

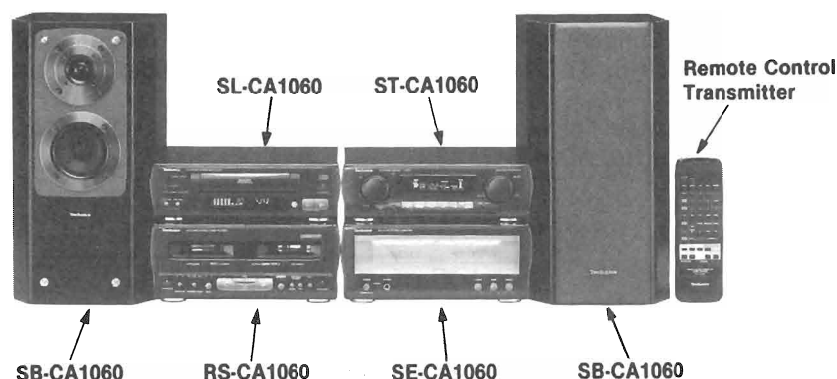
# Service Manual

Cassette Deck



Cassette Deck

## RS-CA1060



Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)

\*1 Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

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

**System: SC-CA1060,  
SC-CA1080**

## AR-1 MECHANISM SERIES

## SPECIFICATIONS

### CASSETTE DECK

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Heads	
DECK 1 (Playback head)	Permalloy head
DECK 2 (Recording/Playback) (Erasure)	Permalloy head Double-gap ferrite head
Motors	
DECK 1, 2 (Capstan drive)	DC servo motor
(Reel table drive)	DC motor
Tape speed	4.8 cm/sec.
Wow and flutter	0.1% (WRMS)
Fast forward and rewind times	Approx. 45 seconds with C-60 cassette tape

### Frequency response (Dolby NR off, CCRT on)

NORMAL	20 Hz–17 kHz
	30 Hz–15 kHz (+0 dB, –7 dB, DIN)
CrO <sub>2</sub>	20 Hz–18 kHz
	30 Hz–17 kHz (+0 dB, –7 dB, DIN)
METAL	20 Hz–20 kHz
	30 Hz–19 kHz (+0 dB, –7 dB, DIN)

### S/N

(Signal level = max recording level, CrO<sub>2</sub>)

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	126 mV/17.6 kΩ
---------	----------------

### Output voltage and impedance

LINE OUT	400 mV/220 Ω
----------	--------------

### GENERAL

Dimensions (W × H × D)	280 × 118.5 × 265 mm
Weight	2.8 kg

### Notes:

- Weights and dimensions shown are approximate.
- Design and specifications are subject to change without notice.

System	Stereo Tuner	Compact disc player	Stereo Amplifier	Cassette deck	Speakers
SC-CA1060	ST-CA1060	SL-CA1060	SE-CA1060	RS-CA1060	*2SB-CA1060
SC-CA1080	ST-CA1080		SE-CA1080		*2SB-CA1080

\*2 Made in PAES

# Technics®

## CONTENTS

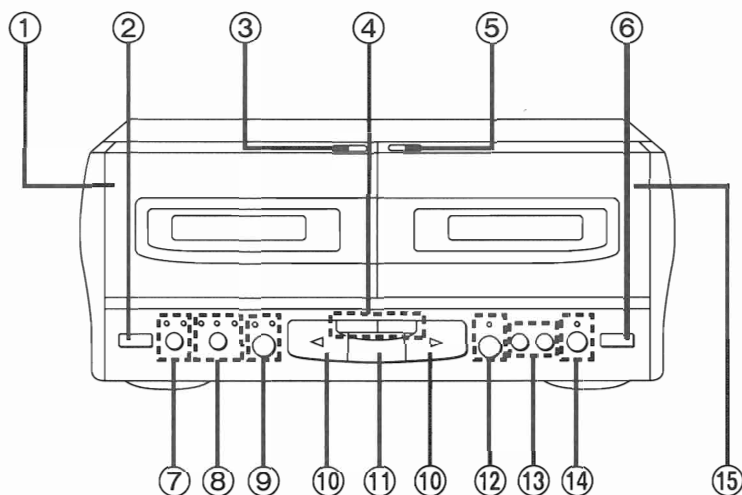
	Page
LOCATION OF CONTROLS .....	2
REPLACEMENT OF FOOT .....	2
OPERATION CHECKS AND MAIN COMPONENT	
REPLACEMENT PROCEDURE .....	3~8
MEASUREMENTS AND ADJUSTMENTS .....	9~12
SCHEMATIC DIAGRAM .....	13~19
PRINTED CIRCUIT BOARDS .....	20~22

	Page
WIRING CONNECTION DIAGRAM .....	23
BLOCK DIAGRAM .....	24, 25
TERMINAL FUNCTION OF IC'S .....	26, 27
CABINET PARTS LOCATION .....	28
REPLACEMENT PARTS LIST .....	29, 32, 33
MECHANISM PARTS LOCATION .....	30, 31
RESISTORS AND CAPACITORS .....	34, 35

**Note 1:** Refer to the placement, Installation, Connections and Concerning the remote control and Quick reference of remote control operation of Service manual for Model No. ST-CA1080 (E, EG), Order No. AD9406153C2 and ST-CA1060 (E, EG), Order No. AD9406170C2.

**Note 2:** Refer to the Accessories and Packaging of Service manual for Model No. SE-CA1080 (E, EB, EG), Order No. AD9406158C2 and SE-CA1060 (E, EB, EG, GC, GN), Order No. AD9406171C8.

## LOCATION OF CONTROLS

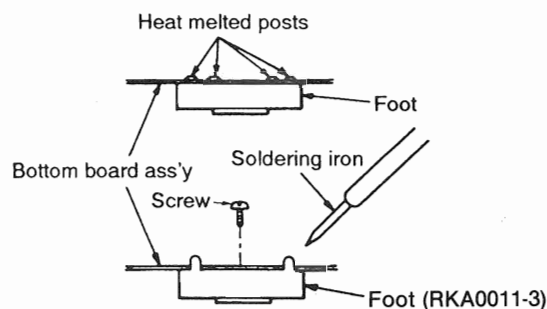


### Cassette deck section **E**

- ① Deck 1 cassette holder
- ② Deck 1 cassette holder open/close button
- ③ Deck 1 cassette holder close button
- ④ Fast forward/rewind/tape program sensor buttons
- ⑤ Deck 2 cassette holder close button
- ⑥ Deck 2 cassette holder open/close button
- ⑦ Dolby noise reduction button and indicators
- ⑧ Reverse mode button and indicators
- ⑨ Deck1/deck2 select button and indicators
- ⑩ Playback buttons and indicators
- ⑪ Stop button
- ⑫ Record pause button and indicator
- ⑬ One-touch tape edit buttons
- ⑭ CCRT button and indicator
- ⑮ Deck 2 cassette holder

## REPLACEMENT OF THE FOOT

1. Remove the 4 heat melted posts on the Bottom board ass'y with a pair of nippers or similar tool.
2. To replace the foot (RKA0011-3) on the Bottom board ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).



## ■ OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

### NOTE

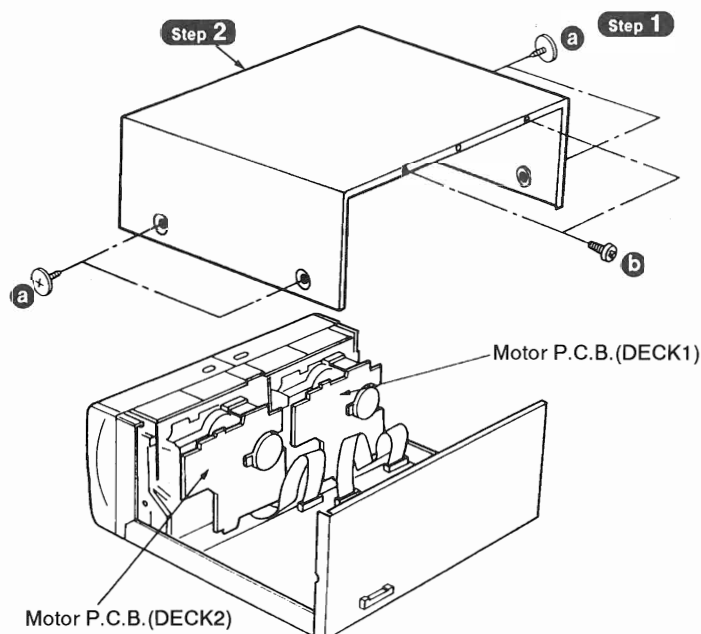
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Illustrated screws are equivalent to actual size.
5. Refer the parts No. on the page of "Main component Replacement Procedures", if necessary.

### ● Contents

•Checking Procedure for each P.C.B.	page.
1. Checking for the motor P.C.B. (DECK1 and DECK2) .....	3.
2. Checking for the main P.C.B. ....	4.
3. Checking for the operation P.C.B. ....	4,5.
•Main Component Replacement Procedures	
1. Replacement for the head block and pinch roller unit .....	5,6.
2. Replacement for the belt, reel motor unit and capstan motor unit .....	6,7.
3. Replacement for the parts mounted on mechanism P.C.B. and solenoid unit .....	7,8.

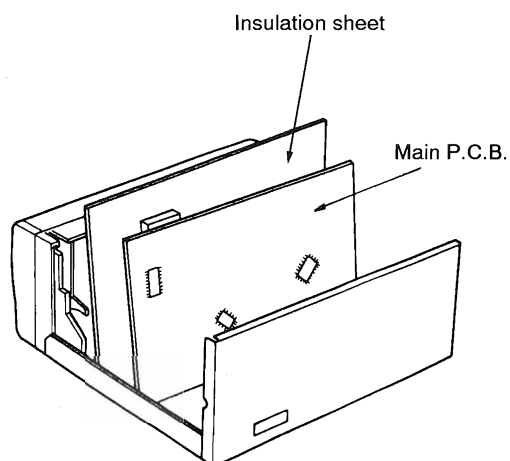
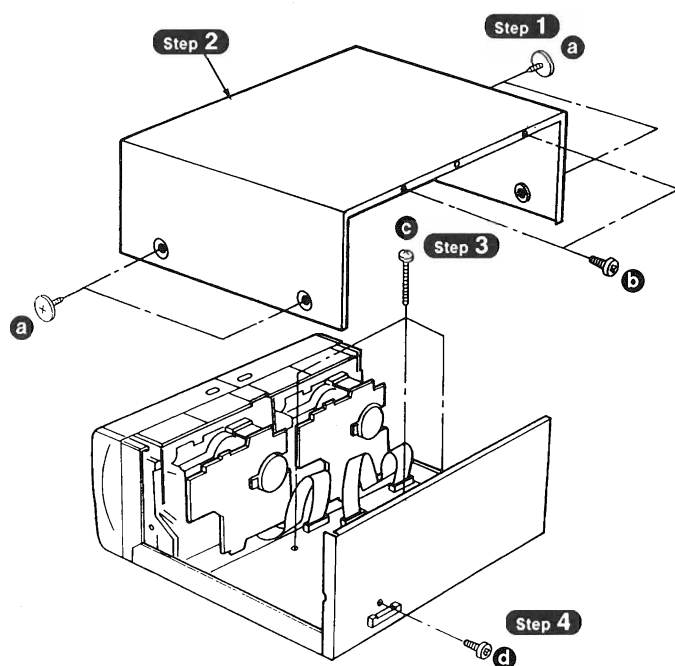
## ■ Checking Procedure for each P.C.B.

### 1. Checking for the motor P.C.B.(DECK1 and DECK2)



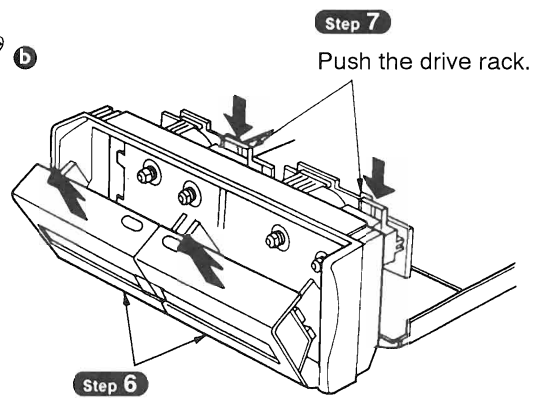
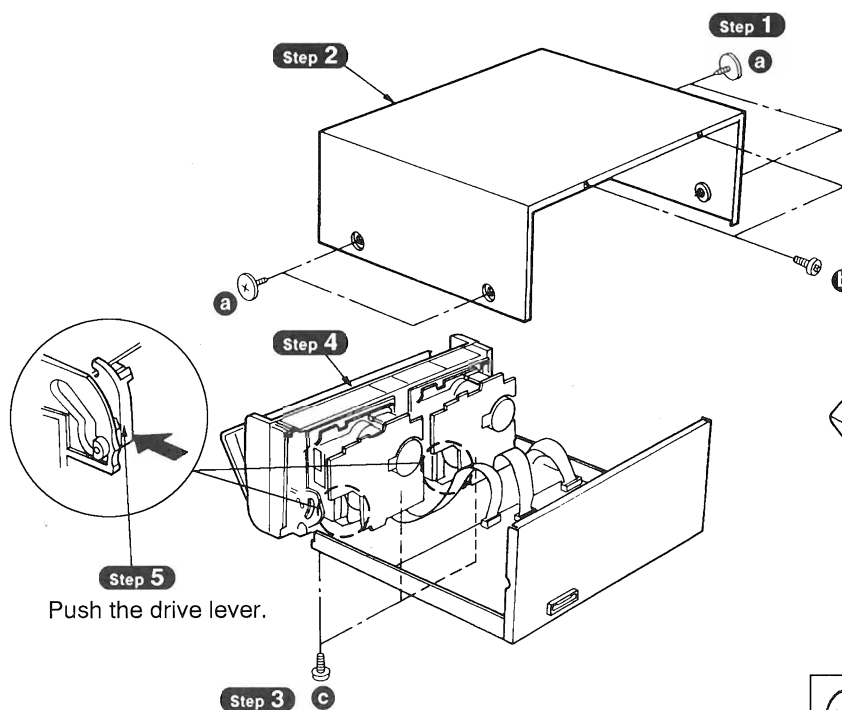
-

## 2. Checking for the main P.C.B.

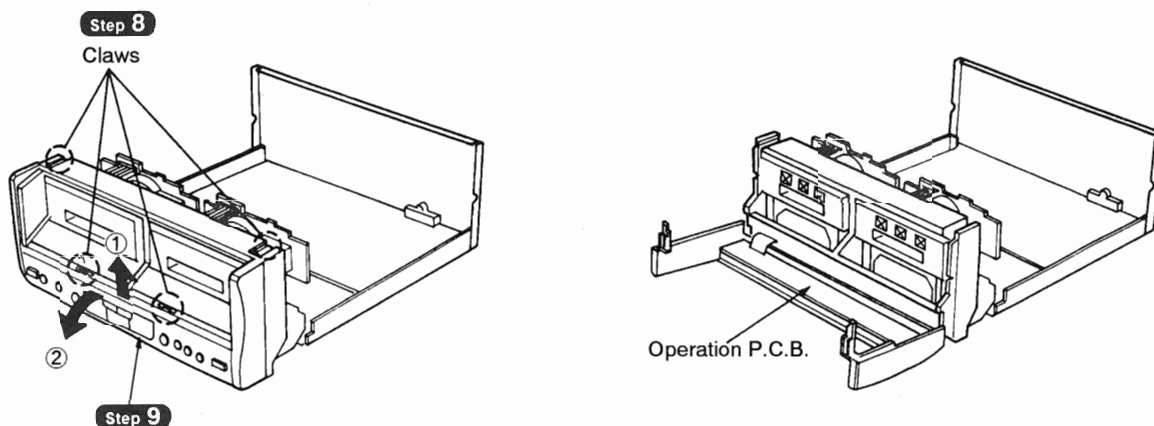


- a** (Black)     **c** (Black)  
**b**, **d** (Black)

## 3. Checking for the operation P.C.B.



- a** (Black)     **b**, **c** (Black)



## Main Component Replacement Procedures

### 1. Replacement for the head block and pinch roller unit

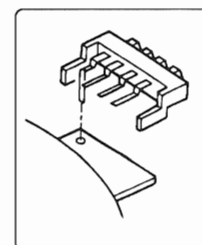
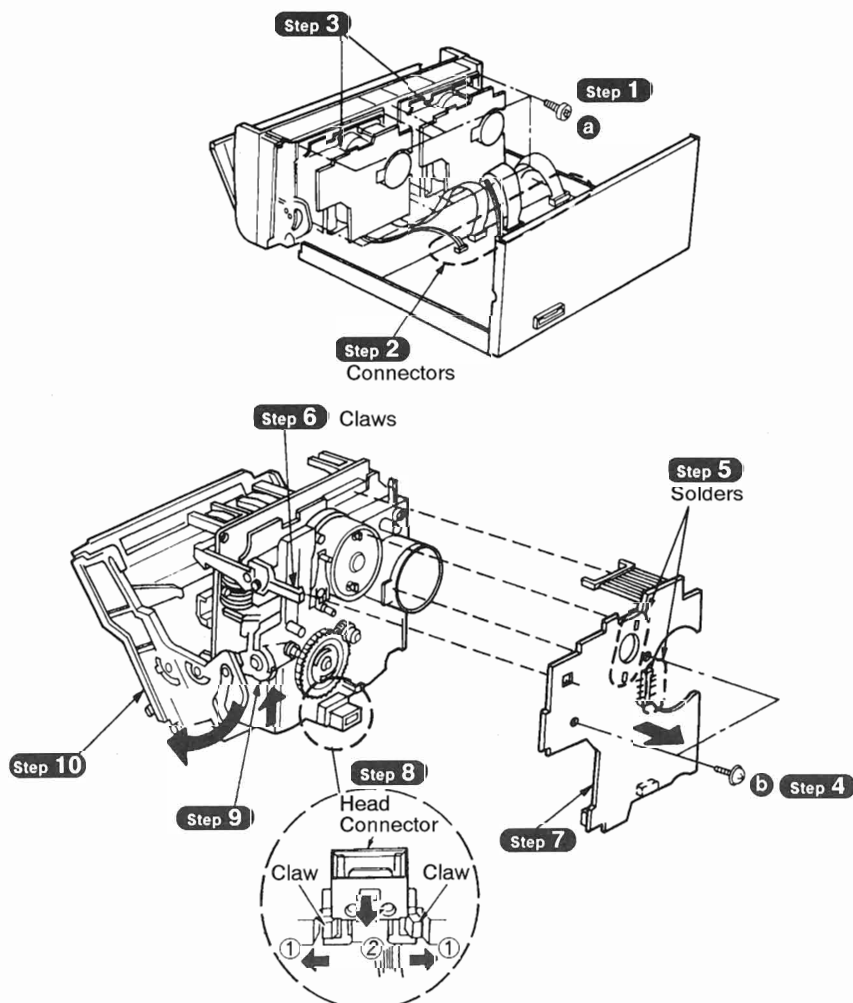
- Follow the **Step 1** ~ **Step 7** of the item 3 in checking procedure for each P.C.B. on page 4.



[XTB3+10JFZ]

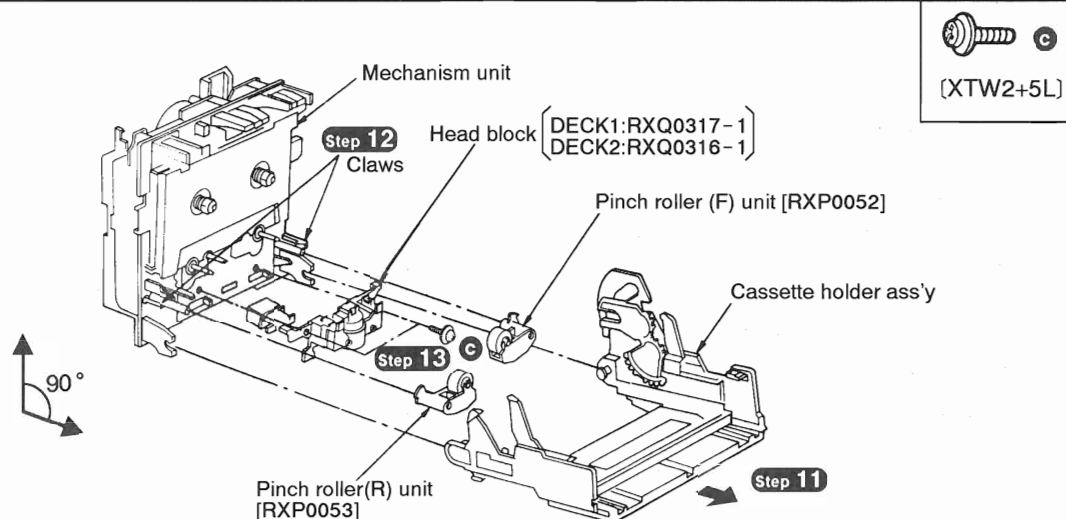


[XTW2+6S]



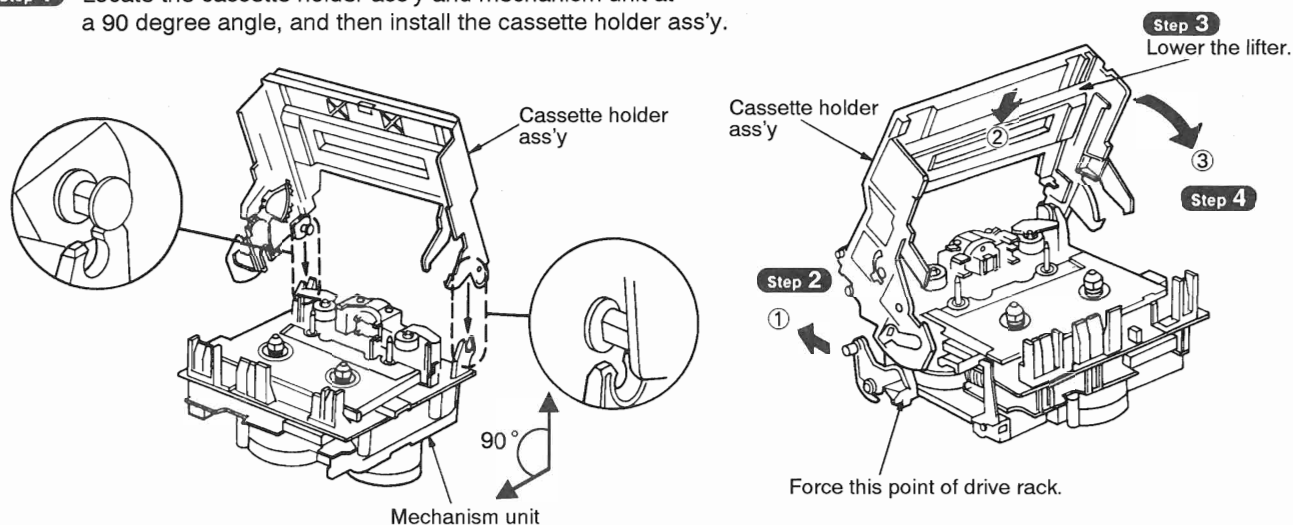
#### NOTE

Handle the connector with care so that the shape of terminal is different from others.



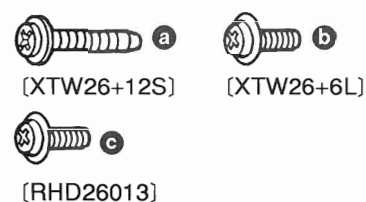
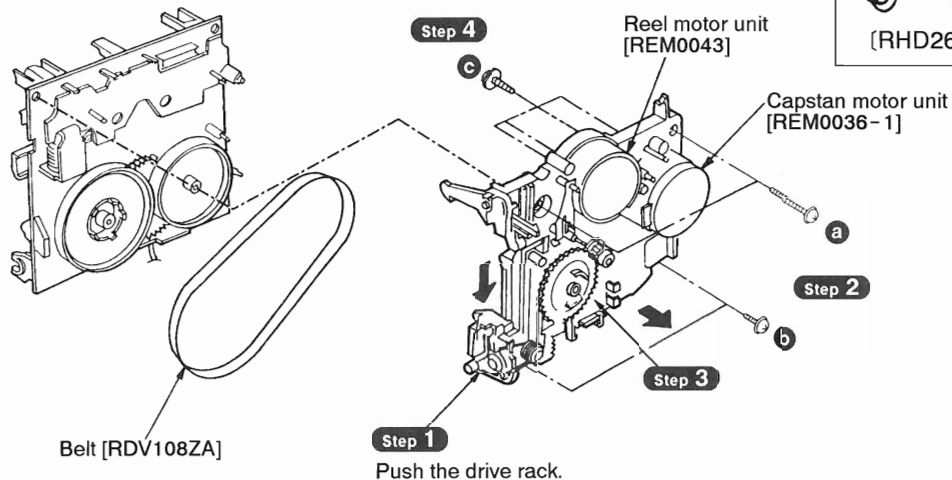
### Installation of the cassette holder ass'y after replacement

**Step 1** Locate the cassette holder ass'y and mechanism unit at a 90 degree angle, and then install the cassette holder ass'y.



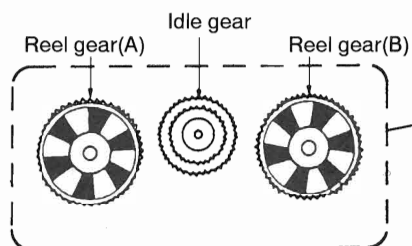
### 2. Replacement for the belt, reel motor unit and capstan motor unit

•Follow the **Step 1** ~ **Step 10** of item 1 in main component replacement procedures on page 5,6.



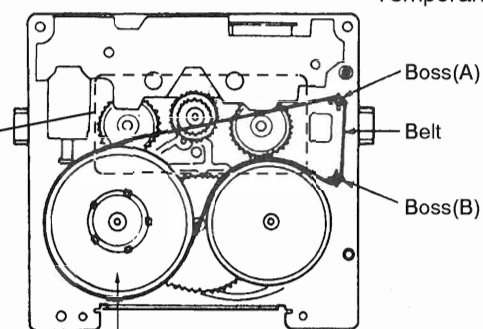
## Installation of the sub chassis ass'y after replacement

**Step 1** Place the idle gear in the center.



**Step 2**

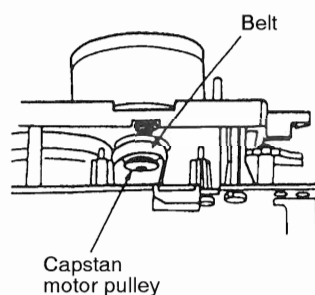
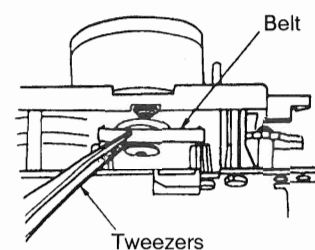
Temporarily secure the belt.



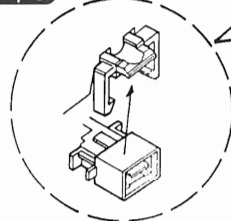
FWD side flywheel ass'y

**Step 7**

Secure the belt with the capstan motor pulley.



**Step 6**



**Step 3**  
Push the drive rack.

**Step 4**

**Step 5**



## 3. Replacement of the parts mounted on mechanism P.C.B. and solenoid unit

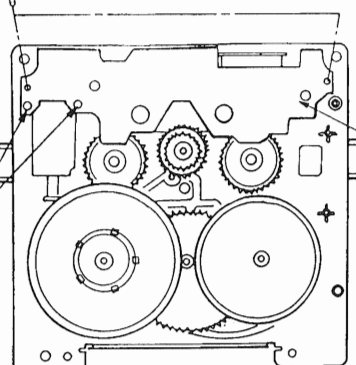
• Follow the **Step 1** ~ **Step 3** of item 2 in main component replacement procedures on page 6.

**Step 1**

a

**Step 2**

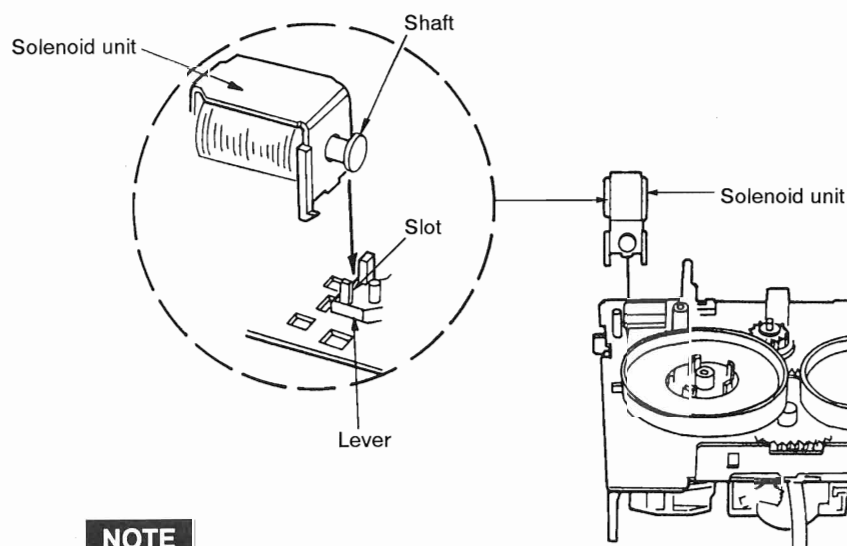
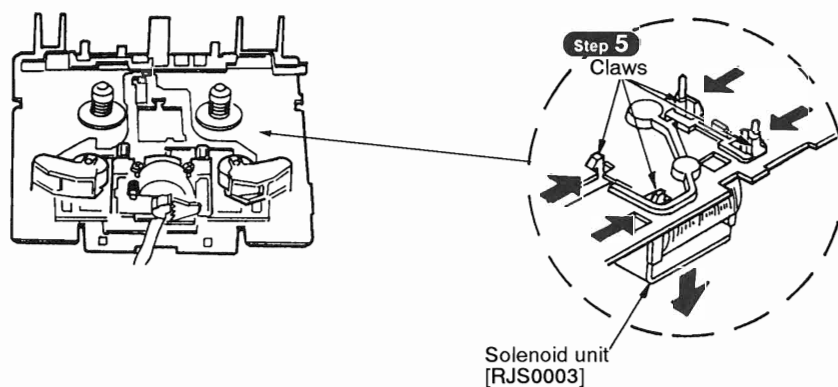
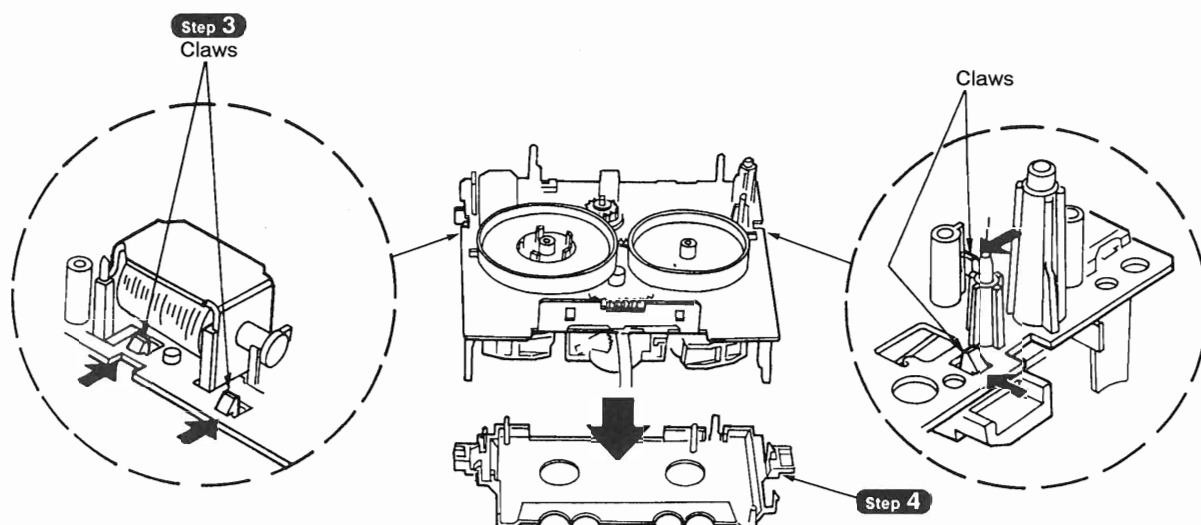
Unsolder the terminals.



Mechanism P.C.B.



[XTW2+6S]



**NOTE**

**Notice for installing the solenoid unit**

- The shaft of solenoid unit should be aligned with the slot of lever.



## MEASUREMENTS AND ADJUSTMENTS

This unit RS-CA1060 is designed to operate on power supplied from the Amplifier (SE-CA1060 or SE-CA1080) through Tuner/Sound Processor (ST-CA1060 or ST-CA1080).

When connecting the unit to other system components, do not connect to the Amplifier (SE-CA1060 or SE-CA1080) directly. Be sure to connect this unit through the Tuner/Sound Processor (ST-CA1060 or ST-CA1080).

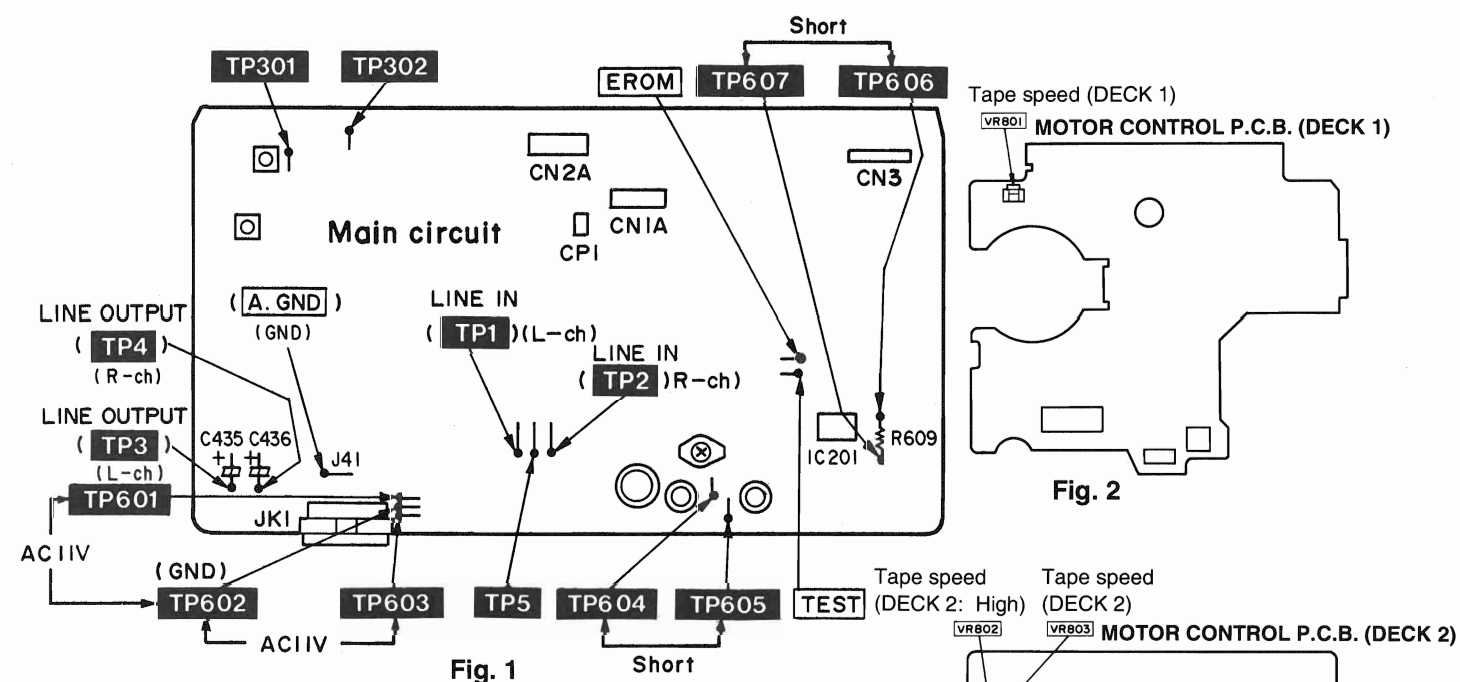
When operating the unit RS-CA1060 alone for testing and servicing, without having power supplied from the Amplifier (SE-CA1060 or SE-CA1080) and the Tuner/Sound Processor (ST-CA1060 or ST-CA1080), use the following method.

### To Supply Power Source

1. Short test points between TP604 and TP605, and TP606 and TP607 at the resistor R609 as shown in Fig. 1.
2. Apply 11V AC power to test points between TP601 and TP602 (GND), and TP603 and TP602 (GND). (10V AC power can be also applied when using adjustment tool for power supply.)

### To Check Signal

Connect an oscilloscope or a built-in amplifier speaker between line output for L-ch (TP3) and jumper (A. GND), and line output for R-ch (TP4) and jumper (A. GND) and check if the signals are outputting from this unit.



### Measurement Condition

- Reverse-mode selector switch;  $\Rightarrow$
- 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)
- AF oscillator
- Digital frequency counter

### Test tape

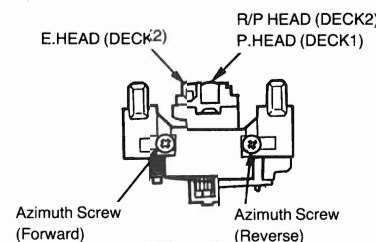
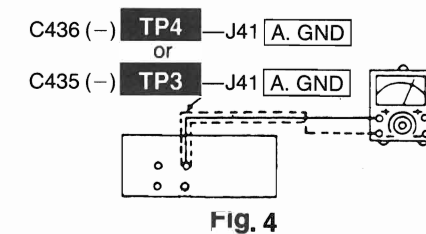
- Head azimuth adjustment (8 kHz, -20 dB); QZZCFM
- Tape speed adjustment (3 kHz, -10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Recording frequency response adjustment; QZZCRA (Normal blank tape)

### HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

1. Connect the measuring instrument as shown in Fig. 4.
2. Replace azimuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base. Fine adjustment of azimuth can not be performed with remaining the bond on the head base. (Supply part No. of azimuth adjusting screw: RHD17015)
3. Playback the azimuth adjustment portion (8 kHz, -20 dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/R-ch are maximized. (Refer to Fig. 5.)
4. Perform the same adjustment in reverse playback mode.

### Check of the level difference between forward and reverse directions

5. Playback the playback gain adjustment portion (315 Hz, 0 dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1 dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.



### TAPE SPEED ADJUSTMENT (DECK 1/2)

Normal speed (Standard value:  $3000 \pm 45$  Hz)

1. Playback the middle portion of the test tape (QZZCWAT).
2. Adjust Deck 1 = VR801 and Deck 2 = VR803 for the output value shown below.

Adjustment target:  $3000 \pm 15$  Hz (NORMAL speed)

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

3. Short-circuit the TEST jumper ("DECK 1" or "DECK 2" indicator blinks).
4. Playback the middle portion on the test tape (QZZCWAT).
5. Press the one touch tape edit (High) button. This will set the high speed mode.
6. At that time, check if the output from DECK 1 is within the standard value.

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

7. Adjust VR802 so that the output frequency of DECK 2 is within  $\pm 30$  Hz for the value of the output frequency of DECK 1.

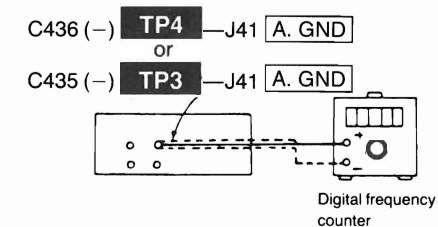


Fig. 6

### ERASE CURRENT CONFIRMATION (DECK 2)

1. Short-circuit the TEST jumper.
2. Press the REC PAUSE button.
3. Check if the output at this time between the erase current confirmation point TP301 and TP302 (chassis) (the output on both edges of R301) is within the standard value.

Standard value:  $160 \pm 25$  mV (TP301  $\leftrightarrow$  L301 case)  
 $200 \pm 25$  mV (TP301  $\leftrightarrow$  GND (chassis))  
 The voltage will vary depending on the ground provided.  
 Measurements must be made at the earth points (L301 coils and chassis) mentioned above.

4. Disconnect the TEST jumper from the frame ground.

Note: The test tape is not required when confirming the erase current.

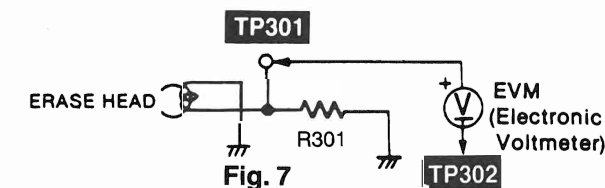
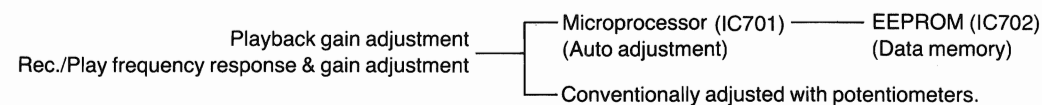


Fig. 7

The RS-CA1060 can automatically adjust playback gain and rec./play frequency response & gain.

### Automatic adjustment of playback gain and rec./play frequency response & gain

A microprocessor (IC701) used within the RS-CA1060 automatically adjusts its playback gain and rec./play frequency response & gain (factory adjustment) and stores adjustment data to an EEPROM chip (IC702). (Potentiometers have conventionally been used for these adjustments.)



If the EEPROM chip (IC702) or any of the head AF signal line components is replaced for servicing, the unit requires re-adjustment. (Refer to page 11.)

### ● Preparation for making automatic adjustments

- Find the beginning of the 315 Hz, 0 dB test signal recorded on the test tape (QZZCFM).
- Switch off the power to the unit and then make the following connections.
  - Connect an AF oscillator between **TP1** (LINE IN, left channel) and **TP5**, and between **TP2** (LINE IN, right channel) and **TP5**. (Refer to Fig. 1 and Fig. 4.)
  - Connect an EVM (AC range) between **TP3** (LINE OUT, left channel) and **A. GND**, and between **TP4** (LINE OUT, right channel) and **A. GND**. (Refer to Fig. 1 and Fig. 4.)
  - Connect **EROM** and **TEST** to the chassis (GND). (Refer to Fig. 1 and Fig. 5.)
    - When **EROM** is connected to the chassis (GND) and the power is switched on, the memory of the EEPROM (IC702) will be erased.
    - When **TEST** is connected to the chassis (GND) and the power is switched on, the unit will be in the adjustment mode.
- Switch on the power to the unit. (Refer to page 20 for information on how to connect the power supply.)
  - The Deck 1/2 indicators and the CCRT indicator will begin flashing. (Refer to Fig. 6.)
- Use the AF oscillator to apply a 315 Hz, -18 dB (126 mV) signal to the unit.
- Without a tape inserted in either Deck 1 or Deck 2, hold the REC PAUSE button down and confirm that the signal is being output from **TP3** and **TP4**.
  - The signal is output from **TP3** and **TP4** only while the REC PAUSE button is held down. When the button is released, the output will stop.
- Adjust the output of the AF oscillator so that the output from **TP3** and **TP4** becomes 400 mV, and then hold the REC PAUSE button down again for at least 5 seconds.
  - The reference signal will be stored in the memory of the EEPROM (IC702).
- Release the REC PAUSE button.
- Disconnect **EROM** from the chassis (GND).
  - Leave **TEST** connected to the chassis (GND). (The Deck 1/2 indicators are flashing at this time.)

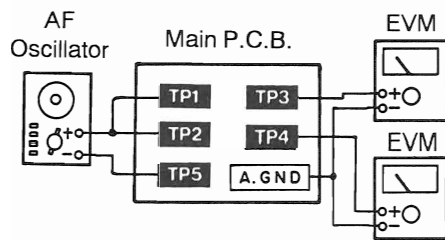


Fig. 4

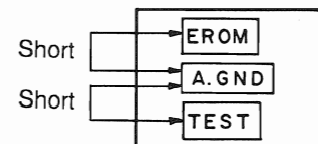


Fig. 5

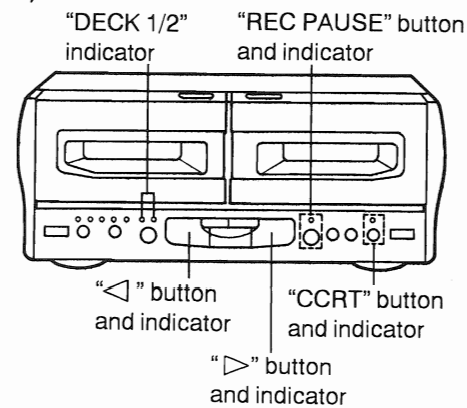
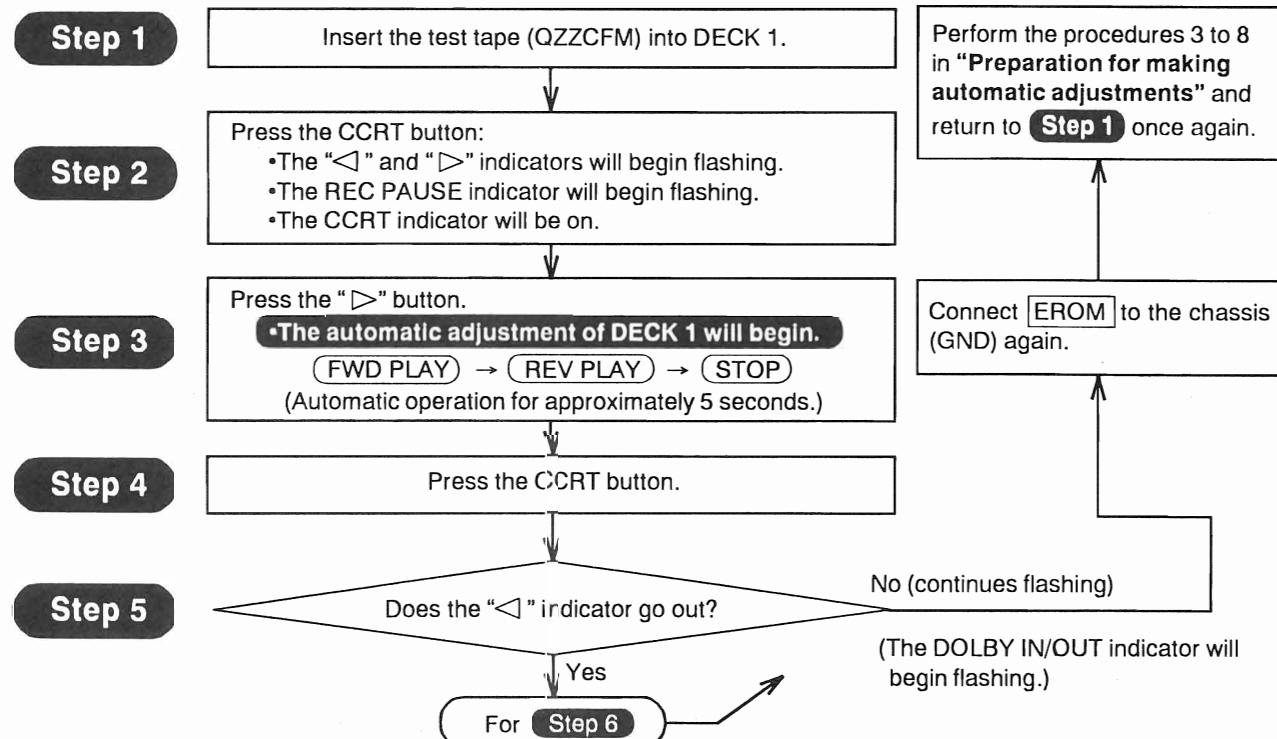
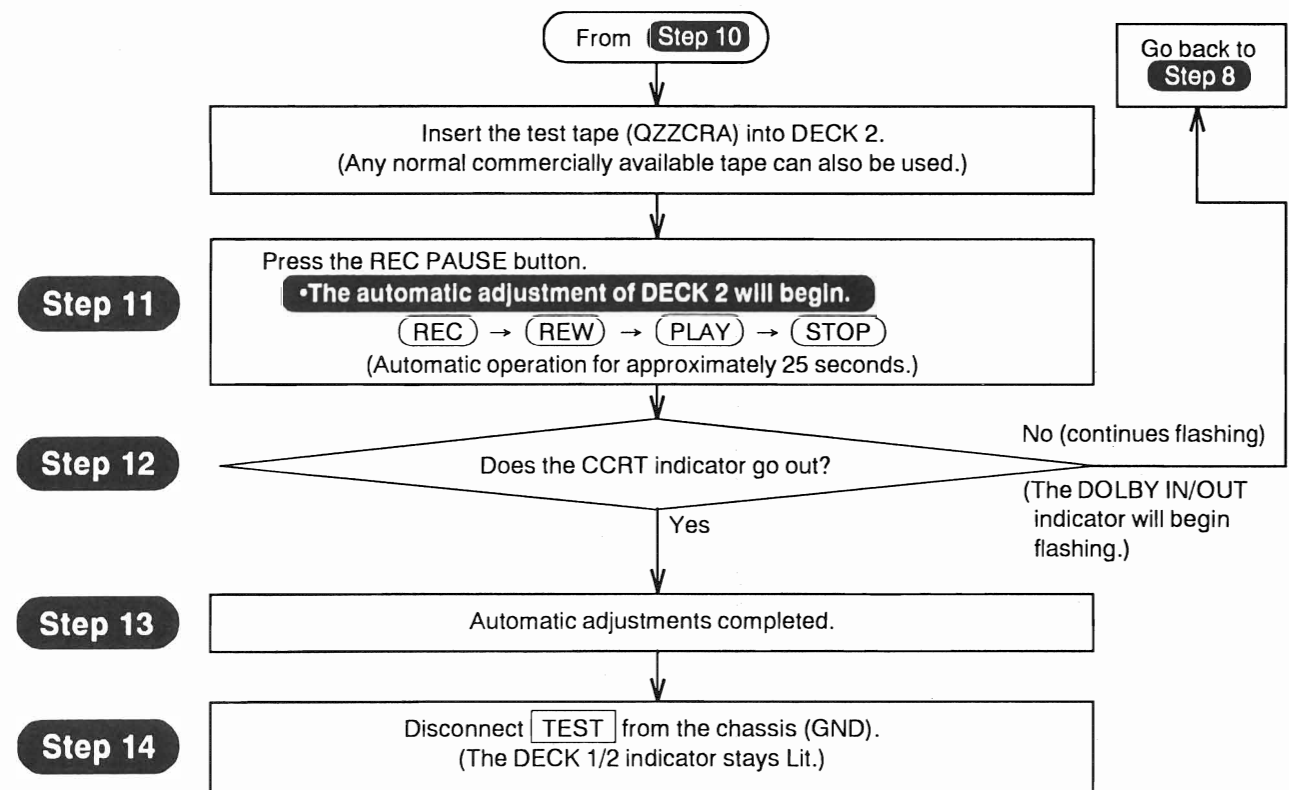


Fig. 6

### ● PLAYBACK GAIN ADJUSTMENT

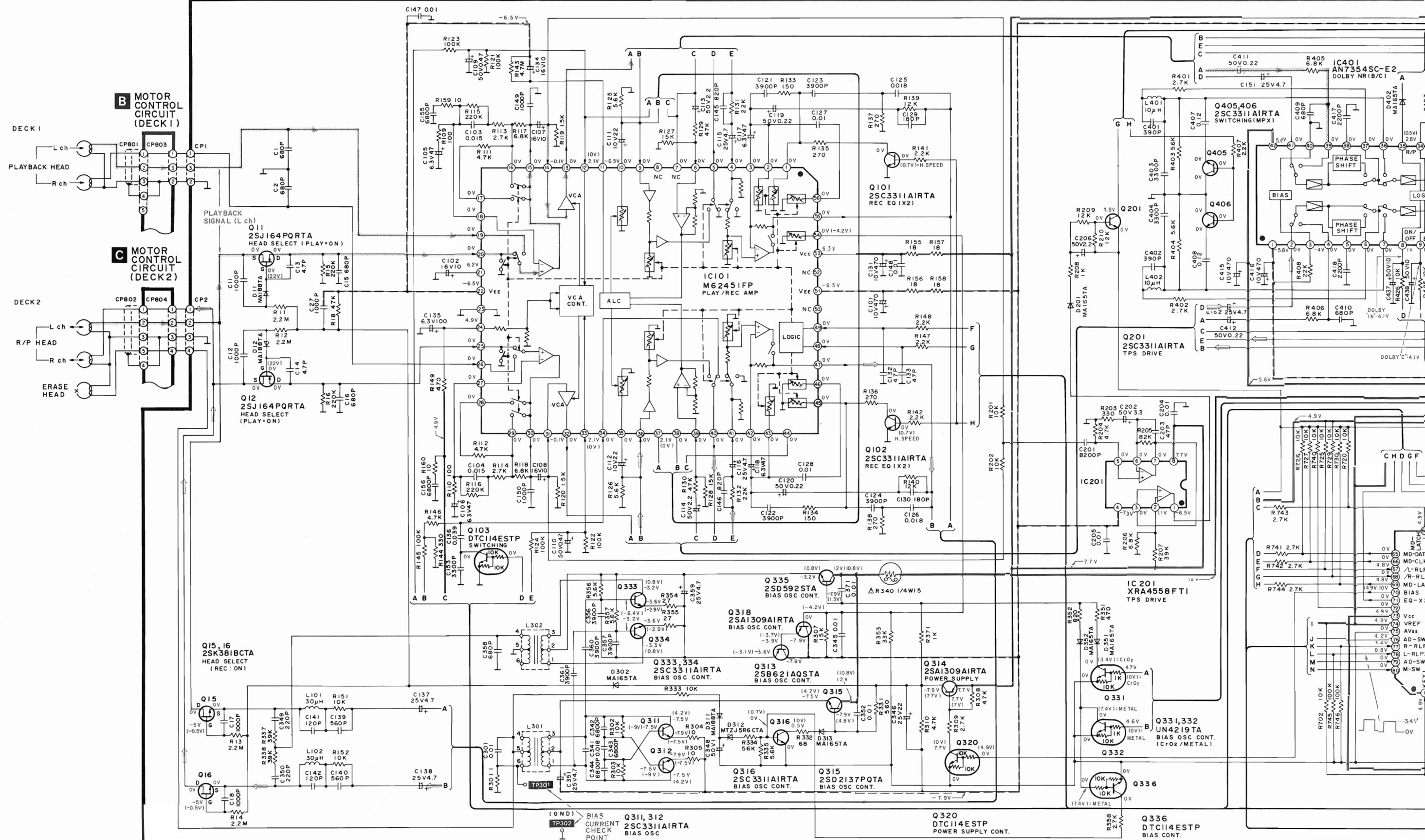


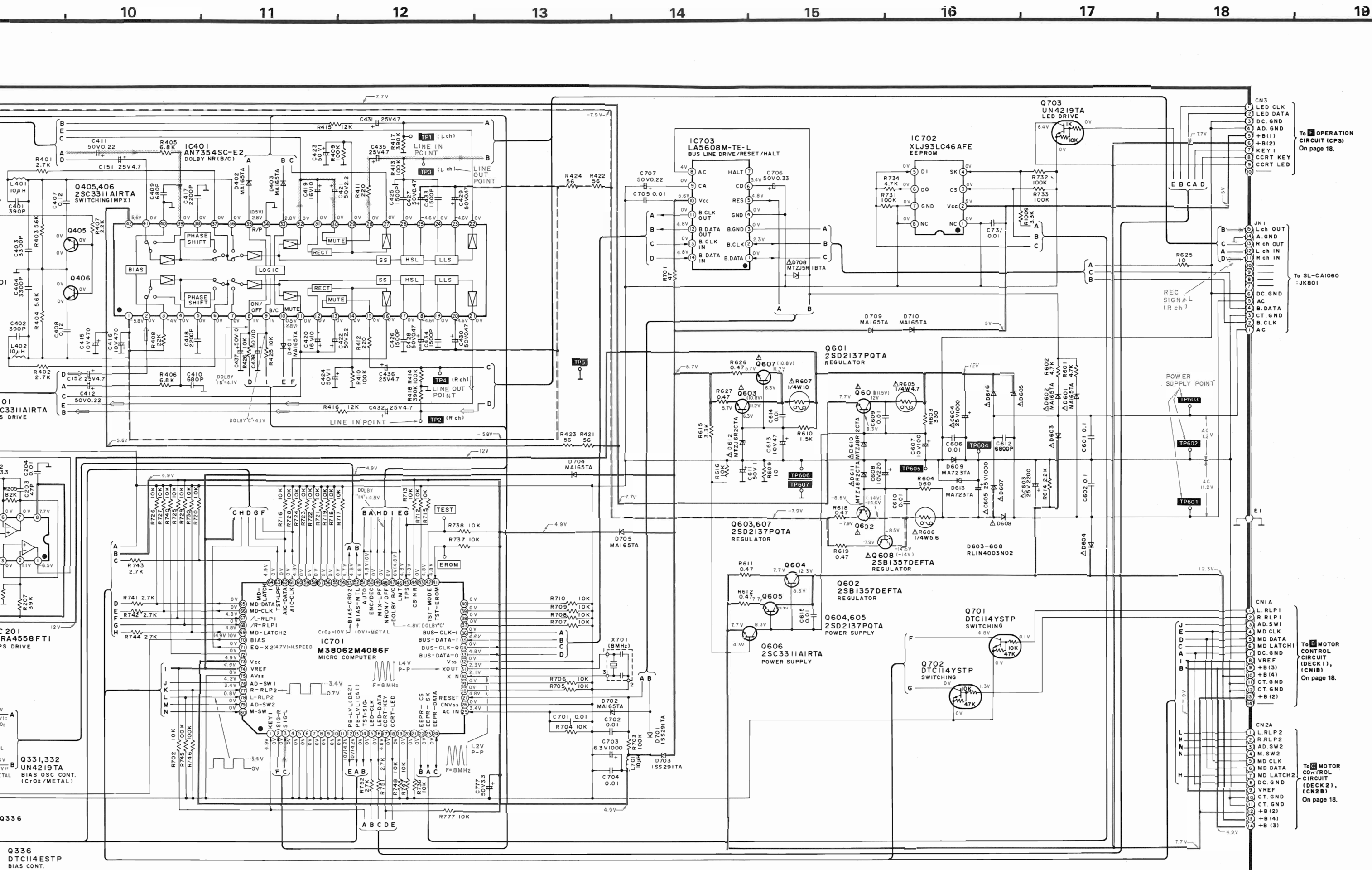
### ● OVERALL GAIN ADJUSTMENT AND OVERALL FREQUENCY ADJUSTMENT



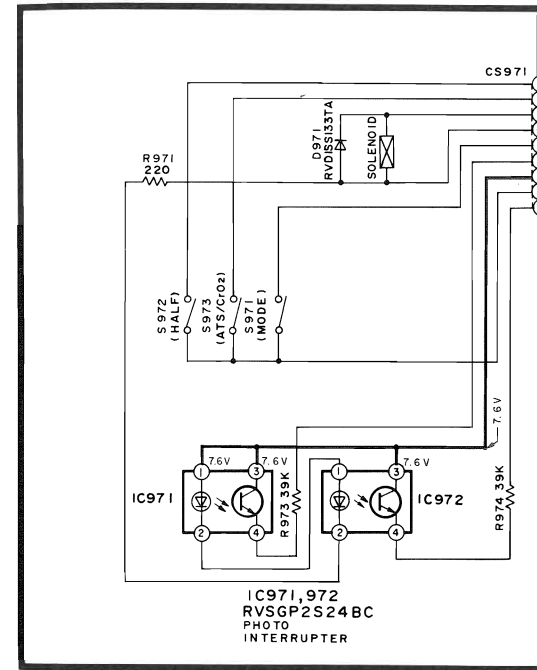
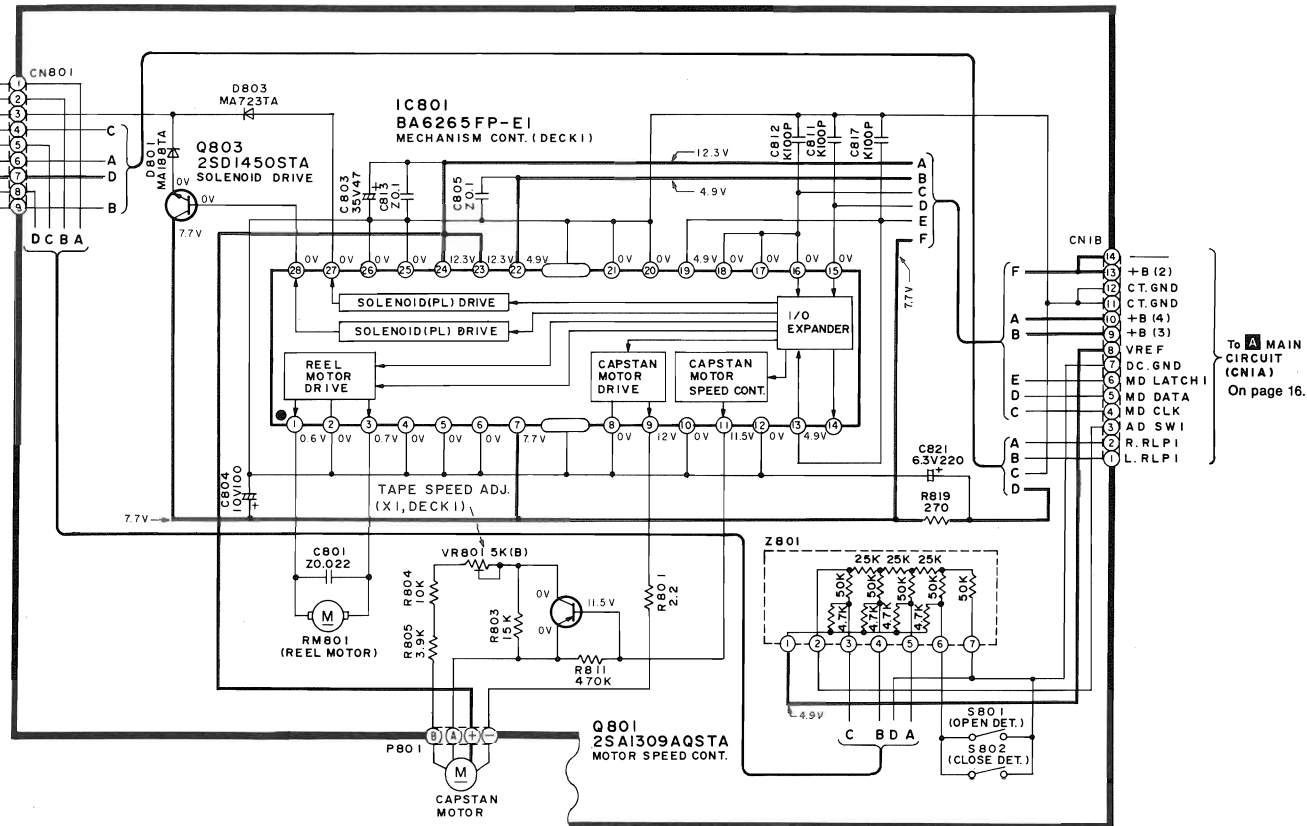
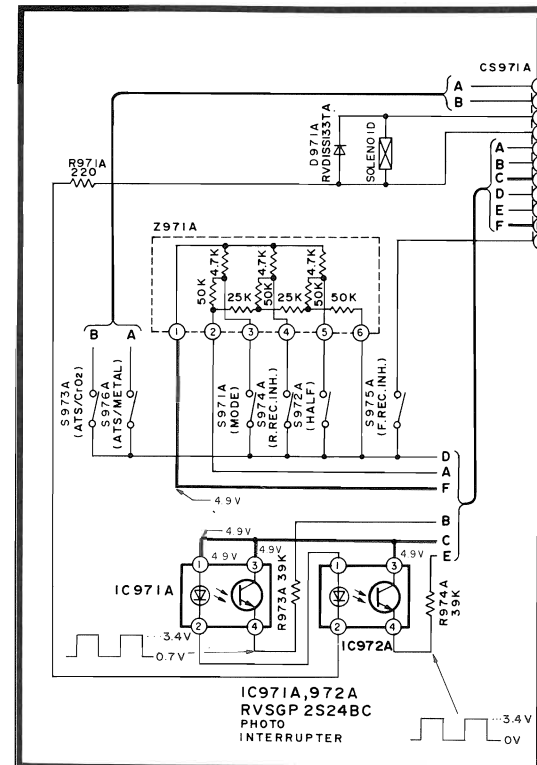
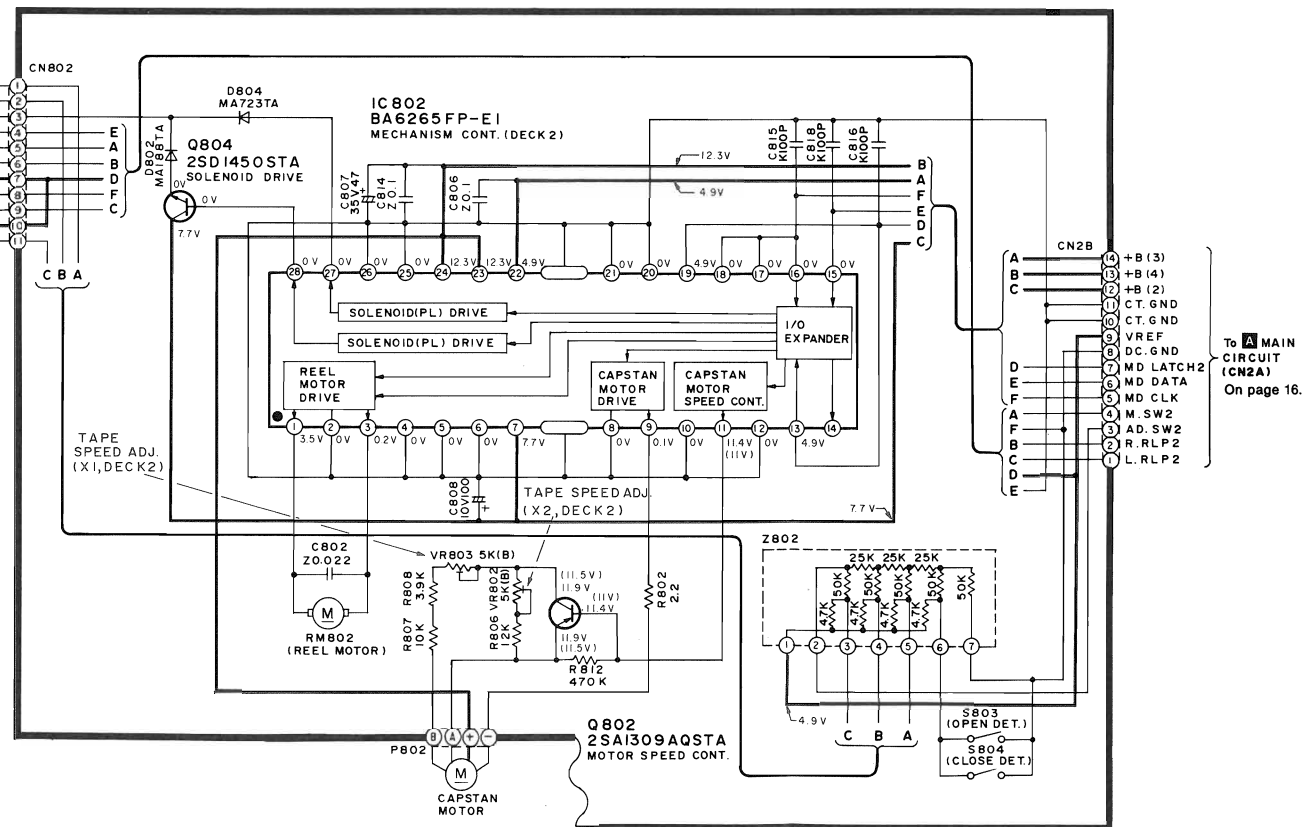
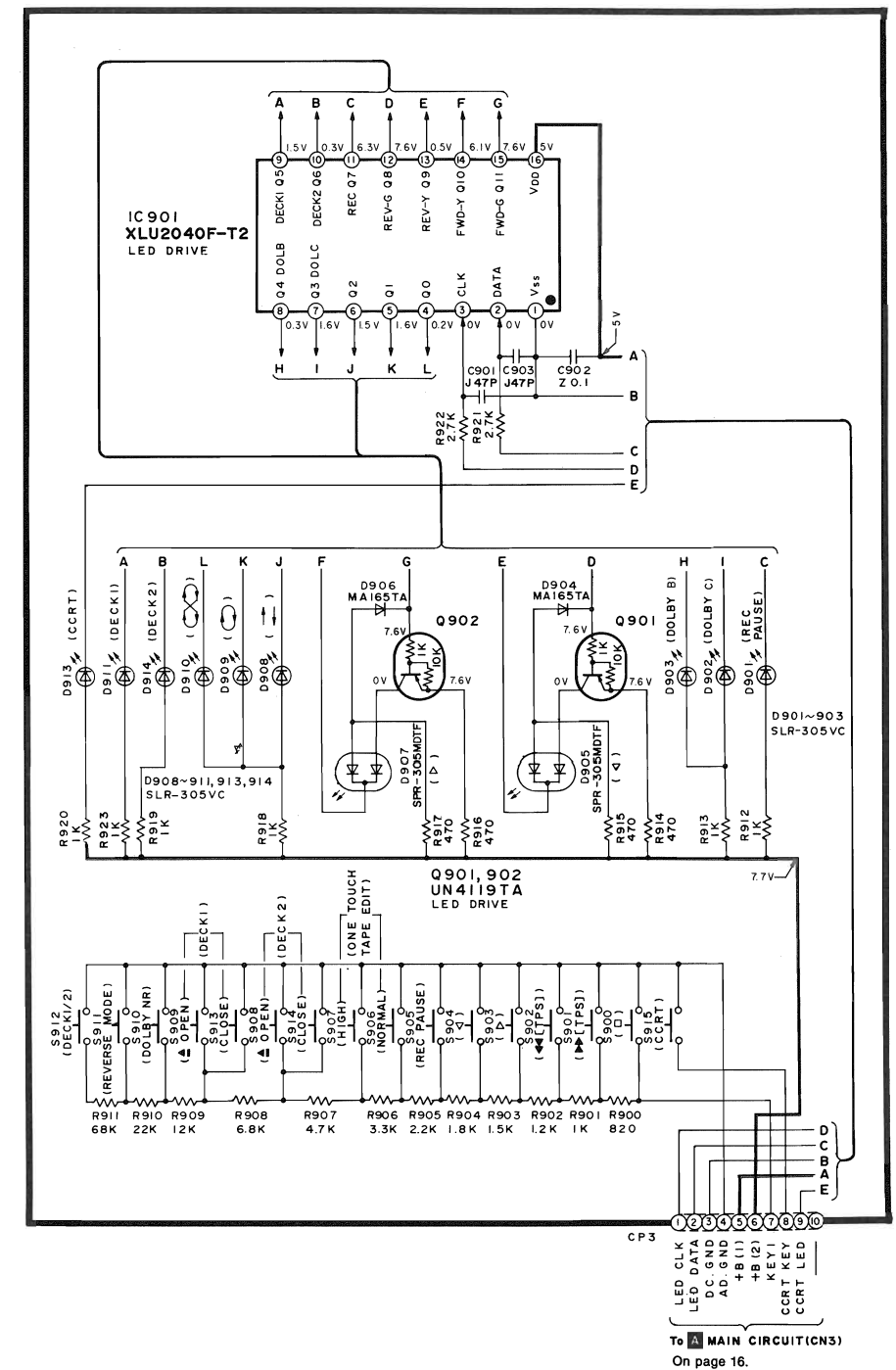
## SCHEMATIC DIAGRAM (Parts list on pages 32~35.)

A MAIN CIRCUIT (REC/PLAY AMP/TPS DRIVE/BIAS OSC/DOLBY NR(B/C)/MICRO COMPUTER/REGULATOR)

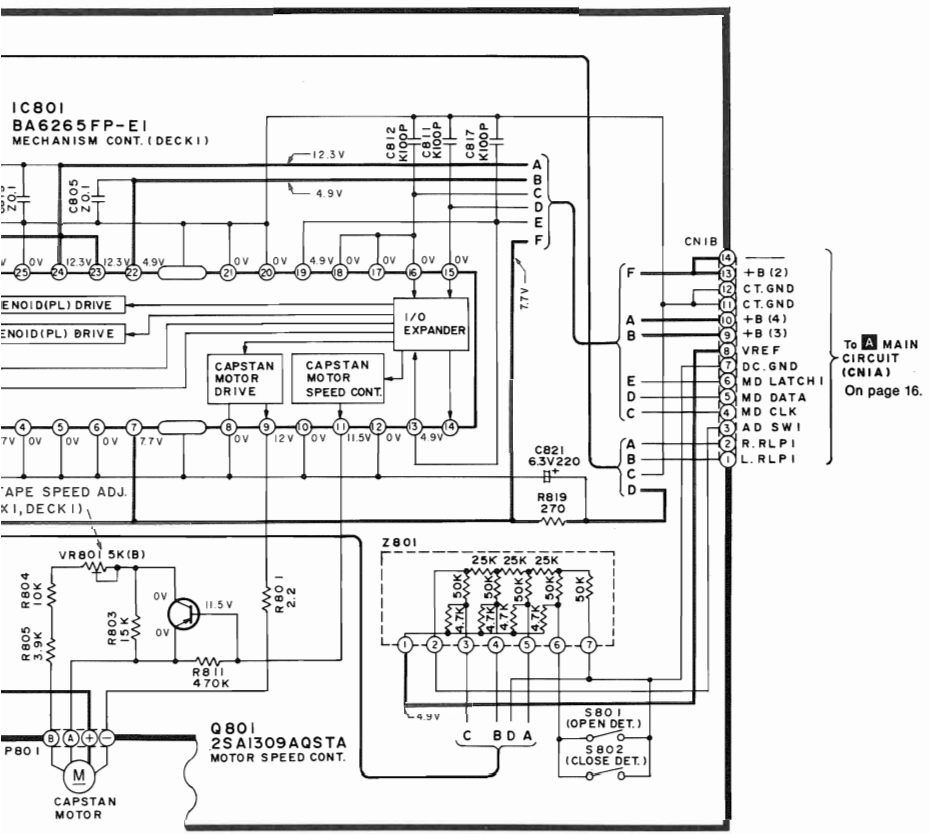




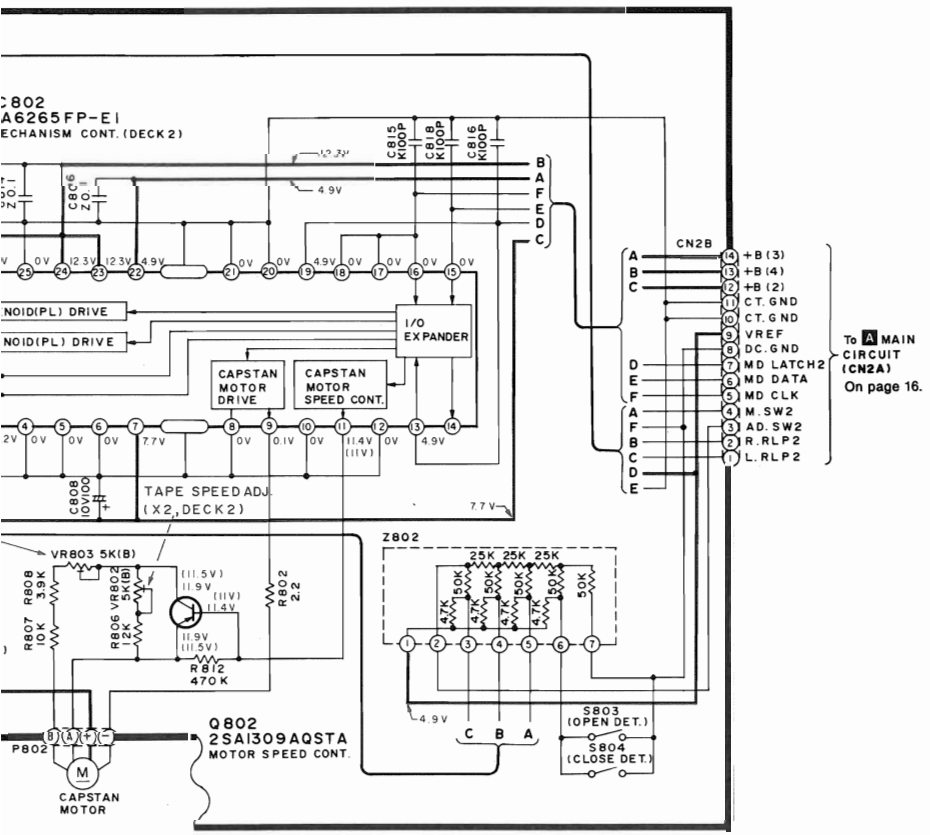


**D** MECHANISM CIRCUIT (DECK 1)**B** MOTOR CONTROL CIRCUIT (DECK 1)**E** MECHANISM CIRCUIT (DECK 2)**C** MOTOR CONTROL CIRCUIT (DECK 2)**F** OPERATION CIRCUIT

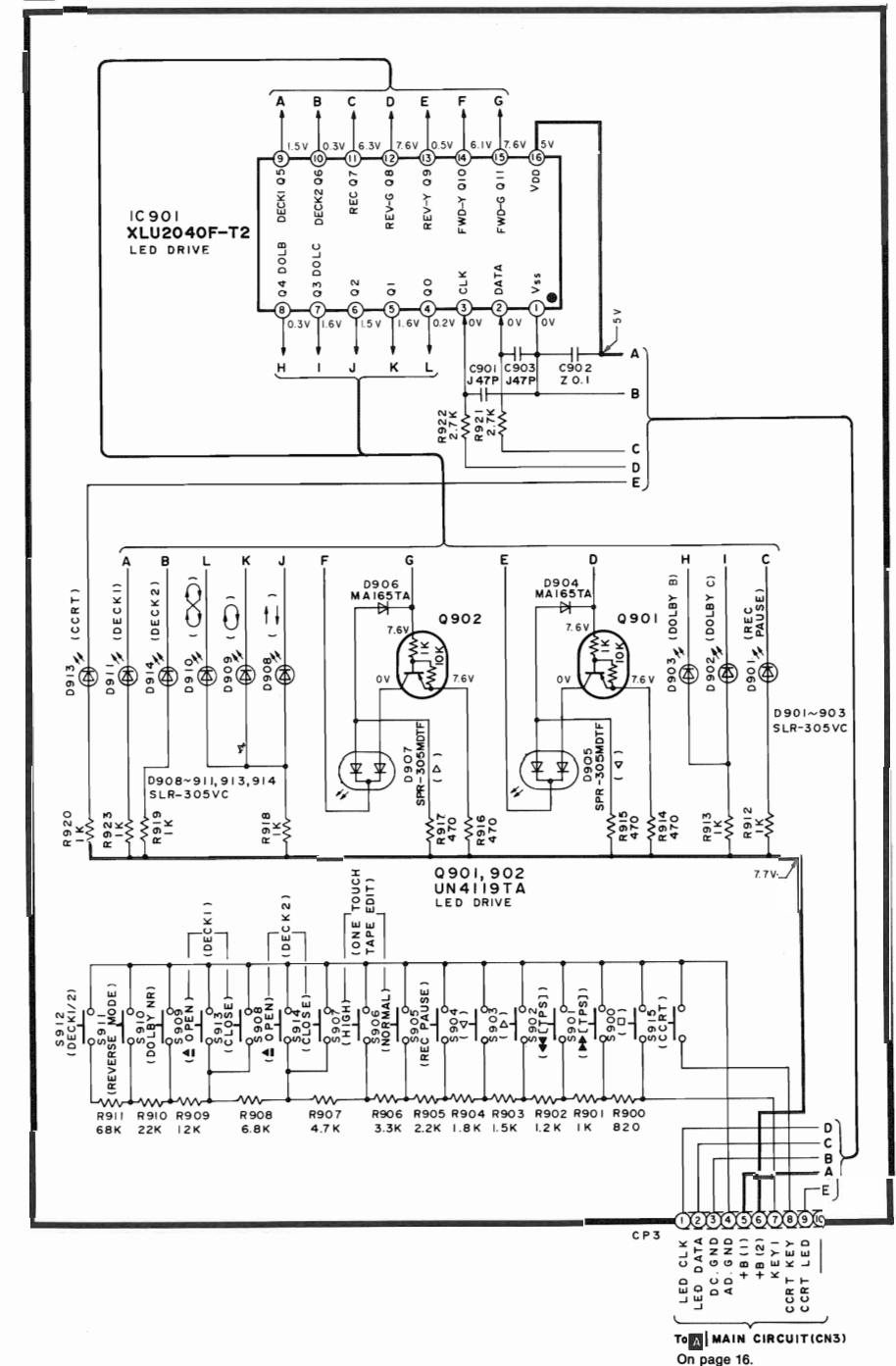
DECK1)



DECK2)



F OPERATION CIRCUIT



Notes:

- S801 : DECK 1 cassette holder open detection switch
  - S802 : DECK 1 cassette holder close detection switch
  - S803 : DECK 2 cassette holder open detection switch
  - S804 : DECK 2 cassette holder close detection switch
  - S900 : Stop switch (□)
  - S901 : Fast forward/tape program sensor switch (TPS ▶▶▶)
  - S902 : Rewind/tape program sensor switch (◀◀◀ TPS)
  - S903 : Forward side playback switch (▷)
  - S904 : Reverse side playback switch (◁)
  - S905 : Record pause switch (REC PAUSE)
  - S906 : One-touch tape edit switch (NORMAL)
  - S907 : One-touch tape edit switch (HIGH)
  - S908 : DECK 2 cassette holder open switch (▲ OPEN)
  - S909 : DECK 1 cassette holder open switch (▲ OPEN)
  - S910 : Dolby noise reduction switch (DOLBY NR B, C)
  - S911 : Reverse mode switch (REVERSE MODE)
  - S912 : DECK 1/DECK 2 select switch (DECK 1/2)
  - S913 : DECK 1 cassette holder close switch (CLOSE)
  - S914 : DECK 2 cassette holder close switch (CLOSE)
  - S915 : CCRT switch (CCRT)
  - S971 : DECK 1 mode detect switch
  - S972 : DECK 1 half detect switch
  - S973 : DECK 1 ATS (CrO<sub>2</sub>) tape select switch
  - S971A : DECK 2 mode select switch
  - S972A : DECK 2 half detect switch
  - S973A : DECK 2 ATS (CrO<sub>2</sub>) tape select switch
  - S974A : DECK 2 reverse side record inhibit detect switch
  - S975A : DECK 2 forward side record inhibit detect switch
  - S976A : DECK 2 ATS (METAL) tape select switch
  - VR801 : DECK 1 tape speed adjustment VR (NORMAL)
  - VR802 : DECK 2 tape speed adjustment VR (HIGH)
  - VR803 : DECK 2 tape speed adjustment VR (NORMAL)
- 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. Voltage values and waveforms are measured as indicated in the schematic diagram when test points between TP604 and TP605, and, between TP606 and TP607 are shorted.

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

• Important safety notice:  
Components identified by ▲ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

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

• The supply parts number is described alone in the replacement parts.

Part No.	Original Part No.	Supply Part No.
IC901	XLU2040F-T2	XLU2040F-T1

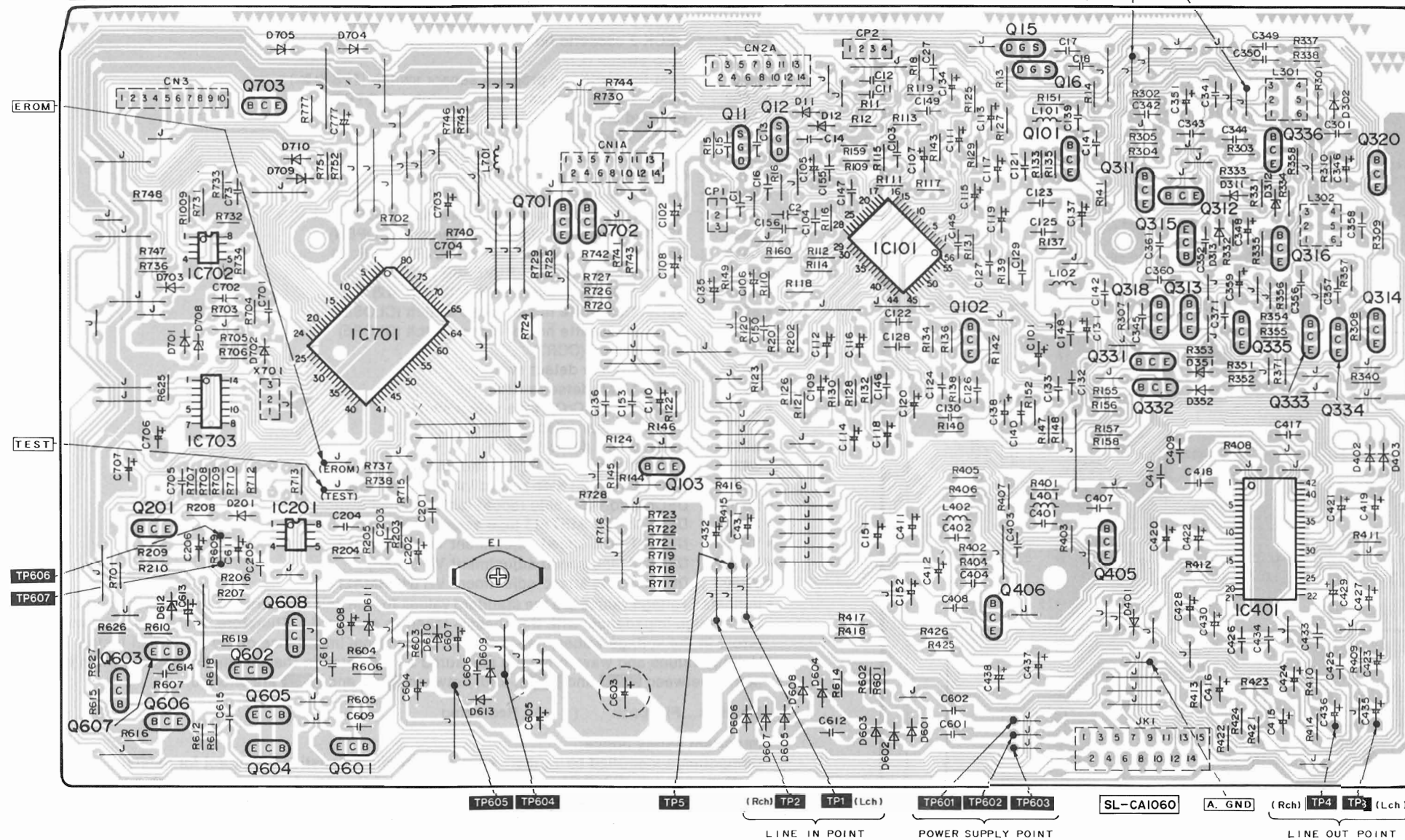
Caution!

- 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.

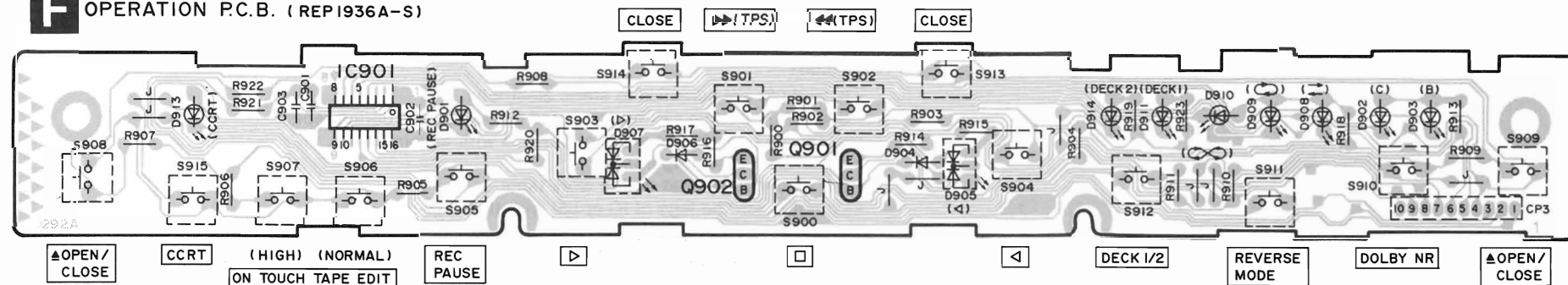
— : Positive Voltage Line  
— : Negative Voltage Line  
— : Playback Signal Line  
— : Recording Signal Line

## ■ PRINTED CIRCUIT BOARDS

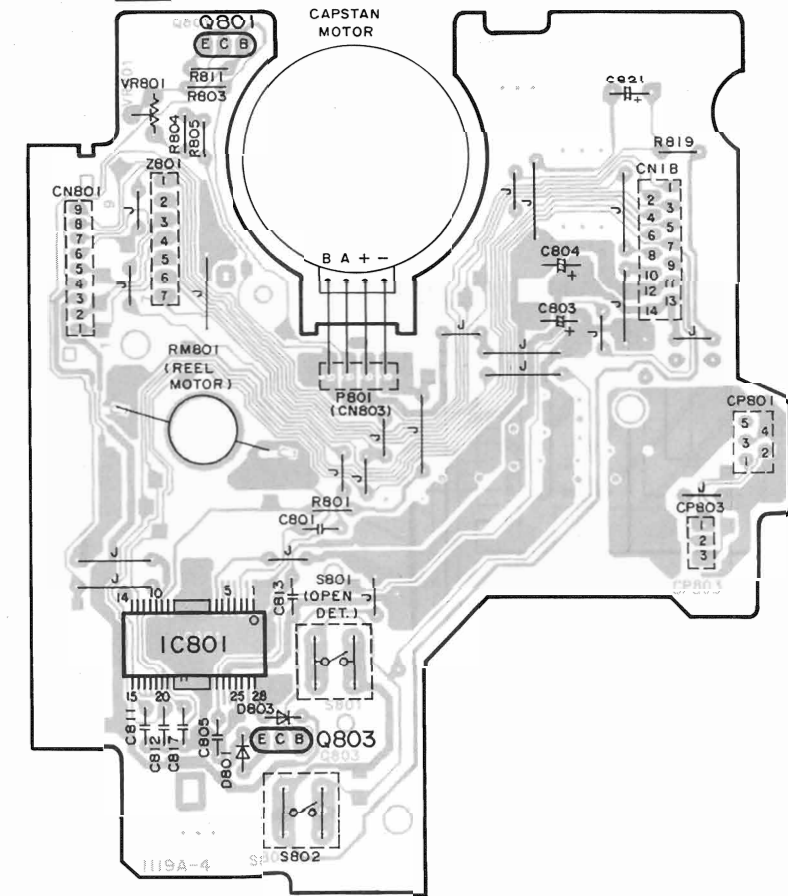
**A** MAIN P.C.B. (REPI674B-M)



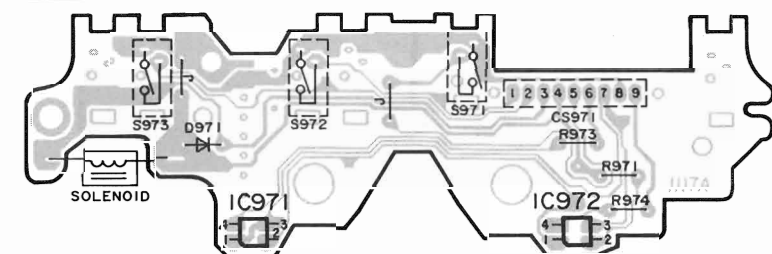
# F OPERATION P.C.B. (REP1936A-S)



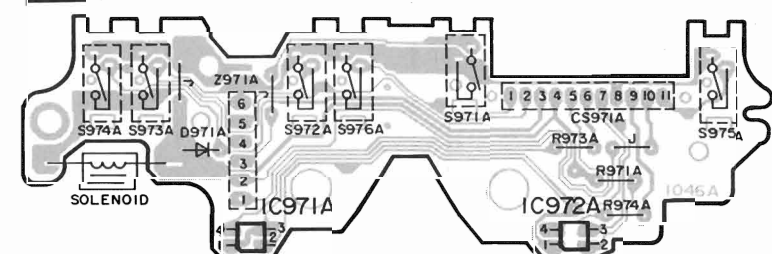
**B** MOTOR CONTROL P.C.B.(DECK I)  
(REPI676A-T)







**D** MECHANISM P.C.B. (DECKI)  
(REPI655A)



**E** MECHANISM P.C.B. (DECK 2)  
(REPI656A)



## ● Terminal guide of

<p>XRA4558FT1 XLJ93LC46AFE</p> 	<p>No.</p>
<p>RVSGP2S24BC</p> 	<p>B C E</p>
<p>2SB1357DEFTA 2SD2137PQTA</p> 	<p>2</p>
	<p>MA MA MA RV</p>



Q801  
E C B

CAPSTAN MOTOR

VR801

R811  
R803

CA21  
H<sub>+</sub>

Relo

CN1B

2 3 4 5 6 7 8 9 10 11 12 13 14

B A + -

C804  
H<sub>+</sub>

C803  
H<sub>+</sub>

RM801  
(REEL MOTOR)

P801  
(CN803)

R801

C801

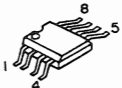
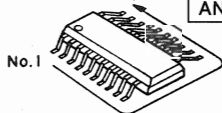

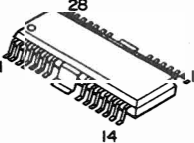
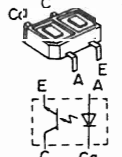
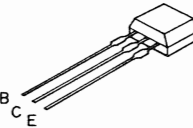

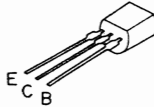
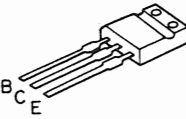

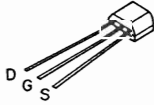
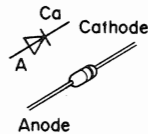
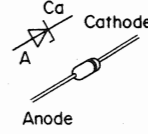
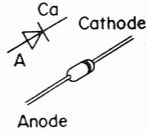
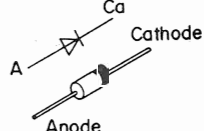
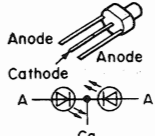
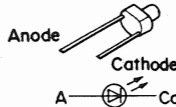
S801  
(OPEN DET.)

IC801

Q803  
E C B

S802

1115A-4

<p>XRA4558FT1 XLJ93LC46AFE</p> 	<table border="1"> <tr> <td>LA5608M-TE-L</td> <td>14 Pin</td> </tr> <tr> <td>XLU2040F-T2</td> <td>16 Pin</td> </tr> <tr> <td>AN7354SC-E2</td> <td>32 Pin</td> </tr> </table> <p>No.1</p> 		LA5608M-TE-L	14 Pin	XLU2040F-T2	16 Pin	AN7354SC-E2	32 Pin	<table border="1"> <tr> <td>M62451FP</td> <td>56 Pin</td> </tr> <tr> <td>M38062M4086F</td> <td>80 Pin</td> </tr> </table> 	M62451FP	56 Pin	M38062M4086F	80 Pin	<p>BA6265FP-E1</p> 
LA5608M-TE-L	14 Pin													
XLU2040F-T2	16 Pin													
AN7354SC-E2	32 Pin													
M62451FP	56 Pin													
M38062M4086F	80 Pin													
<p>RVSGP2S24BC</p> 	<p>DTC114ESTP DTC114YSTP</p> 		<p>UN4219TA 2SA1309AIRTA 2SA1309AQSTA 2SC3311AIRTA 2SD1450STA UN4119TA</p> 	<p>2SB621AQSTA 2SD592STA</p> 										
<p>2SB1357DEFTA 2SD2137PQTA</p> 	<p>2SJ164PQRTA</p> 	<p>2SK381BCTA</p> 	<p>1SS291TA</p> 	<p>MTZJ5R1BTA MTZJ5R6CTA MTZJ6R2CTA MTZJ8R2CTA</p> 										
 <p>MA165TA MA188TA MA723TA RVD1SS133TA</p>	<p>RL1N4003N02</p> 	<p>SPR-305MDTF</p> 	<p>SLR-305VC</p> 											

(GND) TP302 TP301

CP2  
1 2 3 4

Q15  
D G S

Q16  
D G S

Q101  
E C B

Q311  
B C E

Q315  
E C B

Q318  
E C B

Q331  
B C E

Q332  
B C E

Q405  
B C E

Q406  
B C E

Q320  
E C B

Q336  
B C E

Q312  
E C B

Q313  
E C B

Q333  
B C E

Q335  
B C E

Q333  
B C E

Q334  
B C E

Q314  
E C B

Q309  
E C B

Q308  
E C B

Q307  
E C B

Q306  
E C B

Q305  
E C B

Q304  
E C B

Q303  
E C B

Q302  
E C B

Q301  
E C B

Q300  
E C B

Q299  
E C B

Q298  
E C B

Q297  
E C B

Q296  
E C B

Q295  
E C B

Q294  
E C B

Q293  
E C B

Q292  
E C B

Q291  
E C B

Q290  
E C B

Q289  
E C B

Q288  
E C B

Q287  
E C B

Q286  
E C B

Q285  
E C B

Q284  
E C B

Q283  
E C B

Q282  
E C B

Q281  
E C B

Q280  
E C B

Q279  
E C B

Q278  
E C B

Q277  
E C B

Q276  
E C B

Q275  
E C B

Q274  
E C B

Q273  
E C B

Q272  
E C B

Q271  
E C B

Q270  
E C B

Q269  
E C B

Q268  
E C B

Q267  
E C B

Q266  
E C B

Q265  
E C B

Q264  
E C B

Q263  
E C B

Q262  
E C B

Q261  
E C B

Q260  
E C B

Q259  
E C B

Q258  
E C B

Q257  
E C B

Q256  
E C B

Q255  
E C B

Q254  
E C B

Q253  
E C B

Q252  
E C B

Q251  
E C B

Q250  
E C B

Q249  
E C B

Q248  
E C B

Q247  
E C B

Q246  
E C B

Q245  
E C B

Q244  
E C B

Q243  
E C B

Q242  
E C B

Q241  
E C B

Q240  
E C B

Q239  
E C B

Q238  
E C B

Q237  
E C B

Q236  
E C B

Q235  
E C B

Q234  
E C B

Q233  
E C B

Q232  
E C B

Q231  
E C B

Q230  
E C B

Q229  
E C B

Q228  
E C B

Q227  
E C B

Q226  
E C B

Q225  
E C B

Q224  
E C B

Q223  
E C B

Q222  
E C B

Q221  
E C B

Q220  
E C B

Q219  
E C B

Q218  
E C B

Q217  
E C B

Q216  
E C B

Q215  
E C B

Q214  
E C B

Q213  
E C B

Q212  
E C B

Q211  
E C B

Q210  
E C B

Q209  
E C B

Q208  
E C B

Q207  
E C B

Q206  
E C B

Q205  
E C B

Q204  
E C B

Q203  
E C B

Q202  
E C B

Q201  
E C B

Q200  
E C B

Q199  
E C B

Q198  
E C B

Q197  
E C B

Q196  
E C B

Q195  
E C B

Q194  
E C B

Q193  
E C B

Q192  
E C B

Q191  
E C B

Q190  
E C B

Q189  
E C B

Q188  
E C B

Q187  
E C B

Q186  
E C B

Q185  
E C B

Q184  
E C B

Q183  
E C B

Q182  
E C B

Q181  
E C B

Q180  
E C B

Q179  
E C B

Q178  
E C B

Q177  
E C B

Q176  
E C B

Q175  
E C B

Q174  
E C B

Q173  
E C B

Q172  
E C B

Q171  
E C B

Q170  
E C B

Q169  
E C B

Q168  
E C B

Q167  
E C B

Q166  
E C B

Q165  
E C B

Q164  
E C B

Q163  
E C B

Q162  
E C B

Q161  
E C B

Q160  
E C B

Q159  
E C B

Q158  
E C B

Q157  
E C B

Q156  
E C B

Q155  
E C B

Q154  
E C B

Q153  
E C B

Q152  
E C B

Q151  
E C B

Q150  
E C B

Q149  
E C B

Q148  
E C B

Q147  
E C B

Q146  
E C B

Q145  
E C B

Q144  
E C B

Q143  
E C B

Q142  
E C B

Q141  
E C B

Q140  
E C B

Q139  
E C B

Q138  
E C B

Q137  
E C B

Q136  
E C B

Q135  
E C B

Q134  
E C B

Q133  
E C B

Q132  
E C B

Q131  
E C B

Q130  
E C B

Q129  
E C B

Q128  
E C B

Q127  
E C B

Q126  
E C B

Q125  
E C B

Q124  
E C B

Q123  
E C B

Q122  
E C B

Q121  
E C B

Q120  
E C B

Q119  
E C B

Q118  
E C B

Q117  
E C B

Q116  
E C B

Q115  
E C B

Q114  
E C B

Q113  
E C B

Q112  
E C B

Q111  
E C B

Q110  
E C B

Q109  
E C B

Q108  
E C B

Q107  
E C B

Q106  
E C B

Q105  
E C B

Q104  
E C B

Q103  
E C B

Q102  
E C B

Q101  
E C B

Q100  
E C B

Q99  
E C B

Q98  
E C B

Q97  
E C B

Q96  
E C B

Q95  
E C B

Q94  
E C B

Q93  
E C B

Q92  
E C B

Q91  
E C B

Q90  
E C B

Q89  
E C B

Q88  
E C B

Q87  
E C B

Q86  
E C B

Q85  
E C B

Q84  
E C B

Q83  
E C B

Q82  
E C B

Q81  
E C B

Q80  
E C B

Q79  
E C B

Q78  
E C B

Q77  
E C B

Q76  
E C B

Q75  
E C B

Q74  
E C B

Q73  
E C B

Q72  
E C B

Q71  
E C B

Q70  
E C B

Q69  
E C B

Q68  
E C B

Q67  
E C B

Q66  
E C B

Q65  
E C B

Q64  
E C B

Q63  
E C B

Q62

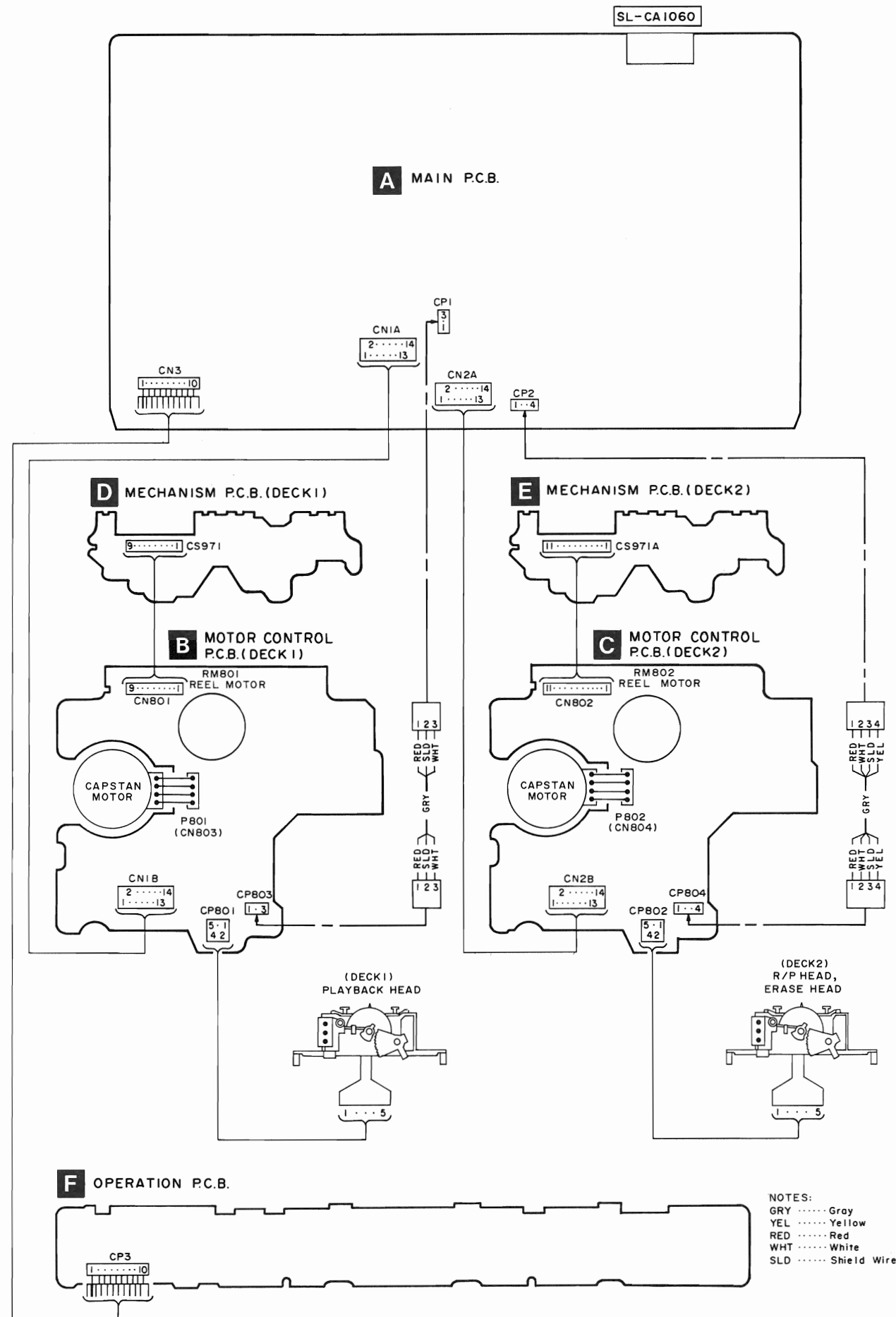
2 TP1 (Lch) TP601 TP602 TP603 SL-CA1060 A. GND (Rch) TP4 TP3 (Lch)

IN POINT POWER SUPPLY POINT LINE OUT POINT

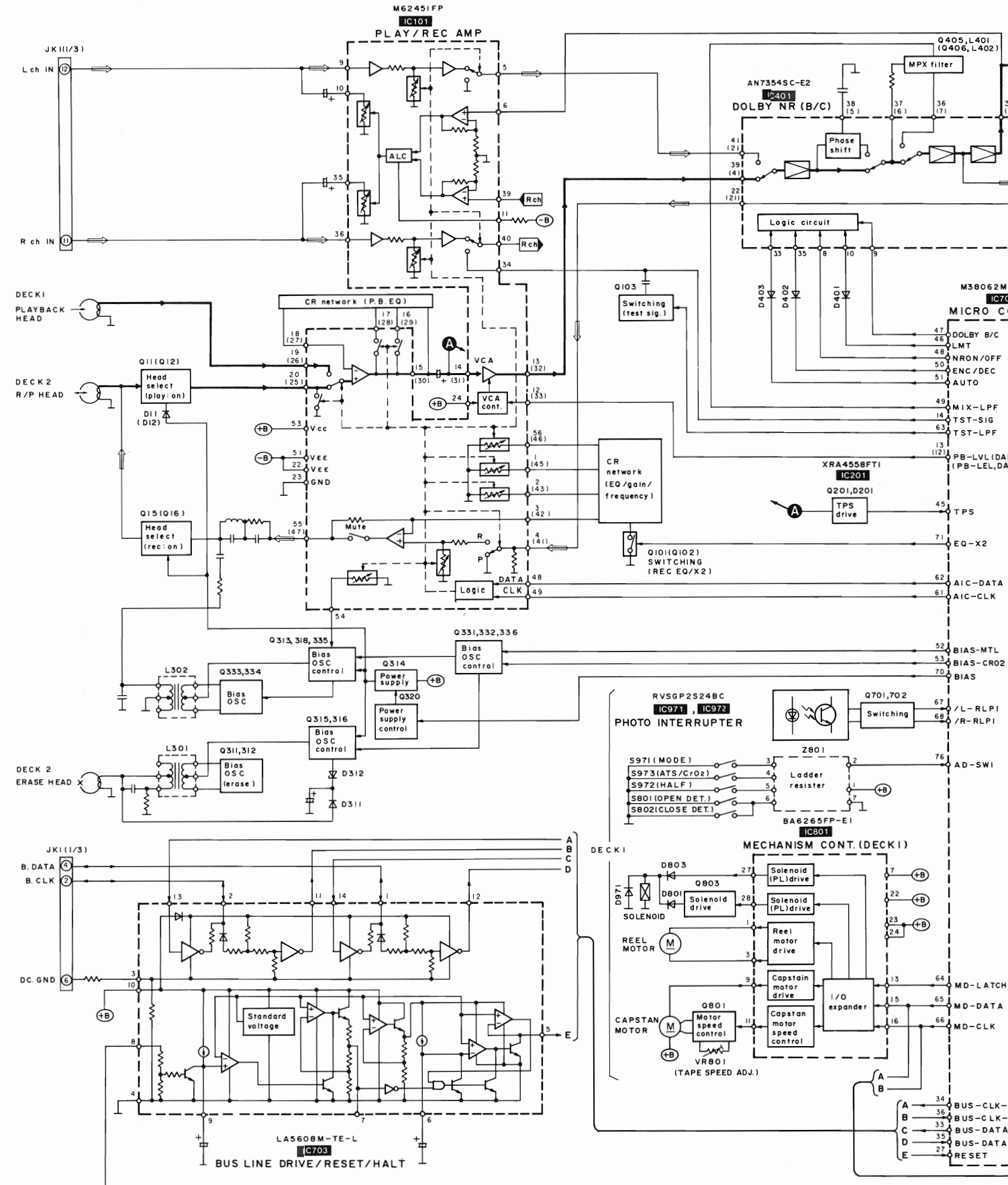
[illegible]



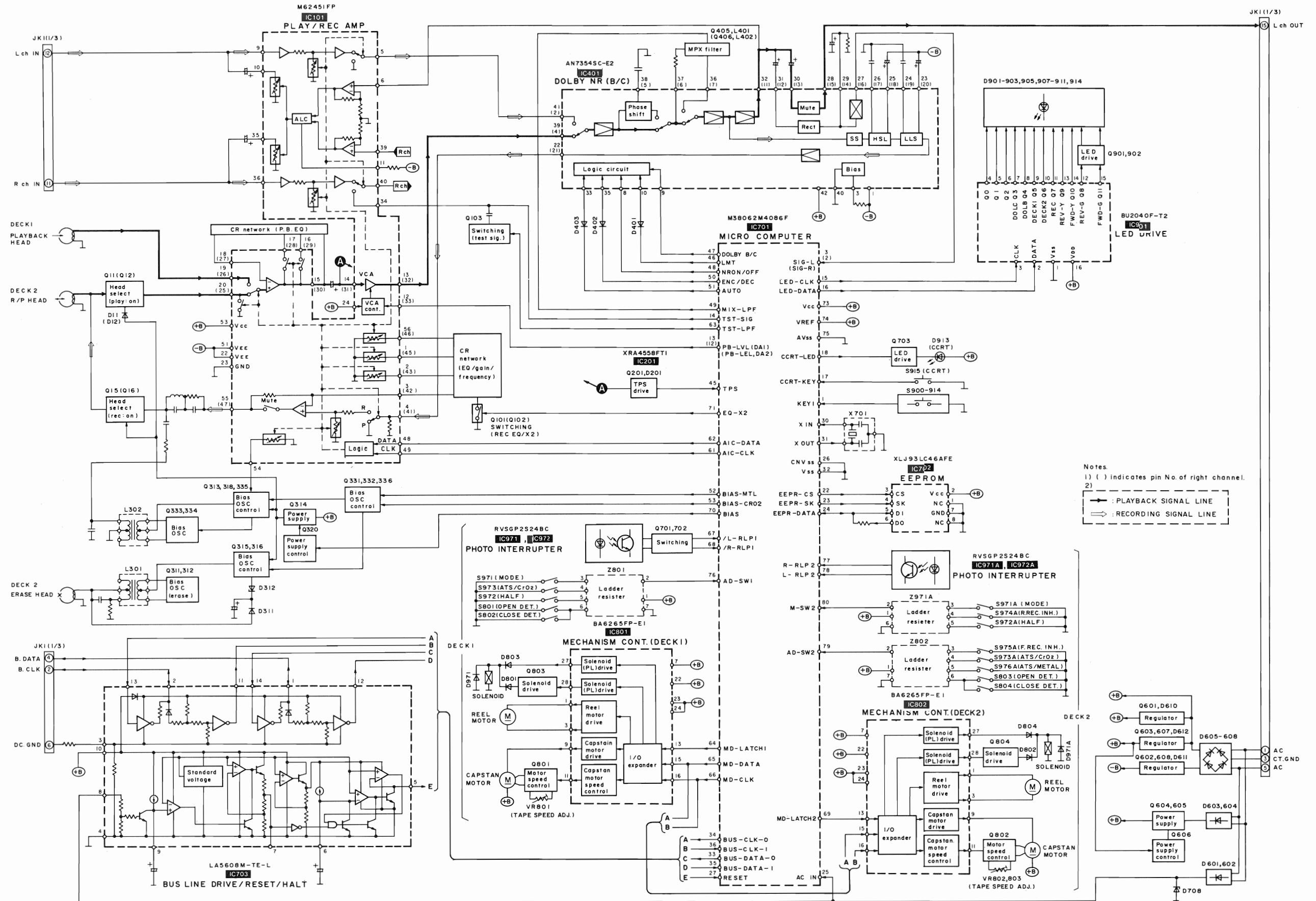
## WIRING CONNECTION DIAGRAM



## BLOCK DIAGRAM



## BLOCK DIAGRAM



■ TERMINAL FUNCTION OF IC’S

● IC701 (M38062M4086F)

Pin No.	Terminal Name	I/O	Function
1	KEY1	I	Operation key input
2	SIG-R	I	Level detection input for audio signal (R-ch)
3	SIG-L	I	Level detection input for audio signal (L-ch)
4 └ 11	—	—	—
12	PB-LVL (DA2)	O	Control signal output for playback level (R-ch)
13	PB-LVL (DA1)	O	Control signal output for playback level (R-ch)
14	TST-SIG	O	Audio test signal output (400 Hz/10 kHz)
15	LED-CLK	O	Serial clock signal output for LED drive control to IC901
16	LED-DATA	O	Serial data signal output for LED drive control to IC901
17	CCRT-KEY	I	Key input for CCRT
18	CCRT-LED	O	ON/OFF control signal output for CCRT display to LED
19 └ 21	—	—	—
22	EEPR-CS	O	Chip select signal output for EEPROM
23	EEPR-SK	O	Serial clock signal output for EEPROM
24	EEPR-DATA	I/O	Serial data signal input/output for EEPROM
25	ACIN	I	Signal input for power OFF mode detection
26	CNVSS	—	Connected to V <sub>ss</sub>
27	RESET	I	Reset signal input from microprocessor
28 29	—	—	—
30	XIN	I	Clock signal input from microprocessor
31	XOUT	O	Clock signal output to microprocessor
32	V <sub>ss</sub>	—	Connected to GND
33	BUS-DATA-0	O	Bus data signal output

Pin No.	Terminal Name	I/O	Function
34	BUS-CLK-0	O	Bus clock signal output
35	BUS-DATA-I	I	Bus data signal input
36	BUS-CLK-I	I	Bus clock signal input
37 └ 40	—	—	—
41	TST-EROM	I	Signal input for EEPROM initialization
42	TST-MODE	I	Switching signal input for Test ON/OFF mode
43	—	—	—
44	CS-NR	I	Model selection input (RS-CH404; “L”)
45	TPS	I	Signal input for tune presence detection in TPS operation
46	LMT	O	Muting signal output for line out
47	DOLBY B/C	—	—
48	NR ON/OFF	O	Dolby ON/OFF switching signal output
49	MIX-LPF	O	Filter ON/OFF switching signal output in audio signal level detection
50	ENC/DEC	O	Encoder/decoder switching signal output to IC for Dolby
51	AUTO	O	Gain control signal output for audio signal level detection circuit
52	BIAS-MTL	O	Control signal output for recording bias in use of a metal tape
53	BIAS-CRO2	O	Control signal output for recording bias in use of a Chrome tape
54 └ 59	—	—	—
60	—	—	—
61	AIC-CLK	O	Clock control signal output to IC for audio recording/playback
62	AIC-DATA	O	Data control signal output to IC for audio recording/playback

Pin No.	Terminal Name	I/O	Function
63	TST-LPF	O	Filter ON/OFF switching signal output for CCRT recording test signal (400 Hz: “H”)
64	MD-LATCH1	O	Latch signal output to IC (801) for mechanism drive on deck 1
65	MD-DATA	O	Serial data signal output to mechanism drive ICs (IC801, IC802)
66	MD-CLK	O	Serial clock signal output to mechanism ICs (IC801, IC802)
67	/L-RLP1	I	Pulse signal input for rotation detection to left side reel of deck 1
68	/R-RLP1	I	Pulse signal input for rotation detection to right side reel of deck 1
69	MD-LATCH2	O	Latch signal output to IC (IC802) for mechanism drive on deck 2
70	BIAS	O	ON/OFF switching signal output for recording bias
71	EQ-X2	O	Switching signal output for recording equalizer
72	—	—	—
73	V <sub>cc</sub>	—	Connected to power source for microcomputer (+5 V)
74	VREF	—	Connected to reference voltage for A/D input
75	AVSS	—	Connected to GND for A/D input
76	AD-SW1	I	Signal input for mechanism switches for deck 1
77	R-RLP2	I	Pulse signal input for rotation detection to right side reel of deck 2
78	L-RLP2	I	Pulse signal input for rotation detection to left side reel of deck 2
79	AD-SW2	I	Signal input for mechanism switches for deck 2
80	M-SW	I	Signal input for mechanism switches for deck 2

●IC702 (XLJ93LC46AFE)

Pin No.	Terminal Name	I/O	Function
1	NC	—	Connected to GND
2	V <sub>cc</sub>	I	Power input
3	CS	I	Chip select signal input
4	SK	I	Serial clock input
5	DI	I	Serial data input
6	DO	O	Serial data output
7	GND	—	GND
8	NC	—	Connected to GND

●IC801 and IC802 (BA6265FP-E1)

Pin No.	Terminal Name	I/O	Function
1	RM—	O	Reel motor control (—)
2	GND	—	Reel motor GND
3	RM+	O	Reel motor control (+)
4 └ 6	NC	—	Connected to GND
7	7.5 V	I	Power input (7.5 V)
8	GND	—	Capstan motor GND
9	CPM	O	Capstan motor control
10	NC	—	Connected to GND
11	CPM-SW	O	Capstan motor speed control
12	NC	—	Connected to GND
13	LACH	I	I/O expander lach signal output
14	S.O.	O	I/O expander serial output
15	DATA	I	I/O expander data input
16	CLK	I	I/O expander clock input
17, 18	NC	—	Connected to CLK
19	NC	—	Connected to LACH
20, 21	GND	—	GND
22	5 V	I	Power input (5 V)
23, 24	15 V	I	Power input (15 V)
25	NC	—	Connected to GND
26	GND	—	GND
27	PL15 V	O	Plunger drive signal output (15 V)
28	PL7.5 V	O	Plunger drive signal output (7.5 V)

Pin No.	Terminal Name	I/O	Function
63	TST-LPF	O	Filter ON/OFF switching signal output for CCRT recording test signal (400 Hz: "H")
64	MD-LATCH1	O	Latch signal output to IC (801) for mechanism drive on deck 1
65	MD-DATA	O	Serial data signal output to mechanism drive ICs (IC801, IC802)
66	MD-CLK	O	Serial clock signal output to mechanism ICs (IC801, IC802)
67	/L-RLP1	I	Pulse signal input for rotation detection to left side reel of deck 1
68	/R-RLP1	I	Pulse signal input for rotation detection to right side reel of deck 1
69	MD-LATCH2	O	Latch signal output to IC (IC802) for mechanism drive on deck 2
70	BIAS	O	ON/OFF switching signal output for recording bias
71	EQ-X2	O	Switching signal output for recording equalizer
72	—	—	—
73	V <sub>CC</sub>	—	Connected to power source for microcomputer (+5 V)
74	VREF	—	Connected to reference voltage for A/D input
75	AVSS	—	Connected to GND for A/D input
76	AD-SW1	I	Signal input for mechanism switches for deck 1
77	R-RLP2	I	Pulse signal input for rotation detection to right side reel of deck 2
78	L-RLP2	I	Pulse signal input for rotation detection to left side reel of deck 2
79	AD-SW2	I	Signal input for mechanism switches for deck 2
80	M-SW	I	Signal input for mechanism switches for deck 2

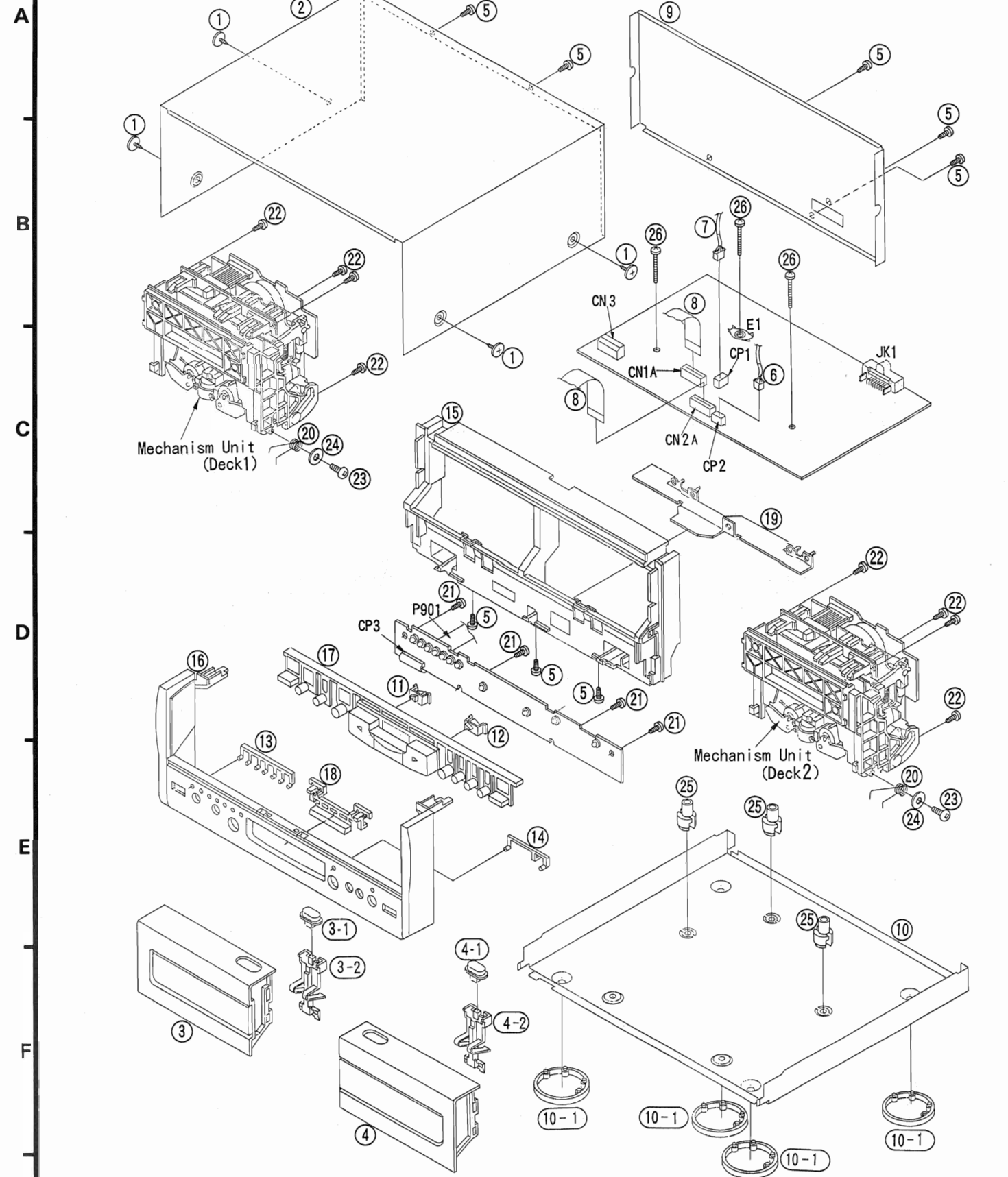
# ●IC702 (XLJ93LC46AFE)

Pin No.	Terminal Name	I/O	Function
1	NC	—	Connected to GND
2	V <sub>CC</sub>	I	Power input
3	CS	I	Chip select signal input
4	SK	I	Serial clock input
5	DI	I	Serial data input
6	DO	O	Serial data output
7	GND	—	GND
8	NC	—	Connected to GND

# ●IC801 and IC802 (BA6265FP-E1)

Pin No.	Terminal Name	I/O	Function
1	RM—	O	Reel motor control (—)
2	GND	—	Reel motor GND
3	RM+	O	Reel motor control (+)
4	NC	—	Connected to GND
5	NC	—	Connected to GND
6	NC	—	Connected to GND
7	7.5 V	I	Power input (7.5 V)
8	GND	—	Capstan motor GND
9	CPM	O	Capstan motor control
10	NC	—	Connected to GND
11	CPM-SW	O	Capstan motor speed control
12	NC	—	Connected to GND
13	LACH	I	I/O expander lach signal output
14	S.O.	O	I/O expander serial output
15	DATA	I	I/O expander data input
16	CLK	I	I/O expander clock input
17, 18	NC	—	Connected to CLK
19	NC	—	Connected to LACH
20, 21	GND	—	GND
22	5 V	I	Power input (5 V)
23, 24	15 V	I	Power input (15 V)
25	NC	—	Connected to GND
26	GND	—	GND
27	PL15 V	O	Plunger drive signal output (15 V)
28	PL7.5 V	O	Plunger drive signal output (7.5 V)

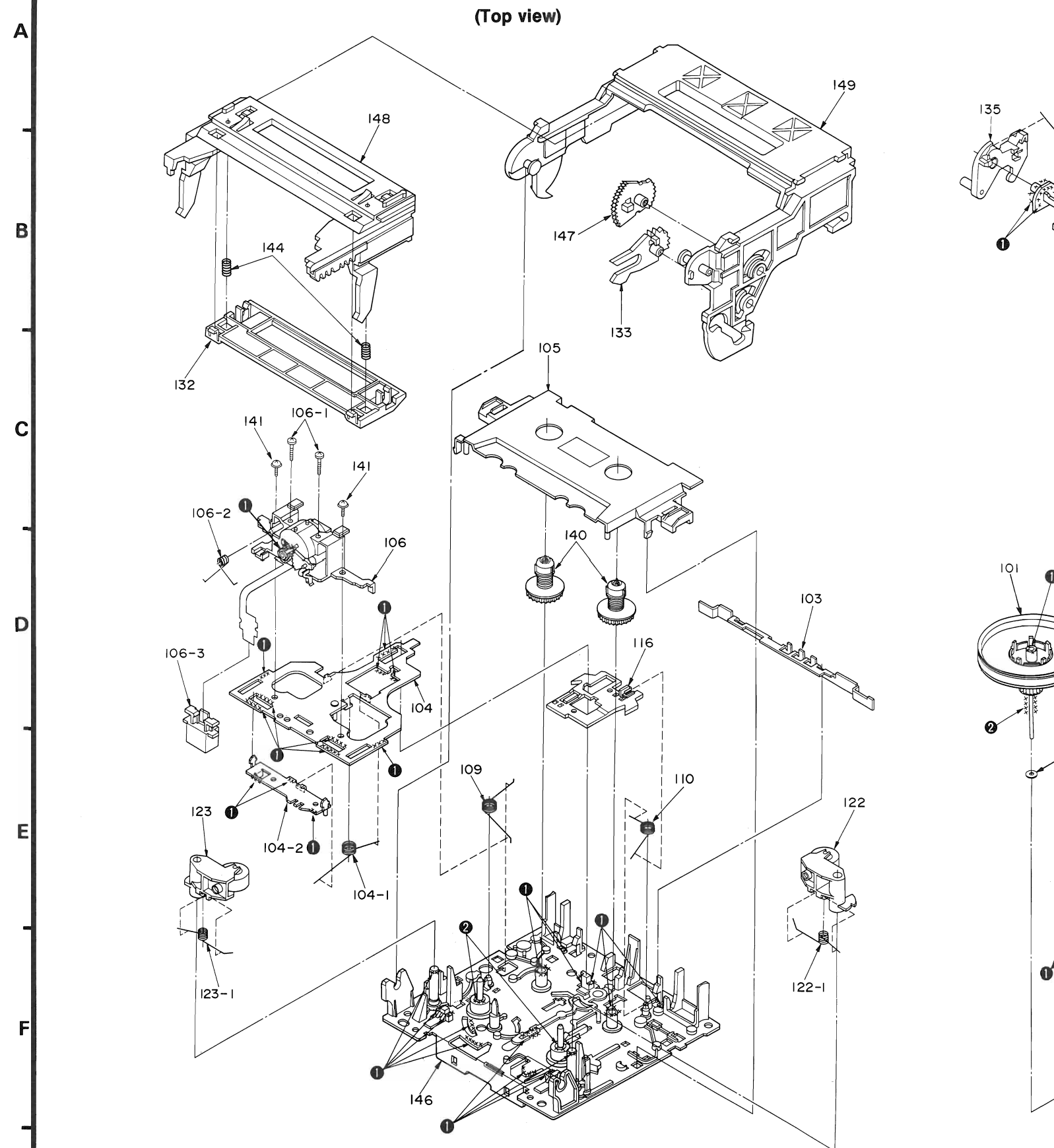
# ■CABINET PARTS LOCATION



# REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS					
1	RHD30007	SCREW		108	RD0019A	MAIN GEAR	
2	RKMD202-2K	CABINET		109	RMB0261	SPRING, HEAD BASE	
3	RYF0285A-K	CASSETTE LID(DECK1)		110	RMB0262	SPRING, BRAKE ROD	
3-1	RGU0958A-K	BUTTON, CLOSE		111	RMB0263	SPRING(F)	
3-2	RMM0110	CLOSE BUTTON LOD		112	RMB0264	SPRING(R)	
4	RYF0286-K	CASSETTE LID(DECK2)		113	RW1472A	SPRING, TRIGGER LEVER	
4-1	RGU0958A-K	BUTTON, CLOSE		114	RML0267A	TRIGGER LEVER	
4-2	RMM0110	CLOSE BUTTON LOD		115	RML0268A	FOR. /REV. SIDE LEVER	
5	XTBS3+8JF21	SCREW		116	RMM0091A	BRAKE ROD	
6	REX0539	CONNECTOR UNIT (4P)		117	RMS0398-1	MOVING IRON CORE	
7	REX0540	CONNECTOR UNIT (3P)		118	RSJ0003	SOLENOID UNIT	
8	REZ0604	FLEXIBLE FLAT CABLE(14P)		119	RUS6092C	SPRING, TAPE PRESSURE	
9	RGR0147A-T	REAR PANEL		120	RXG0036	REEL GEAR UNIT	
10	RFKJSCH404EK	BOTTOM CHASSIS ASS'Y		121	RXL0106	IDLER GEAR UNIT	
10-1	RKA0011-3	FOOT		122	RXP0052	PINCH ROLLER(F) UNIT	
11	RGL0233-Q	PANEL LIGHT(R. PLAY)		122-1	RMB0259	SPRING, PINCH ROLLER(F)	
12	RGL0234-Q	PANEL LIGHT(F. PLAY)		123	RXP0053	PINCH ROLLER(R) UNIT	
13	RGL0235-Q	PANEL LIGHT(L)		123-1	RMB0260	SPRING, PINCH ROLLER(R)	
14	RGL0236-Q	PANEL LIGHT(R)		124	RDG0206A-1	LOADING GEAR	
15	RGP0345A-K	FRONT GRILL		125	RDG0209A	INTERMEDIATE GEAR	
16	RGP0402-K	FRONT PANEL		126	REM0036-1	CAPSTAN MOTOR UNIT	
17	RGU1066-S	BUTTON, OPERATION		127	REM0043	REEL MOTOR UNIT(RM801, 802)	
18	RGU1067-S	BUTTON, F. F. /REW.		128	RHD26013	SCREW	
19	RMA0725	MECHANISM ANGLE		129	RMC0169	SHIELD PLATE	
20	RME0156-1	SPRING, BALANCE		130	RMQ0314A	SURASUTO SPACER	
21	XTBS26+8J	SCREW		131	RXG0037	FRICTION GEAR UNIT	
22	XTB3+10JFZ	SCREW		132	RMQ0401	STABILIZER	
23	XTN2+6J	SCREW		133	RML0275A	LIFT ARM	
24	XWG2	WASHER		134	RMB0269	SPRING, DRIVE LEVER	
25	SHE185-2	P. C. B. HOLDER		135	RML0270A-1	DRIVE LEVER	
26	XTB3+16JFZ	SCREW		136	RMQ0312A	DRIVE RACK	
		MECHANISM PARTS		137	RMB0268	SPRING, HOLDER HOOK	
101	RXF0045	FLYWHEEL(F) UNIT		138	RML0271A	HOLDER HOOK	
101-1	RMQ0420	WASHER		139	XTW2+6S	SCREW	
102	RXF0046	FLYWHEEL(R) UNIT		140	RXR0018	REEL TABLE UNIT	
102-1	RMQ0421	WASHER		141	XTW2+5L	SCREW	
103	RML0272	SWITCH LEVER		142	XTW26+12S	SCREW	
104	RXQ0265	HEAD BASE UNIT		143	XTW26+6L	SCREW	
104-1	RMB0266-1	SPRING, FOR. /REV. SIDE ROD		144	RMB0324	SPRING, STABILIZER	
104-2	RXM0036	FOR. /REV. SIDE ROD UNIT		145	RFKJSCH404AK	SUB CHASSIS ASS'Y	
105	RGK0582-K	DRESSING PLATE		146	RFKJSCH404BK	CHASSIS ASS'Y	
106	RXQ0317-1	HEAD BLOCK(P. B.) (DECK1)		147	RDG0212A	LIFT GEAR	
106	RXQ0316-1	HEAD BLOCK(R/P) (DECK2)		148	RGQ0121-K	LIFTER	
106-1	RHD17015	SCREW, AZIMUTH ADJUSTMENT		149	RKF0334-K	CASSETTE HOLDER	
106-2	RMB0352	SPRING, HEAD HOLD					
106-3	RMQ0360A	CONNECTOR HOLDER					
107	RDV1082A	BELT					

# MECHANISM PARTS LOCATION

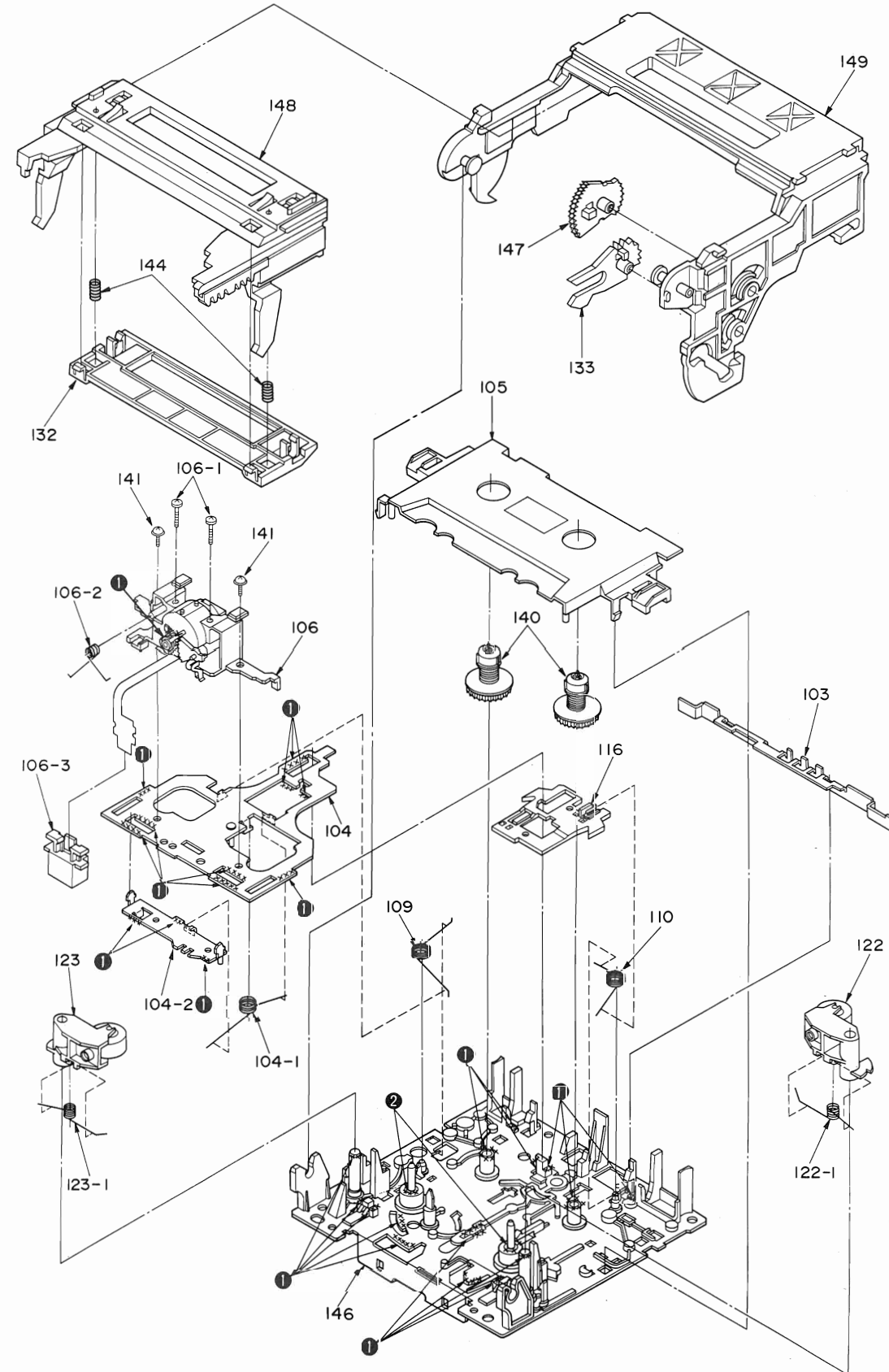




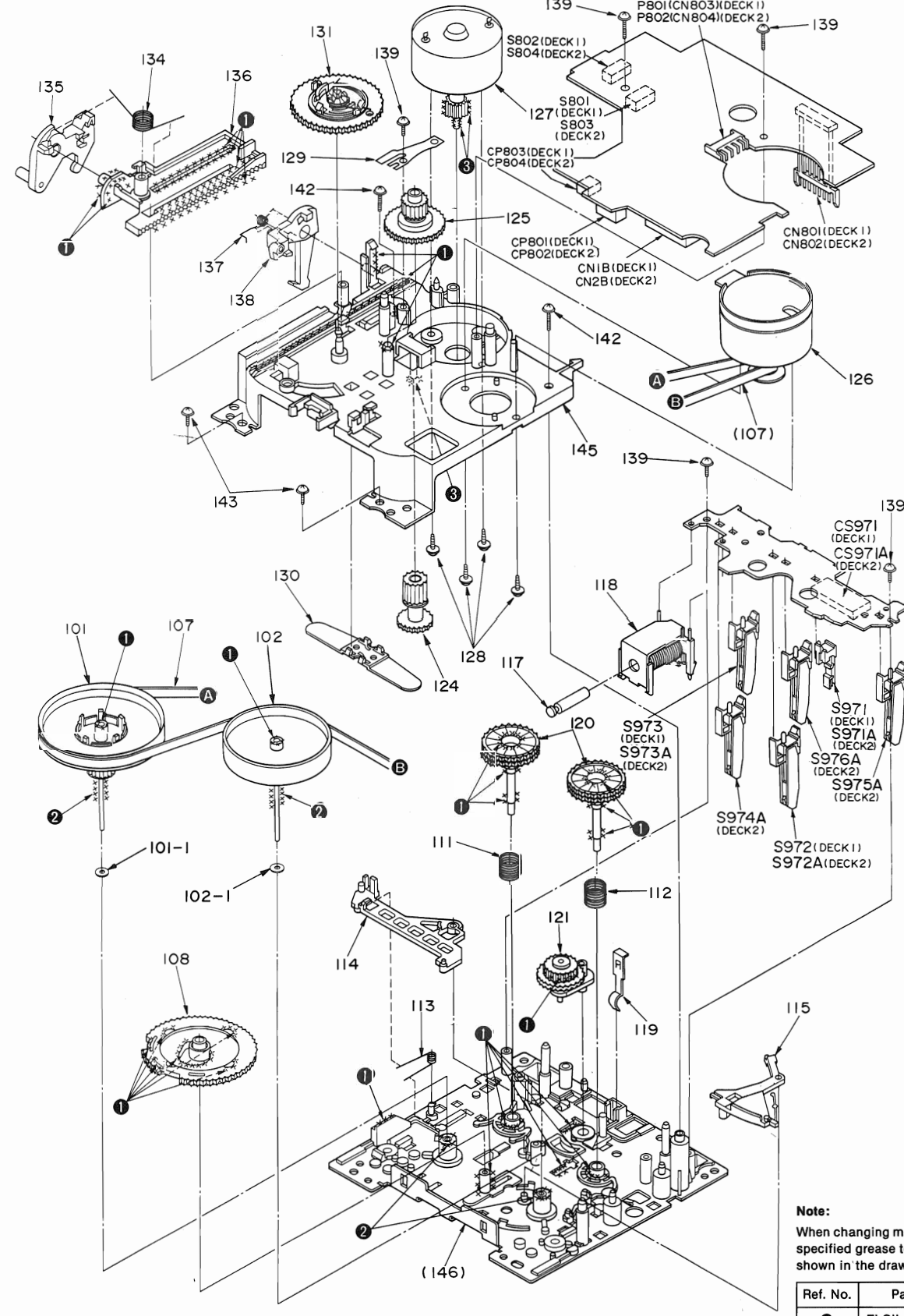
MECHANISM PARTS LOCATION

A  
B  
C  
D  
E  
F

(Top view)



(Bottom view)



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

Ref. No.	Part Name	Part No.
①	FLOIL AK-152	SZZ0L18
②	SWAFLUID #56	RZZ0L02
③	MOLYCOAT EM-20L	RZZ0L05

REPLACEMENT PARTS LIST

**Notes:** \*Important safety notice:  
Components identified by Δ mark have special characteristics important for safety.  
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.  
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				Q803	2SD1450RTA	TRANSISTOR (DECK1)	
		INTEGRATED CIRCUIT (S)		Q804	2SD1450RTA	TRANSISTOR (DECK2)	
				Q901, 902	UN4119	TRANSISTOR	
IC101	M62451FP	PLAY/REC AMP					
IC201	XRA4558FT1	TPS DRIVE				DIODE (S)	
IC401	AN7354SC-E2	DOLBY NR(B/C)					
IC701	M38062M4086F	MICROCOMPUTER		D11, 12	MA188TA	DIODE	
IC702	XLJ93LC46AFE	EEP ROM		D201	MA165	DIODE	
IC703	LA5608M-TE-L	BUS LINE DRIVE/RESET/HAiT		D302	MA165	DIODE	
IC801	BA6265FP-E1	MECHANISM CONTROL (DECK1)		D311	MA188TA	DIODE	
IC802	BA6265FP-E1	MECHANISM CONTROL (DECK2)		D312	MTZJ5R6CTA	DIODE	
IC901	XLU2040F-T1	L. E. D. DRIVE		D313	MA165	DIODE	
IC971	RVSGP2S24BC	PHOTO INTERRUPTER (DECK1)		D351, 352	MA165	DIODE	
IC971A	RVSGP2S24BC	PHOTO INTERRUPTER (DECK2)		D401-403	MA165	DIODE	
IC972	RVSGP2S24BC	PHOTO INTERRUPTER (DECK1)		D601, 602	MA165	DIODE	Δ
IC972A	RVSGP2S24BC	PHOTO INTERRUPTER (DECK2)		D603-608	RL1N4003N02	DIODE	Δ
				D609	MA723TA	DIODE	
		TRANSISTOR (S)		D610, 611	MTZJ8R2CTA	DIODE	Δ
				D612	MTZJ6R2CTA	DIODE	Δ
Q11, 12	2SJ164PQRTA	TRANSISTOR		D613	MA723TA	DIODE	
Q15, 16	2SK381BCDTA	TRANSISTOR		D701	1SS291TA	DIODE	
Q101, 102	2SC3311AIRTA	TRANSISTOR		D702	MA165	DIODE	
Q103	DTC114ESTP	TRANSISTOR		D703	1SS291TA	DIODE	
Q201	2SC3311AIRTA	TRANSISTOR		D704, 705	MA165	DIODE	
Q311, 312	2SC3311AIRTA	TRANSISTOR		D708	MTZJ5R1BTA	DIODE	Δ
Q313	2SB621AQSTA	TRANSISTOR		D709, 710	MA165	DIODE	
Q314	2SA1309AIRTA	TRANSISTOR		D801	MA188TA	DIODE (DECK1)	
Q315	2SD2137PQTA	TRANSISTOR		D802	MA188TA	DIODE (DECK2)	
Q316	2SC3311AIRTA	TRANSISTOR		D803	MA723TA	DIODE (DECK1)	
Q318	2SA1309AIRTA	TRANSISTOR		D804	MA723TA	DIODE (DECK2)	
Q320	DTC114ESTP	TRANSISTOR		D901-903	SLR-305VC	L. E. D.	
Q331, 332	UN4219TA	TRANSISTOR		D904	MA165	DIODE	
Q333, 334	2SC3311AIRTA	TRANSISTOR		D905	SPR-305MDTF	L. E. D.	
Q335	2SD592NCR	TRANSISTOR		D906	MA165	DIODE	
Q336	DTC114ESTP	TRANSISTOR		D907	SPR-305MDTF	L. E. D.	
Q405, 406	2SC3311AIRTA	TRANSISTOR		D908-911	SLR-305VC	L. E. D.	
Q601	2SD2137PQTA	TRANSISTOR	Δ	D913, 914	SLR-305VC	L. E. D.	
Q602	2SB1357DEFTA	TRANSISTOR	Δ	D971	RVD1SS133TA	DIODE (DECK1)	
Q603	2SD2137PQTA	TRANSISTOR	Δ	D971A	RVD1SS133TA	DIODE (DECK2)	
Q604, 605	2SD2137PQTA	TRANSISTOR					
Q606	2SC3311AIRTA	TRANSISTOR				VARIABLE RESISTOR (S)	
Q607	2SD2137PQTA	TRANSISTOR	Δ				
Q608	2SB1357DEFTA	TRANSISTOR	Δ	VR801	EVNDCAA03B53	TAPE SPEED ADJ. (DECK1:X1)	
Q701, 702	DTC114YSTP	TRANSISTOR		VR802	EVNDCAA03B53	TAPE SPEED ADJ. (DECK2:X2)	
Q703	UN4219TA	TRANSISTOR		VR803	EVNDCAA03B53	TAPE SPEED ADJ. (DECK2:X1)	
Q801	2SA1309A-R	TRANSISTOR (DECK1)					
Q802	2SA1309A-R	TRANSISTOR (DECK2)				COIL (S)	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				CN2A	RJS1A6814	CONNECTOR (14P)	
L101, 102	SLQX303-1KT	COIL		CN2B	RJS1A6714	CONNECTOR (14P) (DECK2)	
L301, 302	SL09B4-K	COIL		CN3	SJSD1005	CONNECTOR (10P)	
L401, 402	RLQB103JT-Y	COIL		CN801	RJT071H09A	CONNECTOR (9P) (DECK1)	
L701	RLQA100JT-Y	COIL		CN802	RJT071H11A	CONNECTOR (11P) (DECK2)	
				CP1	SJTD313	CONNECTOR (3P)	
		COMPONENT COMBINATION (S)		CP2	SJTD413	CONNECTOR (4P)	
				CP3	RJS2A1310	CONNECTOR (10P)	
Z801	EXBF7L355SYV	COMBINATION PART (DECK1)		CP801	RJS2A0205-2S	CONNECTOR (5P) (DECK1)	
Z802	EXBF7L355SYV	COMBINATION PART (DECK2)		CP802	RJS2A0205-2S	CONNECTOR (5P) (DECK2)	
Z971A	EXBF6L306SYV	COMBINATION PART (DECK2)		CP803	RJP3G17ZA	CONNECTOR (3P) (DECK1)	
				CP804	RJP4G17ZA	CONNECTOR (4P) (DECK2)	
				CS971	RJU071H09M	SOCKET (9P) (DECK1)	
		OSCILLATOR (S)		CS971A	RJU071H11M	SOCKET (11P) (DECK2)	
X701	EF0EC8004T4	CERAMIC OSCILLATOR (8MHz)		P801	RJR0113	MOTOR CONNECTOR (4P) (DECK1)	(CN803)
				P802	RJR0113	MOTOR CONNECTOR (4P) (DECK2)	(CN804)
		SWITCH (ES)				JACK (S)	
S801	RSH1A024-U	OPEN DETECTION (DECK1)					
S802	RSH1A024-U	CLOSE DETECTION (DECK1)		JK1	RJT065K15	CONNECTOR (15P)	
S803	RSH1A024-U	OPEN DETECTION (DECK2)					
S804	RSH1A024-U	CLOSE DETECTION (DECK2)				GND PART (S)	
S900	EVQ21405R	STOP					
S901	EVQ21405R	F. F. [TPS]		E1	SNE1004-2	GND PLATE	
S902	EVQ21405R	REW. [TPS]					
S903	EVQ21405R	FOR. SIDE PLAYBACK				FLAT CABLE (S)	
S904	EVQ21405R	REV. SIDE PLAYBACK					
S905	EVQ21405R	REC. PAUSE		P901	REZ0715	FLAT CABLE (10P)	
S906	EVQ21405R	ONE TOUCH TAPE EDIT (NORMAL)					
S907	EVQ21405R	ONE TOUCH TAPE EDIT (HIGH)					
S908	EVQ21405R	OPEN/CLOSE (DECK2)					
S909	EVQ21405R	OPEN/CLOSE (DECK1)					
S910	EVQ21405R	DOLBY NR(B/C)					
S911	EVQ21405R	REVERSE MODE					
S912	EVQ21405R	DECK1/DECK2 SELECT					
S913	EVQ21405R	CLOSE (DECK1)					
S914	EVQ21405R	CLOSE (DECK2)					
S915	EVQ21405R	CCRT					
S971	RSH1A018-U	MODE (DECK1)					
S971A	RSH1A018-U	MODE (DECK2)					
S972	RSH1A019-U	HALF (DECK1)					
S972A	RSH1A019-U	HALF (DECK2)					
S973	RSH1A019-U	ATS (DECK1)					
S973A	RSH1A019-U	ATS (DECK2)					
S974A	RSH1A019-U	R. REC. INH. (DECK2)					
S975A	RSH1A019-U	F. REC. INH. (DECK2)					
S976A	RSH1A019-U	ATS (DECK2)					
		CONNECTOR (S) AND SOCKET (S)					
CN1A	RJS1A6814	CONNECTOR (14P)					
CN1B	RJS1A6714	CONNECTOR (14P) (DECK1)					

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				CN2A	RJS1A6814	CONNECTOR (14P)	
L101, 102	SLQX303-1KT	COIL		CN2B	RJS1A6714	CONNECTOR (14P) (DECK2)	
L301, 302	SL09B4-K	COIL		CN3	SJSD1005	CONNECTOR (10P)	
L401, 402	RLQB103JT-Y	COIL		CN801	RJT071H09A	CONNECTOR (9P) (DECK1)	
L701	RLQA100JT-Y	COIL		CN802	RJT071H11A	CONNECTOR (11P) (DECK2)	
				CP1	SJTD313	CONNECTOR (3P)	
		COMPONENT COMBINATION (S)		CP2	SJTD413	CONNECTOR (4P)	
				CP3	RJS2A1310	CONNECTOR (10P)	
Z801	EXBF7L355SYV	COMBINATION PART (DECK1)		CP801	RJS2A0205-2S	CONNECTOR (5P) (DECK1)	
Z802	EXBF7L355SYV	COMBINATION PART (DECK2)		CP802	RJS2A0205-2S	CONNECTOR (5P) (DECK2)	
Z971A	EXBF6L306SYV	COMBINATION PART (DECK2)		CP803	RJP3G17ZA	CONNECTOR (3P) (DECK1)	
				CP804	RJP4G17ZA	CONNECTOR (4P) (DECK2)	
		OSCILLATOR (S)		CS971	RJU071H09M	SOCKET (9P) (DECK1)	
				CS971A	RJU071H11M	SOCKET (11P) (DECK2)	
X701	EF0EC8004T4	CERAMIC OSCILLATOR (8MHz)		P801	RJR0113	MOTOR CONNECTOR (4P) (DECK1)	(CN803)
				P802	RJR0113	MOTOR CONNECTOR (4P) (DECK2)	(CN804)
		SWITCH (ES)					
						JACK (S)	
S801	RSH1A024-U	OPEN DETECTION (DECK1)					
S802	RSH1A024-U	CLOSE DETECTION (DECK1)		JK1	RJT065K15	CONNECTOR (15P)	
S803	RSH1A024-U	OPEN DETECTION (DECK2)					
S804	RSH1A024-U	CLOSE DETECTION (DECK2)				GND PART (S)	
S900	EVQ21405R	STOP					
S901	EVQ21405R	F. F. [TPS]		E1	SNE1004-2	GND PLATE	
S902	EVQ21405R	REW. [TPS]					
S903	EVQ21405R	FOR. SIDE PLAYBACK				FLAT CABLE (S)	
S904	EVQ21405R	REV. SIDE PLAYBACK					
S905	EVQ21405R	REC. PAUSE		P901	REZ0715	FLAT CABLE (10P)	
S906	EVQ21405R	ONE TOUCH TAPE EDIT (NORMAL)					
S907	EVQ21405R	ONE TOUCH TAPE EDIT (HIGH)					
S908	EVQ21405R	OPEN/CLOSE (DECK2)					
S909	EVQ21405R	OPEN/CLOSE (DECK1)					
S910	EVQ21405R	DOLBY NR (B/C)					
S911	EVQ21405R	REVERSE MODE					
S912	EVQ21405R	DECK1/DECK2 SELECT					
S913	EVQ21405R	CLOSE (DECK1)					
S914	EVQ21405R	CLOSE (DECK2)					
S915	EVQ21405R	CCRT					
S971	RSH1A018-U	MODE (DECK1)					
S971A	RSH1A018-U	MODE (DECK2)					
S972	RSH1A019-U	HALF (DECK1)					
S972A	RSH1A019-U	HALF (DECK2)					
S973	RSH1A019-U	ATS (DECK1)					
S973A	RSH1A019-U	ATS (DECK2)					
S974A	RSH1A019-U	R. REC. INH. (DECK2)					
S975A	RSH1A019-U	F. REC. INH. (DECK2)					
S976A	RSH1A019-U	ATS (DECK2)					
		CONNECTOR (S) AND SOCKET (S)					
CN1A	RJS1A6814	CONNECTOR (14P)					
CN1B	RJS1A6714	CONNECTOR (14P) (DECK1)					

RESISTORS AND CAPACITORS

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

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R335	ERDS2TJ562	1/4W 5. 6K	R747, 748	ERDS2TJ103	1/4W 10K
			R337, 338	ERDS2TJ393	1/4W 39K	R751, 752	ERDS2TJ272T	1/4W 2. 7K
			R340	ERD2FCVG150T	1/4W 15 △	R777	ERDS2TJ103	1/4W 10K
R11-14	ERDS2TJ225	1/4W 2. 2M	R351	ERDS2TJ471	1/4W 470	R801	ERDS2TJ2R2T	1/4W 2. 2 (DECK1)
R15, 16	ERDS2TJ224T	1/4W 220K	R352	ERDS2TJ821	1/4W 820	R802	ERDS2TJ2R2T	1/4W 2. 2 (DECK2)
R18	ERDS2TJ473	1/4W 47K	R353	ERDS2TJ333	1/4W 33K	R803	ERDS2TJ153	1/4W 15K (DECK1)
R109, 110	ERDS2TJ101	1/4W 100	R354, 355	ERDS2TJ270T	1/4W 27	R804	ERDS2TJ103	1/4W 10K (DECK1)
R111, 112	ERDS2TJ472	1/4W 4. 7K	R356, 357	ERDS2TJ562	1/4W 5. 6K	R805	ERDS2TJ392T	1/4W 3. 9K (DECK1)
R113, 114	ERDS2TJ272T	1/4W 2. 7K	R358	ERDS2TJ272T	1/4W 2. 7K	R806	ERDS2TJ123	1/4W 12K (DECK2)
R115, 116	ERDS2TJ224T	1/4W 220K	R371	ERDS2TJ102	1/4W 1K	R807	ERDS2TJ103	1/4W 10K (DECK2)
R117, 118	ERDS2TJ682T	1/4W 6. 8K	R401, 402	ERDS2TJ272T	1/4W 2. 7K	R808	ERDS2TJ392T	1/4W 3. 9K (DECK2)
R119, 120	ERDS2TJ152	1/4W 1. 5K	R403, 404	ERDS2TJ562	1/4W 5. 6K	R811	ERDS2TJ474	1/4W 470K (DECK1)
R121-124	ERDS2TJ104	1/4W 100K	R405, 406	ERDS2TJ682T	1/4W 6. 8K	R812	ERDS2TJ474	1/4W 470K (DECK2)
R125, 126	ERDS2TJ822	1/4W 8. 2K	R407	ERDS2TJ222	1/4W 2. 2K	R819	ERDS2TJ271	1/4W 270 (DECK1)
R127, 128	ERDS2TJ153	1/4W 15K	R408	ERDS2TJ223	1/4W 22K	R900	ERDS2TJ821	1/4W 820
R129, 130	ERDS2TJ473	1/4W 47K	R409, 410	ERDS2TJ104	1/4W 100K	R901	ERDS2TJ102	1/4W 1K
R131, 132	ERDS2TJ223	1/4W 22K	R411, 412	ERDS2TJ221	1/4W 220	R902	ERDS2TJ122	1/4W 1. 2K
R133, 134	ERDS2TJ151	1/4W 150	R413, 414	ERDS2TJ104	1/4W 100K	R903	ERDS2TJ152	1/4W 1. 5K
R135-138	ERDS2TJ271	1/4W 270	R415, 416	ERDS2TJ123	1/4W 12K	R904	ERDS2TJ182	1/4W 1. 8K
R139, 140	ERDS2TJ123	1/4W 12K	R417, 418	ERDS2TJ394	1/4W 390K	R905	ERDS2TJ222	1/4W 2. 2K
R141, 142	ERDS2TJ222	1/4W 2. 2K	R421-424	ERDS2TJ560T	1/4W 56	R906	ERDS2TJ332	1/4W 3. 3K
R143	ERDS2TJ475T	1/4W 4. 7M	R425, 426	ERDS2TJ103	1/4W 10K	R907	ERDS2TJ472	1/4W 4. 7K
R144	ERDS2TJ331	1/4W 330	R601, 602	ERDS2TJ472	1/4W 4. 7K	R908	ERDS2TJ682T	1/4W 6. 8K
R145	ERDS2TJ104	1/4W 100K	R603	ERDS2TJ331	1/4W 330	R909	ERDS2TJ123	1/4W 12K
R146	ERDS2TJ472	1/4W 4. 7K	R604	ERDS2TJ561	1/4W 560	R910	ERDS2TJ223	1/4W 22K
R147, 148	ERDS2TJ222	1/4W 2. 2K	R605	ERD2FCVJ4R7T	1/4W 4. 7 △	R911	ERDS2TJ683	1/4W 68K
R149	ERDS2TJ471	1/4W 470	R606	ERD2FCVJ5R6T	1/4W 5. 6 △	R912, 913	ERDS2TJ102	1/4W 1K
R151, 152	ERDS2TJ103	1/4W 10K	R607	ERD2FCVG100T	1/4W 10 △	R914-917	ERDS2TJ471	1/4W 470
R155-158	ERDS2TJ180T	1/4W 18	R609	ERDS2TJ100	1/4W 10	R918-920	ERDS2TJ102	1/4W 1K
R159, 160	ERDS2TJ100	1/4W 10	R610	ERDS2TJ152	1/4W 1. 5K	R921, 922	ERDS2TJ272T	1/4W 2. 7K
R201, 202	ERDS2TJ103	1/4W 10K	R611, 612	ERDS2TJR47T	1/4W 0. 47	R923	ERDS2TJ102	1/4W 1K
R203	ERDS2TJ331	1/4W 330	R614	ERDS2TJ222	1/4W 2. 2K	R971	ERDS2TJ221	1/4W 220 (DECK1)
R204	ERDS2TJ472	1/4W 4. 7K	R615	ERDS2TJ332	1/4W 3. 3K	R971A	ERDS2TJ221	1/4W 220 (DECK2)
R205	ERDS2TJ823T	1/4W 82K	R616	ERDS2TJ103	1/4W 10K	R973	ERDS2TJ393	1/4W 39K (DECK1)
R206	ERDS2TJ682T	1/4W 6. 8K	R618, 619	ERDS2TJR47T	1/4W 0. 47	R973A	ERDS2TJ393	1/4W 39K (DECK2)
R207	ERDS2TJ393	1/4W 39K	R625	ERDS2TJ100	1/4W 10	R974	ERDS2TJ393	1/4W 39K (DECK1)
R208	ERDS2TJ102	1/4W 1K	R626, 627	ERDS2TJR47T	1/4W 0. 47	R974A	ERDS2TJ393	1/4W 39K (DECK2)
R209, 210	ERDS2TJ123	1/4W 12K	R701	ERDS2TJ470	1/4W 47	R1009	ERDS2TJ332	1/4W 3. 3K
R301	ERDS2TJ1R0	1/4W 1. 0	R702	ERDS2TJ103	1/4W 10K			
R302, 303	ERDS2TJ103	1/4W 10K	R703	ERDS2TJ104	1/4W 100K			CAPACITORS
R304, 305	ERDS2TJ100	1/4W 10	R704-710	ERDS2TJ103	1/4W 10K			
R307	ERDS2TJ153	1/4W 15K	R712, 713	ERDS2TJ103	1/4W 10K	C1, 2	ECBA1H681KB5	50V 680P
R308	ERDS2TJ473	1/4W 47K	R715-730	ERDS2TJ103	1/4W 10K	C11, 12	ECBT1H102KB5	50V 1000P
R309	ERDS2TJ272T	1/4W 2. 7K	R731-733	ERDS2TJ104	1/4W 100K	C13, 14	ECBT1H4R7KC5	50V 4. 7P
R310	ERDS2TJ472	1/4W 4. 7K	R734	ERDS2TJ472	1/4W 4. 7K	C15, 16	ECBA1H681KB5	50V 680P
R331	ERDS2TJ561	1/4W 560	R736-738	ERDS2TJ103	1/4W 10K	C17, 18	ECBT1H102KB5	50V 1000P
R332	ERDS2TJ680T	1/4W 68	R740	ERDS2TJ103	1/4W 10K	C27	ECBT1H102KB5	50V 1000P
R333	ERDS2TJ103	1/4W 10K	R741-744	ERDS2TJ272T	1/4W 2. 7K	C101	RCE1AM471BV	10V 470U
R334	ERDS2TJ563	1/4W 56K	R745, 746	ERDS2TJ104	1/4W 100K	C102	ECEA1CKA100B	16V 10U



Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C103, 104	ECQB1H153JF3	50V 0.015U	C341	ECFR1E183KR	25V 0.018U	C607	ECEA1AKA101B	10V 100U
C105, 106	ECEA0JKA470B	6.3V 47U	C342-344	ECKD1H682KB	50V 6800P	C608	ECEA1AKA221B	10V 220U
C107, 108	ECEA1CKA100B	16V 10U	C345	ECBT1E103ZF	25V 0.01U	C609, 610	ECBT1E103ZF	25V 0.01U
C109, 110	ECEA1HKA47B	50V 0.47U	C346	ECEA1EKA220B	25V 22U	C611	ECEA1HKA010B	50V 1U
C111, 112	ECEA1AKA220B	10V 22U	C348	ECEA1HKA010B	50V 1U	C612	ECKR2H682PE	500V 6800P
C113, 114	ECEA1HKA2R2B	50V 2.2U	C349, 350	ECBT1H221KB5	50V 220P	C613	ECEA1AJ470	10V 47U
C115, 116	ECEA1EKA4R7B	25V 4.7U	C351	ECEA1EKA4R7B	25V 4.7U	C614, 615	ECBT1E103ZF	25V 0.01U
C117, 118	ECEA0JKA470B	6.3V 47U	C352	ECBT1E103ZF	25V 0.01U	C701, 702	ECBT1E103ZF	25V 0.01U
C119, 120	ECEA1HKA22B	50V 0.22U	C356, 357	ECKR1H392KB5	50V 3900P	C703	ECEA0JU102	6.3V 1000U
C121-124	ECQB1H392JF3	50V 3900P	C358	ECQP1681JZ3	100V 680P	C704, 705	ECBT1E103ZF	25V 0.01U
C125, 126	ECQB1H183JF3	50V 0.018U	C359	ECEA1EKA4R7B	25V 4.7U	C706	ECEA1HKA33B	50V 0.33U
C127, 128	ECQB1H103JF3	50V 0.01U	C360, 361	ECKR1H392KB5	50V 3900P	C707	ECEA1HKA22B	50V 0.22U
C129, 130	ECBT1H181KB5	50V 180P	C371	ECBT1E103ZF	25V 0.01U	C731	ECBT1E103ZF	25V 0.01U
C131	RCE1AM471BV	10V 470U	C401, 402	ECBT1H391KB5	50V 390P	C777	ECEA1HKA33B	50V 3.3U
C132, 133	ECBT1H470J5	50V 47P	C403, 404	ECBT1C332KR5	16V 3300P	C801	ECBT1E223ZF	25V 0.022U (DECK1)
C134	ECEA1CKA100B	16V 10U	C407, 408	ECQV1H124JM3	50V 0.12U	C802	ECBT1E223ZF	25V 0.022U (DECK2)
C135	ECEA0JKA101B	6.3V 100U	C409, 410	ECBA1H681KB5	50V 680P	C803	ECEA1VKA470B	35V 47U (DECK1)
C136	ECQB1H393JF3	50V 0.039U	C411, 412	ECEA1HKA22B	50V 0.22U	C804	ECEA1AKA101B	10V 100U (DECK1)
C137, 138	ECEA1EKA4R7B	25V 4.7U	C415, 416	RCE1AM471BV	10V 470U	C805	ECBT1H104ZF5	50V 0.1U (DECK1)
C139, 140	ECBT1H561KB5	50V 560P	C417, 418	ECQB1H222JF3	50V 2200P	C806	ECBT1H104ZF5	50V 0.1U (DECK2)
C141, 142	ECKR2H121KB5	500V 120P	C419, 420	ECEA1CKA100B	16V 10U	C807	ECEA1VKA470B	35V 47U (DECK2)
C145, 146	ECQB1H821JF3	50V 820P	C421, 422	ECEA1HKA2R2B	50V 2.2U	C808	ECEA1AKA101B	10V 100U (DECK2)
C147, 148	ECBT1E103ZF	25V 0.01U	C423, 424	ECEA1HKA010B	50V 1U	C811, 812	ECBT1H101KB5	50V 100P (DECK1)
C149, 150	ECBT1H102KB5	50V 1000P	C425, 426	ECQB1H152JF3	50V 1500P	C813	ECBT1H104ZF5	50V 0.1U (DECK1)
C151, 152	ECEA1EKA4R7B	25V 4.7U	C427-430	ECEA1HKA47B	50V 0.47U	C814	ECBT1H104ZF5	50V 0.1U (DECK2)
C153	ECQB1H332JF3	50V 3300P	C431, 432	ECEA1EKA4R7B	25V 4.7U	C815, 816	ECBT1H101KB5	50V 100P (DECK2)
C155, 156	ECBT1C682KR5	16V 6800P	C433, 434	ECQB1H152JF3	50V 1500P	C817	ECBT1H101KB5	50V 100P (DECK1)
C201	ECQB1H822JF3	50V 8200P	C435, 436	ECEA1EKA4R7B	25V 4.7U	C818	ECBT1H101KB5	50V 100P (DECK2)
C202	ECEA1HKA33B	50V 3.3U	C437, 438	ECEA1HKA100B	50V 10U	C821	RCE0JKA221BV	6.3V 220U (DECK1)
C203	ECBT1H470J5	50V 47P	C601, 602	ECFR1H104ZF	50V 0.1U	C901	ECBT1H470J5	50V 47P
C204, 205	ECBT1E103ZF	25V 0.01U	C603	ECEA1EU222B	25V 2200U $\Delta$	C902	ECBT1H104ZF5	50V 0.1U
C206	ECEA1HKA2R2B	50V 2.2U	C604, 605	ECA1EM102B	25V 1000U $\Delta$	C903	ECBT1H470J5	50V 47P
C301	ECQP1103JZ3	100V 0.01U	C606	ECBT1E103ZF	25V 0.01U			