UK Model AEP Model



ELCASET STEREO ELCASET DECK

SPECIFICATIONS

Power Requirements:

110, 120, 220 or 240 V ac, 50/60 Hz

Signal-to-noise Ratio:

Power Consumption:

44W

Dimensions:

Approx. 430 (w) x 170 (h) x 320 (d) mm

 $17 \text{ (w)} \times 6\frac{3}{4} \text{ (h)} \times 12\frac{5}{8} \text{ (d)}$ inches

Including projecting parts and controls

Weight:

Approx. 10.5 kg, 23 lbs 2 oz

DOLBY NR OFF

With Type II ELCASET (FeCr) 62 dB at peak level (NAB) 62 dB (DIN, 1975 rev.)

54 dB (DIN, old)

With Type I ELCASET (SLH) 59 dB at peak level (NAB)

> 59 dB (DIN, 1975 rev.) 51 dB (DIN, old)

DOLBY NR ON

Improved by 5 dB at 1 kHz, 10 dB

above 5 kHz

Tape Speed:

9.5 cm/s (33/4 ips)

Fast Forward and

Rewind Time:

Approx. 75 seconds (by LC-60)

Recording System:

4-track 2-channel stereo

Bias Frequency:

160 kHz

Total Harmonic

Distortion:

0.8%

- Continued on page 2 -

"'Dolby' and the double-D symbol are the trade marks of Dolby Laboratory Inc. Noise reduction system manufactured under license from Dolby Laboratory Inc. *0 dB = 0.775V

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING ON THE SCHEMATIC DIAGRAMS 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.

ELCASET

Look for this mark on all products manufactured under the ELCASET standard.



Frequency Response:	DOLBY NR OFF With Type II ELCASET (FeCr) 15-25,000 Hz (NAB) 25-20,000 Hz ±3 dB (NAB) 20-22,000 Hz (DIN) With Type I ELCASET (SLH) 15-23,000 Hz (NAB) 25-18,000 Hz ±3 dB (NAB) 20-20,000 Hz (DIN)	Outputs:	output level 0.775V (0 dB) at load impedance 100 k ohms with LEVEL ADJUST control turned fully clockwise suitable load impedance more than 10 k ohms HEADPHONES
Wow and Flutter:	0.06% WRMS (NAB) ±0.12% (DIN)	REC/PB Connector:	Input impedance less than 10 k ohms Output impedance less than 10 k ohms
Inputs:	MIC (phone jacks)		

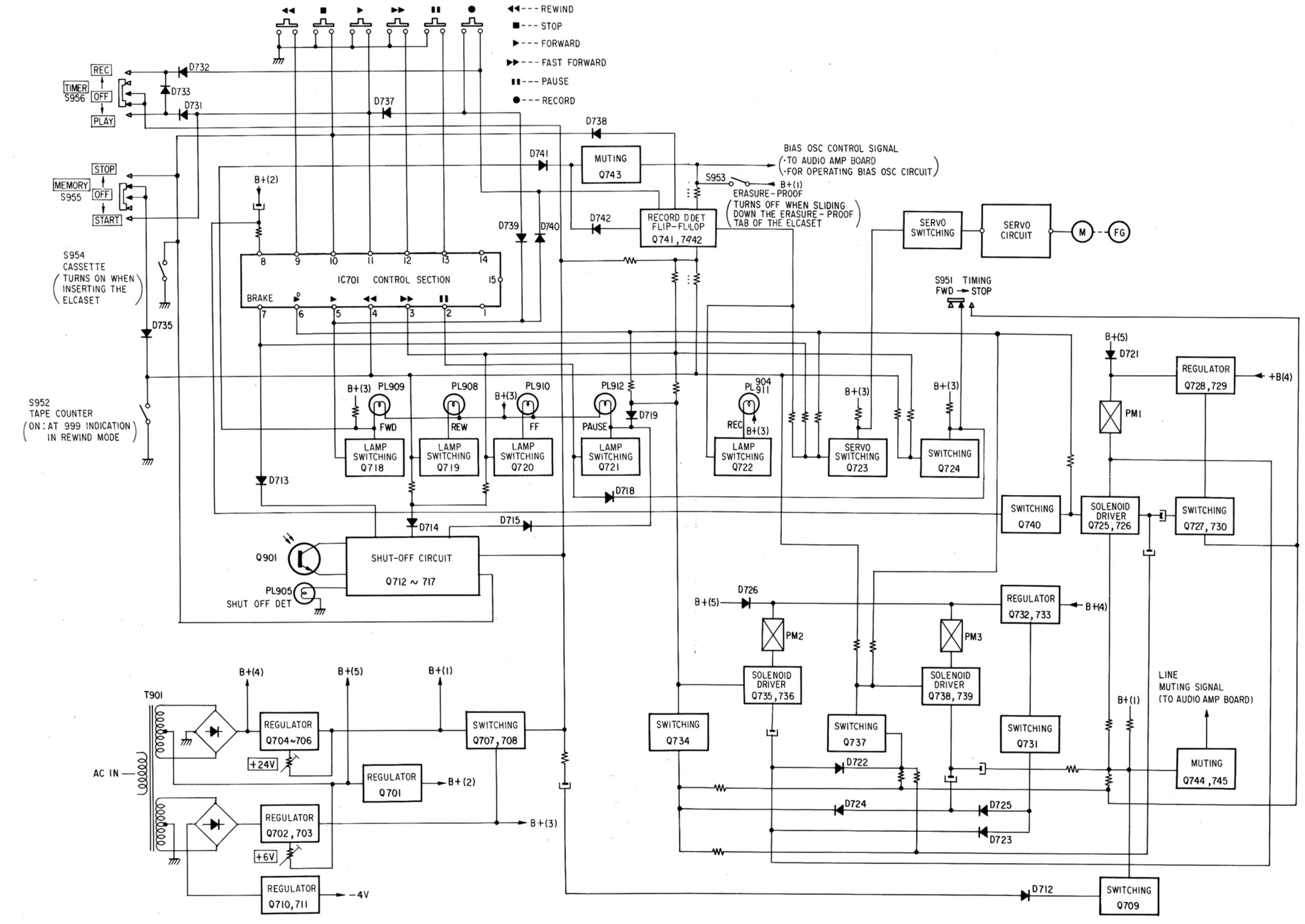
SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM - System Control Section -

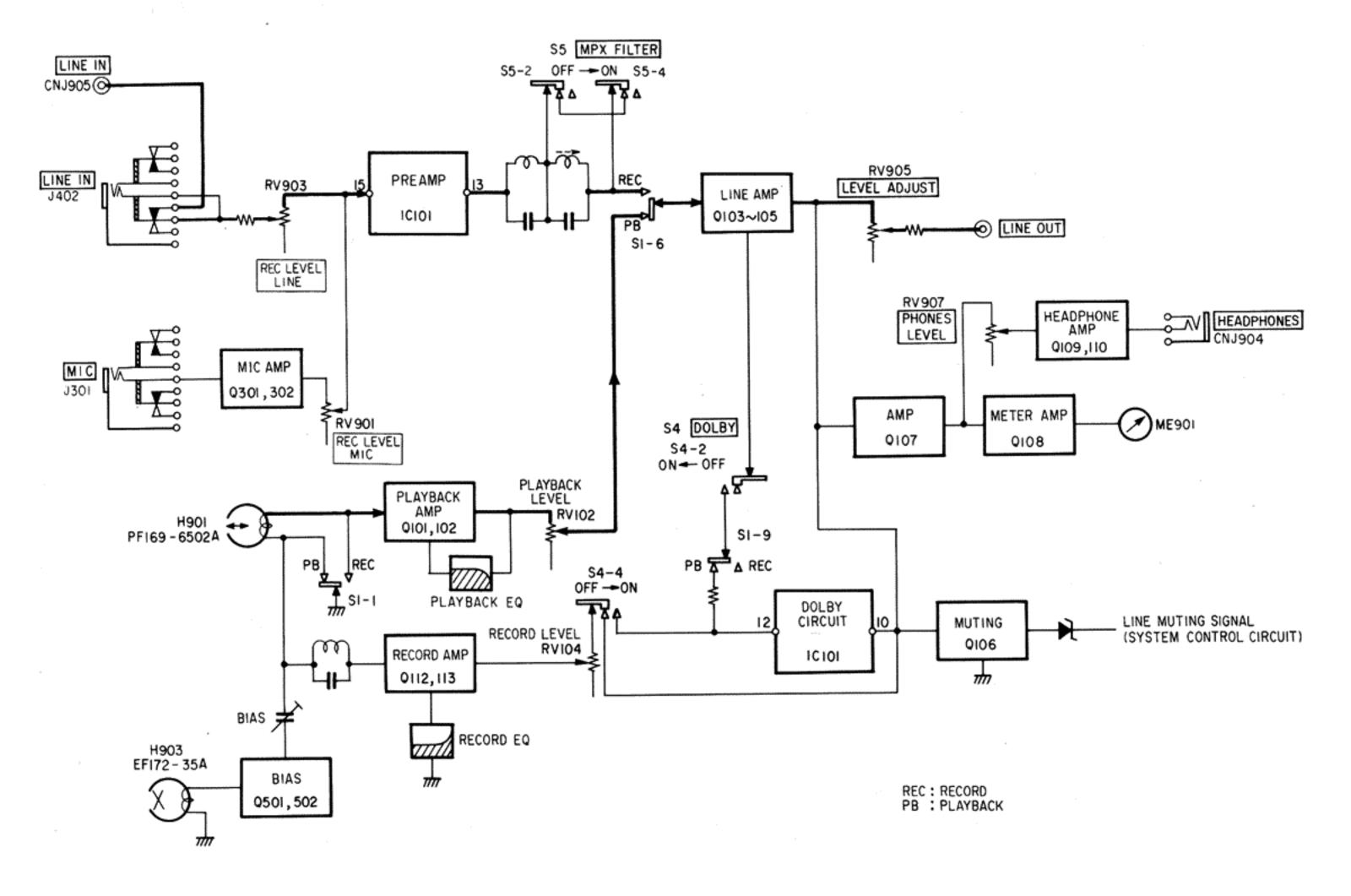
Note: REC: RECORD

FWD: FORWARD FF: FAST FORWARD

REW: REWIND



1-2. BLOCK DIAGRAM - Amplifier Section -



1-3. CIRCUIT DESCRIPTION

The EL-5 system control circuit employes IC701 (CX738) which supplies six different output signals (PAUSE, forward, fast forward, rewind, delayforward, and brake). (See the detailed circuit description of EL-7).

SOLENOID DRIVE CIRCUITS

The following table indicates each operation of the three solenoids for each mode.

Mode Solenoid	Forward	Fast Forward	Rewind	PAUSE	Record	Record/PAUSE or Forward/PAUSE
PM1 (Shifter)	0	×	×	0	0	0
PM2 (Fast Forward)	0	0	X	×	0	×
PM3 (Rewind)	×	×	0	×	0	0

O: energized

X: de-energized

1. STOP mode → forward mode (energized PM1 and PM2) (See Figs. 1-2 and 1-3)

- When the delay forward signal is applied to the base of Q725 and Q735 from terminal 6 of IC701, Q725 and Q726 turn ON to energize PM1.
- When Q725 and Q726 are both ON, C720 discharges, and the Q727's base voltage is decreased. Q727 turn OFF. So Q728 and Q729 turn ON, and PM1 is energized by the high voltage while C720 is discharged.
- 3. In this period, Q730 turns ON. Then Q734 turns ON by a base current flowing via R791. Therefore, the delay forward signal applied to the base of Q735 from terminal 6 of IC701 is grounded at Q734. Q735 and Q736 turn OFF, and PM2 is not energized.
- 4. The other base current is also applied to Q734 via S951 and R791 during forward mode to secure the mechanical operation.
- 5. After discharging C720, Q727 turns ON. (See Fig. 1-3). Consequently, Q728, Q729, Q730 and Q734 turn OFF, and Q735 and Q736 turn ON, so PM2 is energized. (Q731, Q732 and Q733 constitute the solenoid kick circuit. See the circuit description of EL-7).
- 6. Energized both solenoids, PM1 and PM2, place EL-5 in the forward mode.

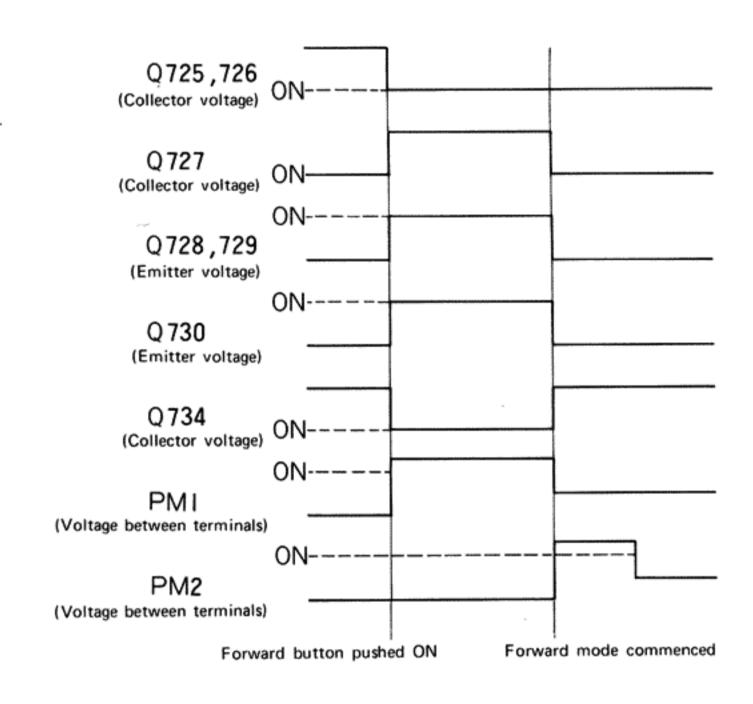


Fig. 1-1 Time Chart of Energizing PM1 and PM2

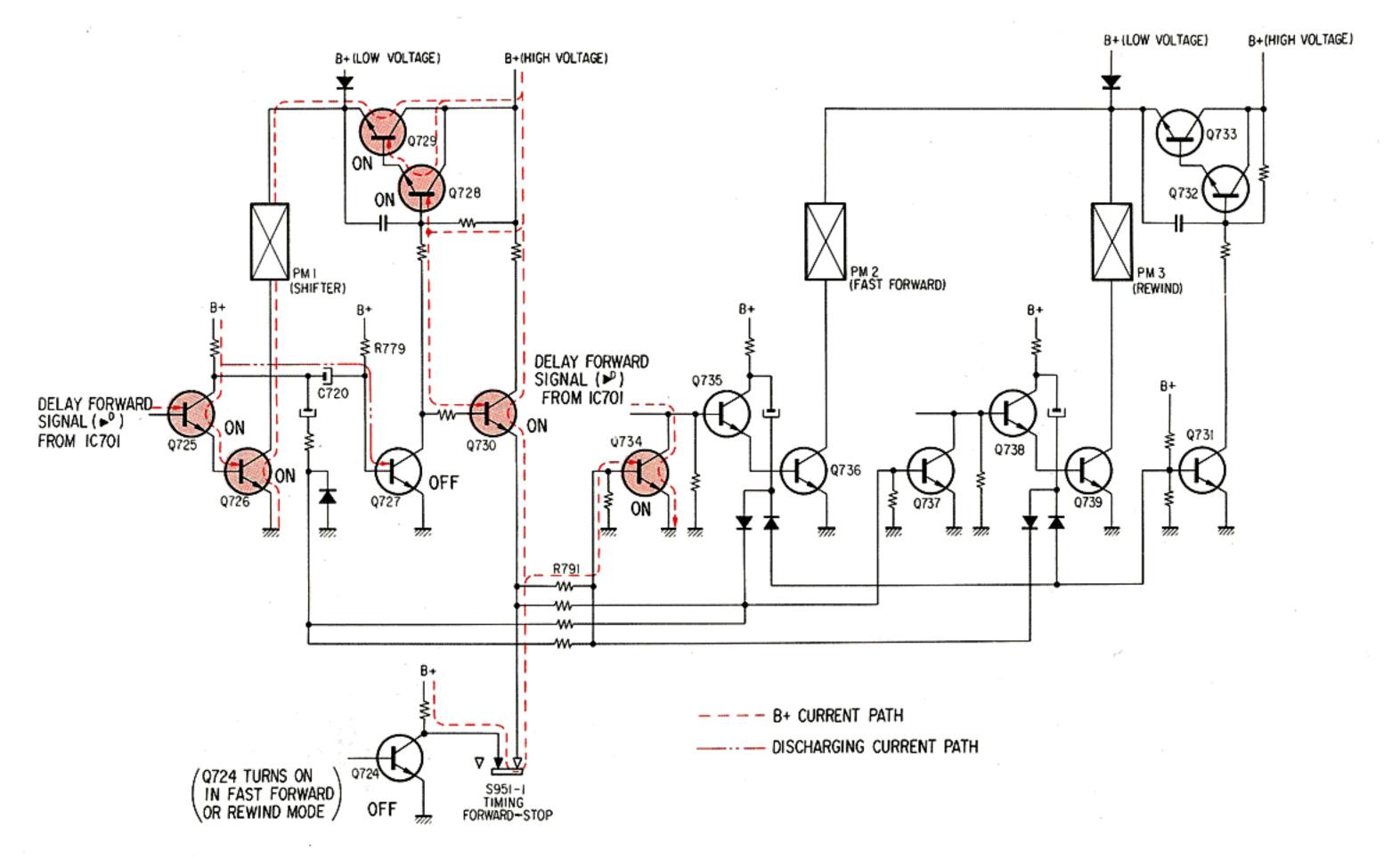


Fig. 1-2 Forward Button Pushed ON

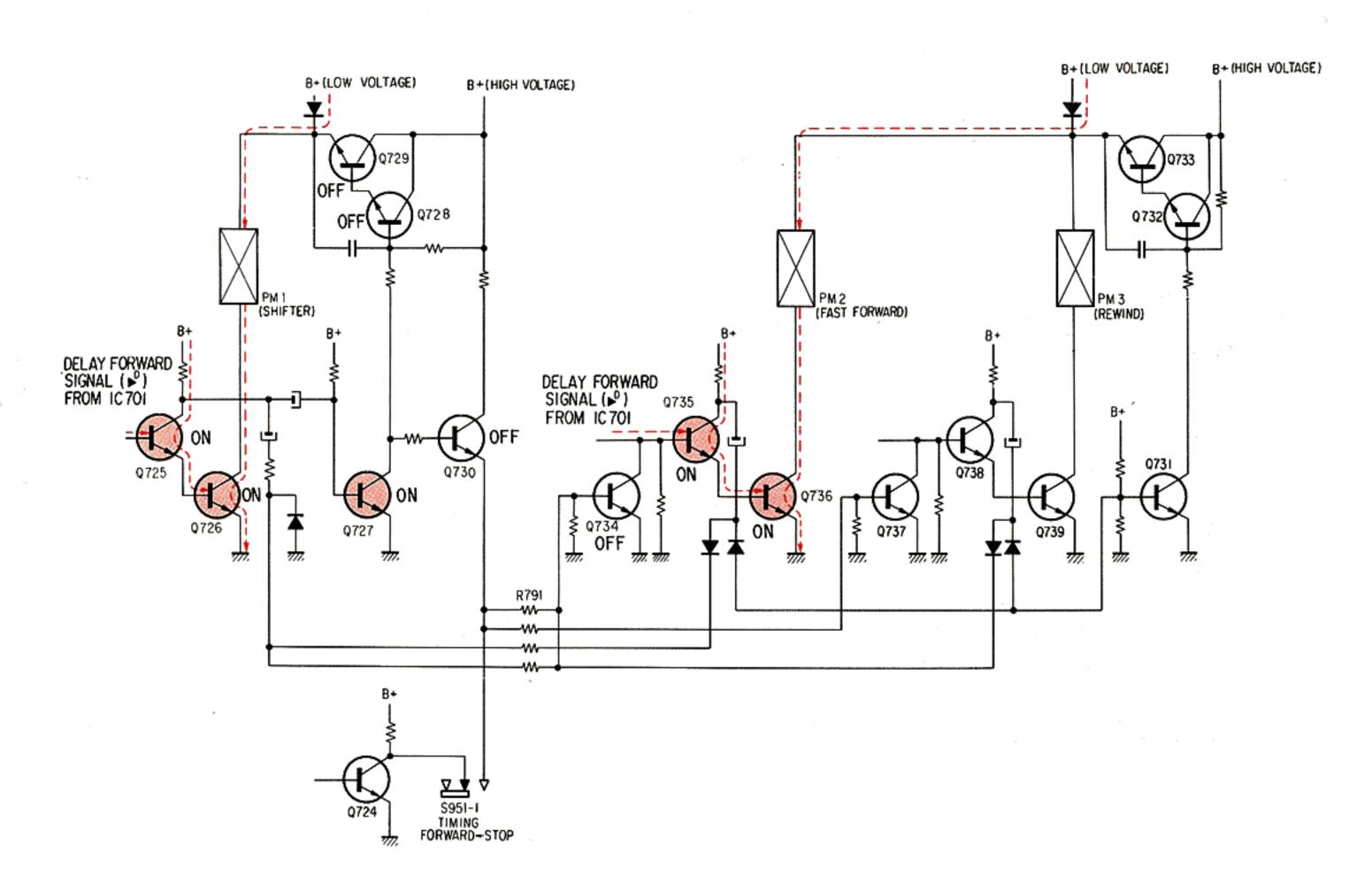


Fig. 1-3 Forward mode Commenced

2. STOP mode → fast forward or rewind mode (energized PM2 or PM3) (See Fig. 1-4)

When the fast forward signal is applied to the base of Q735 from terminal 3 of IC701, Q735 and Q736 turn ON, and PM2 is energized. The energized PM2 places EL-5 in the fast forward mode. For

rewind mode, Q738 and Q739 turn ON by the rewind signal from terminal 4 of IC701, and PM3 is energized. The energized PM3 places EL-5 in the rewind mode. (Q731, Q732 and Q733 constitute the solenoid kick circuit. See the circuit description of EL-7).

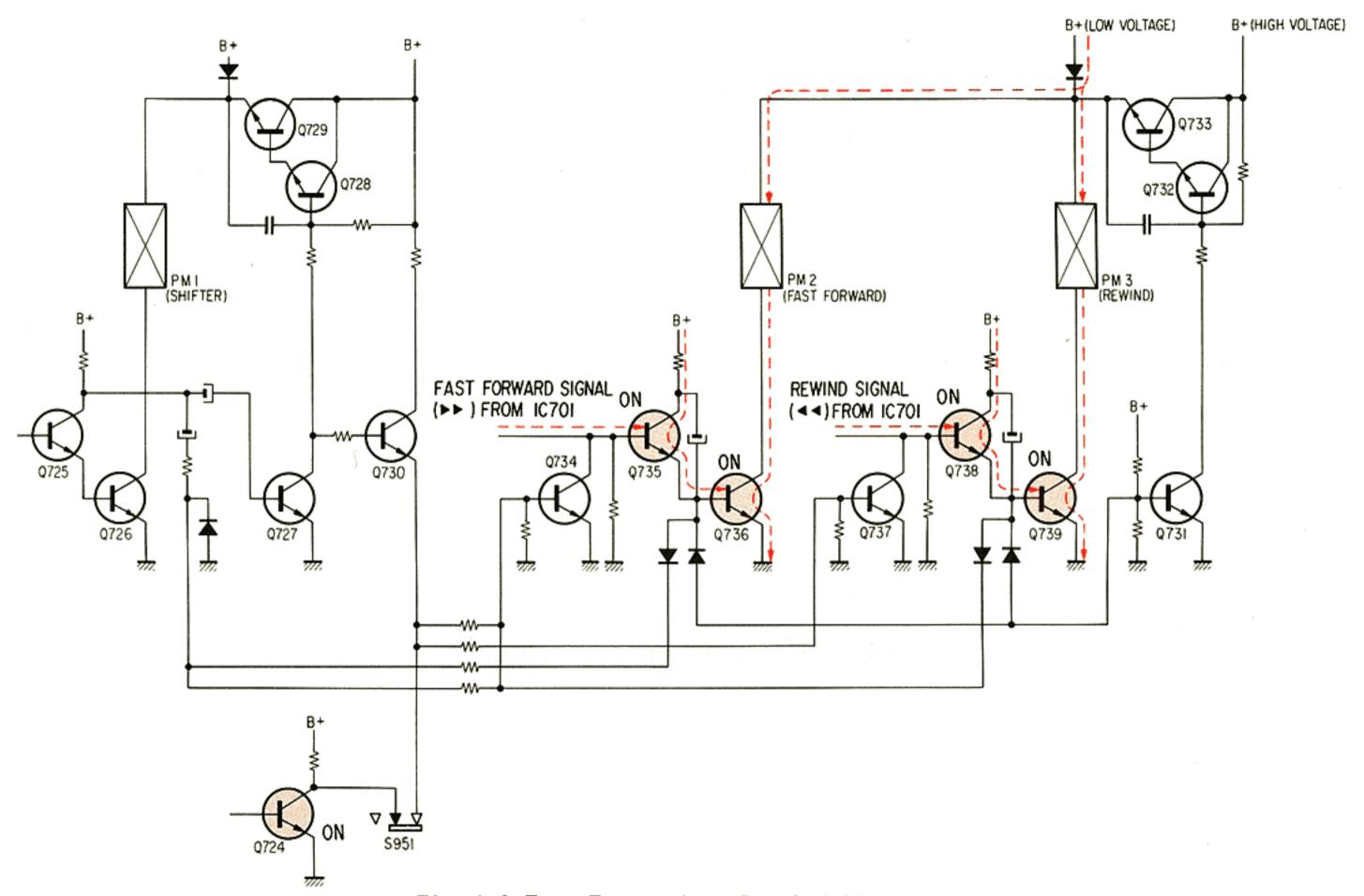


Fig. 1-4 Fast Forward or Rewind Mode

STOP mode → record mode (energized PM1, PM2, PM3) (See Fig. 1-5)

- 1. When the record button is pushed, the record control signal is applied to the base of Q725 and Q738 from the flip-flop Q741/Q742. Then Q725 and Q726 turn ON, and PM1 is energized. According to the operation of Q737 (as same as the operation of Q734 described on section 1), Q738 and Q739 turn ON after PM1 is energized, and PM3 is energized. Energizing of these two solenoids places EL-5 in the record STAND BY mode.
- Then when the forward button is pushed with the record button pushed, the delay forward (▶D) signal from terminal 6 of IC701 is applied to the base of Q735, so Q735 and Q736 turn ON, and PM2 is energized to place EL-5 in record mode.

4. Record mode → PAUSE mode (energized PM1, PM2, PM3 → de-energized PM2) (See Fig. 1-5)

When the PAUSE button is pushed in forward mode, the PAUSE signal from terminal 2 of IC701 is applied to the base of Q721, so Q721 turns ON. The base of Q735 is grounded, then Q735 and Q736 turn OFF, PM2 is de-energized to place EL-5 in the PAUSE mode.

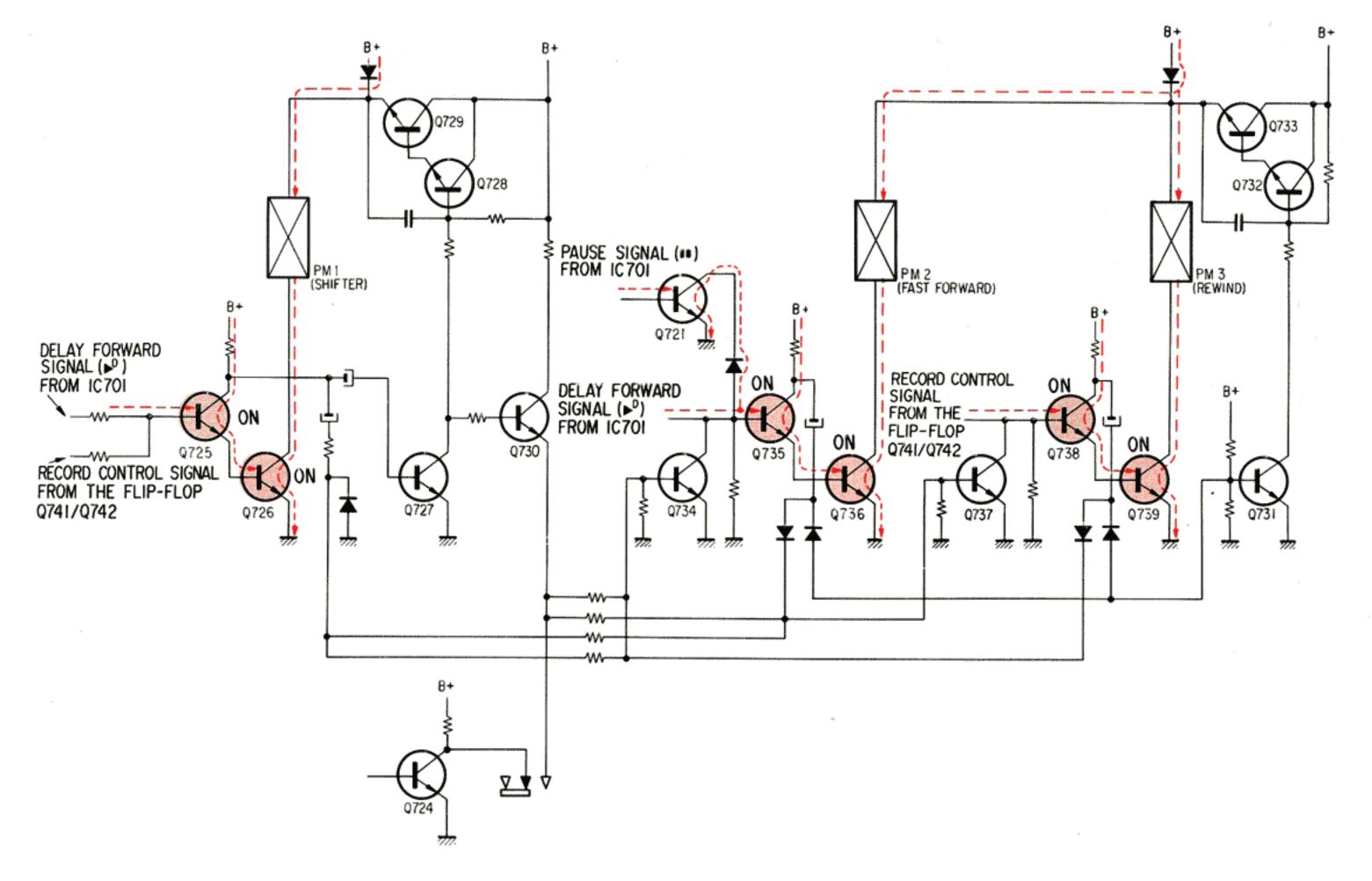


Fig. 1-5 Record/PAUSE Mode

5. Record mode → fast forward or rewind mode (via temporary STOP mode) (See Fig. 1-7)

When changing directly to the fast forward mode from the record mode, Q725 and Q726 turn OFF and the charge-up current of C721 is applied to the base of Q734 via R778 and R790 while C721 is charged up. Q734 turns ON, and the fast forward (▶▶) signal from IC701 is temporarily grounded. Q734 turns OFF after C721 is fully charged, so the fast forward signal from IC701 energizes PM2 to place EL-5 in the fast forward mode. When changing directly to the rewind mode from the record mode, a similar chain of events, including the switching of Q737, places EL-5 in rewind mode. Switching of Q737 makes a temporary STOP during the rewind signal is momentarily grounded.

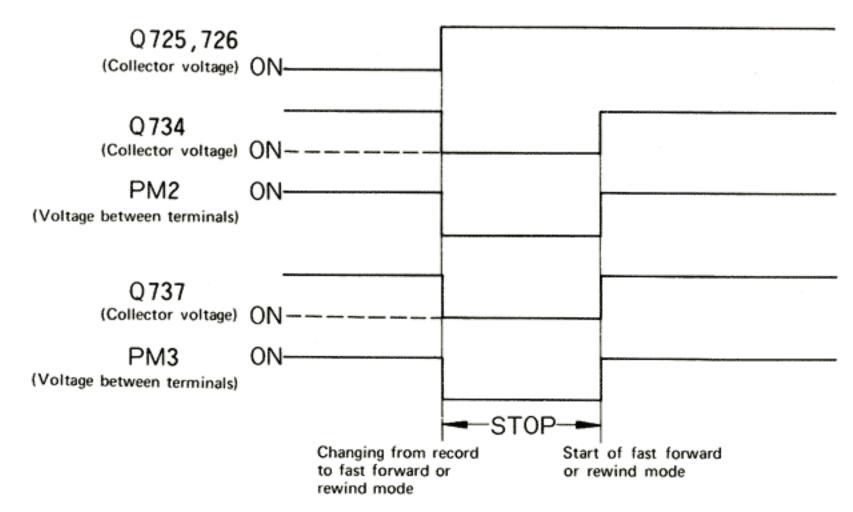


Fig. 1-6 Time Chart

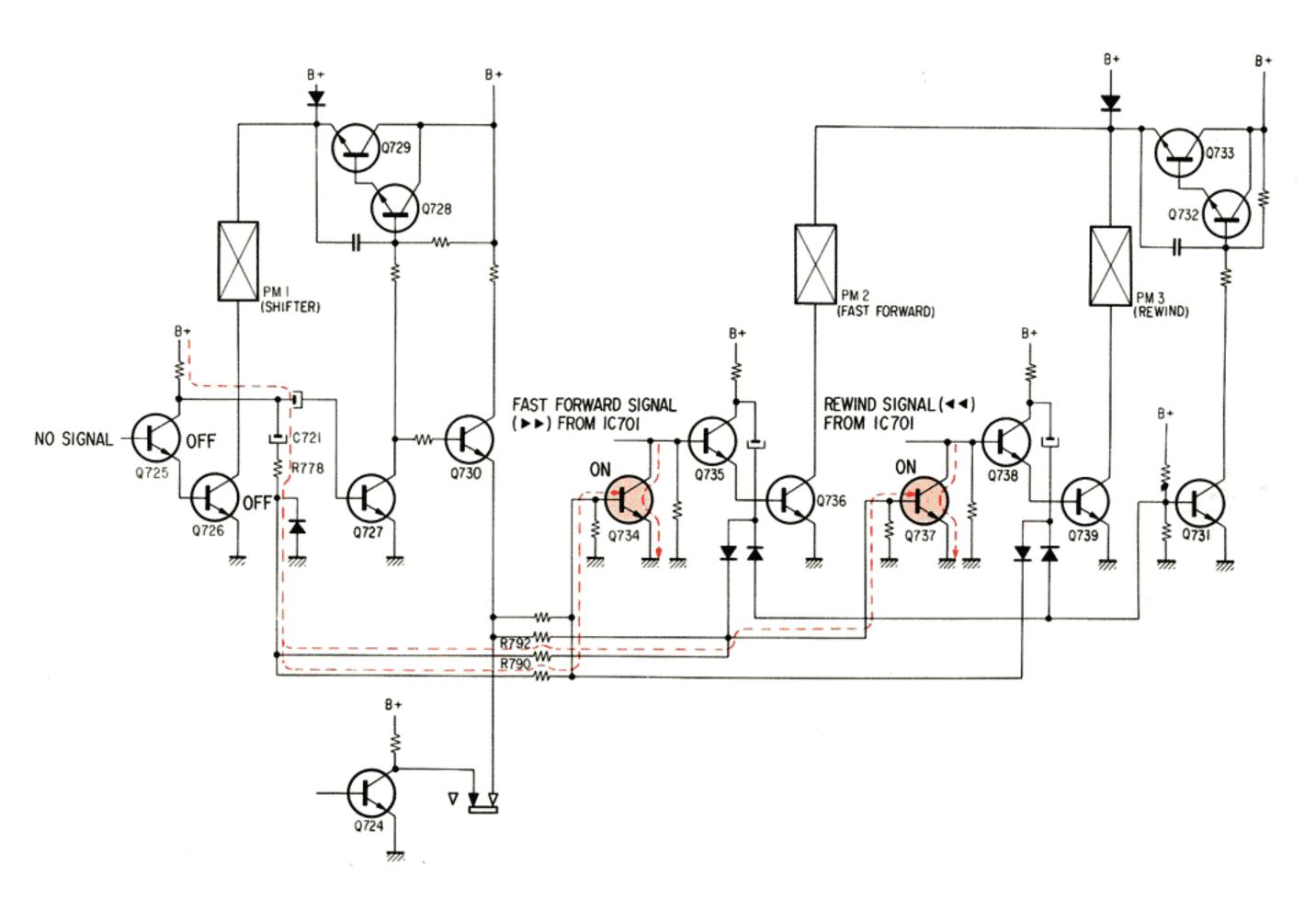


Fig. 1-7 Record Mode → Fast Forward or Rewind Mode

MUTING CIRCUIT

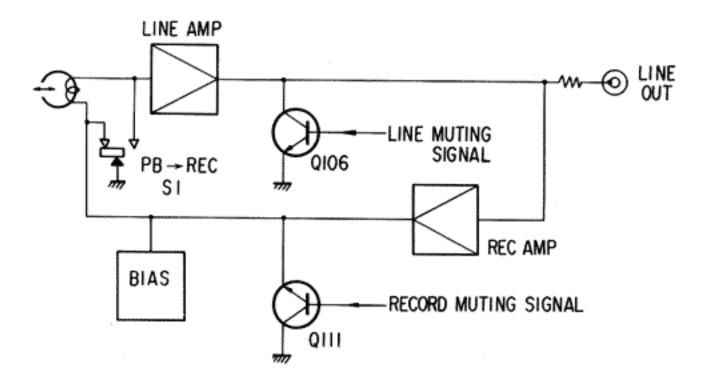


Fig. 1-8 Muting Signal

1. When power switch turned ON (See Fig. 1-9)

Stop signals are generated at Q707 and Q708 by the start-up of the power supply voltage. (See the circuit description of EL-7 for the details on stop signals).

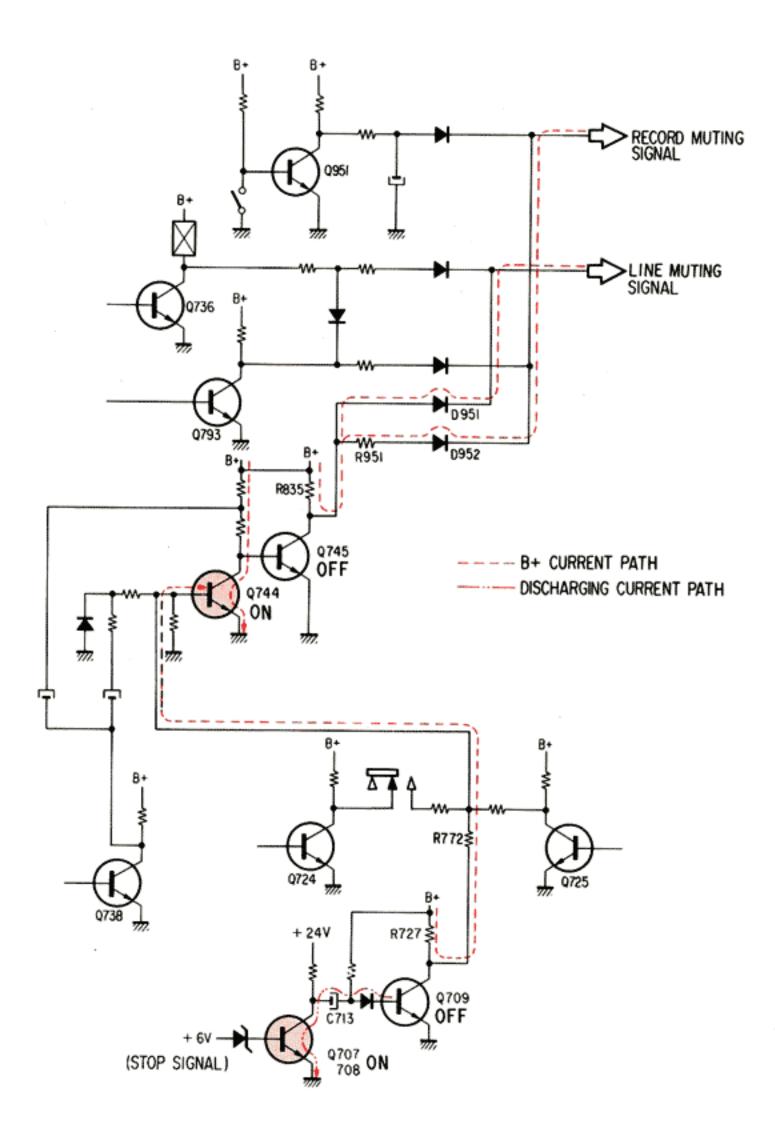


Fig. 1-9 Power Switch Turning ON

- Q707 and Q708 turn ON after 2 seconds from turning the power switch to ON. C713 discharges when Q707 and Q708 turn ON, thus Q709's base voltage is decreased and Q709 turns OFF.
- 2. Q744 turns ON by a base current flowing via R727 and R772, and then Q745 turns OFF. So the record muting signal (via R835, R951 and D952), and the LINE muting signal (via R835 and D951) are applied to the audio circuit.

2. STOP mode (See Fig. 1-10)

Q724 is OFF in STOP mode. And Q744 turns ON by the base current flowing via R770, S951-1 and R771. Thus Q745 turns OFF, so the LINE muting and record muting signals are applied to the audio circuit.

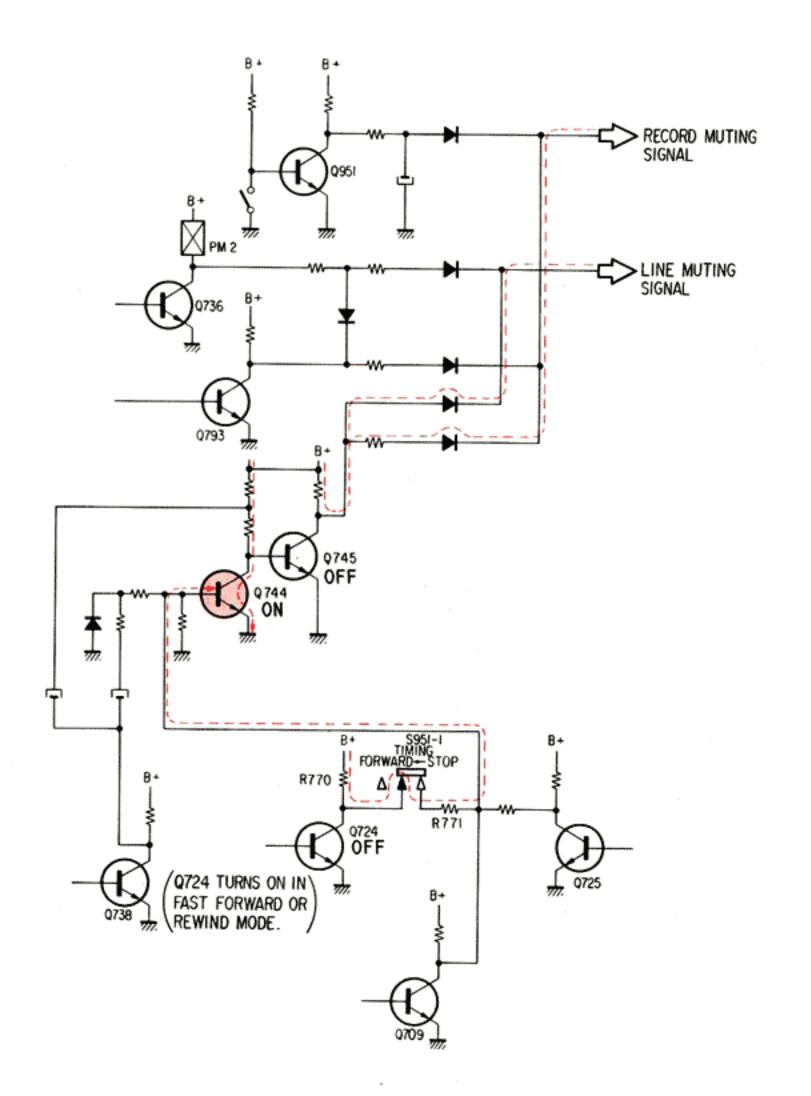


Fig. 1-10 Stop Mode

3. Forward mode (See Fig. 1-11)

Q739 is OFF in forward mode, so only the record muting signal is applied to the audio circuit via PM3, R957, and D955.

4. Fast forward or rewind mode (See Fig. 1-12)

Q725 is OFF in fast forward or rewind mode, so Q744 turns ON by the base current flowing via R776 and R733. Consequently, Q745 turns OFF, and the LINE muting and record muting signals are applied to the audio circuit.

5. STOP mode → record mode, or record mode → STOP mode (See Fig. 1-13)

- When the record button is pushed in STOP mode, Q738 turns ON. Consequently Q745 turns OFF by the discharging current of C738. So the LINE muting and record muting signals are applied to audio circuit.
- When the STOP button is pushed in record mode, Q738 turns OFF. Then Q744 turns ON by the charging current of C739, and Q745 turns OFF. So the LINE muting and record muting signals are applied to the audio circuit.

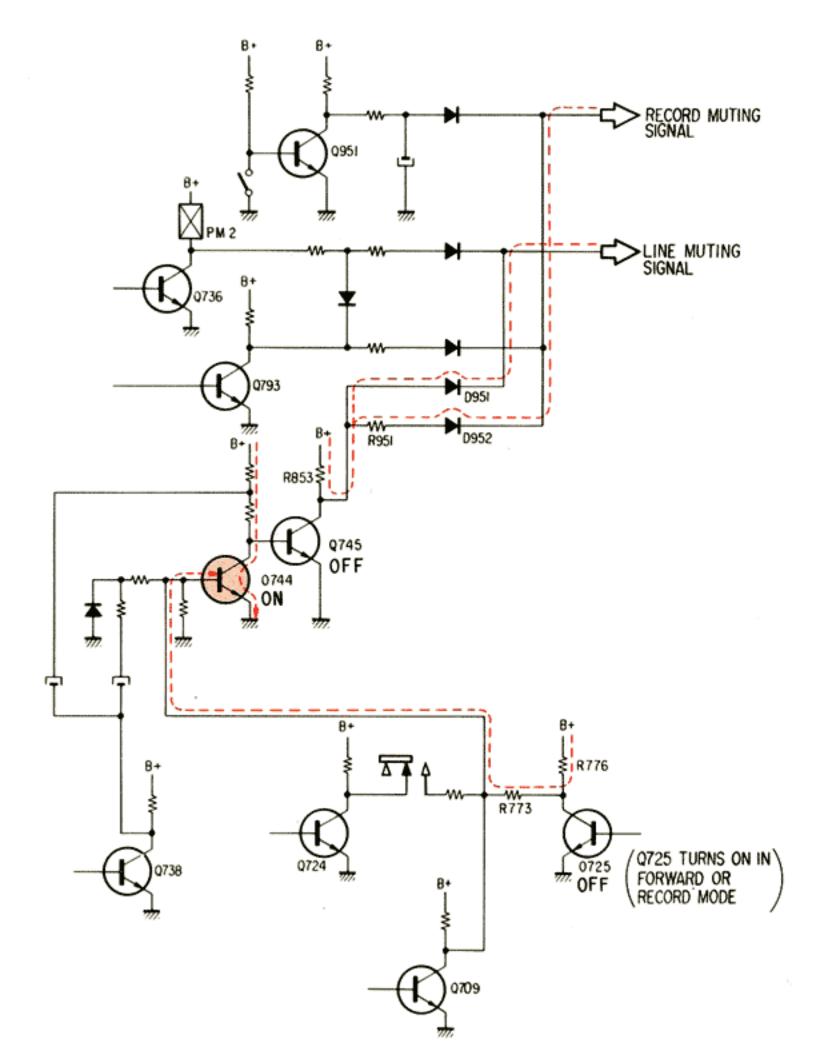


Fig. 1-12 Fast Forward or Rewind Mode

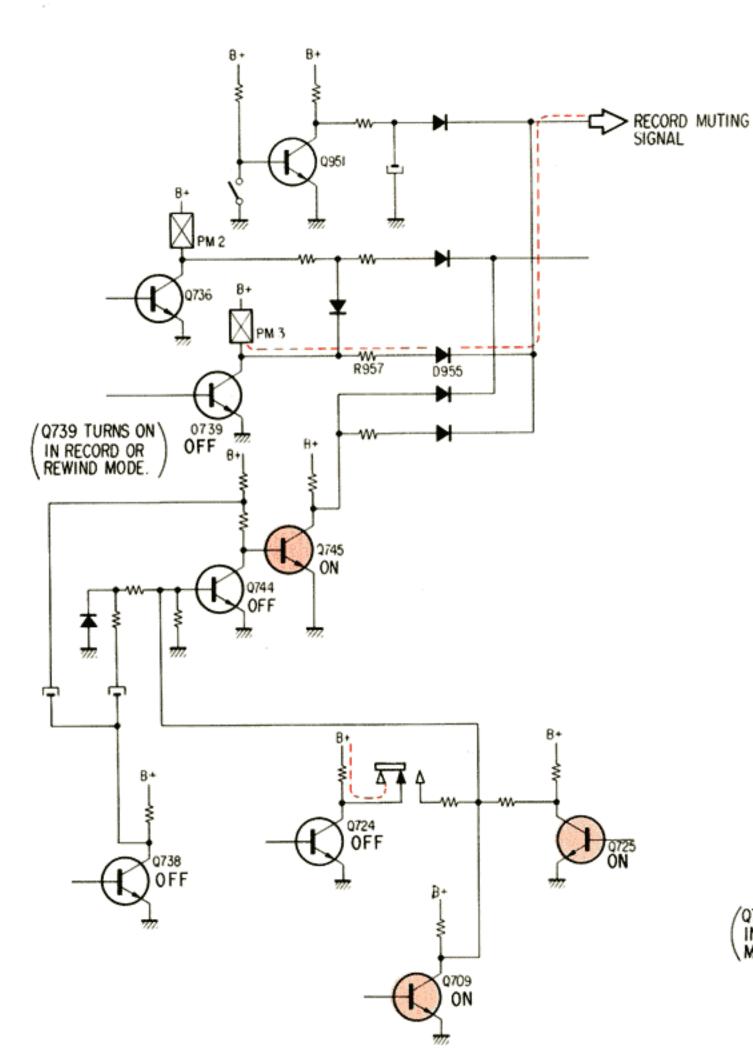


Fig. 1-11 Forward Mode

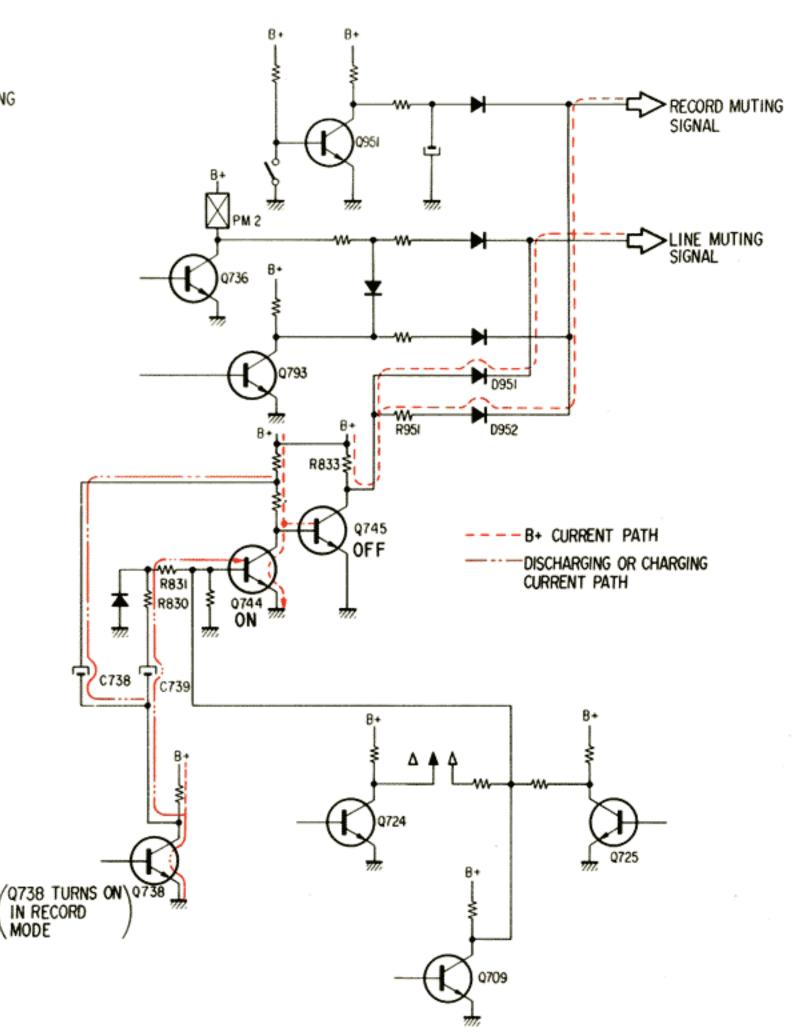


Fig. 1-13 Stop Mode → Record Mode or Record Mode → Stop Mode

6. PAUSE mode (See Fig. 1-14)

In the forward/PAUSE mode, Q721 is ON, and Q736 is OFF. Therefore, the LINE muting signal is applied to the audio circuit via PM2, R956, R955, and D954, and the record muting signal is applied via D956, R957, and D955. But in record/PAUSE mode Q739 is ON. So these signals are not applied.

R953 RECORD MUTING SIGNAL D953 >LINE MUTING SIGNAL R 955 0956 **OFF** (Q721 TURNS ON) W-R957 D955 (Q739 TURNS ON) IN RECORD MODE)

Fig. 1-15 REC MUTING

7. REC MUTING (operated by remote control

When the REC MUTING button of RM-30 is

pushed, Q951 turns OFF since its base is grounded.

Consequently, only the record muting signal is

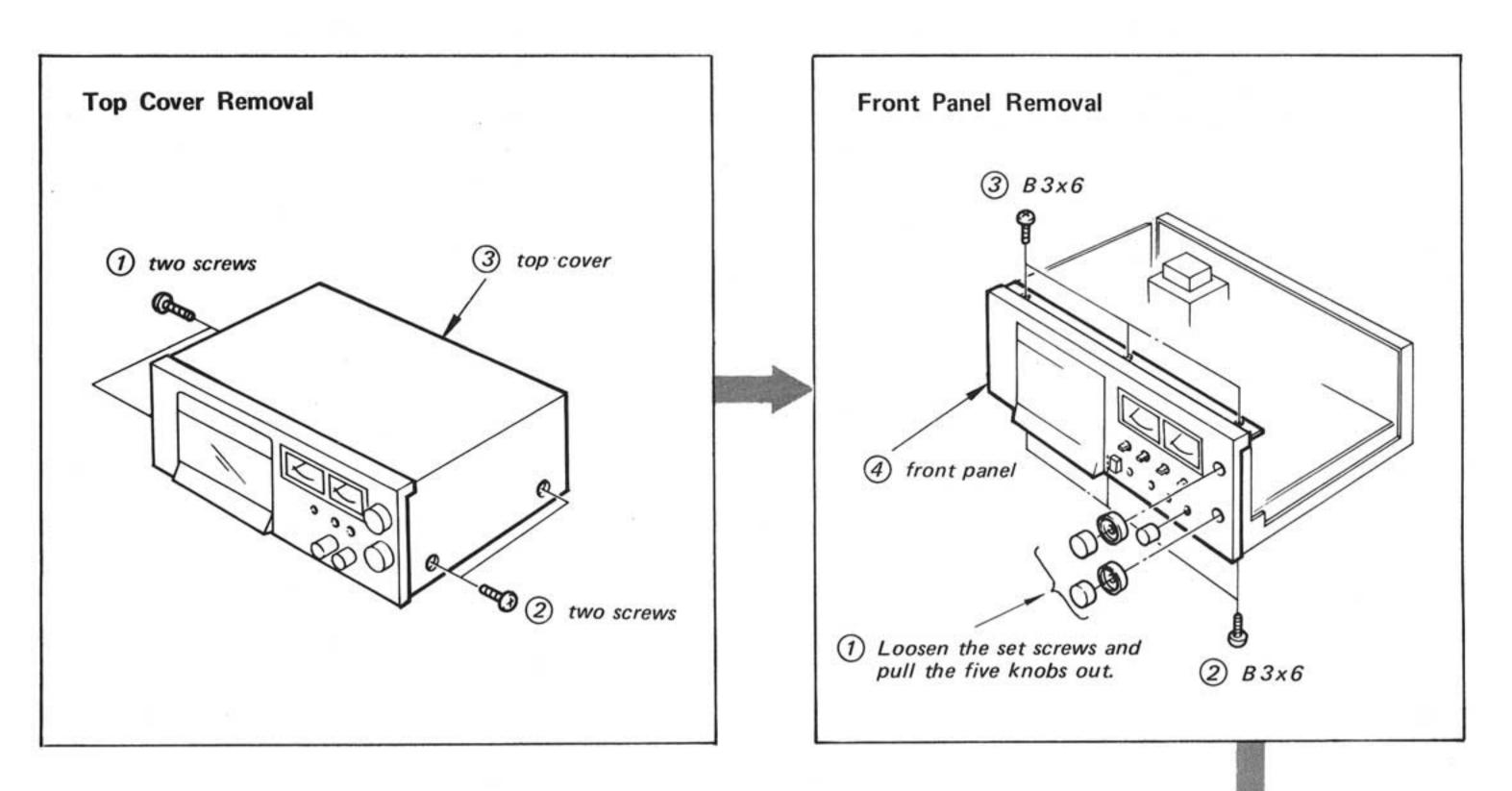
applied to the audio circuit via R953, R954, and

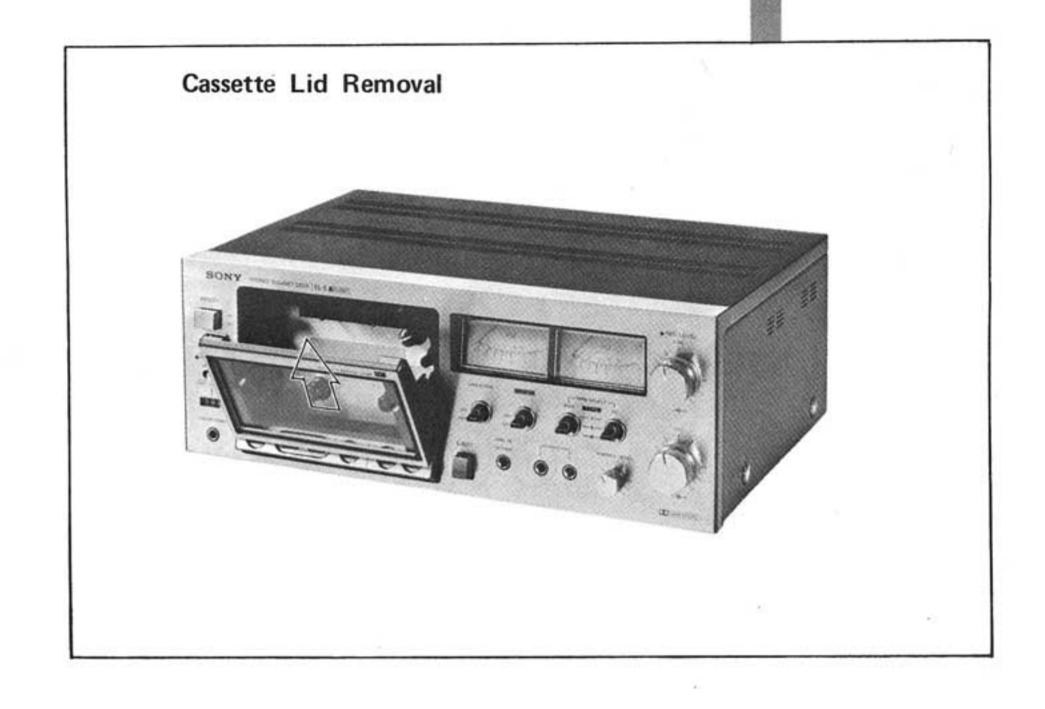
RM-30) (See Fig. 1-15)

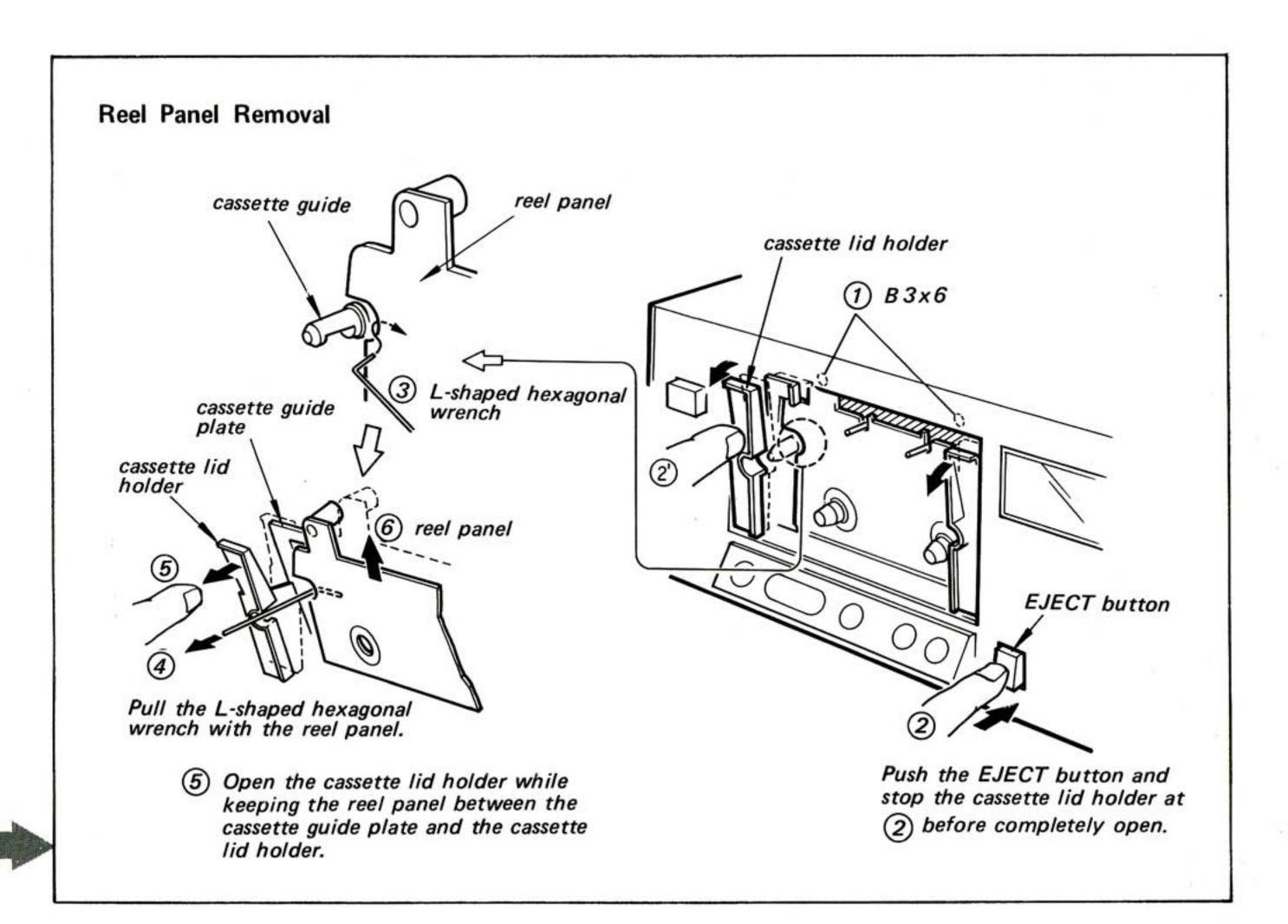
D953.

Fig. 1-14 PAUSE Mode

SECTION 2 DISASSEMBLY

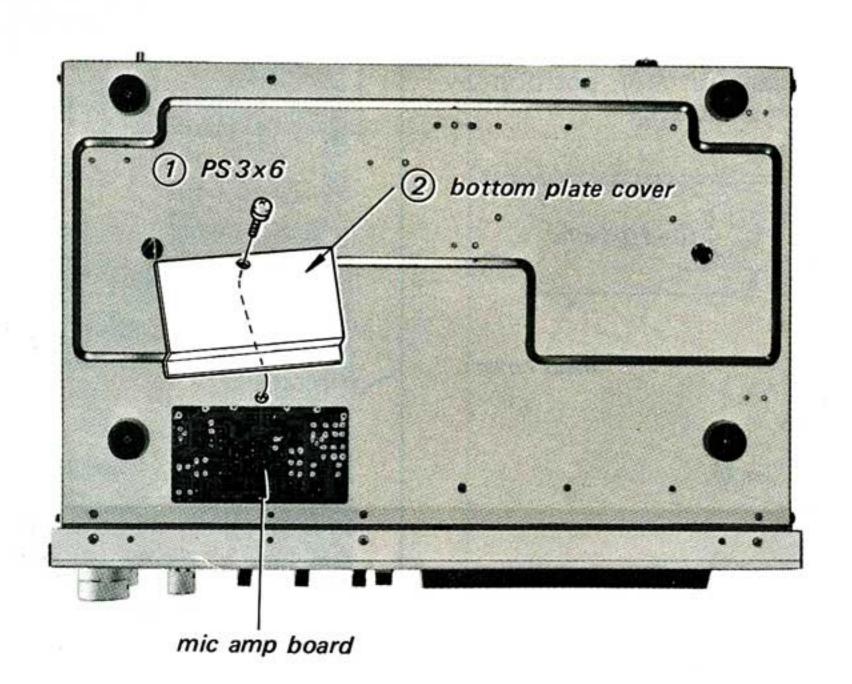






Bottom Plate Cover Removal

(The voltage on the mic amp board can be checked.)



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

 Clean the following parts with a denaturedalcohol-moistened swab:

record/playback head

pinch roller

erase head

rubber belts

capstan

idlers

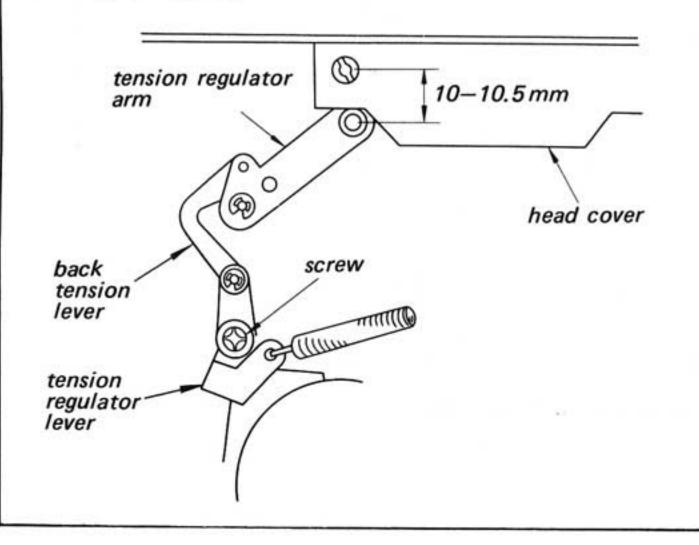
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- 4. After the adjustments, apply a suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Test Tape L-9-MR (with a mirror) 8-918-064-15

section	1	2	3	4
frequency	315 Hz	7 kHz	12.5 kHz	3 kHz
level	0 dB	-10 dB	-10 dB	0 dB
time	40 sec.	60 sec.	40 sec.	180 sec.

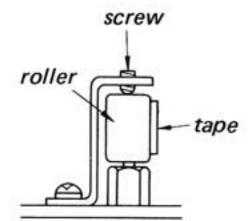
Tension Regulator Arm Position Adjustment — Playback mode —

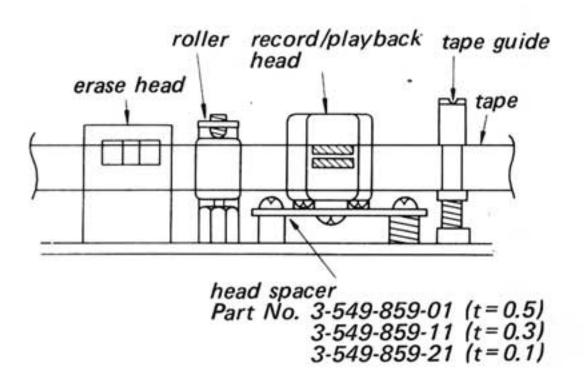
Adjust the tension regulator arm position by loosing the screw.



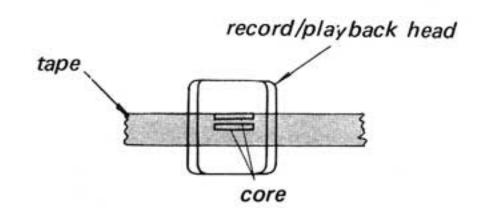
Tape Path Adjustment (Use the test tape L-9-MR) - Playback mode -

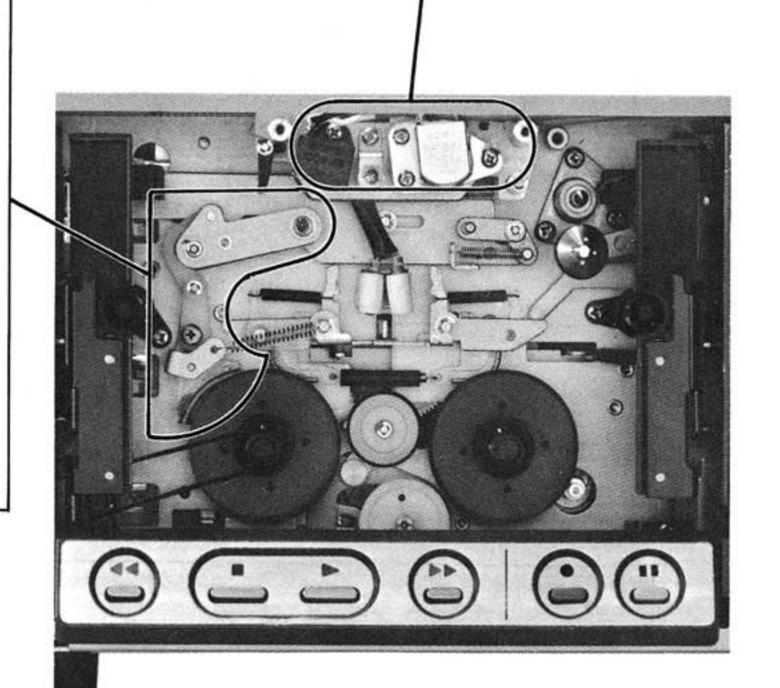
 Adjust the roller height by turning the screw so that the tape runs through the middle of the roller, and make sure that the roller smoothly rotates.





- 2. Adjust the tape guide height without tape curl.
- Adjust the record/playback head height by head spacer so that the upper end of tape touches the upper end of core as shown below.

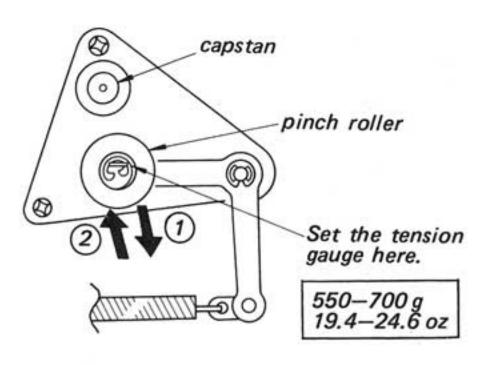


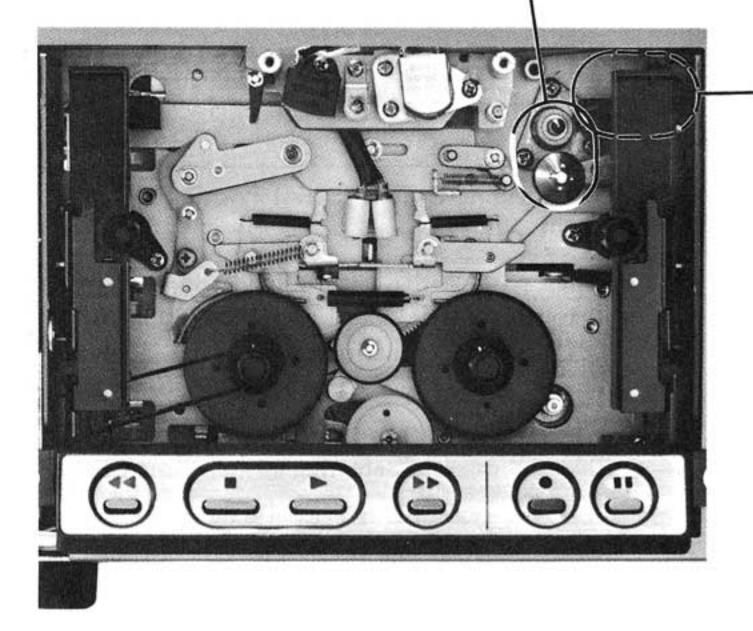


Pinch Roller Pressure Measurement

- Playback mode -

- 1. Set the tension gauge.
- 2. Push the tension gauge.
- Slowly return the pinch roller and read the tension gauge just when the pinch roller starts to rotate.





Tape Retaining Cam Position Adjustment

 Insert the ELCASET into the cassette holder and press the cassette holder to position the tape retainer as shown in Fig. A.

Then, loosen the screws in Fig. C and adjust the tape retaining cam position to obtain the specified clearances *1 and *2 in Fig. B.

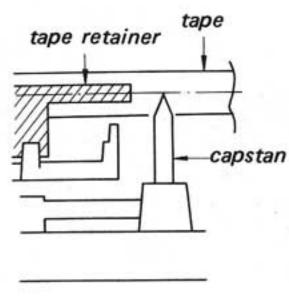


Fig. A

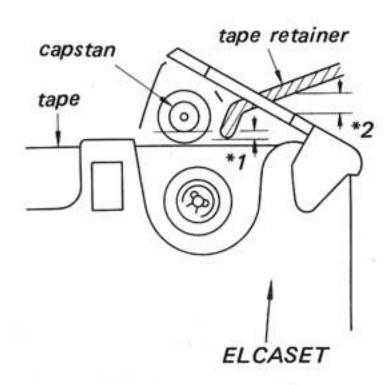


Fig. B

Specification: clearance *1: 1-1.5 mm clearance *2: more than 1 mm

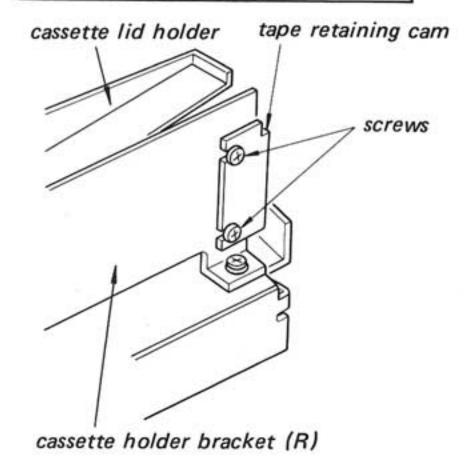
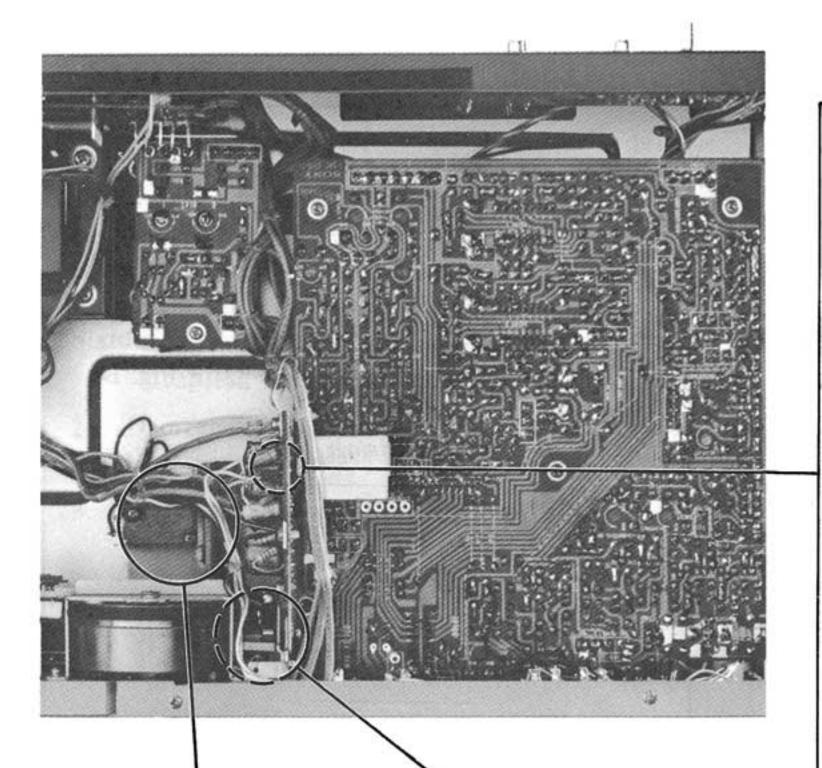


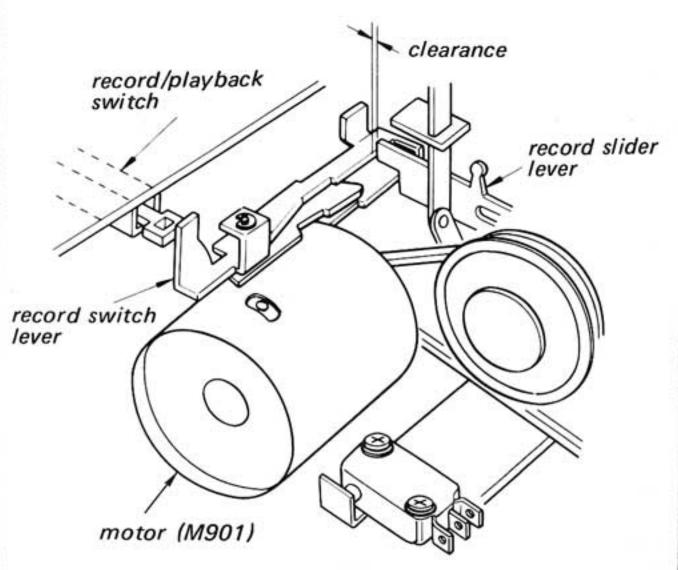
Fig. C

 Push and lock the cassette holder in and make sure that the tape retainer does not touch the tape.



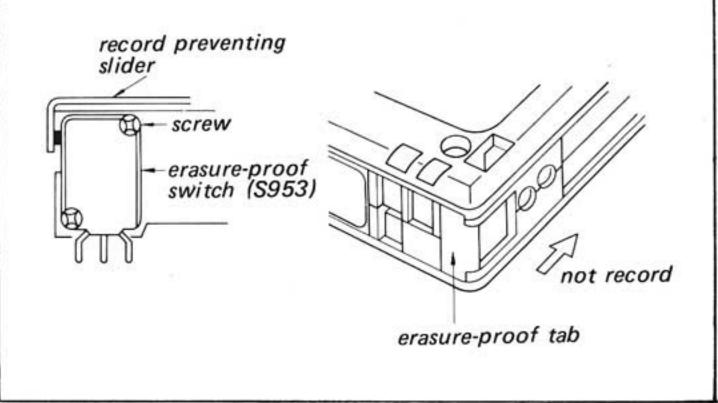
Record Slider Position Check

- 1. Install the ELCASET.
- When pushing the record and forward buttons, make sure that the record switch lever completely pushes the record/playback switch (S1).
- Make sure that the clearance exists between the record switch lever and the record slider.



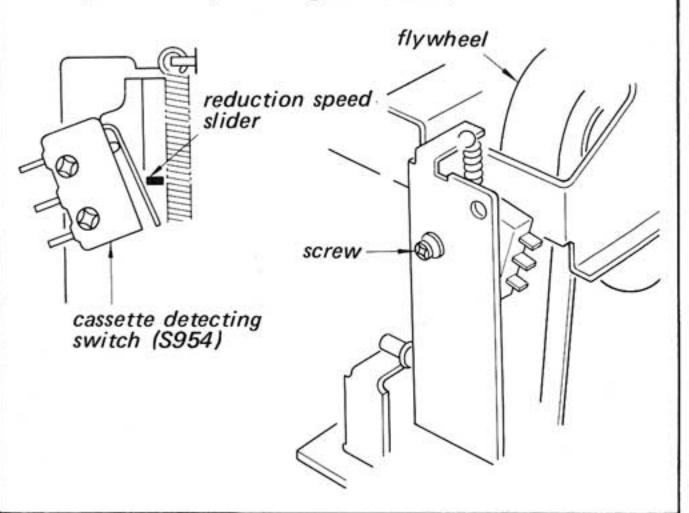
Erasure-proof Switch (S953) Position Adjustment

- When installing the ELCASET whose erasureproof tab does not slide in, make sure that the erasure-proof switch (S953) is ON.
- When installing the ELCASET whose erasureproof tab slides in, make sure that the erasureproof switch (S953) is OFF.
- 3. If necessary, adjust the erasure-proof switch position by loosing the screw.



Cassette Detecting Switch (S954) Position Adjustment

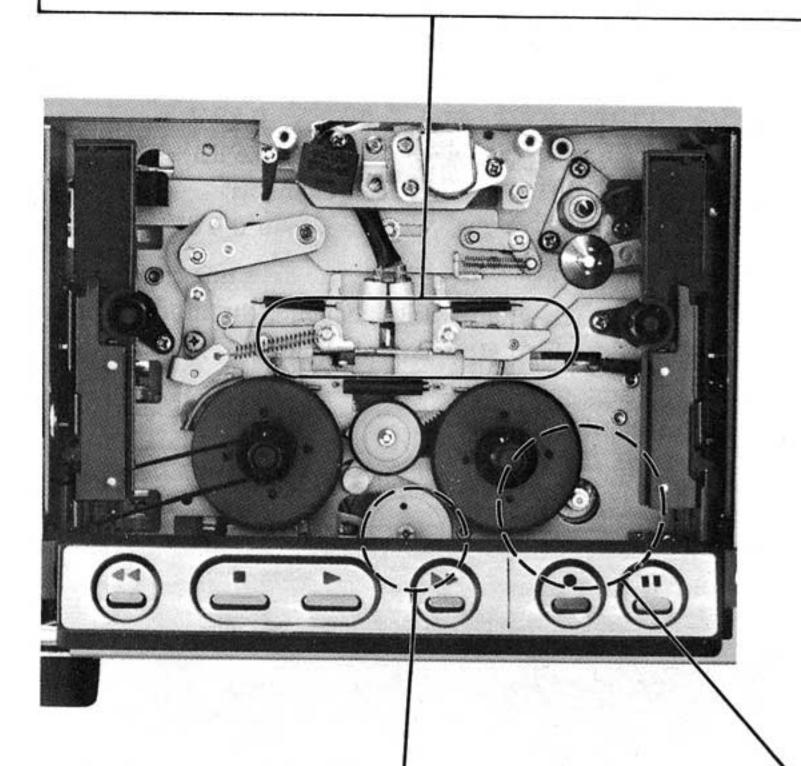
- When pushing the cassette holder in, make sure that the cassette detecting switch (S954) turns ON and the reduction speed slider does not cross the cassette detecting switch over.
- 2. When ejecting the cassette holder, make sure that the cassette detecting switch turns OFF.
- If necessary, adjust the cassette detecting switch position by loosing the screw.

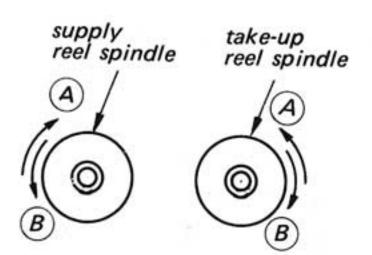


Brake Torque Adjustment

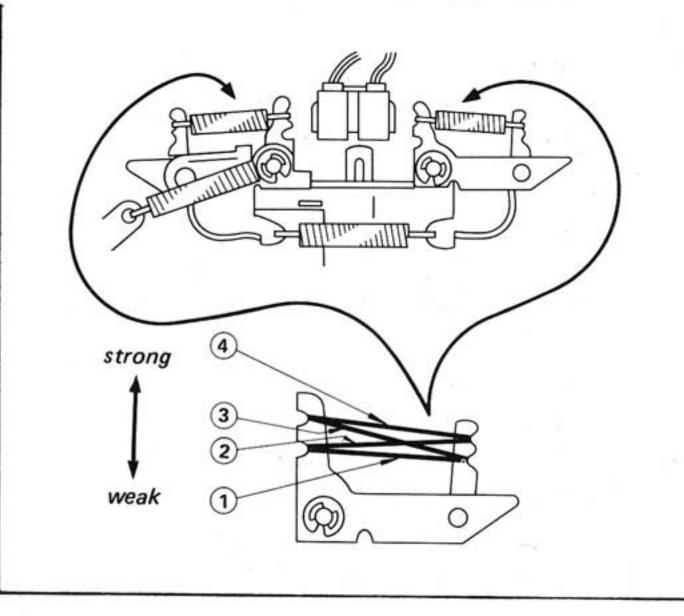
- Stop mode -

Direction	Torque meter reading
(A)	250-300 g.cm (3.5-4.1 oz.in)
B	30-40 g.cm (0.42-0.55 oz.in)





If necessary, change the spring position.

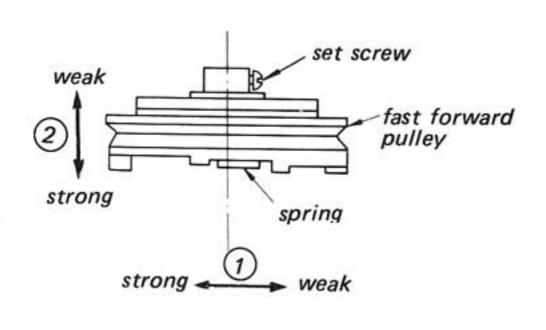


Fast Forward and Rewind Torque Adjustment

- Fast forward or rewind mode -

Torque meter	Meter reading
CQ-201L	200-250 g.cm (2.8-3.4 oz.in)

- 1. Change the spring position.
- If necessary, change the fast forward pulley height.

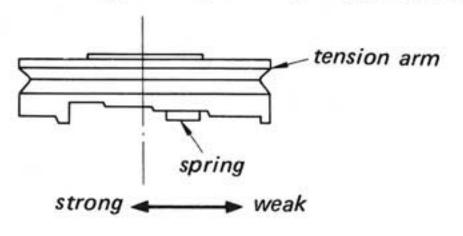


Forward Torque Adjustment

- Playback mode -

Torque meter	Meter reading
CQ-101L	90-120 g.cm (1.25-1.66 oz.in)

If necessary, change the spring position.



Back Tension Torque Measurement

- Playback mode -

Torque meter	Meter reading
CQ-101L	65-100 g.cm (0.91-1.38 oz.in)

3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustments should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

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

POWER switch:

ON

TIMER switch:

OFF

MEMORY switch:

OFF

DOLBY NR switch:

MPX FILTER switch:

OFF

TAPE SELECT EQ switch:

OFF

TAPE SELECT BIAS switch:

TYPE I TYPE I

LEVEL ADJUST control:

(on the rear panel)

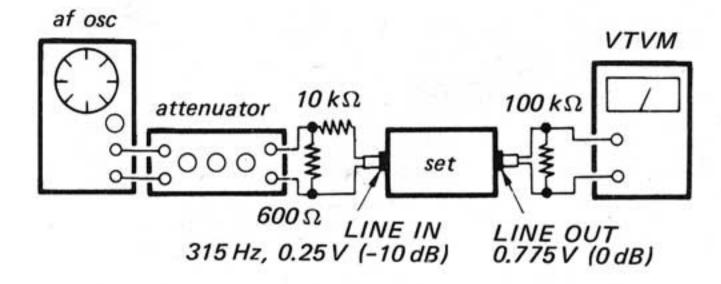
fully clockwise

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

Blank Tape	EQ switch	BIAS switch
CS-60 (SLH)	TYPE I	TYPE I
CS-70 (DUAD)	TYPE II	ТҮРЕ П

Standard Record

Set the REC LEVEL-LINE control for the specified output level. (REC LEVEL-MIC control: 0 position).



Standard Input Level

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

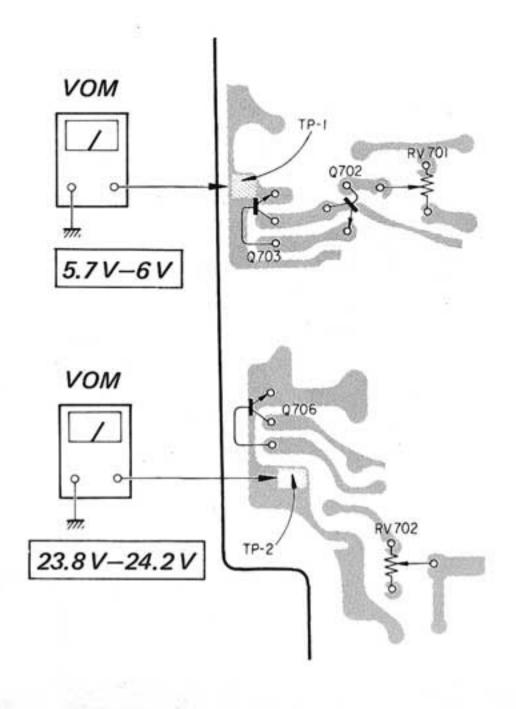
Standard Output Level

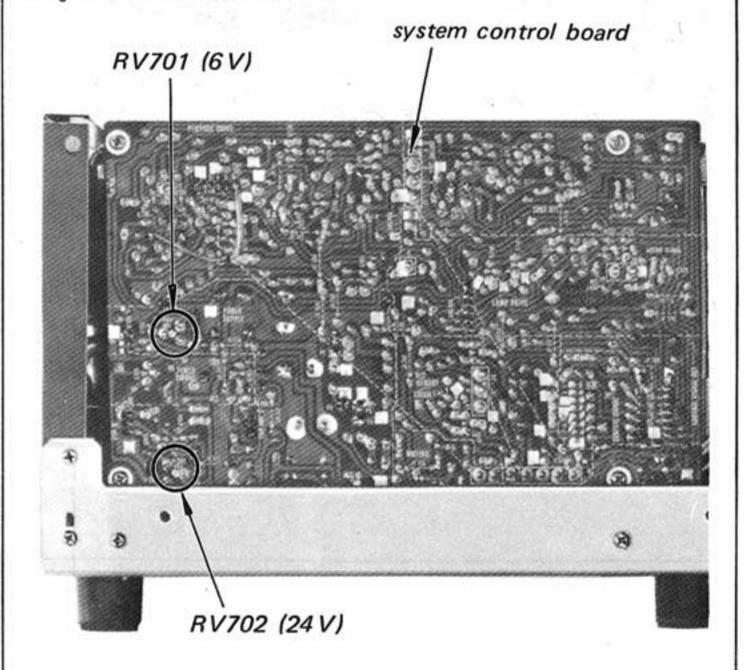
	LINE OUT	HEADPHONES
load impedance	100 kΩ	8Ω
output level	0.775V (0 dB)	0.12V (-16 dB) (PHONES LEVEL: fully clockwise)

DC Voltage Adjustment

Procedure:

Adjust RV701 and RV702 for specifid VOM readings.

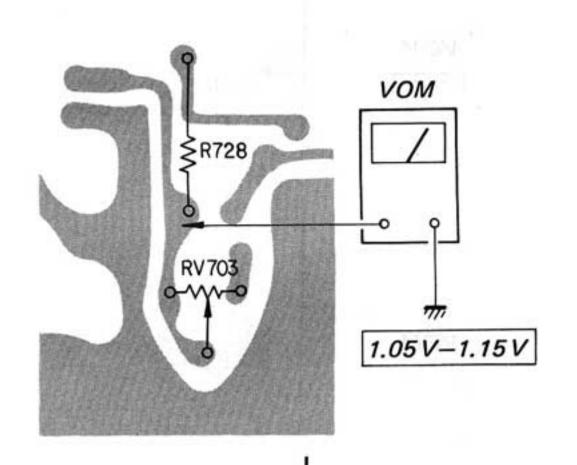


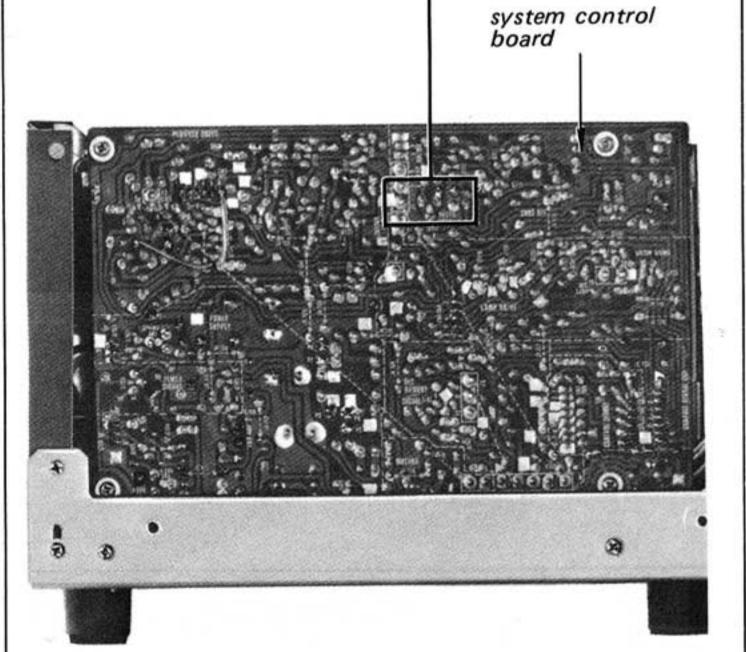


Auto Shut-off Voltage Adjustment

Procedure:

- 1. Play back the leader tape portion of test tape.
- 2. Adjust RV703 for the specified VOM reading.

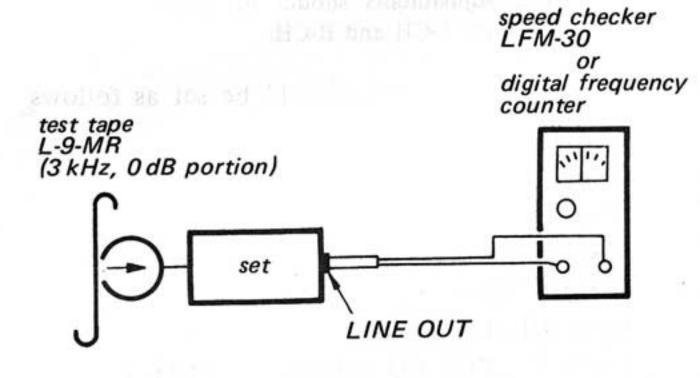




Tape Speed Adjustment

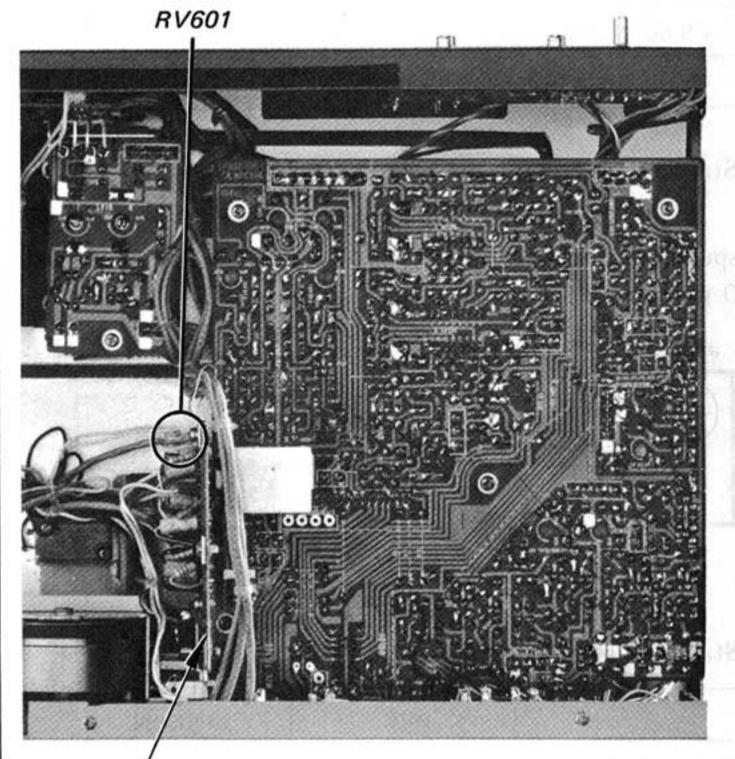
Procedure:

Mode: playback



Specification:

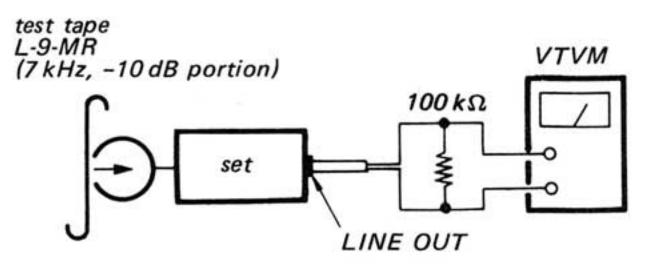
Speed checker	Digital frequency counter	
±0.65%	2,980-3,020 Hz	



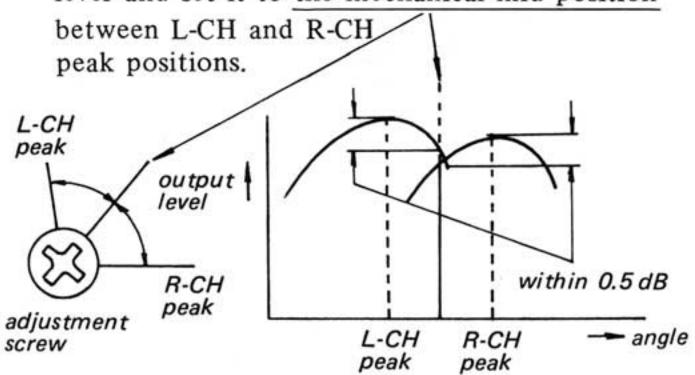
Record/playback Head Azimuth Adjustment

Procedure:

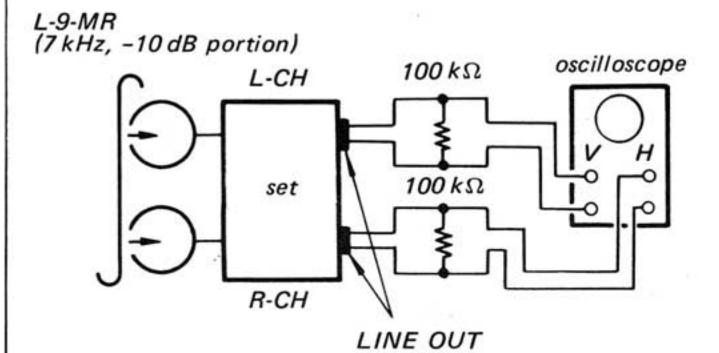
1. Mode: playback

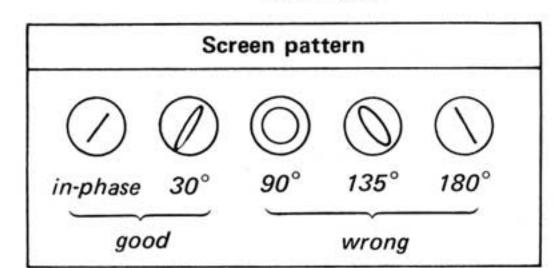


2. Turn the adjustment screw for the maximum level and set it to the mechanical mid position



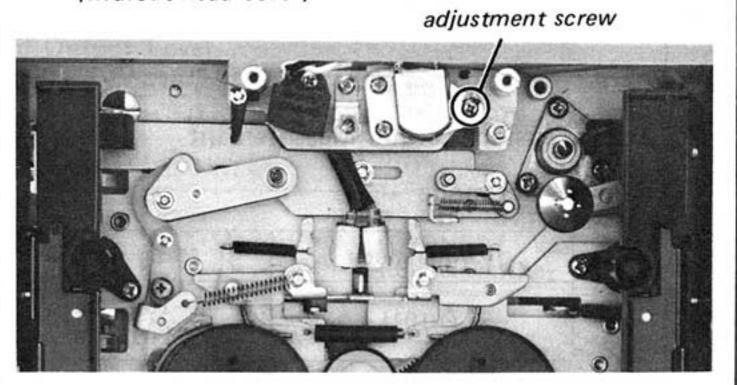
3. Mode: playback





Adjustment Location:

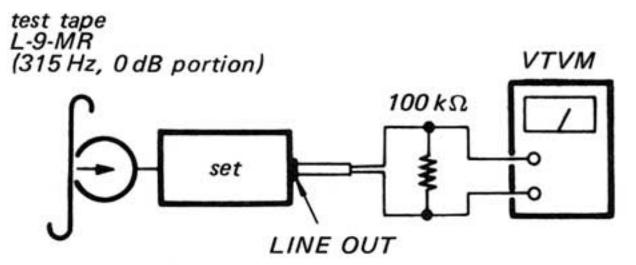
(without head cover)



Playback Level Adjustment

Procedure:

Mode: playback



Specification:

LINE OUT Level:

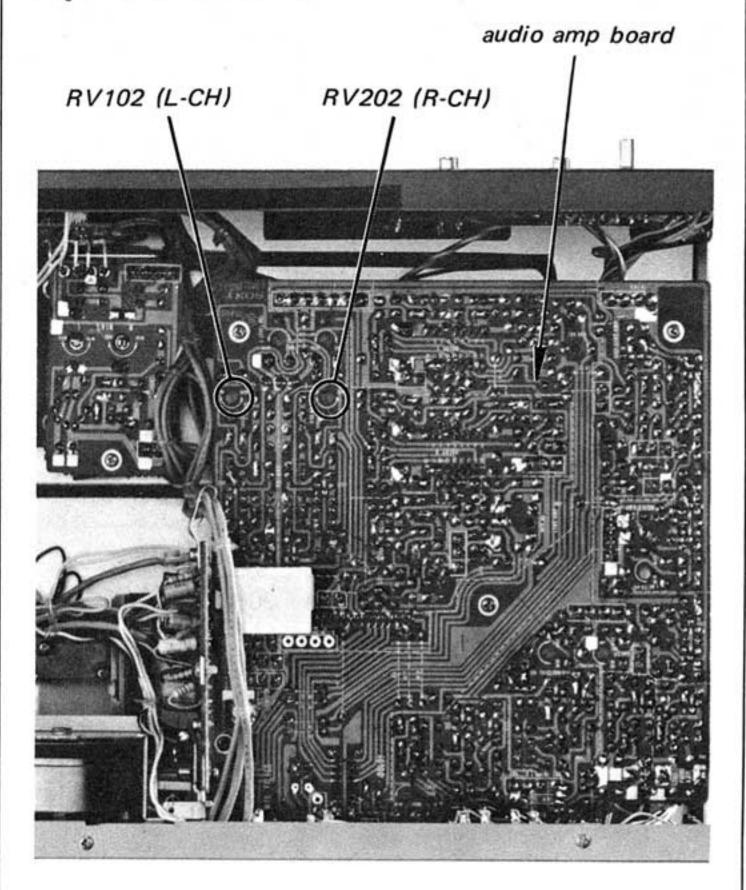
 $0.73 \, V - 0.89 \, V$

 $(0 dB \pm 0.5 dB)$

Level difference between channels:

less than 0.5 dB

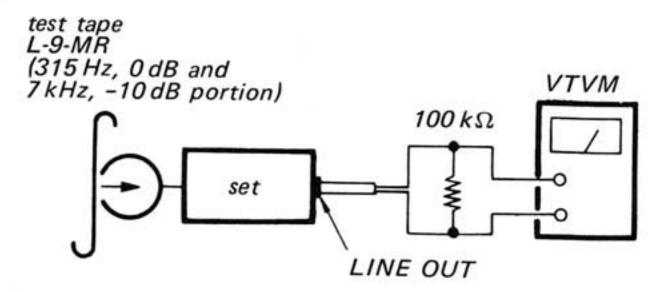
Check that LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.



Playback Equalizer Adjustment

Procedure:

Mode: playback

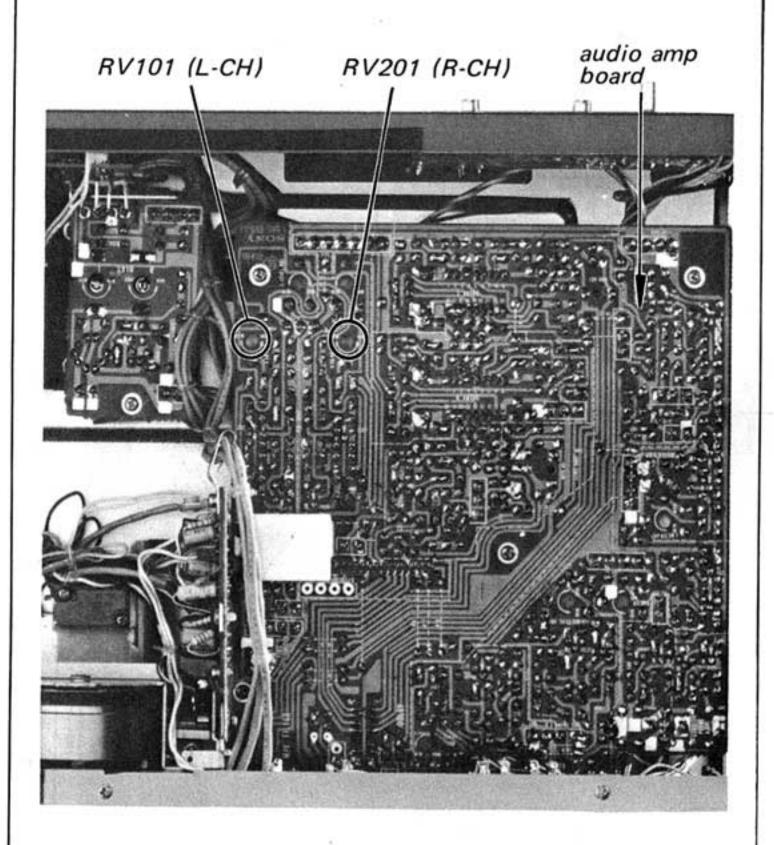


Specification:

7 kHz level difference from 315 Hz: -10 dB ± 0.5 dB

Note: After the playback equalizer adjustment make sure that 315 Hz level is between 0.73 V and 0.89 V (0 dB ± 0.5 dB).

Adjustment Location:



Level Meter Calibration

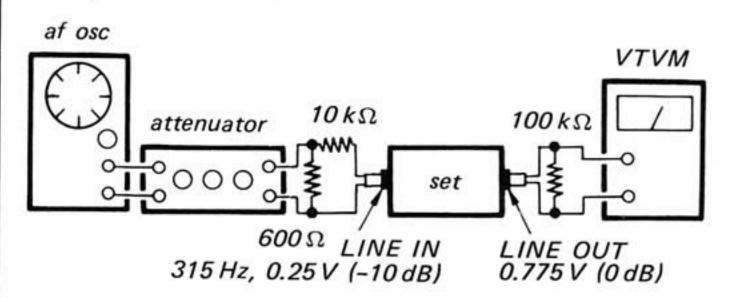
Setting:

REC LEVEL-LINE control: standard record

(See page 20)

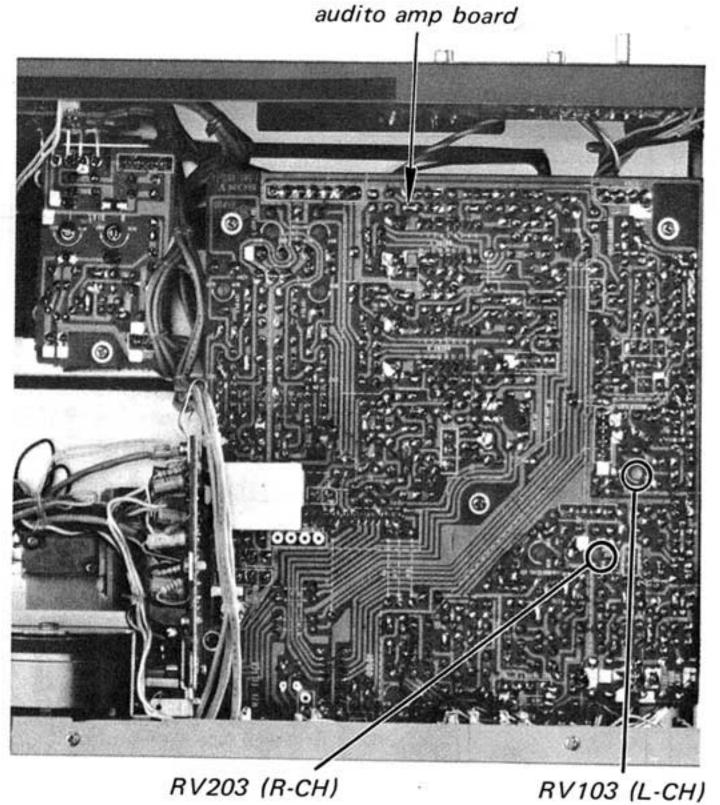
Procedure:

1. Mode: record



Adjust	VU Meter indication
RV103	
(L-CH)	\ \ \ \
RV203	20 60 60 00
(R-CH)	10 7 5 3 0 3

Adjustment Location:



Note: The pointer should move smoothly.

Record Bias Adjustment

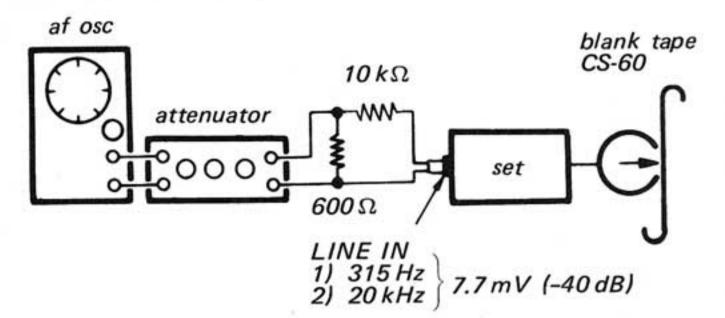
Setting:

REC LEVEL-LINE control: standard record

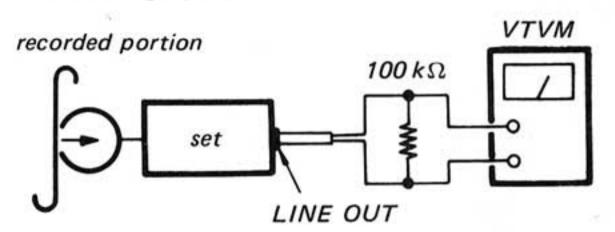
(See page 20.)

Procedure:

1. Mode: record

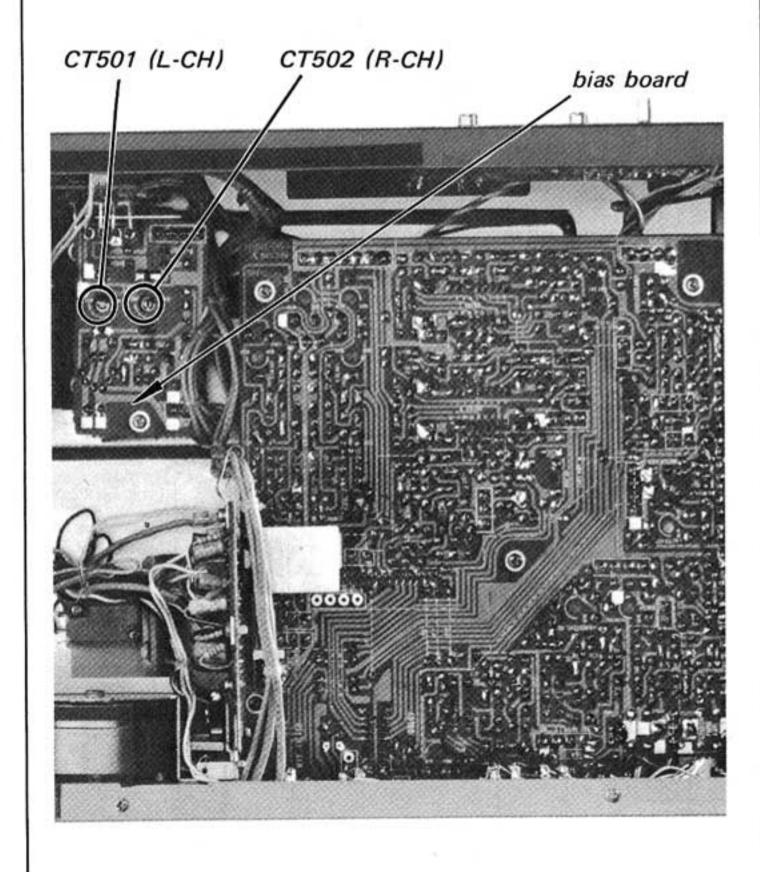


2. Mode: playback



 Repeating above steps, adjust CT501 (L-CH) and CT502 (R-CH) to make 20 kHz and 315 Hz signal output levels equal.

Adjustment Location:



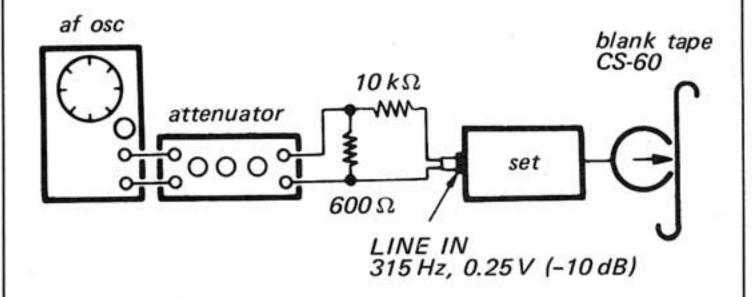
Record Level Adjustment

Setting:

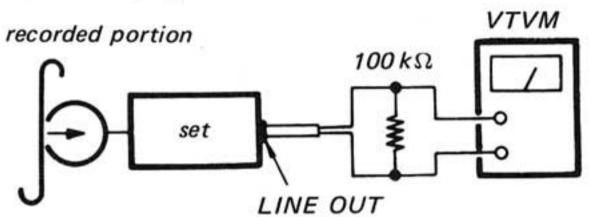
REC LEVEL-LINE control: standard record (See page 20.)

Procedure:

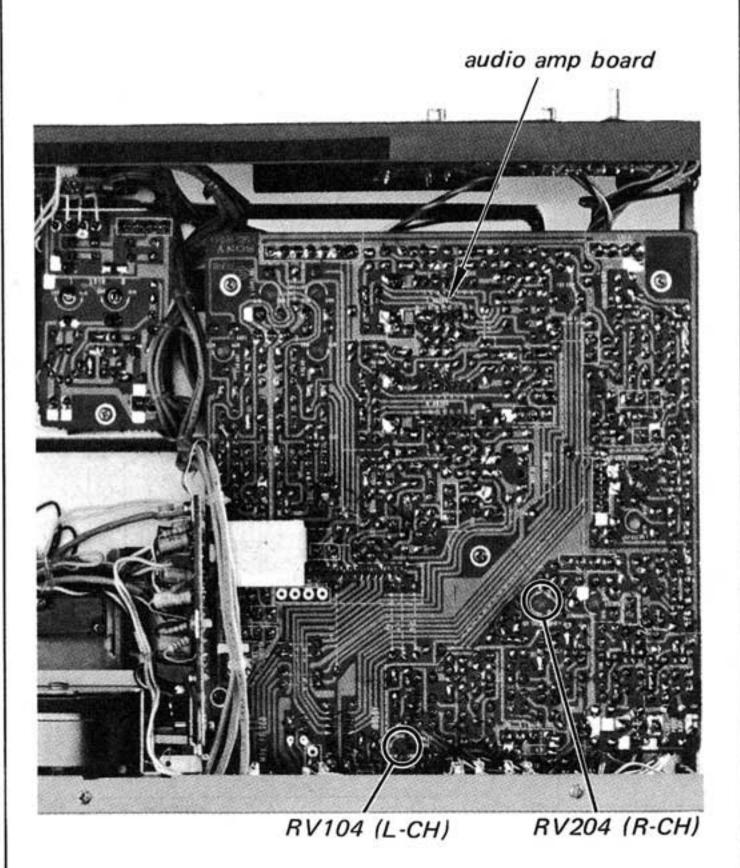
1. Mode: record



2. Mode: playback



3. Repeating above steps, adjust RV104 (L-CH) and RV204 (R-CH) to obtain 0.69 V-0.85 V (0 dB ± 1 dB) reading son VTVM.



MPX Filter Adjustment

Setting:

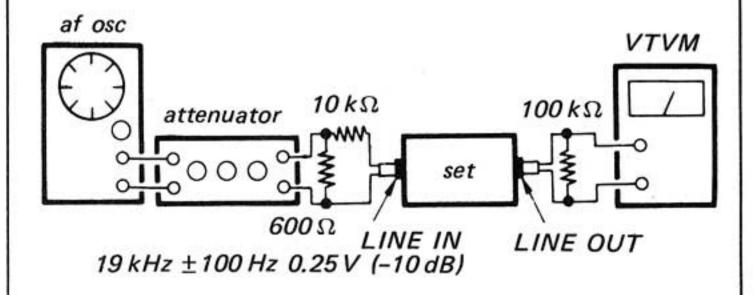
MPX FILTER switch:

ON

REC LEVEL-LINE control: Standard record

(See page 20.)

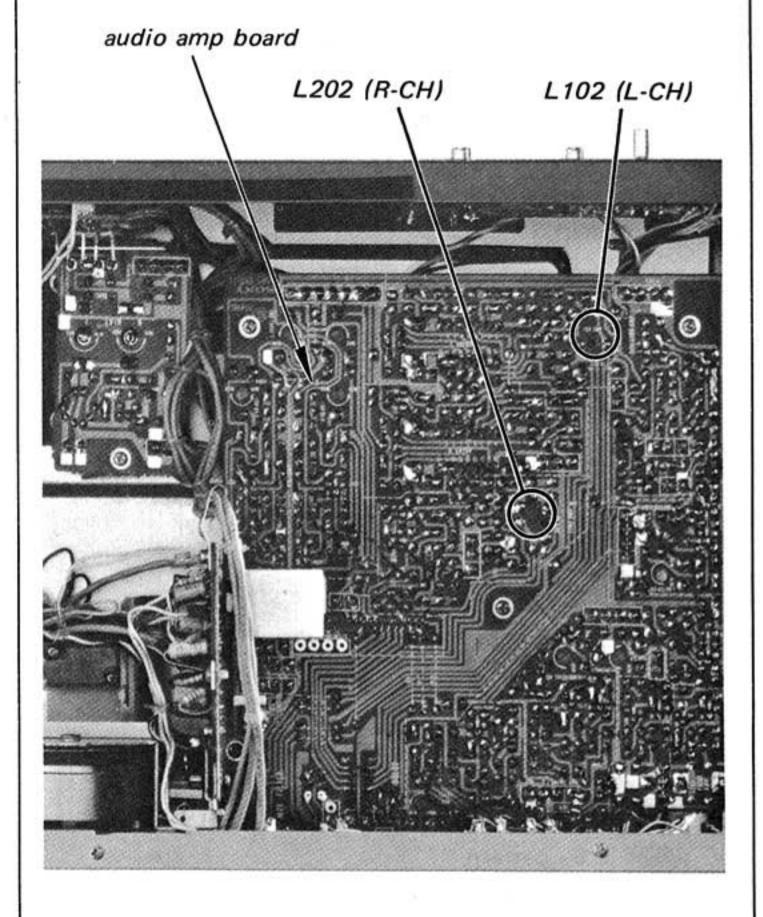
Procedure:



Adjust L102 (L-CH) and L202 (R-CH) for a minimum reading on VTVM.

Specification:

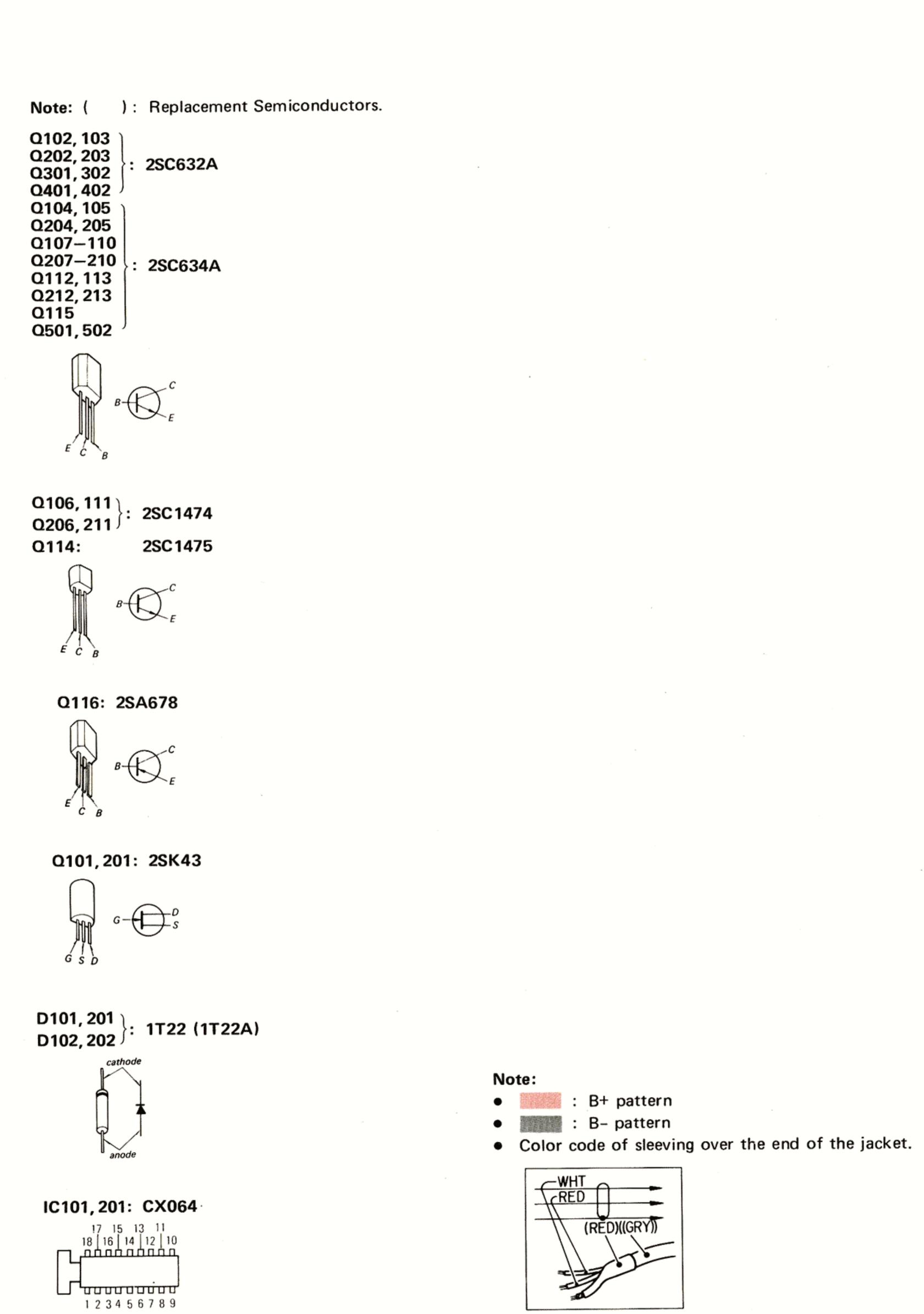
LINE OUT level: less than 22 mV (-32 dB)

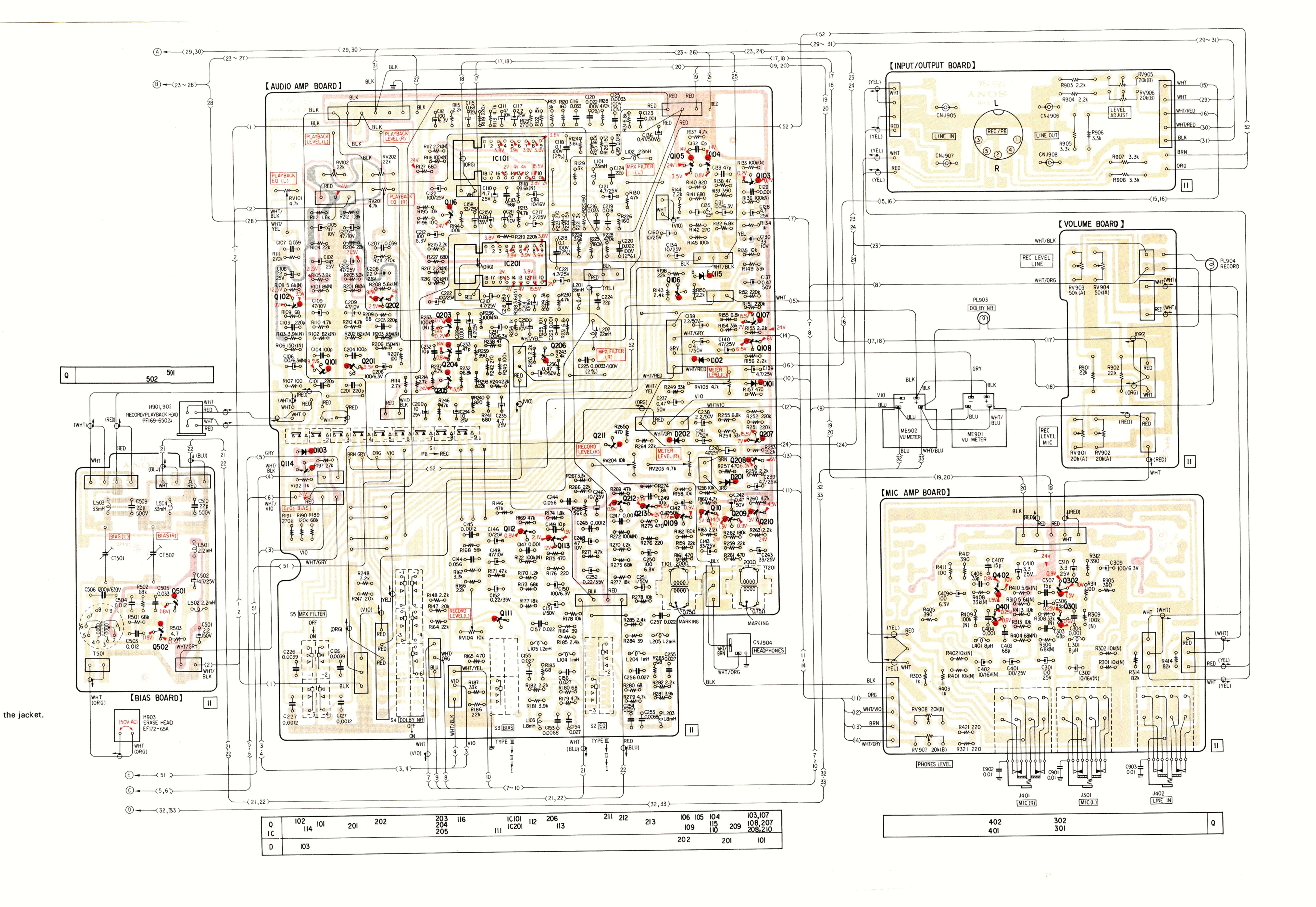


SECTION 4 DIAGRAMS

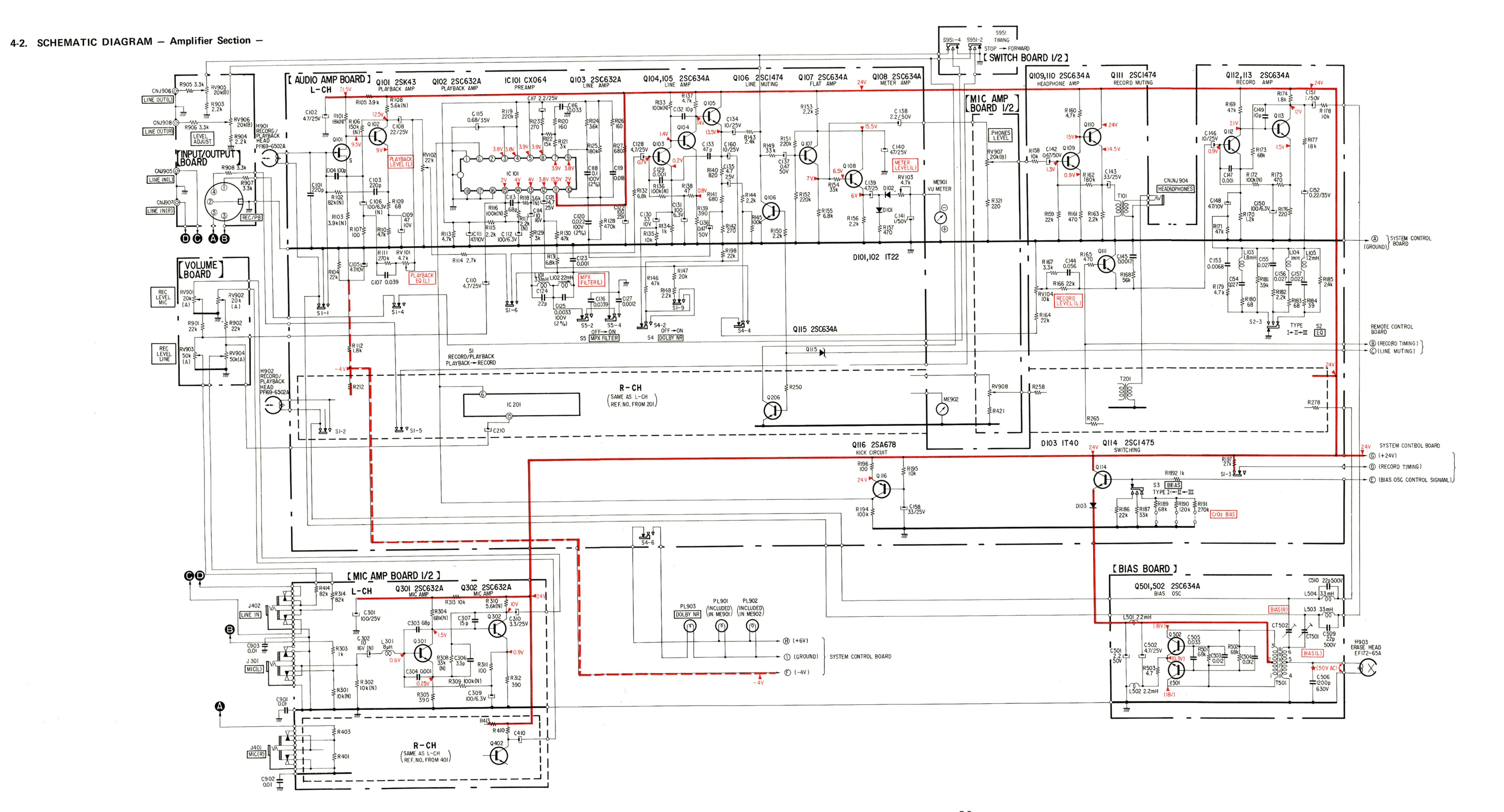
4-1. MOUNTING DIAGRAM — Amplifier Section —

Conductor Side —





(Top view)



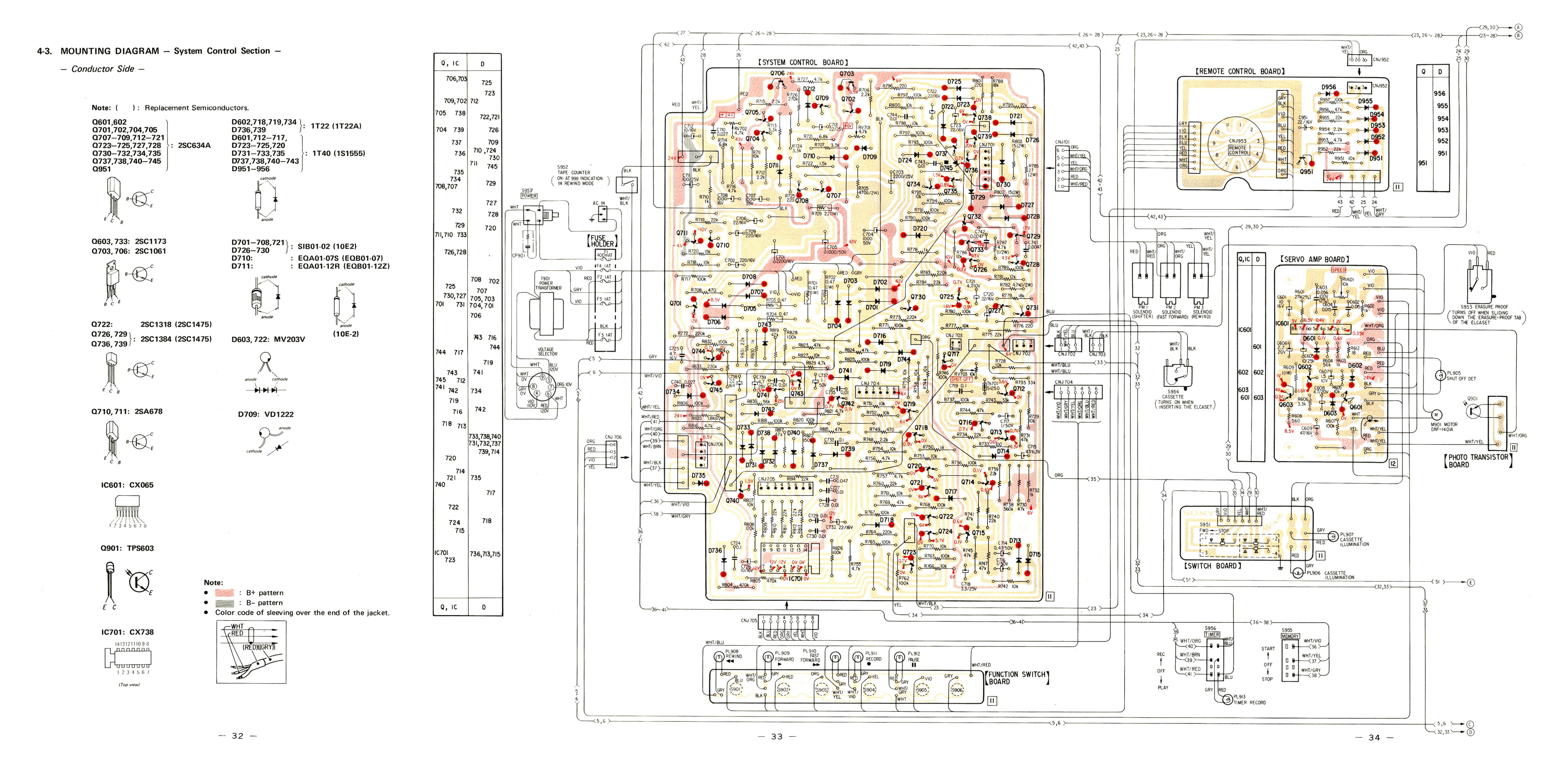
Note:

- Components for right channel have the same values as for left channel.
- All capacitors are in μF unless otherwise noted. pF = μμF.
 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ${}^{1}W$ unless otherwise noted. $k\Omega = 1000\Omega$, $M\Omega = 1000 k\Omega$
- All adjustable resistors have characteristic curve B, unless otherwise noted.
- (N): low-noise capacitor and resistor.
- 2% indicates component tolerance.
- Transistor is used for Q115.
- B+ bus.
- panel designation. adjustment for repair.
- + chassis ground.
- B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions in stop mode with a VOM (20 kΩ/V).

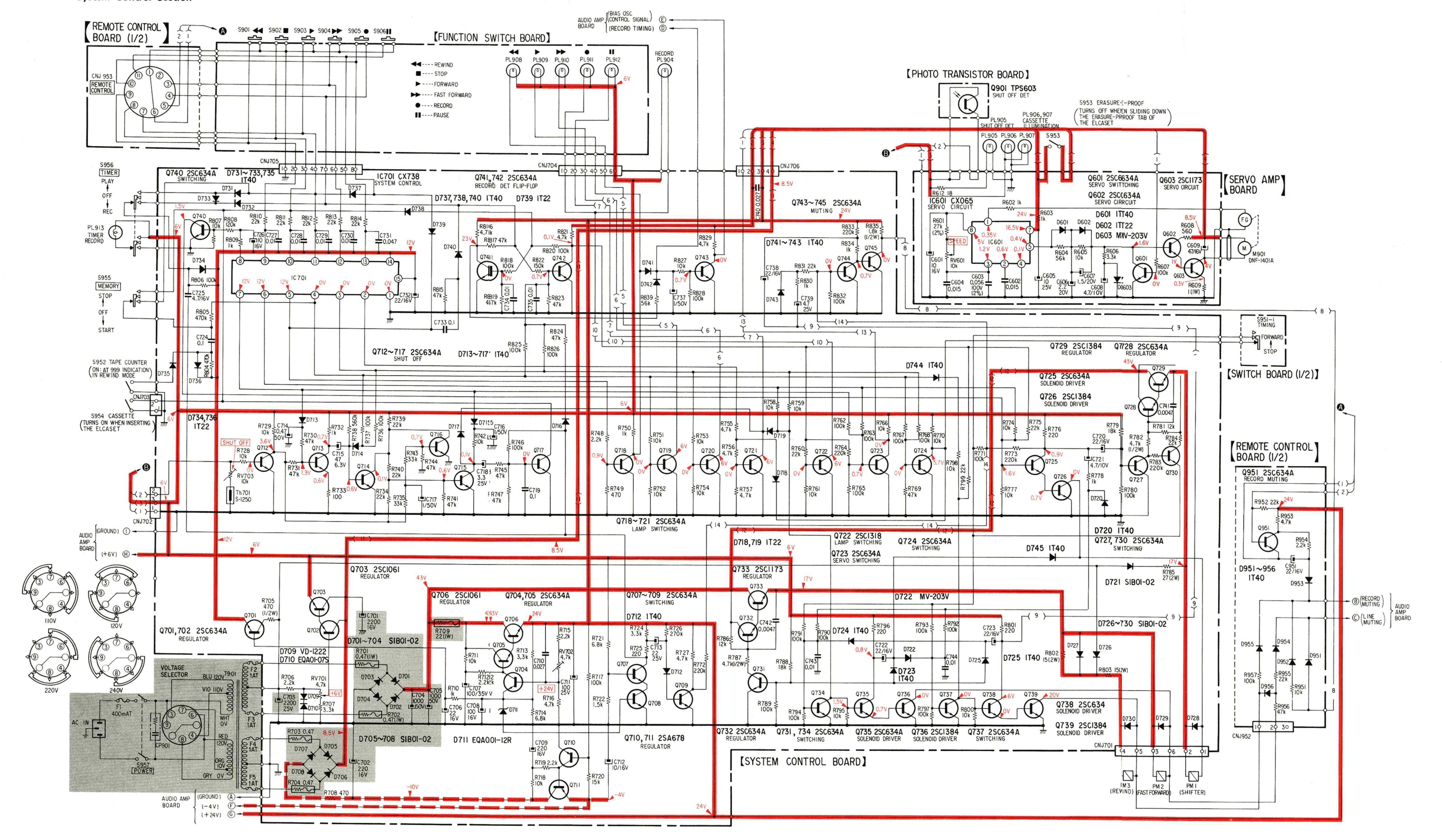
): record

- AC voltage readings indicated by * in the bias oscillator circuit are taken with a VTVM.
- Voltage variations may be noted due to normal production tolerances.
- Switch:

Ref. No.	Switch	Position
S1	RECORD/PLAYBACK	PLAYBACK
S2	EQ	TYPE III
S3	BIAS	TYPE III
S4	DOLBY NR	OFF
S5	MPX FILTER	OFF
S951	TIMING	STOP



4-4. SCHEMATIC DIAGRAM - System Control Section -



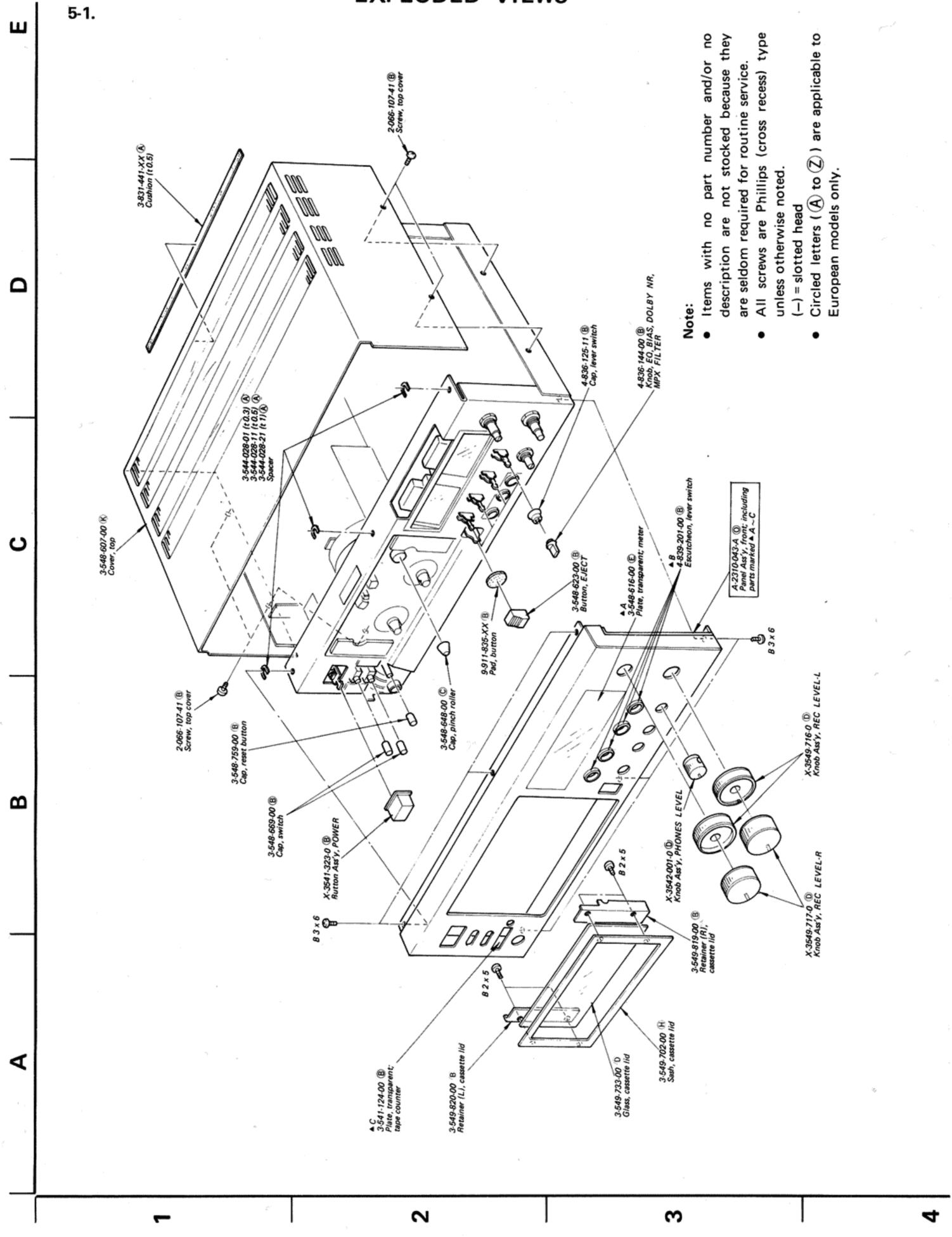
Note:

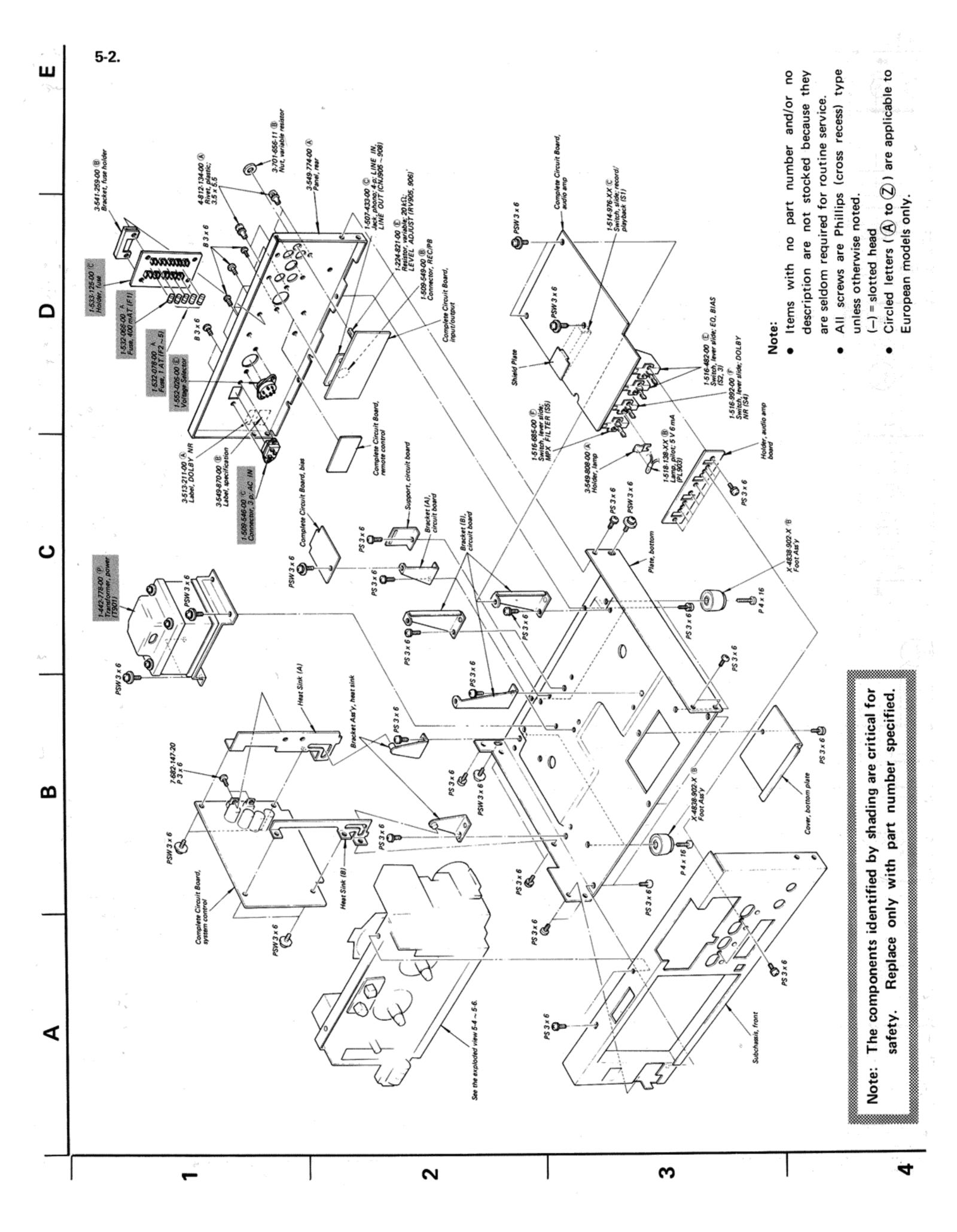
- All capacitors are in μF unless otherwise noted. pF = μμF.
 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ${}^{1}\!\!\!/W$ unless otherwise noted. $k\Omega = 1000\,\Omega$, $M\Omega = 1000\,k\Omega$
- All adjustable resistors have characteristic curve B, unless otherwise noted.
- w-\-: fusible resistor.
- (N): low-noise capacitor and resistor.
- 2% indicates component tolerance.
- B+ bus.
- _____ : panel designation.
- adjustment for repair.
- direct connection to points marked = on the chassis.
- === : B- bus.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken under no signal conditions in forward mode with a VOM (20 $k\Omega/V$).
- Voltage variations may be noted due to normal production tolerances.
- Switch:

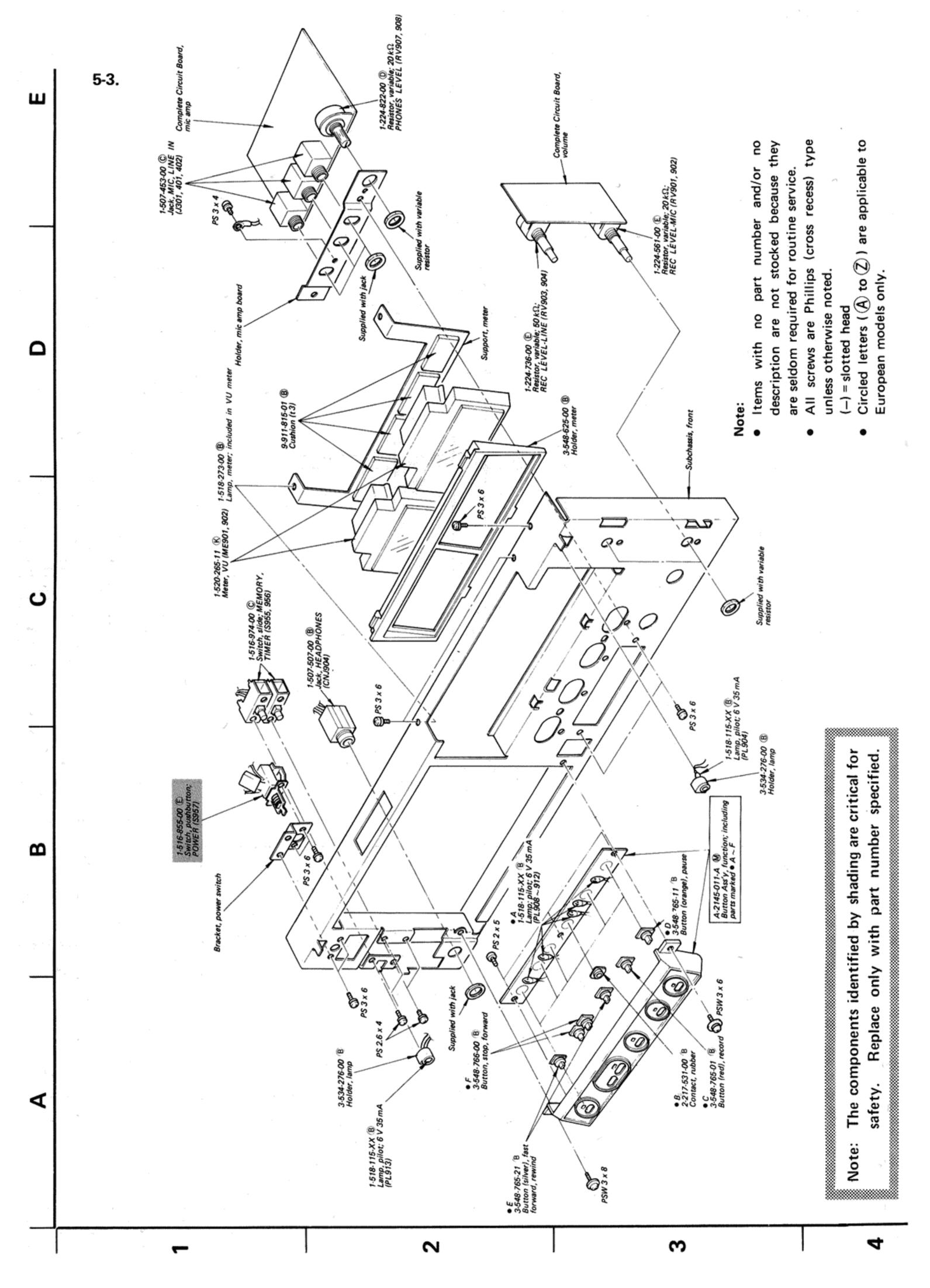
Ref. No.	Switch	Position
S901	REWIND	OFF
S902	STOP	OFF
S903	FORWARD	OFF
S904	FAST FORWARD	OFF
S905	RECORD	OFF
S906	PAUSE	OFF
S951	TIMING	STOP
S952	TAPE COUNTER	OFF
S953	ERASURE-PROOF	OFF
S954	CASSETTE	OFF
S955	MEMORY	OFF
S956	TIMER	OFF
S957	POWER	OFF

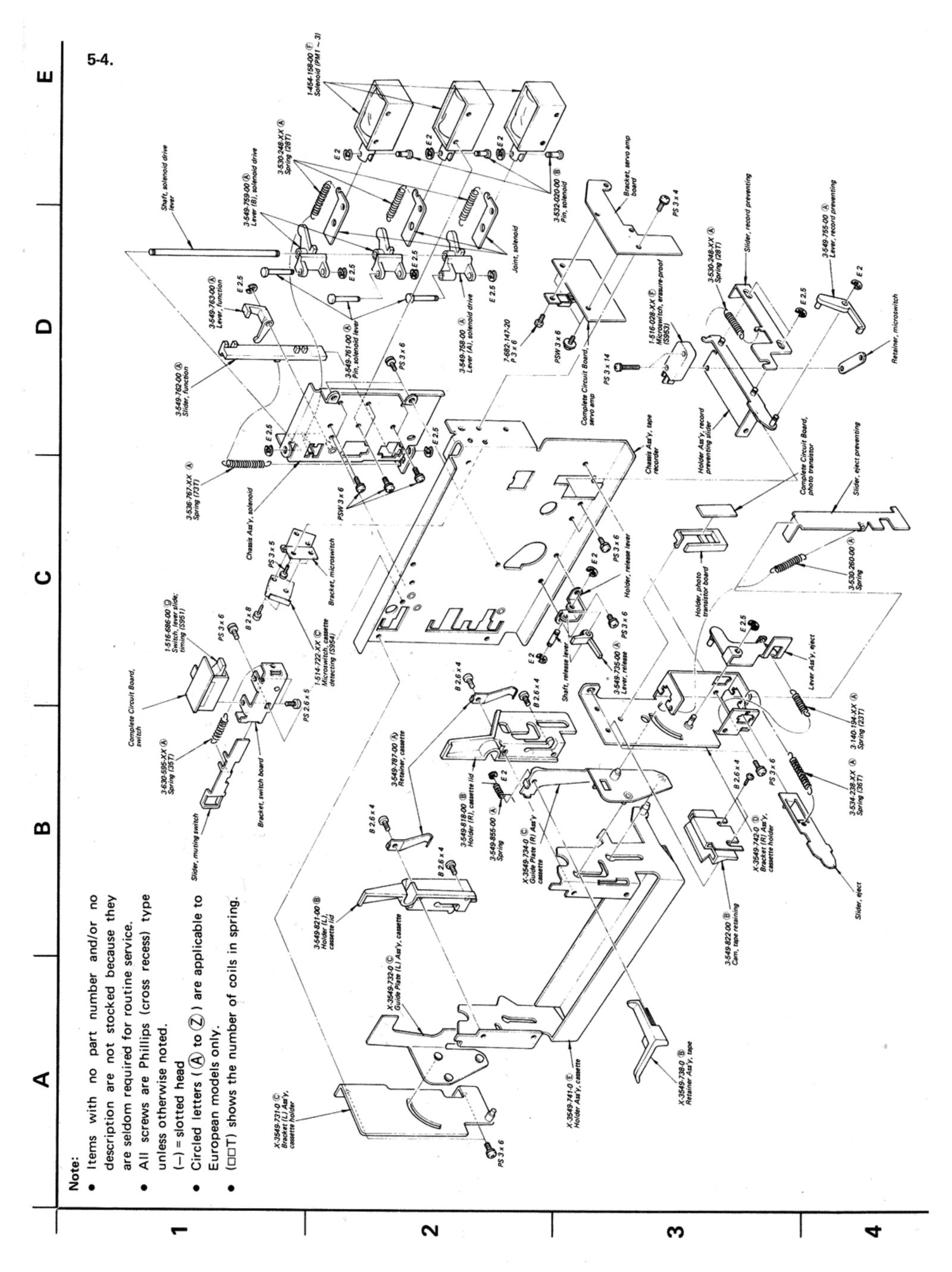
Note: The components identified by shading are critical for safety. Replace only with part number specified.

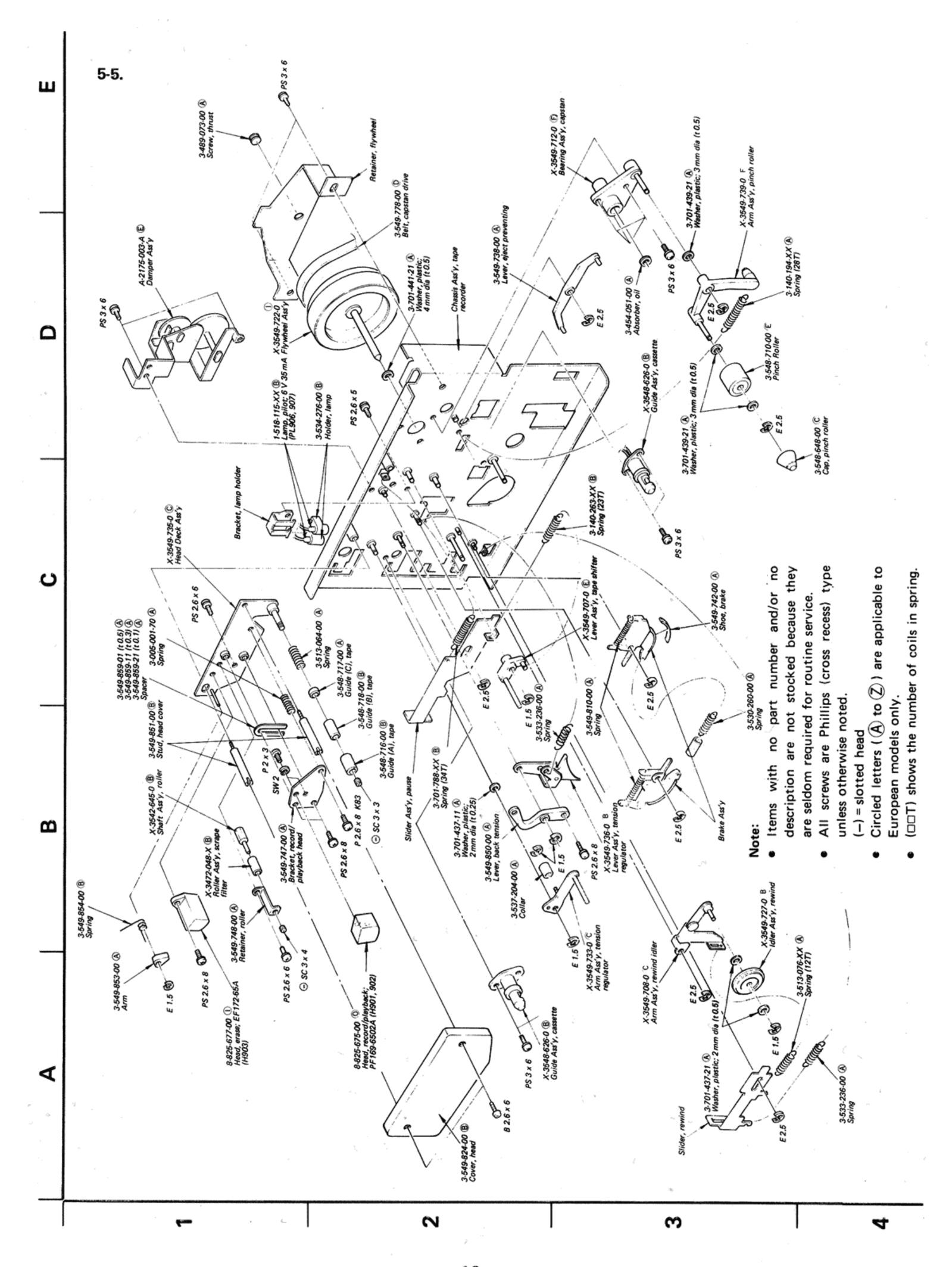
SECTION 5 EXPLODED VIEWS

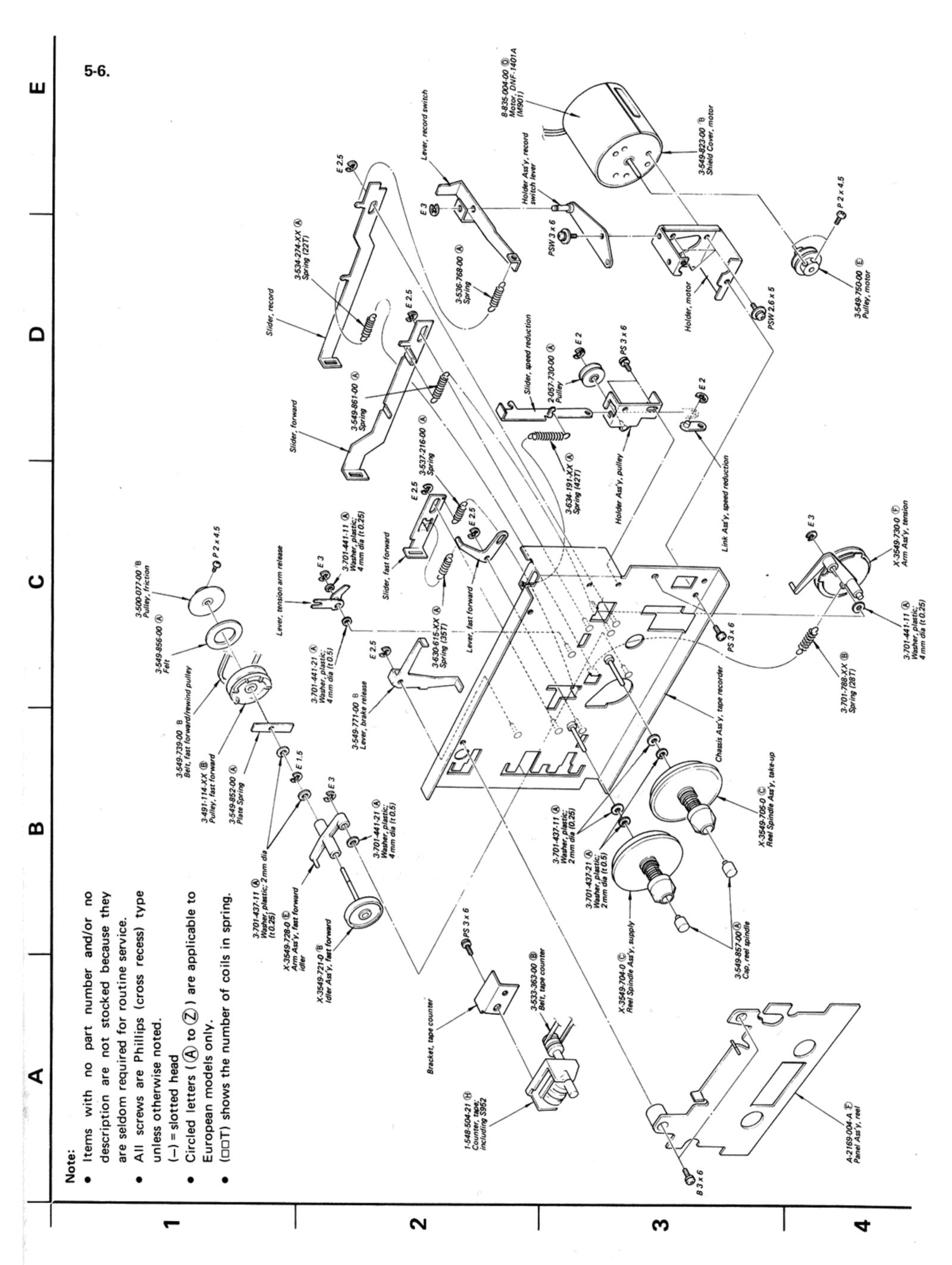












SECTION 6 ELECTRICAL PARTS LIST

 Circled letters (A to 2) are applicable to European models only.

				moders only	<i>y</i> .		
Ref. No.	Part No.	Description	<u> </u>	Ref. No.	Part No.		Description
	SEMICO	NDUCTORS		2737,738	(B	2SC634A
			⇒ (2739	($^{\circ}$	2SC1475
	Trai	nsistors		Q740~745	(B	2SC634A
Q101,201	E	2SK43		2901	(Ē	TPS603
Q102,202	®	2SC632A		Q951	($^{f B}$	2SC634A
Q103,203'							A*
Q104,204 Q105,205	B	2SC634A				10	Cs
Q103,2Q3				C101 201	(\bigcirc	CY064
Q106,206	®	2SC1474	ı	C101,201 C601	(Ē	CX064 CX065
Q107~110			ı	C701		_	CX738
Q207~210)	B	2SC634A	1	0,01	·		011700
Q111,211	B	2SC1474				Dic	odes
Q112,212	B	2SC634A					
Q113,213	•	25C034A	⇒I	0601	($^{\odot}$	181555
			⇒I	0602	($^{\odot}$	1T22A
Q114	©	2SC1475	I	0603	($^{f B}$	MV203V
Q115	B	2SC634A	P SELAN TO		TRANSPORTED NEW YORKSTON OF THE STATE OF THE	-	V CONTRACTOR
Q116	©	2SA678	thickness of	0701~708	THE RESERVE OF THE PROPERTY OF	COMPOUNDS:	10E2
Q301,401				0709		B	VD1222
Q302,402)	B	2SC632A		0710		_	EQB01-07
Q302,402	\$ ×			0711 0712~717		B B	EQB01-12Z 1S1555
Q501,502	(B)	2SC634A	-	7/12 - /1/	`	В	151333
2, 3, 3, 3	0		⇒I	0718,719	(B	1T22A
Q601,602	B	2SC634A	1	0720		B	181555
Q603	©	2SC1173	$\Rightarrow \Gamma$	0721		$\widetilde{\mathbb{B}}$	10E2
			l r	0722		$^{\odot}$	MV203V
Q701~702	B	2SC634A	⇒I	723~725	- ($^{\odot}$	1S1555
Q703	D	2SC1061			^ ^		
Q704,705	B	2SC634A	1	0726~730	. ($^{f B}$	10E2
Q706	(D)	2SC1061	1	0731~733	. (B	1S1555
Q707~709	B	2SC634A	l	0735			
Q710,711	©	2SA678	- 1	0736		B	1T22A
Q712~721	B	2SC634A	= 1	0737,738		B	1S1555
⇒ Q722	C	2SC1475	⇒T	0739		B	1T22A
Q723~725	B	2SC634A	- 1	0740~743		B	1S1555
⇒ Q726	©	2SC1475		,	`	U	
			$\Rightarrow \Gamma$	951~956	(B	1S1555
Q727,728	B	2SC634A	and the same of th		e de la companya de		
⇒ Q729	©	2SC1475			*: T	her	mistor
Q730~732	B	2SC634A			, .		
Q733	C	2SC1173	1	7h701	1-800-198-XX	A	S-1250
Q734,735	(B)	2SC634A		•			
⇒ Q736	(C)	2SC1475					

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

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

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

Ref. No.	Part No.			Descrip	otion	Ref. No.	Part No.	*	1 -	Descrip	otion
		CC	DILS		retained in	C115,215	1-131-214-11	B	0.68	35 V	tantalum
						C116,216	1-108-591-12	B	0.033		mylar
All c	oils are microine	ducto	rs unless	otherw	ise noted.	C117,217	1-131-205-11	B	2.2	25 V	tantalum
						C118,218	1-130-071-11	B	$0.1 \pm 2\%$	100 V	film
L101,201	1-407-879-00	B	33 mH			C119,219	1-108-585-12	B	0.018		mylar
L102,202	1-407-240-00	(B)	22 mH,	variable	inductor						
L103,203	1-407-197-XX	A	1.8 mH			C120,220	1-130-072-11	$^{\odot}$	0.022 ± 3	2% 100	V film
L104,204	1-407-195-XX	_	1 mH			C121,221	1-121-395-11	A	4.7	25 V	
L105,205	1-407-196-XX	B	1.2 mH			C122,222	1-121-416-11	A	100	25 V	
						C123,223	1-108-227-12	(A)	0.001		mylar
L301,401	1-407-519-00	B	8μΗ			C124,224	1-107-069-11	A	22p		silvered mica
L501,502	1-407-198-XX	B	2.2 mH			C125,225	1-129-794-21	B	0.0033	± 2% 10	00V film
L503,504	1-407-879-00	$^{\odot}$	33 mH			C126,226	1-108-569-12	B	0.0039		mylar
						C127,227	1-108-557-12	B	0.0012		mylar
						C128,228	1-121-395-11	A	4.7	25 V	
	TR	ANSF	FORMER	RS		C129,229	1-108-227-12	A	0.001		mylar
T101,201	1-427-284-00	B	Output			C130,230	1-121-402-11	A	33	10V	
						C131,231	1-121-413-11	A	100	6.3 V	
T501	1-433-193-00	(C)	Bias Os	с		C132,232	1-107-061-11	A	10p		silvered mica
						C133,233	1-107-077-11	A	4.7p		silvered mica
Т901	1-442-778-00	P	Power			C134,234	1-121-398-11	A	10	25 V	
						C135,235	1-121-395-11	A	4.7	25 V	
	C	APA	CITORS			C136,236 C137,237	1-121-726-11	(A)	0.47	50 V	
					EKINATO	C138,238	1-121-450-11	(A)	2.2	50 V	,
	all capacitors are	in μ	F and ele	ectrolyti	c unless	C139,239	1-121-395-11	A	4.7	25 V	
	therwise noted. 0WV or less are	not	indicated	evcent	for	0.103,203		0	Z J Bloom		
	lectrolytics. pF			схоорг	101	C140,240	1-121-410-11	(B)	47	25 V	
						C141,241	1-121-391-11	Ã	1	50 V	
C101,201	1-107-093-11	(A)	220p		silvered mica	C142,242	1-121-726-11	A	0.47	50 V	
C102,202	1-121-410-11	®	•	25 V		C143,243	1-121-404-11	A	33	25 V	
C103,203	1-107-093-11	~			silvered mica	C144,244	1-108-597-12	-	0.056		mylar
C104,204	1-107-085-11	A	100p		silvered mica			0		٠.	
C105,205	1-121-409-11	-	•	10 V		C145,245	1-108-557-12	(A)	0.0012		mylar
						C146,246	1-121-398-11	A	10	25 V	
C106,206	1-123-180-11	B	100	6.3 V		C147,247	1-108-227-12	-03	0.001		mylar
C107,207	1-108-593-12	B	0.039		mylar	C148,248	1-121-409-11	A	47	10 V	
C108,208	1-121-480-11	A	22	25 V		C149,249	1-107-061-11	A	10p		silvered mica
C109,209	1-121-409-11	A	47	10 V							."
C110,210	1-121-395-11	_	4.7	25 V		C150,250	1-121-413-11	(A)	100	6.3 V	
								-			

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

A 1

B 0.22

B 0.0068

A 0.027

50 V

35 V

tantalum

mylar

mylar

C111,211

C112,212

C113,213

C114,214

1-121-409-11

1-121-413-11

1-107-081-11

1-121-471-11

47

100

68p

10

(A)

10 V

6.3 V

16 V

silvered mica

C151,251

C152,252

C153,253

C154~156

C254~256

1-121-391-11

1-131-211-11

1-108-575-12

1-108-589-12

Ref. No.	Part No.			Descrip	tion
C157,257	1-108-587-12	(B)	0.022		mylar
C158	1-121-404-11	A	33	25 V	
C160,260	1-121-398-11	$\widecheck{\mathbf{A}}$	10	25 V	
C301,401	1-121-416-11	A	100	25 V	
C302,402	1-121-916-11	B	10	16 V	
C303,403	1-107-081-11	A	68p		silvered mica
C304,404	1-108-227-11	A	0.001		mylar
C306,406	1-107-073-11	A	33 p		silvered mica
C307,407	1-107-065-11	A	15 p		silvered mica
C309,409	1-121-413-11	A	100	6.3 V	savered inica
C310-410	1-121-392-11	A	3.3	25 V	
(510-410	1-121-392-11	W	3.3	23 V	,
C501	1-121-450-11	A	2.2	50 V	
C502	1-121-395-11	A	4.7	25 V	
C503,504	1-108-581-12	B	0.012		mylar
C505	1-108-591-12	B	0.033		mylar
C506	1-129-800-11	B	0.0012	630V	plastic
C509,510	1-107-210-11	A	22p	500 V	silvered mica
C601	1-121-471-11	(A)	10	16 V	
C602	1-108-912-11	B	0.015		mylar
C603	1-129-899-11	B	0.056 ±	2% 100	V plastic
C604	1-108-583-12	B	0.015		mylar
C605	1-121-398-11	\bigcirc	10	25 V	
C606	1-131-196-21	B	2.2	20 V	tantalum
C607	1-131-202-21	B	1.5	20 V	tantalum
C608	1-131-192-21	B	4.7	10 V	tantalum
C609	1-121-409-11	A	4.7	16 V	tuiituiuii
		6			
C701	1-123-070-11	(C)	2200	16 V	
C702	1-123-068-11	(B)	220	16 V	
C703	1-123-067-11	(D)	2200	25 V	
C704,705	1-123-061-11	C	1000	50 V	
C706	1-121-479-11	A	22	16 V	
C707	1-123-062-11	®	100	35 V	
C708	1-121-415-11	$^{\odot}$	100	16 V	
C709	1-121-421-11	B	220	16 V	
C710	1-108-359-12	A	0.027		mylar
C711	1-121-416-11	A	100	25 V	
C712	1-121-471-11	A	10	16 V	
C713	1-121-988-11	B	22	25 V	
C714	1-121-736-11	A	0.47	50V	
C715	1-131-191-21	C	47	6.3 V	tantalum
		9			

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

• Circled letters (A to 2) are applicable to European models only.

Ref. No.	Part No.			Descrip	tion
C716,717	1-121-391-11	A	1	50 V	
C718	1-121-392-11	\bigcirc	3.3	25 V	
C719	1-108-290-12	$^{\odot}$	0.1		mylar
C720	1-131-201-21	$^{\odot}$	22	16 V	tantalum
C721	1-131-192-21	. B	4.7	10 V	tantalum
C722,723	1-121-990-11	A	22	16 V	
C724	1-108-290-12	$^{\odot}$	0.1		mylar
C725	1-121-257-11	A	4.7	16 V	(nonpolarized
C726	1-121-968-11	B	10	16 V	•
C727~730	1-161-136-11	(A)	0.01		ceramic
C731	1-161-140-11	A	0.047		ceramic
C732	1-121-479-11	A	22	16 V	-
C733	1-108-290-12	$^{\circ}$	0.1		mylar
C734,735	1-161-136-11	A	0.01		ceramic
C737	1-121-391-11	A	1	50 V	
C738	1-121-479-11	(A)	22	16 V	
C739	1-121-395-11	(A)	4.7	25 V	
C740	1-108-359-12	A	0.027		mylar
C741,742	1-161-166-11	A	0.0047		ceramic
C743,744	1-161-136-11	A	0.01		ceramic
C901~903	1-161-136-11	A	0.01		ceramic
C951	1-121-479-11	A	22	16 V	c c
CT501,502	1-141-010-XX	$^{\textcircled{B}}$	Trimme	r	
	F	RESI	STORS		

All resistors are in ohms. Common ¼W carbon resistors are omitted.

Check schematic diagram for values.

R601	1-212-688-11	B	$27 k \pm 2$	2% ¼W	metal-oxide
R609	1-212-385-11	A	1 ,	1 W	metal-oxide
R701,702	1-217-465-11	(B)	0.47	1W	fusible
R703,704	1-217-371-11	(B)	0.47	1/4 W	fusible
R705	1-244-865-11	(A)	470	1/2 W	carbon
R709	1-217-485-11	(B)	22	1W	fusible
R782	1-244-889-11	A	4.7 k	½ W	carbon
R785	1-206-473-11	(A)	27	2W	metal-oxide
R787	1-244-889-11	A	4.7 k	½W√	carbon

Ref. No.	Part No.		Description
R802,803	1-206-467-11	A	15 2W metal-oxide
R835	1-244-879-11	A	1.8 k ½W carbon
RV101,201	1-224-644-XX	$^{\odot}$	4.7 k, adjustable
RV102,202	1-224-646-XX	$^{\odot}$	22 k, adjustable
RV103,203	1-224-644-XX	$^{\odot}$	4.7 k, adjustable
RV104,204	1-224-645-XX	$^{\textcircled{B}}$	10 k, adjustable
RV601	1-224-493-00	B	10 k, adjustable
RV701,702	1-224-251-XX	©	4.7 k, adjustable
RV703	1-224-252-XX	©	10 k, adjustable
RV901,902	1-224-561-00	(E)	20 k, variable; REC LEVEL-MIC
RV903,904	1-224-736-00	Ē	50 k, variable; REC LEVEL-LINE
RV905,906	1-224-821-00	Ē	20 k, variable; LEVEL ADJUST
RV907,908	1-224-822-00	Ō	20 k, variable; PHONES LEVEL

SWITCHES

S1	1-514-976-XX	(C)	Slide, record/playback
S2,3	1-516-482-00	(E)	Lever Slide, EQ, BIAS
S4	1-516-992-00	Ð	Lever Slide, DOLBY NR
S5	1-516-685-00	Ē	Lever Slide, MPX FILTER
S951	1-516-686-00	$^{\circ}$	Lever Slide, timing
S952			Included in tape counter
S953	1-516-028-XX	Ē	Micro, erasure-proof
S954	1-514-722-XX	©	Micro, cassette detecting
S955,956	1-516-974-00	(C)	Slide, MEMORY, TIMER
S957	1-516-855-00	(E)	Pushbutton, POWER

JACKS

		_	HEADPHONES Phono, 4-p; LINE IN, LINE OUT
J301,401	1-507-453-00		MIC
J402	1-507-453-00		LINE IN (STEREO)

MISCELLANEOUS

CP901	1-231-057-31 (E	Encapsulated Component
F1	1-532-066-00 (A	Fuse, 400 mAT
F2~5	1-532-078-00	Fuse, 1AT

 Circled letters (A to 2) are applicable to European models only.

Ref. No.	Part No.		Description
H901,902	8-825-675-00	0	Head, record/playback; PF169-6502A
H903	8-825-677-00		Head, erase; EF172-65A
M901	8-835-004-00	0	Motor, DNF-1401A
ME901,902	1-520-265-11	(\mathbf{K})	Meter, VU
PL901,902	1-518-273-00	$^{\textcircled{B}}$	Lamp, meter
PL903	1-518-138-XX	$^{\odot}$	Lamp, pilot; 5V 6 mA
PL904 PL906~913	1-518-115-XX	B	Lamp, pilot; 6V 35 mA
PM1~3	1-454-158-00	Ē	Solenoid
	1-509-546-00	(C)	Connector, 3-p; AC IN
	1-509-549-00	$^{\odot}$	Connector, REC/PB
	1-533-125-00	0	Holder, fuse
	1-552-026-00	(E)	Voltage Selector
	3 2 1		

ACCESSORIES AND PACKING MATERIALS			
Part No.		Description	
X-3545-408-0	$^{\circ}$	Cushion Ass'y, upper (UK model)	
X-3549-744-0	G	Carton Ass'y (AEP model)	
X-3549-745-0	(C)	Cushion Ass'y, upper (AEP model)	
X-3701-018-3	A	Tips Ass'y, head cleaning	
1-534-049-31	(D)	Cord, connection; RK-74H	
1-534-819-00	B	Cord, power (UK model)	
3-429-126-00	B	Bag, plastic; set	
3-548-768-00	$^{\circ}$	Cushion, lower (front) (UK model)	
3-548-769-00	B	Cushion, lower (back) (UK model)	
3-548-770-00	A	Spacer, cassette lid	
3-548-780-00	(C)	Cushion, lower (front) (AEP model)	
3-548-781-00	(C)	Cushion, lower (back) (AEP model)	
3-549-860-00	Ě	Carton (UK model)	
3-701-985-00	B	Tape Driver	
3-780-962-11	©	Manual, instruction	
8-893-508-10	Û	Tape, demonstration	

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