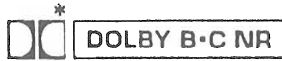


Service Manual

Dolby NR-Equipped
Stereo Double Cassette Deck

Cassette Deck
RS-CH7



Color

(K) Black Type



Area

Country Code	Area	Color
(PP)	U.S.A./Canada.	(K)

System: SC-CH7

RS-TR165 MECHANISM SERIES (AR300)

Because of unique interconnecting cables,
when a component requires service, send or
bring in the entire system.

■ SPECIFICATIONS

Track system	Compact cassette stereo
Tape speed	4.8 cm/sec. (1 7/8 ips)
Bias frequency	80 kHz
Heads	
(DECK 2) REC/PLAY	Permalloy head
Erasing	Double-gap ferrite head
(DECK 1) PLAY	Permalloy head
Motors	
(DECK 2)	DC servo motor
(DECK 1)	DC servo motor
Wow and flutter	0.1% (WRMS)
Fast Forward and Rewind Time	Approx. 110 seconds with C-60 cassette tape
Frequency response	
METAL	30 Hz~17 kHz
CrO ₂	30 Hz~16 kHz
NORMAL	30 Hz~16 kHz

S/N

DOLBY B NR on
DOLBY C NR on
DOLBY off

(signal level=max recording level,
CrO₂ type tape)
66 dB (CCIR)
74 dB (CCIR)
56 dB (A WTD)

■ GENERAL

Power consumption
Dimensions (W×H×D)

16 W
215×110×297 mm
(8 15/32"×4 11/32"×11 1/16")
2.6 kg (5.7 lb.)

Weight

Notes:

- Specifications are subject to change without notice.
- Weight and dimensions shown are approximate.

System	Tuner	Amplifier	CD Player	Cassette Deck	Speakers
SC-CH7	ST-CH7	SU-CH7	SL-CH7	RS-CH7	SB-CH7

Panasonic®

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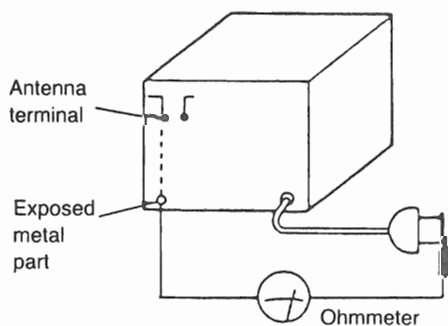
■ SAFETY PRECAUTION

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

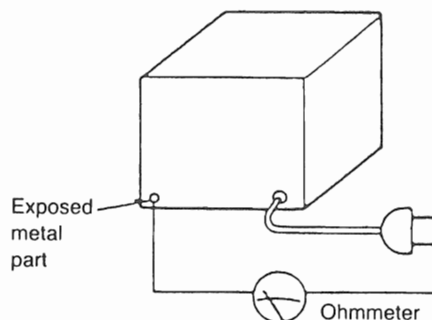
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with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



(Flg. A)

Resistance=3 MΩ–5.2 MΩ



(Flg. B)

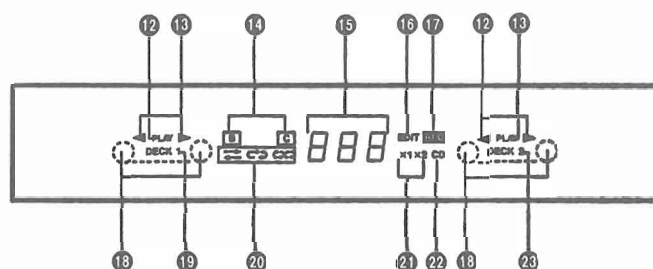
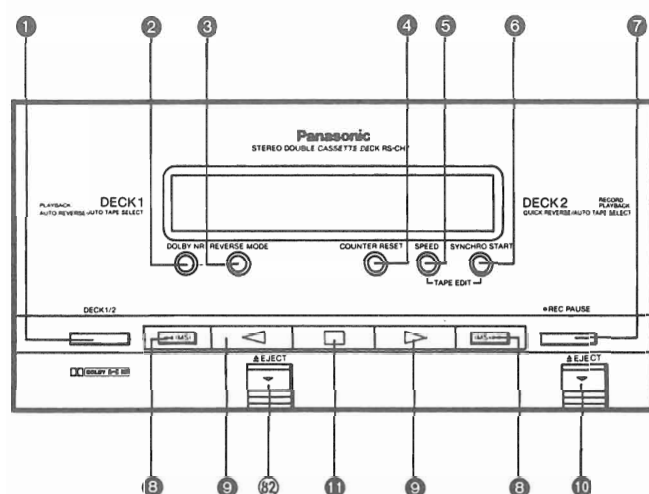
Resistance = Approx. ∞

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.

NOTES:

Refer to the service manual for Model No. SU-CH7, Order No. AD9101027C1 for information on ACCESSORIES, INSTALLATION OF THE SYSTEM, CONNECTIONS and PACKAGING.

LOCATION OF CONTROLS



Cassette deck section

- 1 Deck 1/deck 2 selector (DECK 1/2)**
This button is used to select the deck to be operated.
- 2 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 Dolby B-type and Dolby C-type noise reduction systems.
- 3 Reverse mode button (REVERSE MODE)**
This button is used to select the reverse mode (for playback or recording).
- 4 Tape counter reset button (COUNTER RESET)**
This button is used to reset the tape counter indicator to "000".
- 5 Edit speed button (SPEED)**
This button is used to select the recording speed when edit-recording tapes.
- 6 Synchro-start button (SYNCHRO START)**
This button is used to start a tape-to-tape recording, simultaneously starting deck 1 (the playback deck) and the deck 2 (the recording deck).
- 7 Record/record standby button (● REC PAUSE)**
This button is used to put deck 2 into the record standby mode.
- 8 Fast-forward/rewind/music select button (◀◀ (MS), (MS) ▶▶)**
These buttons are used to advance or rewind the tape, or to quickly search for the beginning of a tune while the tape is being played.
- 9 Playback button (◀, ▶)**
These buttons are used to start the playback or recording (deck 2 only).
- 10 Eject button (▲ EJECT)**
This button is used to open the cassette holder.
- 11 Stop button (□)**
This button is used to stop the tape movement.

Display section

- 12 Playback indicator (PLAY)**
Illuminates to show that deck 1 or 2 is in the playback mode or recording mode (deck 2).
- 13 Tape travel direction indicators (◀, ▶)**
One of these indicators illuminates to show the direction of tape travel.
- 14 Dolby noise reduction indicators (B, C)**
Each indicator illuminates to show the type of Dolby noise reduction system selected by pressing the Dolby noise reduction button.
- 15 Tape counter**
Indicates the amount of tape movement separately for deck 1 or deck 2.
- 16 Edit indicator (EDIT)**
Illuminates when edit-recording tapes or CD.
- 17 Recording indicator (REC)**
Illuminates to indicate that deck 2 is in the recording standby or recording mode.
- 18 Tape indicator**
Illuminates to show that there is a tape in the cassette holder of deck 1 or deck 2.
- 19 Deck 1 operating indicator (DECK 1)**
Illuminates to show that deck 1 can be operated.
- 20 Reverse mode indicators (↔, ↔, ↔)**
Each indicator illuminates to show which of the reverse modes was selected by the reverse mode button.
- 21 Edit speed indicators (×1, ×2)**
One of these indicators will illuminate to show which of the tape-to-tape recording speeds was selected by pressing the edit speed button.
- 22 CD indicator (CD)**
Illuminates when edit-recording a CD.
- 23 Deck 2 operating indicator (DECK 2)**
Illuminates to show that deck 2 can be operated.

DISASSEMBLY INSTRUCTIONS

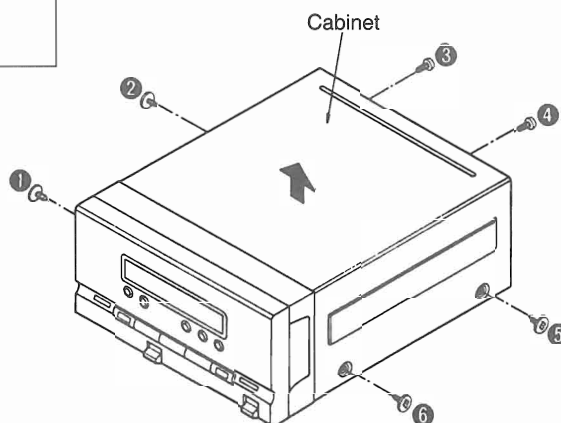
"ATTENTION SERVICER"

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

Ref. No.
1

Removal of the Cabinet

Procedure
1

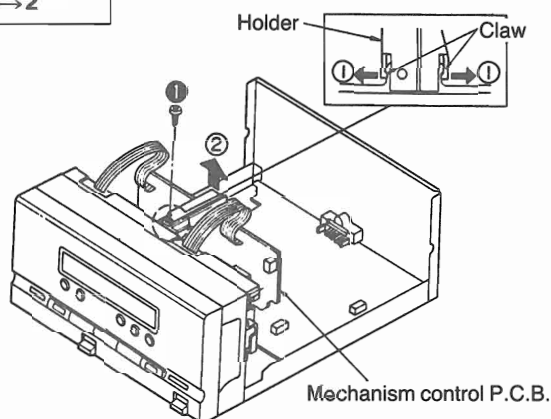


● Remove 6 screws (①~⑥).

Ref. No.
2

Removal of the Mechanism Control P.C.B.

Procedure
1→2



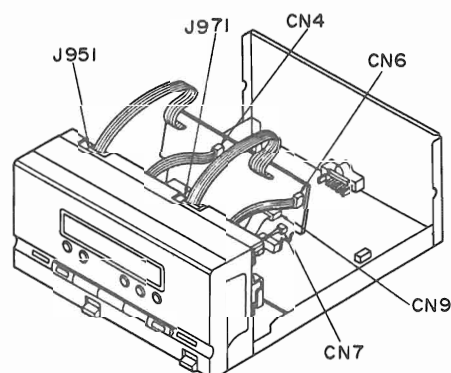
1. Remove the screw (①).
2. Remove 2 claw in the direction of arrow ① and then remove the holder.
3. Remove the mechanism control P.C.B. in the direction of arrow ②.

Removal of the Flat Cable

(J951, J971)

(CN4, CN6)

(CN9)

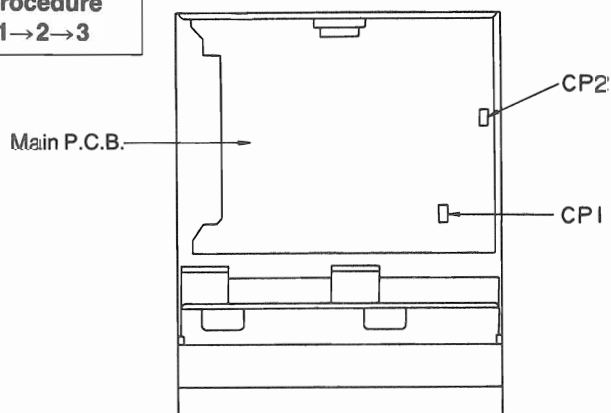


4. Remove 5 flat cable (CN4, CN6, CN9, J951, J971).
5. Remove the connector (CN7).

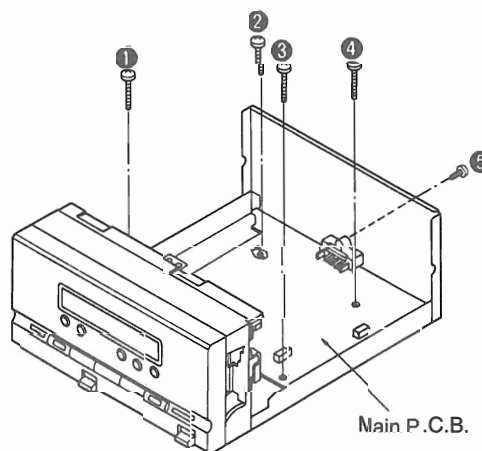
Ref. No.
3

Removal of the Main P.C.B.

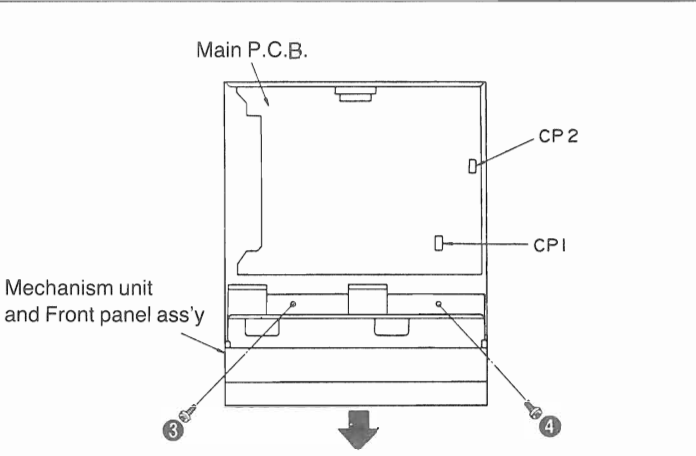
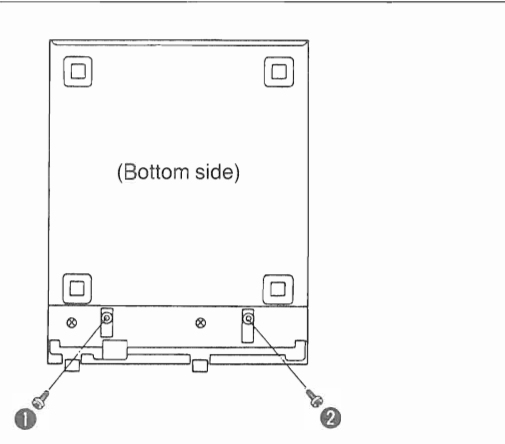
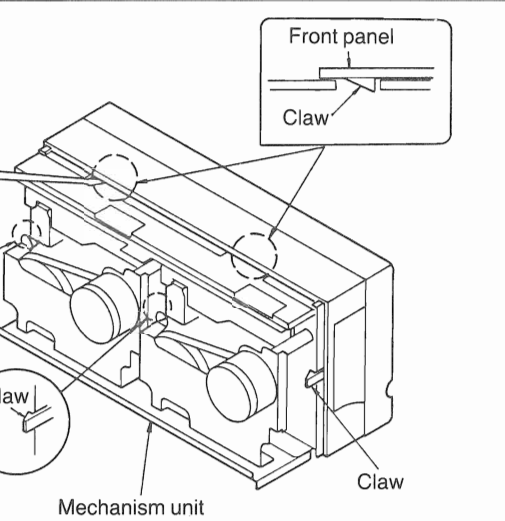
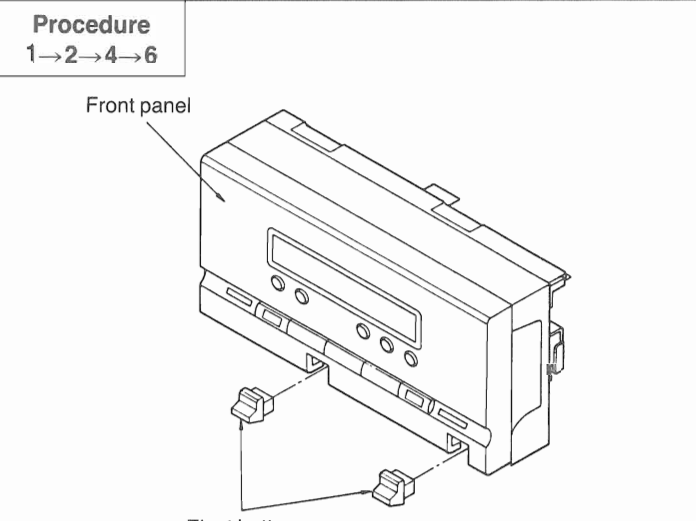
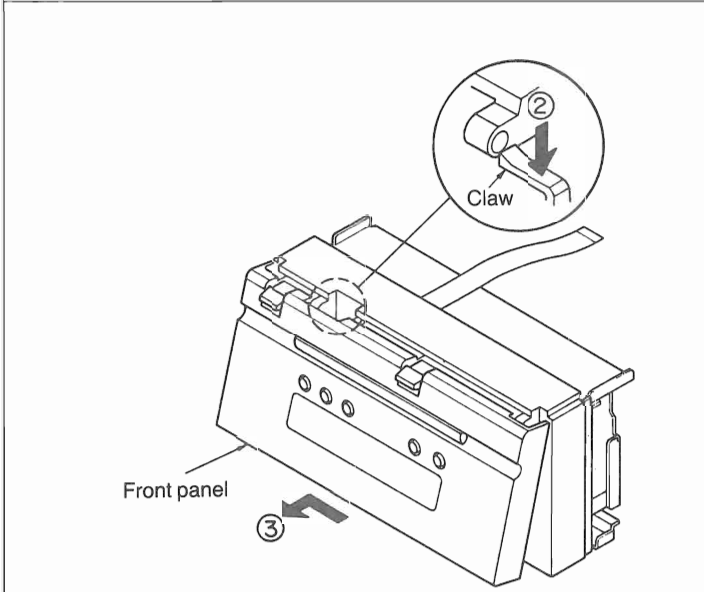
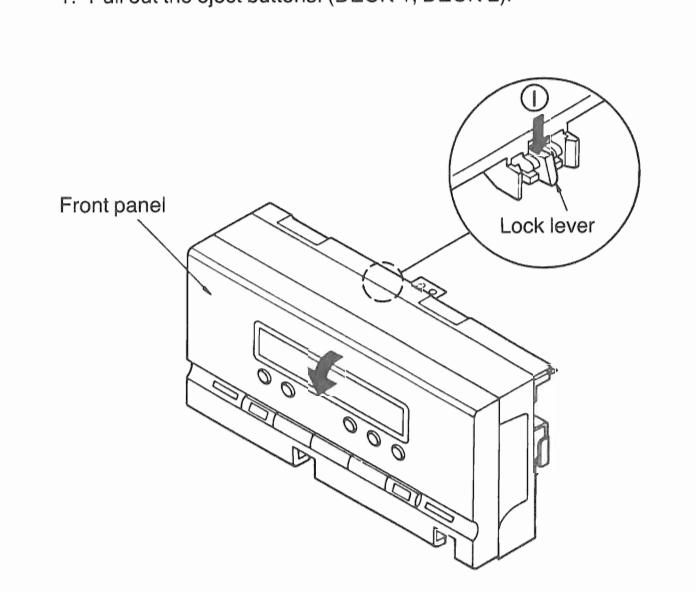
Procedure
1→2→3

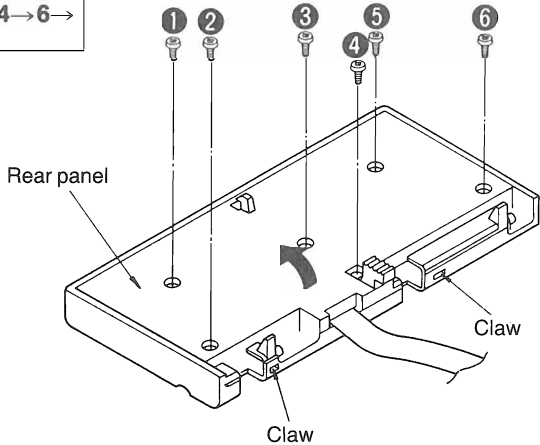
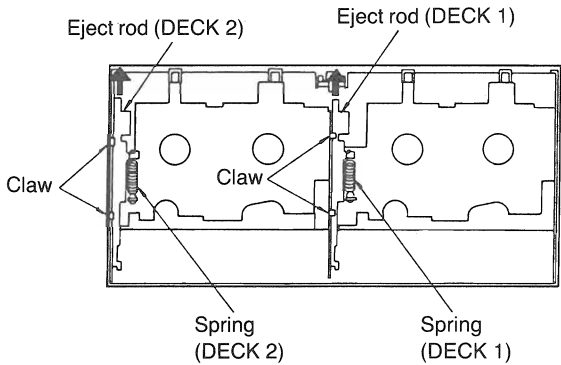
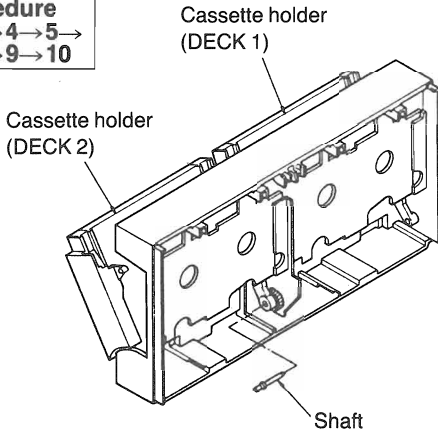


1. Remove 2 connector (CP1, CP2).



2. Remove 5 screws (①~⑤).

Ref. No. 4	Removal of the Mechanism Unit/Front Panel Ass'y	 Main P.C.B. CP 2 CP 1 Mechanism unit and Front panel ass'y 3 4 2. Remove 2 connectors (CP1, CP2). 3. Remove the mechanism unit and front panel in the direction of the arrow.	
Procedure 1→2→4	 (Bottom side) 1. Remove 4 screws (1~4).	Ref. No. 6	Removal of the Front Panel
Procedure 1→2→4→5	 Front panel Claw Claw Claw Mechanism unit Claw ●Remove 5 claws.	 Front panel Eject button 1. Pull out the eject buttons. (DECK 1, DECK 2).	
 Front panel Claw 2 3 3. Push the claw in the direction of arrow ②, and then remove the front panel in the direction of arrow ③.		 Front panel Lock lever 1 2. Push the lever in the direction of the arrow ①, and then open the front panel.	

Ref. No. 7 Procedure 1→2→4→6→ 7	Removal of the Operation P.C.B.	 Operation P.C.B. 1. Remove 6 screws (①~⑥). 2. Remove 2 claws. 3. Remove the rear panel in the direction of arrow. 4. Remove the operation P.C.B. in the direction of arrow.	
Ref. No. 8 Procedure 1→2→4→5→ 6→8	Removal of the Eject rod (DECK 1 and DECK 2)	Ref. No. 9 Procedure 1→2→4→5→ 6→8→9	Removal of the Eject Angle (A) and Eject Angle (B)  Eject rod (DECK 2) Eject rod (DECK 1) Claw Claw Spring (DECK 2) Spring (DECK 1) Eject angle A Eject angle B ① ② ■ Removal of the Eject Angle (A) 1. Remove the screw (①). 2. Pull out the eject angle (A). ■ Removal of the Eject Angle (B) 1. Remove the screw (②). 2. Pull out the eject angle (B).
Ref. No. 10 Procedure 1→2→4→5→ 6→8→9→10	Removal of the Cassette Holder (DECK 1 and DECK 2)	 Cassette holder (DECK 1) Cassette holder (DECK 2) Shaft Rib Rib 1. Pull out the shaft. 2. Push the rib in the direction of arrow and then remove the cassette holder.	

Ref. No.
11

Check of the Main P.C.B.

Procedure
1→11

1. Remove 6 screws (1~6).

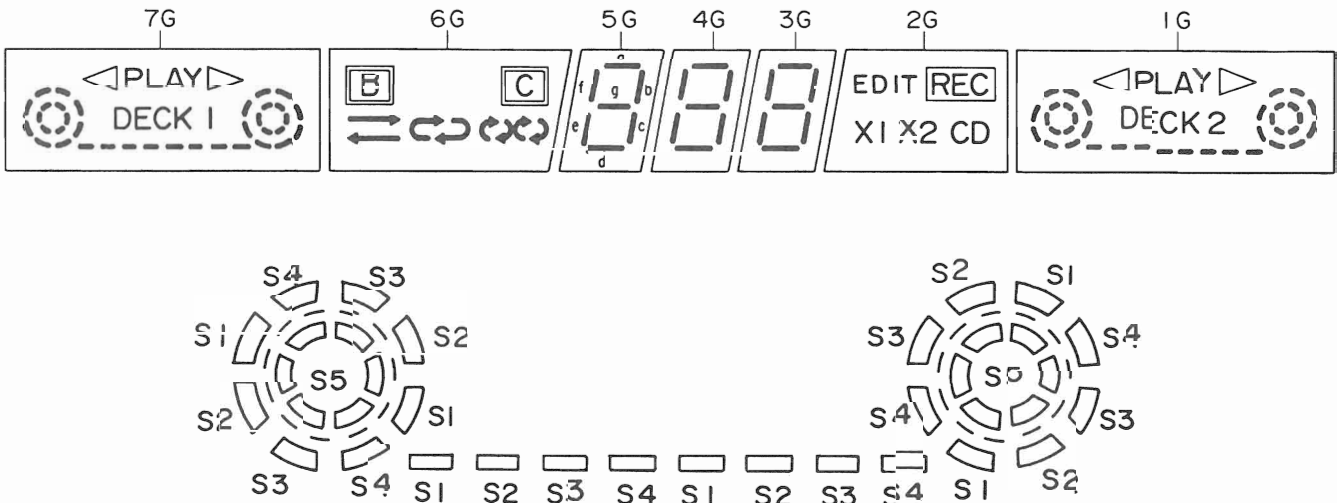
2. Remove 3 screws (7~9).
3. Remove the rear panel in the direction of arrow.

4. Remove 2 screws (10~11).
5. Remove the chassis in the direction of arrow.

6. Check the main P.C.B. in the direction of arrow.

■ DESCRIPTION OF FL PANEL [FL 1 (RSL0088-F)]

●Grid assignment



●Pin connection

Pin No.	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	F+	F+	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	NNP	NNP	NNP	NNP	NNP	NNP	NNP	NNP	NNP	NNP	NNP	NNC	NNC	7G	6G	5G	4G	3G	2G	1G	NP	F-	F-

●Anode connection

	7G	6G	5G	4G	3G	2G	1G
P1	◀	[B]	a	a	a	EDIT	◀
P2	PLAY	—	b	b	b	[REC]	PLAY
P3	S1	[X1]	c	c	c	X1	S1
P4	S3	—	d	d	d	CD	S3
P5	S2	[X2]	e	e	e	X2	S2
P6	▶	[C]	f	f	f	—	▶
P7	DECK1	[↔]	g	g	g	—	DECK2
P8	S4	—	—	—	—	—	S4
P9	S5	—	—	—	—	—	S5

MEASUREMENTS AND ADJUSTMENTS

This tape deck (RS-CH7) is powered by the amplifier (SU-CH7).

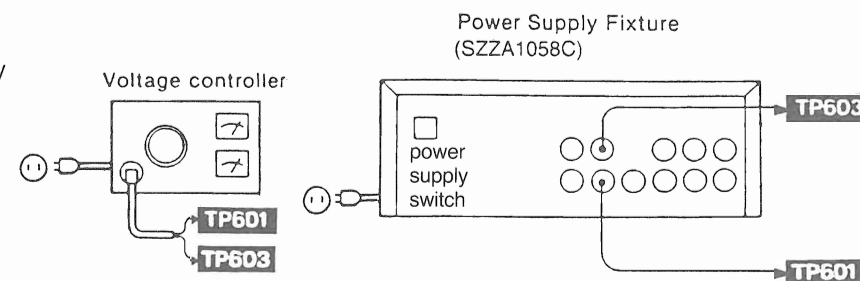
To adjust or check operations on the tape deck as a separate unit, follow the steps below.

1. Apply a power supply voltage of AC 20 V to **TP601** and **TP603**.
2. Short-circuit **TP504** and **TP602** (GND) (power supply switch: ON).

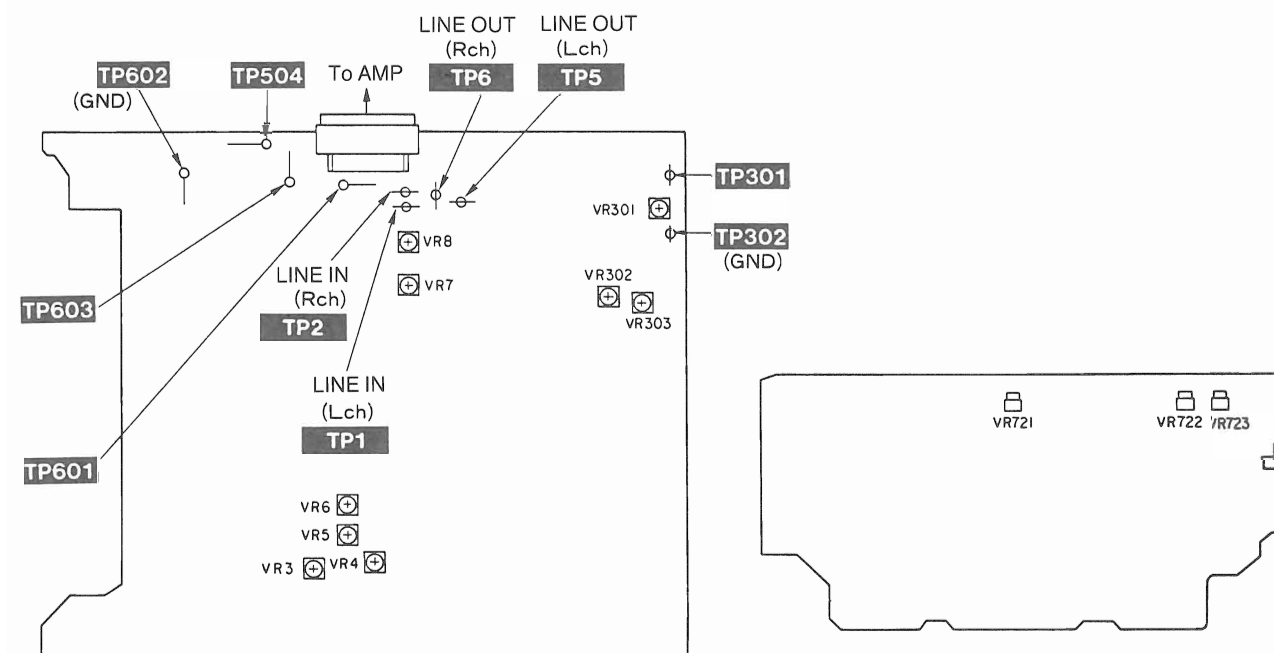
HOW TO CONNECT

Note:

Apply a power supply voltage of AC 20 V to **TP601** and **TP603** by using a Voltage Controller. If it is not available, use a Power Supply Fixture (SZZA1058C) instead.



Adjustment points



Measurement Condition

- Rec. level control; Maximum
- Reverse-mode selector switch; $\rightarrow$
- Edit-recording tape-speed selector; NORMAL
- Timer-recording switch; off

Measuring instrument

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

Test tape

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

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

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

- Playback gain adjustment (315 Hz, 0 dB); 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 1/2)

1. Playback the azimuth adjustment portion (8 kHz, -20 dB) 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.

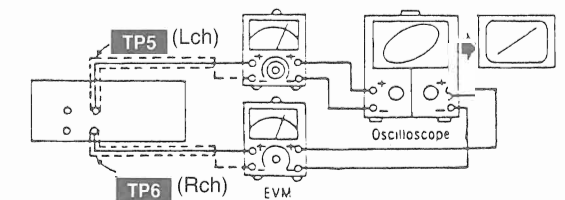


Fig. 1

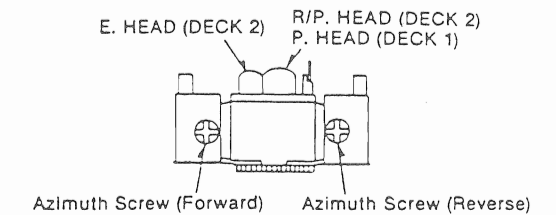


Fig. 2

TAPE SPEED ADJUSTMENT (DECK 1/2)

Normal speed

1. Shift the edit-recording tape-speed selector to "NORMAL".
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust Deck 1=VR721 and Deck 2=VR723 so that the output is within the standard value.

Standard value: $3000 \pm 15 \text{ Hz}$ (NORMAL speed)

High speed [Set the unit to forward (FWD) mode.]

4. Push the edit speed button (SPEED). This will set the high speed mode.
5. Playback the middle portion on the test tape (QZZCWAT).
6. At that time, check if the output from DECK 1 is within the standard value.

Standard value: $6000 \pm 600 \text{ Hz}$ (HIGH speed)

7. Adjust VR722 so that the output frequency of DECK 2 is within $\pm 30 \text{ Hz}$ of the value of the output frequency of DECK 1.

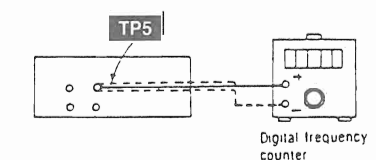


Fig. 3

PLAYBACK GAIN ADJUSTMENT (DECK 1/2)

1. Playback the gain adjusted portion (315 Hz, 0 dB) of the test tape (QZZCFM).
2. Adjust Deck 2=VR5 (L-CH) [[VR6 (R-CH)]] and Deck 1=VR3 (L-CH) [[VR4 (R-CH)]] so that the output is within the standard value.

Standard value: $400 \text{ mV} \pm 0.5 \text{ dB}$

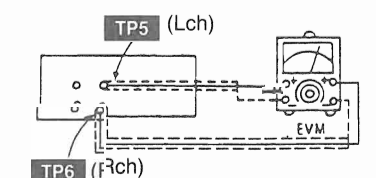


Fig. 4

PLAYBACK FREQUENCY RESPONSE (DECK 1/2)

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

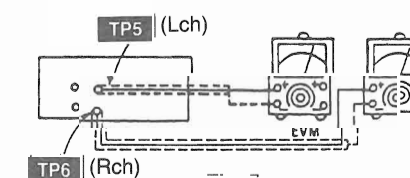


Fig. 5

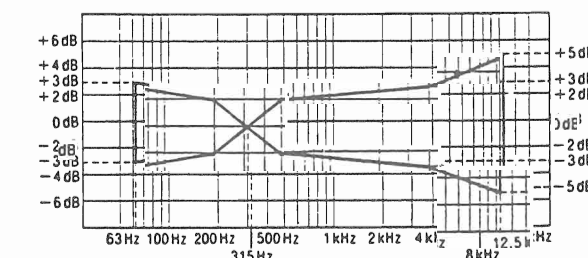
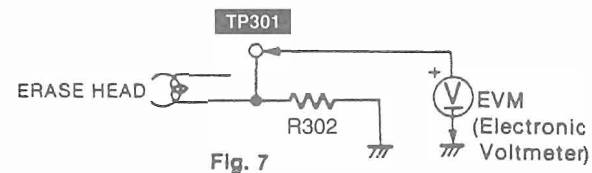


Fig. 6

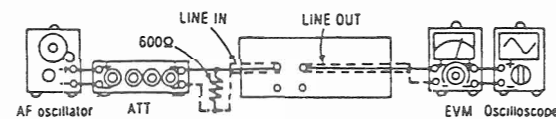
ERASE CURRENT ADJUSTMENT (DECK 2)

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 TP302 (GND) (the output on both edges of R302) is within the standard value.

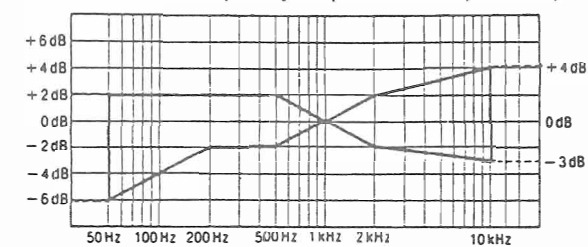
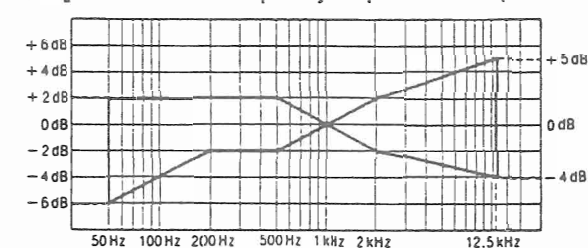
Standard value: 190 mA $\pm$ 5 mA (Metal)

**OVERALL FREQUENCY RESPONSE (DECK 2)**

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) through an attenuator.
3. Attenuate the signal by 20 dB and adjust the frequency from 50 Hz ~ 10 kHz.
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 VR302 (L-CH) and VR303 (R-CH) so that the frequency level is within the standard range.
 - Level up in high frequency range Increase 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 12.5 kHz (50 Hz ~ 12.5 kHz).
8. Assure that the level is within the range shown in Fig. 9.

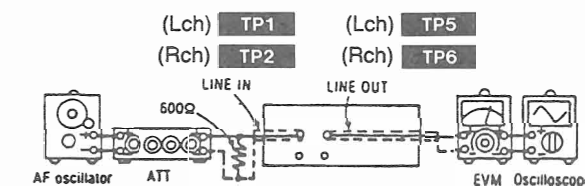
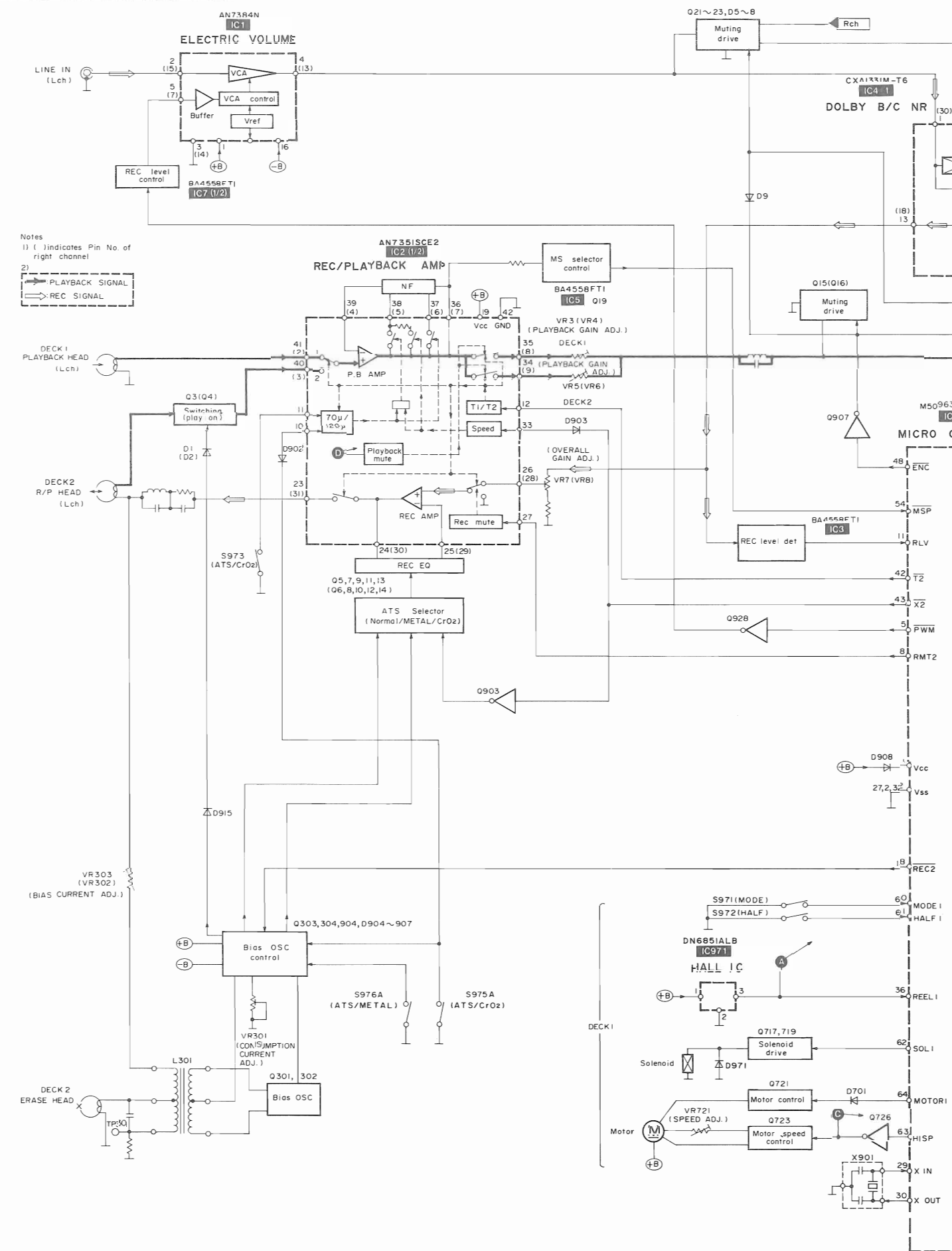


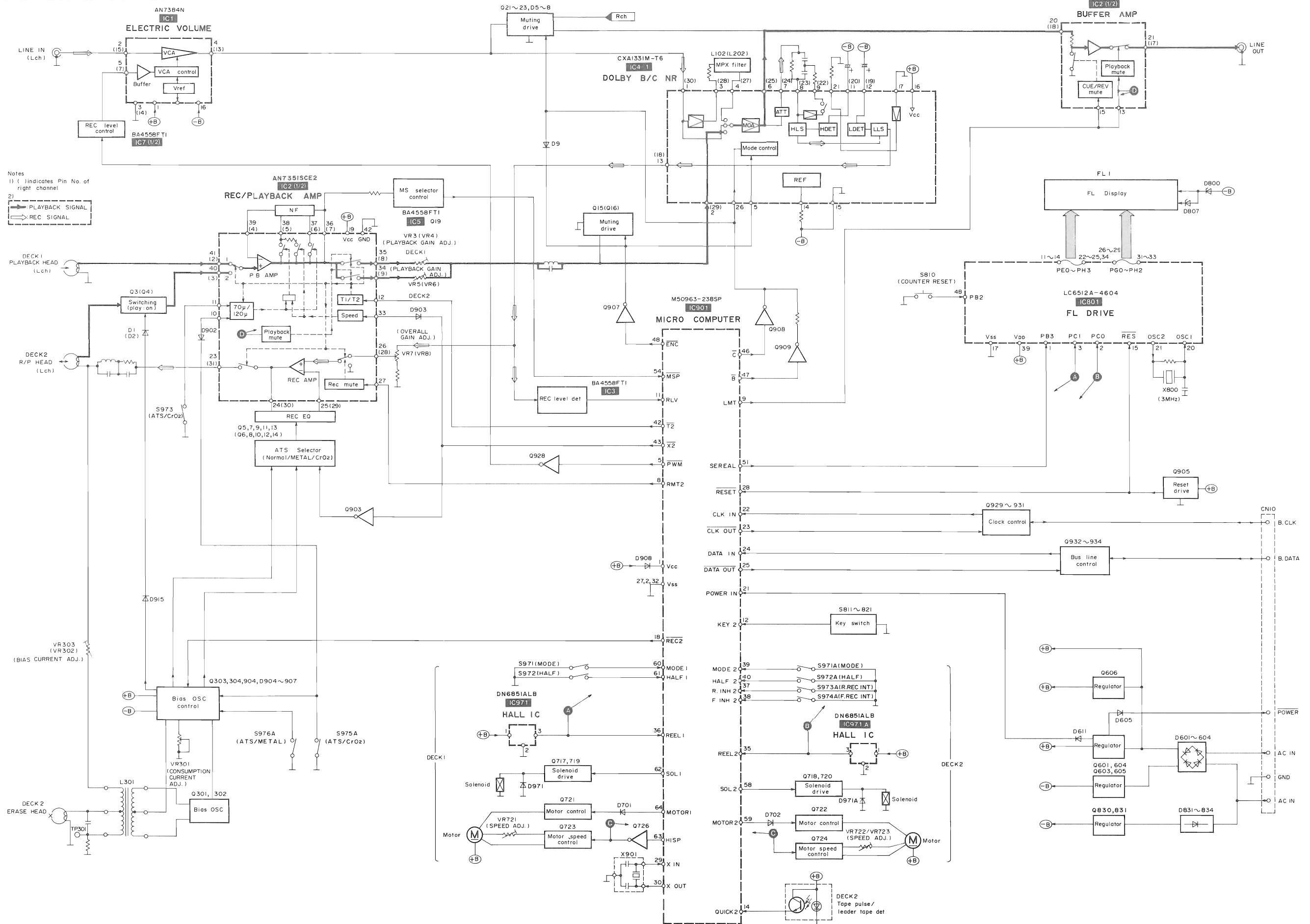
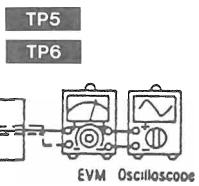
LINE IN (Lch): TP1 LINE OUT (Lch): TP5
(Rch): TP2 (Rch): TP6

Normal Overall frequency response chart (NR OUT)**CrO₂ Metal Overall frequency response chart (NR OUT)****OVERALL GAIN ADJUSTMENT (DECK 2)**

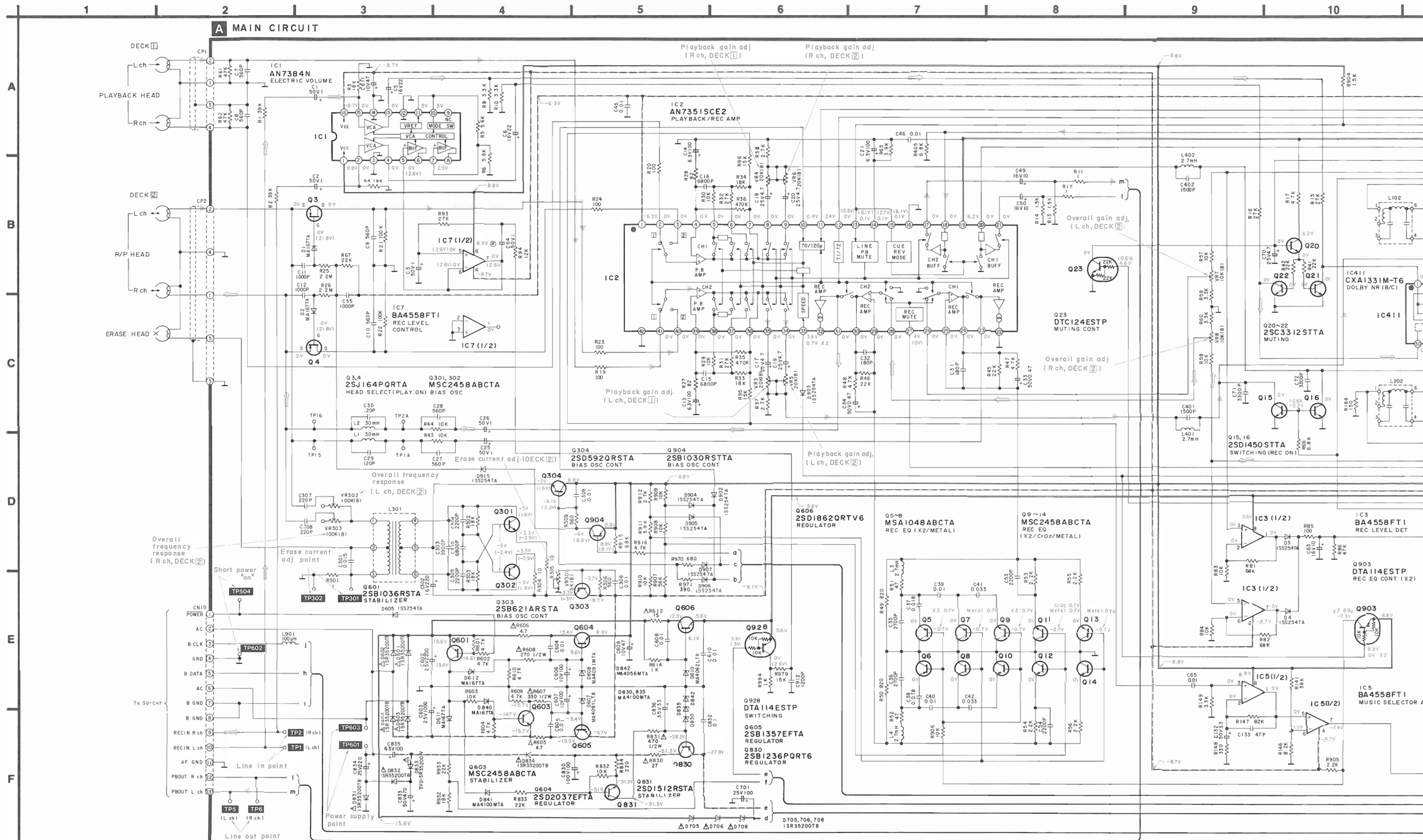
1. Insert the Normal blank test tape (QZZCRA) and set the unit to the Record pause mode.
2. Apply a reference input signal (1 kHz, -19 dB). Attenuate the output so that its level becomes 0.4 V.
3. Record this input signal.
4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
5. If it is not within the standard value, adjust VR7 (L-CH) and VR8 (R-CH).
6. Repeat the step 2~5 above until the output is within the standard value.

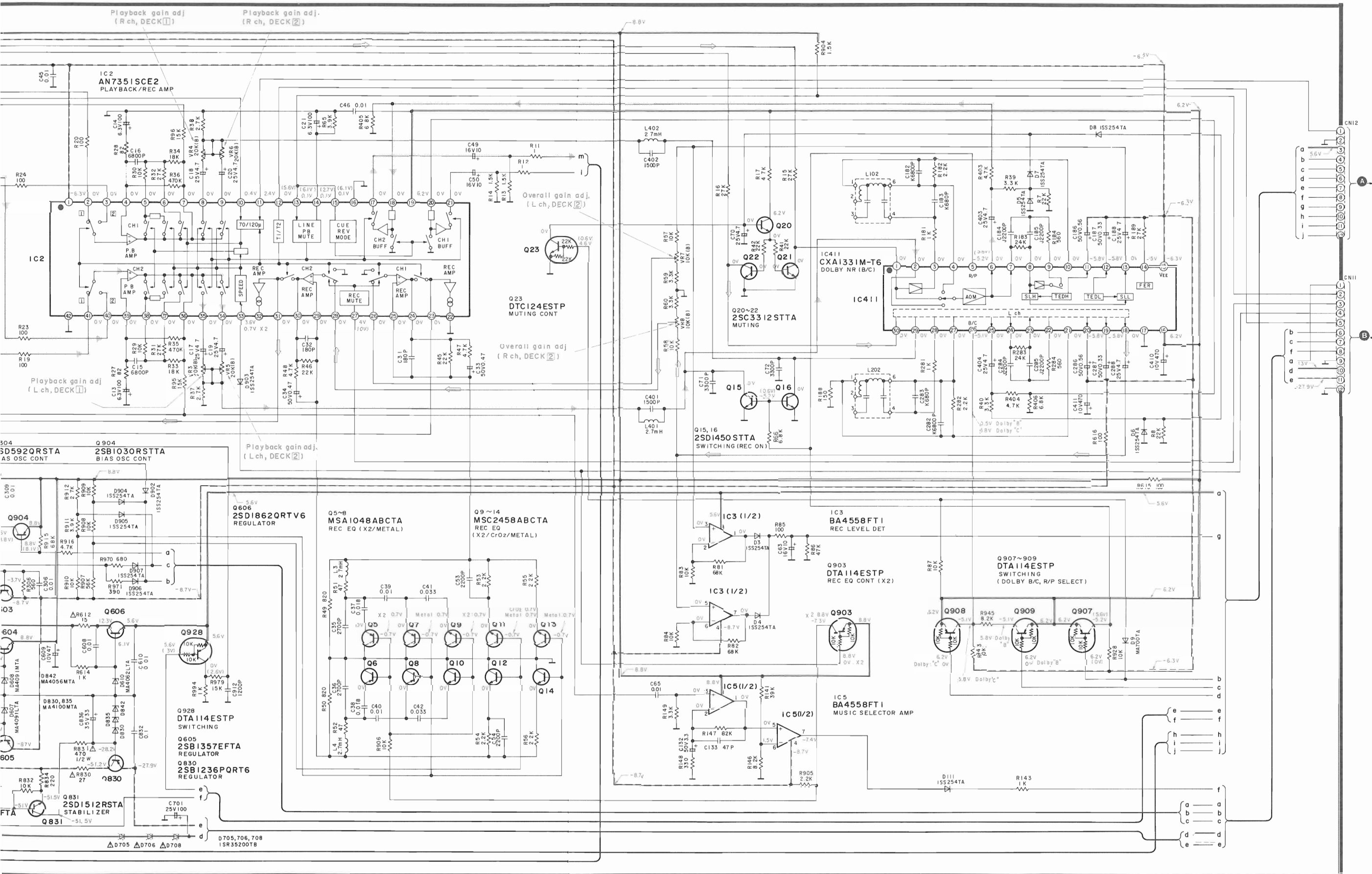
Standard value: 0.4 V $\pm$ 0.5 dB

**BLOCK DIAGRAM**



■ SCHEMATIC DIAGRAM (Parts list on pages 25~28)





■ SCHEMATIC DIAGRAM (Parts list on pages 25~28)

Notes:

- S810 : Counter reset switch in "OFF" position. (COUNTER RESET)
- S811 : Stop switch in "OFF" position. (STOP)
- S812, 813 : FF/REW/MS switch. (S812: ►►, S813: ◄◄)
- S814, 815 : Playback switch. (S814: ►, S815: ◄)
- S816 : Rec pause switch. (REC PAUSE)
- S817 : DECK 1/DECK 2 selector switch.
- S818 : Synchro start switch. (SYNCHRO START)
- S819 : Edit speed switch. (SPEED)
- S820 : Dolby NR switch in "OFF" position.
- S821 : Reverse mode switch. (REVERSE MODE)
- S971A~976A : DECK 2 mechanism leaf switch.

- S971A: Mode detect.
- S972A: Half detect.
- S973A: Reverse side record prevention tab detect.
- S974A: Forward side record prevention tab detect.
- S975A: ATS (CrO₂).
- S976A: ATS (Metal).

- S971~973 : Deck 1 mechanism leaf switch.

- S971: Mode detect.
- S972: Half detect.
- S973: ATS (CrO₂).

●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.

Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

No mark...Playback ()...Recording

●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.

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

— : Positive voltage line

--- : Negative voltage line

→ : Playback signal

→ : Recording signal line

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.

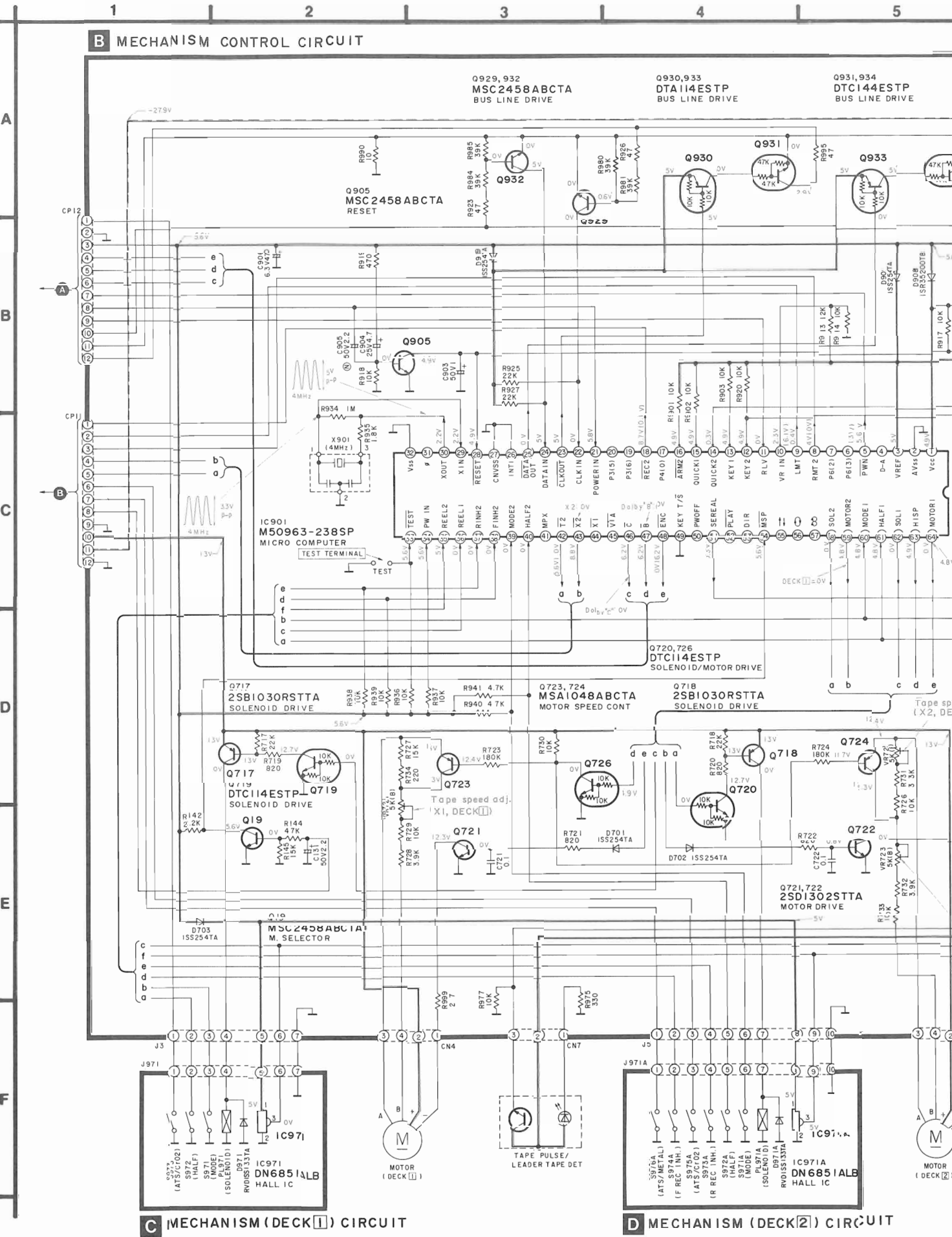
●Ground the soldering iron.

●Put a conductive mat on the work table.

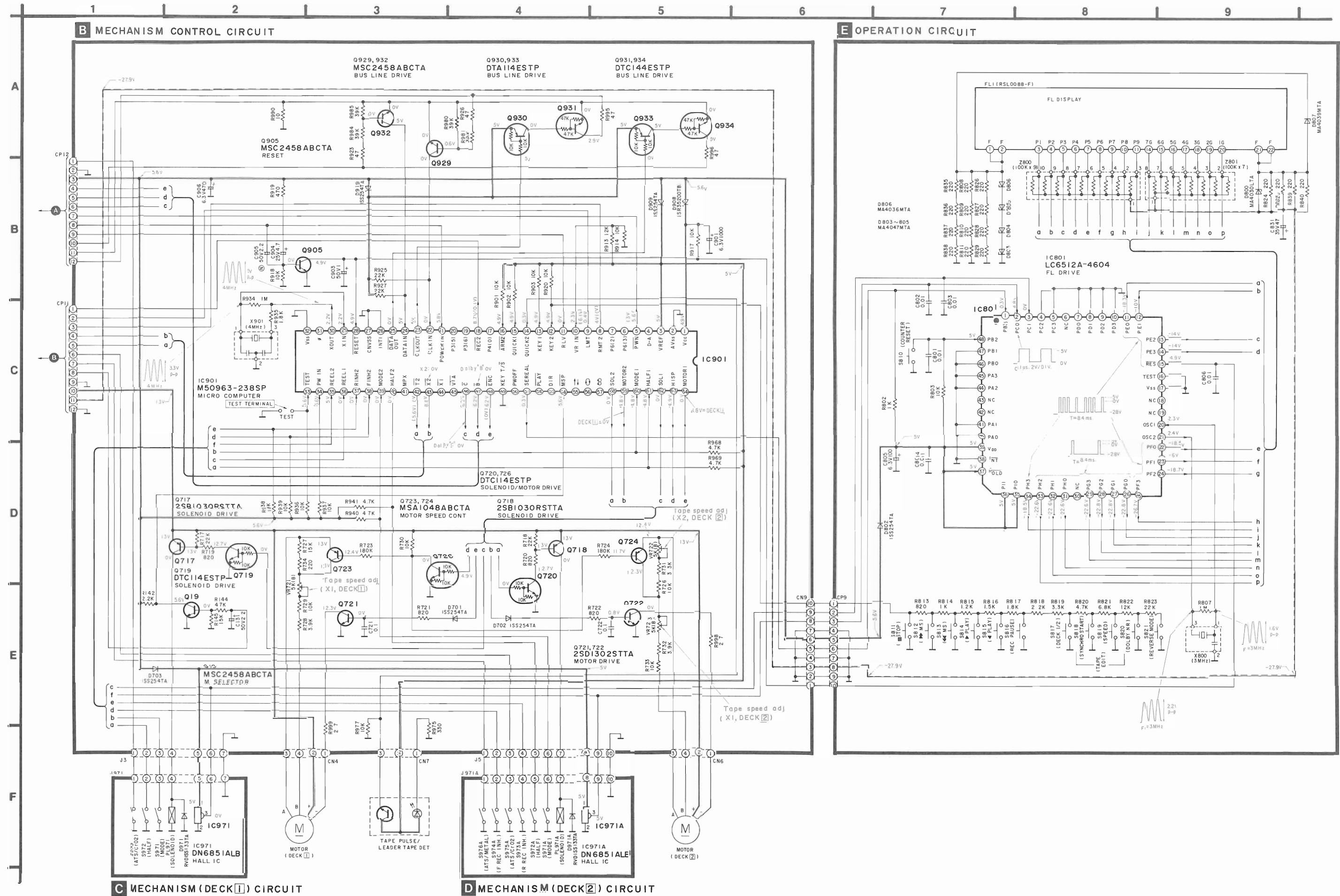
●Do not touch the legs of IC or LSI with the fingers directly.

●The supply part number is described alone in the replacement parts list.

Ref. No.	Production Part No.	Supply Part No.
IC3, 5, 7	BA4558FT1	SVIBA4558F



■ SCHEMATIC DIAGRAM (Parts list on pages 25~28)



PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

(Parts list on pages 25~28)

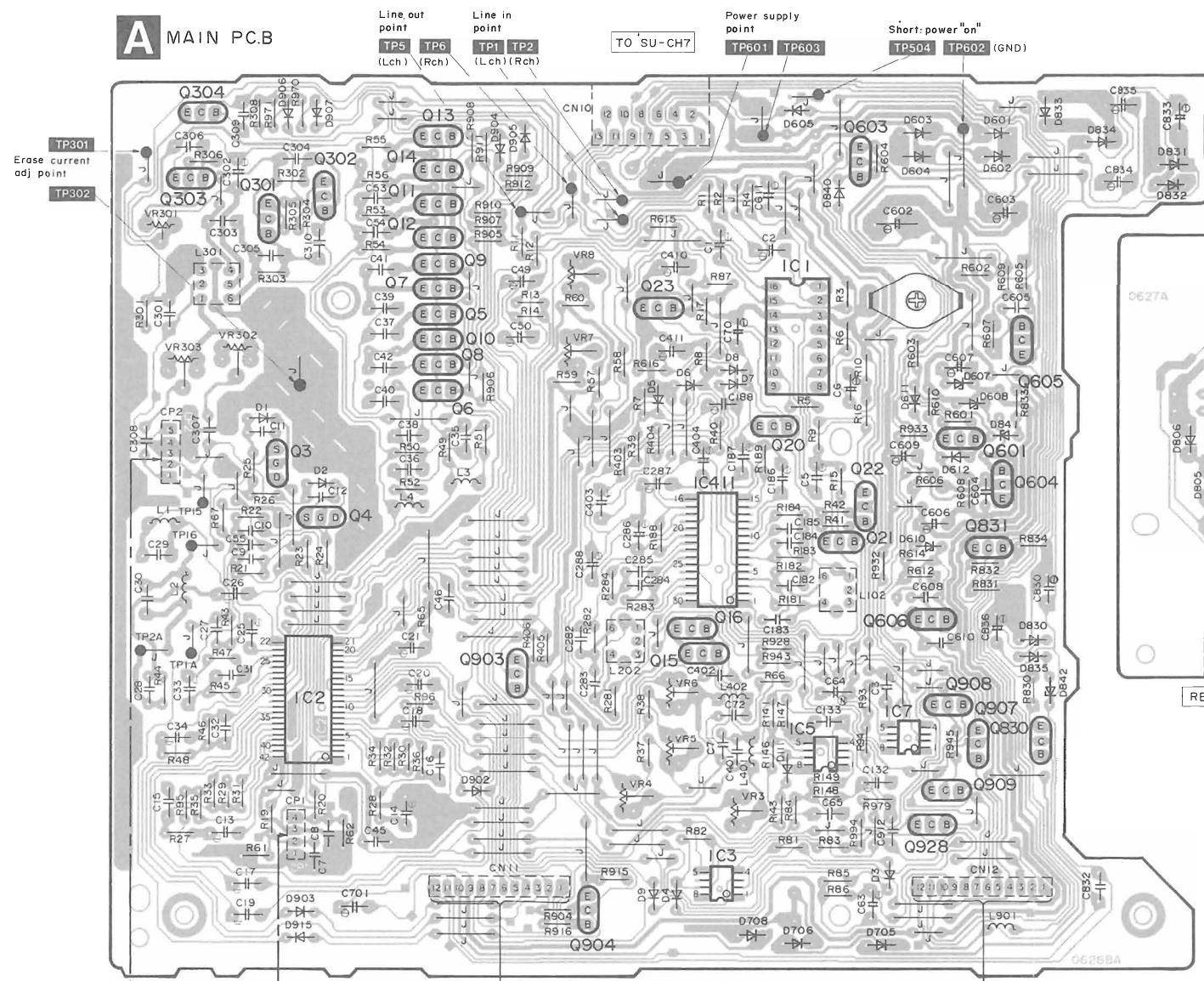
Terminal guide of IC's, transistors and diodes

BA4558FT1 	CXA1331M-T6 	AN7351SCE2
AN7384N 	M50963-238SP 	LC6512A-4604
DN6851ALB 	2SB621ARSTA 2SD592QRSTA 2SD1302STTA 	MSA1048ABCTA MSC2458ABCTA
DTA114ESTP DTC114ESTP DTC124ESTP DTC144ESTP 	2SB1030RSTTA 2SC3312STTA 2SD1450STTA 2SB1036RSTTA 	
2SJ164PQRTA 	2SB1357EFTA 2SD2037EFTA 	2SB1240QRTV6 2SD1862QRTV6 2SB1236PQRT6
MA167TA MA700TA 1SS254TA 1SR35200TB RVD1SS133TA 	MA4130MTA MA4100MTA 	
MA4030LTA MA4036MTA MA4039MTA MA4047MTA MA4062LTA MA4091LTA MA4056MTA 		

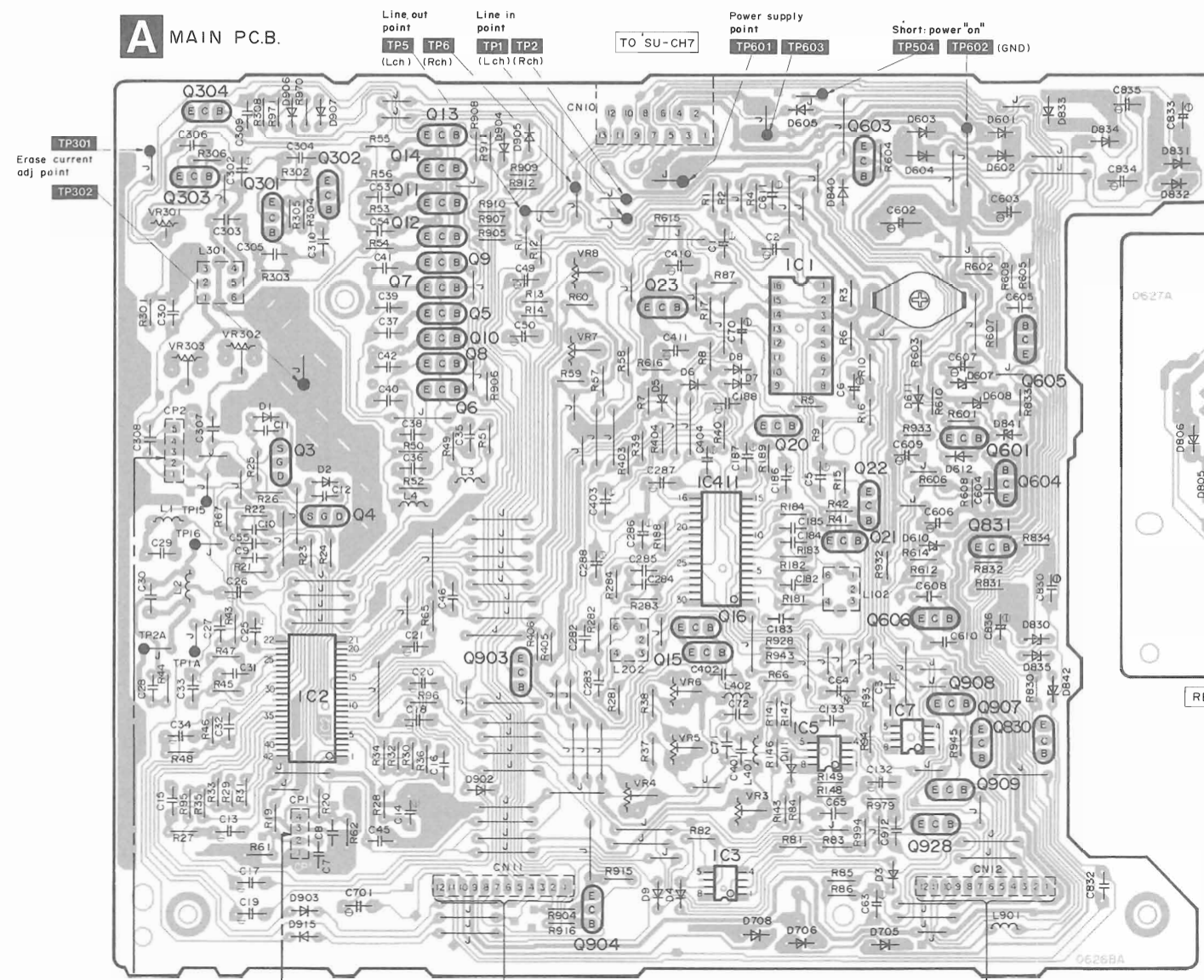
NOTES:

BLK	.....	Black	ORG	.....	Orange
BLU	.....	Blue	PNK	.....	Pink
BRN	.....	Brown	RED	.....	Red
GRY	.....	Gray	SLD	.....	Shield Wire
GRN	.....	Green	VLT	.....	Violet
L.BLU	.....	Light Blue	WHT	.....	White
			YEL	.....	Yellow

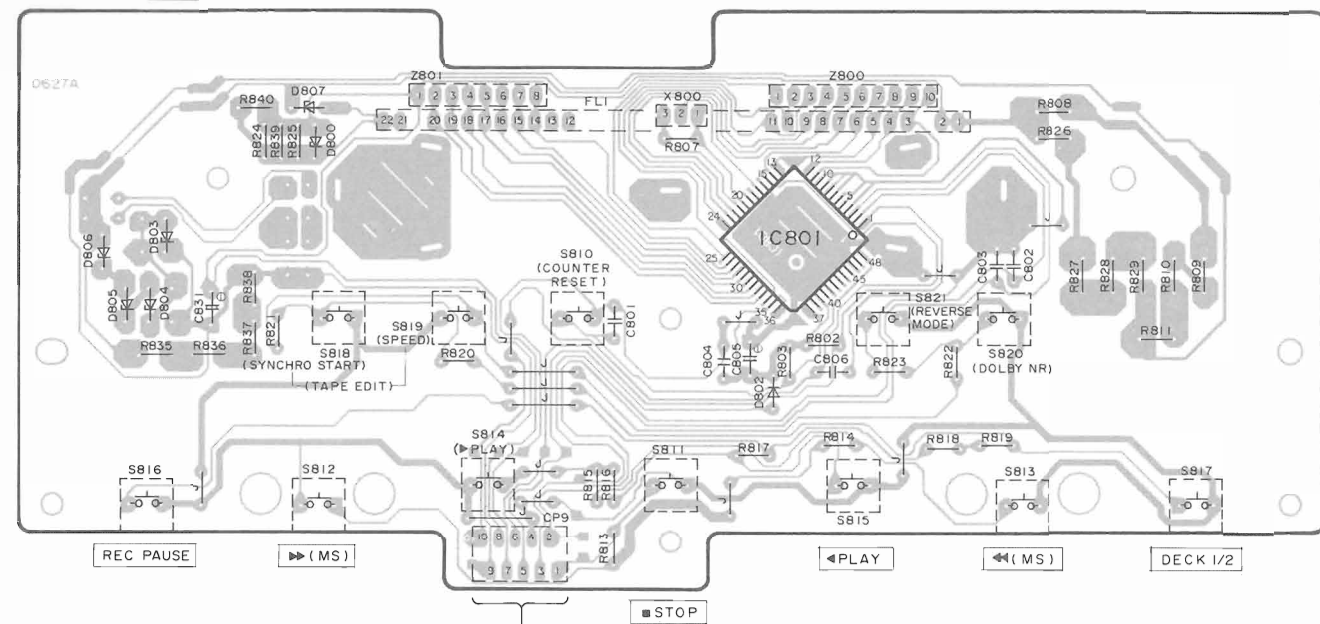
A MAIN P.C.B.



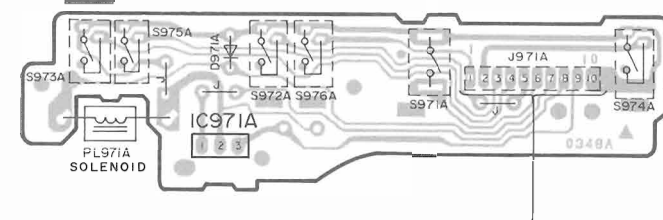
A MAIN P.C.B.



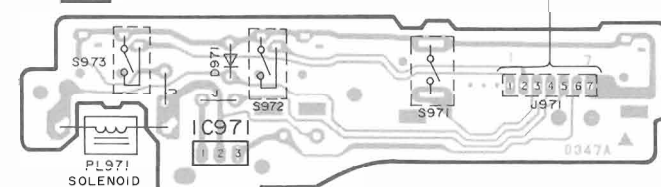
E OPERATION P.C.B.



D MECHANISM (DECK 2) P.C.B.



C MECHANISM (DECK 1) P.C.B.



■ FUNCTION OF IC TERMINALS

●IC801 (LC6512A–4604)

Pin No.	Mark	I/O Division	Function
1	PB3	I	Serial data input
2	PC0	I/O	Deck 2 Rotation pulse signal of reel table
3	PC1	I/O	Deck 1 Rotation pulse signal of reel table
4 └ 10	—	—	Connected to GND
11 └ 14	PE0 └ PE3	O	FL port signal output
15	RES	I	Reset terminal
16	TEST	—	Connected to GND
17	VSS		
18 └ 19	NC	—	Not connected
20	OSC1	I/O	Connected to ceramic oscillator (X800)
21	OSC2		

●IC901 (M50963-236SP)

Pin No.	Mark	I/O Division	Function
1	VCC	I	Power supply (+5 V)
2	AVSS	—	Connected to GND
3	VREF	I	Reference voltage input (+5 V)
4	NC	—	Not connected
5	PWN	O	Control voltage terminal of electric volume
6 └ 7	NC	—	Not connected
8	RMT2	O	Rec, amp, mute signal of deck 2 “L” level in mute is off mode “H” level in mute is on mode
9	LMT	O	Line out mute signal
10	VR IN	I	Not used and connected to resistance
11	RLV	I	Recording level detection (at ATLS position)

Pin No.	Mark	I/O Division	Function
22 └ 25	PF0 └ PF3	O	FL port signal output
26 └ 29	PG0 └ PG3	O	FL grid signal output
30	NC	—	Not connected
31 └ 34	PH0 └ PH3	O	FL grid signal output
35 └ 36	P10 └ P11	—	Not connected
37	HOLD		
38	INT	—	Connected to GND
39	VDD	I	Power supply (+5.6 V)
40 └ 47	—	—	Connected to GND
48	PB2	I	Counter reset terminal

Pin No.	Mark	I/O Division	Function
12	KEY2	I	Key switch input Pin 13 is not used and connected to resistance
13	KEY1		
14	QUICK2	O	Pin 15 is not used and connected to resistance
15	QUICK1		
16	ARM2	I	Mute key input Not used and connected to resistance
17	NC	—	Not connected
18	REC2	I	Recording bias control voltage terminal “L” level when is on “H” level when is off
19 └ 20	NC	—	Not connected
21	POWER IN	I	Power ON/OFF detection terminal
22	CLK IN	I	Clock input for serial data
23	CLK OUT	O	Clock output for serial data

Pin No.	Mark	I/O Division	Function
24	DATA IN	I	Serial data input
25	DATA OUT	O	Serial data output
26	NC	—	Connected to Vss
27	CNVSS	—	Conencted to Vss
28	RESET	I	Reset terminal “L” level when reset is off mode “L”→“H” level when reset is on mode
29	X IN	I	Clock OSC terminal Connected to crystal oscillator
30	X OUT	O	
31	NC	—	Not used
32	Vss	—	Connected to GND
33	TEST	—	Test terminal (“L” level)
34	PW IN	I	Not used
35	REEL2	I	Deck 2 Rotation pulse signal of reel table
36	REEL1	I	Deck 1 Rotation pulse signal of reel table
37	RINH2	I	Deck 2 Reverse Rec. Inh. switch select terminal
38	FINH2	I	Deck 2 Forward Rec. Inh. switch select terminal
39	MODE2	I	Deck 2 mechanism mode switch select terminal
40	HALF2	I	Deck 2 cassette half detection switch “L” level in half detection switch is on mode. “H” level in half detection switch is off mode.
41	MPX	—	Not used
42	T2	O	Deck 2 play select signal “L” level with PLAY mode.
43	X2	O	X2 Speed LED display “L” level when LED is on mode
44	X1	O	Not used
45	VIA	—	

Pin No.	Mark	I/O Division	Function
46	C	O	Dolby C LED display “L” level when LED is on mode “H” level when other mode
47	B	O	
48	ENC	O	Encode/Decode select signal “L” level in encode mode “H” level in decode mode
49	KEY T/Š	—	Not use and connected to GND
50	PW OFF	—	Not used
51	SERIAL	O	Control for FL micro computer Serial data output
52	PLAY	O	Not used
53	DIR	O	
54	MSP	O	
55	↔	O	Not used
56	↻	O	
57	↻	O	
58	SOL2	O	Deck 2 Solenoid control signal “H” level when solenoid is on mode “L” level when solenoid is off mode
59	MOTOR2	O	Deck 2 Motor control signal “H” level when motor is on mode “L” level when motor is off mode
60	MODE1	I	Deck 1 mechanism mode switch select terminal
61	HALF1	I	Deck 1 cassette half detection switch “L” level in half detection switch is on mode “H” level in half detection switch is off mode
62	SOL1	O	Deck 1 Solenoid control signal “H” level when solenoid is on mode “L” level when solenoid is off mode
63	HISP	O	Motor speed control signal “L” level when normal speed “H” level when high speed
64	MOTOR1	O	Deck 1 Motor control signal “H” level when motor is on mode “L” level when motor is off mode

■ 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.
* 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)		Q932	MSC2458ABCTA	TRANSISTOR	
				Q933	DTA114ESTP	TRANSISTOR	
				Q934	DTC144EKT96	TRANSISTOR	
						DIODE (S)	
IC1	AN7384N	I. C, ELECTRIC VOLUME		D1, 2	MA167	DIODE	
IC2	AN7351SCE2	I. C, PLAYBACK/REC. AMP.		D3-8	1SS254TA	DIODE	
IC3	SVIBA4558F	I. C, REC. LEVEL DET.		D9	MA700TA	DIODE	
IC5	SVIBA4558F	I. C, MUSIC SEL. AMP.		D111	1SS254TA	DIODE	
IC7	SVIBA4558F	I. C, REC. LEVEL CONT.		D601-604	1SR35200TB	DIODE	△
IC411	CXA1331M-T6	I. C, DOLBY NR (B/C)		D605	1SS254TA	DIODE	
IC801	LC6512A-4604	I. C, FL DRIVE		D607	MA4091LTA	DIODE	
IC901	MS0963-238SP	I. C, MICROCOMPUTER		D608	MA4091-M	DIODE	
IC971	DN6851ALB	I. C, HALL		D610	MA4062	DIODE	
IC971A	DN6851ALB	I. C, HALL		D611, 612	MA167	DIODE	
		TRANSISTOR(S)		D701-703	1SS254TA	DIODE	
				D705, 706	1SR35200TB	DIODE	△
Q3, 4	2SJ164PQRTA	TRANSISTOR		D708	1SR35200TB	DIODE	△
Q5-8	MSA1048ABCTA	TRANSISTOR		D800	MA4030LTA	DIODE	
Q9	MSC2458ABCTA	TRANSISTOR		D802	1SS254TA	DIODE	
Q10-14	MSC2458ABCTA	TRANSISTOR		D803-805	MA4047MTA	DIODE	
Q15, 16	2SD1450STTA	TRANSISTOR		D806	MA4036MTA	DIODE	
Q19	MSC2458ABCTA	TRANSISTOR		D807	MA4039MTA	DIODE	
Q20-22	2SC3312STTA	TRANSISTOR		D830	MA4100MTA	DIODE	
Q23	DTC124EST	TRANSISTOR		D831, 832	1SR35200TB	DIODE	△
Q301, 302	MSC2458ABCTA	TRANSISTOR		D833	SVD1SR35200A	DIODE	
Q303	2SB621A-R	TRANSISTOR		D834	1SR35200TB	DIODE	△
Q304	2SD592NCR	TRANSISTOR		D835	MA4100MTA	DIODE	
Q601	2SB1036RSTA	TRANSISTOR		D840	MA167	DIODE	
Q603	MSC2458ABCTA	TRANSISTOR		D841	MA4100MTA	DIODE	
Q604	2SD2037EFTA	TRANSISTOR		D842	MA4056MTA	DIODE	
Q605	2SB1357EFTA	TRANSISTOR		D902-907	1SS254TA	DIODE	
Q606	2SD1862QRTV6	TRANSISTOR		D908	1SR35200TB	DIODE	△
Q717, 718	2SB1030QTA	TRANSISTOR		D909	1SS254TA	DIODE	
Q719, 720	DTC114ESTP	TRANSISTOR		D915	1SS254TA	DIODE	
Q721, 722	2SD1302STTA	TRANSISTOR		D919	1SS254TA	DIODE	
Q723, 724	MSA1048ABCTA	TRANSISTOR		D971A	RVD1SS133TA	DIODE	
Q726	DTC114ESTP	TRANSISTOR		D971	RVD1SS133TA	DIODE	
Q830	2SB1236PQRT6	TRANSISTOR				VARIABLE RESISTOR (S)	
Q831	2SD1512R	TRANSISTOR					
Q903	DTA114ESTP	TRANSISTOR					
Q904	2SB1030QTA	TRANSISTOR					
Q905	MSC2458ABCTA	TRANSISTOR					
Q907-909	DTA114ESTP	TRANSISTOR		VR3-6	EVNDXAA00B24	V. R, PLAYBACK GAIN ADJ.	
Q928	DTA114ESTP	TRANSISTOR		VR7, 8	EVNDXAA00B14	V. R, REC. /PLAY LEVEL ADJ.	
Q929	MSC2458ABCTA	TRANSISTOR		VR301	EVNDXAA00B53	V. R, ERASE CURRENT ADJ.	
Q930	DTA114ESTP	TRANSISTOR		VR302, 303	EVNDXAA00B15	V. R, OVERALL GAIN ADJ.	
Q931	DTC144EKT96	TRANSISTOR		VR721-723	EVNDCAA03B53	V. R, TAPE SPEED ADJ.	

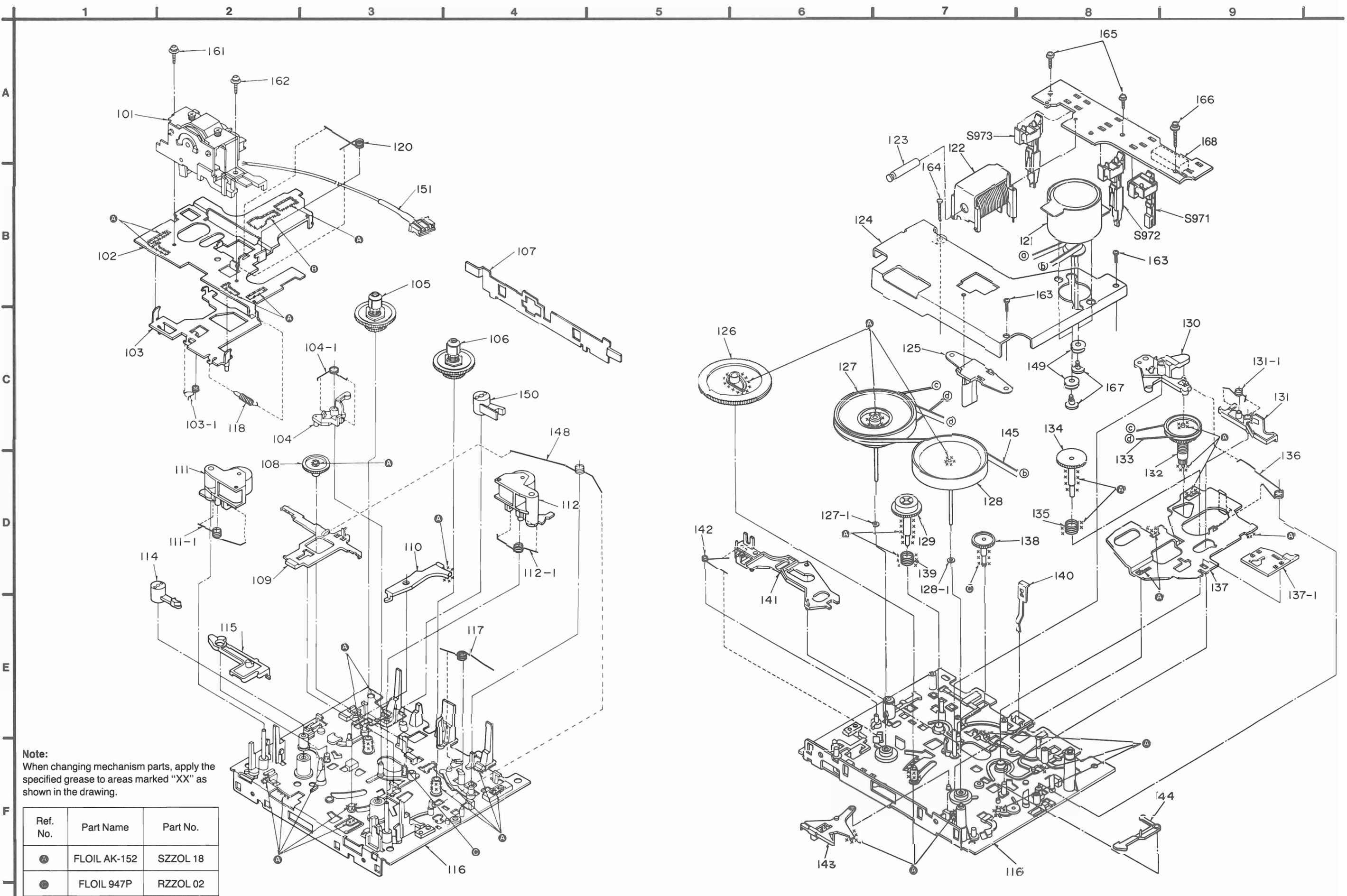
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		COMPONENT COMBINATION (S)		J5	SJSD1005	CONNECTOR (10P)	
				CN4	RJS1A1704	SOCKET (4P)	
				CN6	RJS1A1704	SOCKET (4P)	
Z800	EXBF10E104J	COMPONENT COMBINATION		CN7	SJTD313	CONNECTOR (3P)	
Z801	EXBF8E104J	COMPONENT COMBINATION		CN9	RJS10Q8ZA	SOCKET (10P)	
		COIL (S)		CN10	RJT055B013	CONNECTOR (13P)	
				CN11, 12	RJT057W012-1	CONNECTOR (12P)	
L1, 2	SLQX303-1KT	COIL		CP1	SJTD413	CONNECTOR (4P)	
L3, 4	SLQX272-1YT	COIL		CP2	RJP5G18ZA	CONNECTOR (5P)	
L102	RLM2B005-1M	COIL		CP9	RJS10Q9ZA	SOCKET (10P)	
L202	RLM2B005-1M	COIL		CP11, 12	RJU057W012	SOCKET (12P)	
L301	SL09B4-K	COIL					
L401, 402	SLQX272-1YT	COIL					
L901	ELEXT101KA9	COIL					
		OSCILLATOR (S)					
X800	EF0GC3004T4	OSCILLATOR					
X901	EF0GC4004A4	OSCILLATOR					
		DISPLAY					
FL1	RSL0088-F	DISPLAY					
		SWITCH (ES)					
S810	EVQ21405R	SW, COUNTER RESET					
S811	EVQ21405R	SW, STOP					
S812	EVQ21405R	SW, MS					
S813	EVQ21405R	SW, MS					
S814	EVQ21405R	SW, PLAY					
S815	EVQ21405R	SW, PLAY					
S816	EVQ21405R	SW, REC PAUSE					
S817	EVQ21405R	SW, DECK 1/2					
S818	EVQ21405R	SW, SYNCHRO START					
S819	EVQ21405R	SW, SEED					
S820	EVQ21405R	SW, DOLBY NR					
S821	EVQ21405R	SW, REVERSE MODE					
S971	RSH1A89Z	SW, MODE (DECK1)					
S971A	RSH1A89Z	SW, MODE (DECK2)					
S972	RSH1A90YB-U	SW, HALF (DECK1)					
S972A	RSH1A90YB-U	SW, HALF (DECK2)					
S973	RSH1A90YB-U	SW, ATS/C-r02 (DECK1)					
S973A	RSH1A90YB-U	SW, R. REC INH (DECK2)					
S974A	RSH1A90YB-U	SW, F. REC INH (DECK2)					
S975A	RSH1A90YB-U	SW, ATS/C-r02 (DECK2)					
S976A	RSH1A90YB-U	SW, ATS/METAL (DECK2)					
		CONNECTOR (S)					
J3	RJS7T4ZA	SOCKET (7P)					

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						
R1, 2	ERDS2TJ393	1/4W 39K	R145	ERDS2TJ153	1/4W 15K	R815	ERDS2TJ122	1/4W 1. 2K
R3, 4	ERDS2TJ183T	1/4W 18K	R146	ERDS2TJ822	1/4W 8. 2K	R816	ERDS2TJ152	1/4W 1. 5K
R5, 6	ERDS2TJ562	1/4W 5. 6K	R147	ERDS2TJ823T	1/4W 82K	R817	ERDS2TJ182	1/4W 1. 8K
R7, 8	ERDS2TJ223	1/4W 22K	R148	ERDS2TJ331	1/4W 330	R818	ERDS2TJ222	1/4W 2. 2K
R9	ERDS2TJ332	1/4W 3. 3K	R149	ERDS2TJ332	1/4W 3. 3K	R819	ERDS2TJ332	1/4W 3. 3K
R10	ERDS2TJ332	1/4W 3. 3K	R181	ERDS2TJ102	1/4W 1K	R820	ERDS2TJ472	1/4W 4. 7K
R11, 12	ERDS2TJ1R0	1/4W 1. 0	R182	ERDS2TJ222	1/4W 2. 2K	R821	ERDS2TJ682T	1/4W 6. 8K
R13, 14	ERDS2TJ152	1/4W 1. 5K	R183	ERDS2TJ243T	1/4W 24K	R822	ERDS2TJ123	1/4W 12K
R15, 16	ERDS2TJ273	1/4W 27K	R184	ERDS2TJ561	1/4W 560	R823	ERDS2TJ223	1/4W 22K
R17	ERDS2TJ472	1/4W 4. 7K	R188	ERDS2TJ151	1/4W 150	R824-829	ERDS2TJ221	1/4W 220
R19, 20	ERDS2TJ101	1/4W 100	R189	ERDS2TJ273	1/4W 27K	R830	ERD2FCVG270T	1/4W 27 Δ
R21, 22	ERDS2TJ104	1/4W 100K	R281	ERDS2TJ102	1/4W 1K	R831	ERDS1FVJ471T	1/2W 470 Δ
R23, 24	ERDS2TJ101	1/4W 100	R282	ERDS2TJ222	1/4W 2. 2K	R832	ERDS2TJ103	1/4W 10K
R25, 26	ERDS2TJ225	1/4W 2. 2M	R283	ERDS2TJ243T	1/4W 24K	R833	ERDS2TJ223	1/4W 22K
R27, 28	ERDS2EJ820	1/4W 82	R284	ERDS2TJ561	1/4W 560	R834-840	ERDS2TJ221	1/4W 220
R29, 30	ERDS2TJ103	1/4W 10K	R301	ERDS2TJ1R0	1/4W 1. 0	R901-903	ERDS2TJ103	1/4W 10K
R31, 32	ERDS2TJ273	1/4W 27K	R302, 303	ERDS2TJ183T	1/4W 18K	R904	ERDS2TJ152	1/4W 1. 5K
R33, 34	ERDS2TJ183T	1/4W 18K	R304, 305	ERDS2TJ100	1/4W 10	R905	ERDS2TJ222	1/4W 2. 2K
R35, 36	ERDS2TJ474	1/4W 470K	R306	ERDS2TJ561	1/4W 560	R906	ERDS2TJ103	1/4W 10K
R37, 38	ERDS2TJ272T	1/4W 2. 7K	R308	ERDS2TJ561	1/4W 560	R907	ERDS2TJ563	1/4W 56K
R39, 40	ERDS2TJ332	1/4W 3. 3K	R403, 404	ERDS2TJ472	1/4W 4. 7K	R908-910	ERDS2TJ103	1/4W 10K
R41, 42	ERDS2TJ223	1/4W 22K	R405, 406	ERDS2TJ682T	1/4W 6. 8K	R911	ERDS2TJ392T	1/4W 3. 9K
R43, 44	ERDS2TJ103	1/4W 10K	R601, 602	ERDS2TJ472	1/4W 4. 7K	R912	ERDS2TJ272T	1/4W 2. 7K
R45, 46	ERDS2TJ223	1/4W 22K	R603	ERDS2TJ103	1/4W 10K	R913	ERDS2TJ123	1/4W 12K
R47, 48	ERDS2TJ472	1/4W 4. 7K	R604	ERDS2TJ472	1/4W 4. 7K	R914	ERDS2TJ103	1/4W 10K
R49, 50	ERDS2TJ821	1/4W 820	R605, 606	ERD2FCVJ4R7T	1/4W 4. 7 Δ	R915	ERDS2TJ683	1/4W 68K
R51, 52	ERDS2TJ470	1/4W 47	R607	ERDS1FVJ331T	1/2W 330 Δ	R916	ERDS2TJ472	1/4W 4. 7K
R53-56	ERDS2TJ222	1/4W 2. 2K	R608	ERDS1FVJ271T	1/2W 270 Δ	R917, 918	ERDS2TJ103	1/4W 10K
R57, 58	ERDS2TJ103	1/4W 10K	R609, 610	ERDS2TJ472	1/4W 4. 7K	R919	ERDS2TJ471	1/4W 470
R59, 60	ERDS2TJ332	1/4W 3. 3K	R612	ERD2FCVG150T	1/4W 15 Δ	R920	ERDS2TJ103	1/4W 10K
R61, 62	ERDS2TJ473	1/4W 47K	R614	ERDS2TJ102	1/4W 1K	R923	ERDS2TJ470	1/4W 47
R65	ERDS2TJ392T	1/4W 3. 9K	R615, 616	ERDS2TJ101	1/4W 100	R925	ERDS2TJ223	1/4W 22K
R66	ERDS2TJ682T	1/4W 6. 8K	R717, 718	ERDS2TJ223	1/4W 22K	R926	ERDS2TJ470	1/4W 47
R67	ERDS2TJ223	1/4W 22K	R719-722	ERDS2TJ821	1/4W 820	R927	ERDS2TJ223	1/4W 22K
R81, 82	ERDS2TJ683	1/4W 68K	R723, 724	ERDS2TJ184T	1/4W 180K	R928	ERDS2TJ103	1/4W 10K
R83, 84	ERDS2TJ103	1/4W 10K	R726	ERDS2TJ103	1/4W 10K	R932	ERDS2TJ183T	1/4W 18K
R85	ERDS2TJ101	1/4W 100	R727	ERDS2TJ153	1/4W 15K	R933	ERDS2TJ223	1/4W 22K
R86	ERDS2TJ473	1/4W 47K	R728	ERDS2TJ392T	1/4W 3. 9K	R934	ERDS2TJ105T	1/4W 1M
R87	ERDS2TJ103	1/4W 10K	R729, 730	ERDS2TJ103	1/4W 10K	R935	ERDS2TJ182	1/4W 1. 8K
R93	ERDS2TJ273	1/4W 27K	R731	ERDS2TJ332	1/4W 3. 3K	R936-939	ERDS2TJ103	1/4W 10K
R94	ERDS2TJ123	1/4W 12K	R732	ERDS2TJ392T	1/4W 3. 9K	R940, 941	ERDS2TJ472	1/4W 4. 7K
R95, 96	ERDS2TJ153	1/4W 15K	R733	ERDS2TJ103	1/4W 10K	R943	ERDS2TJ103	1/4W 10K
R141	ERDS2TJ393	1/4W 39K	R734	ERDS2TJ221	1/4W 220	R945	ERDS2TJ822	1/4W 8. 2K
R142	ERDS2TJ222	1/4W 2. 2K	R802	ERDS2TJ102	1/4W 1K	R968, 969	ERDS2TJ472	1/4W 4. 7K
R143	ERDS2TJ102	1/4W 1K	R803	ERDS2TJ103	1/4W 10K	R970	ERDS2TJ681	1/4W 680
R144	ERDS2TJ473	1/4W 47K	R807	ERDS2TJ105T	1/4W 1M	R971	ERDS2TJ391	1/4W 390
			R808-811	ERDS2TJ221	1/4W 220	R975	ERDS2TJ331	1/4W 330
			R813	ERDS2TJ821	1/4W 820	R977	ERDS2TJ103	1/4W 10K
			R814	ERDS2TJ102	1/4W 1K	R979	ERDS2TJ153	1/4W 15K

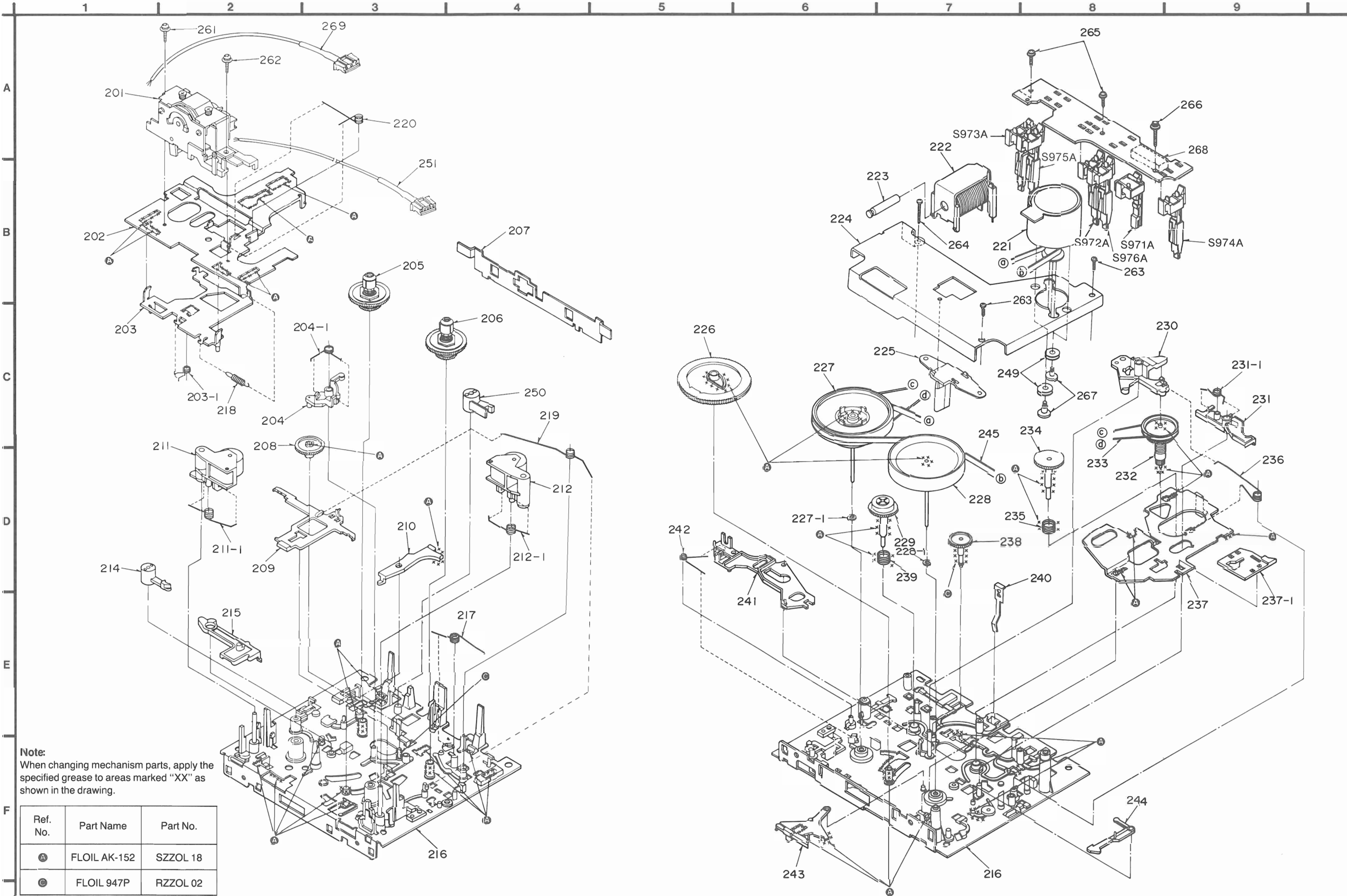
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R980, 981	ERDS2TJ393	1/4W 39K	C302	ECEA1CU221	16V 220U
R984, 985	ERDS2TJ393	1/4W 39K	C303	ECKR1H392KB5	50V 3900P
R990	ERDS2TJ100	1/4W 10	C304, 305	ECFR1E222KV	25V 2200P
R994	ERDS2TJ102	1/4W 1K	C306	ECKR1H103ZF5	50V 0. 01U
R995, 996	ERDS2TJ470	1/4W 47	C307, 308	ECBT1H221KB5	50V 220P
R998, 999	ERDS2TJ2R7T	1/4W 2. 7	C309	ECKR1H103ZF5	50V 0. 01U
		CAPACITORS	C310	ECFR1E682KV	25V 6800P
			C401, 402	ECBT1C152JR5	16V 1500P
			C403, 404	ECEA1EKA4R7B	25V 4. 7U
C1-3	ECEA1HKA010B	50V 1U	C410, 411	ECEA1AU471	10V 470U
C5, 6	ECEA1CU220	16V 22U	C602	ECEA1EU222B	25V 2200U
C7-9	ECBT1H561KB5	50V 560P	C603	ECEA1EU102B	25V 1000U
C10	ECBT1H561KB5	50V 560P	C604, 605	ECBT1C103MS5	16V 0. 01U
C11, 12	ECBT1H102KB5	50V 1000P	C606, 607	ECEA1AU101	10V 100U
C13, 14	ECEA0JKA101B	6. 3V 100U	C608	ECBT1C103MS5	16V 0. 01U
C15, 16	ECQB1H682J23	50V 6800P	C609	ECEA1AU470	10V 47U
C17-20	ECEA1EKA4R7B	25V 4. 7U	C610	ECKR1H103ZF5	50V 0. 01U
C21	ECEA0JKA101B	6. 3V 100U	C611	ECEA1AU470	10V 47U
C25, 26	ECEA1HKA010B	50V 1U	C701	ECEA1EU101	25V 100U
C27, 28	ECBT1H561KB5	50V 560P	C721, 722	ECFR1H104ZF	50V 0. 1U
C29, 30	ECKR2H121KB5	500V 120P	C801-804	ECBT1C103MS5	16V 0. 01U
C31, 32	ECCR1H181K5	50V 180P	C805	ECEA0JKS101B	6. 3V 100U
C33, 34	ECEA1HKAR47B	50V 0. 47U	C806	ECBT1C103MS5	16V 0. 01U
C35, 36	ECFR1C272JR	16V 2700P	C830	ECA2AM101B	100V 100U
C37, 38	ECFR1C183JR	16V 0. 018U	C831	ECEA1VKS470Q	35V 47U
C39, 40	ECFR1C103JR	16V 0. 01U	C832	ECFR1H104ZF	50V 0. 1U
C41, 42	ECFR1C333JR	16V 0. 033U	C833	ECA1HM471B	50V 470U
C45, 46	ECKR1H103ZF5	50V 0. 01U	C834	ECEA1EU221	25V 220U
C49, 50	ECEA1CKA100B	16V 10U	C835	ECA1JM101B	63V 100U
C53, 54	ECFR1C222JR	16V 2200P	C836	ECEA1VKA330B	35V 33U
C55	ECBT1H102KB5	50V 1000P	C901	ECEA0JU102	6. 3V 1000U
C63	ECEA1CKA100B	16V 10U	C903	ECEA1HKA010B	50V 1U
C64	ECEA1HN010	50V 1U	C904	ECEA1EKA4R7B	25V 4. 7U
C65	ECFR1C103JR	16V 0. 01U	C905	ECEA1HSN2R2B	50V 2. 2U
C70	ECEA1EKA4R7B	25V 4. 7U	C906	ECEA0JU471	6. 3V 470U
C71, 72	ECBT1C332KR5	16V 3300P	C912	ECKT1H122KB	50V 1200P
C131	ECEA1HK2R2B	50V 2. 2U			
C132	ECEA1HKA3R3B	50V 3. 3U			
C133	ECCR1H470K5	50V 47P			
C182	ECBT1C682KR5	16V 6800P			
C183	ECBA1H681KB5	50V 680P			
C184, 185	ECBT1C222JR5	16V 2200P			
C186	ECEA1HUR56B	50V 0. 56U			
C187	ECEA1HKR33	50V 0. 33U			
C188	ECEA1EKA4R7B	25V 4. 7U			
C282	ECBT1C682KR5	16V 6800P			
C283	ECBA1H681KB5	50V 680P			
C284, 285	ECBT1C222JR5	16V 2200P			
C286	ECEA1HUR56B	50V 0. 56U			
C287	ECEA1HKR33	50V 0. 33U			
C288	ECEA1EKA4R7B	25V 4. 7U			
C301	ECQP1153JZ	100V 0. 015U			

MECHANISM PARTS LOCATION •DECK 1

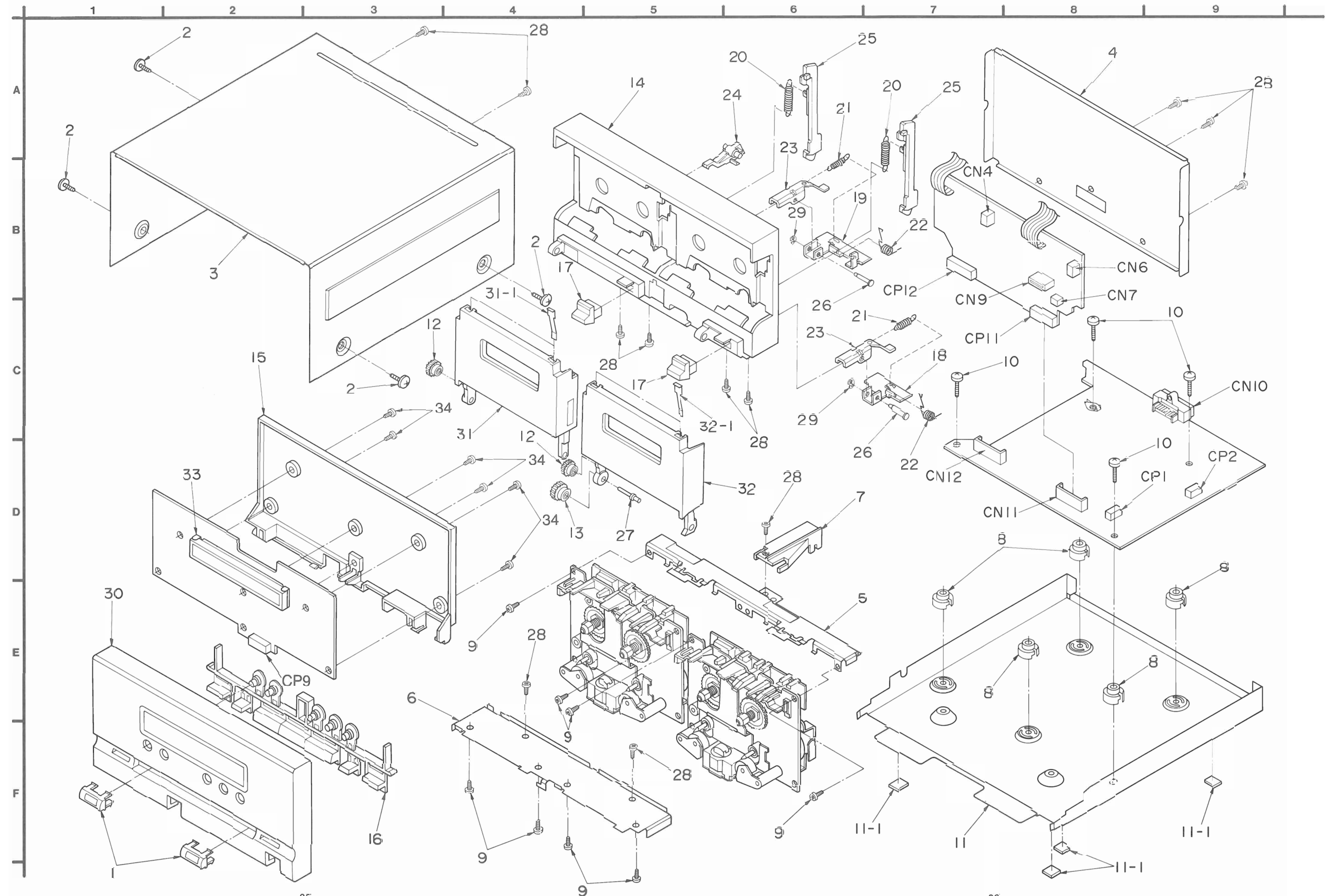


Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST		144	RUB509ZA	LEVER	
(DECK1)				145	RDV108ZA	CAPSTAN BELT	
101	RXQ0051-1	HEAD BLOCK(PLAY)		148	RUW144ZA	SPRING	
102	RUA793ZF	HEAD BASE		149	RHG3032ZA	RUBBER CUSHION	
103	RZLAR300A	ROD		150	RNL180ZB	DAMPER ARM	
103-1	RUW143ZA	SPRING		151	REX0132	LEAD WIRE (4P)	
104	1UB0089ZA	ARM		161	XTW2+6L	SCREW	
104-1	RUW148ZA	SPRING		162	XTW2+8L	SCREW	
105	1DM00182B	REEL TABLE (R)		163	XTN26+7J	SCREW	
106	1DM00172B	REEL TABLE (F)		164	RHE5203ZA	SCREW	
107	RML0069-1	LEVER		165	XTW2+8S	SCREW	
108	RDG5772ZC	GEAR		166	XYC2+JF16	SCREW	
109	RUB5082B	BRACKET ROD		167	RHD26002	SCREW	
110	RUB5062B	LEVER		168	RJS7T7ZA	CONNECTOR (7P) J971	
111	1UB00882B	ARM (R)					
111-1	RUW141ZA	SPRING					
112	1UB00872B	ARM (F)					
112-1	RUW140ZC	SPRING					
114	RNL12D	DAMPER ARM					
115	RUB5032D	MAIN LEVER					
116	RFKRRSCH9N	CHASSIS ASS'Y					
117	RUW142ZA	SPRING					
118	RUD105ZA	SPRING					
120	RUW139ZA	SPRING					
121	RFKPRSCH9N	DC MOTOR ASS'Y					
122	1UE00152B	PLUNGER					
123	RUB428ZE	MOVING IRON CORE					
124	RMA0101	ANGLE					
125	RMD5014ZC	ANGLE					
126	RDG5927ZG	MAIN GEAR					
127	1DW00372B	FLYWHEEL (F)					
127-1	RNW139ZA	WASHER					
128	1DW00382B	FLYWHEEL (R)					
128-1	RNW138ZA	WASHER					
129	1DG00062B	REEL TABLE GEAR					
130	RUB5132D	ARM					
131	1UB0091ZA	LEVER					
131-1	RUW146ZA	SPRING					
132	1DR00112B	MAIN PULLEY					
133	RDV902B	BELT					
134	RDG5769ZA	REEL TABLE GEAR					
135	RUQ1112B	SPRING					
136	RUW145ZA	SPRING					
137	1UB0090ZA	ROD					
137-1	RUB5122B	ROD					
138	RDG57732B	GEAR					
139	RUQ112ZA	SPRING					
140	RUS6092C	TAPE PRESSURE SPRING					
141	RUB5142C	LEVER					
142	RUW147ZA	SPRING					
143	RUB515ZA	LEVER					

MECHANISM PARTS LOCATION •DECK 2



■ CABINET PARTS LOCATION



[illegible]

