TC-K96R

AEP Model
E Model
Canadian Model

PRELIMINARY

STEREO CASSETTE DECK

SPECIFICATIONS

GENERAL

Power Requirements:	120V ac, 60Hz (US, Canadian model) 110, 120, 220, or 240V ac, 50/60Hz (AEP, UK, E model)
Power Consumption:	30W (US, Canadian model) 33W (AEP, UK, E model)
AC Outlet:	Unswitched 300W total (US, Canadian model)
Dimensions:	Approx. 460(w)x155(h)x325(d)mm 18 1/8(w)x6 1/8(h)x12 7/8(d) inches including projecting parts and controls (US, Canadian model) Approx. 430(w)x155(h)x325(d)mm 17(w)x6 1/8(h)x12 7/8(d) inches including projecting parts and controls (AEP, UK, E model)
Weight:	Approx. 9.4 kg, 20 lb 12 oz. (US, Canadian model) Approx. 8.5 kg, 18 lb 12 oz. (AEP, UK, E model)

TAPE RECORDER SECTION

Track:	4-track 2-channel stereo
Fast Forward Rewing Time:	Approx. 90 seconds with Sony cassette C-60

— Continued on page 2 —

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

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 UN TRAMÉ ET UNE 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 DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SONY®

SERVICE MANUAL

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

Wow and Flutter: 0.05% WRMS (NAB)
±0.14% (DIN)

S/N Ratio: DOLBY NR OFF
- With Ferri-Chrome cassette
  59 dB at peak level (NAB)
  57 dB (DIN, 1975 rev.)
- With chromium dioxide cassette
  57 dB at peak level (NAB)

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

Total Harmonic Distortion: 1.3%

Record Bias Frequency: 105 kHz

Inputs: MIC (two phone jacks)
sensitivity 0.25mV (–70 dB)
for a low-impedance microphone
LINE IN (two phono jacks)
sensitivity 77.5mV (–20 dB)
input impedance 100k ohms

Outputs: VARIABLE LINE OUT (two phone jacks) output level
0.775V (0 dB) at load impedance
100k ohms with LINE OUT level control at "10" suitable load impedance more than 10k ohms
FIXED LINE OUT (two phono jacks) output level 0.435V (–5 dB)
at load impedance 100k ohms
suitable load impedance more than 10k ohms
HEADPHONES (binaural jack)
output level –20 to –50 dB
at load impedance 8 ohms

Other Jack: REC/PB (connector)
input impedance less than 10k ohms
output impedance less than 10k ohms

$\boxed{0\text{ dB} = 0.775\text{ V}}$

• MODEL IDENTIFICATION

–Specification Label–

US, Canadian model

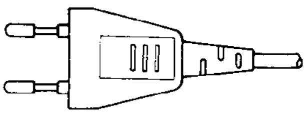
SONY
TAPECORDER
MODEL NO. TC-K96R
AC 120V 60Hz 30W
SERIAL NO.
MADE IN JAPAN

AEP, UK, E model

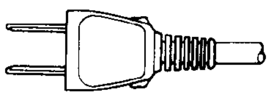
SONY
TAPECORDER
MODEL NO. TC-K96R
AC 110, 120, 220, 240V ~50/60Hz 33W
SERIAL NO.
MADE IN JAPAN

– Power Cord (E model) –

euro-plug (1-551-216-00)



parallel blade plug (1-534-754-00)



MOS IC HANDLING PRECAUTIONS

Since the insulation resistance of the oxidized film of MOS IC is generally very high and the film is extremely thin, the static electric charge on clothing or the body will cause the insulation to breakdown.

IC601 (μPD547-022) and IC602 (TC4019P) are used for this unit. Observe the following precautions when replacing this IC:

1. Maintain all the pins at the same potential by wrapping the IC in aluminum foil or other similar material (See Fig. 1).

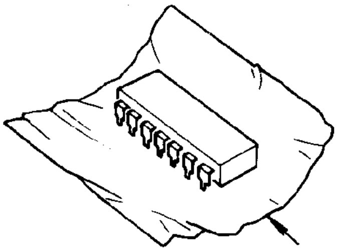


Fig. 1.

2. Ground the work bench for static electricity (See Fig. 2) (Place a sheet of aluminum onto the bench.)

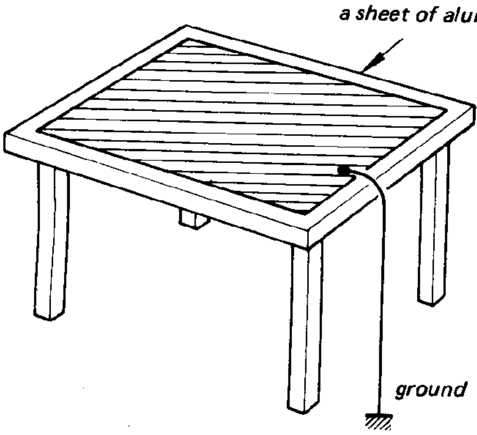


Fig. 2.

3. If necessary to touch the MOS IC direct, grasp the IC at a point other than the pins. Moreover, wear cotton gloves or a cotton finger sack. (Gloves made of nylon or other similar material are undesirable. The static electricity on your body can be easily discharged by wrapping a ground wire around your wrist.)

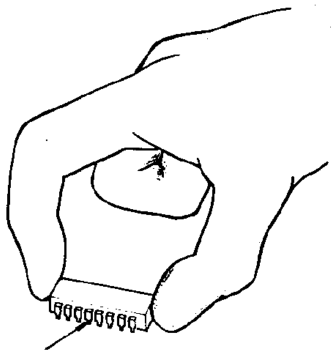


Fig. 3.

4. Short all the pins of the IC before beginning any work. Also ground the soldering iron.

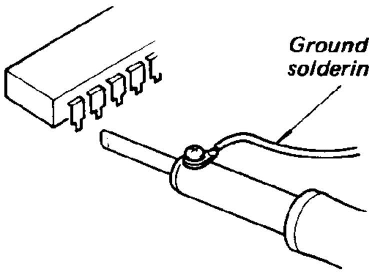
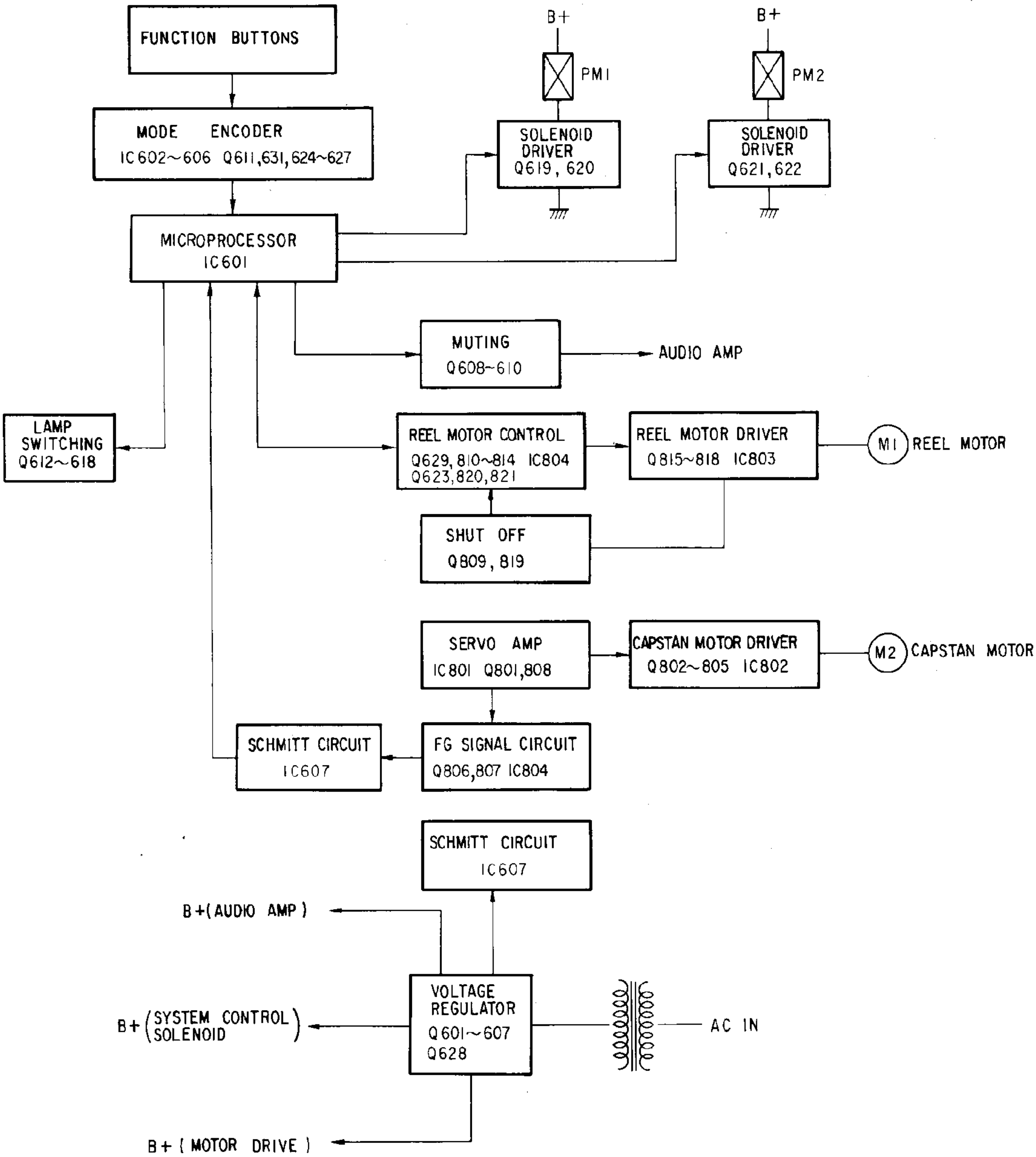


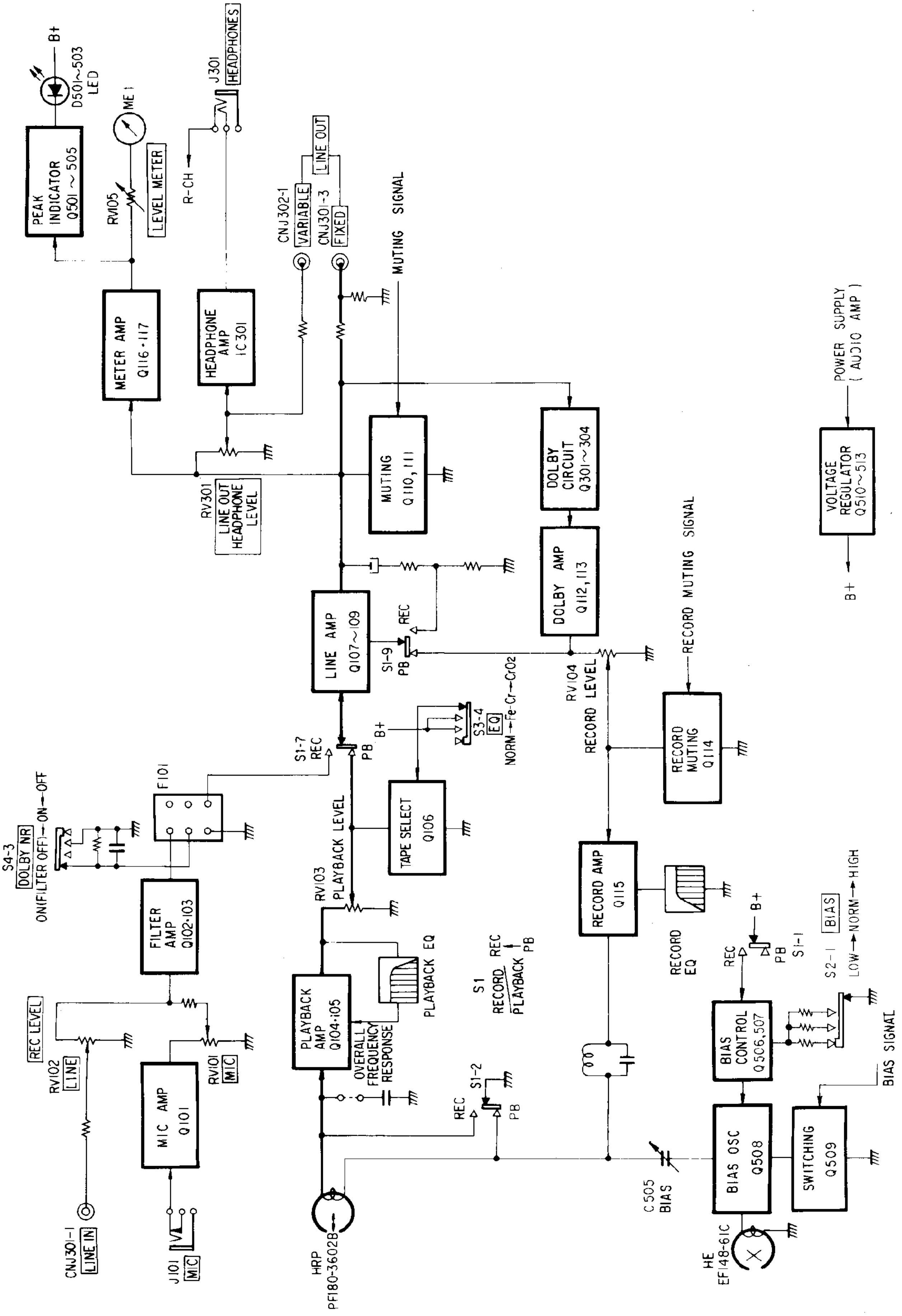
Fig. 4.

SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM —System Control Section—



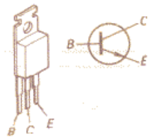
1-2. BLOCK DIAGRAM —Audio Amp Section—



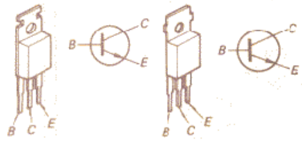
SECTION 2
DIAGRAMS

- **Replacement Semiconductors**
  For replacement, use semiconductors except in (   ).

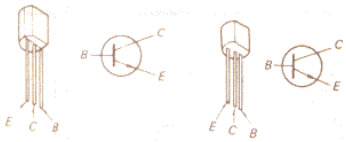
Q601 : 2SC1173



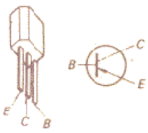
Q602 : 2SC1061 (2SC1419)



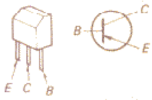
Q603, 607~619
Q621, 624~627, 631
Q801, 808, 810
Q820, 821, 629
} 2SC1364 (2SC1634)



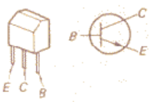
Q604 : 2SA678



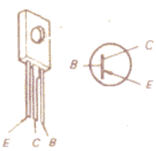
Q605, 606 : 2SB605



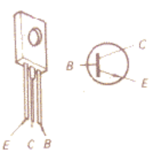
Q620, 622
Q628
} 2SD571



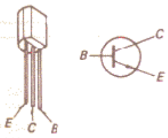
Q803, 804
Q816, 817
} 2SB548



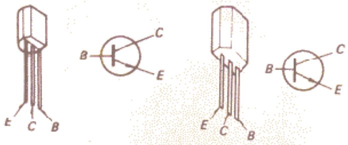
Q802, 805
Q815, 818
} 2SD414



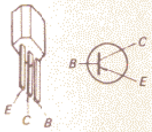
Q806, 807
Q809, 813
} 2SC1364 (2SC945)



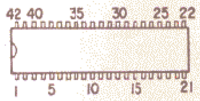
Q811, 812 : 2SC1364(2SC634A)



Q814, 819 : 2SA678 (2SA677)



IC601 : μPD547-022



(Top view)

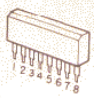
IC602 : TC4019P

(Top view)

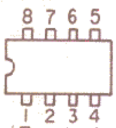
IC607 : TC4069P

(Top view)

IC801 : CX-065A



IC802~804 : μPC4558C (μPC4558)
IC603~606 : μPC4557C (μPC4557)

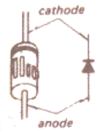


(Top view)

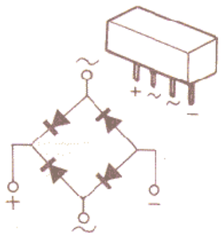
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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

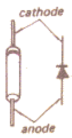
D608 : EQB01-15 (EQA01-15R)
D611 : EQB01-11Z (EQA01-11R)



D605, 606 : S1VB10



D601~604, 607
D609, 619, 620
} 10E2
D627 : 1S1555 (1T40)
D801~809
D612~618
D621~623
D626
} 1S1555



- All capacitors are in μF unless otherwise noted. pF = $\mu\mu$F
  50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted.
  kΩ = 1000Ω, MΩ = 1000 kΩ
- : nonflammable resistor.
- : fusible resistor.
- : B + bus.
- : adjustment for repair.
- : B–bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions with a VOM (20 kΩ/V).
  - ▶ : Forward (right)
  - ▶▶ : Fast Forward (right)
  - ◀ : Forward (left)
  - ◀◀ : Fast Forward (left)

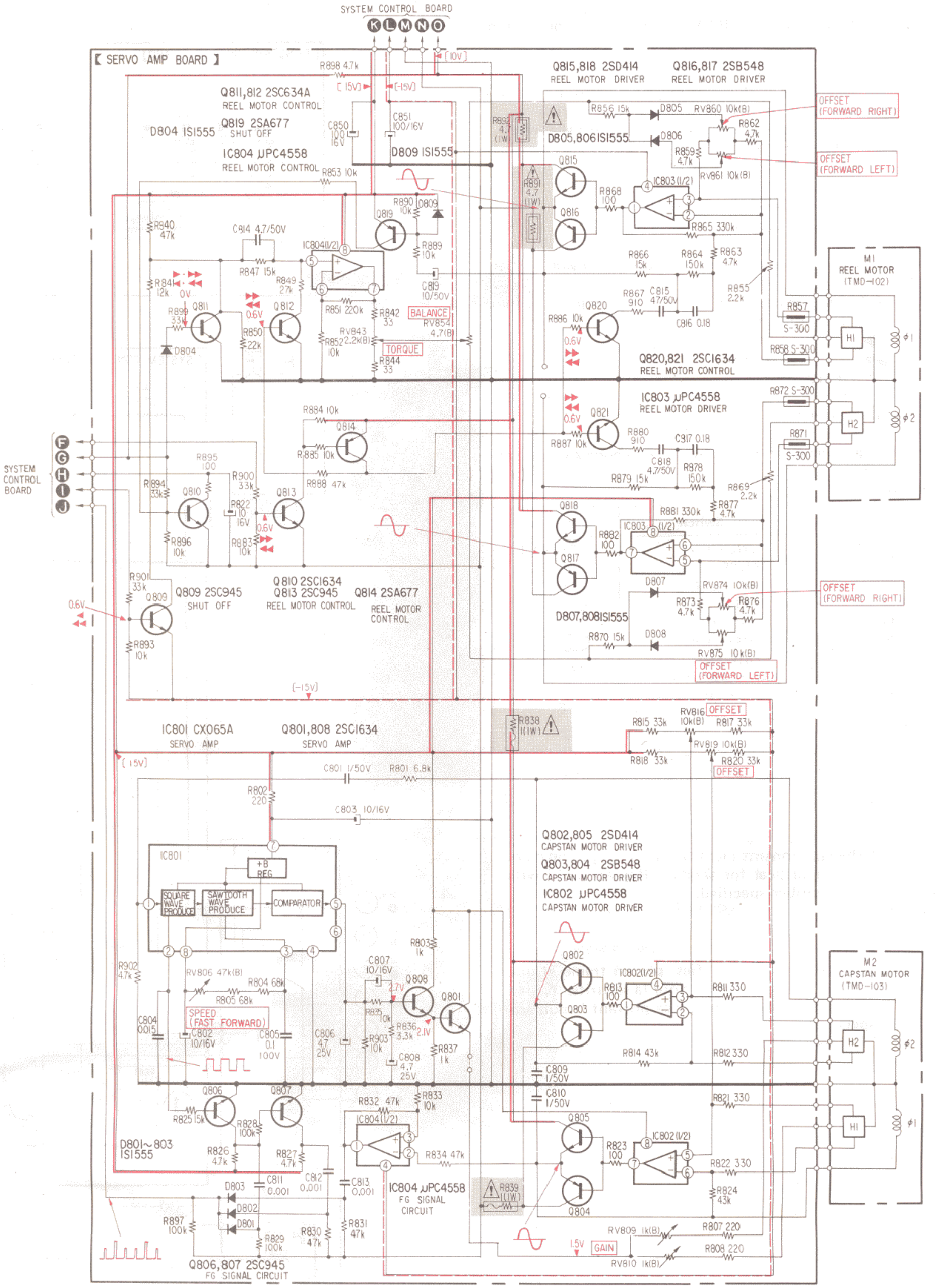
no mark: stop

[ ]: Voltages taken from the indicated points to the ground of servo amplifier circuit in forward mode.

Note:
(The ground of servo amplifier circuit is isolated from the chassis ground which has zero potential. The difference in voltage between these two grounds is approximately 10 V.)

- Voltage variations may be noted due to normal production tolerances.

2-1. SCHEMATIC DIAGRAM —Servo Amp Section—



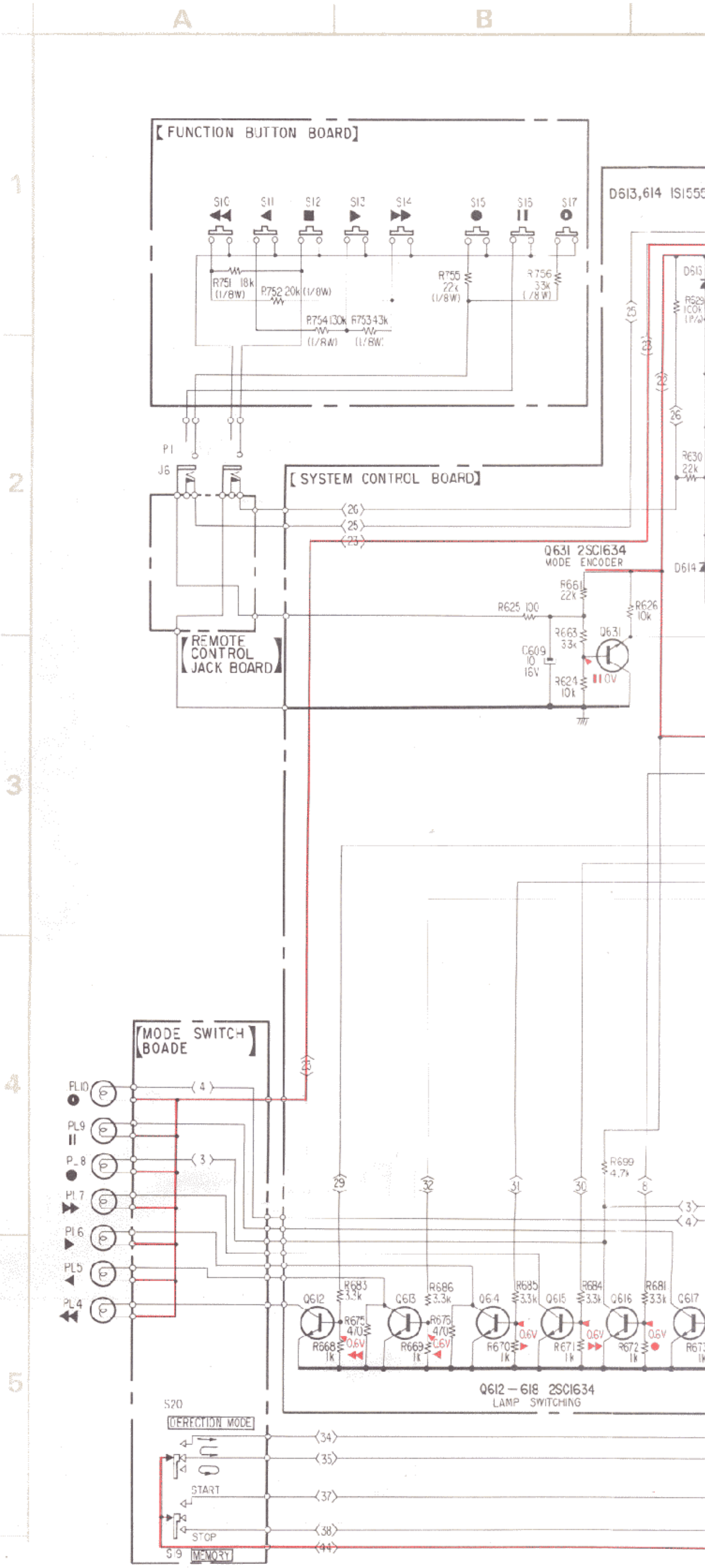
2-2. SCHEMATIC DIAGRAM —System Control Section—

- All capacitors are in µF unless otherwise noted. pF = µµF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000 kΩ
- [W] : nonflammable resistor.
- (N) : low-noise resistor.
- ▬ : B + bus.
- Readings are taken under no signal conditions with a VOM (20 kΩ/V).
  - ◀◀ : Fast Forward (left) no mark: stop
  - ◀ : Forward (left)
  - ▶ : Forward (right)
  - ▶▶ : Fast Forward (right)
  - ● : record
  - ❚❚ : pause
  - ⭘ : rec mute
  - ■ : stop
- Voltage variations may be noted due to normal production tolerances.
- Switch

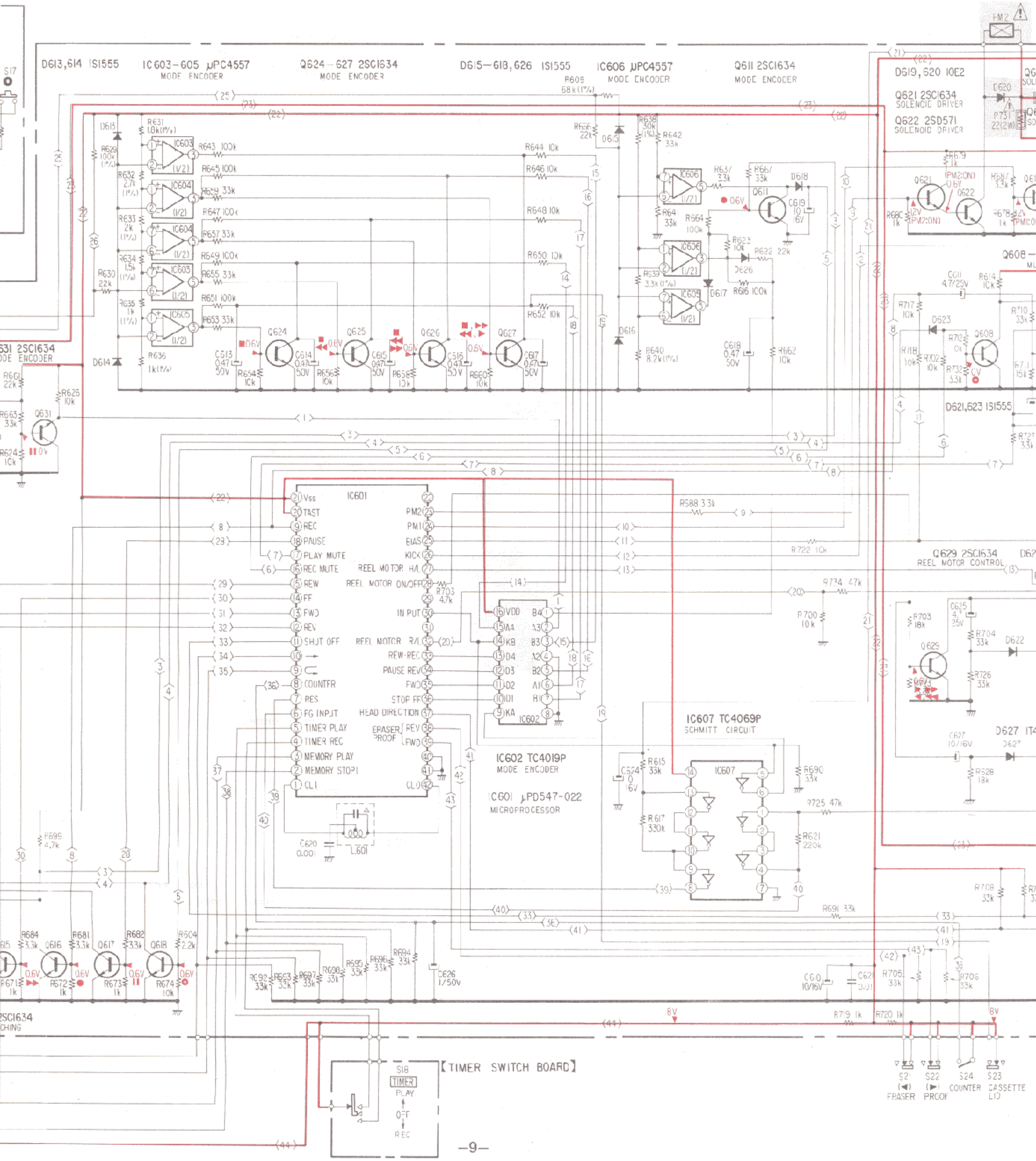
Ref. No.	Switch	Position
S10–15	FUNCTION	FORWARD
S16	PAUSE	OFF
S17	REC MUTE	OFF
S18	TIMER	OFF
S19	MEMORY	OFF
S20	DIRECTION MODE	⊂→
S21	FORWARD (left) ERASER PROOF	OFF
S22	FORWARD (right) ERASER PROOF	OFF
S23	CASSETTE LID	OFF
S24	TAPE COUNTER	OFF
S25	DIRECTION	FORWARD
S26	POWER	OFF

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

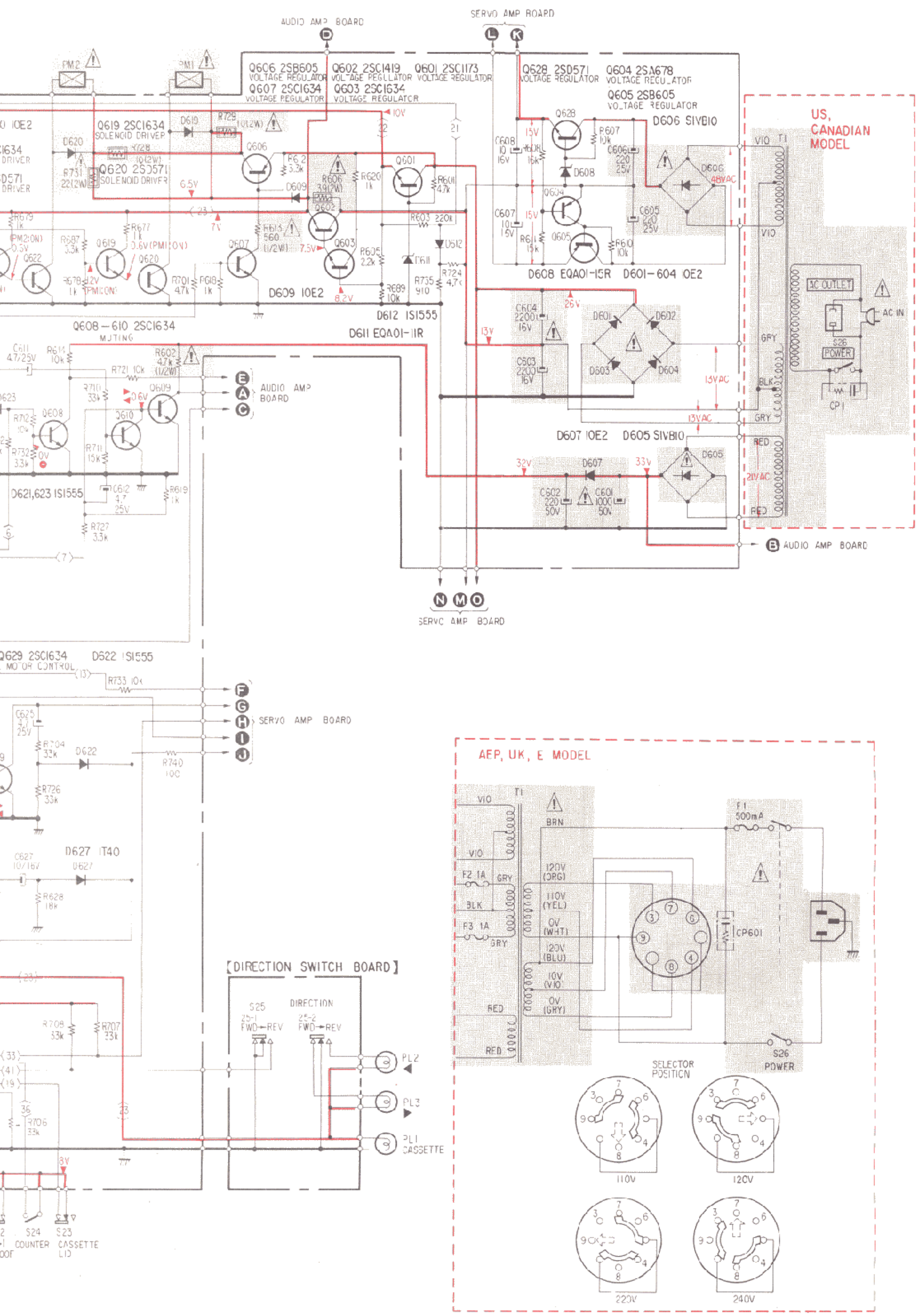
Note: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



C D E F


D613,614 1S1555
IC603-605 µPC4557
MODE ENCODER
Q624-627 2SC1634
MODE ENCODER
D615-618,626 1S1555
IC606 µPC4557
MODE ENCODER
Q611 2SC1634
MODE ENCODER
D619,620 10E2
Q621 2SC1634
SOLENOID DRIVER
Q622 2SD571
SOLENOID DRIVER
Q631 2SC1634
MODE ENCODER
IC601
Vss
TAST
REC
PAUSE
PLAY MUTE
REC MUTE
REW
FF
FWD
REV
SHUT OFF
COUNTER
PES
FG INPUT
TIMER PLAY
TIMER REC
MEMORY PLAY
MEMORY STOP
CL1
PM2
PM1
BIAS
KICK
REEL MOTOR H/L
REEL MOTOR ON/OFF
IN PUT
REEL MOTOR R/L
REW-REC
PAUSE REV
FWD
STOP FF
HEAD DIRECTION
ERASER PROOF
REV
FWD
CL0
IC602
VDD
KB
KA
IC602 TC4019P
MODE ENCODER
IC601 µPD547-022
MICROPROCESSOR
IC607 TC4069P
SCHMITT CIRCUIT
Q629 2SC1634
REEL MOTOR CONTROL
D621,623 1S1555
2SC1634
SWITCHING
S18
TIMER
PLAY
OFF
REC
【TIMER SWITCH BOARD】
S21 (◀) ERASER
S22 (▶) PROOF
S24 COUNTER
S23 CASSETTE LID
8V

G H I J

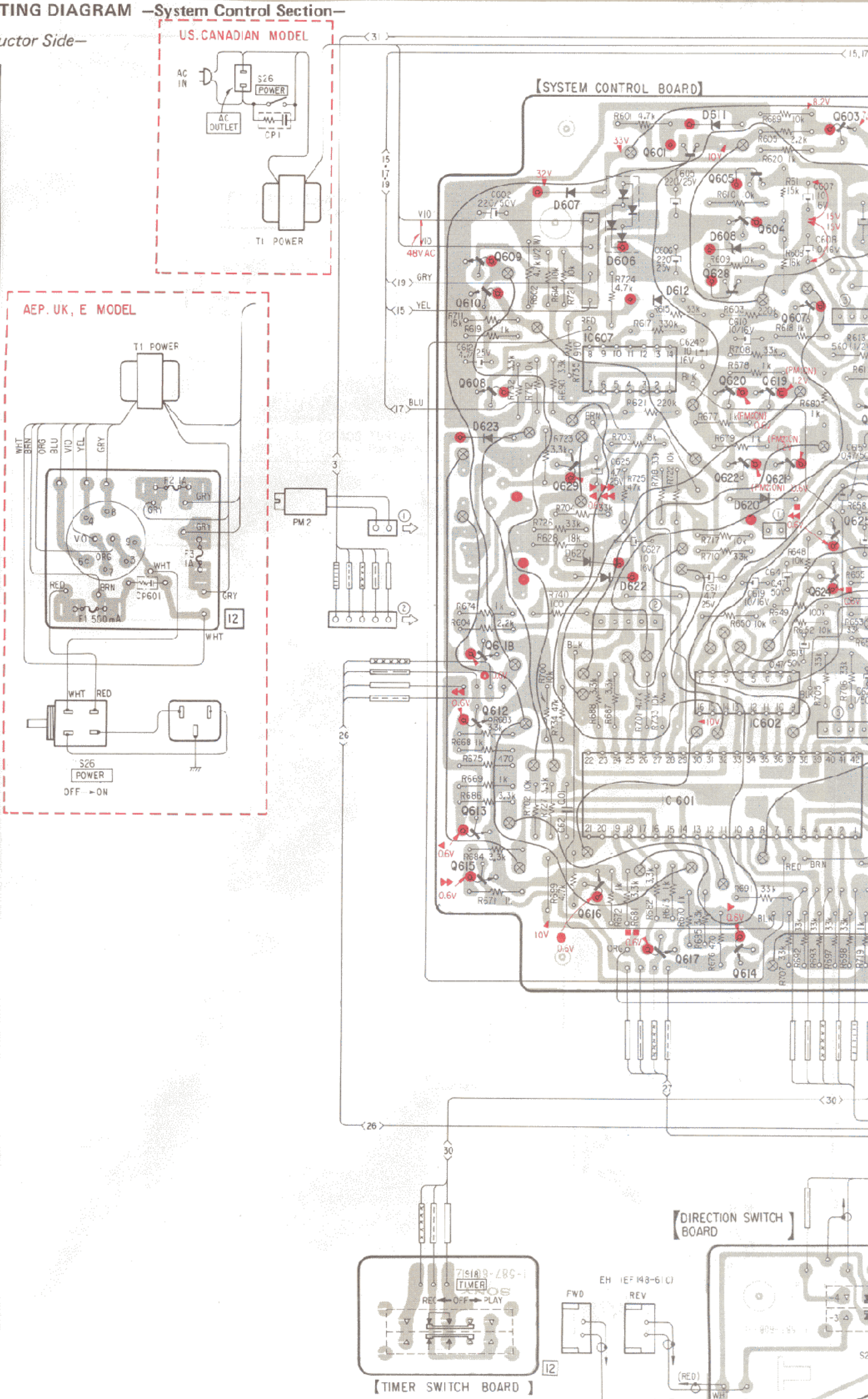

AUDIO AMP BOARD
SERVO AMP BOARD
Q606 2SB605 VOLTAGE REGULATOR
Q607 2SC1634 VOLTAGE REGULATOR
Q602 2SC1419 VOLTAGE REGULATOR
Q603 2SC1634 VOLTAGE REGULATOR
Q601 2SC1173 VOLTAGE REGULATOR
Q628 2SD571 VOLTAGE REGULATOR
Q604 2SA678 VOLTAGE REGULATOR
Q605 2SB605 VOLTAGE REGULATOR
D606 SIVB10
US, CANADIAN MODEL
Q619 2SC1634 SOLENOID DRIVER
Q620 2SD571 SOLENOID DRIVER
D608 EQA01-15R
D601-604 10E2
D609 10E2
D612 1S1555
D611 EQA01-11R
Q608-610 2SC1634 MUTING
AC OUTLET
AC IN
S26 POWER
CP1
D607 10E2
D605 SIVB10
D621,623 1S1555
Q629 2SC1634 MOTOR CONTROL
D622 1S1555
D627 1T40
[DIRECTION SWITCH BOARD]
S25 DIRECTION
PL2
PL3
PL1 CASSETTE
S24 COUNTER
S23 CASSETTE LID
AEP, UK, E MODEL
F1 500mA
F2 1A
F3 1A
CP601
SELECTOR POSITION
S26 POWER
110V
120V
220V
240V

A B C D

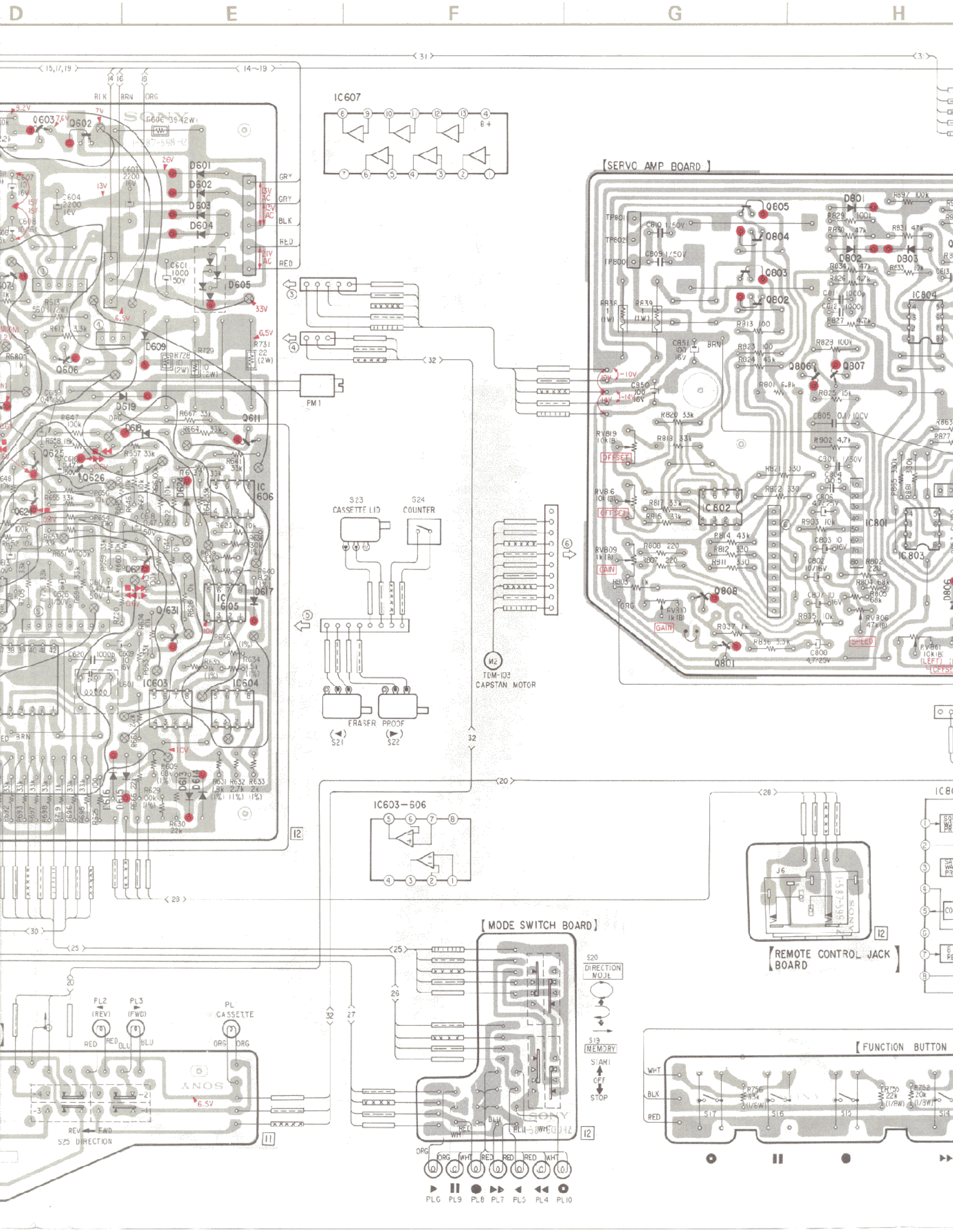
2-3. MOUNTING DIAGRAM —System Control Section—

—Conductor Side—

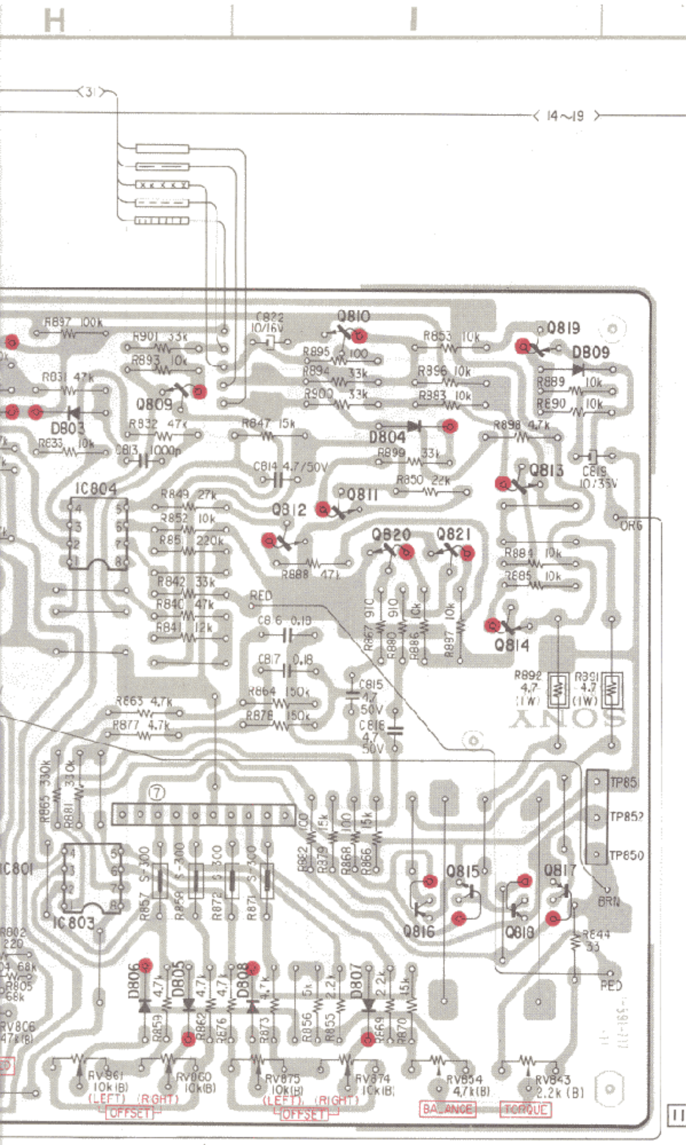
Q, IC	D
603, 602	611
601	
605	601
604	607, 606, 602, 603
609	608, 604
610, 628, 607	612, 605
IC607, 620, 619, 608, 606	609
622, 621, 629, 623	623, 619
611	620, 618, 621
625, 626	625
624, IC 606	624, 622
618, 627	
IC 602, IC 605, 612	617
631	
IC601, IC 603, IC 604, 613	
615, 616	
	615, 616, 613, 614
614, 617	



1 2 3 4 5

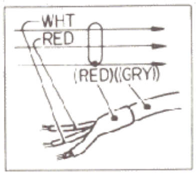

D
E
F
G
H
IC607
[SERVO AMP BOARD]
IC603−606
S23
CASSETTE LID
S24
COUNTER
ERASER
PROOF
TDM-103
CAPSTAN MOTOR
[MODE SWITCH BOARD]
S20
DIRECTION MODE
S19
MEMORY
START
OFF
STOP
[REMOTE CONTROL JACK BOARD]
[FUNCTION BUTTON
PL2 (REV)
PL3 (FWD)
PL CASSETTE
S25 DIRECTION
PL6 PL9 PL8 PL7 PL5 PL4 PL10

- **Replacement Semiconductor: See Page 6.**

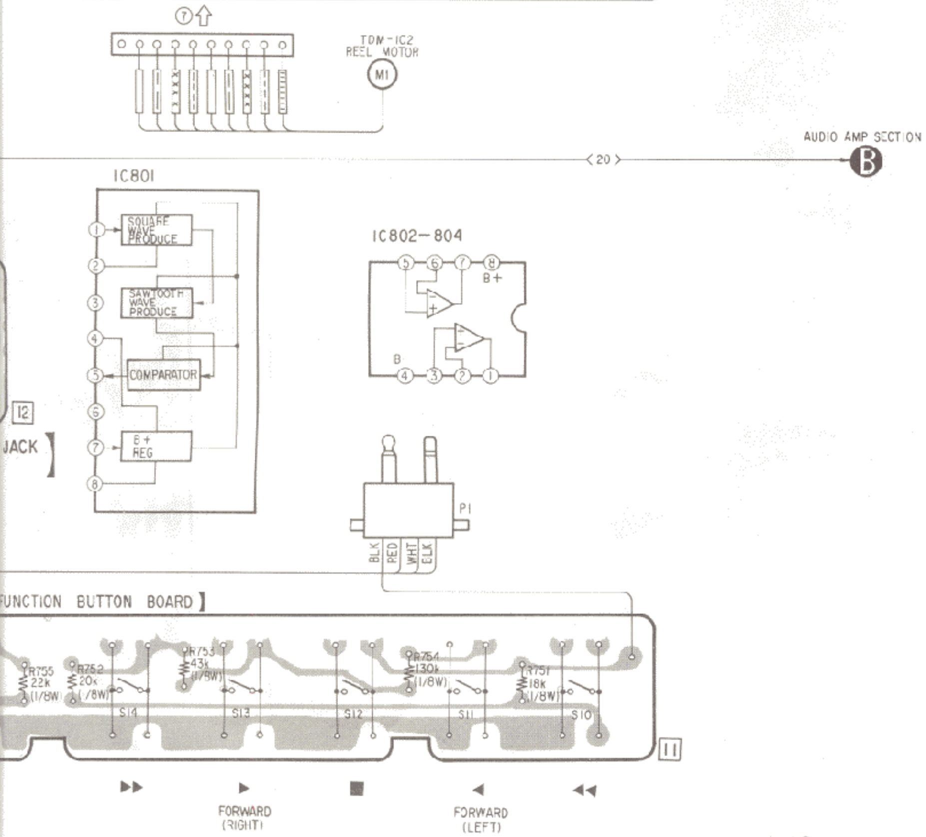


Q , IC	D
805 810 819	801 809
804 809	802,803 804
803	
802 813 811	
812	
820,821 IC804	
806,807 814	
IC802	
IC803 IC801 815,817	
816,818	
808	806,808 805,807
801	

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



- ○——: parts extracted from the component side.
- ●——: parts extracted from the conductor side.
- ⊗ : Through hole.
- ⊗——⊗ : component-side pattern

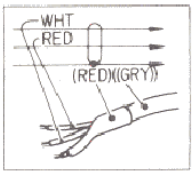


2-4. MOUNTING DIAGRAM —Audio Amp Section—

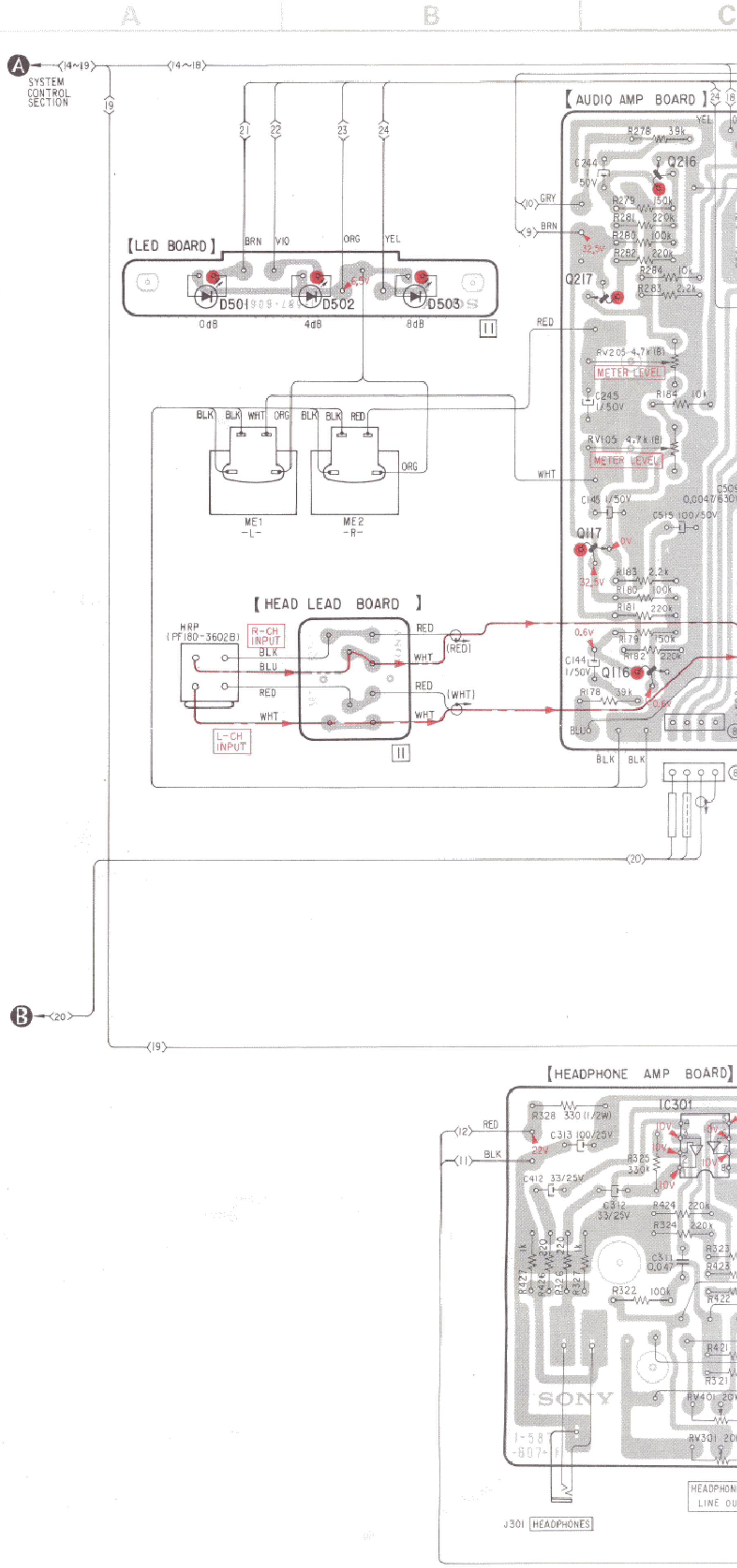
—Conductor Side—

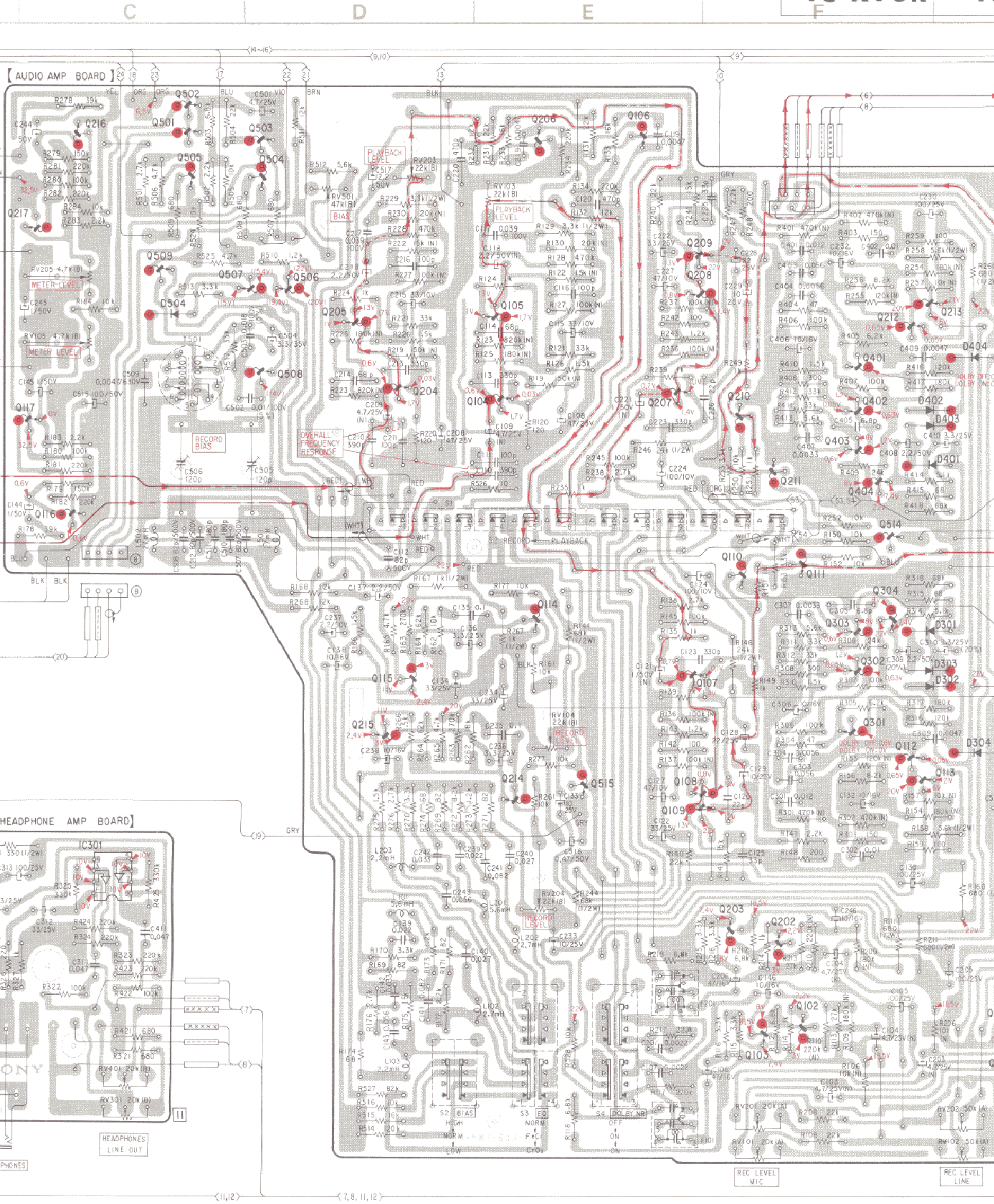
Replacement Semiconductor: See page 19.

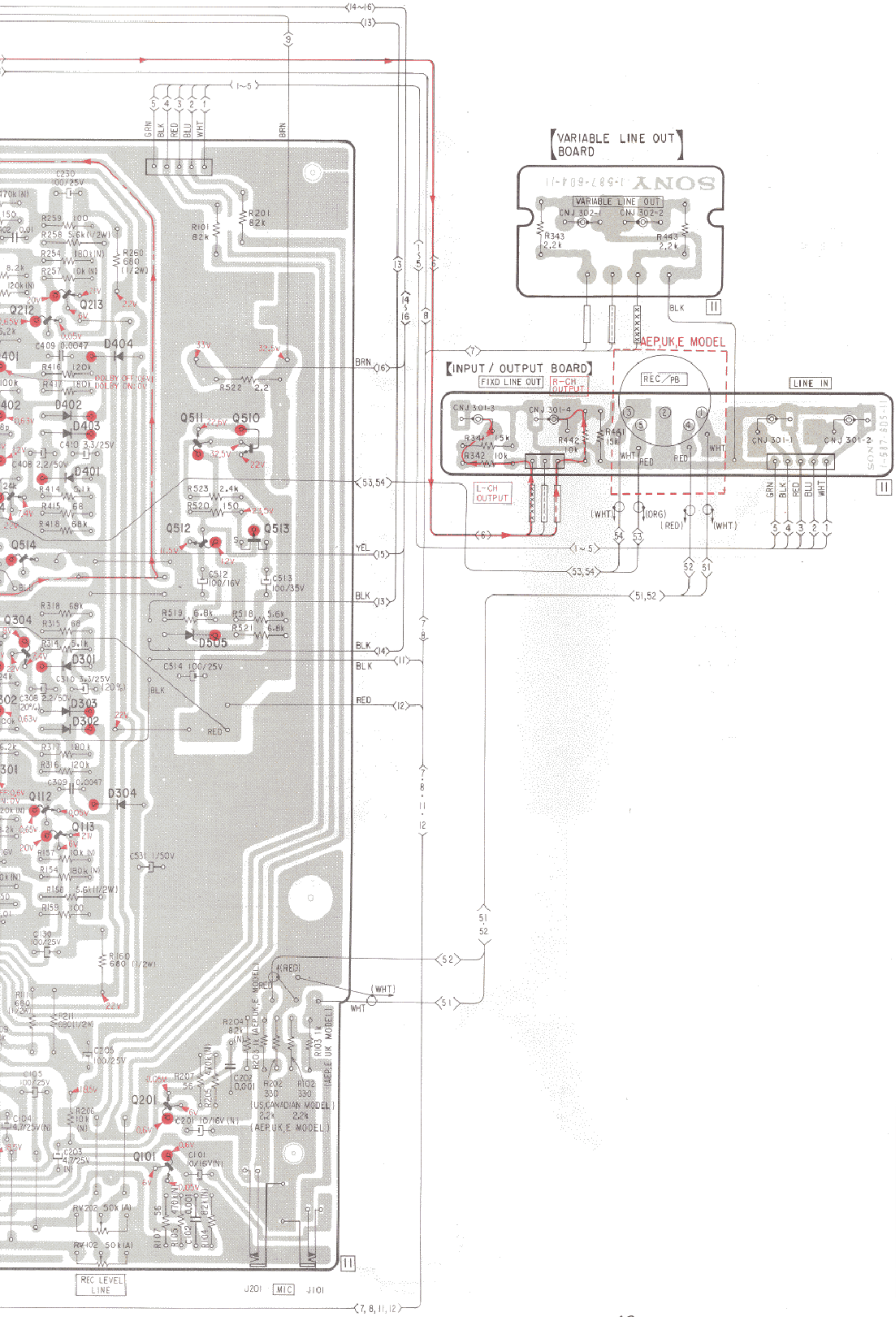
- Color code of sleeving over the end of the jacket.



- Signal Path
  - : L-CH
  - : R-CH

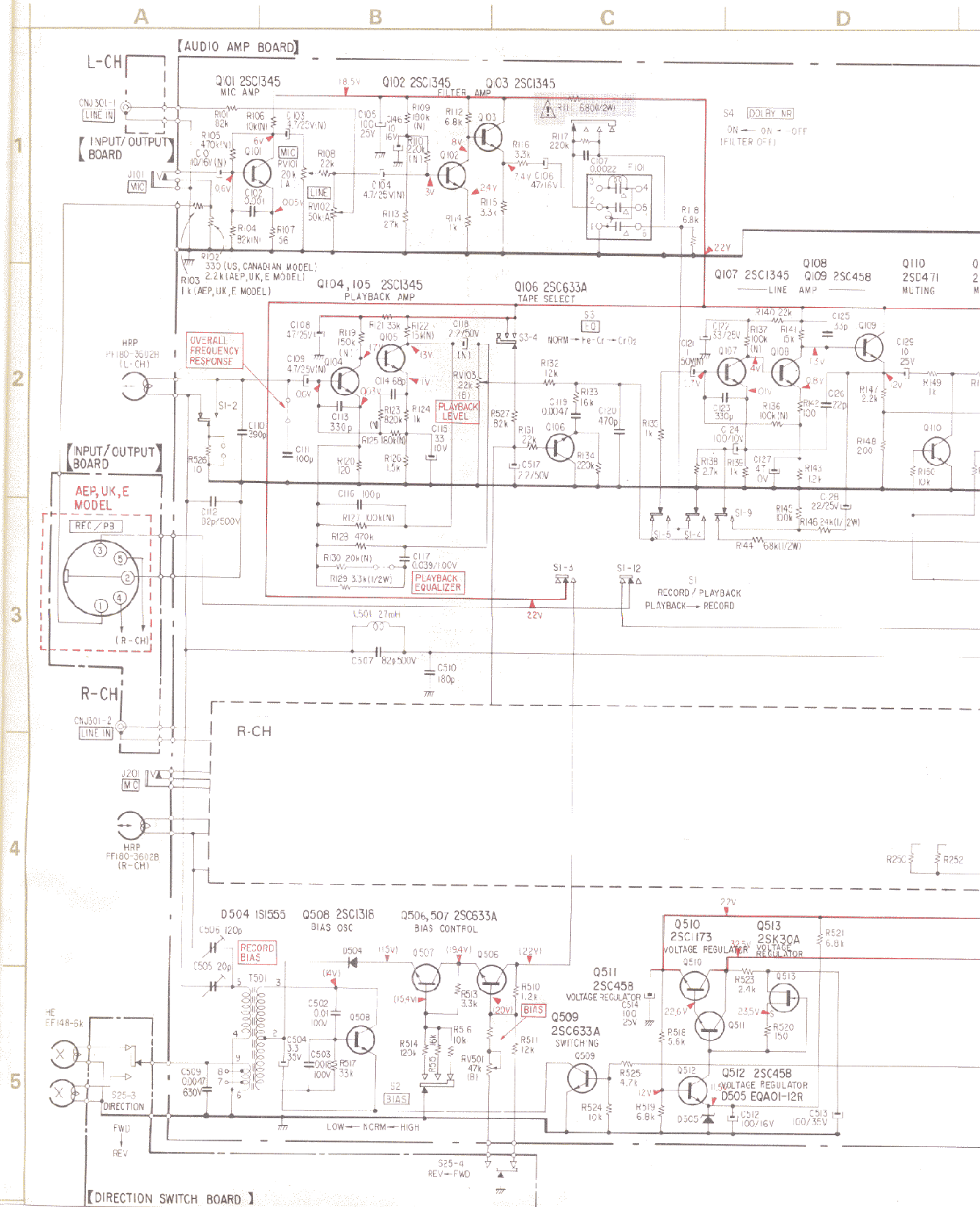



C
D
E
F
AUDIO AMP BOARD
HEADPHONE AMP BOARD
PLAYBACK LEVEL
RECORD BIAS
OVERALL FREQUENCY RESPONSE
METER LEVEL
RECORD LEVEL
REC LEVEL MIC
REC LEVEL LINE
HEADPHONES LINE OUT



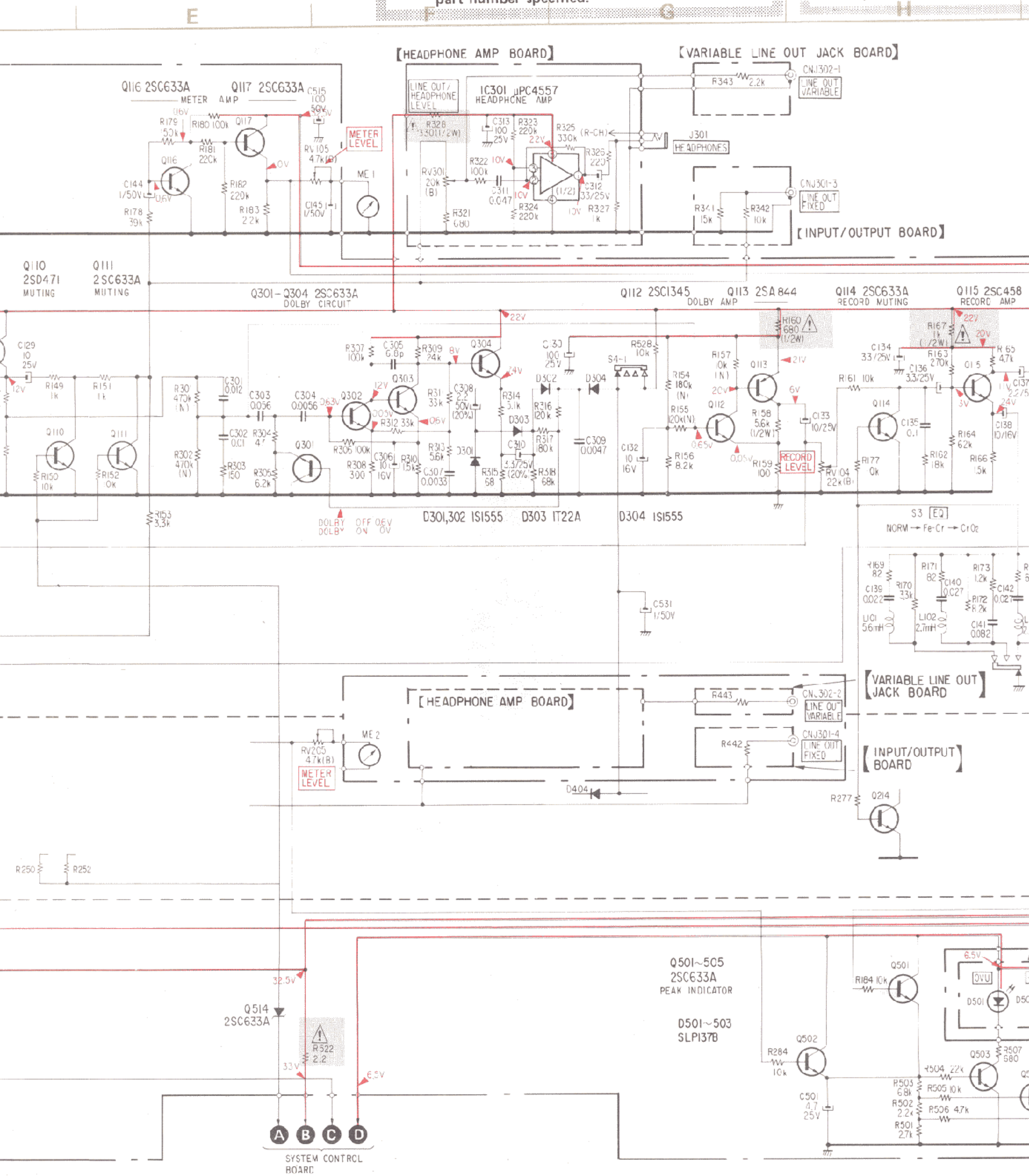
Q, IC	D
502	
216 501 206 106 503	
505,504	
217	501 ~503
209 509 507,506 208	
105 213 205 212	504
401	404
508 204 207 104 402 210	402
117 511,510 403	403
211	401
404	
116 512,513	
514	
111 110	
	505
114 304 303	301
302 115 107	303 302
215 301	
	304
112 515 113 214 108 109	
IC301	
203 202	
201 102 103	
101	
Q, IC	D

2-5. SCHEMATIC DIAGRAM —Audio Amp Section—

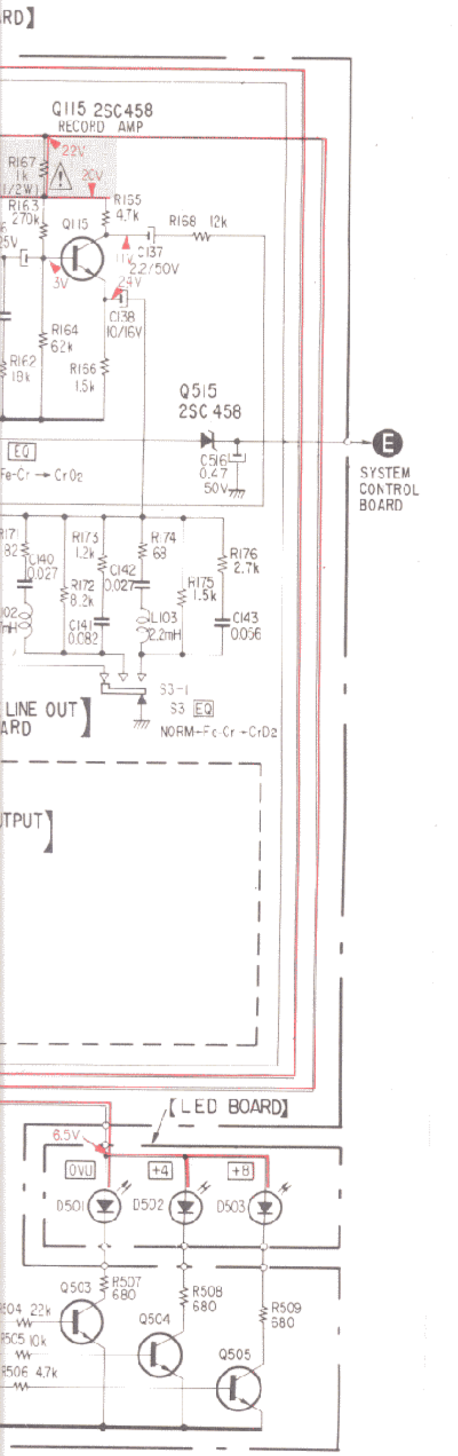


Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une marque ⚠ sont critiques p... remplacer que par une pi... spécifié.



posants identifiés par un tramé et une
⚠ sont critiques pour la sécurité. Ne les
r que par une pièce portant le numéro



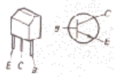
- All capacitors are in μF unless otherwise noted. pF = μμF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ = 1000Ω, MΩ = 1000 kΩ
- (N) : low-noise resistor.
- ▬▬ : B + bus.
- ▭ : panel designation.
- ▭ : adjustment for repair.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions with a VOM (20 kΩ/V).
  ( ): record
  no mark: stop
- Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S1	RECORD/PLAYBACK	PLAYBACK
S2	BIAS	HIGH
S3	EQ	NORM
S4	DOLBY NR	OFF

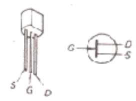
- **Replacement Semiconductors**

For replacement, use semiconductors except in ( ).

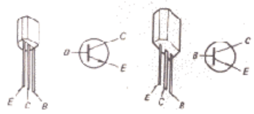
Q101~105, 107
Q201~205, 207 } 2SC1345
Q112, 212



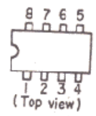
Q513 : 2SK30A



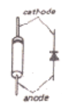
Q106, 206, 116, 216
Q111, 211, 117, 217
Q114, 214, 501–507
Q509, 514 } 2SC1364 (2SC633A)
Q301–304
Q401–404



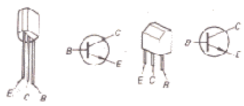
IC301 : μPC4557C (μPC4557)



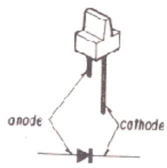
D301, 302, 304
D401, 402, 404 } 1S1555
D504
D303, 403 : 1T22AM (1T22A)



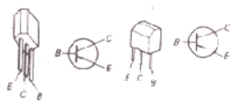
Q108, 109, 115
Q208, 209, 215 } 2SC1364 (2SC458)
Q511, 512, 515



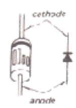
D501~503 : SLP137B



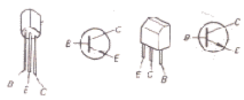
Q113, 213 : 2SA678 (2SA844)



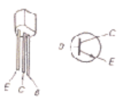
D505 : EQB01-12Z (EQA01-12R)



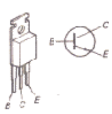
Q110, 210 : 2SD1474 (2SD471)



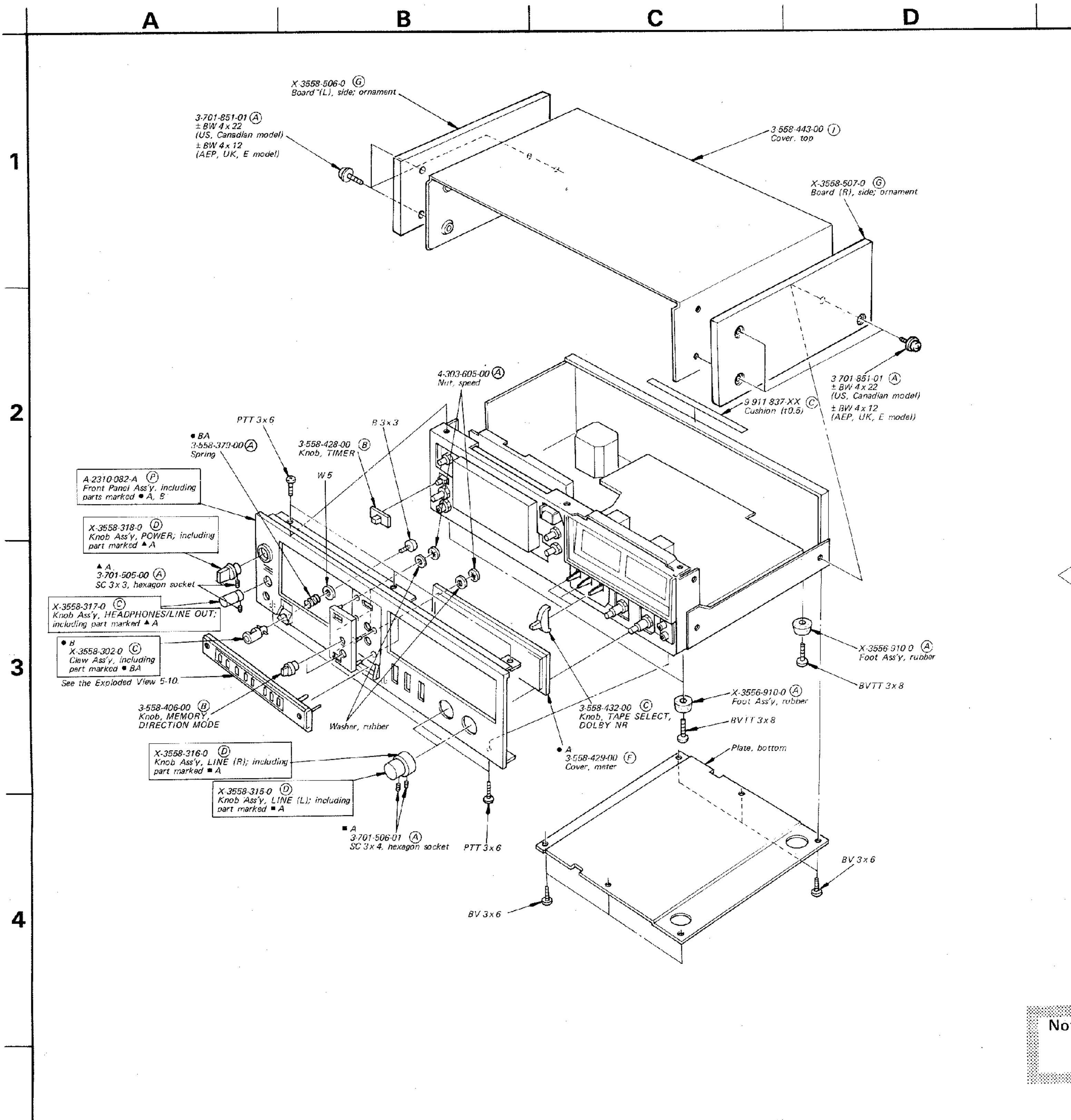
Q508 : 2SC1475 (2SC1318)



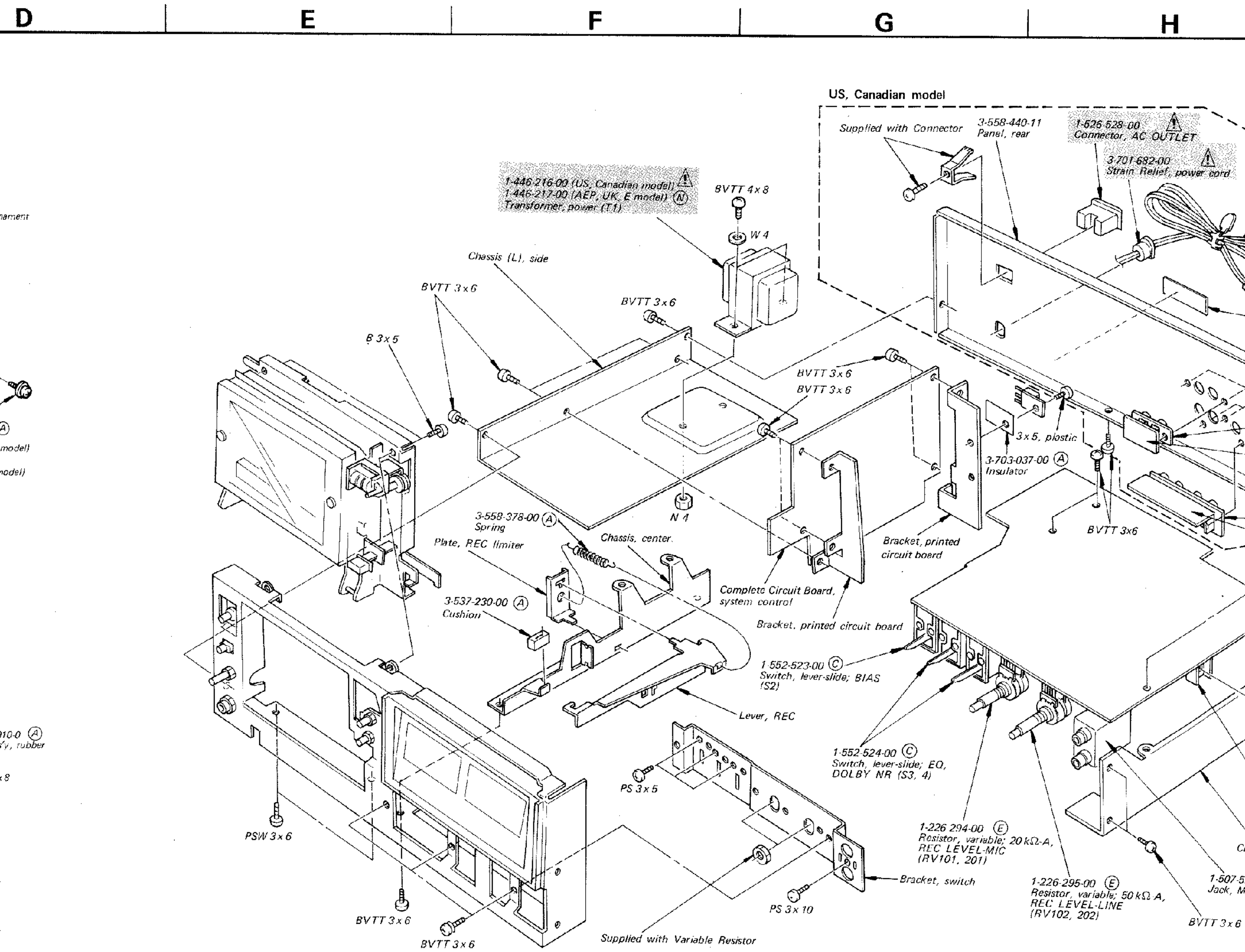
Q510 : 2SC1173



SECTION 3
EXPLODED VIEW



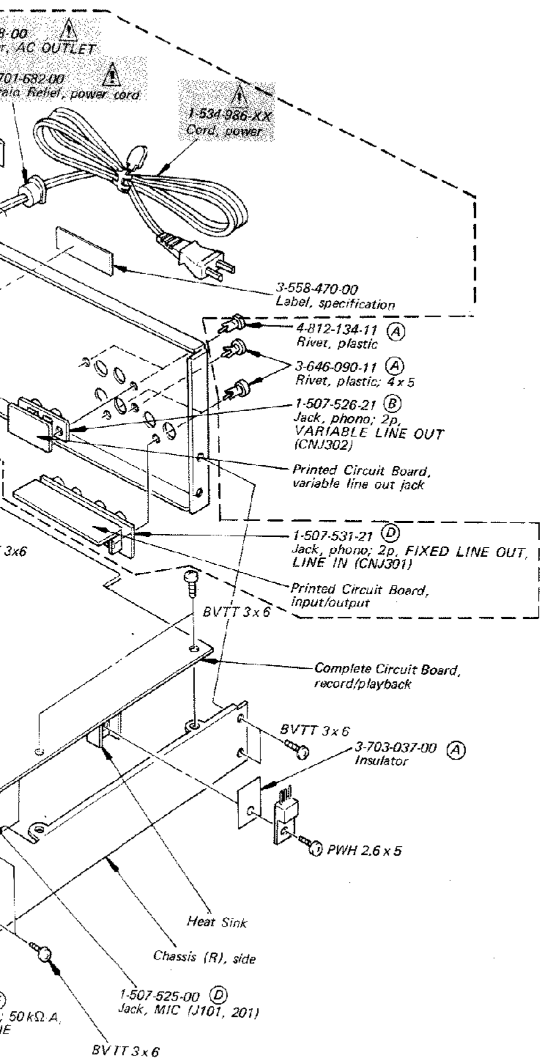
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters ((A) to (Z)) are applicable to European models only.

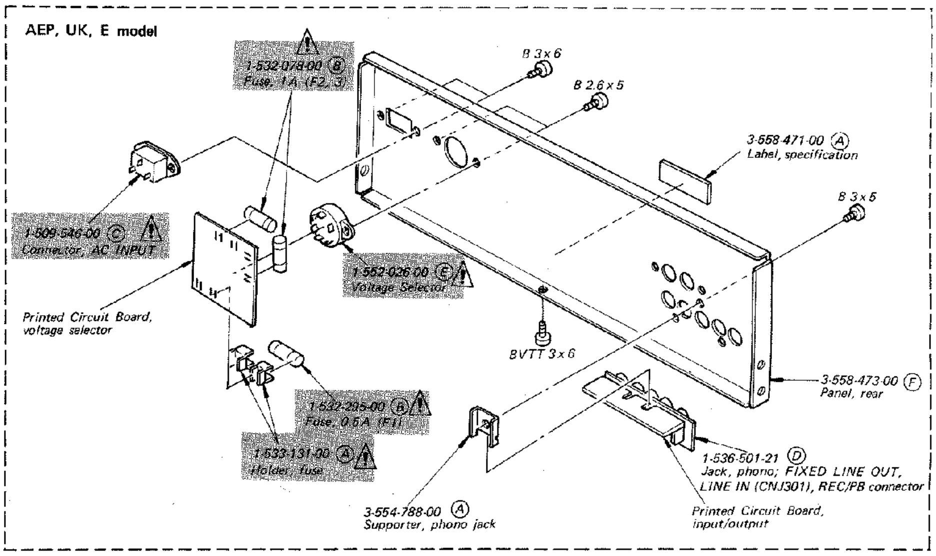


Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

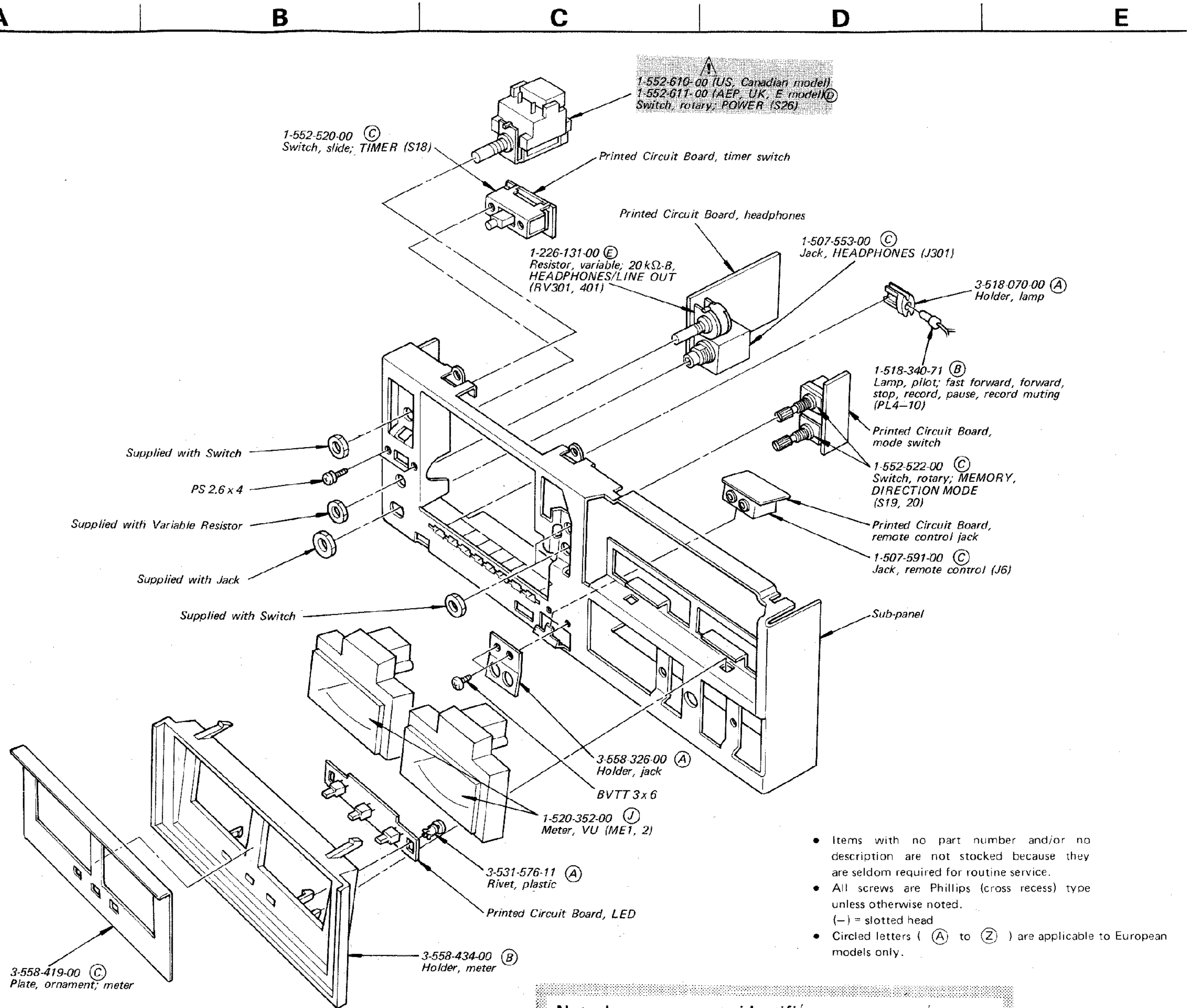
Note: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

H | I | J | K | L





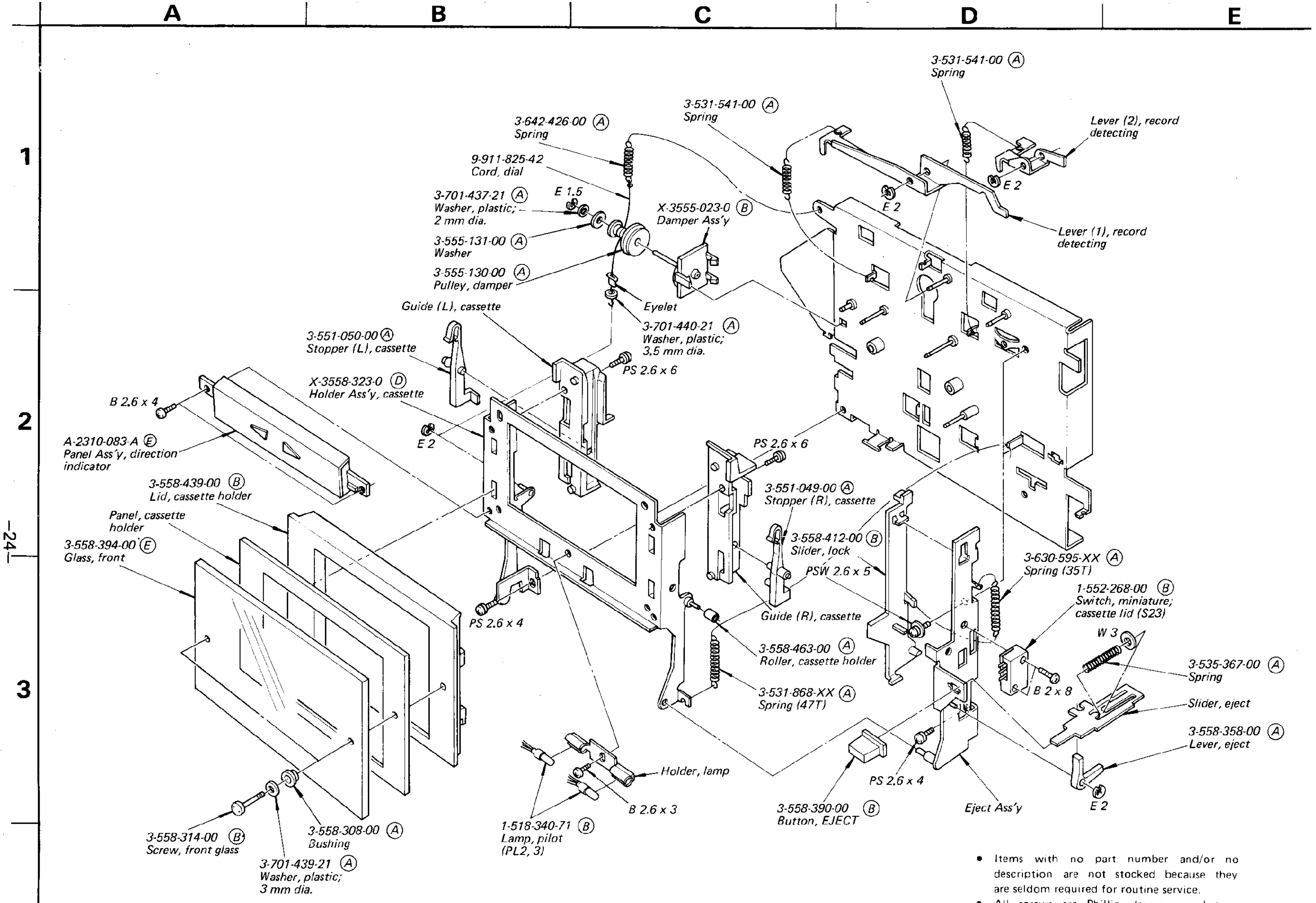
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



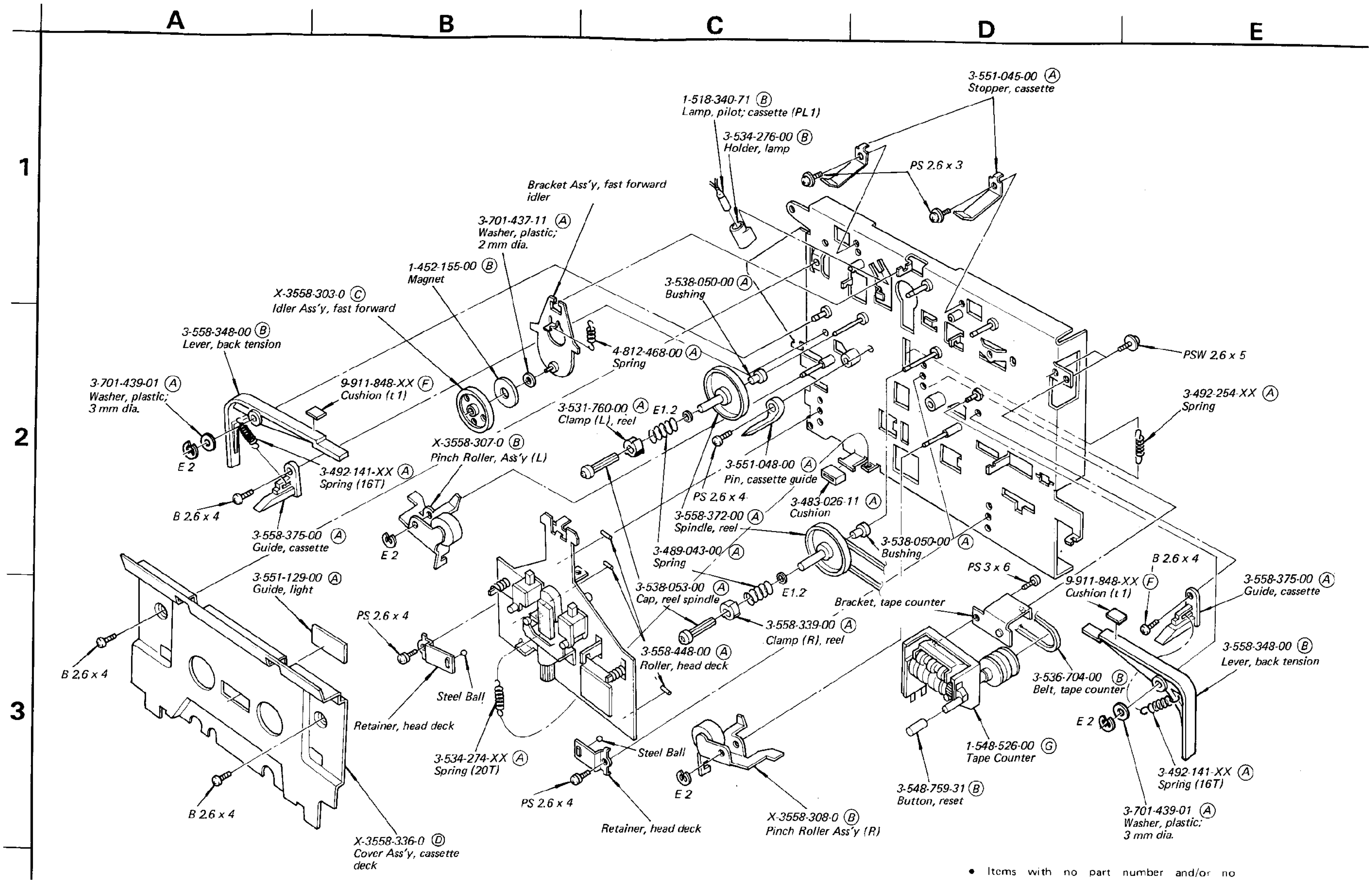
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.

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

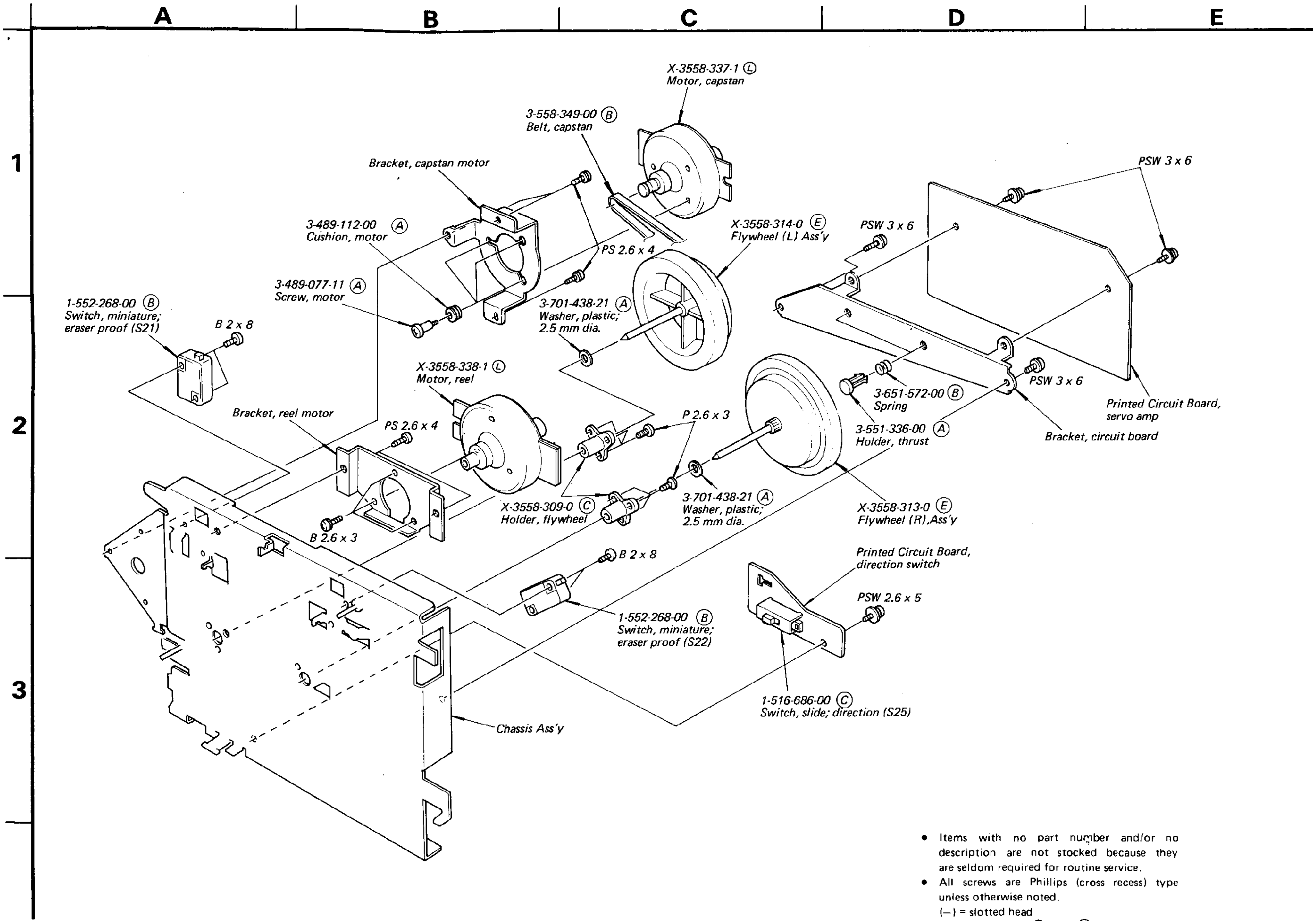
Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



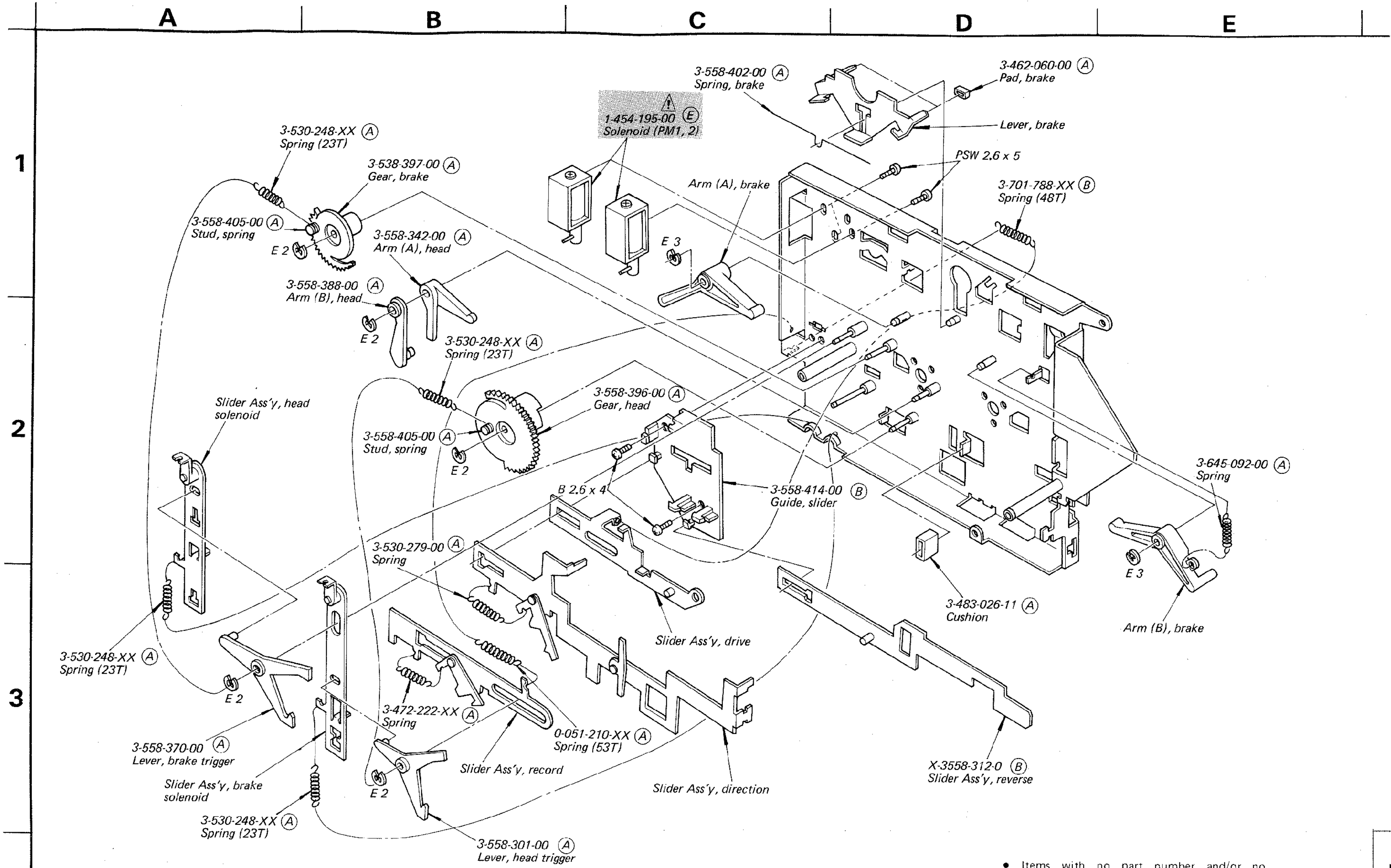
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters ((A) to (Z)) are applicable to European models only.
- (□□T) shows the number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



- 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 ((A) to (Z)) are applicable to European models only.
- (□□T) shows the number of coils in spring.



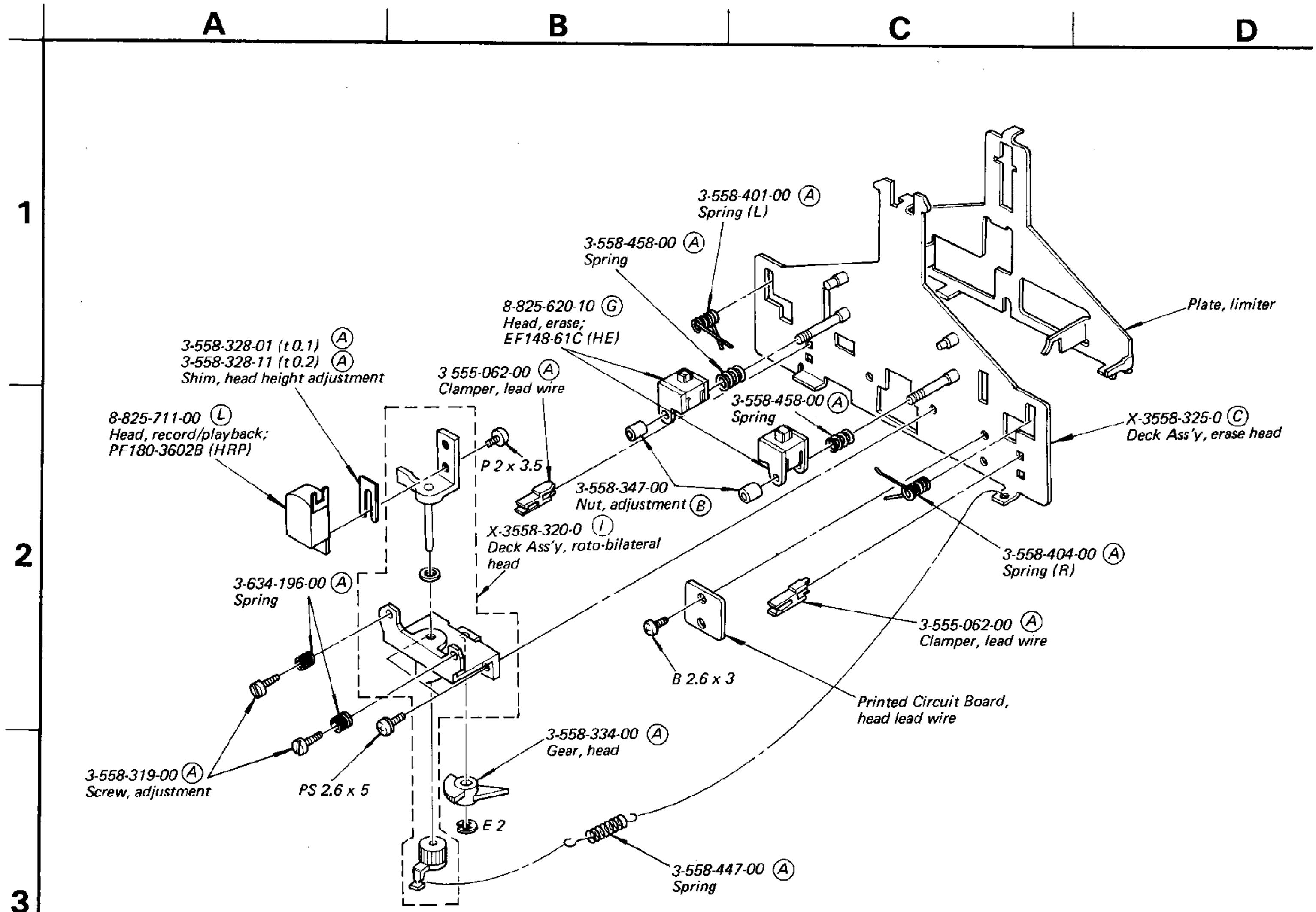
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- Circled letters (Ⓐ to Ⓩ) are applicable to European models only.



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

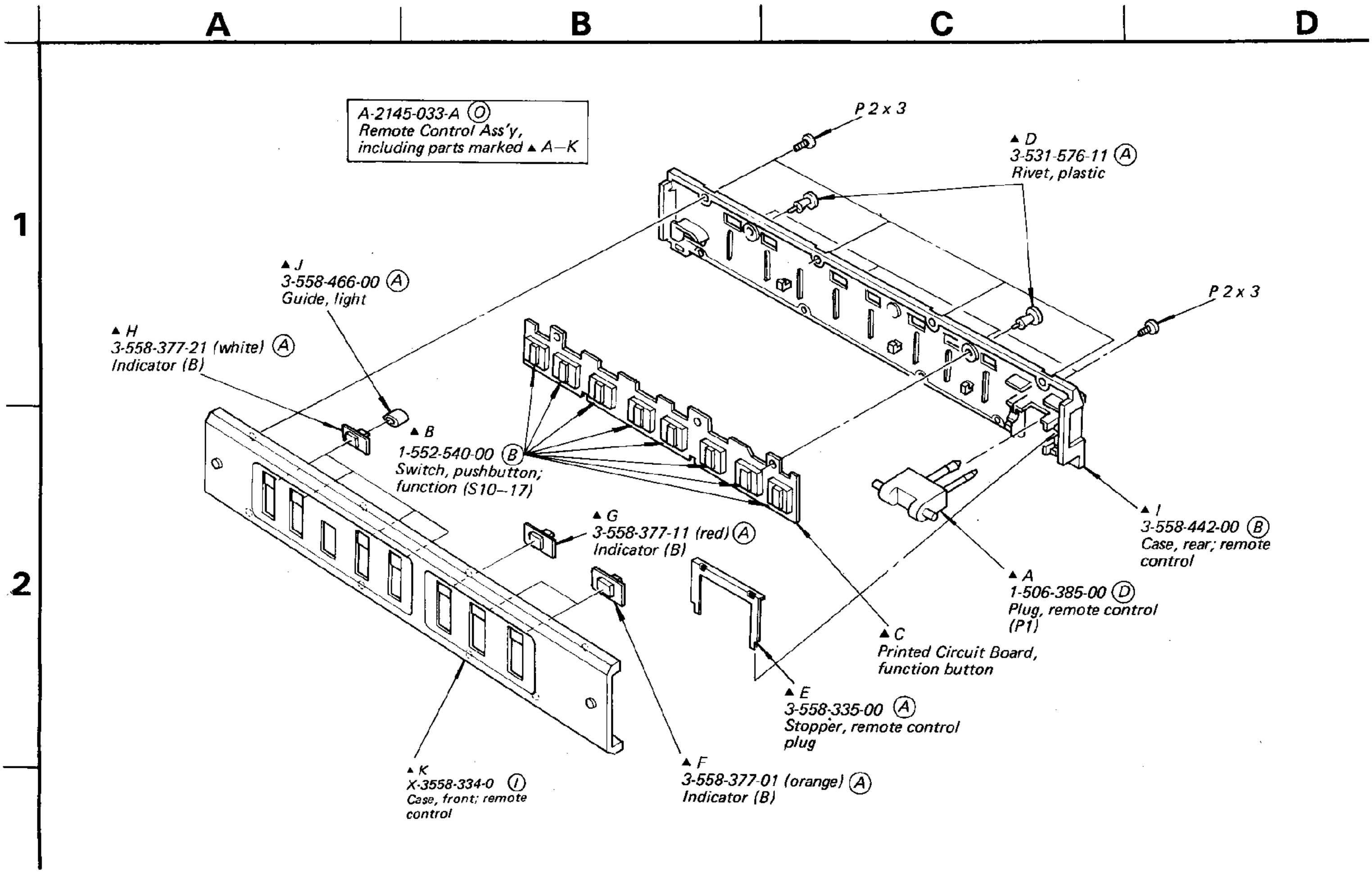
Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- 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 ((A) to (Z)) are applicable to European models only.
- (□□T) shows the number of coils in spring.



4

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



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

SECTION 4
ELECTRICAL PARTS LIST

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

Ref. No.	*Part No.*	*Description*
		PRINTED CIRCUIT BOARD
	1-588-144-00	Ⓑ Voltage Selector (AEP, UK, E model)
		SEMICONDUCTORS
		Transistors
Q101–105, Q201–205	8-729-334-58	Ⓑ 2SC1345
⇒ Q106, 206	8-729-663-47	Ⓑ 2SC1364
Q107, 207	8-729-334-58	Ⓑ 2SC1345
⇒ Q108, 208, Q109, 209	8-729-663-47	Ⓑ 2SC1364
⇒ Q110, 210	8-760-335-10	Ⓑ 2SC1474
⇒ Q111, 211	8-729-663-47	Ⓑ 2SC1364
Q112, 212	8-729-334-58	Ⓑ 2SC1345
⇒ Q113, 213	8-727-788-00	Ⓑ 2SA678
⇒ Q114–117, Q214–217	8-729-663-47	Ⓑ 2SC1364
⇒ Q301–304, Q401–404	8-729-663-47	Ⓑ 2SC1364
⇒ Q501–507	8-729-663-47	Ⓑ 2SC1364
⇒ Q508	8-760-413-10	Ⓒ 2SC1475
⇒ Q509	8-729-663-47	Ⓑ 2SC1364
Q510	8-729-217-33	Ⓒ 2SC1173
⇒ Q511, 512	8-729-663-47	Ⓑ 2SC1364
Q513	8-729-203-04	Ⓑ 2SK30A
⇒ Q514, 515	8-729-663-47	Ⓑ 2SC1364
Q601	8-729-217-33	Ⓒ 2SC1173
⇒ Q602	8-729-316-12	Ⓓ 2SC1061
⇒ Q603	8-729-663-47	Ⓑ 2SC1364
Q604	8-727-788-00	Ⓑ 2SA678
Q605, 606	8-729-160-51	Ⓑ 2SB605
⇒ Q607–619	8-729-663-47	Ⓑ 2SC1364
Q620	8-729-157-11	Ⓑ 2SD571
⇒ Q621	8-729-663-47	Ⓑ 2SC1364
Q622	8-729-157-11	Ⓑ 2SD571
⇒ Q624–627	8-729-663-47	Ⓑ 2SC1364
Q628	8-729-157-11	Ⓑ 2SD571
⇒ Q629, 631	8-729-663-47	Ⓑ 2SC1364

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

Ref. No.	*Part No.*	*Description*
⇒ Q801	8-729-663-47	Ⓑ 2SC1364
Q802	8-729-141-43	Ⓑ 2SD414
Q803, 804	8-729-154-83	Ⓑ 2SB548
Q805	8-729-141-43	Ⓑ 2SD414
⇒ Q806–813	8-729-663-47	Ⓑ 2SC1364
⇒ Q814	8-727-788-00	Ⓑ 2SA678
Q815	8-729-141-43	Ⓑ 2SD414
Q816, 817	8-729-154-83	Ⓑ 2SB548
Q818	8-729-141-43	Ⓑ 2SD414
⇒ Q819	8-727-788-00	Ⓑ 2SA678
⇒ Q820, 821	8-729-663-47	Ⓑ 2SC1364
		ICs
⇒ IC301	8-759-145-57	Ⓒ μPC4557C
IC601	8-759-147-22	Ⓛ μPD547-022
IC602	8-759-240-19	Ⓒ TC4019P
⇒ IC603–606	8-759-145-57	Ⓒ μPC4557C
IC607	8-759-240-69	Ⓒ TC4069P
IC801	8-759-600-65	Ⓕ CX065A
IC802–804	8-759-145-58	Ⓓ μPC4558C
		Diodes
D301, 401, D302, 402	8-719-815-55	Ⓑ 1S1555
⇒ D303, 403	8-719-422-21	Ⓑ 1T22AM
D304, 404	8-719-815-55	Ⓑ 1S1555
D501–503	8-719-901-37	Ⓑ SLP137B
D504	8-719-815-55	Ⓑ 1S1555
⇒ D505	8-719-930-12	Ⓑ EQB01-12Z
D601–604	⚠ 8-719-200-02	Ⓑ 10E2
D605, 606	⚠ 8-719-511-10	Ⓒ SIVB10
D607	⚠ 8-719-200-02	Ⓑ 10E2
⇒ D608	8-719-931-15	Ⓑ EQB01-15
D609	8-719-200-02	Ⓑ 10E2
⇒ D611	8-719-930-11	Ⓑ EQB01-11Z
D612–618	8-719-815-55	Ⓑ 1S1555
D619, 620	⚠ 8-719-200-02	Ⓑ 10E2
D621–623	8-719-815-55	Ⓑ 1S1555
D626	8-719-815-55	Ⓑ 1S1555
⇒ D627	8-819-815-55	Ⓑ 1S1555
D801–809	8-719-815-55	Ⓑ 1S1555

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

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

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

COILS

Ref. No.	*Part No.*	*Description*
L101, 201	1-407-203-XX	Ⓐ 5.6 mH, microinductor
L102, 202	1-407-199-XX	Ⓑ 2.7 mH, microinductor
L103, 203	1-407-198-XX	Ⓐ 2.2 mH, microinductor
L501, 502	1-407-211-XX	Ⓑ 27 µH, microinductor
L601	1-405-800-00	Ⓑ Osc

TRANSFORMERS

Ref. No.	*Part No.*	*Description*
T1	⚠ 1-446-216-00	Power (US, Canadian model)
	⚠ 1-446-217-00	Ⓝ Power (AEP, UK, E model)
T501	1-433-132-11	Ⓑ Bias Osc

CAPACITORS

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

Ref. No.	*Part No.*	*Description*			
C101, 201	1-121-651-11	Ⓐ	10	16V	elect
C102, 202	1-161-323-11	Ⓐ	0.001		
C103, 203 / C104, 204	1-121-915-11	Ⓑ	4.7	25V	elect
C105, 205	1-121-416-11	Ⓑ	100	25V	elect
C106, 206	1-121-409-11	Ⓐ	47	16V	elect
C107, 207	1-108-230-12	Ⓐ	0.0022		mylar
C108, 208	1-121-410-11	Ⓑ	47	25V	elect
C109, 209	1-121-915-11	Ⓑ	4.7	25V	elect
C110, 210	1-161-318-11	Ⓐ	390p		
C111, 211	1-161-271-11	Ⓐ	100p		
C112, 212	1-107-037-11	Ⓐ	82p	500V	silvered mica
C113, 213	1-161-317-11	Ⓐ	330p		
C114, 214	1-161-269-11	Ⓐ	68p		
C115, 215	1-121-402-11	Ⓐ	33	10V	elect
C116, 216	1-161-271-11	Ⓐ	100p		
C117, 217	1-130-190-11	Ⓑ	0.039	100V	polyethylene
C118, 218	1-121-450-11	Ⓐ	2.2	50V	elect
C119, 219	1-108-234-12	Ⓐ	0.0047		mylar
C120, 220	1-161-319-11	Ⓐ	470p		
C121, 221	1-121-391-11	Ⓐ	1	50V	elect

Ref. No.	*Part No.*	*Description*			
C122, 222	1-121-404-11	Ⓐ	33	25V	elect
C123, 223	1-161-317-11	Ⓐ	330p		
C124, 224	1-121-414-11	Ⓐ	100	10V	elect
C125, 225	1-161-265-11	Ⓐ	33p		
C126, 226	1-161-263-11	Ⓐ	22p		
C127, 227	1-121-352-11	Ⓐ	47	10V	elect
C128, 228	1-121-480-11	Ⓐ	22	25V	elect
C129, 229	1-121-398-11	Ⓐ	10	25V	elect
C130, 230	1-121-416-11	Ⓑ	100	25V	elect
C131	1-121-391-11	Ⓐ	1	50V	elect
C132, 232	1-121-651-11	Ⓐ	10	16V	elect
C133, 233	1-121-398-11	Ⓐ	10	25V	elect
C134, 234	1-121-404-11	Ⓐ	33	25V	elect
C135, 235	1-108-251-12	Ⓑ	0.1		mylar
C136, 236	1-121-392-11	Ⓐ	3.3	25V	elect
C137, 237	1-121-450-11	Ⓐ	2.2	50V	elect
C138, 238	1-121-651-11	Ⓐ	10	16V	elect
C139, 239	1-108-242-12	Ⓐ	0.022		mylar
C140, 240	1-108-589-12	Ⓐ	0.027		mylar
C141, 241	1-108-362-12	Ⓑ	0.082		mylar
C142, 242	1-108-591-12	Ⓐ	0.033		mylar
C143, 243	1-108-361-12	Ⓐ	0.056		mylar
C144, 244 / C145, 245	1-121-391-11	Ⓐ	1	50V	elect
C146, 246	1-121-651-00	Ⓐ	10	16V	elect
C301, 401	1-108-581-12	Ⓐ	0.012		mylar
C302, 402	1-108-239-12	Ⓐ	0.01		mylar
C303, 403	1-108-361-12	Ⓐ	0.056		mylar
C304, 404	1-108-355-12	Ⓐ	0.0056		mylar
C305, 405	1-161-257-11	Ⓐ	6.8p		
C306, 406	1-121-651-11	Ⓐ	10	16V	elect
C307, 407	1-108-567-12	Ⓐ	0.0033		mylar
C308, 408	1-121-450-11	Ⓐ	2.2	50V	elect
C309, 409	1-108-234-12	Ⓐ	0.0047		mylar
C310, 410	1-121-392-11	Ⓐ	3.3	25V	elect

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

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

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Ref.No.	Part No.	Description		
C311, 411	1-161-021-11	Ⓐ 0.047	(semiconductor)	
C312, 412	1-121-404-11	Ⓐ 33	25V	elect
C313	1-121-416-11	Ⓑ 100	25V	elect
C501	1-121-395-11	Ⓐ 4.7	25V	elect
C502	1-129-701-11	Ⓐ 0.01	100V	polyethylene
C503	1-130-189-11	Ⓑ 0.018	100V	polyethylene
C504	1-131-350-11	Ⓑ 3.3	35V	tantalum
C505,506	1-141-010-XX	Ⓑ Trimmer, 120p		
C507,508	1-107-037-11	Ⓐ 82p	500V	mica
C509	1-129-710-11	Ⓑ 0.0047	630V	polyethylene
C510,511	1-107-091-11	Ⓐ 180p		mica
C512	1-121-415-11	Ⓐ 100	16V	elect
C513	1-121-357-11	Ⓑ 100	35V	tantalum
C514	1-121-416-11	Ⓑ 100	25V	elect
C515	1-121-417-11	Ⓑ 100	50V	elect
C516	1-121-726-11	Ⓐ 0.47	50V	elect
C517	1-121-450-11	Ⓐ 2.2	50V	elect
C601	⚠1-123-364-11	Ⓒ 1000	50V	elect
C602	⚠1-123-361-11	Ⓑ 220	50V	elect
C603,604	⚠1-123-325-11	Ⓑ 2200	16V	elect
C605,606	⚠1-123-334-11	Ⓑ 220	25V	elect
C607–610	1-121-651-11	Ⓐ 10	16V	elect
C611,612	1-121-395-11	Ⓐ 4.7	25V	elect
C613–618	1-121-726-11	Ⓐ 0.47	50V	elect
C619	1-121-651-11	Ⓐ 10	16V	elect
C620	1-161-323-11	Ⓐ 0.001		
C621	1-161-379-11	Ⓐ 0.01		
C622–624	1-121-651-11	Ⓐ 10	16V	elect
C625	1-121-395-11	Ⓐ 4.7	25V	elect
C801	1-123-228-11	Ⓑ 1	50V	elect (nonpolarized)
C802,803	1-121-651-11	Ⓐ 10	16V	elect
C804	1-108-240-12	Ⓐ 0.015		mylar
C805	1-130-071-11	Ⓑ 0.1	100V	polyethylene
C806	1-121-395-11	Ⓐ 4.7	25V	elect
C807	1-121-450-11	Ⓐ 2.2	50V	elect
C808	1-121-395-11	Ⓐ 4.7	25V	elect
C809,810	1-123-228-11	Ⓑ 1	50V	elect (nonpolarized)
C811–813	1-161-323-11	Ⓐ 0.001		
C814,815	1-123-232-11	Ⓑ 4.7	50V	elect (nonpolarized)
C816,817	1-108-364-12	Ⓐ 0.18		mylar
C818	1-123-232-11	Ⓑ 4.7	50V	elect (nonpolarized)
C819	1-121-738-11	Ⓐ 10	50V	elect
C822	1-121-651-11	Ⓐ 10	16V	elect
C850,851	1-121-415-11	Ⓐ 100	16V	elect

RESISTORS

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

Ref. No.	Part No.	Description		
R111,211	⚠1-244-869-11	Ⓐ 680	½W	carbon
R129,229	1-244-885-11	Ⓐ 3.3k	½W	carbon
R144,244	1-244-917-11	Ⓐ 68k	½W	carbon
R146,246	1-244-906-11	Ⓐ 24k	½W	carbon
R158,258	1-244-891-11	Ⓐ 5.6k	½W	carbon
R160,260	⚠1-244-869-11	Ⓐ 680	½W	carbon
R167,267	⚠1-244-873-11	Ⓐ 1k	½W	carbon
R328	⚠1-244-861-11	Ⓐ 330	½W	carbon
R522	⚠1-246-409-11	Ⓐ 2.2	¼W	carbon
R602	⚠1-244-889-11	Ⓐ 4.7k	½W	carbon
R606	⚠1-206-477-11	Ⓐ 39	2W	metal oxide (nonflammable)
R609	1-214-176-11	Ⓐ 68k	¼W	metal oxide (1%)
R613	⚠1-244-867-11	Ⓐ 560	½W	carbon
R629	1-214-180-11	Ⓐ 100k	¼W	metal oxide (1%)
R631	1-214-138-11	Ⓐ 1.8k	¼W	metal oxide (1%)
R632	1-214-142-11	Ⓐ 2.7k	¼W	metal oxide (1%)
R633	1-214-139-11	Ⓐ 2k	¼W	metal oxide (1%)
R634	1-214-136-11	Ⓐ 1.5k	¼W	metal oxide (1%)
R635,636	1-214-132-11	Ⓐ 1k	¼W	metal oxide (1%)
R638	1-214-167-11	Ⓐ 30k	¼W	metal oxide (1%)
R639	1-214-144-11	Ⓐ 3.3k	¼W	metal oxide (1%)
R640	1-214-154-11	Ⓐ 8.2k	¼W	metal oxide (1%)
R728,729	⚠1-206-463-11	Ⓐ 10	2W	metal oxide (nonflammable)

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

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Ref. No	Part No.	Description
R731	⚠1-206-471-11	(A) 22 2W metal oxide (nonflammable)
R751	1-210-113-11	(A) 18k 1/8W carbon
R752	1-246-859-11	(A) 20k 1/8W carbon
R753	1-246-863-11	(A) 43k 1/8W carbon
R754	1-246-869-11	(A) 130k 1/8W carbon
R755	1-210-114-11	(A) 22k 1/8W carbon
R756	1-210-381-11	(B) 33k 1/8W carbon
R804,805	1-214-176-11	(A) 68k ¼W metal oxide
R838,839	⚠1-213-036-11	(A) 1 1W fusible
R891,892	⚠1-212-393-11	(A) 4.7 1W metal oxide (nonflammable)
RV101,201	1-226-294-00	(E) 20k-A, variable; MIC
RV102,202	1-226-295-00	(E) 50k-A, variable; LINE
RV103,203 RV104,204	1-224-646-XX	(B) 22k-B, adjustable; playback level, record level
RV105,205	1-224-644-XX	(B) 4.7k-B, adjustable; level meter
RV301,401	1-226-131-00	(E) 20k-B, variable; HEADPHONES LINE OUT
RV501	1-224-647-XX	(B) 47k-B, adjustable; bias
RV806	1-224-661-00	(B) 47k-B, adjustable; speed
RV809,810	1-224-642-XX	(B) 1k-B, adjustable; gain
RV816,819	1-224-645-XX	(B) 10k-B, adjustable; offset
RV843	1-224-642-XX	(B) 1k-B, adjustable; torque
RV854	1-224-633-00	(B) 4.7k-B, adjustable; balance
RV860,861 RV874,875	1-224-645-XX	(B) 10k-B, adjustable; offset

SWITCHES

Ref. No.	Part No.	Description
S1	1-552-521-00	(C) slide, record/playback
S2	1-552-523-00	(C) Lever-slide, BIAS
S3,4	1-552-524-00	(C) Lever-slide, EQ, DOLBY NR
S10–17	1-552-540-00	(B) pushbutton, function
S18	1-552-520-00	(C) Slide, TIMER
S19,20	1-552-522-00	(C) Rotary, MEMORY, DIRECTION MODE
S21–23	1-552-268-00	(B) Miniature, eraser proof, cassette lid
S24	1-548-526-00	(G) Tape Counter, w/switch
S25	1-516-686-00	(C) Slide, direction
S26	⚠1-552-610-00	Rotary, POWER (US, Canadian model)
S26	⚠1-552-611-00	(D) Rotary, POWER (AEP, UK, E model)

MISCELLANEOUS

Ref. No.	Part No.	Description
CNJ301	1-507-501-21	(D) Jack, phono; 4p, LINE IN, LINE OUT-FIXED (AEP, UK, E model)
CNJ301	1-507-531-21	Jack, phono; 4p, LINE IN, LINE OUT-FIXED (US, Canadian model)
CNJ302	1-507-526-21	(B) Jack, phono; 2p, LINE OUT-VARIABLE
CP1	⚠1-231-326-00	Encapsulated Component (US model)
CP1	⚠1-231-341-00	Encapsulated Component (Canadian model)
CP601	⚠1-231-057-00	(B) Encapsulated Component (AEP, UK, E model)
F1	⚠1-532-295-00	(B) Fuse, 0.5A (AEP, UK, E model)
F2,3	⚠1-532-078-00	(B) Fuse, 1A (AEP, UK, E model)
F101,201	1-231-388-00	(C) Low pass filter
HE	8-825-620-10	(G) Head, erase; EF148-61C
HRP	8-825-711-00	(L) Head, record/playback; PF180-3602B
J6	1-507-591-00	(C) Jack, remote control
J101,201	1-507-525-00	(D) Jack, MIC
J301	1-507-553-00	(C) Jack, HEADPHONES
M1	X-3558-338-1	(L) Motor, reel; TMD-102
M2	X-3558-337-1	(L) Motor, capstan; TMD-103
ME1, 2	1-520-352-00	(J) Meter, level
P1	1-506-385-00	(D) Plug, remote control
PL1–10	1-518-340-71	(B) Lamp, pilot
PM1, 2	⚠1-454-195-00	(E) Solenoid
R857, 858 R871, 872	1-800-071-XX	(B) Thermistor S-300

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Part No.		*Description*
1-452-155-00	Ⓑ	Magnet
⚠1-509-546-00	Ⓒ	Connector, AC INPUT (AEP, UK, E model)
⚠1-526-528-00		Socket, AC OUTLET (US, Canadian model)
⚠1-533-131-00	Ⓐ	Holder, fuse (AEP, UK, E model)
⚠1-534-986-XX		Cord, power (US, Canadian model)
⚠1-552-026-00	Ⓔ	Voltage Selector (AEP, UK, E model)

ACCESSORIES AND PACKING MATERIALS

Part No.		*Description*
X-3701-105-0	Ⓐ	Tips Ass'y, head cleaning
1-534-049-31	Ⓔ	Cord, connection; RK-74H
⚠1-534-754-00		Cord, power; parallel-blade plug (E model)
⚠1-534-819-00	Ⓖ	Cord, power (UK model)
⚠1-551-216-00		Cord, power; euro plug (E model)
1-551-576-00	Ⓘ	Cord, remote control
3-429-126-00	Ⓑ	Bag, plastic; set
3-558-465-00	Ⓑ	Cushion (AEP, UK E model)
3-558-474-00	Ⓐ	Spacer
3-558-475-00		Carton(US, Canadina model)
3-558-476-00	Ⓓ	Carton(AEP, UK, E model)
3-558-478-00		Cushion (US, Canadian model)
3-701-630-00	Ⓐ	Bag, plastic
3-770-549-11	Ⓖ	Manual, instruction (AEP, UK, E model)
3-770-549-21		Manual, instruction (US model)
3-770-549-21 3-794-316-31		Manual, instruction (Canadian model)
3-794-233-21	Ⓐ	Leaflet

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