 308
Q310, 311 : 2SC1364
Q313

Q104, 204 : 2SC2001

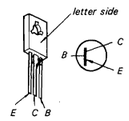
Q312 : 2SC1475 (2SD789)



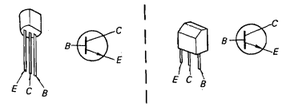
Q301, 1001: 2SD414



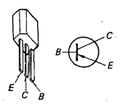
Q302: 2SB548



Q303, 305: 2SC1364 (2SC458)



Q304, 306 : 2SA1027R (2SA844)
Q309 : 2SA1027R (2SA1026)



IC101, 201 : NJM4560D
IC401 : TL489CP

IC301 : μPC4556C
IC302, 303 : μPC4557C

IC1001: CX069

D101, 201
D103, 203
D305–307
D311, 312
D405, 406 : 1S1555 (1T40)

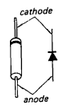
D102, 202
D104, 204 : 1T22AM (1T22A)

D105, 205 : 1S1555

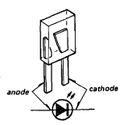
D301, 302
D309
D401–404
D407, 1001 : 10E2

D303, 304
D310 : HZ6B2L (HZ6B1L)

D308 : RD3.0E



D408 : SEL1720Y
D409
D411–414 : SEL1120R
D410 : SEL1320G

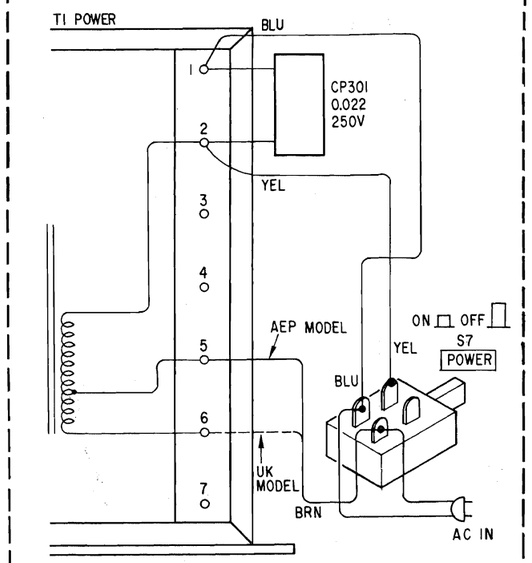


SECTION 4
DIAGRAMS

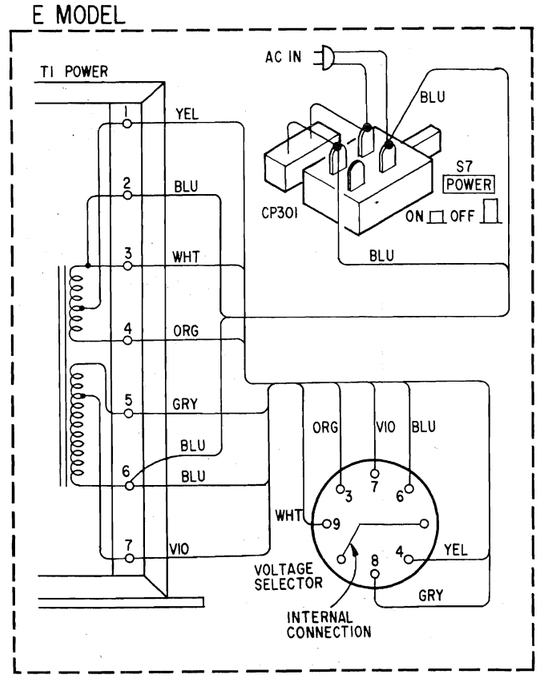
4-1. MOUNTING DIAGRAM (AEP, UK, E model)

– Power Supply Section –

AEP, UK MODEL



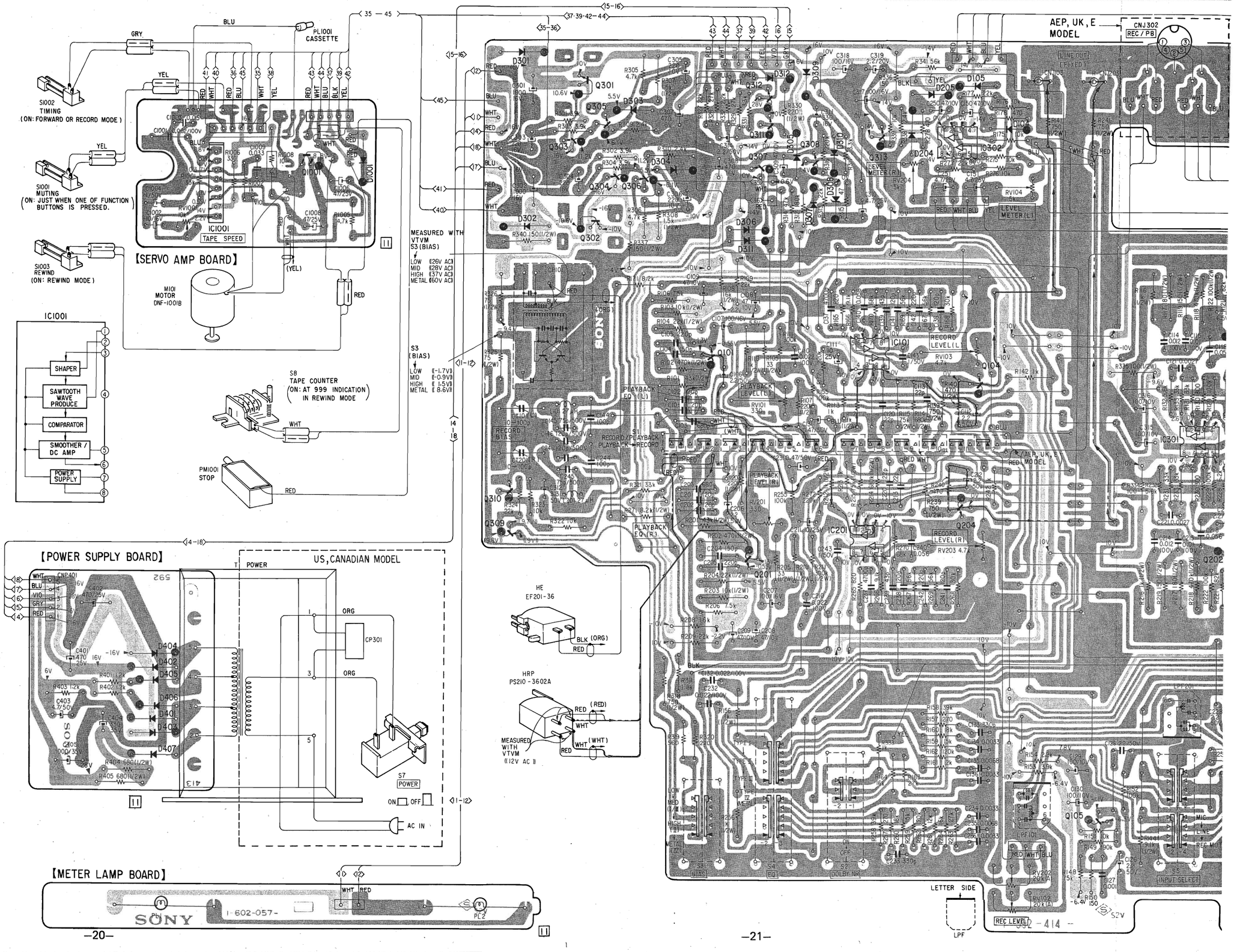
E MODEL



4-2. MOUNTING DIAGRAM

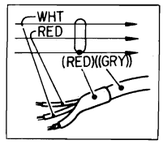
— Conductor Side —

See page 18 for the semiconductor illustration.

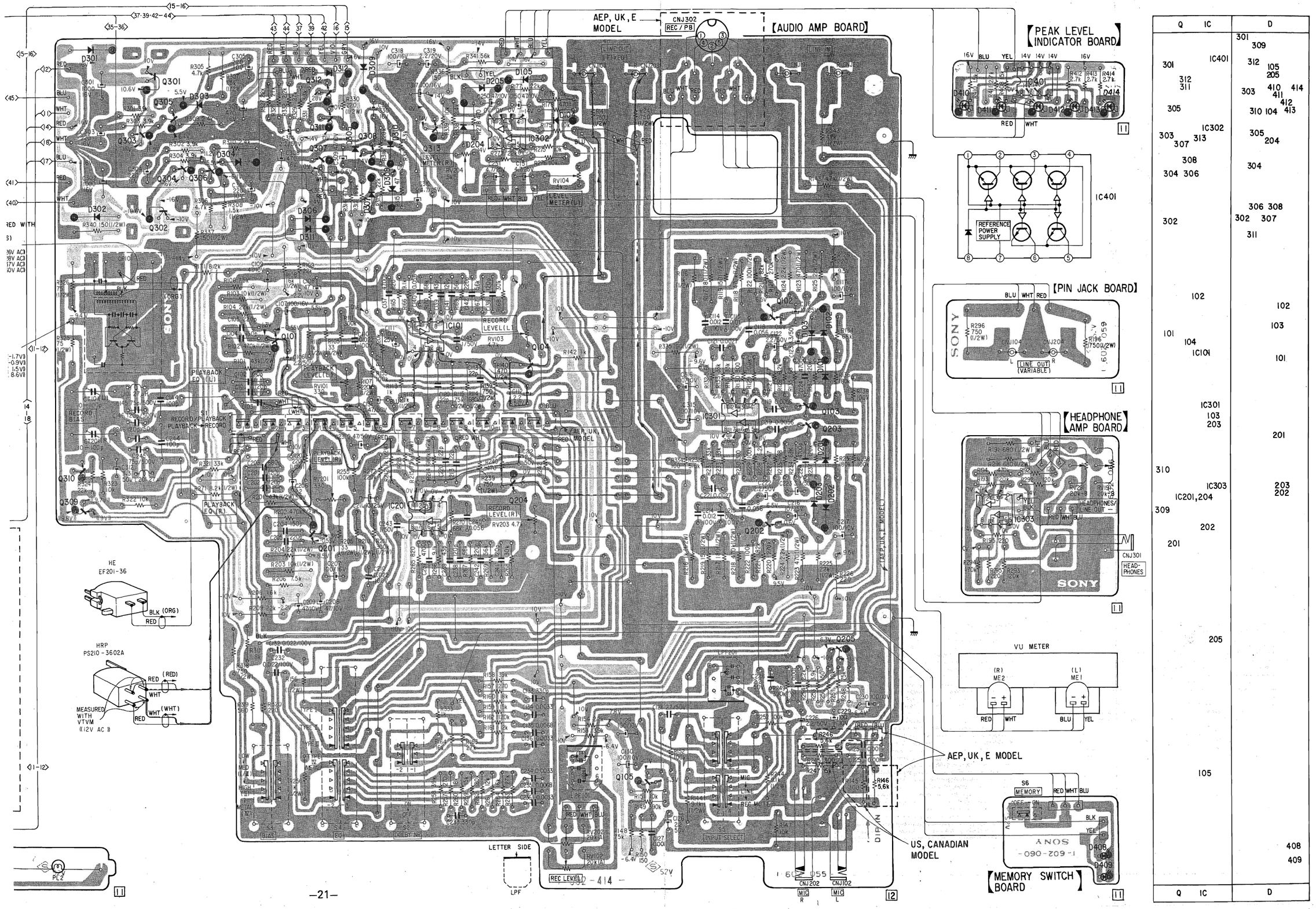


Note:

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

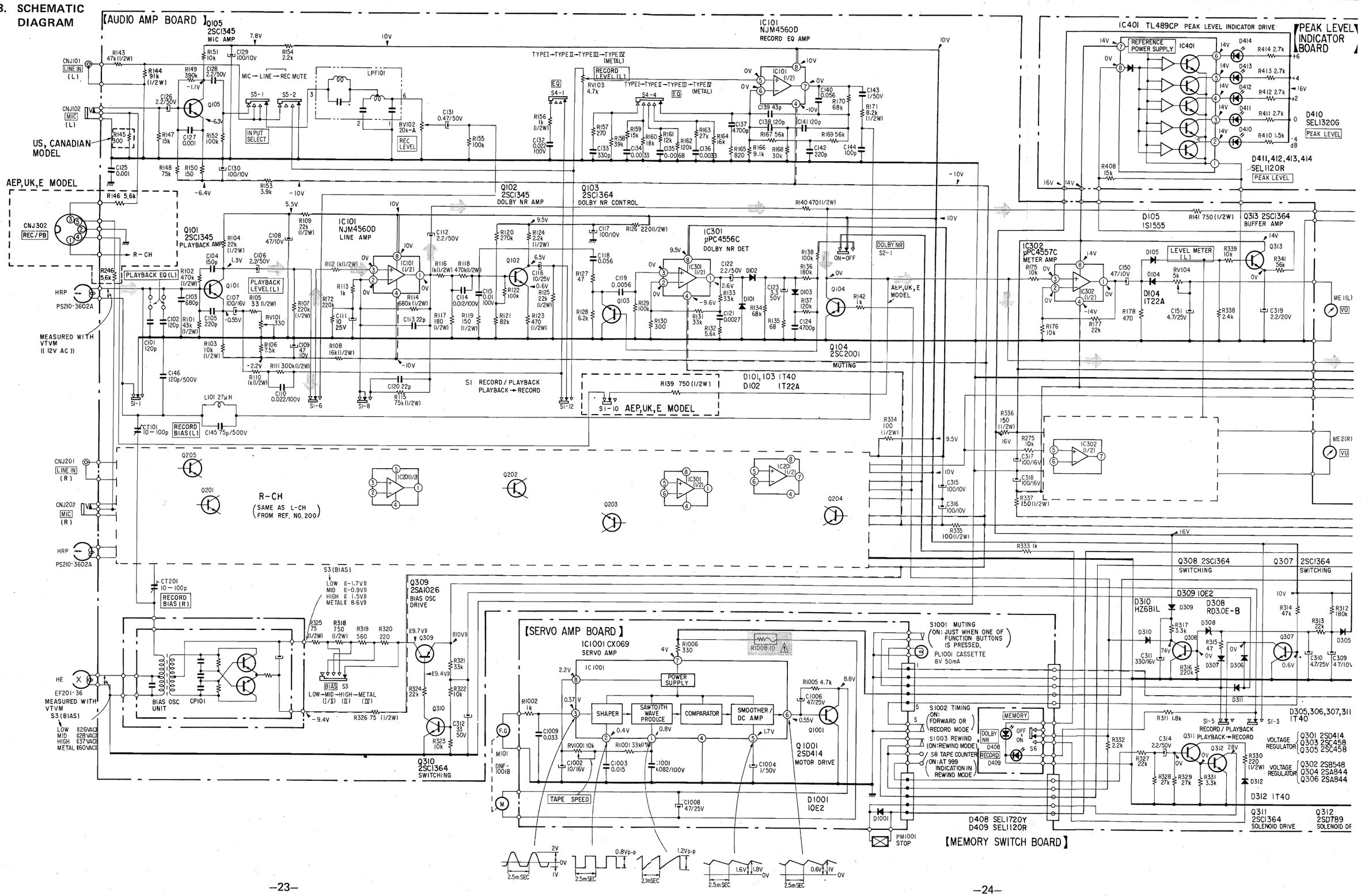


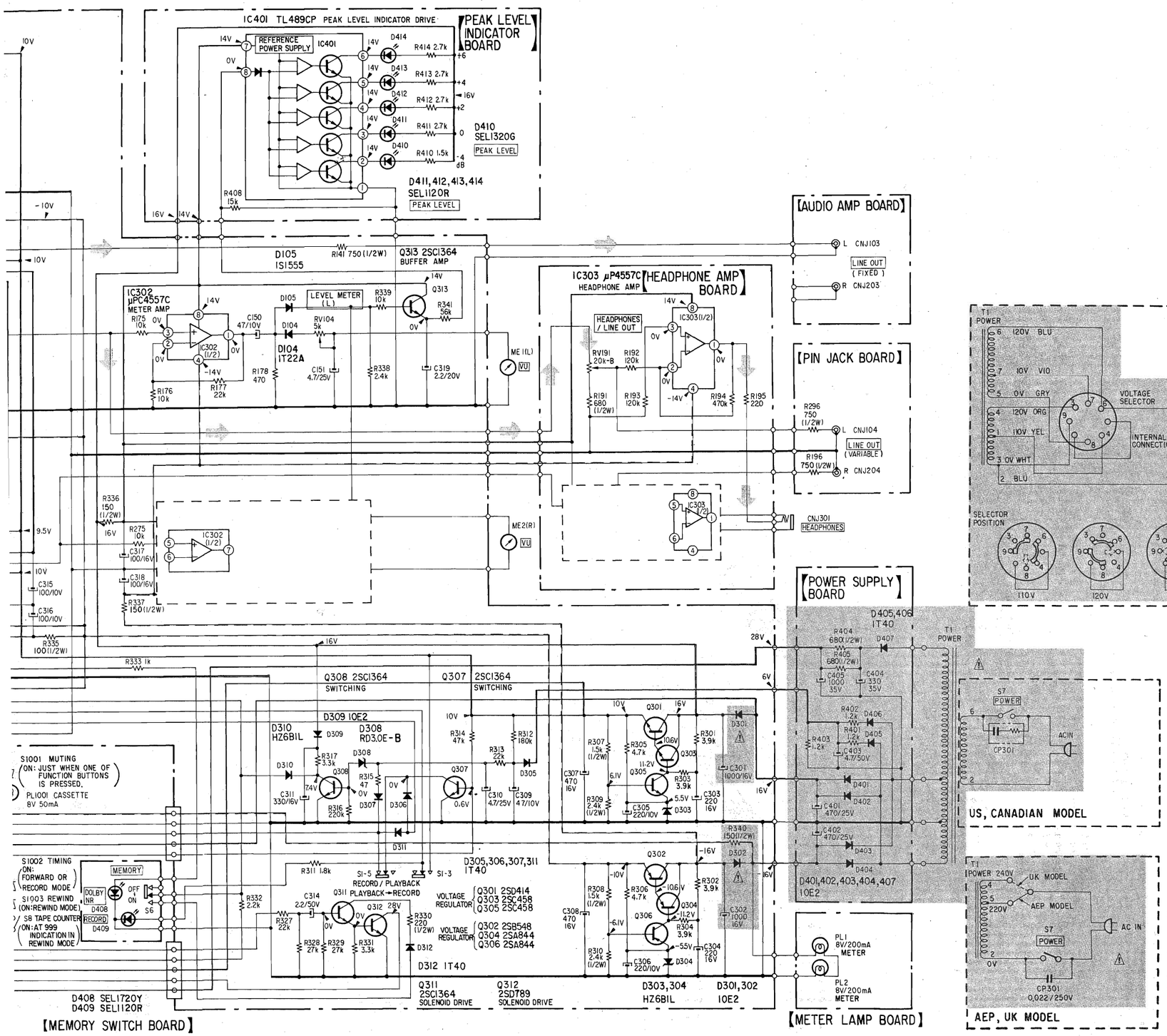
- [ ]← : indicates side identified with part number.
- : B + pattern
- : B – pattern
- : L-CH signal path
- : R-CH signal path



Q	IC	D
		301
		309
	IC401	312
301		105
		205
312		303
311		410 414
		411
305		412
		310 104 413
	IC302	
303	313	305
307		204
308		
304 306		304
		306 308
302		302 307
		311
	102	102
		103
101		
104		
	IC101	101
	IC301	
	103	
	203	201
310		
	IC303	203
	IC201,204	202
309		
	202	
201		
	205	
	105	
		408
		409
Q	IC	D

4-3. SCHEMATIC DIAGRAM





Note:

- Components for right channel have same values as for left channel. Reference numbers are corded from 200.
- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- : fusible resistor.
- : panel designation.
- : adjustment for repair.
- : B+ bus.
- : B− bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (20kΩ/V).
  (( )) : record
- Voltage variations may be noted due to normal production tolerances.
- : signal path
- Switch

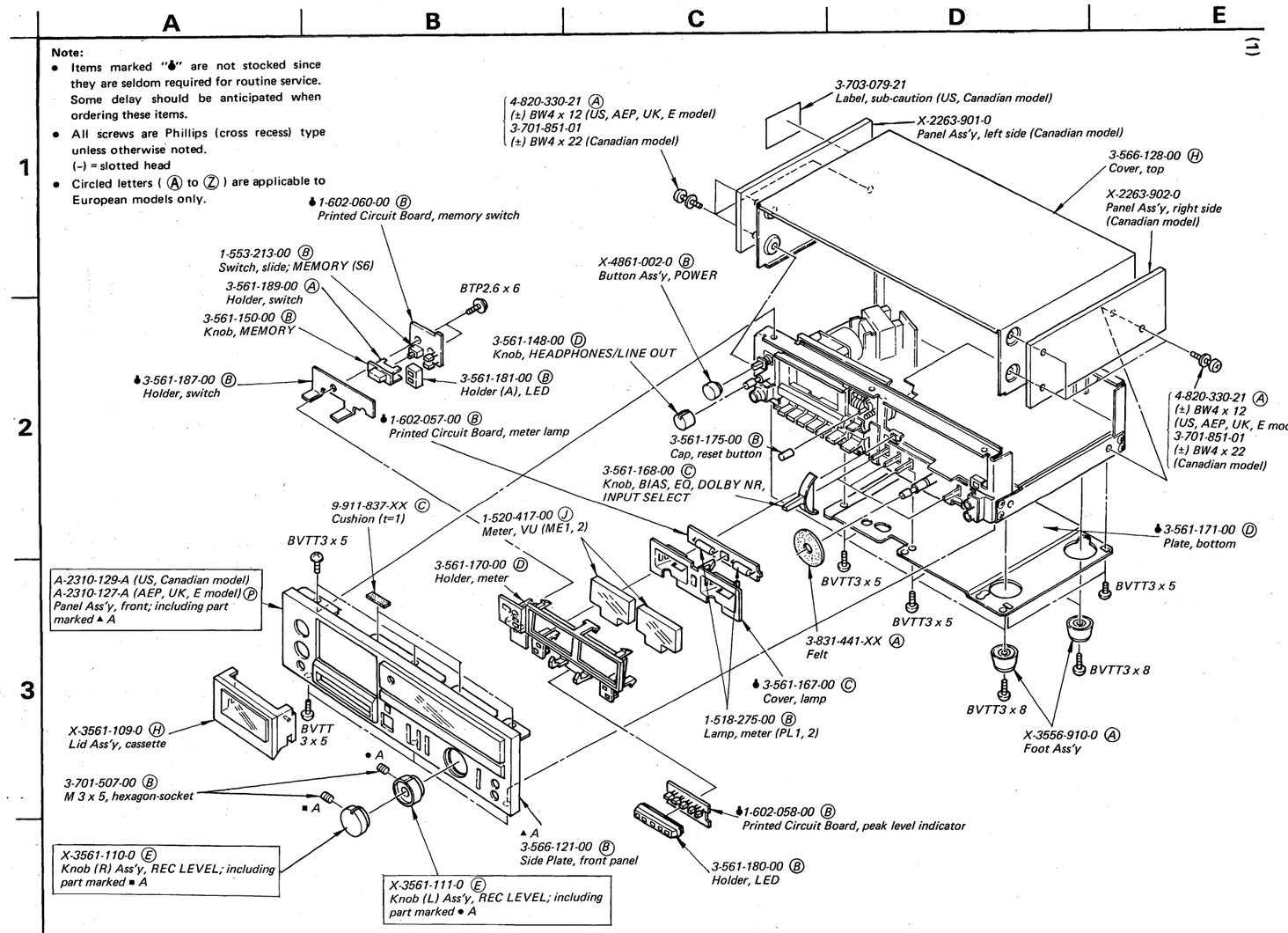
Ref. No.	Switch	Position
S1	RECORD/PLAYBACK	PLAYBACK
S2	DOLBY NR	ON
S3	BIAS	LOW
S4	EQ	TYPE 1
S5	INPUT SELECT	MIC
S6	MEMORY	OFF
S7	POWER	OFF
S8	TAPE COUNTER	OFF
S1001	MUTING	OFF
S1002	TIMING	OFF
S1003	REWIND	OFF

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

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

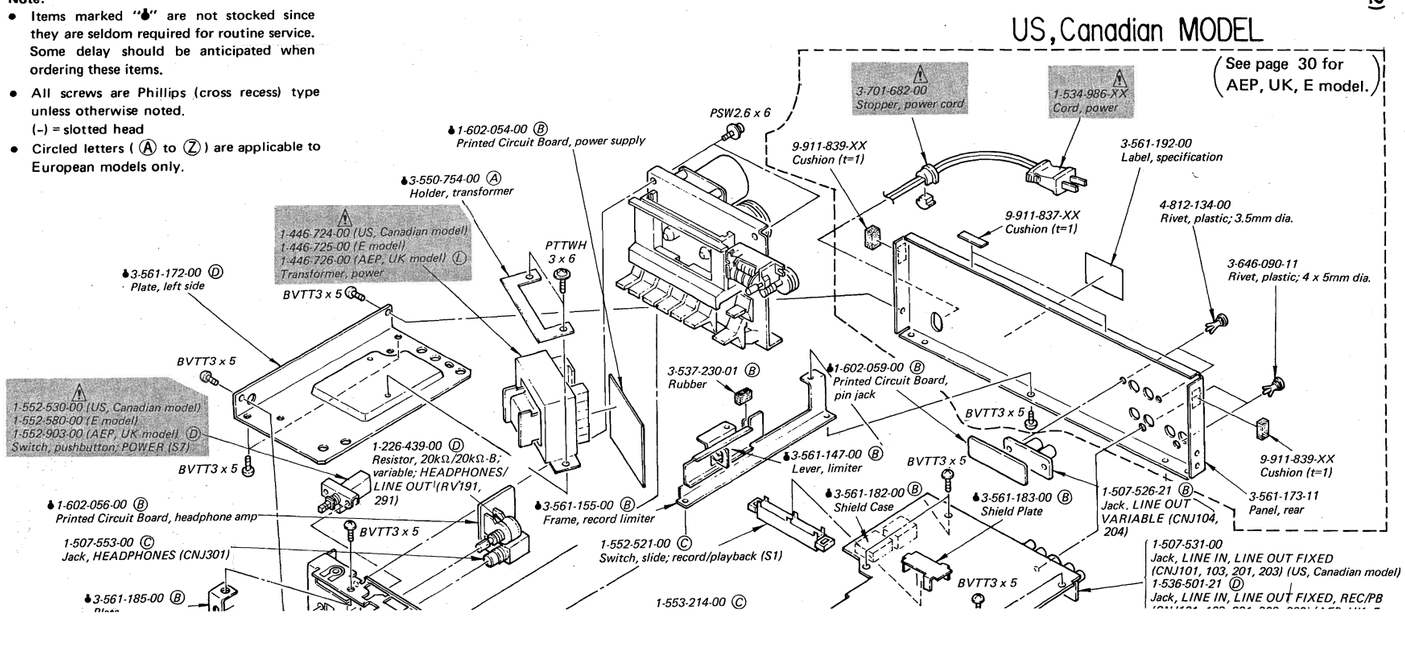
(1)

Note:
- Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



(2)

Note:
- Items marked "•" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

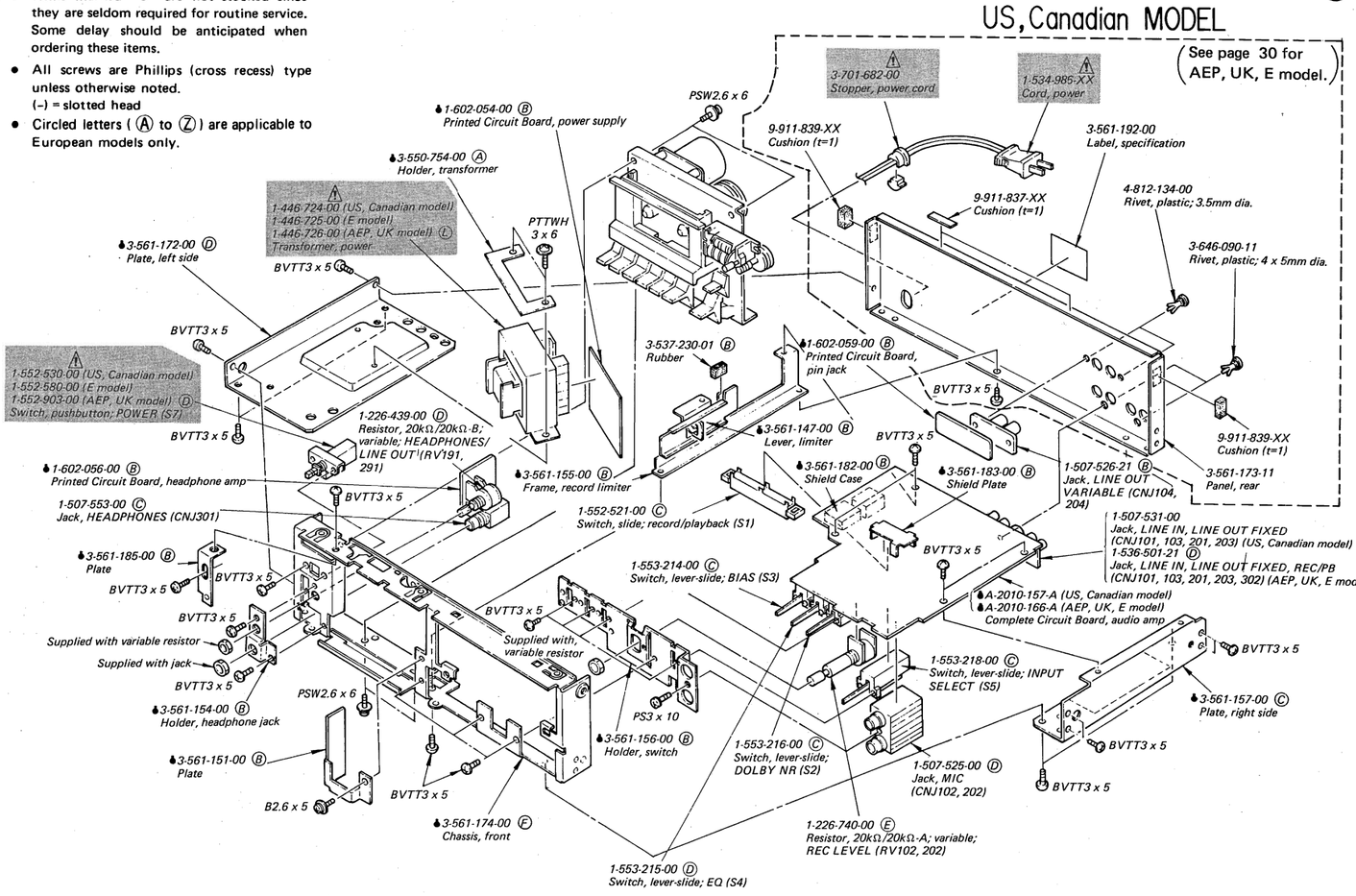


Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

(2)

US, Canadian MODEL

See page 30 for AEP, UK, E model.

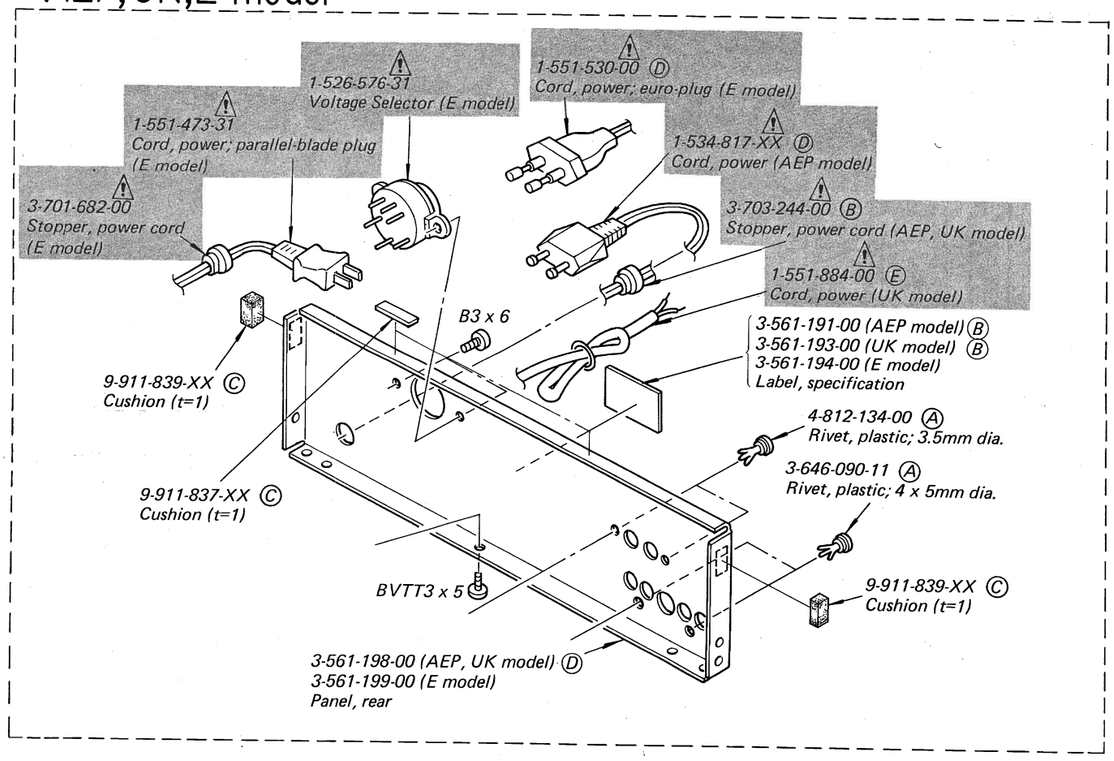


Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: 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.

(3)

AEP, UK, E model

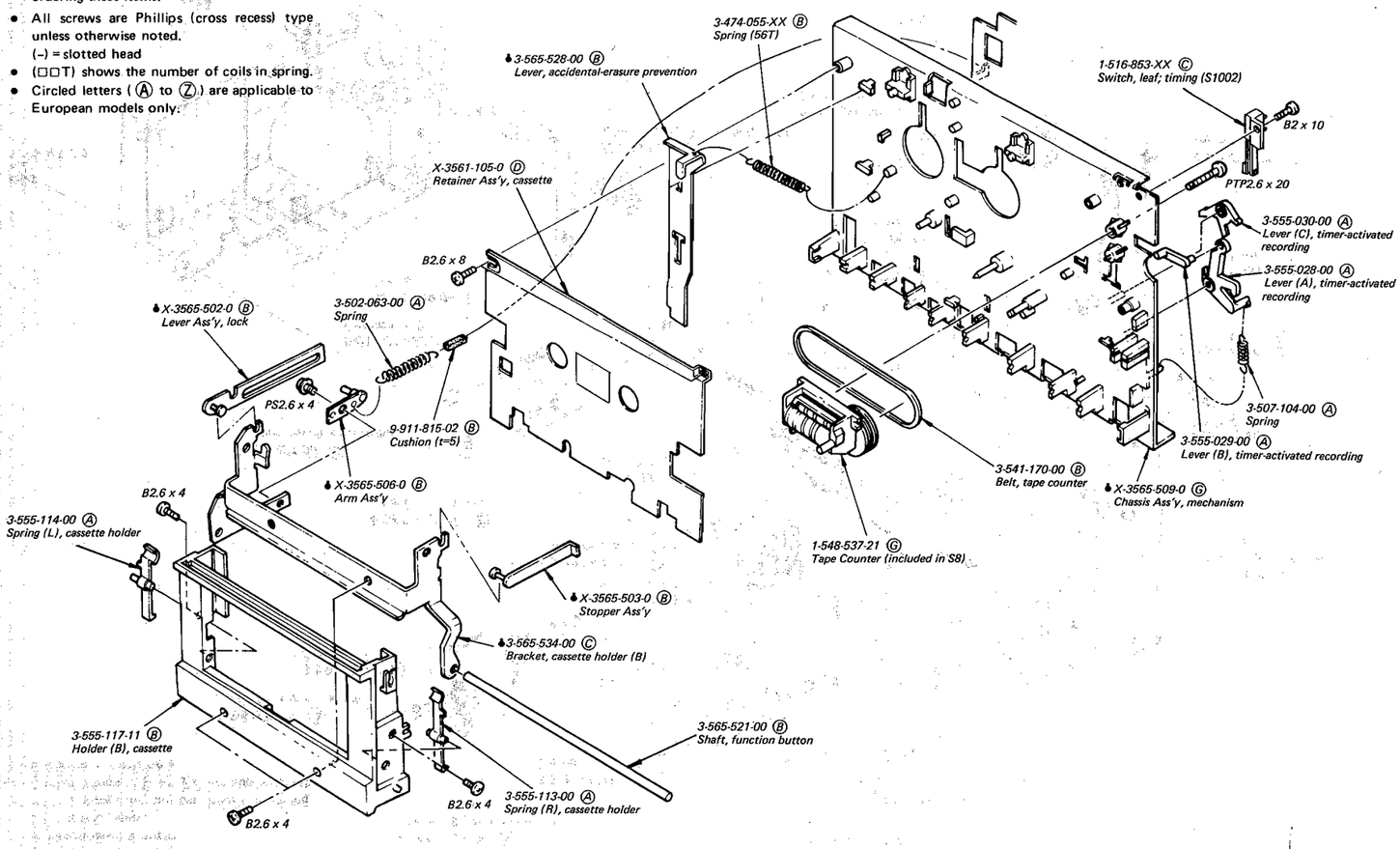


Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: 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.

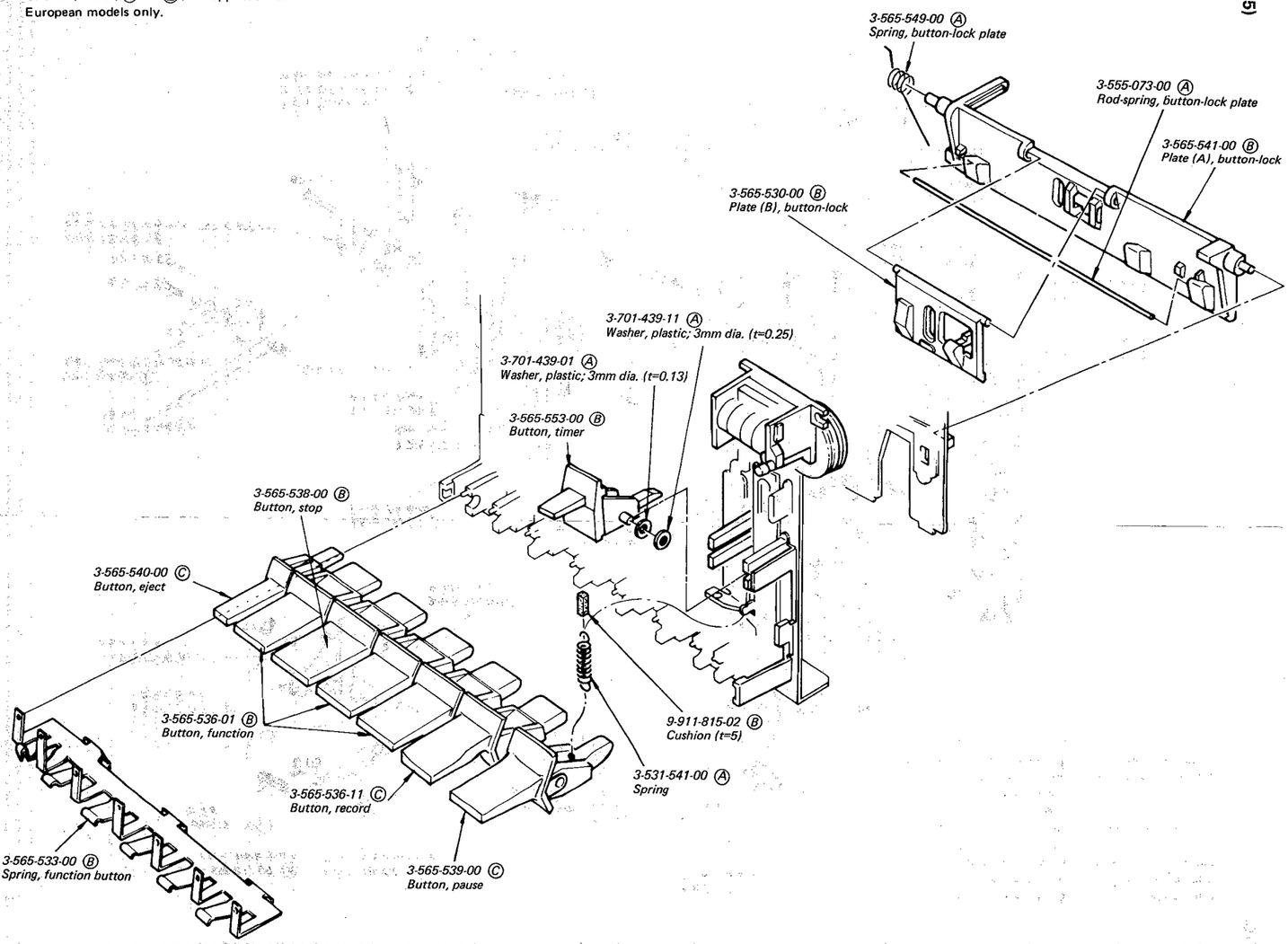
Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

(4)



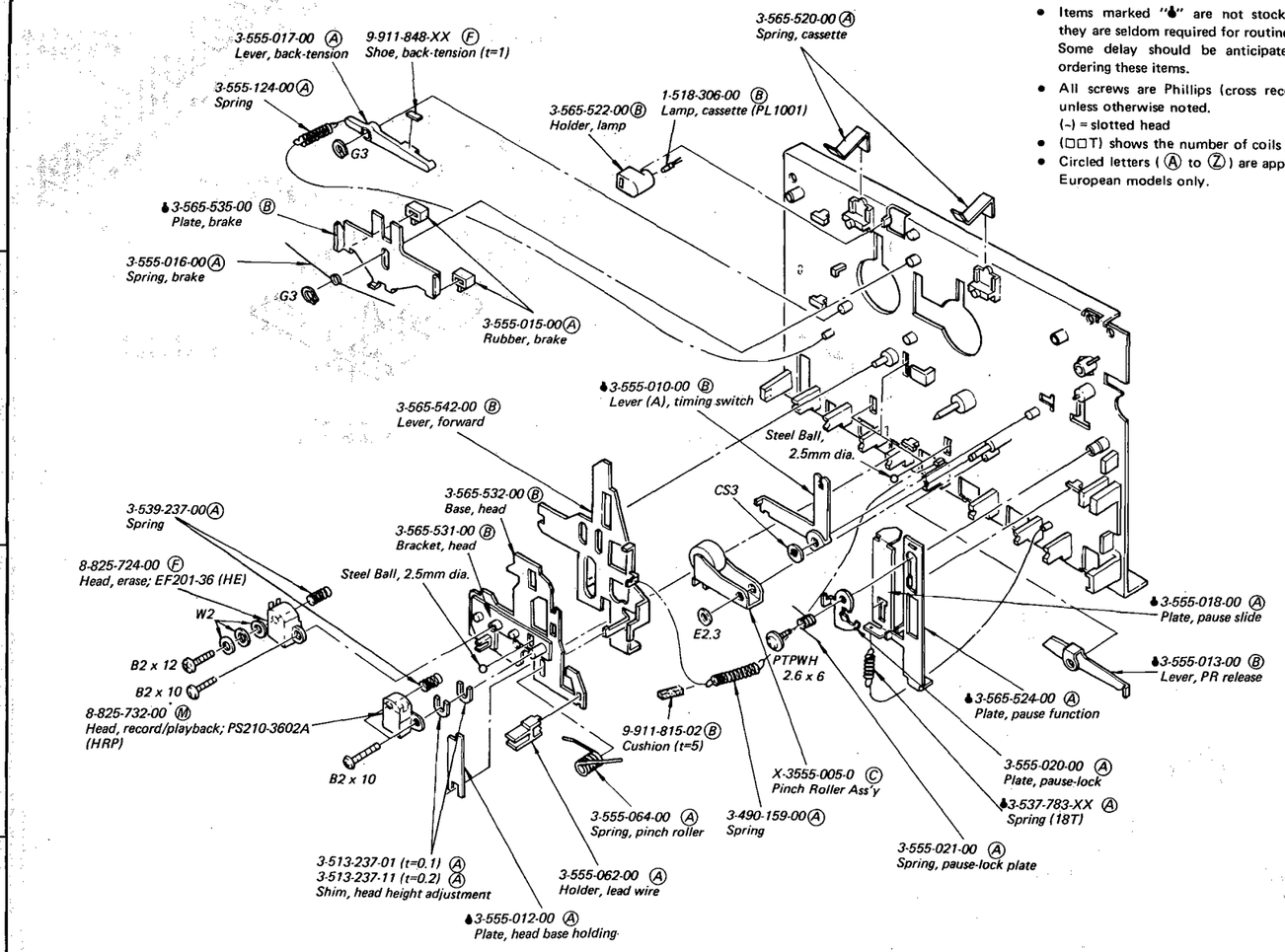
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

(5)



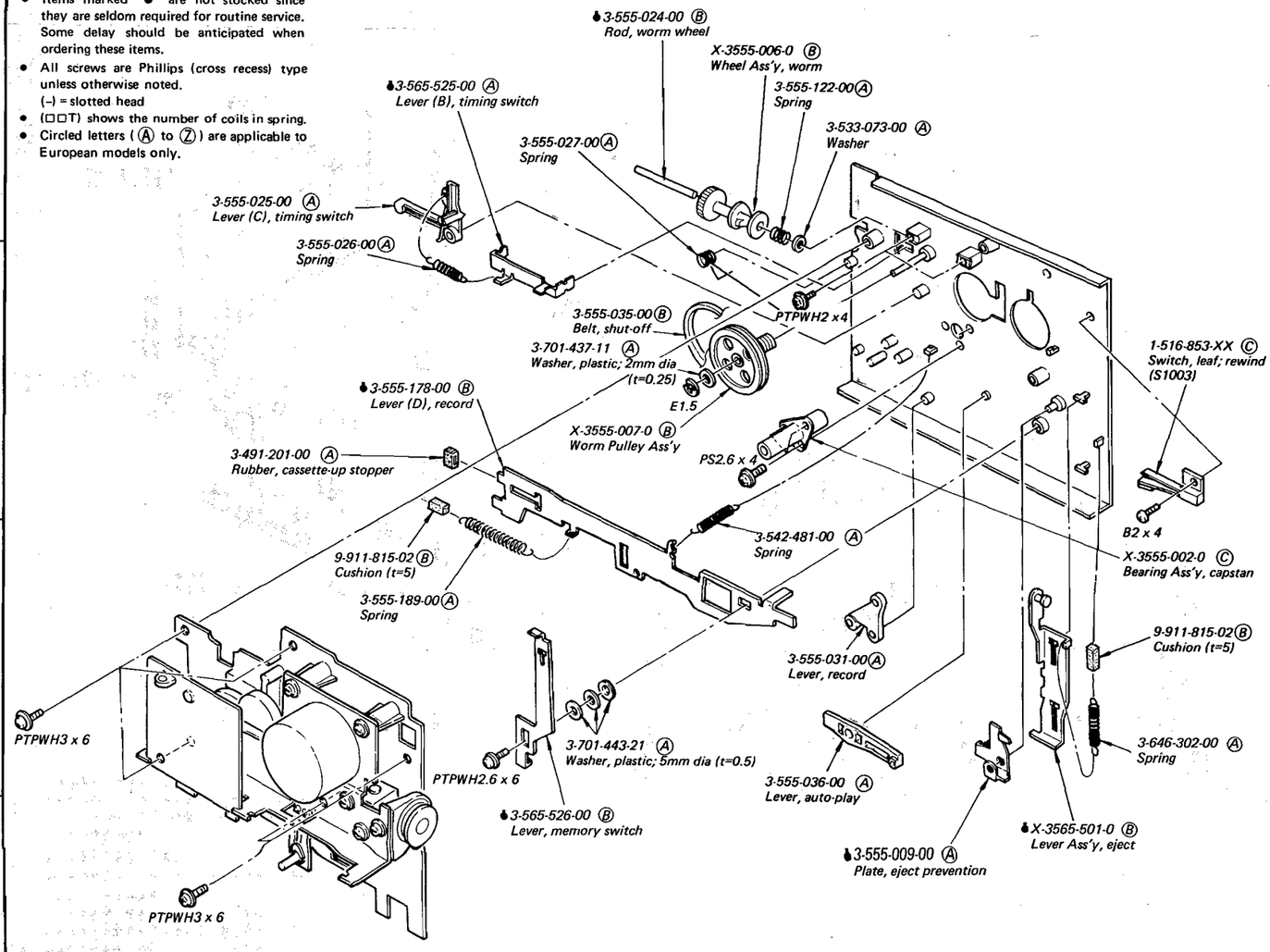
(6)

Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



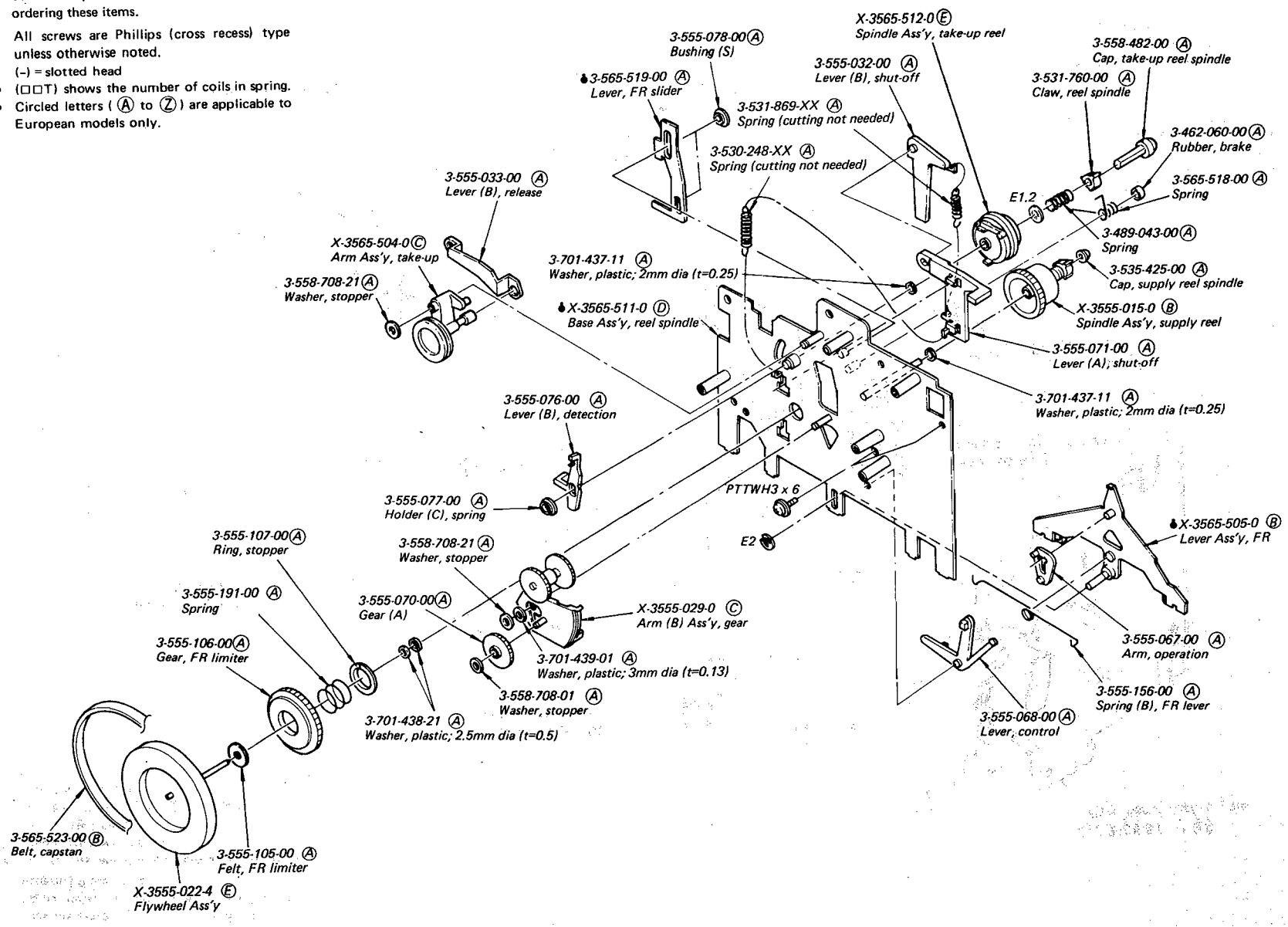
(7)

Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

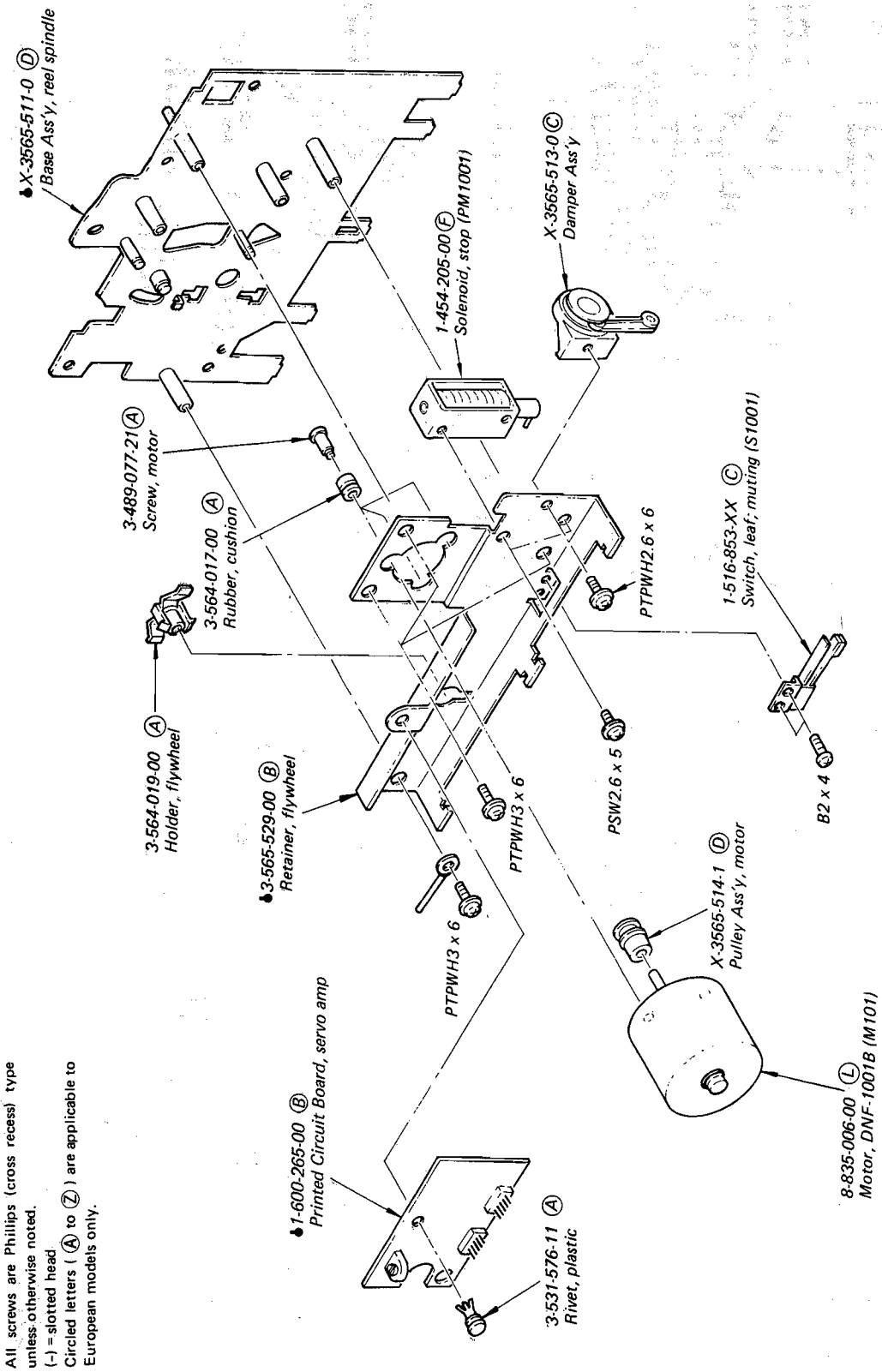


Note:

- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- (□□T) shows the number of coils in spring.
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



(9)



Note:
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (-) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

SECTION 6
ELECTRICAL PARTS LIST

⇒: 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*
		SEMICONDUCTORS
		Transistors
Q101, 201 Q102, 202	8-729-334-58	Ⓑ 2SC1345
Q103, 203	8-729-663-47	Ⓒ 2SC1364
Q104, 204	8-729-100-13	Ⓑ 2SC2001
Q105, 205	8-729-334-58	Ⓑ 2SC1345
Q301	8-729-141-43	Ⓑ 2SD414
Q302	8-729-154-83	Ⓑ 2SB548
⇒ Q303	8-729-663-47	Ⓒ 2SC1364
⇒ Q304	8-729-612-77	Ⓑ 2SA1027R
⇒ Q305	8-729-663-47	Ⓒ 2SC1364
⇒ Q306	8-729-612-77	Ⓑ 2SA1027R
Q307, 308	8-729-663-47	Ⓒ 2SC1364
⇒ Q309	8-729-612-77	Ⓑ 2SA1027R
Q310, 311	8-729-663-47	Ⓒ 2SC1364
⇒ Q312	8-760-413-10	Ⓑ 2SC1475
Q313	8-729-663-47	Ⓒ 2SC1364
Q1001	8-729-141-43	Ⓑ 2SD414
		ICs
IC101, 201	8-759-745-00	Ⓓ NJM4560D
IC301	8-759-100-06	Ⓓ μPC4556C
IC302, 303	8-759-145-57	Ⓓ μPC4557C
IC401	8-759-904-89	Ⓓ TL489CP
IC1001	8-750-690-00	Ⓕ CX069
		Diodes
⇒ D101, 201	8-719-815-55	Ⓑ 1S1555
⇒ D102, 202	8-719-422-21	Ⓑ 1T22AM
⇒ D103, 203	8-719-815-55	Ⓑ 1S1555
⇒ D104, 204	8-719-422-21	Ⓑ 1T22AM
D105, 205	8-719-815-55	Ⓑ 1S1555
D301, 302 ⚠	8-719-200-02	Ⓑ 10E2
⇒ D303, 304	8-719-910-65	Ⓑ HZ6B2L
⇒ D305–307	8-719-815-55	Ⓑ 1S1555
D308	8-719-130-07	Ⓑ RD3.0E-B
D309	8-719-200-02	Ⓑ 10E2
⇒ D310	8-719-910-65	Ⓑ HZ6B2L
⇒ D311, 312	8-719-815-55	Ⓑ 1S1555
D401–404 ⚠	8-719-200-02	Ⓑ 10E2
⇒ D405, 406 ⚠	8-719-815-55	Ⓑ 1S1555
D407 ⚠	8-719-200-02	Ⓑ 10E2
D408	8-719-317-20	Ⓑ SEL1720Y
D409	8-719-311-20	Ⓑ SEL1120R
D410	8-719-313-20	Ⓑ SEL1320G
D411–414	8-719-311-20	Ⓑ SEL1120R
D1001	8-719-200-02	Ⓑ 10E2
		CAPACITORS

All capacitors are in μF. Common capacitors are omitted.
Refer to the lists on pages 40 and 41 for their part numbers.
p : μμF, elect : electrolytic

C110, 210	1-130-305-00	Ⓑ 0.022	100V	polyethylene
C114, 214	1-130-299-00	Ⓑ 0.012	100V	polyethylene
C128, 228	1-123-230-00	Ⓑ 2.2	50V	elect (nonpolarized)
C132, 232	1-130-305-00	Ⓑ 0.022	100V	polyethylene
C143, 243	1-123-228-00	Ⓑ 1	50V	elect (nonpolarized)
C301, 302 ⚠	1-121-245-00	Ⓑ 1000	16V	elect
C401, 402 ⚠	1-121-733-00	Ⓑ 470	25V	elect
C403 ⚠	1-123-355-00	Ⓑ 4.7	50V	elect
C404 ⚠	1-123-347-00	Ⓑ 330	35V	elect
C405 ⚠	1-123-349-00	Ⓒ 1000	35V	elect
C1001	1-130-134-00	Ⓑ 0.082	100V	plastic
CT101,201	1-141-225-00	Ⓒ Trimmer, 10 – 100p; record bias		

RESISTORS

All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on the last page for their part numbers.

R101, 201	1-244-912-00	Ⓐ 43k	½W	carbon
R102, 202	1-244-937-00	Ⓐ 470k	½W	carbon
R103, 203	1-244-897-00	Ⓐ 10k	½W	carbon
R104, 204	1-244-905-00	Ⓐ 22k	½W	carbon
R105, 205	1-244-837-00	Ⓐ 33	½W	carbon
R107, 207	1-244-929-00	Ⓐ 220k	½W	carbon
R108, 208	1-244-902-00	Ⓐ 16k	½W	carbon
R109, 209	1-244-905-00	Ⓐ 22k	½W	carbon
R110, 210	1-244-873-00	Ⓐ 1k	½W	carbon
R111, 211	1-244-932-00	Ⓐ 300k	½W	carbon
R112, 212	1-244-873-00	Ⓐ 1k	½W	carbon
R114, 214	1-244-941-00	Ⓐ 680k	½W	carbon
R115, 215	1-244-918-00	Ⓐ 75k	½W	carbon
R116, 216	1-244-873-00	Ⓐ 1k	½W	carbon
R117, 217	1-244-855-00	Ⓐ 180	½W	carbon

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

Note: 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.

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

Ref. No.	*Part No.*	*Description*			
R118, 218	1-244-937-00	Ⓐ	470k	½W	carbon
R119, 219	1-244-853-00	Ⓐ	150	½W	carbon
R123, 223	1-244-865-00	Ⓐ	470	½W	carbon
R124, 224	1-244-881-00	Ⓐ	2.2k	½W	carbon
R125, 225	1-244-905-00	Ⓐ	22k	½W	carbon
R126, 226	1-244-857-00	Ⓐ	220	½W	carbon
R139, 239	1-244-870-00	Ⓐ	750	½W	carbon (AEP, UK, E model)
R140, 240	1-244-865-00	Ⓐ	470	½W	carbon
R141, 241	1-244-870-00	Ⓐ	750	½W	carbon
R143, 243	1-244-913-00	Ⓐ	47k	½W	carbon
R144, 244	1-244-896-00	Ⓐ	9.1k	½W	carbon
R156, 256	1-244-873-00	Ⓐ	1k	½W	carbon
R171, 271	1-244-895-00	Ⓐ	8.2k	½W	carbon
R196, 296	1-244-870-00	Ⓐ	750	½W	carbon
R307, 308	1-244-877-00	Ⓐ	1.5k	½W	carbon
R309, 310	1-244-882-00	Ⓐ	2.4k	½W	carbon
R318	1-244-870-00	Ⓐ	750	½W	carbon
R325, 326	1-244-846-00	Ⓐ	75	½W	carbon
R330	1-244-857-00	Ⓐ	220	½W	carbon
R334, 335	1-244-849-00	Ⓐ	100	½W	carbon
R336, 337	1-244-853-00	Ⓐ	150	½W	carbon
R340	1-244-853-00	Ⓐ	150	½W	carbon
R401–403	⚠1-246-475-00	Ⓐ	1.2k	¼W	carbon
R404, 405	⚠1-244-869-00	Ⓐ	680	½W	carbon
R1001	1-214-765-00	Ⓐ	33k	¼W	metal oxide (1%)
R1008	⚠1-217-523-00	Ⓑ	10	¼W	fuse
RV101, 201	1-224-640-XX	Ⓑ	330-B, adjustable; playback level		
RV102, 202	1-226-740-00	Ⓔ	20k/20k-A, variable; REC LEVEL		
RV103, 203	1-224-644-XX	Ⓑ	4.7k-B, adjustable; record level		
RV104, 204	1-226-235-00	Ⓐ	5k-B, adjustable; level meter		
RV191, 291	1-226-439-00	Ⓓ	20k/20k-B, variable; HEADPHONES/ LINE OUT		
RV1001	1-226-431-00	Ⓑ	10k-B, adjustable; tape speed		

MISCELLANEOUS

CNJ101,201	1-507-531-00	Jack, LINE IN, LINE OUT FIXED (US, Canadian model)

Ref. No.	*Part No.*	*Description*
CNJ101,201 CNJ103,203 CNJ302	1-536-501-21	Ⓓ Jack, LINE IN, LINE OUT FIXED, REC/PB (AEP, UK, E model)
CNJ102,202	1-507-525-00	Ⓓ Jack, MIC
CNJ104,204	1-507-526-21	Ⓑ Jack, LINE OUT VARIABLE
CNJ301	1-507-553-00	Ⓒ Jack, HEADPHONES
CP101	1-464-110-00	Ⓖ Unit, bias osc
CP301	⚠1-231-341-00	Encapsulated Component (Canadian, E model)
	⚠1-231-326-11	Encapsulated Component (US model)
	⚠1-130-456-00	Ⓒ Capacitor, 0.022μF 250V film (AEP, UK model)
HE	8-825-724-00	Ⓕ Head, erase; EF201-36
HRP	8-825-732-00	Ⓜ Head, record/playback; PS210-3602A
L101, 201	1-408-262-00	Ⓑ Coil, 27μH; microinductor
LPF101,201	1-231-372-00	Ⓒ Filter, low-pass
M101	8-835-006-00	Ⓛ Motor, DNF-1001B
ME1, 2	1-520-417-00	Ⓙ Meter, VU
PL1, 2	1-518-275-00	Ⓑ Lamp, 8V 200mA; meter
PL1001	1-518-306-00	Ⓑ Lamp, 8V 50mA; cassette
PM1001	1-454-205-00	Ⓕ Solenoid, stop
S1	1-552-521-00	Ⓓ Switch, slide; record/playback
S2	1-552-216-00	Ⓒ Switch, lever-slide; DOLBY NR
S3	1-553-214-00	Ⓒ Switch, lever-slide; BIAS
S4	1-553-215-00	Ⓓ Switch, lever-slide; EQ
S5	1-553-218-00	Ⓒ Switch, lever-slide; INPUT SELECT
S6	1-553-213-00	Ⓑ Switch, slide; MEMORY
S7	⚠1-552-530-00	Switch, pushbutton; POWER (US, Canadian model)
	⚠1-552-580-00	Switch, pushbutton; POWER (E model)
	⚠1-552-903-00	Ⓓ Switch, pushbutton; POWER (AEP, UK model)
S8	————	included in tape counter
S1001–1003	1-516-853-XX	Ⓒ Switch, leaf; muting, timing, rewind
T1	⚠1-446-724-00	Transformer, power (US, Canadian model)
	⚠1-446-725-00	Transformer, power (E model)
	⚠1-446-726-00	Ⓛ Transformer, power (AEP, UK model)

Note: 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.

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.

Part No.		*Description*
⚠1-526-576-31		Voltage Selector (E model)
⚠1-534-817-XX	Ⓓ	Cord, power (AEP model)
⚠1-534-986-XX		Cord, power (US, Canadian model)
⚠1-551-473-31		Cord, power; parallel-blade plug (E model)
⚠1-551-530-00		Cord, power; euro-plug (E model)
⚠1-551-884-00	Ⓔ	Cord, power (UK model)
♦1-560-063-00	Ⓑ	Connector Pin
♦1-560-064-00	Ⓑ	Connector Pin

COMPLETE CIRCUIT BOARDS

♦A-2010-157-A	Audio Amp (US, Canadian model)
♦A-2010-166-A	Audio Amp (AEP, UK, E model)

PRINTED CIRCUIT BOARDS

♦1-600-265-00	Ⓑ	Servo Amp
♦1-602-054-00	Ⓑ	Power Supply
♦1-602-055-00	Ⓘ	Audio Amp
♦1-602-056-00	Ⓑ	Headphone Amp
♦1-602-057-00	Ⓑ	Meter Lamp
♦1-602-058-00	Ⓑ	Peak Level Indicator
♦1-602-059-00	Ⓑ	Pin Jack
♦1-602-060-00	Ⓑ	Memory Switch

- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note: 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.

ACCESSORIES AND PACKING MATERIALS

Part No.		*Description*
X-3701-105-0	Ⓐ	Tip Ass'y, head cleaning
1-551-734-11	Ⓓ	Cord, connection; RK-74A
3-429-126-00		Bag, plastic (Canadian model)
3-561-142-00		Cushion, upper-front (Canadian model)
3-561-143-00		Cushion, upper-rear (Canadian model)
3-561-144-00		Cushion, bottom-right (Canadian model)
3-561-145-00		Cushion, bottom-left (Canadian model)
3-561-195-00	Ⓔ	Carton (US, AEP, UK, E model)
3-561-196-00		Carton (Canadian model)
3-566-148-00	Ⓑ	Cushion, upper-front (US, AEP, UK, E model)
3-566-149-00	Ⓑ	Cushion, upper-rear (US, AEP, UK, E model)
3-566-150-00	Ⓑ	Cushion, bottom-right (US, AEP, UK, E model)
3-566-151-00	Ⓑ	Cushion, bottom-left (US, AEP, UK, E model)
3-701-630-00	Ⓐ	Bag, plastic
3-783-194-11	Ⓓ	Manual, instruction (AEP, UK, E model)
3-783-194-21		Manual, instruction (US model)
3-783-194-21 3-794-813-31		Manual, instruction (Canadian model)
3-783-828-11	Ⓑ	Caution Card, cassette
3-794-233-21		Separate Sheet, consumer products (US model)
4-818-924-00	Ⓑ	Bag, plastic (US, AEP, UK, E model)

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

ELECTROLYTIC CAPACITORS

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

CAP. (μF)	RATING → : Use the high voltage rated one.					
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47					→	1-121-726-00 Ⓐ
1.0					→	1-121-391-00 Ⓐ
2.2					→	1-121-450-00 Ⓐ
3.3	→	→	→	1-121-392-00 Ⓐ	→	1-121-393-00 Ⓐ
4.7	→	→	→	1-121-395-00 Ⓐ	→	1-121-396-00 Ⓐ
10	→	→	1-121-651-00 Ⓐ	1-121-398-00 Ⓐ	→	1-121-738-00 Ⓐ
22	→	→	1-121-479-00 Ⓐ	1-121-480-00 Ⓐ	1-121-662-00 Ⓐ	1-121-152-00 Ⓐ
33	→	→	1-121-403-00 Ⓐ	1-121-404-00 Ⓐ	1-121-652-00 Ⓑ	1-121-405-00 Ⓐ
47	→	1-121-352-00 Ⓐ	1-121-409-00 Ⓐ	1-121-410-00 Ⓐ	1-121-653-00 Ⓑ	1-121-411-00 Ⓐ
100	→	1-121-414-00 Ⓐ	1-121-415-00 Ⓐ	1-121-416-00 Ⓐ	1-121-357-00 Ⓑ	1-121-417-00 Ⓑ
220	1-121-419-00 Ⓑ	1-121-420-00 Ⓑ	1-121-421-00 Ⓐ	1-121-422-00 Ⓑ	1-121-261-00 Ⓒ	1-121-423-00 Ⓑ
330	1-121-751-00 Ⓑ	1-121-805-00 Ⓑ	1-121-521-00 Ⓒ	1-121-654-00 Ⓑ	1-121-655-00 Ⓓ	1-121-656-00 Ⓒ
470	1-121-424-00 Ⓑ	1-121-425-00 Ⓒ	1-121-426-00 Ⓒ	1-121-733-00 Ⓑ	1-121-361-00 Ⓔ	1-121-810-00 Ⓓ
1000	–	1-121-736-00 Ⓒ	1-121-245-00 Ⓓ	1-121-657-00 Ⓓ	1-121-388-00 Ⓔ	1-123-061-00 Ⓕ
2200	1-121-658-00 Ⓑ	1-121-659-00 Ⓒ	1-121-660-00 Ⓓ	1-123-067-00 Ⓕ	1-121-984-00 Ⓕ	–
3300	1-121-661-00 Ⓓ	1-123-075-00 Ⓔ	1-123-071-00 Ⓕ	–	–	–

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47	–	–	–	–
1.0	1-123-249-00 Ⓐ	1-123-252-00 Ⓐ	1-123-003-00 Ⓑ	1-121-168-00 Ⓑ
2.2	1-123-250-00 Ⓐ	1-123-026-00 Ⓑ	–	1-123-028-00 Ⓑ
3.3	1-121-995-00 Ⓐ	–	1-123-004-00 Ⓑ	1-123-006-00 Ⓒ
4.7	1-123-255-00 Ⓐ	1-121-246-00 Ⓑ	1-121-759-00 Ⓑ	1-123-007-00 Ⓓ
10	1-121-126-00 Ⓑ	1-121-999-00 Ⓑ	1-123-254-00 Ⓒ	1-123-008-00 Ⓓ
22	1-121-996-00 Ⓒ	1-123-253-00 Ⓒ	1-123-005-00 Ⓓ	1-123-022-00 Ⓓ
33	1-121-997-00 Ⓒ	1-121-757-00 Ⓒ	–	–
47	1-123-251-00 Ⓒ	1-121-919-00 Ⓒ	–	–
100	1-123-084-00 Ⓔ	–	–	–

CERAMIC CAPACITORS Ⓐ

CAP. (pF)	RATING							
	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

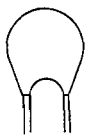
CERAMIC (SEMICONDUCTOR) CAPACITORS Ⓐ

CAP. (μF)	RATING → : Use the high voltage rated one.				
	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS Ⓐ

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

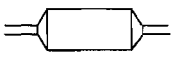
CAP. (μF)	RATING 50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μF)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	–	–
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	–	–
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	–	–
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	–	–
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



TANTALUM CAPACITORS

→: Use the high voltage rated one.

CAP. (μF)	RATING 3.15 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.
0.01					→	→	1-131-396-00 Ⓑ
0.015						→	1-131-397-00 Ⓑ
0.022						→	1-131-398-00 Ⓑ
0.033						→	1-131-399-00 Ⓑ
0.047						→	1-131-400-00 Ⓑ
0.068					→	→	1-131-401-00 Ⓑ
0.1					→	→	1-131-402-00 Ⓑ
0.15					→	→	1-131-403-00 Ⓑ
0.22					→	→	1-131-404-00 Ⓑ
0.33					→	1-131-409-00 Ⓑ	1-131-405-00 Ⓑ
0.47	–	–	–	–	1-131-412-00 Ⓑ	→	1-131-406-00 Ⓑ
0.68	–	–	–	1-131-415-00 Ⓑ	→	1-131-410-00 Ⓑ	1-131-407-00 Ⓑ
1.0	–	–	1-131-418-00 Ⓑ	–	1-131-413-00 Ⓑ	→	1-131-408-00 Ⓑ
1.5	–	1-131-421-00 Ⓑ	–	1-131-416-00 Ⓑ	→	1-131-411-00 Ⓑ	1-131-348-00 Ⓑ
2.2	1-131-424-00 Ⓑ	–	1-131-419-00 Ⓑ	–	1-131-414-00 Ⓑ	1-131-355-00 Ⓑ	1-131-349-00 Ⓑ
3.3	–	1-131-422-00 Ⓑ	–	1-131-417-00 Ⓑ	1-131-362-00 Ⓑ	1-131-356-00 Ⓑ	1-131-350-00 Ⓑ
4.7	1-131-425-00 Ⓑ	–	1-131-420-00 Ⓑ	1-131-369-00 Ⓑ	1-131-363-00 Ⓑ	1-131-357-00 Ⓑ	1-131-351-00 Ⓒ
6.8	–	1-131-423-00 Ⓑ	1-131-376-00 Ⓑ	1-131-370-00 Ⓑ	1-131-364-00 Ⓑ	1-131-358-00 Ⓒ	1-131-352-00 Ⓒ
10	1-131-426-00 Ⓑ	1-131-383-00 Ⓑ	1-131-377-00 Ⓑ	1-131-371-00 Ⓑ	1-131-365-00 Ⓒ	1-131-359-00 Ⓒ	1-131-353-00 Ⓓ
15	1-131-390-00 Ⓑ	1-131-384-00 Ⓑ	1-131-378-00 Ⓑ	1-131-372-00 Ⓑ	1-131-366-00 Ⓒ	1-131-360-00 Ⓓ	–
22	1-131-391-00 Ⓑ	1-131-385-00 Ⓑ	1-131-379-00 Ⓒ	1-131-373-00 Ⓒ	1-131-367-00 Ⓓ		
33	1-131-392-00 Ⓑ	1-131-386-00 Ⓒ	1-131-380-00 Ⓒ	1-131-374-00 Ⓓ			
47	1-131-393-00 Ⓒ	1-131-387-00 Ⓒ	1-131-381-00 Ⓓ	–			
68	1-131-394-00 Ⓑ	1-131-388-00 Ⓒ	–	–			
100	1-131-395-00 Ⓓ	–	–	–			



TANTALUM CAPACITORS

CAP. (μF)	RATING 3 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	35 VOLT. PART No.
0.033						1-131-273-00 Ⓔ
0.047						1-131-274-00 Ⓔ
0.068						1-131-275-00 Ⓔ
0.1						1-131-276-00 Ⓓ
0.15						1-131-277-00 Ⓓ
0.22			–	–	1-131-262-00 Ⓓ	1-131-278-00 Ⓓ
0.33			–	–	1-131-263-00 Ⓓ	1-131-279-00 Ⓓ
0.47			1-131-169-00 Ⓓ	–	1-131-264-00 Ⓓ	1-131-280-00 Ⓓ
0.68			–	1-131-258-00 Ⓓ	1-131-265-00 Ⓓ	1-131-281-00 Ⓓ
1.0			1-131-254-00 Ⓓ	–	1-131-266-00 Ⓓ	1-131-282-00 Ⓓ
1.5		1-131-250-00 Ⓓ	–	–	1-131-267-00 Ⓓ	1-131-283-00 Ⓔ
2.2		–	–	1-131-259-00 Ⓓ	1-131-268-00 Ⓓ	1-131-284-00 Ⓔ
3.3		–	1-131-255-00 Ⓓ	–	1-131-269-00 Ⓓ	–
4.7		1-131-251-00 Ⓔ	1-131-171-00 Ⓓ	–	1-131-270-00 Ⓓ	–
6.8		–	–	1-131-260-00 Ⓓ	1-131-271-00 Ⓔ	–
10	–	–	1-131-256-00 Ⓓ	–	1-131-272-00 Ⓔ	–
15	–	1-131-252-00 Ⓓ	–	1-131-261-00 Ⓔ		
22	–	–	1-131-257-00 Ⓔ	–		
33	1-131-176-00 Ⓓ	1-131-253-00 Ⓔ	1-131-173-00 Ⓒ	–		
47	1-131-288-00 Ⓕ	1-131-174-00 Ⓓ	–	–		
100	1-131-177-00 Ⓓ					

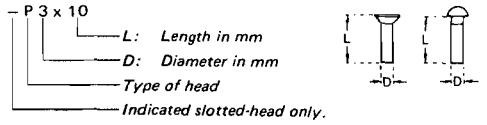
1/4 WATT CARBON RESISTORS Ⓐ

Note: Circled letter Ⓐ is applicable to European models only.

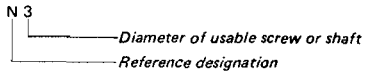
Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	10	1-246-425-00	100	1-246-449-00	1.0k	1-246-473-00	10k	1-246-497-00	100k	1-246-521-00	1.0M	1-246-545-00
1.1	1-246-402-00	11	1-246-426-00	110	1-246-450-00	1.1k	1-246-474-00	11k	1-246-498-00	110k	1-246-522-00	1.1M	1-210-814-00
1.2	1-246-403-00	12	1-246-427-00	120	1-246-451-00	1.2k	1-246-475-00	12k	1-246-499-00	120k	1-246-523-00	1.2M	1-210-815-00
1.3	1-246-404-00	13	1-246-428-00	130	1-246-452-00	1.3k	1-246-576-00	13k	1-246-500-00	130k	1-246-524-00	1.3M	1-210-816-00
1.5	1-246-405-00	15	1-246-429-00	150	1-246-453-00	1.5k	1-246-577-00	15k	1-246-501-00	150k	1-246-525-00	1.5M	1-210-817-00
1.6	1-246-406-00	16	1-246-430-00	160	1-246-454-00	1.6k	1-246-578-00	16k	1-246-502-00	160k	1-246-526-00	1.6M	1-210-818-00
1.8	1-246-407-00	18	1-246-431-00	180	1-246-455-00	1.8k	1-246-579-00	18k	1-246-503-00	180k	1-246-527-00	1.8M	1-210-819-00
2.0	1-246-408-00	20	1-246-432-00	200	1-246-456-00	2.0k	1-246-580-00	20k	1-246-504-00	200k	1-246-528-00	2.0M	1-210-820-00
2.2	1-246-409-00	22	1-246-433-00	220	1-246-457-00	2.2k	1-246-581-00	22k	1-246-505-00	220k	1-246-529-00	2.2M	1-210-821-00
2.4	1-246-410-00	24	1-246-434-00	240	1-246-458-00	2.4k	1-246-582-00	24k	1-246-506-00	240k	1-246-530-00	2.4M	1-244-754-00
2.7	1-246-411-00	27	1-246-435-00	270	1-246-459-00	2.7k	1-246-583-00	27k	1-246-507-00	270k	1-246-531-00	2.7M	1-244-755-00
3.0	1-246-412-00	30	1-246-436-00	300	1-246-460-00	3.0k	1-246-584-00	30k	1-246-508-00	300k	1-246-532-00	3.0M	1-244-756-00
3.3	1-246-413-00	33	1-246-437-00	330	1-246-461-00	3.3k	1-246-585-00	33k	1-246-509-00	330k	1-246-533-00	3.3M	1-244-757-00
3.6	1-246-414-00	36	1-246-438-00	360	1-246-462-00	3.6k	1-246-586-00	36k	1-246-510-00	360k	1-246-534-00	3.6M	1-244-758-00
3.9	1-246-415-00	39	1-246-439-00	390	1-246-463-00	3.9k	1-246-587-00	39k	1-246-511-00	390k	1-246-535-00	3.9M	1-244-759-00
4.3	1-246-416-00	43	1-246-440-00	430	1-246-464-00	4.3k	1-246-488-00	43k	1-246-512-00	430k	1-246-536-00	4.3M	1-244-760-00
4.7	1-246-417-00	47	1-246-441-00	470	1-246-465-00	4.7k	1-246-489-00	47k	1-246-513-00	470k	1-246-537-00	4.7M	1-244-761-00
5.1	1-246-418-00	51	1-246-442-00	510	1-246-466-00	5.1k	1-246-490-00	51k	1-246-514-00	510k	1-246-538-00	5.1M	1-244-762-00
5.6	1-246-419-00	56	1-246-443-00	560	1-246-467-00	5.6k	1-246-491-00	56k	1-246-515-00	560k	1-246-539-00		
6.2	1-246-420-00	62	1-246-444-00	620	1-246-468-00	6.2k	1-246-492-00	62k	1-246-516-00	620k	1-246-540-00		
6.8	1-246-421-00	68	1-246-445-00	680	1-246-469-00	6.8k	1-246-493-00	68k	1-246-517-00	680k	1-246-541-00		
7.5	1-246-422-00	75	1-246-446-00	750	1-246-470-00	7.5k	1-246-494-00	75k	1-246-518-00	750k	1-246-542-00		
8.2	1-246-423-00	82	1-246-447-00	820	1-246-471-00	8.2k	1-246-495-00	82k	1-246-519-00	820k	1-246-543-00		
9.1	1-246-424-00	91	1-246-448-00	910	1-246-472-00	9.1k	1-246-496-00	91k	1-246-520-00	910k	1-246-544-00		

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

Sony Corporation