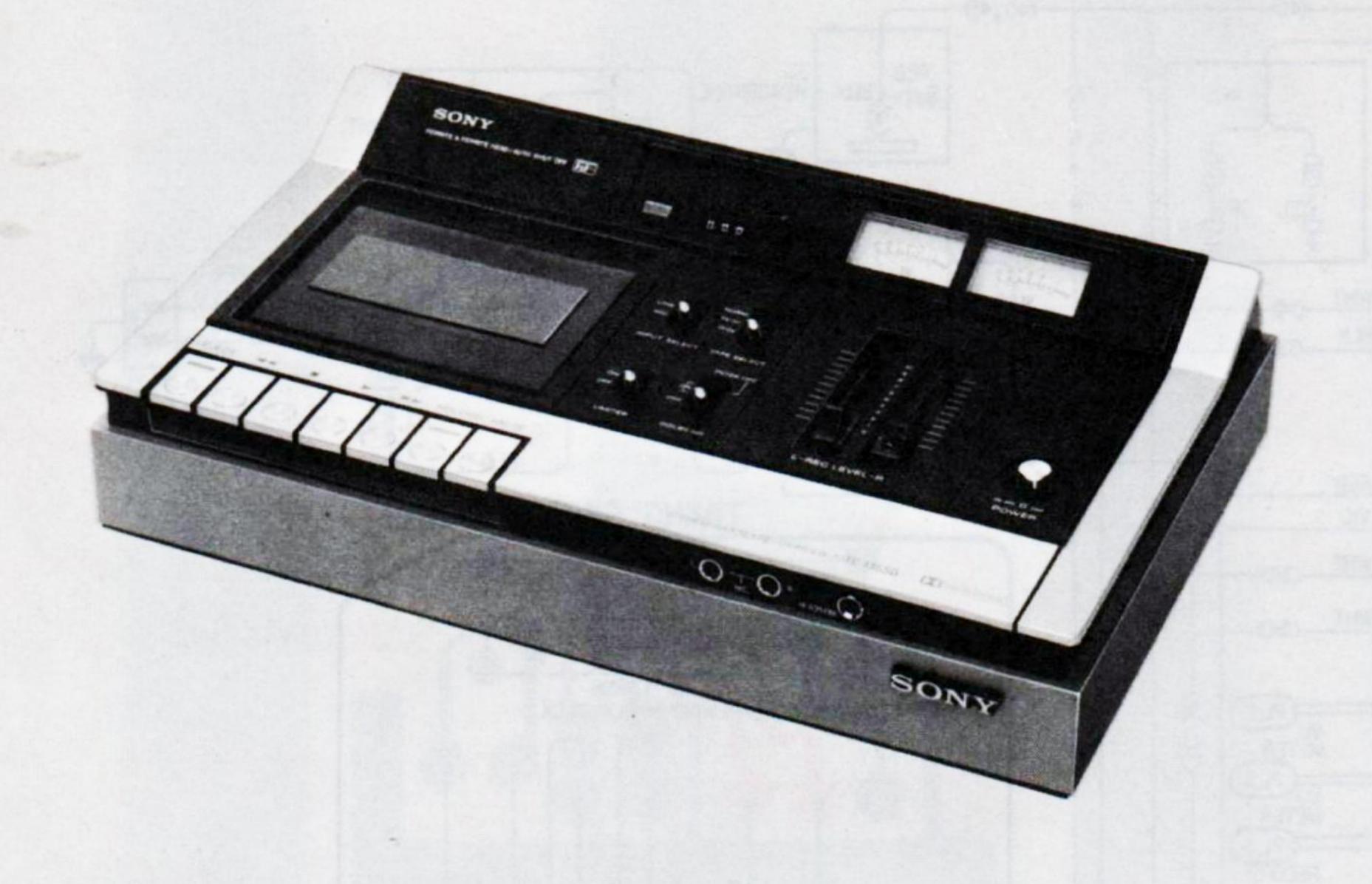
UK Model AEP Model



STEREO CASSETTE-CORDER

SPECIFICATIONS

Power Requirements:

120 Vac, 60 Hz (USA and Canada Model)

110, 127, 220, 240 V ac, 50/60 Hz

(AEP and UK Model)

Power Consumption: 7 W

> 4-track, 2-channel stereo Track System:

4.8 cm/s (1 1/8 ips) Tape Speed:

DOLBY NR OFF Frequency Response:

> $30 \sim 13,000$ Hz (NAB) NORMAL: $40 \sim 11,000 \text{ Hz (DIN)}$

Fe-Cr, CrO_2 : 30 ~ 15,000 Hz (NAB) $50 \sim 14,000 \text{ Hz } \pm 3 \text{ dB } (NAB)$

 $40 \sim 14,000 \text{ Hz (DIN)}$

0.1 % (RMS) weighted (NAB) Wow and Flutter:

±0.2% (DIN)

DOLBY NR OFF Signal-to-Noise Ratio:

> NORMAL: 52 dB at peak level (NAB)

> 54 dB at peak level (NAB) Fe-Cr:

> > 58 dB (DIN)

54 dB at peak level (NAB) CrO₂:

DOLBY NR ON

Improved: 5 dB at 1 kHz

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

105 kHz Record Bias Frequency:

> MIC 2 Inputs:

> > for low impedance microphone

Sensitivity: 0.19 mV (-72 dB)

LINE IN 2 Impedance: 100 kΩ

Sensitivity: 62mV (-22dB)

LINE OUT 2 Outputs:

load impedance:

more than $10 \,\mathrm{k}\Omega$ 0.44 V (-5 dB) Normal level:

with $100 \, k\Omega$ load (LINE OUT maximum)

HEADPHONE 1

load impedance: Ω 8

REC/PB 1 Other Jack:

> Input impedance: less than $10 k\Omega$ Output impedance: less than $10 \text{ k}\Omega$

390 (w) x 110 (h) x 250 (d) mm Dimensions:

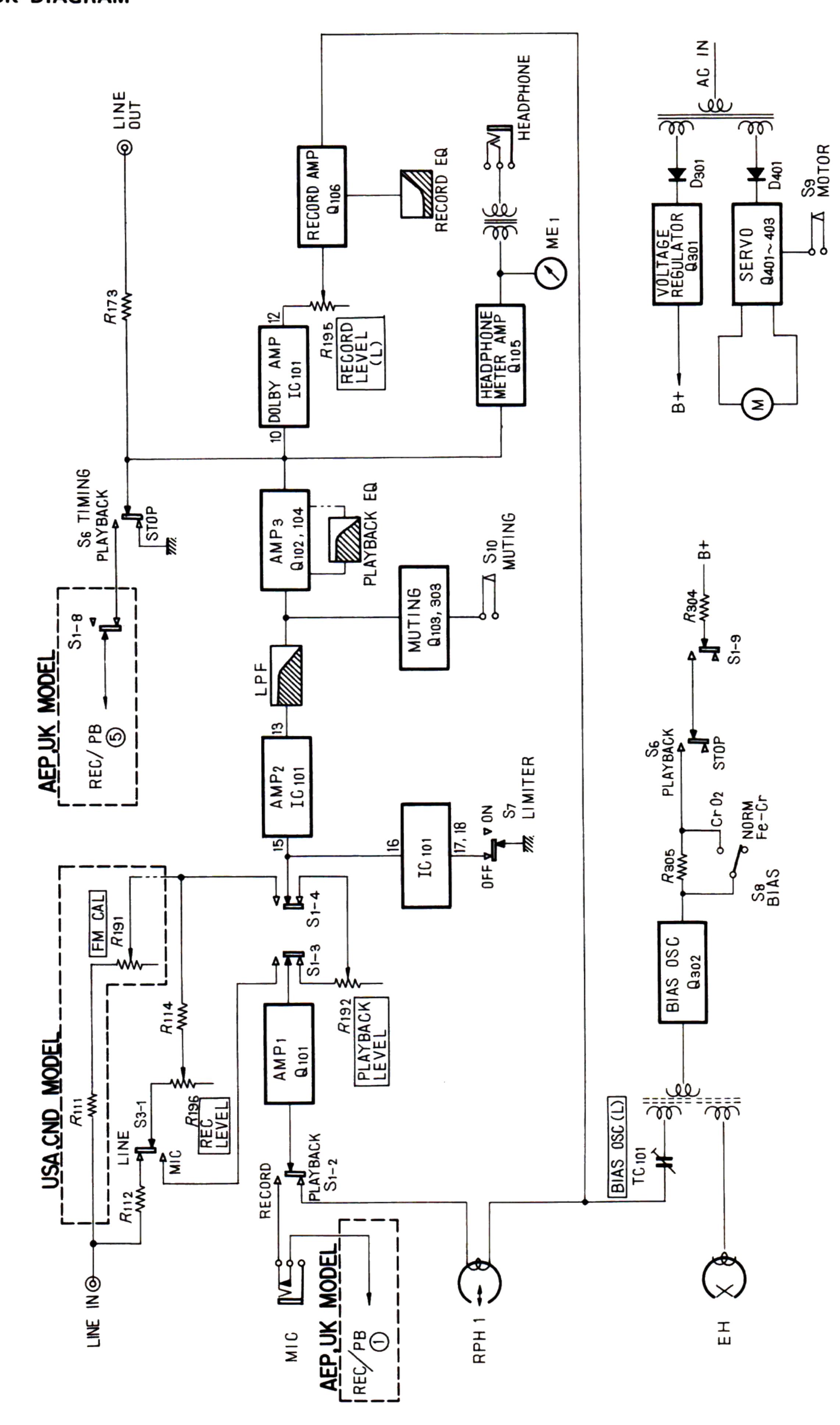
 $15\frac{3}{8}$ (w) x $4\frac{1}{4}$ (h) x $9\frac{3}{4}$ (d) inches

Weight: 3.6 kg, 8 lb 3 oz

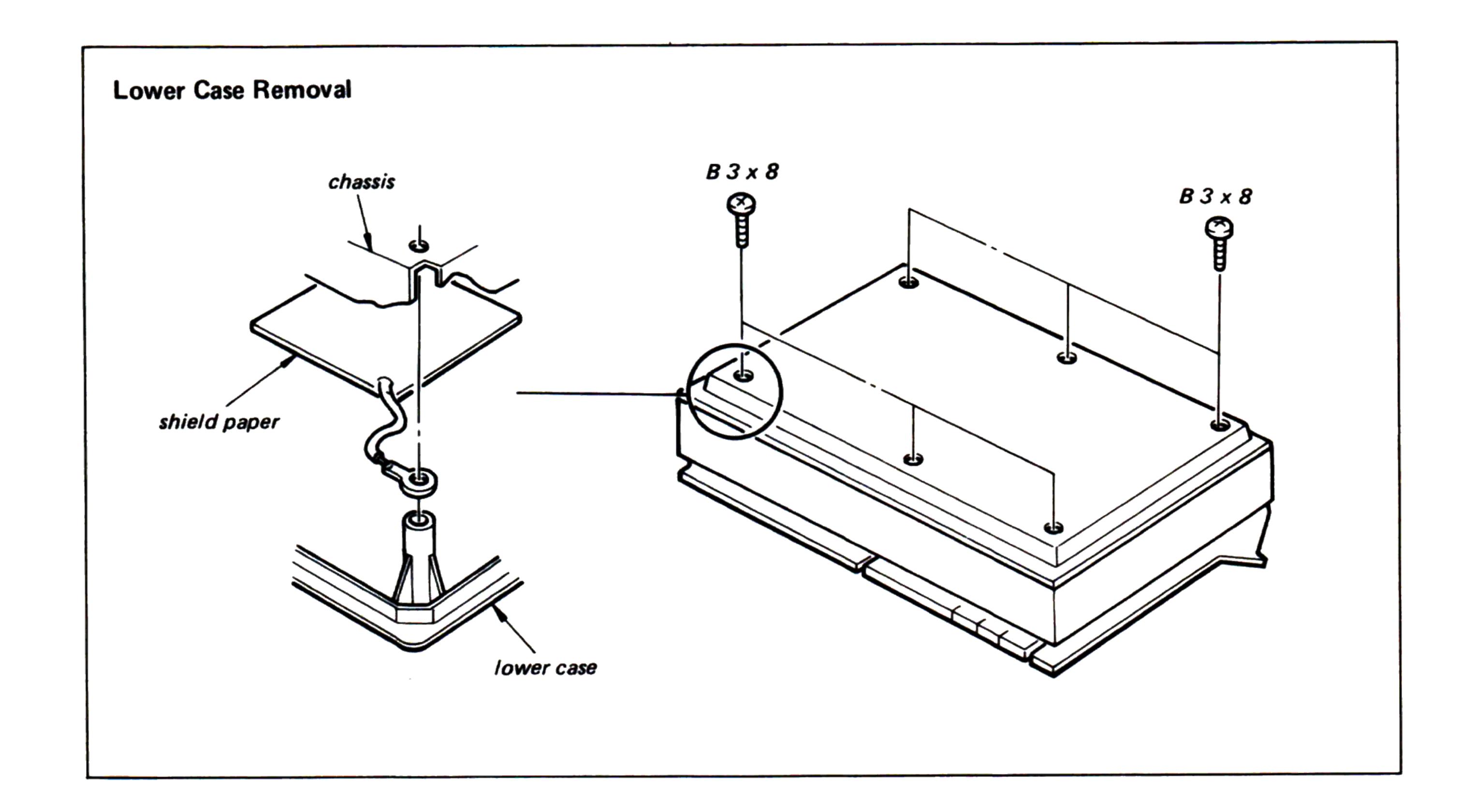


SECTION 1 OUTLINE

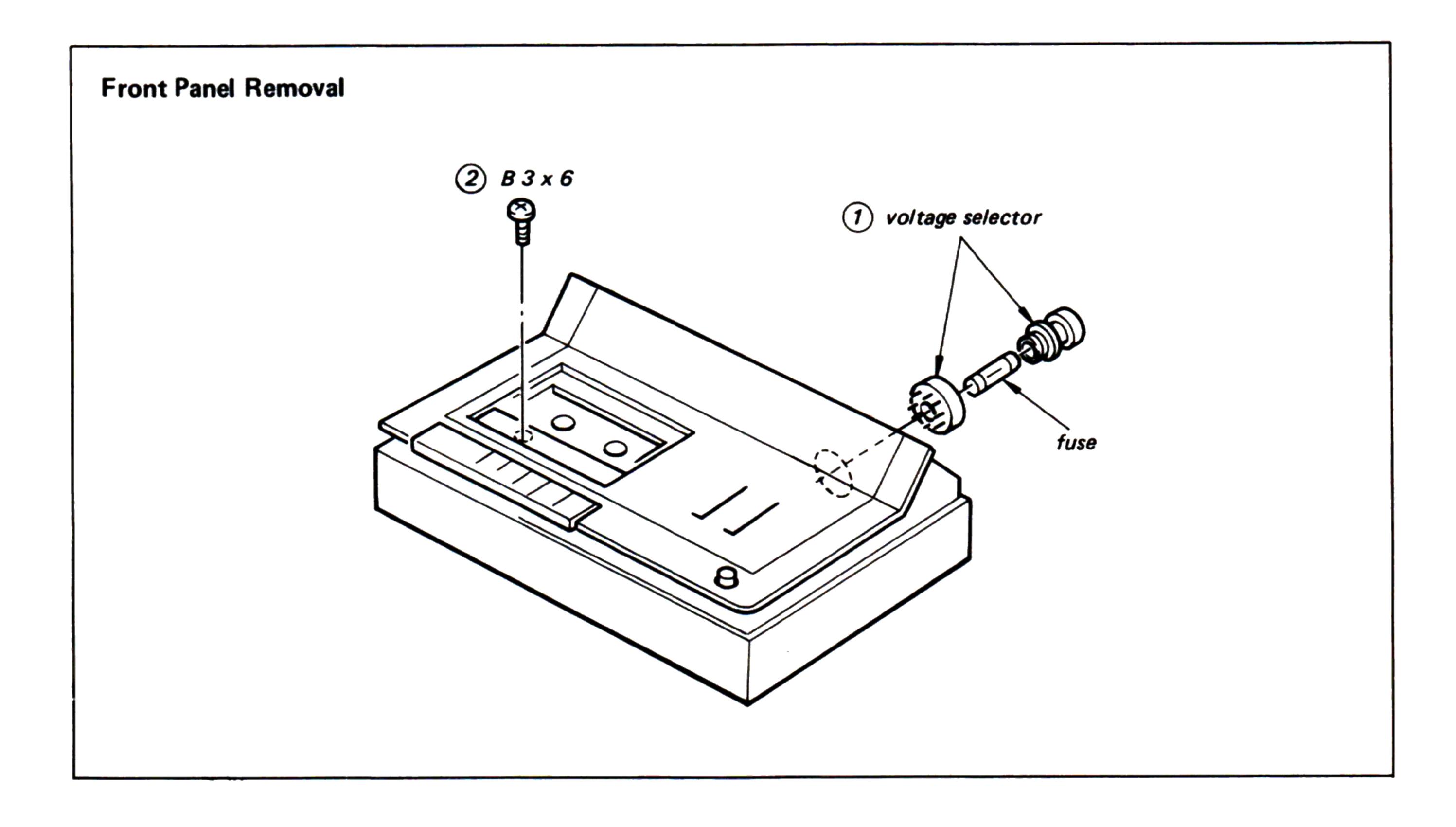
1-1. BLOCK DIAGRAM



1-2. DISASSEMBLY





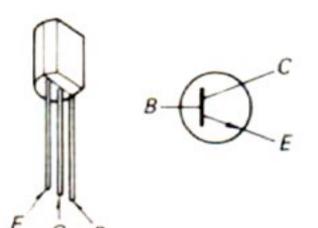


SECTION 2 DIAGRAMS

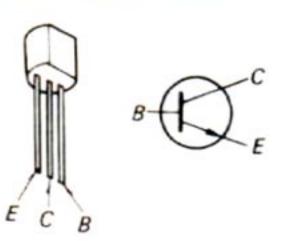
2-1. MOUNTING DIAGRAM

Conductor Side —

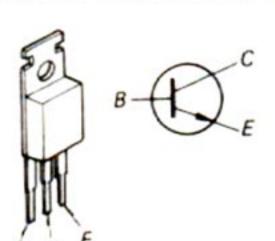
Q101, 201: 2SC1362 Q103 \sim 106 \cdot 2SC945Q Q203 \sim 206 Q303: 2SC945 Q401, 402: 2SC1364



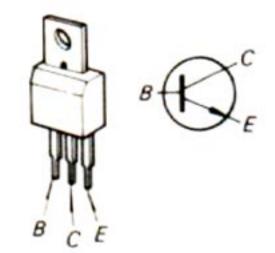
Q102, 202: 2SC900E Q302: 2SC1383



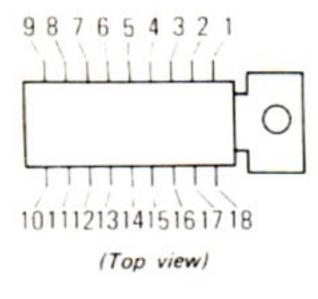
Q301: 2SC1173Y



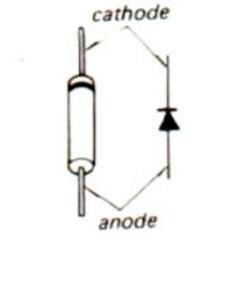
Q403: 2SC1761



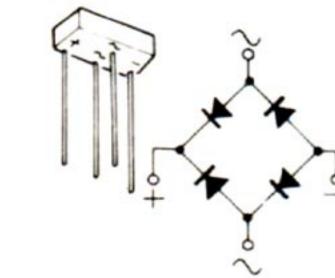
IC101, 201: CX064



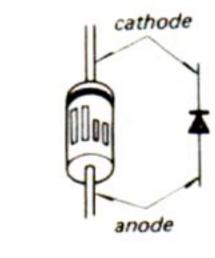
D101, 201: 1T22 D302: 1T40

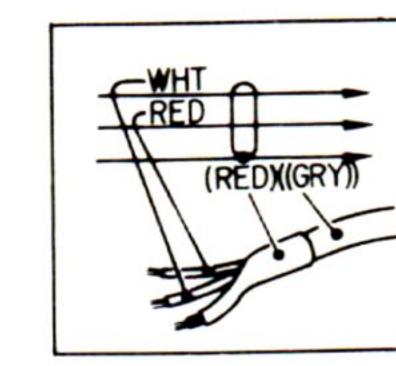


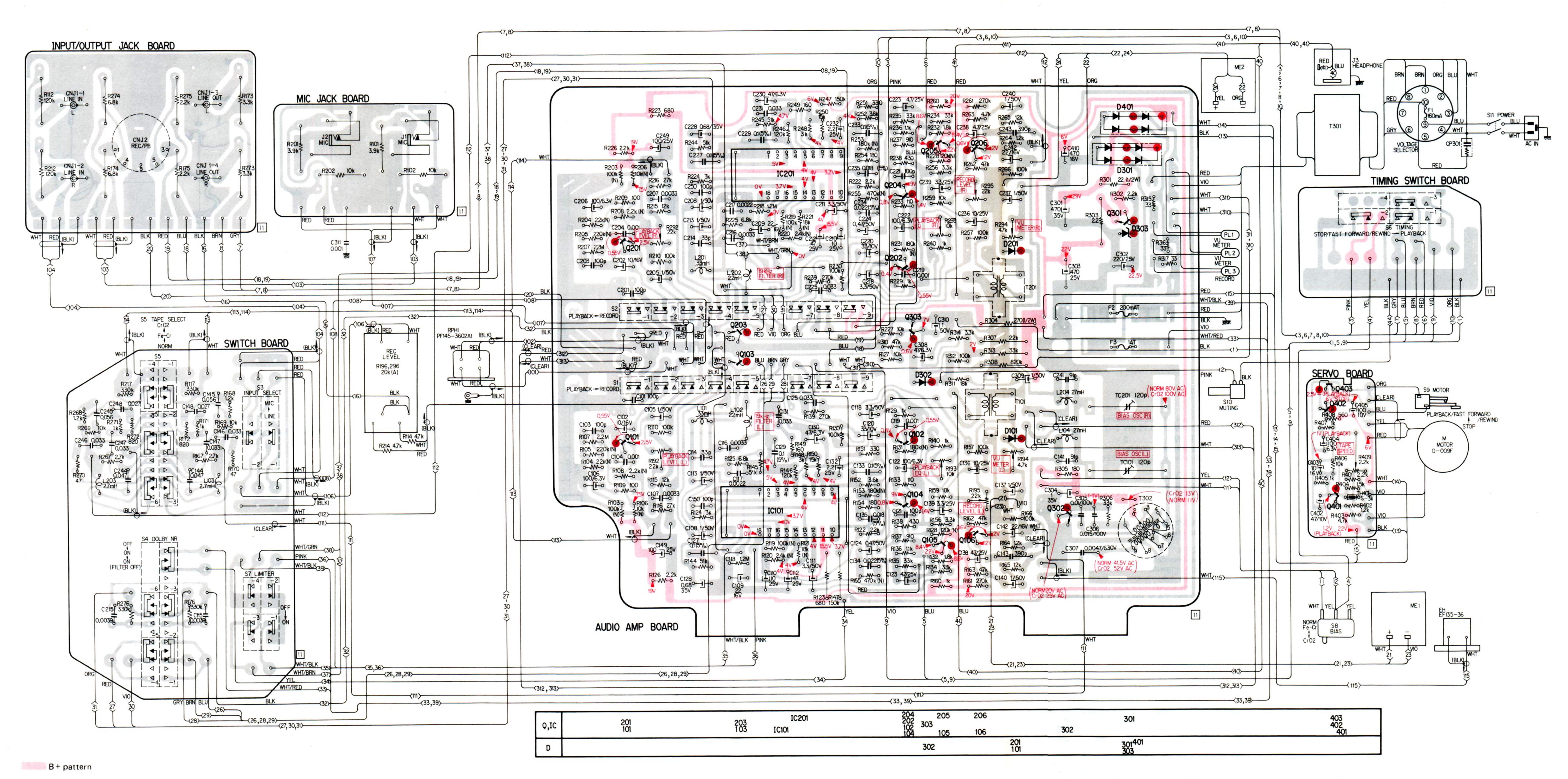
D301, 401: SIRB10



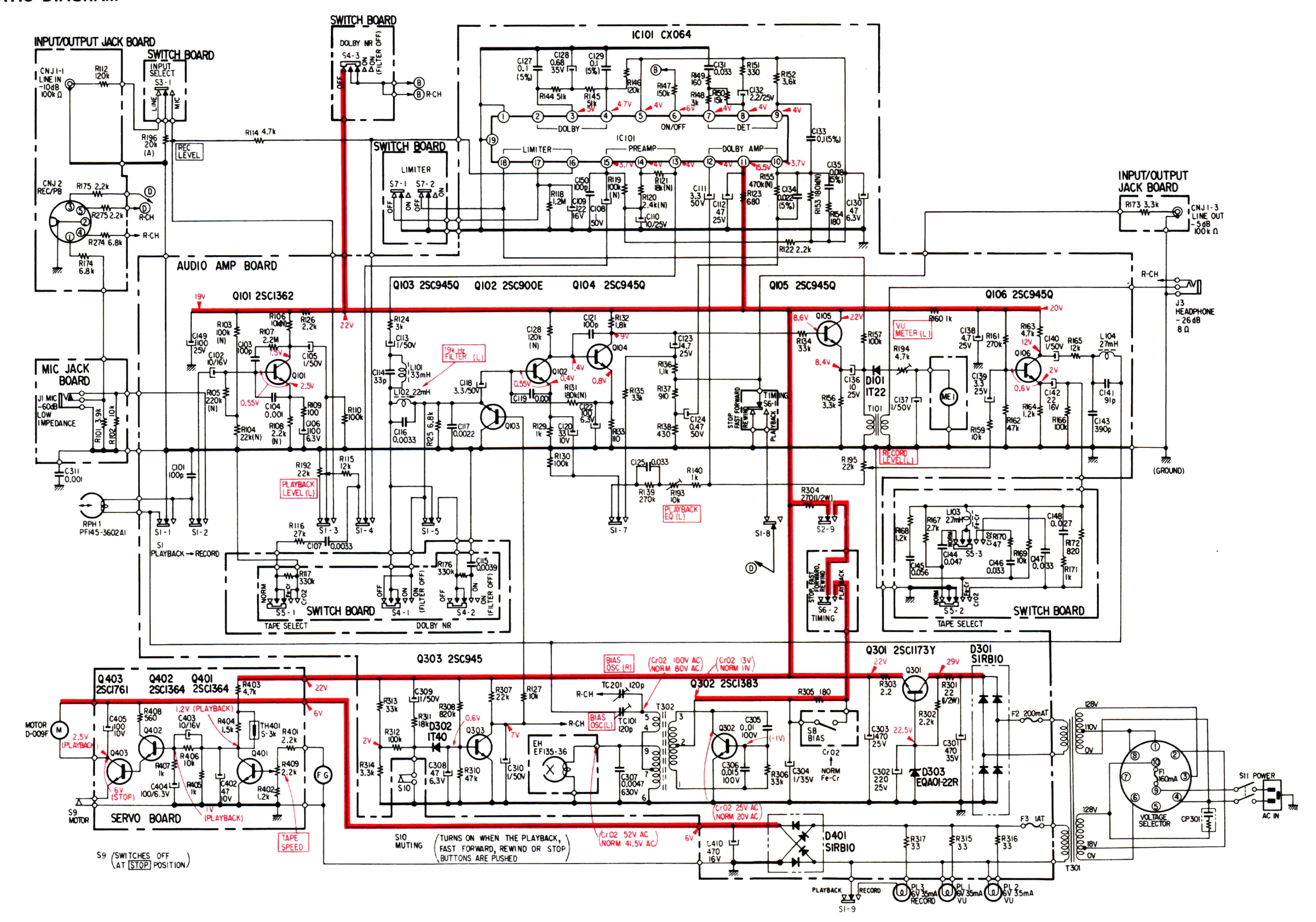
D303: EQA01-22R







2-2. SCHEMATIC DIAGRAM



Note:

• All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. $p = \mu \mu F$.

$$\left\{
 \begin{array}{l}
 \text{COOO} \\
 \text{O.OOO} \\
 \text{O.OOO}
 \end{array}
 \right\} =
 \left\{
 \begin{array}{l}
 \text{COOO} \\
 \text{O.OOO} \\
 \text{(\pm 0 \%)}
 \end{array}
 \right\}$$

- All resistors are in Ω , ¼W, unless otherwise noted. k = 1,000 M = 1,000 k
- R-CH section circuit are omitted from the diagram.
 Ref. No. of parts used in R-CH are in 200s.
- indicates chassis ground.

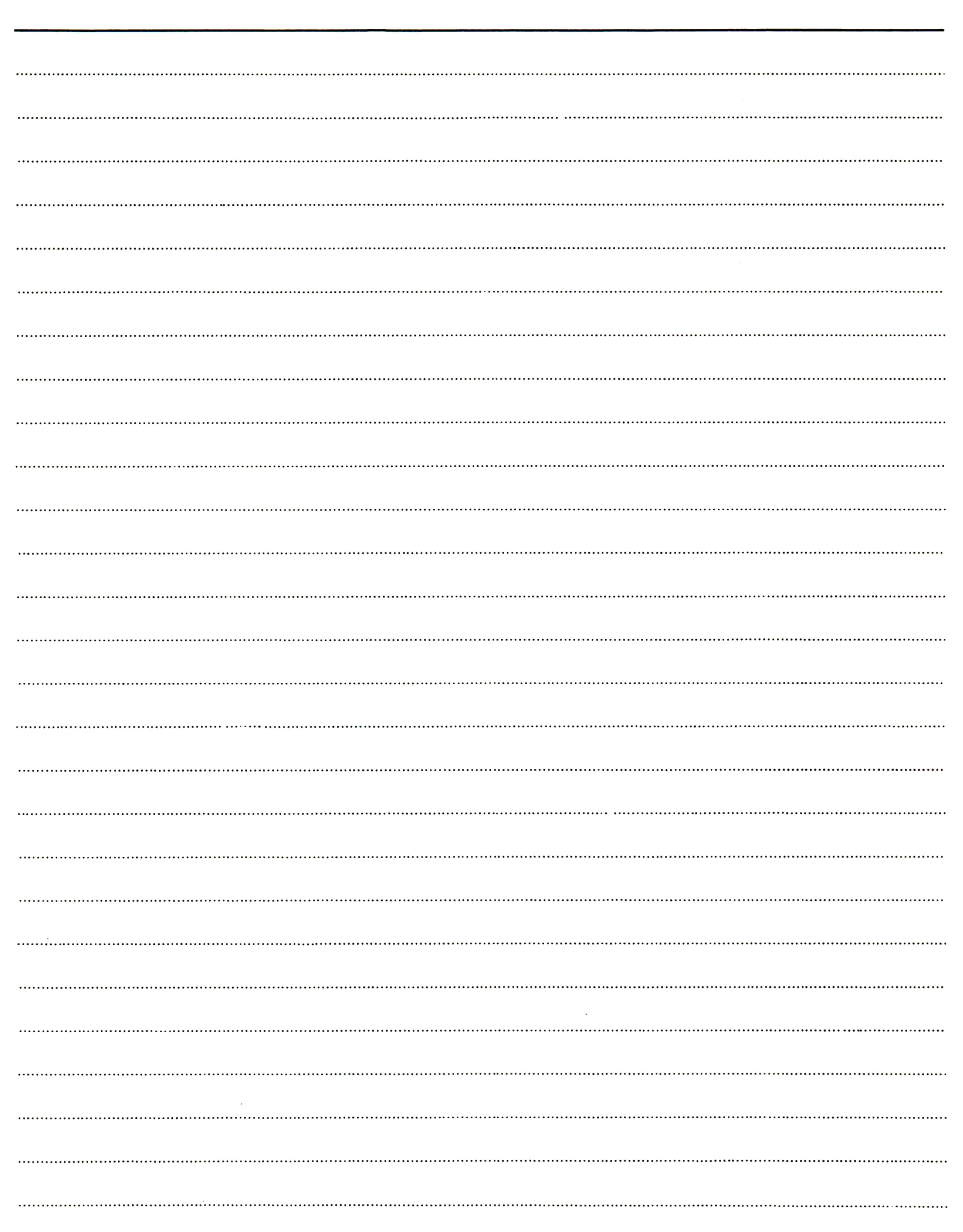
- (N) indicates a low-noise resistor.
- indicates B + circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20 $k\Omega/V$). Readings in () are in record mode.
- Voltage variations may be noted due to normal production tolerances.
- AC voltage readings on bias oscillator circuit are taken with a VTVM.
- Voltage between base and emitter are measured with 2.5 V range.

Switch Mode:

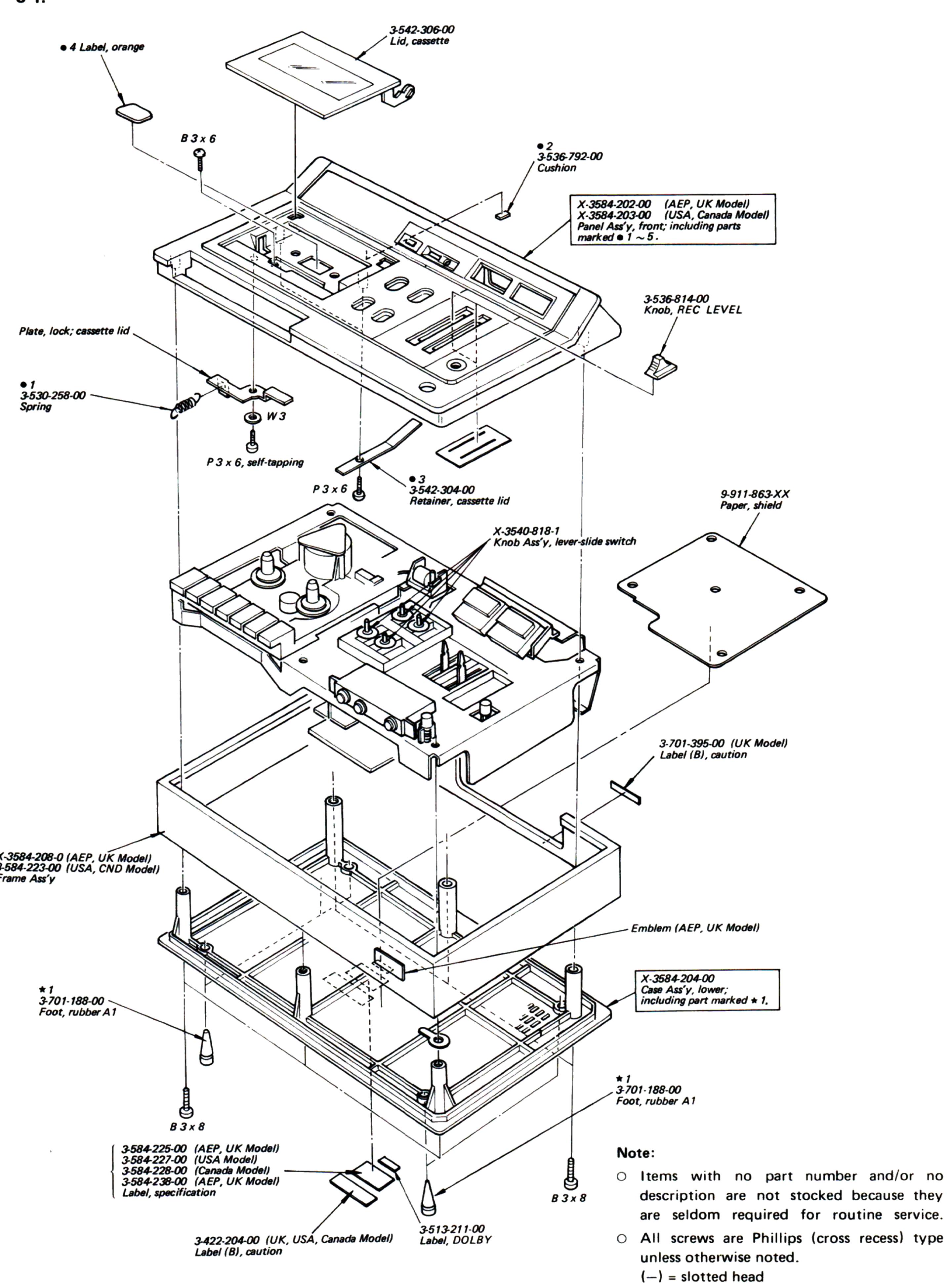
Ref. No.	Switch	Position
S1, 2	RECORD/playback	playback
S3	INPUT SELECT	LINE
S4	DOLBY NR	OFF
S5	TAPE SELECT	NORM
S6	timing	OFF
S7	LIMITER	OFF
S8	bias	NORM, Fe-Cr
S9	motor	OFF
S10	muting	ON
S11	POWER	OFF

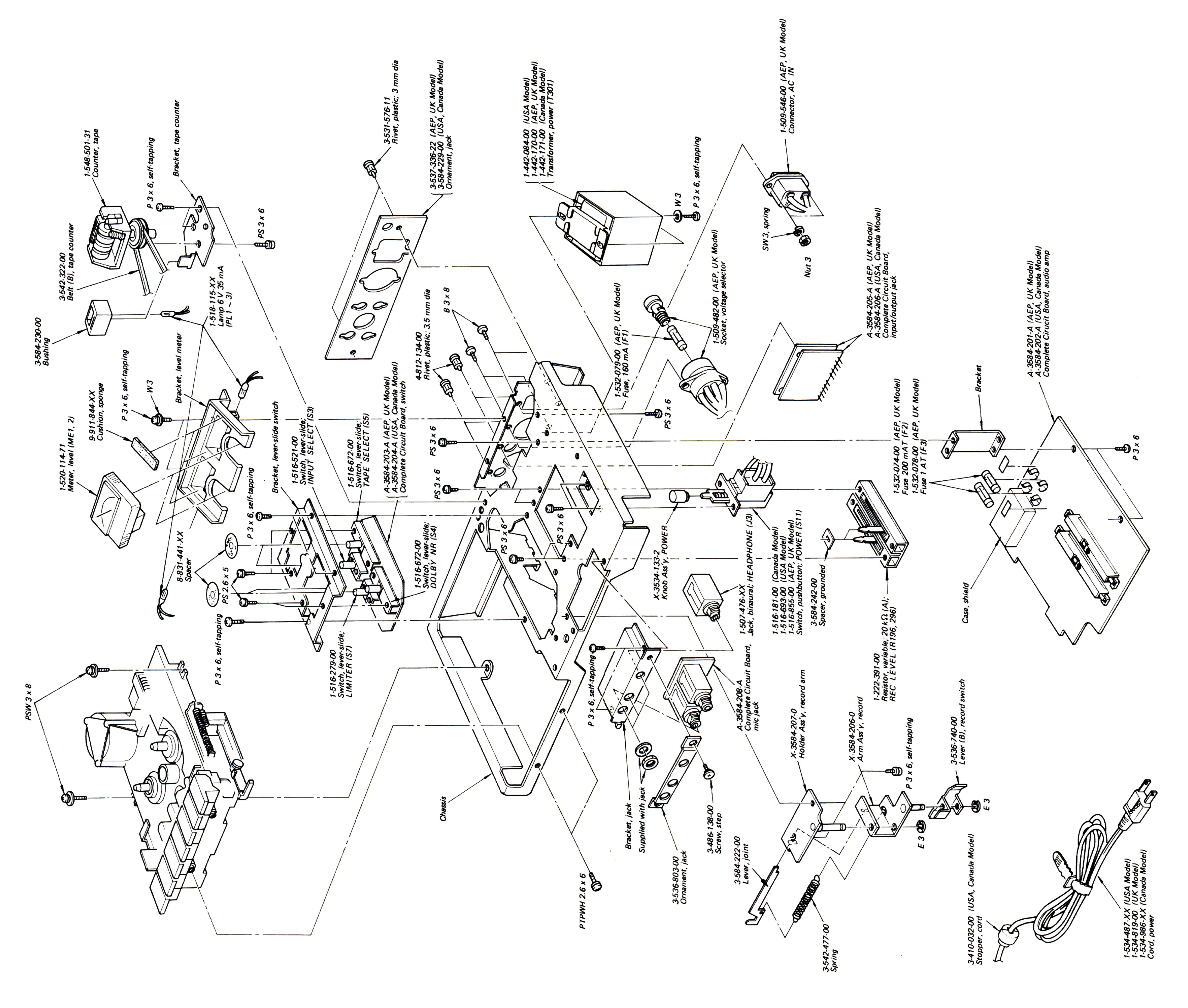
SECTION 3 EXPLODED VIEWS

MEMO



3-1

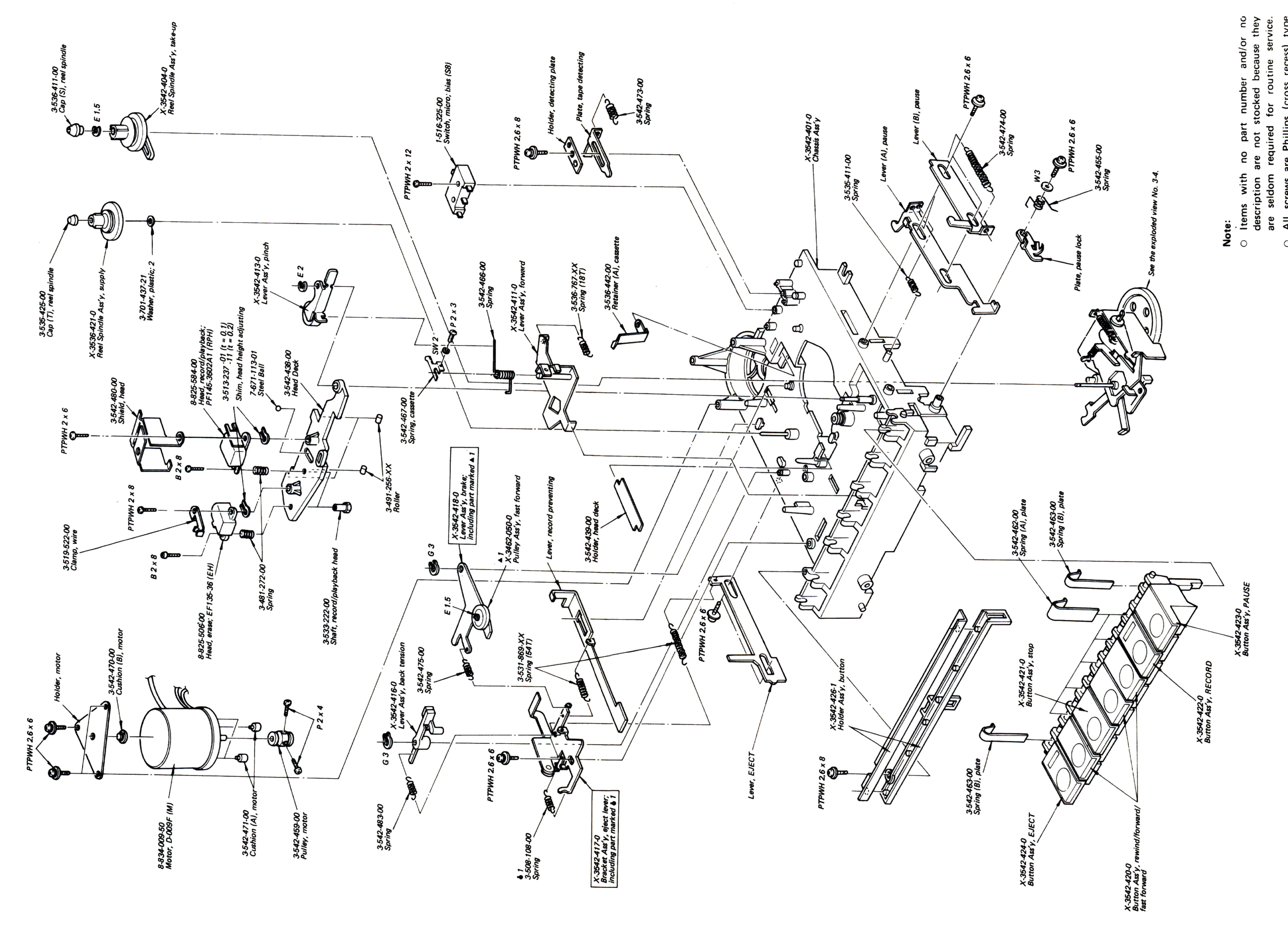


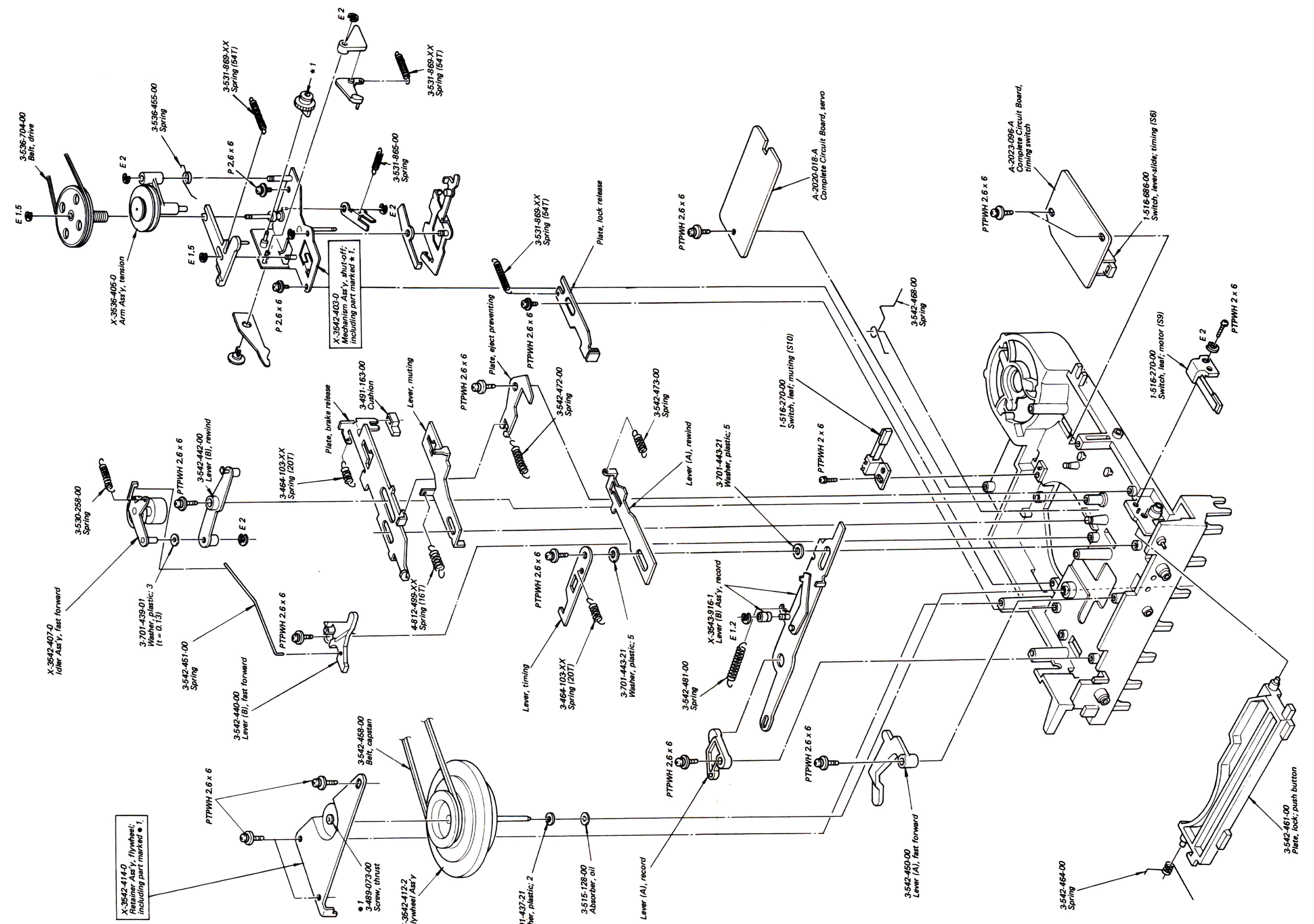


Jote:

- Items with no part number and/or no description are not stocked because they are seldom required for routine service.
 - are seldom required for routine serving All screws are Phillips (cross recess) ty unless otherwise noted.

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SECTION 4 PARTS LIST

4-1. ELECTRICAL PARTS

Ref. No.	Part No.	Description	Ref. No.	Part No.	Descrip	tion			
	COMPLETE C	IRCUIT BOARDS	TRANSFORMERS						
	A-2020-018-A	Servo .	T101, 201	1-427-299-00	Output	Output			
	A-2023-096-A	Timing Switch	T301	1-442-084-00	Power (U	JSA Mode	el)		
	A-3584-201-A	Audio Amp (AEP, UK Model)	T301	1-442-170-00	Power (A	AEP, UK I	Model)		
	A-3584-202-A	Audio Amp (USA, Canada Model)	T301	1-442-171-00	Power (C	Canada Mo	odel)		
	A-3584-203-A	Switch (AEP, UK Model)	T302	1-433-132-14					
	A-3584-204-A	Switch (USA, Canada Model)		CAPACITORS					
	A-3584-205-A	Input/Output Jack							
		(AEP, UK Model)	All capacito	rs are in μ F unles	s otherwis	e indicate	d. 50 or		
	A-3584-206-A	Input/Output Jack	less working volts are omitted except for electrolytic type.						
		(USA, Canada Model)	(elect = ele	ctrolytic, $p = \mu \mu$	F)				
	A-3584-208-A	Mic Jack							
			C101, 201	1-102-106-11	100 p		ceramic		
	SEMICO	NDUCTORS	C102, 202	1-121-916-11	10	16 V	elect		
			C103, 203	1-102-106-11	100 p		ceramic		
	Tra	nsistors	C104, 204	1-102-074-11	0.001		ceramic		
			C105, 205	1-121-912-11	1	50 V	elect		
Q101, 201		2SC1362							
Q102, 202		2SC900E	C106, 206	1-121-413-11	100	6.3 V	elect		
$Q103 \sim 106$	5	2SC945Q	C107, 207	1-108-567-12	0.0033		mylar		
$Q203 \sim 206$	6	250743Q	C108, 208	1-121-391-11	1	50 V	elect		
			C109, 209	1-121-479-11	22	16 V	elect		
Q301		2SC1173Y	C110, 210	1-121-738-11	10	25 V	elect		
Q302		2SC1383							
Q303		2SC945	C111, 211	1-121-393-11	3.3	50 V	elect		
			C112, 212	1-121-410-11	47	25 V	elect		
Q401, 402		2SC1364	C113, 213	1-121-391-11	1	50 V	elect		
Q403		2SC1761	C114, 214	1-102-969-11	33 p		ceramic		
			C115, 215	1-108-569-12	0.0039		mylar		
IC101, 201		CX064							
			C116, 216	1-108-567-12	0.0033		mylar		
	D	iodes	C117, 217	1-108-563-12	0.0022		mylar		
			C118, 218	1-121-393-11	3.3	50 V	elect		
D101, 201		1T22	C119, 219	1-102-074-11	0.001		ceramic		
D301, 401		SIRB10							
D302		1T40	C120, 220		33	10 V	elect		
D303		EQA01-22R	C121, 221		100 p		ceramic		
			C122, 222		100	6.3 V	elect		
Th401	1-800-200-11	Thermistor, S-3K	C123, 223		4.7	25 V	elect		
			C124, 224	1-121-726-11	0.47	50 V	elect		
	С	OILS							
			C125, 225	1-108-591-12	0.033		mylar		
L101, 201	1-407-561-00	33 mH microinductor	C126, 226	1-108-595-12	0.047		mylar		
L102, 202	1-407-240-00	22 mH variable inductor	C127, 227	1-108-603-12	0.1	5 %	mylar		
L103, 203	1-407-199-XX	2.7 mH microinductor							
L104, 204	1-407-211-XX	27 mH microinductor							
		•							

Ref. No.	Part No.	Descrip	tion		Ref. No.	Part No.	Descripti	ion		
C128, 228	1-131-214-11	0.68	35 V	tantalum	RESISTORS					
C129, 229	1-108-603-12	0.00	5 %				.0.00			
C127, 227	1-100-003-12	0.1	3 %	mylar	All registors	are in ohms Rec	mlar tyne +	5 % 1/4 W	carbon	
⇒C130, 230	1-121-352-11	47	10 V	elect	All resistors are in ohms. Regular type ±5 % ¼ W carbon and composition resistors are omitted. Check schematic					
C130, 230	1-108-591-12	0.033	10 4	mylar	_	the resistance val				
\Rightarrow C132, 232	1-121-986-11	2.2	50 V	elect	alagrain 101	the resistance var	a 0 5. 1. – 1, c	,,,,		
C133, 233	1-108-603-12	0.1	5%	mylar	⇒ R191, 291	1-224-579-00	10 k (A)	variable.	FM CAL	
C134, 234	1-108-587-12	0.022	5 %	mylar			1011 (11)	,	CND model)	
., ., .		0.022	3 /0	iii y iai	R192, 292	1-224-253-XX	22 k	(adjustable	
C135, 235	1-108-585-12	0.018	5 %	mylar	R193, 293	1-224-252-XX			adjustable	
C136, 236	1-121-738-11	10	25 V	elect	R194, 294	1-224-251-XX			adjustable	
C137, 237	1-121-391-11	1	50 V	elect	R195, 295	1-224-253-XX	22 k		adjustable	
C138, 238	1-121-395-11	4.7	25 V	elect						
⇒ C139, 239	1-121-393-11	3.3	50 V	elect	R196, 296	1-222-391-00	20 k (A)	variable,	REC LEVEL	
					R301	1-202-533-11	22	½ W	composition	
C140, 240	1-121-391-11	1	50 V	elect	R304	1-202-559-11	270	¹∕2 W	composition	
C141, 241	1-107-084-11	91 p		silvered mica	R409	1-222-722-00	2.2 k		adjustable	
C142, 242	1-121-479-11	22	16 V	elect						
C143, 243	1-107-232-11	390 p		silvered mica		SWI	TCHES			
⇒C144, 244	1-108-593-12	0.039		mylar						
					S1, 2	1-514-976-21	Lever-slide	e, RECO	RD/playback	
\Rightarrow C145, 245	1-108-599-12	0.068		mylar	S3	1-516-521-00	Lever-slide	e, INPUT	SELECT	
C146, 246	1-108-591-12	0.033		mylar	S4, 5	1-516-672-00	Lever-slide	e, DOLB	Y NR/TAPE	
C147, 247		0.000		,					SELECT	
C148, 248	1-108-589-12	0.027		mylar	S6	1-516-686-00	Lever-slide	e, timing		
C149, 249	1-121-416-11	100	25 V	elect	S7	1-516-279-00	Lever-slide	e, LIMIT	ER	
C150	1-107-131-11	100 p		silvered mica						
0001					S8	1-516-325-00	Micro, bia	S		
C301	1-121-361-11	470	35 V	elect	S9, 10	1-516-270-00	Leaf, mot	•	•	
C302	1-121-422-11	220	25 V	elect		[1-516-181-00	Pushbutto	•		
C303	1-121-733-11	470	25 V	elect				(Canada		
C304	1-131-215-11	1	35 V	tantalum	S11 ·	1-516-693-00	Pushbutto	•		
C305	1-108-377-12	0.01	100 V	mylar				(USA M		
C206	1 100 270 12	0.015	100 17			(1-516-855-00	Pushbutto	•		
C306 C307	1-108-379-12	0.015	100 V	mylar				(AEP, U	K Model)	
⇒ C308	1-129-710-11	0.0047	630 V	polypropylene		•	10K0			
C309, 310	1-121-352-11 1-121-391-11	47	10 V	elect		J	ACKS			
C309, 310 C311	1-121-391-11	0.001	50 V	elect		1 507 295 00	Dhana 1D	o. i inde	ı N ı	
CJII	1-102-074-11	0.001		ceramic	CNIII 1 1	1-507-385-00	Phono, 2P			
C402	1-121-352-11	47	10 V	alact	CNJ1-1 ~4	1-517-433-00			anada Model)	
C402	1-121-552-11	10	16 V	elect elect		1-31/-433-00	Phono, 4P			
C403	1-121-031-11	100	6.3 V	elect	CNJ2	1-509-549-00	Connector		K Model)	
C405	1-121-413-11	100	10 V	elect	C143 2	1 307-347-00	Connector	, KEC/F	D	
C410	1-121-426-11	470	16 V	elect	J1, 2	1-507-448-00	Binaural, l	MIC		
	1-141-034-21			trimmer	J3	1-507-476-XX	•		IONE	
		P				I JULY TIONA	Dinaural, I	LLADIII	ONL	

Note: ⇒: Due to replacement parts, the values are different from on the diagrams.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	MISCEL	LANEOUS	PL1 ∼ 3	1-518-115-XX	Lamp, 6 V 35 mA
CP301	1-231-057-31	Encapsulated Component, C-R	RPH	8-825-584-00	Head, record/playback; PF145-3602A1
EH	8-825-506-00	Head, erase; EF135-36		1-509-482-00	Socket, voltage selector
F1	1-532-079-00	Fuse, 160 mA (AEP, UK Model)		1 507 102 00	(AEP, UK Model)
F2	1-532-074-00	Fuse, 200 mAT (AEP, UK Model)		1-509-546-00	Connector, AC IN (AEP, UK Model)
F3	1-532-078-00	Fuse, 1 AT (AEP, UK Model)		1-534-487-XX	Cord, power (USA Model)
				1-534-819-00	Cord, power (UK Model)
M	8-834-009-50	Motor, D-009F		1-534-986-XX	Cord, power (Canada Model)
ME1, 2	1-520-114-71	Meter, level		1-548-501-31	Counter, tape

ACCESSORIES					
Part No.	Description	Part No.	Description		
X-3701-018-2	Tips Ass'y, head cleaning (AEP, UK,	3-701-395-00	Label (B), caution (UK Model)		
	Canada Model)	3-701-763-00	Label, UL (USA Model)		
		3-780-833-11	Manual, instruction (AEP, UK, Canada		
1-534-049-51	Cord, connection; RK-74H		Model)		
3-422-204-00	Label (B), caution (UK, USA, Canada	3-780-833-21	Manual, instruction (USA Model)		
	Model)'	8-890-060-00	Tape, FeCr; C-60 (AEP, UK, Canada		
3-513-211-00	Label, DOLBY		Model)		
3-701-046-00	Label, CSA (Canada Model)	8-890-062-00	Tape, FeCr; C-60 (USA Model)		

4-2. HARDWARE

SCREWS All screws are Phillips (cross recess) type unless otherwise indicated. (-); slotted head 7-623-108-11 3 (middle) 7-623-108-12 3 (middle) 7-623-205-22 2 (small), spri	
indicated. (-); slotted head 7-623-108-12 3 (middle)	
indicated. (*), siotted nead	
7-623-205-22 2 (small), spri	
	ing
7-621-255-15 P 2 x 3	
7-621-770-96 B 2 x 8 Lug	
7-627-505-69 (-) P 2 x 4	
7-628-254-05 PS 2.6 x 5	S
7-682-548-05 B 3 x 8	
7-624-101-01 E 1.2	
7-682-647-01 PS 3 x 6 7-624-102-01 E 1.5	
7-682-948-01 PSW 3 x 8 E 2	
7-685-133-21 P 2.6 x 6	
7-685-145-11 P 3 x 6, self-tapping 7-624-171-51 G 3	
7-687-204-21 PTPWH 2 x 6	
MISCELLANEOUS	•
7-687-205-21 PTPWH 2 x 8	
7-687-233-21 PTPWH 2.6 x 6 7-671-113-01 Steel Ball	
7-687-234-21 PTPWH 2.6 x 8	

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