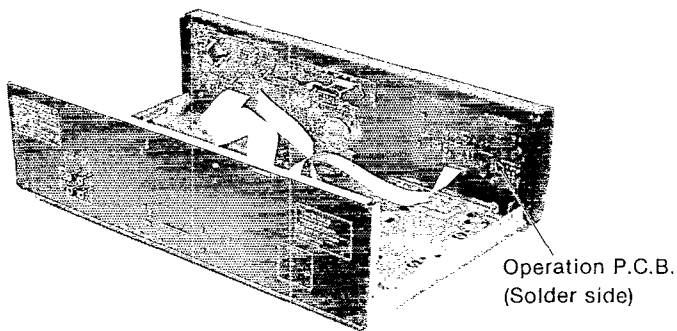
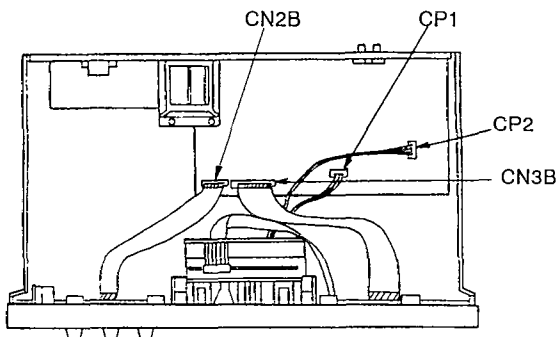


3. Checking for the operation P.C.B.

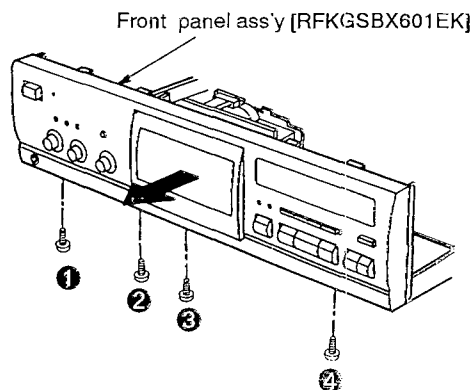
Step 1 Follow the disassembly procedure described in item 1 on page 9.



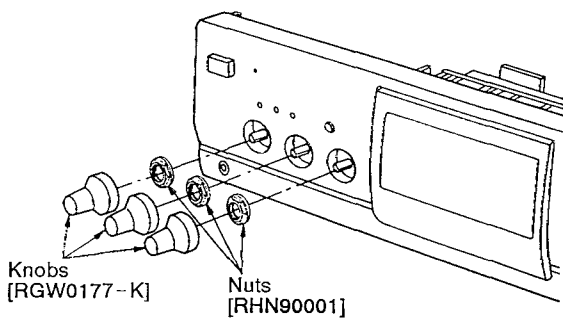
Step 2 Remove the 4 connectors.



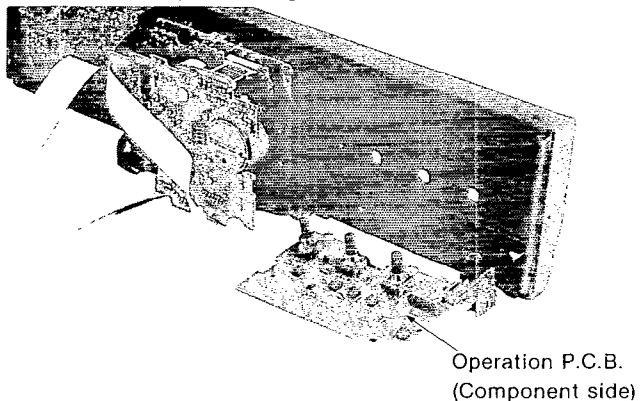
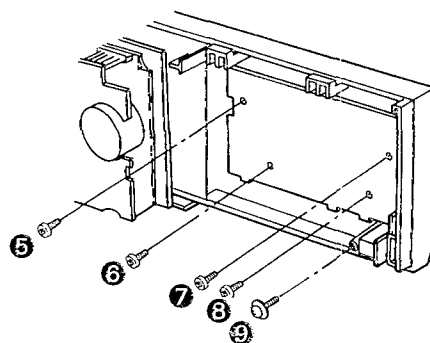
Step 3 Remove the 4 screws.






Step 4 Remove the 3 knobs and nuts.



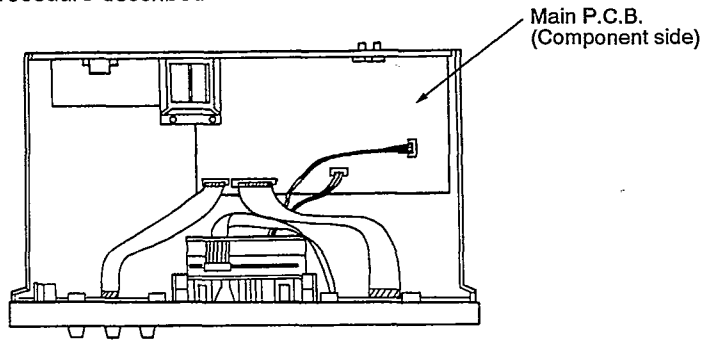
Step 5 Remove the 5 screws.



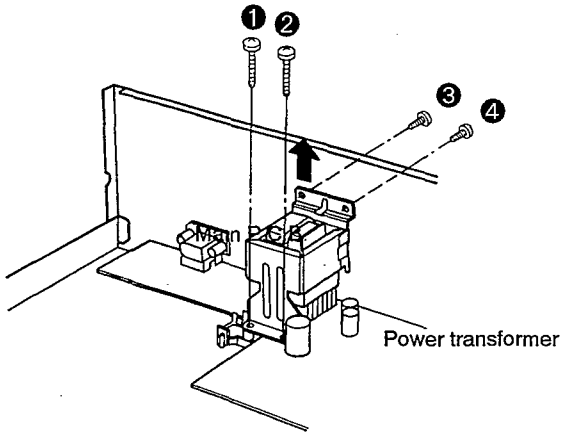
-  ①~④
[XTBS3+8JFZ1] (Black)
-  ⑤~⑧
[XTB26+8.J]
-  ⑨
[RHD26016]

4. Checking for the main P.C.B.

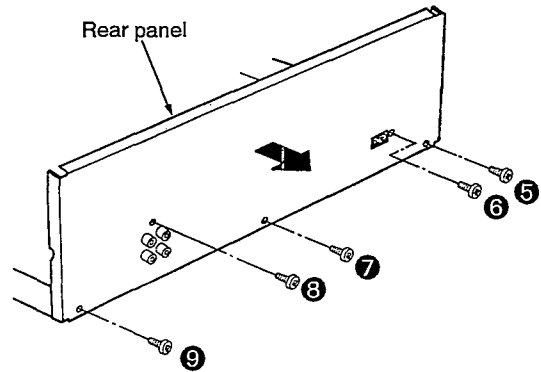
Step 1 Follow the disassembly procedure described in item 1 on page 9.



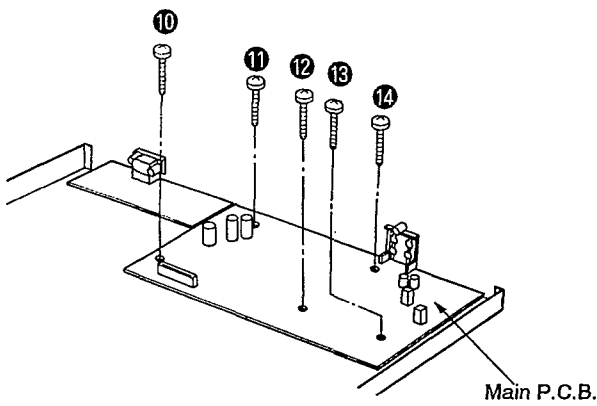
Step 2 Remove the 4 screws.



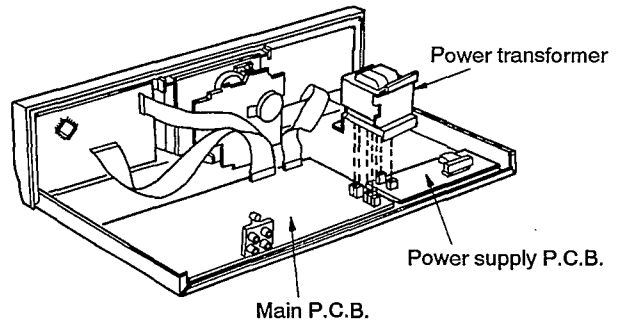
Step 3 Remove the 5 screws.



Step 4 Remove the 5 screws.

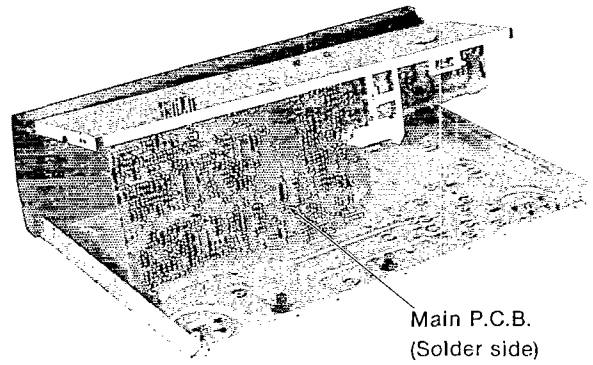
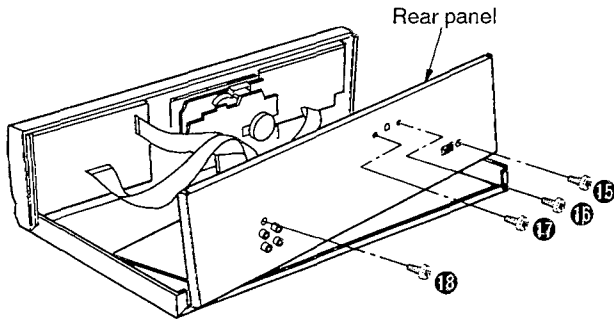


Step 5 Install the power transformer on the main P.C.B. and power supply P.C.B..



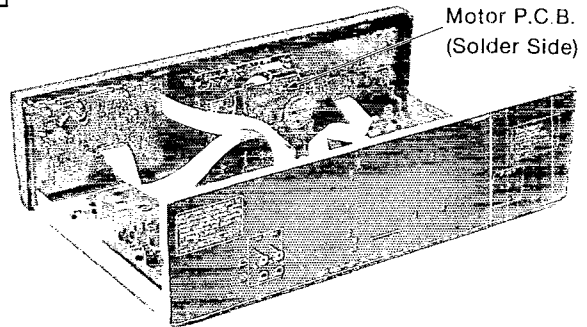
- 1, 2, 10 ~ 14
[XTB3+20JFZ] (Black)
- 3 ~ 9, 15 ~ 18
[XTBS3+8JFZ1] (Black)

Step 6 Install the rear panel to the main P.C.B. and power transformer with 4 screws temporarily.

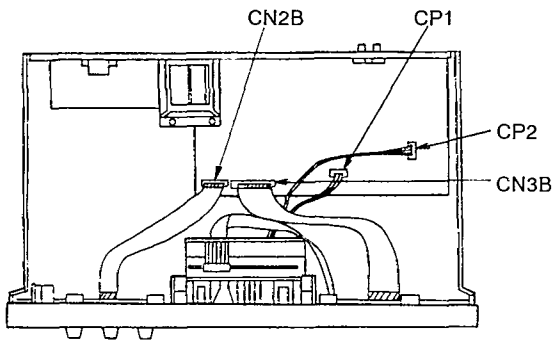


5. Checking for the motor P.C.B.

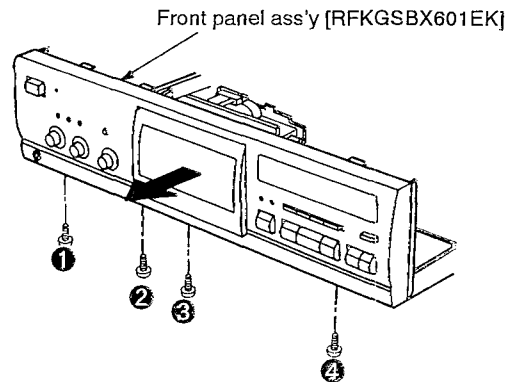
Step 1 Follow the disassembly procedure described in item 1 on page 9.



Step 2 Remove the 4 connectors.

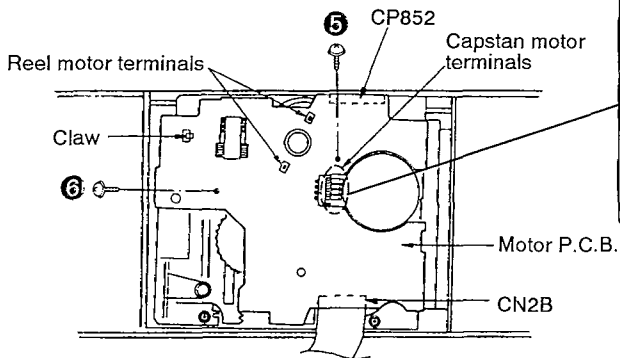


Step 3 Remove the 4 screws.



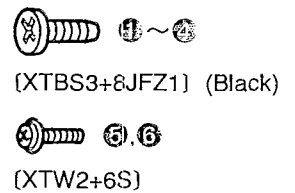
Step 4 Unsolder the reel motor and capstan motor terminals.

Step 5 Remove the 2 screws, claws and connector.



NOTE

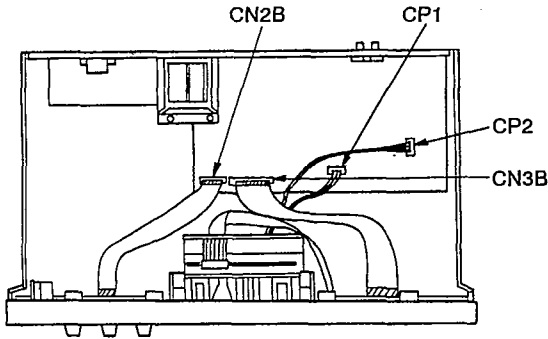
Handle the connector with care so that the shape of terminal is different from others.



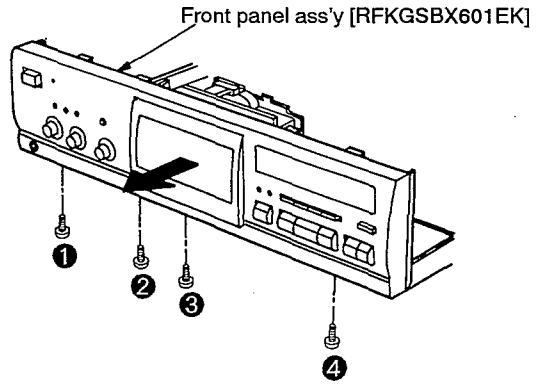
6. Replacement for the mechanism unit

Step 1 Follow the disassembly procedure described in item 1 on page 9.

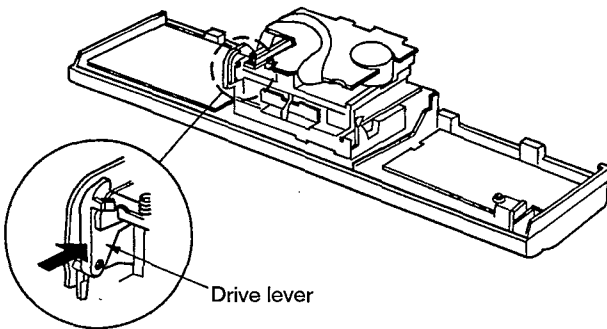
Step 2 Remove the 4 connectors.



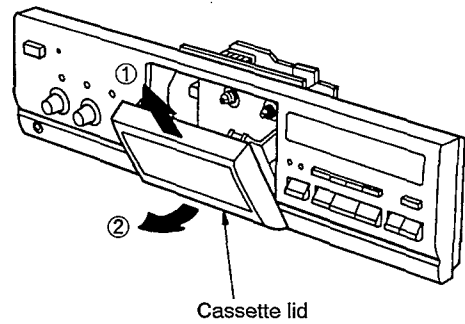
Step 3 Remove the 4 screws.



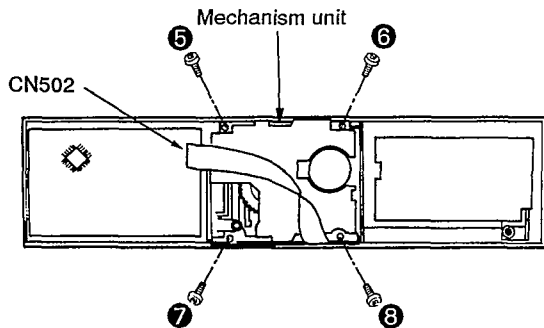
Step 4 Push the drive lever and open the cassette holder ass'y.





Step 5 Lift the cassette lid in the direction of arrow ①, and then remove it in the direction of arrow ②.



Step 6 Remove the 4 screws and 1 connector.

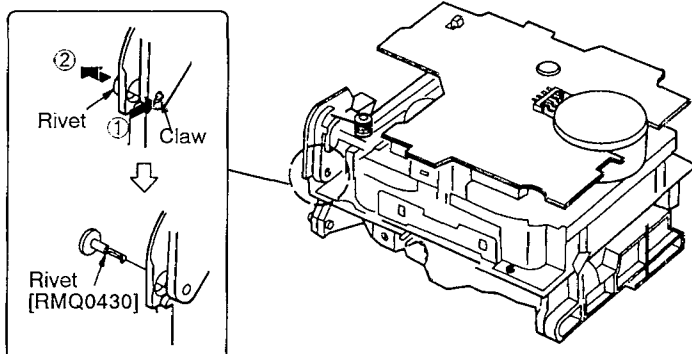


-  ①~④
[XTBS3+8JFZ1] (Black)
-  ⑤~⑧
[XTB3+12JFZ] (Black)

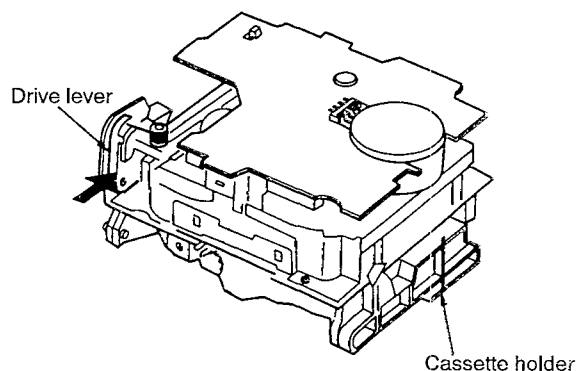
7. Replacement for the REC./PLAY head, erase head and pinch roller (F) unit

Step 1 Follow the disassembly procedure described in item 1 on page 9.

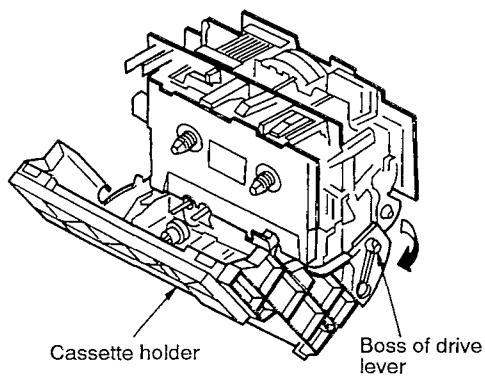
Step 2 Pushing the claw in the direction of arrow ①, pull out the rivet in the direction of arrow ②.



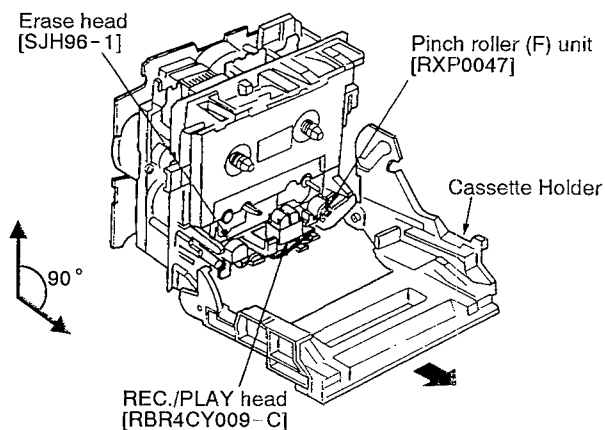
Step 3 Push the drive lever, and then open the cassette holder.



Step 4 Operate the cassette holder in the direction of arrow, and then remove it from the boss of drive lever.

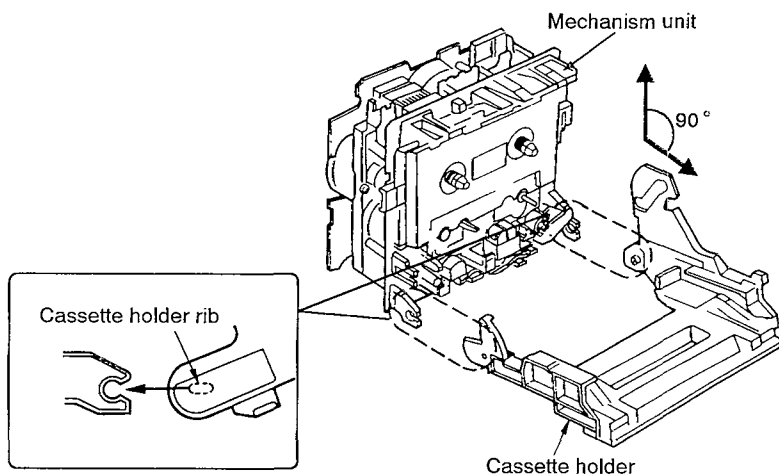


Step 5 Locate the cassette holder and mechanism unit at a 90 degree angle as shown below, and then pull the cassette holder.

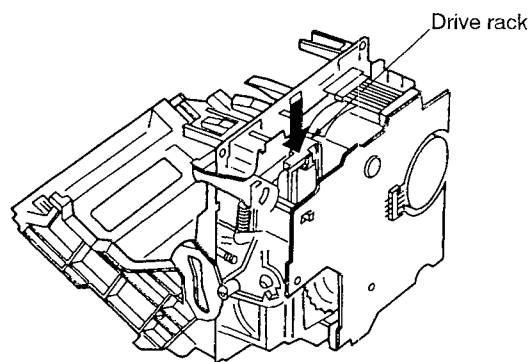


Installation of the cassette holder after replacement

Step 6 Locate the cassette holder and mechanism unit at a 90 degree angle, and then install the cassette holder.

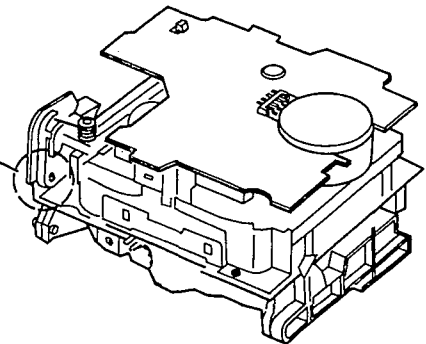
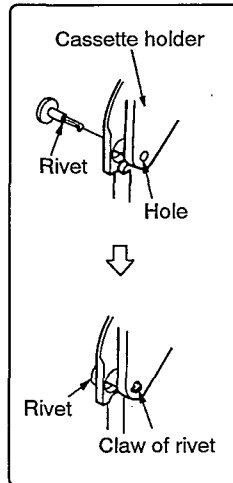
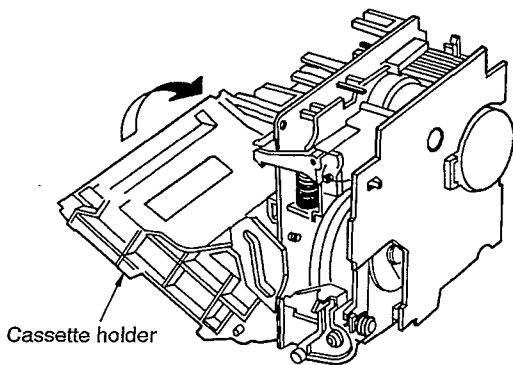


Step 7 Push the drive rack in the direction of arrow.



Step 8 Close the cassette holder in the direction of arrow.

Step 9 Insert the rivet into the hole of cassette holder.



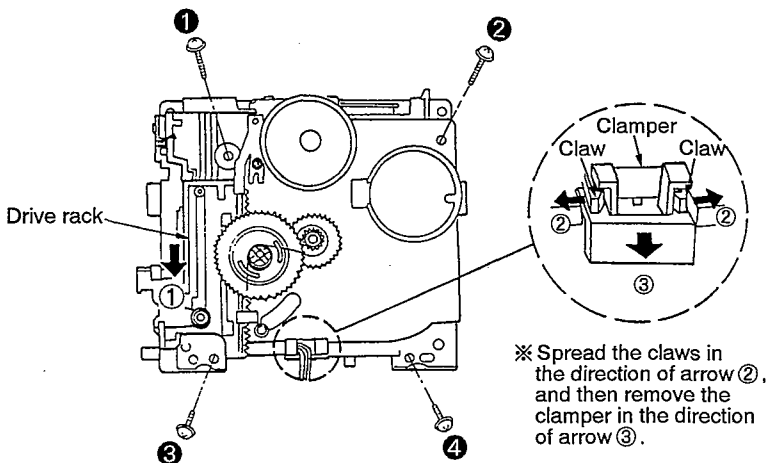
8. Replacement for the capstan motor, reel motor, flywheel ass'y and belt

Step 1 Perform the **Step 1** ~ **Step 5** in item 7 on page 15.

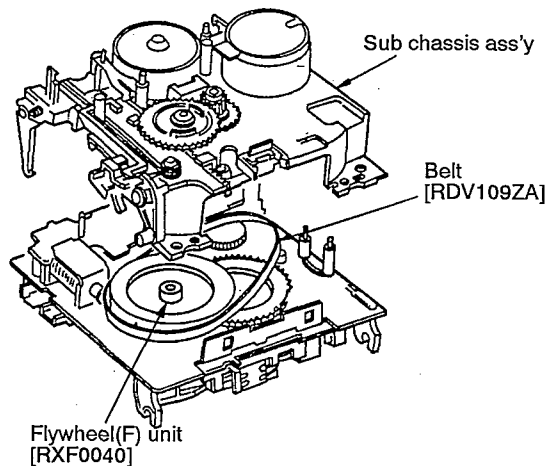
Step 2 Slide the drive rack in the direction of arrow ①.

Step 3 Remove the 4 screws and clamber.

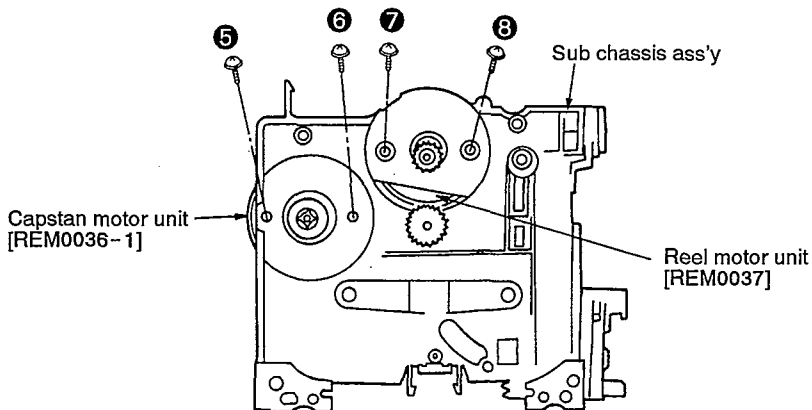
Step 4 Remove the sub chassis ass'y.



※ Spread the claws in the direction of arrow ②, and then remove the clamber in the direction of arrow ③.



Step 5 Remove the 4 screws.



[XTW26+12S]



[XTW26+6L]

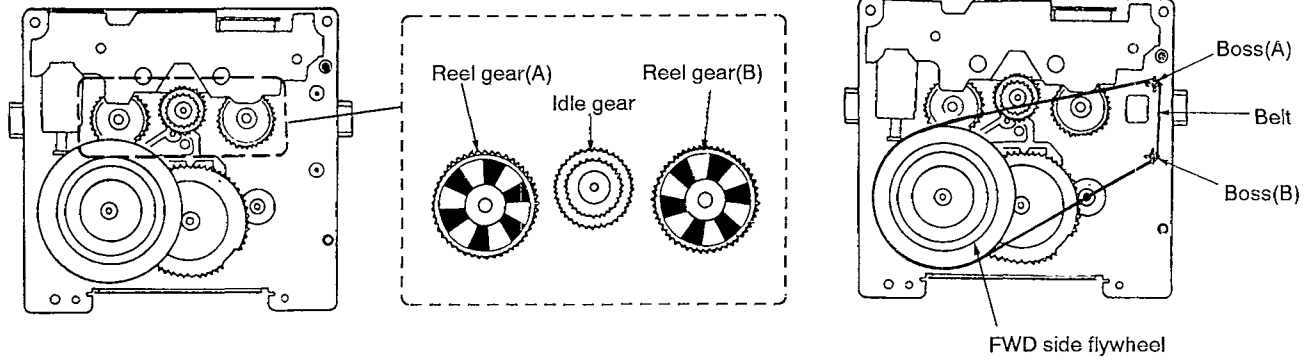


[RHD26013]

Installation of the sub chassis ass'y after replacement

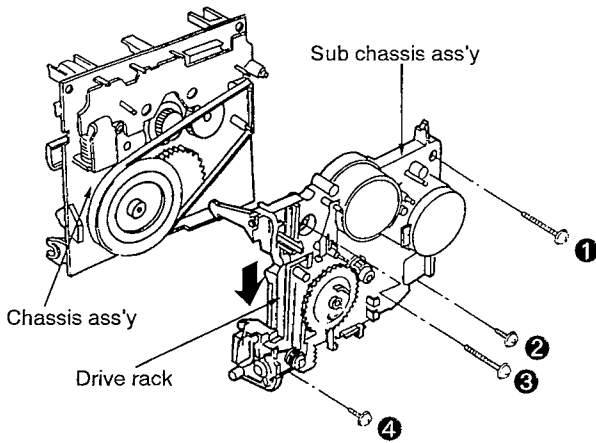
Step 6 Place the idle gear in the center as shown below.

Step 7 Temporarily secure the belt as shown below.

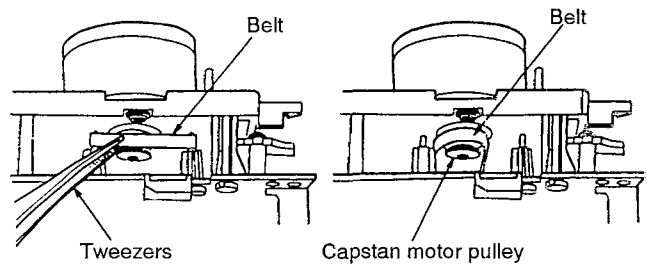


Step 8 Push the drive rack in the direction of arrow.

Step 9 Install the sub chassis ass'y to the chassis ass'y with 4 screws.



Step 10 Secure the belt with the capstan motor pulley.

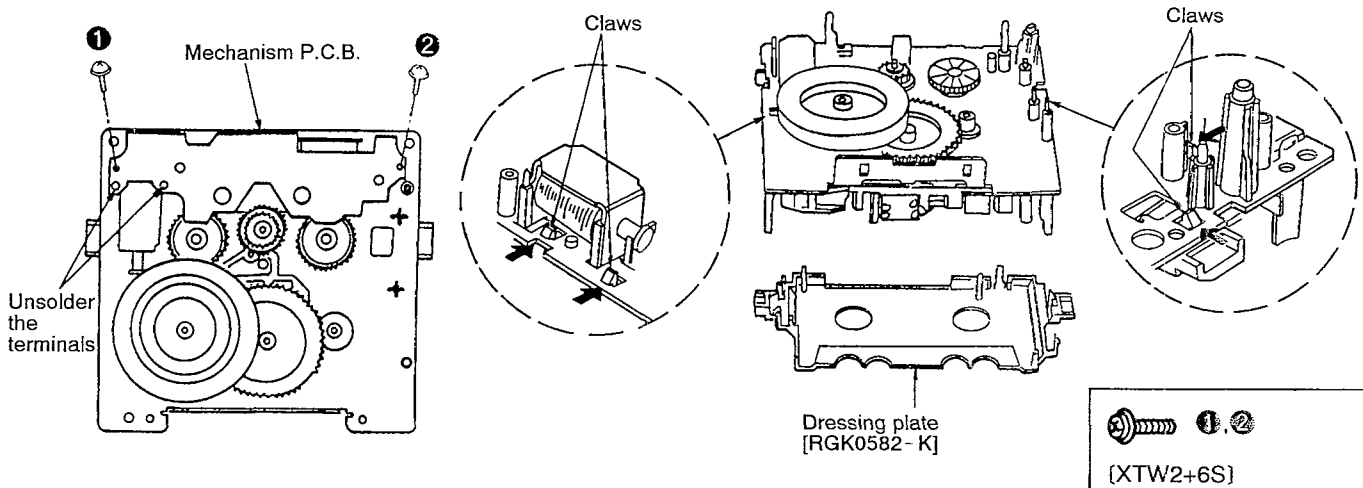


9. Replacement for the parts mounted on mechanism P.C.B. and solenoid unit

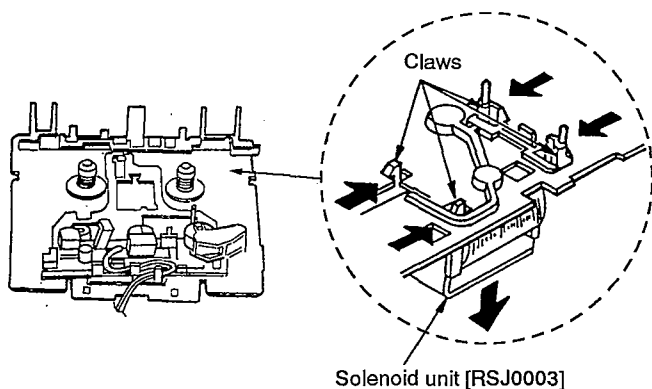
Step 1 Perform **Step 1** ~ **Step 4** in item 8 on page 16.

Step 2 Remove the 2 screws and unsolder the terminals (2 points), and then remove the mechanism P.C.B..

Step 3 Release the 4 claws, and then remove the dressing plate.

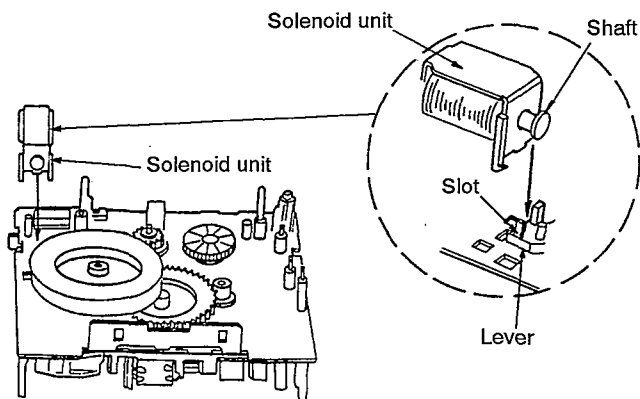


Step 4 Release the 4 claws.



NOTE Notice for installing the solenoid unit

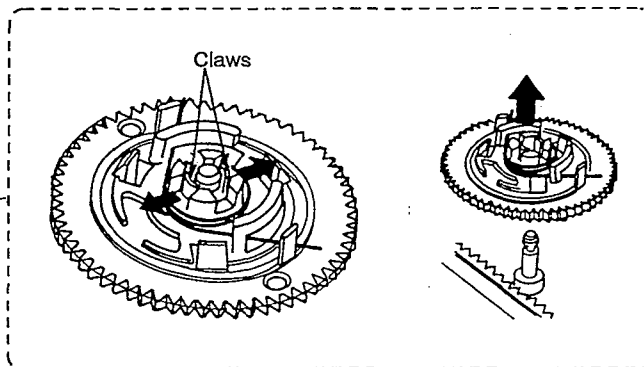
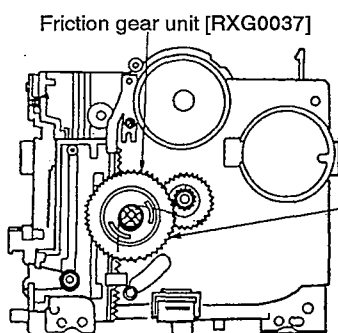
•The shaft of solenoid unit should be aligned with the slot of lever.



10. Replacement for the friction gear unit and drive rack

Step 1 Perform the **Step 1** ~ **Step 4** in item 8 on page 16.

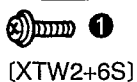
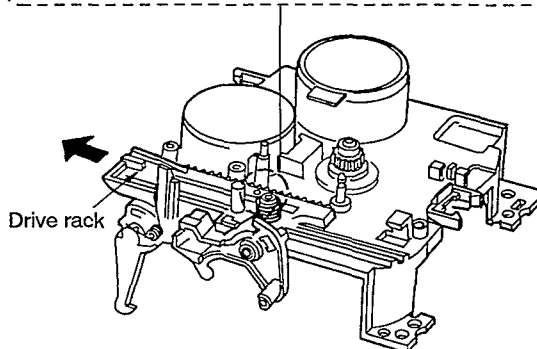
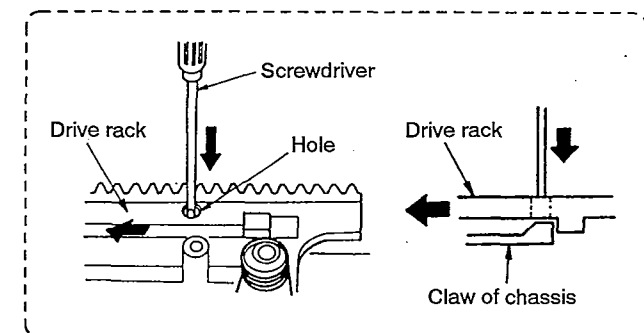
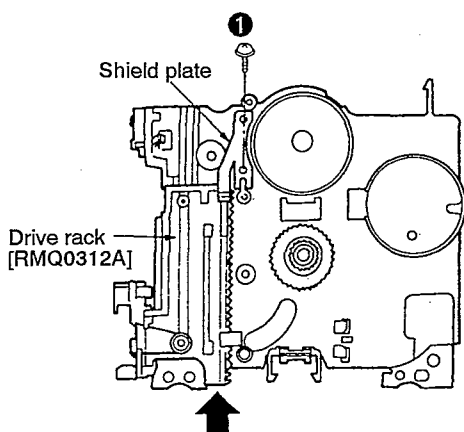
Step 2 Spread the 2 claws, and then remove the friction gear unit.



Step 3 Remove the screw and shield plate.

Step 4 Force the drive rack in the direction of arrow.

Step 5 Remove the drive rack using screwdriver inserted into the hole.



■ WRITING TO EEPROM

This unit is equipped with EEPROM memory that stores a variety of design data and performance data such as playback gain, bias value, recording gain, recording equalization, etc., which was programmed at the factory.

This EEPROM memory is capable of being read and written to more than 100,000 times. To illustrate this, if one ATC operation is performed every hour continuously every day for ten years, it would still be possible to successfully read and write with the EEPROM.

Data is actually written in this EEPROM only when ATC is actuated or when power supply is turned on or off. Since it hardly breaks down, there will scarcely occur such a trouble as to require replacement.

Measurement Condition

- Recording-level control; Maximum
- Recording-balance control; Center
- Dolby NR switch; Off
- ATC switch; Off
- Headphones volume control: Maximum
- Make sure heads are clean
- Judgeable room temperature 20±5°C (68±9°F)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- AF oscillator
- ATT (Attenuator)
- Resistor (600Ω)

NOTE: Before adjustment, be sure to set the AF oscillator output level to 0dB (1kHz): 1V

Test tape

- Playback gain adjustment (315Hz, 0dB); QZZCFM
- Overall gain adjustment and Overall frequency response, HX PRO adjustment
Normal reference blank tape; QZZCRV2
CrO₂ reference blank tape; QZZCRX1
Metal reference blank tape; QZZCRZ5

NOTE: Step 2 to step 7 only has to be done after exchange of the EEPROM.

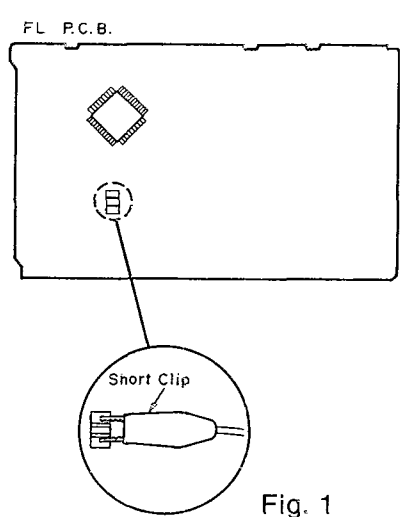
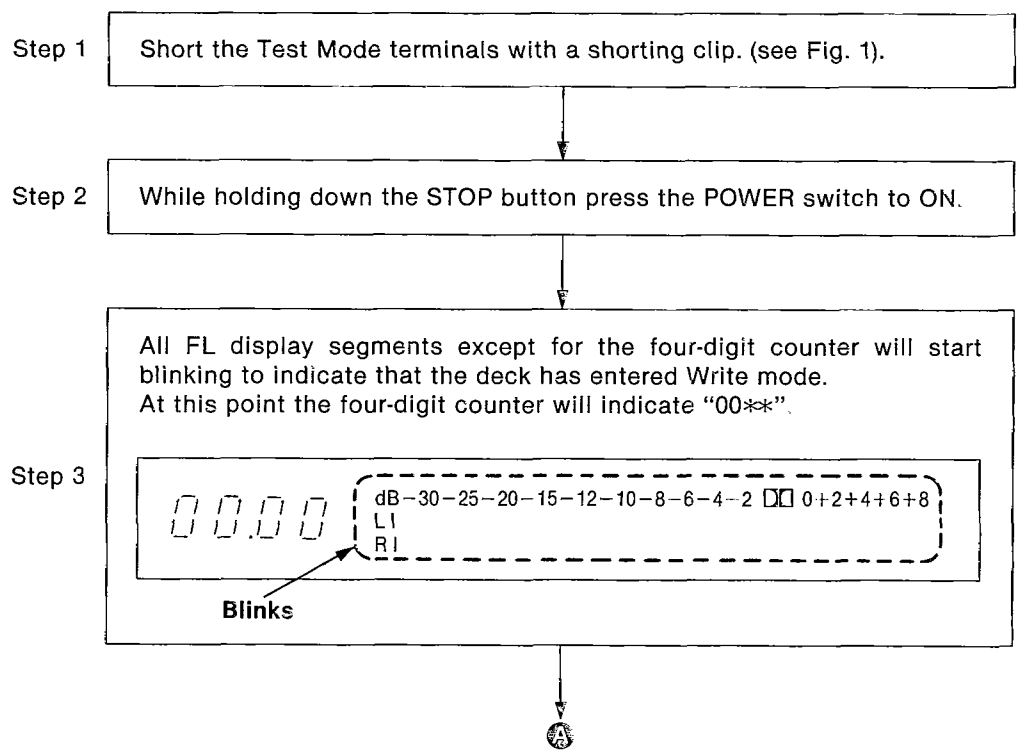


Fig. 1

Notes:

- The test mode terminals on main P.C.B. should be shorted with a short clip as shown above figure.
- After the adjustment items disconnect the short clip.

A

Step 4

The counter shows a four-digit hex number. The two high-order digits indicate a ROM address, and the two low-order digits indicate the data stored at that address.

Step 5

Set these digits using the FF or REW button. The high- and low-order digits of the address increment alternately each time the FF button is pressed. The REW button causes these digits to decrement alternately. For fast incrementing or decrementing, hold down the FF or REW button.

Set these digits using the REC or PAUSE button. The high- and low-order digits of the data increment alternately each time the REC button is pressed. The PAUSE button causes these digits to decrement alternately. For fast incrementing or decrementing, hold down the REC or PAUSE button.

Example: Set "08" in address 14 (see Fig. 4).

Set these digits to "08" using the REC or PAUSE button.

Set these digits to "14" using the FF or REW button.

* The data writing process is complete when the next address number appears. For example, writing of the data 14.08 has been completed when the address 15 is displayed.

Step 6

Begin from address 00 and write data up to address 7F (data in). Check that the data at address 7F is "00" (end), and then exit the write mode.

Step 7

After completing ROM writing, press the STOP button to restore the normal Test mode. The four-digit counter on displays.

Blinks

PLAYBACK GAIN

Step 8

- Set the AF oscillator's output frequency to 315Hz/-20dB (100mV) (see Fig. 2).
- With no tape loaded in the deck, press and hold the REC button. Adjust the test signal level using the Rec. Level and Balance controls until the line output levels on both channels are 320mV. When the adjustment is complete, release the REC button. (The deck stores the data at the moment the REC button is released.)
- Load the test tape, QZZCFM, into the deck and locate the section of the tape where the playback gain test tone (315Hz, 0dB) is recorded, then playback the portion. Press the ATC button, and the display will flash MEMO slowly, meaning that playback gain is being automatically adjusted. Press the PLAY button. (At this point the deck automatically adjusts playback gains.) After this play back the tape and verify that the output level falls in the specified range.

Standard value: 320mV ± 0.5dB

Note: If adjustment of PLAYBACK GAIN fails, the display will flash MEMO rapidly. After a successful adjustment, the display will no longer show MEMO.

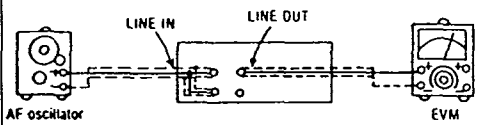


Fig. 2

B

ⓑ

HX PRO ADJUSTMENT

Step 9

- Insert the Metal blank tape (QZZCRZ5) and set the unit to the Record Pause mode.
- Connect a DC voltmeter across TP1 (R-CH) and GND, TP2 (L-CH) and GND.
- Adjust L301 (R-CH) and L302 (L-CH) so that the output is the minimum value.

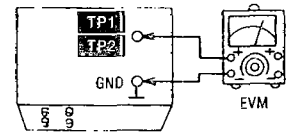


Fig. 3

INITIAL SETTING UP FOR OVERALL GAIN AND OVERALL FREQUENCY RESPONSE

Step 10

- Load a Normal blank test tape (QZZCRV2) into the deck under test. Press the ATC button, then the REC button. The display will flash MEMO slowly. (At this point the deck automatically adjusts the overall gain and frequency response.)
- After the above setting, the overall gain for selection of CrO₂ and Metal tape will be automatically set by the ROM and stored in the ROM.
Note: If adjustment of OVERALL GAIN or OVERALL FREQUENCY RESPONSE fails, the display will flash MEMO rapidly. After a successful adjustment, the display will no longer show MEMO.

Step 11

Remove the shorting clip from the Test Mode terminals. The FL display will stop blinking.

Note: If the microprocessor is replaced, it is not necessary to replace (or write data to) the EEPROM.

• **EEPROM MAP**

High Low	0	1	2	3	4	5	6	7
0	00	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—
4	—	08	—	—	—	6E	96	A6
5	—	20	—	—	—	66	98	7D
6	—	12	—	—	—	28	1E	1A
7	—	07	—	—	—	64	6A	79
8	—	FB	—	—	—	BF	BF	BC
9	—	F5	—	—	—	—	—	02
A	—	4A	—	—	—	—	—	—
B	—	60	—	—	—	7C	7D	7D
C	—	5D	—	—	—	70	6B	6B
D	—	90	—	—	—	82	83	83
E	—	4C	95	96	97	—	00	05
F	—	53	0E	0D	0D	—	00	00

Fig. 4

Note: At an address with no data value indicated (e.g. 01 → —), the ROM operates normally irrespective of the kind of the data supplied.

MEASUREMENTS AND ADJUSTMENTS

Measurement Condition

- Recording-level control; Maximum
- Recording-balance control; Center
- Headphones volume control; Maximum
- Dolby NR switch; Off
- ATC switch; Off

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

Measuring instrument

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

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

NOTE: Before adjustment, be sure to set the AF oscillator output level to 0dB (1 kHz): 1V

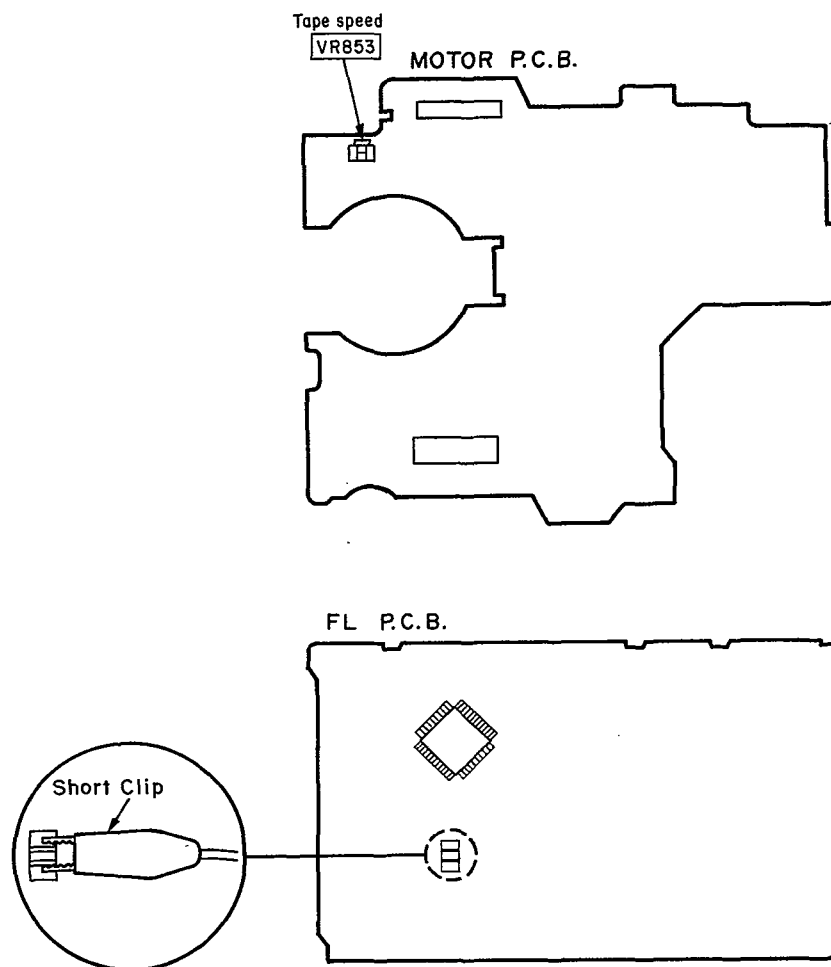
Test tape

- Head azimuth adjustment (8kHz, -20dB)
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB)
- Playback gain adjustment (315Hz, 0dB)

; QZZCFM

- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Overall gain adjustment and Overall frequency response Normal reference blank tape; QZZCRV2
- CrO₂ reference blank tape; QZZCRX1
- Metal reference blank tape; QZZCRZ5

Adjustment Points

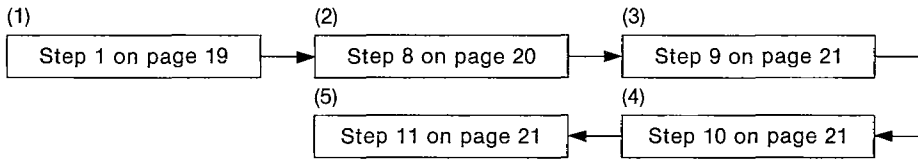


Notes:

- The test mode terminals on main P.C.B. should be shorted with a short clip as shown left figure.
- After the adjustment items disconnect the short clip.

HEAD REPLACEMENT

When replacing the head, adjust the head azimuth as instructed below, and rewrite the data to the EEPROM. (By adjusting head azimuth, data is automatically written to the EEPROM.)



(The adjustment is necessary because the playback gain, the overall gain, and the overall frequency response are changed by the head replacement.)

HEAD AZIMUTH ADJUSTMENT

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

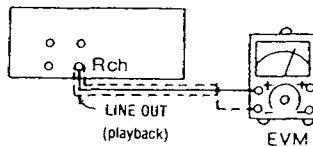


Fig. 5

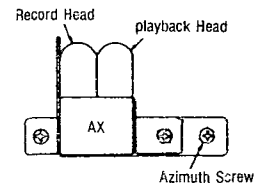


Fig. 6

TAPE SPEED ADJUSTMENT

(Standard value: 3000 ± 45 Hz)

1. Playback the middle portion of the test tape (QZZCWAT).
2. Short the test terminal.
3. Adjust VR853 so that the output is within the adjustment target.

Adjustment target: 3000 ± 15 Hz

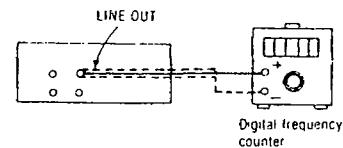


Fig. 7

PLAYBACK GAIN MEASUREMENT

1. Short the test terminal.
2. Load the test tape (QZZCFM) into the deck and locate the part where the playback gain test tone (315Hz, 0dB) is recorded. After this, play back the tape and verify that the output level falls in the specified range.

Standard value: $320 \text{ mV} \pm 0.5 \text{ dB}$

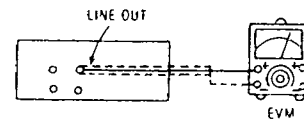
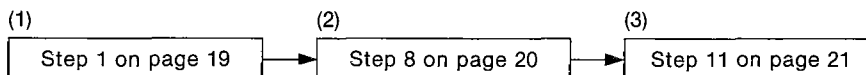


Fig. 8

3. Release the test terminal.
4. When the data is not within the specified range, the head azimuth should be readjusted as instructed below and the data in the EEPROM rewritten. (By adjusting head azimuth, data is automatically written to the EEPROM.) When adjusting head azimuth, check the test tape for scratches or crease. If any exist, use a different tape and follow instructions 1 to 3 below.



PLAYBACK FREQUENCY RESPONSE

1. Playback the frequency response portion (315Hz, 12.5kHz~63Hz, -20dB) of the test tape (QZZCFM).
2. Assure that the frequency response is within the range shown in Fig. 10 for both L-CH and R-CH.

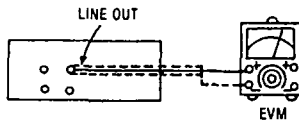


Fig. 9

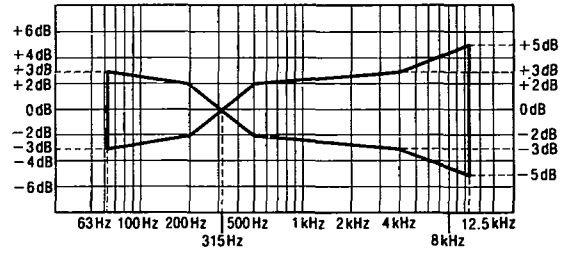


Fig. 10

ERASE CURRENT MEASUREMENT

1. Insert the Metal blank test tape (QZZCRZ) in the deck, press the Record button.
2. Check if the output at this time between the erase current confirmation point TP3 and GND (chassis) is within the standard value.

Standard value: $190 \pm 25 \text{ mA (Metal)}$..EVM Reading: $190 \pm 25 \text{ mV}$

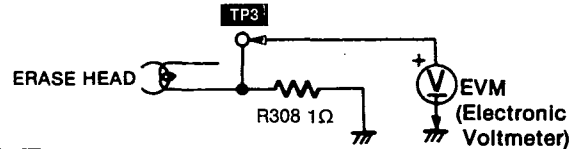


Fig. 11

CONFIRMATION OF THE OVERALL GAIN AND OVERALL FREQUENCY RESPONSE

1. In the Record Pause mode, load a normal blank tape (QZZCRV2) into the deck, and apply the reference input signal (1kHz, -24dB) to the Rec. input. Adjust the output to 320mV with the attenuator, and start recording.
2. While playing back the reference signal just recorded, verify that the output level falls in the following range.

Standard value: $320 \text{ mV} \pm 0.5 \text{ dB}$

3. Afterward, apply a signal (frequency at the measured point in the range from 50Hz to 10kHz), whose level is 20dB lower than the reference signal level (1kHz, -24dB=approx. 63mV), to the Rec. input. Then start recording with a normal blank tape (QZZCRV2).
4. Play back the test signals just recorded and verify that the levels at the test frequencies fall in the ranges specified in Fig. 12 with respect to the reference signal level.
5. Repeat steps 3 and 4 above for CrO₂ blank test tape (QZZCRX1) and Metal blank test tape (QZZCRZ5), in these cases raising the upper end of the test signal frequency range to 12.5kHz. Verify that the signal levels at the test frequencies fall in the ranges specified in Fig. 13 with respect to the reference signal level.
6. Steps 1 through 2 above are concerned with overall gain; steps 3 through 5 pertain to overall frequency response.
7. When the data is not within the specified range, the head azimuth should be readjusted as instructed below and the data in the EEPROM rewritten. (By adjusting head azimuth, data is automatically written to the EEPROM.) When adjusting head azimuth, check the test tape for scratches or creases. If any exist, use a different tape and follow instructions 1 to 4 below.
8. If outside the standard value, data in EEPROM should be written again by taking the following procedure and thereafter section 1-6 should be carried out again.

Normal Overall frequency response chart (NR OUT)

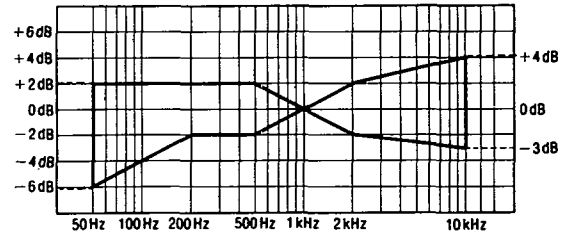


Fig. 12

CrO₂ Metal Overall frequency response chart (NR OUT)

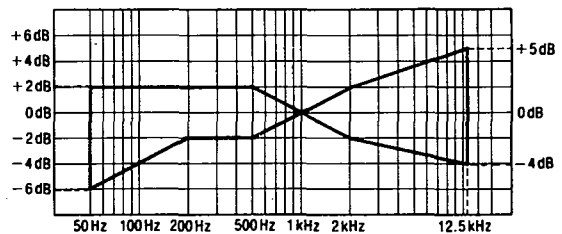


Fig. 13

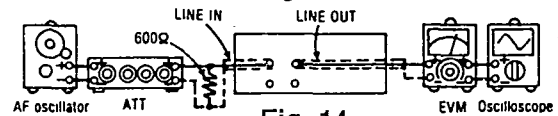
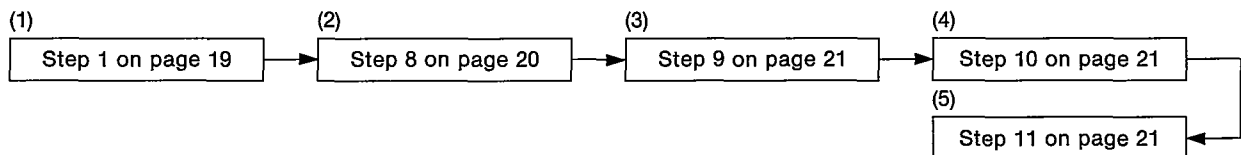
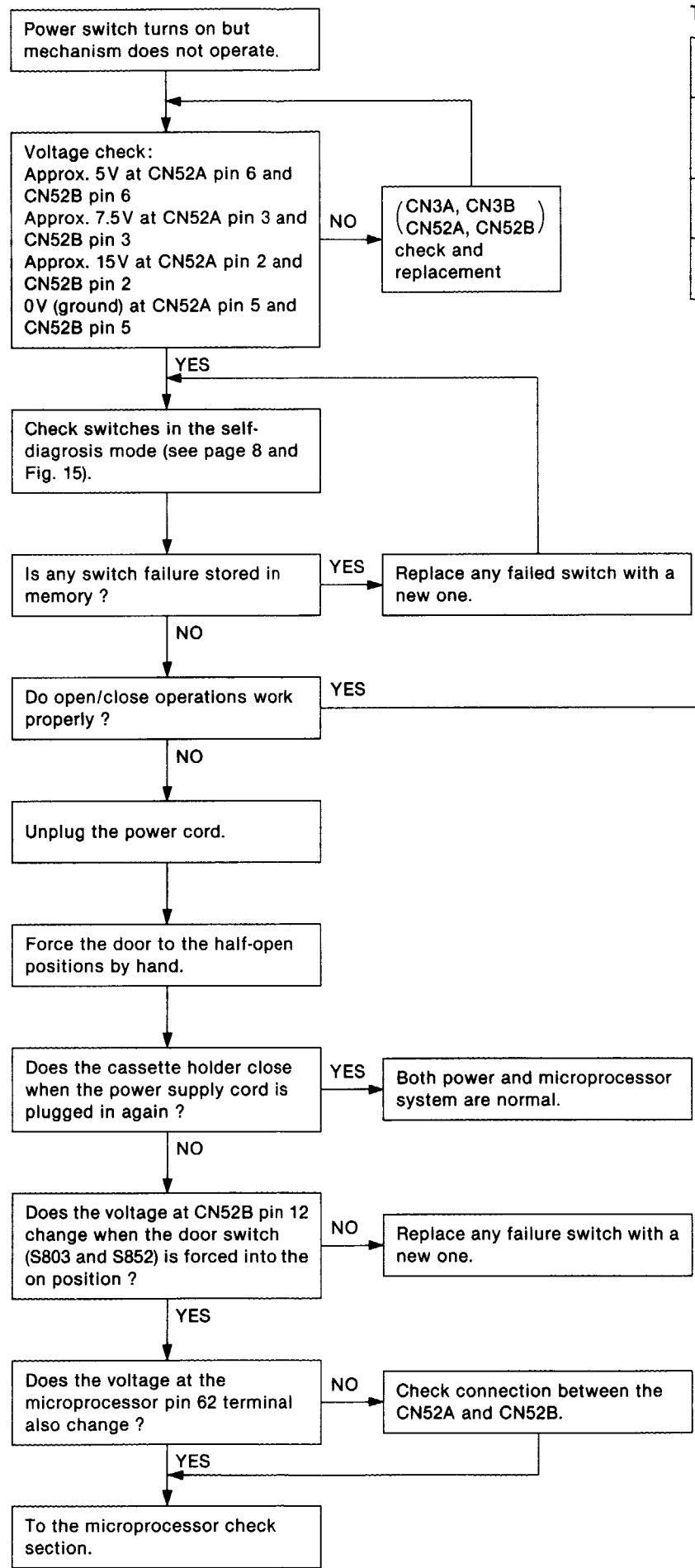
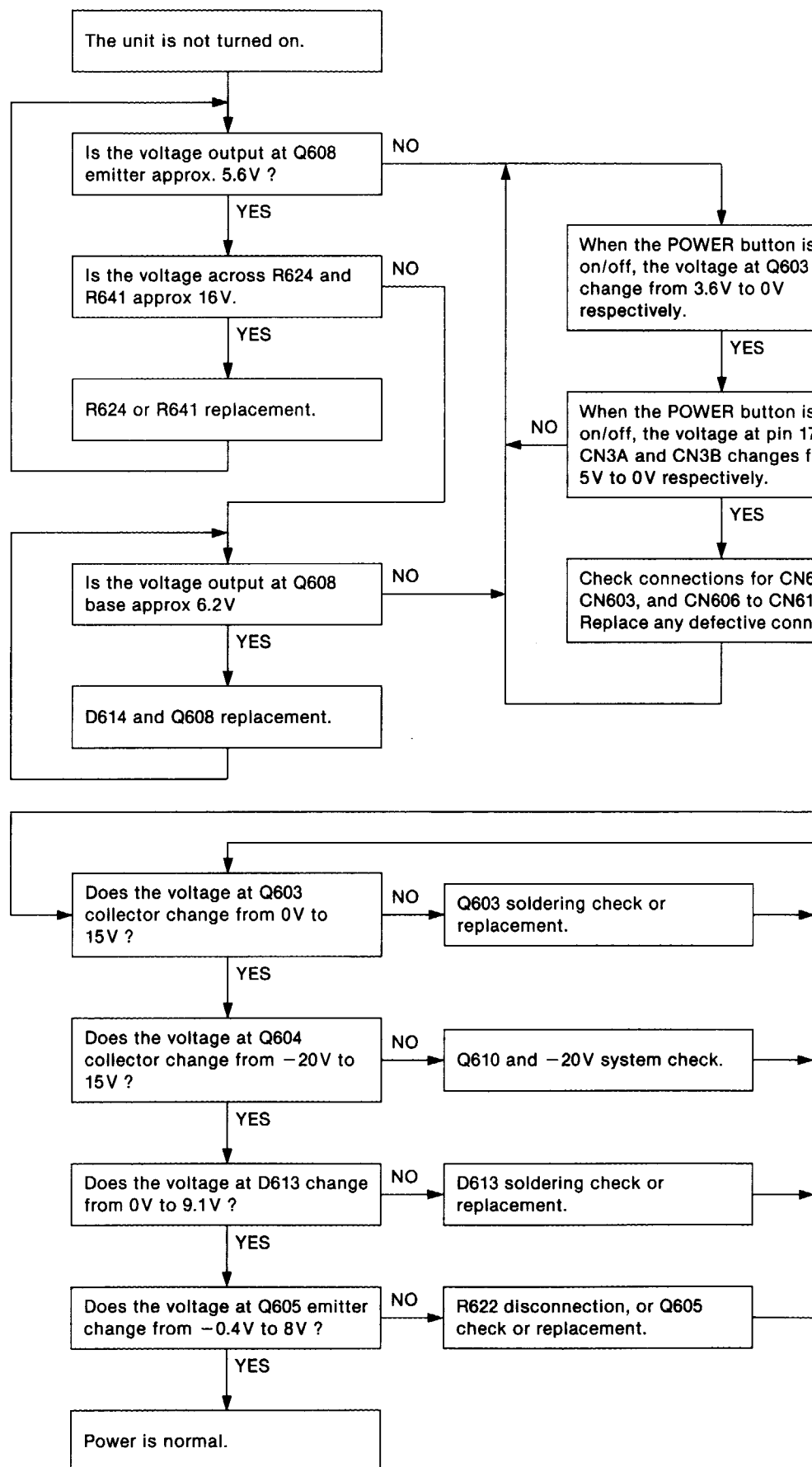


Fig. 14



TROUBLESHOOTING GUIDE

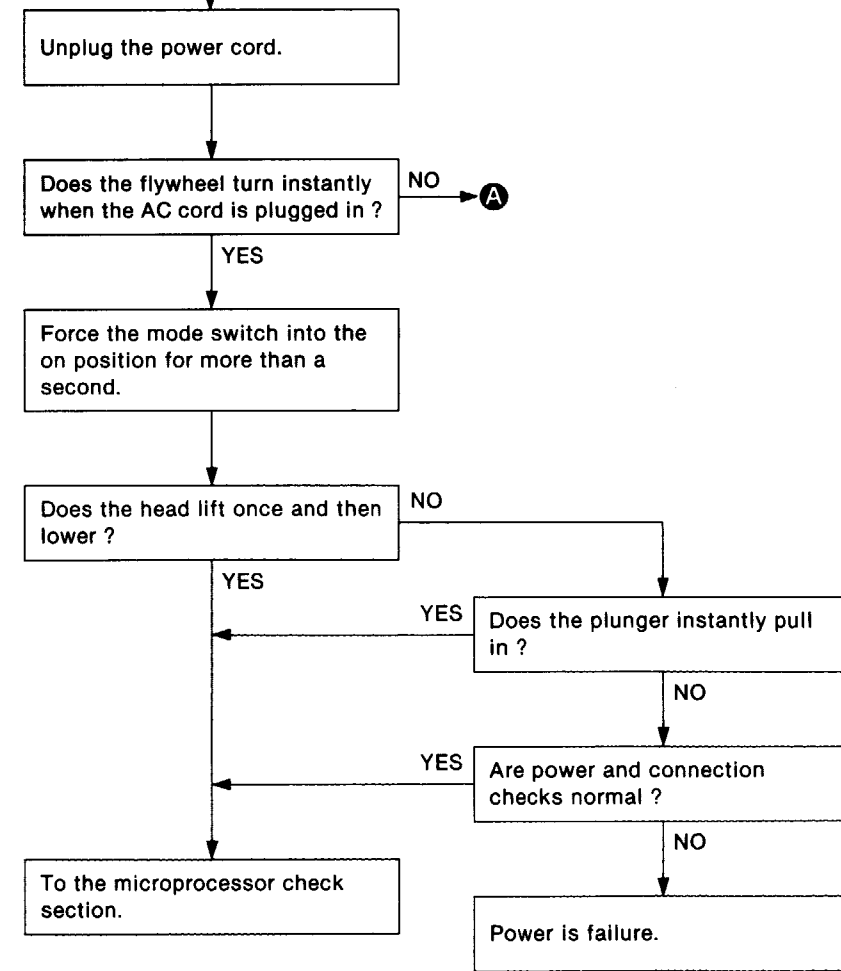
*To perform troubleshooting, set the unit to the state described in the "Motor Control PCB Checking Method" on page 31.



To display stored results of self-diagnostic test

1	Check the cassette holder is empty (no cassette tape), then turn on the power.
2	Press and hold the DOLBY NR B button (for more than 3 seconds), and also press the STOP (■) button for about 2 seconds until the level meter changes from constantly lit to blinking.
3	To check the self-diagnostic results, press the STOP (■) button. These results are indicated in the respective displays.
4	To return the display to normal mode, switch the power off and then back on again.

Fig. 15



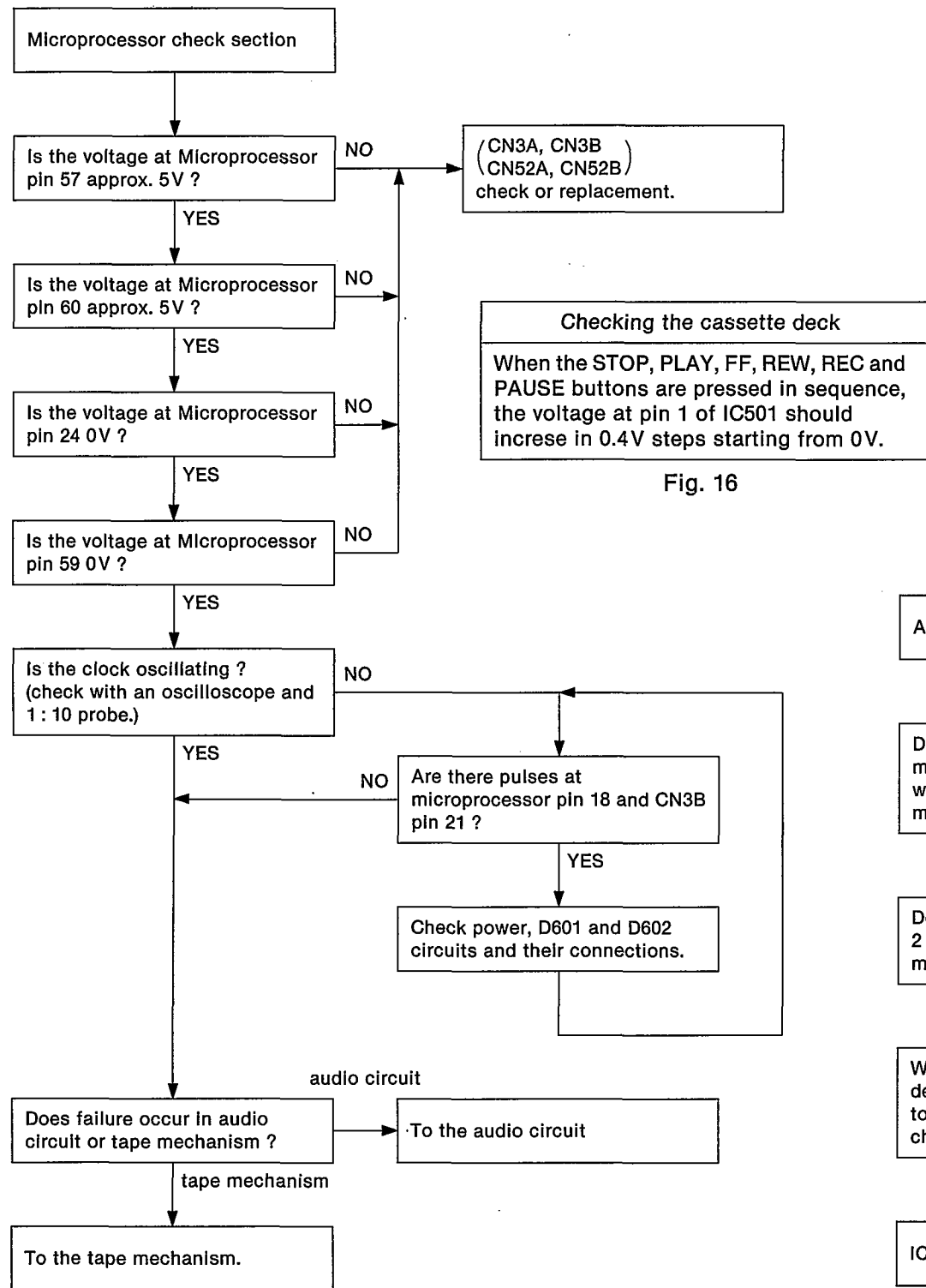
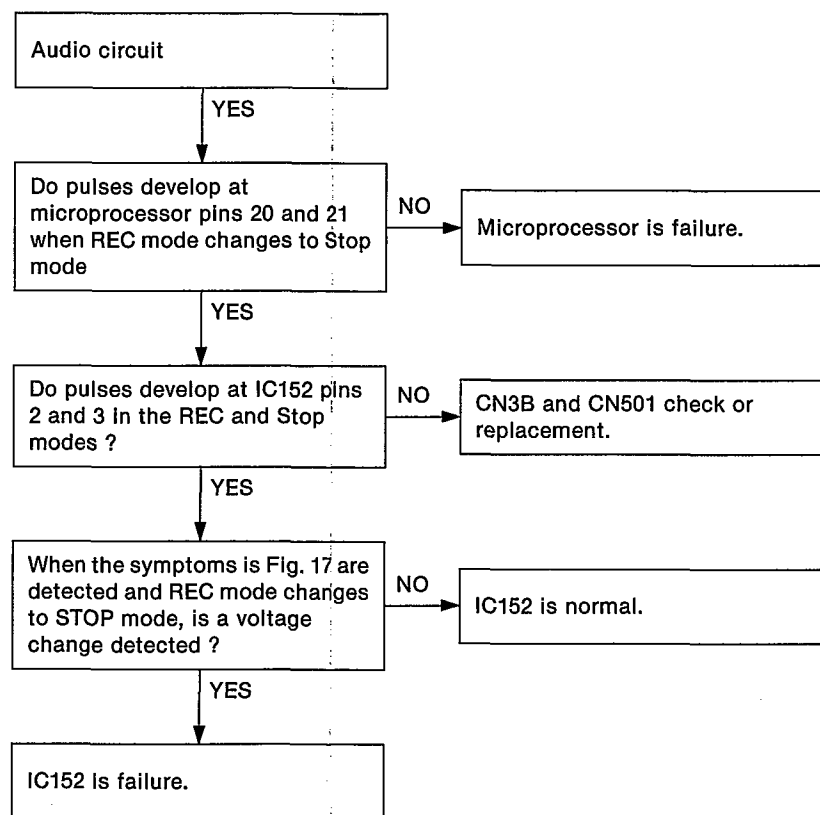
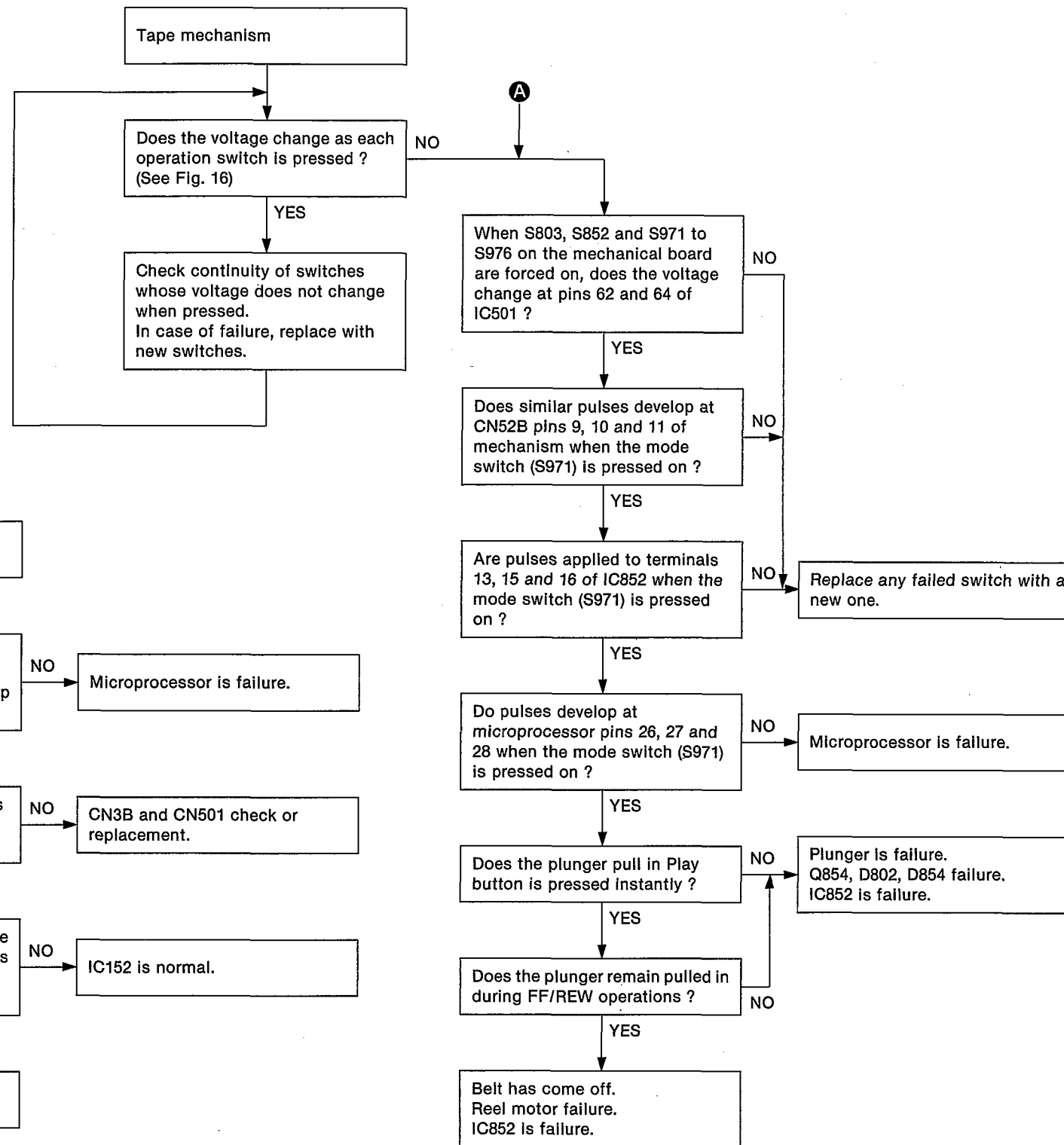


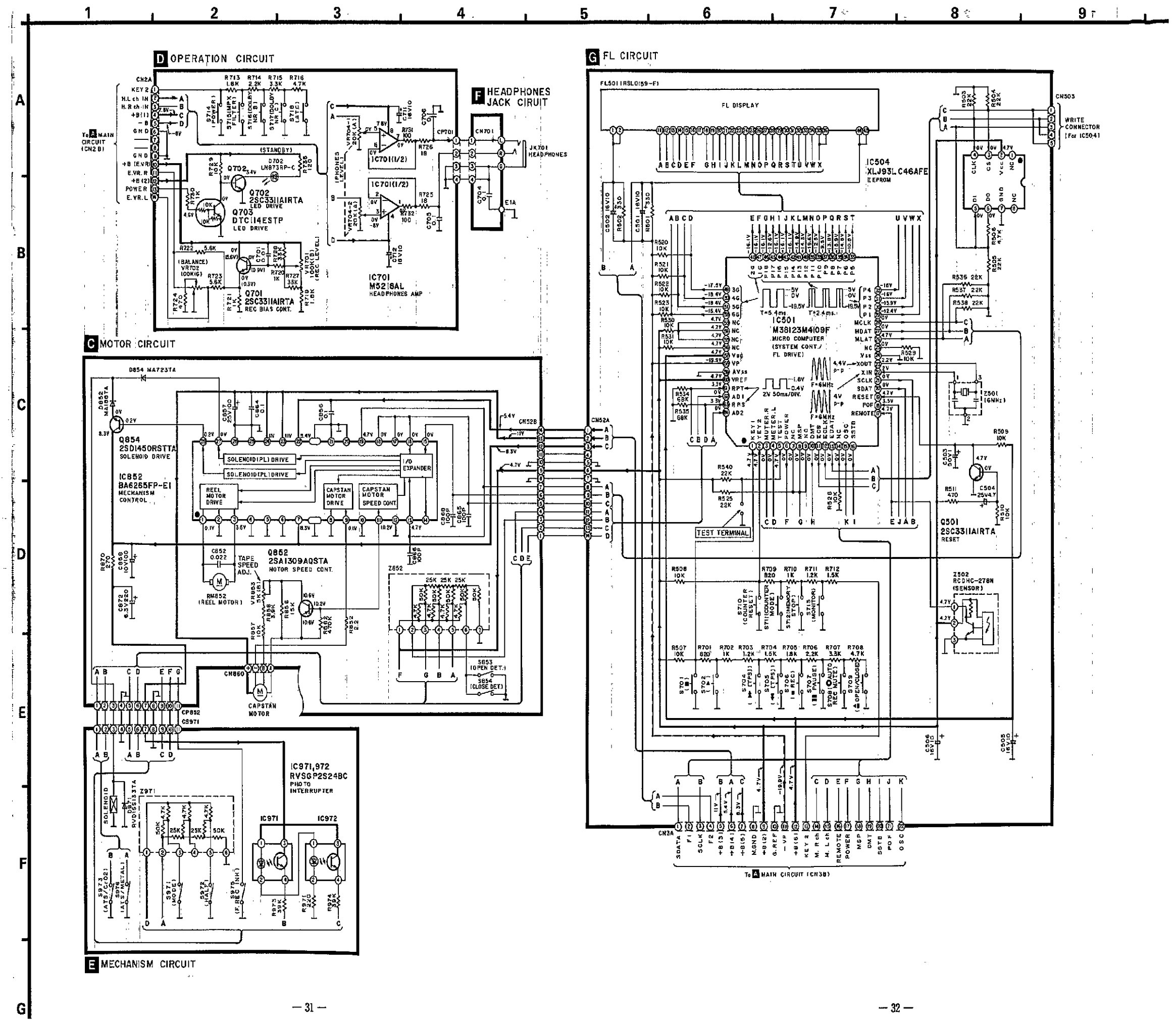
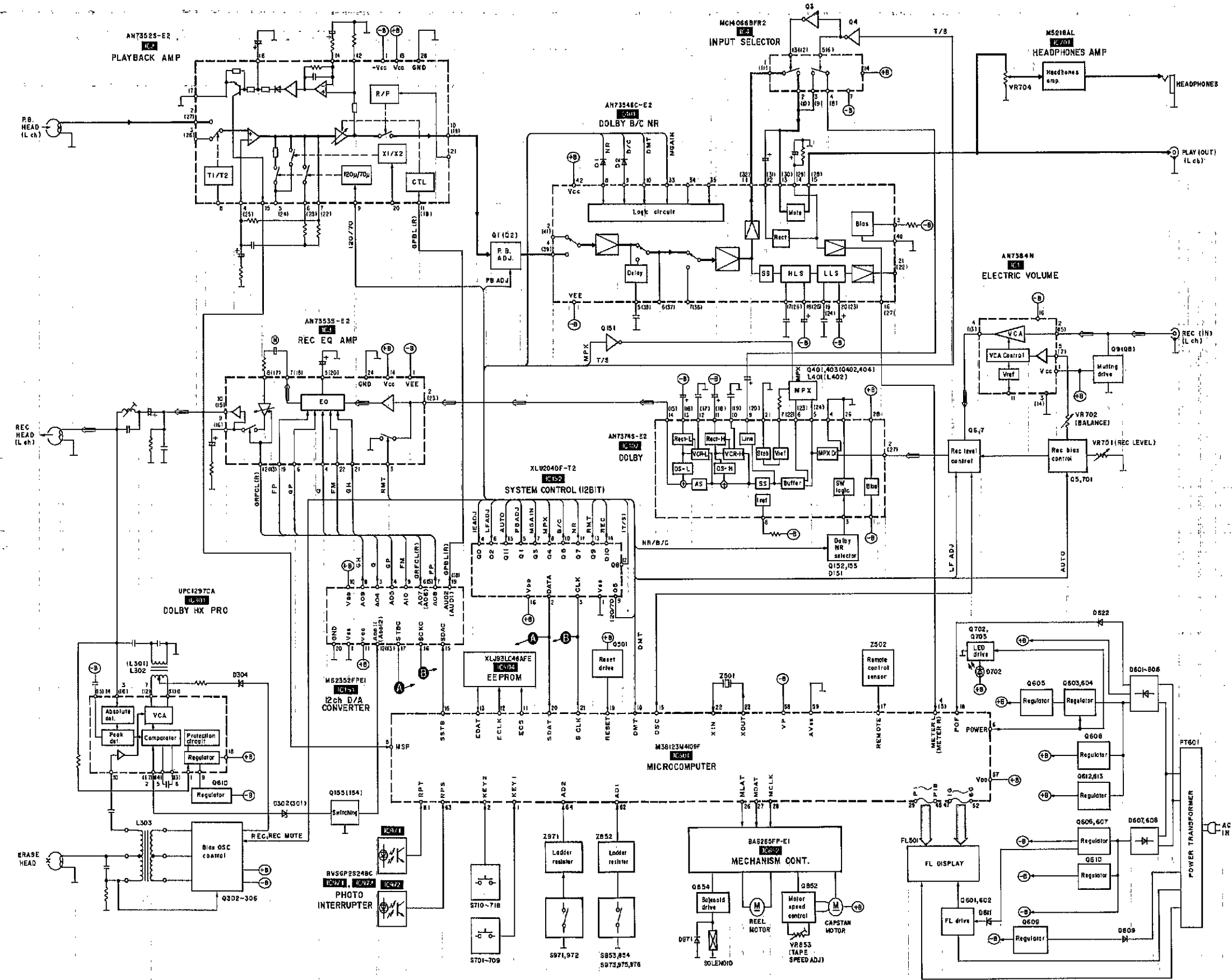
Fig. 16



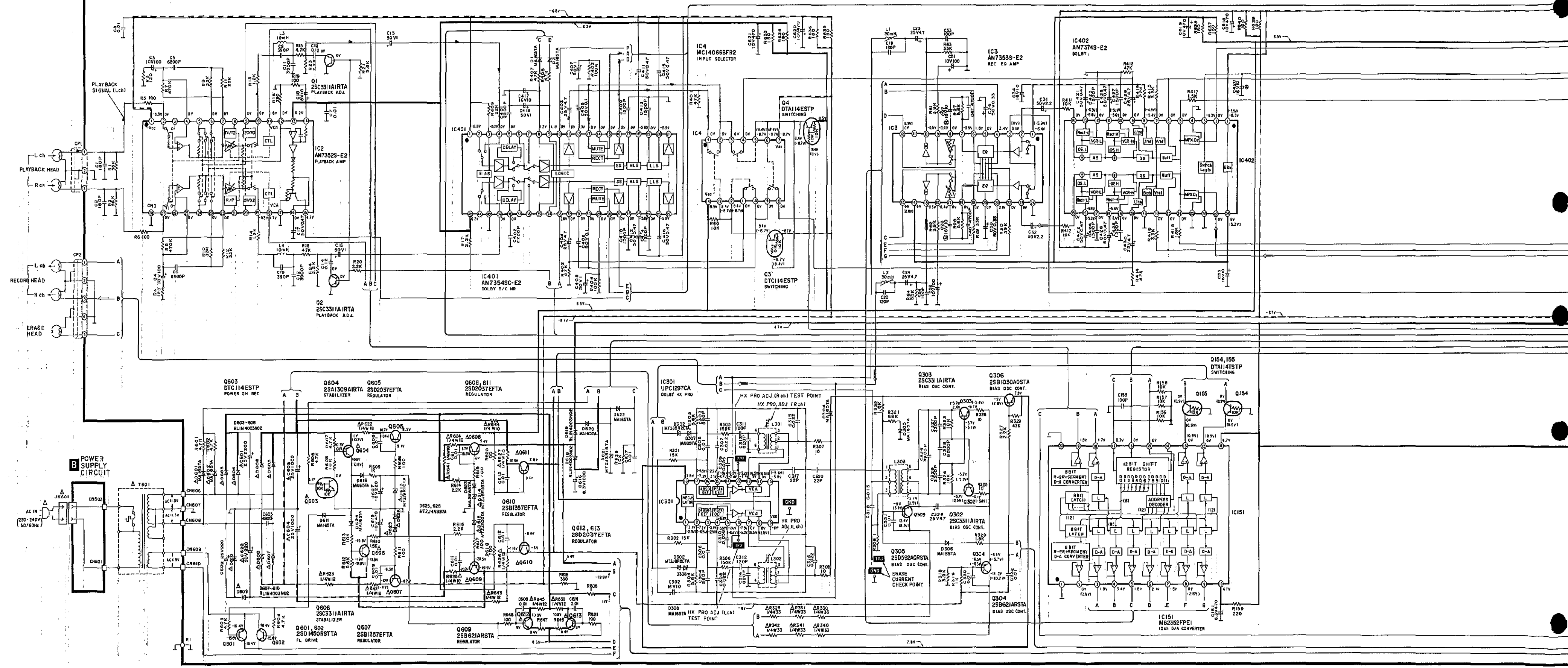
Symptom	Check Point
REC and Play produces no change.	IC152 pin 14
Dolby off, B and C produces no change.	IC152 pins 10 and 11
Auto Rec Mute does not operate.	IC152 pin 13

Fig. 17

BLOCK DIAGRAM

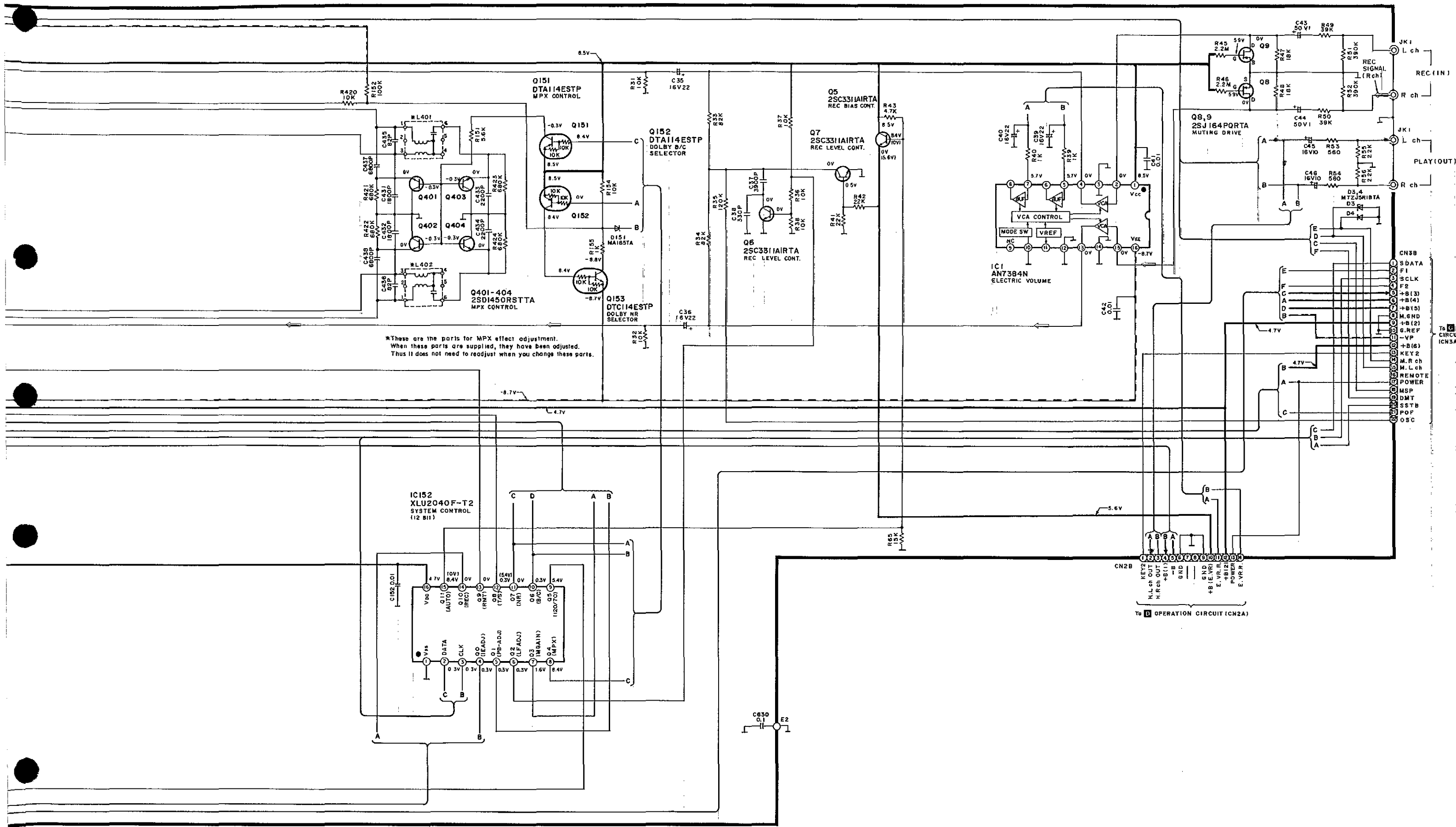


A MAIN CIRCUIT (PLAYBACK EQ AMP/POWER SUPPLY/REC EQ AMP/BIAS OSC & HX PRO/ENCODE DOLBY NR/CONTROL/DECODE DOLBY NR/ELECTRIC VOLUME)



SCHEMATIC DIAGRAM (Parts list on pages 53~56.)

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



*These are the parts for MPX effect adjustment.
When these parts are supplied, they have been adjusted.
Thus it does not need to readjust when you change these parts.

Note 1:

- S701 : Stop switch (■).
- S702 : Playback switch (▶).
- S704 : Fast-forward search [TPS] switch (▶▶ [TPS]).
- S705 : Rewind search [TPS] switch (◀◀ [TPS]).
- S706 : Record switch (● REC).
- S707 : Pause switch (■ PAUSE).
- S708 : Automatic-record-muting switch (● AUTO REC MUTE).
- S709 : Cassette holder open/close switch (▲ OPEN/CLOSE).
- S710 : Tape/liner counter reset switch (COUNTER RESET).
- S711 : Tape/liner counter mode switch (COUNTER MODE).
- S712 : Memory stop switch (MEMORY STOP).
- S713 : Monitor switch (MONITOR).
- S714 : Power "STANDBY & /ON" switch (POWER, STANDBY & /ON).
- S715 : Multiplex filter switch (MPX FILTER).
- S716 : Dolby noise reduction switches (DOLBY NR B, C).
S716 : DOLBY NR B, S717 : DOLBY NR C
- S718 : Auto tape calibration switch (ATC).
- S853 : Cassette holder open detection switch in "off" position.
- S854 : Cassette holder close detection switch in "off" position.
- S971 : Mode switch in "off" position.
- S972 : Half switch in "off" position.
- S973 : ATS (CrO₂) switch in "off" position.
- S975 : REC inhibit switch in "off" position.
- S976 : ATS (Metal) switch in "off" position.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1 K=1,000 (Ω), 1 M=1,000 k (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
()..... Voltage values at record mode.

- For measurement us EVM.
- Important safety notice
Components identified by ▲ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
- (— +B —) indicates +B (bias).
- (— -B —) indicates -B (bias).
- (—▶—) indicates the flow of the playback signal.
- (—▶—) indicates the flow of the record signal.
- The supply part number is described alone in the replacement parts list.

Ref. No.	Production Part No.	Supply Part No.
IC152	XLU2040F-T2	XLU2040F-T1
IC701	M5218AL	M5218L

※ marks indicate printed resistor.

Caution!

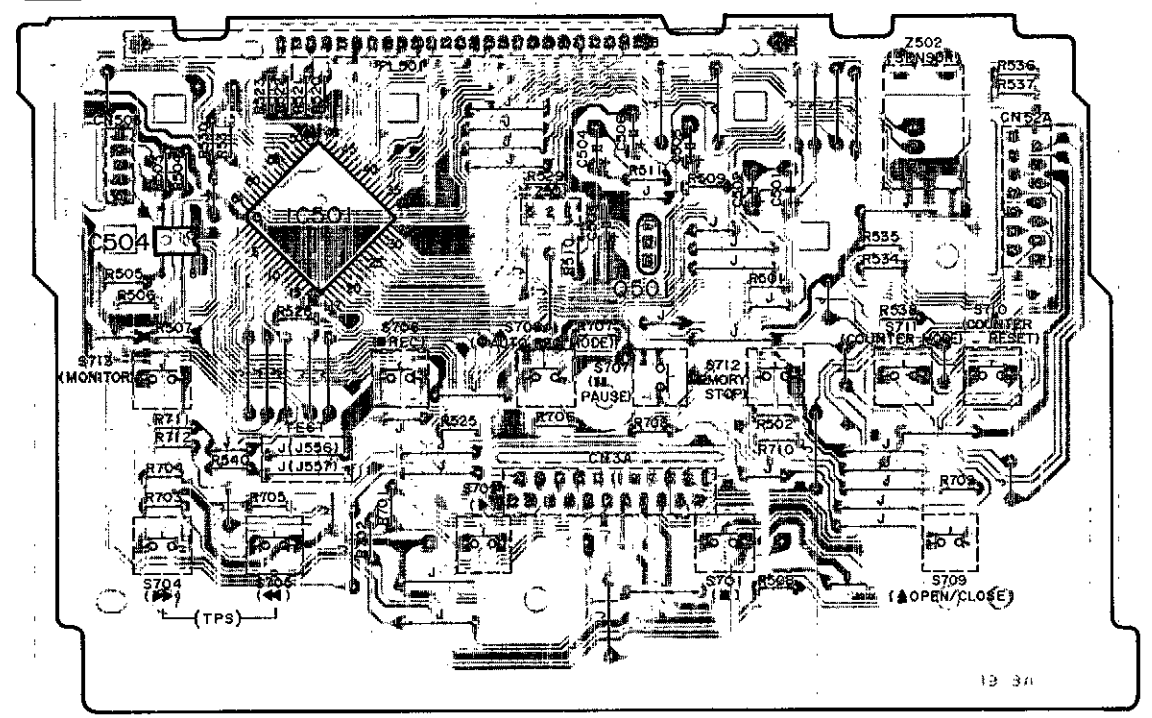
- IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers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

PRINTED CIRCUIT BOARDS

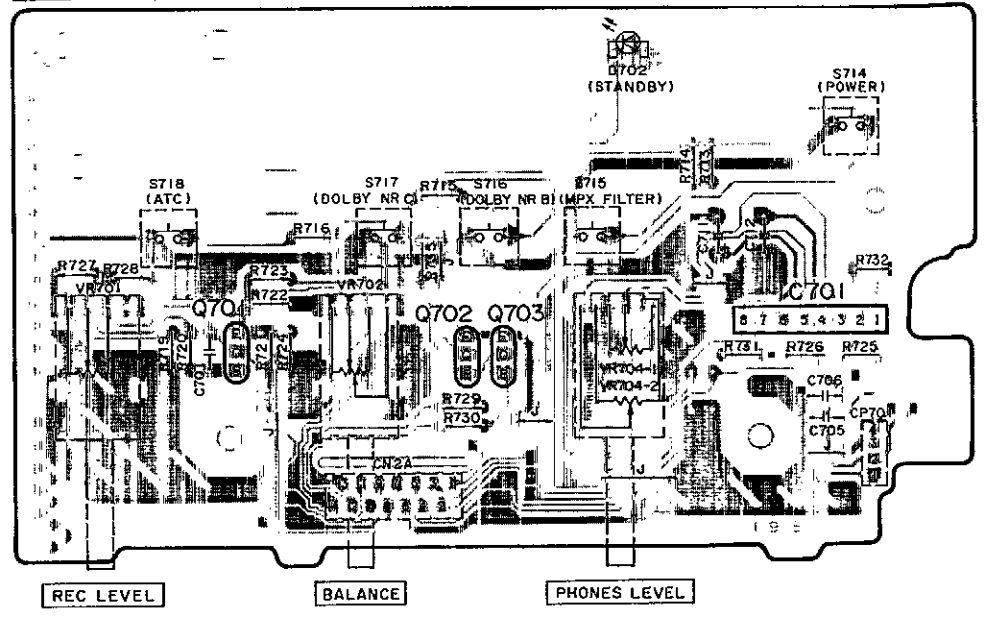
(This printed circuit boards may be modified at any time with the development of new technology).

A
B
C
D
E
F
G

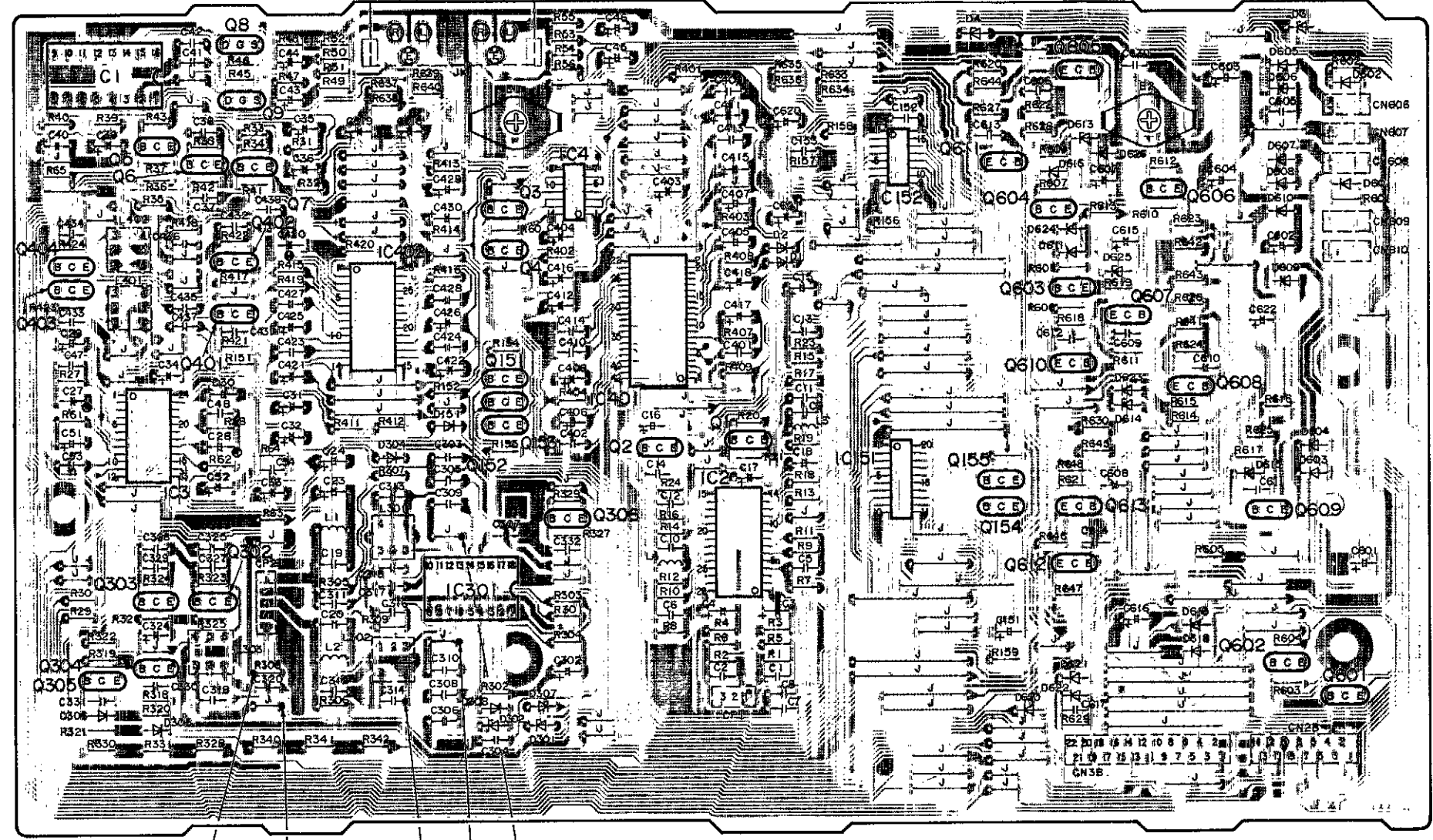
G FL P.C.B. (REP1957A-S)



D OPERATION P.C.B. (REP1957A-S)

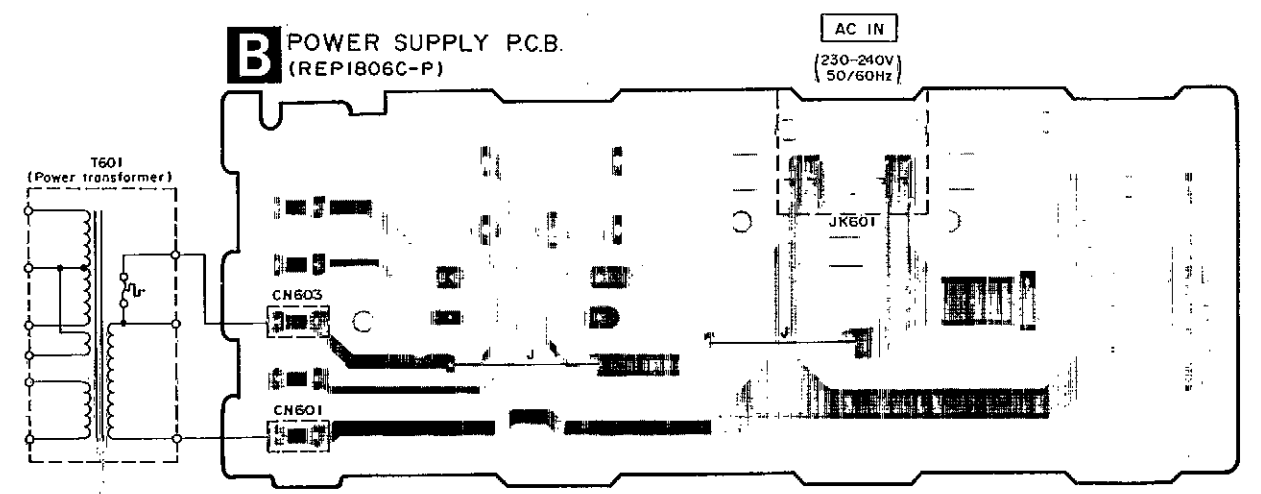


A MAIN P.C.B. (REP1956A-M)

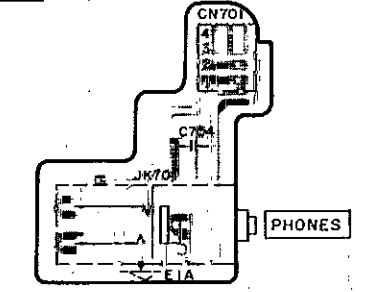


GND TP-3 ERASE CURRENT CHECK POINT
GND TP-2 TP-1 (Lch) (Rch) HX PRO ADJ. TEST POINT

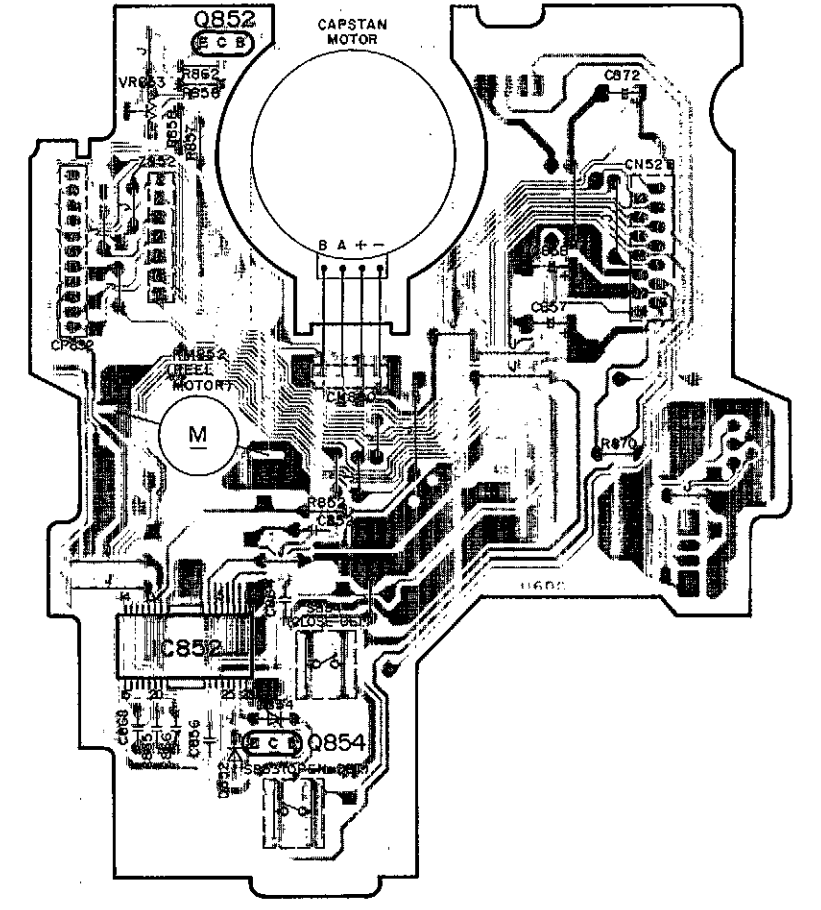
B POWER SUPPLY P.C.B. (REP1806C-P)



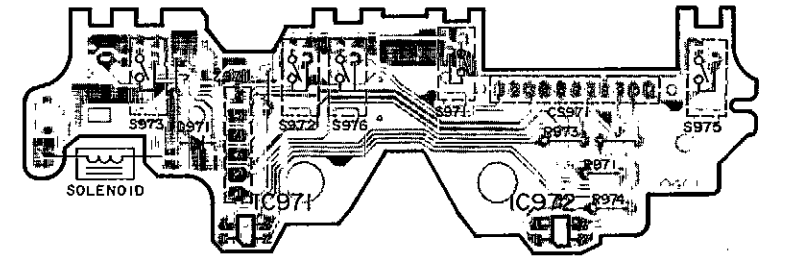
F HEADPHONES JACK P.C.B. (REP1957A-S)



C MOTOR P.C.B. (REP1959A-T)



E MECHANISM P.C.B. (REP1954A)

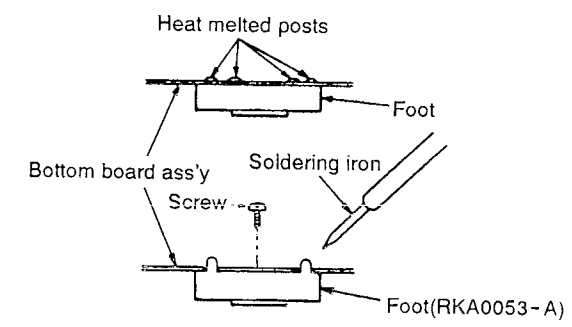


Terminal guide of IC's, transistors and diodes

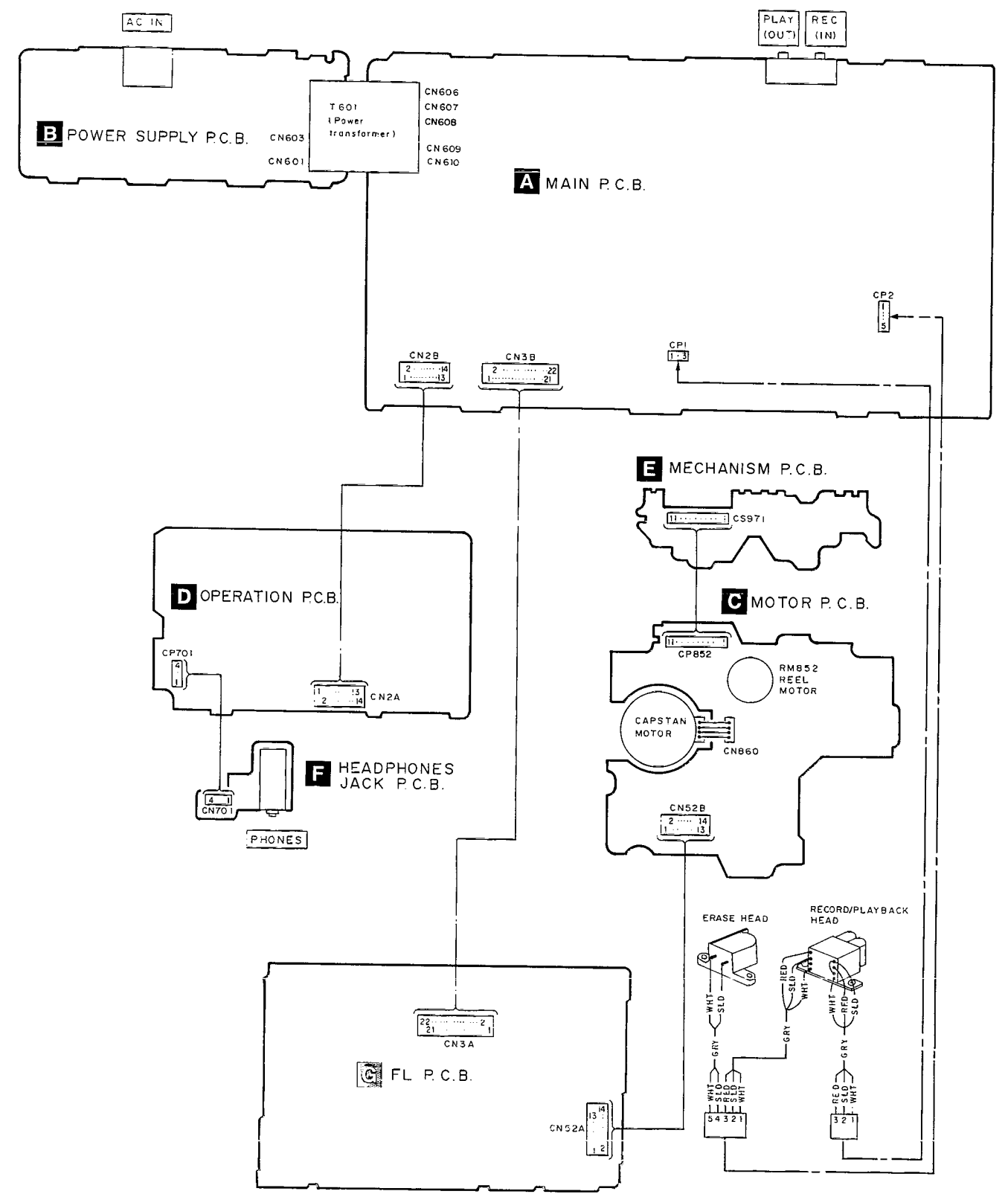
<p>BA6265FP-E1</p>	<p>No. 1</p> <table border="1"> <tr><td>XLJ93LC46AFE</td><td>8 Pin</td></tr> <tr><td>MC14066BFR2</td><td>14 Pin</td></tr> <tr><td>XLU2040F-T2</td><td>16 Pin</td></tr> <tr><td>M62352FPE1</td><td>20 Pin</td></tr> <tr><td>AN7353S-E2</td><td>24 Pin</td></tr> <tr><td>AN7352S-E2</td><td>28 Pin</td></tr> <tr><td>AN7374S-E2</td><td>28 Pin</td></tr> <tr><td>AN7354SC-E2</td><td>42 Pin</td></tr> </table>	XLJ93LC46AFE	8 Pin	MC14066BFR2	14 Pin	XLU2040F-T2	16 Pin	M62352FPE1	20 Pin	AN7353S-E2	24 Pin	AN7352S-E2	28 Pin	AN7374S-E2	28 Pin	AN7354SC-E2	42 Pin	<p>M38123M4109F</p>	<p>M5218AL</p>
XLJ93LC46AFE	8 Pin																		
MC14066BFR2	14 Pin																		
XLU2040F-T2	16 Pin																		
M62352FPE1	20 Pin																		
AN7353S-E2	24 Pin																		
AN7352S-E2	28 Pin																		
AN7374S-E2	28 Pin																		
AN7354SC-E2	42 Pin																		
<p>AN7384N 16 Pin UPC1297CA 18 Pin</p>	<p>RVSGP2S24BC</p>	<p>DTA114ESTP DTC114ESTP DTC114YSTP</p>	<p>2SB621ARSTA 2SD592AQRSTA</p>																
<p>2SA1309AIRTA 2SB1030AQSTA 2SC3311AIRTA 2SD1450RSTTA</p>	<p>2SB1357EFTA 2SD2037EFTA</p>	<p>2SJ164PQRTA</p>	<p>RL1N4003N02</p>	<p>MA188TA</p>															
<p>MA29WATA MA165TA MA723TA RVD1SS133TA</p>	<p>MTZJ4R3BTA MTZJ5R1BTA MTZJ8R2CTA MTZJ9R1CTA MTZJ20DTA</p>	<p>LN873RP-C</p>																	

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(RKA0053-A) on the Bottom board ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).

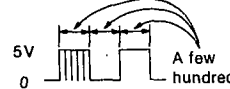




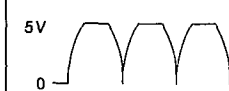
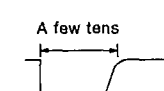

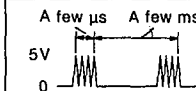



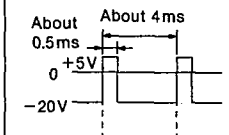
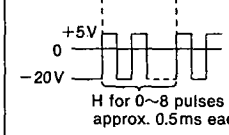
WIRING CONNECTION DIAGRAM





■ TERMINAL FUNCTION OF IC

• IC501 (M38123M4109F): MICROCOMPUTER

Pin No.	Mark	I/O Division	Function	Check point	※ Discription
1	KEY1	I	Key switch (STOP, FF, PLAY, REW, REC, ARM, PAUSE, OPEN/CLOSE) input	IC501 ① pin	+5V without key input and 0V with the stop key ON. An analog value (0~5V) is used for each key ON.
2	KEY2	I	Key switch (COUNTER RESET, COUNTER MODE, MEMORY STOP, POWER, DOLBY B, DOLBY C, MPX, ATC ON/OFF, MONITOR) input	IC501 ② pin	+5V without key input and 0V with the stop key ON. An analog value (0~5V) is used for each key ON.
3	METER-R	I	Rch indication level input	Connector CN3A ⑭ pin	0V with no signal and 1V with 0VU (-20dB) input in the REC or PAUSE mode. The voltage varies from 0 to 5V for different input levels.
4	METER-L	I	Lch indication level input	Connector CN3A ⑮ pin	
5	TEST		Test mode input	IC501 ⑤ pin	Normal: "H" (=4.8V) Test (Service) mode: "L" (=0V)
6	POWER	O	Power control output ON: "H", OFF: "L"	Connector CN3A ⑩ pin	Power ON: "H" (=5V) Power OFF: "L" (=0V)
7	—	—	Not used	—	—
8	MSP	I	TPS signal det. input ON: "L", OFF: "H"	Connector CN3A ⑱ pin	TPS mode No program: "H" (=5V) Programs: "L" (=0V)
9	—	—	Not used	—	—
10	DMT	O	Line out mute signal output ON: "L", OFF: "H"	Connector CN3A ⑲ pin	"L" (=0V) when sound is being produced in the play or REC mode and "H" (=2.5~5V) when no sound is produced in the stop of FF/REW mode.
11	ECS	O	E2PROM chip select signal	Connector CN503 ① pin CN503 ⑤ pin	 (ex...FOR ↔ REV PLAY mode is changed) A few hundred μs
12	ECLK	O	E2PROM serial clock output	Connector CN503 ② pin CN503 ④ pin	 (ex...FOR ↔ REV PLAY mode is changed) Waveform appears in response to 11 above.
13	EDAT	I/O	E2PROM serial data input/output	Connector CN503 ③ pin	 (ex...FOR ↔ REV PLAY mode is changed) Waveform appears in response to 11 above.
14	—	—	Not used	—	—
15	OSC	O	Audio signal for adjustment output	Connector CN3A ⑳ pin	Generated signals at approx. 400Hz, 10kHz and 3kHz (square wave (H and L, 0 and 5V) in REC mode during adjustment of ATC).
16	S STB	O	Strobe (load) output for the DA converter (IC151)	Connector CN3A ㉑ pin	Used to load output for the DA converter (IC151).

Pin No.	Mark	I/O Division	Function	Check point	※ Discription
17	REMOTE	I	Remocon signal input	Z502 ① pin	H and L pulse waveform appears on the input of a remote control signal.
18	POF	I	Power off det. input	Connector CN3A ㉒ pin	 Rectified waveform at both 50 and 60 Hz (clamping at 5V) The microprocessor goes into standby mode when this signal is removed.
19	RESET	I	Reset input ON: "L", OFF: "H"	Transistor Q501 collector	 Usually H (=5V) but L for a period of a few to a few tens of milliseconds is first plugged in when the player.
20	SDAT	O	Serial data output for DA converter (IC151)/serial-parallel converter (IC152)	Connector CN3A ① pin	 Data output in response to 21
21	SCLK	O	Serial clock output for DA converter (IC151)/serial-parallel converter (IC152)	Connector CN3A ③ pin	 Pulse signal is emitted only when a mode change occurs. A few μs A few ms
22	XIN	I	Microcomputer clock OSC terminal	Z502 ① pin terminal	 Oscillator waveform at 6 MHz
23	XOUT	O	Microcomputer clock OSC terminal	Z501 ③ pin terminal	 Oscillator waveform at 6 MHz
24	GND	—	Microcomputer GND	IC501 ㉓ pin	0V
25	—	—	Not used	—	—
26	MLAT1	O	Latch output for mechanism control	Connector CN52A ⑧ pin	 Emitted only when mechanism mode changes.
27	MDAT	O	Serial data output for mechanism control	Connector CN52A ④ pin	Serial data used to control the mechanism driver via IC852.
28	MCLK	O	Serial clock output for mechanism control	Connector CN52A ⑩ pin	Emitted only when mechanism mode changes.
29 46	P1 P18	O	FL meter segment output	FL501 ⑩~⑱ pin	 About 0.5ms About 4ms +5V -20V
47 52	1G 6G	O	FL meter glid output	FL501 ①~⑩ pin	 +5V -20V H for 0~8 pulses of duration approx. 0.5ms each.

Pin No.	Mark	I/O Division	Function	Check point	※ Discription
53	—	—	Not used	—	—
54	—	—	Not used	—	—
55	—	—	Not used	—	—
56	—	—	Not used	—	—
57	V _{DD}	—	Microcomputer terminal	Connector CN3A ⑫ pin	+5V, Backup
58	-VP	—	FL meter pull down voltage input terminal	Connector CN3A ⑪ pin	-20V
59	AV _{SS}	—	GND terminal (A/D)	Connector CN3A ⑩ pin	0V
60	V _{REF}	I	Reference power supply (+5V) (A/D)	Connector CN3A ⑨ pin	+5V
61	RPT	I	Reel pulse det. input (take up side)	Connector CN52A ⑬ pin	 <p>Changes within the 0 → 3V range each time the take up reel is through approximately 30 degrees.</p>
62	AD01	I	Deck 2 Mechanism switch (FINH, CrO ₂ , Metal, OPEN/CLOSE) input	Connector CN52A ⑫ pin	No tape load: Approx. 4.1V Normal tape with tab: Apprxo. 0V Chrome tape with tab: 1.1V Metal tape with tab: Approx. 1.7V
63	RPS	I	Reel pulse det. input (supply side)	Connector CN52A ⑭ pin	 <p>Changes within the 0 → 3V range each time the take up reel is through approximately 30 degrees.</p>
64	AD02	I	Deck 2 Mechanism switch (MODE, RINH, HALF) input	Connector CN52A ⑪ pin	No tape load: Approx. 4.1V Normal tape with tab: Approx. 2.3V

REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS		147	RML0271A	HOLDER HOOK	
				148	RMB0269	SPRING, DRIVE LEVER	
				149	RML0270A-1	DRIVE LEVER	
101	RGK0582-K	DRESSING PLATE		150	RMQ0312A	DRIVE RACK	
102	RMQ0430	RIVET		151	XTW2+6S	SCREW	
103	RYF0263-K	CASSETTE HOLDER		152	RXR0015	REEL TABLE UNIT	
103-1	RUS757ZA	SPRING, TAPE PRESSURE		153	XTW26+12S	SCREW	
104	RDK0019A	MAIN GEAR		154	XTW26+6L	SCREW	
105	RDV109ZA	BELT					
106	RMB0261	SPRING, HEAD BASE					
107	RMB0262	SPRING, BRAKE ROD					
108	RMB0263	SPRING(F)					
109	RMB0264	SPRING(R)					
110	RFKJSBX601EK	CHASSIS ASS'Y					
111	RML0267A	TRIGGER LEVER					
112	RML0272	SWITCH LEVER					
113	RMM0091A	BRAKE ROD					
114	RMS0398-1	MOVING IRON CORE					
115	RSJ0003	SOLENOID UNIT					
116	RUS609ZC	SPRING, TAPE PRESSURE					
117	RJW147ZA	SPRING, TRIGGER LEVER					
118	RXF0040	FLYWHEEL(F) UNIT					
119	RXG0029	REEL GEAR UNIT					
120	RXL0089	IDLE GEAR UNIT					
121	RXP0047	PINCH ROLLER(F) UNIT					
121-1	RMB0259	SPRING, PINCH ROLLER(F)					
122	RBR4CY009-C	REC./PLAY HEAD					
123	REX0612	HEAD READ WIRE (3P)					
124	REX0613	HEAD READ WIRE (5P)					
125	RHD20026-W	SCREW					
126	RHD20027-K	SCREW					
127	RHD20028-K	SCREW, AZIMUTH ADJUSTMENT					
128	RHD20031-Y	SCREW					
129	RFKRSBX601EK	HEAD BASE ASS'Y					
130	RMB0364	SPRING, AZIMUTH ADJUSTMENT					
131	RMB0383	SPRING, EARTH					
132	RMQ0450	HEAD READ WIRE CONNECTOR					
133	RMRO782-K	HEAD SPACER					
134	RMX0101	SPACER					
135	SJH96-1	ERASE HEAD					
136	XTW2+5L	SCREW					
137	RDG0206A-1	LOADING GEAR					
138	RDG0209A	INTERMEDIATE GEAR					
139	REM0036-1	CAPSTAN MOTOR UNIT					
140	REM0037	REEL MOTOR UNIT					
141	RHD26013	SCREW					
142	RMC0169	SHIELD PLATE					
143	RFKJSCH404AK	SUB CHISSIS ASS'Y					
144	RMQ0314A	SURASUTO SPACER					
145	RXG0030	FRICTION GEAR UNIT					
145-1	RMB0267	SPRING, FRICTION GEAR					
146	RMB0268	SPRING, HOLDER HOOK					

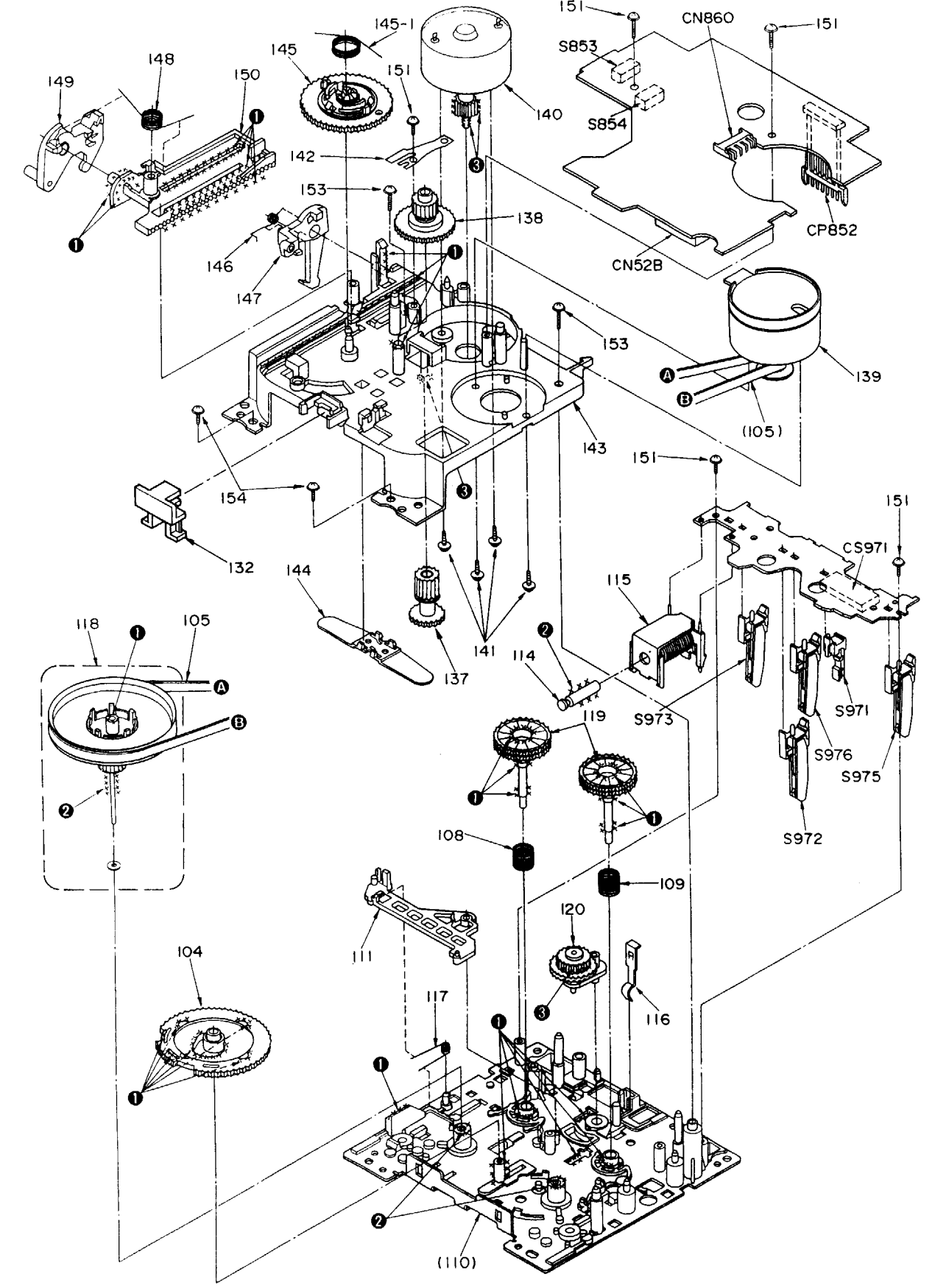
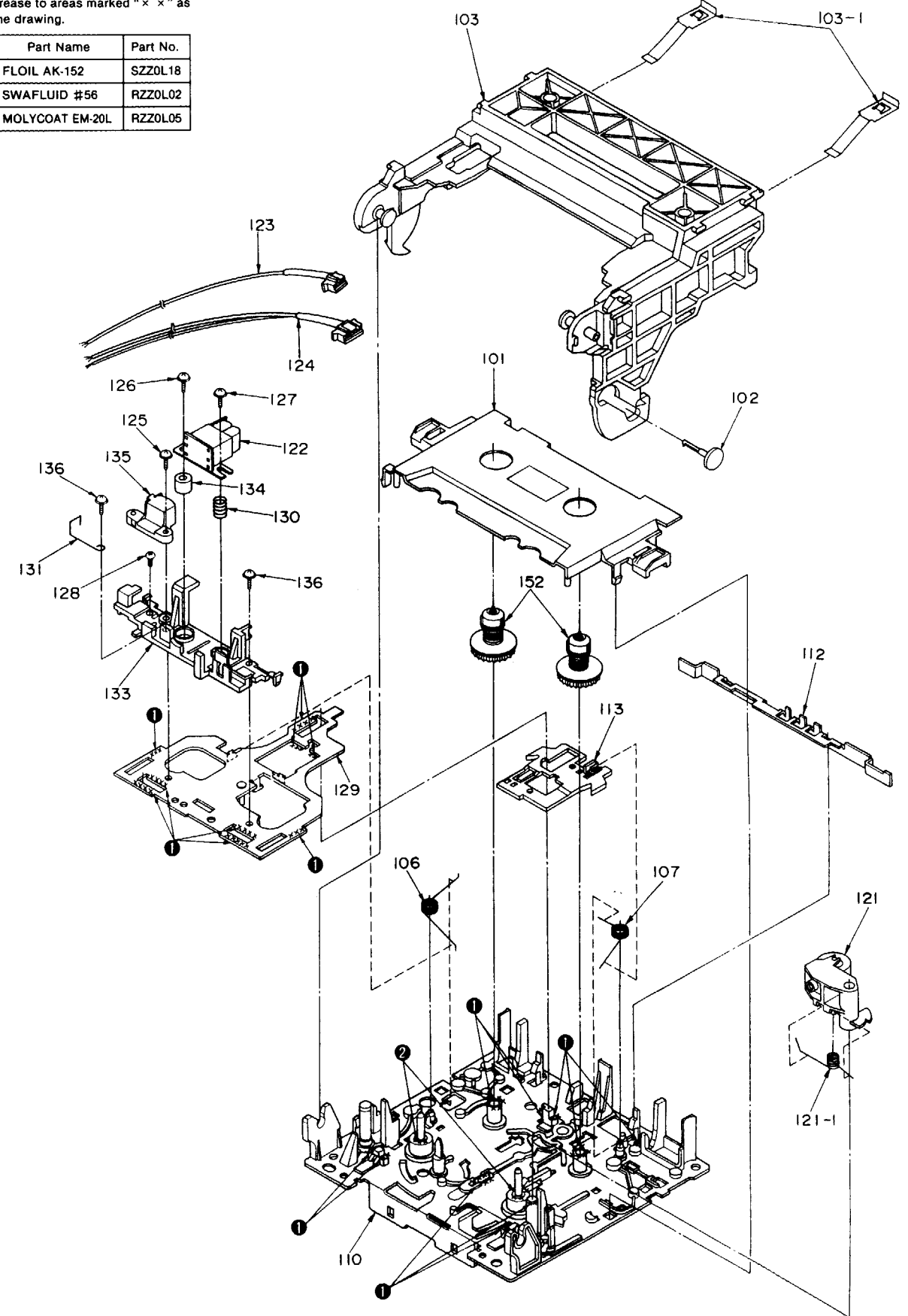
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MECHANISM PARTS LOCATION

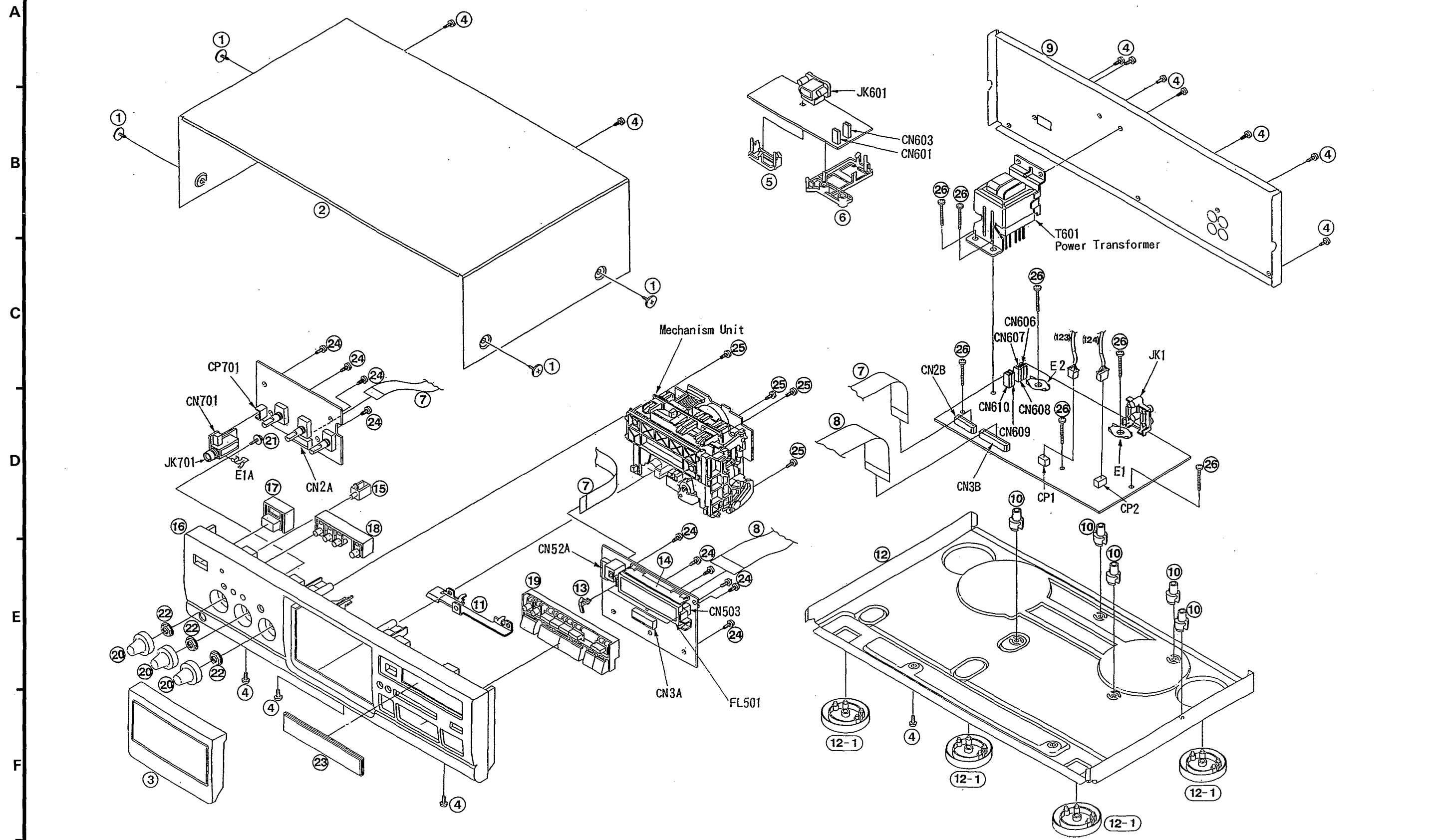
Note:
When changing mechanism parts, apply the specified grease to areas marked "x x" as shown in the drawing.

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

A
B
C
D
E
F
G



■ CABINET PARTS LOCATION



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.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		IC971, 972	RVSGP2S24BC	PHOTO INTERRUPTER	
						TRANSISTOR(S)	
1	RHD30035-K1	SCREW		Q1, 2	2SC3311AIRTA	TRANSISTOR	
2	RKA0036-K	CABINET		Q3	DTC114ESTP	TRANSISTOR	
3	RYF0266A-K	CASSETTE LTD		Q4	DTA114ESTP	TRANSISTOR	
4	XTB3+8JFZ1	SCREW		Q5-7	2SC3311AIRTA	TRANSISTOR	
5	RFKNSTR373AK	TRANSFORMER BASE1 ASS'Y		Q8, 9	2SJ164PQRTA	TRANSISTOR	
6	RFKNSTR373BK	TRANSFORMER BASE2 ASS'Y		Q151, 152	DTA114ESTP	TRANSISTOR	
7	REZ0641	FLEXIBLE FLAT CABLE(14P)		Q153	DTC114ESTP	TRANSISTOR	
8	REZ0685	FLEXIBLE FLAT CABLE(22P)		Q154, 155	DTA114ESTP	TRANSISTOR	
9	RGR0188A-D	REAR PANEL	(E, EG)	Q302, 303	2SC3311AIRTA	TRANSISTOR	
9	RGR0188A-E	REAR PANEL	(EB)	Q304	2SB621A-R	TRANSISTOR	
10	RKQ0089	P. C. B. HOLDER		Q305	2SD592ANCQ	TRANSISTOR	
11	RMA0772	MECHANISM ANGLE		Q306	2SB1030AQSTA	TRANSISTOR	
12	RFKJLPG460-K	BOTTOM CHASSIS ASS'Y		Q401-404	2SD1450RTA	TRANSISTOR	
12-1	RKA0053-A	FOOT		Q501	2SC3311AIRTA	TRANSISTOR	
13	RMN0195	FL HOLDER PIECE		Q601, 602	2SD1450RTA	TRANSISTOR	
14	RMN0265	FL HOLDER		Q603	DTC114ESTP	TRANSISTOR	Δ
15	RGL0206-Q	PANEL LIGHT		Q604	2SA1309AIRTA	TRANSISTOR	Δ
16	RFKGSBX601EK	FRONT PANEL ASS'Y		Q605	2SD2037EFTA	TRANSISTOR	Δ
17	RGU0882-K	BUTTON, POWER		Q606	2SC3311AIRTA	TRANSISTOR	
18	RFKNSBX501AK	BUTTON ASS'Y, ATC		Q607	2SB1357EFTA	TRANSISTOR	Δ
19	RGU1096-K	BUTTON, OPERATION		Q608	2SD2037EFTA	TRANSISTOR	Δ
20	RGW0177A-K	KNOB, P. LEVEL/BAL./REC LEVEL		Q609	2SB621A-R	TRANSISTOR	Δ
21	RHD26016	SCREW		Q610	2SB1357EFTA	TRANSISTOR	Δ
22	RHN90001	NUT		Q611	2SD2037EFTA	TRANSISTOR	Δ
23	RKW0331-R	TRANSPARENT PLATE		Q612, 613	2SD2037EFTA	TRANSISTOR	Δ
24	XTB3+8J	SCREW		Q701, 702	2SC3311AIRTA	TRANSISTOR	
25	XTB3+12JFZ	SCREW		Q783	DTC114ESTP	TRANSISTOR	
26	XTB3+20JFZ	SCREW		Q852	2SA1309A-R	TRANSISTOR	
		INTEGRATED CIRCUIT(S)		Q854	2SD1450RTA	TRANSISTOR	
						DIODE(S)	
IC1	AN7384N	ELECTRIC VOLUME		D1, 2	MA165	DIODE	
IC2	AN7352S-E2	PLAYBACK AMP		D3, 4	MTZJ5R1BTA	DIODE	
IC3	AN7353S-E2	REC EQ AMP		D151	MA165	DIODE	
IC4	MC14066BFR2	INPUT SELECTOR		D301, 302	MTZJ8R2CTA	DIODE	
IC151	M62352FPE1	12ch D/A CONVERTER		D304-308	MA165	DIODE	
IC152	XLU2040F-T1	DATA CONTROL		D601, 602	MA165	DIODE	Δ
IC301	UPC1297CA	DOLBY HX PRO		D603-610	RL1N4003N02	DIODE	Δ
IC401	AN7354SC-E2	DOLBY B/C NR		D611	MA165	DIODE	
IC402	AN7374S-E2	DOLBY		D613	MTZJ9R1CTA	DIODE	Δ
IC501	M38123M4109F	MICROCOMPUTER		D614	MTZJ5R1BTA	DIODE	Δ
IC504	XLJ93LC46AFE	EEPROM		D615	MTZJ20DTA	DIODE	Δ
IC701	M5218L	HEADPHONES AMP					
IC852	BA6265FP-E1	MECHANISM CONTROL					

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
D616	MA165	DIODE		S709	EVQ21405R	OPEN/CLOSE	
D618, 619	RL1N4003N02	DIODE		S710	EVQ21405R	COUNTER RESET	
D620	MA165	DIODE		S711	EVQ21405R	COUNTER MODE	
D621	MTZJ5R1BTA	DIODE		S712	EVQ21405R	MEMORY STOP	
D622	MA165	DIODE		S713	EVQ21405R	MONITOR	
D623	MA29WA	DIODE		S714	EVQ21405R	POWER	
D624	MA165	DIODE		S715	EVQ21405R	MPX FILTER	
D625, 626	MTZJ4R3BTA	DIODE		S716	EVQ21405R	DOLBY NR B	
D702	LN873RP-C	L. E. D.		S717	EVQ21405R	DOLBY NR C	
D852	MA188TA	DIODE		S718	EVQ21405R	ATC	
D854	MA723TA	DIODE		S853	RSH1A024-U	OPEN DETECTION	
D971	RVD1SS133TA	DIODE		S854	RSH1A024-U	CLOSE DETECTION	
		VARIABLE RESISTOR(S)		S971	RSH1A018-U	MODE	
VR701	EVJ02FF02B15	REC LEVEL CONTROL		S972	RSH1A019-U	HALF	
VR702	EVJ02SF02G15	BALANCE CONTROL		S973	RSH1A019-U	ATS	
VR704	EVJY10F02A24	PHONES LEVEL CONTROL		S975	RSH1A019-U	REC. INHIBIT	
VR853	EVNDCAA03B53	TAPE SPEED ADJ.		S976	RSH1A019-U	ATS	
		COIL(S)				CONNECTOR(S) AND SOCKET(S)	
L1, 2	SLQX303-1KT	COIL		CN2A	RJS1A6214-1	CONNECTOR(14P)	
L3, 4	RLQB103JT-Y	COIL		CN2B	RJS1A6814	CONNECTOR(14P)	
L301, 302	SL09B1-Z	COIL		CN3A	RJS1A6222	CONNECTOR(22P)	
L303	SL09B4-K	COIL (HX PRO ADJ.)		CN3B	RJS1A6822	CONNECTOR(22P)	
L401, 402	RLM2B006T-K	COIL		CN52A	RJS1A6214-1	CONNECTOR(14P)	
		TRANSFORMER(S)		CN52B	RJS1A6714	CONNECTOR(14P)	
T601	RTP1K4B018-V	POWER TRANSFORMER	△	CN503	SJS50581BB	SOCKET(5P)	
		COMPONENT COMBINATION(S)		CN601	RJS1A1101T1	CONNECTOR(1P)	
Z501	EFOEC6004T4	CERAMIC OSCILLATOR(6MHz)		CN603	RJS1A1101T1	CONNECTOR(1P)	
Z502	RCDHC-278N	REMOTE SENSOR		CN606-610	RJS1A1101T1	CONNECTOR(1P)	
Z852	EXBF7L355SYV	COMBINATION PART		CN701	RJU057W004	SOCKET(4P)	
Z971	EXBF6L306SYV	COMBINATION PART		CN860	RJR0113	MOTOR CONNECTOR(4P)	
		DISPLAY TUBE(S)		CP1	SJTD313	CONNECTOR(3P)	
FL501	RSLO159-F	DISPLAY TUBE		CP2	RJP5G18ZA	CONNECTOR(5P)	
		SWITCH(ES)		CP701	RJT057W004-1	CONNECTOR(4P)	
S701	EVQ21405R	STOP		CP852	RJT071H11A	CONNECTOR(11P)	
S702	EVQ21405R	PLAYBACK		CS971	RJU071H11M	SOCKET(11P)	
S704	EVQ21405R	F. F. SEARCH<TPS>				JACK(S)	
S705	EVQ21405R	REW. SEARCH<TPS>		JK1	SJF3069N	TERMINAL BOARD: REC/PLAY	
S706	EVQ21405R	REC		JK601	SJS9236	AC INLET	△
S707	EVQ21405R	PAUSE		JK701	SJJ146B	HEADPHONES JACK	
S708	EVQ21405R	AUTO REC MUTE				GND PART(S)	
				E1	SNE1004-2	GND PLATE	
				E1A	SUSD165	GND SPRING	
				E2	SNE1004-2	GND PLATE	

RESISTORS AND CAPACITORS

Notes : * Capacity values are in microfarads (μF) 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	R318	ERDS2TJ392T	1/4W 3.9K	R622	ERD2FCVG180T	1/4W 18 Δ
			R319	ERDS2TJ102	1/4W 1K	R623	ERD2FCVG120T	1/4W 12 Δ
			R320	ERDS2TJ182	1/4W 1.8K	R624	ERD2FCVG180T	1/4W 18 Δ
R1, 2	ERDS2TJ563	1/4W 56K	R321	ERDS2TJ682T	1/4W 6.8K	R625	ERD2FCVG100T	1/4W 10 Δ
R3, 4	ERDS2EJ121	1/4W 120	R322	ERDS2TJ182	1/4W 1.8K	R626	ERD2FCVG120T	1/4W 12 Δ
R5, 6	ERDS2TJ101	1/4W 100	R323, 324	ERDS2TJ183T	1/4W 1.8K	R627	ERD2FCVG100T	1/4W 10 Δ
R7, 8	ERDS2TJ474	1/4W 470K	R325, 326	ERDS2TJ100	1/4W 10	R628	ERDS2TJ101	1/4W 100
R9, 10	ERDS2TJ333	1/4W 33K	R327	ERDS2TJ222	1/4W 2.2K	R629	ERDS2TJ103	1/4W 10K
R11, 12	ERDS2TJ223	1/4W 22K	R328	ERD2FCVG330T	1/4W 33 Δ	R630	ERD2FCVG120T	1/4W 12 Δ
R13, 14	ERDS2TJ122	1/4W 1.2K	R329	ERDS2TJ473	1/4W 47K	R633	ERDS2TJ151	1/4W 150
R15, 16	ERDS2TJ472	1/4W 4.7K	R330, 331	ERD2FCVG330T	1/4W 33 Δ	R634	ERDS2TJ181T	1/4W 180
R17	ERDS2TJ222	1/4W 2.2K	R340-342	ERD2FCVG330T	1/4W 33 Δ	R635	ERDS2TJ151	1/4W 150
R18	ERDS2TJ331	1/4W 330	R401, 402	ERDS2TJ473	1/4W 47K	R636	ERDS2TJ181T	1/4W 180
R19	ERDS2TJ101	1/4W 100	R403, 404	ERDS2TJ104	1/4W 100K	R637	ERDS2TJ151	1/4W 150
R20	ERDS2TJ222	1/4W 2.2K	R407, 408	ERDS2TJ473	1/4W 47K	R638	ERDS2TJ181T	1/4W 180
R21	ERDS2TJ562	1/4W 5.6K	R409	ERDS2TJ223	1/4W 22K	R639	ERDS2TJ151	1/4W 150
R23, 24	ERDS2TJ222	1/4W 2.2K	R411, 412	ERDS2TJ103	1/4W 10K	R640	ERDS2TJ181T	1/4W 180
R27, 28	ERDS2TJ562	1/4W 5.6K	R413, 414	ERDS2TJ473	1/4W 47K	R641, 642	ERD2FCVG180T	1/4W 18 Δ
R29	ERDS2TJ333	1/4W 33K	R415, 416	ERDS2TJ332	1/4W 3.3K	R643	ERD2FCVG120T	1/4W 12 Δ
R30	ERDS2TJ393	1/4W 39K	R417, 418	ERDS2TJ152	1/4W 1.5K	R644	ERD2FCVG100T	1/4W 10 Δ
R31, 32	ERDS2TJ103	1/4W 10K	R419	ERDS2TJ223	1/4W 22K	R645	ERD2FCVG120T	1/4W 12 Δ
R33, 34	ERDS2TJ823T	1/4W 82K	R420	ERDS2TJ103	1/4W 10K	R646, 647	ERDS2TJ180	1/4W 1.0
R35	ERDS2TJ124T	1/4W 120K	R421-424	ERDS2TJ684	1/4W 680K	R648	ERDS2TJ101	1/4W 100
R36-38	ERDS2TJ103	1/4W 10K	R501, 502	ERDS2TJ331	1/4W 330	R701	ERDS2TJ821	1/4W 820
R39, 40	ERDS2TJ102	1/4W 1K	R503-505	ERDS2TJ223	1/4W 22K	R702	ERDS2TJ102	1/4W 1K
R41, 42	ERDS2TJ223	1/4W 22K	R506	ERDS2TJ472	1/4W 4.7K	R703	ERDS2TJ122	1/4W 1.2K
R43	ERDS2TJ472	1/4W 4.7K	R507-510	ERDS2TJ103	1/4W 10K	R704	ERDS2TJ152	1/4W 1.5K
R45, 46	ERDS2TJ225	1/4W 2.2M	R511	ERDS2TJ471	1/4W 470	R705	ERDS2TJ182	1/4W 1.8K
R47, 48	ERDS2TJ183T	1/4W 18K	R520-523	ERDS2TJ103	1/4W 10K	R706	ERDS2TJ222	1/4W 2.2K
R49, 50	ERDS2TJ393	1/4W 39K	R525	ERDS2TJ103	1/4W 10K	R707	ERDS2TJ332	1/4W 3.3K
R51, 52	ERDS2TJ394	1/4W 390K	R528-531	ERDS2TJ103	1/4W 10K	R708	ERDS2TJ472	1/4W 4.7K
R53, 54	ERDS2TJ561	1/4W 560	R534, 535	ERDS2TJ683	1/4W 68K	R709	ERDS2TJ821	1/4W 820
R55, 56	ERDS2TJ222	1/4W 2.2K	R536-538	ERDS2TJ223	1/4W 22K	R710	ERDS2TJ102	1/4W 1K
R60	ERDS2TJ103	1/4W 10K	R540	ERDS2TJ223	1/4W 22K	R711	ERDS2TJ122	1/4W 1.2K
R61, 62	ERDS2TJ392T	1/4W 3.9K	R601-604	ERDS2TJ472	1/4W 4.7K	R712	ERDS2TJ152	1/4W 1.5K
R63, 64	ERDS2TJ333	1/4W 33K	R605	ERDS2TJ180	1/4W 1.0	R713	ERDS2TJ182	1/4W 1.8K
R65	ERDS2TJ153	1/4W 15K	R606, 607	ERDS2TJ472	1/4W 4.7K	R714	ERDS2TJ222	1/4W 2.2K
R151	ERDS2TJ562	1/4W 5.6K	R608	ERDS2TJ103	1/4W 10K	R715	ERDS2TJ332	1/4W 3.3K
R152	ERDS2TJ104	1/4W 100K	R609	ERDS2TJ102	1/4W 1K	R716	ERDS2TJ472	1/4W 4.7K
R154	ERDS2TJ103	1/4W 10K	R610	ERDS2TJ152	1/4W 1.5K	R719	ERDS2TJ182	1/4W 1.8K
R155	ERDS2TJ102	1/4W 1K	R611	ERDS2TJ101	1/4W 100	R720, 721	ERDS2TJ102	1/4W 1K
R156-158	ERDS2TJ103	1/4W 10K	R612	ERDS2TJ562	1/4W 5.6K	R722, 723	ERDS2TJ562	1/4W 5.6K
R159	ERDS2TJ221	1/4W 220	R613	ERDS2TJ103	1/4W 10K	R724	ERDS2TJ471	1/4W 470
R301, 302	ERDS2TJ153	1/4W 15K	R614	ERDS2TJ222	1/4W 2.2K	R725, 726	ERDS2TJ180T	1/4W 18
R303, 304	ERDS2TJ562	1/4W 5.6K	R615	ERDS2TJ101	1/4W 100	R727, 728	ERDS2TJ333	1/4W 33K
R305, 306	ERDS2TJ154	1/4W 150K	R616	ERDS2TJ222	1/4W 2.2K	R729	ERDS2TJ103	1/4W 10K
R307	ERDS2TJ100	1/4W 10	R617, 618	ERDS2TJ101	1/4W 100	R730	ERDS2TJ102	1/4W 1K
R308	ERDS2TJ180	1/4W 1.0	R619	ERDS2TJ331	1/4W 330	R731, 732	ERDS2TJ101	1/4W 100
R309	ERDS2TJ100	1/4W 10	R620, 621	ERDS2TJ101	1/4W 100	R735	ERDS2EJ121	1/4W 120

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R852	ERDS2TJ2R2T	1/4W 2.2	C325	ECKR1H392KB5	50V 3900P	C872	ECEAOJKA221B	6.3V 220U
R856	ERDS2TJ153	1/4W 15K	C327	ECKW1H222KB5	50V 2200P			
R857	ERDS2TJ103	1/4W 10K	C328	ECKD1H682KB	50V 6800P			
R858	ERDS2TJ392T	1/4W 3.9K	C329	ECKW1H222KB5	50V 2200P			
R862	ERDS2TJ474	1/4W 470K	C330-332	ECBT1E103ZF	25V 0.01U			
R870	ERDS2TJ271	1/4W 270	C401, 402	ECBT1C222KR5	16V 2200P			
R971	ERDS2TJ221	1/4W 220	C403, 404	ECEA1EKA4R7B	25V 4.7U			
R973, 974	ERDS2TJ393	1/4W 39K	C405, 406	ECEA1HKA0R1B	50V 0.1U			
			C407, 408	ECEA1HKA010B	50V 1U			
		CAPACITORS	C409, 410	ECQB1H152JF3	50V 1500P			
			C411, 412	ECEA1HKAR47B	50V 0.47U			
C1, 2	ECBT1H181KB5	50V 180P	C413, 414	ECQB1H152JF3	50V 1500P			
C3, 4	ECEA1AKA101B	10V 100U	C415, 416	ECEA1HKAR47B	50V 0.47U			
C5, 6	ECQB1H682JF3	50V 6800P	C417	ECEA1CKA100B	16V 10U			
C7, 8	ECBT1E103ZF	25V 0.01U	C418	ECEA1HKA010B	50V 1U			
C9, 10	ECBT1H391KB5	50V 390P	C420	ECEA1CKN100B	16V 10U			
C11, 12	ECBT1C392KR5	16V 3900P	C421, 422	ECEA1HKAR47B	50V 0.47U			
C13, 14	ECQV1H124JM3	50V 0.12U	C423, 424	ECQB1H152JF3	50V 1500P			
C15, 16	ECEA1HKA010B	50V 1U	C425, 426	ECEA1HKAR47B	50V 0.47U			
C17	ECEA1HKAR47B	50V 0.47U	C427, 428	ECQB1H152JF3	50V 1500P			
C18	ECEA1CKA100B	16V 10U	C429, 430	ECEA1EKA4R7B	25V 4.7U			
C19, 20	ECKR2H121KB5	500V 120P	C431, 432	ECBT1C182KR5	16V 1800P			
C23, 24	ECEA1EKA4R7B	25V 4.7U	C433, 434	ECBT1C222KR5	16V 2200P			
C27, 28	ECEA1CKN100B	16V 10U	C435, 436	ECBT1H820KB5	50V 82P			
C29, 30	ECEA1HKAR33B	50V 0.33U	C437, 438	ECBT1C682KR5	16V 6800P			
C31, 32	ECEA1HKA2R2B	50V 2.2U	C501, 502	ECEA1CKA100B	16V 10U			
C33, 34	ECEA1CKA100B	16V 10U	C503	ECEA1HKA010B	50V 1U			
C35, 36	ECEA1CKA220B	16V 22U	C504	ECEA1EKA4R7B	25V 4.7U			
C37	ECQB1H392JF3	50V 3900P	C505, 506	ECEA1CKA100B	16V 10U			
C38	ECBT1H331KB5	50V 330P	C601	ECEA1EU222	25V 2200U Δ			
C39, 40	ECEA1CKA220B	16V 22U	C602	RCE1EM221BV	25V 220U			
C41, 42	ECBT1E103ZF	25V 0.01U	C603, 604	ECA1EM102E	25V 1000U Δ			
C43, 44	ECEA1HKA010B	50V 1U	C605	ECKR2H682PE	500V 6800P			
C45, 46	ECEA1CKA100B	16V 10U	C606	ECBT1E103ZF	25V 0.01U			
C47, 48	ECBT1C472KR5	16V 4700P	C607	ECEA1AKA221B	10V 220U			
C51, 52	ECEA1AKA101B	10V 100U	C608-614	ECBT1E103ZF	25V 0.01U			
C53, 54	ECBT1H101KB5	50V 100P	C615	RCE1AM471BV	10V 470U			
C151	ECA0JM471B	6.3V 470U	C616	ECA0JM102B	6.3V 1000U			
C152	ECBT1E103ZF	25V 0.01U	C617	ECBT1E103ZF	25V 0.01U			
C153	ECBT1H101KB5	50V 100P	C618-621	RCE1AM471BV	10V 470U			
C302	ECEA1CKA100B	16V 10U	C622	RCE1HM221BV	50V 220U Δ			
C303, 304	ECBT1H561KB5	50V 560P	C630	ECBT1H104ZF5	50V 0.1U			
C305, 306	ECQB1H103JF3	50V 0.01U	C701	ECBT1E103ZF	25V 0.01U			
C307, 308	ECQB1H223JF3	50V 0.022U	C704-706	ECBT1H104ZF5	50V 0.1U			
C309, 310	ECQV1H563JM3	50V 0.056U	C711, 712	ECEA1CKA100B	16V 10U			
C311, 312	ECBT1H121KB5	50V 120P	C852	ECBT1E223ZF	25V 0.022U			
C313, 314	ECKR2H821KB5	500V 820P	C856	ECBT1H104ZF5	50V 0.1U			
C315, 316	ECBT1E223ZF	25V 0.022U	C857	ECEA1EKA101B	25V 100U			
C317	ECBT1H220J5	50V 22P	C858	ECEA1AKA101B	10V 100U			
C318	ECQP1153JZ	100V 0.015U	C864	ECBT1H104ZF5	50V 0.1U			
C320	ECBT1H220J5	50V 22P	C865, 866	ECBT1H101KB5	50V 100P			
C324	ECEA1EKA4R7B	25V 4.7U	C868	ECBT1H101KB5	50V 100P			

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.

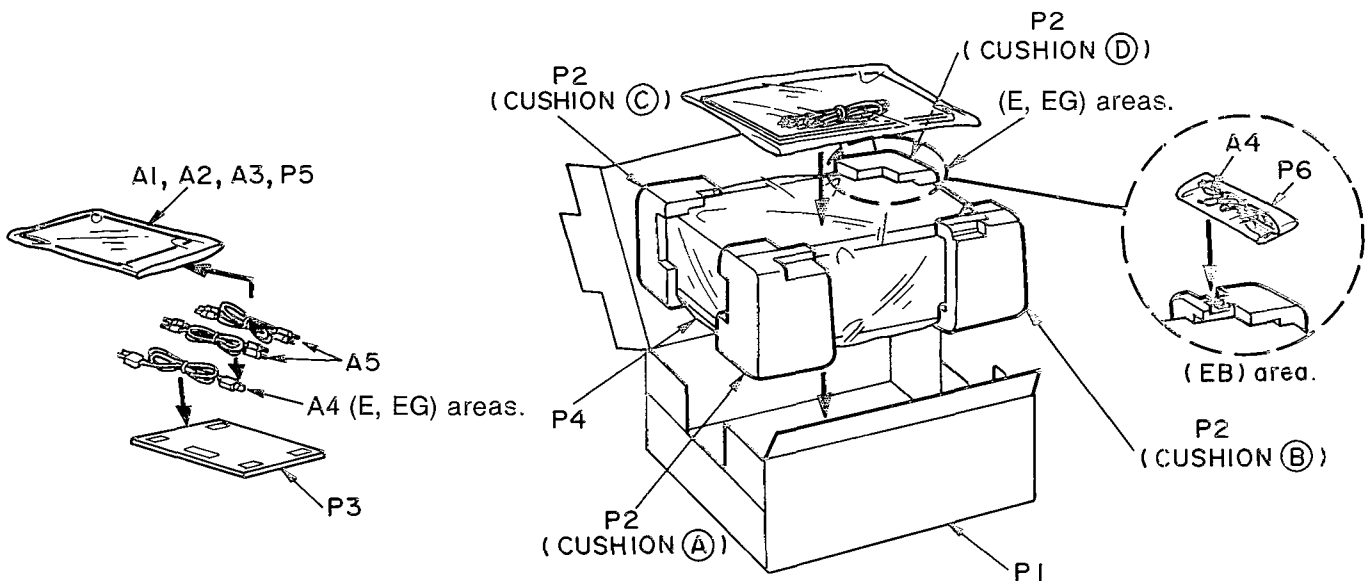
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

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
		PACKING MATERIAL				ACCESSORIES	
P1	RPG2226	PACKING CASE	(E, EG)	A1	RFKSSBX601E	INSTRUCTION MANUAL ASS'Y	(E)
P1	RPG2227	PACKING CASE	(EB)	A1	RFKSSBX601EG	INSTRUCTION MANUAL ASS'Y	(EG)
P2	RPN0697	CUSHION	(E, EG)	A1	RQT2624-B	INSTRUCTION MANUAL	(EB)
P2	RPN0698	CUSHION	(EB)	A2	RQA0013	WARRANTY CARD	
P3	RPQ0164	ACCESSORIES PAD		A3	RQCB0169	SERVICENTER LIST	
P4	SPP723	PROTECTION COVER (THIS UNIT)		A4	RJA0019-2K	AC POWER SUPPLY CORD	(E, EG) Δ (SF)
P5	XZB25X34C03Y	PROTECTION BAG (F. B., ACC.)		A4	VJA0733	AC POWER SUPPLY CORD	(EB) Δ (SF)
P6	RPFD032	MIRROR SHEET	(EB)	A5	SJP2276	STEREO CONNECTION CABLE	

PACKAGING



<CUSHION (A), (B), (C), (D) Part No.: RPN0697 (E, EG), RPN0698 (EB)>