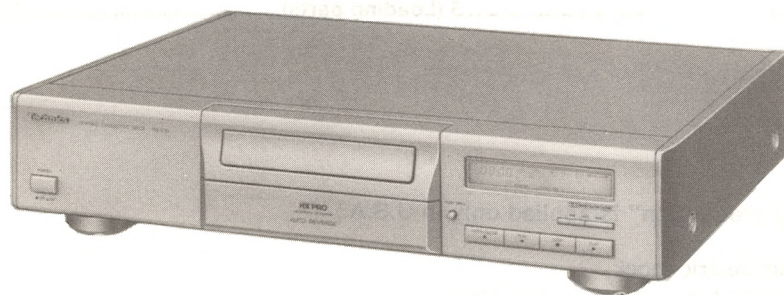


Service Manual

Dolby NR-Equipped
Stereo Cassette DeckCassette Deck
RS-E10

Color

(S)...Silver Type

Area

Country Code	Area	Color
(PP)	U.S.A./Canada.	(S)
(E)	Continental Europe.	
(EB)	Great Britain.	
(EG)	F.R. Germany and Italy.	

*HX Pro headroom extension originated by Bang Olufsen and manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY", the double-D symbol, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

System Name	Unit	
SC-E10 (PP, E, EB, EG)	Tuner Amplifier	SA-E10
	CD Player	SL-E10
	Cassette Deck	RS-E10
	Speaker	SB-EX2 (E, EB, EG)
SC-E30 (PP)	Tuner Amplifier	SA-E10
	CD Player	SL-E10
	DAT	SV-E10

RS-TR555 MECHANISM SERIES (AR350)

SPECIFICATIONS

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Heads	Recording/Playback head (Permalloy) × 1 Erasing head (Double-gap ferrite) × 1
Motors	Capstan drive (DC servo motor) × 1 Reel table drive (DC motor) × 1 Loading drive (DC motor) × 1
Tape speed	4.8 cm/sec. (1-7/8 ips)
Wow and flutter	0.07% (WRMS)
For (E, EB, EG) areas only	±0.2% (DIN)
Fast forward and rewind times	Approx. 90 seconds with C-60 cassette tape
Frequency response (Dolby NR off)	
NORMAL	30 Hz~15 kHz, ±3 dB
For (PP) area	20 Hz~18 kHz
For others	20 Hz~17 kHz (DIN)
CrO ₂	30 Hz~16 kHz, ±3 dB
For (PP) area	20 Hz~18 kHz
For others	20 Hz~17 kHz (DIN)
MEATAL	30 Hz~17 kHz, ±3 dB
For (PP) area	20 Hz~19 kHz
For others	20 Hz~18 kHz (DIN)

S/N (signal level = max recording level, CrO₂ type tape)

NR off 56 dB (A weighted)

Dolby B NR on 66 dB (CCIR)

Dolby C NR on 74 dB (CCIR)

Input sensitivity and impedance

LINE IN 60 mV/47 kΩ

Output voltage and impedance

LINE OUT 400 mV/800 Ω

■ GENERAL

Power consumption 23 W

Power supply

For (PP) area AC 60 Hz, 120 V

For others AC 50/60 Hz, 230-240 V

Dimensions (W × H × D)

445 × 97 × 327 mm
(17-17/32" × 3-13/16" × 12-7/8")

Weight

5 kg (11 lb.)

Note:

Specifications are subject to change without notice.

Weight and dimensions are approximate.

Technics

CONTENTS

	Page
SAFETY PRECAUTION	2
ACCESSORIES	3
CONNECTIONS	3
LOCATION OF CONTROLS	4~6
DISASSEMBLY INSTRUCTIONS	7~11
MEASUREMENTS AND ADJUSTMENTS	12~14
FUNCTION OF IC TERMINALS	15, 16
BLOCK DIAGRAM	17, 18
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES	19
SCHEMATIC DIAGRAM	19~25

	Page
PRINTED CIRCUIT BOARDS	26~29
WIRING CONNECTION DIAGRAM	30
INTERNAL CONNECTION OF FL	31
PACKING	31
REPLACEMENT PARTS LIST	32, 33
RESISTORS & CAPACITORS	34, 35
REPLACEMENT PARTS LIST	36
EXPLODED VIEWS (Cabinet parts)	37, 38
EXPLODED VIEWS (Mechanical parts)	39, 40
REPLACEMENT PARTS LIST	41
EXPLODED VIEWS (Loading parts)	42

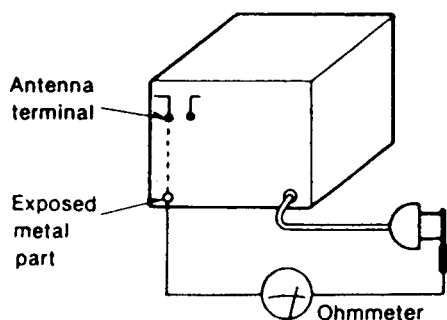
SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

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

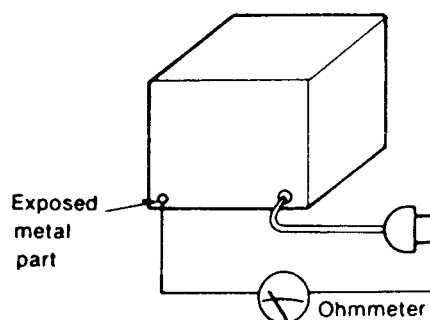
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between $3M\Omega$ and $5.2M\Omega$ 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 = $3M\Omega$ — $5.2M\Omega$

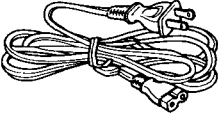


(Fig. B)

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
[(SFDAC05E03)..... (E, EG)
 (SJA172)..... (PP)
 (SJA188)..... (EB)] 1 pc.



Stereo connection cables
(SJP2249-3)..... 2 pcs.



Stereo mini cable for remote-control
(SJP2257T) 1 pc.

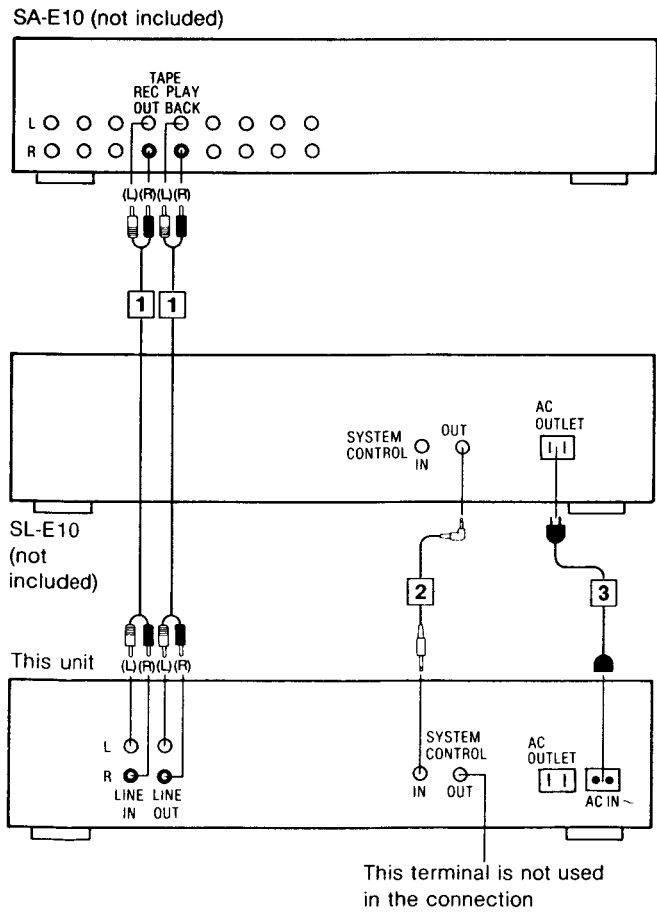
Note: Configuration of AC power supply cord differs according to area.

CONNECTIONS

Before making connections, be sure that the power to this unit and all other system components is first turned off. See the operating instructions of the tuner amplifier (SA-E10) or the compact disc player (SL-E10) for details.

Make connections to each component by using the included cord and cables.

Make sure to check in the ☐ each time one connection is finished.



☐ 1 Connect the stereo connection cables.

☐ 2 Connect the stereo mini cable for remote-control.

☐ 3 Connect the AC power supply cord.

“AC OUTLET” (UNSWITCHED)

Power is always available, regardless of the unit’s power switch setting. Audio equipment rated up to 55W can be connected.

For (EB) area

Cut off and dispose of the plug and replace with a suitable plug.



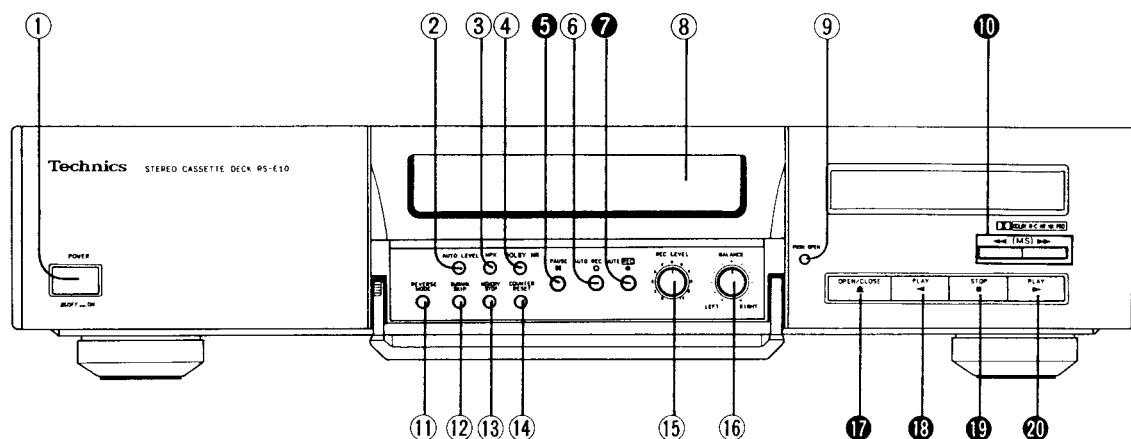
Household AC outlet

Fit a suitable plug to the AC power supply cord.

Concerning the remote control operation

This unit can be controlled by using the remote-control transmitter included with SA-E10 (not included). See the operating instructions of SA-E10 for detailed information.

■ LOCATION OF CONTROLS



Control section

The functions indicated by the numbers with black background (for example ⑤) can be activated from both the main unit and the remote control transmitter included with SA-E10.

① Power switch (POWER).....For PP area

Press (⏻) to switch the power on.
Press again (⏻) to switch the power off.

Power “STANDBY ⏻/ON” switch...For others (POWER ⏻ STANDBY ⏻ ON)

This switch switches ON and OFF the secondary circuit power only. The unit is in the “standby” condition when this switch is set to the STANDBY ⏻ position. Regardless of the switch setting, the primary circuit is always “live” as long as the power cord is connected to an electrical outlet.

② Auto recording level button (AUTO LEVEL)

This button is used to set the proper recording level automatically.

③ Multiplex filter button (MPX)

This button is used during the recording of an FM stereo broadcast that employs Dolby noise reduction so as to prevent misoperation of the Dolby noise reduction.

④ Dolby noise-reduction button (DOLBY NR)

This button is used to reduce the hissing noise heard from the tape. This unit is provided with both the B-type and C-type noise-reduction systems.

⑤ Pause button (⏸ PAUSE)

This button is used to temporarily stop the tape playback or recording of the deck.

⑥ Automatic-record-muting button (⏻ AUTO REC MUTE)

This button is used to make a silent interval on the tape while recording is in progress.

⑦ Record button (● REC)

This button is used to set the deck to the recording stand-by mode.

⑧ Cassette tray

⑨ Panel open button (PUSH OPEN)

⑩ Rewind/fast-forward search button (◀◀ (MS) ▶▶)

These buttons are used to advance or rewind the tape, or to easily and quickly search for the program's beginning of the tape.

⑪ Reverse-mode button (REVERSE MODE)

This button is used for selection of the reverse mode (for either playback or recording.)

⑫ Blank skip button (BLANK SKIP)

This button is used to skip a silent portion on the tape.

⑬ Memory-stop button (MEMORY STOP)

This button is used to rewind the tape to the preset point.

⑭ Tape counter reset button (COUNTER RESET)

This button is used to reset the tape counter indication to “00.00”.

⑮ Recording-level control (REC LEVEL)

This control is used to regulate the recording level

⑯ Recording-balance control (BALANCE)

This control is used to balance the left and right sound levels during recording.

⑰ Cassette tray open/close button (▲ OPEN/CLOSE)

⑱ Reverse-side playback button (◀ PLAY)

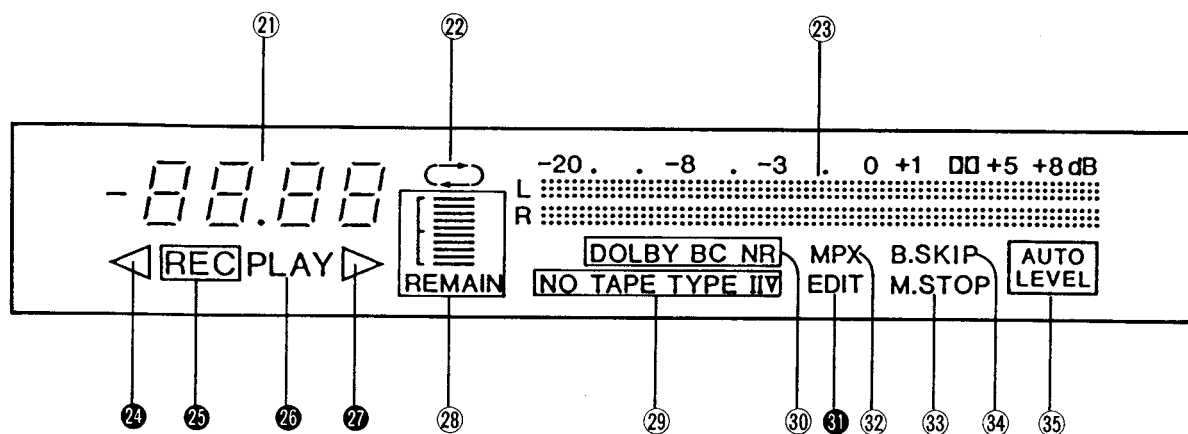
This button is used to start the playback or recording of side “B” of the cassette.

⑲ Stop button (■ STOP)

This button is used to stop the tape movement.

⑳ Forward-side playback button (▶ PLAY)

This button is used to start the playback or recording of side “A” of the cassette.



Display section

The indicators with black background (for example 24) is accessible by using a compatible remote control transmitter included with SA-E10.

21 Tape counter

Indicates the amount of tape movement.

22 Reverse-mode indicator (↔)

Illuminates to show which of the reverse modes was selected by the reverse-mode button.

23 Input level meter

During playback, this meter indicates the level of the recorded sound.
During recording, it indicates the level being recorded, adjusted by the recording-level control.

24 Reverse-side indicator (◀)

Illuminates during playback or recording to indicate that side "B" of the tape is being used.

25 Recording indicator ([REC])

Illuminates to indicate that this unit is in the recording stand-by mode or is recording.

26 Playback indicator (PLAY)

When this indicator illuminates steadily, it indicates that this unit is in the playback or recording mode.
When flashing, indicates that this unit is in the pause mode or in the recording stand-by mode.

27 Forward-side indicator (▶)

Illuminates during playback or recording to indicate that side "A" of the tape is being used.

28 Tape remain display (REMAIN)

Indicates the approximate amount of tape remaining.

29 Tape-select indicators

The type of tape being used will be automatically detected. The corresponding indicator illuminates to show the tape type. "NO TAPE" is displayed when the cassette tape is not inserted.

30 Dolby noise-reduction indicator

Illuminates to show the type of Dolby noise-reduction system selected by pressing the Dolby noise-reduction button.

31 Edit indicator (EDIT)

Illuminates to indicate that this unit is in the CD edit-recording mode by using the remote-control transmitter included with SA-E10.

32 Multiplex filter indicator (MPX)

Illuminates when the multiplex filter button is pressed.

33 Memory stop indicator (M. STOP)

Illuminates to indicate that this unit is in the memory stop mode.

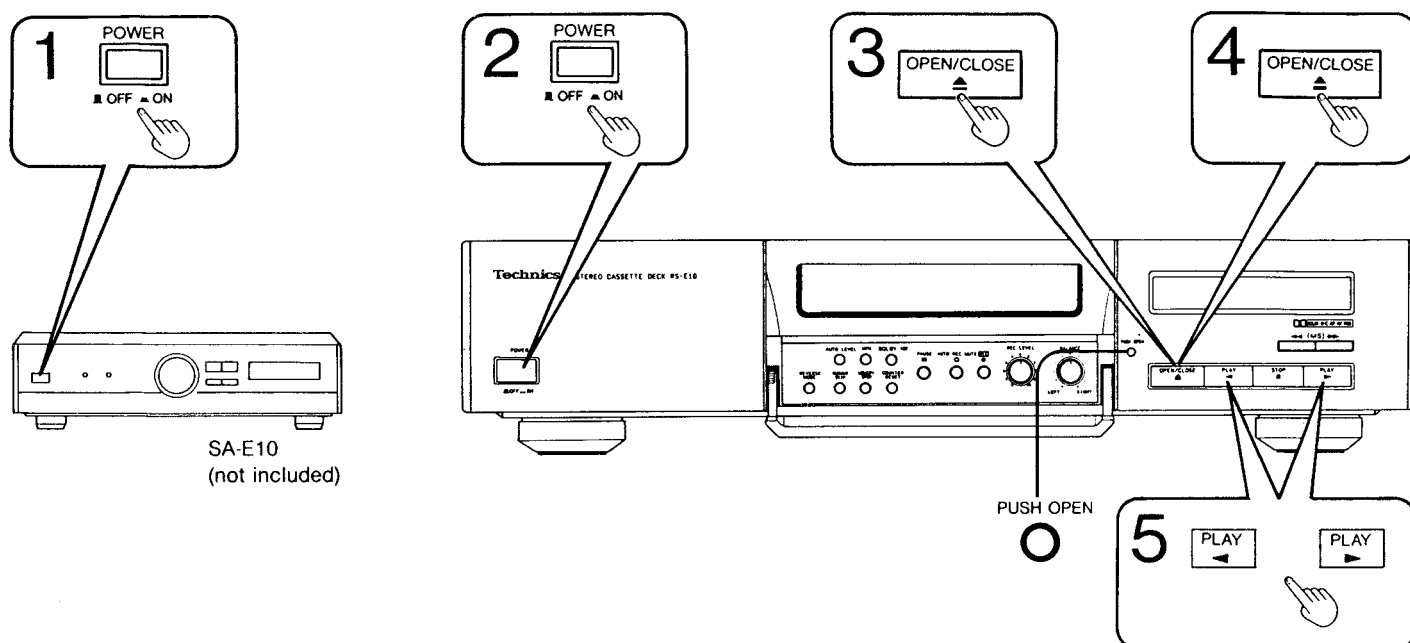
34 Blank skip indicator (B. SKIP)

Illuminates to indicate that this unit is in the blank skip mode.

35 Auto recording level indicator ([AUTO LEVEL])

Illuminates to indicate that this unit is in the auto recording level adjustment mode.

• Basic Operating Procedure for Playback

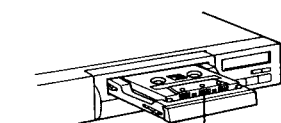


1 Set the power switch of SA-E10 to ON.

2 Set the power switch to ON.

When the power switch of this unit is switched to ON, the power supply can be switched ON and OFF by using the switch on the SA-E10 (not included).

3 Press the cassette tray open/close button to open cassette tray, and then insert the cassette tape.



(The part of the cassette where the tape is exposed should face toward you.)

4 Press the cassette tray open/close button to close cassette tray.

5 Press the playback button.

See page 8 for detailed information of the operation.

To open the panel

Press the panel open button.

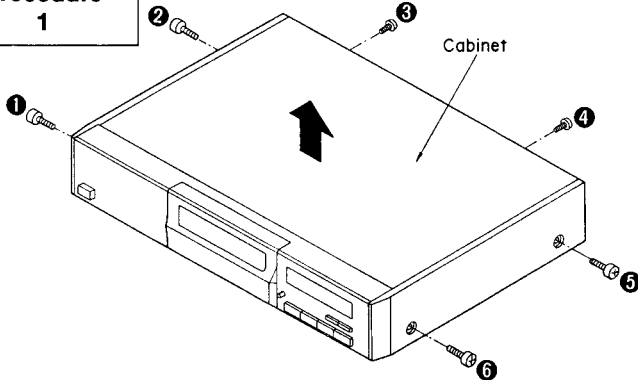
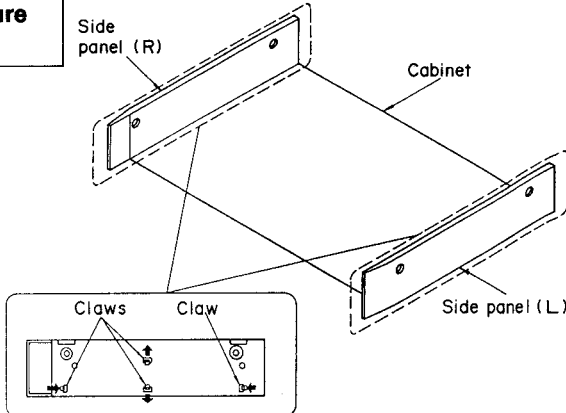
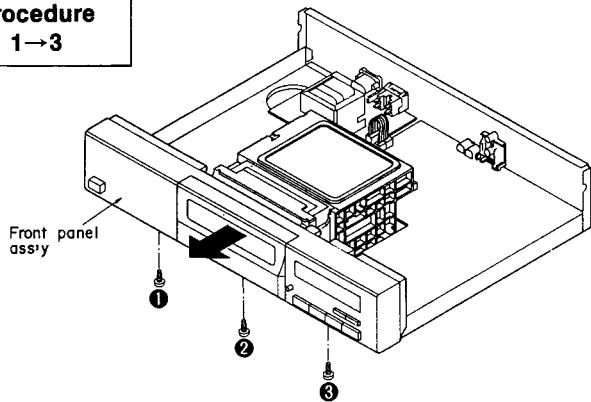
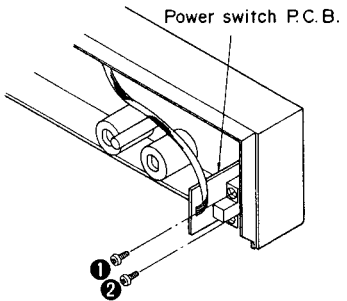
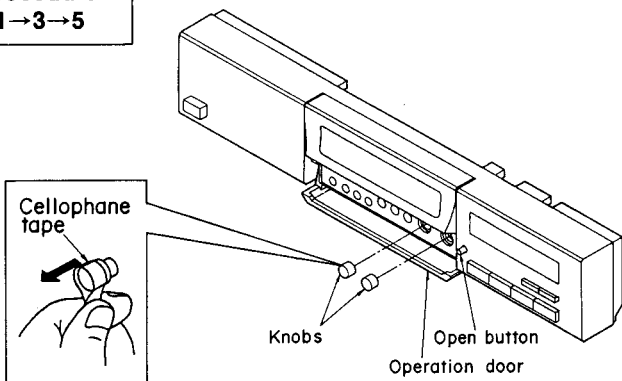
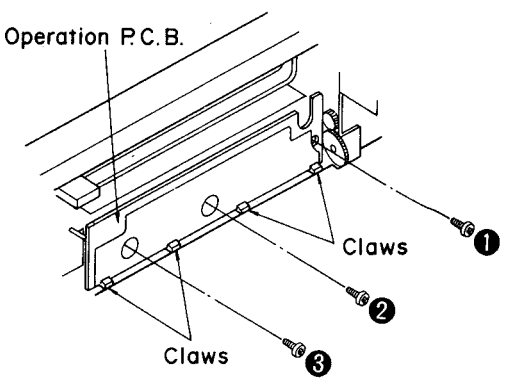
PUSH OPEN

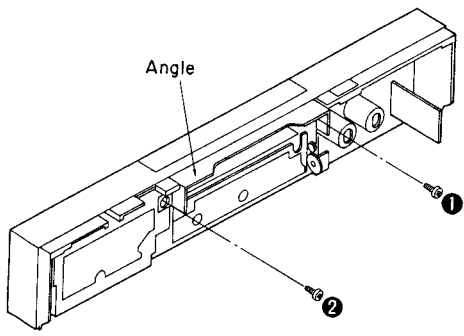
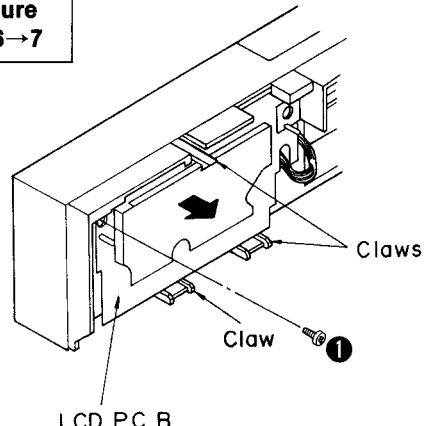
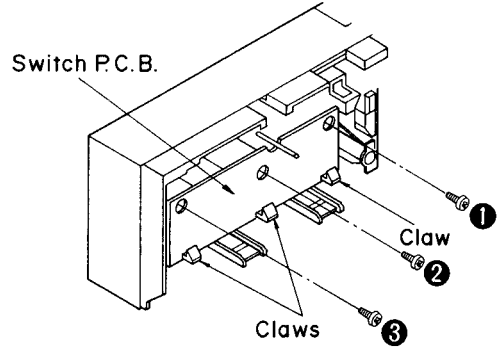
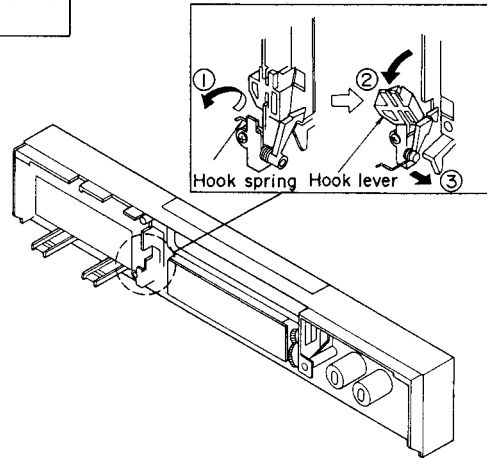
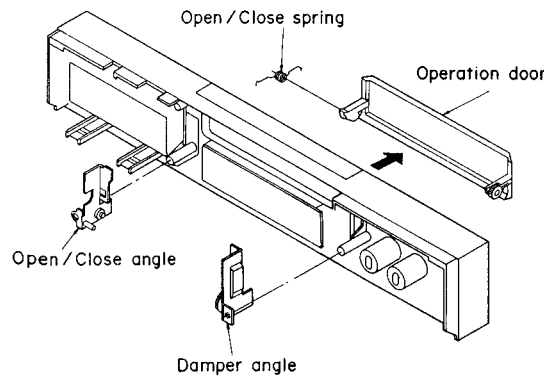
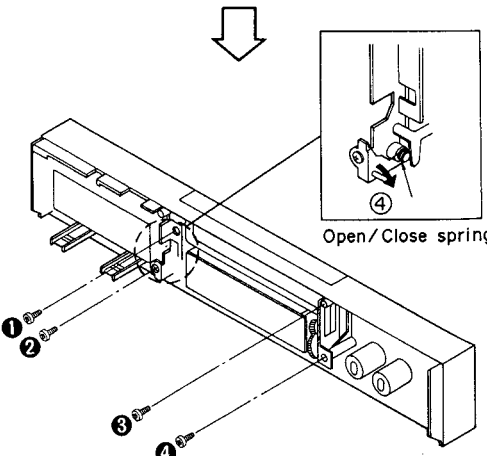


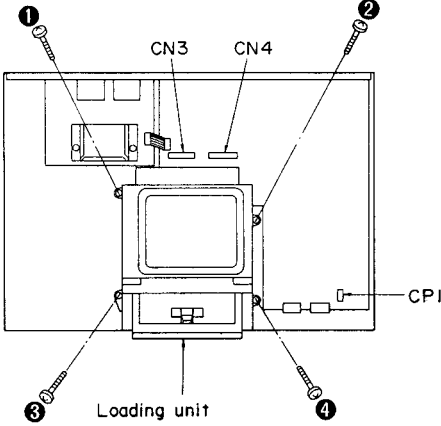
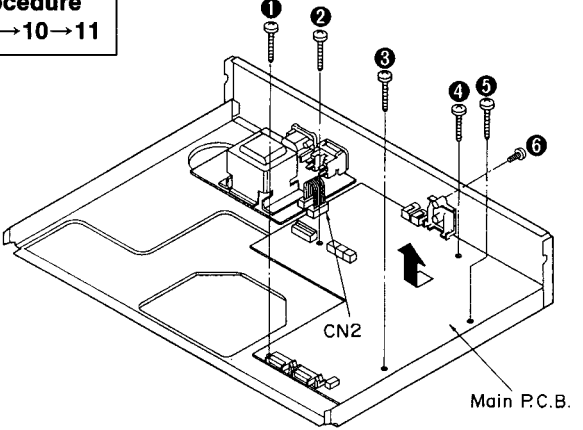
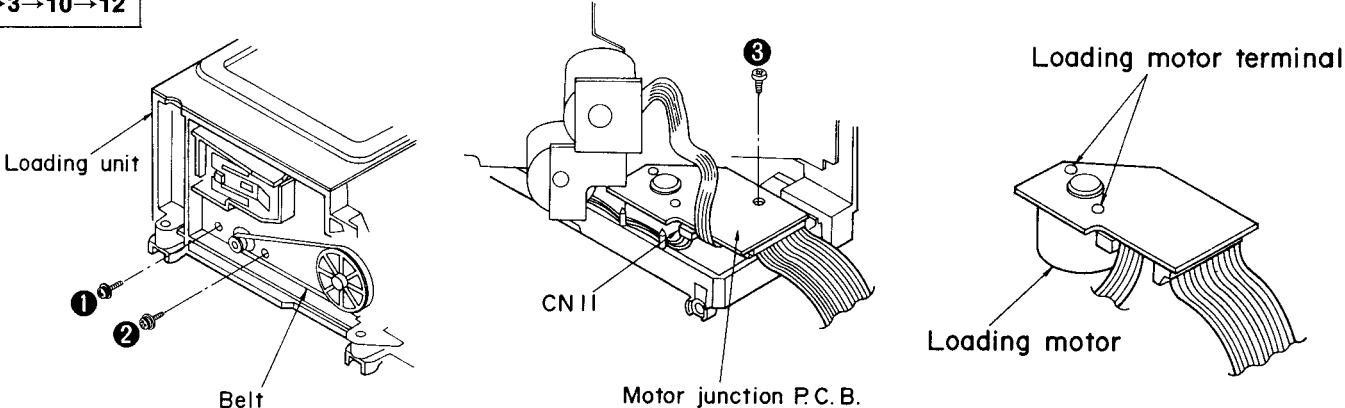
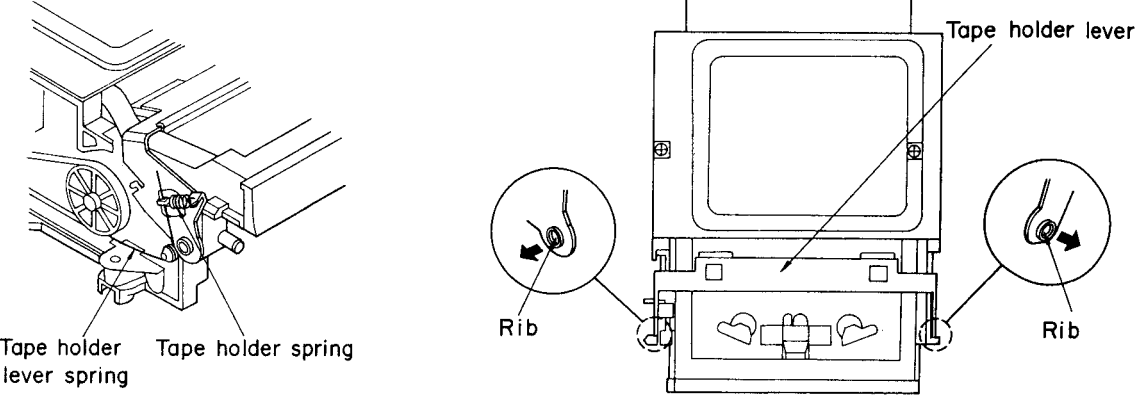
DISASSEMBLY INSTRUCTIONS

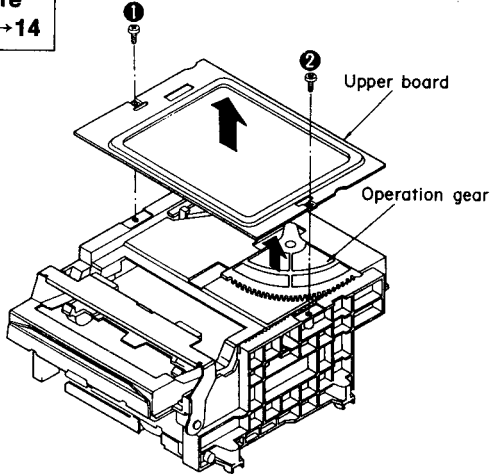
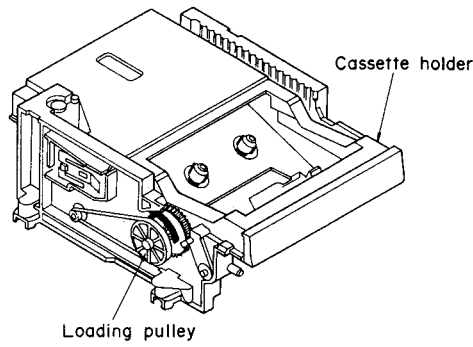
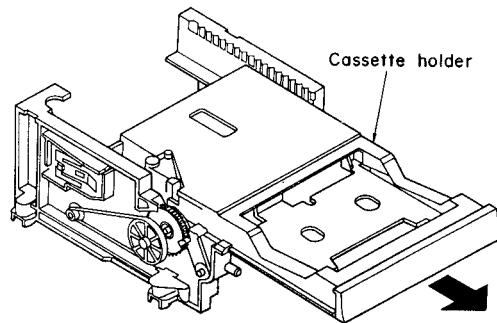
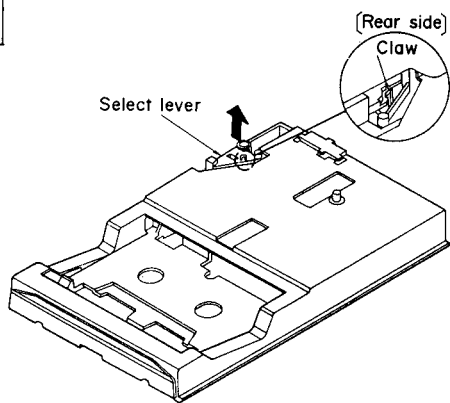
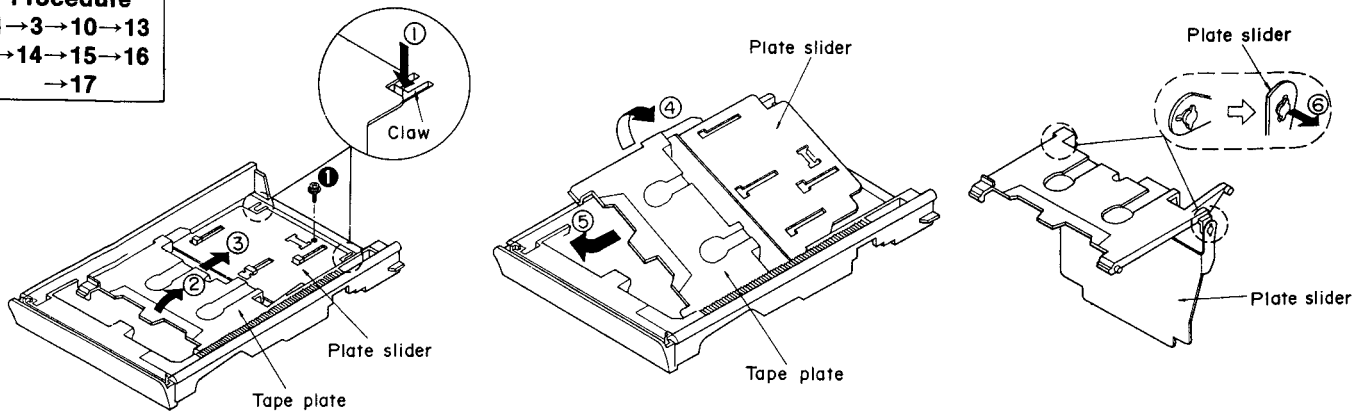
"ATTENTION SERVICER"

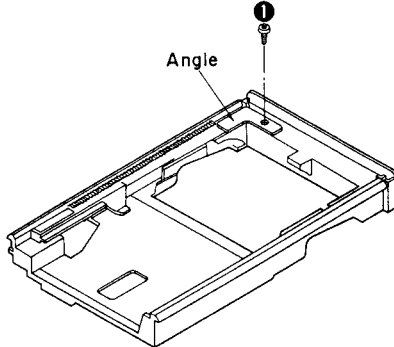
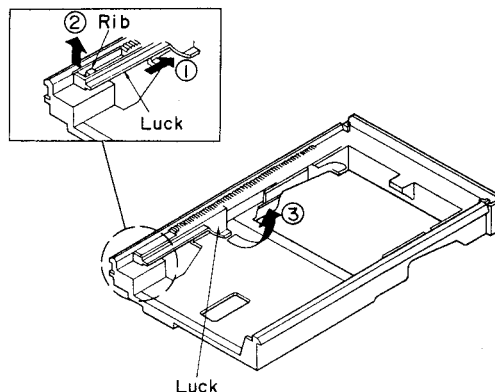
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

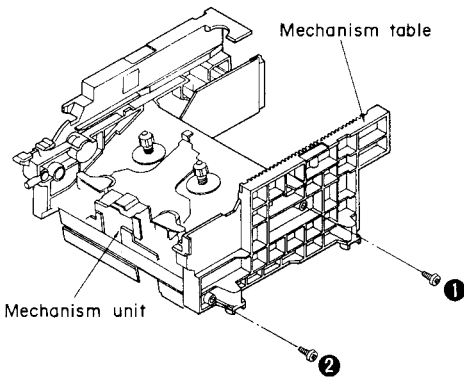
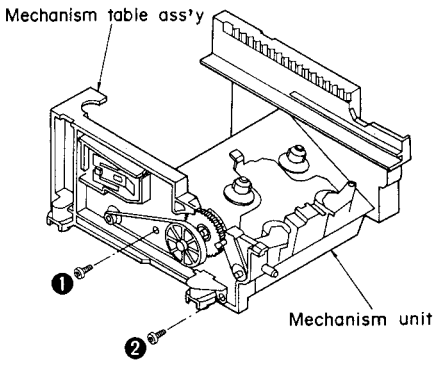
Ref. No. 1	Removal of the cabinet	Ref. No. 2	Removal of the side panels (L) • (R)
Procedure 1	 • Remove the 6 screws (①~⑥).	Procedure 1→2	 • Release the 8 claws.
Ref. No. 3	Removal of the front panel ass'y	Ref. No. 4	Removal of the power switch P.C.B.
Procedure 1→3	 1. Remove the 3 screws (①~③). 2. Remove the front panel ass'y in the direction of arrow.	Procedure 1→3→4	 • Remove the 2 screws (①, ②).
Ref. No. 5	Removal of the operation P.C.B.		
Procedure 1→3→5	 1. Push the open button and open the operation door. 2. Pull out the 2 knobs.	 3. Remove the 3 screws (①~③). 4. Release the 4 claws.	

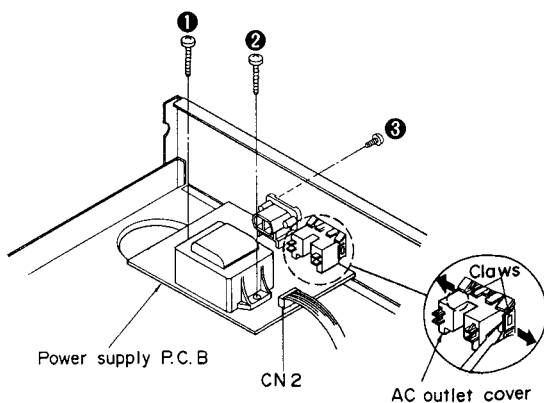
Ref. No. 6	Removal of the angle	Ref. No. 7	Removal of the LCD P.C.B.
Procedure 1→3→6	 • Remove the 2 screws (①, ②).	Procedure 1→3→6→7	 1. Remove the 1 screw (①). 2. Release the 3 claws and remove the LCD P.C.B. in the direction of arrow.
Ref. No. 8	Removal of the switch P.C.B.	Ref. No. 9	Removal of the operation door, open/close angle and damper angel
Procedure 1→3→6→7→8	 1. Remove the 3 screws (①~③). 2. Release the 3 claws.	Procedure 1→3→5→6→7→9	 1. Remove the hook spring in the direction of arrow ①. 2. Remove the hook lever in the direction of arrow ②, ③.
 5. Remove the operation door, open/close angle and damper angle.		 3. Remove the open/close spring in the direction of arrow ④. 4. Remove the 4 screws (①~④).	

Ref. No. 10	Removal of the loading unit	Ref. No. 11	Removal of the main P.C.B.
Procedure 1→3→10	 1. Remove the 2 flat cables of 2 connectors (CN3, CN4). 2. Remove the 1 connector (CP1). 3. Remove the 4 screws (①~④).	Procedure 1→3→10→11	 1. Remove the 1 flat cable of connector (CN2). 2. Remove the 6 screws (①~⑥). 3. Remove the main P.C.B. in the direction of arrow.
Ref. No. 12	Removal of the loading motor and motor junction P.C.B.		
Procedure 1→3→10→12	 1. Remove the 2 screws (①, ②). 2. Remove the belt. 3. Remove the 1 connector (CN11). 4. Remove the 1 screw (③). 5. Unsolder the 2 terminals of loading motor.		
Ref. No. 13	Removal of the tape holder lever		
Procedure 1→3→10→13	 1. Remove the tape holder lever spring and tape holder spring. 2. Extend the tape holder lever in the direction of arrow, and remove it from rib.		

Ref. No. 14	Removal of the upper board and operation gear	Ref. No. 15	Removal of the cassette holder
Procedure 1→3→10→14	 • Remove the 2 screws (①, ②).	Procedure 1→3→10→13 →14→15	 1. Turn the loading pulley in the direction of arrow, and slide the cassette holder in front.
Ref. No. 16	Removal of the select lever	 2. Move the cassette holder fully in the direction of arrow.	
Procedure 1→3→10→13 →14→15→16	 1. Release the 1 claw. 2. Remove the select lever in the direction of arrow.		
Ref. No. 17	Removal of the tape plate and plate slider	 4. Remove the tape plate and plate slider in the direction of arrow ④, ⑤. 5. Extend and remove the plate slider in the direction of arrow ⑥.	
Procedure 1→3→10→13 →14→15→16 →17	1. Remove the 1 screw (①). 2. Push the 1 claw in the direction of arrow ①. 3. Lift the tape plate in the direction of arrow ②, and slide it in the direction of arrow ③.		

Ref. No. 18	Removal of the luck		
Procedure 1→3→10→13 →15→16→17 →18			
	1. Remove the 1 screw (❶). 2. Remove the angle. 3. Slide the luck in the direction of arrow ❶.	4. Lift the lever in the direction of arrow ❷, and remove it from rib. 5. Remove the luck in the direction of arrow ❸.	

Ref. No. 19	Removal of the mechanism table	Ref. No. 20	Removal of the mechanism table ass'y
Procedure 1→3→10→13 →14→15→19		Procedure 1→3→10→13 →14→15→20	
	• Remove the 2 screws (❶, ❷).		• Remove the 2 screws (❶, ❷).

Ref. No. 21	Removal of the power supply P.C.B.		
Procedure 1→21			
	1. Remove the 1 flat cable of connector (CN2). 2. Remove the 3 screws (❶~❸). 3. Release the 2 claws of the AC outlet cover.		

MEASUREMENTS AND ADJUSTMENTS

Measurement Condition

- Rec. level control; Maximum
- Recording-balance control; Center
- Reverse-mode selector switch; $\longleftrightarrow$
- Dolby NR switch; Off

- 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

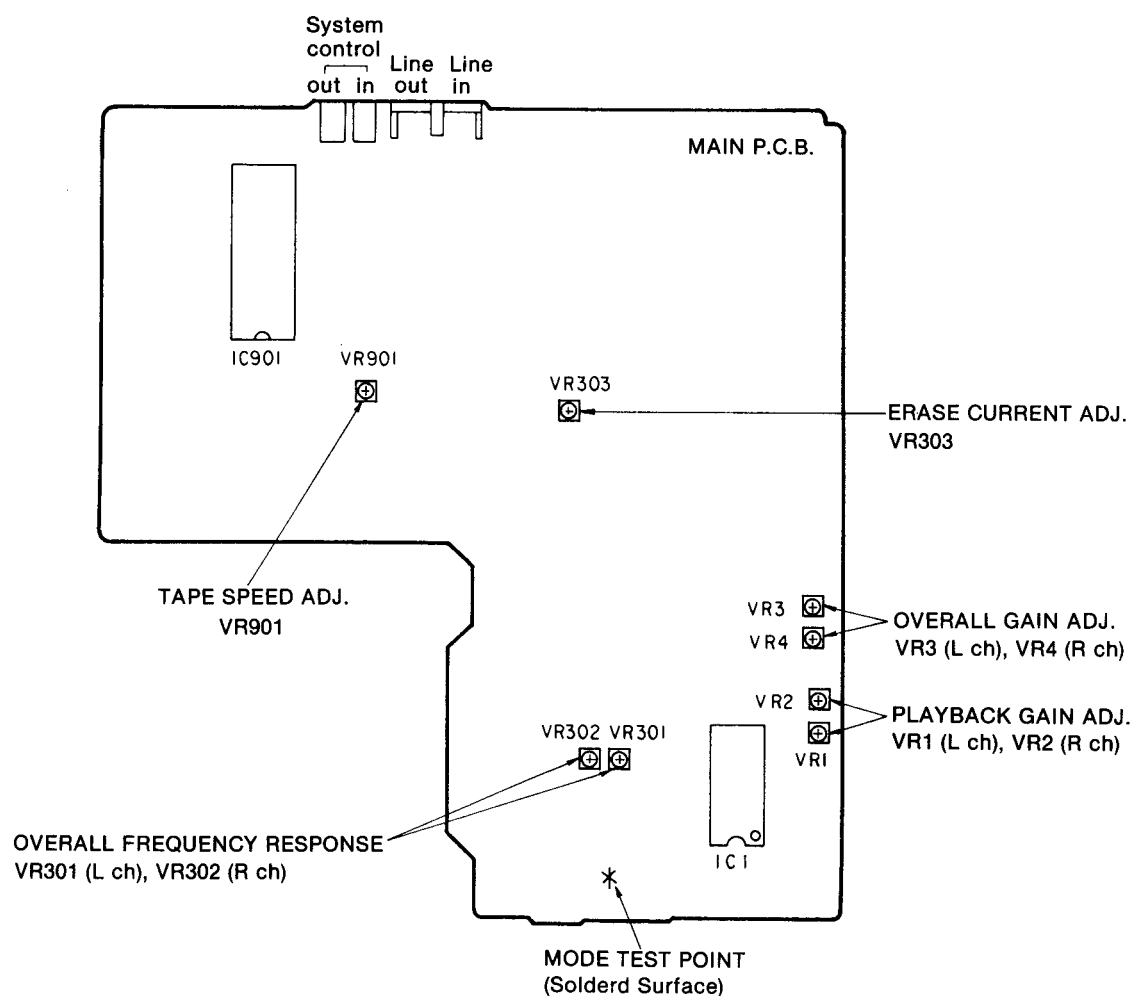
- ATT (Attenuator)
- Resistor (600Ω)

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

Adjustment Points



HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the output of the R-CH are maximized.
2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

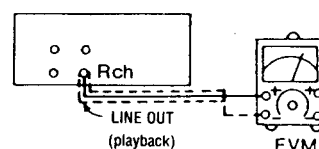


Fig. 1

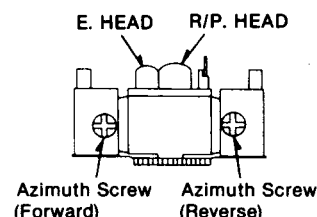


Fig. 2

TAPE SPEED ADJUSTMENT

1. Playback the middle portion of the test tape (QZZCWAT).
2. Adjust the **VR901** so that the output is within the standard value.

Standard value: $3000 \pm 15\text{Hz}$

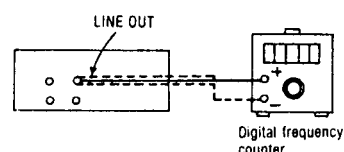


Fig.3

PLAYBACK GAIN ADJUSTMENT

1. Playback the gain adjusted portion (315 Hz, 0 dB) of the test tape (QZZCFM).
2. Adjust **VR1** (L-CH) and **VR2** (R-CH) so that the output is within the standard value.

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

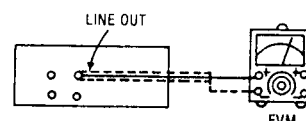


Fig.4

PLAYBACK FREQUENCY RESPONSE

1. Playback the frequency response portion (315 Hz, 12.5 kHz ~ 63 Hz, -20 dB) 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.

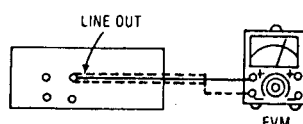


Fig.5

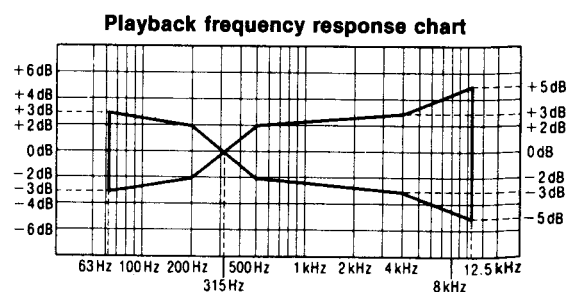


Fig.6

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 (1 kHz, -24 dB). 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 **VR3** (L-CH) and **VR4** (R-CH).
6. Repeat the step 2 ~ 5 above until the output is within the standard value.

Standard value: 0.4V $\pm$ 0.5dB

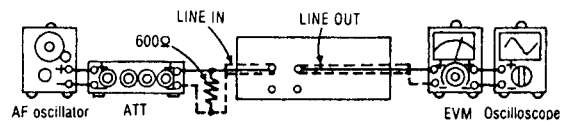


Fig. 7

OVERALL FREQUENCY RESPONSE

1. Insert the a Normal blank test tape (QZZCRA) and set the unit to the Record Pause mode.
2. Apply a reference input signal (1 kHz, -24 dB) through an attenuator.
3. Attenuate the signal by 20 dB and adjust the frequency from 50 Hz ~ 10.0kHz.
4. Record the frequency sweep.
5. Playback the recorded signal and assure that it is within the range shown in **Fig.8** in comparison to the reference frequency (1 kHz).
6. If it is not within the standard range, adjust **VR301** (L-CH) and **VR302** (R-CH) so that the frequency level is within the standard range.
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.9**.

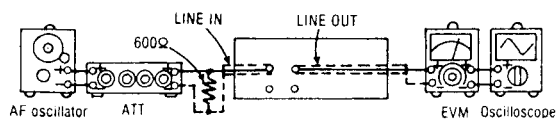


Fig.10

Normal Overall frequency response chart (NR OUT)

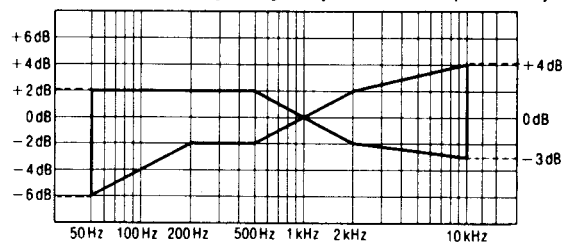


Fig.8

CrO₂-Metal Overall frequency response chart (NR OUT)

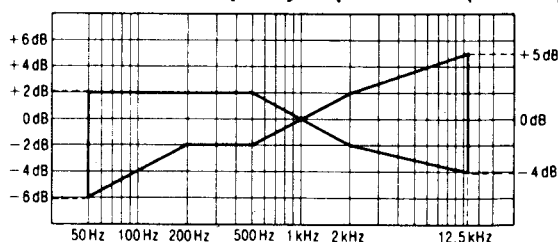


Fig.9

ERASE CURRENT ADJUSTMENT

1. Insert the Metal blank test tape (QZZCRZ) and set the unit to the Record Pause mode.
2. Adjust **VR303** so that the output between **TP3** and GND is within the standard value.

Standard value: 190 $\pm$ 5mA (Metal)...EVM Reading: 190 $\pm$ 5mV

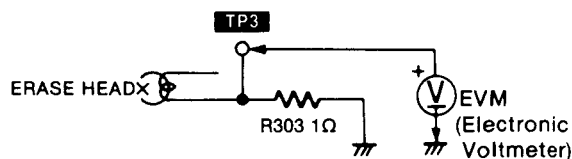


Fig. 11

FUNCTIONS OF IC TERMINALS

• IC501 (LC7583A): LCD DRIVE

Pin No.	Mark	I/O	Description
1 } 23	S1 } S23	O	Serial data indication segment output
24	OPEN	—	Not connected
25 } 34	S24 } S33	O	Serial data indication segment output
35	S34	O	$\overline{\text{DSP1}}$, $\overline{\text{DSP2}}$ indication segment output
36 } 47	AD 1 } AD 12	O	ADC (RI, LI) indication segment output
48	AD 13	O	(Not used, open)
49 50	COM 1 COM 2	O	Common driver output
51 52	RI LI	I	AD converter input

Pin No.	Mark	I/O	Description
53 54	$\overline{\text{DSP 1}}$ $\overline{\text{DSP 2}}$	I	Direct indication input terminal (Not used, connected to GND)
55	VREF	I	Reference voltage input
56	V _{DD}	I	Power supply terminal
57	$\overline{\text{RES}}$	I	Reset signal input
58	TEST 2	O	(Not used, open)
59	V _{SS}	—	GND terminal
60	TEST 1	—	(Not used, connected to GND)
61	OSC	I	Clock signal input
62	CE	I	Chip enable terminal for serial data transfer
63	CL	I	Synchronism clock signal for serial data transfer
64	DI	I	Serial data transfer terminal

• IC901 (M50941-576SP): MICROCOMPUTER

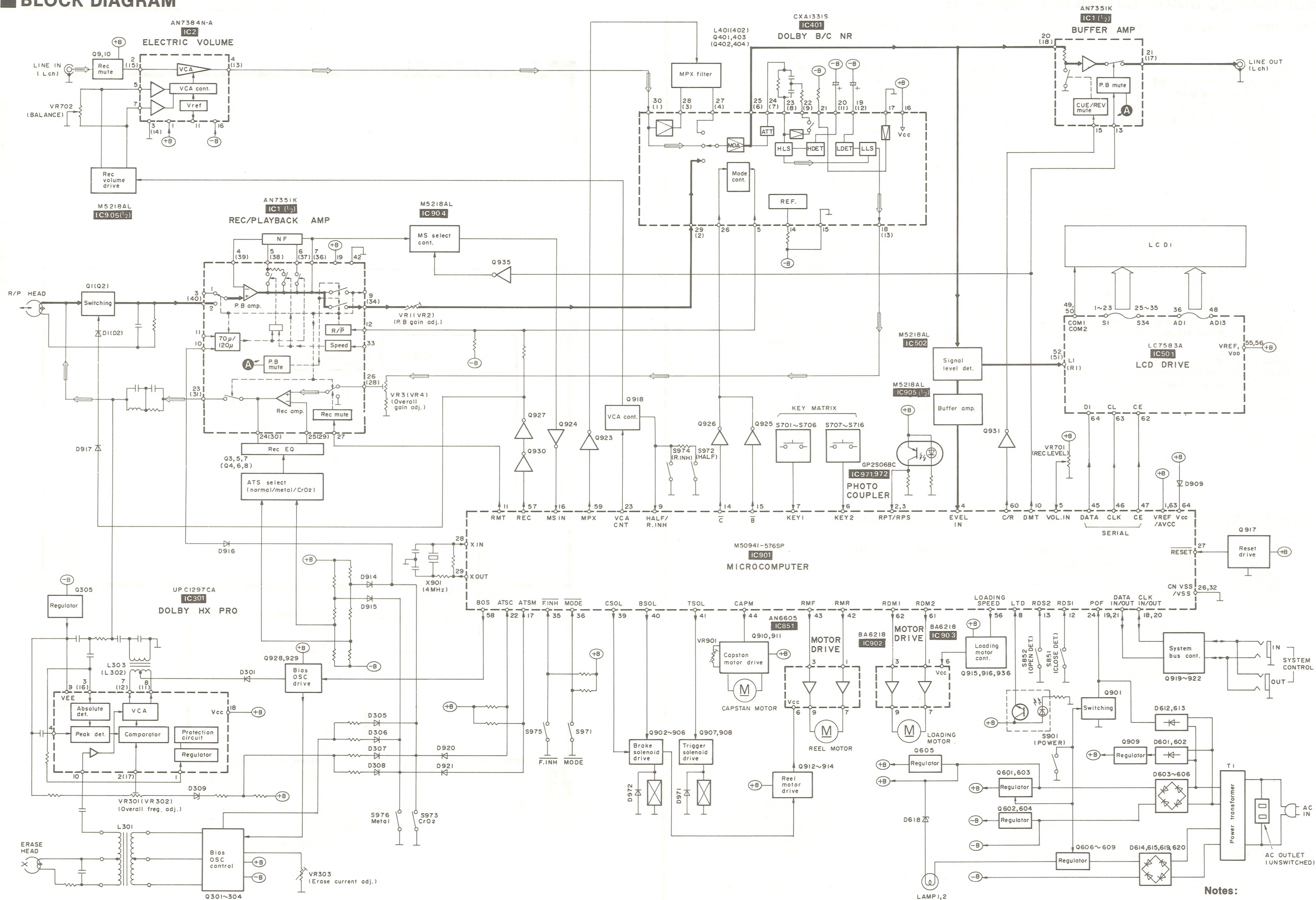
Pin No.	Mark	I/O	Description
1	VREF	I	Reference voltage input
2	RPT	I	Rotary pulse det. signal
3	RPS		
4	EVEL IN	I	Signal level det.
5	VOL IN	I	Volume variable voltage level input
6	KEY 2	I	Key switch input
7	KEY 1		
8	LTD	I	Leader tape det. signal
9	HALF/ R. INH	I	Cassette half det. switch signal/R. rec. inh.
10	DMT	O	Line output muting control terminal ("H": ON, "L": OFF)

Pin No.	Mark	I/O	Description
11	RMT	O	Rec. muting control out put terminal ("H": ON, "L": OFF)
12	RDS 1	I	Disc tray OPEN/CLOSE det. signal
13	RDS 2		
14	$\overline{\text{C}}$	O	Dolby NR mode select output ("L": Dolby C, "H": others)
15	$\overline{\text{B}}$	O	Dolby NR mode select output ("L": Dolby B, "H": others)
16	MSIN	I	Playback select signal output ("L": ON, "H": OFF)
17	ATSM	I	Auto tape select signal input
18	CLK OUT	O	Bass clock signal output
19	DATA OUT	O	Bass data signal output

Pin No.	Mark	I/O	Description
20	CLK IN	I	Bass clock signal input
21	DATA IN	I	Bass data signal input
22	ATSC	I	Auto tape select signal input
23	VCA CNT	O	VCA control signal
24	POF	I	AC POWER det. input
25	INT2	—	Not connected
26	CN V _{SS}	—	GND terminal
27	RESET	I	Reset signal input
28	X IN	I	Clock oscillator terminal (4 MHz)
29	X OUT	O	
30	XC IN	I	(Not used, connected to GND)
31	XC OUT	O	(Not used, open)
32	V _{SS}	—	GND terminal
33	ϕ	O	System clock signal (Not used, open)
34	R3	—	Not connected
35	F. INH	I	F. rec. inh. signal ("H": OFF, "L": ON)
36	MODE	I	Mechanism mode switch ("H": OFF, "L": ON)
37	RO	—	Not connected
38	VP	I	Reference voltage $\ominus$
39	C SOL	O	Brake solenoid keep control signal ("H": ON)
40	B SOL	O	Brake solenoid trigger control signal ("H": ON)

Pin No.	Mark	I/O	Description
41	T SOL	O	Trigger solenoid control signal ("H": ON)
42	RMR	O	Reel motor control
43	RMF		
44	CAPM	O	Capstan motor control ("H": ON, "L": OFF)
45	SER DATA	O	Serial data transfer terminal
46	SER CLK	O	Synchronism clock signal for serial data
47	SER CE	O	Chip enable terminal for serial data transfer
48 }	P06 }	—	Not connected
55	P00, P27		
56	LOADING SPEED	O	Loading speed control signal
57	REC	O	Rec. mode signal ("H": Rec., "L": Others)
58	BOS	O	Bias oscillator ON/OFF control ("H": ON, "L": OFF)
59	MPX	O	Multiplex ON/OFF control ("L": ON, "H": OFF)
60	C/R	O	Cue/rev mode control ("H": Cue/rev, "L": Others)
61	RDM 2	O	Loading motor drive signal
62	RDM 1		
63	A V _{CC}	I	Power supply terminal
64	V _{CC}	I	Power supply terminal

BLOCK DIAGRAM



Notes:

- Playback signal
- - - Recording signal

SCHEMATIC DIAGRAM (Parts list on pages 32~35.)

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

Notes:

- S701: Stop switch (■ STOP).
- S702: Fast-forward switch (MS ►►).
- S703: Rewind switch (◄◄ MS).
- S704: Forward-side playback switch (► PLAY).
- S705: Reverse-side playback switch (◄ PLAY).
- S706: Cassette tray open/close switch (▲ OPEN/CLOSE).
- S707: Record switch (● REC).
- S708: Automatic-record-muting switch (● AUTO REC MUTE).
- S709: Pause switch (■ PAUSE).
- S710: Auto recording level switch (AUTO LEVEL).
- S711: Tape counter reset switch (COUNTER RESET).
- S712: Memory-stop switch (MEMORY STOP).
- S713: Blank skip switch (BLANK SKIP).
- S714: Reverse-mode switch (REVERSE MODE; ►, ◄).
- S715: Dolby noise-reduction switch (Dolby NR; B, C).
- S716: Multiplex filter switch (MPX).
- S851: Disc tray close detection switch in "off" position.
- S852: Disc tray open detection switch in "off" position.
- S901: Power switch in "on" position (PP area: POWER/ ■ OFF ■ ON, Others areas: POWER/ ■ standby ■ ON).
- S971: Mode switch in "off" position.
- S972: Cassette half detection switch in "off" position.
- S973: ATS (CrO₂) switch in "off" position.
- S974: Reverse rec. inhibit switch in "off" position.
- S975: Forward rec. inhibit switch in "off" position.
- S976: ATS (Metal) switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)

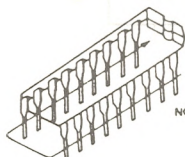
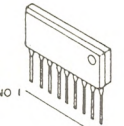
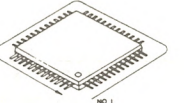
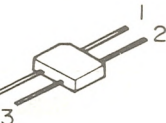
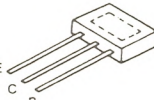
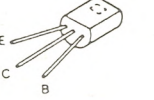
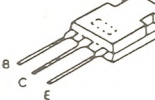
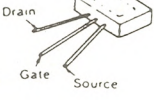
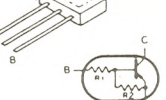
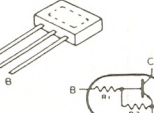
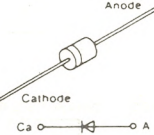
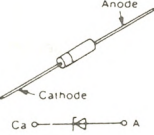
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode of deck 2 with volume control at minimum position otherwise specified.
() Voltage values at record mode.
- For measurement us EVM.
- Important safety notice
Components identified by ▲ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- (———— +B ————) indicates +B (bias).
- (———— -B ————) indicates -B (bias).
- (————) indicates the flow of the playback signal.
- (————) indicates the flow of the record signal.
- The supply part number is described alone in the replacement parts list.

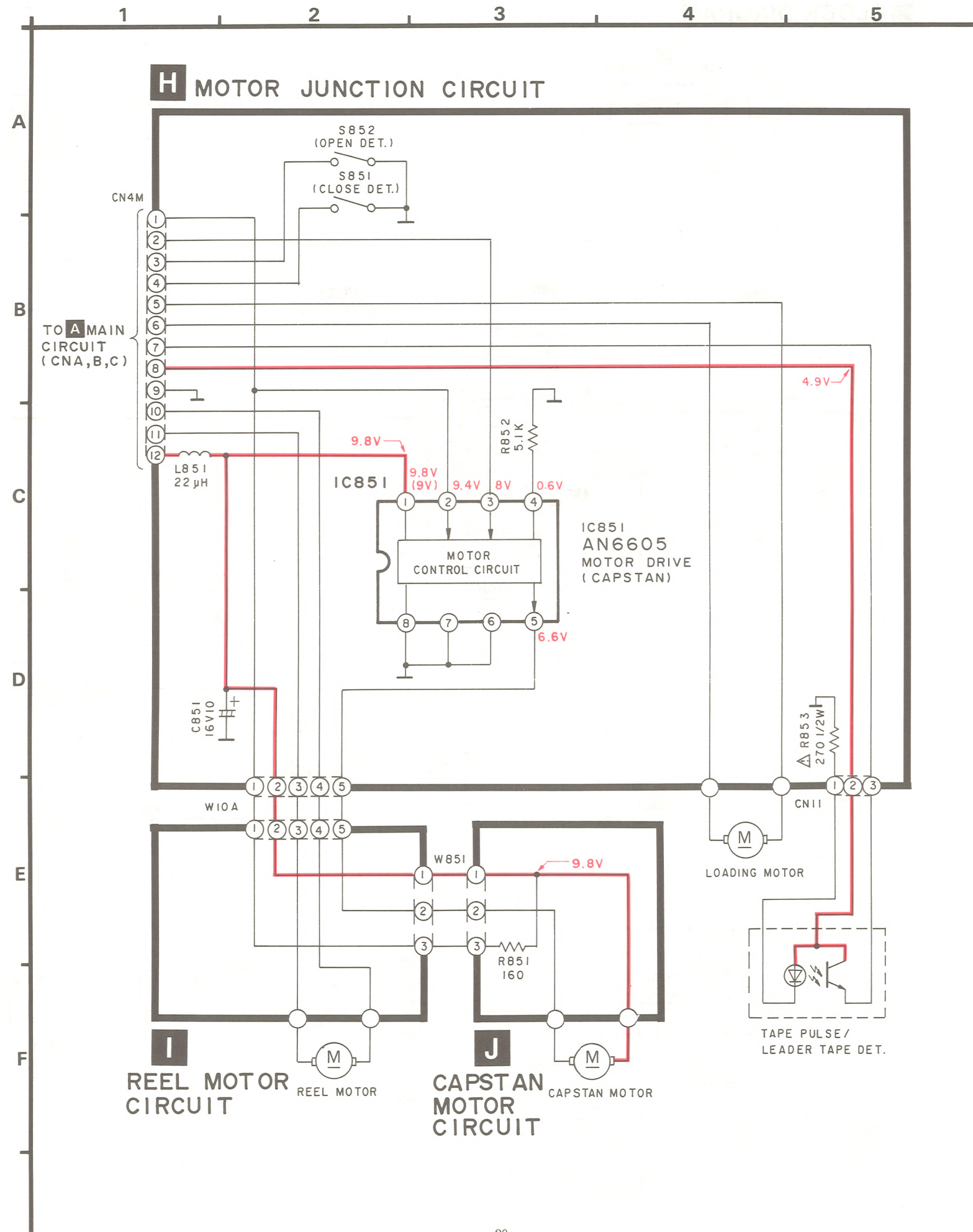
Ref. No.	Production Part No.	Supply Part No.
IC2	AN7384N-A	AN7384
IC502, 904, 905	M5218AL	M5218L

* Caution !

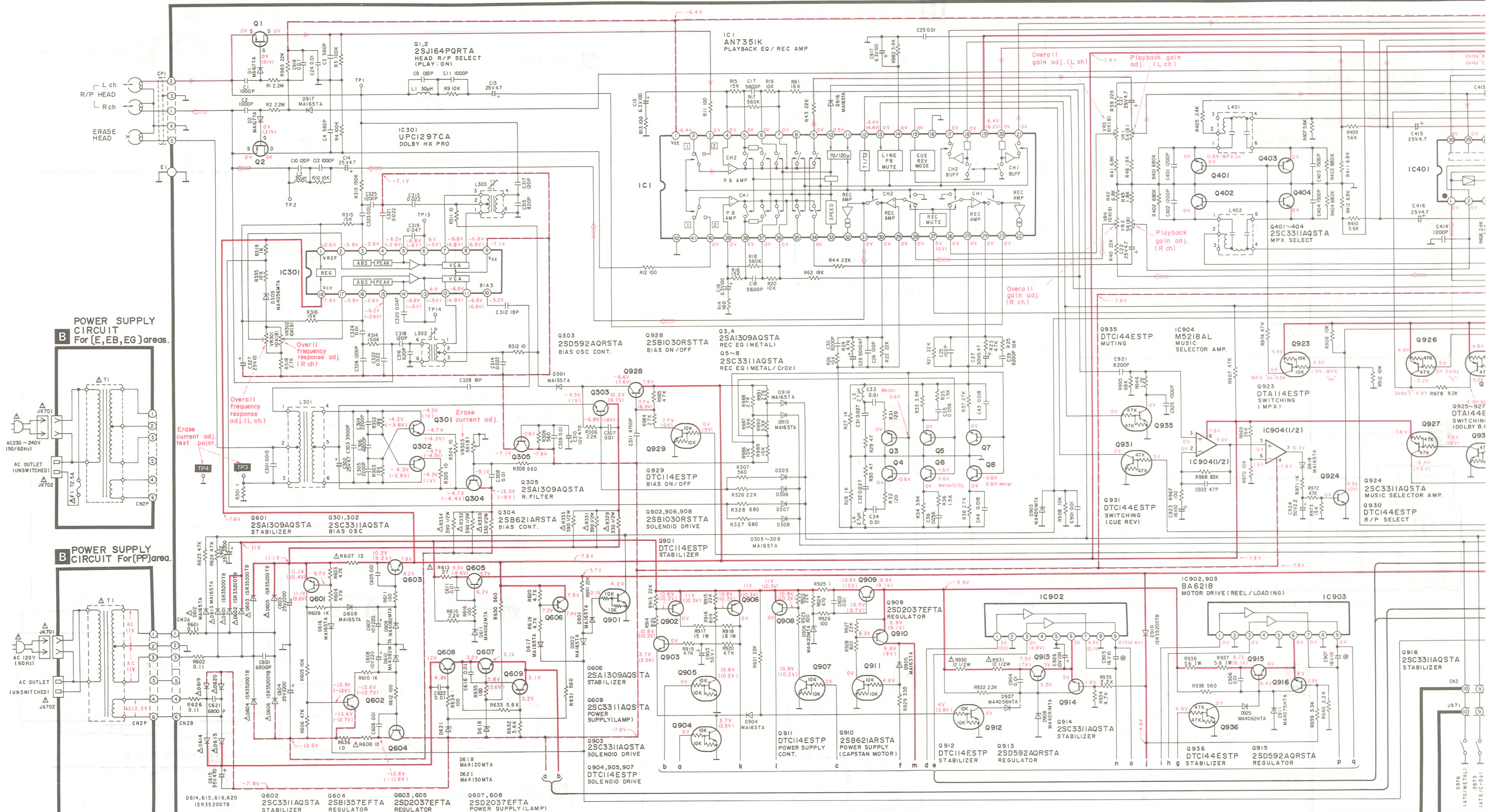
- IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.
- * Cover the parts boxes made of plastics with aluminum foil.
- * Ground the soldering iron.
- * Put a conductive mat on the work table.
- * Do not touch the legs of IC or LSI with the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

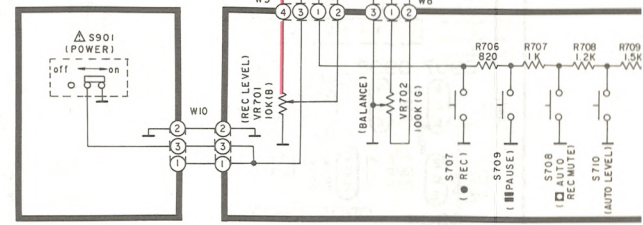
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

	<table><tr><td>AN6605</td><td>8P</td></tr><tr><td>AN7384N-A</td><td>16P</td></tr><tr><td>UPC1297CA</td><td>18P</td></tr><tr><td>CXA1331S</td><td>30P</td></tr><tr><td>AN7351K</td><td>42P</td></tr><tr><td>M50941-576SP</td><td>64P</td></tr></table>	AN6605	8P	AN7384N-A	16P	UPC1297CA	18P	CXA1331S	30P	AN7351K	42P	M50941-576SP	64P	<table><tr><td>M5218AL</td><td>8P</td></tr><tr><td>BA6218</td><td>9P</td></tr></table> 	M5218AL	8P	BA6218	9P	<table><tr><td>LC7583A</td><td>64P</td></tr></table> 	LC7583A	64P	
AN6605	8P																					
AN7384N-A	16P																					
UPC1297CA	18P																					
CXA1331S	30P																					
AN7351K	42P																					
M50941-576SP	64P																					
M5218AL	8P																					
BA6218	9P																					
LC7583A	64P																					
2SA1309AQSTA, 2SC3311AQSTA, 2SB1030RSTTA 	2SB621ARSTA, 2SD592AQRSTA 	2SB1357EFTA, 2SD2037EFTA 	2SJ164PQRTA 	DTA114ESTP, DTA144ESTP 																		
DTC114ESTP, DTC144ESTP 		MA167TA, MA165TA, 1SR35200TB, MA700TA, RVD1SS133TA		MA4056MTA, MA4056HTA, MA4082MTA, MA4091MTA, MA4062MTA, MA4075HTA, MA4120MTA, MA4062HTA, MA4051MTA, MA4150MTA																		



A MAIN CIRCUIT

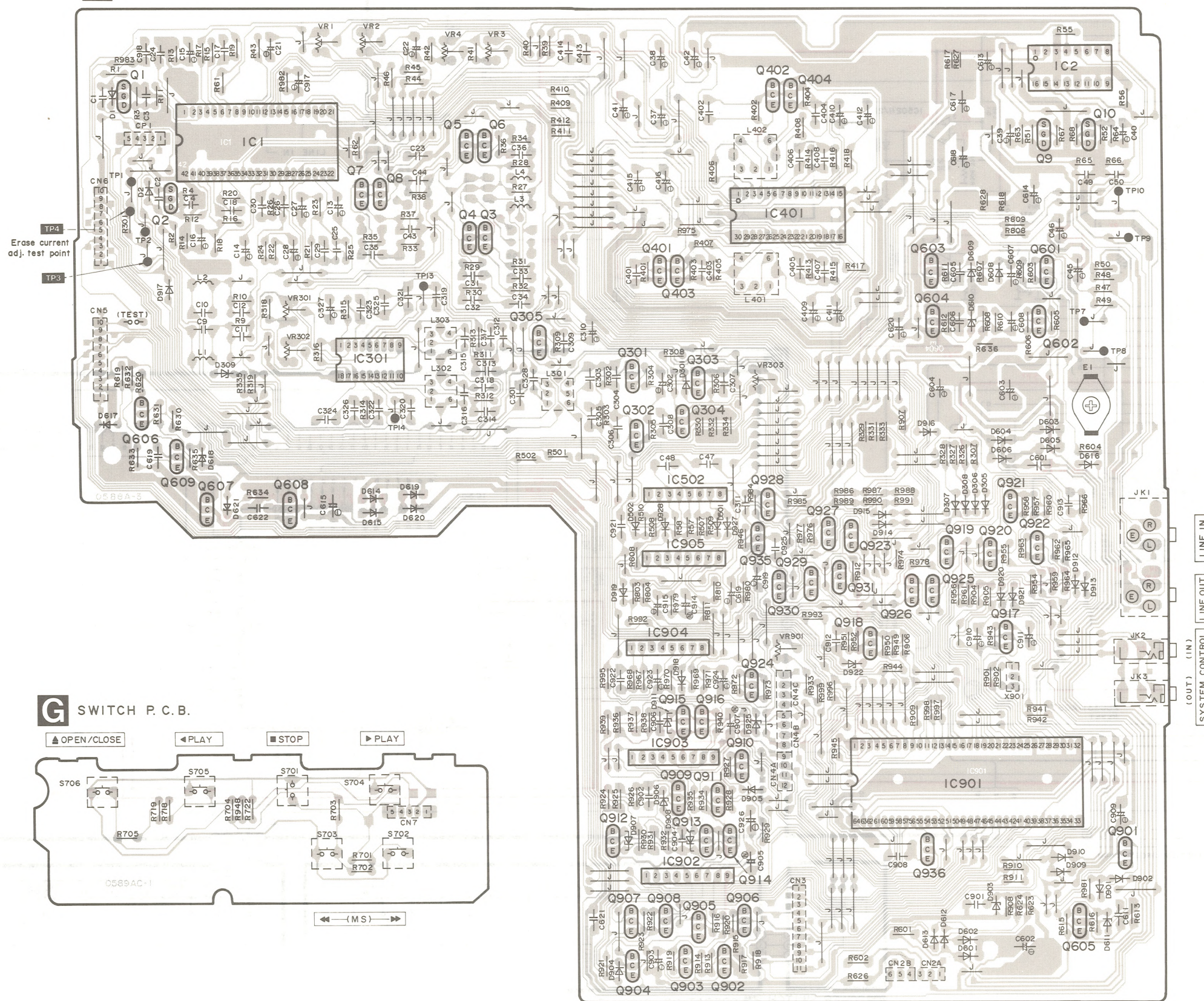
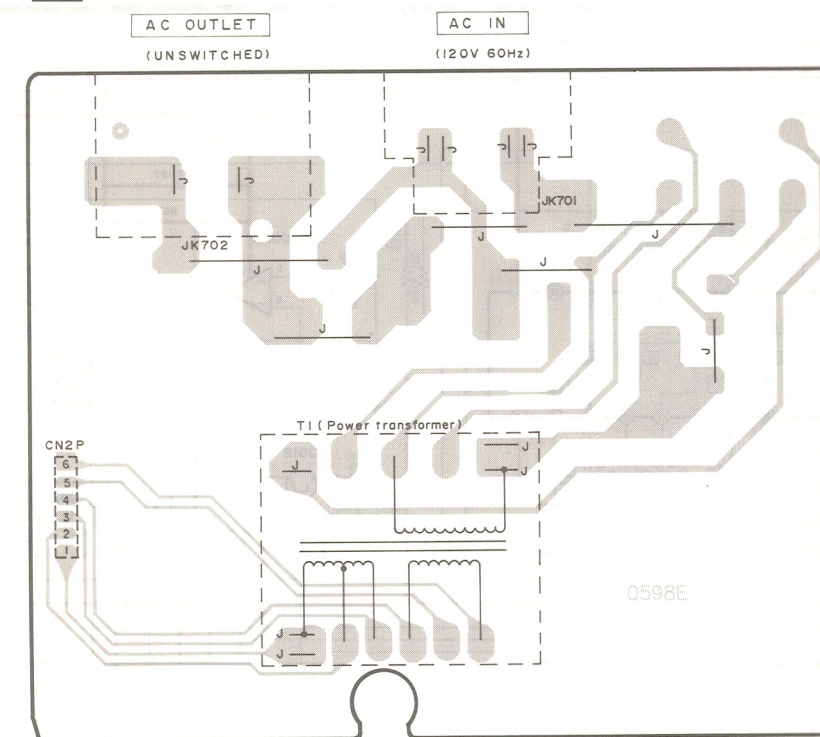
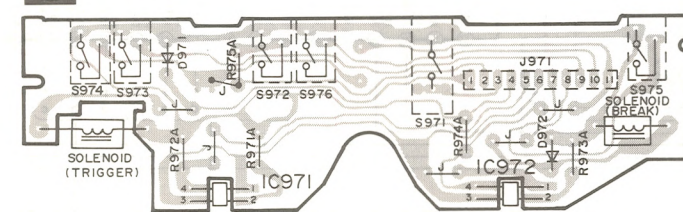
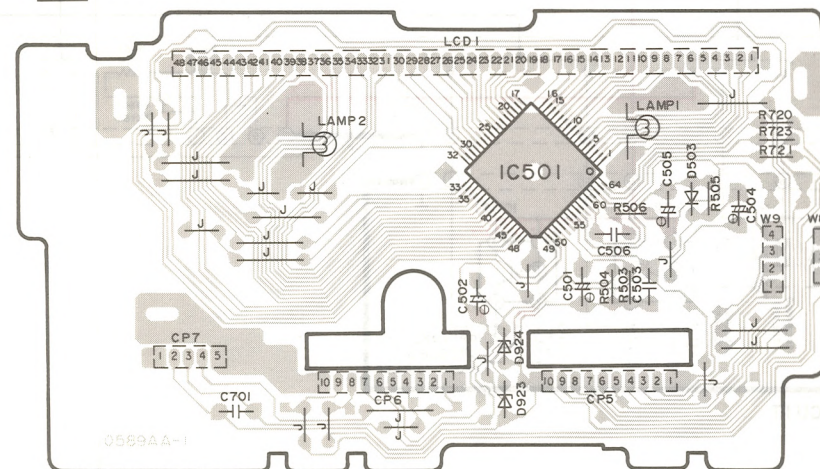


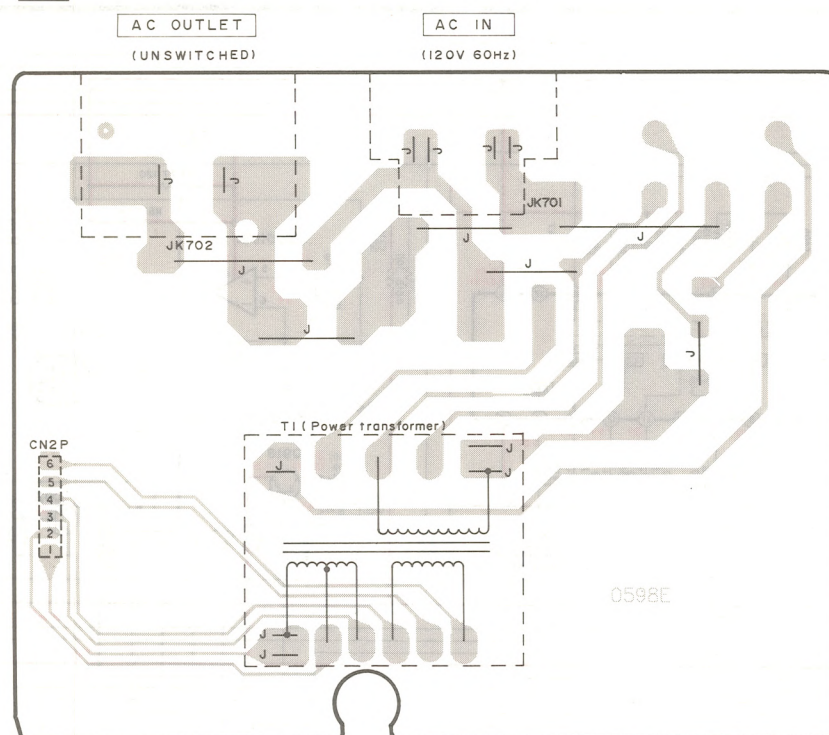
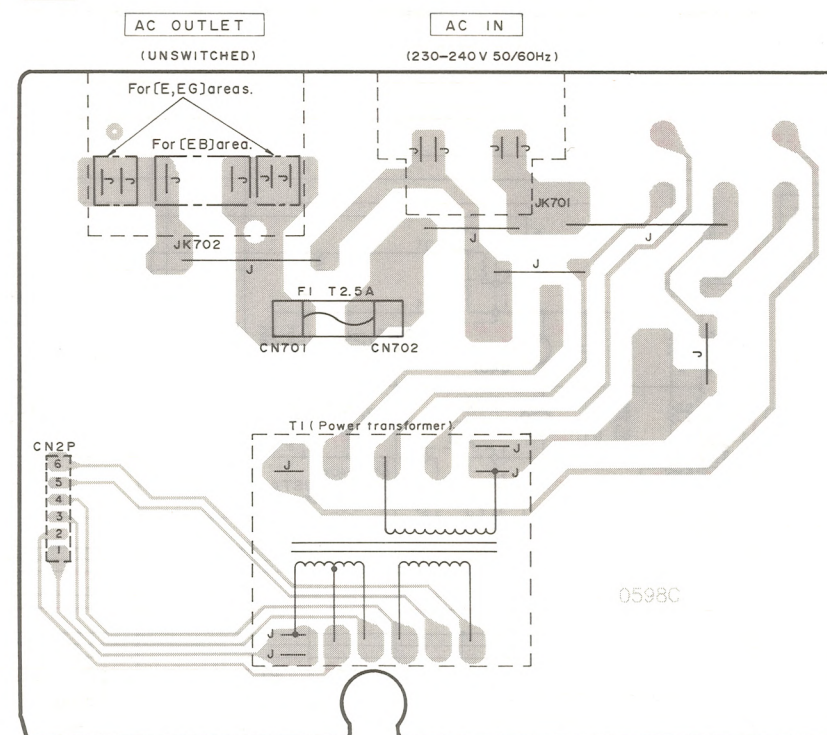
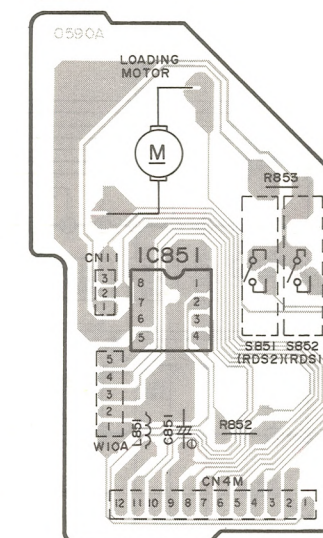
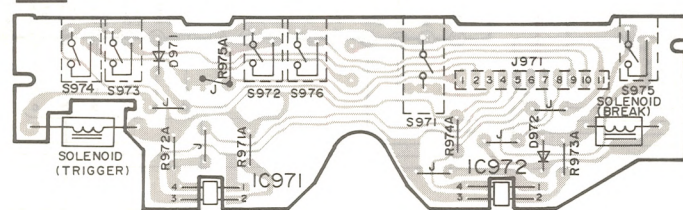
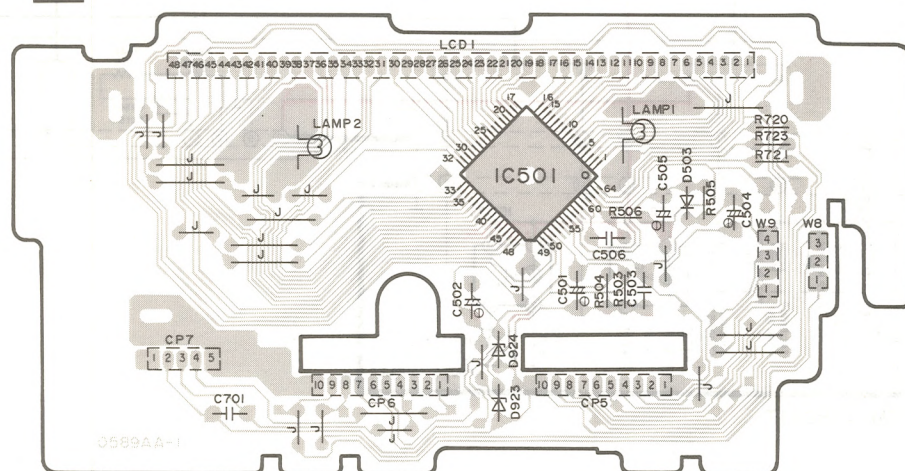
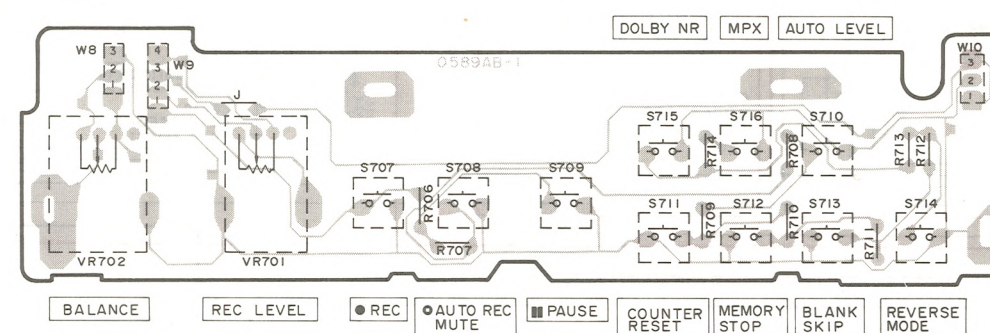
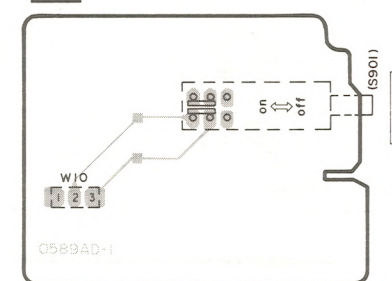
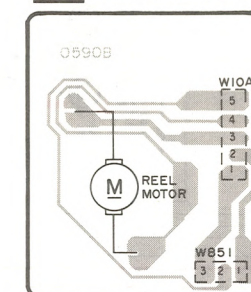
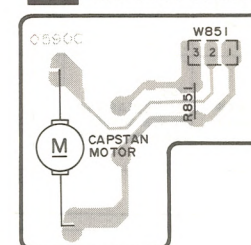


F OPERATION CIRCUIT

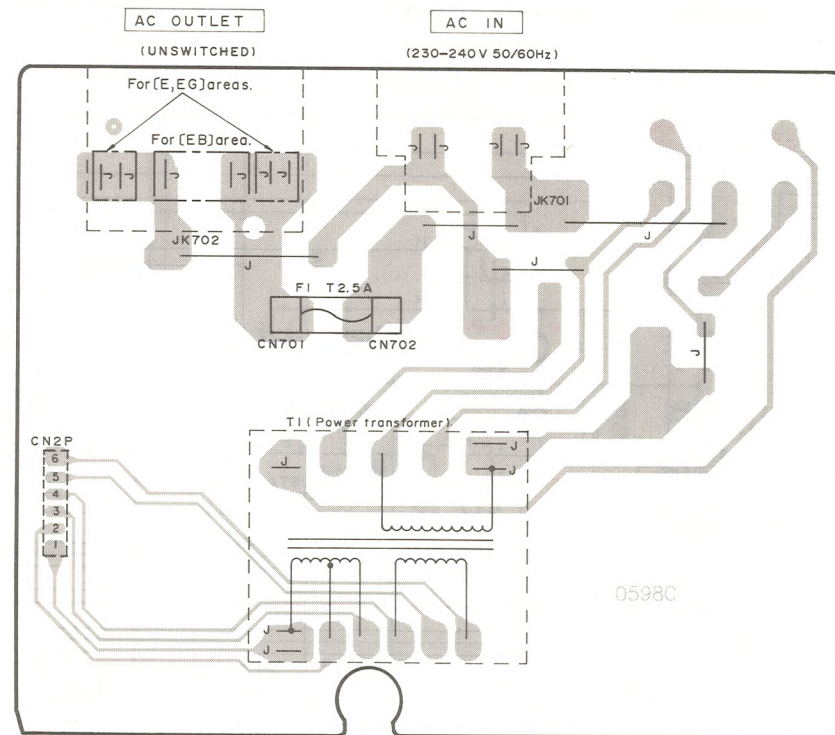
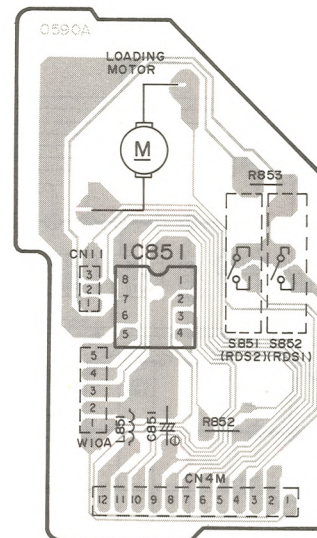
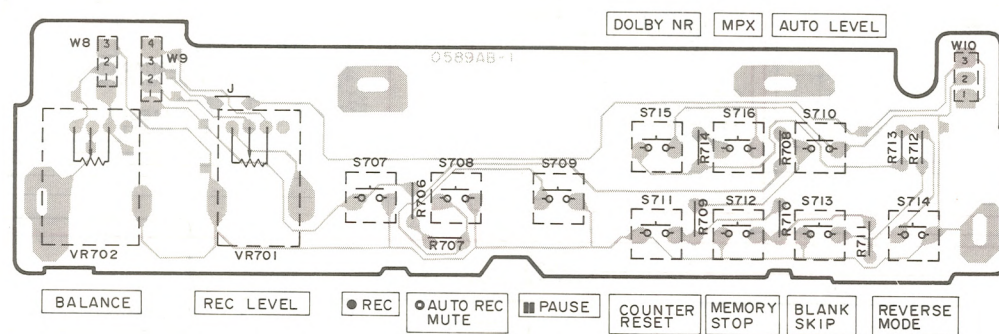
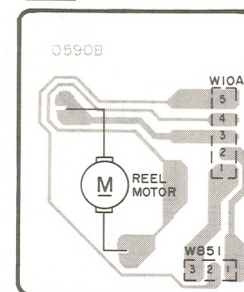
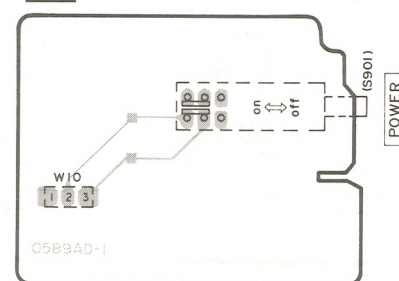
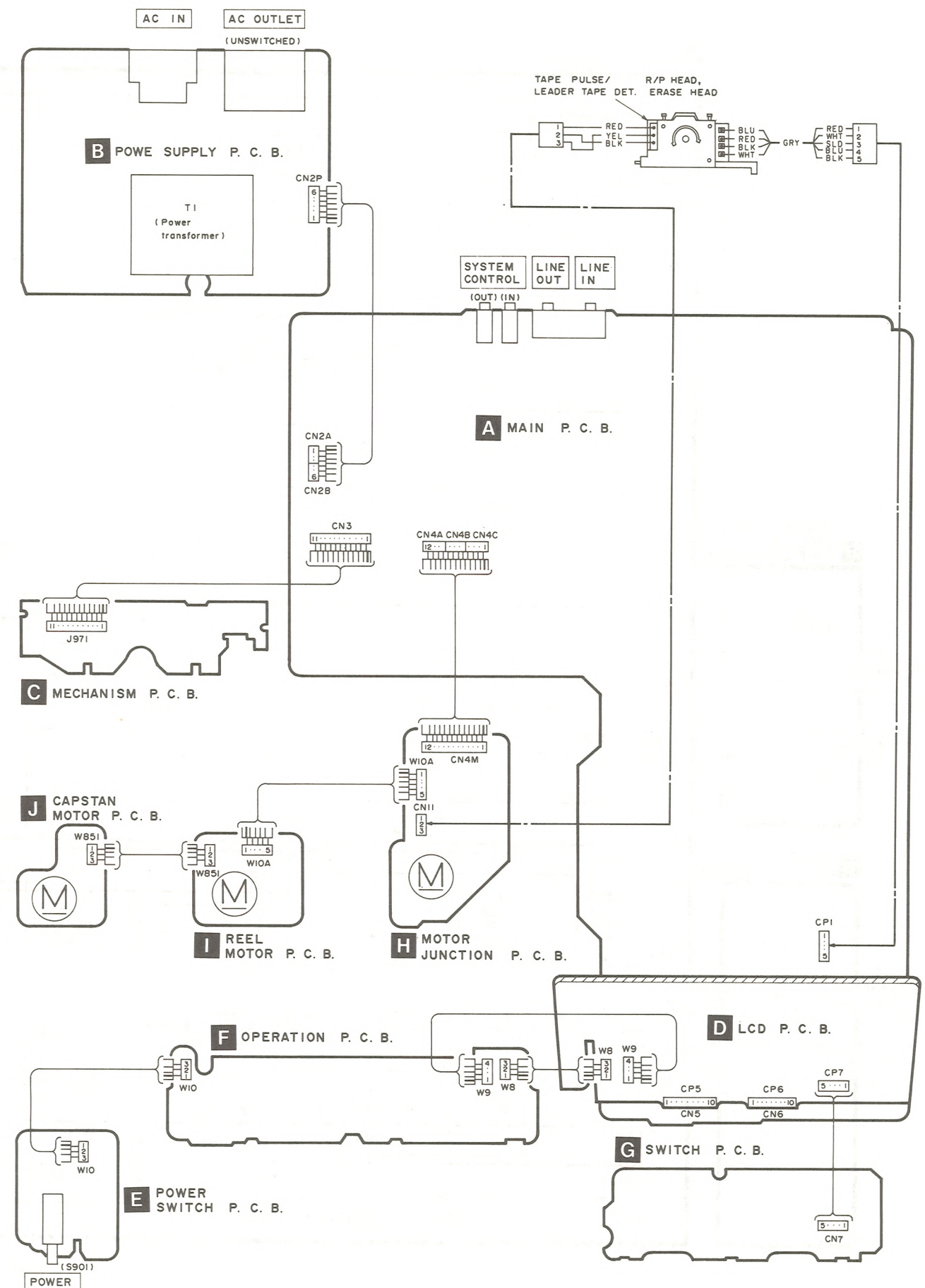
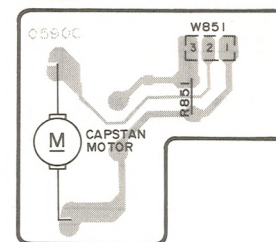


PRINTED CIRCUIT BOARDS

A MAIN P.C.B.**B** POWER SUPPLY P.C.B. For [PP] area.**C** MECHANISM P.C.B.**D** LCD P.C.B.

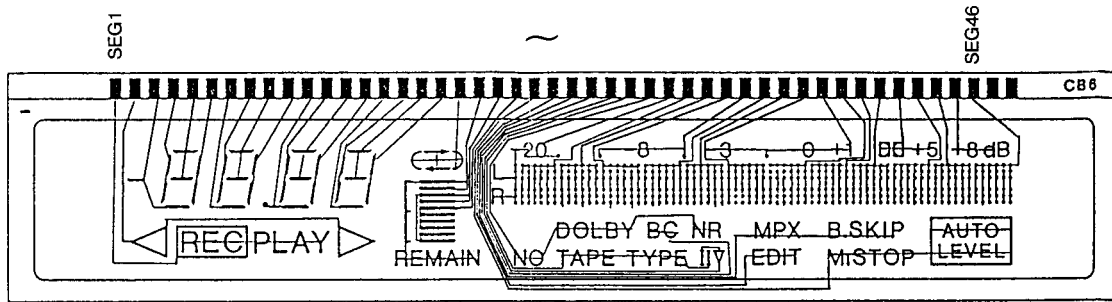
B POWER SUPPLY P.C.B. For [PP]area.**B** POWER SUPPLY P.C.B. For [E,EB,EG] areas.**H** MOTOR JUNCTION P.C.B.**C** MECHANISM P.C.B.**D** LCD P.C.B.**F** OPERATION P.C.B.**E** POWER SWITCH P.C.B.**I** REEL MOTOR P.C.B.**J** CAPSTAN MOTOR P.C.B.

WIRING CONNECTION DIAGRAM

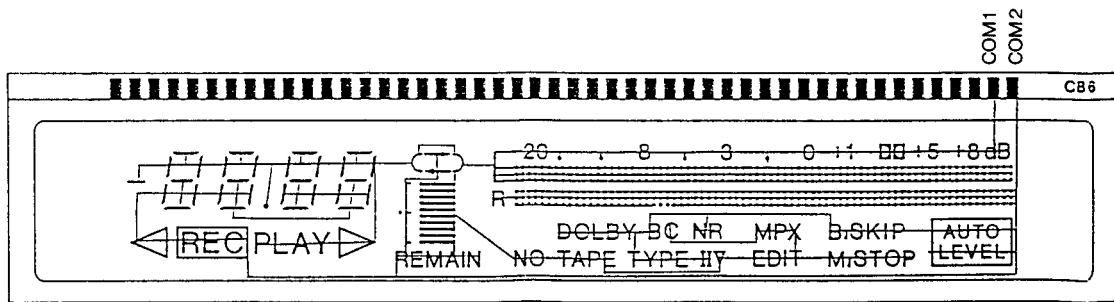
B POWER SUPPLY P.C.B. For [E,EB,EG] areas.**H** MOTOR JUNCTION P.C.B.**F** OPERATION P.C.B.**I** REEL MOTOR P.C.B.**E** POWER SWITCH P.C.B.**J** CAPSTAN MOTOR P.C.B.

INTERNAL CONNECTIONS OF LCD

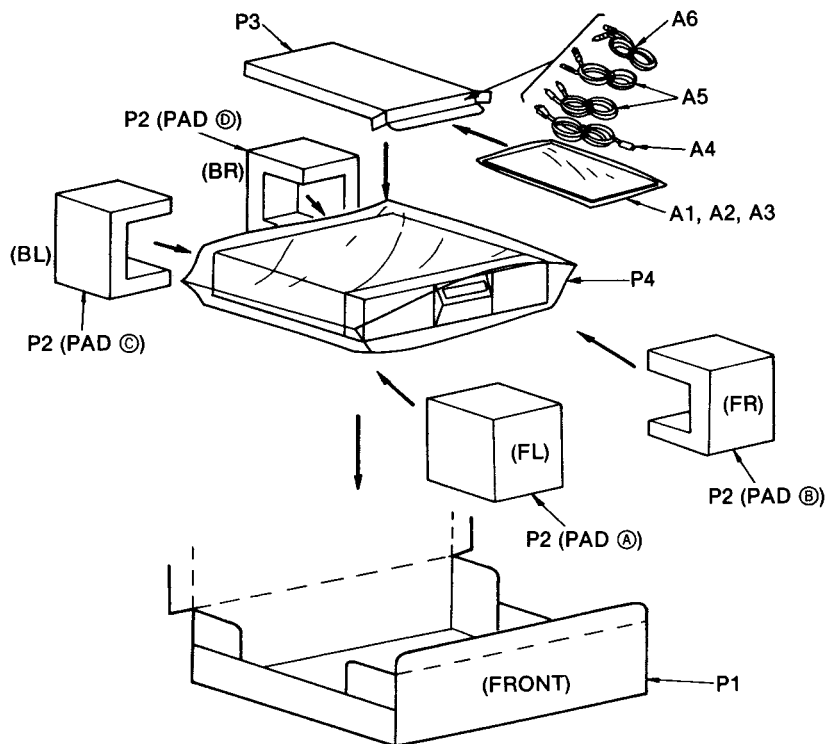
• Segment connection diagram



• Common connection diagram



PACKING



<PAD A, B, C, D Part No.: RPN0436>

REPLACEMENT PARTS LIST

Notes : * Important safety notice:

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

* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.) Parts without these indications can be used for all areas.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		Q914	2SC3311A-Q	TRANSISTOR	
				Q915	2SD592ANCQ	TRANSISTOR	
IC1	AN7351K	PLAYBACK EQ/REC AMP		Q916, 917	2SC3311A-Q	TRANSISTOR	
IC2	AN7384	ELECTRIC VOLUME		Q918	2SA1309A-R	TRANSISTOR	
IC301	UPC1297CA	DOLBY HK PRO		Q919, 920	DTC144ESTP	TRANSISTOR	
IC401	CXA1331S	DOLBY NR(B/C)		Q921, 922	2SC3311A-Q	TRANSISTOR	
IC501	LC7583A	LCD DRIVE		Q923	DTA114ESTP	TRANSISTOR	
IC502	M5218L	BUFFER AMP (LCD DRIVE)		Q924	2SC3311A-Q	TRANSISTOR	
IC851	AN6605	MOTOR DRIVE (CAPSTAN)		Q925-927	DTA144ESTP	TRANSISTOR	
IC901	M50941-576SP	MICRO COMPUTER		Q928	2SB1030QTA	TRANSISTOR	
IC902, 903	BA6218	MOTOR DRIVE (REEL/LOADING)		Q929	DTC114ESTP	TRANSISTOR	
IC904	M5218L	MUSIC SELECTOR AMP		Q930, 931	DTC144ESTP	TRANSISTOR	
IC905	M5218L	VCA CONTROL		Q935, 936	DTC144ESTP	TRANSISTOR	
IC971, 972	GP2S06BC	PHOTO COUPLER				DIODE (S)	
		TRANSISTOR(S)					
Q1, 2	2SJ164PQRTA	TRANSISTOR		D1, 2	MA167	DIODE	
Q3, 4	2SA1309A-R	TRANSISTOR		D301	MA165	DIODE	
Q5-8	2SC3311A-Q	TRANSISTOR		D305-308	MA165	DIODE	
Q9	2SJ164PQRTA	TRANSISTOR		D309	MA4056MTA	DIODE	
Q10	2SJ164PQRTA	TRANSISTOR		D501-503	MA165	DIODE	
Q301, 302	2SC3311A-Q	TRANSISTOR		D601-606	1SR35200TB	DIODE	$\triangle$
Q303	2SD592ANCQ	TRANSISTOR		D608	MA165	DIODE	
Q304	2SB621A-R	TRANSISTOR		D609, 610	MA4082MTA	DIODE	
Q305	2SA1309A-R	TRANSISTOR		D611	MA4062MTA	DIODE	
Q401-404	2SC3311A-Q	TRANSISTOR		D612, 613	MA165	DIODE	$\triangle$
Q601	2SA1309A-R	TRANSISTOR		D614, 615	1SR35200TB	DIODE	$\triangle$
Q602	2SC3311A-Q	TRANSISTOR		D616, 617	MA165	DIODE	
Q603	2SD2037EFTA	TRANSISTOR		D618	MA4120	DIODE	
Q604	2SB1357EFTA	TRANSISTOR		D619, 620	1SR35200TB	DIODE	$\triangle$
Q605	2SD2037EFTA	TRANSISTOR		D621	MA4150M	DIODE	
Q606	2SA1309A-R	TRANSISTOR		D901, 902	MA165	DIODE	
Q607, 608	2SD2037EFTA	TRANSISTOR		D903	MA4051MTA	DIODE	
Q609	2SC3311A-Q	TRANSISTOR		D904, 905	MA165	DIODE	
Q901	DTC114ESTP	TRANSISTOR		D906	MA4120	DIODE	
Q902	2SB1030QTA	TRANSISTOR		D907	MA4056HTA	DIODE	
Q903	2SC3311A-Q	TRANSISTOR		D908	MA4091-M	DIODE	
Q904, 905	DTC114ESTP	TRANSISTOR		D909, 910	1SR35200TB	DIODE	
Q906	2SB1030QTA	TRANSISTOR		D911	MA4075HTA	DIODE	
Q907	DTC114ESTP	TRANSISTOR		D912, 913	MA700TA	DIODE	
Q908	2SB1030QTA	TRANSISTOR		D914-921	MA165	DIODE	
Q909	2SD2037EFTA	TRANSISTOR		D922-924	MA4051MTA	DIODE	
Q910	2SB621A-R	TRANSISTOR		D925	MA4062-H	DIODE	
Q911, 912	DTC114ESTP	TRANSISTOR		D927, 928	MA165	DIODE	
Q913	2SD592ANCQ	TRANSISTOR		D971, 972	RVD1SS133TA	DIODE	
						VARIABLE RESISTOR(S)	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
VR1, 2	EVNDXAA00B53	PLAYBACK GAIN ADJ.		S712	EVQ21405R	MEMORY STOP	
VR3, 4	EVNDXAA00B14	OVERALL GAIN ADJ.		S713	EVQ21405R	BLANK SKIP	
VR301, 302	EVNDXAA00B14	OVERALL FREQ. ADJ.		S714	EVQ21405R	REVERSE MODE	
VR303	EVNDXAA00B53	ERASE CURRENT ADJ.		S715	EVQ21405R	DOLBY NR(B, C)	
VR701	EVJ02BF01B14	REC. LEVEL CONTROL		S716	EVQ21405R	MPX	
VR702	EVJ02SF01G15	BALANCE CONTROL		S851, 852	RSH1A005	DISC TRAY; CLOSE/OPEN DET.	
VR901	EVNDXAA00B53	TAPE SPEED ADJ.		S901	SSH1230	POWER	△
		COIL (S)		S971	RSH1A89ZB-U	MODE	
				S972	RSH1A90YB-U	HALF DET.	
				S973	RSH1A90YB-U	ATS	
L1, 2	SLQX303-1KT	COIL		S974	RSH1A90YB-U	R REC INH	
L3, 4	SLQX272-1YT	COIL		S975	RSH1A90YB-U	F. REC INH	
L301	SL09B4-K	COIL		S976	RSH1A90YB-U	ATS	
L302, 303	SL09B1-Z	COIL				CONNECTOR(S) AND SOCKET(S)	
L401, 402	QLM9Z10K	COIL					
L851	RLQZB220KT-D	COIL		CN2A, 2B	RJS1A1703	CONNECTOR(3P)	
		TRANSFORMER (S)		CN2P	SJT30643-V	CONNECTOR(6P)	
				CN3	SJSD1105	CONNECTOR(11P)	
T1	RTPIK4C009-V	POWER TRANSFORMER	(PP) △	CN4A-4C	RJS1A1704	SOCKET(4P)	
T1	RTPIK4B010-V	POWER TRANSFORMER	(E, EB, EG) △	CN4M	SJT31243-V	CONNECTOR(12P)	
		OSCILLATOR(S)		CN5, 6	RJU003K010M1	SOCKET(10P)	
				CN7	SJS50581BB	SOCKET(5P)	
				CN11	RJP3G17ZA	CONNECTOR(3P)	
X901	EF0GC4004A4	CERAMIC FILTER (4MHz)		CN701, 702	EYF52BC	FUSE HOLDER	(E, EB, EG)
		LCD(S)		CP1	RJP5G18ZA	CONNECTOR(5P)	
				CP5, 6	RJT003K010M1	CONNECTOR(10P)	
				CP7	SJT30548BB1	CONNECTOR(5P)	
LCD1	EDD113CB6A2P	LCD				JACK(S)	
		LAMP (S)					
LAMP1, 2	XAMR126S7A	LAMP		JK1	SJF3069N	RCA PIN JACK	
		FUSE (S)		JK2, 3	RJJ33T01	M3 JACK(BLACK)	
				JK701	SJSD16	AC INLET	(PP) △
				JK701	SJS9236	AC INLET	(E, EB, EG) △
				JK702	RJS1A4802-B	AC OUTLET	(EB) △
				JK702	RJS1A4902-B	AC OUTLET	(E, EG) △
F1	XBA2C25TB0	FUSE 250V T2. 5A	(E, EB, EG) △	JK702	SJS9331B	AC OUTLET	(PP) △
		SWITCH(ES)				GND PART(S)	
S701	EVQ21405R	STOP		E1	SNE1004-1	GND PLATE	
S702	EVQ21405R	F. F.					
S703	EVQ21405R	REW.					
S704	EVQ21405R	F. PLAYBACK					
S705	EVQ21405R	R. PLAYBACK					
S706	EVQ21405R	CASSETTE TRAY; OPEN/CLOSE					
S707	EVQ21405R	REC					
S708	EVQ21405R	AUTO REC MUTE					
S709	EVQ21405R	PAUSE					
S710	EVQ21405R	AUTO LEVEL					
S711	EVQ21405R	COUNTER RESET					

RESISTORS & CAPACITORS

Notes : * Capacity value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R405, 406	ERDS2TJ242	1/4W 2.4K	R722	ERDS2TJ562	1/4W 5.6K
			R407-410	ERDS2TJ562	1/4W 5.6K	R723	ERDS2TJ102	1/4W 1K
			R411, 412	ERDS2TJ682T	1/4W 6.8K	R803	ERDS2TJ333	1/4W 33K
R1, 2	ERDS2TJ225	1/4W 2.2M	R413, 414	ERDS2TJ243T	1/4W 24K	R804	ERDS2TJ473	1/4W 47K
R3, 4	ERDS2TJ104	1/4W 100K	R415, 416	ERDS2TJ561	1/4W 560	R806	ERDS2TJ104	1/4W 100K
R9	ERDS2TJ103	1/4W 10K	R417	ERDS2TJ151	1/4W 150	R808, 809	ERDS2TJ182	1/4W 1.8K
R10	ERDS2TJ103	1/4W 10K	R418	ERDS2TJ273	1/4W 27K	R810	ERDS2TJ331	1/4W 330
R11-14	ERDS2TJ101	1/4W 100	R501, 502	ERDS2TJ220T	1/4W 22	R811	ERDS2TJ472	1/4W 4.7K
R15, 16	ERDS2TJ153	1/4W 15K	R503, 504	ERDS2TJ272T	1/4W 2.7K	R851	ERSB33J161U	1/4W 160
R17, 18	ERDS2TJ564	1/4W 560K	R505	ERDS2TJ103	1/4W 10K	R852	ERSB02J512U	1/4W 5.1K
R19, 20	ERDS2TJ103	1/4W 10K	R506	ERDS2TJ473	1/4W 47K	R853	ERDS1FVJ271T	1/2W 270 Δ
R21, 22	ERDS2TJ223	1/4W 22K	R507, 508	ERDS2TJ393	1/4W 39K	R901	ERDS2TJ105T	1/4W 1M
R23, 24	ERDS2TJ472	1/4W 4.7K	R509, 510	ERDS2TJ473	1/4W 47K	R902	ERDS2TJ102	1/4W 1K
R25, 26	ERDS2TJ103	1/4W 10K	R601, 602	ERQ16NKR11E	1W 0.11	R904, 905	ERDS2TJ223	1/4W 22K
R27, 28	ERDS2TJ102	1/4W 1K	R603, 604	ERDS2TJ472	1/4W 4.7K	R906	ERDS2TJ103	1/4W 10K
R29, 30	ERDS2TJ470	1/4W 47	R605	ERDS2TJ103	1/4W 10K	R907	ERDS2TJ472	1/4W 4.7K
R31, 32	ERDS2EJ121	1/4W 120	R606	ERDS2TJ472	1/4W 4.7K	R908	ERDS2TJ103	1/4W 10K
R33, 34	ERDS2TJ392T	1/4W 3.9K	R607	ERD2FCVG120T	1/4W 12 Δ	R909-911	ERDS2TJ472	1/4W 4.7K
R35, 36	ERDS2TJ152	1/4W 1.5K	R608	ERD2FCVG180T	1/4W 18 Δ	R912	ERDS2TJ103	1/4W 10K
R37, 38	ERDS2TJ272T	1/4W 2.7K	R609, 610	ERDS2TJ102	1/4W 1K	R913	ERDS2TJ223	1/4W 22K
R39, 40	ERDS2TJ223	1/4W 22K	R611, 612	ERDS2TJ101	1/4W 100	R914	ERDS2TJ821	1/4W 820
R41, 42	ERDS2TJ682T	1/4W 6.8K	R613	ERD2FCVG270T	1/4W 27 Δ	R915	ERDS2TJ223	1/4W 22K
R43, 44	ERDS2TJ223	1/4W 22K	R615	ERDS2TJ222	1/4W 2.2K	R916	ERDS2TJ821	1/4W 820
R45, 46	ERDS2TJ182	1/4W 1.8K	R616-618	ERDS2TJ101	1/4W 100	R917	ERG1SJ150E	1W 15
R47, 48	ERDS2TJ332	1/4W 3.3K	R619, 620	ERDS2TJ472	1/4W 4.7K	R918	ERG1SJ180E	1W 18
R49, 50	ERDS2TJ561	1/4W 560	R623, 624	ERDS2TJ472	1/4W 4.7K	R919, 920	ERDS2TJ472	1/4W 4.7K
R51, 52	ERDS2TJ223	1/4W 22K	R626	ERQ16NKR11E	1W 0.11	R921, 922	ERDS2TJ223	1/4W 22K
R55, 56	ERDS2TJ182	1/4W 1.8K	R627, 628	ERDS2EJ121	1/4W 120	R923	ERDS2TJ821	1/4W 820
R57, 58	ERDS2TJ104	1/4W 100K	R630, 631	ERDS2TJ561	1/4W 560	R924	ERDS2TJ471	1/4W 470
R61, 62	ERDS2TJ183T	1/4W 18K	R632, 633	ERDS2TJ562	1/4W 5.6K	R925	ERDS2TJ180	1/4W 1.0
R63, 64	ERDS2TJ393	1/4W 39K	R634, 635	ERDS2TJ101	1/4W 100	R926	ERDS2TJ101	1/4W 100
R65, 66	ERDS2TJ394	1/4W 390K	R636	ERDS2TJ100	1/4W 10	R927	ERDS2TJ223	1/4W 22K
R67, 68	ERDS2TJ225	1/4W 2.2M	R701	ERDS2TJ821	1/4W 820	R928	ERDS2TJ821	1/4W 820
R301	ERDS2TJ180	1/4W 1.0	R702	ERDS2TJ102	1/4W 1K	R929	ERDS2TJ331	1/4W 330
R302, 303	ERDS2TJ183T	1/4W 18K	R703	ERDS2TJ122	1/4W 1.2K	R930, 931	ERDS1FJ120	1/2W 12 Δ
R304, 305	ERDS2TJ100	1/4W 10	R704	ERDS2TJ152	1/4W 1.5K	R932	ERDS2TJ222	1/4W 2.2K
R306	ERDS2TJ222	1/4W 2.2K	R705	ERDS2TJ182	1/4W 1.8K	R933	ERDS2TJ103	1/4W 10K
R307-309	ERDS2TJ561	1/4W 560	R706	ERDS2TJ821	1/4W 820	R934	ERDS2TJ472	1/4W 4.7K
R311, 312	ERDS2TJ100	1/4W 10	R707	ERDS2TJ102	1/4W 1K	R935	ERDS2TJ222	1/4W 2.2K
R313, 314	ERDS2TJ154	1/4W 150K	R708	ERDS2TJ122	1/4W 1.2K	R936, 937	ERX1SJ5R6E	1W 5.6
R315, 316	ERDS2TJ153	1/4W 15K	R709	ERDS2TJ152	1/4W 1.5K	R938	ERDS2TJ561	1/4W 560
R318	ERDS2TJ272T	1/4W 2.7K	R710	ERDS2TJ182	1/4W 1.8K	R939	ERDS2TJ332	1/4W 3.3K
R319	ERDS2TJ102	1/4W 1K	R711	ERDS2TJ222	1/4W 2.2K	R940	ERDS2TJ222	1/4W 2.2K
R326	ERDS2TJ222	1/4W 2.2K	R712	ERDS2TJ332	1/4W 3.3K	R941	ERDS2TJ103	1/4W 10K
R327, 328	ERDS2TJ681	1/4W 680	R713	ERDS2TJ472	1/4W 4.7K	R942	ERDS2TJ471	1/4W 470
R329, 330	ERDS1FVJ331T	1/2W 330 Δ	R714	ERDS2TJ562	1/4W 5.6K	R943-945	ERDS2TJ103	1/4W 10K
R331-334	ERDS1FVJ391T	1/2W 390 Δ	R718	ERDS2TJ222	1/4W 2.2K	R946	ERDS2TJ122	1/4W 1.2K
R335	ERDS2TJ103	1/4W 10K	R719	ERDS2TJ332	1/4W 3.3K	R948	ERDS2TJ472	1/4W 4.7K
R401-404	ERDS2TJ684	1/4W 680K	R720, 721	ERDS2TJ102	1/4W 1K	R949, 950	ERDS2TJ473	1/4W 47K

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R951	ERDS2TJ153	1/4W 15K	C3, 4	ECBT1H561KB5	50V 560P	C602-604	ECEA1EU222B	25V 2200U
R952	ERDS2TJ822	1/4W 8.2K	C9	ECKR2H121KB5	500V 120P	C605, 606	ECKR1H103ZF5	50V 0.01U
R954, 955	ERDS2TJ100	1/4W 10	C10	ECKR2H121KB5	500V 120P	C607, 608	ECEA1AU221	10V 220U
R956	ERDS2TJ223	1/4W 22K	C11, 12	ECBT1H102KB5	50V 1000P	C611	ECKR1H103ZF5	50V 0.01U
R957, 958	ERDS2TJ393	1/4W 39K	C13, 14	ECEA1EK4R7	25V 4.7U	C613, 614	ECEA1CK100B	16V 10U
R959	ERDS2TJ100	1/4W 10	C15, 16	ECEA0JU101B	6.3V 100U	C615	ECEA1VU471B	35V 470U
R960	ERDS2TJ393	1/4W 39K	C17, 18	ECQB1H562JF3	50V 5600P	C616	ECKR1H103ZF5	50V 0.01U
R961	ERDS2TJ223	1/4W 22K	C21, 22	ECEA1EK4R7	25V 4.7U	C617, 618	ECEA1AU102B	10V 1000U
R962, 963	ERDS2TJ393	1/4W 39K	C23, 24	ECKR1H103ZF5	50V 0.01U	C619, 620	ECEA1AU221	10V 220U
R964	ERDS2TJ100	1/4W 10	C25, 26	ECBT1H101KB5	50V 100P	C621	ECKR2H682PE	500V 6800P
R965	ERDS2TJ393	1/4W 39K	C27, 28	ECEA1HKR47	50V 0.47U	C622	ECKR1H103ZF5	50V 0.01U
R966	ERDS2TJ100	1/4W 10	C29, 30	ECQB1H822JF3	50V 8200P	C701	ECKR1H103ZF5	50V 0.01U
R967	ERDS2TJ101	1/4W 100	C31, 32	ECQV1H273JZ3	50V 0.027U	C851	ECEA1CK100B	16V 10U
R968	ERDS2TJ823T	1/4W 82K	C33, 34	ECQB1H103JF3	50V 0.01U	C901, 902	ECKR1H103ZF5	50V 0.01U
R969	ERDS2TJ393	1/4W 39K	C35, 36	ECQV1H563JZ3	50V 0.056U	C903	ECEA1HK010B	50V 1U
R970	ERDS2TJ103	1/4W 10K	C37-42	ECEA1EK4R7	25V 4.7U	C904	ECKR1H103ZF5	50V 0.01U
R971	ERDS2TJ102	1/4W 1K	C43, 44	ECQB1H183JF3	50V 0.018U	C905	ECEA1CN100SB	16V 10U
R971A	ERDS2TJ221	1/4W 220	C45, 46	ECEA1CK100B	16V 10U	C906	ECKR1H103ZF5	50V 0.01U
R972	ERDS2TJ473	1/4W 47K	C47, 48	ECQV1H104JZ3	50V 0.1U	C907	ECEA1CN100SB	16V 10U
R972A	ERDS2TJ183T	1/4W 18K	C49, 50	ECBT1H820KB5	50V 82P	C908	ECKR1H103ZF5	50V 0.01U
R973	ERDS2TJ153	1/4W 15K	C301	ECQP1153JZ	100V 0.015U	C909	ECEA0JU222B	6.3V 2200U
R973A	ERDS2TJ221	1/4W 220	C302	ECEA1EK4R7	25V 4.7U	C910	ECEA1HK010B	50V 1U
R974	ERDS2TJ472	1/4W 4.7K	C303	ECKR1H392KB5	50V 3900P	C911	ECEA1EK4R7	25V 4.7U
R974A	ERDS2TJ183T	1/4W 18K	C304, 305	ECKW1H222KB5	50V 2200P	C912	ECKT1H122KB	50V 1200P
R975	ERDS2TJ103	1/4W 10K	C306	ECKD1H682KB	50V 6800P	C913	ECKR1H103ZF5	50V 0.01U
R975A	ERDS2TJ472	1/4W 4.7K	C307, 308	ECKR1H103ZF5	50V 0.01U	C914	ECEA1HN010	50V 1U
R976	ERDS2TJ561	1/4W 560	C309	ECBT1E103ZF	25V 0.01U	C915	ECEA1HK010B	50V 1U
R977	ERDS2TJ472	1/4W 4.7K	C310	ECEA1AU471	10V 470U	C917	ECEA0JU101B	6.3V 100U
R978	ERDS2TJ822	1/4W 8.2K	C311	ECBT1C472MR5	16V 4700P	C918	ECKR1H103ZF5	50V 0.01U
R979	ERDS2TJ273	1/4W 27K	C312	ECBT1H180J5	50V 18P	C919	ECEA0JU101B	6.3V 100U
R980	ERDS2TJ123	1/4W 12K	C313, 314	ECKT1H223ZF	50V 0.022U	C921	ECQB1H822JF3	50V 8200P
R981	ERDS2TJ223	1/4W 22K	C315, 316	ECBT1H821KB5	50V 820P	C922	ECBT1H470J5	50V 47P
R982	ERDS2TJ392T	1/4W 3.9K	C317, 318	ECBT1H121KB5	50V 120P	C923	ECEA1CK100B	16V 10U
R983	ERDS2TJ223	1/4W 22K	C319, 320	ECQV1H473JZ3	50V 0.047U	C924	ECEA1HK2R2B	50V 2.2U
R984	ERDS2TJ272T	1/4W 2.7K	C321, 322	ECQB1H223JF3	50V 0.022U	C925	ECKD1H152KB	50V 1500P
R985	ERDS2TJ473	1/4W 47K	C323, 324	ECQB1H103JF3	50V 0.01U	C926	ECEA1AU101	10V 100U
R986	ERDS2TJ103	1/4W 10K	C325, 326	ECKT1H122KB	50V 1200P			
R987	ERDS2TJ392T	1/4W 3.9K	C327	ECEA1EK100	25V 10U			
R988	ERDS2TJ272T	1/4W 2.7K	C328	ECBT1H180J5	50V 18P			
R989	ERDS2TJ103	1/4W 10K	C401, 402	ECKT1H122KB	50V 1200P			
R990	ERDS2TJ392T	1/4W 3.9K	C403, 404	ECKD1H152KB	50V 1500P			
R991	ERDS2TJ272T	1/4W 2.7K	C405-408	ECQB1H222JF3	50V 2200P			
R992	ERDS2TJ220T	1/4W 22	C409, 410	ECEA1HUR56B	50V 0.56U			
R993	ERDS2TJ272T	1/4W 2.7K	C411, 412	ECEA1HMR33	50V 0.33U			
R995	ERDS2TJ683	1/4W 68K	C413, 414	ECKT1H122KB	50V 1200P			
R996	ERDS2TJ103	1/4W 10K	C415, 416	ECEA1EK4R7	25V 4.7U			
R997, 998	ERDS2TJ472	1/4W 4.7K	C501, 502	ECEA0JU101B	6.3V 100U			
R999	ERDS2TJ222	1/4W 2.2K	C503	ECKR1H103ZF5	50V 0.01U			
			C504	ECEA1CK100B	16V 10U			
		CAPACITORS	C505	ECEA1HK010B	50V 1U			
			C506	ECBT1H102KB5	50V 1000P			
C1, 2	ECBT1H102KB5	50V 1000P	C601	ECKR2H682PE	500V 6800P			

REPLACEMENT PARTS LIST

Notes : * Important safety notice:

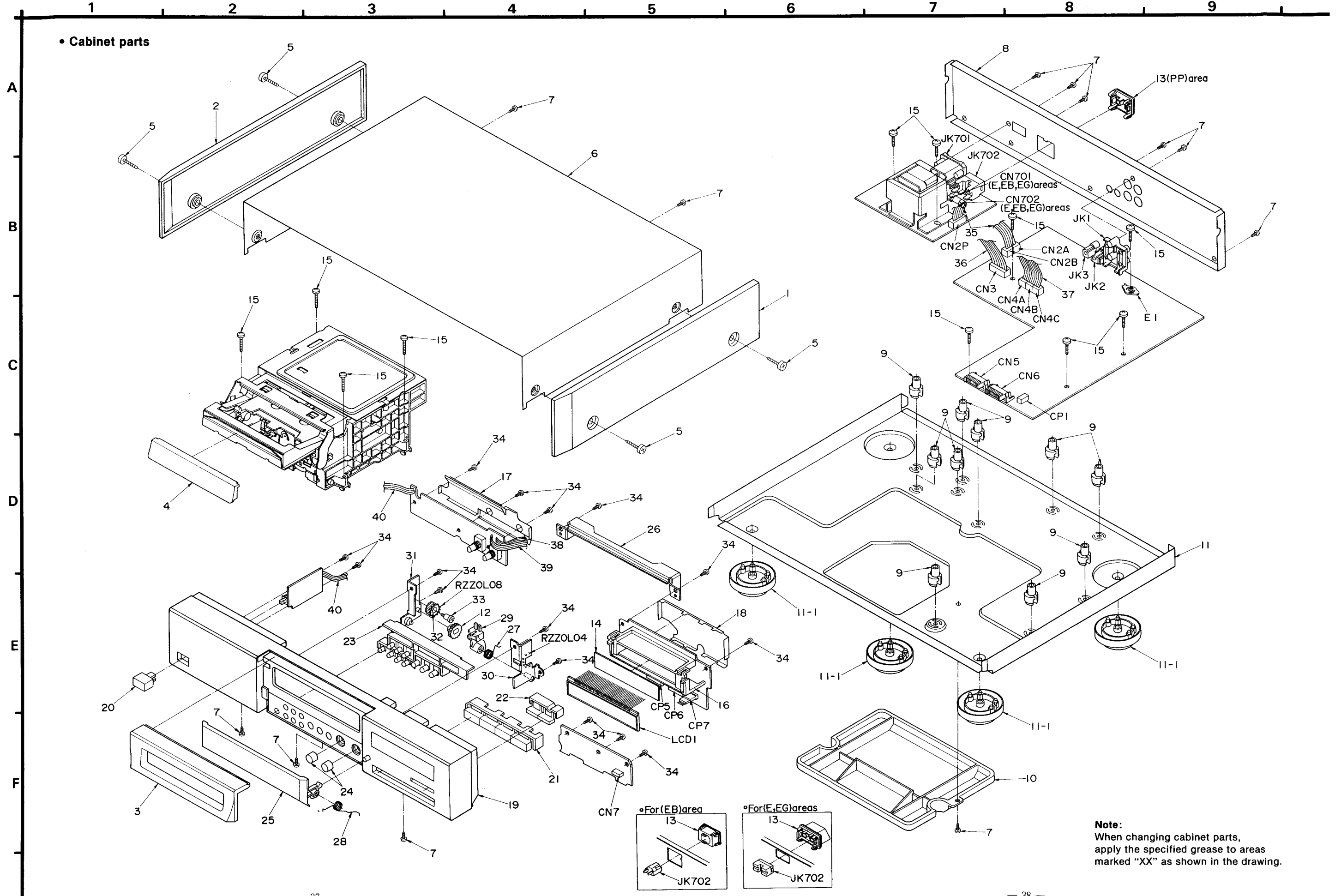
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

- * The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

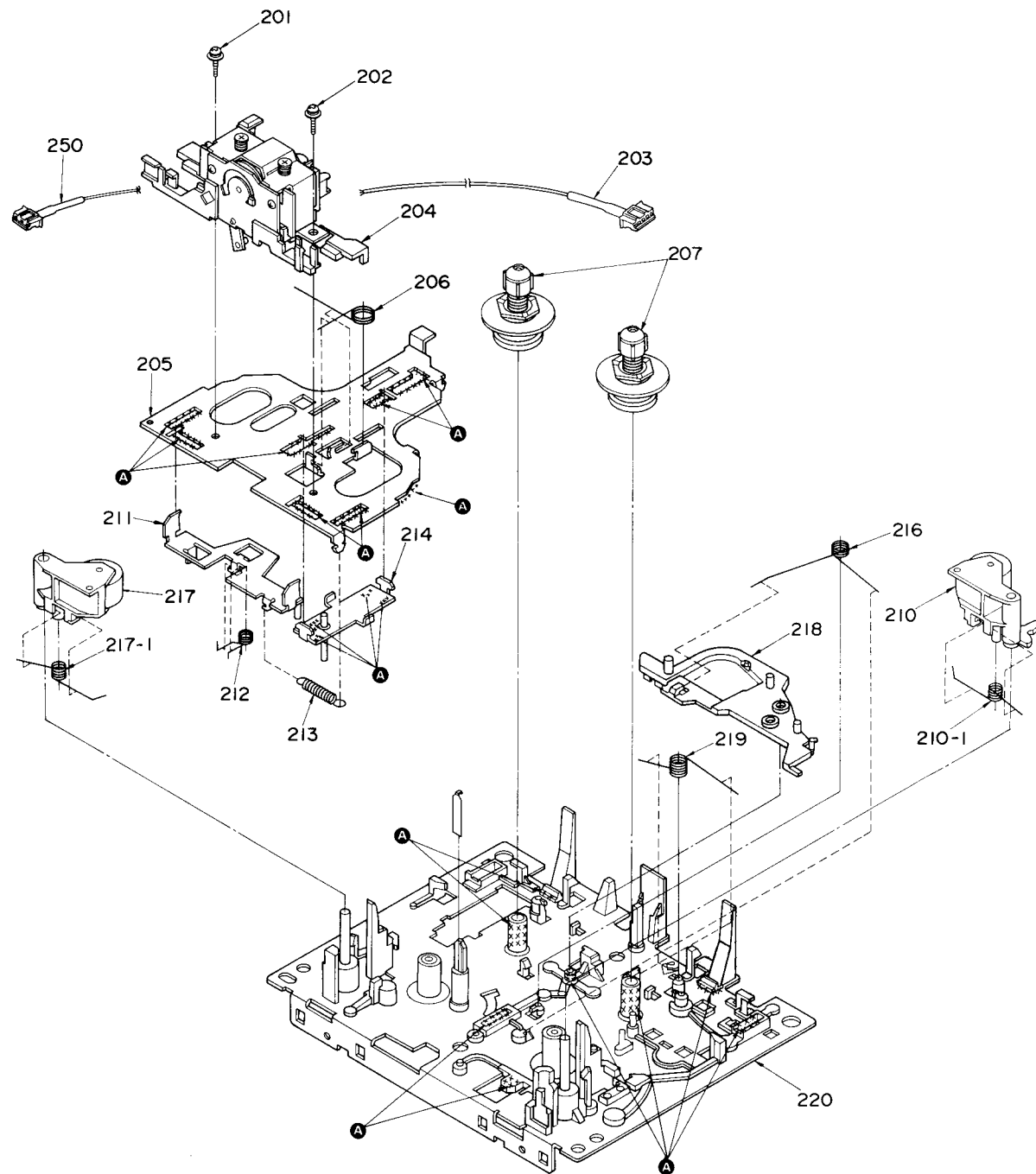
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		38	RWJ1803130KK	FLAT CABLE (3P), W8	
				39	RWJ1804110KK	FLAT CABLE (4P), W9	
				40	RWJ1803220KK	FLAT CABLE (3P), W10	
1	RGKD330-S	SIDE PANEL (R)				PACKING MATERIAL	
2	RGKD331-S	SIDE PANEL (L)					
3	RGKD345-S	CENTER ORNAMENT		P1	RPG0937	CARTON BOX	(PP)
4	RGKD346-S	TRAY ORNAMENT		P1	RPG0938	CARTON BOX	(E, EB, EG)
5	RHD30016	SCREW		P2	RPN0436	PAD	
6	RKM0154B-S	CABINET		P3	SPSD152	ACCESSORIES BOX	
7	XTBS3+8JFZ1	SCREW		P4	SPP756	PROTECTION COVER	
8	RGR0111A-B	REAR PANEL	(PP)			ACCESSORIES	
8	RGR0111D-A	REAR PANEL	(EG)				
8	RGR0111D-B	REAR PANEL	(E)				
8	RGR0111G-A	REAR PANEL	(EB)	A1	RFKSE10E-S	INSTRUCTION MANUAL	(E)
9	RKQ0089	P. C. B. HOLDER		A1	RQT1092-Y	INSTRUCTION MANUAL	(PP)
10	RKU0031	BOTTOM COVER		A1	RQT1093-G	INSTRUCTION MANUAL	(EB)
11	RFKJSE10-S	BOTTOM BOARD ASS'Y		A1	RQT1096-D	INSTRUCTION MANUAL	(EG)
11-1	RKA0045	FOOT		A2	RQA0013	WARRANTY CARD	(E, EB, EG)
12	RDG0151	INTERMEDIATE GEAR		A2	SQX7179	WARRANTY CARD	(PP)
13	RJS1A4802-A	AC OUTLET COVER	(EB)	A2	RQA0049	WARRANTY CARD	for CANADA
13	RJS1A4902-A	AC OUTLET COVER	(E, EG)	A3	RQCB0169	SERVICENTER LIST	(E, EB, EG)
13	SJS9331A	AC OUTLET COVER	(PP)	A3	SQX9129-1	SERVICENTER LIST	(PP)
14	RGHD062	SHEET		A3	SQX9131	SERVICENTER LIST	for CANADA
15	XTB3+20JFZ	SCREW		A4	SFDAC05E03	AC POWER SUPPLY CORD	(E, EG) Δ
16	RMN0125	LCD HOLDER		A4	SJA172	AC POWER SUPPLY CORD	(PP) Δ
17	RFKNSE10-S	SHIELD PLATE ASS'Y		A4	SJA188	AC POWER SUPPLY CORD	(EB) Δ
18	RSC0178	SHIELD PLATE, LCD		A5	SJP2249-3	STEREO CONNECTION CABLE	
19	RFKGSE10E-S	FRONT PANEL ASS'Y	(E, EB, EG)	A6	SJP2257T	STEREO MINI CABLE	
19	RFKGSE10PP-S	FRONT PANEL ASS'Y	(PP)				
20	RGU0030-1S	BUTTON, POWER					
21	RGU0512A-S	BUTTON, OPERATION A					
22	RGU0513-S	BUTTON, OPERATION B					
23	RGU0515-H	BUTTON, OPERATION C					
24	RGW0111-H	KNOB, REC. LEVEL BALANCE					
25	RKF0185-S1	DOOR					
26	RMA0393	ANGLE					
27	RME0072	SPRING, FOOK					
28	RME0073	SPRING, OPEN/CLOSE					
29	RML0199	LEVER, FOOK					
30	RXA0086	ANGLE, OPEN/CLOSE					
31	RXA0087	ANGLE, DAMPER					
32	SMQ4096	EJECT GEAR					
33	SNE2120	SCREW					
34	XTB3+8JFZ	SCREW					
35	RWJ1806090QQ	FLAT CABLE (6P), W2					
36	RWJ021180QQ	FLAT CABLE (11P), W3					
37	RWJ1812170QQ	FLAT CABLE (12P), W4					

EXPLODED VIEW

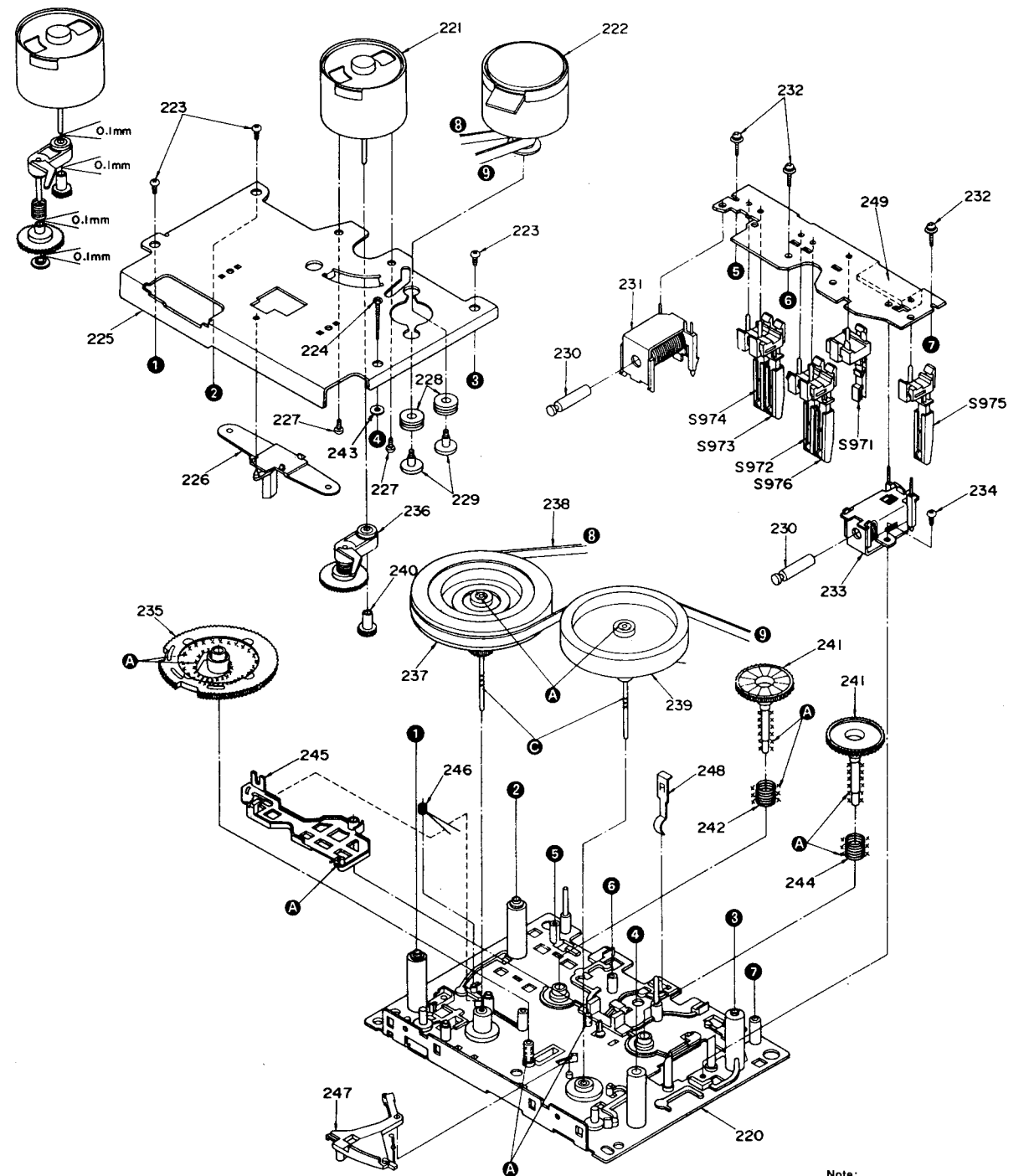


• Mechanical parts

(Top view)



(Bottom view)



Note:
When changing mechanism parts,
apply the specified grease to areas
marked "XX" as shown in the drawing.

Ref. No.	Part Name	Part No.
A	FL0IL AK-152	SZZOL 18
G	FL0IL947P	RZZOL 02

■ REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST	
201	XTW2+8L	SCREW	
202	XTW2+6L	SCREW	
203	REX0059	LEAD WIRE BLOCK(5P)	
204	RXQ0008	HEAD BLOCK (REC./PLAYBACK)	
205	RMA0047-1	HEAD BASE	
206	RUW139ZA	SPRING	
207	RXP0009	REEL TABLE	
210	RXP0004	PINCH ROLLER ARM(F)	
210-1	RUW140ZC	SPRING	
211	RXQ0077	HEAD BASE	
212	RUW143ZA	SPRING	
213	RUD105ZA	SPRING	
214	RXQ0078	MAIN ROD	
216	RME0020	SPRING	
217	RXP0005	PINCH ROLLER ARM(R)	
217-1	RUW141ZA	SPRING	
218	RML0040-2	BLAKE LEVER	
219	RUW142ZA	SPRING	
220	RXK0060	CHASSIS	
221	MMN-6F4RA88	REEL MOTOR	
222	RFKPS10-S	CAPSTAN MOTOR ASS'Y	
223	XTN26+7J	SCREW	
224	XTN26+26F	SCREW	
225	RMA0048	FLYWHEEL PLATE	
226	RMD5014ZC	ANGLE	
227	XSN26+3	SCREW	
228	RHG3032ZA	RUBBER CUSHION	
229	RHD26002	SCREW	
230	RUB428ZE	MOVING IRON CORE	
231	RSJ0003	SOLENOID	
232	XTW2+8S	SCREW	
233	RXQ0011	BLAKE SOLENOID	
234	XTN26+4F	SCREW	
235	RDG0030	MAIN GEAR	
236	RXG0009	IDLER GEAR	
237	RXF0007	FLYWHEEL (F)	
238	RDV0015	CAPSTAN BELT	
239	1DW0054YA	FLYWHEEL (R)	
240	RDG0034	REEL MOTOR GEAR	
241	RXG0003	REEL TABLE GEAR	
242	RUQ112ZA	SPRING	
243	RHW31002	WASHER	
244	RUQ111ZB	SPRING	
245	RML0037	LEVER	
246	RUW147ZA	SPRING	
247	RML0038	LEVER	
248	RUS609ZC	TAPE PRESSURE SPRING	
249	RJS11T7ZA	CONNECTOR(11P), J971	
250	REX0069-1	LEAD WIRE BLOCK(3P)	

[illegible]

EXPLODED VIEW

