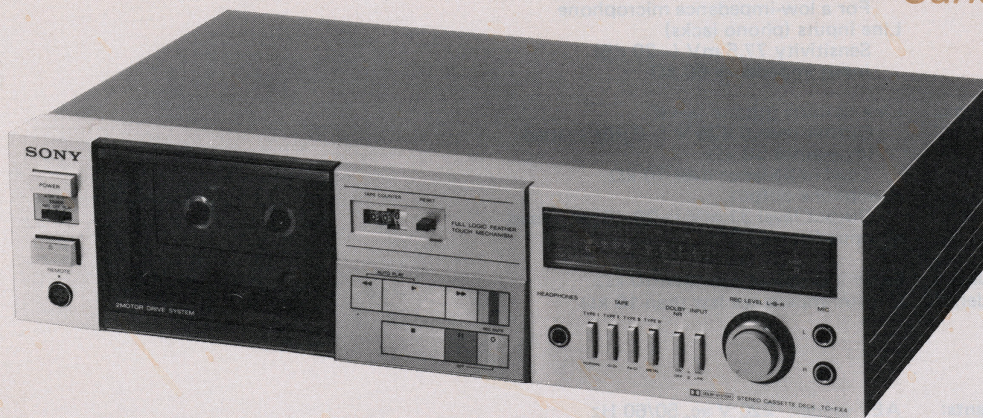


TC-FX4

US Model
Canadian Model
AEP Model
UK 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

Recording System: 4-track 2-channel stereo

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

Bias Frequency: 105 kHz

Signal-to-noise Ratio: DOLBY NR OFF

- With TYPE IV cassette (Sony METALLIC)
58 dB at peak level (NAB)
56 dB (DIN)
- With TYPE III cassette (Sony FeCr)
58 dB at peak level (NAB)
56 dB (DIN)
- 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 METALLIC and FeCr cassettes)


Frequency Response: DOLBY NR OFF

- 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 FeCr)
20 – 16,000 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)

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 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 DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



SONY
SERVICE MANUAL

– Continued on page 2 –

Wow and Flutter: 0.05 % WRMS (NAB)
±0.17 % (DIN)

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

Outputs: Line outputs (phono jacks)
Output level 0.435 V (–5 dB) at load
impedance 50 k Ω
Load impedance over 10 k Ω
Headphone output
Output level 31 mV (–28 dB) at a load
impedance of 8 Ω

Record/Playback Jack: Input impedance less than 10 k Ω
(AEP model) Output impedance less than 10 k Ω

GENERAL

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

Power Consumption: 22 W

Dimensions: Approx. 430(w) x 105(h) x 250(d) mm
16 $\frac{7}{8}$ (w) x 4 $\frac{1}{8}$ (h) x 9 $\frac{7}{8}$ (d) inches
including projecting parts and controls

Weight: Approx. 4 kg (8 lbs 13 oz)

Supplied Accessories: Connecting cord 2
Head cleaning tips 1 set

0 dB = 0.775 V

While the information given is correct at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in these specifications. We ask you to check with your appointed Sony dealer if clarification on any point is required.

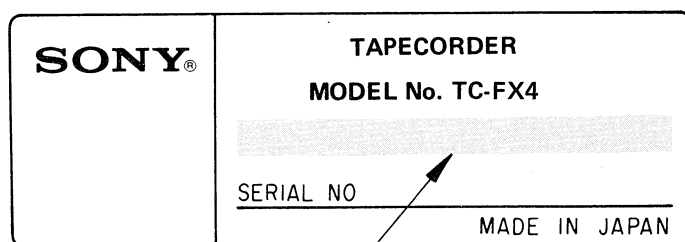
Note

Appliance conforms with EEC Directive 76/889 regarding interference suppression.

Tape Transport Mechanism Type: TCM-110V3
--

MODEL IDENTIFICATION

— Specification Label —



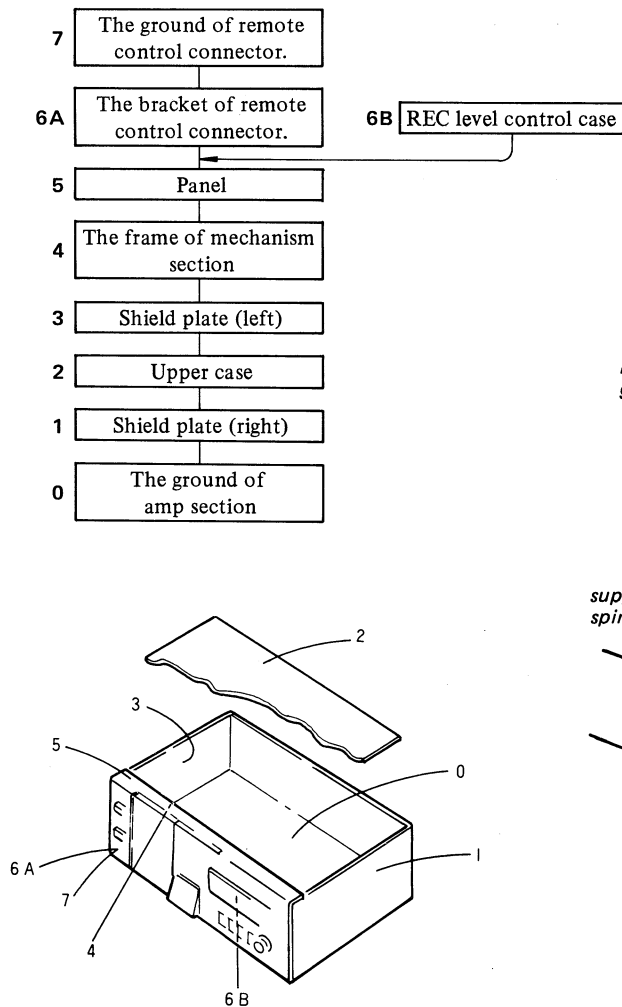
US, Canadian model: AC 120V 60Hz 22W
AEP model: AC 220V~ 50/60Hz 22W
UK model: AC 240V~ 50/60Hz 22W

SERVICE NOTE

The Grounded Circuit On Repairing

The ground is connected in the numerical order as shown below.

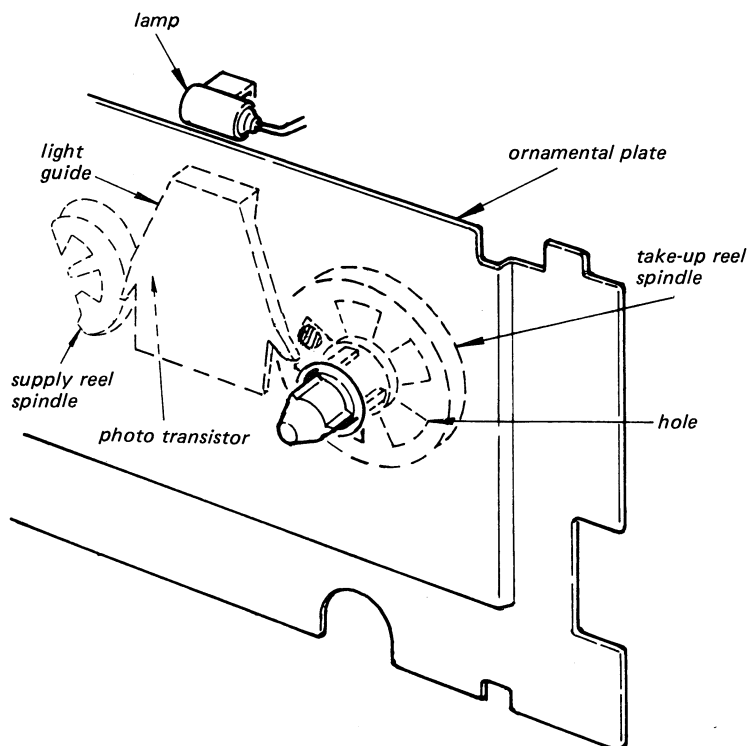
When removing parts, make the grounded circuit by using the clip cord.



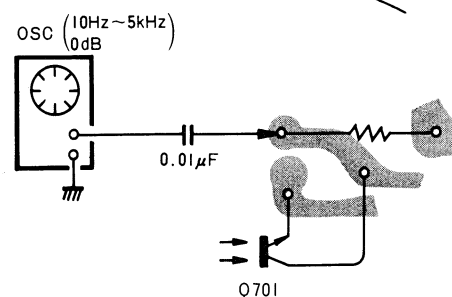
Shut-Off Detection and Precaution On Repairing

In this set, the shut-off detection is made optically. The take-up reel spindle has five holes. The light of the lamp received by the light guide is intermittently applied to the photo transistor by means of the rotation of the reel spindle. The pulse generated by the photo transistor Q701 is amplified by Q601 and is fed to the mechanism control IC401.

Accordingly, when it is necessary to repair the unit after removing the ornamental plate, connect an af oscillator to the collector of Q701 as shown below, so as not to operate the shut-off mechanism.



MD board (conductor side)



Handling Precautions for MOS ICs

Generally, the insulation resistance of the oxide layer in MOS IC structures is very high, and the oxide layer is very thin. Because of this, it is possible that the static voltages usually present on clothes and the human body will be enough to generate a potential difference across the insulator, high enough to cause a breakdown of the insulating layer.

The following precautions should be taken while handling these ICs.

(Particular care should be taken under conditions of low humidity.)

Precautions in Replacing MOS ICs

1. Store new ICs by inserting them into a urethane-polyester cushion (which is somewhat conductive), or wrapping it in aluminum foil, so that all the pins are at the same potential. (The ICs should be stored in that manner until mounted on the circuit board.)

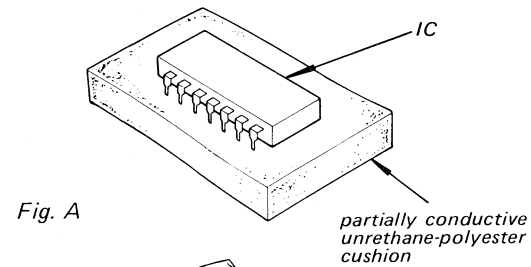


Fig. A

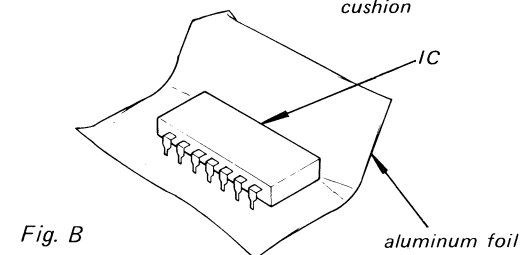


Fig. B

2. Check the soldering iron for possible power-line leakage current. Make sure that there is no leakage path by connecting an ohmmeter to the tip of the soldering iron and the plug as shown in Fig. C. If there is a leakage path, use some other soldering iron.

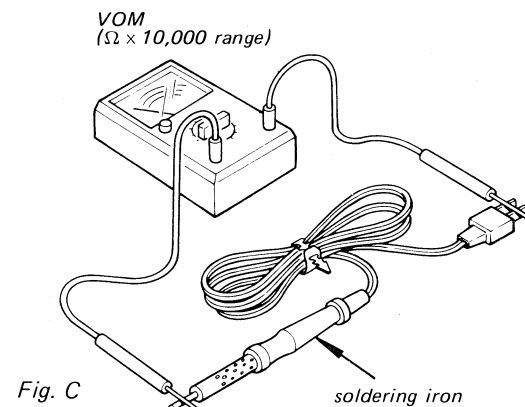


Fig. C

3. Equalize any potential difference between the clothes, the tools in use, the work bench, the set being worked on, and the packaged IC by touching them all in succession with the hands or a conductive wire or tool.
4. The following are effective methods for handling ICs that remove the potential difference across the oxide layer.
 - Use a paper clip modified by soldering in a wire braid insert.

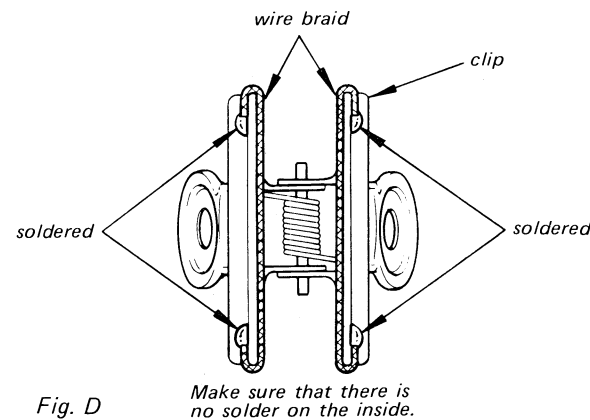


Fig. D

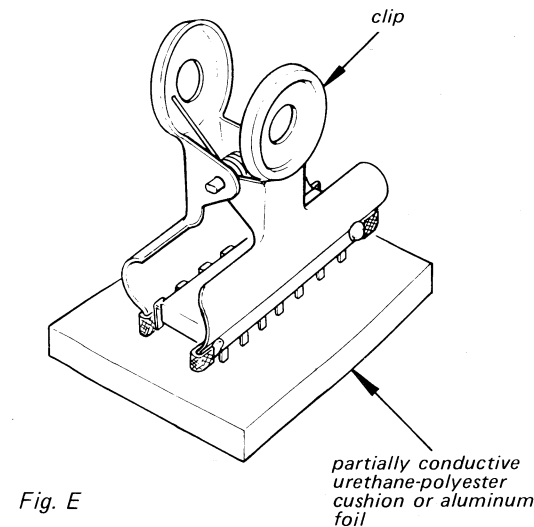


Fig. E

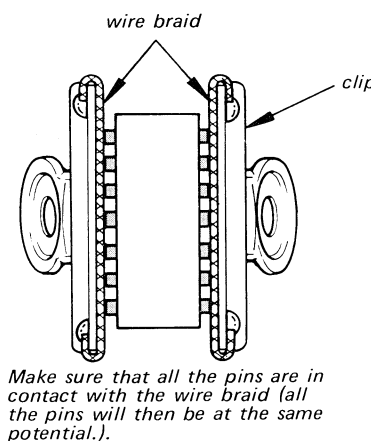


Fig. F

- Take a short length of fine bare wire and wind it around the IC so that it shorts all the pins of the IC, while it is still in the urethane-polyester cushion or aluminum foil. This ensures that all the pins are at the same potential.

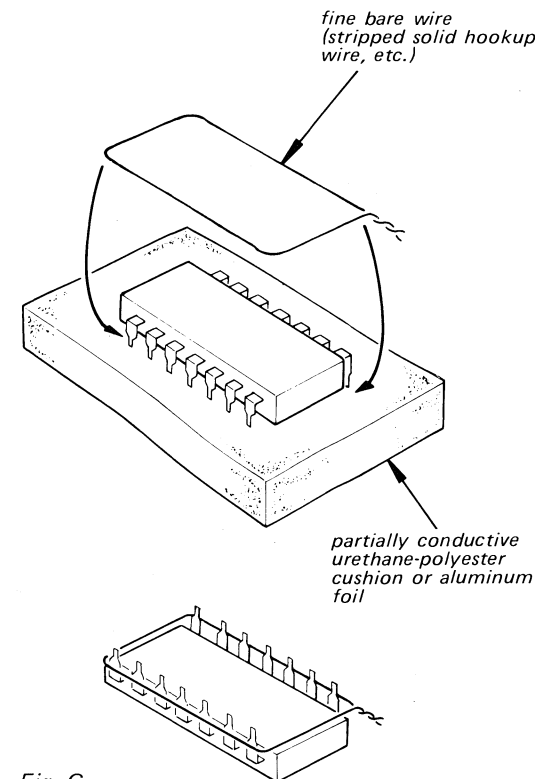


Fig. G

- When it is necessary to handle the IC with the fingers, do not touch any pin, and hold the IC at the ends of its plastic-package case as shown in Fig. H.

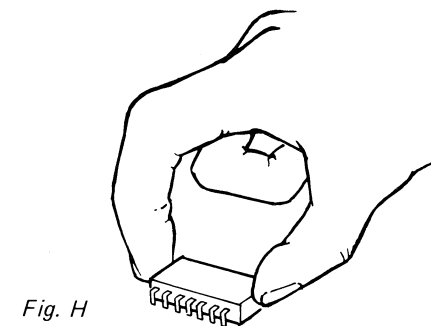


Fig. H

5. Method of Mounting
Insert the IC while holding it with the modified clip, and solder all the pins with the clip still shorting the pins. (Similarly, solder all the pins while the bare shorting wire is still wound around them.). Remove the clip or the bare shorting wire only after all the pins have been soldered.

Precaution while Checking C-MOS ICs

The C-MOS ICs (Complementary MOS) are MOS ICs that have their output sections made up of N-channel and P-channel push-pull stages to increase their speed of operation. If the output terminal of these ICs comes into contact with B+ or B- voltage, then the FET which is ON at that time will either become shorted or open.

This is valid for all the output sections that are connected together by the interconnections. Even the circuits that are physically separated (and not on the same board) can be destroyed simultaneously.

Example:

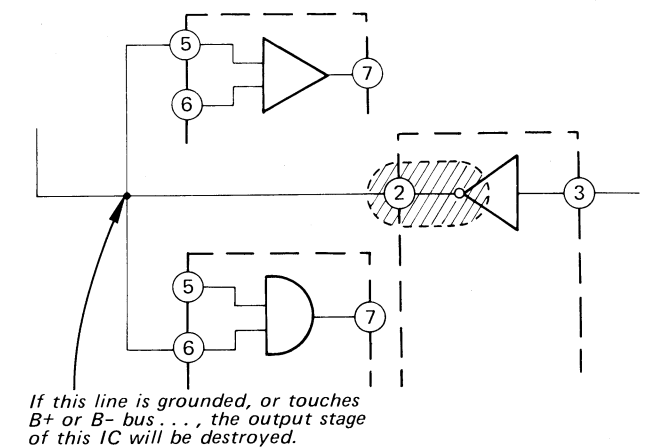


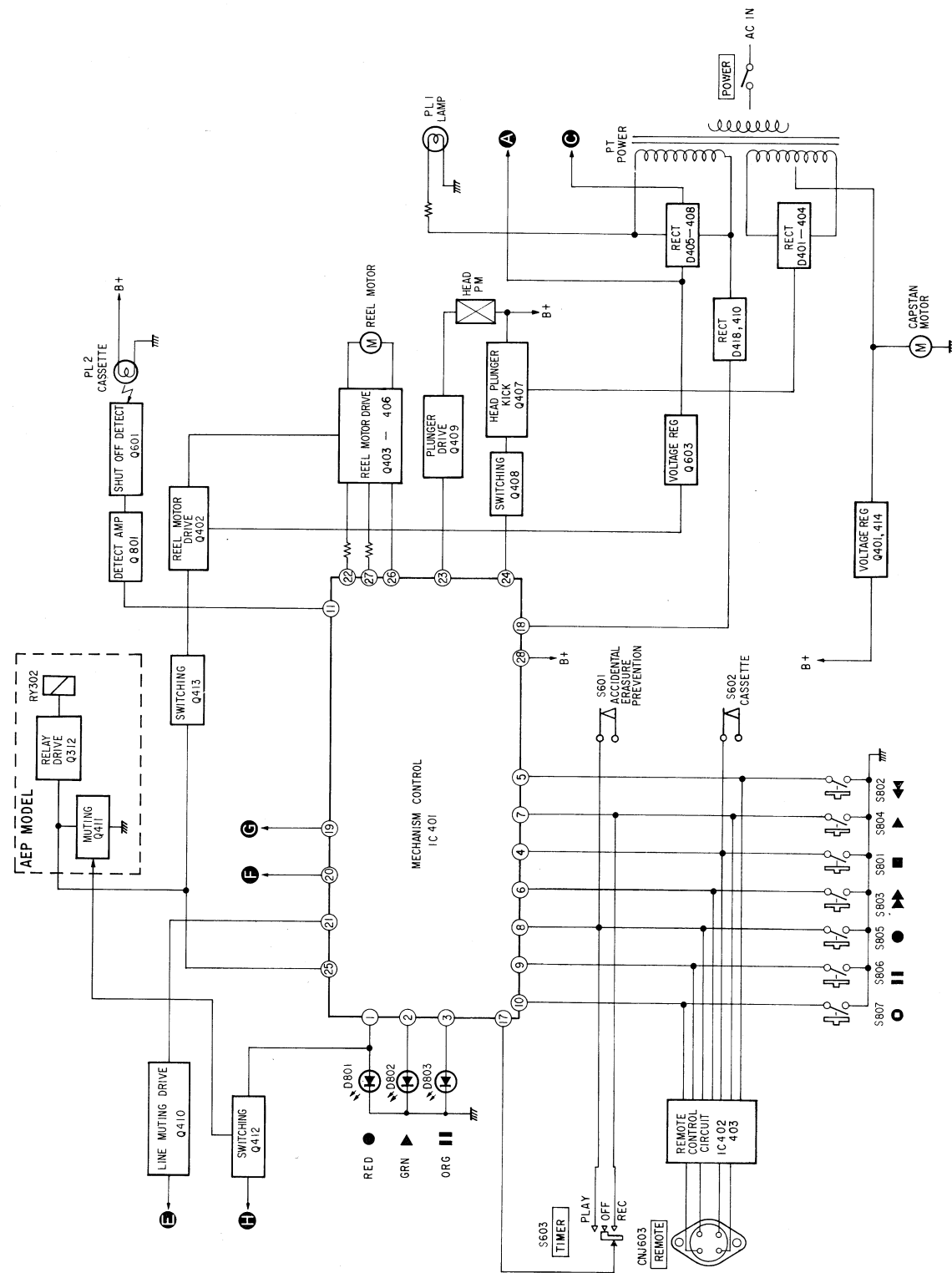
Fig. I

SECTION 1

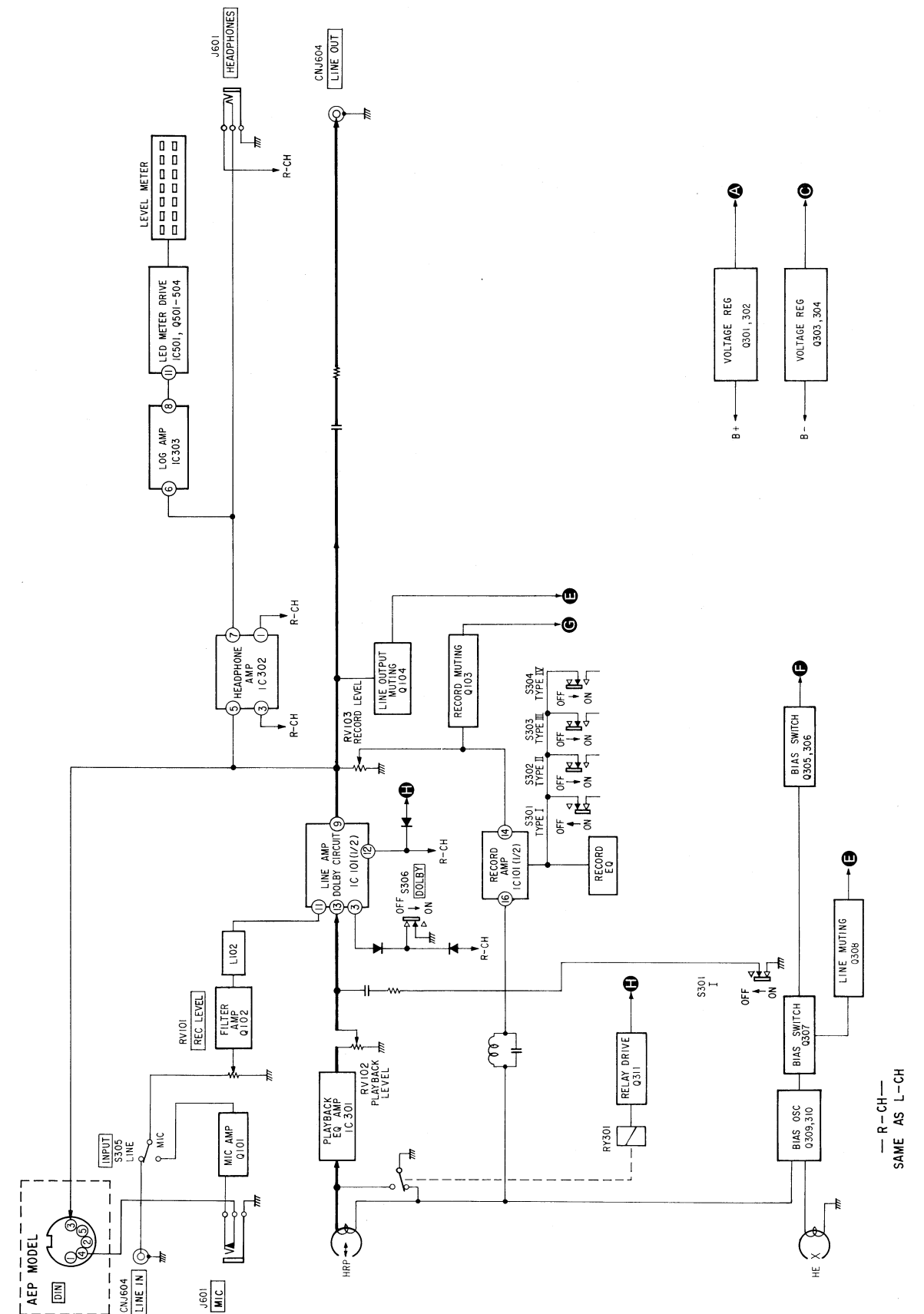
OUTLINE

1-1. BLOCK DIAGRAMS

— System Control Section —



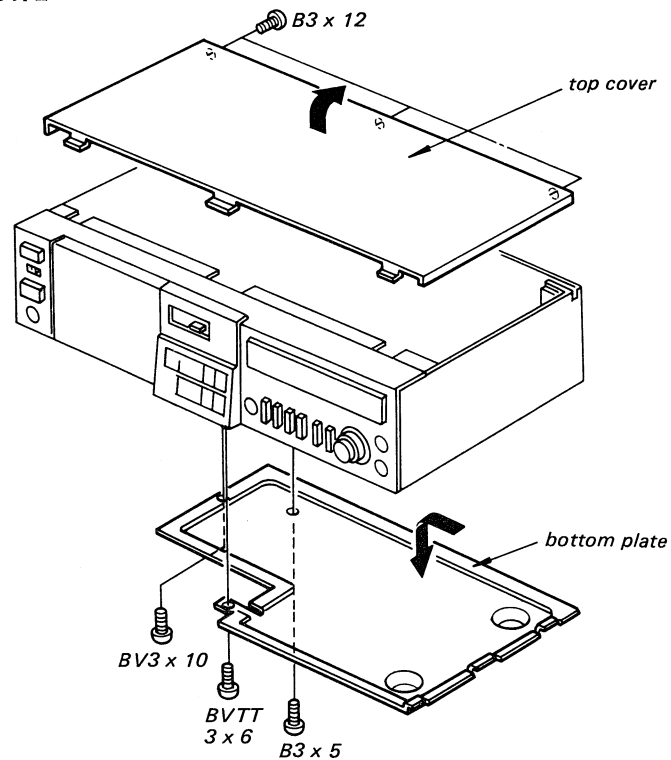
– Audio Amp Section –



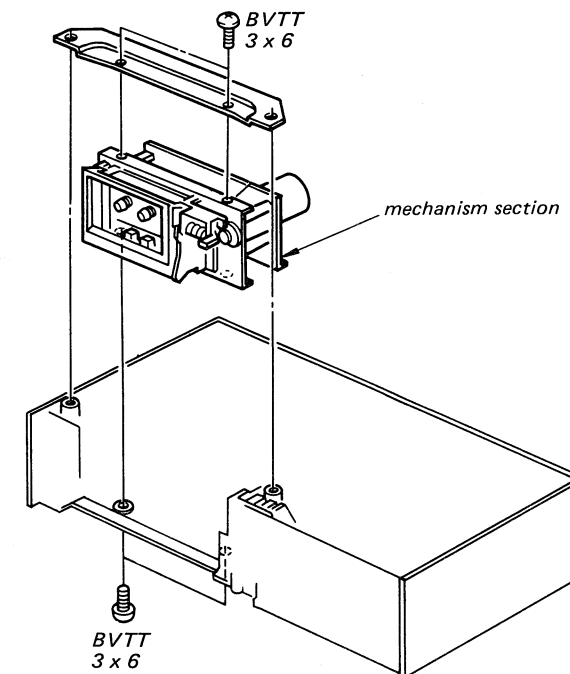
SECTION 2 DISASSEMBLY

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

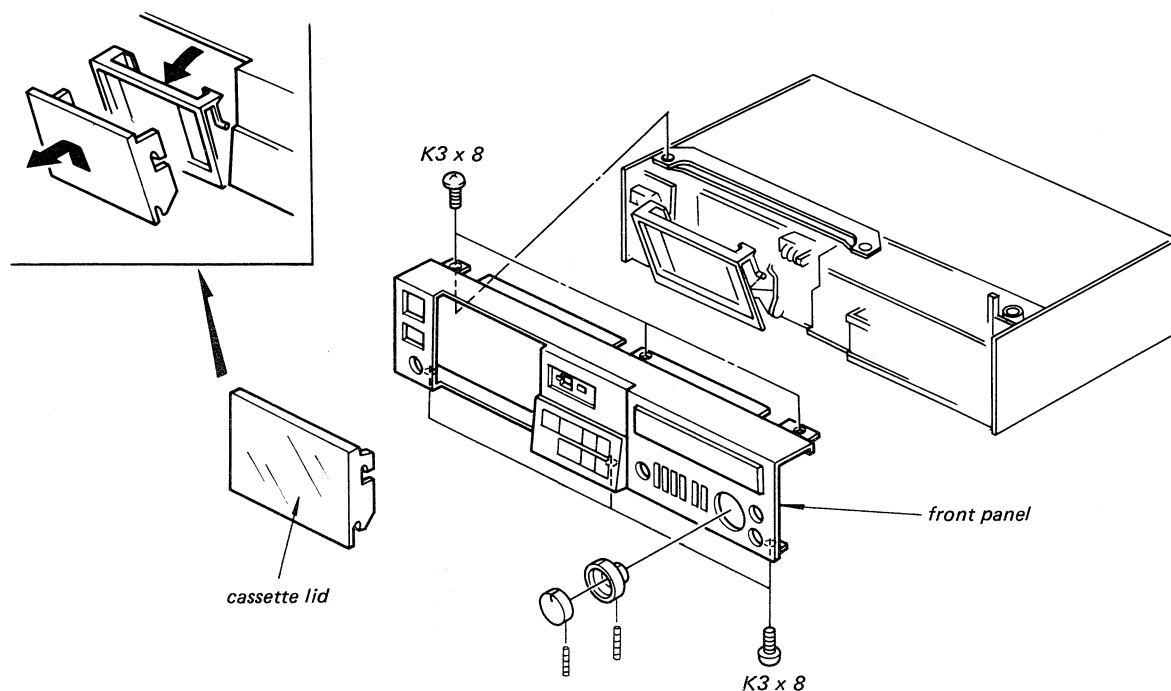
TOP COVER/BOTTOM PLATE



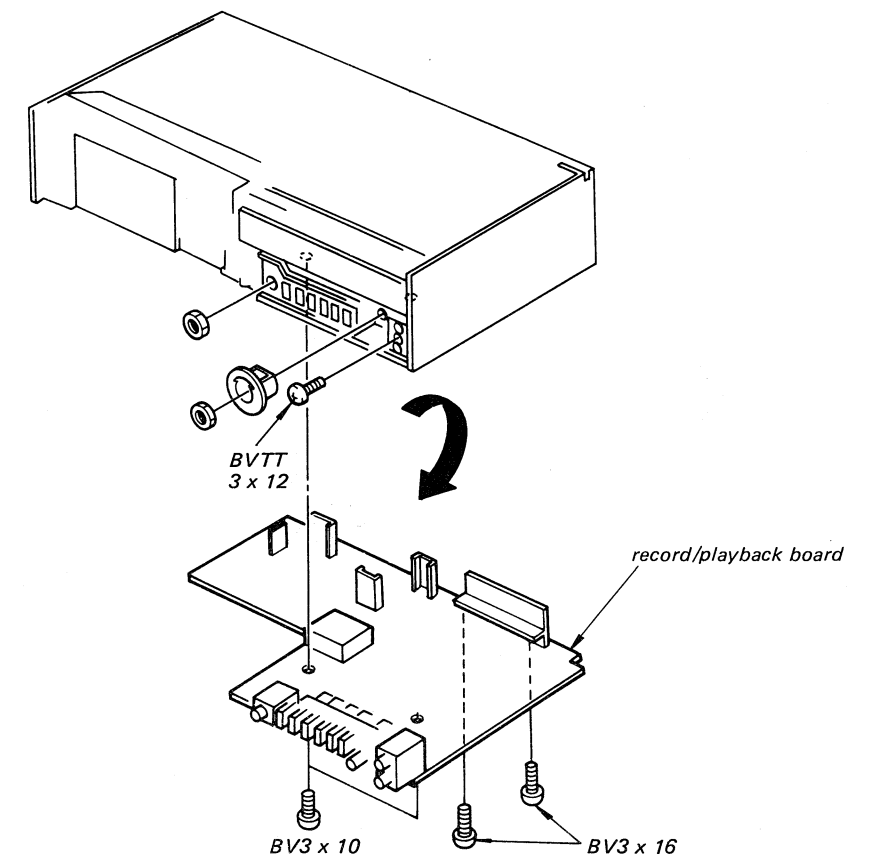
MECHANISM SECTION



FRONT PANEL

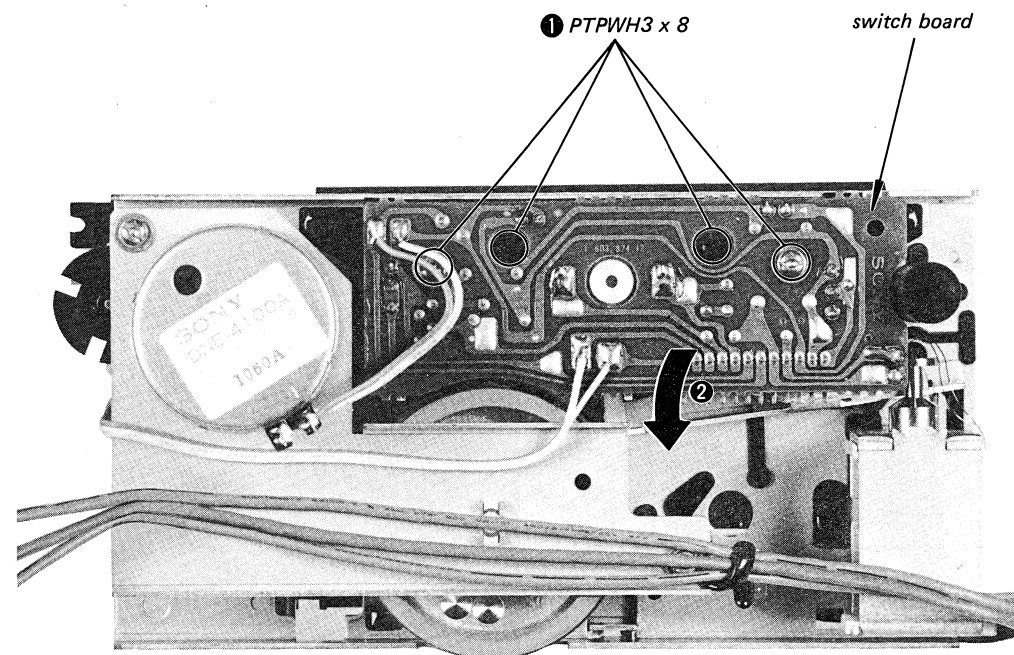


RECORD/PLAYBACK BOARD



SECTION 3 ADJUSTMENTS

SWITCH BOARD



3-1. MECHANICAL ADJUSTMENTS

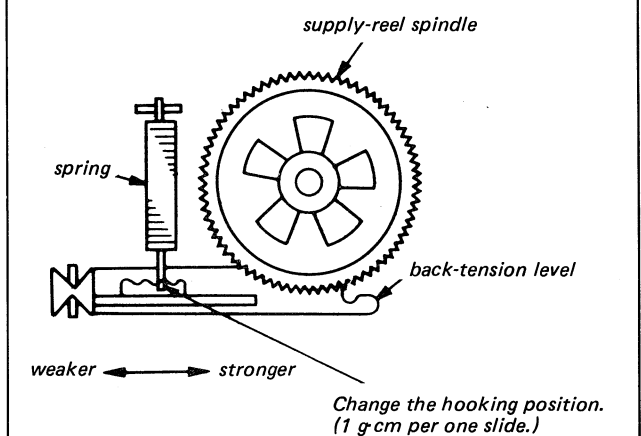
PRECAUTION

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.

Torque Measurement and Back Tension Torque Adjustment

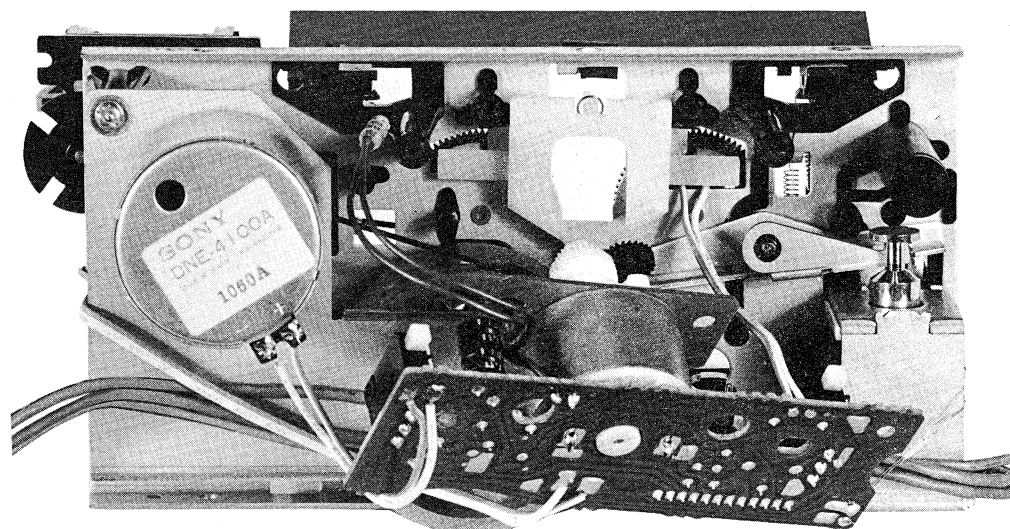
Torque	Torque meter	Meter reading
Forward	CQ-102C	35–55 g·cm (0.48–0.76 oz·inch)
Fast forward, rewind	CQ-201A	110–165 g·cm (3.80–5.82 oz·inch)
Back tension	CQ-102C	2.5–4.5 g·cm (0.04–0.06 oz·inch)

2. If the specified back-tension torque is not obtained, change the hooking position.

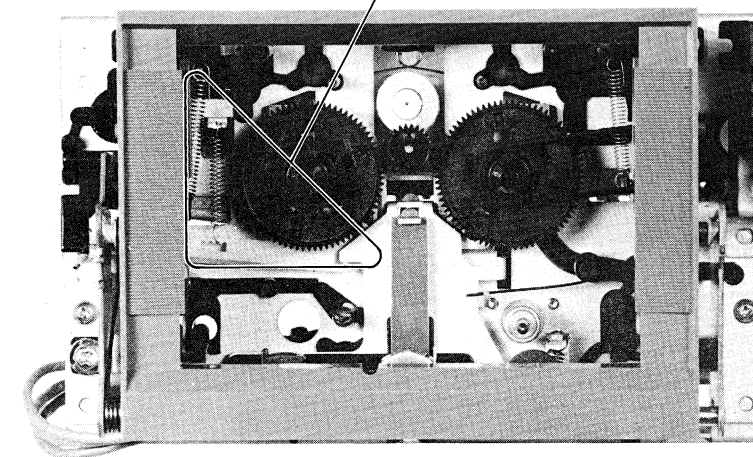


INSIDE OF MECHANISM SECTION

• rear view

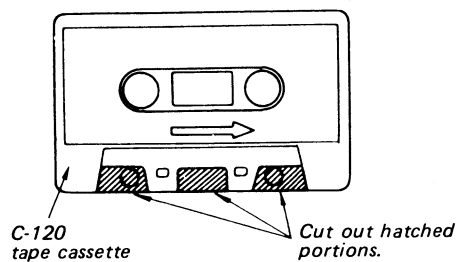


• front view: Refer to photos on mechanical adjustment.

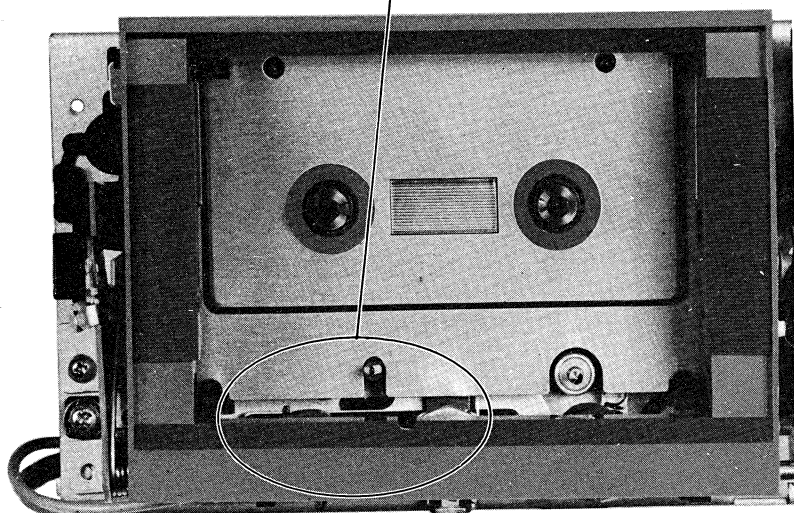
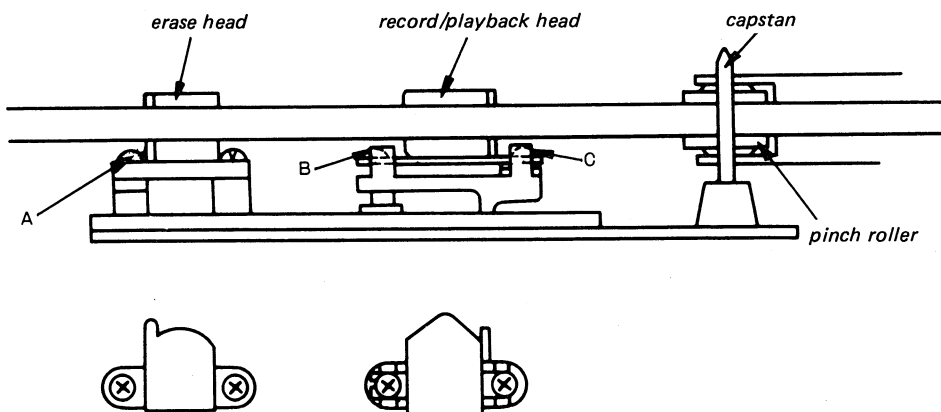


Head Height Adjustment

1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights by using the adjustment screw A, B, C, to eliminate tape curl and tape twist.



3.2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. (Playback section may be adjusted earlier than record section.)

The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE switch
CS-10	TYPE I
CS-20	TYPE II
CS-30	TYPE III
CS-40	TYPE IV

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

DOLBY NR switch: OFF
TAPE switch: TYPE I
TIMER switch: OFF

- Standard Record :

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

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

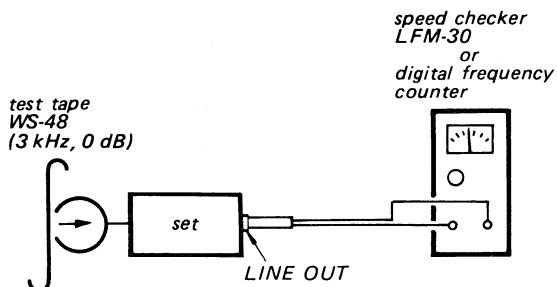
Standard Output Level

	HEAD-PHONES	LINE OUT
load impedance	8 Ω	47 k Ω
output level	39 mV (-26 dB)	0.44 V (-5 dB)

Capstan Motor Speed Adjustment

Procedure:

Mode : playback



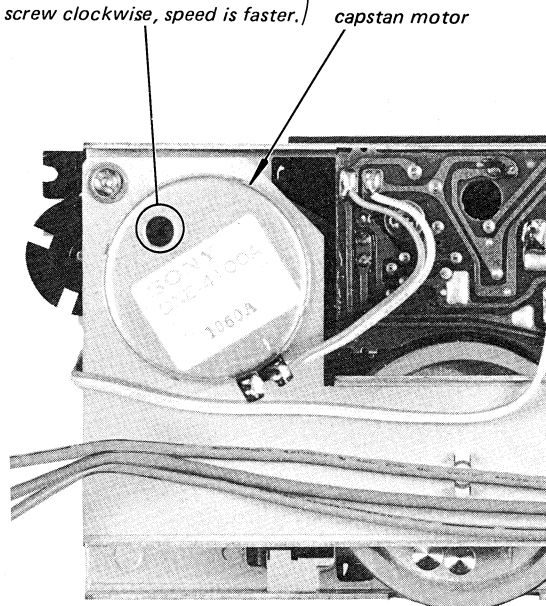
Specification:

Speed checker	Digital frequency counter
-0.3 - +0.3 %	2,990 - 3,010 Hz

Frequency difference between the beginning and the end of the tape should be within 1 % (30 Hz).

Adjustment Location:

(Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster.)

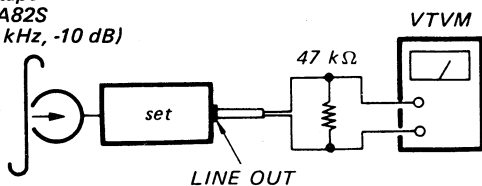


Record/playback Head Azimuth Adjustment

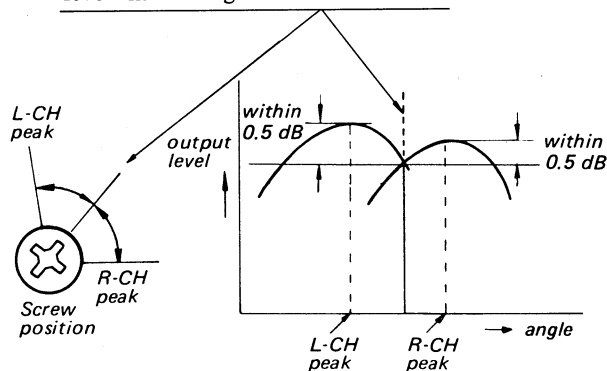
Procedure:

1. Mode: playback

test tape
P-4-A82S
(6.3 kHz, -10 dB)

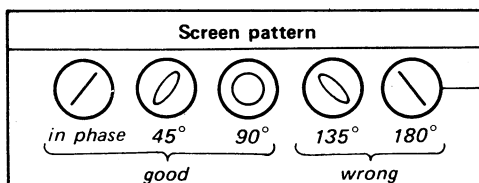
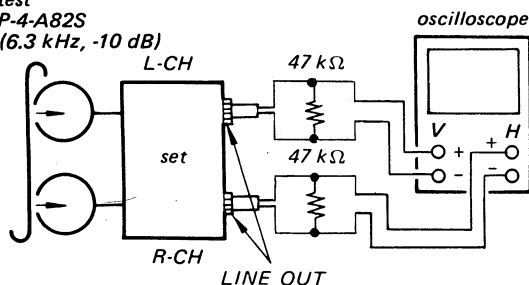


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



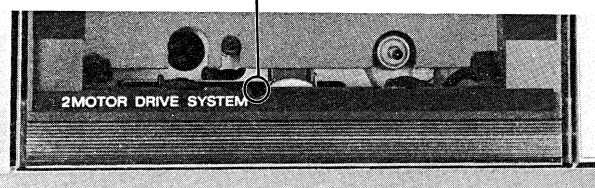
3. Phase Check
Mode: playback

test
P-4-A82S
(6.3 kHz, -10 dB)



Adjustment Location:

adjustment screw

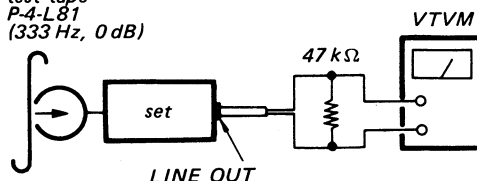


Playback Level Adjustment

Procedure:

Mode :playback

test tape
P-4-L81
(333 Hz, 0 dB)



Specification:

LINE OUT level : 0.52 ~ 0.59 V
(-3.5 ~ -2.5 dB)

Level difference between channels :
less than 0.5 dB

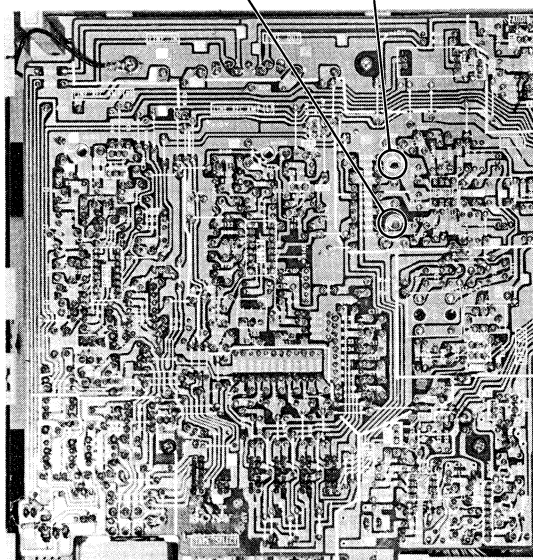
Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

- record/playback board -

RV102
(L-CH)

RV202
(R-CH)



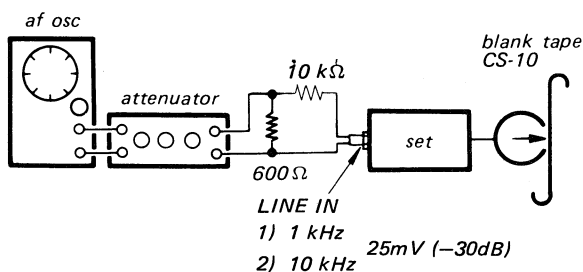
Record Bias Adjustment

Setting:

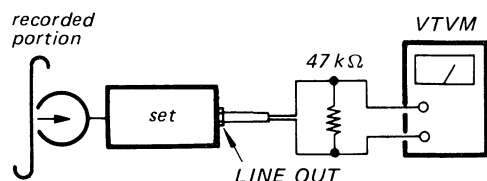
REC LEVEL control: standard record
(See page 14)

Procedure:

1. Mode: record



2. Mode: playback

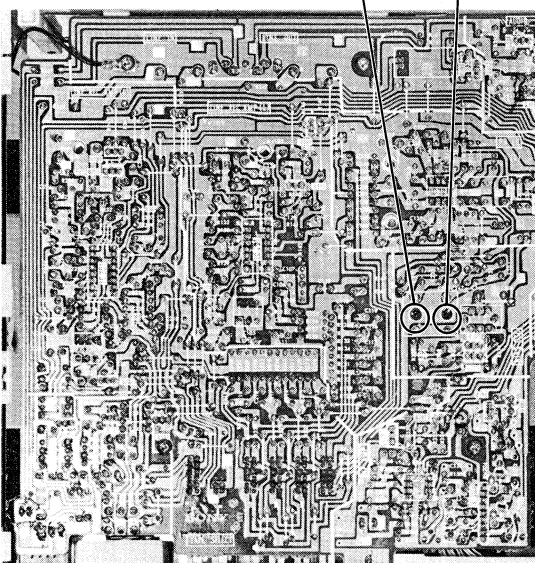


Adjust BIAS trimmer C317 (L-CH, R-CH) so that the LINE OUT level of 10 kHz signal is 0 dB relative to that of 1 kHz.

Adjustment Location:

— record/playback board —

C317
(R-CH) (L-CH)



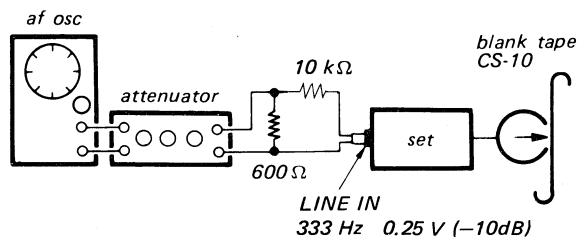
Record Level Adjustment

Setting:

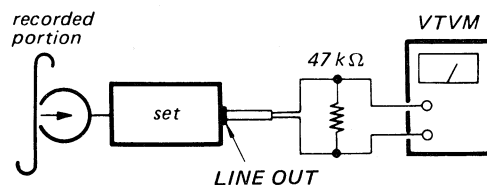
REC LEVEL control: standard record
(See page 14)

Procedure:

1. Mode: record



2. Mode: playback



Specification:

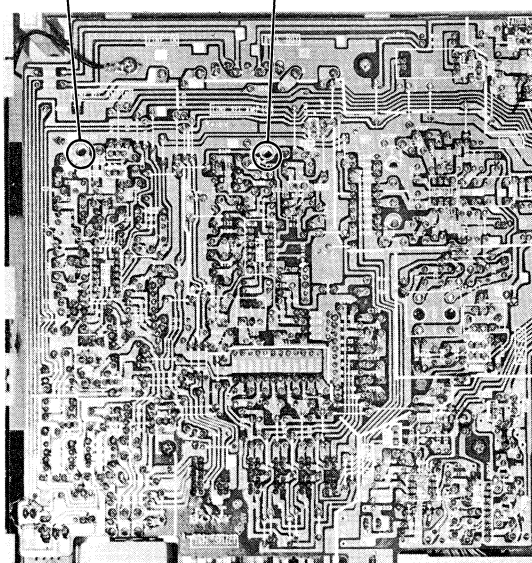
LINE OUT level : 0.41 ~ 0.46 V
(-5.5 ~ -4.5 dB)

Adjustment Location:

— record/playback board —

RV203
(R-CH)

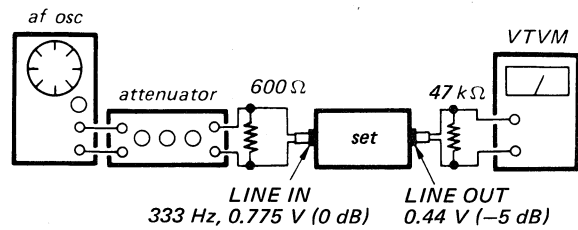
RV103
(L-CH)



Level Meter Calibration

Procedure:

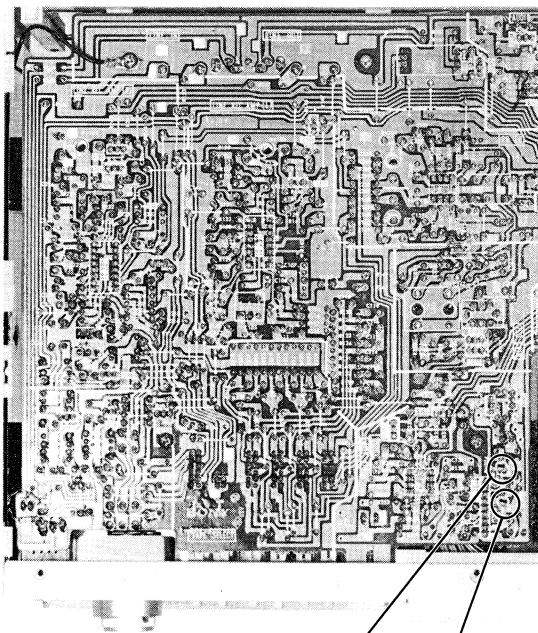
1. Mode : record



2. Set the REC LEVEL control so that the LINE OUT level is -5 dB.
3. Adjust RV104 (L-CH) and RV204 (R-CH) to obtain 0 VU on the level meter.

Adjustment Location:

— record/playback board —

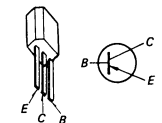


RV204 (R-CH)
RV104 (L-CH)

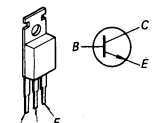
Voltages and Waveforms at the Terminals of IC401					
Terminal No.	Waveform or Voltage	Terminal No.	Waveform or Voltage	Terminal No.	Waveform or Voltage
①	Record Mode 4V 0V	⑩	4.4V 0.7V 0V Record Muting button is pushed	⑳	Forward Mode or Record Mode Voltage becomes 6V even when only REC button is pushed — REC MONITOR 4.6V 0V
②	Forward Mode 4V 0V	⑪	4V 0V 2sec Tape End 0.2 sec Tape stops at the end of the tape in Forward Mode. Voltage may fall to 0V by rotating angle of take-up reel spindle after shut-off mechanism operates.	㉑	4.6V 0V 31.25msec PAUSE button is pushed in Record Mode
③	Pause Mode 4V 0V	⑫		㉒	4.6V 0V Forward Mode
④	3V 0V Stop button is pushed	⑬	1Vp-p 8msec	㉓	4V 0V
⑤	3.6V 0V Rewind button is pushed	⑭	0Vdc	㉔	4.6V 0V 0.25 sec Forward button is pushed
⑥	4V 0V Fast Forward button is pushed	⑮	5Vdc	㉕	4V 0V Forward Mode
⑦	5.6V 1V 0V Forward button is pushed	⑯	4sec 0.5sec Power button is pushed in Timer reset Mode	㉖	4V 0V Fast Forward Mode
⑧	4.2V 1.4V 0V Record button is pushed	⑰	4.5V 0V Record Muting button is pushed in Record Mode	㉗	4V 0V Rewind Mode
⑨	4.1V 1.2V 0V Pause button is pushed	⑲	4.5V 0V Record button is pushed	㉘	5Vdc

Semiconductor Lead Layout

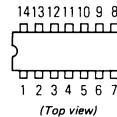
2SA844
2SA1026
2SA1027R



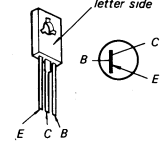
2SD880



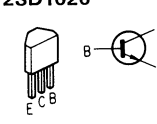
μPC339C



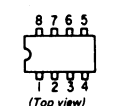
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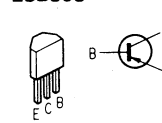
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2SD1020



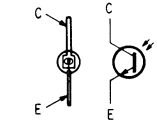
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NJM4562D
μPC4557C



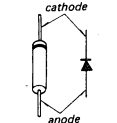
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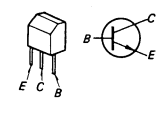
PH102



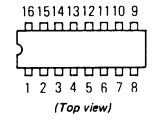
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EQB01-15
HZ6C-3L
10E2
HZ6B1L



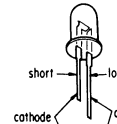
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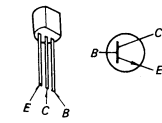
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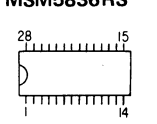
AA3432S
AR3432S
PG3432S



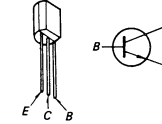
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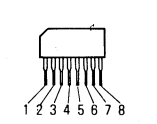
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MSM5836RS



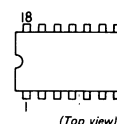
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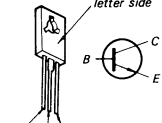
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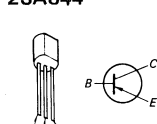
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2SA952
2SA844

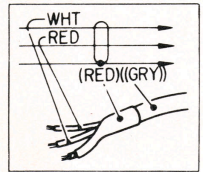


SECTION 4
DIAGRAMS

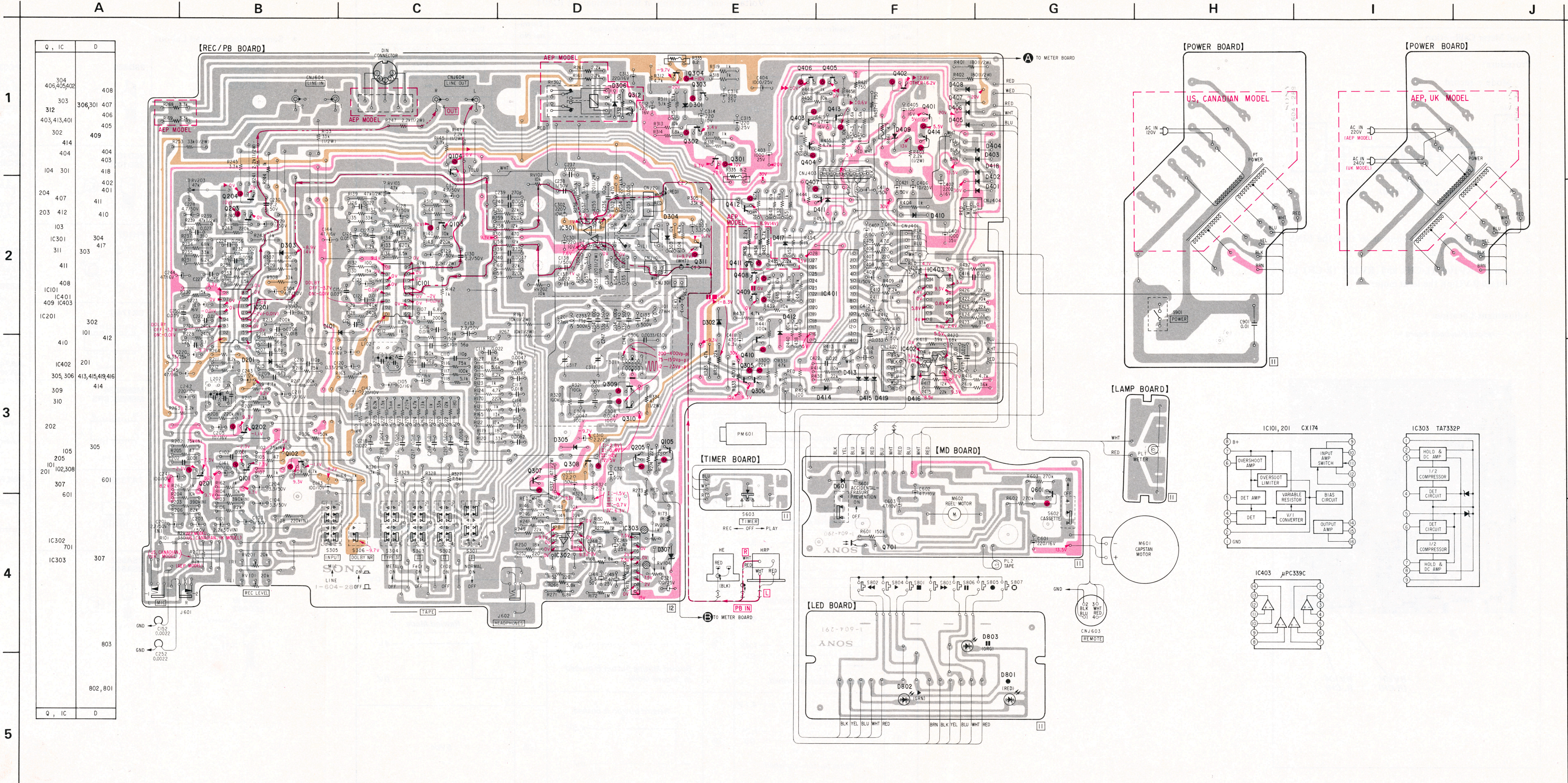
4-1. MOUNTING DIAGRAM — Conductor Side —
— System Control and Audio Amp Section —

- See page 19 for the semiconductors lead layout.
- Refer to page 18 for voltages and waveforms at the terminal of IC401.

Note:
• Color code of sleeving over the end of the jacket.

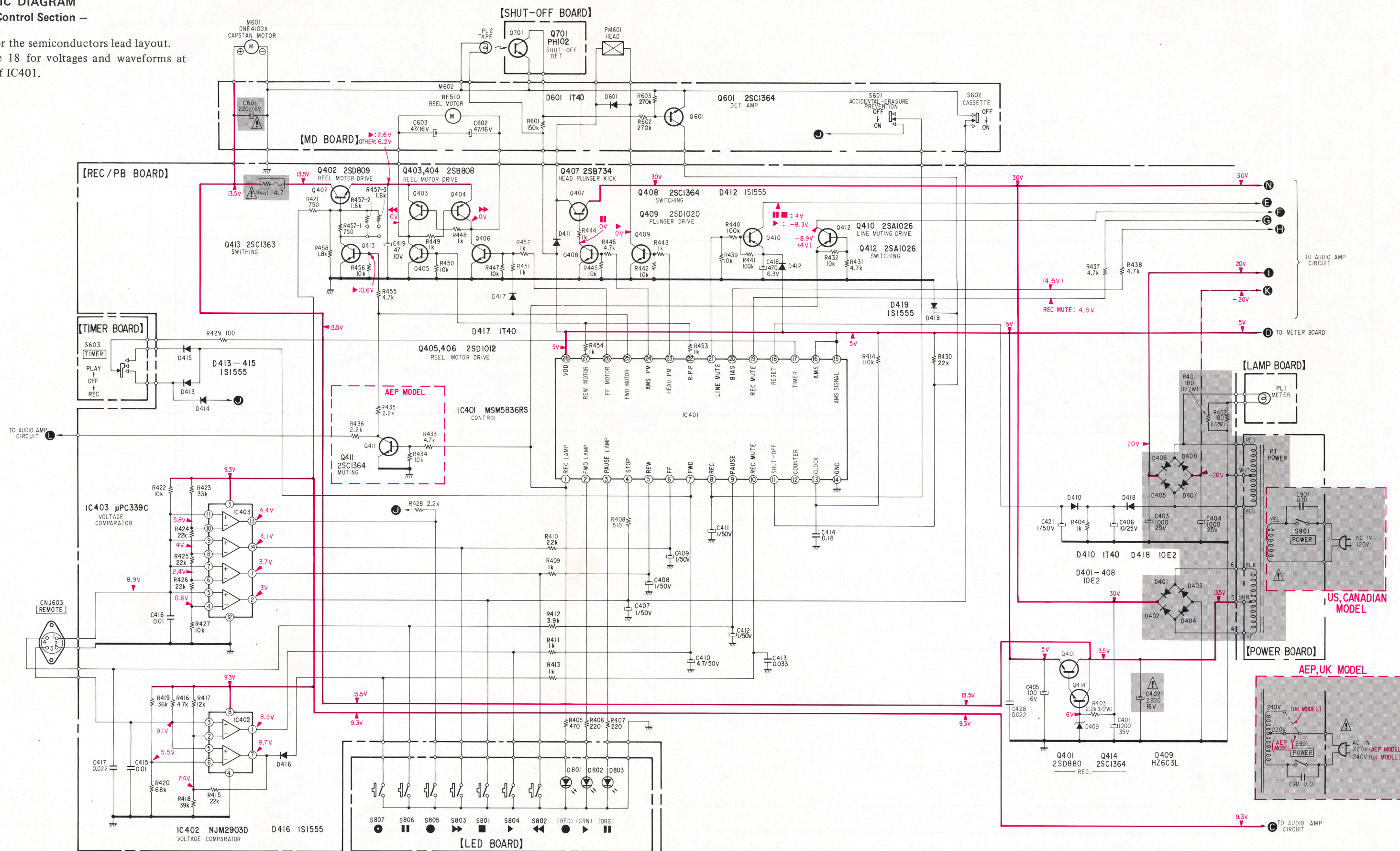


- B + pattern
- B - pattern
- signal path
- L-CH signal path
- R-CH signal path
- no mark: STOP
- () : REC
- : STOP
- : FWD
- : REW
- : FF
- : REC
- : PAUSE



4-2. SCHEMATIC DIAGRAM — System Control Section —

- See page 19 for the semiconductors lead layout.
- Refer to page 18 for voltages and waveforms at the terminal of IC401.




Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega : 1000\Omega$, $\text{M}\Omega : 1000\text{k}\Omega$
- : B+ bus.
- - - : B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (20 $\text{k}\Omega/\text{V}$).
- no mark: STOP
- : STOP
- ▲ : FWD
- ▶ : REW
- ◀ : FF
- : REC
- : PAUSE

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

Ref. No.	Switch	Position
S601	ACCIDENTAL ERASER PREVENTION	OFF
S602	CASSETTE	OFF
S603	TIMER	OFF
S801	STOP	OFF
S802	REW	OFF
S803	FF	OFF
S804	FWD	OFF
S805	REC	OFF
S806	PAUSE	OFF
S807	REC MUTE	OFF
S901	POWER	OFF

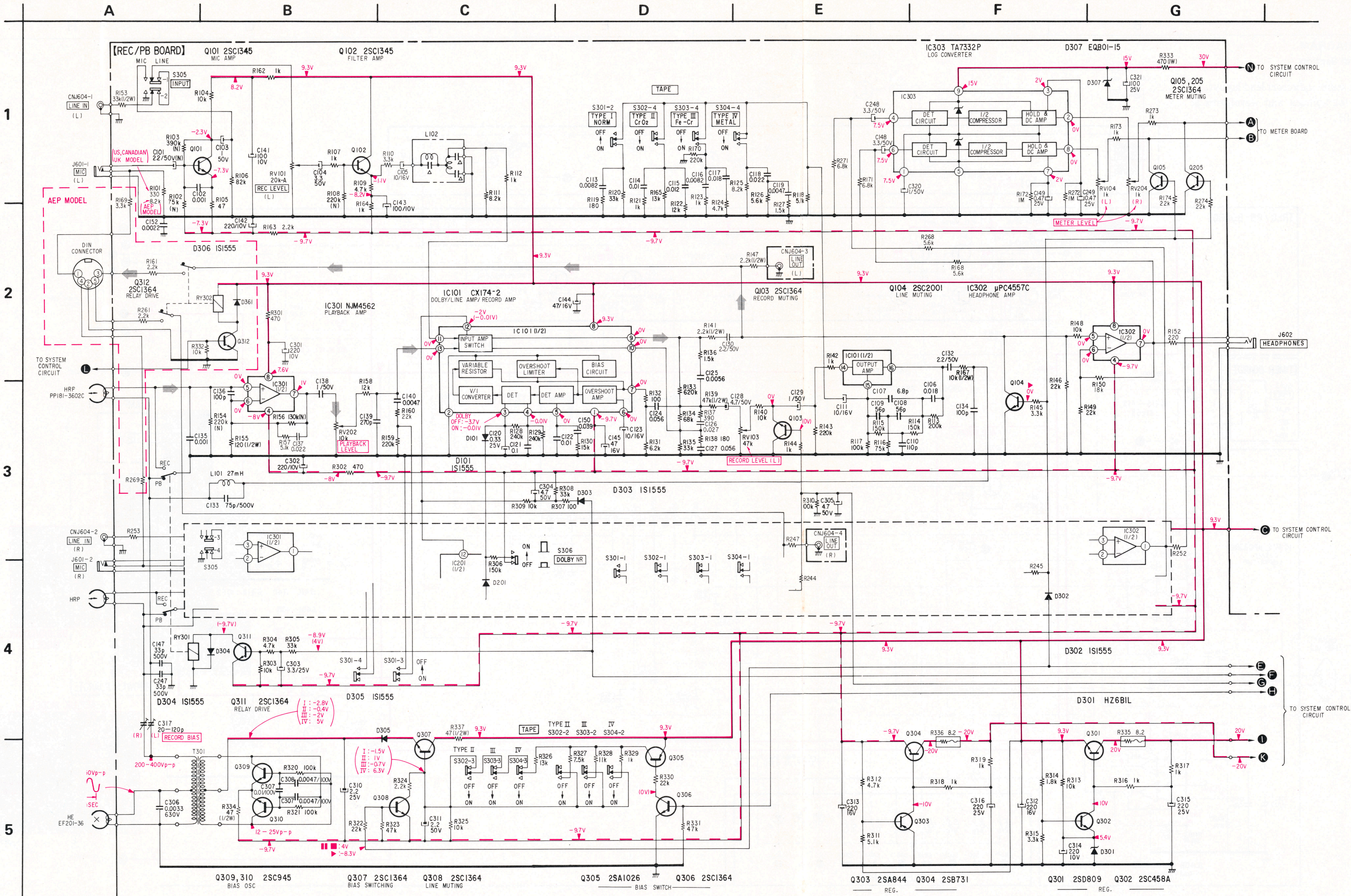
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

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

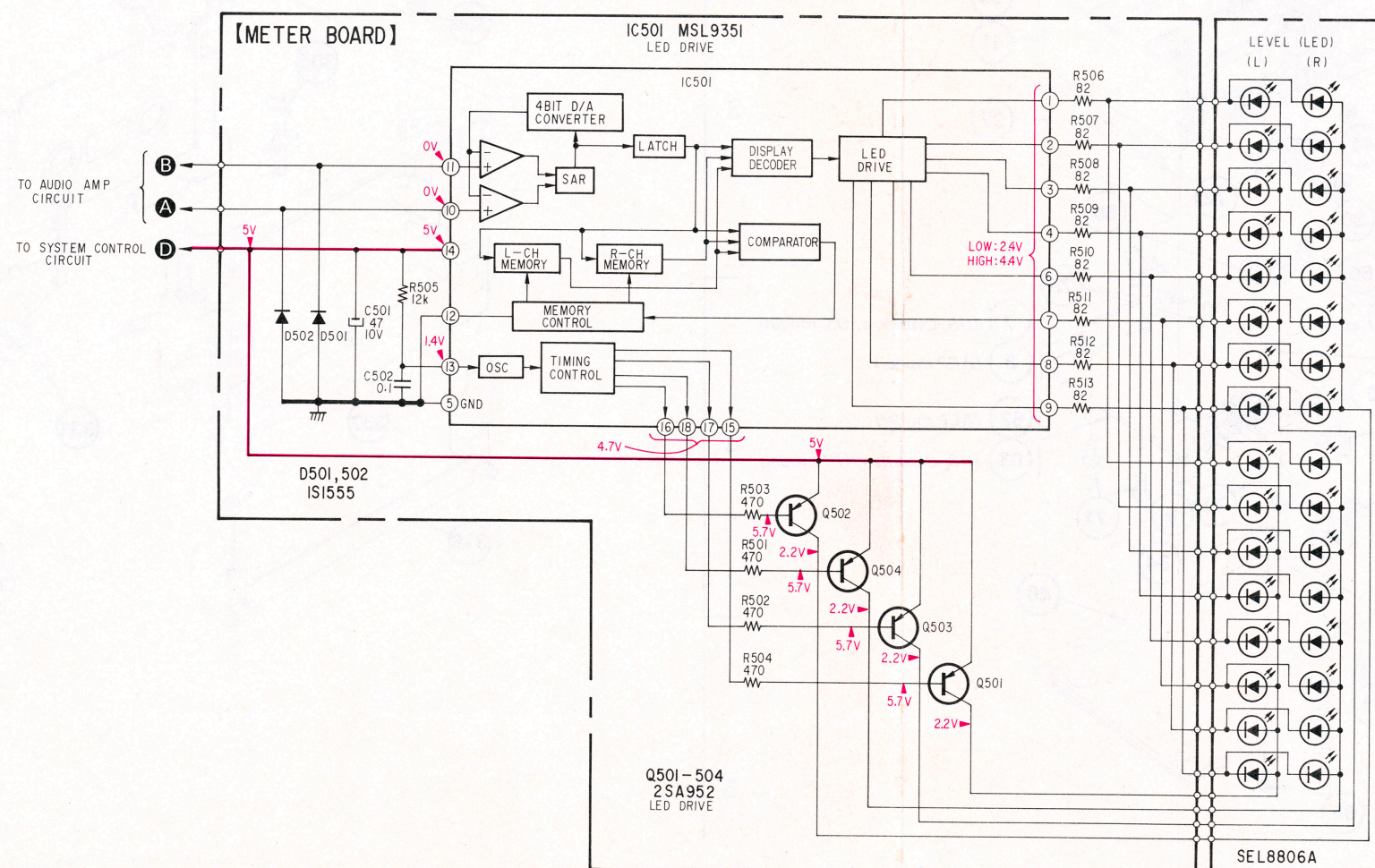
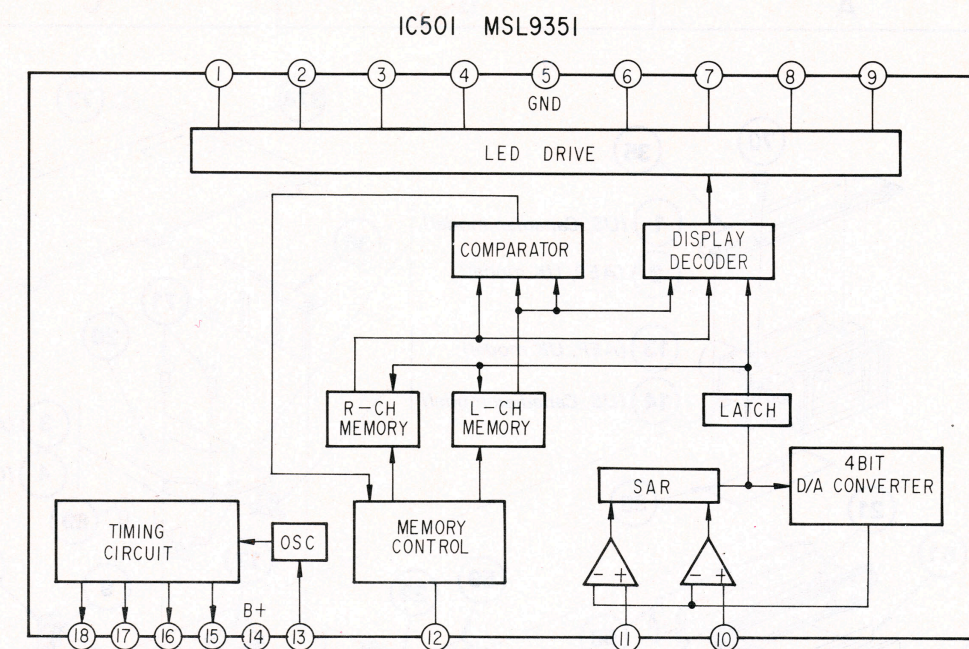
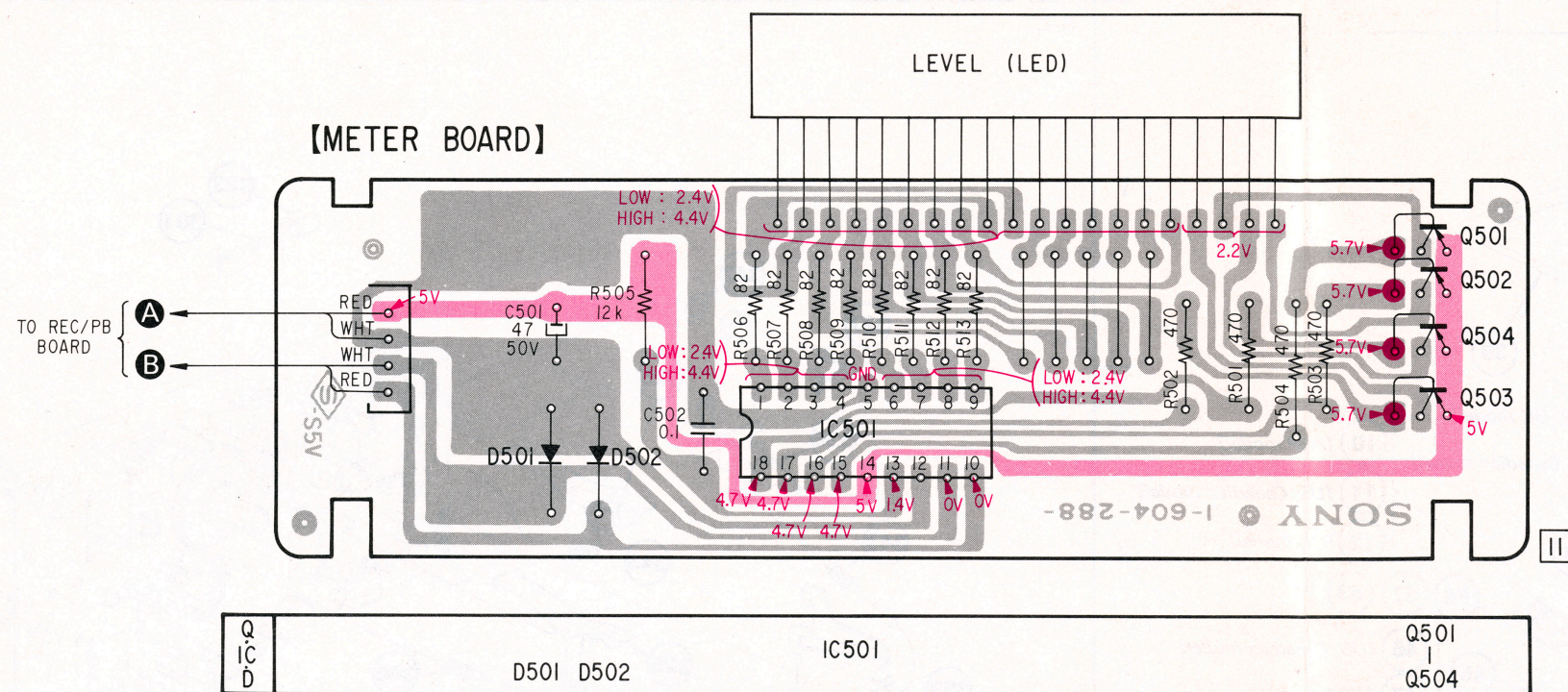
4-3. SCHEMATIC DIAGRAM
— Audio Amp Section —

- Note:
- Components for right channel have same values as for left channel. Reference numbers are coded from 200.
 - All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega : 1000\Omega$, $\text{M}\Omega : 1000\text{k}\Omega$
 - : nonflammable resistor.
 - : fusible resistor.
 - : signal path
 - : 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 (20 $\text{k}\Omega/\text{V}$).
no mark: STOP
() : REC
■ : STOP
▶ : FWD
◀ : REW
▶▶ : FF
● : REC
■ : PAUSE
 - Voltage variations may be noted due to normal production tolerances.
 - Switches

Ref. No.	Switch	Position
S301-304	TAPE	NORMAL
S305	INPUT	LINE
S306	DOLBY	OFF

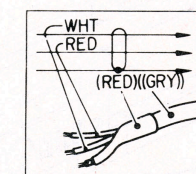


4-4. Meter Drive Section



Note:

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



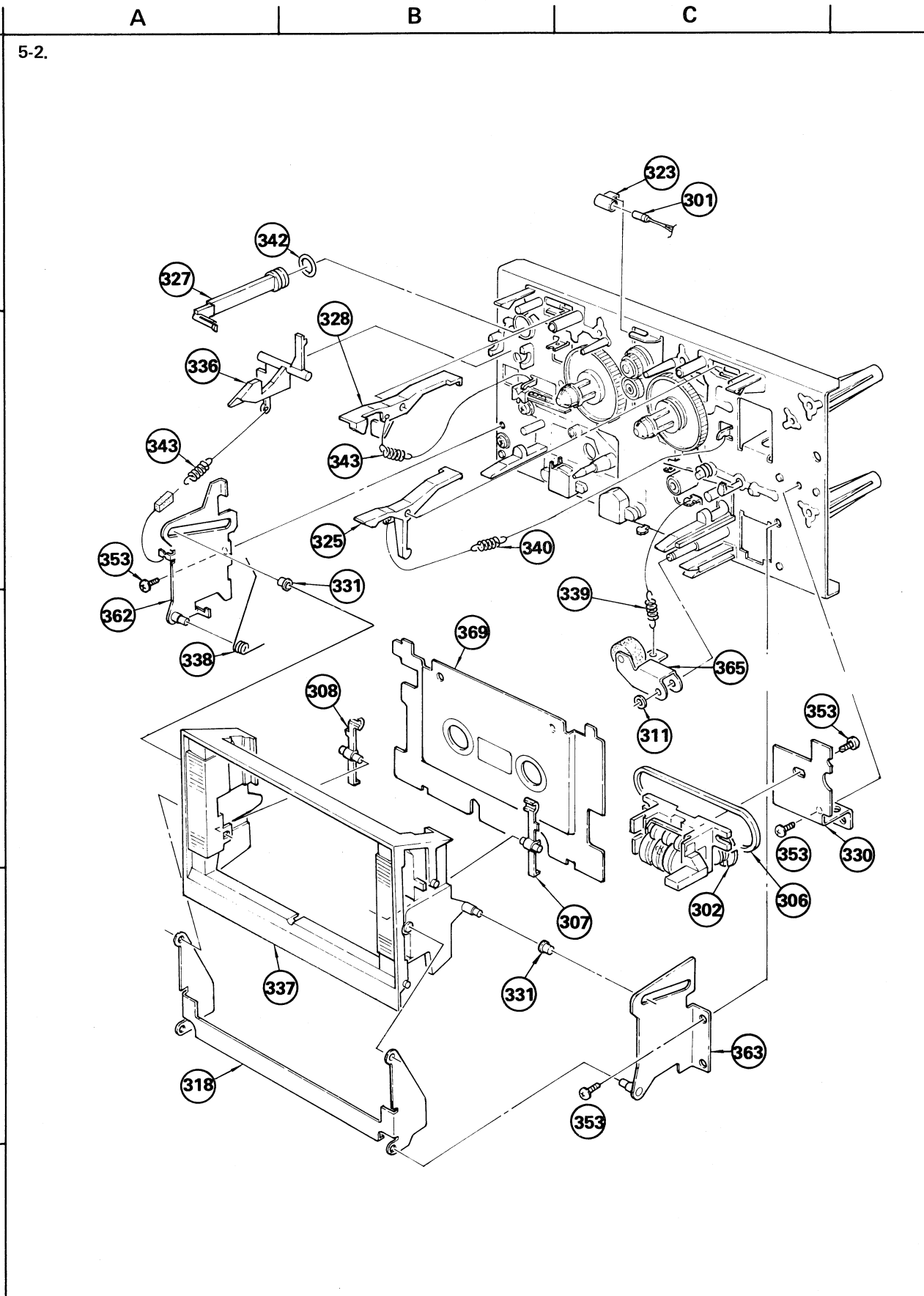
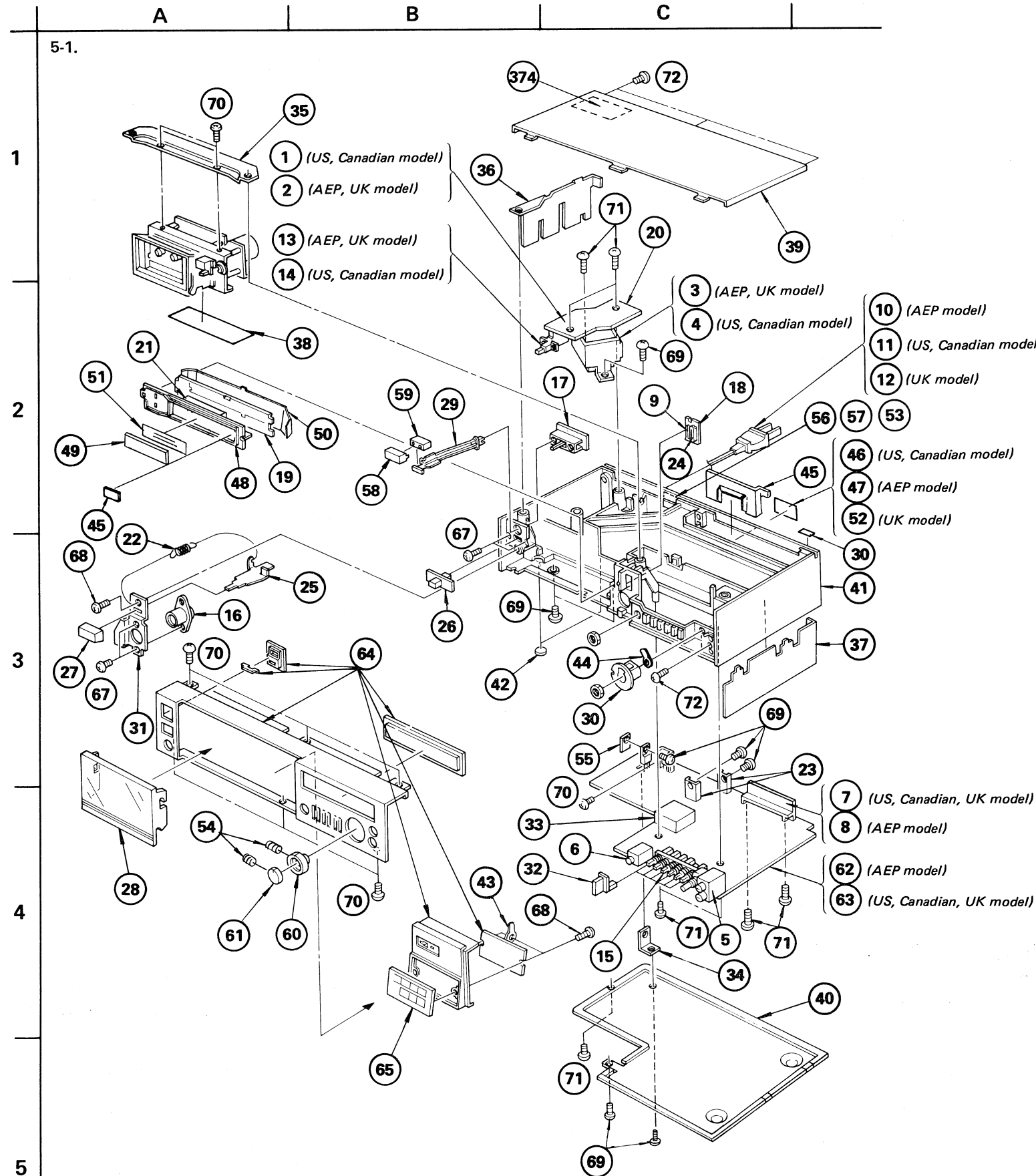
- : B + pattern

Note:

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted. $\text{k}\Omega : 1000\ \Omega$, $\text{M}\Omega : 1000\ \text{k}\Omega$
- ———: B+ bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with a VOM (20 $\text{k}\Omega/\text{V}$).
- Voltage variations may be noted due to normal production tolerances.

SECTION 5

EXPLODED VIEWS AND PARTS LIST



5-3.

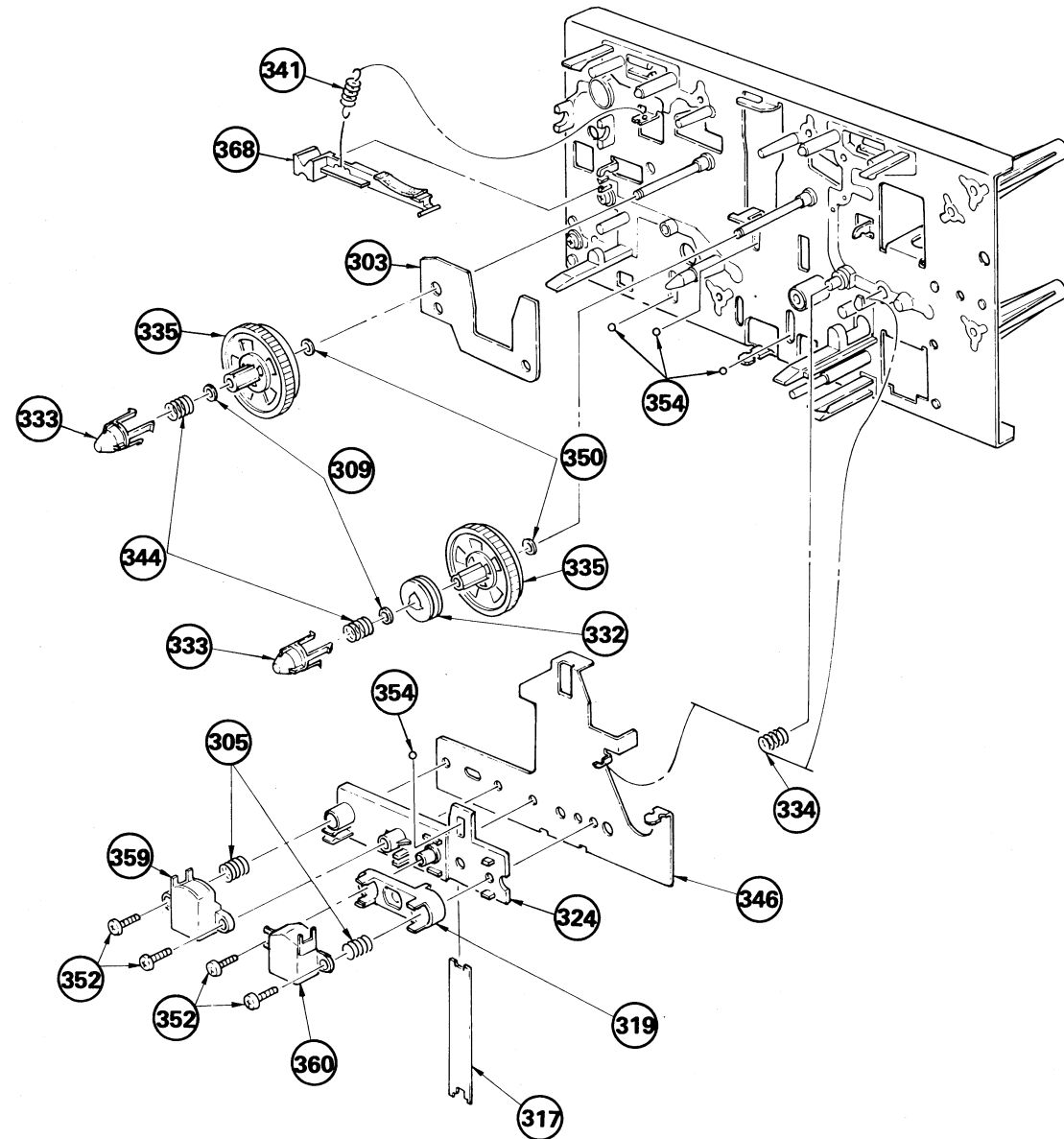
1

2

3

4

5



5-4.

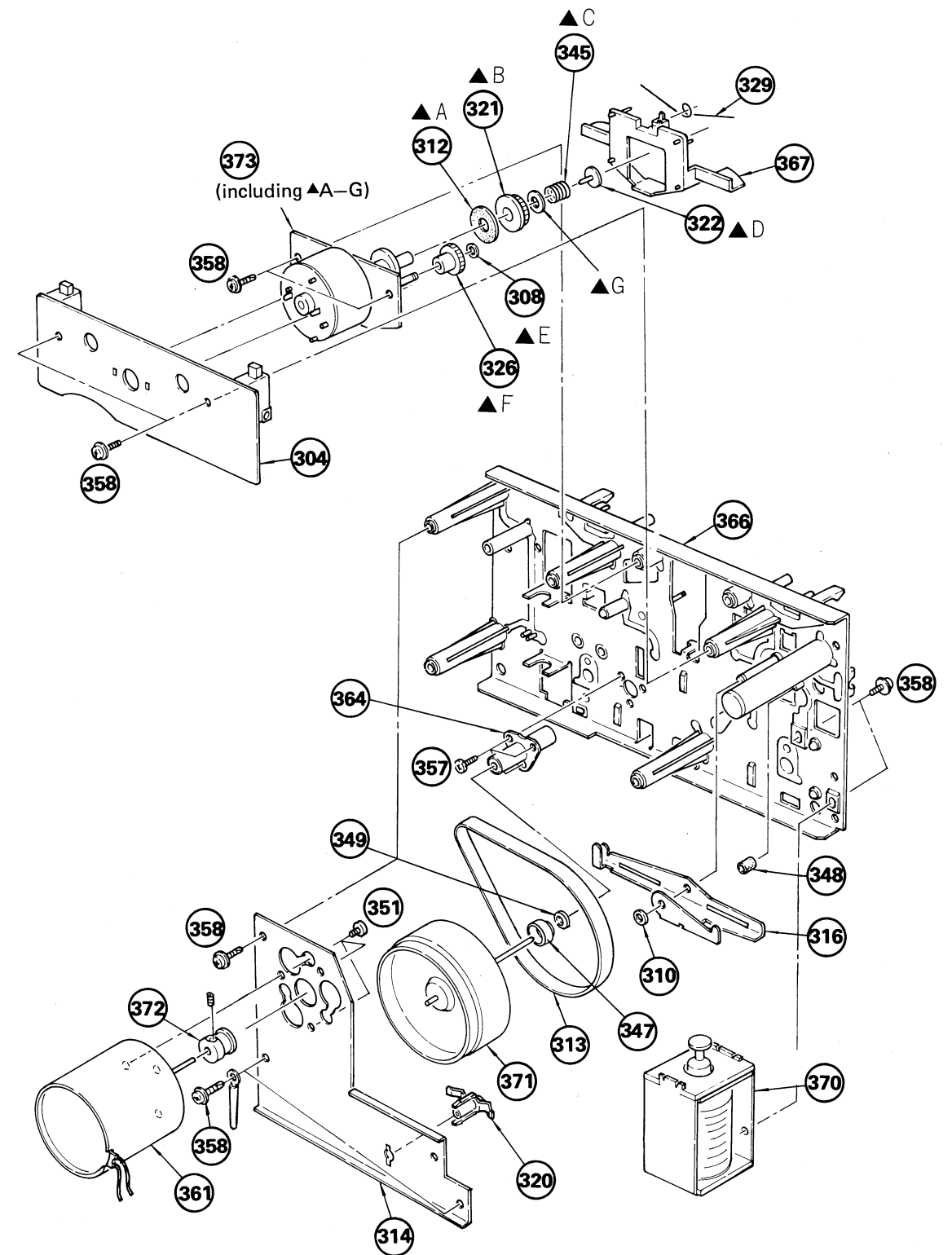
1

2

3

4

5



GENERAL SECTION

No.	Part No.	Description
1	▲.1-161-749-00	CERAMIC 0.01MF 125V*** (US,CND)
2	▲.1-161-744-00	CERAMIC 0.01MF 400V*** (AEP,UK)
3	▲.1-446-916-00	TRANSFORMER, POWER*** (AEP,UK)
4	▲.1-446-922-00	TRANSFORMER, POWER*** (US,CND)
5	1-507-525-00	JACK, (MIC)
6	1-507-553-00	JACK (HEAD PHONE)
7	1-507-717-00	JACK, PIN 4P*** (US,CND,UK)
8	1-507-716-00	JACK, PIN 4P*** (AEP)
9	1-518-351-00	LAMP, PILOT
10	▲.1-534-817-XX	CORD, POWER*** (AEP)
11	▲.1-534-986-XX	CORD, POWER*** (US,CND)
12	▲.1-551-963-XX	CORD, POWER*** (UK)
13	▲.1-553-318-00	SWITCH, PUSH (AC POWER)*** (AEP,UK)
14	▲.1-553-319-00	SWITCH, PUSH (AC POWER)*** (US,CND)
15	1-553-581-00	SWITCH, PUSH (S 301-401)
16	1-561-293-00	SOCKET (4P)
17	▲;1-604-287-00	PC BOARD, SW
18	▲;1-604-288-00	PC BOARD, LAMP
19	▲;1-604-282-00	PC BOARD, LED METER
20	▲;1-604-289-00	PC BOARD, POWER
21	1-806-076-11	DIODE (LEVEL METER) SEL8806A
22	3-534-275-00	SPRING, TENSION
23	▲;3-567-307-00	HEAT SINK (35)
24	▲;3-574-128-00	REFLECTOR, METER
25	▲;3-575-501-00	SLIDER, EJECT
26	3-575-515-00	KNOB, SLIDE SWITCH
27	3-575-533-00	BUTTON, EJECT
28	3-575-546-11	WINDOW, CASSETTE
29	3-576-316-00	ROD (B), POWER SWITCH
30	3-576-702-00	PLATE, ORNAMENTAL, KNOB, REC
31	▲;3-576-703-00	BRACKET, JACK, REMOTE CONTROL
32	3-576-704-11	KNOB, SELECT, TAPE
33	▲;3-576-710-00	PLATE, SHIELD, AUDIO
34	▲;3-576-711-00	BRACKET, TRANSISTOR
35	▲;3-576-716-00	BRACKET (UPPER), MECHANISM
36	▲;3-576-718-00	PLATE, SHIELD (LEFT)
37	▲;3-576-719-00	PLATE, SHIELD (RIGHT)
38	▲;3-576-721-00	PLATE, SHIELD, HEAD
39	3-576-723-00	CASE
40	▲;3-576-726-00	PLATE, BOTTOM
41	3-576-727-11	CHASSIS
42	3-576-731-00	FELT (H)
43	3-576-732-00	SPRING, LEAF, ELECTROSTATIC
44	3-576-733-00	SPRING, LEAF, PANEL
45	▲;3-576-737-00	PLATE, SHIELD, INPUT OUTPUT

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (▲-▲▲▲-▲▲▲-XX or ▲-▲▲▲-▲▲▲-X) may be different from those used in the set.

CAPACITORS:

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

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μ H

GENERAL SECTION

No.	Part No.	Description
46	3-576-738-00	LABEL, MODEL NUMBER*** (US,CND)
47	3-576-740-00	LABEL, MODEL NUMBER*** (AEP)
48	▲;3-576-741-00	ESCUTCHEON (LED), METER
49	▲;3-576-742-00	ILLUMINATOR (LED), METER
50	3-576-743-00	PLATE, SHIELD, LED
51	3-576-744-00	PLATE, ORNAMENTAL (LED), METER
52	3-576-745-00	LABEL, MODEL NUMBER*** (UK)
53	3-576-940-00	LABEL, BEAD*** (UK)
54	3-701-506-01	SET SCREW, DOUBLE POINT 3X4
55	3-703-037-00	INSULATOR, TO-220
56	3-703-043-21	LABEL, CAUTION, MAIN*** (US,CND,UK)
57	3-703-079-21	LABEL, COURTION (BACK)*** (US,CND,UK)
58	4-871-322-01	CAP, POWER KNOB
59	4-871-323-00	BASE, POWER KNOB
60	X-3576-703-0	KNOB (L) ASSY, REC
61	X-3576-704-0	KNOB (R) ASSY, REC
62	▲;A-2010-192-A	MOUNTED PCB, RECORD/PLAYBACK*** (AEP)
63	▲;A-2010-191-A	MOUNTED PCB, RECORD/PLAYBACK*** (US,CND,UK)
64	X-3576-705-1	PANEL ASSY, FRONT*** (US,CND,UK)
64	X-3576-706-1	PANEL ASSY, FRONT*** (AEP)
65	A-2145-043-A	BUTTON ASSY, CONTROL
66	7-621-773-95	SCREW +B 2.6X4
67	7-621-775-20	SCREW +B 2.6X5
68	7-685-534-29	SCREW +BTP 2.6X8
69	7-685-871-01	SCREW +BVTT 3X6
70	7-685-246-29	SCREW +KTP 3X8
71	7-685-647-21	SCREW +BVTP 3X10
72	7-685-847-01	SCREW +BVTT 3X12
73	7-685-650-21	SCREW +BVTP 3X16

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
81	1-551-734-11	CORD, CONNECTION (RK- 74A)
82	3-576-748-00	CARTON
83	3-576-749-00	CUSHION (L)
84	3-576-750-00	CUSHION (R)
85	3-701-630-00	BAG, POLYETHYLENE
86	3-783-472-11	MANUAL, INSTRUCTION
87	3-793-828-11	QUESTIONNAIRE
88	4-866-723-00	SHEET
89	8-890-435-10	TAPE (FECR 46)*** (CND)
90	X-3701-105-0	ROD ASSY, CLEANING, HEAD

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

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

MECHANISM SECTION

No.	Part No.	Description
301	▲;1-518-313-00	LAMP, PILOT
302	1-548-536-41	COUNTER
303	▲;1-603-823-00	PC BOARD, PHOTO
304	▲;1-604-290-00	PC BOARD, MD
305	3-481-272-00	SPRING, COMPRESSION
306	3-532-213-00	BELT, COUNTER
307	3-555-113-00	SPRING (R)
308	3-555-114-00	SPRING (L)
309	3-558-708-01	WASHER, STOPPER
310	3-558-708-11	WASHER, STOPPER
311	3-558-708-21	WASHER, STOPPER
312	3-564-027-11	FELT, LIMITER
313	3-564-319-00	BELT, CAPSTAN
314	▲;3-575-302-00	RETAINER, THRUST
315	*****	
316	▲;3-575-307-00	LEVER, FWD
317	▲;3-575-312-00	SPRING
318	▲;3-575-314-00	LEVER, FULCRUM, HOLDER
319	3-575-320-00	BASE, ADJUSTMENT, HEAD
320	3-575-321-00	RETAINER, THRUST, CAPSTAN
321	3-575-324-00	GEAR, LIMITER
322	3-575-327-00	STOPPER
323	3-575-328-00	HOLDER, LAMP
324	3-575-330-00	BRACKET, HEAD
325	▲;3-575-331-00	LEVER, DETECTION, HALF
326	3-575-332-00	GEAR, FR
327	3-575-333-00	PISTON
328	▲;3-575-334-00	LEVER, DETECTION, REC
329	3-575-345-00	SPRING
330	▲;3-575-347-00	BRACKET, COUNTER
331	3-575-348-00	ROLLER, GUIDE, THREADING
332	3-575-349-00	PULLEY, CB
333	3-575-350-00	CLAW, REEL TABLE
334	3-575-351-00	SPRING
335	3-575-353-00	TABLE, REEL
336	3-575-354-00	LEVER, LOCK
337	3-575-355-00	HOLDER, CASSETTE
338	3-575-356-00	SPRING
339	3-575-357-00	SPRING, TENSION
340	3-575-358-00	SPRING, TENSION
341	3-575-359-00	SPRING, TENSION
342	3-575-360-00	RING, O
343	3-575-364-00	SPRING, TENSION
344	3-575-365-00	SPRING, COMPRESSION
345	3-575-368-00	SPRING, COMPRESSION

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (▲-▲▲▲-▲▲▲-XX or ▲-▲▲▲-▲▲▲-X) may be different from those used in the set.

MECHANISM SECTION

No.	Part No.	Description
346	3-575-383-00	CHASSIS, HEAD
347	3-576-734-00	WASHER, CAPSTAN
348	3-652-612-11	CUSHION (B)
349	3-701-438-21	WASHER
350	3-701-439-21	WASHER
351	7-621-259-15	SCREW +P 2.6X3
352	7-621-772-70	SCREW +B 2X14
353	7-621-775-10	SCREW +B 2.6X4
354	7-671-112-11	BALL, STEEL
355	7-682-949-01	SCREW +PSW 3X10
356	7-685-534-29	SCREW +BTP 2.6X8 TYPE2 N-S
357	7-685-861-01	SCREW +BVTT 2.6X5 (S)
358	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE2
359	8-825-724-00	HEAD, ERASE EF-201-36
360	8-829-373-30	HEAD, REC/PB (PP181-3602C)
361	8-835-049-01	MOTOR, DC (DNE-4100A)
362	▲;X-3575-301-0	PLATE (A) ASSY, HOLDER FULCRUM
363	▲;X-3575-302-0	PLATE (B) ASSY, HOLDER FULCRUM
364	X-3575-303-0	METAL ASSY, CAPSTAN
365	X-3575-304-0	PINCH LEVER (T) ASSY
366	▲;X-3575-306-0	CHASSIS ASSY, MECHANISM
367	X-3575-309-0	PLATE ASSY, BRAKE
368	X-3575-310-0	LEVER ASSY, TENSION, BACK
369	X-3575-314-0	PLATE ASSY, ORNAMENTAL
370	X-3575-316-0	SOLENOID ASSY
371	X-3575-318-0	FLYWHEEL (D) ASSY
372	X-3575-328-1	PULLEY ASSY, MOTOR
373	X-3575-313-0	MOTOR ASSY, REEL
374	3-572-384-00	PLATE, INSULATOR

CAPACITORS:

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

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable














COILS

- MMH : mH, UH : μ H

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

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







ELECTRICAL PARTS

Ref.No.	Part No.	Description
C401	 1-123-349-00	ELECT 1000MF 35V
C402	 1-123-324-00	ELECT 2200MF 16V
C403	 1-123-337-00	ELECT 1000MF 25V
C404	 1-123-337-00	ELECT 1000MF 25V
C601	 1-123-485-00	ELECT 220MF 16V
D101	8-719-815-55	DIODE 1S1555
D201	8-719-815-55	DIODE 1S1555
D301	8-719-990-64	DIODE HZ6B1L
D302	8-719-815-55	DIODE 1S1555
D303	8-719-815-55	DIODE 1S1555
D304	8-719-815-55	DIODE 1S1555
D305	8-719-815-55	DIODE 1S1555
D307	8-719-931-15	DIODE EQB01-15
D401	 8-719-200-02	DIODE 10E-2
D402	 8-719-200-02	DIODE 10E-2
D403	 8-719-200-02	DIODE 10E-2
D404	 8-719-200-02	DIODE 10E-2
D405	 8-719-200-02	DIODE 10E-2
D406	 8-719-200-02	DIODE 10E-2
D407	 8-719-200-02	DIODE 10E-2
D408	 8-719-200-02	DIODE 10E-2
D409	8-719-910-69	DIODE HZ6C3L
D410	8-719-815-55	DIODE 1S1555
D411	8-719-815-55	DIODE 1S1555
D412	8-719-200-02	DIODE 10E-2
D413	8-719-815-55	DIODE 1S1555
D414	8-719-815-55	DIODE 1S1555
D415	8-719-815-55	DIODE 1S1555
D416	8-719-815-55	DIODE 1S1555
D417	8-719-815-55	DIODE 1S1555
D418	8-719-200-02	DIODE 10E-2
D419	8-719-815-55	DIODE 1S1555
D501	8-719-815-55	DIODE 1S1555
D502	8-719-815-55	DIODE 1S1555
D601	8-719-815-55	DIODE 1S1555
D802	8-719-904-32	DIODE PG3432SX
D801	8-719-934-32	DIODE AR3432S
D803	8-719-934-34	DIODE AA3432S
IC101	8-759-100-02	IC CX-174-2
IC201	8-759-100-02	IC CX-174-2
IC301	8-759-705-62	IC NJM4562D-M
IC302	8-759-145-57	IC UPC4557C
IC303	8-759-273-32	IC TA7332P
IC401	8-759-908-36	IC MSM5836
IC402	8-759-729-03	IC NJM2903D
IC403	8-759-133-90	IC UPC339C
IC501	8-759-993-51	IC MSL9351
L101	1-408-262-00	MICRO INDUCTOR 27MMH
L102	1-231-388-00	FILTER, LOWPASS
L201	1-408-262-00	MICRO INDUCTOR 27MMH
L202	1-231-388-00	FILTER, LOWPASS

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q101	8-729-334-58	TRANSISTOR 2SC1345
Q102	8-729-334-58	TRANSISTOR 2SC1345
Q103	8-729-663-47	TRANSISTOR 2SC1364
Q104	8-729-100-13	TRANSISTOR 2SC2001
Q105	8-729-663-47	TRANSISTOR 2SC1364
Q201	8-729-334-58	TRANSISTOR 2SC1345
Q202	8-729-334-58	TRANSISTOR 2SC1345
Q203	8-729-663-47	TRANSISTOR 2SC1364
Q204	8-729-100-13	TRANSISTOR 2SC2001
Q205	8-729-663-47	TRANSISTOR 2SC1364
Q301	8-729-180-93	TRANSISTOR 2SD809
Q302	8-729-300-37	TRANSISTOR 2SC458A
Q303	8-729-384-47	TRANSISTOR 2SA844
Q304	8-729-173-13	TRANSISTOR 2SB731
Q305	8-729-384-47	TRANSISTOR 2SA844
Q306	8-729-663-47	TRANSISTOR 2SC1364
Q307	8-729-663-47	TRANSISTOR 2SC1364
Q308	8-729-663-47	TRANSISTOR 2SC1364
Q309	8-729-663-47	TRANSISTOR 2SC1364
Q310	8-729-663-47	TRANSISTOR 2SC1364
Q311	8-729-663-47	TRANSISTOR 2SC1364
Q401	8-729-288-02	TRANSISTOR 2SD880
Q402	8-729-186-23	TRANSISTOR 2SD862
Q403	8-729-880-82	TRANSISTOR 2SB808
Q404	8-729-880-82	TRANSISTOR 2SB808
Q405	8-729-801-22	TRANSISTOR 2SD1012
Q406	8-729-801-22	TRANSISTOR 2SD1012
Q407	8-729-103-43	TRANSISTOR 2SB734
Q408	8-729-663-47	TRANSISTOR 2SC1363
Q409	8-729-102-03	TRANSISTOR 2SD1020
Q410	8-729-612-77	TRANSISTOR 2SA1027R
Q411	8-729-663-47	TRANSISTOR 2SC1364
Q412	8-729-612-77	TRANSISTOR 2SA1027R
Q413	8-729-663-47	TRANSISTOR 2SC1363
Q414	8-729-663-47	TRANSISTOR 2SC1364
Q501	8-729-195-23	TRANSISTOR 2SA952
Q502	8-729-195-23	TRANSISTOR 2SA952
Q503	8-729-195-23	TRANSISTOR 2SA952
Q504	8-729-195-23	TRANSISTOR 2SA952
Q601	8-729-663-47	TRANSISTOR 2SC1364
Q803	8-729-101-02	TRANSISTOR PH102
R141	1-244-881-00	CARBON 2.2K 5% 1/2W
R147	1-244-881-00	CARBON 2.2K 5% 1/2W
R153	1-244-909-00	CARBON 33K 5% 1/2W
R155	1-244-851-00	CARBON 120 5% 1/2W
R167	1-244-897-00	CARBON 10K 5% 1/2W
R241	1-244-881-00	CARBON 2.2K 5% 1/2W
R247	1-244-881-00	CARBON 2.2K 5% 1/2W
R253	1-244-909-00	CARBON 33K 5% 1/2W
R255	1-244-851-00	CARBON 120 5% 1/2W
R267	1-244-897-00	CARBON 10K 5% 1/2W

ELECTRICAL PARTS

Ref.No.	Part No.	Description
R333	1-213-139-00	METAL 470 5% 1W F
R334	1-244-841-00	CARBON 47 5% 1/2W
R335	 1-212-855-00	FUSIBLE 8.2 5% 1/4W F
R336	 1-212-855-00	FUSIBLE 8.2 5% 1/4W F
R401	 1-244-855-00	CARBON 180 5% 1/2W
R402	 1-244-855-00	CARBON 180 5% 1/2W
R403	 1-244-881-00	CARBON 2.2K 5% 1/2W
R461	 1-212-849-00	FUSIBLE 4.7 5% 1/4W F
RV101	1-228-250-00	RES, VAR 20K/20K(RV101/201)
RV102	1-224-645-XX	RES, ADJ, CARBON 10K
RV103	1-224-647-XX	RES, ADJ, CARBON 47K
RV104	1-226-233-00	RES, ADJ, CARBON 1K
RV202	1-224-645-XX	RES, ADJ, CARBON 10K
RV203	1-224-647-XX	RES, ADJ, CARBON 47K
RV204	1-226-233-00	RES, ADJ, CARBON 1K
RY301	1-515-323-00	RELAY
RY302	1-515-297-00	RELAY ***(AEP)
S503	1-552-809-00	SWITCH, SLIDE
S601	1-552-532-00	SWITCH, PUSH
S602	1-552-532-00	SWITCH, PUSH
T301	1-433-235-00	COIL, BIAS OSCILLATOR

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:


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


RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : μH

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

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

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:


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


RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F : nonflammable

COILS

- MMH : mH, UH : μH

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

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

ELECTROLYTIC CAPACITORS

RATING → : Use the high voltage rated one.						
CAP. (μF)	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.	50 VOLT. 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. PART No.	160 VOLT. PART No.	250 VOLT. PART No.	350 VOLT. 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

RATING							
CAP. (pF)	50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (pF)	50 VOLT. PART No.	CAP. (μF)	50 VOLT. 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

RATING → : Use the high voltage rated one.					
CAP. (μF)	25 VOLT. PART No.	50 VOLT. PART No.	CAP. (μF)	25 VOLT. PART No.	50 VOLT. 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			

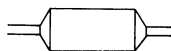
MYLAR CAPACITORS

RATING											
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.	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

RATING → : Use the high voltage rated one.							
CAP. (μF)	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

RATING						
CAP. (μF)	3 VOLT.	6.3 VOLT.	10 VOLT.	16 VOLT.	20 VOLT.	35 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	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					

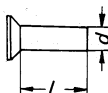
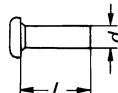
1/8 WATT CARBON RESISTOR

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
2.0	—	13	1-246-821-00	91	1-246-831-00	620	1-246-841-00	4.3k	1-246-851-00	30k	1-246-861-00	200k	1-246-871-00
2.2	1-246-751-00	15	1-246-761-00	100	1-246-771-00	680	1-246-781-00	4.7k	1-246-791-00	33k	1-246-801-00	220k	1-246-811-00
2.4	—	16	1-246-822-00	110	1-246-832-00	750	1-246-842-00	5.1k	1-246-852-00	36k	1-246-862-00	240k	1-247-054-00
2.7	1-246-752-00	18	1-246-762-00	120	1-246-772-00	820	1-246-782-00	5.6k	1-246-792-00	39k	1-246-802-00	270k	1-247-046-00
3.0	—	20	1-246-823-00	130	1-246-833-33	910	1-246-843-00	6.2k	1-246-853-00	43k	1-246-863-00	300k	1-247-055-00
3.3	1-246-753-00	22	1-246-763-00	150	1-246-773-00	1.0k	1-246-783-00	6.8k	1-246-793-00	47k	1-246-803-00	330k	1-247-047-00
3.6	—	24	1-246-824-00	160	1-246-834-00	1.1k	1-246-844-00	7.5k	1-246-854-00	51k	1-246-864-00	360k	1-247-056-00
3.9	1-246-754-00	27	1-246-764-00	180	1-246-774-00	1.2k	1-246-784-00	8.2k	1-246-794-00	56k	1-246-804-00	390k	1-247-048-00
4.3	—	30	1-246-825-00	200	1-246-835-00	1.3k	1-246-845-00	9.1k	1-246-855-00	62k	1-246-865-00	430k	1-247-057-00
4.7	1-246-755-00	33	1-246-765-00	220	1-246-775-00	1.5k	1-246-785-00	10k	1-246-795-00	68k	1-246-805-00	470k	1-247-049-00
5.1	—	36	1-246-826-00	240	1-246-836-00	1.6k	1-246-846-00	11k	1-246-856-00	75k	1-246-866-00	510k	1-247-058-00
5.6	1-246-756-00	39	1-246-766-00	270	1-246-776-00	1.8k	1-246-786-00	12k	1-246-796-00	82k	1-246-806-00	560k	1-247-050-00
6.2	—	43	1-246-827-00	300	1-246-837-00	2.0k	1-246-847-00	13k	1-246-857-00	91k	1-246-867-00	620k	1-247-059-00
6.8	1-246-757-00	47	1-246-767-00	330	1-246-777-00	2.2k	1-246-787-00	15k	1-246-797-00	100k	1-246-807-00	680k	1-247-051-00
7.5	1-246-818-00	51	1-246-828-00	360	1-246-838-00	2.4k	1-246-848-00	16k	1-246-858-00	110k	1-246-868-00	750k	1-247-060-00
8.2	1-246-758-00	56	1-246-768-00	390	1-246-778-00	2.7k	1-246-788-00	18k	1-246-798-00	120k	1-246-808-00	820k	1-247-052-00
9.1	1-246-819-00	62	1-246-829-00	430	1-246-839-00	3.0k	1-246-849-00	20k	1-246-859-00	130k	1-246-869-00	910k	1-247-061-00
10	1-246-759-00	68	1-246-769-00	470	1-246-779-00	3.3k	1-246-789-00	22k	1-246-799-00	150k	1-246-809-00	1 M	1-247-053-00
11	1-246-820-00	75	1-246-830-00	510	1-246-840-00	3.6k	1-246-850-00	24k	1-246-860-00	160k	1-246-870-00		
12	1-246-760-00	82	1-246-770-00	560	1-246-780-00	3.9k	1-246-790-00	27k	1-246-800-00	180k	1-246-810-00		

1/4 WATT CARBON RESISTORS

Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
1.0	1-246-401-00	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	1-246-476-00	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	1-246-477-00	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	1-246-478-00	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	1-246-479-00	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	1-246-480-00	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	1-246-481-00	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	1-246-482-00	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	1-246-483-00	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	1-246-484-00	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	1-246-485-00	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	1-246-486-00	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	1-246-487-00	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		

DIMENSIONS AND PART NO. OF PRECISION SCREWS

<div>⊕ K (Flat-countersunk-head screw)</div> <div></div>				<div>⊕ P (Pan-head screw)</div> <div></div>			
Type	Size (mm) (d × L)	Part No.		Type	Size (mm) (d × L)	Part No.	
		Black	Silver			Black	Silver
Type 1	K1.4 × 1.6	7-627-451-08	7-627-451-07	Type 1	P1.4 × 1.4		7-627-551-47
	K1.4 × 1.8				P1.4 × 1.6	7-627-551-08	7-627-551-07
	K1.4 × 2	7-627-451-38	7-627-451-37		P1.4 × 1.8		
	K1.4 × 2.2				P1.4 × 2	7-627-551-18	7-627-551-17
	K1.4 × 2.5	7-627-451-18	7-627-451-17		P1.4 × 2.2		
	K1.4 × 2.8				P1.4 × 2.5	7-627-551-28	7-627-551-27
	K1.4 × 3	7-627-451-28	7-627-451-27		P1.4 × 2.8	7-627-551-88	
	K1.4 × 3.5		7-627-451-47		P1.4 × 3	7-627-551-58	7-627-551-57
	K1.4 × 4				P1.4 × 3.5	7-627-551-68	7-627-551-67
	K1.4 × 4.5				P1.4 × 4	7-627-551-78	7-627-551-77
	K1.4 × 5	7-627-451-78	7-627-451-77		P1.4 × 4.5		
	K1.7 × 1.8	7-627-450-78			P1.4 × 5	7-627-551-38	7-627-551-37
	K1.7 × 2				P1.7 × 1.6	7-627-552-18	
	K1.7 × 2.2				P1.7 × 1.8		
	K1.7 × 2.5				P1.7 × 2	7-627-552-28	7-627-552-27
	K1.7 × 2.8				P1.7 × 2.2		
	K1.7 × 3				P1.7 × 2.5	7-627-552-08	7-627-552-07
	K1.7 × 3.5				P1.7 × 2.8		
	K1.7 × 4				P1.7 × 3	7-627-552-38	7-627-552-37
	K1.7 × 4.5				P1.7 × 3.5	7-627-552-78	
	K1.7 × 5				P1.7 × 4	7-627-552-48	7-627-552-47
	K1.7 × 5.5				P1.7 × 4.5		7-627-552-67
	K1.7 × 6				P1.7 × 5	7-627-552-58	7-627-552-57
	K2 × 2	7-627-452-08	7-627-452-07		P1.7 × 5.5		
	K2 × 2.2				P1.7 × 6		
K2 × 2.5			Type 1	P2 × 1.8			
K2 × 2.8				P2 × 2	7-627-553-18	7-627-553-17	
K2 × 3	7-627-452-18	7-627-452-17		P2 × 2.2		7-627-554-07	
K2 × 3.5				P2 × 2.5	7-627-553-28	7-627-553-27	
K2 × 4				P2 × 2.8			
K2 × 4.5	7-627-452-28			P2 × 3	7-627-553-38	7-627-553-37	
K2 × 5				P2 × 3.5		7-627-554-17	
K2 × 5.5	7-627-452-38			P2 × 4	7-627-553-48	7-627-553-47	
K2 × 6				P2 × 4.5	7-627-553-58	7-627-553-57	
K2 × 7				P2 × 5		7-627-553-67	
K2 × 8				P2 × 5.5			
Type 3					P2 × 6		
					P2 × 7	7-627-553-88	7-627-553-87
					P2 × 8	7-627-553-98	7-627-553-97
					P2 × 10	7-627-553-78	7-627-553-77
					P1.4 × 1.4		7-627-850-37
					P1.4 × 1.6		7-627-850-47
					P1.4 × 1.8		7-627-850-77
					P1.4 × 2	7-627-850-08	7-627-850-07
					P1.4 × 2.2		
					P1.4 × 2.5	7-627-850-18	7-627-850-17
Type 3					P1.4 × 2.8		
					P1.4 × 3	7-627-850-28	7-627-850-27
					P1.4 × 3.5	7-627-850-58	7-627-850-57
					P1.4 × 4	7-627-850-68	7-627-850-67
					P1.4 × 4.5		7-627-851-17
					P1.4 × 5		7-627-851-27

Sony Corporation

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9-950-527-11

81B05125-1

Printed in Japan

84

US Model
Canadian Model
AEP Model
UK Model
E Model

CORRECTION

No. 1
July, 1982

This correction updates the service manual to cover the misprintings in the parts list.

File this correction with the service manual.

Page 35.

No.	Correct Part No.	Correct Description
86	3-783-472-11	MANUAL, INSTRUCTION (AEP, UK, E)
	3-783-472-21	MANUAL, INSTRUCTION (US, Canadian)
	3-795-136-11	MANUAL, INSTRUCTION; DUTCH/SWEDISH (AEP)
	3-795-137-31	MANUAL, INSTRUCTION; FRENCH (Canadian)

Page 37.

Ref. No.	Correct Part No.	Correct Description
IC401	8-759-948-36	IC MSM5836RS

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SERVICE MANUAL