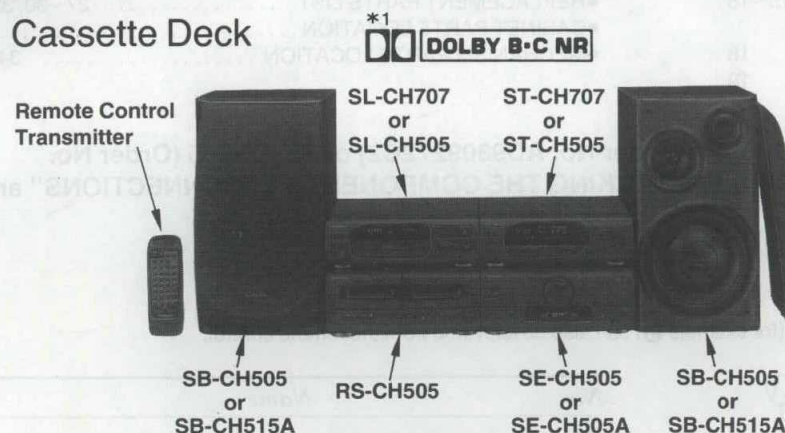


# Service Manual

## Cassette Deck

## Cassette Deck



# RS-CH505

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(K) . . . Black Type

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

### Area

| Suffix for Model No. | Area                                                                       | Colour |
|----------------------|----------------------------------------------------------------------------|--------|
| (E)                  | Europe, Asia,<br>Latin America,<br>Middle Near East,<br>Africa and Oceania | (K)    |

### System: SC-CH505

## NEW MECHANISM (AR-1) Specifications

|                                                         |                                               |
|---------------------------------------------------------|-----------------------------------------------|
| Deck system                                             | Stereo cassette deck                          |
| Track system                                            | 4-track, 2-channel                            |
| Recording system                                        | AC bias                                       |
| Erasing system                                          | AC erase                                      |
| Tape speed                                              | 4.8 cm/sec.                                   |
| Bias frequency                                          | 80 kHz                                        |
| Heads                                                   |                                               |
| DECK 1 (playback head)                                  | Permalloy head                                |
| DECK 2 (recording/playback)<br>(erasure)                | Permalloy head<br>Double gap ferrite head     |
| Motors (capstan/reel table drive)<br>(reel table drive) | DC servo motor<br>DC motor                    |
| Wow and flutter                                         | 0.1% (WRMS)                                   |
| Fast forward and rewind times                           | Approx. 45 seconds<br>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 (CrO <sub>2</sub> )         | Signal level MOL   |
| Dolby 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/220Ω        |

### General

|                    |                  |
|--------------------|------------------|
| Dimensions (W×H×D) | 270×118.5×263 mm |
| Weight             | 2.85 kg          |

### Notes:

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

\*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.

| System   | Tuner                    | Compact disc player      | Amplifier                 | Cassette deck | Speakers                  |
|----------|--------------------------|--------------------------|---------------------------|---------------|---------------------------|
| SC-CH505 | *2ST-CH505<br>*2ST-CH707 | *3SL-CH505<br>*4SL-CH707 | *2SE-CH505A<br>*5SE-CH505 | RS-CH505      | *5SB-CH505<br>*6SB-CH515A |

Notes: \*2For Europe

\*3For Europe and Oceania

\*4For Asia, Latin America, Middle Near East and Africa

\*5For Asia, Latin America, Middle Near East, Africa and Oceania

\*6For Europe...Made in PAES

# Technics

## ■ Contents

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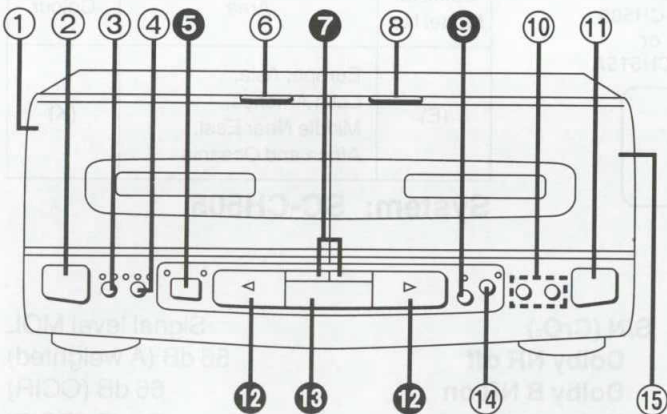
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| • MEASUREMENTS AND ADJUSTMENTS ..... | 20~22         |
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### NOTE:

Refer to the service manual for Model No. SE-CH505A (Order No. AD9309272C2) or SE-CH505 (Order No. AD9309283C3) for information on "ACCESSORIES", "STACKING THE COMPONENTS", "CONNECTIONS" and "PACKAGING".

## ■ Location of Controls

The functions indicated by the numbers with black background (for example ⑤) can also be activated from the remote control.



| No. | Name                                                   |
|-----|--------------------------------------------------------|
| ①   | Deck 1 cassette holder                                 |
| ②   | Deck 1 cassette holder open button (▲ OPEN)            |
| ③   | Dolby noise reduction button and indicators (DOLBY NR) |
| ④   | Reverse mode button and indicators (REVERSE MODE)      |

| No. | Name                                                                 |
|-----|----------------------------------------------------------------------|
| ⑤   | Deck 1/deck 2 select button and indicators (DECK 1/2)                |
| ⑥   | Deck 1 cassette holder close button (CLOSE)                          |
| ⑦   | Fast forward/rewind/tape program sensor buttons [◀◀ (TPS), (TPS) ▶▶] |
| ⑧   | Deck 2 cassette holder close button (CLOSE)                          |
| ⑨   | Record pause button and indicator (REC PAUSE)                        |
| ⑩   | One-touch tape edit buttons (NORMAL, HIGH)                           |
| ⑪   | Deck 2 cassette holder open button (▲ OPEN)                          |
| ⑫   | Playback buttons and indicators (◀, ▶)                               |
| ⑬   | Stop button (□)                                                      |
| ⑭   | CCRT button and indicator (CCRT)                                     |
| ⑮   | Deck 2 cassette holder                                               |

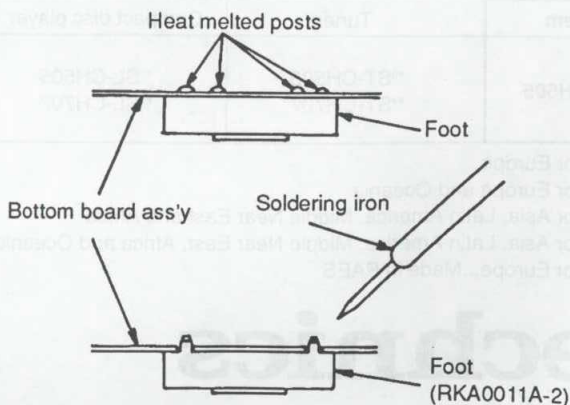
## ■ Disassembly Instructions

### "ATTENTION SERVICER"

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

#### • 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 (RKA0011A-2) on the Bottom board ass'y melt the 4 posts with a soldering iron.

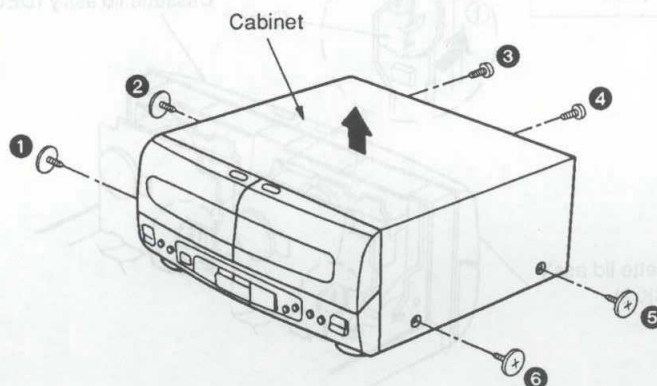


Ref. No.  
1

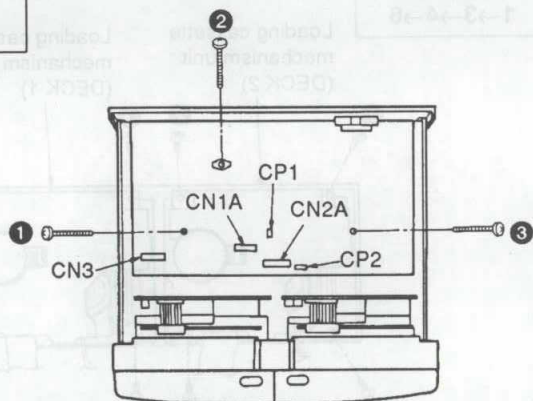
## Removal of the Cabinet

Procedure  
1

1. Remove the 6 screws (①~⑥).
2. Remove the cabinet in the direction of arrow.

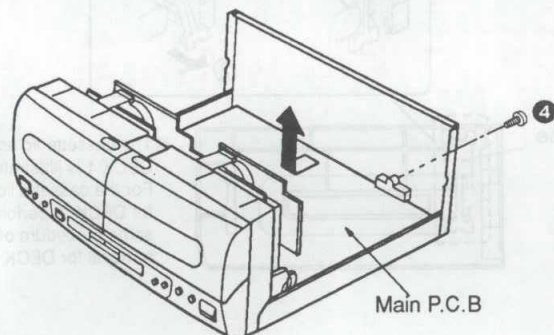
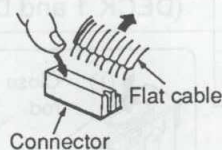
Ref. No.  
2

## Removal of the Main P.C.B.

Procedure  
1→2

1. Remove the 3 flat cables (CN1A, CN2A, CN3).
2. Remove the 2 connectors (CP1, CP2).
3. Remove the 3 screws (①~③).

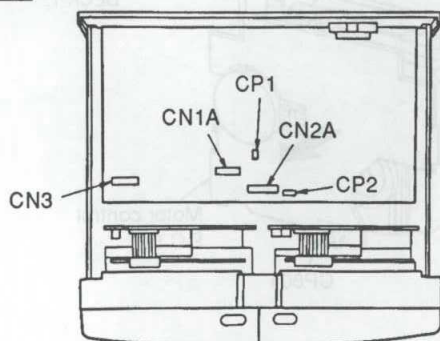
- Push the top of the connector and then pull out the flat cable.



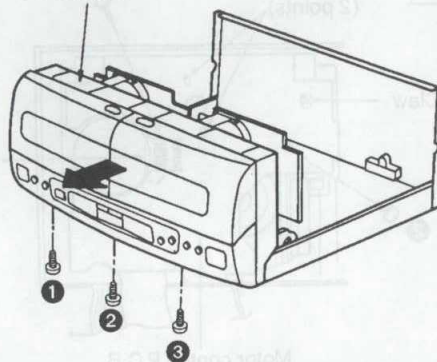
4. Remove the 1 screws (④).
5. Remove the main P.C.B. in the direction of arrow.

Ref. No.  
3

## Removal of the Front Grill

Procedure  
1→3

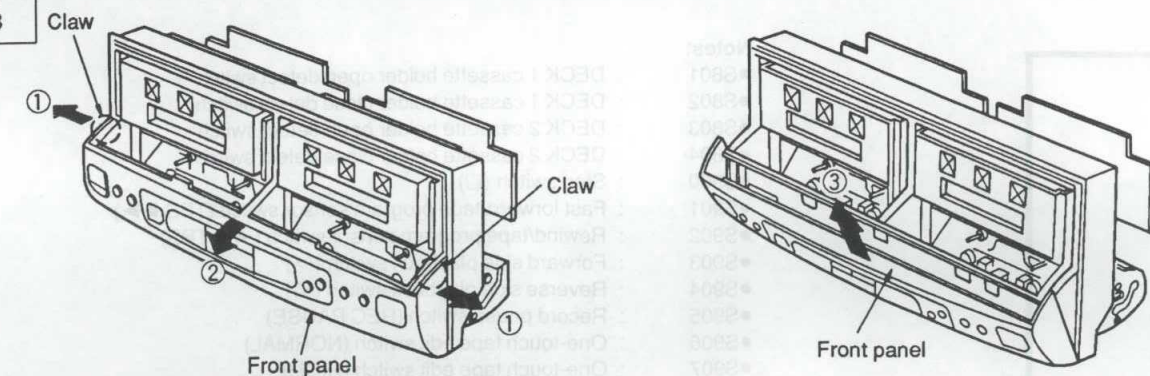
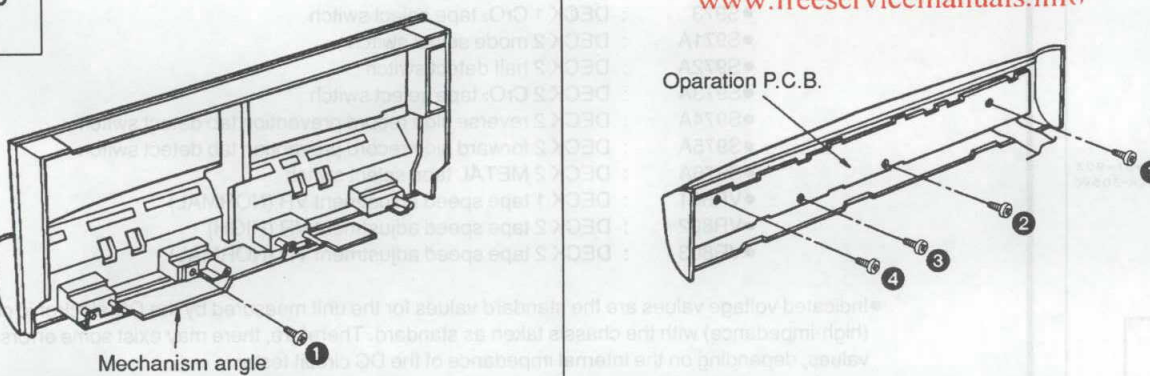
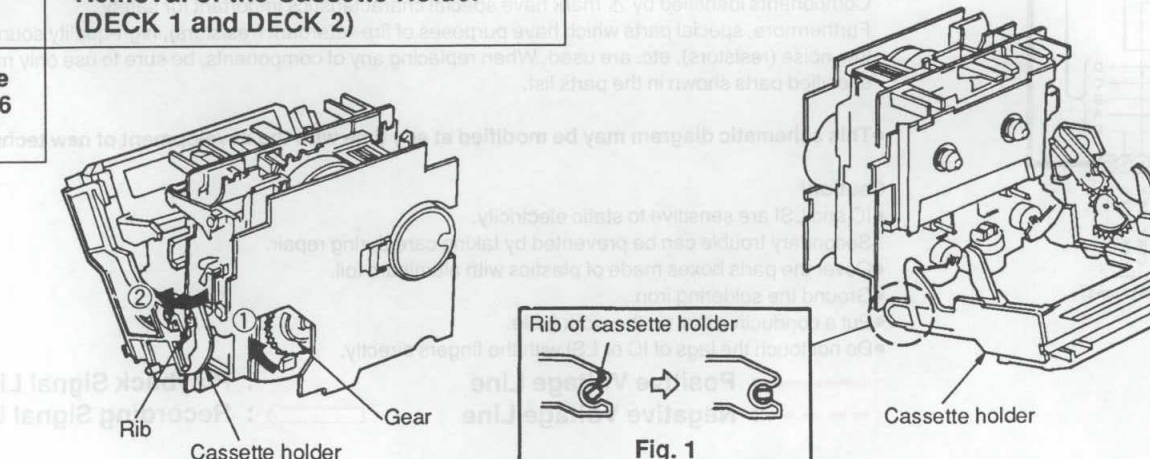
Front grill



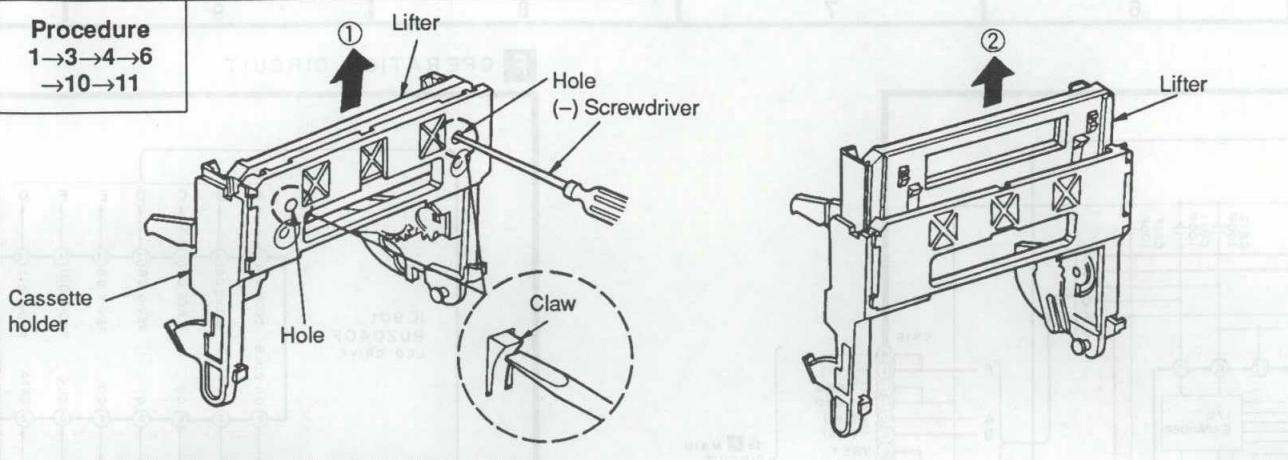
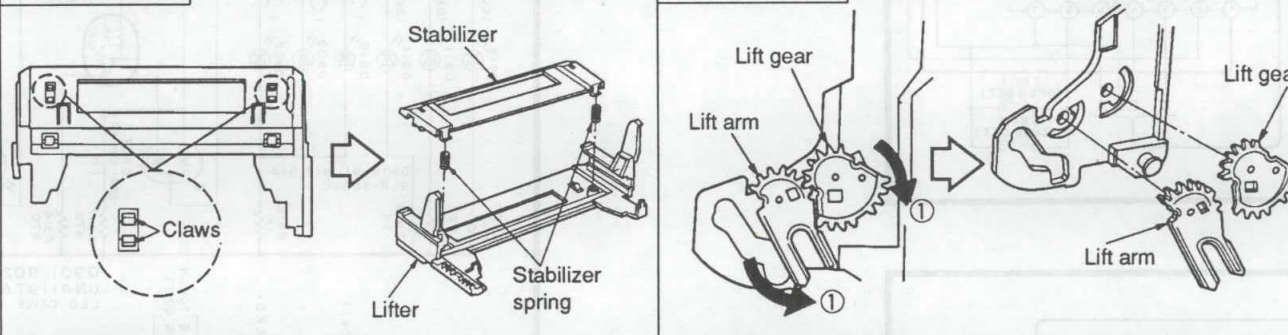
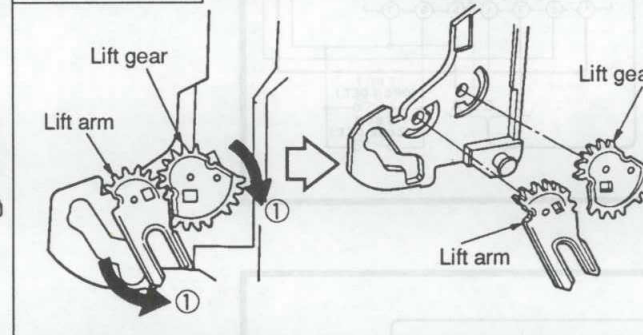
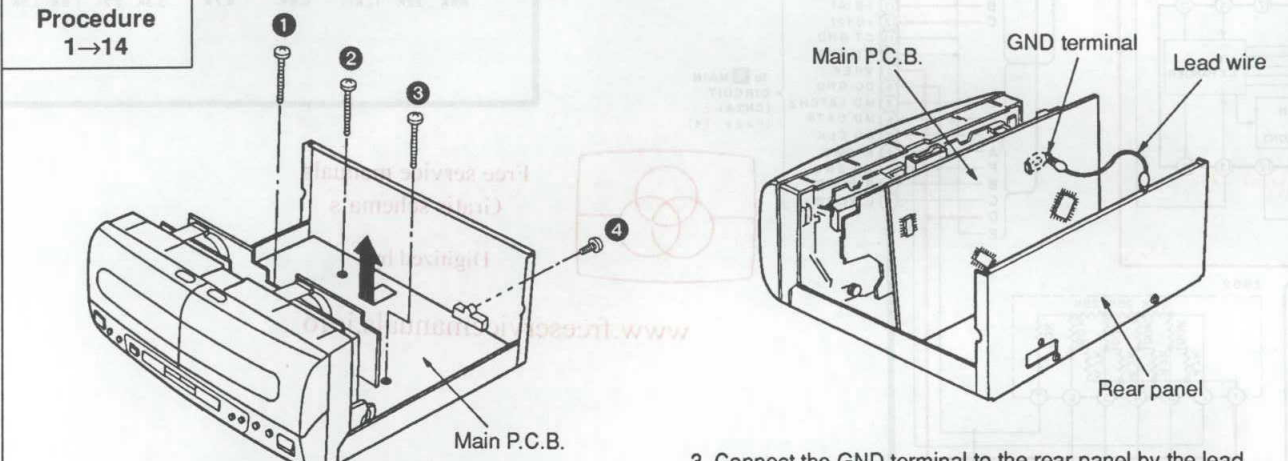
1. Remove the 3 flat cables (CN1A, CN2A, CN3).
2. Remove the 2 connectors (CP1, CP2).

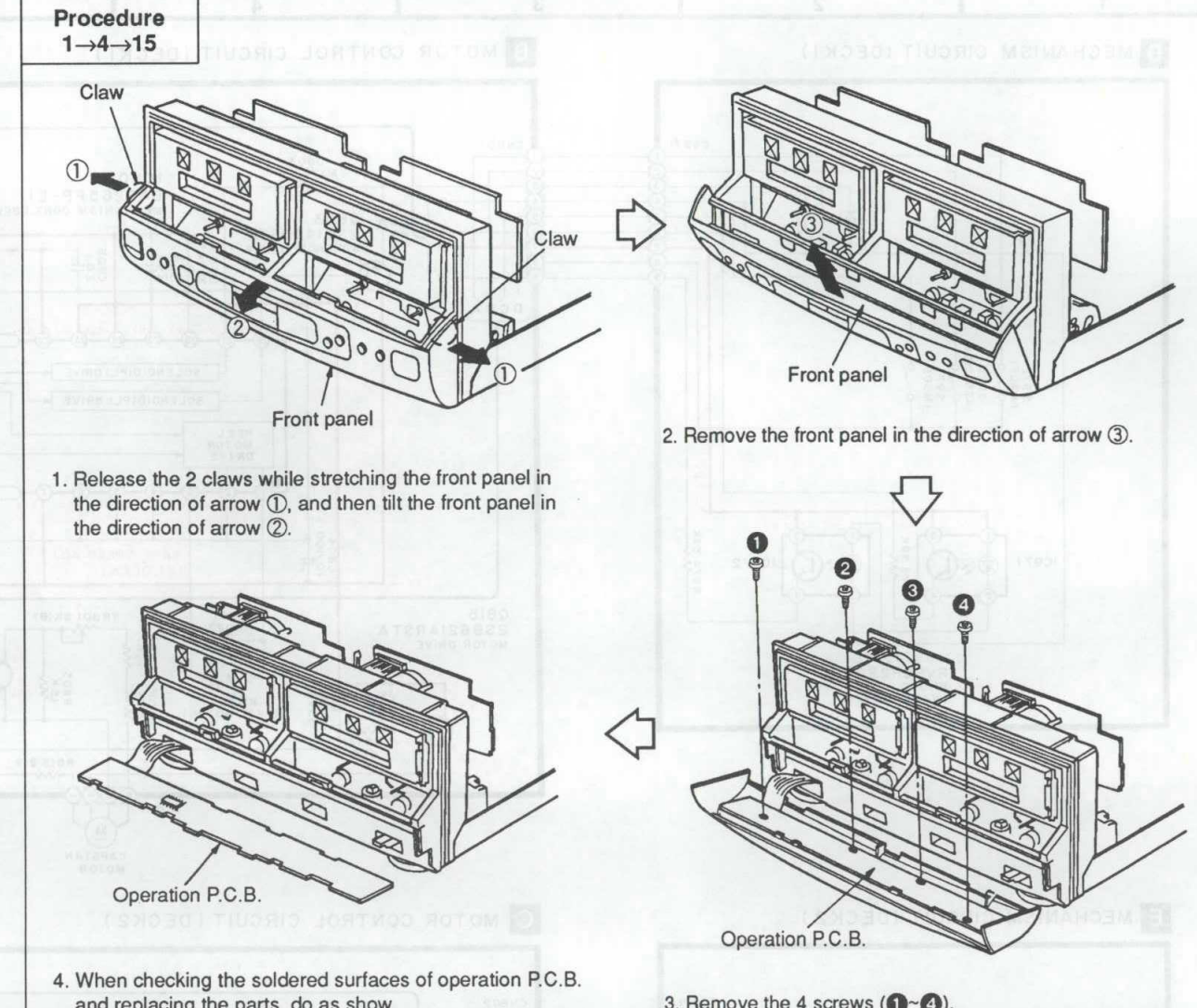
3. Remove the 3 screws (①~③).
4. Remove the front grill in the direction of arrow.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Ref. No.</b><br>4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Removal of the Cassette Lid Ass'y (DECK 1 and DECK 2)</b>   | <div data-bbox="343 142 890 604"> </div> <div data-bbox="938 142 1476 571"> </div> <div data-bbox="148 615 697 667" data-cs="2" data-kind="parent"> <p>1. Turn the gear in the direction of arrow ①, and open the cassette lid ass'y.</p> </div> <div data-bbox="845 644 1426 674" data-cs="2" data-kind="parent"> <p>2. Remove the cassette lid ass'y in the direction of arrow ②.</p> </div>                                                                                                                                                                                                                                                                                                                                                                                     |                                                                            |
| <b>Ref. No.</b><br>5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Removal of the Close Rod (DECK 1 and DECK 2)</b>            | <b>Ref. No.</b><br>6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Removal of the Loading Cassette Mechanism units (DECK 1 and DECK 2)</b> |
| <div data-bbox="148 789 272 842"> <b>Procedure</b><br/>1→3→4→5       </div> <div data-bbox="323 789 663 1024"> </div> <div data-bbox="161 1045 560 1201"> </div> <div data-bbox="579 1060 807 1199" data-cs="2" data-kind="parent"> <p>※The cassette lid ass'y for DECK 1 is illustrated. For the cassette lid ass'y for DECK 2, perform the same procedure of removal for DECK 1.</p> </div> <div data-bbox="137 1278 686 1335" data-cs="2" data-kind="parent"> <p>●Push the close rod in the direction of arrow ①, and then remove the close rod in the direction of arrow ②.</p> </div> |                                                                | <div data-bbox="850 789 978 842"> <b>Procedure</b><br/>1→3→4→6       </div> <div data-bbox="1026 835 1433 1255"> </div> <div data-bbox="839 1310 1153 1337" data-cs="2" data-kind="parent"> <p>●Remove the 8 screws (①~⑧).</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                            |
| <b>Ref. No.</b><br>7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Removal of the Motor Control P.C.B. (DECK 1 and DECK 2)</b> | <div data-bbox="264 1451 850 1885"> </div> <div data-bbox="906 1434 1289 1822"> </div> <div data-bbox="1217 1394 1492 1533" data-cs="2" data-kind="parent"> <p>※The motor control P.C.B. for DECK 1 is illustrated. For the motor control P.C.B. for DECK 2, perform the same procedure of removal for DECK 1.</p> </div> <div data-bbox="129 1906 608 1990" data-cs="2" data-kind="parent"> <p>1. Unsolder the reel motor terminal (2 points).<br/>2. Unsolder the capstan motor terminal (4 points).<br/>3. Remove the 2 screws (①, ②).</p> </div> <div data-bbox="831 1915 1404 1997" data-cs="2" data-kind="parent"> <p>4. Release the 1 claw.<br/>5. Pull out the motor control P.C.B. in the direction of arrow, and then remove the 2 connectors (CS971, CP801).</p> </div> |                                                                            |

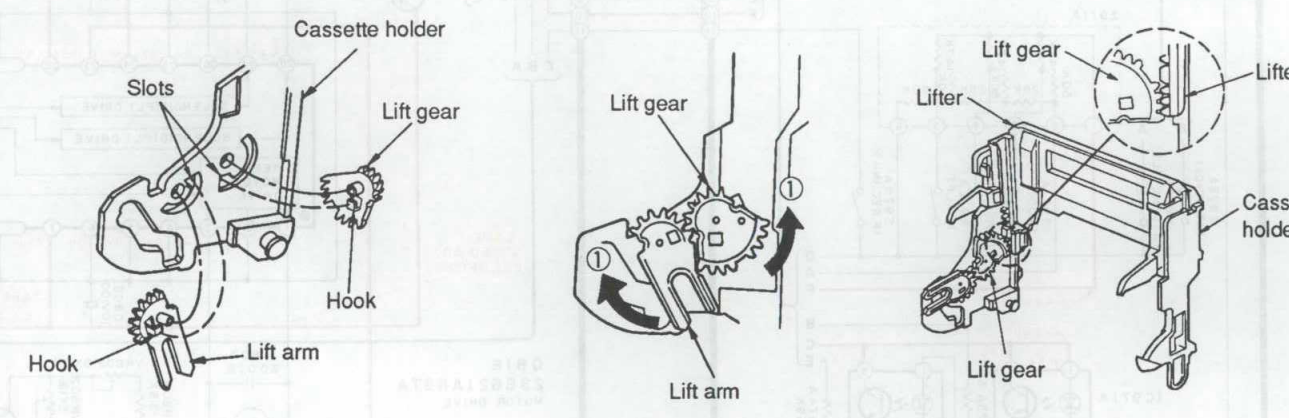
|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ref. No.<br>8               | Removal of the Operation P.C.B.                                                                                                                                                                                                                                                                                                                                                                                                   |
| Procedure<br>1→3→4→8        |  <p>1. Release the 2 claws while stretching the front panel in the direction of arrow ①, and then tilt the front panel in the direction of arrow ②.</p> <p>2. Remove the front panel in the direction of arrow ③.</p>                                                                                                                           |
| Ref. No.<br>9               | Removal of the Mechanism angle                                                                                                                                                                                                                                                                                                                                                                                                    |
| Procedure<br>1→3→4→6<br>→9  |  <p>• Remove the 1 screw (①).</p> <p>3. Remove the 4 screws (①~④).</p>                                                                                                                                                                                                                                                                          |
| Ref. No.<br>10              | Removal of the Cassette Holder (DECK 1 and DECK 2)                                                                                                                                                                                                                                                                                                                                                                                |
| Procedure<br>1→3→4→6<br>→10 |  <p>1. Turn the gear in the direction of arrow ①, and open the cassette holder.</p> <p>2. Remove the cassette holder from the rib in the direction of arrow ②.</p> <p>3. Open the cassette holder so that the rib of the cassette holder is located to the position as shown in Fig.1., and then pull it out in the direction of arrow ③.</p> |

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|                                   |                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ref. No.<br>11                    | Removal of the Lifter                                                                                                                                                                                                                                                                                                                                           |
| Procedure<br>1→3→4→6<br>→10→11    |  <p>1. Insert the tip of (-) screwdriver to the 2 holes of the cassette holder to release the 2 claws of the lifter, and then remove the lifter in the direction of arrow ①.</p> <p>2. Remove the lifter in the direction of arrow ②.</p>                                    |
| Ref. No.<br>12                    | Removal of the Stabilizer and Stabilizer Spring                                                                                                                                                                                                                                                                                                                 |
| Procedure<br>1→3→4→6<br>→10→11→12 |  <p>1. Release the 4 claws.</p> <p>2. Remove the stabilizer and stabilizer spring.</p>                                                                                                                                                                                       |
| Ref. No.<br>13                    | Removal of the Lift Arm and Lift Gear                                                                                                                                                                                                                                                                                                                           |
| Procedure<br>1→3→4→6<br>→10→11→13 |  <p>1. Turn the lift arm and the lift gear fully in the direction of arrow ①.</p> <p>2. Remove the lift arm and lift gear.</p>                                                                                                                                               |
| Ref. No.<br>14                    | How to check the Main P.C.B.                                                                                                                                                                                                                                                                                                                                    |
| Procedure<br>1→14                 |  <p>1. Remove the 4 screws (①~④).</p> <p>2. Remove the main P.C.B. in the direction of arrow.</p> <p>3. Connect the GND terminal to the rear panel by the lead wire.</p> <p>4. When checking the soldered surfaces of main P.C.B. and replacing the parts, do as show.</p> |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ref. No.<br>15      | How to check the Operation P.C.B.                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Procedure<br>1→4→15 |  <p>1. Release the 2 claws while stretching the front panel in the direction of arrow ①, and then tilt the front panel in the direction of arrow ②.</p> <p>2. Remove the front panel in the direction of arrow ③.</p> <p>3. Remove the 4 screws (①~④).</p> <p>4. When checking the soldered surfaces of operation P.C.B. and replacing the parts, do as show.</p> |

■ HOW TO INSTALL THE LIFTER



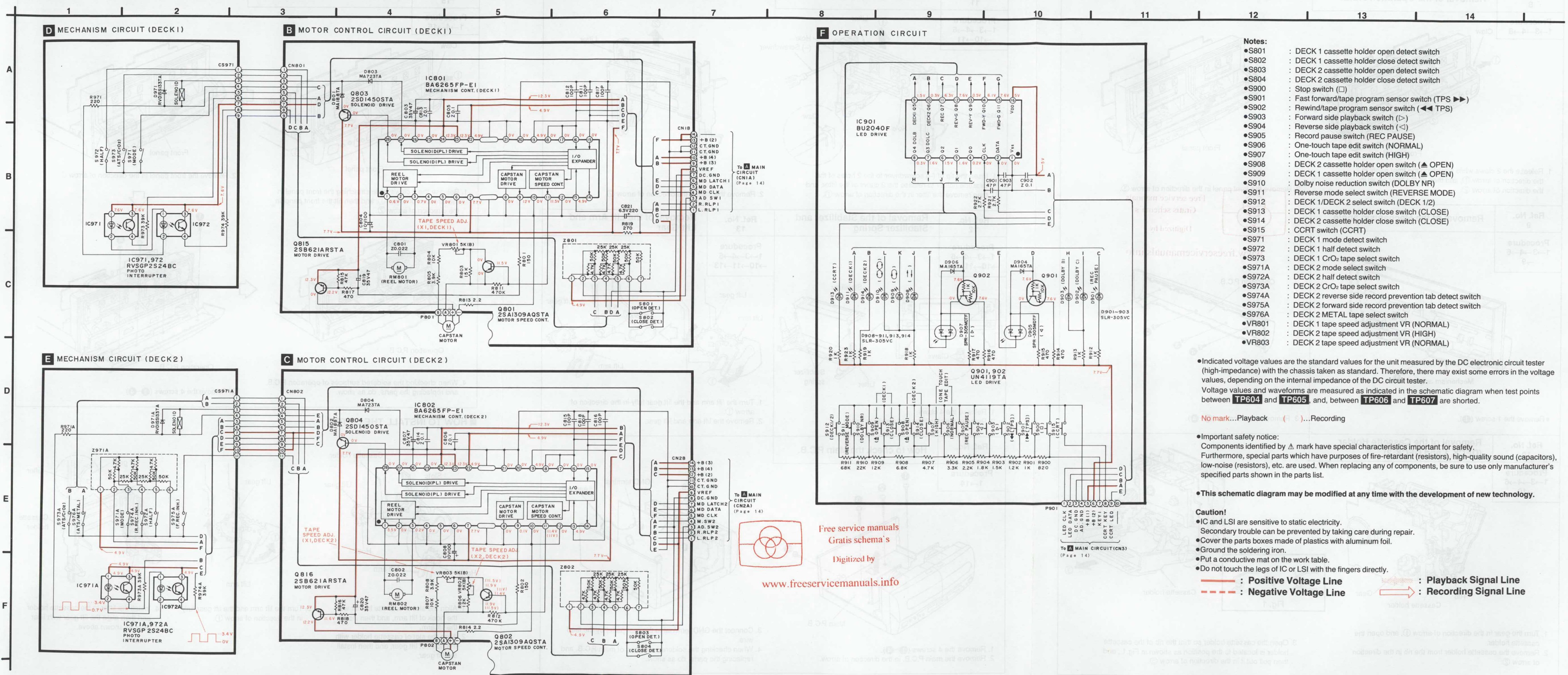
1. Align the slot of cassette holder with the hook of lift arm, and then install the lift arm.

2. Align the slot of cassette holder with the hook of lift gear, and then install the lift gear.

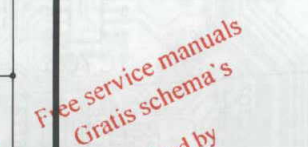
3. Turn the lift arm and the lift gear fully in the direction of arrow ①.

4. Install the lifter to the cassette holder and then align the lift gear with lifter gear as shown above.

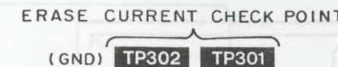
# Schematic Diagram • Mechanism (DECK1)/(DECK2), Motor Control (DECK1)/(DECK2), Operation Circuit (Parts list on pages 27~30)



●Main, Motor Control (DECK1)/(DECK2) Circuit (Parts list on pages 27~30)



**A** MAIN P.C.B. (REP1674B-M)



- 15 -

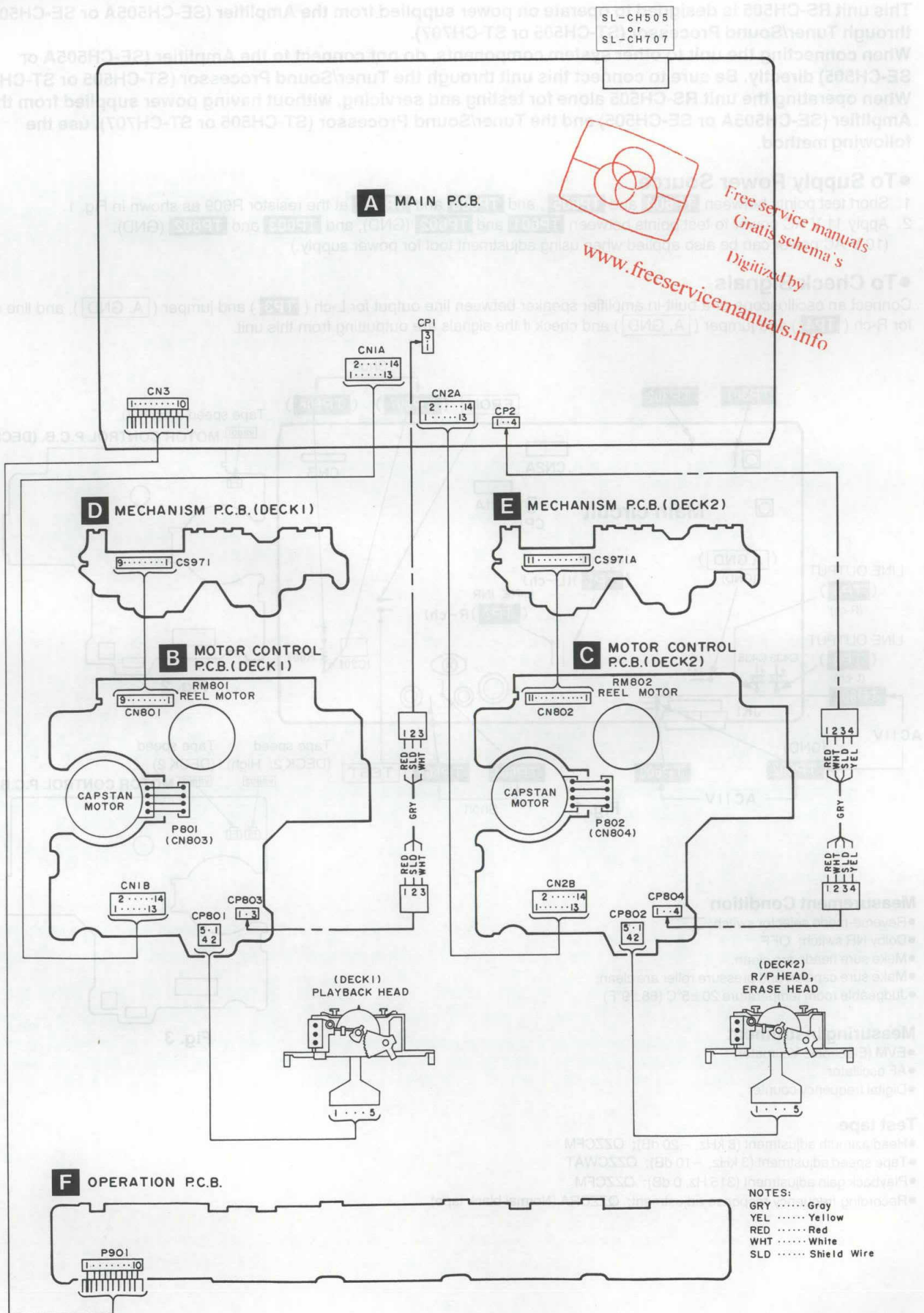

DECK 1/2  
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[www.freeservicemanuals.info](http://www.freeservicemanuals.info)  
 C.B. (DECK 2)

- 16 -

- 17 -

|                                                        |                                                                      |                                                                                                |                                                  |                                                                |
|--------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------|
| <p>LA5658FT1<br/>XLJ93LC46AFE</p>                      | <p>LA5608M-TE-L 14 Pin<br/>BU2040F 16 Pin<br/>AN7354SC-E2 32 Pin</p> | <p>M62451FP 56 Pin<br/>M38062M4084F 80 Pin</p>                                                 | <p>BA6265FP-E1</p>                               |                                                                |
| <p>RVSGP2S24BC</p>                                     | <p>DTC114ESTP<br/>DTC114YSTP</p>                                     | <p>UN4219TA<br/>2SA1309AIRTA<br/>2SA1309AQSTA<br/>2SC3311AIRTA<br/>2SD1450STA<br/>UN4119TA</p> | <p>2SB621AQSTA<br/>2SB621ARSTA<br/>2SD592STA</p> |                                                                |
| <p>2SB1357DEFTA<br/>2SD2137PQTA</p>                    | <p>2SJ164PQRTA</p>                                                   | <p>2SK381BCTA</p>                                                                              | <p>1SS291TA</p>                                  | <p>MTZJ5R1BTA<br/>MTZJ5R6CTA<br/>MTZJ6R2CTA<br/>MTZJ8R2CTA</p> |
| <p>MA165TA<br/>MA188TA<br/>MA723TA<br/>RVD1SS133TA</p> | <p>RL1N4003N02</p>                                                   | <p>SPR-305MDTF</p>                                                                             | <p>SLR-305VC</p>                                 | <p></p>                                                        |

# Wiring Connection Diagram



## ■ Measurements and Adjustments

This unit RS-CH505 is designed to operate on power supplied from the Amplifier (SE-CH505A or SE-CH505) through Tuner/Sound Processor (ST-CH505 or ST-CH707).

When connecting the unit to other system components, do not connect to the Amplifier (SE-CH505A or SE-CH505) directly. Be sure to connect this unit through the Tuner/Sound Processor (ST-CH505 or ST-CH707). When operating the unit RS-CH505 alone for testing and servicing, without having power supplied from the Amplifier (SE-CH505A or SE-CH505) and the Tuner/Sound Processor (ST-CH505 or ST-CH707), 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 11 V AC power to test points between **TP601** and **TP602** (GND), and **TP603** and **TP602** (GND).  
(10 V AC power can be also applied when using adjustment tool for power supply.)

### ● To Check Signals

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.

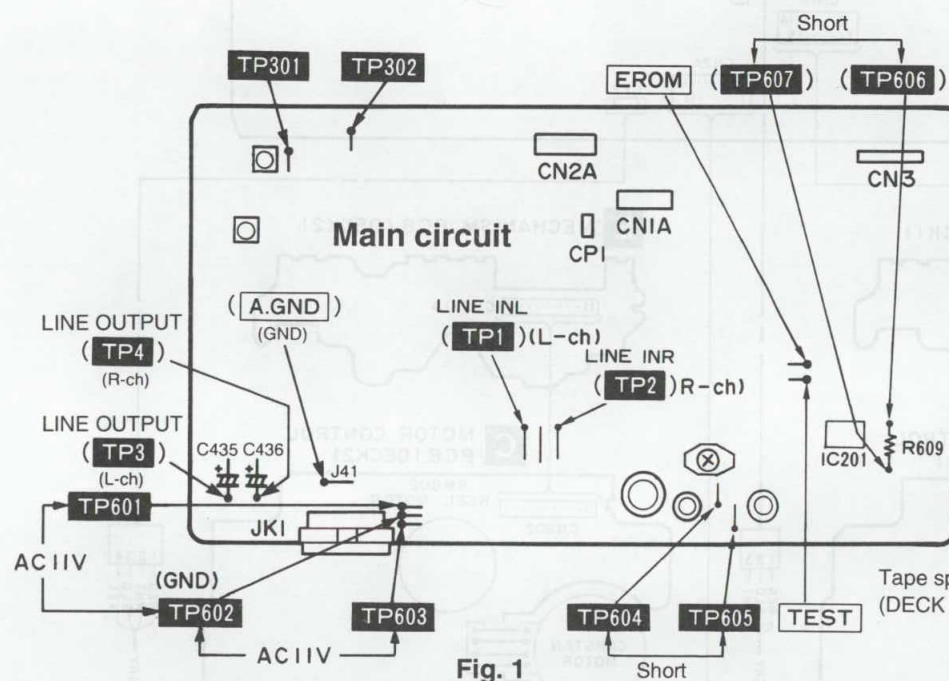


Fig. 1

Fig. 2

Fig. 3

### Measurement Condition

- Reverse-mode selector switch;
- 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

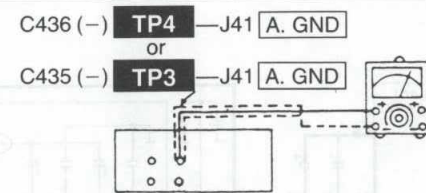
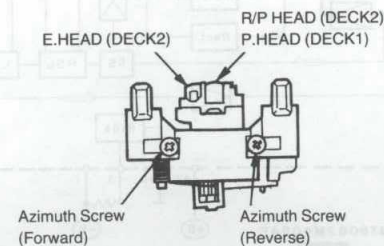
- Head azimuth adjustment (8 kHz, -20 dB); QZZCFM
- Tape speed adjustment (3 kHz, -10 dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Recording frequency response adjustment; QZZCRA (Normal blank tape)

**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.

**Fig. 4****Fig. 5****TAPE SPEED ADJUSTMENT (DECK 1/2)****Normal speed (Standard value: 3000±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.

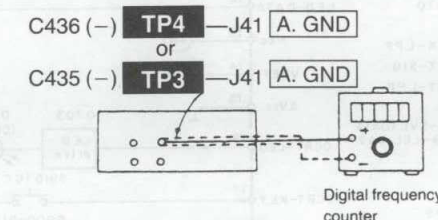
**Adjustment target: 3000±15 Hz (NORMAL speed)**  
**Standard value: 3000±45 Hz (NORMAL speed)**

**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±600 Hz (HIGH speed)**

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

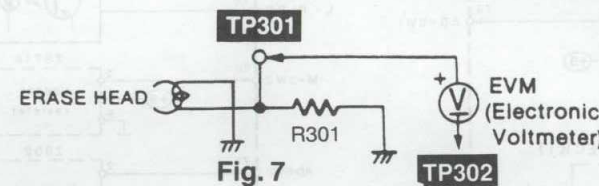
**Fig. 6****ERASE CURRENT CONFIRMATION (DECK 2)**

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.

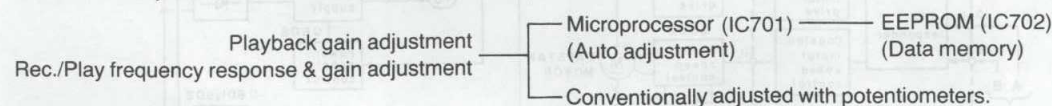
**Standard value: 160±25 mA**

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-CH505 can automatically adjust playback gain and rec./play frequency response & gain.****•Automatic adjustment of playback gain and rec./play frequency response & gain**

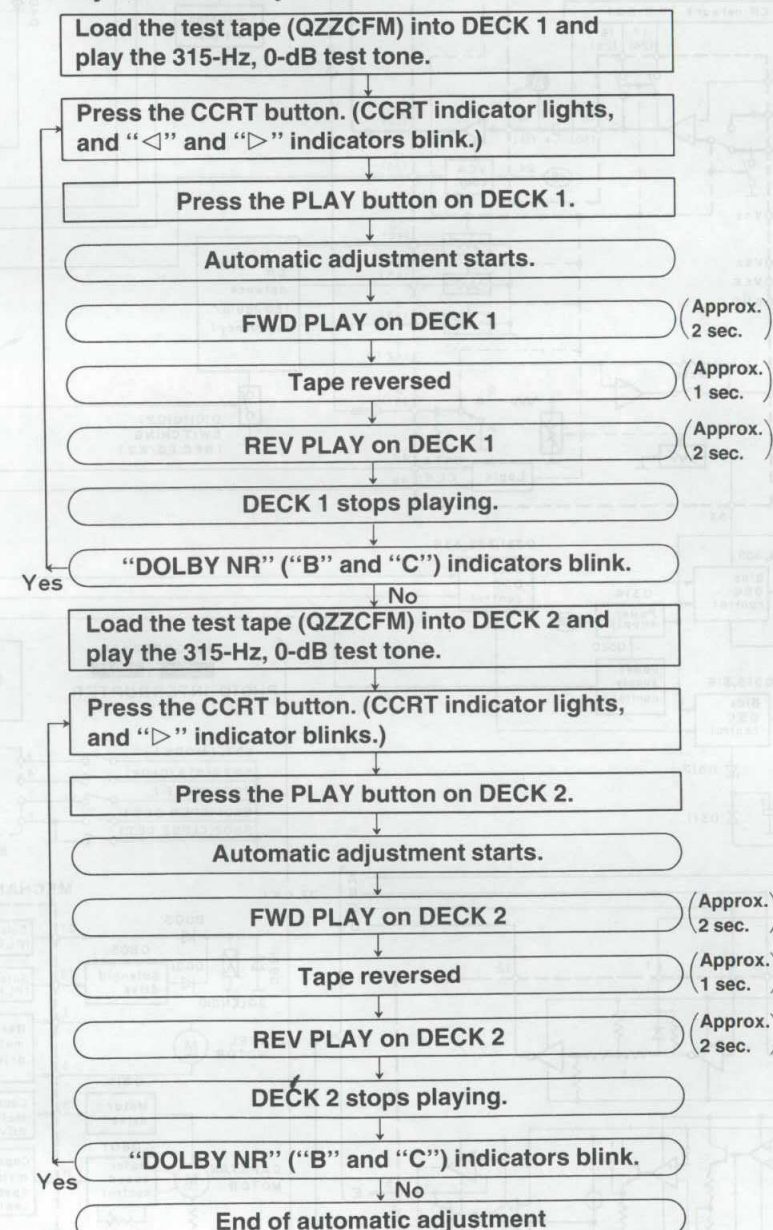
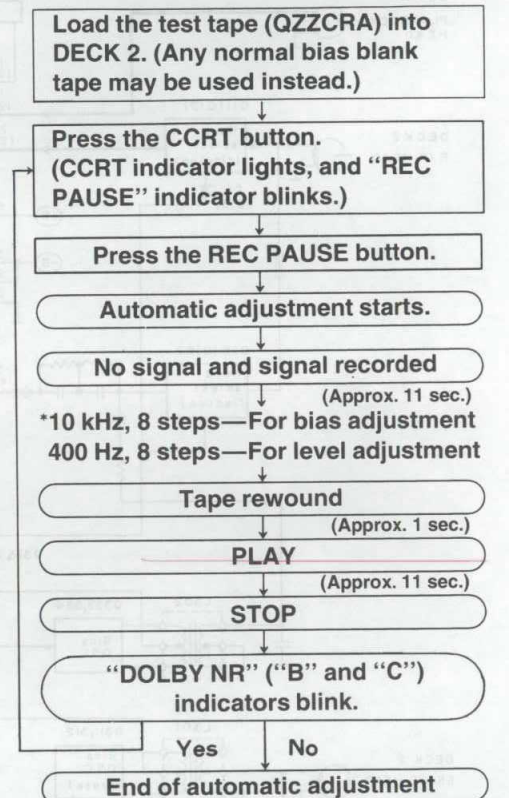
A microprocessor (IC701) used within the RS-CH505 automatically adjusts its playback gain and rec./play frequency response & gain (factory adjustment) and stores adjustment data to an EEPROM chip (IC702). (Potentiometers have conventionally been used for these adjustments.)



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 22.)

**•Preparations for Adjustment**

1. Connect an AF oscillator to the line inputs, TP1 (L channel) and TP2 (R channel) (see Fig. 1).
2. Connect an AC voltmeter to the line outputs, TP3 (L channel) and TP4 (R channel) (see Fig. 1).
3. Make sure that the power is turned off, and then ground the EROM jumper and TEST jumper on the Main P.C.B. to the frame ground.
4. Turn on the power (see page 20).  
The EROM (IC702) is initialized and the indicator shows blinking letters "DECK 1" or "DECK 2" and "CCRT".
5. Apply a test tone signal [315 Hz, -18 dB (126 mV)] from the AF oscillator to the line inputs (TP1 for channel L, TP2 for channel R).
6. Make sure that no tape is loaded in DECK 1 or DECK 2.  
While pressing and holding the REC PAUSE button, adjust the AF oscillator output level until the signal level at the line outputs (TP3 for L channel, TP4 for R channel) is 400 mV. After setting the AF oscillator output level, keep holding down the REC PAUSE button for approx. 5 sec.
7. Release the REC PAUSE button.
8. Disconnect EROM jumper from the frame ground.

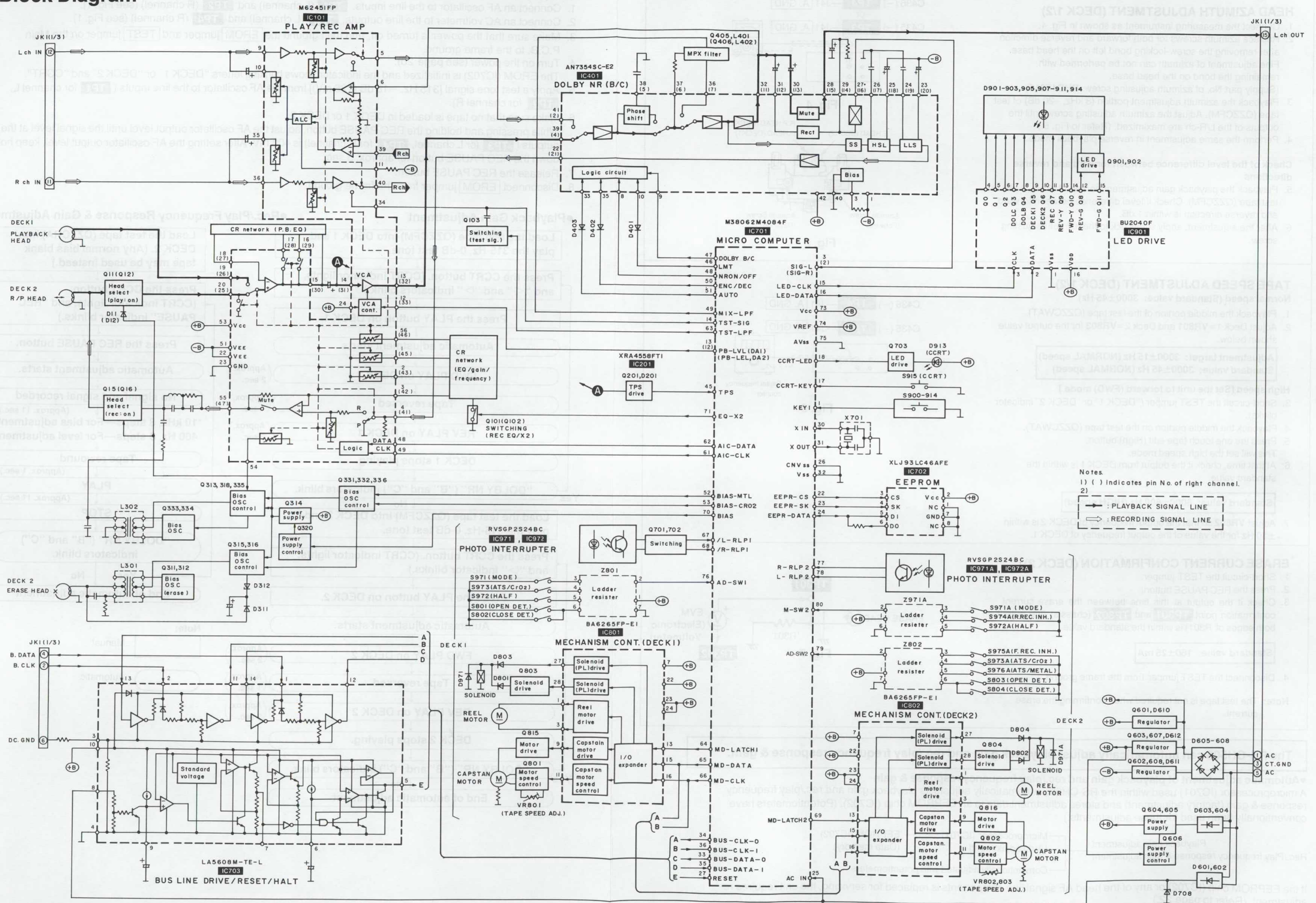
**•Playback Gain Adjustment****•Rec./Play Frequency Response & Gain Adjustment**

**Note:**

...Manual

...Automatic

# Block Diagram



## Function of IC Terminals

### •IC701 (M38062M4084F)

| 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<br>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<br>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<br>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<br>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     | O   | Dolby B/C switching signal output                                     |
| 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<br>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-SW2           | 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<br>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) |

■ 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.  
\*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.  
\*The "(SF)" mark denotes the standard part.

| Ref. No.   | Part No.     | Part Name & Description    | Remarks | Ref. No.  | Part No.     | Part Name & Description    | Remarks |
|------------|--------------|----------------------------|---------|-----------|--------------|----------------------------|---------|
|            |              | INTEGRATED CIRCUIT (S)     |         | Q801, 802 | 2SA1309A-R   | TRANSISTOR                 |         |
|            |              |                            |         | Q803, 804 | 2SD1450RTA   | TRANSISTOR                 |         |
|            |              |                            |         | Q815, 816 | 2SB621A-R    | TRANSISTOR                 |         |
|            |              |                            |         | Q901, 902 | UN4119       | TRANSISTOR                 |         |
|            |              |                            |         |           |              | DIODE (S)                  |         |
| IC101      | M62451FP     | I. C, REC. /PLAYBACK AMP.  |         | D11, 12   | MA188TA      | DIODE                      |         |
| IC201      | XRA4558FT1   | I. C, TPS DRIVE            |         | D201      | MA165        | DIODE                      |         |
| IC401      | AN7354SC-E2  | I. C, DOLBY NR(B/C)        |         | D302      | MA165        | DIODE                      |         |
| IC701      | M38062M4084F | I. C, MICRO COMPUTER       |         | D311      | MA188TA      | DIODE                      |         |
| IC702      | XLJ93LC46AFE | I. C, EEPROM               |         | D312      | MTZJ5R6CTA   | DIODE                      |         |
| IC703      | LA5608M-TE-L | I. C, BUS LINE/HALT/RESET  |         | D313      | MA165        | DIODE                      |         |
| IC801, 802 | BA6265FP-E1  | I. C, MECHANISM CONTROL    |         | D351, 352 | MA165        | DIODE                      |         |
| IC901      | BU2040F      | I. C, LED DRIVE            |         | D401-403  | MA165        | DIODE                      |         |
|            |              | PHOTO SENSOR (S)           |         | D601, 602 | MA165        | DIODE                      | Δ       |
|            |              |                            |         | D603-608  | RL1N4003N02  | DIODE                      | Δ       |
| IC971      | RVSGP2S24BC  | I. C, PHOTO SENSOR (DECK1) |         | D609      | MA723TA      | DIODE                      |         |
| IC971A     | RVSGP2S24BC  | I. C, PHOTO SENSOR (DECK2) |         | D610, 611 | MTZJ8R2CTA   | DIODE                      | Δ       |
| IC972      | RVSGP2S24BC  | I. C, PHOTO SENSOR (DECK1) |         | D612      | MTZJ6R2CTA   | DIODE                      | Δ       |
| IC972A     | RVSGP2S24BC  | I. C, PHOTO SENSOR (DECK2) |         | D613      | MA723TA      | DIODE                      |         |
|            |              | TRANSISTOR (S)             |         | D701      | 1SS291TA     | DIODE                      |         |
|            |              |                            |         | D702      | MA165        | DIODE                      |         |
| Q11, 12    | 2SJ164PQRTA  | TRANSISTOR                 |         | D703      | 1SS291TA     | DIODE                      |         |
| Q15, 16    | 2SK381BCDTA  | TRANSISTOR                 |         | D704, 705 | MA165        | DIODE                      |         |
| Q101, 102  | 2SC3311AIRTA | TRANSISTOR                 |         | D706      | MTZJ5R1BTA   | DIODE                      | Δ       |
| Q103       | DTC114ESTP   | TRANSISTOR                 |         | D709, 710 | MA165        | DIODE                      |         |
| Q201       | 2SC3311AIRTA | TRANSISTOR                 |         | D801, 802 | MA188TA      | DIODE                      |         |
| Q311, 312  | 2SC3311AIRTA | TRANSISTOR                 |         | D803, 804 | MA723TA      | DIODE                      |         |
| Q313       | 2SB621AQSTA  | TRANSISTOR                 |         | D901-903  | SLR-305VC    | LED                        |         |
| Q314       | 2SA1309AIRTA | TRANSISTOR                 |         | D904      | MA165        | DIODE                      |         |
| Q315       | 2SD2137PQTA  | TRANSISTOR                 |         | D905      | SPR-305MDTF  | LED                        |         |
| Q316       | 2SC3311AIRTA | TRANSISTOR                 |         | D906      | MA165        | DIODE                      |         |
| Q318       | 2SA1309AIRTA | TRANSISTOR                 |         | D907      | SPR-305MDTF  | LED                        |         |
| Q320       | DTC114ESTP   | TRANSISTOR                 |         | D908-911  | SLR-305VC    | LED                        |         |
| Q331, 332  | UN4219TA     | TRANSISTOR                 |         | D913, 914 | SLR-305VC    | LED                        |         |
| Q333, 334  | 2SC3311AIRTA | TRANSISTOR                 |         | D971      | RVD1SS133TA  | DIODE (DECK1)              |         |
| Q335       | 2SD592NCR    | TRANSISTOR                 |         | D971A     | RVD1SS133TA  | DIODE (DECK2)              |         |
| Q336       | DTC114ESTP   | TRANSISTOR                 |         |           |              | VARIABLE RESISTOR (S)      |         |
| Q405, 406  | 2SC3311AIRTA | TRANSISTOR                 |         | VR801     | EVNDCAA03B53 | V. R, TAPE SPEED ADJ. (X1) |         |
| Q601       | 2SD2137PQTA  | TRANSISTOR                 | Δ       | VR802     | EVNDCAA03B53 | V. R, TAPE SPEED ADJ. (X2) |         |
| Q602       | 2SB1357DEFTA | TRANSISTOR                 | Δ       | VR803     | EVNDCAA03B53 | V. R, TAPE SPEED ADJ. (X1) |         |
| Q603       | 2SD2137PQTA  | TRANSISTOR                 | Δ       |           |              | COMPONENT COMBINATION (S)  |         |
| Q604, 605  | 2SD2137PQTA  | TRANSISTOR                 |         |           |              |                            |         |
| Q606       | 2SC3311AIRTA | TRANSISTOR                 |         |           |              |                            |         |
| Q607       | 2SD2137PQTA  | TRANSISTOR                 | Δ       |           |              |                            |         |
| Q608       | 2SB1357DEFTA | TRANSISTOR                 | Δ       |           |              |                            |         |
| Q701, 702  | DTC114YSTP   | TRANSISTOR                 |         |           |              |                            |         |
| Q703       | UN4219TA     | TRANSISTOR                 |         |           |              |                            |         |

| Ref. No.  | Part No.     | Part Name & Description    | Remarks | Ref. No.   | Part No.     | Part Name & Description | Remarks |
|-----------|--------------|----------------------------|---------|------------|--------------|-------------------------|---------|
| Z801, 802 | EXBF7L355SYV | COMPONENT COMBINATION      |         | CN2A       | RJS1A6814    | SOCKET (14P)            |         |
| Z971A     | EXBF6L306SYV | COMPONENT COMBINATION      |         | CN1B       | RJS1A6714    | SOCKET (14P)            |         |
|           |              | COIL (S)                   |         | CN2B       | RJS1A6714    | SOCKET (14P)            |         |
|           |              |                            |         | CP1        | RJP3G182A    | CONNECTOR (3P)          |         |
|           |              |                            |         | CP2        | RJP4G182A    | CONNECTOR (4P)          |         |
| L101, 102 | SLQX303-1KT  | COIL                       |         | CP801, 802 | RJS2A0205-2S | SOCKET (5P)             |         |
| L301, 302 | SL09B4-K     | COIL                       |         | CP803      | RJP3G172A    | CONNECTOR (3P)          |         |
| L401, 402 | RLQB103JT-Y  | COIL                       |         | CP804      | RJP4G172A    | CONNECTOR (4P)          |         |
| L701      | ELEXT100KA9  | COIL                       |         | CS971      | RJU071H09M   | SOCKET (9P)             |         |
|           |              | OSCILLATOR (S)             |         | CS971A     | RJU071H11M   | SOCKET (11P)            |         |
|           |              |                            |         | P801       | RJR0113      | CONNECTOR (4P)          |         |
|           |              |                            |         | P802       | RJR0113      | CONNECTOR (4P)          |         |
| X701      | EFOEC8004T4  | OSCILLATOR (8MHz)          |         |            |              | EARTH TERMINAL          |         |
|           |              | SWITCH (ES)                |         | E1         | SNE1004-1    | GND PLATE               |         |
|           |              |                            |         |            |              | JACK                    |         |
| S801      | RSH1A024-U   | SW, OPEN DETECTOR (DECK1)  |         |            |              |                         |         |
| S802      | RSH1A024-U   | SW, CLOSE DETECTOR (DECK1) |         |            |              |                         |         |
| S803      | RSH1A024-U   | SW, OPEN DETECTOR (DECK2)  |         |            |              |                         |         |
| S804      | RSH1A024-U   | SW, CLOSE DETECTOR (DECK2) |         | JK1        | RJT065K15    | CONNECTOR (15P)         |         |
| S900      | EVQ21405R    | SW, STOP                   |         |            |              |                         |         |
| S901      | EVQ21405R    | SW, FF [TPS]               |         |            |              |                         |         |
| S902      | EVQ21405R    | SW, REW [TPS]              |         |            |              |                         |         |
| S903      | EVQ21405R    | SW, FWD DIRECTION          |         |            |              |                         |         |
| S904      | EVQ21405R    | SW, REV DIRECTION          |         |            |              |                         |         |
| S905      | EVQ21405R    | SW, REC PAUSE              |         |            |              |                         |         |
| S906      | EVQ21405R    | SW, EDIT (X1)              |         |            |              |                         |         |
| S907      | EVQ21405R    | SW, EDIT (X2)              |         |            |              |                         |         |
| S908      | EVQ21405R    | SW, OPEN (DECK2)           |         |            |              |                         |         |
| S909      | EVQ21405R    | SW, OPEN (DECK1)           |         |            |              |                         |         |
| S910      | EVQ21405R    | SW, DOLBY NR               |         |            |              |                         |         |
| S911      | EVQ21405R    | SW, REV MODE               |         |            |              |                         |         |
| S912      | EVQ21405R    | SW, DECK 1/2               |         |            |              |                         |         |
| S913      | EVQ21405R    | SW, CLOSE (DECK1)          |         |            |              |                         |         |
| S914      | EVQ21405R    | SW, CLOSE (DECK2)          |         |            |              |                         |         |
| S915      | EVQ21405R    | SW, CCRT                   |         |            |              |                         |         |
| S971      | RSH1A018-U   | SW, MODE (DECK1)           |         |            |              |                         |         |
| S971A     | RSH1A018-U   | SW, MODE (DECK2)           |         |            |              |                         |         |
| S972      | RSH1A019-U   | SW, HALF (DECK1)           |         |            |              |                         |         |
| S972A     | RSH1A019-U   | SW, HALF (DECK2)           |         |            |              |                         |         |
| S973      | RSH1A019-U   | SW, ATS/Cr-02 (DECK1)      |         |            |              |                         |         |
| S973A     | RSH1A019-U   | SW, ATS/Cr-02 (DECK2)      |         |            |              |                         |         |
| S974A     | RSH1A019-U   | SW, R. REC. INH (DECK2)    |         |            |              |                         |         |
| S975A     | RSH1A019-U   | SW, F. REC. INH (DECK2)    |         |            |              |                         |         |
| S976A     | RSH1A019-U   | SW, ATS/METAL (DECK2)      |         |            |              |                         |         |
|           |              | CONNECTOR (S)              |         |            |              |                         |         |
|           |              |                            |         |            |              |                         |         |
| CN3       | RJS10T4ZA    | SOCKET (10P)               |         |            |              |                         |         |
| CN801     | RJT071H09A   | CONNECTOR (9P)             |         |            |              |                         |         |
| CN802     | RJT071H11A   | CONNECTOR (11P)            |         |            |              |                         |         |
| CN1A      | RJS1A6814    | SOCKET (14P)               |         |            |              |                         |         |

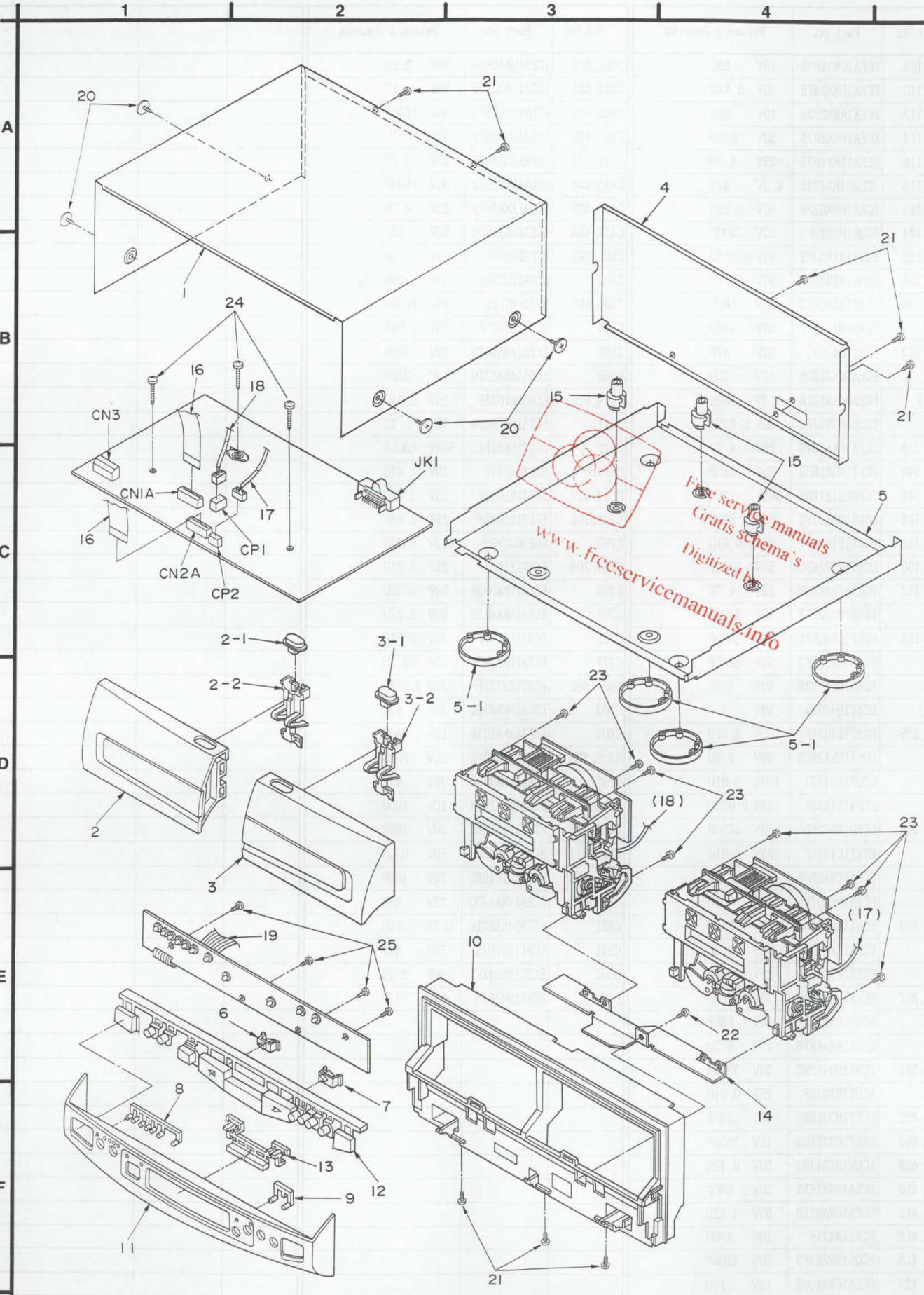
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Notes : \* Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)  
\* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k(OHM)

| Ref. No.  | Part No.    | Values & Remarks | Ref. No.  | Part No.     | Values & Remarks   | Ref. No.    | Part No.     | Values & Remarks |
|-----------|-------------|------------------|-----------|--------------|--------------------|-------------|--------------|------------------|
|           |             | RESISTORS        |           |              |                    |             |              |                  |
| R1, 2     | ERDS2TJ224T | 1/4W 220K        | R334      | ERDS2TJ563   | 1/4W 56K           | R747, 748   | ERDS2TJ103   | 1/4W 10K         |
| R11-14    | ERDS2TJ225  | 1/4W 2. 2M       | R335      | ERDS2TJ562   | 1/4W 5. 6K         | R751, 752   | ERDS2TJ272T  | 1/4W 2. 7K       |
| R15, 16   | ERDS2TJ224T | 1/4W 220K        | R337, 338 | ERDS2TJ393   | 1/4W 39K           | R777        | ERDS2TJ103   | 1/4W 10K         |
| R18       | ERDS2TJ473  | 1/4W 47K         | R340      | ERD2FCVG150T | 1/4W 15 $\Delta$   | R801, 802   | ERDS2TJ151   | 1/4W 150         |
| R109, 110 | ERDS2TJ101  | 1/4W 100         | R351      | ERDS2TJ331   | 1/4W 330           | R803        | ERDS2TJ153   | 1/4W 15K         |
| R111, 112 | ERDS2TJ472  | 1/4W 4. 7K       | R352      | ERDS2TJ102   | 1/4W 1K            | R804        | ERDS2TJ103   | 1/4W 10K         |
| R113, 114 | ERDS2TJ272T | 1/4W 2. 7K       | R353      | ERDS2TJ333   | 1/4W 33K           | R805        | ERDS2TJ392T  | 1/4W 3. 9K       |
| R115, 116 | ERDS2TJ224T | 1/4W 220K        | R354, 355 | ERDS2TJ270T  | 1/4W 27            | R806        | ERDS2TJ123   | 1/4W 12K         |
| R117, 118 | ERDS2TJ682T | 1/4W 6. 8K       | R356, 357 | ERDS2TJ562   | 1/4W 5. 6K         | R807        | ERDS2TJ103   | 1/4W 10K         |
| R119, 120 | ERDS2TJ152  | 1/4W 1. 5K       | R358      | ERDS2TJ272T  | 1/4W 2. 7K         | R808        | ERDS2TJ392T  | 1/4W 3. 9K       |
| R121-124  | ERDS2TJ104  | 1/4W 100K        | R371      | ERDS2TJ102   | 1/4W 1K            | R811, 812   | ERDS2TJ474   | 1/4W 470K        |
| R125, 126 | ERDS2TJ562  | 1/4W 5. 6K       | R401, 402 | ERDS2TJ272T  | 1/4W 2. 7K         | R813, 814   | ERDS2TJ2R2T  | 1/4W 2. 2        |
| R127, 128 | ERDS2TJ153  | 1/4W 15K         | R403, 404 | ERDS2TJ562   | 1/4W 5. 6K         | R815, 816   | ERDS2TJ473   | 1/4W 47K         |
| R129, 130 | ERDS2TJ473  | 1/4W 47K         | R405, 406 | ERDS2TJ682T  | 1/4W 6. 8K         | R817, 818   | ERDS2TJ471   | 1/4W 470         |
| R131, 132 | ERDS2TJ223  | 1/4W 22K         | R407, 408 | ERDS2TJ223   | 1/4W 22K           | R819        | ERDS2TJ271   | 1/4W 270         |
| R133, 134 | ERDS2TJ151  | 1/4W 150         | R409, 410 | ERDS2TJ104   | 1/4W 100K          | R900        | ERDS2TJ821   | 1/4W 820         |
| R135-138  | ERDS2TJ271  | 1/4W 270         | R411, 412 | ERDS2TJ221   | 1/4W 220           | R901        | ERDS2TJ102   | 1/4W 1K          |
| R139, 140 | ERDS2TJ123  | 1/4W 12K         | R413, 414 | ERDS2TJ104   | 1/4W 100K          | R902        | ERDS2TJ122   | 1/4W 1. 2K       |
| R141, 142 | ERDS2TJ222  | 1/4W 2. 2K       | R415, 416 | ERDS2TJ123   | 1/4W 12K           | R903        | ERDS2TJ152   | 1/4W 1. 5K       |
| R143      | ERDS2TJ475T | 1/4W 4. 7M       | R417, 418 | ERDS2TJ394   | 1/4W 390K          | R904        | ERDS2TJ182   | 1/4W 1. 8K       |
| R144      | ERDS2TJ331  | 1/4W 330         | R421-424  | ERDS2TJ560T  | 1/4W 56            | R905        | ERDS2TJ222   | 1/4W 2. 2K       |
| R145      | ERDS2TJ104  | 1/4W 100K        | R425, 426 | ERDS2TJ103   | 1/4W 10K           | R906        | ERDS2TJ332   | 1/4W 3. 3K       |
| R146      | ERDS2TJ472  | 1/4W 4. 7K       | R601, 602 | ERDS2TJ472   | 1/4W 4. 7K         | R907        | ERDS2TJ472   | 1/4W 4. 7K       |
| R147, 148 | ERDS2TJ222  | 1/4W 2. 2K       | R603      | ERDS2TJ331   | 1/4W 330           | R908        | ERDS2TJ682T  | 1/4W 6. 8K       |
| R149      | ERDS2TJ471  | 1/4W 470         | R604      | ERDS2TJ561   | 1/4W 560           | R909        | ERDS2TJ123   | 1/4W 12K         |
| R151, 152 | ERDS2TJ103  | 1/4W 10K         | R605      | ERD2FCVJ4R7T | 1/4W 4. 7 $\Delta$ | R910        | ERDS2TJ223   | 1/4W 22K         |
| R155-158  | ERDS2TJ180T | 1/4W 18          | R606      | ERD2FCVJ5R6T | 1/4W 5. 6 $\Delta$ | R911        | ERDS2TJ683   | 1/4W 68K         |
| R159, 160 | ERDS2TJ100  | 1/4W 10          | R607      | ERD2FCVG100T | 1/4W 10 $\Delta$   | R912, 913   | ERDS2TJ102   | 1/4W 1K          |
| R201, 202 | ERDS2TJ103  | 1/4W 10K         | R609      | ERDS2TJ100   | 1/4W 10            | R914-917    | ERDS2TJ471   | 1/4W 470         |
| R203      | ERDS2TJ331  | 1/4W 330         | R610      | ERDS2TJ152   | 1/4W 1. 5K         | R918-920    | ERDS2TJ102   | 1/4W 1K          |
| R204      | ERDS2TJ472  | 1/4W 4. 7K       | R611, 612 | ERDS2TJR47T  | 1/4W 0. 47         | R921, 922   | ERDS2TJ272T  | 1/4W 2. 7K       |
| R205      | ERDS2TJ823T | 1/4W 82K         | R614      | ERDS2TJ222   | 1/4W 2. 2K         | R923        | ERDS2TJ102   | 1/4W 1K          |
| R206      | ERDS2TJ682T | 1/4W 6. 8K       | R615      | ERDS2TJ332   | 1/4W 3. 3K         | R971, 971A  | ERDS2TJ221   | 1/4W 220         |
| R207      | ERDS2TJ393  | 1/4W 39K         | R616      | ERDS2TJ103   | 1/4W 10K           | R973, 974   | ERDS2TJ393   | 1/4W 39K         |
| R208      | ERDS2TJ102  | 1/4W 1K          | R618, 619 | ERDS2TJR47T  | 1/4W 0. 47         | R973A, 974A | ERDS2TJ393   | 1/4W 39K         |
| R209, 210 | ERDS2TJ123  | 1/4W 12K         | R625      | ERDS2TJ100   | 1/4W 10            | R1009       | ERDS2TJ332   | 1/4W 3. 3K       |
| R301      | ERDS2TJ1R0  | 1/4W 1. 0        | R626, 627 | ERDS2TJR47T  | 1/4W 0. 47         |             |              | CAPACITORS       |
| R302, 303 | ERDS2TJ103  | 1/4W 10K         | R701      | ERDS2TJ470   | 1/4W 47            |             |              |                  |
| R304, 305 | ERDS2TJ100  | 1/4W 10          | R702      | ERDS2TJ103   | 1/4W 10K           | C1, 2       | ECBT1H561KB5 | 50V 560P         |
| R307      | ERDS2TJ153  | 1/4W 15K         | R703      | ERDS2TJ104   | 1/4W 100K          | C11, 12     | ECBT1H102KB5 | 50V 1000P        |
| R308      | ERDS2TJ473  | 1/4W 47K         | R704-710  | ERDS2TJ103   | 1/4W 10K           | C13, 14     | ECBT1H4R7KC5 | 50V 4. 7P        |
| R309      | ERDS2TJ272T | 1/4W 2. 7K       | R712, 713 | ERDS2TJ103   | 1/4W 10K           | C15, 16     | ECBT1H561KB5 | 50V 560P         |
| R310      | ERDS2TJ472  | 1/4W 4. 7K       | R715-730  | ERDS2TJ103   | 1/4W 10K           | C17, 18     | ECBT1H102KB5 | 50V 1000P        |
| R331      | ERDS2TJ561  | 1/4W 560         | R731-733  | ERDS2TJ104   | 1/4W 100K          | C27         | ECBT1H102KB5 | 50V 1000P        |
| R332      | ERDS2TJ680T | 1/4W 68          | R734      | ERDS2TJ472   | 1/4W 4. 7K         | C101        | ECA1AM471B   | 10V 470U         |
| R333      | ERDS2TJ103  | 1/4W 10K         | R736-738  | ERDS2TJ103   | 1/4W 10K           | C102        | ECEA1CKA100B | 16V 10U          |
|           |             |                  | R740      | ERDS2TJ103   | 1/4W 10K           | C103, 104   | ECQB1H153JF3 | 50V 0.015U       |
|           |             |                  | R741-744  | ERDS2TJ272T  | 1/4W 2. 7K         | C419, 420   | ECEA1CKA100B | 16V 10U          |
|           |             |                  | R745, 746 | ERDS2TJ104   | 1/4W 100K          |             |              |                  |

| Ref. No.  | Part No.     | Values & Remarks | Ref. No.  | Part No.     | Values & Remarks   |  |  |  |
|-----------|--------------|------------------|-----------|--------------|--------------------|--|--|--|
| C107, 108 | ECEA1CKA100B | 16V 10U          | C421, 422 | ECEA1HKA2R2B | 50V 2. 2U          |  |  |  |
| C109, 110 | ECEA1HKA47B  | 50V 0. 47U       | C423, 424 | ECEA1HKA010B | 50V 1U             |  |  |  |
| C111, 112 | ECEA1KA220B  | 10V 22U          | C425, 426 | ECQB1H152JF3 | 50V 1500P          |  |  |  |
| C113, 114 | ECEA1HKA2R2B | 50V 2. 2U        | C427-430  | ECEA1HKA47B  | 50V 0. 47U         |  |  |  |
| C115, 116 | ECEA1EKA4R7B | 25V 4. 7U        | C431, 432 | ECEA1EKA4R7B | 25V 4. 7U          |  |  |  |
| C117, 118 | ECEA0JKA470B | 6. 3V 47U        | C433, 434 | ECQB1H152JF3 | 50V 1500P          |  |  |  |
| C119, 120 | ECEA1HKA2R2B | 50V 0. 22U       | C435, 436 | ECEA1EKA4R7B | 25V 4. 7U          |  |  |  |
| C121-124  | ECQB1H392JF3 | 50V 3900P        | C437, 438 | ECEA1HKA100B | 50V 10U            |  |  |  |
| C125, 126 | ECQB1H183JF3 | 50V 0.018U       | C601, 602 | ECFR1H104ZF  | 50V 0. 1U          |  |  |  |
| C127, 128 | ECQB1H103JF3 | 50V 0. 01U       | C603      | ECEA1EU222B  | 25V 2200U $\Delta$ |  |  |  |
| C129, 130 | ECBT1H181KB5 | 50V 180P         | C604, 605 | ECA1EM102B   | 25V 1000U $\Delta$ |  |  |  |
| C131      | ECA1AM471B   | 10V 470U         | C606      | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C132, 133 | ECBT1H470J5  | 50V 47P          | C607      | ECEA1AKA101B | 10V 100U           |  |  |  |
| C134      | ECEA1CKA100B | 16V 10U          | C608      | ECEA1AKA221Q | 10V 220U           |  |  |  |
| C135      | ECEA0JKA101B | 6. 3V 100U       | C609, 610 | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C136      | ECQB1H393JF3 | 50V 0.039U       | C611      | ECEA1HKA010B | 50V 1U             |  |  |  |
| C137, 138 | ECEA1EKA4R7B | 25V 4. 7U        | C612      | ECKR2H682PE  | 500V 6800P         |  |  |  |
| C139, 140 | ECBT1H561KB5 | 50V 560P         | C613      | ECEA1AU470   | 10V 47U            |  |  |  |
| C141, 142 | ECKR2H121KB5 | 500V 120P        | C614, 615 | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C145, 146 | ECQB1H821JF3 | 50V 820P         | C701, 702 | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C147, 148 | ECBT1E103ZF  | 25V 0. 01U       | C703      | ECEA0JU102   | 6. 3V 1000U        |  |  |  |
| C149, 150 | ECBT1H102KB5 | 50V 1000P        | C704, 705 | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C151, 152 | ECEA1EKA4R7B | 25V 4. 7U        | C706      | ECEA1HKA33B  | 50V 0. 33U         |  |  |  |
| C153      | ECQB1H332JF3 | 50V 3300P        | C707      | ECEA1HKA2R2B | 50V 0. 22U         |  |  |  |
| C155, 156 | ECBT1C682KR5 | 16V 6800P        | C731      | ECBT1E103ZF  | 25V 0. 01U         |  |  |  |
| C201      | ECQB1H822JF3 | 50V 8200P        | C777      | ECEA1HKA3R3B | 50V 3. 3U          |  |  |  |
| C202      | ECEA1HKA3R3B | 50V 3. 3U        | C801, 802 | ECBT1E223ZF  | 25V 0. 022U        |  |  |  |
| C203      | ECBT1H470J5  | 50V 47P          | C803      | ECEA1VKA470Q | 35V 47U            |  |  |  |
| C204, 205 | ECBT1E103ZF  | 25V 0. 01U       | C804      | ECEA1AKA101B | 10V 100U           |  |  |  |
| C206      | ECEA1HKA2R2B | 50V 2. 2U        | C805, 806 | ECBT1H104ZF5 | 50V 0. 1U          |  |  |  |
| C301      | ECQP1103JZ3  | 100V 0. 01U      | C807      | ECEA1VKA470Q | 35V 47U            |  |  |  |
| C341      | ECFR1E183KR  | 25V 0.018U       | C808      | ECEA1AKA101B | 10V 100U           |  |  |  |
| C342-344  | ECKD1H682KB  | 50V 6800P        | C811, 812 | ECBT1H101KB5 | 50V 100P           |  |  |  |
| C345      | ECBT1E103ZF  | 25V 0. 01U       | C813, 814 | ECBT1H104ZF5 | 50V 0. 1U          |  |  |  |
| C346      | ECEA1EKA220B | 25V 22U          | C815-818  | ECBT1H101KB5 | 50V 100P           |  |  |  |
| C348      | ECEA1HKA010B | 50V 1U           | C819, 820 | ECEA1VKA470Q | 35V 47U            |  |  |  |
| C349, 350 | ECBT1H221KB5 | 50V 220P         | C821      | ECEA0JKA221B | 6. 3V 220U         |  |  |  |
| C351      | ECEA1EKA4R7B | 25V 4. 7U        | C901      | ECBT1H470J5  | 50V 47P            |  |  |  |
| C352      | ECBT1E103ZF  | 25V 0. 01U       | C902      | ECBT1H104ZF5 | 50V 0. 1U          |  |  |  |
| C356, 357 | ECKR1H392KB5 | 50V 3900P        | C903      | ECBT1H470J5  | 50V 47P            |  |  |  |
| C358      | ECQP1681JZ3  | 16V 680P         |           |              |                    |  |  |  |
| C359      | ECEA1EKA4R7B | 25V 4. 7U        |           |              |                    |  |  |  |
| C360, 361 | ECKR1H392KB5 | 50V 3900P        |           |              |                    |  |  |  |
| C371      | ECBT1E103ZF  | 25V 0. 01U       |           |              |                    |  |  |  |
| C401, 402 | ECBT1H391KB5 | 50V 390P         |           |              |                    |  |  |  |
| C403, 404 | ECBT1C332KR5 | 16V 3300P        |           |              |                    |  |  |  |
| C407, 408 | ECQV1H124JM3 | 50V 0. 12U       |           |              |                    |  |  |  |
| C409, 410 | ECBA1H681KB5 | 50V 680P         |           |              |                    |  |  |  |
| C411, 412 | ECEA1HKA2R2B | 50V 0. 22U       |           |              |                    |  |  |  |
| C415, 416 | ECA1AM471B   | 10V 470U         |           |              |                    |  |  |  |
| C417, 418 | ECQB1H222JF3 | 50V 2200P        |           |              |                    |  |  |  |
|           |              |                  |           |              |                    |  |  |  |

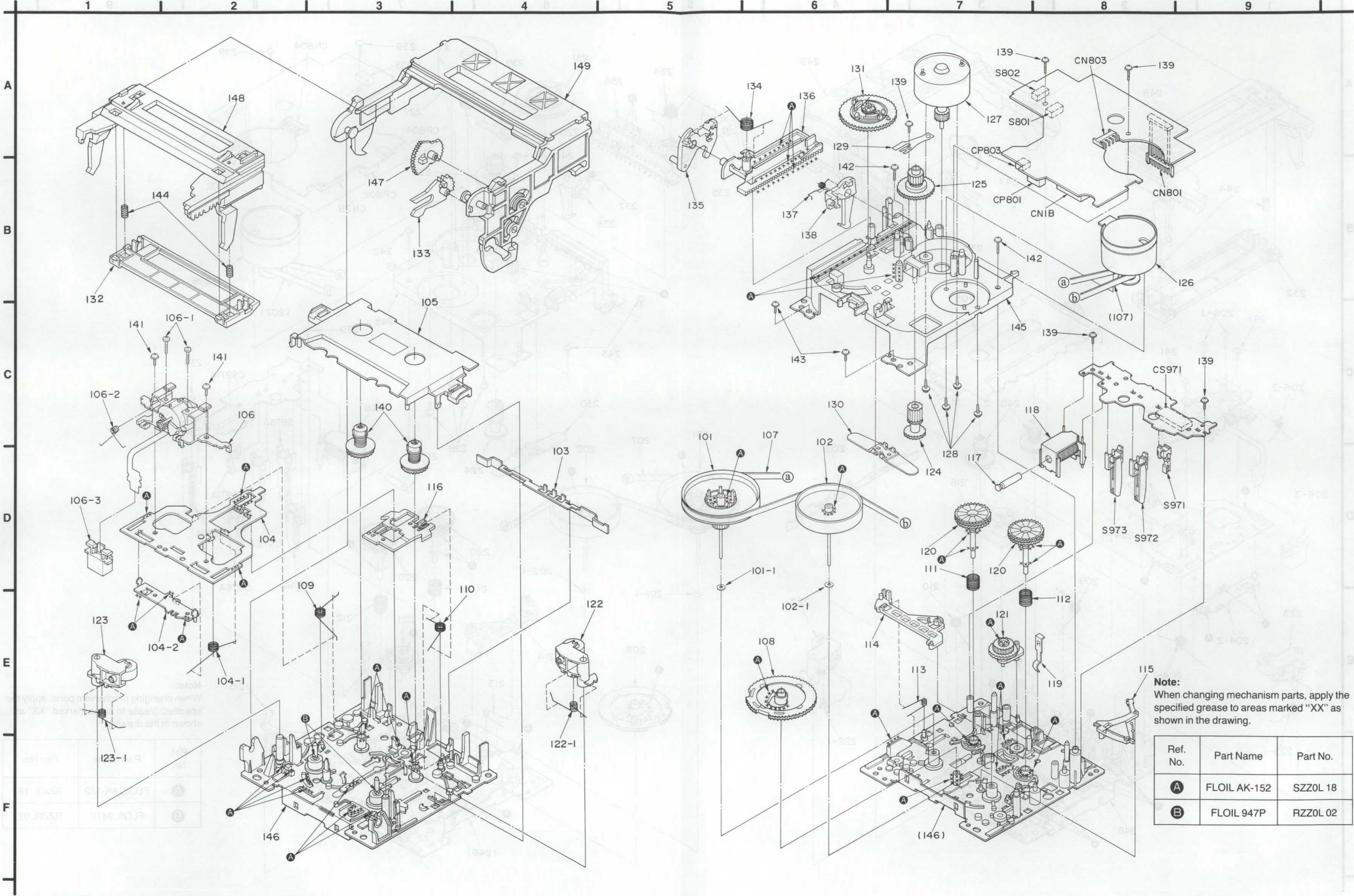
Cabinet Parts Location



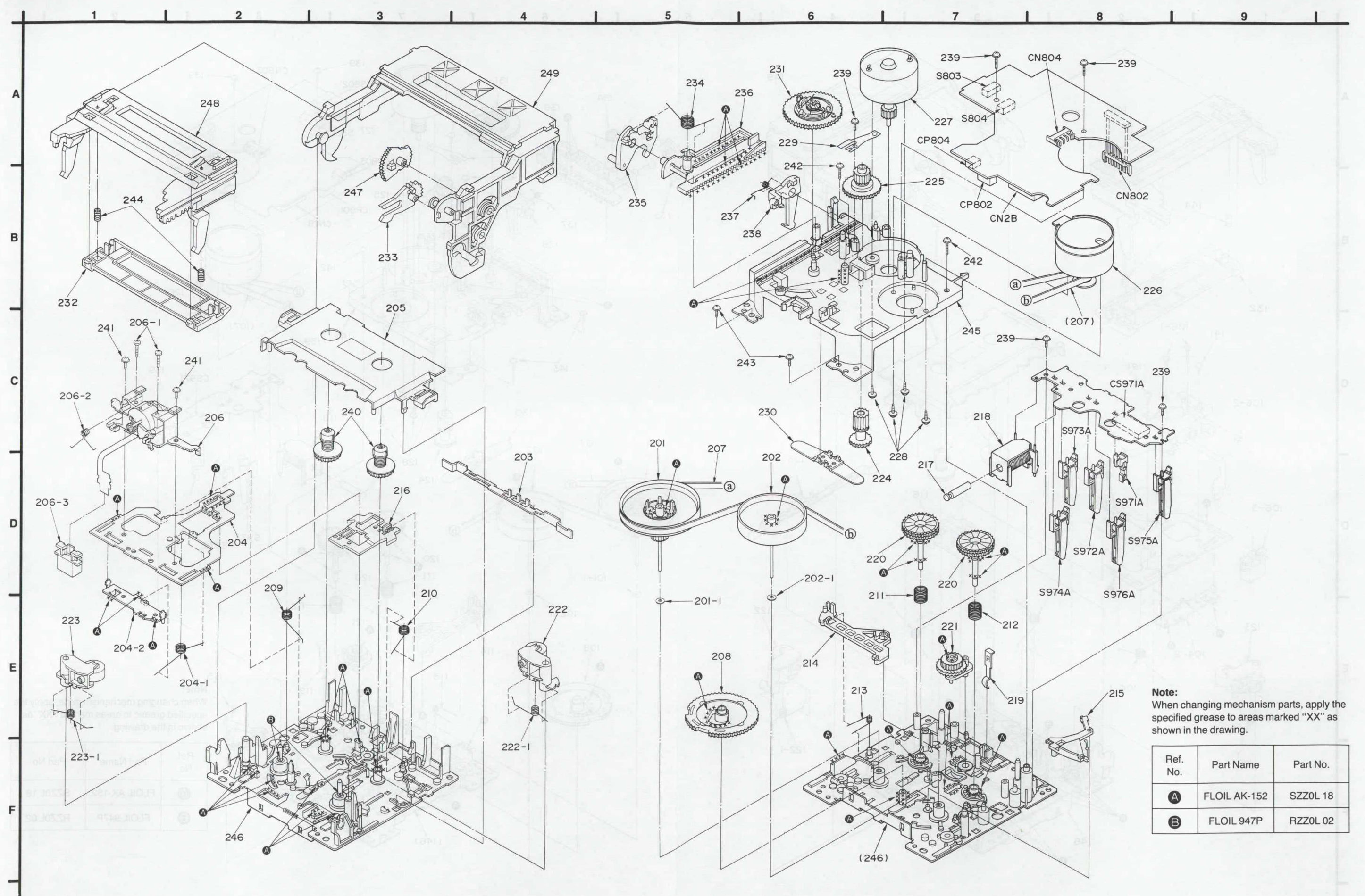
| Ref. No. | Part No.     | Part Name & Description       | Remarks | Ref. No. | Part No.  | Part Name & Description  | Remarks |
|----------|--------------|-------------------------------|---------|----------|-----------|--------------------------|---------|
|          |              | CABINET PARTS                 |         |          |           | MECHANISM PARTS          |         |
|          |              |                               |         |          |           | DECK1 (PLAYBACK)         |         |
| 1        | RKMD202-1K   | CABINET                       |         | 101      | RXF0045   | FLY WHEEL(F) ASS'Y       |         |
| 2        | RYF0229B-K   | CASSETTE LID ASS'Y (L)        |         | 101-1    | RMQ0420   | WASHER                   |         |
| 2-1      | RGU0958-K    | BUTTON, CLOSE                 |         | 102      | RXF0046   | FLY WHEEL(R) ASS'Y       |         |
| 2-2      | RMM0110      | CLOSE ROD                     |         | 102-1    | RMQ0421   | WASHER                   |         |
| 3        | RYF0230A-K   | CASSETTE LID ASS'Y (R)        |         | 103      | RML0272   | SWITCH LEVER             |         |
| 3-1      | RGU0958-K    | BUTTON, CLOSE                 |         | 104      | RXQ0265   | HEAD BASE ASS'Y          |         |
| 3-2      | RMM0110      | CLOSE ROD                     |         | 104-1    | RMB0266   | SPRING                   |         |
| 4        | RGR0147A-M   | REAR PANEL                    |         | 104-2    | RXM0036   | ROD                      |         |
| 5        | RFKJSCH404EK | BOTTOM BOARD ASS'Y            |         | 105      | RGK0582-K | ORNAMENT PLATE           |         |
| 5-1      | RKA0011A-2   | FOOT                          |         | 106      | RXQ0317   | HEAD ASS'Y (P. B)        |         |
| 6        | RGL0214-Q    | LEADING LIGHT PANEL (R. PLAY) |         | 106-1    | RHD17015  | AZIMUTH ADJUSTMENT SCREW |         |
| 7        | RGL0215-Q    | LEADING LIGHT PANEL (F. PLAY) |         | 106-2    | RMB0265-1 | SPRING                   |         |
| 8        | RGL0216-Q    | LEADING LIGHT PANEL (A)       |         | 106-3    | RMQ0360A  | CONNECTOR HOLDER         |         |
| 9        | RGL0217-Q    | LEADING LIGHT PANEL (B)       |         | 107      | RDV108ZA  | BELT                     |         |
| 10       | RGP0345-K    | FRONT GRILL                   |         | 108      | RDK0019A  | MAIN GEAR                |         |
| 11       | RGP0346A-K   | FRONT PANEL                   |         | 109      | RMB0261   | SPRING                   |         |
| 12       | RGU0956-K    | BUTTON, PLAY etc.             |         | 110      | RMB0262   | SPRING                   |         |
| 13       | RGU0957-K    | BUTTON, FF/REW etc.           |         | 111      | RMB0263   | SPRING                   |         |
| 14       | RMA0725      | MECHANISM ANGLE               |         | 112      | RMB0264   | SPRING                   |         |
| 15       | SHE185-2     | P. C. B. SPACER               |         | 113      | RMB0312   | SPRING                   |         |
| 16       | REZ0604      | FLAT CABLE (14P)              |         | 114      | RML0267A  | LEVER                    |         |
| 17       | REX0539      | LEAD WIRE (4P)                |         | 115      | RML0268A  | LEVER                    |         |
| 18       | REX0540      | LEAD WIRE (3P)                |         | 116      | RMM0091A  | BRAKE ROD                |         |
| 19       | REZ0630      | FLAT CABLE (10P) (P901)       |         | 117      | RMS0398   | PLUNGER                  |         |
| 20       | RHD30007     | SCREW                         |         | 118      | RSJ0003   | SOLENOID                 |         |
| 21       | XTBS3+8JFZ1  | SCREW                         |         | 119      | RUS6092C  | SPRING                   |         |
| 22       | XTBS26+8J    | SCREW                         |         | 120      | RXG0036   | REEL TABLE GEAR          |         |
| 23       | XTB3+10JFZ   | SCREW                         |         | 121      | RXL0106   | IDLER LEVER              |         |
| 24       | XTB3+16JFZ   | SCREW                         |         | 122      | RXP0052   | PINCH ROLLER (F) ASS'Y   |         |
| 25       | XTN26+8J     | SCREW                         |         | 122-1    | RMB0259   | SPRING                   |         |
|          |              |                               |         | 123      | RXP0053   | PINCH ROLLER (R) ASS'Y   |         |
|          |              |                               |         | 123-1    | RMB0260   | SPRING                   |         |
|          |              |                               |         | 124      | RDG0206A  | GEAR                     |         |
|          |              |                               |         | 125      | RDG0209A  | GEAR                     |         |
|          |              |                               |         | 126      | REM0036   | CAPSTAN MOTOR            |         |
|          |              |                               |         | 127      | REM0043   | REEL MOTOR               |         |
|          |              |                               |         | 128      | RHD26013  | SCREW                    |         |
|          |              |                               |         | 129      | RMC0169   | SPRING                   |         |
|          |              |                               |         | 130      | RMQ0314A  | SPACER                   |         |
|          |              |                               |         | 131      | RXG0037   | GEAR ASS'Y               |         |
|          |              |                               |         | 132      | RMQ0401   | STABILIZER               |         |
|          |              |                               |         | 133      | RML0275A  | LIFT ARM                 |         |
|          |              |                               |         | 134      | RMB0269   | SPRING                   |         |
|          |              |                               |         | 135      | RML0270A  | LEVER                    |         |
|          |              |                               |         | 136      | RMQ0312A  | DRIVE GEAR               |         |
|          |              |                               |         | 137      | RMB0268   | SPRING                   |         |
|          |              |                               |         | 138      | RML0271A  | LEVER                    |         |
|          |              |                               |         | 139      | XTW2+6S   | SCREW                    |         |

Mechanism Parts Location •DECK 1 (PLAYBACK)

| Ref. No. | Part No.     | Part Name & Description  | Remarks | Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|--------------------------|---------|----------|--------------|-------------------------|---------|
| 140      | RXR0018      | REEL TABLE               |         | 230      | RMQ0314A     | SPACER                  |         |
| 141      | XTW2+5L      | SCREW                    |         | 231      | RXG0037      | GEAR ASS'Y              |         |
| 142      | XTW26+12S    | SCREW                    |         | 232      | RMQ0401      | STABILIZER              |         |
| 143      | XTW26+6L     | SCREW                    |         | 233      | RML0275A     | LIFT ARM                |         |
| 144      | RMB0324      | STABILIZER SPRING        |         | 234      | RMB0269      | SPRING                  |         |
| 145      | RFKJSCH404AK | SUB CHASSIS ASS'Y        |         | 235      | RML0270A     | LEVER                   |         |
| 146      | RFKJSCH404BK | CHASSIS ASS'Y            |         | 236      | RMQ0312A     | DRIVE GEAR              |         |
| 147      | RDG0212A     | LIFT GEAR                |         | 237      | RMB0268      | SPRING                  |         |
| 148      | RGQ0121-K    | LIFTER                   |         | 238      | RML0271A     | LEVER                   |         |
| 149      | RKF0334-K    | CASSETTE HOLDER          |         | 239      | XTW2+6S      | SCREW                   |         |
|          |              | MECHANISM PARTS          |         | 240      | RXR0018      | REEL TABLE              |         |
|          |              | DECK2 (REC. /PLAYBACK)   |         | 241      | XTW2+5L      | SCREW                   |         |
|          |              |                          |         | 242      | XTW26+12S    | SCREW                   |         |
|          |              |                          |         | 243      | XTW26+6L     | SCREW                   |         |
| 201      | RXF0045      | FLY WHEEL (F) ASS'Y      |         | 244      | RMB0324      | STABILIZER SPRING       |         |
| 201-1    | RMQ0420      | WASHER                   |         | 245      | RFKJSCH404AK | SUB CHASSIS ASS'Y       |         |
| 202      | RXF0046      | FLY WHEEL (R) ASS'Y      |         | 246      | RFKJSCH404BK | CHASSIS ASS'Y           |         |
| 202-1    | RMQ0421      | WASHER                   |         | 247      | RDG0212A     | LIFT GEAR               |         |
| 203      | RML0272      | SWITCH LEVER             |         | 248      | RGQ0121-K    | LIFTER                  |         |
| 204      | RXQ0265      | HEAD BASE ASS'Y          |         | 249      | RKF0334-K    | CASSETTE HOLDER         |         |
| 204-1    | RMB0266      | SPRING                   |         |          |              |                         |         |
| 204-2    | RXMD036      | ROD                      |         |          |              |                         |         |
| 205      | RGK0582-K    | ORNAMENT PLATE           |         |          |              |                         |         |
| 206      | RXQ0316      | HEAD ASS'Y (R/P)         |         |          |              |                         |         |
| 206-1    | RHD17015     | AZIMUTH ADJUSTMENT SCREW |         |          |              |                         |         |
| 206-2    | RMB0265-1    | SPRING                   |         |          |              |                         |         |
| 206-3    | RMQ0360A     | CONNECTOR HOLDER         |         |          |              |                         |         |
| 207      | RDV1082A     | BELT                     |         |          |              |                         |         |
| 208      | RDK0019A     | MAIN GEAR                |         |          |              |                         |         |
| 209      | RMB0261      | SPRING                   |         |          |              |                         |         |
| 210      | RMB0262      | SPRING                   |         |          |              |                         |         |
| 211      | RMB0263      | SPRING                   |         |          |              |                         |         |
| 212      | RMB0264      | SPRING                   |         |          |              |                         |         |
| 213      | RMB0312      | SPRING                   |         |          |              |                         |         |
| 214      | RML0267A     | LEVER                    |         |          |              |                         |         |
| 215      | RML0268A     | LEVER                    |         |          |              |                         |         |
| 216      | RMD091A      | BRAKE ROD                |         |          |              |                         |         |
| 217      | RMS0398      | PLUNGER                  |         |          |              |                         |         |
| 218      | RSJ0003      | SOLENOID                 |         |          |              |                         |         |
| 219      | RUS6092C     | SPRING                   |         |          |              |                         |         |
| 220      | RXG0036      | REEL TABLE GEAR          |         |          |              |                         |         |
| 221      | RXL0106      | IDLER LEVER              |         |          |              |                         |         |
| 222      | RXP0052      | PINCH ROLLER (F) ASS'Y   |         |          |              |                         |         |
| 222-1    | RMB0259      | SPRING                   |         |          |              |                         |         |
| 223      | RXP0053      | PINCH ROLLER (R) ASS'Y   |         |          |              |                         |         |
| 223-1    | RMB0260      | SPRING                   |         |          |              |                         |         |
| 224      | RDG0206A     | GEAR                     |         |          |              |                         |         |
| 225      | RDG0209A     | GEAR                     |         |          |              |                         |         |
| 226      | REM0036      | CAPSTAN MOTOR            |         |          |              |                         |         |
| 227      | REM0043      | REEL MOTOR               |         |          |              |                         |         |
| 228      | RHD26013     | SCREW                    |         |          |              |                         |         |
| 229      | RM00169      | SPRING                   |         |          |              |                         |         |



■ Mechanism Parts Location •DECK 2 (RECORD/PLAYBACK)



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

| Ref. No. | Part Name    | Part No. |
|----------|--------------|----------|
| A        | FLOIL AK-152 | SZZ0L 18 |
| B        | FLOIL 947P   | RZZ0L 02 |