

Service Manual

Cassette Deck
RS-T330R
Dolby NR-Equipped
Stereo Double Cassette Deck



Color

(S)...Silver Type
(K)...Black Type

Color

Color	Area
(K)	(M).....U.S.A.
(K)	(MC).....Canada.
(S) (K)	(E).....Continental Europe.
(S) (K)	(EK).....United Kingdom.
(S) (K)	(EG).....F.R. Germany.
(S) (K)	(EH).....Holland.
(S) (K)	(XA).....Asia, Latin America, Middle Near East, Africa and Oceania.
(S) (K)	(XL).....Australia.



Note: Please dispose of the service manual for Model No. RS-T330R (Order No. HAD8804124C0) and replace it with this service manual.

SPECIFICATIONS (Except M, MC)

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
(DECK A) REC/PLAY	Permaloy head
Erasing	Double-gap ferrite head
(DECK B) PLAY	Permaloy head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec. (1-7/8 ips)
Frequency response (w/o Dolby N.R.)	
METAL	20 Hz~17 kHz
	30 Hz~16 kHz (DIN)
CrO ₂	20 Hz~17 kHz
	30 Hz~16 kHz (DIN)
NORMAL	20 Hz~16 kHz
	30 Hz~15 kHz (DIN)
S/N (signal level = max recording level, CrO ₂ type tape)	
Dolby C NR on	74 dB (CCIR)
Dolby B NR on	66 dB (CCIR)
NR off	56 dB (A weighted)
Wow and flutter	
For Australia	0.1% (WRMS)

For others 0.07% (WRMS)
±0.2% (DIN)

Fast Forward and Rewind Time
Approx. 110 seconds with C-60 cassette tape

Input sensitivity and impedance
LINE 60 mV/47 kΩ

Output voltage and impedance
LINE 400 mV/3.2 kΩ
HEADPHONES 30 mV/8 Ω

■ GENERAL

Power consumption 14W

Power supply
For Australia and United Kingdom AC 50 Hz/60 Hz, 240V
For continental Europe AC 50 Hz/60 Hz, 220V
For others AC 50 Hz/60 Hz, 110V/127V/220V/240V

Dimensions (W×H×D) 430 × 125 × 235 mm
Weight 4.5 kg

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Technics

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave.65 De Infanteria, Km.9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic Hawaii, Inc.
99-859, Iwaiwa Street
P.O. Box 774
Honolulu, Hawaii 96808-0774

Matsushita Electric
of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Panasonic Tokyo Sales Department
Matsushita Electric Industrial Co., Ltd.
World Trade Center Bldg., 4-1, Hamamatsu-cho,
2-chome, Minato-ku, Tokyo 105, Japan

SPECIFICATIONS (M, MC only)

CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Heads	
(DECK A) REC/PLAY	Permalloy head
Erasing	Double-gap ferrite head
(DECK B) PLAY	Permalloy head
Motors	Electronically controlled DC motor
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Tape speed	4.8 cm/sec. (1-7/8 ips)
Frequency response (w/o Dolby N.R.)	
METAL	20 Hz~17 kHz

CrO₂	40 Hz~15 kHz (±3 dB) 20 Hz~17 kHz
NORMAL	40 Hz~15 kHz (±3 dB) 20 Hz~16 kHz
	40 Hz~14 kHz (±3 dB)
S/N	(signal level=max recording level, CrO ₂ type tape)
Dolby C NR on	74 dB (CCIR)
Dolby B NR on	66 dB (CCIR)
NR off	56 dB (A weighted)
Wow and flutter	0.1 % (WRMS)
Fast Forward and Rewind Time	Approx. 110 seconds with C-60 cassette tape
Input sensitivity and impedance	
LINE	60 mV/47 kΩ

Output voltage and impedance

LINE	400 mV/3.2 kΩ
HEADPHONES	30 mV/8 Ω
(Plug type : 1/4 inch stereo phone plug)	

GENERAL

Power consumption	14 W
Power supply	AC 120 V, 60 Hz
Dimensions (W × H × D)	430 × 125 × 235 mm (16-15/16" × 4-29/32" × 9-8/32")
Weight	4.5 kg (9.9 lb.)

CONTENTS

• Safety Precaution	2
• Accessories	2
• Location of Controls	3, 4
• How to Connect	4
• Disassembly Instructions	5, 6
• Measurement and Adjustment Methodes	7~9
• Microcomputer Terminal Function	10~13
• Replacement Parts List (Cabinet Parts)	14
• Cabinet Parts Location	15, 16
• Printed Circuit Boards	17~20
• Wiring Connection Diagram	21
• Schematic Diagram	22~28
• Block Diagram	29, 30
• Resistors & Capacitors	31~33
• Terminal Guide of IC's, Transistors and Diodes	33
• Replacement Parts List (Electrical parts)	34, 35
• Replacement Parts List (Packings and Accessories Parts)	36
• Mechanical Parts Location	37~40
• Replacement Parts List (Mechanical Parts)	41

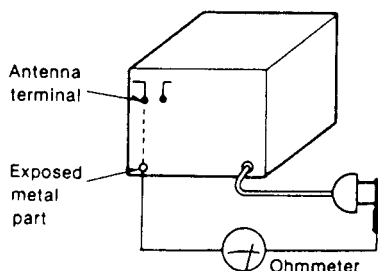
SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

INSULATION RESISTANCE TEST

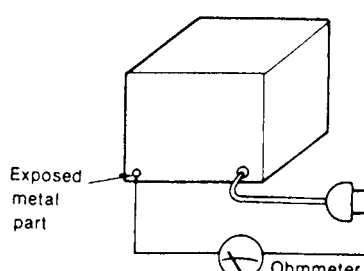
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ



(Fig. B)

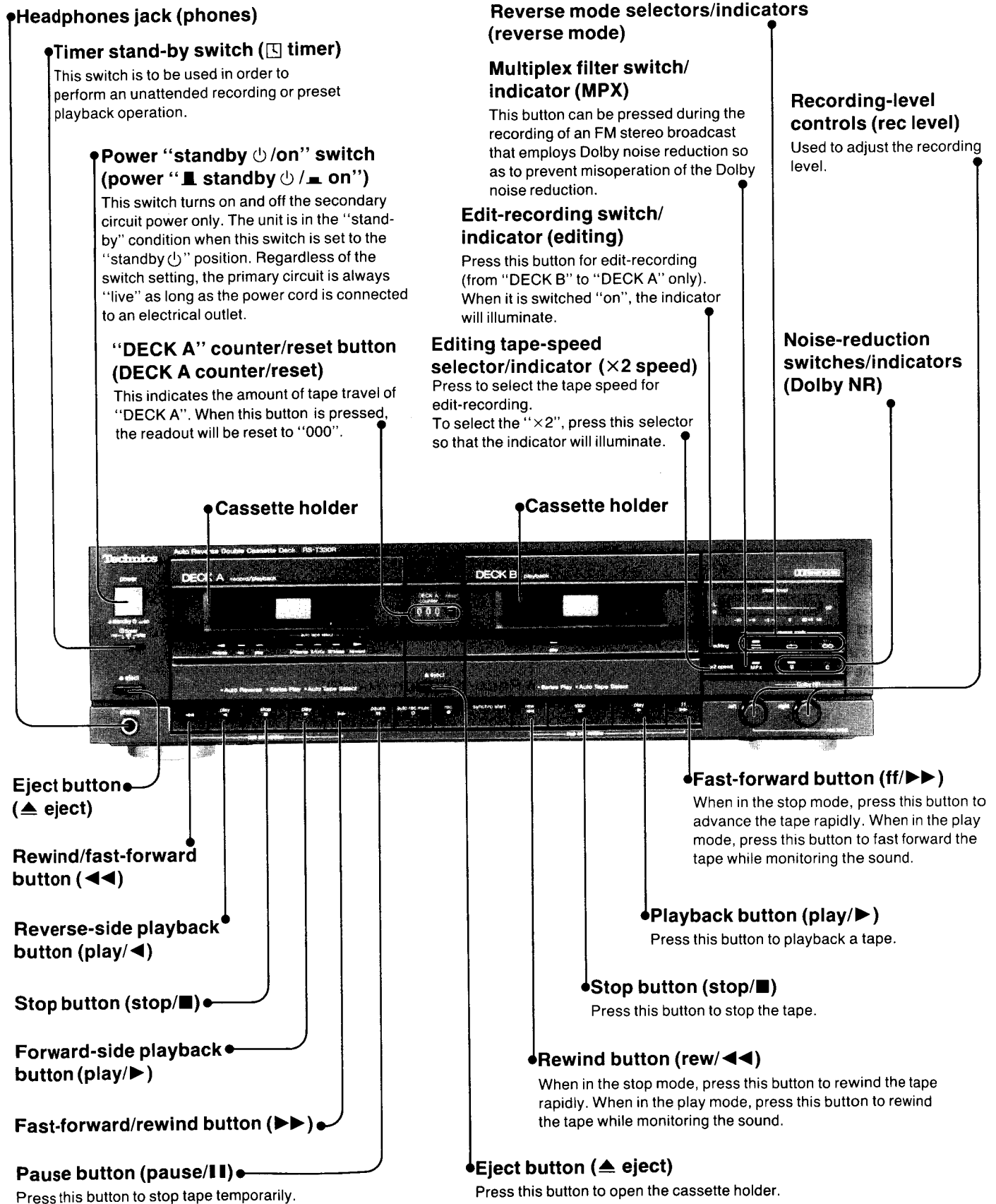
Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

ACCESSORIES

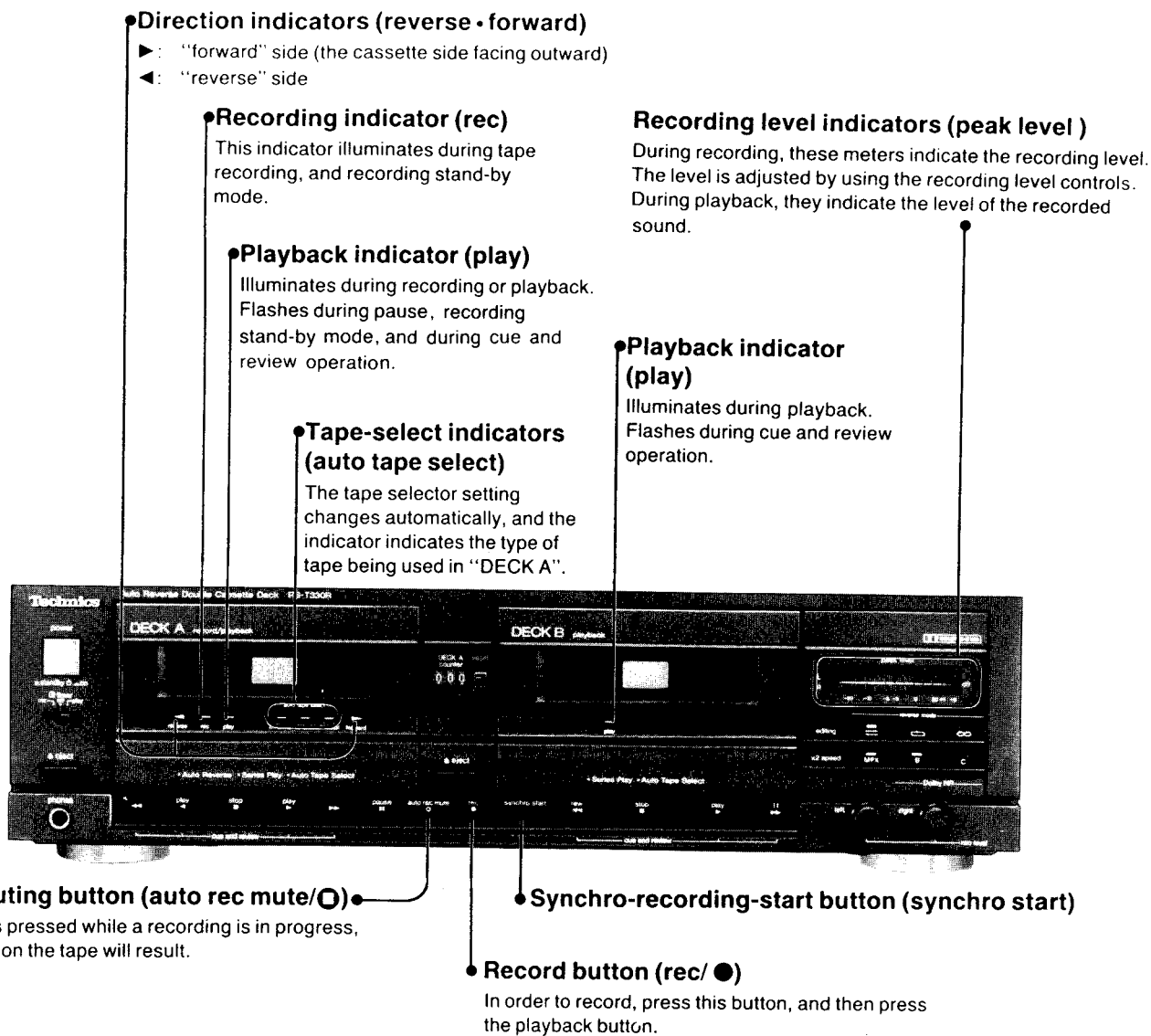
• AC power supply cord	1	• Stereo connection cables	2

LOCATION OF CONTROLS

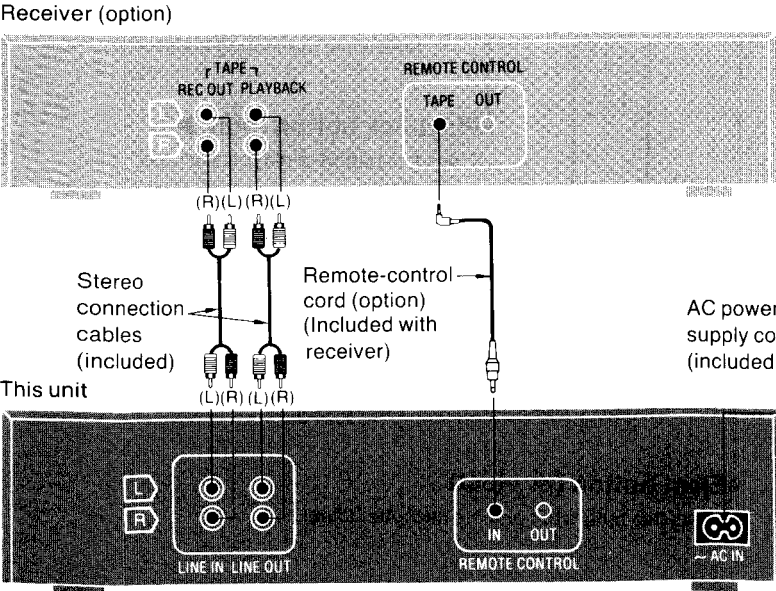


When using “DECK A” (Auto reverse)

When using “DECK B” (Only forward-side)



HOW TO CONNECT



Note: The configuration of AC power supply cord differs according to area.

- **Remote-control "IN" terminal**
This terminal can be used only with Technics receivers or amplifiers having the appropriate remote-control terminal. (Contact your dealer for details.)
- **Remote-control "OUT" terminal**
This terminal can be used only with Technics graphic equalizer or compact disc players having the appropriate remote-control terminal. (Contact your dealer for details.)

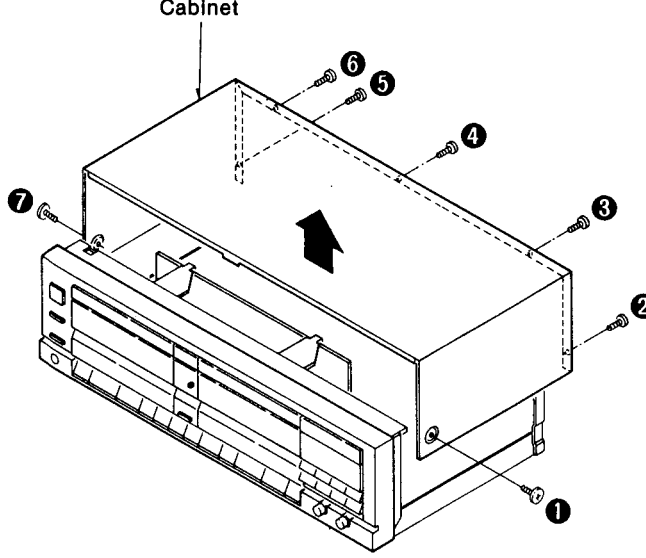
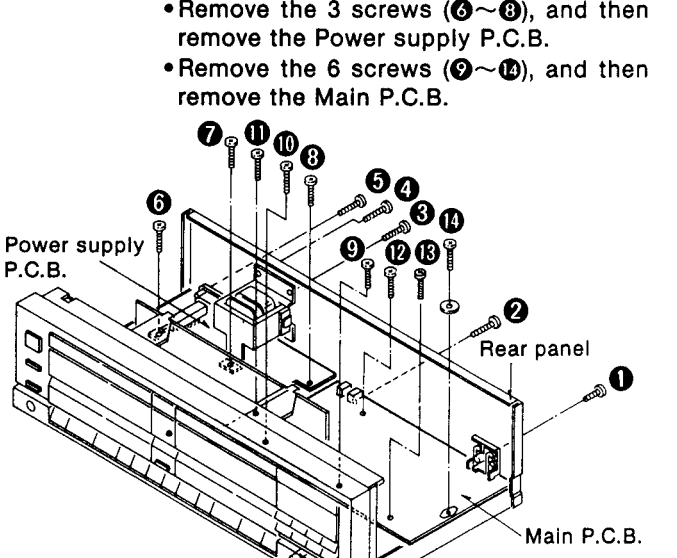
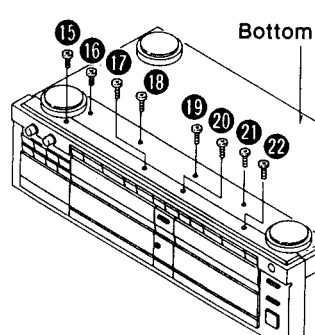
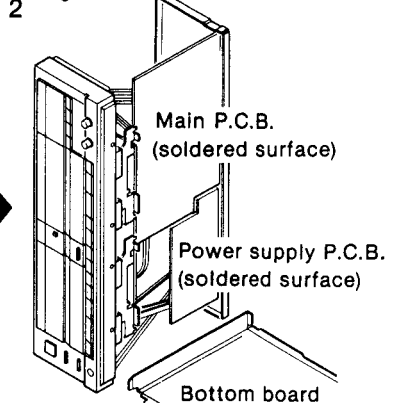
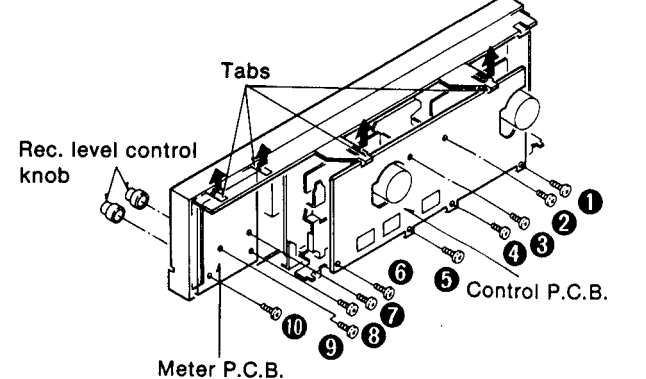
Placement hints
If this unit is placed near a receiver, a "hum" noise may be heard during tape playback, recording, or AM reception of the receiver. If this occurs, leave as much space as possible between the units, or place them where there is the least amount of "hum".

For United Kingdom
AC power supply cord (included)
Household AC outlet
Fit a suitable plug to the AC power supply cord.

DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No. 1	How to remove the Cabinet.	Ref. No. 2	How to remove the Power supply P.C.B. and the Main P.C.B.
Procedure 1	Remove the 7 screws (①~⑦).	Procedure 1→2	- Remove the 5 screws (①~⑤), and then remove the Rear panel. - Remove the 3 screws (⑥~⑧), and then remove the Power supply P.C.B. - Remove the 6 screws (⑨~⑭), and then remove the Main P.C.B.
	 Fig. 1		 Fig. 2
	How to check the Main P.C.B. - When checking the soldered surfaces of Main P.C.B. and replacing the parts, do as show. 1. Remove the 9 screws (⑥~⑭), and then remove the Main P.C.B. and Power supply P.C.B. (See Fig. 2) 2. Remove the 9 screws (②, ⑮~⑳), and then remove the Bottom board. (See Fig. 2, 3)	 Fig. 3	 Fig. 4
Ref. No. 3	How to remove the Control P.C.B. and Meter P.C.B.		
Procedure 1→2→3	- Remove the 6 screws (①~⑥). - Release the 2 tabs, and then remove the Control P.C.B. - Pull out the 2 Rec. level control knobs. - Remove the 4 screws (⑦~⑩). - Release the 2 tabs, and then remove the Meter P.C.B.		
			 Fig. 5

Ref. No. 4
How to remove the Timer sw P.C.B. and Headphones P.C.B.

- Procedure 1→2→4**
- Remove the one screw (①), and then remove the Timer sw P.C.B.
 - Remove the one screw (②), and then remove the Headphones P.C.B.

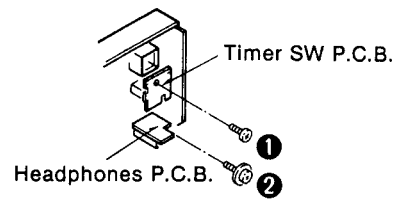


Fig. 6

Ref. No. 5
How to remove the Mechanism unit.

- Procedure 1→2→3→5**
- Remove the 4 screws (①~④).

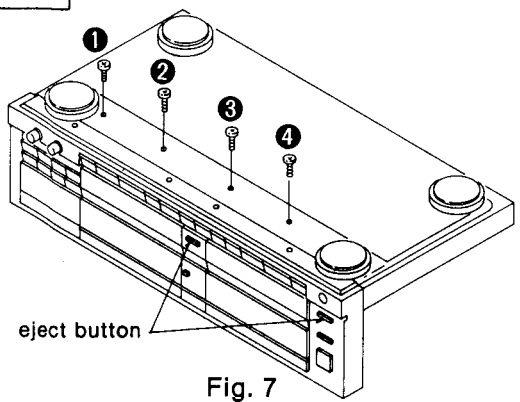


Fig. 7

- Remove the 8 screws (⑤~⑫).
- Push the eject button, and then remove the Mechanism unit.

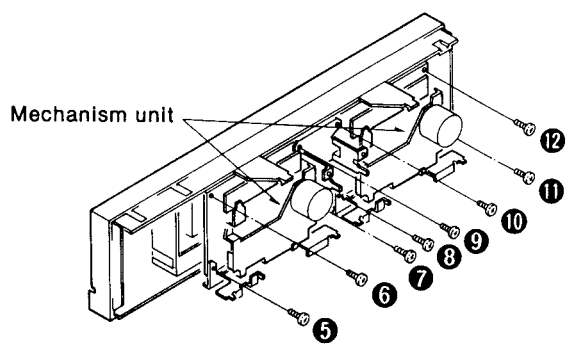


Fig. 8

Ref. No. 6
How to remove the Operation P.C.B.

- Procedure 1→2→3→5→6**
- Remove the 4 screws (①~④).

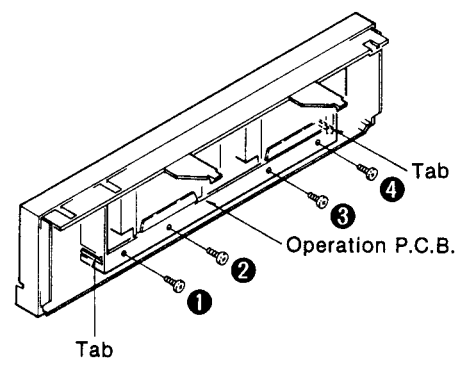


Fig. 9

- Release the 2 tabs, and then remove the Operation knob.
- Remove the Operation P.C.B.

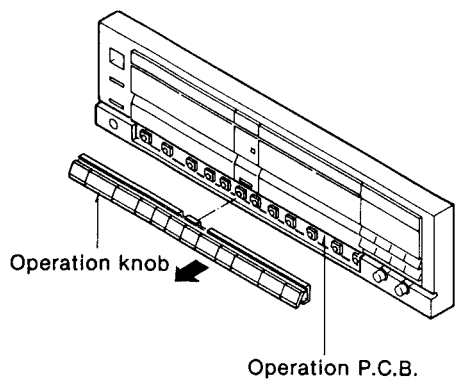


Fig. 10

Ref. No. 7
How to remove the LED P.C.B.

- Procedure 7**
- Remove the Cassette lid.
 - Push the 3 tabs in the direction of arrow, and then remove the LED P.C.B.

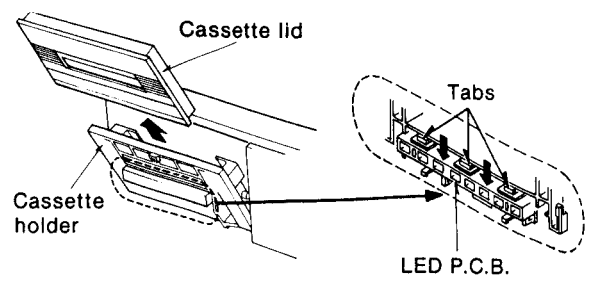


Fig. 11

MEASUREMENT AND ADJUSTMENT METHOD

Measurement Condition

- Rec. level control; Maximum
- Timer stand-by switch; Off
- Editing switch; Off
- Editing tape-speed selector; off (X1)

- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature $20 \pm 5^\circ\text{C}$ ($68 \pm 9^\circ\text{F}$)

Measuring Instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter
- AF oscillator

- ATT (Attenuator)
- DC voltmeter
- Resistor (600 Ω)

Test tape

- Head azimuth adjustment (8kHz, -20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB); QZZCFM

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall frequency response, Overall gain adjustment
Normal reference blank tape; QZZCRA
CrO₂ reference blank tape; QZZCRX
Metal reference blank tape; QZZCRZ

HEAD AZIMUTH ADJUSTMENT (DECK A/B)

1. Playback the azimuth adjustment portion (8kHz, -20dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-CH and R-CH are maximized and the lissajous waveform, as illustrated, approaches 0 degrees.

Note: If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

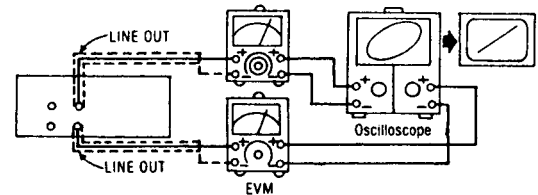


Fig. 1

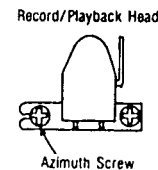


Fig. 2

TAPE SPEED ADJUSTMENT (DECK A/B)

Normal speed

1. Shift the editing tape-speed selector to "OFF (X1)".
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust Deck B=VR802 and Deck A=VR801 so that the output is within the standard value.

High speed

4. Shift the editing tape speed switch to "X2" and connect the MODE TEST POINT and GND.
5. Playback the middle portion of the test tape (QZZCWAT).
6. Adjust Deck B=VR803 so that the output is within the standard value.

Note: The Normal speed adjustment must be done before the High speed adjustment.

Standard value: $3000 \pm 15\text{ Hz}$ (Normal), $6000 \pm 600\text{ Hz}$ (High)

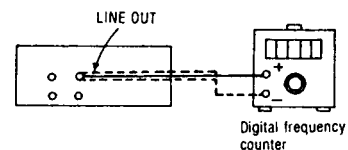


Fig. 3

PLAYBACK GAIN ADJUSTMENT (DECK A/B)

1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
2. Adjust Deck B=VR3 (L-CH) [VR4 (R-CH)] and Deck A=VR1 (L-CH) [VR2 (R-CH)] so that the output is within the standard value.

Standard value: $0.4\text{ V} \pm 0.5\text{ dB}$

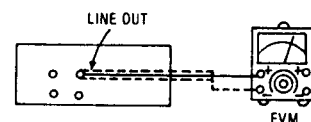


Fig. 4

PLAYBACK FREQUENCY RESPONSE (DECK A/B)

1. Playback the frequency response portion (315Hz, 12.5kHz~63Hz, -20dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in Fig. 6 for both L-CH and R-CH.

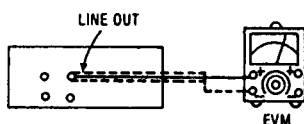


Fig. 5

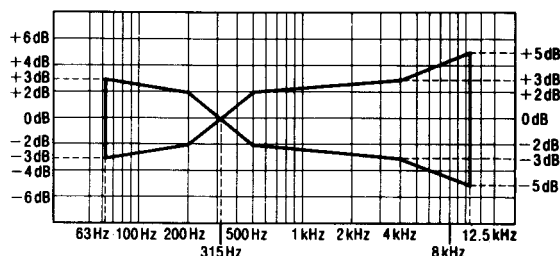


Fig. 6

ERASE CURRENT ADJUSTMENT (DECK A)

1. Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record Pause mode.
2. Adjust VR301 so that the output between TP301 and GND is within the standard value.

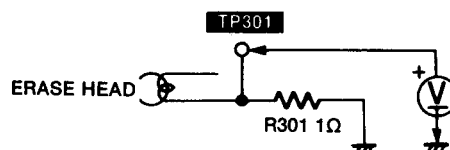


Fig. 7

Standard value: $190 \pm 5\text{mV}$ (Metal)

OVERALL FREQUENCY RESPONSE

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1kHz, -24dB) through an attenuator.
3. Attenuate the signal by 20dB and adjust the frequency from 50Hz~10kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in Fig. 9 in comparison to the reference frequency (1kHz).
6. If it is not within the standard range, adjust VR7 (L-CH) and VR8 (R-CH) so that the frequency level is within the standard range.
 - Level up in high frequency rangeIncrease the bias current.
 - Level down in high frequency range ...Decrease the bias current.
7. Repeat steps 2~6 above using the CrO₂ tape (QZZCRX) and the Metal tape (QZZCRZ) increasing the frequency range to 12.5kHz (50Hz~12.5kHz).
8. Assure that the level is within the range shown in Fig. 10.

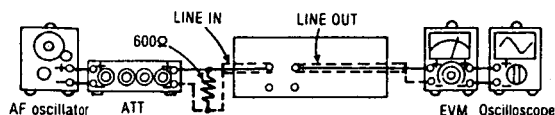


Fig. 8

Normal Overall frequency response chart (NR OUT)

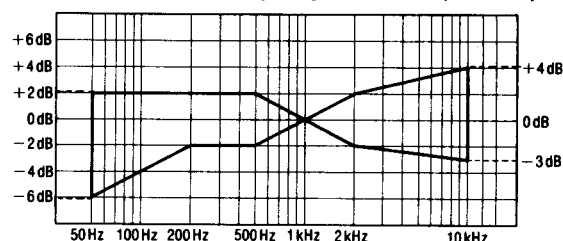


Fig. 9

CrO₂ Metal Overall frequency response chart (NR OUT)

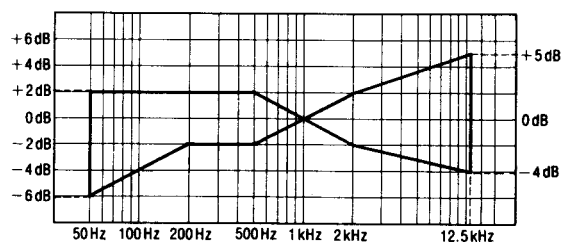


Fig. 10

OVERALL GAIN ADJUSTMENT

1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1kHz, -24dB). Attenuate the output so that its level becomes 0.4V.
3. Record this input signal.
4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
5. If it is not within the standard value, adjust VR5 (L-CH) and VR6 (R-CH).
6. Repeat the step 2~5 above until the output is within the standard value.

Standard value: $0\text{V} \pm 0.5\text{dB}$

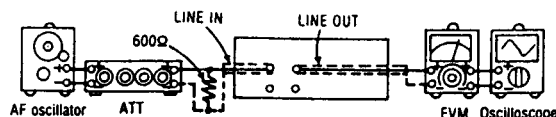


Fig. 11

FLUORESCENT METER ADJUSTMENT

- 1.Insert the Normal blank test tape(QZZCRA) and apply a reference input signal (1 kHz, -24 dB) in the Record Pause mode.
- 2.Using an attenuator, adjust until the voltage of the tape decks "LINE OUT" terminals is 0.4V.
- 3.Adjust VR201 (L-CH) and VR202 (R-CH) so that the "0dB" segment is slightly illuminated.

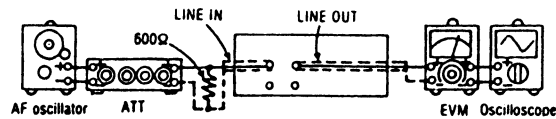


Fig. 11

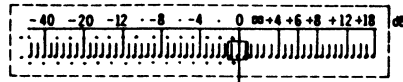
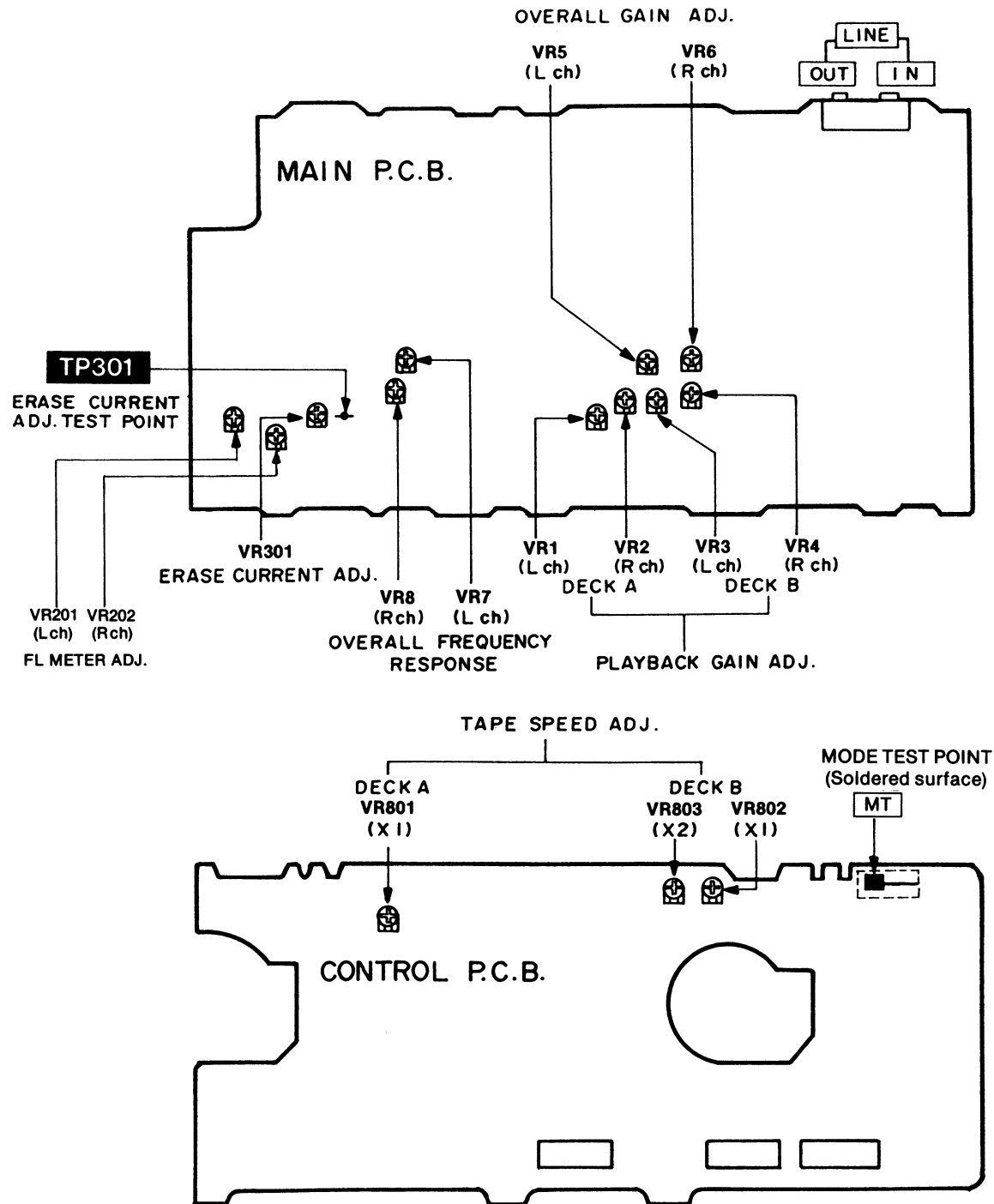


Fig. 12

• Adjustment Points



■ MICROCOMPUTER TERMINAL FUNCTION
(IC801: M50746-412SP)

Pin No.	Symbol	In/Out	Description of terminal
1	V _{CC}	—	Power supply terminal
2	A V _{SS}	—	• Connected to V _{SS}
3	V _{REF}	Input	Standard voltage terminal (5V)
4	D/A	—	Not used in this unit.
5	PWM	—	Not used in this unit.
6	P6 (3)	—	Not used in this unit.
7	P6 (2)	Output	• "L" level in CUE/REV mode. • "H" level in other mode.
8	P6 (1)	Output	Mater mute control signal • "L" level in muting is on mode. • "H" level in muting is off mode.
9	P6 (0)	Output	• "H" level in Line In REC mode. • "L" level in other mode.
10	AN (7)	Input	Leader tape detect.
11	AN (6)	Input	Key switch scan (Editing, X2 speed, Dolby B-C , Reverse mode, MPX)
12	AN (5)	Input	Key switch scan (DECK A: Stop, F.F., Rew. Play, DECK B: Rec. Synchro start, Timer Rec./Play)
13	AN (4)	Input	Key switch scan (DECK A: Stop, F.F., Rew, F. Play, R. Play, Pause, Auto rec mute)
14	P4 (3)	Input	Foward side Rec. inhibit switch. • "L" level in rec inhibit switch is on mode. • "H" level in rec inhibit switch is off mode.
15	P4 (2)	Input	Reverse side Rec. inhibit switch.
16	P4 (1)	Input	Remote control serial signal
17	P4 (0)	Input	• "H"level input terminal
18	P3 (7)	Output	Direct mute signal • "H" level in mute is on mode. • "L" level in mute is off mode.
19	P3 (6)	Output	Rec. amp. mute signal • "L" level in mute is on mode. • "H" level in mute is off mode.
20	P3 (5)	Output	Encode/Decode select signal • "L" level in encode mode. • "H" level in decode mode.
21	P3 (4)	Output	Deck A/B Playback amp. select signal • "L" level in Deck A Playback amp. • "H" level in Deck B Playback amp.

MICROCOMPUTER TERMINAL FUNCTION (IC801: M50746-412SP)

Pin No.	Symbol	In/Out	Description of terminal
1	V _{CC}	—	Power supply terminal
2	A V _{SS}	—	• Connected to V _{SS}
3	V _{REF}	Input	Standard voltage terminal (5V)
4	D/A	—	Not used in this unit.
5	PWM	—	Not used in this unit.
6	P6 (3)	—	Not used in this unit.
7	P6 (2)	Output	• "L" level in CUE/REV mode. • "H" level in other mode.
8	P6 (1)	Output	Mater mute control signal • "L" level in muting is on mode. • "H" level in muting is off mode.
9	P6 (0)	Output	• "H" level in Line In REC mode. • "L" level in other mode.
10	AN (7)	Input	Leader tape detect.
11	AN (6)	Input	Key switch scan (Editing, X2 speed, Dolby B·C, Reverse mode, MPX)
12	AN (5)	Input	Key switch scan (DECK A: Stop, F.F., Rew. Play, DECK B: Rec. Synchro start, Timer Rec./Play)
13	AN (4)	Input	Key switch scan (DECK A: Stop, F.F., Rew, F. Play, R. Play, Pause, Auto rec mute)
14	P4 (3)	Input	Foward side Rec. inhibit switch. • "L" level in rec inhibit switch is on mode. • "H" level in rec inhibit switch is off mode.
15	P4 (2)	Input	Reverse side Rec. inhibit switch.
16	P4 (1)	Input	Remote control serial signal
17	P4 (0)	Input	• "H" level input terminal
18	P3 (7)	Output	Direct mute signal • "H" level in mute is on mode. • "L" level in mute is off mode.
19	P3 (6)	Output	Rec. amp. mute signal • "L" level in mute is on mode. • "H" level in mute is off mode.
20	P3 (5)	Output	Encode/Decode select signal • "L" level in encode mode. • "H" level in decode mode.
21	P3 (4)	Output	Deck A/B Playback amp. select signal • "L" level in Deck A Playback amp. • "H" level in Deck B Playback amp.

Pin No.	Symbol	In/Out	Description of terminal
22	P3 (3)	Output	Playback equalizer (120/170 μ s) select signal • "L" level in 120 μ s mode. • "H" level in 70 μ s mode.
23	P3 (2)	Output	Deck B High Speed Playback equalizer select signal • "L" level in high speed (X2) playback mode. • "H" level in normal speed (X1) playback mode.
24	P3 (1)	Output	MPX filter control.
25	P3 (0)	Output	Rec. mode signal • "L" level in Deck A Rec. mode. • "H" level in other mode.
26	POF (INT1)	Input	Power supple off detection
27	CNV _{SS}	—	Connected to V _{SS}
28	RESET	Input	Reset terminal
29	X _{IN}	Input	Clock OSC terminal
30	X _{OUT}	Output	
31	ϕ	—	Not used in this unit.
32	V _{SS}	—	Connected to GND
33	P5 (7)	Input	Deck B Automatic tape select switch • "L" level in ATS switch is no mode. • "H" level in ATS switch is off mode.
34	P5 (6)	Input	Deck B cassette half detection switch • "L" level in half detection switch in on mode. • "H" level in half detection switch in off mode.
35	P5 (5)	Input	Deck B Mode switch • "L" level in mode switch is on mode. • "H" level in mode switch is off mode.
36	P5 (4)	Input	Deck B Rotation pulse signal of reel table
37	P5 (3)	Input	Deck A Rotation pulse signal of reel table
38	P5 (2)	Input	Deck A Mode switch • "L" level in mode switch is on mode. • "H" level in mode switch is off mode.
39	P5 (1)	Input	Deck A cassette half detection switch • "L" level in half detection switch is on mode. • "H" level in half detection switch is off mode.
40	P5 (0)	Input	Deck A Automatic tape select switch • "L" level in ATS switch is on mode. • "H" level in ATS switch is off mode.
41	P1 (7)	—	5V terminal
42	P1 (6)	—	Not used in this unit.
43	P1 (5)	Output	Deck B Playback LED display • "L" level in LED on mode. • "H" level in LED off mode.

Pin No.	Symbol	In/Out	Description of terminal
44	P1 (4)	Output	Deck B Remote control LED display • “L” level in LED on mode. • “H” level in LED off mode.
45	P1 (3)	Output	Deck A Playback LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
46	P1 (2)	Output	Deck A Remote control LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
47	P1 (1)	Output	X2 Speed LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
48	P1 (0)	Output	Editing LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
49	P0 (7)	Output	MPX LED display.
50	P0 (6)	Output	Reverse mode (⇄) LED display.
51	P0 (5)	Output	Reverse mode (↻) LED display.
52	P0 (4)	Output	Reverse mode (↺) LED display.
53	P0 (3)	Output	Dolby B LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
54	P0 (2)	Output	Dolby C LED display • “L” level when LED is on mode. • “H” level when LED is off mode.
55	P0 (1)	Output	Direction LED display.
56	P0 (0)	—	Not used in this unit.
57	P2 (7)	Output	Deck B Solenoid control signal • “H” level when solenoid is on mode. • “L” level when solenoid is off mode.
58	P2 (6)	Output	Deck B Motor control signal • “H” level when motor is on mode. • “L” level when motor is off mode.
59	P2 (5)	Output	Deck B Motor speed control signal • “L” level when normal speed (X1). • “H” level when high speed (X2).
60	P2 (4)	Output	Deck A Solenoid control signal • “H” level when solenoid is on mode. • “L” level when solenoid is off mode.
61	P2 (3)	Output	Deck A Motor control signal • “H” level when motor is on mode. • “L” level when motor is off mode.
62	P2 (2)	Output	Deck A Motor speed control signal • “L” level when normal speed (X1). • “H” level when high speed (X2).

Pin No.	Symbol	In/Out	Description of terminal			
63	P2 (1)	Output	Dolby NR select signal			
64	P2 (0)			NR OFF	Dolby B	Dolby C
			63	H	H	L
			64	H	L	L

REPLACEMENT

Notes : * Important safety
Components
manufactured
* Bracketed in
Parts without
* (K) mark parts
* (S) mark parts
Parts other than

Ref. No.	Part No.
CABINET AND CHASSIS	
1	(K) SNE2129-1
1	(S) SNE2129
2	(K) SBN1228-4
2	(S) SBN1228-5
3	(K) SGE1911-2
(M, MC)	
3	(K) SGE1911-5
(E, EG, EH, EK)	
(XA, XL)	
3	(S) SGE1911-8
(E, EG, EH, EK)	
(XA, XL)	
4	(K) SGE1911-1
(M, MC)	
4	(K) SGE1911-4
(E, EG, EH, EK)	
(XA, XL)	
4	(S) SGE1911-7
(E, EG, EH, EK)	
(XA, XL)	
5	(K) SKC2160K99
5	(S) SKC2160S98
6	XTB3+10J
7	XTB3+12JFF
8	XTB3+20J
9	XTB3+8JFZ
10	XTS3+8J
11	SJN32
12	XTB3+8J
13	XTB3+8JFR
14	XTV26+6J
15	SMQ5X840-H
16	SHR301
17	SHE36-3
(XA)	
18	SUB247
19	SMN2074
20	SMN2075
21	SMQ30052
22	SMQ30053
23	SMQ40041
24	SMQ40042
25	SUS1002
26	SUS1005
27	(K) SBC666-5
27	(S) SBC666
28	(K) SBD145
28	(S) SBD145-1
29	SKUST330R-
29-1	SKL313
29-2	XTB3+10J
30	SGX7956
31	SGE1912
31-1	QBP2006A
32	SMN2073
33	(K) SGXST330R-
33	(S) SGXST330R-
34	SGP7280-1B
(E)	
34	SGP7280-1D
(EG, EH)	
34	SGP7280-1F

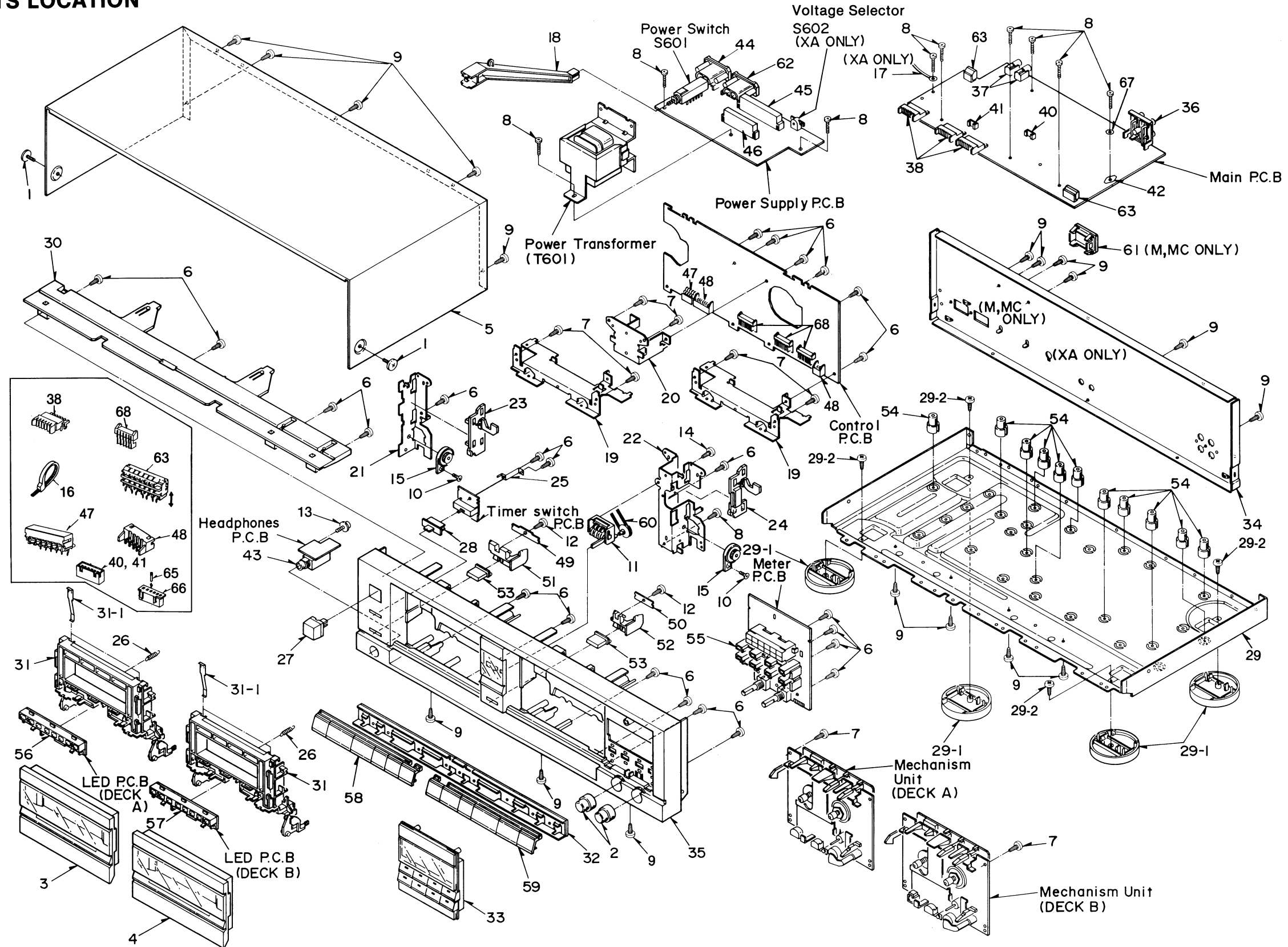
[illegible]

Notes :

- * Important safety notice :
Components identified by mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
- * Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.
- * "" mark parts are used for black type only.
- * "" mark parts are used for silver type only.
Parts other than "" and "" marked are used for all color types.

— 14 —

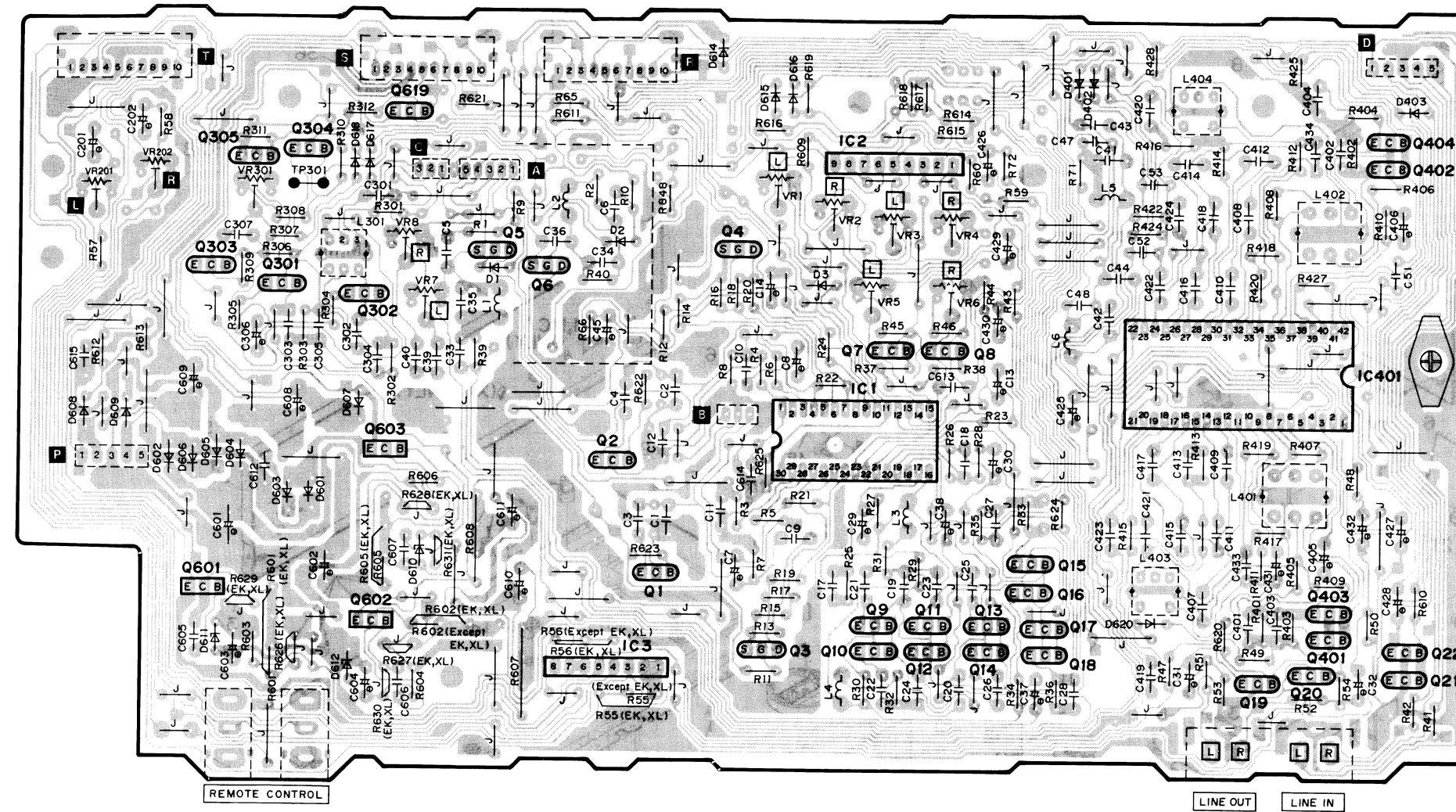
■ CABINET PARTS LOCATION



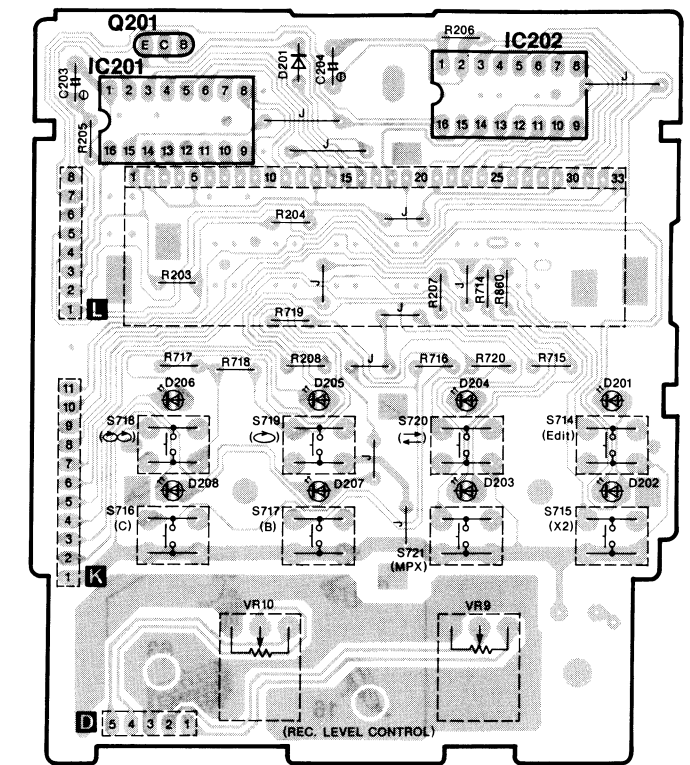
1	3	16	4	6	13	1	21	6	9	15	10	9	6	5	9	8	12	7	29	6	13	19	18	11	14	7	9	8	6	12	10	8	15	6	20	7	8	19	6	7	17	6	8	9	9	8	9	9	7	8	9	9	9
30	31	38	26	31-1	31	31-1	27	26	31	26	28	23	25	33	32	22	35	29-1	24	29-2	38	37	29-2	39	41	40	29-2	36	29-1	29-2	29	34																					
40	41	48	68	56	63	57	48	65	66	43	58	59	53	59	51	49	55	53	60	52	50	44	47	48	62	64	46	45	64	68	48	54	63	61	54	61	42	67	54	63													

PRINTED CIRCUIT BOARDS

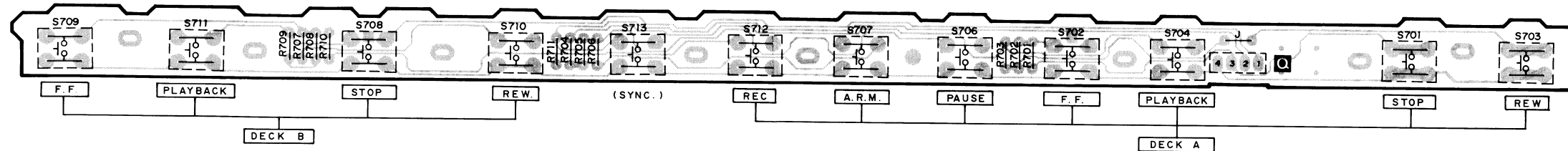
I MAIN P.C.B.



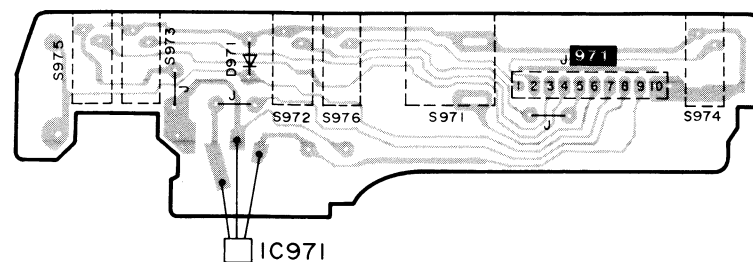
IV METER P.C.B.



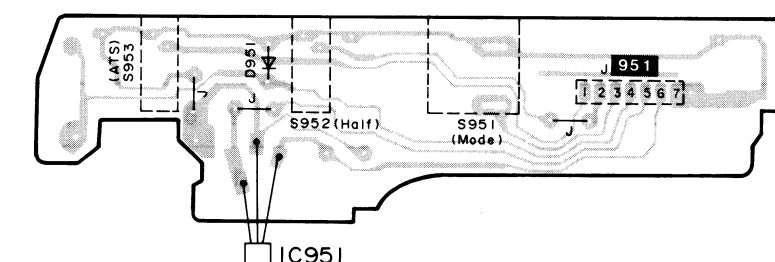
V OPERATION P.C.B.



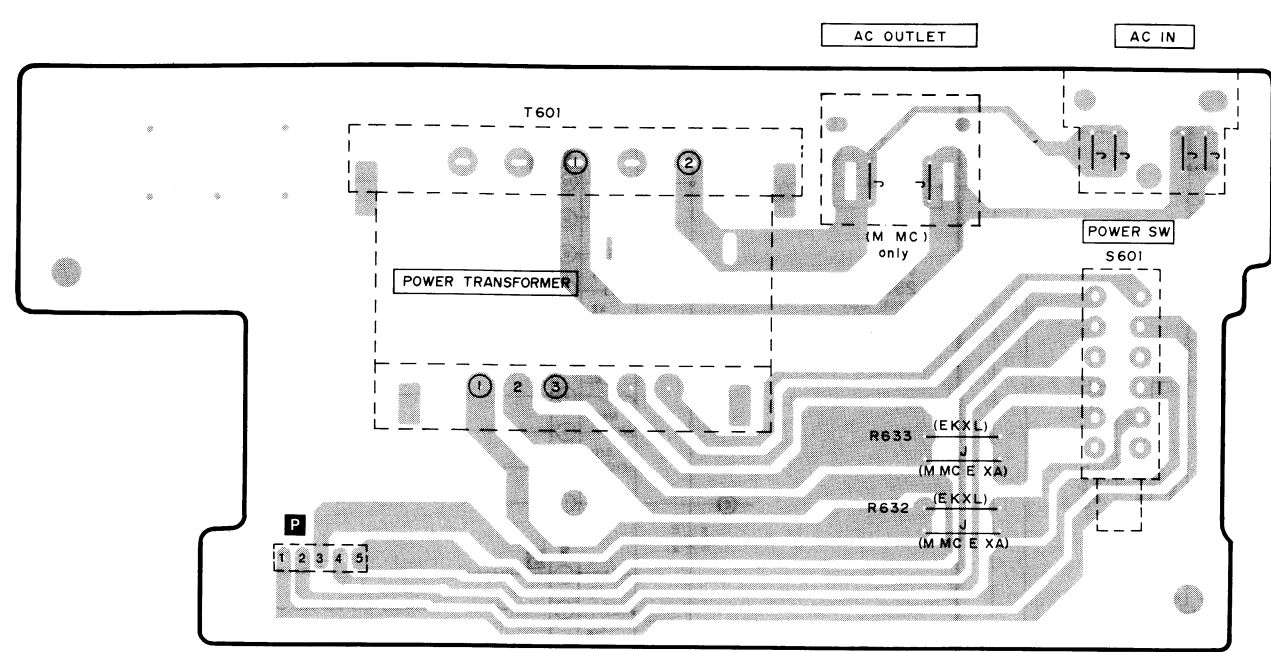
VIII MECHANISM P.C.B. (DECK A)



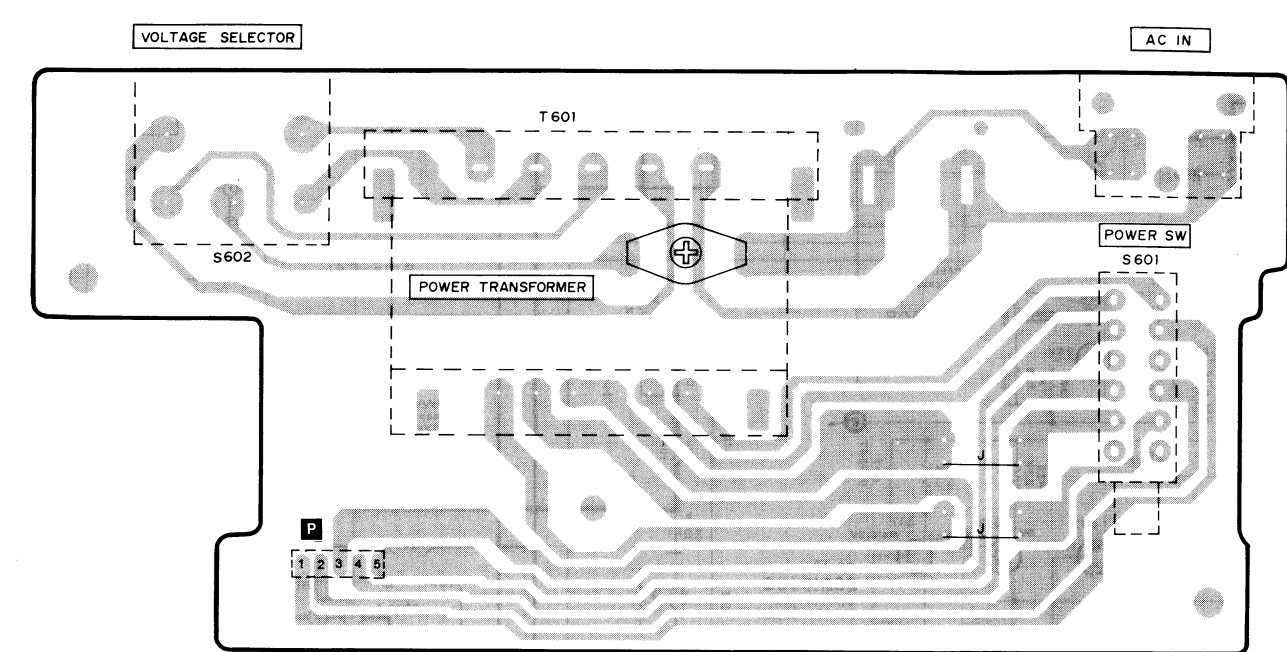
IX MECHANISM P.C.B. (DECK B)



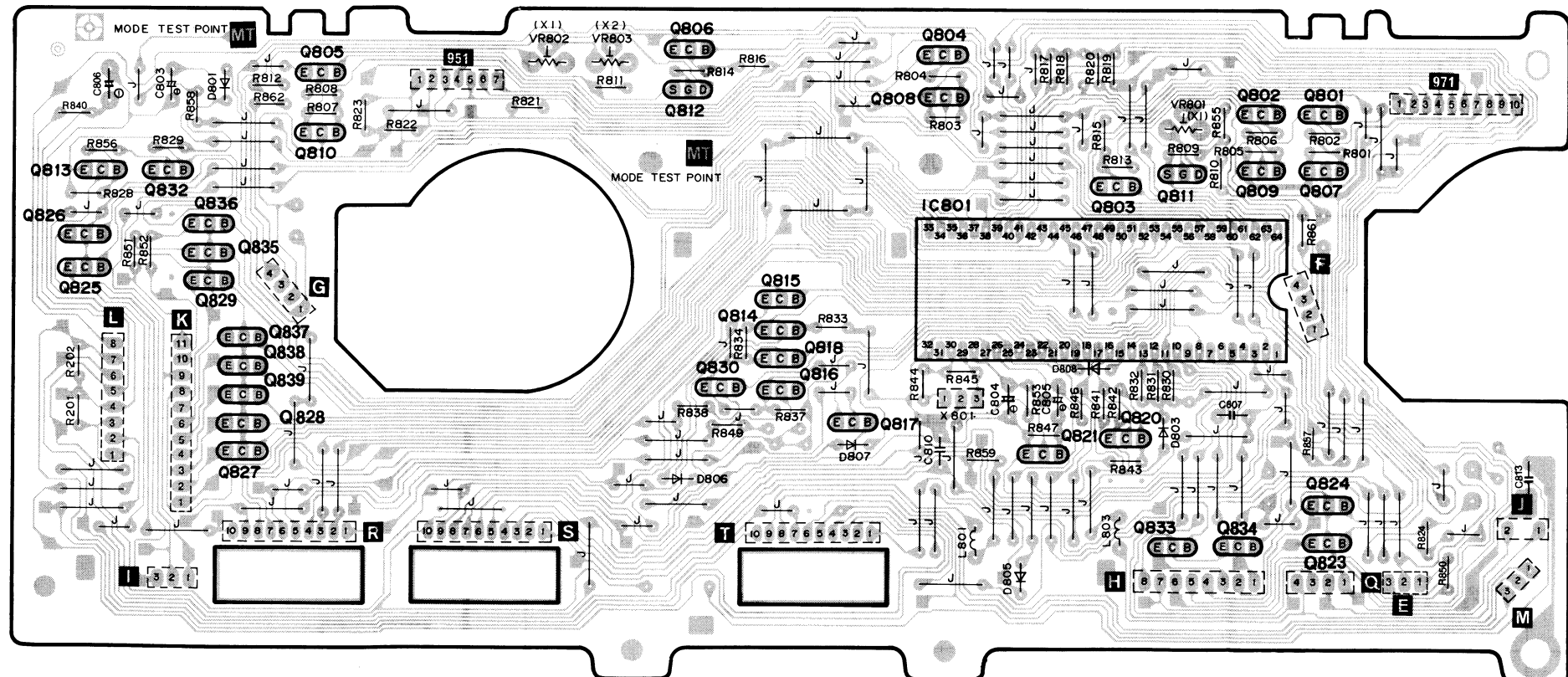
III POWER SUPPLY P.C.B. (M, MC, E, EK, EG, EH, XL)



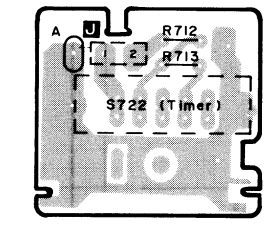
III POWER SUPPLY P.C.B. (XA)



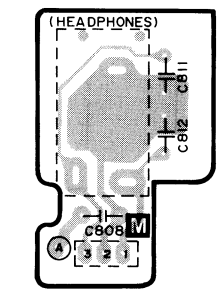
II CONTROL P.C.B.



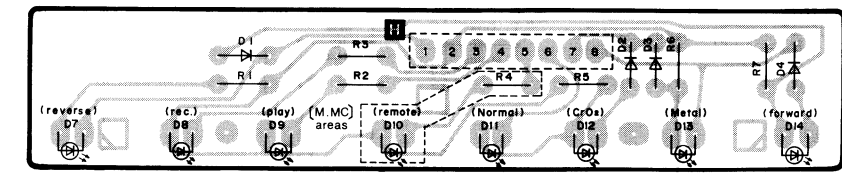
VII TIMER SW P.C.B.



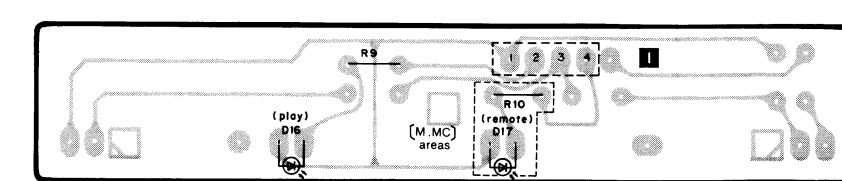
VI HEADPHONES P.C.B.



X LED P.C.B. (DECK A)



XI LED P.C.B. (DECK B)



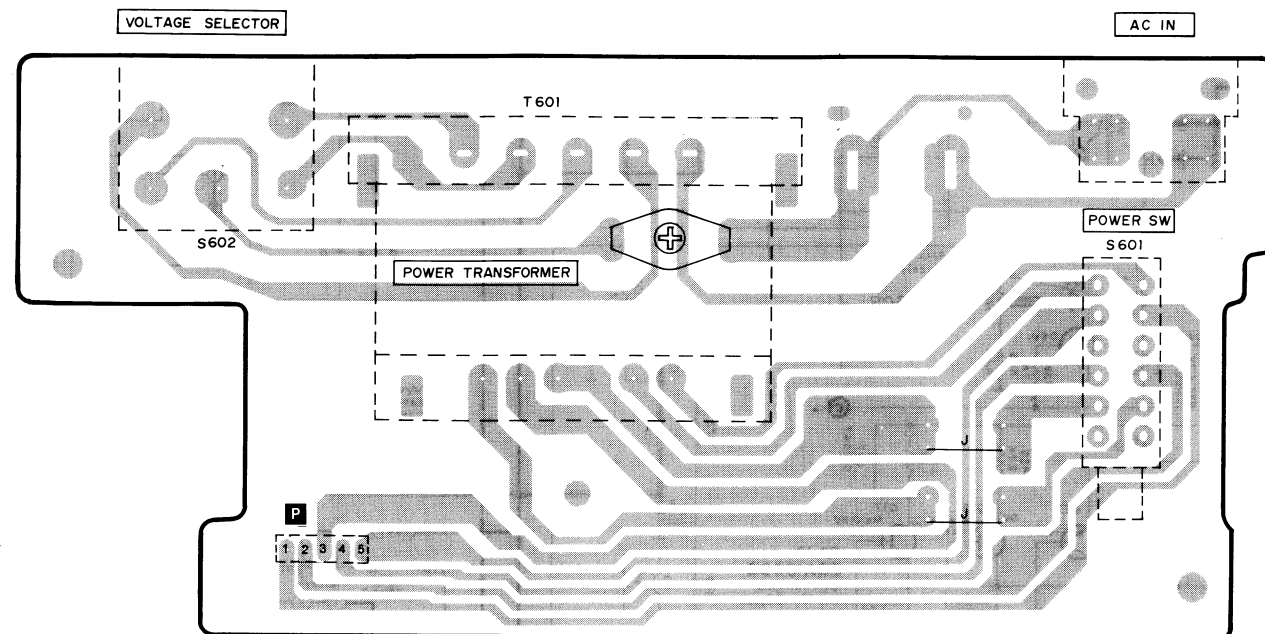
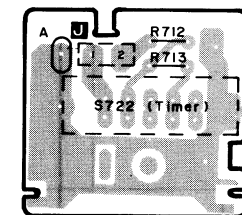
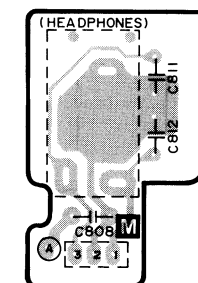
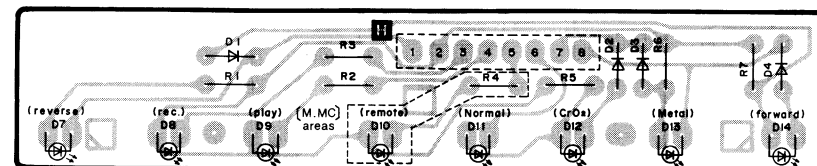
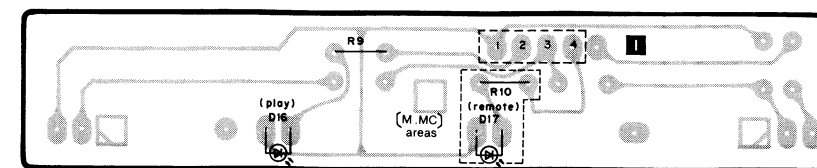
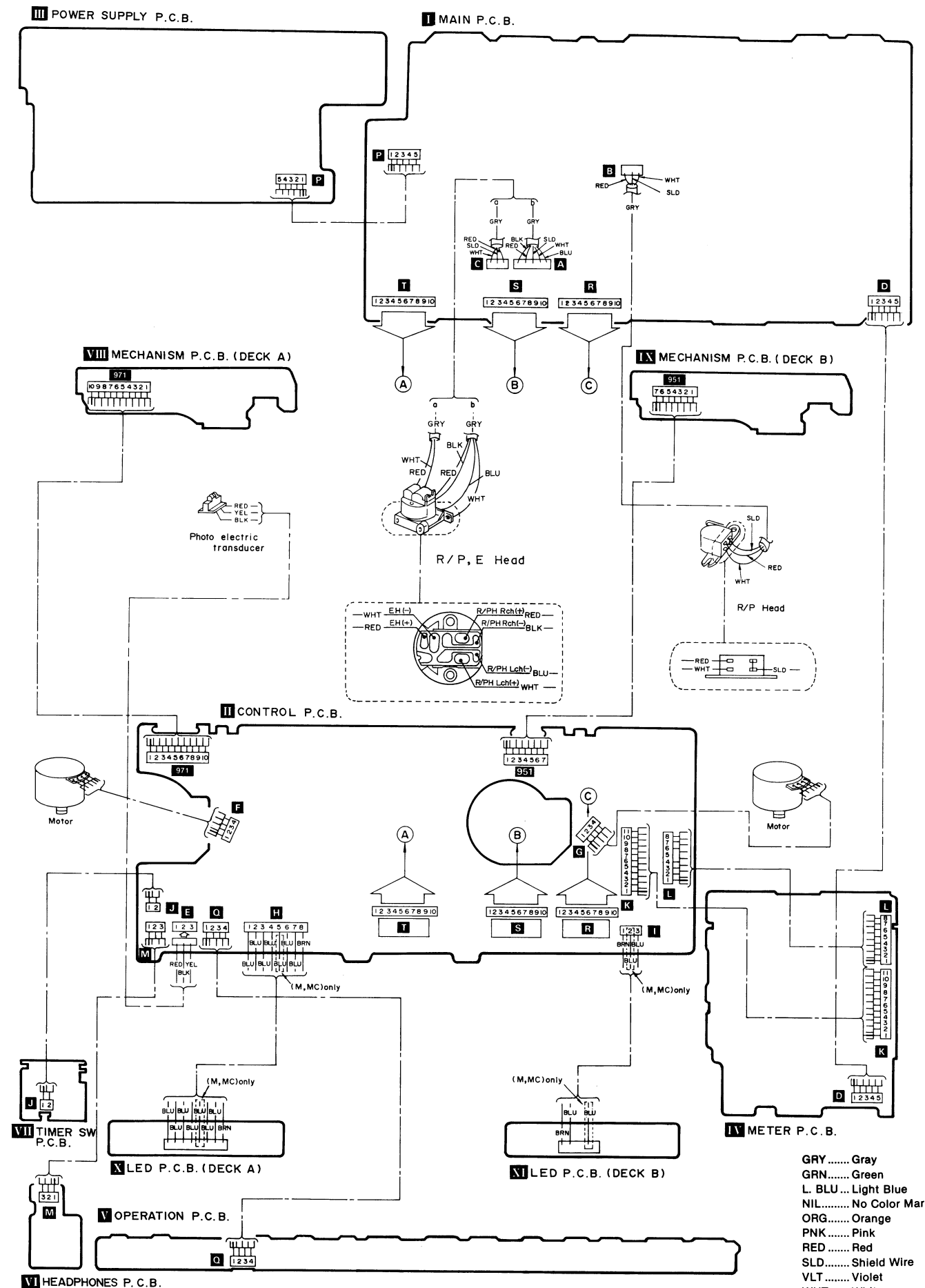
15

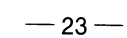
16

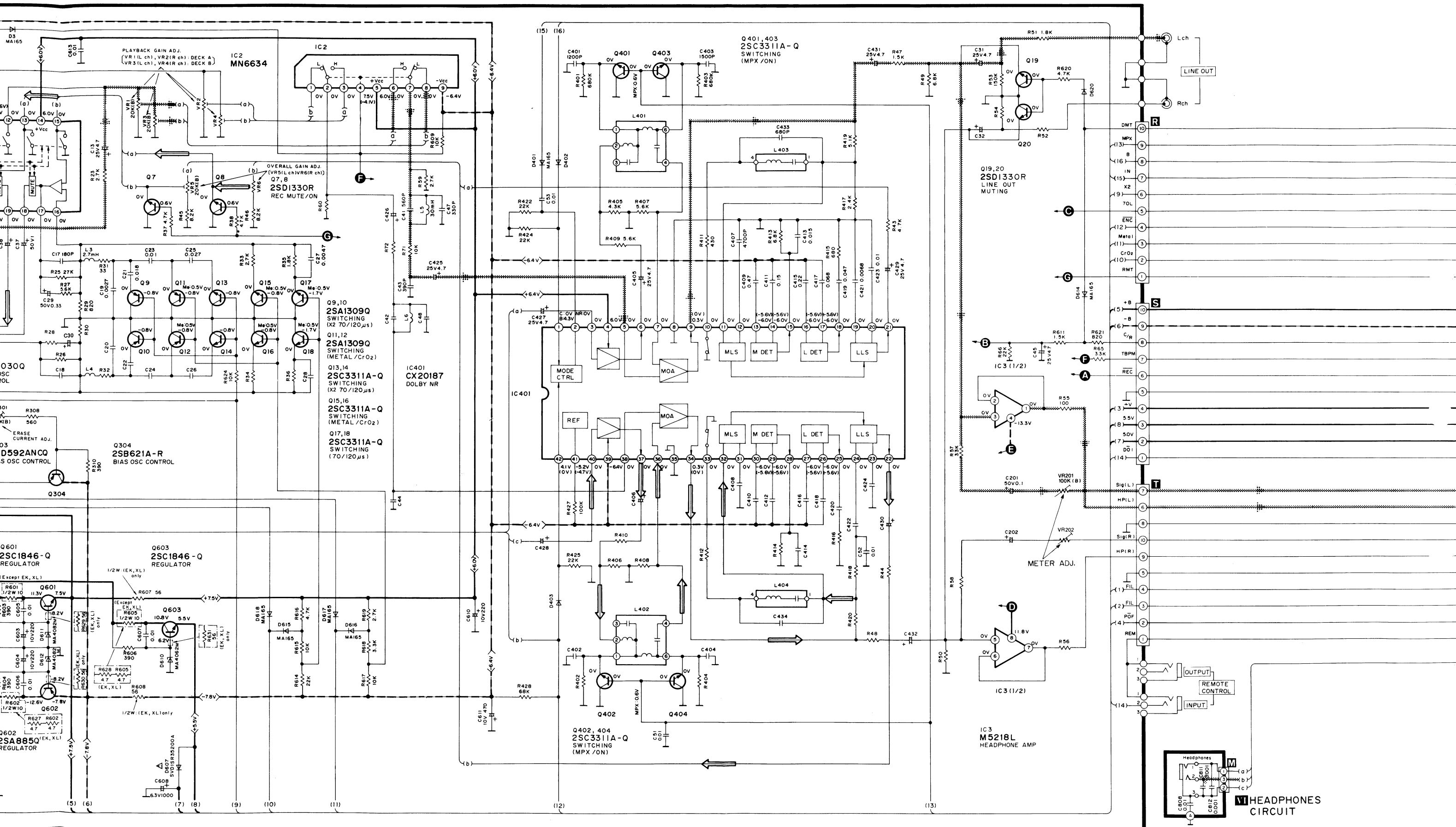
17

18

19

III POWER SUPPLY P.C.B. (XA)**VII TIMER SW P.C.B.****VI HEADPHONES P.C.B.****X LED P.C.B. (DECK A)****XI LED P.C.B. (DECK B)****WIRING CONNECTION DIAGRAM**





IV METER

24

25

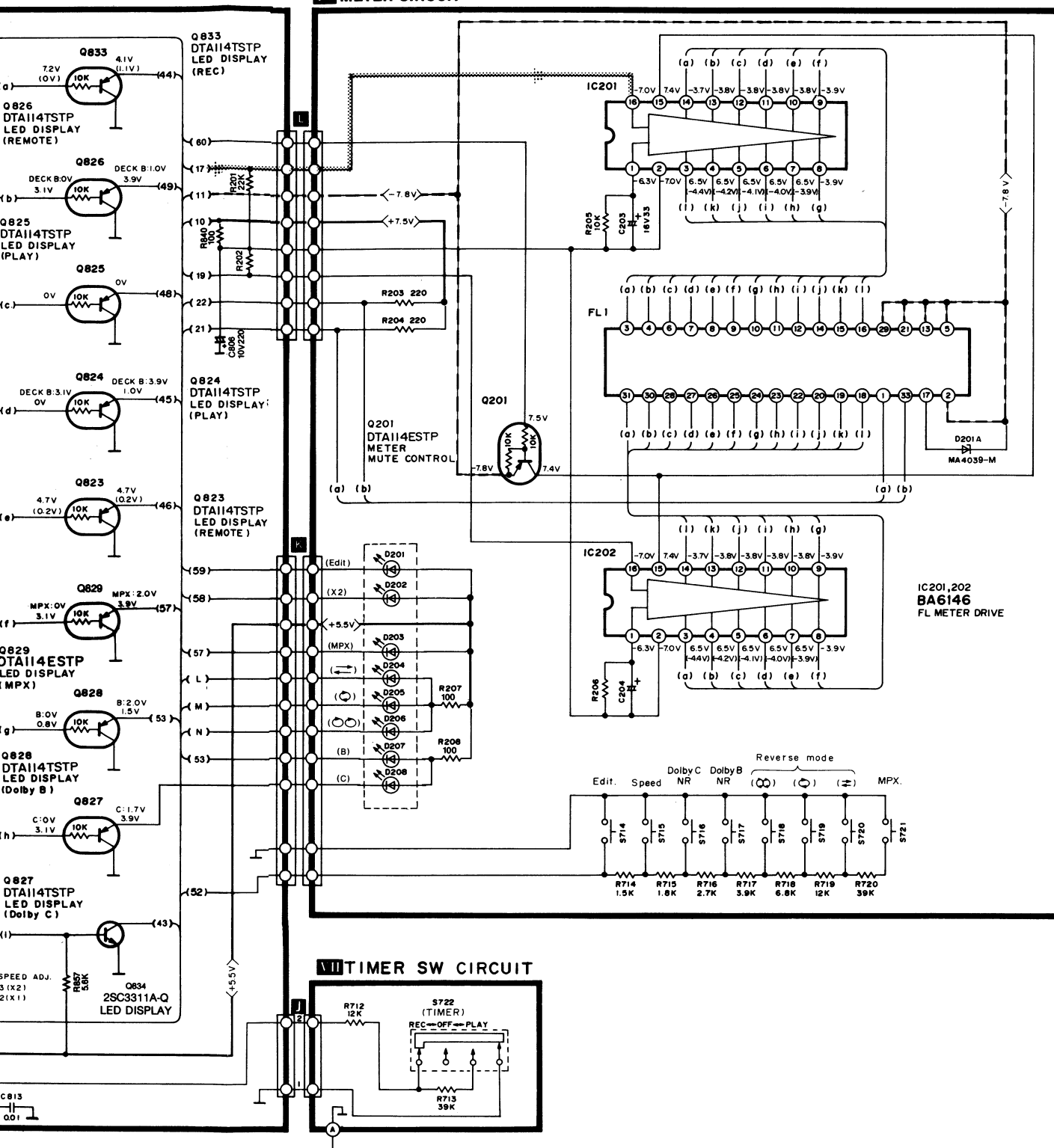
26

27

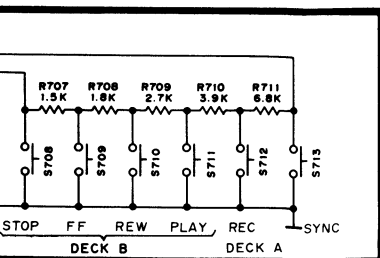
28

29

METER CIRCUIT



TIMER SW CIRCUIT



SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

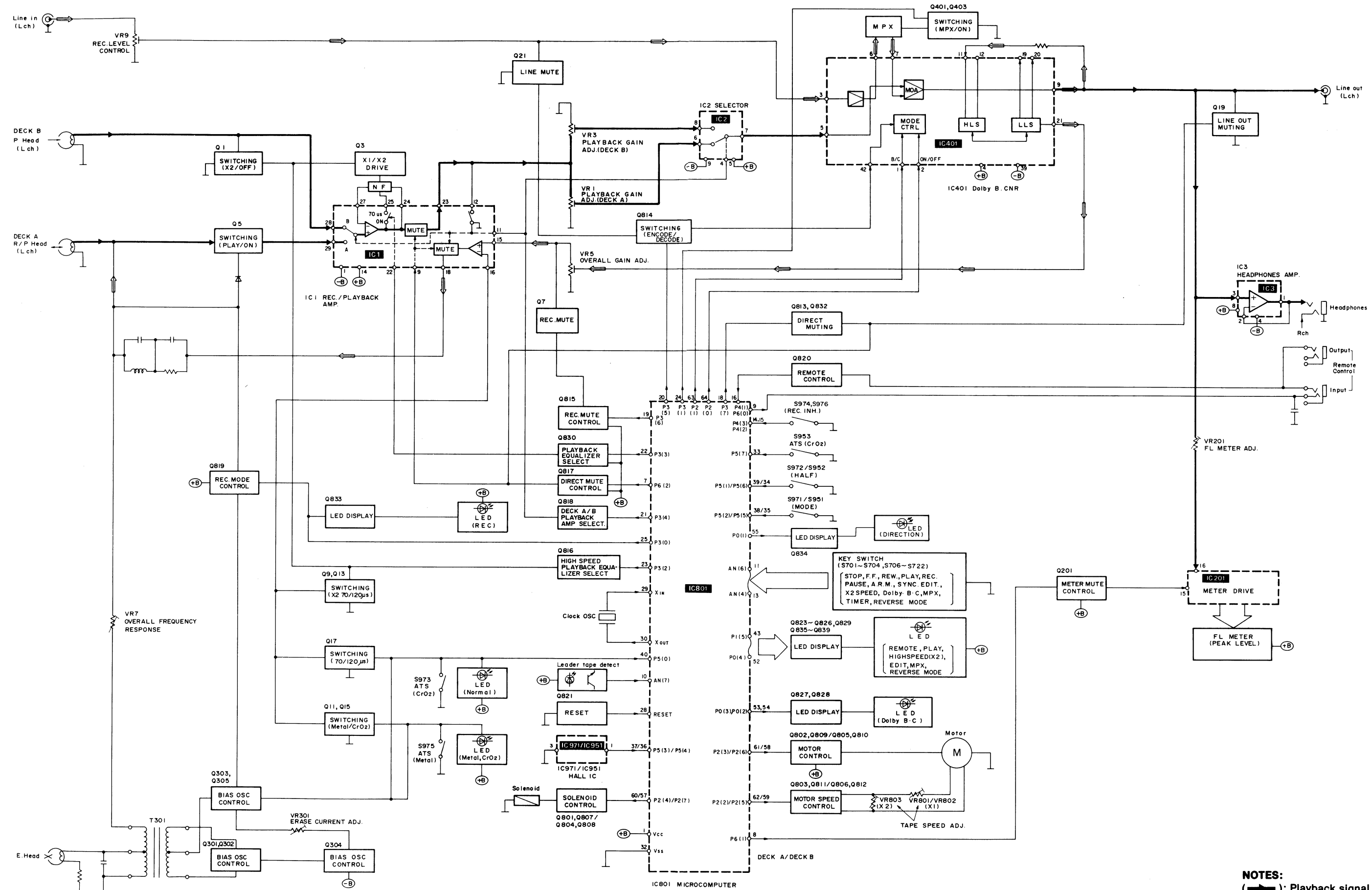
Notes:

- S601: Power switch in "on" position.
 - S602: Voltage selector in "240V" position. (XA)
 - S701: DECK A Stop switch in "off" position.
 - S702: DECK A F.F. switch in "off" position.
 - S703: DECK A Rew. switch in "off" position.
 - S704: DECK A For. Playback switch in "off" position.
 - S705: DECK A Rev. Playback switch in "off" position.
 - S706: DECK A Pause switch in "off" position.
 - S707: DECK A Auto rec. mute switch in "off" position.
 - S708: DECK B Stop switch in "off" position.
 - S709: DECK B F.F. switch in "off" position.
 - S710: DECK B Rew. switch in "off" position.
 - S711: DECK B Playback switch in "off" position.
 - S712: DECK A Record switch in "off" position.
 - S713: Synchro recording start switch in "off" position.
 - S714: Editing switch in "off" position.
 - S715: Editing tape speed selector in "off (X1)" position.
 - S716: Dolby C NR switch in "off" position.
 - S717: Dolby B NR switch in "off" position.
 - S718: Reverse mode switch (⊖) in "off" position.
 - S719: Reverse mode switch (⊕) in "off" position.
 - S720: Reverse mode switch (⊖) in "off" position.
 - S721: MPX switch in "off" position.
 - S722: Timer stand-by switch in "off" position.
 - S951: DECK B Mode switch in "off" position.
 - S952: DECK B Cassette half detection switch in "off" position.
 - S953: DECK B ATS (CrO₂) switch in "off" position.
 - S971: DECK A Mode switch in "off" position.
 - S972: DECK A Cassette half detection switch in "off" position.
 - S973: DECK A ATS (CrO₂) switch in "off" position.
 - S974: DECK A For. Rec inhibit switch in "off" position.
 - S975: DECK A ATS (Metal) switch in "off" position.
 - S976: DECK A Rev. Rec. inhibit switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)
Capacity are in micro-farads (μF) unless specified otherwise.
All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
().....Voltage values at record mode.
For measurement us EVM.
- Important safety notice**
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (——— < +B > ———) indicates +B (bias).
 - (——— < -B > ———) indicates -B (bias).
 - (———) indicates the flow of the playback signal.
 - (———) indicates the flow of the record signal.

* Caution!

- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- * Cover the parts boxes made of plastics with aluminum foil.
- * Ground the soldering iron.
- * Put a conductive mat on the work table.
- * Do not touch the legs of IC or LSI with the fingers directly.

BLOCK DIAGRAM



NOTES:

(→): Playback signal
(⇨): Recording signal

RESISTORS

Notes : * Important safety n
Components ident
manufacturer's sp
* Bracketed indicat
Parts without thes

Numbering System For Res

Example:

ERD	25	F
Type	Wattage (1/4W)	Shape

ERX	2	AN
Type	Wattage (2W)	Shape

Numbering System For Capac

Example:

ECKD	1H	102
Type	Voltage (50V)	Value (0.001μF)

ECEA	50	M
Type	Voltage (50V)	Character

● Capacity values are in micro
otherwise, P = Pico-farads (p)
● Resistance values are in ohm
otherwise, 1K = 1,000Ω, 1M =

Ref. No.	Part No.
RESISTORS(VALU, WATTAGE)	
R1	ERDS2TJ101
R2	ERDS2TJ101
R3	ERDS2TJ101
R4	ERDS2TJ101
R5	ERDS2TJ101
R6	ERDS2TJ101
R7	ERDS2TJ820
R8	ERDS2TJ820
R9	ERDS2TJ225
R10	ERDS2TJ225
R11	ERDS2TJ225
R12	ERDS2TJ225
R13	ERDS2TJ392
R14	ERDS2TJ392
R15	ERDS2TJ272
R16	ERDS2TJ272
R17	ERDS2TJ102
R18	ERDS2TJ102
R19	ERDS2TJ332
R20	ERDS2TJ332
R21	ERDS2TJ184
R22	ERDS2TJ184
R23	ERDS2TJ272
R24	ERDS2TJ272
R25	ERDS2TJ273
R26	ERDS2TJ273
R27	ERDS2TJ562
R28	ERDS2TJ562
R29	ERDS2TJ821
R30	ERDS2TJ821
R31	ERDS2TJ330
R32	ERDS2TJ330
R33	ERDS2TJ272
R34	ERDS2TJ272
R35	ERDS2TJ182
R36	ERDS2TJ182
R37	ERDS2TJ472
R38	ERDS2TJ472
R39	ERDS2TJ103
R40	ERDS2TJ103

RESISTORS & CAPACITORS

Notes : * Important safety notice :

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)

Parts without these indications can be used for all areas.

Numbering System For Resistors

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1K Ω)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470 Ω)

Numbering System For Capacitors

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001 μ F)	Tolerance	Unique
ECEA	50	M		330
Type	Voltage (50V)	Characteristics		Value (33 μ F)

● Capacity values are in microfarads (μ F) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).

● Resistance values are in ohms (Ω), unless specified otherwise, 1K = 1,000 Ω , 1M = 1,000k Ω .

Resistor Type	Wattage	Tolerance
ERD : Carbon	10 : 1/8W 12 : 1/2W	J : $\pm 5\%$
ERG : Metal Oxide	14 : 1/4W 25 : 1/4W	F : $\pm 1\%$
ERQ : Fuse Type Metal	1A : 1W 18 : 1/8W	G : $\pm 2\%$
ERX : Metal Film	S2 : 1/4W S1 : 1/2W	J : $\pm 5\%$
ERD L : Carbon (chip)	2F : 1/4W 50 : 1/2W	K : $\pm 10\%$
ERO K : Metal Film (chip)	2A : 2W 3A : 3W	M : $\pm 20\%$
ERC : Solid	6G : 1/10W 8G : 1/8W	
ERF : Incombustible Box-Shaped		
ERM : Wire-Wound		
RRJ : Chip Resistor		
ERJ : Chip Resistor		

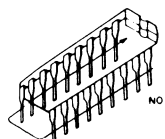
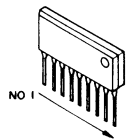
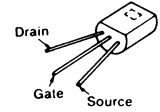
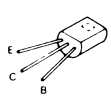
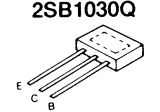
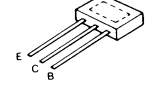
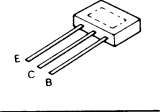
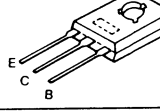
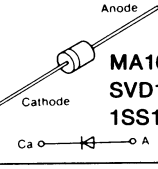
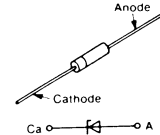
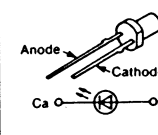
Capacitor Type	Voltage	Tolerance
ECE : Electrolytic	0J : 6.3V 1A : 10V	K : $\pm 10\%$
ECCD : Ceramic	1C : 16V 1E : 25V	M : $\pm 20\%$
ECKD : Ceramic Capacitor	1H : 50V 1V : 35V	Z : +80 % -20
ECQM : Polyester	50 : 50V 05 : 50V	
ECQP : Polypropylene	2H : 500V 2A : 100V	J : $\pm 5\%$
ECG : Ceramic	1 : 100V 1J : 63V	G : $\pm 2\%$
ECEA N : Non Polar Electrolytic	KC : 400V AC	F : $\pm 1\%$
QCU : Ceramic (Chip Type)	KC : 125V AC (UL)	C : ± 0.25 pF
ECUX : Ceramic (Chip Type)		D : ± 0.5 pF
ECF : Semiconductor		
EECW : Liquid electrolyte double layer capacitor		

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS(VALUE, WATTAGE)			R41	ERDS2TJ223	22K 1/4	R302	ERDS2TJ183	18K 1/4
R1	ERDS2TJ101	100 1/4	R42	ERDS2TJ223	22K 1/4	R303	ERDS2TJ183	18K 1/4
R2	ERDS2TJ101	100 1/4	R43	ERDS2TJ472	4.7K 1/4	R304	ERDS2TJ100	10 1/4
R3	ERDS2TJ101	100 1/4	R44	ERDS2TJ472	4.7K 1/4	R305	ERDS2TJ100	10 1/4
R4	ERDS2TJ101	100 1/4	R45	ERDS2TJ822	8.2K 1/4	R306	ERDS2TJ821	820 1/4
R5	ERDS2TJ101	100 1/4	R46	ERDS2TJ822	8.2K 1/4	R307	ERDS2TJ471	470 1/4
R6	ERDS2TJ101	100 1/4	R47	ERDS2TJ152	1.5K 1/4	R308	ERDS2TJ561	560 1/4
R7	ERDS2TJ820	82 1/4	R48	ERDS2TJ152	1.5K 1/4	R309	ERDS2TJ561	560 1/4
R8	ERDS2TJ820	82 1/4	R49	ERDS2TJ682	6.8K 1/4	R310	ERDS2TJ391	390 1/4
R9	ERDS2TJ225	2.2M 1/4	R50	ERDS2TJ682	6.8K 1/4	R311	ERDS2TJ683	68K 1/4
R10	ERDS2TJ225	2.2M 1/4	R51	ERDS2TJ182	1.8K 1/4	R312	ERDS2TJ472	4.7K 1/4
R11	ERDS2TJ225	2.2M 1/4	R52	ERDS2TJ182	1.8K 1/4	R401	ERDS2TJ684	680K 1/4
R12	ERDS2TJ225	2.2M 1/4	R53	ERDS2TJ154	150K 1/4	R402	ERDS2TJ684	680K 1/4
R13	ERDS2TJ392	3.9K 1/4	R54	ERDS2TJ154	150K 1/4	R403	ERDS2TJ684	680K 1/4
R14	ERDS2TJ392	3.9K 1/4	R55	ERDS2TJ101	100 1/4	R404	ERDS2TJ684	680K 1/4
R15	ERDS2TJ272	2.7K 1/4	(E, EG, EH, MC)			R405	ERDS2TJ432	4.3K 1/4
R16	ERDS2TJ272	2.7K 1/4	(XA)			R406	ERDS2TJ432	4.3K 1/4
R17	ERDS2TJ102	1K 1/4	R55	ERD2FCG101	100 1/4	R407	ERDS2TJ562	5.6K 1/4
R18	ERDS2TJ102	1K 1/4	(EK, XL)			R408	ERDS2TJ562	5.6K 1/4
R19	ERDS2TJ332	3.3K 1/4	R56	ERDS2TJ101	100 1/4	R409	ERDS2TJ562	5.6K 1/4
R20	ERDS2TJ332	3.3K 1/4	(E, EG, EH, MC)			R410	ERDS2TJ562	5.6K 1/4
R21	ERDS2TJ184	180K 1/4	(XA)			R411	ERDS2TJ431T	430 1/4
R22	ERDS2TJ184	180K 1/4	R56	ERD2FCG101	100 1/4	R412	ERDS2TJ431T	430 1/4
R23	ERDS2TJ272	2.7K 1/4	(EK, XL)			R413	ERDS2TJ682	6.8K 1/4
R24	ERDS2TJ272	2.7K 1/4	R57	ERDS2TJ333	33K 1/4	R414	ERDS2TJ682	6.8K 1/4
R25	ERDS2TJ273	27K 1/4	R58	ERDS2TJ333	33K 1/4	R415	ERDS2TJ681	680 1/4
R26	ERDS2TJ273	27K 1/4	R59	ERDS2TJ272	2.7K 1/4	R416	ERDS2TJ681	680 1/4
R27	ERDS2TJ562	5.6K 1/4	R60	ERDS2TJ272	2.7K 1/4	R417	ERDS2TJ242	2.4K 1/4
R28	ERDS2TJ562	5.6K 1/4	R65	ERDS2TJ332	3.3K 1/4	R418	ERDS2TJ242	2.4K 1/4
R29	ERDS2TJ821	820 1/4	R66	ERDS2TJ223	22K 1/4	R419	ERDS2TJ512	5.1K 1/4
R30	ERDS2TJ821	820 1/4	R71	ERDS2TJ103	10K 1/4	R420	ERDS2TJ512	5.1K 1/4
R31	ERDS2TJ330	33 1/4	R72	ERDS2TJ103	10K 1/4	R422	ERDS2TJ223	22K 1/4
R32	ERDS2TJ330	33 1/4	R201	ERDS2TJ223	22K 1/4	R424	ERDS2TJ223	22K 1/4
R33	ERDS2TJ272	2.7K 1/4	R202	ERDS2TJ223	22K 1/4	R425	ERDS2TJ682	22K 1/4
R34	ERDS2TJ272	2.7K 1/4	R203	ERDS2TJ221	220 1/4	R427	ERDS2TJ104	100K 1/4
R35	ERDS2TJ182	1.8K 1/4	R204	ERDS2TJ221	220 1/4	R428	ERDS2TJ683	68K 1/4
R36	ERDS2TJ182	1.8K 1/4	R205	ERDS2TJ103	10K 1/4	R601	ERDS1FJ100	10 1/2
R37	ERDS2TJ472	4.7K 1/4	R206	ERDS2TJ103	10K 1/4	(E, EG, EH, MC)		
R38	ERDS2TJ472	4.7K 1/4	R207	ERDS2TJ101	100 1/4	(XA)		
R39	ERDS2TJ103	10K 1/4	R208	ERDS2TJ101	100 1/4	R601	ERD2FCJ4R7	4.7 1/4
R40	ERDS2TJ103	10K 1/4	R301	ERDS2TJ1R0	1 1/4	(EK, XL)		

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
R602 (E, EG, EH, MC) (XA)	ERDS1FJ100	10 1/2	R802	ERDS2TJ821	820 1/4	C24	ECQB1H103JZ	0.01 50
R603	ERDS2TJ391	390 1/4	R803	ERDS2TJ223	22K 1/4	C25	ECQB1H273JZ	0.027 50
R604	ERDS2TJ391	390 1/4	R804	ERDS2TJ821	820 1/4	C26	ECQB1H273JZ	0.027 50
R605 (E, EG, EH, MC) (XA)	ERDS1FJ100	10 1/2	R805	ERDS2TJ223	22K 1/4	C27	ECQB1H472JZ	4700P 50
R606 (EK, XL)	ERD2FCJ4R7	4.7 1/4	R806	ERDS2TJ561	560 1/4	C28	ECQB1H472JZ	4700P 50
R607	ERDS2TJ391	390 1/4	R807	ERDS2TJ223	22K 1/4	C29	ECEA1HKR33	0.33 50
R607 (EK, XL)	ERDS1FJ560	56 1/2	R808	ERDS2TJ561	560 1/4	C30	ECEA1HKR33	0.33 50
R607 (E, EG, EH, MC) (XA)	ERDS2TJ560	56 1/4	R809	ERDS2TJ153	15K 1/4	C31	ECEA1EK4R7	4.7 25
R608 (EK, XL)	ERDS1FJ560	56 1/2	R810	ERDS2TJ103	10K 1/4	C32	ECEA1EK4R7	4.7 25
R608 (E, EG, EH, MC) (XA)	ERDS2TJ560	56 1/4	R811	ERDS2TJ103	10K 1/4	C33	ECKD1H561KB	560P 50
R609	ERDS2TJ103	10K 1/4	R812	ERDS2TJ103	10K 1/4	C34	ECKD1H561KB	560P 50
R610	ERDS2TJ103	10K 1/4	R813	ERDS2TJ225	2.2M 1/4	C35	ECKD2H121KB	120P 500
R611	ERDS2TJ152	1.5K 1/4	R814	ERDS2TJ225	2.2M 1/4	C36	ECKD2H121KB	120P 500
R612	ERDS2TJ182	1.8K 1/4	R815	ERDS2TJ103	10K 1/4	C37	ECEA1HK010	1 50
R613	ERDS2TJ103	10K 1/4	R816	ERDS2TJ103	10K 1/4	C38	ECEA1HK010	1 50
R614	ERDS2TJ223	22K 1/4	R817	ERDS2TJ562	5.6K 1/4	C39	ECKD1H271KB	270P 50
R615	ERDS2TJ103	10K 1/4	R818	ERDS2TJ562	5.6K 1/4	C40	ECKD1H271KB	270P 50
R616	ERDS2TJ472	4.7K 1/4	R819	ERDS2TJ562	5.6K 1/4	C41	ECKD1H561KB	560P 50
R617	ERDS2TJ103	10K 1/4	R820	ERDS2TJ562	5.6K 1/4	C42	ECKD1H561KB	560P 50
R618	ERDS2TJ332	3.3K 1/4	R821	ERDS2TJ562	5.6K 1/4	C43	ECKD1H391KB	390P 50
R619	ERDS2TJ272	2.7K 1/4	R822	ERDS2TJ562	5.6K 1/4	C44	ECKD1H391KB	390P 50
R620	ERDS2TJ472	4.7K 1/4	R823	ERDS2TJ562	5.6K 1/4	C45	ECEA1EK4R7	4.7 25
R621	ERDS2TJ821	820 1/4	R824	ERDS2TJ103	10K 1/4	C47	ECBT1H561KB5	560P 50
R622	ERDS2TJ103	10K 1/4	R828	ERDS2TJ184	180K 1/4	C48	ECBT1H561KB5	560P 50
R623	ERDS2TJ103	10K 1/4	R829	ERDS2TJ683	68K 1/4	C51	ECBT1E103ZF	0.01 25
R624	ERDS2TJ103	10K 1/4	R830	ERDS2TJ103	10K 1/4	C52	ECBT1E103ZF	0.01 25
R625	ERDS2TJ104	100K 1/4	R831	ERDS2TJ103	10K 1/4	C53	ECBT1E103ZF	0.01 25
R626 (EK, XL)	ERDS2TJ4R7T	4.7 1/4	R832	ERDS2TJ103	10K 1/4	C201	ECEA1HK0R1	0.1 50
R627 (EK, XL)	ERDS2TJ4R7T	4.7 1/4	R833	ERDS2TJ473	47K 1/4	C202	ECEA1HK0R1	0.1 50
R628 (EK, XL)	ERDS2TJ4R7T	4.7 1/4	R834	ERDS2TJ332	3.3K 1/4	C203	ECEA1CU330	33 16
R629 (EK, XL)	ERDS2TJ560	56 1/4	R837	ERDS2TJ472	4.7K 1/4	C204	ECEA1CU330	33 16
R630 (EK, XL)	ERDS2TJ560	56 1/4	R838	ERDS2TJ223	22K 1/4	C301	ECQP1153JZW	0.015 100
R631 (EK, XL)	ERDS2TJ560	56 1/4	R840	ERDS2TJ101	100 1/4	C302	ECKD1H392KB	3900P 50
R632 (EK, XL)	ERQ16NKR20E	0.2 1/6	R841	ERDS2TJ223	22K 1/4	C303	ECKD1H682KB	0.0068 50
R633 (EK, XL)	ERQ16NKR20E	0.2 1/6	R842	ERDS2TJ562	5.6K 1/4	C304	ECKD1H222MD	0.0022 50
R701	ERDS2TJ152	1.5K 1/4	R843	ERDS2TJ272	2.7K 1/4	C305	ECKD1H222MD	0.0022 50
R702	ERDS2TJ182	1.8K 1/4	R844	ERDS2TJ182	1.8K 1/4	C306	ECEA1CU220	22 16
R703	ERDS2TJ272	2.7K 1/4	R845	ERDS2TJ105	1M 1/4	C307	ECKD1H103PF	0.01 50
R704	ERDS2TJ392	3.9K 1/4	R846	ERDS2TJ471	470 1/4	C401	ECKD1H122KB	1200P 50
R705	ERDS2TJ682	6.8K 1/4	R847	ERDS2TJ103	10K 1/4	C402	ECKD1H122KB	1200P 50
R706	ERDS2TJ123	12K 1/4	R848	ERDS2TJ103	10K 1/4	C403	ECKD1H152KB	1500P 50
R707	ERDS2TJ152	1.5K 1/4	R849	ERDS2TJ222	2.2K 1/4	C404	ECKD1H152KB	1500P 50
R708	ERDS2TJ182	1.8K 1/4	R850	ERDS2TJ271	270 1/4	C405	ECEA1EK4R7	4.7 25
R709	ERDS2TJ272	2.7K 1/4	R851	ERDS2TJ101	100 1/4	C406	ECEA1EK4R7	4.7 25
R710	ERDS2TJ392	3.9K 1/4	R852	ERDS2TJ101	100 1/4	C407	ECQB1H472JZ	4700P 50
R711	ERDS2TJ682	6.8K 1/4	R853	ERDS2TJ223	22K 1/4	C408	ECQB1H472JZ	4700P 50
R712	ERDS2TJ123	12K 1/4	R855	ERDS2TJ221	220 1/4	C409	ECQV1H474JZ3	0.47 50
R713	ERDS2TJ393	39K 1/4	R856	ERDS2TJ223	22K 1/4	C410	ECQV1H474JZ3	0.47 50
R714	ERDS2TJ152	1.5K 1/4	R857	ERDS2TJ562	5.6K 1/4	C411	ECQM1H154JZ	0.15 50
R715	ERDS2TJ182	1.8K 1/4	R858	ERDS2TJ103	10K 1/4	C412	ECQM1H154JZ	0.15 50
R716	ERDS2TJ272	2.7K 1/4	R859	ERDS2TJ103	10K 1/4	C413	ECQB1H153JZ	0.015 50
R717	ERDS2TJ392	3.9K 1/4	R860	ERDS2TJ101	100 1/4	C414	ECQB1H153JZ	0.015 50
R718	ERDS2TJ682	6.8K 1/4	R861	ERDS2TJ392	3.9K 1/4	C415	ECQV1H224JZ	0.22 50
R719	ERDS2TJ123	12K 1/4	R862	ERDS2TJ392	3.9K 1/4	C416	ECQV1H224JZ	0.22 50
R720	ERDS2TJ393	39K 1/4	CAPACITORS(VALUE,VOLTAGE)			C417	ECQV1H683JZ3	0.068 50
R801	ERDS2TJ223	22K 1/4	C1	ECKD1H471KB	470P 50	C418	ECQV1H683JZ3	0.068 50
			C2	ECKD1H471KB	470P 50	C419	ECQM1H473JZ	0.047 50
			C3	RCBS1H271KBY	270P 50	C420	ECQM1H473JZ	0.047 50
			C4	RCBS1H271KBY	270P 50	C421	ECQB1H682JZ3	0.0068 50
			C5	ECKD1H122KB	1200P 50	C422	ECQB1H682JZ3	0.0068 50
			C6	ECKD1H122KB	1200P 50	C423	ECQB1H103JZ	0.01 50
			C7	ECEA0JU101	100 6.3	C424	ECQB1H103JZ	0.01 50
			C8	ECEA0JU101	100 6.3	C425	ECEA1EK4R7	4.7 25
			C9	ECQB1H123JZ	0.012 50	C426	ECEA1EK4R7	4.7 25
			C10	ECQB1H123JZ	0.012 50	C427	ECEA1EK4R7	4.7 25
			C11	ECKD1H821KB	820P 50	C428	ECEA1EK4R7	4.7 25
			C12	ECKD1H821KB	820P 50	C429	ECEA1EK4R7	4.7 25
			C13	ECEA1EK4R7	4.7 25	C430	ECEA1EK4R7	4.7 25
			C14	ECEA1EK4R7	4.7 25	C431	ECEA1EK4R7	4.7 25
			C17	ECCD1H181K	180P 50	C432	ECEA1EK4R7	4.7 25
			C18	ECCD1H181K	180P 50	C433	ECKD1H681K	680P 50
			C19	ECQB1H272JZ	0.0027 50	C434	ECKD1H681K	680P 50
			C20	ECQB1H272JZ	0.0027 50	C601	ECEA1CU222	2200 16
			C21	ECQB1H183JZ	0.018 50	C602	ECEA16V1000	1000 16
			C22	ECQB1H183JZ	0.018 50	C603	ECEA1AU221	220 10
			C23	ECQB1H103JZ	0.01 50	C604	ECEA1AU221	220 10
						C605	ECKD1H103PF	0.01 50

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
C606	ECKD1H103PF	0.01 50	C612	ECKD2H682PEL	6800P 500	C805	ECEA1EK4R7	4.7 25
C607	ECKD1H103PF	0.01 50	C613	ECKD1H103PF	0.01 50	C806	ECEA1AU221	220 10
C608	ECEA0JS102	1000 6.3	C614	ECKD1H103PF	0.01 50	C807	ECKD1H103PF	0.01 50
C609	ECEA1CU222	2200 16	C615	ECKD1H102KB	0.001 50	C808	ECKD1H103PF	0.01 50
C610	ECEA1AU221	220 10	C803	ECEA0JU471	470 6.3	C810	ECKD1H223PF	0.022 50
C611	ECEA1AU471	470 10	C804	ECEA1HK010	1 50	C811	ECBT1H102KB5	0.001 50
						C812	ECBT1H102KB5	0.001 50
						C813	ECKF1H103ZF	0.01 50

■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

 <table><tr><td>BA6146</td><td>16 Pin</td></tr><tr><td>CX20187</td><td>42 Pin</td></tr><tr><td>AN7016NK</td><td>30 Pin</td></tr><tr><td>M50746-412SP</td><td>64 Pin</td></tr></table>	BA6146	16 Pin	CX20187	42 Pin	AN7016NK	30 Pin	M50746-412SP	64 Pin	 <table><tr><td>M5218L</td><td>8 Pin</td></tr><tr><td>MN6634</td><td>9 Pin</td></tr></table>	M5218L	8 Pin	MN6634	9 Pin	 2SJ40CTA 2SK381	 2SB621A-R 2SD592ANCQ
BA6146	16 Pin														
CX20187	42 Pin														
AN7016NK	30 Pin														
M50746-412SP	64 Pin														
M5218L	8 Pin														
MN6634	9 Pin														
 2SA1309Q 2SC3311A-Q 2SD1330R 2SB1030Q	 DTC114ESTP	 DTA114ESTP, DTA114TS	 2SA885Q 2SC1846-Q  MA165 SVD1SR35200A 1SS133												
 MA4062M MA4082M MA4039-M	 LN28RCPP (ORANGE) LN38GCPP (GREEN) LN363GCPP (GREEN) LN463YCPPU (AMBER) LN863RCPP (ORANGE)														

■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			Q827	DTA114ESTP	TRANSISTOR
IC1	AN7016NK	I.C. REC./PLAYBACK AMP.	Q828	DTA114ESTP	TRANSISTOR
IC2	MN6634	I.C. SELECTOR	Q829	DTA114ESTP	TRANSISTOR
IC3	M5218L	I.C. HEADPHONES AMP.	Q830	DTA114ESTP	TRANSISTOR
IC201	BA6146	I.C. METER DRIVE	Q832	2SC3311A-Q	TRANSISTOR
IC202	BA6146	I.C. METER DRIVE	Q833	DTA114ESTP	TRANSISTOR
IC401	CX20187	I.C. DOLBY B-C NR	Q834	2SC3311A-Q	TRANSISTOR
IC801	M50746-412SP	I.C. MICROCOMPUTER	Q835	DTA114ESTP	TRANSISTOR
IC951	DN6851A	I.C. HALL	Q836	DTA114ESTP	TRANSISTOR
IC971	DN6851A	I.C. HALL	Q837	DTA114ESTP	TRANSISTOR
TRANSISTORS			Q838	DTA114ESTP	TRANSISTOR
Q1	2SA1309Q	TRANSISTOR	Q839	DTA114ESTP	TRANSISTOR
Q2	2SA1309Q	TRANSISTOR	DIODES		
Q3	2SK381	TRANSISTOR	D1	MA165	DIODE
Q4	2SK381	TRANSISTOR	D2	MA165	DIODE
Q5	2SJ40CTA	TRANSISTOR	D3	MA165	DIODE
Q6	2SJ40CTA	TRANSISTOR	D201	LN28RCPP	DIODE
Q7	2SD1330R	TRANSISTOR	D201A	MA4039-M	DIODE
Q8	2SD1330R	TRANSISTOR	D202	LN28RCPP	DIODE
Q9	2SA1309Q	TRANSISTOR	D203	LN38GCPP	L.E.D
Q10	2SA1309Q	TRANSISTOR	D204	LN28RCPP	DIODE
Q11	2SA1309Q	TRANSISTOR	D205	LN28RCPP	DIODE
Q12	2SA1309Q	TRANSISTOR	D206	LN28RCPP	DIODE
Q13	2SC3311A-Q	TRANSISTOR	D207	LN38GCPP	L.E.D
Q14	2SC3311A-Q	TRANSISTOR	D208	LN38GCPP	L.E.D
Q15	2SC3311A-Q	TRANSISTOR	D401	MA165	DIODE
Q16	2SC3311A-Q	TRANSISTOR	D402	MA165	DIODE
Q17	2SC3311A-Q	TRANSISTOR	D403	MA165	DIODE
Q18	2SC3311A-Q	TRANSISTOR	D601	 SVD1SR35200A	DIODE
Q19	2SD1330R	TRANSISTOR	D602	 SVD1SR35200A	DIODE
Q20	2SD1330R	TRANSISTOR	D603	 SVD1SR35200A	DIODE
Q21	2SC3311A-Q	TRANSISTOR	D604	 SVD1SR35200A	DIODE
Q22	2SC3311A-Q	TRANSISTOR	D605	 SVD1SR35200A	DIODE
Q201	DTA114ESTP	TRANSISTOR	D606	 SVD1SR35200A	DIODE
Q301	2SC3311A-Q	TRANSISTOR	D607	 SVD1SR35200A	DIODE
Q302	2SC3311A-Q	TRANSISTOR	D608	MA165	DIODE
Q303	2SD592ANCQ	TRANSISTOR	D609	MA165	DIODE
Q304	2SB621A-R	TRANSISTOR	D610	MA4062M	DIODE
Q305	2SB1030Q	TRANSISTOR	D611	MA4082M	DIODE
Q401	2SC3311A-Q	TRANSISTOR	D612	MA4082M	DIODE
Q402	2SC3311A-Q	TRANSISTOR	D614	MA165	DIODE
Q403	2SC3311A-Q	TRANSISTOR	D615	MA165	DIODE
Q404	2SC3311A-Q	TRANSISTOR	D616	MA165	DIODE
Q601	2SC1846-Q	TRANSISTOR	D617	MA165	DIODE
Q602	2SA885Q	TRANSISTOR	D618	MA165	DIODE
Q603	2SC1846-Q	TRANSISTOR	D620	MA165	DIODE
Q801	DTC114ESTP	TRANSISTOR	D801	 SVD1SR35200A	DIODE
Q802	DTC114ESTP	TRANSISTOR	D803	MA165	DIODE
Q803	DTC114ESTP	TRANSISTOR	D805	MA165	DIODE
Q804	DTC114ESTP	TRANSISTOR	D806	MA165	DIODE
Q805	DTC114ESTP	TRANSISTOR	D807	MA165	DIODE
Q806	DTC114ESTP	TRANSISTOR	D808	MA165	DIODE
Q807	2SB1030Q	TRANSISTOR	D951	1SS133	DIODE
Q808	2SB1030Q	TRANSISTOR	D971	1SS133	DIODE
Q809	2SB621A-R	TRANSISTOR	VARIABLE RESISTORS		
Q810	2SB621A-R	TRANSISTOR	VR1	EVND4AA00B24	V.R. PLAYBACK GAIN ADJ.
Q811	2SK381	TRANSISTOR	VR2	EVND4AA00B24	V.R. PLAYBACK GAIN ADJ.
Q812	2SK381	TRANSISTOR	VR3	EVND4AA00B24	V.R. PLAYBACK GAIN ADJ.
Q813	2SA1309Q	TRANSISTOR	VR4	EVND4AA00B24	V.R. PLAYBACK GAIN ADJ.
Q814	2SA1309Q	TRANSISTOR	VR5	EVND4AA00B24	V.R. OVERALL GAIN ADJ.
Q815	DTA114ESTP	TRANSISTOR	VR6	EVND4AA00B24	V.R. OVERALL GAIN ADJ.
Q816	DTA114ESTP	TRANSISTOR	VR7	EVND4AA00B15	V.R. OVERALL FREQ. ADJ.
Q817	DTA114ESTP	TRANSISTOR	VR8	EVND4AA00B15	V.R. OVERALL FREQ. ADJ.
Q818	DTA114ESTP	TRANSISTOR	VR9	SVR2F25A54	V.R. LEVEL CONTROL
Q819	DTA114ESTP	TRANSISTOR	VR10	SVR2F25A54	V.R. LEVEL CONTROL
Q820	2SA1309Q	TRANSISTOR	VR201	EVND4AA00B15	V.R. FL METER ADJ.
Q821	2SC3311A-Q	TRANSISTOR	VR202	EVND4AA00B15	V.R. FL METER ADJ.
Q823	DTA114ESTP	TRANSISTOR	VR301	EVND4AA00B53	V.R. ERASE CURRENT ADJ.
Q824	DTA114ESTP	TRANSISTOR	VR801	EVN49C00YB53	V.R. TAPE SPEED ADJ.
Q825	DTA114ESTP	TRANSISTOR	VR802	EVN49C00YB53	V.R. TAPE SPEED ADJ.
Q826	DTA114ESTP	TRANSISTOR	VR803	EVN49C00YB14	V.R. TAPE SPEED ADJ.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
COILS AND TRANSFORMERS			S713	EVQQB005R	SW. SYNCHRO REC.
L1	SLQX303-1KT	CHOKE COIL	S714	EVQQB005R	SW. EDITING
L2	SLQX303-1KT	CHOKE COIL	S715	EVQQB005R	SW. EDITING TAPE SPEED
L3	SLQX272-1YT	CHOKE COIL	S716	EVQQB005R	SW. DOLBY C NR
L4	SLQX272-1YT	CHOKE COIL	S717	EVQQB005R	SW. DOLBY B NR
L5	SLQX303-1KT	CHOKE COIL	S718	EVQQB005R	SW. REVERSE MODE
L6	SLQX303-1KT	CHOKE COIL	S719	EVQQB005R	SW. REVERSE MODE
L301	SL09B4-K	OSCILLATOR	S720	EVQQB005R	SW. REVERSE MODE
L401	SLM1C90-M	COIL	S721	EVQQB005R	SW. MPX
L402	SLM1C90-M	COIL	S722	SSS147-1	SW. TIMER
L403	SLM1B12-K	COIL	S951	RSH1A89Z	SW. MODE (DECK B)
L404	SLM1B12-K	COIL	S952	RSH1A90Z	SW. HALF (DECK B)
L801	ELEPK101KA	CHOKE COIL	S953	RSH1A90Z	SW. ATS (DECK B)
L802	SLQX272-1YT	CHOKE COIL	S971	RSH1A89Z	SW. MODE (DECK A)
L803	ELEPK101KA	CHOKE COIL	S972	RSH1A90Z	SW. HALF (DECK A)
T601	SLT5K255-K	POWER TRANSFORMER	S973	RSH1A90Z	SW. ATS (DECK A)
(M, MC)			S974	RSH1A90Z	SW. REC INH(F) (DECK A)
T601	SLT5K256-K	POWER TRANSFORMER	S975	RSH1A90Z	SW. ATS (DECK A)
(E, EG, EH)			S976	RSH1A90Z	SW. REC INH(R) (DECK A)
T601	SLT5K257-K	POWER TRANSFORMER	OTHERS (LED unit)		
(EK, XL)			D1	MA165	DIODE
T601	SLT5K258-K	POWER TRANSFORMER	D2	MA165	DIODE
(XA)			D3	MA165	DIODE
OSCILLATORS			D4	MA165	DIODE
X801	EF0FC400A4	CERAMIC FILTER	D7	LN363GCPP	L.E.D
DISPLAYS			D8	LN863RCPP	L.E.D
FL1	SADBG427ZSK	DISPLAY TUBE	D9	LN363GCPP	L.E.D
SWITCHES			D10	LN363GCPP	L.E.D
S601	SSH1226	SW. POWER	(M, MC)		
S602	SSR187-1	SW. VOLTAGE SELECTOR	D11	LN863RCPP	L.E.D
(XA)			D12	LN363GCPP	L.E.D
S701	EVQQB005R	SW. STOP (DECK A)	D13	LN463YCPPU	L.E.D
S702	EVQQB005R	SW. F.F. (DECK A)	D14	LN363GCPP	L.E.D
S703	EVQQB005R	SW. REW (DECK A)	D16	LN363GCPP	L.E.D
S704	EVQQB005R	SW. F.PLAYBACK (DECK A)	D17	LN363GCPP	L.E.D
S705	EVQQB005R	SW. R.PLAYBACK (DECK A)	(M, MC)		
S706	EVQQB005R	SW. PAUSE (DECK A)	R1	ERDS2TJ271	CARBON, 270Ω, 1/4W
S707	EVQQB005R	SW. AUTO REC MUTE	R2	ERDS2TJ271	CARBON, 270Ω, 1/4W
S708	EVQQB005R	SW. STOP (DECK B)	R3	ERDS2TJ271	CARBON, 270Ω, 1/4W
S709	EVQQB005R	SW. F.F. (DECK B)	R4	ERDS2TJ271	CARBON, 270Ω, 1/4W
S710	EVQQB005R	SW. REW (DECK B)	(M, MC)		
S711	EVQQB005R	SW. PLAYBACK (DECK B)	R5	ERDS2TJ271	CARBON, 270Ω, 1/4W
S712	EVQQB005R	SW. REC (DECK A)	R6	ERDS2TJ271	CARBON, 270Ω, 1/4W
			R9	ERDS2TJ271	CARBON, 270Ω, 1/4W
			R10	ERDS2TJ271	CARBON, 270Ω, 1/4W
			(M, MC)		

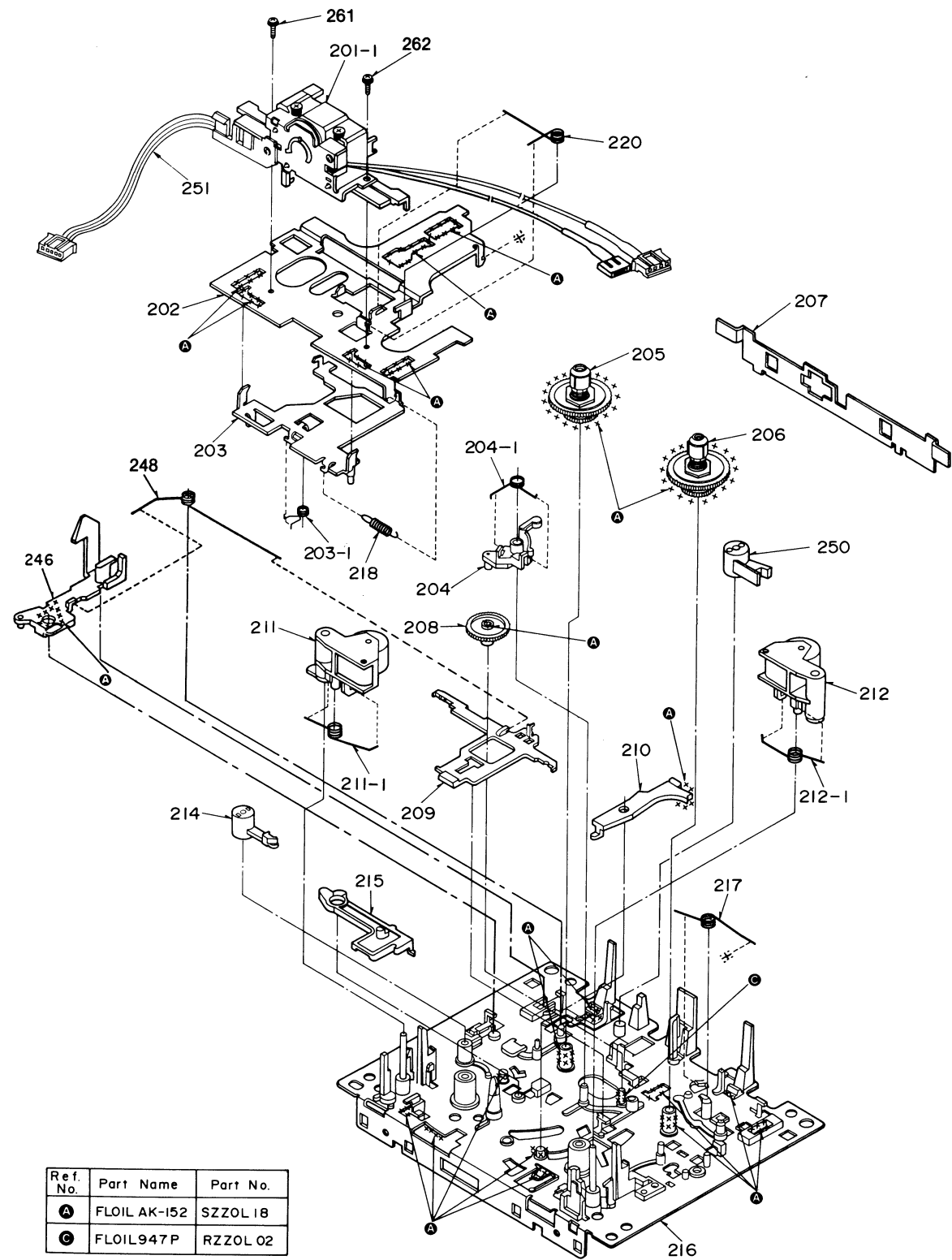
REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.
* " " mark parts are used for black type only.
* " " mark parts are used for silver type only.
Parts other than " " and " " marked are used for all color types.

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PACKING MATERIAL			(EG)		
P1	SPG6237	PACKING CASE	A1	SQF13328	INSTRUCTION MANUAL
(M)			(EK)		
P1	SPG6238	PACKING CASE	A1	SQF13401	INSTRUCTION MANUAL
(MC, E, EG, EH)			(XA)		
(EK, XA, XL)			A1	SQF13402	INSTRUCTION MANUAL
P1	SPG6239	PACKING CASE	(XL)		
(E, EG, EH, EK)			A2	SFDAC05E03	POWER CORD
(XA, XL)			(E, EG, EH)		
P2	SPS5131	PAD	A2	SFDAC05G02	POWER CORD
P3	SPS5132	PAD	(EK)		
P4	SPS5185	PAD	A2	SJA168	POWER CORD
P5	XZB50X65B02	POLY SHEET	(XA)		
ACCESSORIES			A2	SJA172	POWER CORD
A1	SQF13238	INSTRUCTION MANUAL	(MC)		
(M)			A2	SJA173	POWER CORD
A1	SQF13239	INSTRUCTION MANUAL	(XL)		
(MC)			A2	SJA175-1T	POWER CORD
A1	SQF13240	INSTRUCTION MANUAL	(M)		
(E, EH)			A3	SJP2257T	CORD
A1	SQF13241	INSTRUCTION MANUAL	(M, MC)		
			A4	SJP2264	CORD
			A5	RJP120ZBS-H	AC PLUG ADAPTOR
			(XA)		

MECHANICAL PARTS LOCATION

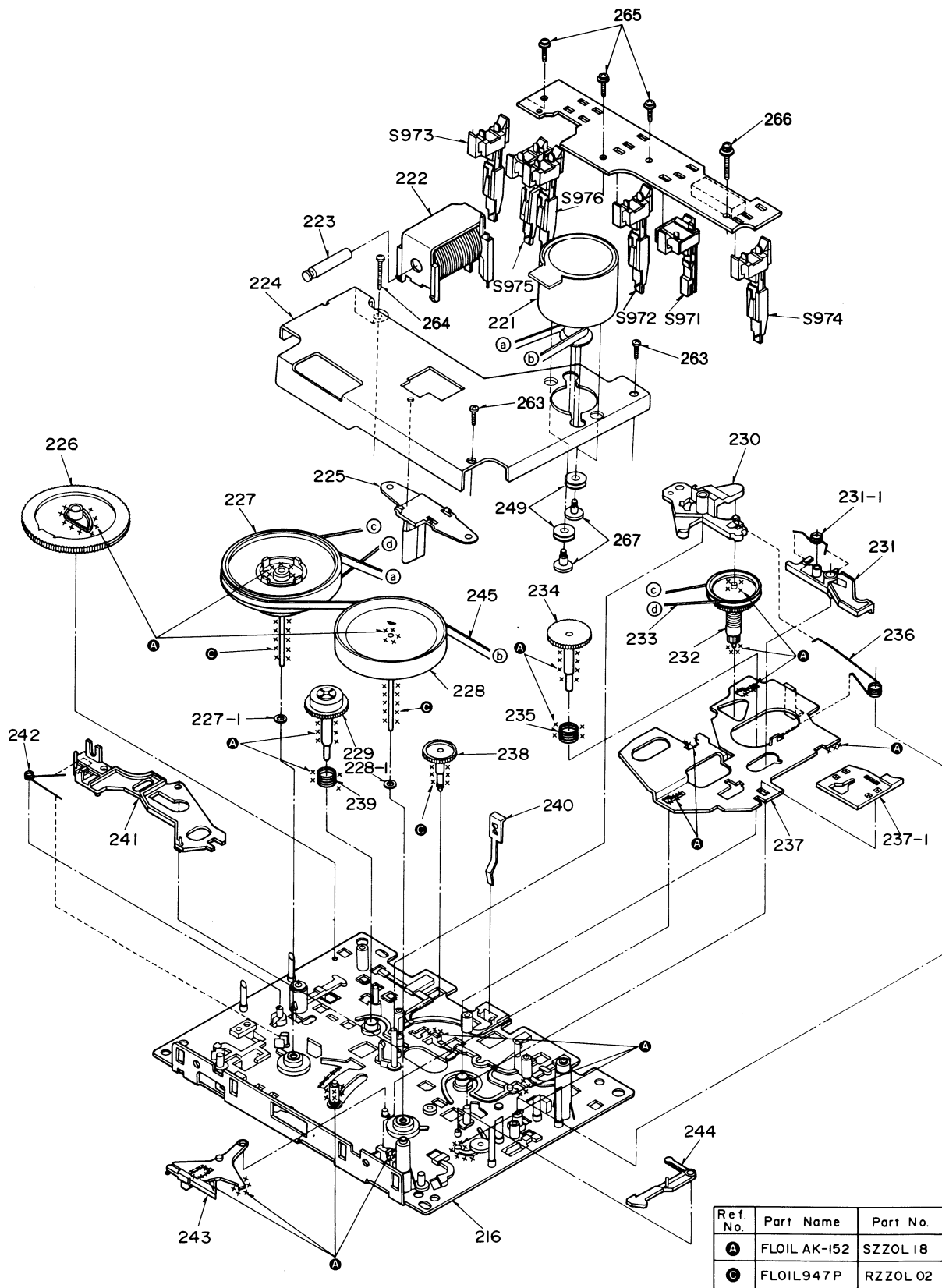
(DECK A: Up Side)



Ref. No.	Part Name	Part No.
A	FLOIL AK-I52	SZZOL 18
C	FLOIL947P	RZZOL 02

200~209	202	203	203-I	201-I	209	208	204	204-I	205	206	207
210~219	214	211	211-I	218	215	210	216	217	212-I	212	
220~	246	251	248	261	262	220		250			

(DECK A: Down Side)



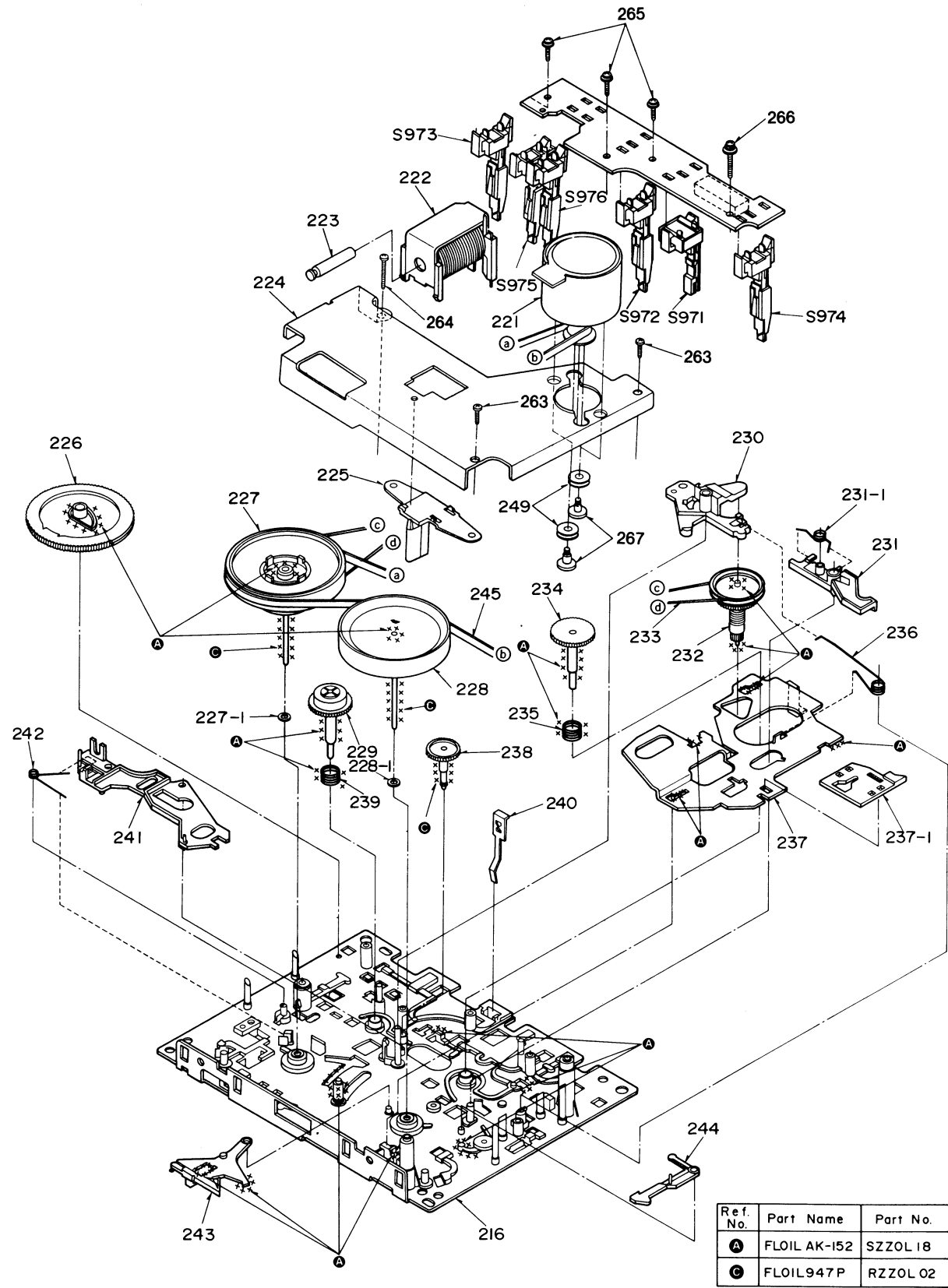
Ref. No.	Part Name	Part No.
A	FLOIL AK-I52	SZZOL 18
C	FLOIL947P	RZZOL 02

200~229	226	227-I 227 224 223 225 229 228-I 222 228 221 216												
230~239	239					238 235 234			233 232 230 237 231-I 231 236 237-I					
240~	242	241	243	264 245 249 263 240 265 267 263 244 266										

(DECK

100~10
110~12
130~

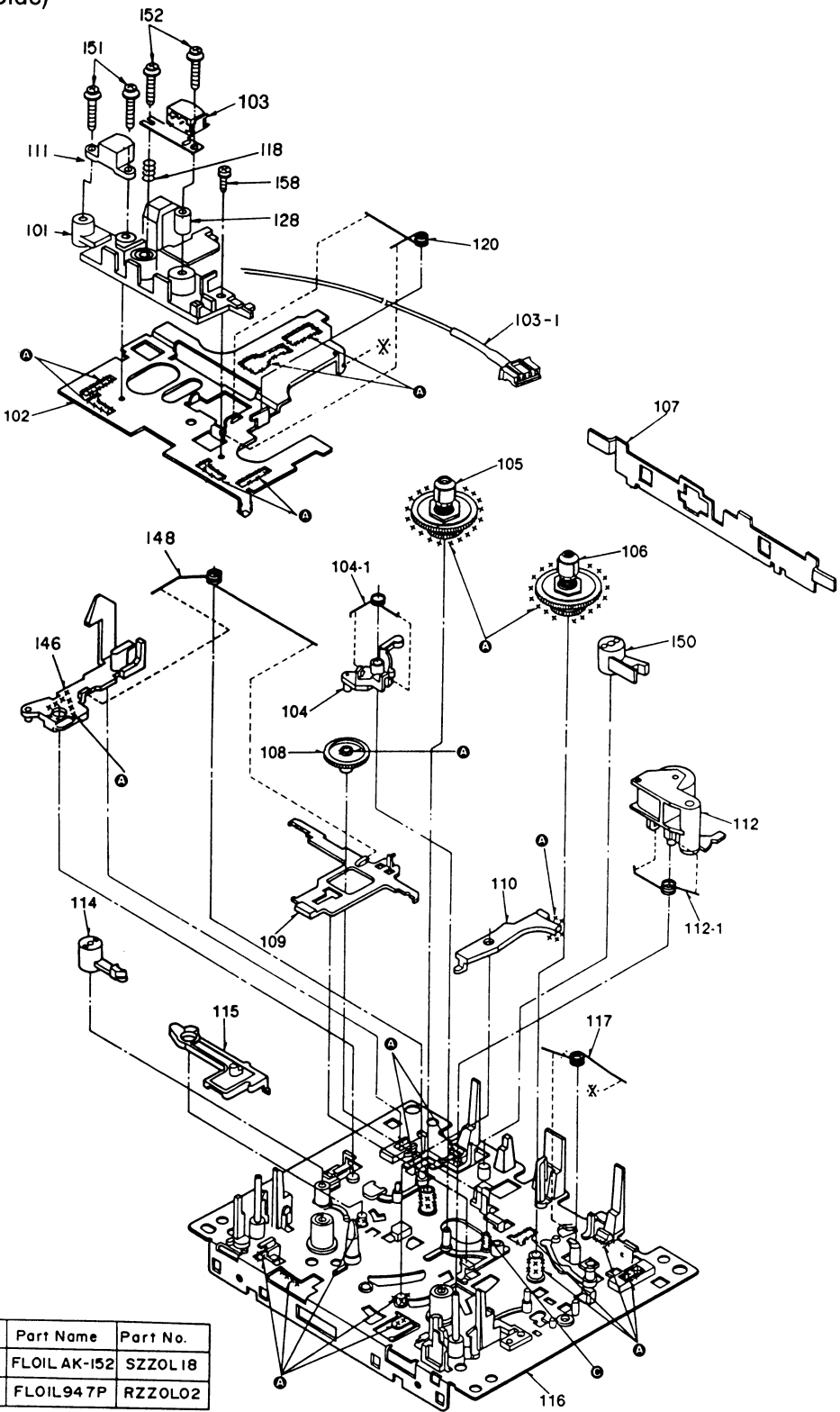
(DECK A: Down Side)



Ref. No.	Part Name	Part No.
A	FL0IL AK-I52	SZZOL I8
C	FL0IL947P	RZZOL 02

200~229	226	227-1 227 224 223 225 229 228-1 222 228 221 216																
230~239	239 238 235 234 233 232 230 237 231-1 231 236 237-1																	
240~	242	241	243	264 245 249 263 240 265 267 263 244 266														

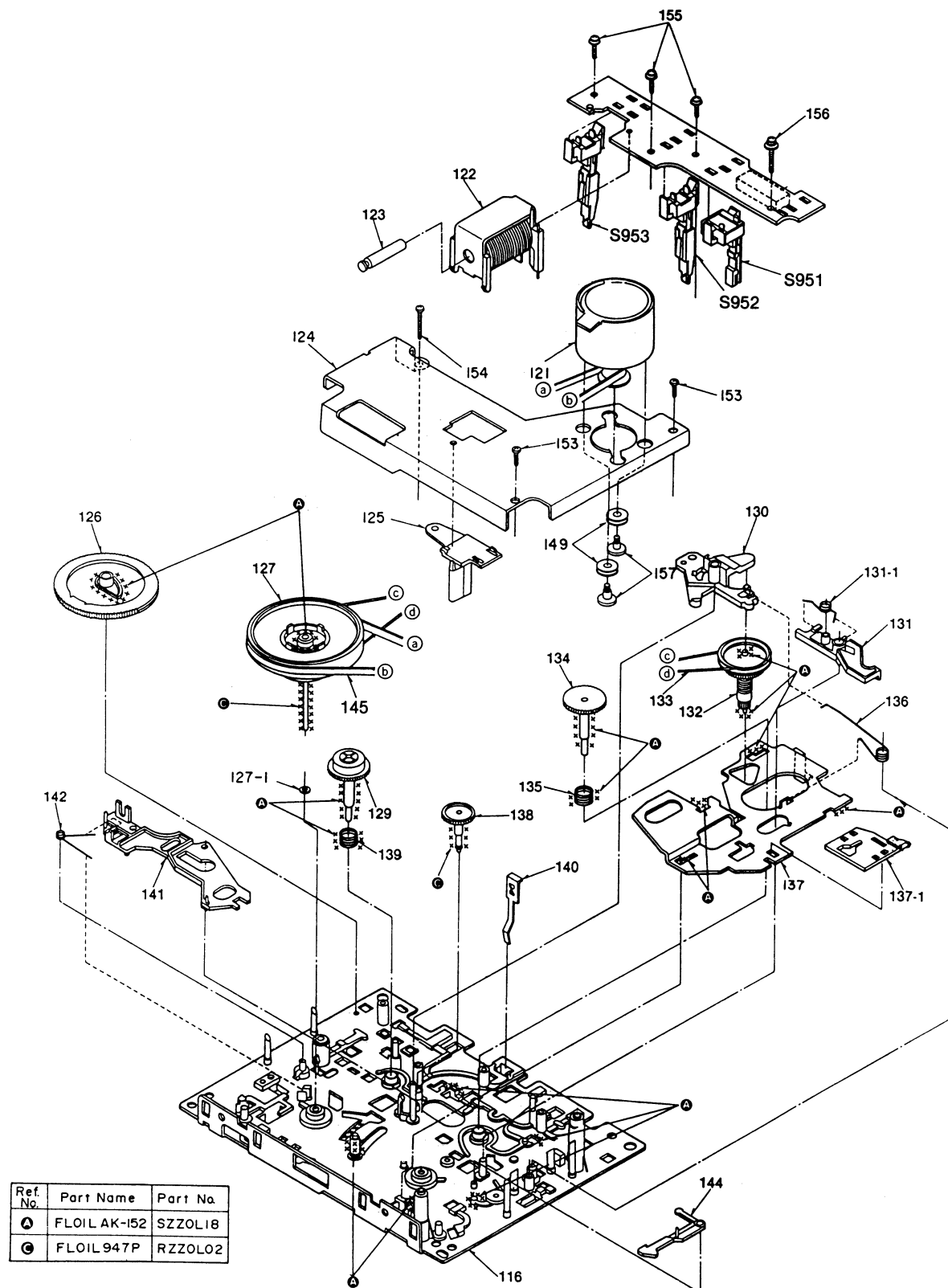
(DECK B: Up Side)



Ref. No.	Part Name	Part No.
A	FL0IL AK-I52	SZZOL I8
C	FL0IL947P	RZZOL 02

100~109	102	101	108 109 104 104-1 103							105	103-1	106 107			
110~129	111	114	118 115 128							120	110	116	117	112-1	112
130~	146	151	152	148	158					150					

(DECK B: Down Side)



100 ~ 129	126	127-1 127 124 123 125 129 122	116 121
130 ~ 139		139 138 135 134 133 132 130 137 131-1 131 136 137-1	
140 ~	142 141	145 154 140 149 153 155 144 157 153	156

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
DECK A			267	QH1303	SCREW
CASSETTE DECK			DECK B		
CASSETTE DECK			CASSETTE DECK		
201-1	1MD0060ZA	HEAD ASS. Y	101	RMD50132B	HEAD SP
202	RUA793Z	HEAD BASE	102	RUA793YA	CHASSIS
203	RZLAR300	ROD	103	RJH4C35GYAM	HEAD /PLAYBACK
203-1	RUW143Z	SPRING	103-1	1JS0060ZA	LEAD WIRE
204	1UB0089ZA	ARM	104	1UB0089ZA	ARM
204-1	RUW148ZA	COIL SPRING	104-1	RUW148ZA	COIL SPRING
205	1DM0018ZA	REEL ASS. Y	105	1DM0005ZA	REEL TABLE ASS'Y
206	1DM0017ZA	REEL TABLE ASS'Y	106	1DM0017ZA	REEL TABLE ASS'Y
207	RUB502Z	LEVER	107	RUB5022C	LEVER
208	RDG5772Z	GEAR	108	RDG5772Z	GEAR
209	RUB508ZA	ROD	109	RUB508ZA	ROD
210	RUB506Z	LEVER	110	RUB5062B	LEVER
211	1UB0088ZA	REEL ASS. Y	111	RUG82Z	DAMPE HEAD
211-1	RUW141Z	SPRING	112	1UB0087ZA	ARM
212	1UB0087ZA	ARM	112-1	RUW1402B	COIL SPRING
212-1	RUW140Z	SPRING	114	RNL1Z	DAMPER ARM
214	RNL1Z	DAMPER ARM	115	RUB5032B	LEVER
215	RUB503Z	LEVER	116	RZUAR300	PLATE
216	RZUSX990	CHASSIS	117	RUW142ZA	COIL SPRING
217	RUW142ZA	COIL SPRING	118	QBA51278	SPRING
218	RUD105Z	SPRING	120	RUW139ZA	SPRING
220	RUW139ZA	SPRING	121	RFM134ZA	DC MOTOR
221	RFM133ZA	DC MOTOR	122	1UE0015ZA	PLUNGER
222	1UE0015ZA	PLUNGER	123	RUB428Z	LEVER
223	RUB428Z	LEVER	124	RUL10302C	ANGLE
224	RUL1030Z	PLATE	125	RMD5017ZA	ANGLE
225	RMD5014Z	PLATE	126	RDG5927Z	GEAR
226	RDG5927ZA	GEAR	127	1DW0037ZA	FLYWHEEL ASS'Y
227	1DW0053ZA	FLYWHEEL ASS'Y	(M, MC, XA, XL)		
228	1DW0054ZA	WHEEL	127	1DW0053ZA	FLYWHEEL ASS'Y
228-1	RNW138Z	WASHER	(E, EG, EH, EK)		
229	1DG0006ZA	GEAR ASS'Y	128	RH1M278ZA	SPACER
230	RUB513Z	ARM	129	1DG0006ZA	GEAR ASS'Y
231	1UB0091ZA	LEVER	130	RUB5132C	ARM
231-1	RUW146ZA	COIL SPRING	131	1UB0091ZA	LEVER
232	1DR0011ZA	PULLEY ASS'Y	131-1	RUW146ZA	COIL SPRING
233	RDV90Z	BELT	132	1DR0011ZA	PULLEY ASS'Y
234	RDG5769Z	GEAR	133	RDV902B	BELT
235	RUQ10Z	SPRING	134	RDG5769Z	GEAR
236	RUW145ZA	COIL SPRING	135	RUQ10Z	SPRING
237	1UB0090ZA	ROD	136	RUW145ZA	COIL SPRING
237-1	RUB512Z	ROD	137	1UB0090ZA	ROD
238	RDG5773Z	GEAR	137-1	RUB5122B	ROD
239	RUQ30Z	SPRING	138	RDG5773Z	GEAR
240	RUS608Z	SPRING	139	RUQ30Z	SPRING
241	RUB514Z	LEVER	140	RUS608Z	SPRING
242	RUW147ZA	COIL SPRING	141	RUB5142B	LEVER
243	RUB515Z	LEVER	142	RUW147ZA	COIL SPRING
244	RUB509ZA	LEVER	144	RUB509ZA	LEVER
245	RDV108ZA	BELT	145	RDV109ZA	BELT
246	RUB541Z	EJECT ROD (L)	146	RUB541Z	EJECT ROD (L)
248	RUW167Z	SPRING	149	RHG3032Z	RUBBER CUSHION
249	RHG3032Z	RUBBER CUSHION	150	RNL180Z	DAMPER ARM
250	RNL180Z	DAMPER ARM			
251	1JS0087ZA	LEAD WIRE			
SCREWS, WASHERS AND NUTS			SCREWS, WASHERS AND NUTS		
227-1	RNW139ZA	WASHER	127-1	RNW139ZA	WASHER
261	XTW2+6L	SCREW	151	QH1361A	SCREW
262	XTW2+8L	SCREW	152	RHE5201ZA	SCREW
263	XTN26+7J	SCREW	153	XTN26+7J	SCREW
264	XTN26+16F	SCREW	154	XTN26+16F	SCREW
265	XTW2+8S	SCREW	155	XTW2+8S	SCREW
266	XYC2+JF16	SCREW	156	XYC2+JF16	SCREW
			157	XSN26+3	SCREW
			158	XTN2+5F	SCREW

Service Manual

Cassette Deck

RS-T330R**Supplement**Dolby NR-Equipped
Stereo Double Cassette Deck

Color

(S)...Silver Type
(K)...Black Type*
DOLBY B-C NR

Area

Color	Area
(K)	(M).....U.S.A.
(K)	(MC).....Canada.
(S) (K)	(E).....Continental Europe.
(S) (K)	(EK).....United Kingdom:
(S) (K)	(EG).....F.R. Germany.
(S) (K)	(EH).....Holland.
(S) (K)	(XA).....Asia, Latin America, Middle Near East, Africa and Oceania.
(S) (K)	(XL).....Australia.

Please file and use this supplement manual together with the Service Manual
for Model No. RS-T330R, Order No. HAD8804124C0.

This supplement is issued to correct a mistake in a part number on page 41.

Ref. No.	Wrong Part No.	Correct Part No.	Part Name & Description	Remarks
121	RFM134ZA	RFM133ZA	DC MOTOR (DECK B)	Correction

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Sales Company,
Division of Matsushita Electric
of Puerto Rico, Inc.
Ave. 65 De Infanteria, Km. 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

Panasonic Hawaii, Inc.
99-859, Iwaiwa Street
P.O. Box 774
Honolulu, Hawaii 96808-0774

**Matsushita Electric
of Canada Limited**
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Technics

Printed in Japan
K880712300TN