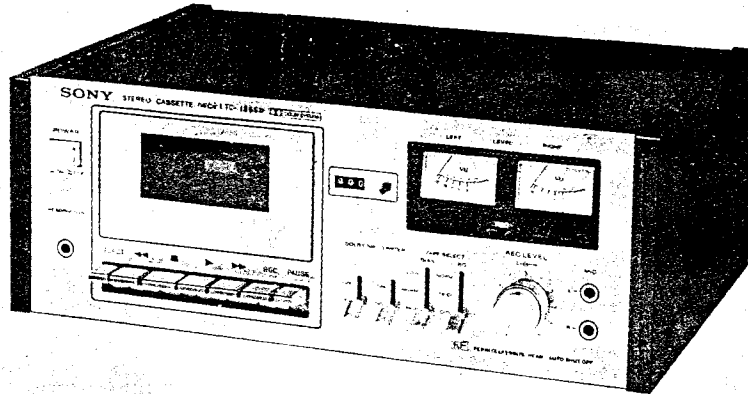


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AEP Model
E Model
UK Model



STEREO CASSETTE RECORDER

SPECIFICATIONS

Power Requirements:	110, 127, 220 or 240 V ac, 50/60 Hz (AEP, UK model)	With regular cassette 30 – 14,000 Hz (NAB)
	100, 110, 120, 127, 220, 240 V ac, 50/60 Hz (E model)	40 – 12,000 Hz (DIN)
Power Consumption:	8 W	Wow and Flutter: 0.09 % WRMS (NAB) ±0.2 % (DIN)
Tape Speed:	4.8 cm/s (1 7/8 ips)	Inputs: MIC (phone jack) 2 sensitivity 0.2 mV (–72 dB) for low-impedance microphones
Fast Forward and Rewind Time:	Approx. 90 sec. (by C-60)	LINE IN (phono jack) 2 sensitivity 0.06 V (–22 dB) input impedance more than 100 kΩ
Recording System:	4-track 2-channel stereo	Outputs: LINE OUT (phono jack) 2 output level 0.435 V (–5 dB) at load impedance 100 kΩ suitable load impedance more than 10 kΩ
Record Bias Frequency:	105 kHz	HEADPHONES (binaural jack) 1 suitable load impedance 8 Ω
Signal-to-Noise Ratio:	DOLBY* NR OFF With Ferri-Chrome Cassette 54 dB at peak level (NAB) 48 dB (DIN) With chromium dioxide cassette 54 dB at peak level (NAB) With regular cassette 52 dB at peak level (NAB) DOLBY* NR ON Improved by 5 dB at 1 kHz, 10 dB above 5 kHz	REC/PB: Input impedance less than 10 kΩ Output impedance less than 10 kΩ
Total Harmonic Distortion:	1.7 %	Dimensions: Approx. 390 (w) x 150 (h) x 295 (d) mm 15 3/8 (w) x 5 3/4 (h) x 11 5/8 (d) inches including projecting parts and controls
Frequency Response:	DOLBY* NR OFF With Ferri-Chrome Cassette and chromium dioxide cassette 30 – 16,000 Hz (NAB) 50 – 15,000 Hz ±3 dB (NAB) 40 – 15,000 Hz (DIN)	Weight: Approx. 6.3 kg (13 lb 15 oz)

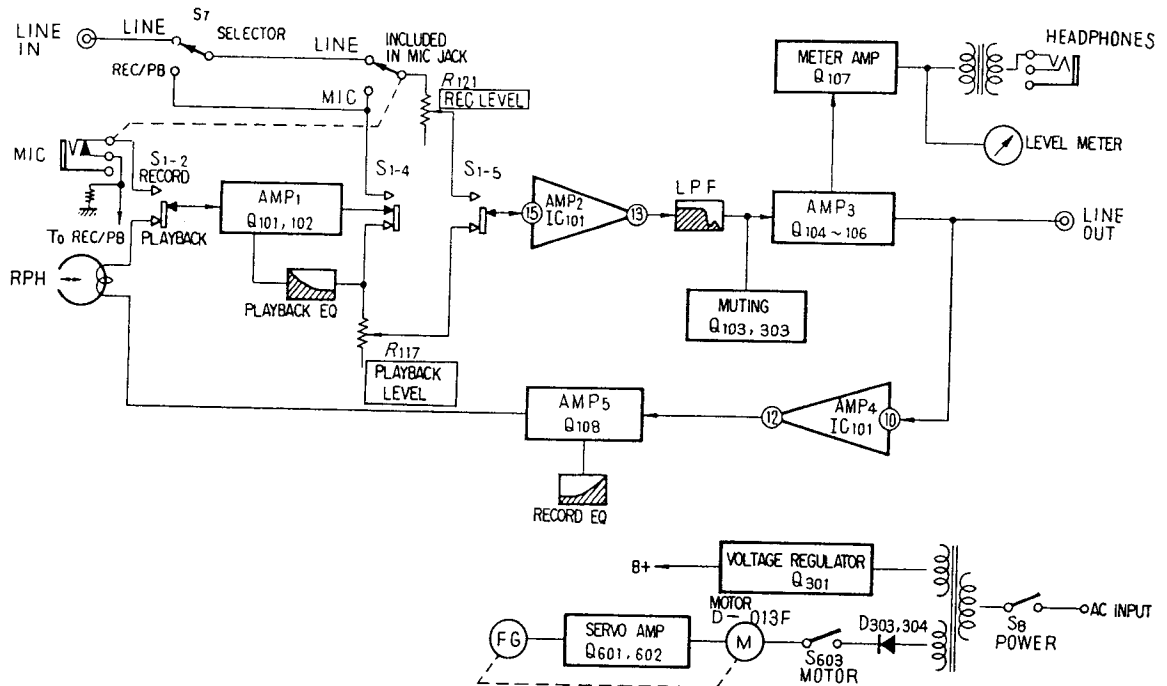
0 dB = 0.775 V

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

SERVICE MANUAL

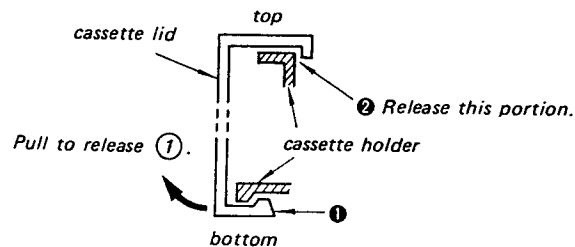
SECTION 1
OUTLINE

1-1. BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

2-1. CASSETTE LID REMOVAL



2-2. CASE REMOVAL

Remove four screws (\oplus BS4 x 22) from both sides of the case.

2-3. AUDIO AMP BOARD REMOVAL

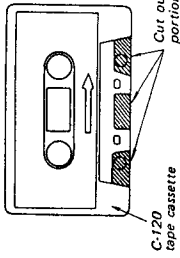
The audio amp board can be easily removed by removing three screws (PSW3 x 6). When reattaching the board, make sure that the record/playback switch lever (B) securely push the record/playback slide switch.

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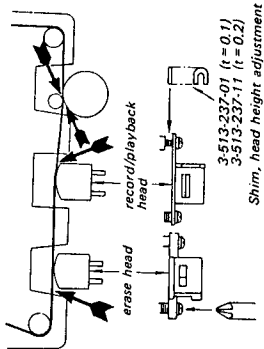
SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

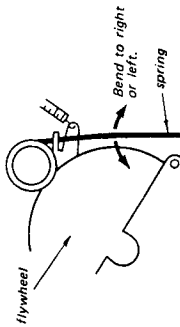
Tape Path Adjustment
 — **Playback Mode** —
 1. Make an adjustment cassette as shown below.



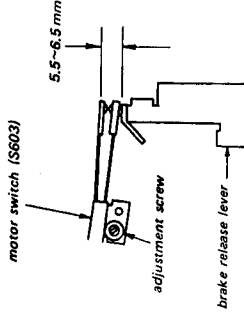
2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at arrowed portions.



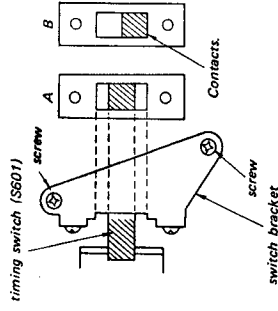
Fast Forward and Rewind Torque Adjustment
 — **Fast Forward and Rewind Modes** —
 Bend the spring to obtain torque of 55 ~ 95 g·cm (0.8 ~ 1.3 oz·inch).



Motor Switch (S603) Position Adjustment
 — **Stop Mode** —
 Loosen adjustment screw and adjust the position of the switch to obtain the specified clearance between the switch leaves.
 After the adjustment, tighten and lock the screw with a suitable locking compound.

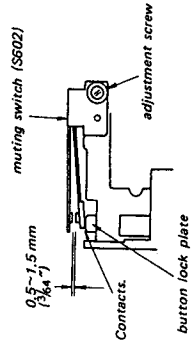


Timing Switch (S601) Position Adjustment
 — **Stop Mode** —
 Loosen the screws and adjust position of the switch bracket so that it places as shown B.
 After the adjustment, tighten the screws.

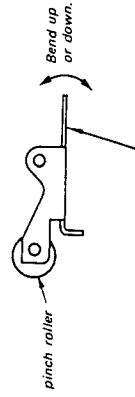


Muting Switch (S602) Position Adjustment
 — **Stop Mode** —

Loosen the adjustment screw and adjust position of the switch so that the clearance between contacts of switch leaves becomes 0.5 ~ 1.5 mm (3/164").

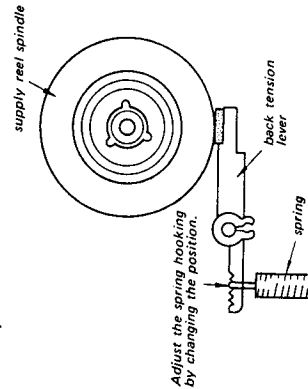


PAUSE Timing Adjustment
 — **PAUSE Mode** —

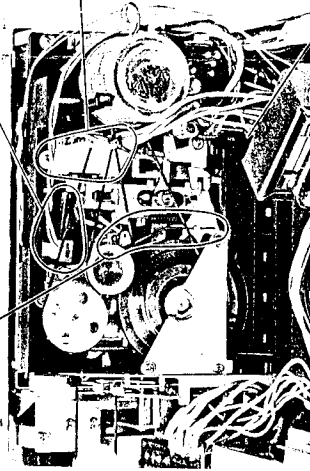


Bend here and adjust the position of pinch roller so that the rotations of pinch roller and reel spindles cease at the same time.

Playback Back Tension Torque Adjustment
 — **Playback Mode** —



Adjust the spring hooking by changing the position.
 Specification: 2.5 ~ 4 g·cm (0.04 ~ 0.05 oz·inch)



Reference Datum
 Forward Torque: 30 ~ 65 g·cm (0.42 ~ 0.9 oz·inch)
 Pinch Roller Pressure: 270 ~ 370 g (9.5 ~ 13 oz)
 Shut-off Time: Within six seconds

3-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with an alcohol moistened swab:
 - record/playback head
 - erase head
 - capacitors
 - pinch roller
 - rubber belts
 - idlers
- Demagnetize record/playback head with a head demagnetizer.
- Do not use magnetized screwdriver for adjustments.
- Adjustments should be performed in the order arranged in this service manual.
- Adjustments should be performed for both L-CH and R-CH with rated power supply voltage unless otherwise specified.
- Record and playback level adjustments should be carefully performed.

Test Equipment/Tools Required:

- audio oscillator (af osc)
- VTVM
- digital frequency counter
- speed checker SONY LFM-30
- attenuator (600 Ω)
- non-magnetic screwdriver
- resistors ... 600 Ω (¼ W), 10 kΩ (¼ W), 100 kΩ (¼ W)
- blank tapes (completely erased with bulk eraser)
- SONY CS-10 (HF), CS-20 (CrO₂), CS-30 (Fe-Cr)

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

Tape	BIAS switch	EQ switch
CS-10	NORMAL	NORMAL
CS-20	HIGH	CrO ₂
CS-30	NORMAL	Fe-Cr

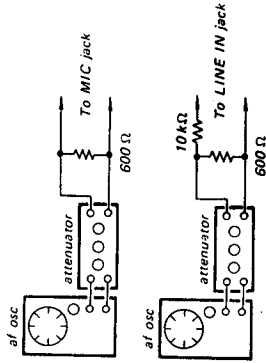
SONY test tapes
 P-4-A81 (6.3 kHz, -10 dB)
 P-4-L81 (333 Hz, 0 dB)
 WS-48 (3 kHz, 0 dB)

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

- DOLBY NR switch: OFF
- LIMITER switch: OFF
- REC LEVEL controls: 5 (center detent)
- EQ switch: NORMAL
- BIAS switch: NORMAL

Test Equipment Connections:

Input side:



Standard Record:

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

Standard Input Level

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

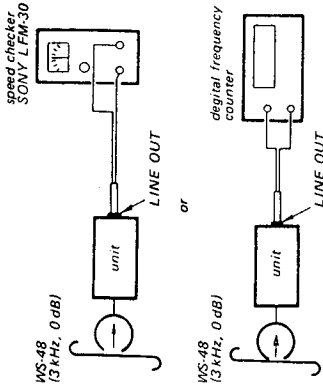
Standard Output Level

	LINE OUT	HEADPHONES
load impedance	100 kΩ	8 Ω
output level	0.435 V (-5 dB)	31 mV (-28 dB)

1. Tape Speed Adjustment

Procedure:

Mode: Playback



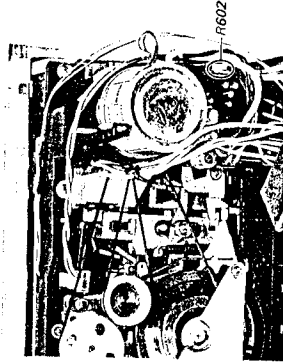
Adjust R602 to obtain the specified values below.

Specification:

speed checker	digital frequency counter
-1 ~ +1 %	2,970 ~ 3,030 Hz

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

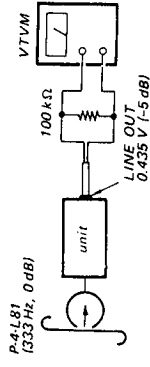
Adjustment Location:



2. Playback Level Adjustment

Procedure:

1. Mode: Playback



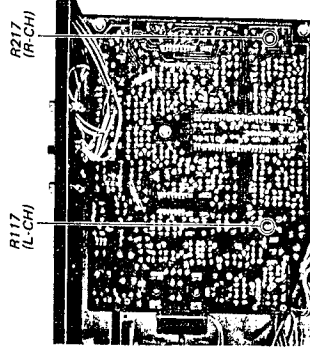
Adjust R117 (L-CH) and R217 (R-CH) to obtain 0.435 V (-5 dB) VTVM reading.

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

Specification:

- LINE OUT level: 0.42 ~ 0.46 V (-5.5 ~ -4.5 dB)
- Level difference between channels: less than 0.5 dB
- TAPE SELECT switch: Fe-Cr
- Level difference from NORMAL should be -0.2 dB ± 0.5 dB

Adjustment Location:

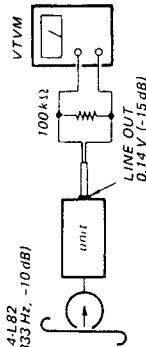


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3. Playback Equalizer Adjustment

Procedure:

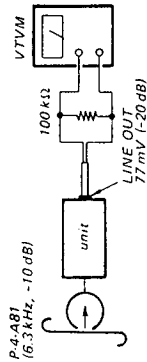
- Mode: Playback



Adjust R115-1, 2, 3 (L-CH) and R215-1, 2, 3 (R-CH) by bridging patterns to obtain the LINE OUT voltages of 0.14 V (-15 dB).

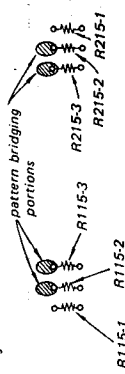
- Mode: Playback

TAPE SELECT switch: C+O₂, Fe-Cr



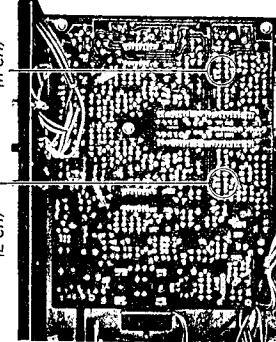
Specification: 62 ~ 95 mV (-22 ~ -18 dB)

Adjustment Location:



R115-1, 2, 3 (L-CH)

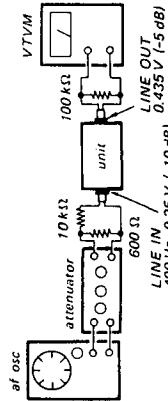
R215-1, 2, 3 (R-CH)



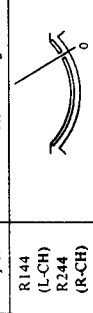
4. VU Meter Calibration

Procedure:

- Mode: Standard record (See page 5.)



Adjust R144 (L-CH) and R244 (R-CH)



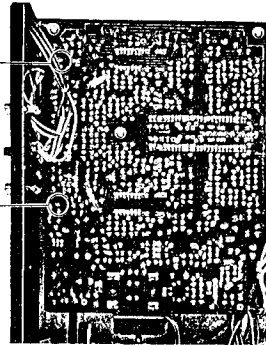
Specification:

When the REC LEVEL control is adjusted to make 0 VU indication, VTVM reading should be 0.42 ~ 0.46 V (-5.5 ~ -4.5 dB)

Adjustment Location:

R144 (L-CH)

R244 (R-CH)

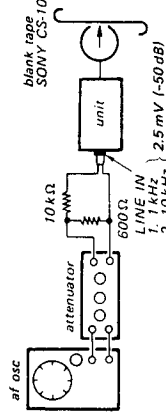


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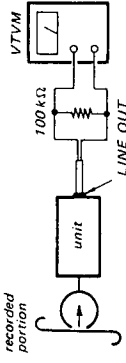
5. Record Bias Adjustment

Procedure:

- Mode: Record



- Mode: Playback



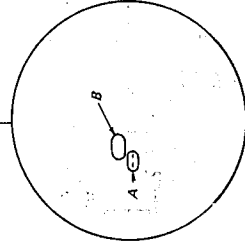
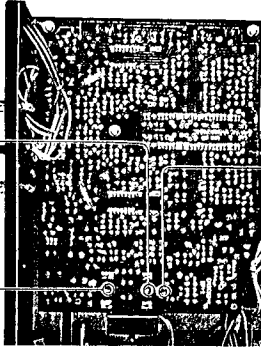
- Adjust C154 (L-CH) and C254 (R-CH) to make both signal outputs equal.

- If necessary, cut the pattern A and connect patterns B and repeat adjustment 1).

Adjustment Location:

C254 (R-CH)

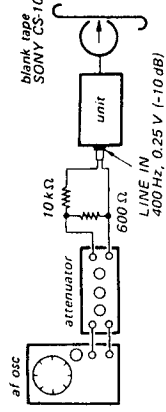
C154 (L-CH)



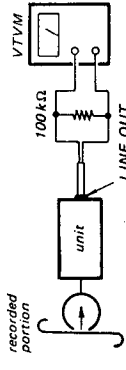
6. Record Level Adjustment

Procedure:

- Mode: Standard record (See page 5.)



- Mode: Playback



- Adjust R163 (L-CH) and R263 (R-CH) to obtain 0.435 V (-5 dB) VTVM reading.

- Change the blank tape to CS-20 and CS-30, and perform the same record and playback procedure. Measure LINE OUT level.

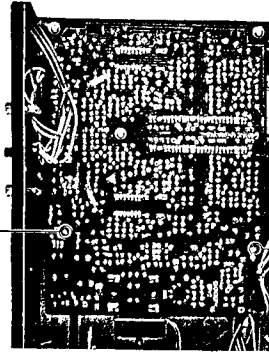
Specification:

SONY tape	LINE OUT level
CS-10	0.435 V (-5 dB, reference)
CS-20	0.35 ~ 0.49 V (-7 ~ -4 dB)
CS-30	0.39 ~ 0.49 V (-6 ~ -4 dB)

Adjustment Location:

R263 (R-CH)

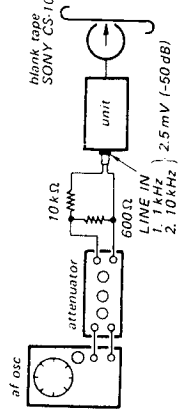
R163 (L-CH)



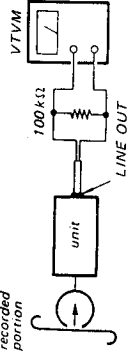
5. Record Bias Adjustment

Procedure:

1. Mode: Record

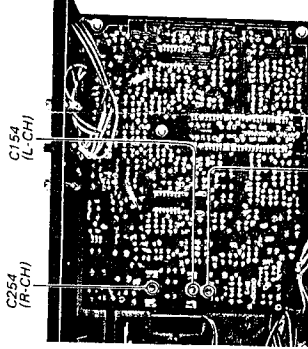


2. Mode: Playback



- 1) Adjust C154 (L-CH) and C254 (R-CH) to make both signal outputs equal.
- 2) If necessary, cut the pattern A and connect patterns B and repeat adjustment 1).

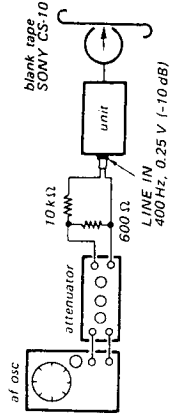
Adjustment Location:



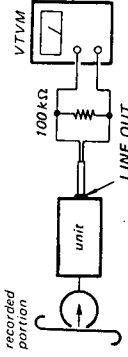
6. Record Level Adjustment

Procedure:

1. Mode: Standard record (See page 5.)



2. Mode: Playback

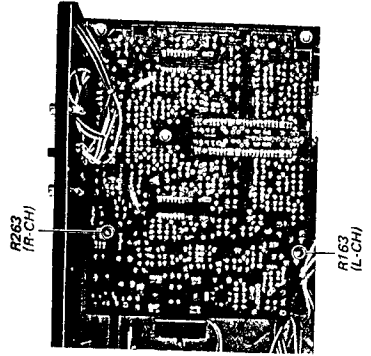


- Adjust R163 (L-CH) and R263 (R-CH) to obtain 0.435 V (-5 dB) VTVM reading.
- Change the blank tape to CS-20 and CS-30, and perform the same record and playback procedure. Measure LINE OUT level.

Specification:

SONY tape	LINE OUT level
CS-10	0.435 V (-5 dB, reference)
CS-20	0.35 ~ 0.49 V (-7 ~ -4 dB)
CS-30	0.39 ~ 0.49 V (-6 ~ -4 dB)

Adjustment Location:



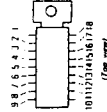
MEMO

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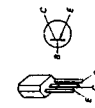
SECTION 4
DIAGRAMS

4-1. MOUNTING DIAGRAM

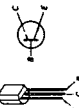
Conductor Side -
IC101, 201: CX-D64



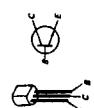
Q1: 2SA677



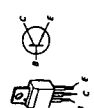
O101, 102, 104 } 2SC1361
O201, 202, 204 }
O103, 105-108 }
O203, 205-208 } 2SC1363
O303, 602 }



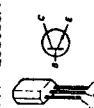
O302: 2SC1384



O301: 2SC1760
O603: 2SC1761



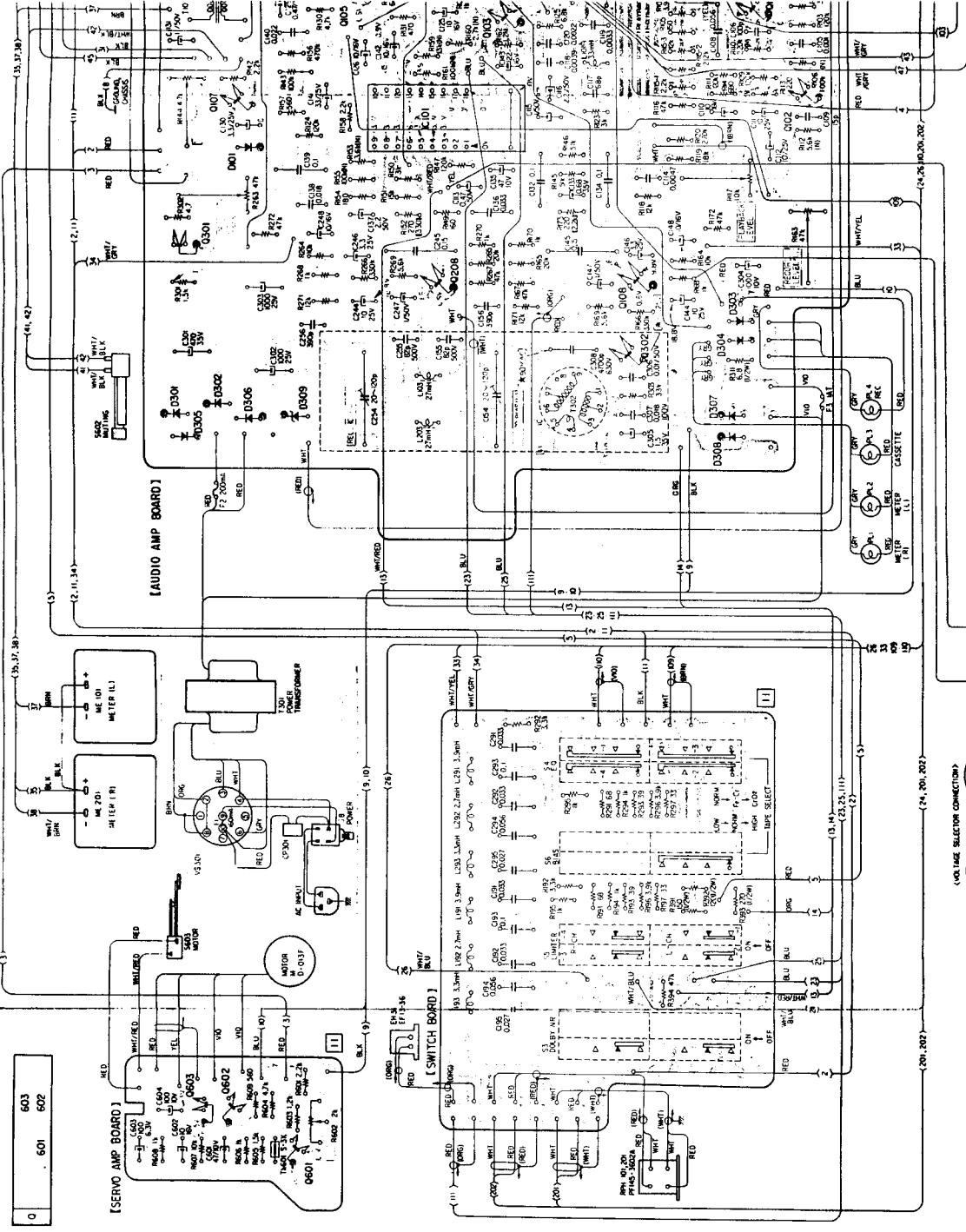
O601: 2SC533A



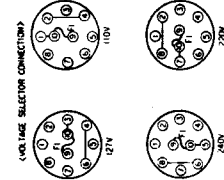
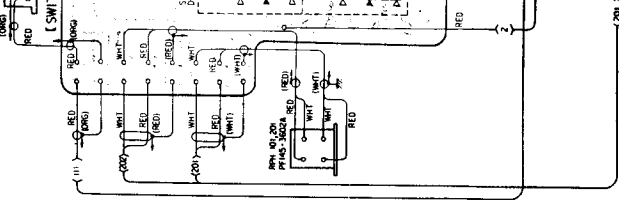
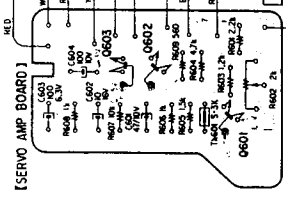
D101, 201: 1T72A
D310: 1S1555
D301-308: 10E-2



D309: EOA01-21R

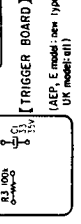


0	603
	602



Note: B +

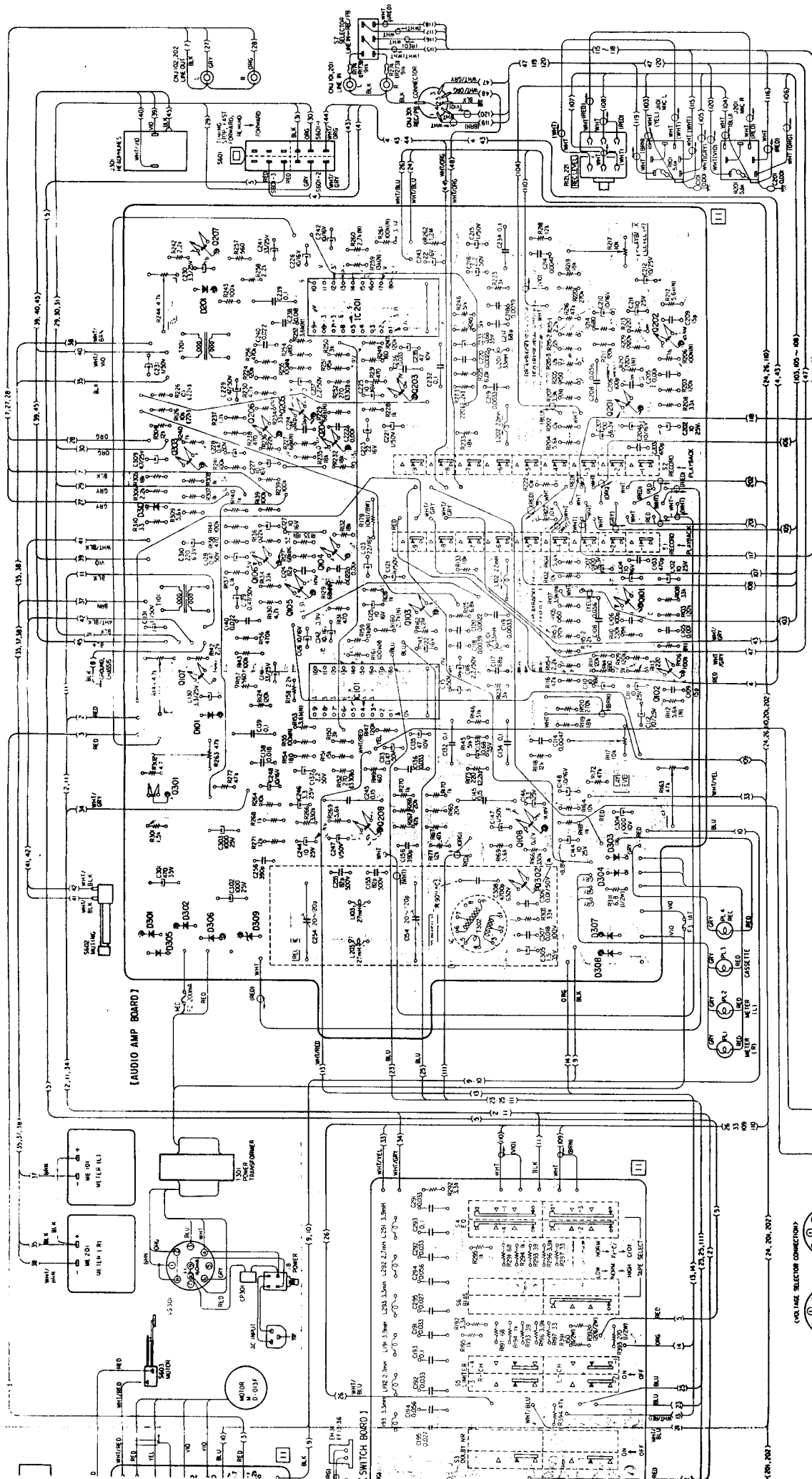
() : AEP, E model



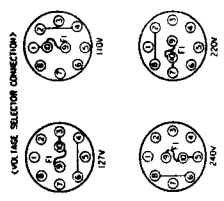
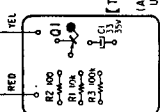
[TRIGGER BOARD]
(AEP, E model only 1/4K UK model: all)

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TC-186SD

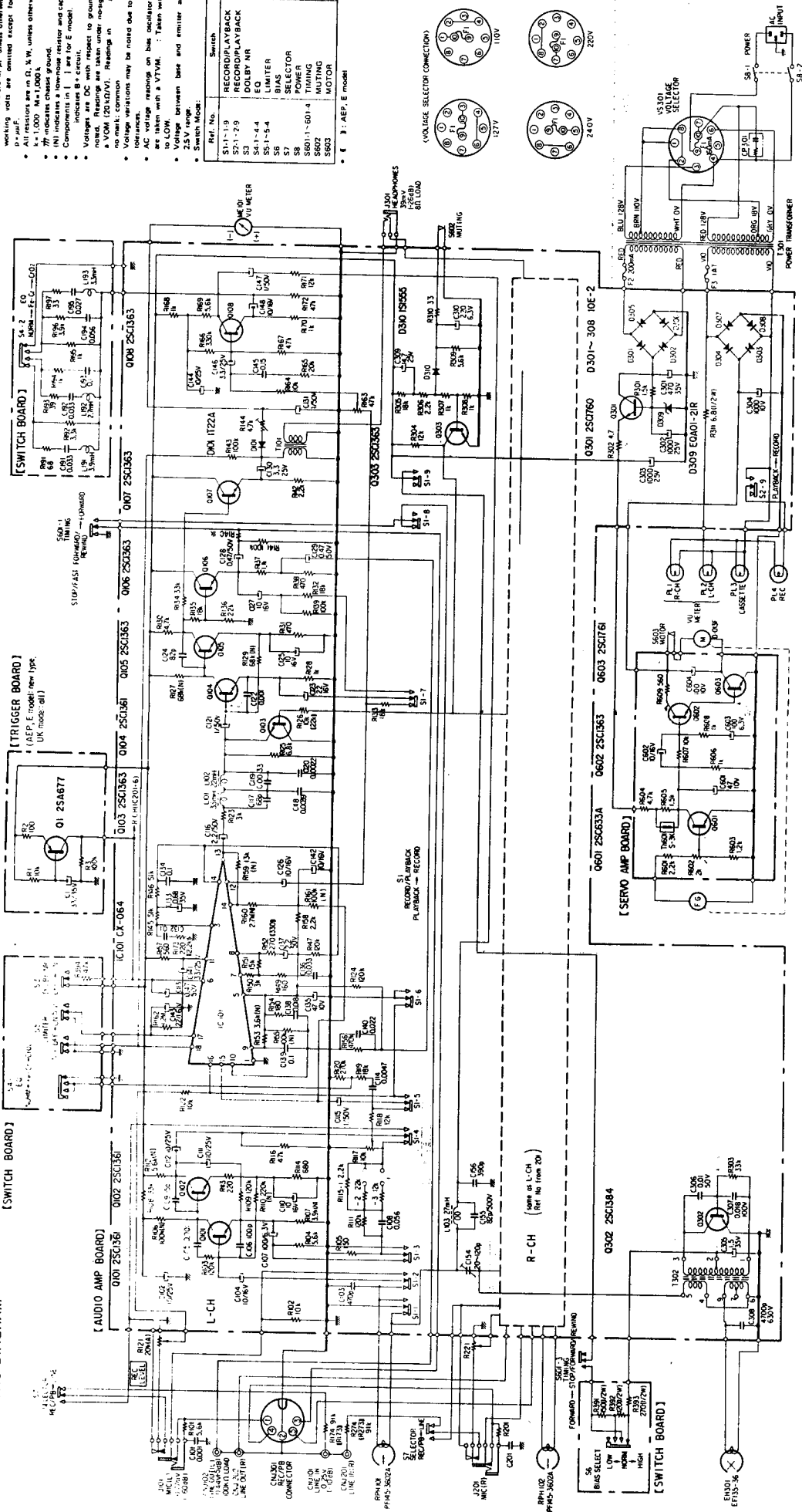


Q	IC01	207
IC	202	201
D	303 304 305 306 307	300



TC-186SD TC-186SD

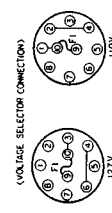
4-2. SCHEMATIC DIAGRAM



- Note:**
- All capacitors are in μF unless otherwise noted. 50 or 100 pF parts are omitted except for electrolytic type.
 - All resistors are in Ω , $\text{k}\Omega$, $\text{M}\Omega$, unless otherwise noted.
 - 1-1,000 M = 1,000,000.
 - W indicates a wirewound resistor and capacitor.
 - Comp indicates a composite resistor and capacitor.
 - Indicates a 5% tolerance.
 - Indicates a 10% tolerance.
 - Indicates a 20% tolerance.
 - Voltages are DC with respect to ground unless otherwise noted. Readings are taken under no-load conditions with a VOM (200/20V). Readings in μV are in record mode.
 - Voltage variations may be noted due to normal production tolerances.
 - AC voltage readings on line oscillator circuit marked are taken with a VTVM. Taken with BIAS switch set LOW.
 - Voltage between base and emitter are measured with a 2.5V range.
 - Switch Mode:

Ref. No.	Switch	Position
S11-13	RECORD/PLAYBACK	PLAYBACK
S21-23	RECORD/PLAYBACK	PLAYBACK
S3	DOLBY NR	OFF
S41-44	EQ	NORM
S51-54	LIMITER	OFF
S6	BAS	LOW
S7	REVERSE	OFF
S8	POWER	OFF
S601-1-601.4	TIMING	FORWARD
S602	MULTING	OFF
S603	MOTOR	OFF

• E 3 : AEP, E model



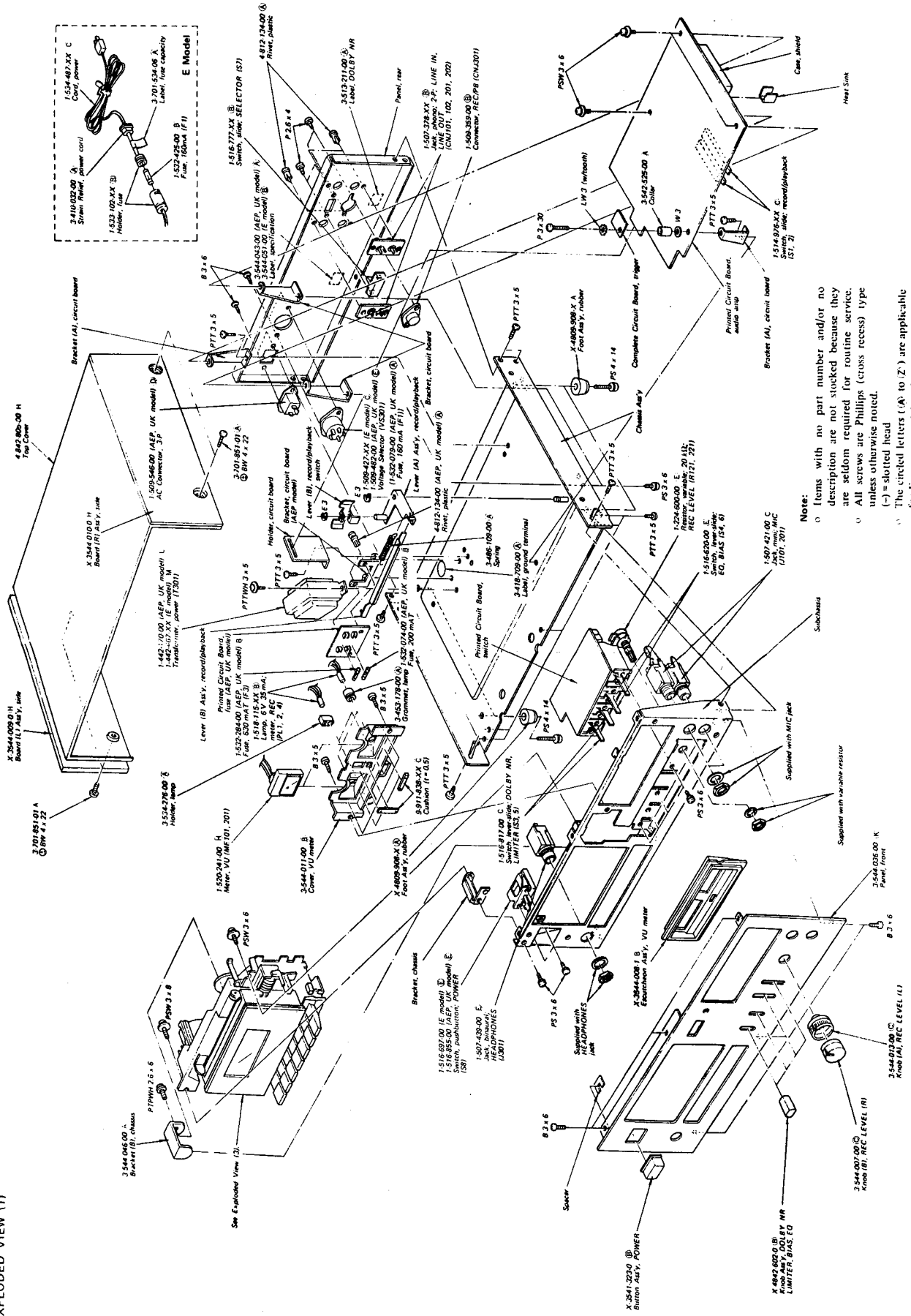
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TC-186SD TC-186SD

**SECTION 5
 EXPLODED VIEWS**

5-1. EXPLODED VIEW (1)

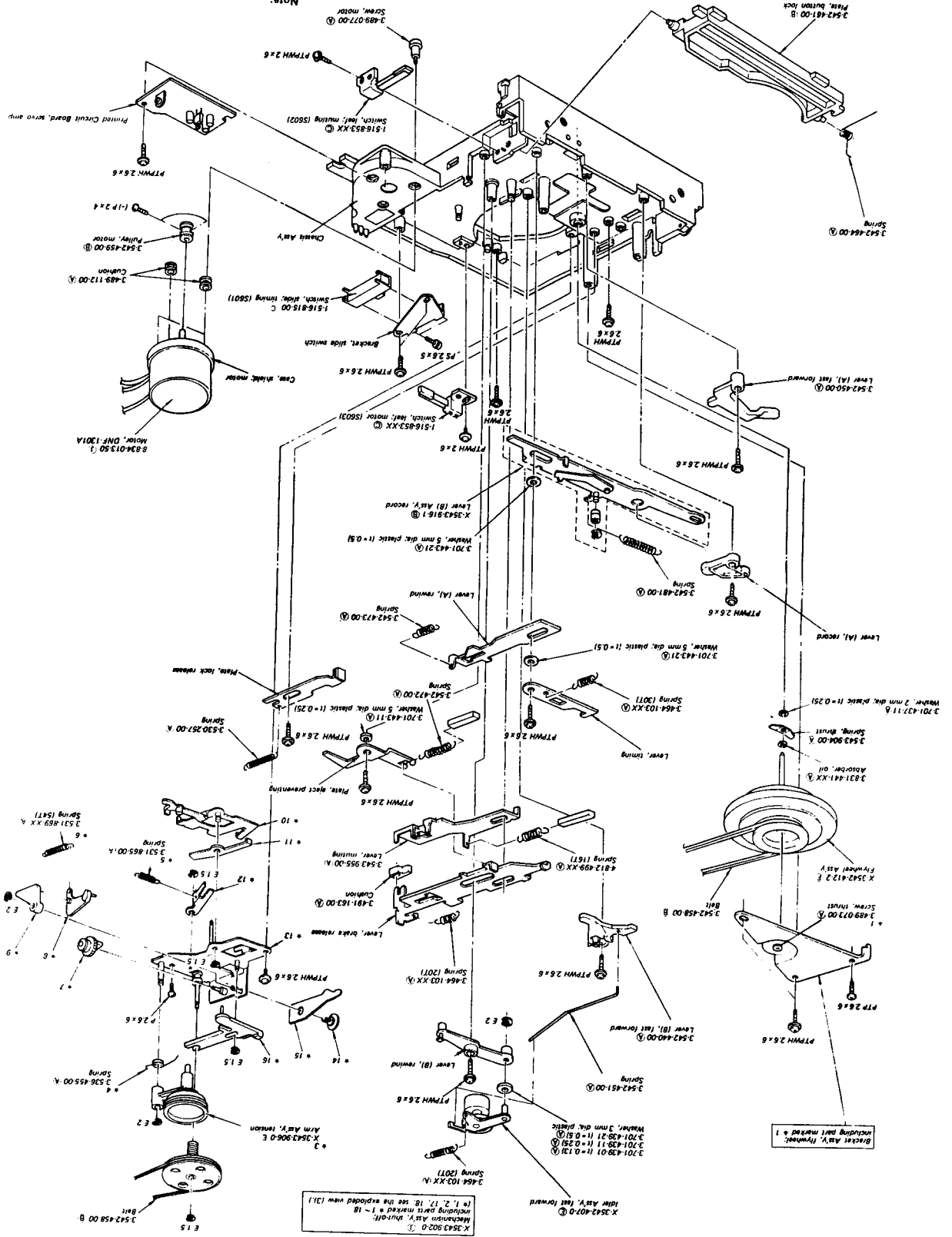


Note:

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

TC-186SD TC-186SD

5-2. EXPLODED VIEW (2)

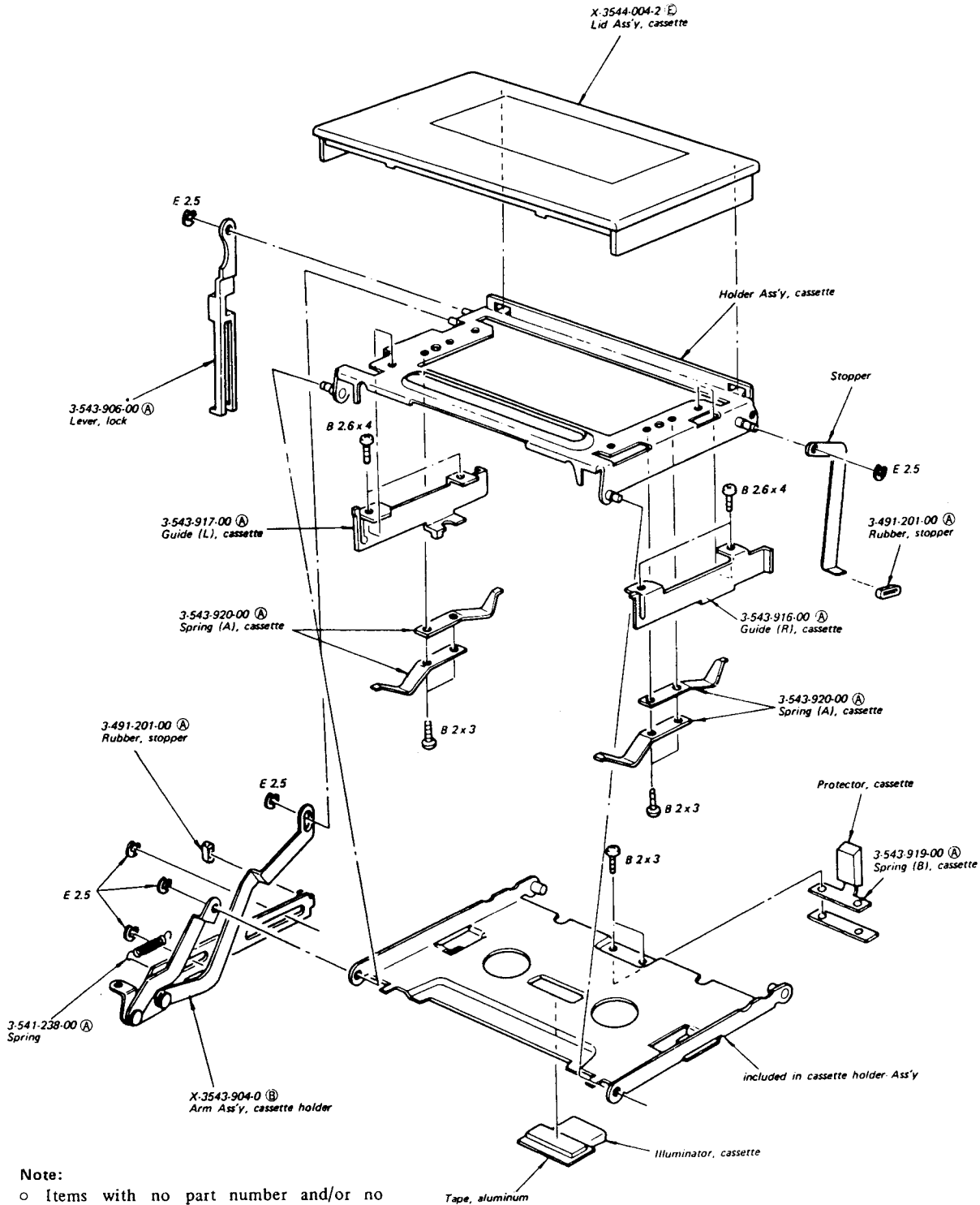


Note:

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

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5-4. EXPLODED VIEW (4)



Note:

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

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SECTION 6 ELECTRICAL PARTS LIST

Note: The circled letters (A) to (Z) are applicable for European models only.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
SEMICONDUCTORS			COILS		
Transistors			L101,201	1-407-212-XX(B)33 mH	microinductor
			L102,202	1-407-240-00 (B)22 mH	variable inductor
Q1	(C)2SA677	(AEP, E model: new type, UK model: all)	L103,203	1-407-211-XX(B)27 mH	microinductor
Q101,201 Q102,202	(B)2SC1361		L191,291	1-407-201-XX(B)3.9 mH	microinductor
Q103,203	(B)2SC1363		L192,292	1-407-199-XX(B)2.7 mH	microinductor
Q104,204	(B)2SC1361		L193,293	1-407-200-XX(B)3.3 mH	microinductor
Q105~108 Q205~208	(B)2SC1363		CAPACITORS		
Q301	(C)2SC1760		All capacitors are in μF and ceramic type unless otherwise indicated. 50 or less working volts are omitted except for electrolytic type. (elect = electrolytic, p = μF)		
Q302	(C)2SC1384		C1	1-121-652-11 (A) 33	35 V elect (AEP, E model: new type, UK model: all)
Q303	(B)2SC1363		C101,201	1-101-455-11 (A) 0.001	
Q601	(B)2SC633A		C102,202	1-121-398-11 (A) 10	25 V elect
Q602	(B)2SC1363		C103,203	1-102-114-11 (A) 470 p	
Q603	(C)2SC1761		C104,204	1-121-916-11 (B) 10	16 V elect
Diodes			C105,205	1-102-074-11 (A) 0.001	
D101,201	(B)1T22A		C106,206	1-102-106-11 (A) 100 p	
D301~308	(B)10E2		C107,207	1-121-413-11 (A) 100	6.3 V elect
D309	(B)EQA01-21R		C108,208	1-105-522-12 (B) 0.056	mylar
D310	(B)1S1555		C109,209	1-102-956-11 (A) 15 p	
IC			C110,210	1-121-916-11 (B) 10	16 V elect
IC101,201	(1)CX-064		C111,211 C112,212	1-121-398-11 (A) 10	25 V elect
Thermistor			C113	1-121-726-11 (A) 0.47	50 V elect
Th601	1-800-200-00 (B) Thermistor		C114,214	1-105-509-12 (A) 0.0047	mylar
			C115,215	1-121-391-11 (A) 1	50 V elect
			C116,216	1-123-050-11 (B) 2.2	50 V elect
			C117,217	1-101-889-11 (A) 68 p	
			C118,218	1-105-508-12 (A) 0.0039	mylar
			C119,219	1-129-794-11 (B) 0.0033	100 V film
			C120,220	1-105-505-12 (A) 0.0022	mylar

Note: The circled letters (A to Z) are applicable for European models only.

Ref. No.	Part No.	Description
C121,221	1-121-391-11 (A) 1	50 V elect
C122,222	1-102-074-11 (A) 0.001	
C123,223	1-121-479-11 (A) 22	16 V elect
C124,224	1-102-974-11 (A) 82 p	
C125~127 C225~227)	1-121-651-11 (A) 10	16 V elect
C128,228 C129,229)	1-121-726-11 (A) 0.47	50 V elect
C130,230	1-121-392-11 (A) 3.3	25 V elect
C131,231	1-121-391-11 (A) 1	50 V elect
C132,232	1-105-525-12 (B) 0.1	mylar
C133,233	1-131-214-11 (B) 0.68	35 V tantalum
C134,234	1-105-525-12 (B) 0.1	mylar
C135,235	1-121-352-11 (A) 47	10 V elect
C136,236	1-105-519-12 (A) 0.033	mylar
C137,237	1-121-986-11 (A) 2.2	50 V elect
C138,238	1-105-516-12 (A) 0.018	mylar
C139,239	1-105-525-12 (B) 0.1	mylar
C140,240	1-105-517-12 (A) 0.022	mylar
C141,241	1-121-404-11 (A) 33	25 V elect
C142,242	1-121-651-11 (A) 10	16 V elect
C143,243	1-121-479-11 (A) 22	16 V elect
C144,244	1-121-398-11 (A) 10	25 V elect
C145,245	1-105-847-12 (B) 0.15	mylar
C146,246	1-121-392-11 (A) 3.3	25 V elect
C147,247	1-121-391-11 (A) 1	50 V elect
C148,248	1-121-651-11 (A) 10	16 V elect
C154,254	1-141-010-XX (B) 20~120 p	trimmer
C155,255	1-107-037-11 (A) 82 p	500 V silvered mica
C156,256	1-102-113-11 (A) 390 p	
C191,291 C192,292)	1-105-519-12 (A) 0.033	mylar
C193,293	1-105-525-12 (B) 0.1	mylar
C194,294	1-105-522-12 (B) 0.056	mylar
C195,295	1-105-518-12 (A) 0.027	mylar
C301	1-121-361-11 (B) 470	35 V elect
C302,303	1-121-657-11 (C) 1000	25 V elect
C304	1-121-736-11 (B) 1000	10 V elect

Ref. No.	Part No.	Description
C305	1-131-216-11 (B) 1.5	35 V tantalum
C306	1-108-804-12 (A) 0.01	mylar
C307	1-108-807-12 (A) 0.018	mylar
C308	1-129-710-11 (A) 4700 p	630 V film
C309	1-121-395-11 (A) 4.7	25 V elect
C310	1-121-419-11 (B) 220	6.3 V elect
C601	1-121-352-11 (A) 47	10 V elect
C602	1-121-471-11 (A) 10	16 V elect
C603	1-121-413-11 (A) 100	6.3 V elect
C604	1-121-414-11 (A) 100	10 V elect

RESISTORS

All resistors are in Ω . Regular-type $\frac{1}{4}$ W carbon and composition resistors are omitted. Check the schematic diagram for the resistance values. (k = 1,000)

R311	1-244-821-11 (A) 6.8	$\frac{1}{2}$ W carbon
R391	1-244-853-11 (A) 150	$\frac{1}{2}$ W carbon
R392	1-244-851-11 (A) 120	$\frac{1}{2}$ W carbon
R393	1-244-859-11 (A) 270	$\frac{1}{2}$ W carbon
R117,217	1-224-645-XX (B) 10 k, adjustable	
R121,221	1-224-600-00 (E) 20 k, variable; REC LEVEL	
R144,244	1-224-644-XX (B) 4.7 k, adjustable	
R163,263	1-224-647-XX (B) 47 k, adjustable	
R602	1-224-643-XX (B) 2 k, adjustable	

SWITCHES

S1,2	1-514-976-XX (C) Slide, record/playback
S3	1-516-817-00 (C) Lever-slide, DOLBY NR
S4	1-516-620-00 (E) Lever-slide, EQ
S5	1-516-817-00 (C) Lever-slide, LIMITER
S6	1-516-620-00 (E) Lever-slide, BIAS
S7	1-516-777-XX (B) Slide, SELECTOR

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Note: The circled letters (A) to (Z) are applicable for European models only.

Ref. No.	Part No.	Description
S8	1-516-697-00 (E)	Pushbutton, POWER (E Model)
	1-516-855-00 (E)	Pushbutton, POWER (AEP, UK Model)
S601	1-516-815-00 (C)	Slide, timing
S602,603	1-516-853-XX (C)	Leaf, muting, motor

TRANSFORMERS

T101,201	1-427-299-00 (C)	Output
T301	1-442-170-00 (L)	Power (AEP, UK Model)
	1-442-467-XX (M)	Power (E Model)
T302	1-433-132-11 (C)	Bias Osc

JACKS

CNJ101,201	1-507-378-XX (B)	Phone, 2-p; LINE IN, LINE OUT
CNJ102,202		
CNJ301	1-509-359-00 (B)	Connector, REC/PB
J101,201	1-507-421-00 (C)	Mini, MIC
J301	1-507-439-00 (E)	Binaural, HEADPHONES

MISCELLANEOUS

CP301	1-101-534-31 (C)	Encapsulated Component (AEP, UK Model)
	1-231-057-31 (B)	Encapsulated Component (E Model)
EH301	8-825-506-00 (C)	Head, erase; EF135-36
F1	1-532-079-00 (B)	Fuse, 160 mA (AEP, UK Model)
	1-532-425-00 (B)	Fuse, 160 mA (E Model)

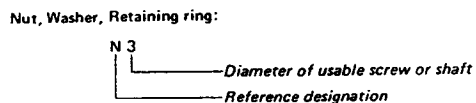
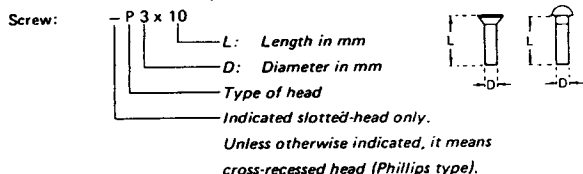
Ref. No.	Part No.	Description
F2	1-532-074-00 (B)	Fuse, 200 mA (AEP, UK Model)
F3	1-532-284-00 (B)	Fuse, 630 mA (AEP, UK Model)
M	8-834-013-50 (J)	Motor, DNF-1301A
ME101,201	1-520-241-00 (H)	Meter, VU
PL1~4	1-518-115-XX (B)	Lamp, 6 V 35 mA; meter, cassette, REC
RPH101,201	8-825-584-00 (M)	Head, record/playback; PF145-3602A
VS301	1-509-427-XX (C)	Voltage Selector (E Model)
	1-509-482-00 (E)	Voltage Selector (AEP, UK Model)
	1-509-546-00 (D)	AC Connector, 3 p (AEP, UK Model)
	1-533-102-XX (B)	Holder, fuse (E Model)
	1-534-487-XX (C)	Cord, power (E Model)
	1-548-091-XX (E)	Counter, tape













ACCESSORIES














X-3701-018-2 (A)	Tips Ass'y, cleaning
1-534-049-31 (E)	Cord, connection; RK-74
1-534-819-00 (G)	Cord, power
3-780-826-11 (E)	Manual, instruction (E, AEP Model)
3-780-826-12 (E)	Manual, instruction (UK Model)
3-793-010-20 (A)	Booklet, tape talk
3-793-828-11 (A)	Card, caution; cassette
8-890-060-00 (E)	Tape, cassette; Fe-Cr; C-60

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HARDWARE NOMENCLATURE



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

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

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SUPPLEMENT

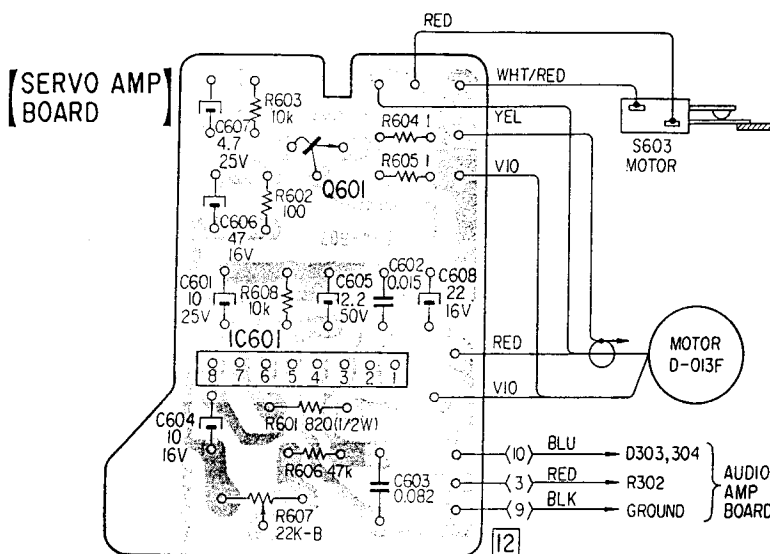
This supplement updates the service manual to include the production change.

File this supplement with the service manual.

US Model
Canadian Model
AEP Model
UK Model
E Model
PX Model

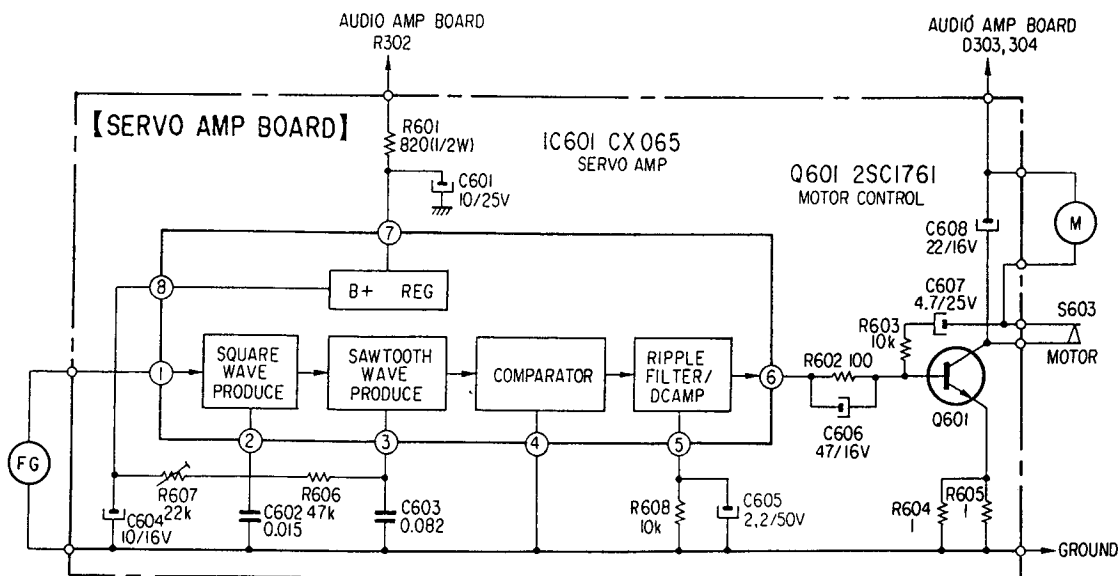
No.2
October, 1979

· MOUNTING DIAGRAM (Page.10)



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· SCHEMATIC DIAGRAM (Page.13,14)



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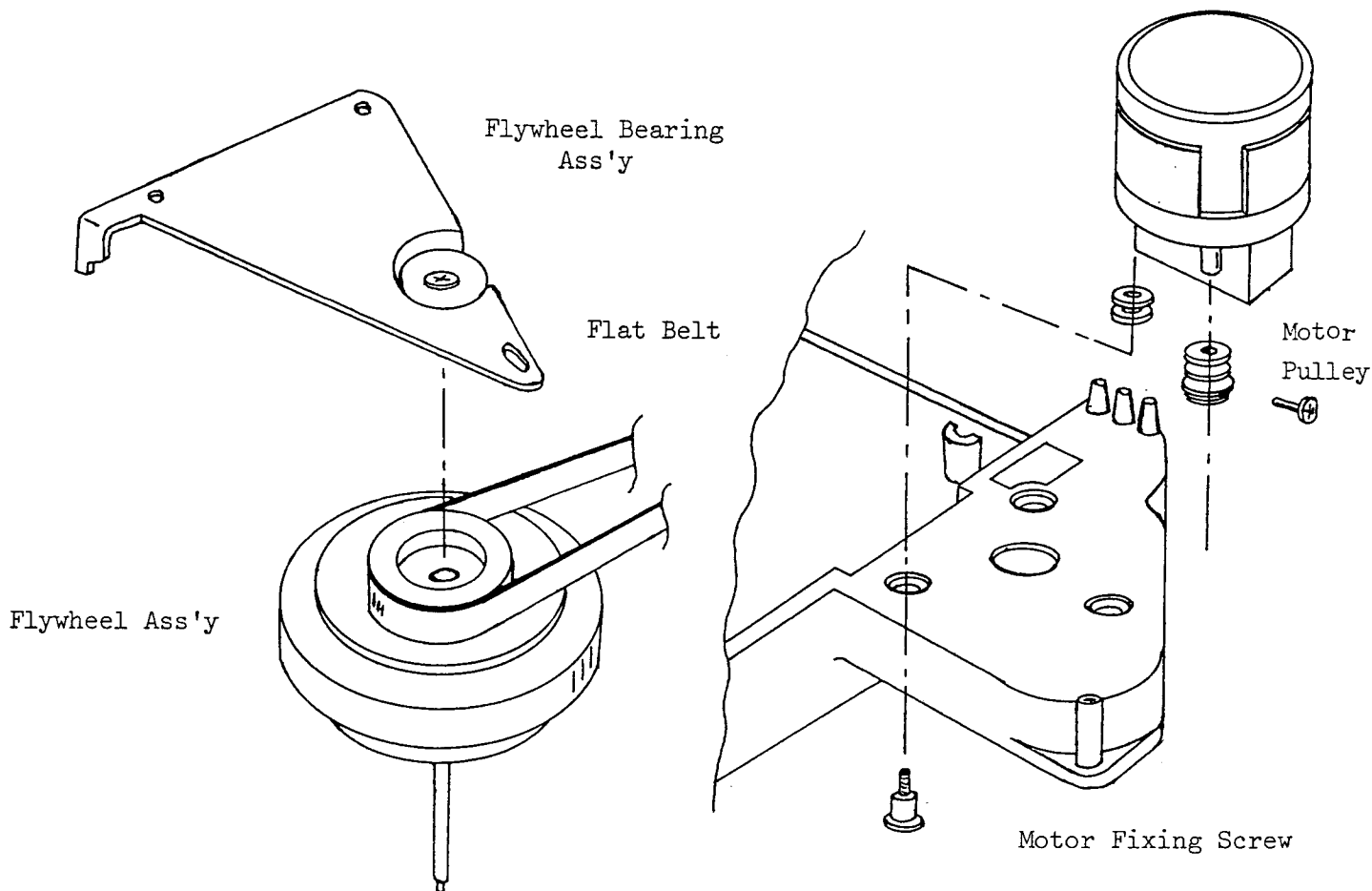
Technical Publication
 Ascot Road, Feltham, Middlesex
 Telephone Ashford (Middx) 50021
 Telex 934910

Model TC186SD, TC204SD, TC206SD

Date March 1977 Ref. TCK 0206

Subject

PRODUCTION CHANGE



Later production of the above models incorporates the following production change:-

COMPONENT	FORMER	NEW
Capstan Belt	3-542-458-00	3-543-978-00
Flywheel Ass'y	X-3542-412-2	X-3543-920-0
Flywheel Bearing Ass'y	X-3542-414-0	X-3543-921-0
Motor Pulley	3-542-459-00	3-543-975-00
Collar	3-489-111-00	-
Oil Remover	3-831-441-XX	3-515-128-00
Motor Fixing Screw	-	3-543-979-00

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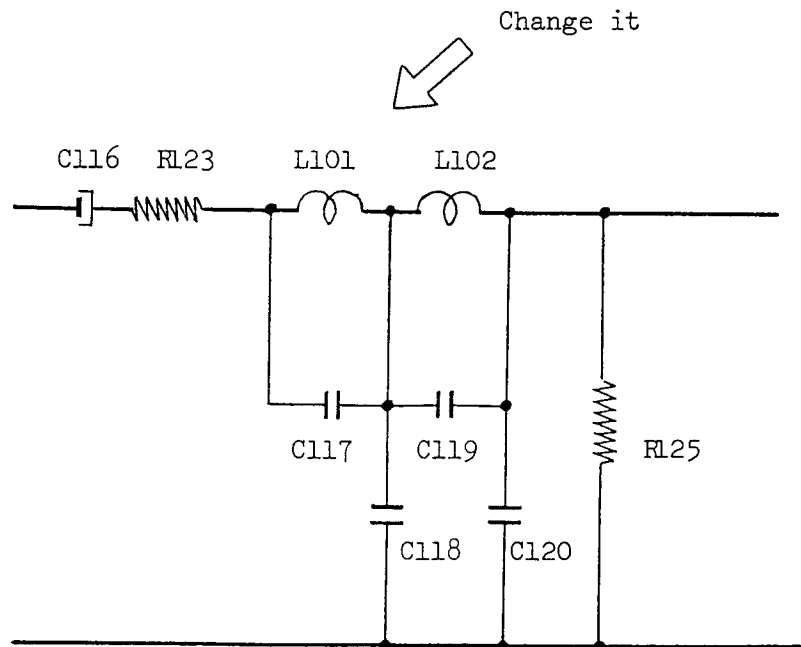
Model TC-186 SD
 Date March 1977 Ref. TCK 0204

Subject

SERVO NOISE

If servo noise occurs on the left channel in recorders fitted with a I.C. servo board, it can be reduced by changing L101 to a screened type as indicated below.

	Part Name	Part Code
Former	LF - 5	1-407-510-00
	Micro-inductor	or 1-407-212-XX
New	Micro-inductor	1-407-879-00



Technical Publication
 Ascot Road, Feltham, Middlesex
 Telephone Ashford (Middx) 50021
 Telex 934910

Model **TC-186 SD**

Date **March 1977** Ref. **TCK 0203**

Subject

NEW SERVO BOARD

Later production of the above model incorporates a new servo board which is shown below.

