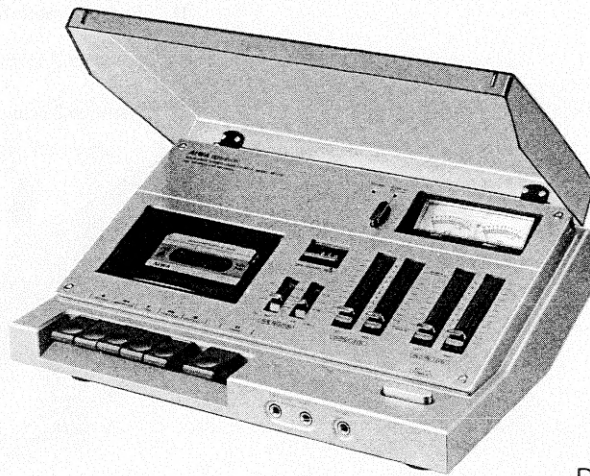


**STEREO CASSETTE DECK  
WITH DOLBY SYSTEM**

**MODEL AD-1250<sup>EE,UK</sup>**

**AIWA<sup>®</sup>**

**(SERVICE MANUAL)**



Set using ISO screws

DATE OF ISSUE 25/10/1976

**SPECIFICATIONS**

<b>Type</b>	Stereo cassette tape deck with built-in Dolby NR System	<b>Recording system</b>	AC bias (frequency 85 kHz)
<b>Track format</b>	4 tracks 2 channels	<b>Erase system</b>	AC erase
<b>Circuitry</b>	2 ICs, 28 transistors, 13 diodes, 3 LEDs	<b>Motor</b>	DC servo motor
<b>Power supply</b>	<b>AD-1250EE</b> AC 110~120V/220~240V, Switchable 50/60Hz <b>AD-1250UK</b> AC 120V/240V, switchable 50/60Hz	<b>Head</b>	Ultra-hard quality permalloy head
<b>Power consumption</b>	10 W	<b>Inputs</b>	MIC max. sensitivity 0.3 mV (200 ohms ~10 kilohms usable) LINE IN max. sensitivity 50 mV (more than 50 kilohms) DIN max. sensitivity 0.1mV/kilohms (3 kilohms)
<b>Frequency Response</b>	According to DIN 45 500 Blatt 8 LH tape: 30~12,500 Hz CrO <sub>2</sub> tape: 30~16,000 Hz Fe-Cr tape: 30~16,000 Hz  LH tape: 30~14,000 Hz CrO <sub>2</sub> tape: 30~16,000 Hz Fe-Cr tape: 30~16,000 Hz	<b>Outputs</b>	LINE OUT standard level 0.775 V (0 VU) Optimum load impedance more than 50 kilohms DIN standard level 0.775 V (0 VU) Headphones 8 ohms
<b>SN Ratio</b>	According to DIN 45 500 Blatt 8 58 dB (Fe-Cr tape DOLBY NR ON)	<b>Dimensions</b>	388 (W) x 145 (H) x 275 (D) mm (with dust cover)
<b>Wow &amp; Flutter</b>	60 dB (Fe-Cr tape DOLBY NR ON) According to DIN 45 500 Blatt 8 0.18% 0.09% (WRMS)	<b>Weight</b>	4.65 kg (with dust cover)
<b>Tape speed</b>	4.8 cm/sec. (1-7/8 ips)	<b>Accessories</b>	DIN cord 1, Head cleaning stick 1, Cassette tape 1
<b>Rewind time</b>	85 sec. (C-60)		
<b>Fast forward time</b>	85 sec. (C-60)		

- Specifications and external appearance are subject to change without notice due to product improvement.
- Dolby Noise Reduction System is licensed from Dolby Laboratories Incorporated.
- The name "Dolby" and the "Double D" symbol are trademarks of Dolby Laboratories Incorporated.

**DISASSEMBLY INSTRUCTIONS**

**1. To Remove Top Panel**

- 1) Remove 4 screws. (Refer to Fig. 1)

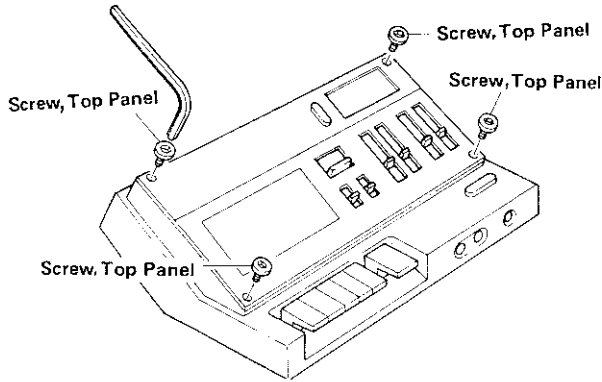


Fig. 1

**2. To Remove Back Cover**

- 1) Remove 6 screws. (Refer to Fig. 2)

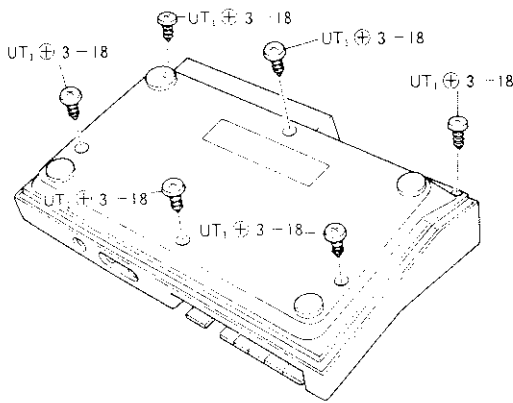


Fig. 2

**3. To Remove Mechanism Chassis**

- 1) Pull out the control knobs.
- 2) Remove 4 screws. (Refer to Fig. 3)

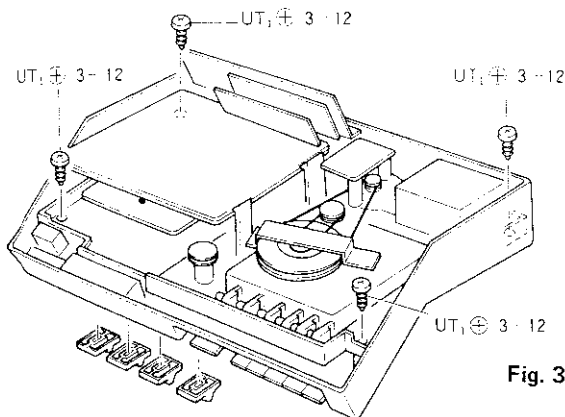


Fig. 3

**4. To Remove Volume Circuit Board**

- 1) Remove 8 screws. (Refer to Fig. 4)

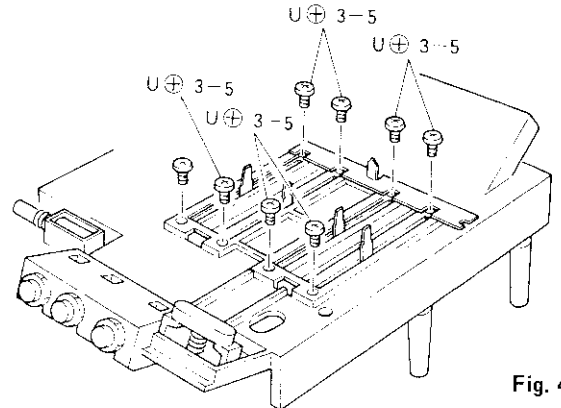


Fig. 4

**5. To Remove REC/PB Circuit Board**

- 1) Remove mounting screw. (Refer to Fig. 5)
- 2) Remove 2 springs. (Refer to Fig. 6)
- 3) Remove 3 screws. (Refer to Fig. 6)

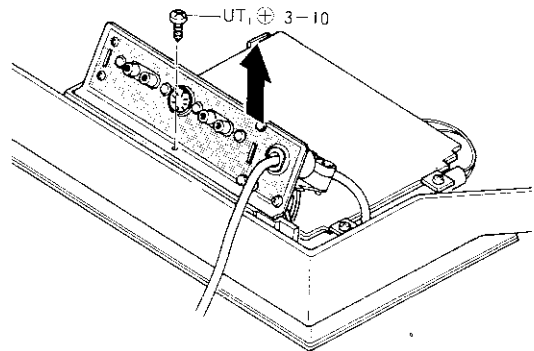


Fig. 5

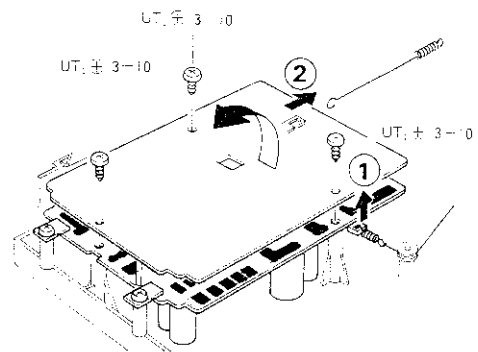


Fig. 6

**6. To Remove Peak Indicator Circuit Board**

- 1) Remove 2 screws. (Refer to Fig. 7)

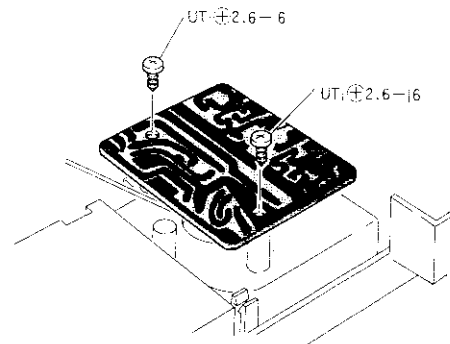


Fig. 7

**7. To Remove Mechanism**

- 1) Remove spring and 2 studs. (Refer to Fig. 8)
- 2) Remove counter belt and 2 springs. (Refer to Fig. 9)
- 3) Remove main belt and spring. (Refer to Fig. 10)
- 4) Remove 4 screws. (Refer to Fig. 10)

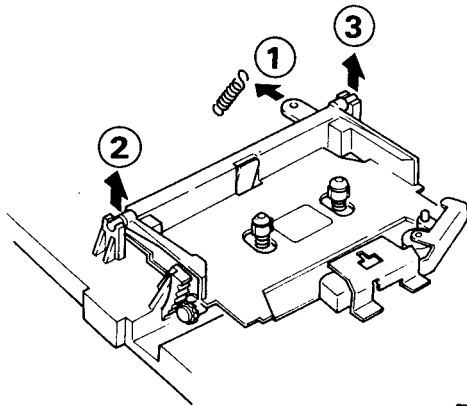


Fig. 8

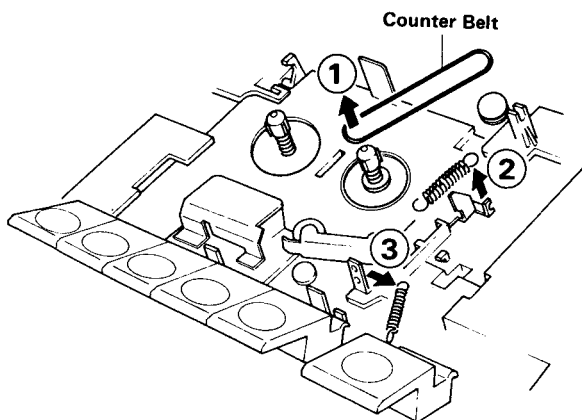


Fig. 9

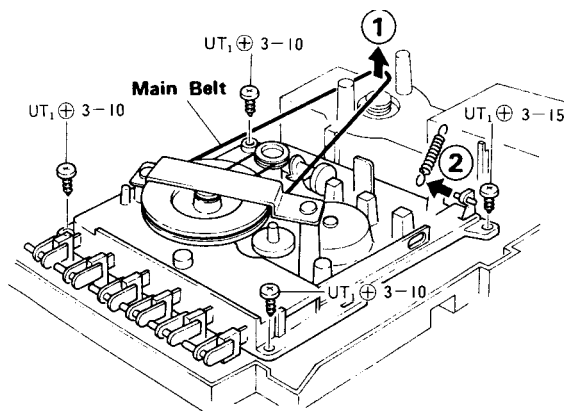


Fig. 10

**ADJUSTMENTS**

■ **Mechanical Section**

**1. Thrust**

Turn thrust adjusting screw in direction shown by arrow. Adjust for  $0.2 \pm 0.1$  mm spacing between screw and flywheel. (Refer to Fig.11)

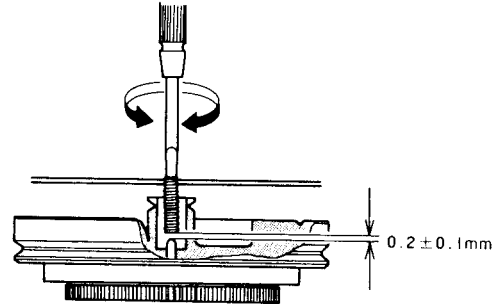


Fig. 11

**2. Pause Spring**

- 1) Confirm that pause spring lightly contacts the slider when slider tip is contacted at left side of worm wheel.
- 2) If space occurs between pause spring and slider due to strong pause spring contact with the slider, bend the pause spring so that the slider becomes lightly contacted. (Refer to Fig.12).

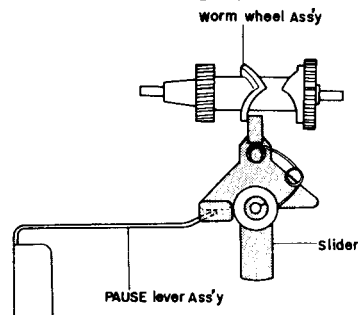


Fig. 12

**-3. Tape Speed**

$3\text{kHz} \pm 1\%$   
Use a standard test tape, TTA-111 (3 kHz) or equivalent.

**4. Wow and Flutter**

Less than  $0.09\%$  WRMS at PB  
Use a standard test tape, TTA-111 (3 kHz) or equivalent.

**5. Pinch Roller Pressure**

$275 \pm 25\text{g}$

**6. Take-up Torque**

$50 \pm 10\text{g-cm}$

**7. FF Torque**

$100 \pm \begin{matrix} 15 \\ 10 \end{matrix} \text{g-cm}$

**8. Rewind Torque**

$95 \pm \begin{matrix} 15 \\ 5 \end{matrix} \text{g-cm}$

**9. Automatic shut-off Time**

Less than 15 sec.

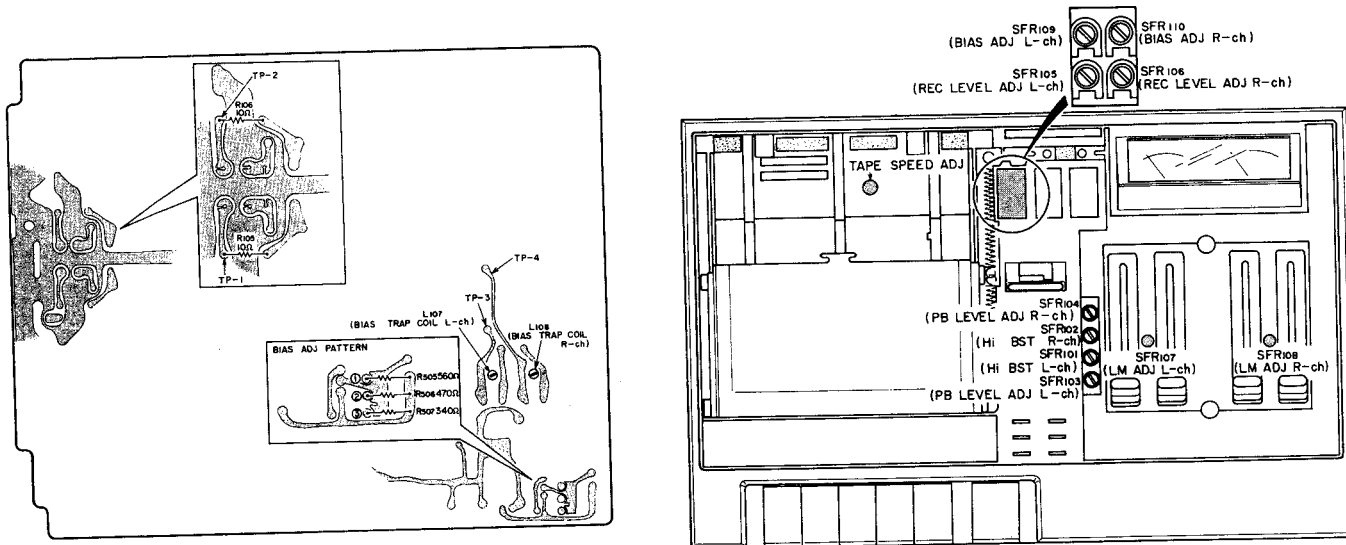
**10. Current Consumption**

PLAY: Less than 110mA  
REW: Less than 160mA  
FF: Less than 160mA  
(Mechanism unit only)

**ADJUSTMENTS**

**Electrical Adjustments**

■ **Location of Main Parts**



■ **PLAYBACK ADJUSTMENTS**

- **Conditions:**  
DOLBY-NR.....OFF    OUTPUT LEVEL.....MAX    OUTPUT.....LINE OUT

Adjustment Item	Tape Selector	Test Tape	Adjustment Location	Specification
Azimuth	CrO <sub>2</sub>	TTA-117E	Rec./Pb. head azimuth screw	10 kHz portion output maximum for both L & R channels
Tape Speed	LH	TTA-111A	Speed semi-fixed resistor in motor	3 kHz ± 1%
Playback Level	LH	TTA-161	L-ch: SFR103 R-ch: SFR104	1.1 ± 0.15V
Playback Frequency Response	CrO <sub>2</sub>	TTA-117E	L-ch: SFR101 R-ch: SFR102	1 kHz/10 kHz flat
Confirmation of Playback Frequency Response	LH	TTA-117E	—————	With reference to 1 kHz: 100 Hz~10 kHz ± 2 dB 40 Hz +2 dB -5 dB 12.5 kHz +2 dB -3 dB

■ **RECORDING ADJUSTMENTS**

- **Conditions:**  
DOLBY-NR.....OFF    OUTPUT LEVEL.....MAX    TAPE SELECTOR.....CrO<sub>2</sub>

Adjustment Item	Test Point	Adjustment Location	Specification
Bias Trap Coil	L-ch TP-3	L107	Adjust for minimum voltage at test point
	R-ch TP-4	L108	
Bias Current	L-ch TP-1	SFR109	5.5mV (550µA) at test point
	R-ch TP-2	SFR110	

- **Conditions:**  
DOLBY NR.....OFF,    OUTPUT LEVEL.....MAX,    INPUT.....LINE IN    OUTPUT.....LINE OUT

Adjustment Item	Adjustment Location	Specification
Level Meter	L-ch SFR107 R-ch SFR108	With 400 Hz signal applied and at 1.1V output, the set VU meters shall indicate the Dolby mark.

■ REC/PB FREQUENCY RESPONSE ADJUSTMENT

Bias Current Adjustment

- **Conditions:**  
Input signed 1 kHz 10 kHz OVU -20 dB DOLBY-NR.....OFF OUTPUT LEVEL.....MAX  
OUTPUT.....LINE OUT

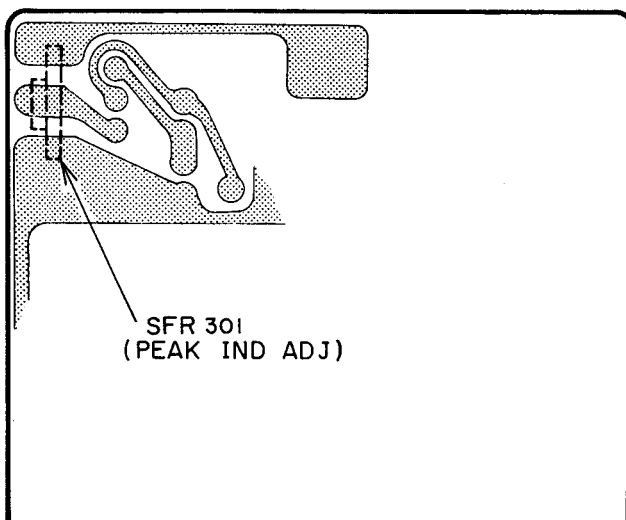
Tape Selector	Test Tape	Adjustment Location	5 kHz Level High	5 kHz Level Low	Specification
FeCr	TTA-119E	L-ch SFR301 R-ch SFR-302	Increase bias current beyond 550 $\mu$ A (5.5mV)	Reduce bias current below 550 $\mu$ A (5.5mV)	1 kHz/10 kHz 0 + 0.5 dB
BIAS.....Fe-Cr EQ.....LH	CS-10	Connect pattern to one point among ① ~ ③	Connect ③ pattern	Connect ① pattern	1 kHz/10 kHz 0 $\pm$ 1 dB

■ REC/PB SENSITIVITY ADJUSTMENT

- **Conditions:**  
Input signal 1 kHz OVU-20 dB DOLBY-NR.....OFF OUTPUT LEVEL.....MAX OUTPUT.....LINE OUT

Tape Selector	Test Tape	Adjustment Location	Specification
CrO <sub>2</sub>	CS-20	L-ch: SFR105	77.5mV +0.5 -0 dB
		R-ch: SFR106	
Fe-Cr	TTA-119E	_____	77.5mV $\pm$ 0.5 dB
BIAS.....Fe-Cr EQ.....LH	CS-10	_____	77.5mV $\pm$ 0.5 dB

■ PEAK INDICATOR INDICATION ADJUSTMENT



- **Conditions:**  
DOLBY-NR.....OFF OUTPUT LEVEL.....MAX  
INPUT.....LINE IN

Adjustment Location	Specification
SFR301	With 400 Hz signal applied, LED shall light when VU meter indicates 5 $\pm$ 0.5 dB

■ ELECTRICAL MEASUREMENTS

1. Playback Out put

Test Tape	Specification	Remarks
TTA-161	1.1V ± 0.15V	Set VU meters shall indicate Dolby marks

2. Rec./Pb. Frequency Response

Input signal: 100Hz - 1 kHz - 10 kHz OVU - 20 dB

Frequency	Test Tape CS-20 Tape Selector CrO <sub>2</sub>	Test Tape TTA-119E Tape Selector Fe-Cr	Test Tape CS-10 Tape Selector BIAS ...Fe-Cr, EQ...LH
100 Hz	0 ± 1 dB	0 ± 1 dB	0 ± 1 dB
1 kHz	0 dB	0 dB	0 dB
10 kHz	0 ± 1 dB	0 ± 1 dB	0 ± 1 dB

3. Rec./Pb. Distortion & Output

Input signal: 400 Hz OVU

Test Tape	Tape Selector	Rec/Pb Distortion	Rec/Pb Output
CS-20	CrO <sub>2</sub>	Less than 2.5%	0 dBm ± 1 dB
TTA-119E	Fe-Cr	Less than 1.5%	0 dBm ± 1 dB
CS-10	BIAS...Fe-Cr EQ...LH	Less than 2.0%	0 dBm ± 1 dB

4. Rec./Pb. S/N

Input signal: 400 Hz OVU/no signal (RECORD LEVEL...MIN)

Dolby-NR	Test Tape	Tape Selector	Input Signal	S/N (dB)
OFF	CS-20	CrO <sub>2</sub>	400 Hz	44
			No signal	
	TTA-119E	Fe-Cr	400 Hz	44
			No signal	
	CS-10	BIAS...Fe-Cr EQ...LH	400 Hz	42
			No signal	
ON	CS-20	CrO <sub>2</sub>	400 Hz	48
			No signal	
	TTA-119E	Fe-Cr	400 Hz	48
			No signal	
	CS-10	BIAS...Fe-Cr EQ...LH	400 Hz	47
			No signal	

5. Erase Efficiency

Input signal: 400 Hz OVU + 10 dB  
Use bandpass filter

Tape Selector	Test Tape	Specification
CrO <sub>2</sub>	CS-20	More than 60 dB
Fe-Cr	TTA-119E	More than 60 dB
BIAS...Fe-Cr, EQ...LH	CS-10	More than 60 dB

6. Cross Talk & Separation

Input signal: 1 kHz OVU  
Use bandpass filter

Measurement Item	Tape Selector	Test Tape	Specification
Cross Talk	CrO <sub>2</sub>	TTA-119D	More than 65 dB
Separation	CrO <sub>2</sub>	TTA-119D	More than 30 dB

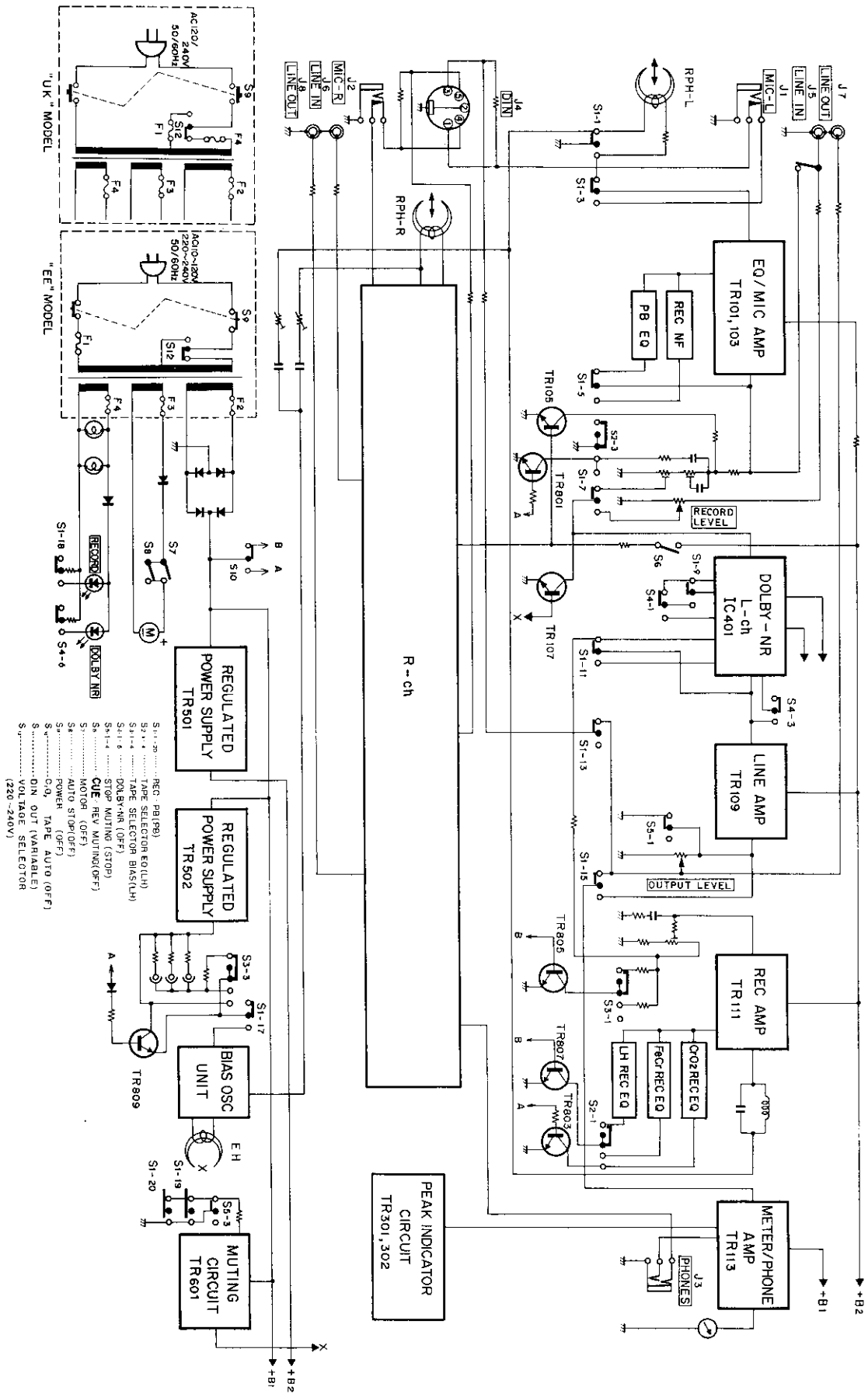
7. Playback Noise

Tape Selector	Test Tape	Specification	Remarks
CrO <sub>2</sub>	TTA-119D	Less than 3 mV	Levels measured with set in PAUSE mode.
Fe-Cr	TTA-119E	Less than 3 mV	
LH	TTA-119A	Less than 4 mV	

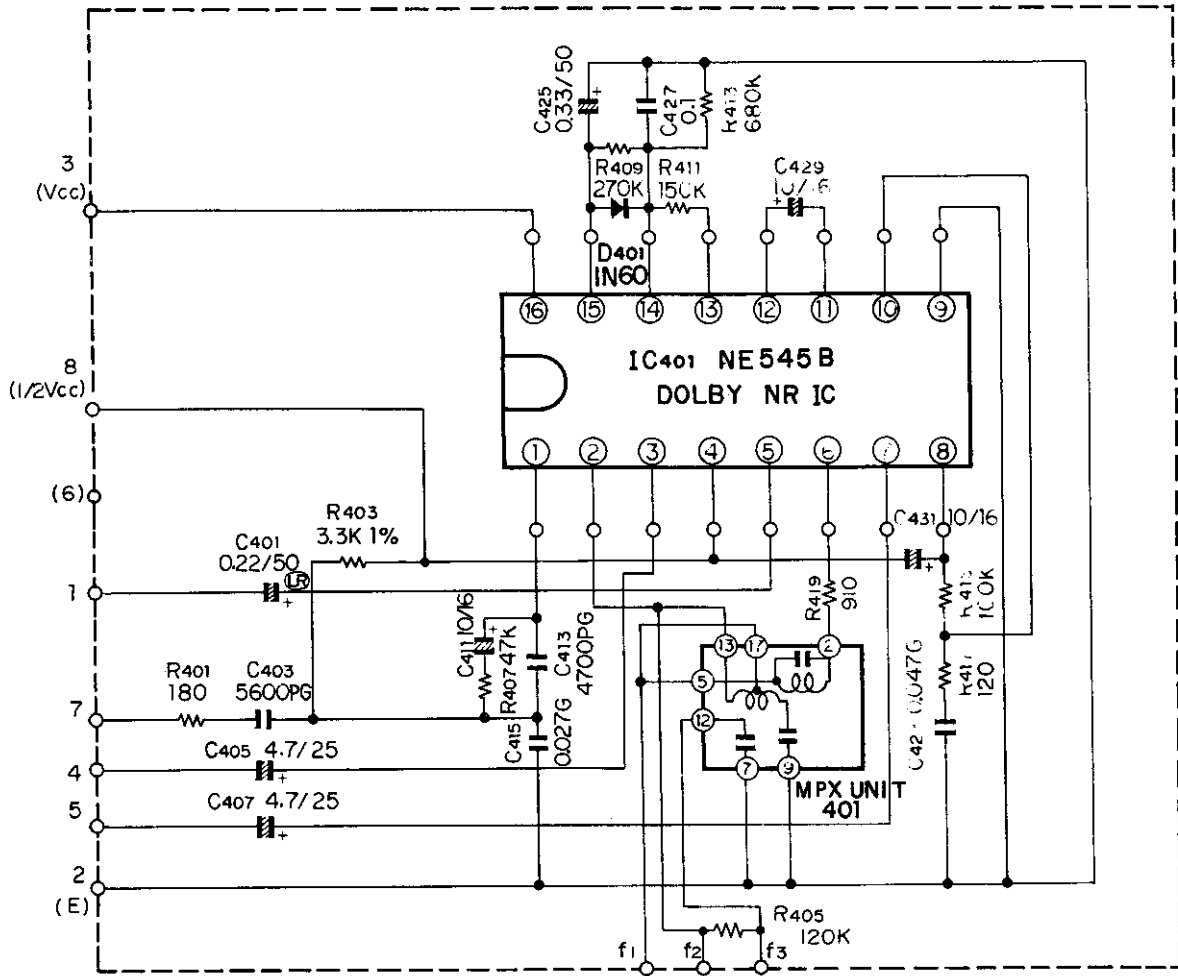
8. DOLBY-NR Effectiveness

Test Tape	Specification	
TTA-114	3~5 dB	Measure level difference between DOLBY-NR ON and OFF.

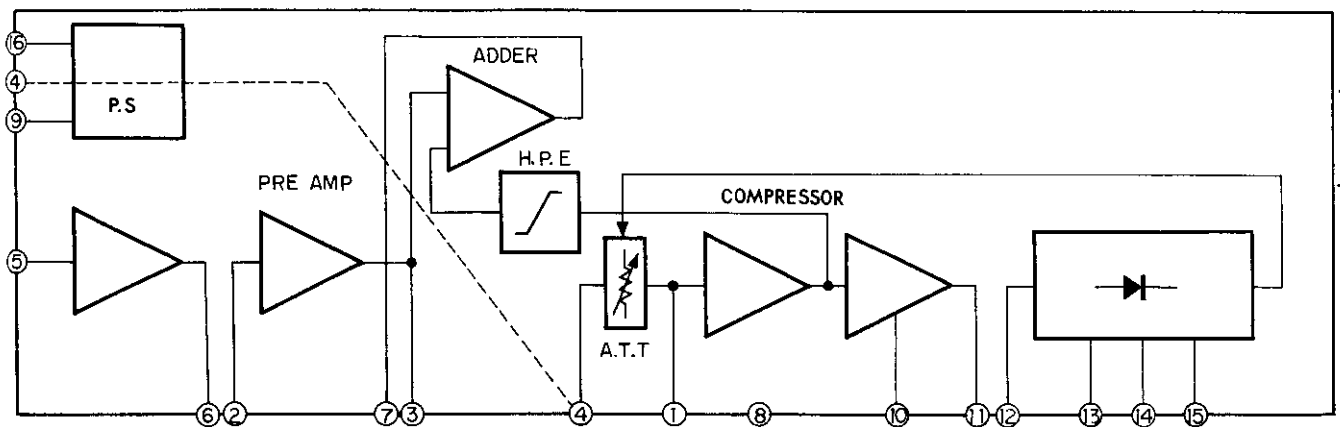
BLOCK DIAGRAM



DOLBY-NR SCHEMATIC DIAGRAM

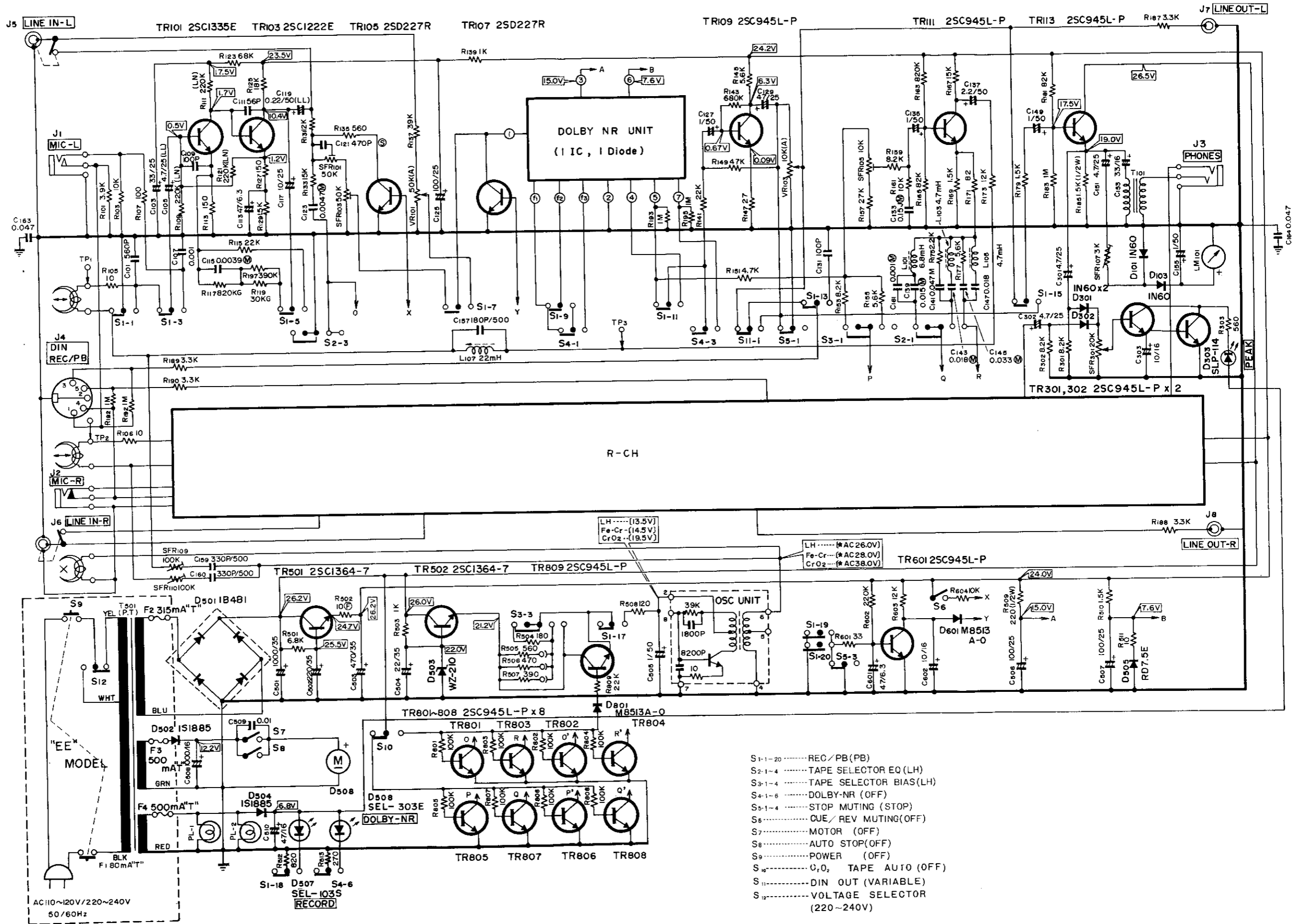


IC CIRCUIT DIAGRAM, NE545B



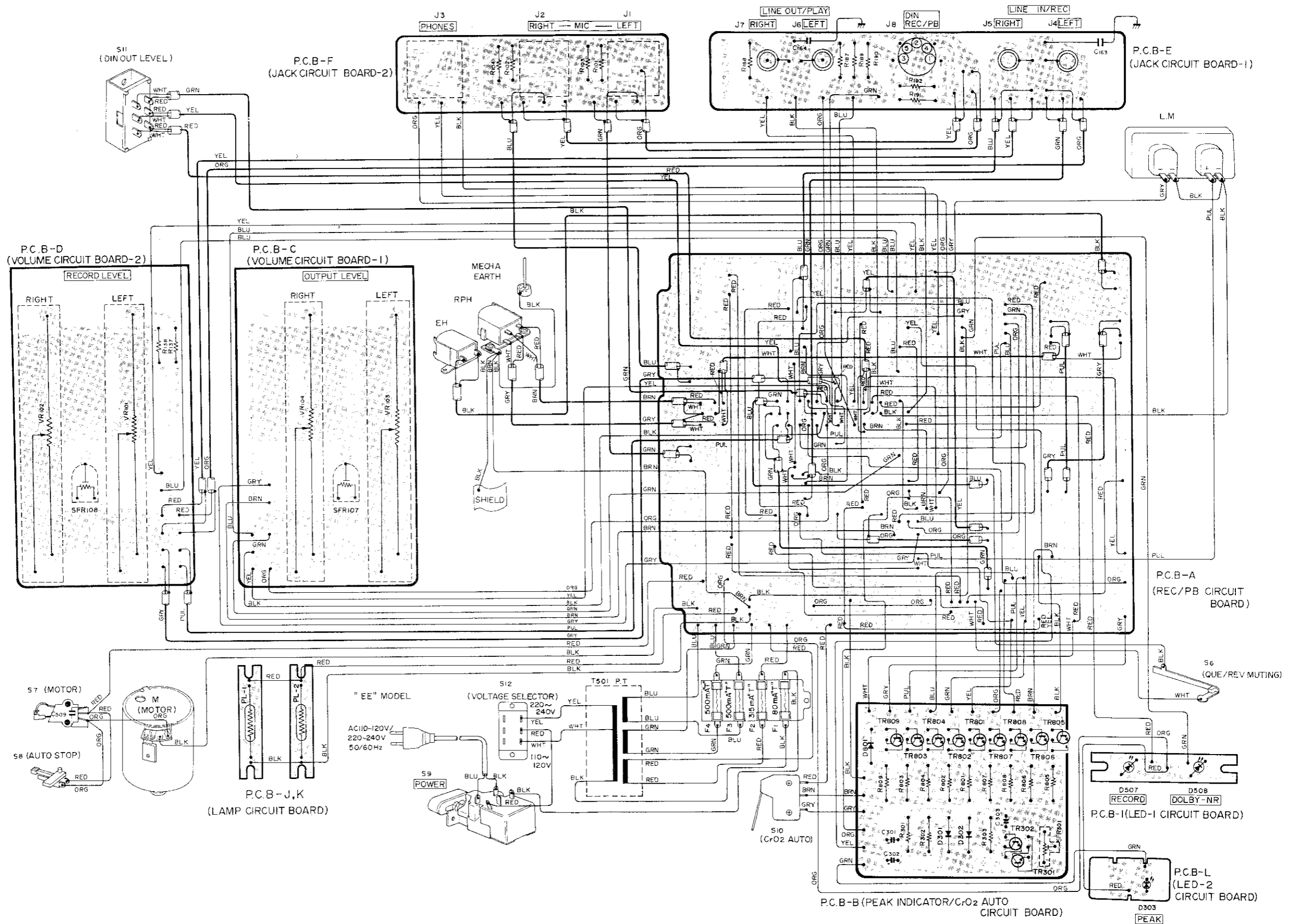


SCHEMATIC DIAGRAM

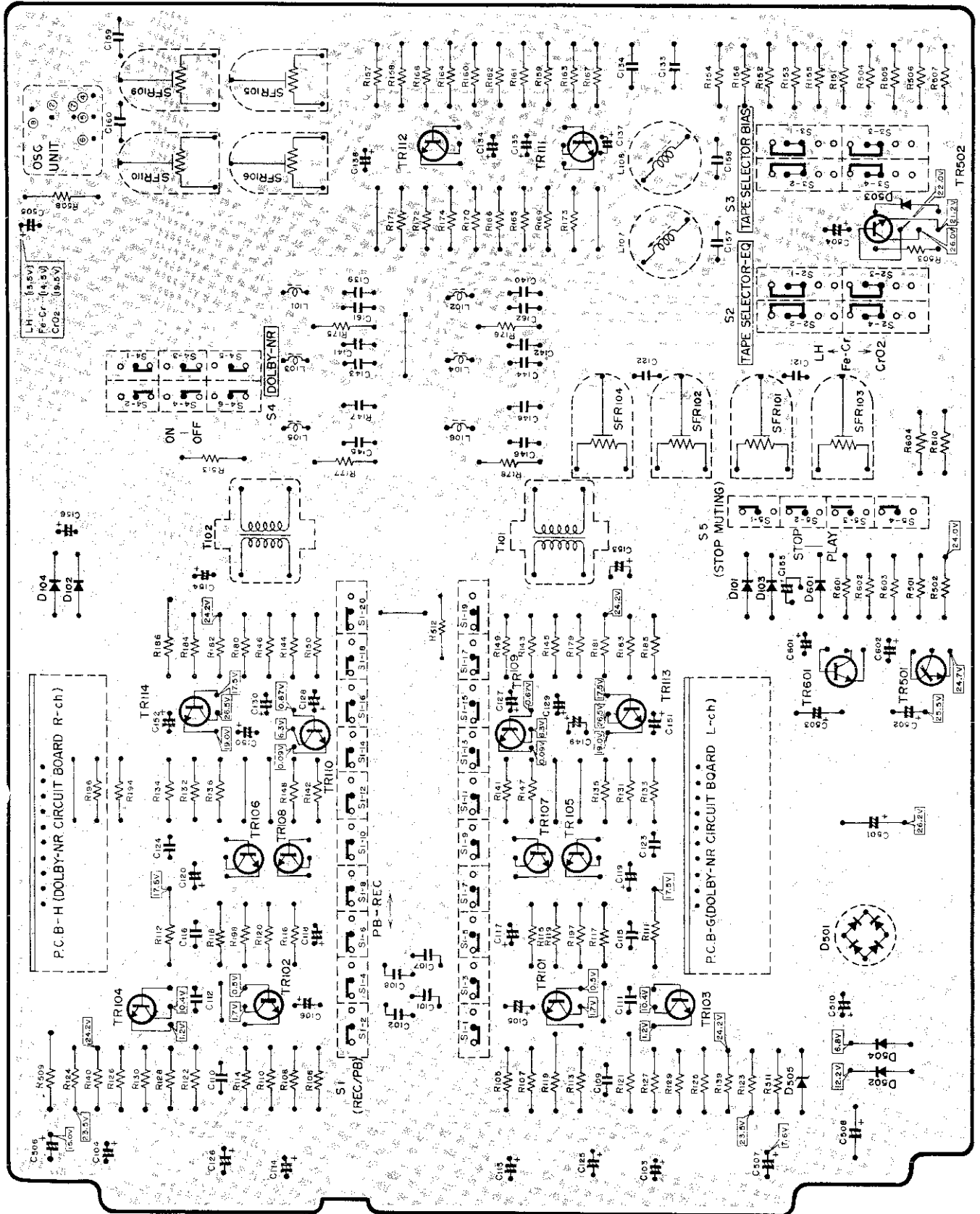


- S1-1-20 ..... REC/PB (PB)
- S2-1-4 ..... TAPE SELECTOR EQ (LH)
- S3-1-4 ..... TAPE SELECTOR BIAS (LH)
- S4-1-6 ..... DOLBY-NR (OFF)
- S5-1-4 ..... STOP MUTING (STOP)
- S6 ..... CUE/REV MUTING (OFF)
- S7 ..... MOTOR (OFF)
- S8 ..... AUTO STOP (OFF)
- S9 ..... POWER (OFF)
- S10 ..... C, O, TAPE AUTO (OFF)
- S11 ..... DIN OUT (VARIABLE)
- S12 ..... VOLTAGE SELECTOR (220-240V)

WIRING

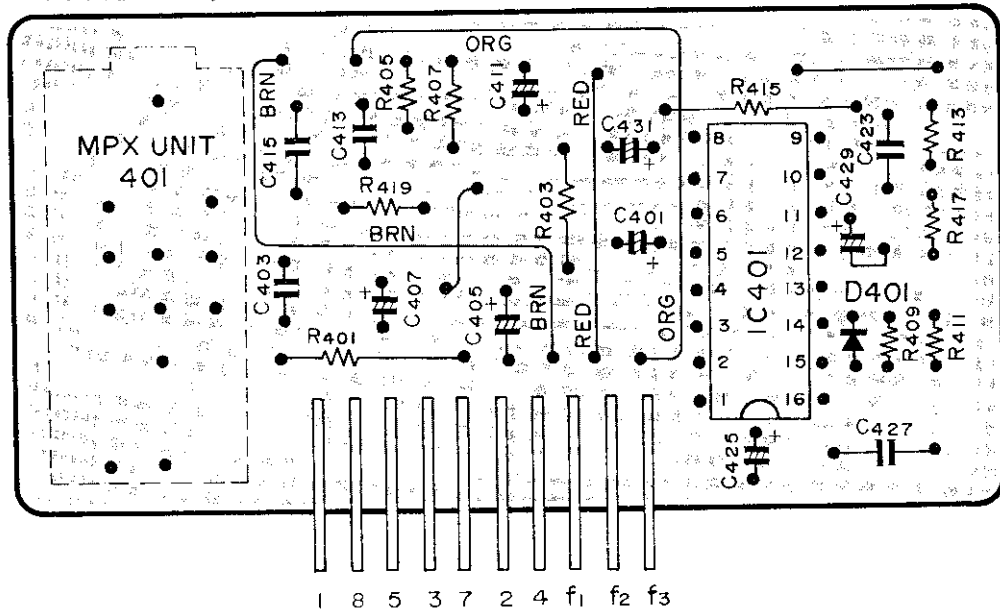


REC/PB CIRCUIT BOARD

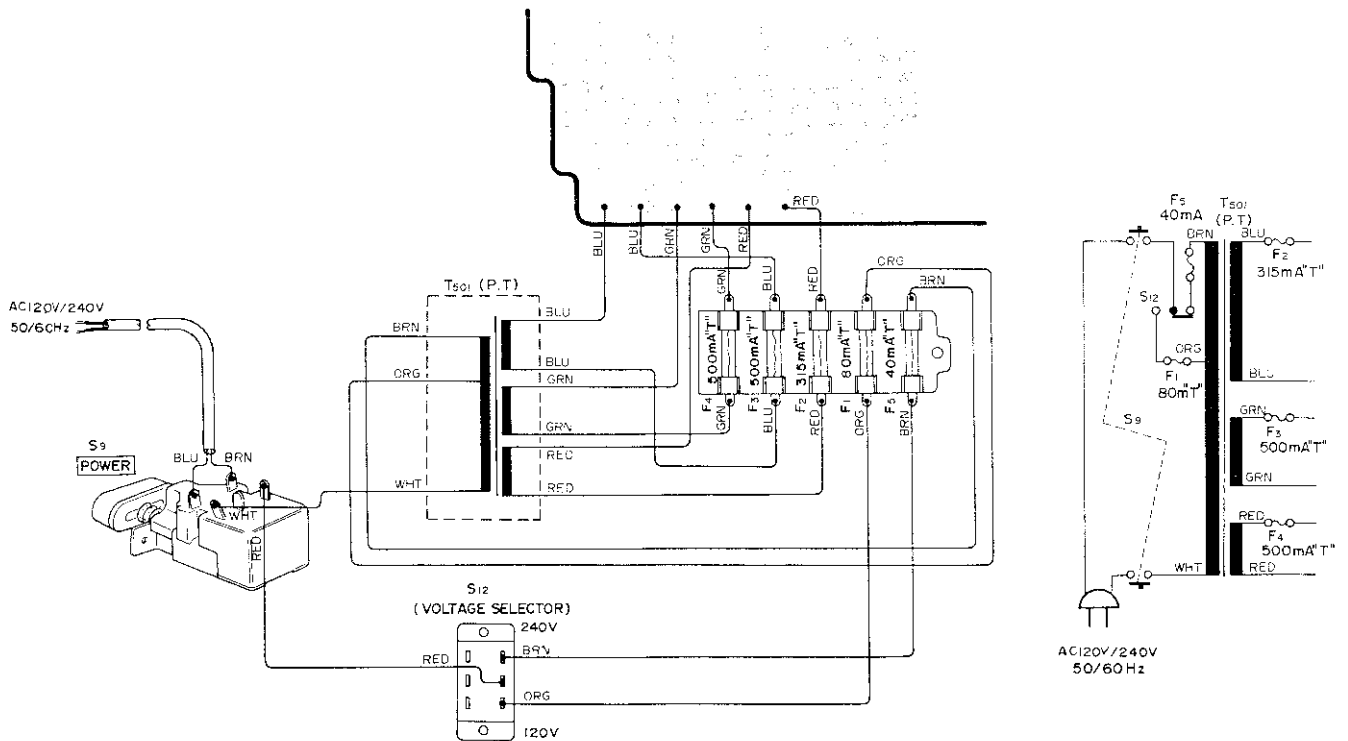


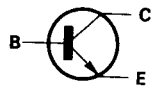
DOLBY-NR CIRCUIT BOARD

P.C.B-G (DOLBY-NR CIRCUIT BOARD)

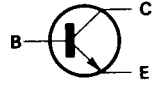


WIRING (POWER CIRCUIT BOARD)-UKMODEL

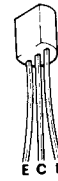




2SC1335



2SC1364



2SC1222  
2SD227  
2SC945



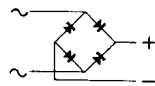
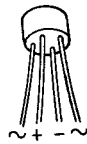
1N60



1S1885



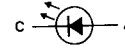
WZ210



1B4B1

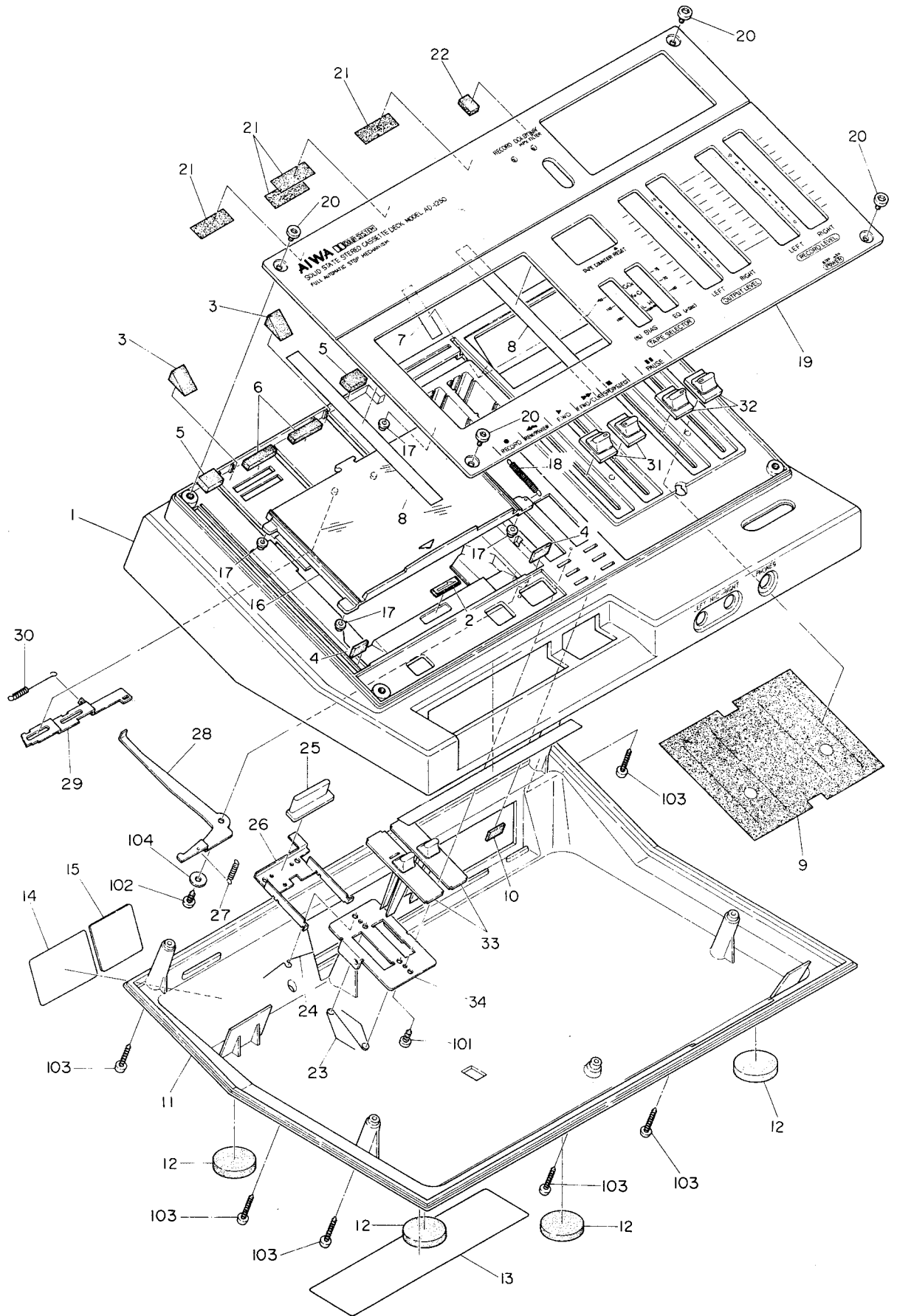


SLP114



SEL-103S  
SEL-303E

EXPLODED VIEW-1



## MECHANICAL PARTS

## PARTS LIST

■ \* mark in this part list shows exclusive part  
(which is used) for only Model AD-1250

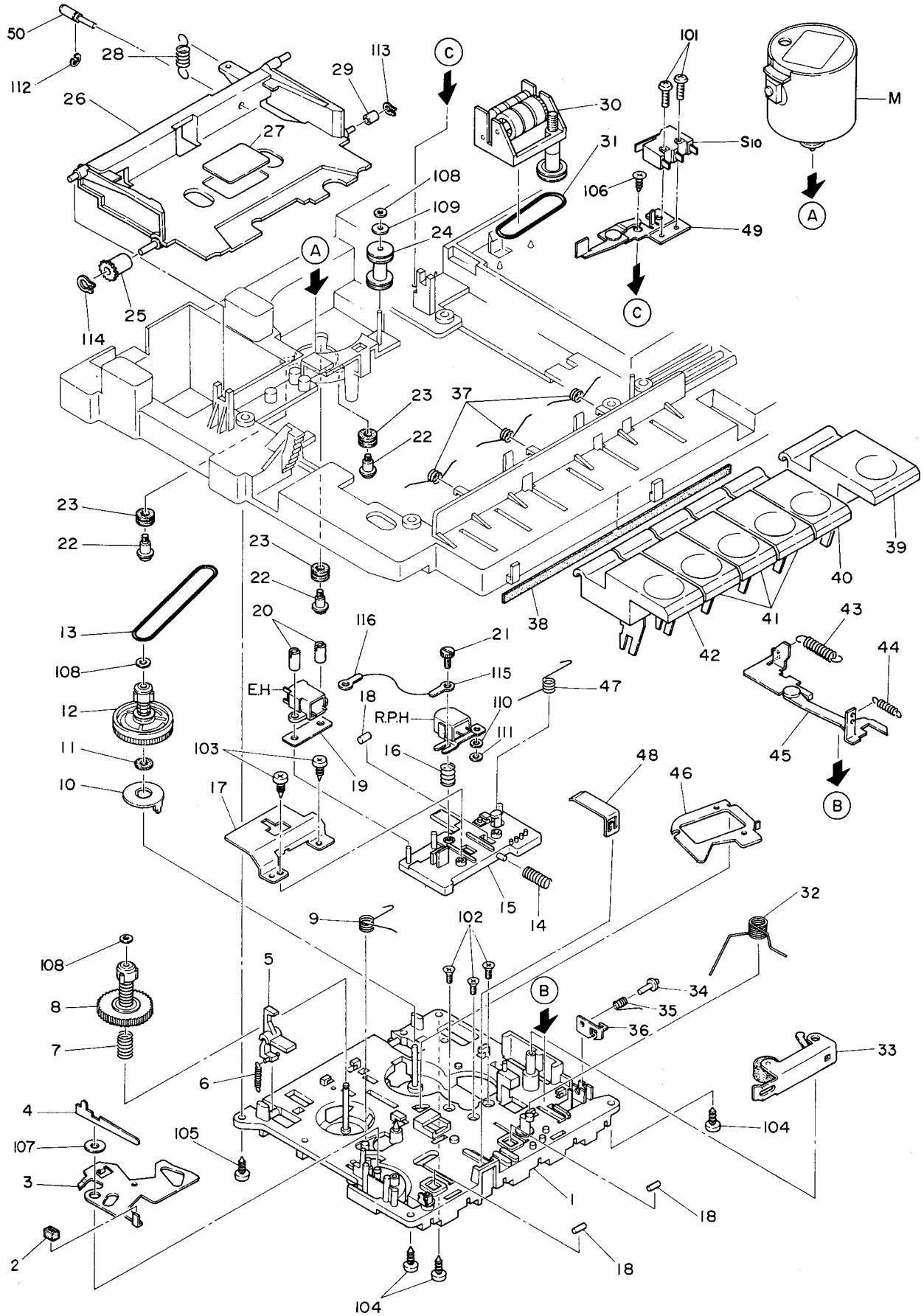
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1~15	80-003-860-41		<b>Cabinet Assembly (Main case ass'y + Bottom cover ass'y)</b>		
1~10	80-003-861-41		<b>Main case ass'y</b>		
1-1	82-386-001-01		Case proper	*	1
1-2	82-386-009-01		Name plate, Arrow	*	2
1-3	82-386-214-01		Stopper, Cassette lid	*	2
1-4	82-386-254-01		G cushion	*	2
1-5	82-386-270-01		M cushion	*	2
1-6	82-386-269-01		M cushion	*	2
1-7	82-386-266-01		Meter blind	*	2
1-8	82-386-267-01		Tefron sheet	*	2
1-9	82-386-227-01		Himeron cloth, Volume	*	1
1-10	82-386-253-01		G cushion	*	2
11~15	80-003-862-41		<b>Bottom cover ass'y</b>		
1-11	82-386-002-01		Back cover	*	1
1-12	82-386-016-01		Leg, Back cover	*	4
1-13	82-386-054-01		Label H, Caution	*	1
1-14	82-386-046-01		Label C, Caution	*	1
1-15	82-386-027-01		Name plate, Spec.	*	1
1-16	82-384-004-01		Cassette lid		1
1-17	82-386-226-01		Pulley, Cassette lid	*	4
1-18	82-385-285-01		Spring, Lid arm		1
1-19	82-386-034-01		Panel, Top	*	1
1-20	82-386-017-01		Screw, Top panel	*	4
1-21	82-386-264-01		Himeron cloth	*	4
1-22	82-386-272-01		G cushion	*	1
1-23	82-386-250-01		Spring A, Button holder	*	1
1-24	82-386-261-01		Spring B, Button holder	*	1
1-25	82-386-013-01		Reset button	*	1
1-26	82-386-241-01		Metal fitting, Reset button	*	1
1-27	82-386-262-01		Spring, Lock plate	*	1
1-28	82-386-204-01		Lock plate B	*	1
1-29	82-386-203-01		Lock plate C	*	1
1-30	82-386-244-01		Spring, Lock plate	*	1
1-31	82-386-010-01		Knob A, Volume	*	2
1-32	82-386-011-01		Knob B, Volume	*	2
1-33	82-386-012-01		Knob, Selector	*	2
1-34	82-386-205-01		Holder, Selector button	*	1





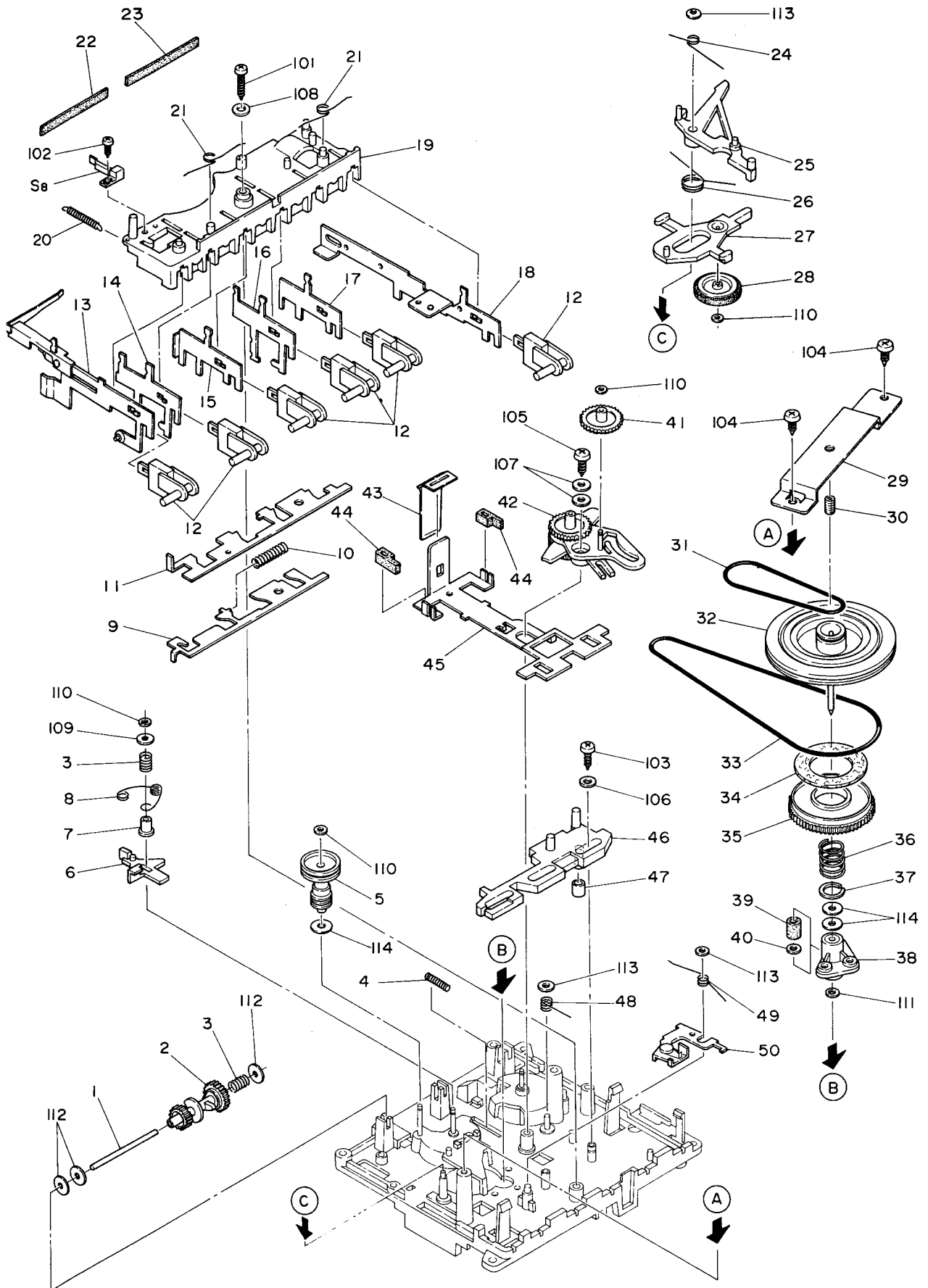
Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
2-1	82-386-202-01		Mechanism chassis	*	1
2-2	87-038-039-01		Binder, Lead wire		2
2-3	82-386-265-01		Cushion, Circuit board	*	2
2-4	82-386-015-01		Button, Dolby	*	1
2-5	82-386-242-01		Cushion, Button	*	1
2-6	87-058-023-01		Binder, AC cord		1
2-7	82-386-216-01		Plate, Earth	*	1
2-8	82-386-014-01		Button, AC switch	*	1
2-9	82-386-215-01		Holder, AC switch	*	1
2-10	82-386-628-01		Shield plate	*	1
2-11	87-071-013-01		Pulley A		2
2-12	82-386-240-01		Pulley, Adjusting	*	1
2-13	87-064-056-01		Hinge, Circuit board		2
2-14	82-386-206-01		Arm, Selector switch	*	2
2-15	82-386-207-01		Metal fitting, REC switch	*	1
2-16	82-386-221-01		Spring, REC switch	*	1
2-17	87-096-084-01		String, Play muting		1
2-18	82-386-620-01		Shield paper	*	1
2-19	82-386-629-01		Shield plate	*	1
2-20a	87-034-835-01		AC cord (EE model only)		1
2-20b	87-034-848-01		AC cord (UK model only)		1
2-21	87-085-094-01		Holder, AC cord A		1
2-22	87-085-095-01		Holder, AC cord B		1
2-23	82-386-219-01		Metal fitting, AC cord holder	*	1
2-24	82-386-018-01		Panel, Rear jack	*	1
2-25a	82-386-039-01		Plate, Jack (EE model only)	*	1
2-25b	82-386-040-01		Plate, Jack (UK model only)	*	1
2-26	87-085-102-01		Nylon rivet		6
2-27	82-386-208-01		Metal fitting, REC relay	*	1
2-28	82-386-222-01		Spring, REC relay metal	*	1
2-29a	82-379-678-01		Holder, Fuse (EE model only)	AD-1800	1
2-29b	82-386-634-01		Holder, Fuse (UK model only)	*	1
2-30	87-056-008-01		Label, AC cord (UK model only)		1
2-31	87-056-016-01		Tag, Voltage selector (UK model only)		1

EXPLODED VIEW-3



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
3-1	82-439-202-01		Chassis	TPR-300	1
3-2	82-439-302-01		Pad, Switch	TPR-300	1
3-3	82-439-235-01		REC lock lever	TPR-300	1
3-4	82-385-620-01		Leaf switch	AD-6300	1
3-5	82-385-281-01		Record-blocking lever	AD-6300	1
3-6	82-386-243-01		Spring, Record-blocking lever	*	1
3-7	82-439-380-01		Spring, Back tension	TPR-300	1
3-8	82-439-216-01		Supply reel platform ass'y	TPR-300	1
3-9	82-439-289-01		Spring, REC lock lever	TPR-300	1
3-10	82-439-358-01		Slip disk	TPR-300	1
3-11	82-439-367-01		Felt, 7-5-12	TPR-300	1
3-12	82-439-208-01		Take-up reel platform ass'y	TPR-300	1
3-13	82-283-378-01		Belt, Relay	TP-770	1
3-14	82-439-281-01		Spring, Moving chassis	TPR-300	1
3-15	82-385-303-01		Moving chassis	AD-6300	1
3-16	82-385-332-01		Spring B, Head adjusting	AD-6300	1
3-17	82-386-633-01		Shield plate, Head	*	1
3-18	82-439-297-11		Roller 3φ	TPR-300	3
3-19	82-385-323-01		Spacer, Erase head	AD-6300	1
3-20	82-385-318-01		Nut, 2φ	AD-6300	2
3-21	82-439-373-01		Shaft, Head adjusting	TPR-300	1
3-22	87-081-483-01		Screw, Motor		3
3-23	82-439-319-01		Rubber cushion B	TPR-300	3
3-24	82-422-230-01		Pulley, Relay		1
3-25	82-386-258-01		Gear, Cassette-up plate	*	1
3-26	82-386-209-01		Cassette-up plate	*	1
3-27	82-386-033-01		Label, Tape indication	*	1
3-28	82-386-233-01		Spring, Cassette-up plate	*	1
3-29	82-386-228-01		Collar, Cassette-up plate	*	1
3-30	87-040-085-01		Counter		1
3-31	82-446-204-01		Belt, Counter		1
3-32	82-439-277-01		Spring, Play lever	AD-6300	1
3-33	82-439-364-01		Pinch lever ass'y	TPR-300	1
3-34	82-439-268-01		Shaft, Lock plate	TPR-300	1
3-35	82-439-275-01		Spring, Lock plate	TPR-300	1
3-36	82-385-278-01		Lock plate	AD-6300	1
3-37	82-386-257-01		Spring, Button	*	3
3-38	82-386-008-01		Cushion, Button	*	1
3-39	82-386-006-01		Key, PAUSE	*	1
3-40	82-386-005-01		Key, STOP	*	1
3-41	82-386-007-01		Key, FWD	*	3
3-42	82-386-234-01		Key, REC	*	1
3-43	82-370-419-01		Spring, Up plate lock lever		1
3-44	82-386-229-01		Spring, Brake arm	*	1
3-45	82-476-232-01		Up plate lock lever ass'y		1
3-46	82-385-374-11		REV lever B	AD-6300	1
3-47	82-439-206-01		Spring B, Pinch lever	TPR-300	1
3-48	82-439-277-01		Plate spring, Moving chassis	TPR-300	1
3-49	82-386-263-01		CrO <sub>2</sub> switch holder ass'y	*	1
3-50	82-474-260-01		Shaft, CrO <sub>2</sub> switch		1

EXPLODED VIEW-4



Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
4-1	82-439-300-01		Shaft, Worm wheel	TPR-300	1
4-2	82-439-408-01		Worm wheel ass'y	AD-6300	1
4-3	82-439-369-01		Spring, Slip	TPR-300	2
4-4	82-439-371-01		Spring, Brake	TPR-300	1
4-5	82-385-309-01		Worm gear B ass'y	AD-6300	1
4-6	82-439-357-01		Slider	TPR-300	1
4-7	82-439-368-01		Bushing, Slider	TPR-300	1
4-8	82-439-288-01		Spring, Slider	TPR-300	1
4-9	82-439-375-01		Slide plate B	TPR-300	1
4-10	82-439-284-01		Spring, Slide plate	TPR-300	1
4-11	82-439-233-01		Slide plate A	TPR-300	1
4-12	82-386-225-01		Terminal, Button	*	6
4-13	82-386-260-01		Pause lever ass'y	*	1
4-14	82-439-231-01		Stop lever	TPR-300	1
4-15	82-439-232-01		Lever, FF	TPR-300	1
4-16	82-439-345-01		Lever, PLAY	TPR-300	1
4-17	82-439-230-01		Lever, REW	TPR-300	1
4-18	82-439-228-01		Lever, REC	TPR-300	1
4-19	82-439-432-01		Back plate	TPR-300	1
4-20	82-439-267-01		Spring, Pause lever	TPR-300	1
4-21	82-283-300-01		Spring, Push-button	TP-770	2
4-22	82-386-256-01		G cushion B	*	1
4-23	82-386-255-01		G cushion A	*	1
4-24	82-439-287-01		Spring, Auto-kick lever	TPR-300	1
4-25	82-439-255-01		Auto-kick lever	TPR-300	1
4-26	82-439-286-01		Spring, Play idler lever	TPR-300	1
4-27	82-439-259-01		Play idler lever	TPR-300	1
4-28	82-285-255-01		Play idler ass'y		1
4-29	82-474-219-01		Holder F		1
4-30	82-385-311-01		Screw for thrust	AD-6300	1
4-31	82-385-314-01		Rubber belt, Worm	AD-6300	1
4-32	82-385-307-01		Flywheel ass'y	AD-6300	1
4-33	82-283-272-01		Belt, Main		1
4-34	82-439-389-01		Felt, 24φ	TPR-300	1
4-35	82-439-355-01		Gear, Slip	TPR-300	1
4-36	82-439-246-01		Spring, Flywheel	TPR-300	1
4-37	82-439-354-01		Washer, 18φ	TPR-300	1
4-38	82-385-379-01		Shaft bearing ass'y	AD-6300	1
4-39	82-439-292-01		Drive rubber	TPR-300	1
4-40	82-439-385-01		Oil stopper	TPR-300	1
4-41	82-439-356-01		FR gear B	TPR-300	1
4-42	82-439-218-01		FR lever ass'y	TPR-300	1
4-43	82-385-252-01		Plate spring, Brake plate	AD-6300	1
4-44	82-439-426-01		Brake shoe A	TPR-300	2
4-45	82-439-269-01		Brake plate	AD-6300	1
4-46	82-439-225-01		FR slide plate	TPR-300	1
4-47	82-439-226-01		Collar, FR slide plate	TPR-300	1
4-48	82-439-290-01		Spring, FR slide plate	TPR-300	1
4-49	82-439-280-01		Spring, Release lever	TPR-300	1
4-50	82-439-360-01		Release lever ass'y	TPR-300	1

Ref. No.	Part No.	Description	Q'ty
1-101	87-341-071-01	UT <sub>1</sub> + 2.6-4	2
1-102	87-341-074-01	UT <sub>1</sub> + 2.6-8	1

Ref. No.	Part No.	Description	Q'ty
1-103	87-341-101-01	UT <sub>1</sub> + 3-18	6
1-104	87-410-317-01	W3-10-0.8	1

Ref. No.	Part No.	Description	Q'ty
2-101	87-295-071-01	U + 2.6-4 (Black)	2
2-102	87-295-092-01	U + 3-4 (Black)	2
2-103	87-251-093-01	U + 3-5	8
2-104	87-253-099-01	U + 3-15	2
2-105	87-341-037-01	UT <sub>1</sub> + 2-10	2
2-106	87-341-073-01	UT <sub>1</sub> + 2.6-6	2
2-107	87-341-094-01	UT <sub>1</sub> + 3-6	1
2-108	87-341-096-01	UT <sub>1</sub> + 3-10	6

Ref. No.	Part No.	Description	Q'ty
2-109	87-341-097-01	UT <sub>1</sub> + 3-12	4
2-110	87-341-171-01	UT <sub>1</sub> + 4-10	2
2-111	87-480-093-01	VS + 3-5	2
2-112	87-081-486-01	FW3.2-8-2	3
2-113	87-081-498-01	PW2.1-5-0.13	4
2-114	87-442-003-01	STP-3	3
2-115	87-450-414-01	LB-4	1
2-116	87-341-095-01	UT <sub>1</sub> + 3-8	2




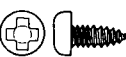


Ref. No.	Part No.	Description	Q'ty
3-101	87-253-036-01	U + 2-8	2
3-102	87-329-074-01	Q + 2.6-8 (Black)	3
3-103	87-351-072-01	VT <sub>1</sub> + 2.6-5	2
3-104	87-341-096-01	UT <sub>1</sub> + 3-10	3
3-105	87-341-099-01	UT <sub>1</sub> + 3-15	1
3-106	87-321-073-01	QT <sub>1</sub> + 2.6-8	1
3-107	87-081-015-01	FW 3-8-0.5	1
3-108	87-081-489-01	PW1-7-3.5-0.25	3





Ref. No.	Part No.	Description	Q'ty
3-109	87-081-492-01	PW2.1-8-0.13	1
3-110	87-081-036-01	TW2-5-0.2	1
3-111	86-604-019-01	2.5φw	1
3-112	87-441-609-01	STE-3	1
3-113	87-442-002-01	STP-2	1
3-114	87-442-004-01	STP-4	1
3-115	87-450-411-01	LB-1	1
3-116	87-450-412-01	LB-2	1

Ref. No.	Part No.	Description	Q'ty
4-101	87-351-102-01	VT <sub>1</sub> + 3-20	1
4-102	87-341-034-01	UT <sub>1</sub> + 2-5	1
4-103	87-351-035-01	UT <sub>1</sub> + 2-6	1
4-104	87-341-074-01	UT <sub>1</sub> + 2.6-8	2
4-105	87-341-075-01	UT <sub>1</sub> + 2.6-10	1
4-106	87-410-305-01	W2-6-0.4	1
4-107	87-410-311-01	W2.6-7.5-0.5	2

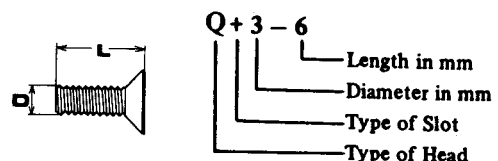
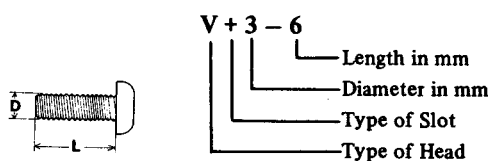
Ref. No.	Part No.	Description	Q'ty
4-108	87-410-325-01	W4-10-0.8	1
4-109	87-081-030-01	FW2-6-0.5	1
4-110	87-081-409-01	PW1.7-3.5-0.25	4
4-111	87-081-498-01	PW2.1-5-0.13	1
4-112	87-081-492-01	PW2.1-8-0.13	3
4-113	87-081-484-01	PW3-6-0.25	3
4-114	87-081-319-01	TW2.3-8-0.2	3

**HARDWARE NOMENCLATURE**

- U: Binding head screw 
- Q: Flat countersunk head screw 
- UT<sub>1</sub>: Binding head tapping screw 
- VT<sub>1</sub>: Pan head tapping screw 
- QT<sub>1</sub>: Flat countersunk head tapping screw 
- VS: Pan head screw with spring washer 

- W: Washer 
- FW: Fiber washer
- PW: Poly-slider washer
- TW: Tefron washer
- STP: Powerful stop ring 
- STE: E ring 
- LB: Lug terminal plate 

Example:



## ACCESSORIES/PACKAGE

Ref. No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
1	82-386-858-01		Packing, Printed indiv.	*	1
2	82-386-862-01		Cushion L, Printed indiv.	*	1
3	82-386-863-01		Cushion R, Printed indiv.	*	1
4	87-051-145-01		Poly-vinyl sack (for case)		1
5	87-056-500-01		Curly stopper		2
6	87-056-549-01		Poly-vinyl sack (for AC cord)		1
7	87-051-171-01		Poly-vinyl sack (for instruction)		1
8a	82-386-906-01		Instruction booklet (EE model only)	*	1
8b	82-386-907-01		Instruction booklet (UK model only)	*	1
9	86-925-002-01		Connection cord, CW-115k		1
10	87-058-019-01		Head cleaning pole ass'y		1
11	80-291-645-01		Tape cassette, DMC-130A		1
12	87-056-009-01		Distributors list		1
13	87-056-571-01		Label, Cassette lid		1
14	82-386-857-01		Protection sheet A	*	1
15	82-386-866-01		Cushion A, Auxiliary	*	1
16	82-386-861-01		Cushion B, Auxiliary	*	1
17	82-386-065-01		Dust cover ass'y	*	1
18	82-386-867-01		Pad, Dust cover	*	1

ELECTRICAL PARTS

Symbol No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
<b>&lt;&lt; REC/PB CIRCUIT BOARD SECTION &gt;&gt;</b>					
PCB-A	82-386-602-11		REC/PB circuit board	*	1
<b>&lt; REC/PB SECTION &gt;</b>					
TR101,102	39-313-355-01		Transistor, 2SC1335 (E)		2
TR103,104	89-312-222-01		Transistor, 2SC1222 (E)		2
TR105,106 107,108	89-402-275-01		Transistor, 2SD227 (R)		4
TR109,110 111,112 113,114	89-309-456-01		Transistor, 2SC945 (L-P)		6
D101,102,103 104	88-051-060-01		Diode, 1N60		4
L101,102	82-371-648-01		Coil, 6.8mH		2
L103,104,105 106	87-005-093-01		Coil, 4.7mH		4
L107,108	82-371-644-01		Trap coil, 22mH		2
T101,102	82-370-610-01		Matching transformer		2
S1	87-031-390-01		Slide switch (REC/PB)		2
S2,3	82-386-630-01		Lever switch (TAPE SELECTOR EQ-BIAS)	*	2
S4	82-386-618-01		Push switch (DOLBY-NR)	*	1
OSC UNIT	82-385-609-11		Bias OSC unit	AD-6300	1
SFR101,102 103,104	87-021-432-01		Semi-fixed resistor, 50KΩ-B		4
SFR105,106	87-021-445-01		Semi-fixed resistor, 10KΩ-B		2
SFR109,110	87-021-446-01		Semi-fixed resistor, 100KΩ-B		2
<b>&lt; Resistors &gt;</b>					
R105,106	88-130-100-01		10Ω 1/4W ±5%		2
R147,148	88-130-270-01		27Ω 1/4W ±5%		2
R171,172	88-130-820-01		82Ω 1/4W ±5%		2
R107,108	88-130-101-01		100Ω 1/4W ±5%		2
R113,114,127 128	88-130-151-01		150Ω 1/4W ±5%		4
R135,136	88-130-561-01		560Ω 1/4W ±5%		2
R139,140	88-130-102-01		1KΩ 1/4W ±5%		2
R129,130,169 170,179,180	88-130-152-01		1.5KΩ 1/4W ±5%		6
R175,176	88-130-222-01		2.2KΩ 1/4W ±5%		2
R151,152	88-130-472-01		4.7KΩ 1/4W ±5%		2
R145,146,155 156,177,178	88-130-562-01		5.6KΩ 1/4W ±5%		6
R153,154,159 160	88-130-828-01		8.2KΩ 1/4W ±5%		4
R161,162	88-130-103-01		10KΩ 1/4W ±5%		2
R131,132,173 174	88-130-123-01		12KΩ 1/4W ±5%		4
R133,134,167 168	88-130-153-01		15KΩ 1/4W ±5%		4
R125,126	88-130-183-01		18KΩ 1/4W ±5%		2
R115,116,141 142	88-130-223-01		22KΩ 1/4W ±5%		4
R157,158	88-130-273-01		27KΩ 1/4W ±5%		2
R149,150	88-130-473-01		47KΩ 1/4W ±5%		2
R123,124	88-130-683-01		68KΩ 1/4W ±5%		2
R165,166,181 182	88-130-823-01		82KΩ 1/4W ±5%		4
R143,144	88-130-684-01		680KΩ 1/4W ±5%		2
R163,164	88-130-824-01		820KΩ 1/4W ±5%		2
R183,184,193 194,195,196	88-130-105-01		1MΩ 1/4W ±5%		6
R109,110,111 112,121,122	88-183-224-01		220KΩ 1/4W ±5% ELR LN		6
R197,198	88-181-394-01		390KΩ 1/4W ±5% ELR		2
R185,186	88-141-152-01		1.5KΩ 1/2W ±5%		2
R119,120	87-002-006-01		30KΩ 1/4W ±5%		2
R117,118	88-181-824-01		820KΩ 1/4W ±5% ELR		2



Symbol No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty
< Capacitors >					
C127,128,135 136,155,156	88-337-100-01		1 $\mu$ F 50V Electrolytic		6
C137,138	88-337-200-01		2.2 $\mu$ F 50V Electrolytic		2
C129,130,151 152	88-336-500-01		4.7 $\mu$ F 25 V Electrolytic		4
C117,118	88-336-110-01		10 $\mu$ F 25V Electrolytic		2
C103,104	88-336-310-01		33 $\mu$ F 25V Electrolytic		2
C125,126	88-336-120-01		100 $\mu$ F 25V Electrolytic		2
C153,154	88-335-310-01		33 $\mu$ F 16V Electrolytic		2
C113,114,601	88-332-510-01		47 $\mu$ F 6.3V Electrolytic		3
C119,120	87-015-328-01		0.22 $\mu$ F 50V Electrolytic LR		2
C105,106	87-015-246-01		4.7 $\mu$ F 25V Electrolytic LR		2
C161,162	88-707-610-01		0.001 $\mu$ F Mylar		2
C115,116	88-707-710-01		0.0039 $\mu$ F Mylar		2
C123,124	88-707-720-01		0.0047 $\mu$ F Mylar		2
C139,140	88-707-820-01		0.015 $\mu$ F Mylar		2
C143,144,147 148	88-707-880-01		0.018 $\mu$ F Mylar		4
C145,146	88-707-840-01		0.033 $\mu$ F Mylar		2
C141,142	88-707-850-01		0.047 $\mu$ F Mylar		2
C133,134	88-717-920-01		0.15 $\mu$ F Mylar		2
C121,122	88-507-550-01		470pF Styrol		2
C111,112	88-212-310-01		56pF Ceramic		2
C109,110,131 132	88-212-410-01		100pF Ceramic		4
C107,108	88-214-610-01		0.001 $\mu$ F Ceramic		2
C101,102	88-218-560-01		560pF Ceramic		2
C157,158	88-238-460-01		180pF 500V Ceramic		2
C159,160	88-238-520-01		330pF 500V Ceramic		2
< POWER SECTION >					
TR501,502	89-313-647-01		Transistor, 2SC1364 (7)		2
D501	87-027-163-01		Diode, 1B4B1		1
D502,504	87-027-083-01		Diode, 1S1885		2
D503	82-385-622-01		Zener diode, WZ210	AD-6300	2
D505	82-371-647-01		Zener diode, RD7.5E		1
< Resistors >					
R511	88-130-100-01		10 $\Omega$ 1/4W $\pm$ 5%		1
R504	88-130-181-01		180 $\Omega$ 1/4W $\pm$ 5%		1
R513	88-130-271-01		270 $\Omega$ 1/4W $\pm$ 5%		1
R507	88-130-391-01		390 $\Omega$ 1/4W $\pm$ 5%		1
R506	88-130-471-01		470 $\Omega$ 1/4W $\pm$ 5%		1
R505	88-130-561-01		560 $\Omega$ 1/4W $\pm$ 5%		1
R512	88-130-821-01		860 $\Omega$ 1/4W $\pm$ 5%		1
R510	88-130-152-01		1.5K $\Omega$ 1/4W $\pm$ 5%		1
R501	88-130-682-01		6.8K $\Omega$ 1/4W $\pm$ 5%		1
R514	88-181-272-01		2.7K $\Omega$ 1/4W $\pm$ 5% ELR		1
R508	88-140-121-01		120 $\Omega$ 1/2W $\pm$ 5%		1
R509	88-141-221-01		220 $\Omega$ 1/2W $\pm$ 5%		1
R502	87-029-015-01		10 $\Omega$ Fuse resistor		1
< Capacitors >					
C505	88-337-100-01		1 $\mu$ F 50V Electrolytic		1
C504	88-344-210-01		22 $\mu$ F 35V Electrolytic		1
C502	88-344-220-01		220 $\mu$ F 35V Electrolytic		1
C503	88-344-520-01		470 $\mu$ F 35V Electrolytic		1
C510	88-335-510-01		47 $\mu$ F 16V Electrolytic		1
C508	88-335-130-01		1000 $\mu$ F 16V Electrolytic		1
C501	87-015-326-01		1000 $\mu$ F 35V Electrolytic		1
< MUTING SECTION >					
TR601	89-309-456-01		Transistor, 2SC945 (L-P)		1
D602	87-026-066-01		Diode, M8513A(O)		1
S5	82-370-619-01		Slide switch (STOP MUTING)		1

Symbol No.	Part No.	Part No. Changed to	Description	Common Model	Q'ty.
R601	88-130-330-01		< Resistors > 33Ω 1/4W ±5%		1
R604	88-130-103-01		10KΩ 1/4W ±5%		1
R603	88-130-123-01		12KΩ 1/4W ±5%		1
R602	88-130-224-01		220KΩ 1/4W ±5%		1
C602	88-335-110-01		< Capacitor > 10μF 16V Electrolytic		1
<b>« PEAK INDICATOR / CrO<sub>2</sub> AUTO CIRCUIT BOARD SECTION »</b>					
PCB-B	82-386-609-01		PEAK INDICATOR/CrO <sub>2</sub> AUTO circuit board	*	1
<b>&lt; PEAK INDICATOR SECTION &gt;</b>					
TR301,302	89-309-456-01		Transistor, 2SC945L (P)		2
D301,302	88-051-060-01		Diode, 1N60		2
SFR301	87-021-375-01		Semi-fixed resistor, 20kΩ-B		1
R303	88-130-561-01		< Resistors > 560Ω 1/4W ±5%		1
R301,302	88-130-822-01		8.2kΩ 1/4W ±5%		2
C301,302	88-336-500-01		< Capacitors > 4.7μF 25V Electrolytic		2
C303	88-335-110-01		10μF 16V Electrolytic		1
<b>&lt; CrO<sub>2</sub> AUTO SECTION &gt;</b>					
TR801~809	89-309-456-01		Transistor, 2SC945L (P)		9
D801	87-026-066-01		Diode, M8513A (O)		1
R809	88-130-223-01		< Resistors > 22kΩ 1/4W ±5%		1
R801~80	88-130-104-01		100kΩ 1/4W ±5%		8
<b>« VOLUME CIRCUIT BOARD-1 SECTION »</b>					
PCB-C	82-386-605-01		VOLUME circuit board-1	*	1
VR103,104	82-386-616-01		Slide volume, 10KΩ-A (OUTPUT LEVEL)	*	1
SFR107	87-021-444-01		Semi-fixed resistor, 3KΩ-B		1
<b>« VOLUME CIRCUIT BOARD-2 SECTION »</b>					
PCB-D	82-386-606-01		VOLUME circuit board-2	*	1
VR101,102	82-386-617-01		Slide volume, 50KΩ-A (RECORD LEVEL)	*	1
SFR108	87-021-444-01		Semi-fixed resistor, 3KΩ-B		1
R137,138	88-130-393-01		< Resistors > 33KΩ 1/4W ±5%		2
<b>« JACK CIRCUIT BOARD-1 SECTION »</b>					
PCB-E	82-386-604-01		JACK circuit board-1	*	1
J4,5,6,7,8	82-386-621-01		Jack Ass'y (LINE IN, LINE OUT, DIN)	*	1
R187,188,189	88-130-332-01		< Resistors > 3.3KΩ 1/4W ±5%		4
190					
R191,192	88-130-105-01		1MΩ 1/4W ±5%		2
<b>« JACK CIRCUIT BOARD-2 SECTION »</b>					
PCB-F	82-386-603-01		JACK circuit board-2	*	1
J1,2	87-032-749-01		Jack 6.3φ (MIC L, R)		2
J3	87-032-748-01		Jack 6.3φ (PHONES)		1
R101,102	88-130-392-01		< Resistors > 3.9KΩ 1/4W ±5%		2
R103,104	88-130-103-01		10KΩ 1/4W ±5%		2
<b>« DOLBY-NR CIRCUIT BOARD SECTION »</b>					
PCB-G.H	82-385-650-11		DOLBY-NR circuit board	AD-6300	2
IC401,402	87-027-151-01		IC, NB545B		2
D401,402	88-051-060-01		Diode, IN60		2
MPX UNIT	82-385-611-01		Filter unit	AD-6300	2
	87-032-640-01		Connector, 10P		2

Symbol No.	Parts No.	Part No. Changed to	Description	Common Model	Q'ty
< Resistors >					
R417,418	88-181-121-01		120Ω 1/4W ±5% ELR		2
R409,410	88-181-911-01		910Ω 1/4W ±5% ELR		2
R407,408	88-181-473-01		47KΩ 1/4W ±5% ELR		2
R405,406	88-181-124-01		120KΩ 1/4W ±5% ELR		2
R411,412	88-181-154-01		150KΩ 1/4W ±5% ELR		2
R409,410	88-181-274-01		270KΩ 1/4W ±5% ELR		2
R413,414	88-181-684-01		680KΩ 1/4W ±5% ELR		2
R401,402	88-131-181-01		180Ω 1/4W ±5%		2
R415,416	88-131-104-01		100KΩ 1/4W ±5%		2
R403,404	82-371-652-01		3.3KΩ 1/4W ±1%		2
< Capacitors >					
C401,402	87-015-282-01		0.22μF 50V Electrolytic LR		2
C425,426	88-337-394-01		0.33μF 50V Electrolytic		2
C405,406,407 408	88-336-500-01		4.7μF 25V Electrolytic		4
C411,412,429 430,431,432	88-335-110-01		10μF 16V Electrolytic		6
C413,414	82-371-643-01		4700pF PP		2
C403,404	82-371-642-01		5600pF PP		2
C415,416	82-371-641-01		0.027μF PP		2
C423,424	88-707-850-01		0.047μF Mylar		2
C427,428	88-717-910-01		0.1μF Mylar		2
<< LED-1 CIRCUIT BOARD SECTION >>					
PCB-I	82-380-662-01		LED-1 circuit board	AD-6500	1
D507	87-026-112-01		Light emitting diode, SEL103S LED (RECORD)		1
D508	87-026-113-01		Light emitting diode, SEL103E GRN (DOLBY-NR)		1
<< LAMP CIRCUIT BOARD SECTION >>					
PCB-J.K	82-386-608-11		LAMP circuit board	*	2
PL1,2	82-380-626-01		Pilot lamp (METER)	AD-6500	2
<< LED-2 CIRCUIT BOARD SECTION >>					
PCB-L	82-385-644-01		LED-2 circuit board	AD-6500	1
D303	87-026-083-01		Light emitting diode, SLP-114 (PEAK)		1
<< MISCELLANEOUS >>					
T501	82-386-613-01		Power transformer (EE model only)	*	1
T501	82-386-614-01		Power transformer (UK model only)	*	1
RPH	87-046-130-01		REC/PB head		1
EH	87-046-131-01		Erase head		1
LM	82-385-643-01		Level meter	AD-6300	1
M	82-386-631-01		Motor		1
S7	87-031-363-01		Micro switch (MOTOR)		1
S8	87-031-361-01		Leaf switch (AUTO STOP)		1
S9	87-031-349-01		Push switch (POWER)		1
S10	87-031-377-01		Micro switch (CrO <sub>2</sub> AUTO)		1
S11	82-375-623-01		Slide switch (DIN OUT)	AD-1300	1
S12	87-031-364-01		Slide switch (VOLTAGE SELECTOR)		1
F1	87-035-123-01		Fuse, 80mA "T"		1
	87-057-816-01		Fuse label, 80mA "T"		1
F2	87-350-107-01		Fuse, 315mA "T"		1
	87-057-795-01		Fuse label, 315mA "T"		1
F3,4	87-035-075-01		Fuse, 500mA "T"		2
	87-057-806-01		Fuse label, 500mA "T"		2
F5	87-035-151-01		Fuse, 40mA "T" (UK model only)		1
	87-057-831-01		Fuse label, 40mA "T" (UK model only)		1
	82-379-678-01		Fuse holder, 4P (EE model only)	AD-1800	1
	82-386-634-01		Fuse holder, 5P (UK model only)	*	1
< Capacitors >					
C163,164	88-215-850-01		0.047μF Ceramic		2
C509	88-215-810-01		0.01μF Ceramic		1