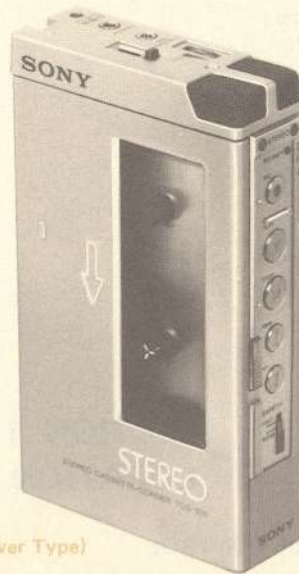


# TCS-370

AEP Model  
UK Model  
E Model



(Photo: Silver Type)

## STEREO CASSETTE-CORDER

### SPECIFICATIONS

Recording system 4-track 2-channel stereo  
Speaker 5 cm (2 inches) dia.  
Fast winding time Approx. 2 min. with Sony Cassette C-60  
Frequency response TYPE I (NORMAL) cassette  
50–10,000 Hz  
40–14,000 Hz (playback)  
Input Microphone input jack (stereo minijack)  
sensitivity 0.2 mV  
for low impedance microphone  
Output Headphones jack (stereo minijack)  
load impedance 8–300 ohms  
Power output (at 10% harmonic distortion)  
Speaker: 200 mW  
Headphones: 20 mW + 20 mW  
at load impedance 32 ohms  
Battery life

|                               | recording   | playback  |             |
|-------------------------------|-------------|-----------|-------------|
|                               |             | speaker   | head-phones |
| Sony SUM-3(NS)<br>New Super   | Approx. 2.5 | Approx. 2 | Approx. 3   |
| Sony Eveready<br>AM3 Alkaline | Approx. 5   | Approx. 4 | Approx. 6   |

(hours)

#### Power requirements

3 V dc, 2 batteries IEC designation R6 (size AA)  
DC IN 3 V jack accepts:  
ac power adaptor  
AC-37 (optional) available in the United Kingdom for use on 240 V ac, 50 Hz  
AC-37 (optional) available in Continental European countries for use on 220 V ac, 50 Hz  
AC-38 (optional) available in other countries for use on 110, 120, 220 or 240 V ac, 50/60 Hz  
car battery cord  
DCC-127A (optional) for use on 12 V car battery  
The optional PC-200 dc plug adaptor is required for connection with the DCC-127A.

Dimensions Approx. 88.5 × 149.1 × 31.8 mm (w/h/d)  
(3½ × 5¾ × 1¼ inches)  
incl. projecting parts and controls  
Weight Approx. 420 g (14.9 oz) incl. batteries

0 dB = 0.775 V

TAPE TRANSPORT MECHANISM

MT-7-22

# SONY

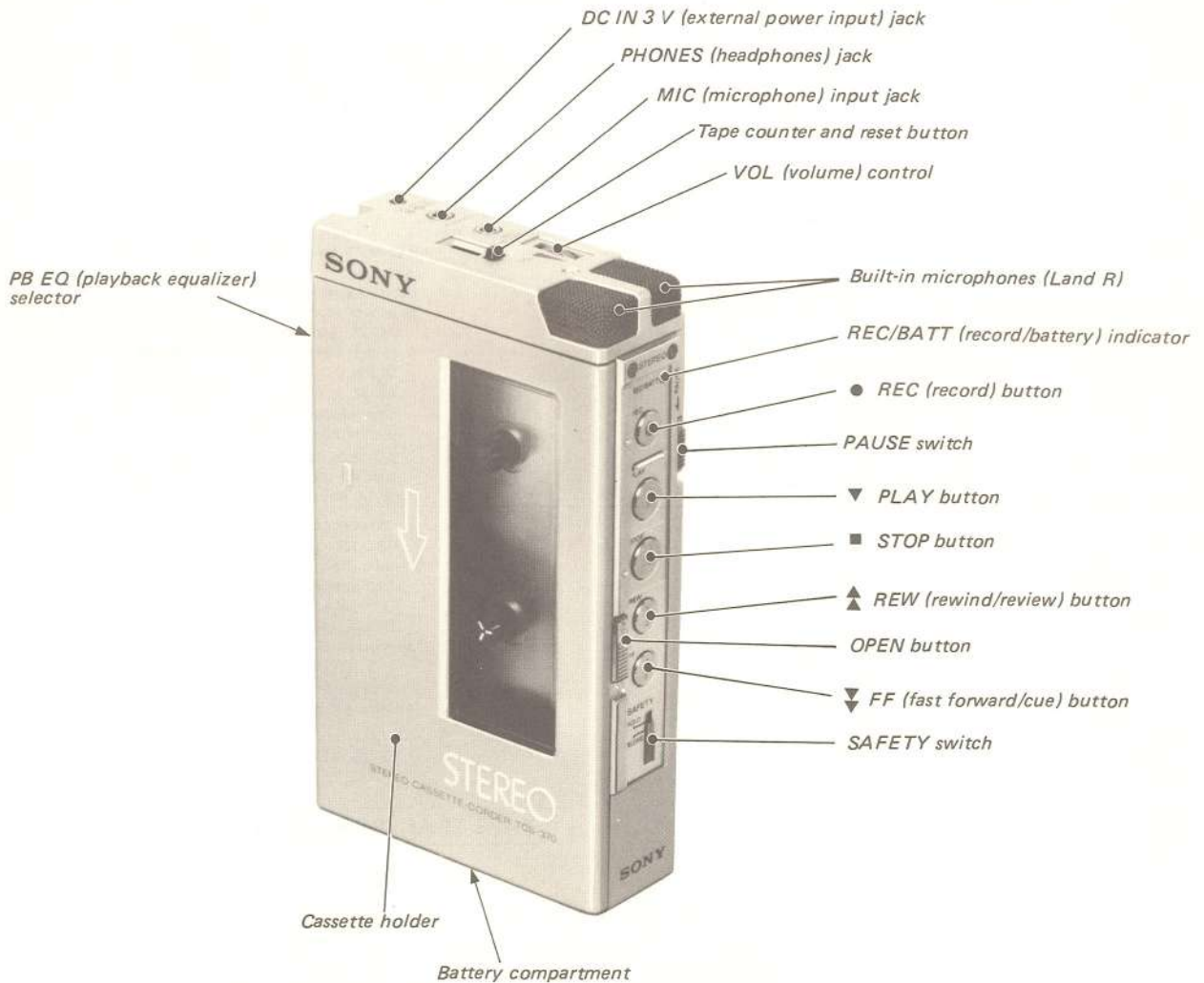
## SERVICE MANUAL



MICROFILM

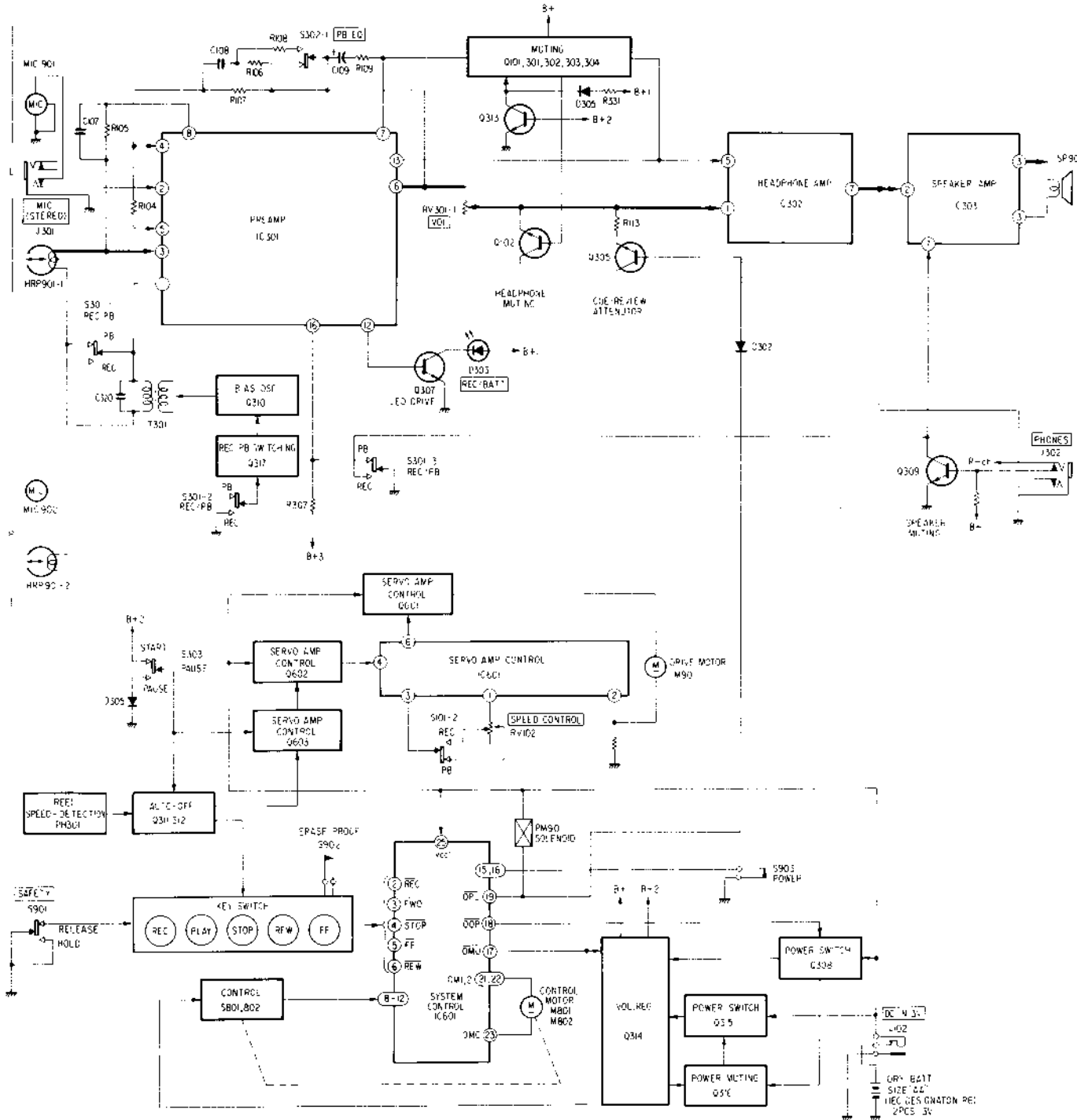
**FEATURES**

- Complete stereo recording and playback system in this very compact cassette-corder.
- Built-in one point stereo microphone and an external microphone jack (stereo) for stereo recording.
- Stereo playback through the supplied stereo headphones.
- Logic-controlled mechanism allows rapid switching directly from one mode to another.
- Safety switch for preventing the set from changing to another mode if, by accident, a tape operation button is pressed.

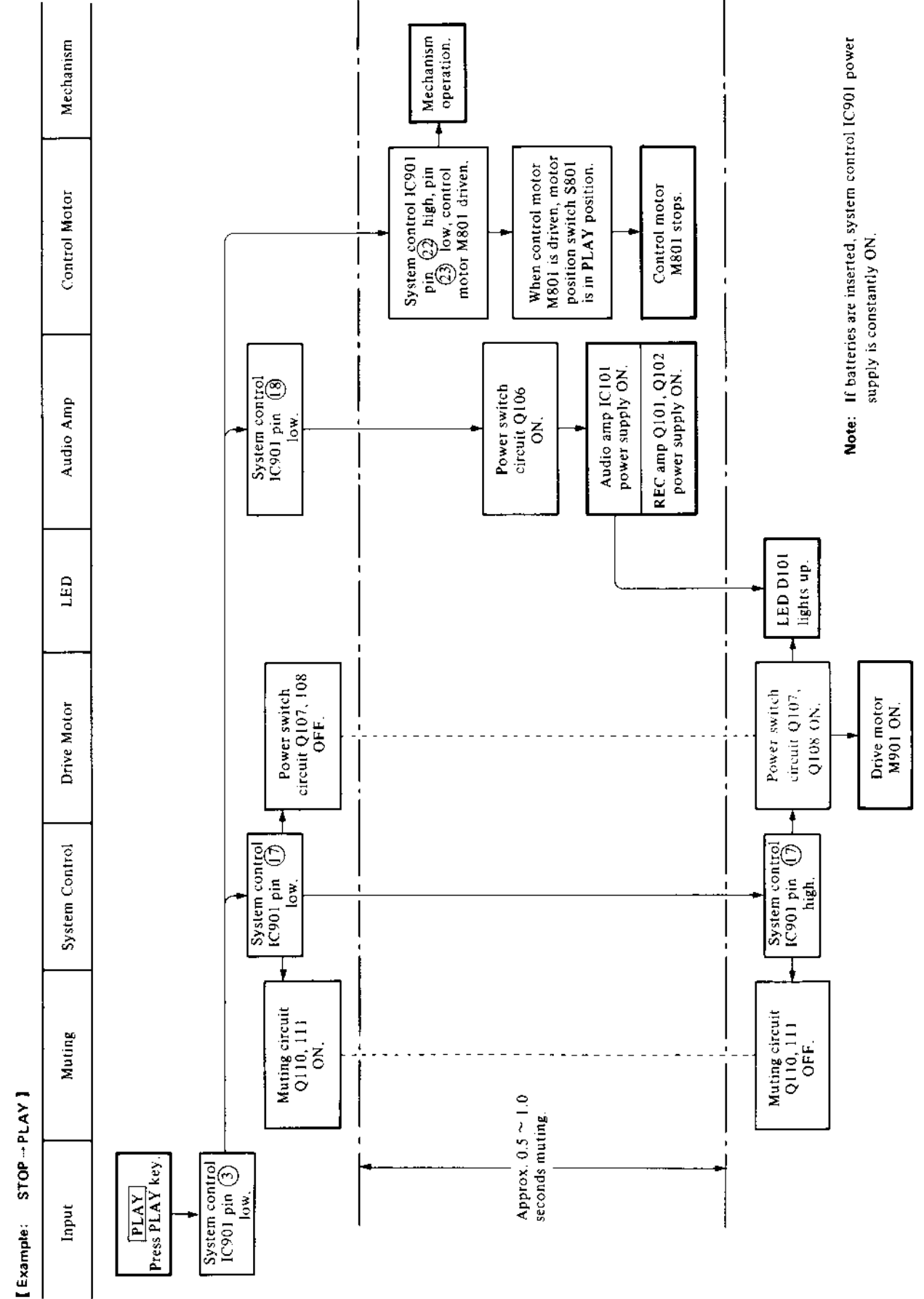
**SECTION 1  
LOCATION****1-1. LOCATION AND FUNCTION OF CONTROL**

SECTION 2  
OUTLINE

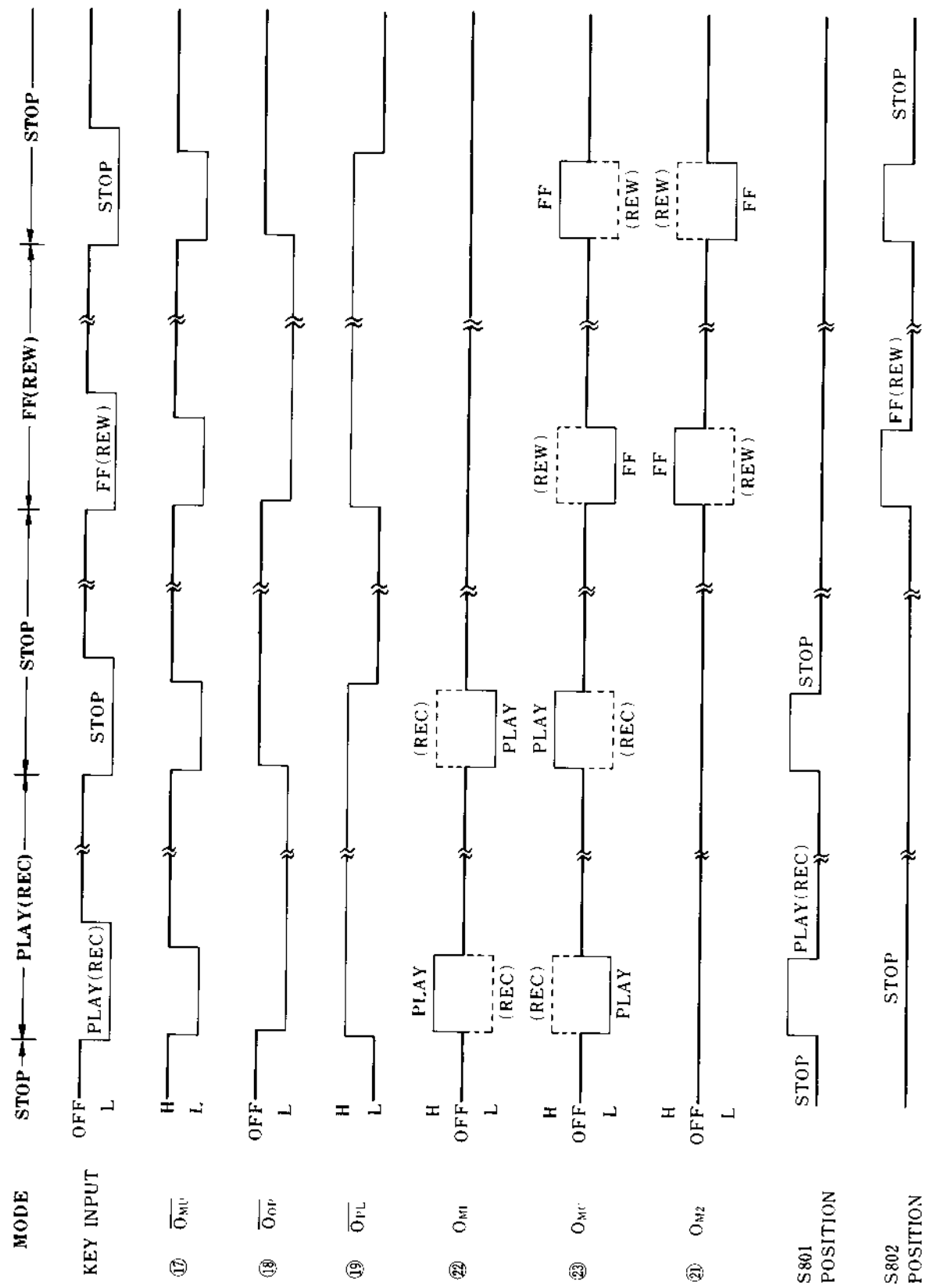
2-1. BLOCK DIAGRAM



2-2. OPERATION ORDER



2-3. SYSTEM CONTROL IC901 TIMING CHART



2-4. SYSTEM CONTROL IC901 FUNCTION DESCRIPTION

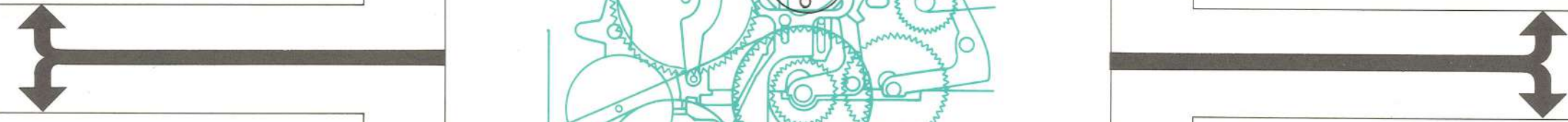
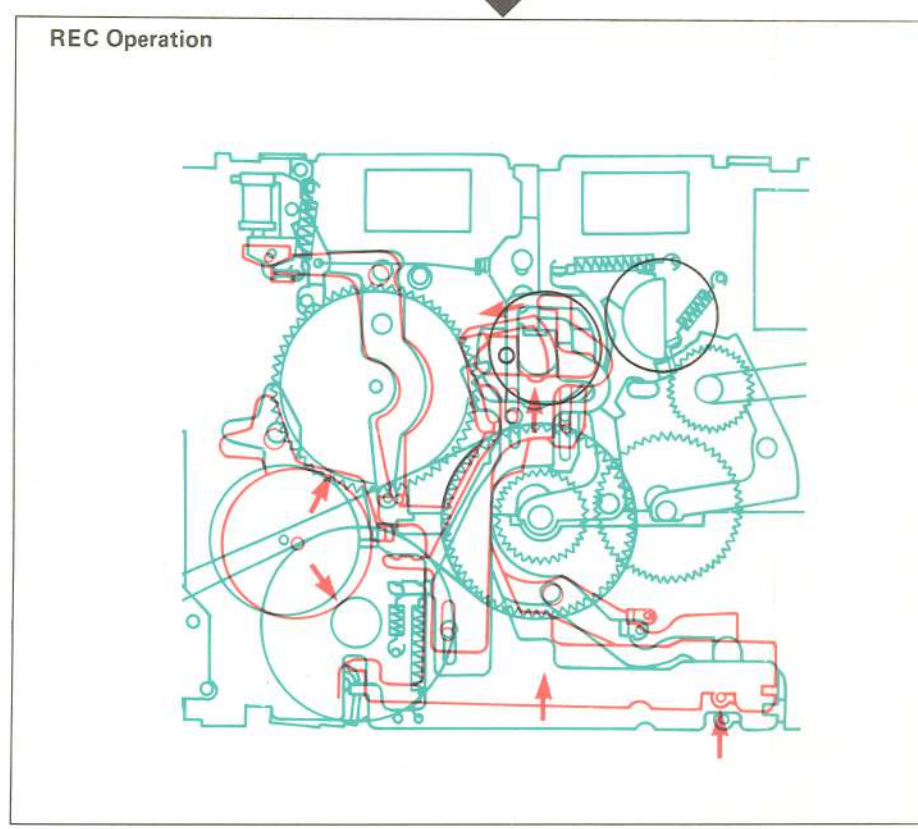
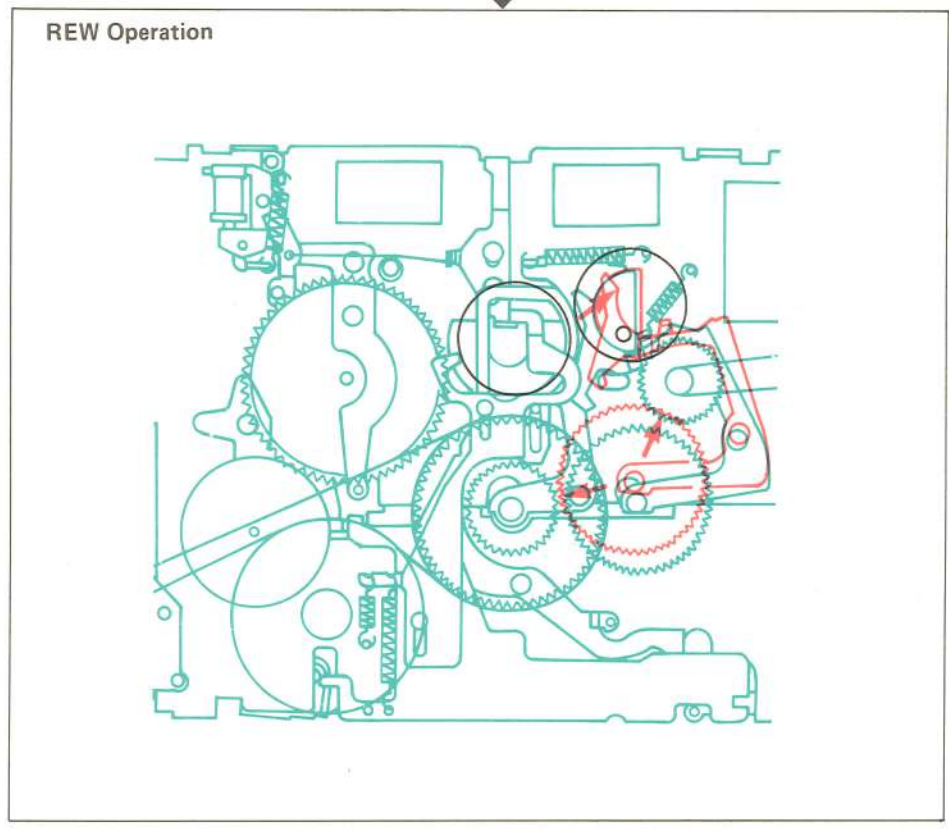
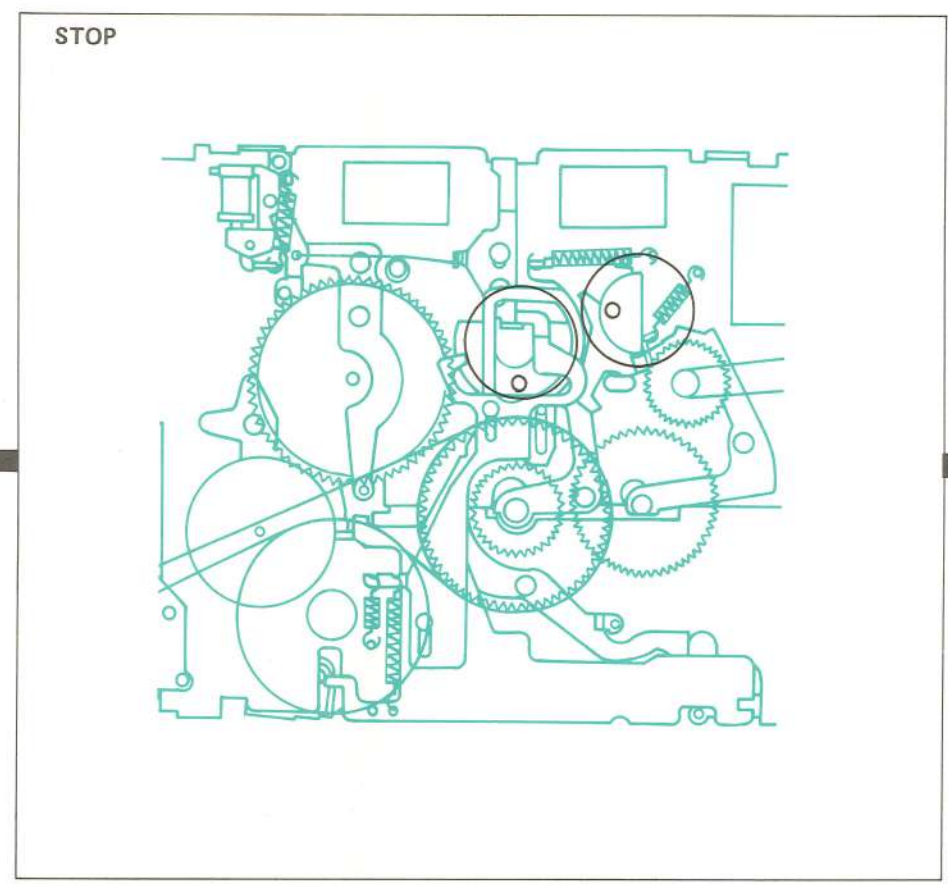
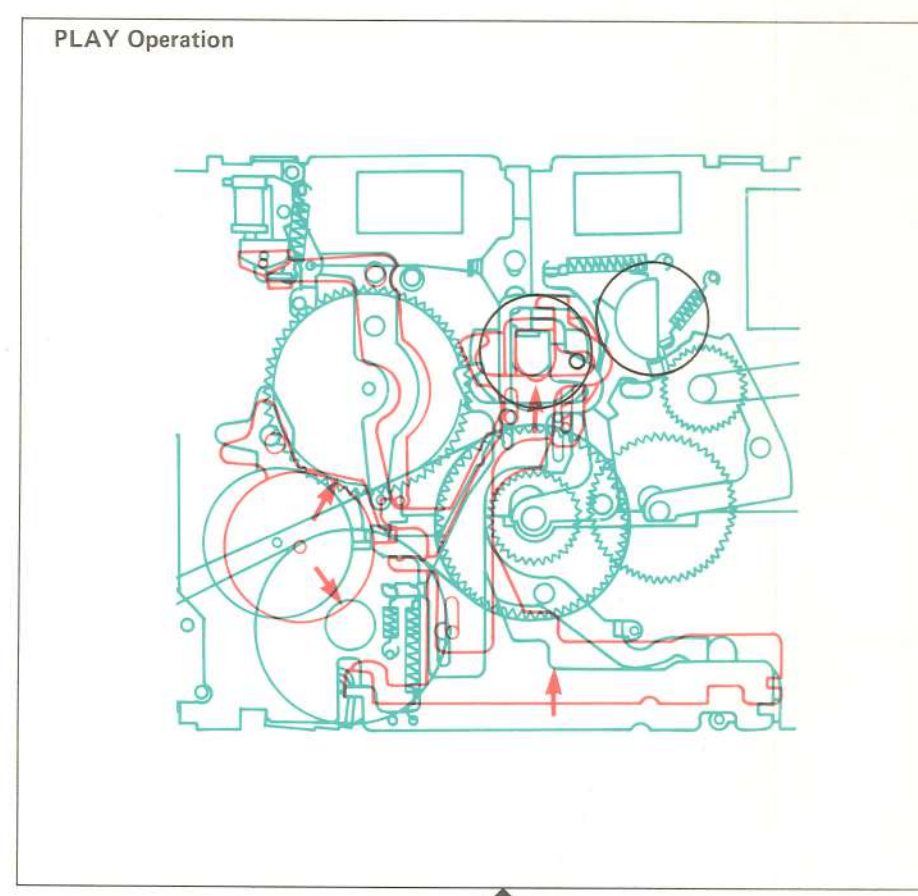
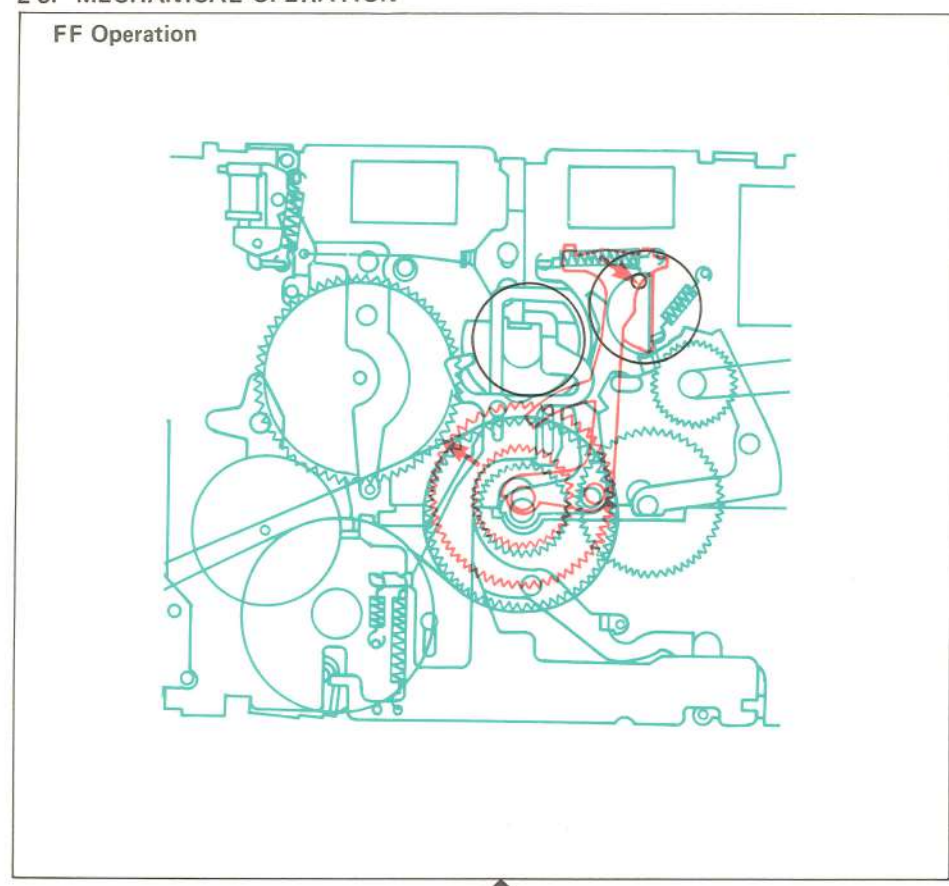
| Pin No. | I/O    | Symbol                   | Signal Name         | Function  | Termination |
|---------|--------|--------------------------|---------------------|---|-------------|
| 1       | --     | V <sub>CC2</sub>         | power supply 2      | Logic IC <sub>1</sub> power supply, connected to pin 25 V <sub>CC1</sub> inside module.                     | --          |
| 2       | input  | $\overline{\text{REC}}$  | record              | REC mode at low level.  | PU          |
| 3       | input  | $\overline{\text{FWD}}$  | forward             | FWD mode at low level.  | PU          |
| 4       | input  | $\overline{\text{STOP}}$ | stop                | STOP mode at low level.   | PU          |
| 5       | input  | $\overline{\text{FF}}$   | FF                  | FF mode at low level. CUE during FWD.   | PU          |
| 6       | input  | $\overline{\text{REW}}$  | rewind              | REW mode at low level. REVIEW during FWD.   | PU          |
| 7       |        |                          |                     |   |             |
| 8       | input  | $\overline{\text{A}}$    | position A          | Indicates control motor M801 stop position in FWD, STOP, REC modes. Position detection input.               | PU          |
| 9       | input  | $\overline{\text{B}}$    | position B          |   |             |
| 10      | input  | $\overline{\text{C}}$    | position C          |   |             |
| 11      | input  | $\overline{\text{D}}$    | position D          | Indicates control motor M802 stop position in FF, STOP, REW modes. Position detection input.                | PU          |
| 12      | input  | $\overline{\text{E}}$    | position E          |   |             |
| 13      |        |                          |                     |   |             |
| 14      |        |                          |                     |   |             |
| 15      | --     | GND <sub>1</sub>         | ground 1            | Ground for logic IC <sub>1</sub> and voltage regulator IC <sub>3</sub> , connected to pin 16 inside module. | --          |
| 16      | --     | GND <sub>2</sub>         | ground 2            | Ground for driver IC <sub>2</sub> , connected to pin 15 inside module.                                      | --          |
| 17      | output | $\overline{\text{OMU}}$  | muting output       | ON output when control motor M801 or M802 operated.   | PU          |
| 18      | output | $\overline{\text{OOP}}$  | operation output    | ON output except during STOP mode.  | OC          |
| 19      | output | $\overline{\text{OPL}}$  | plunger output      | ON output in CUE or REVIEW mode.  | OC          |
| 20      |        |                          |                     |   |             |
| 21      | output | O <sub>M2</sub>          | motor output 2      | Output to rotate control motor M802. High for FF, low for REW.  | PP          |
| 22      | output | O <sub>M1</sub>          | motor output 1      | Output to rotate control motor M801. High for FWD, low for REC.   | PP          |
| 23      | output | O <sub>MC</sub>          | motor common output | Output to rotate control motors M801, M802. Low for F, high for R.  | PP          |
| 24      |        |                          |                     |   |             |
| 25      | --     | V <sub>CC1</sub>         | power supply 1      | Power supply for voltage regulator IC <sub>3</sub> . Connected to pin 1 V <sub>CC2</sub> inside module.     | --          |

\*Termination Symbols PU: pull-up PP: push-pull  
OC: open collector

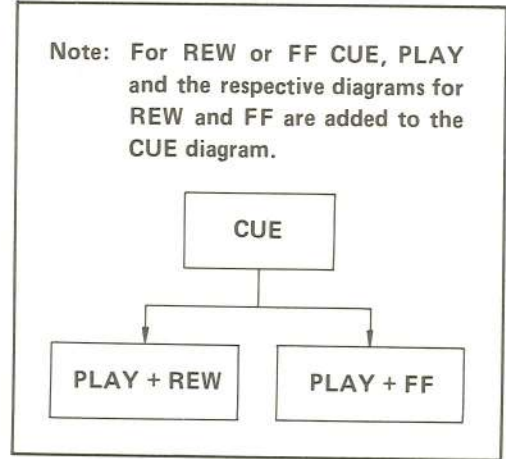
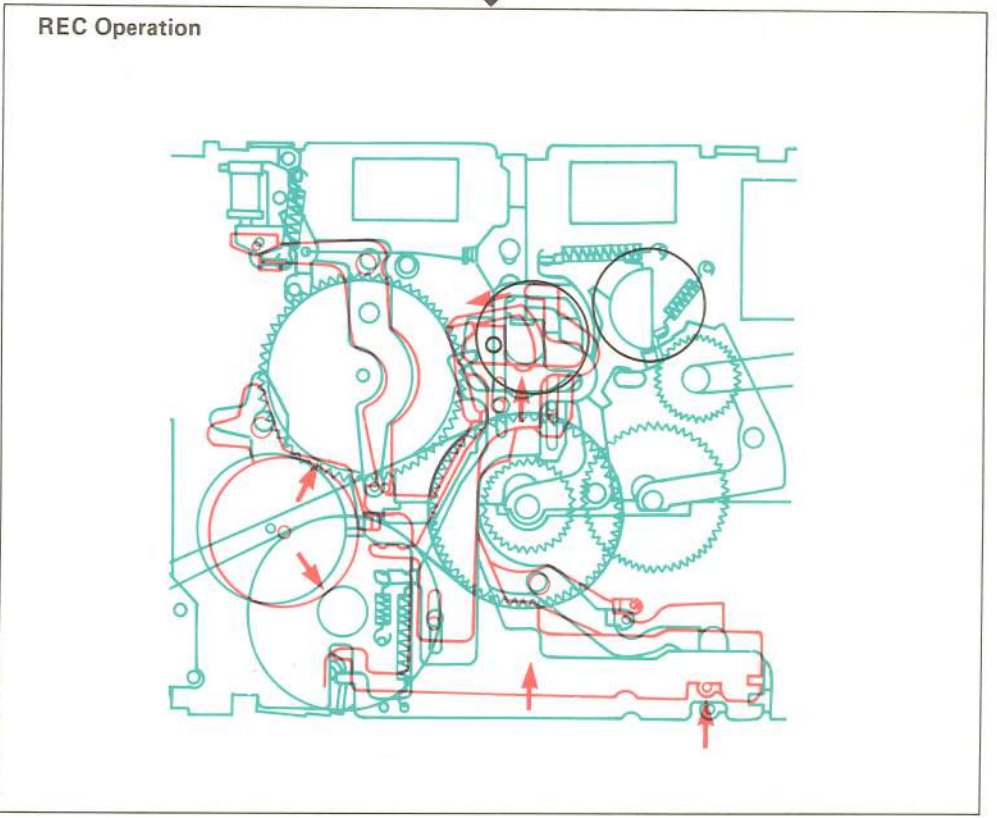
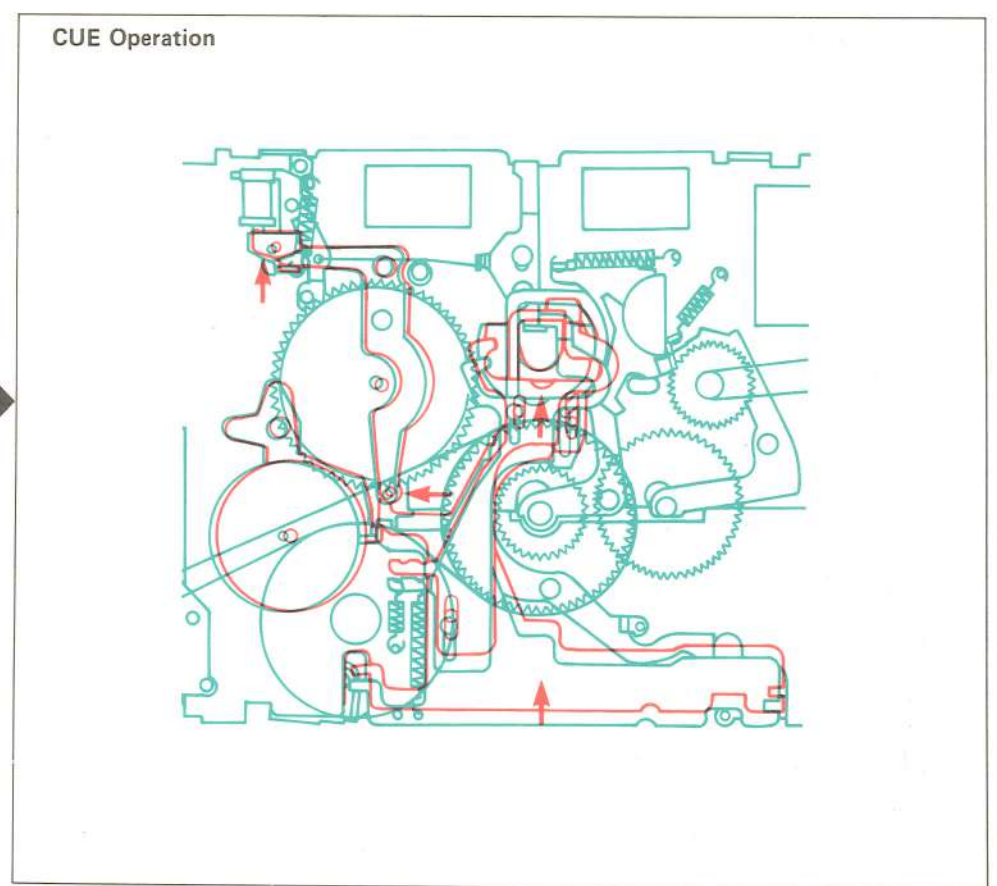
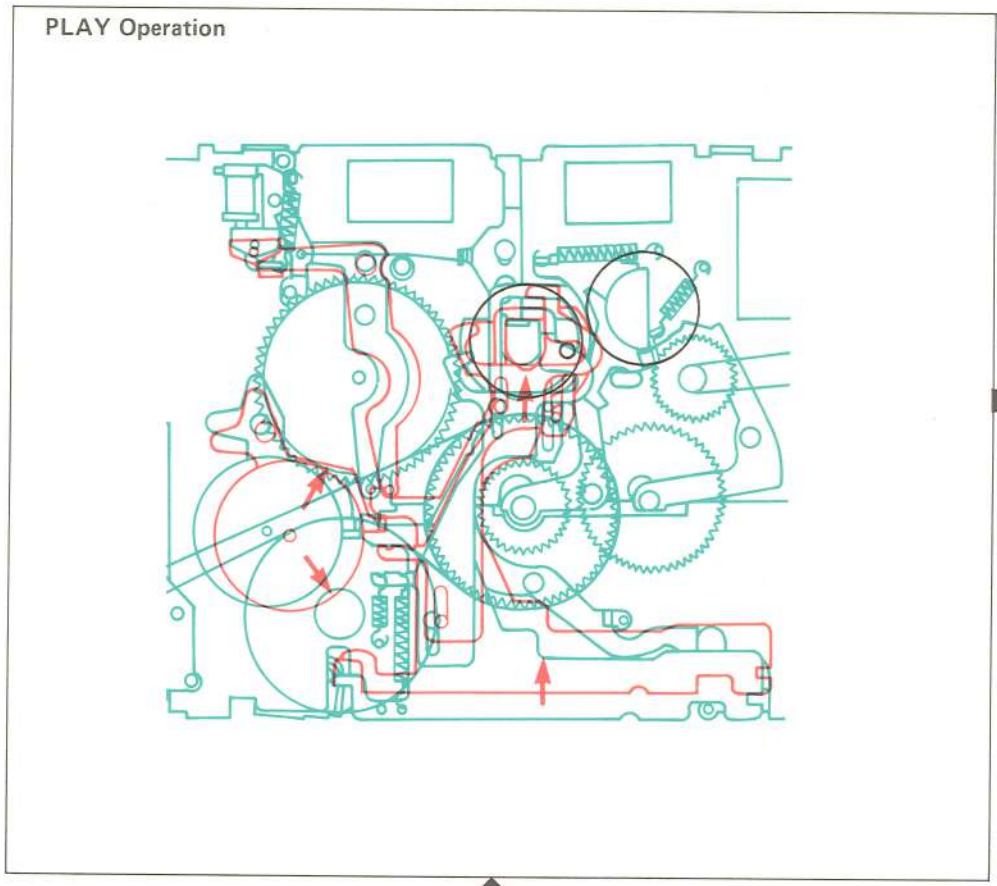
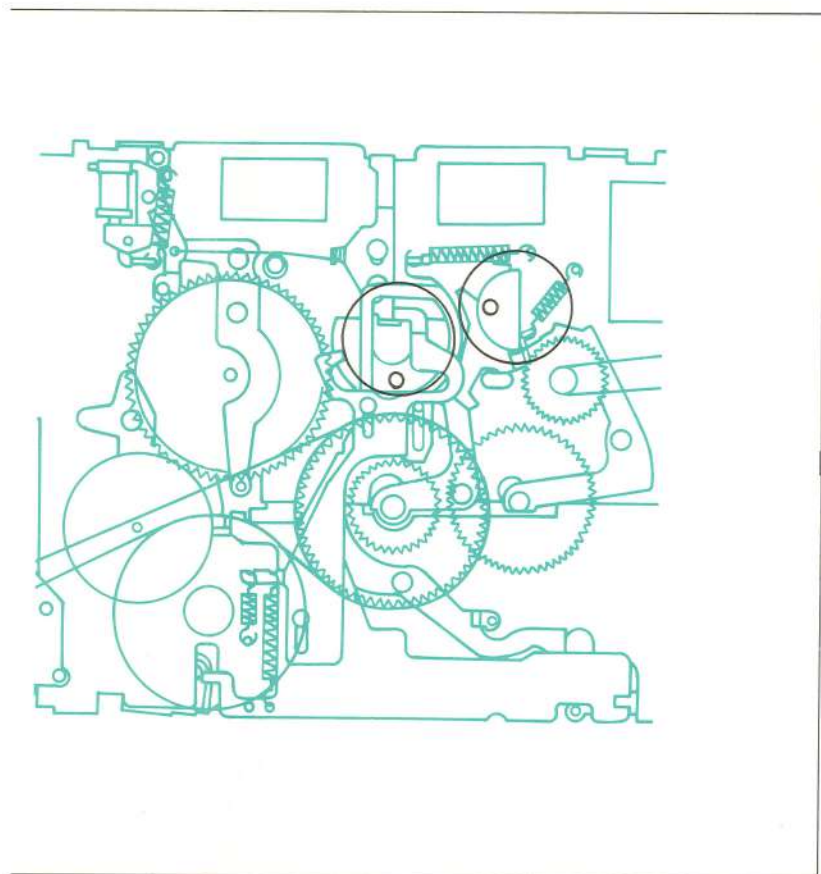
\*Logic IC<sub>1, 2, 3</sub> are ICs inside system control IC901.

2-5. MECHANICAL OPERATION

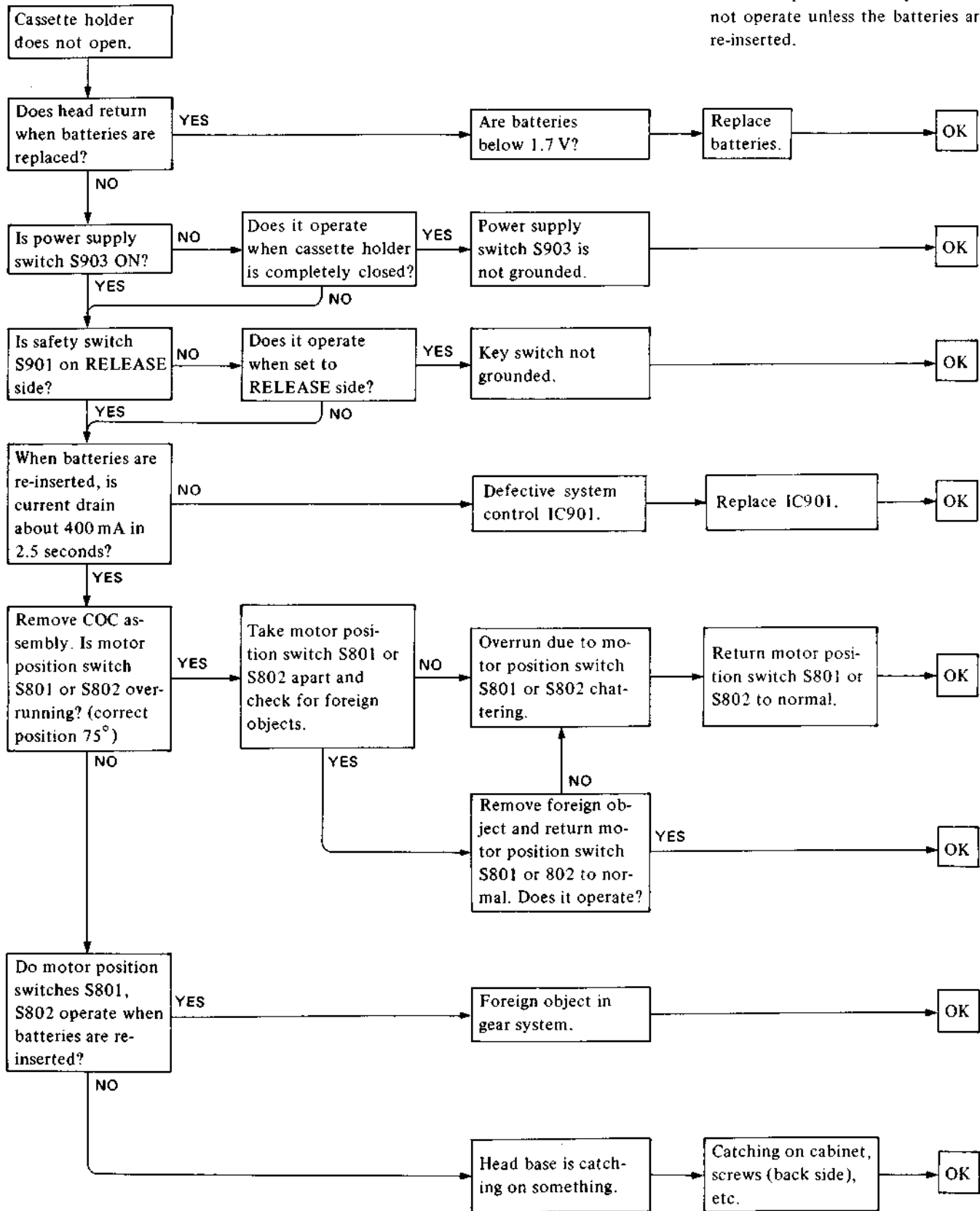
Note: Black: STOP mode  
 Red: Mechanism position for each mode operation  
 Blue: Control board ass'y for each mode operation



Note: Black: STOP mode  
 Red: Mechanism position for each mode operation  
 Blue: Control board ass'y for each mode operation

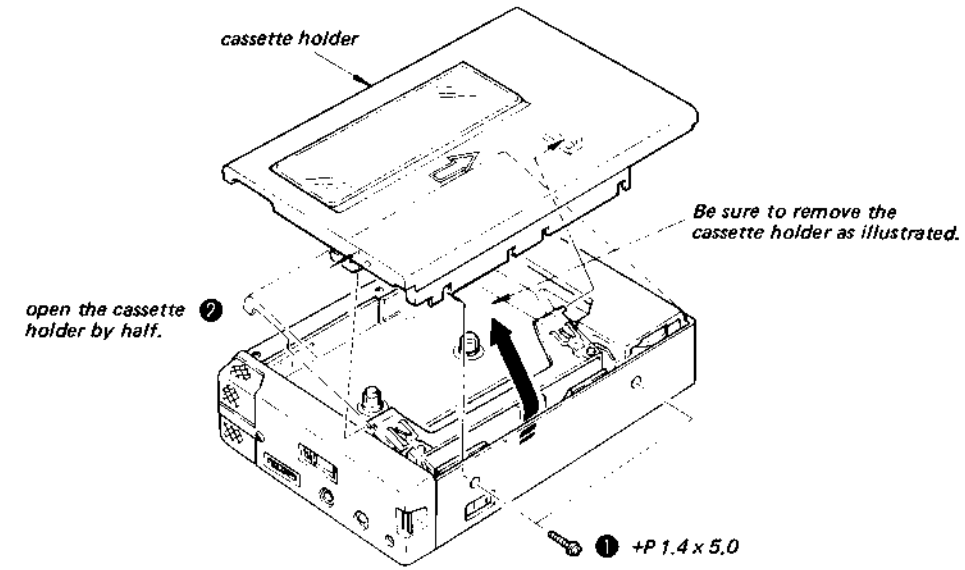


2-6. TROUBLESHOOTING

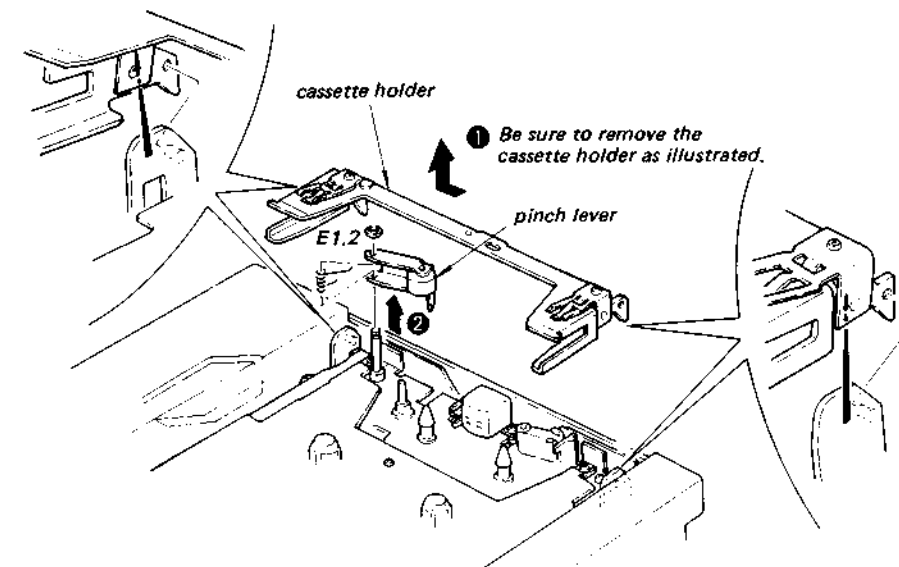


Note: Follow the disassembly procedure in the numerical order given.

CASSETTE HOLDER REMOVAL



CASSETTE HOLDER, PINCH LEVER REMOVAL



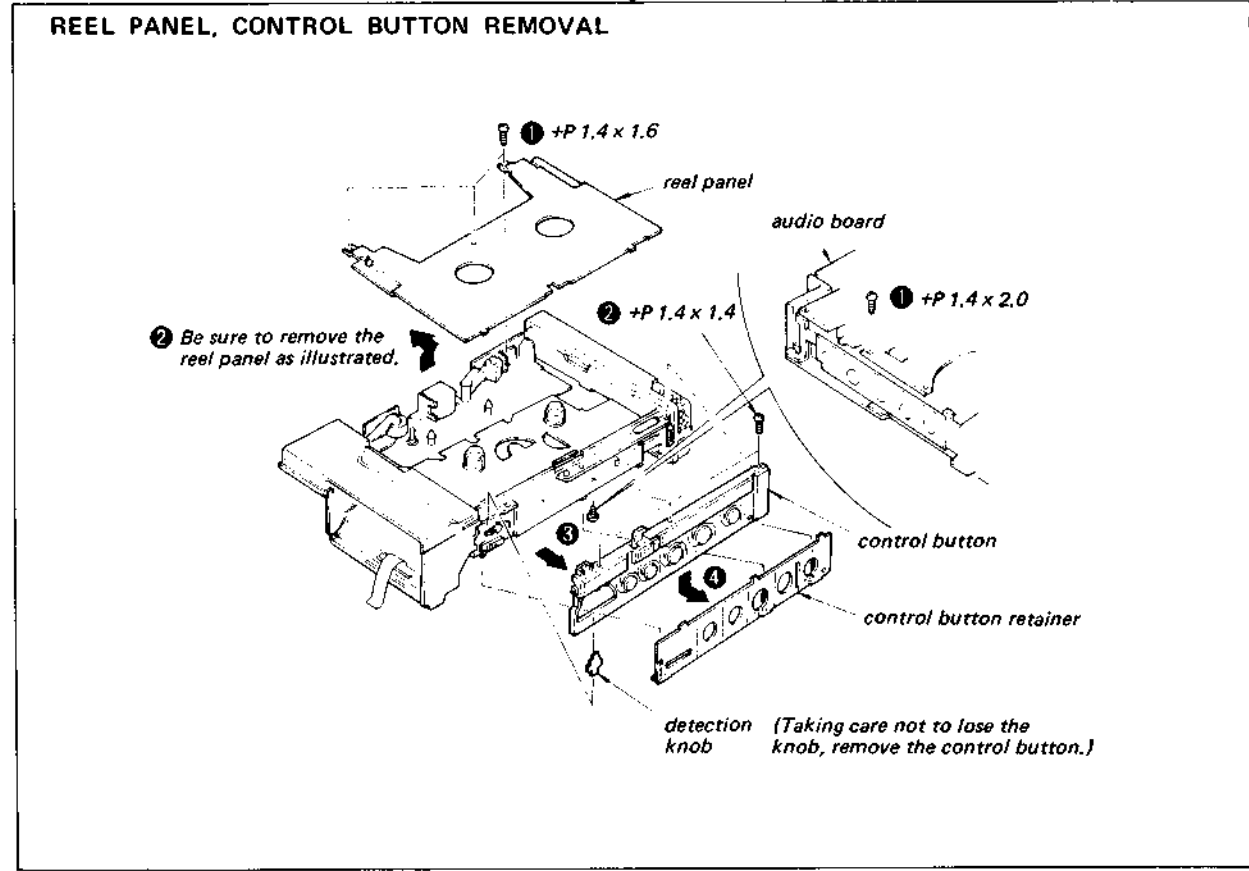
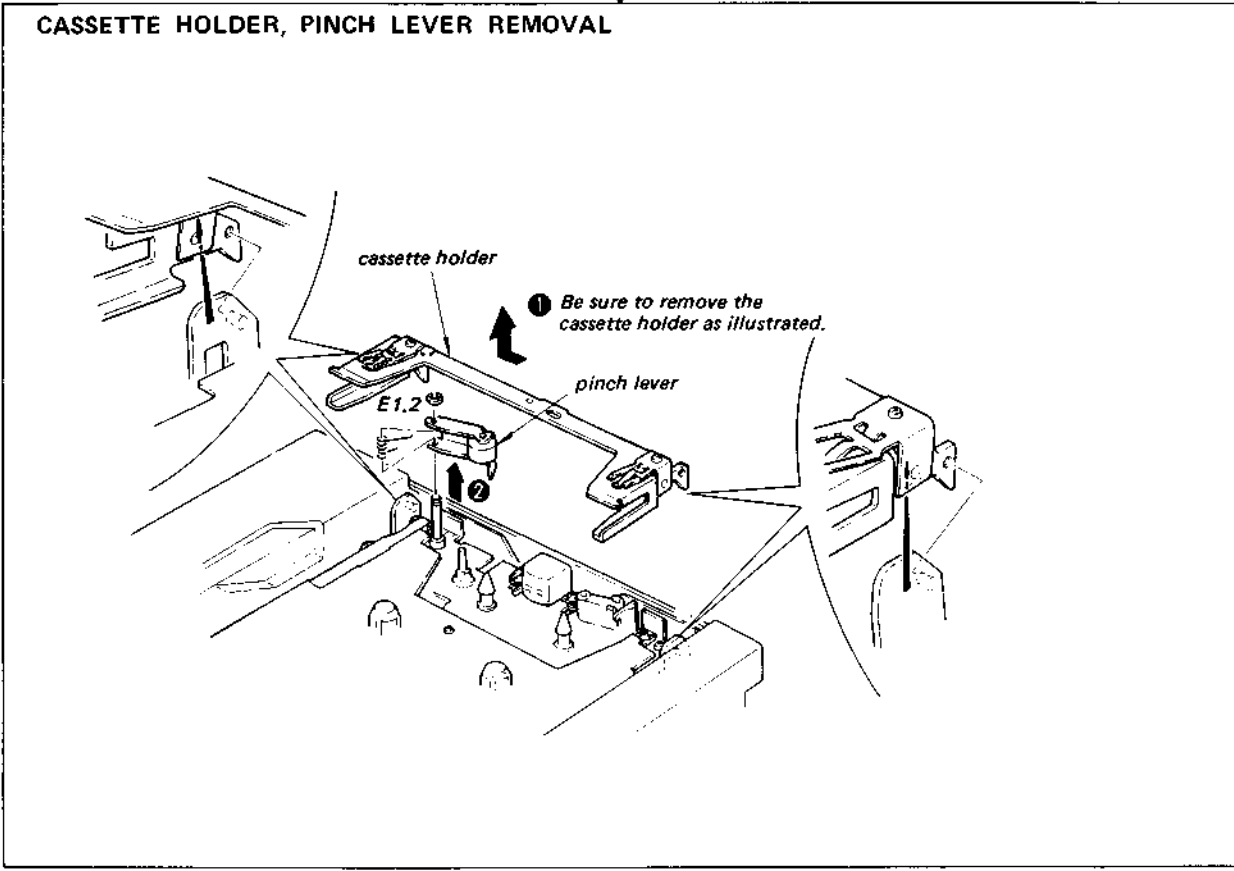
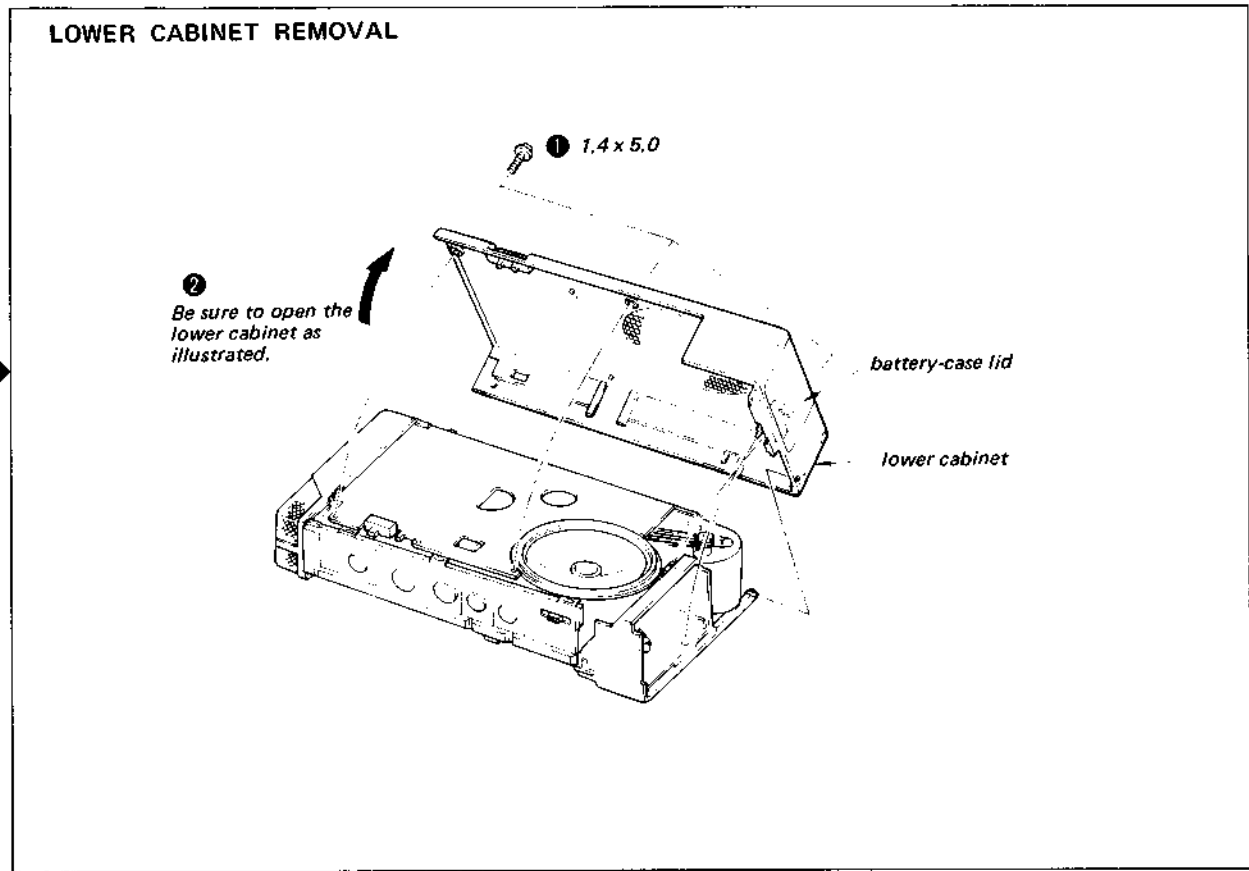
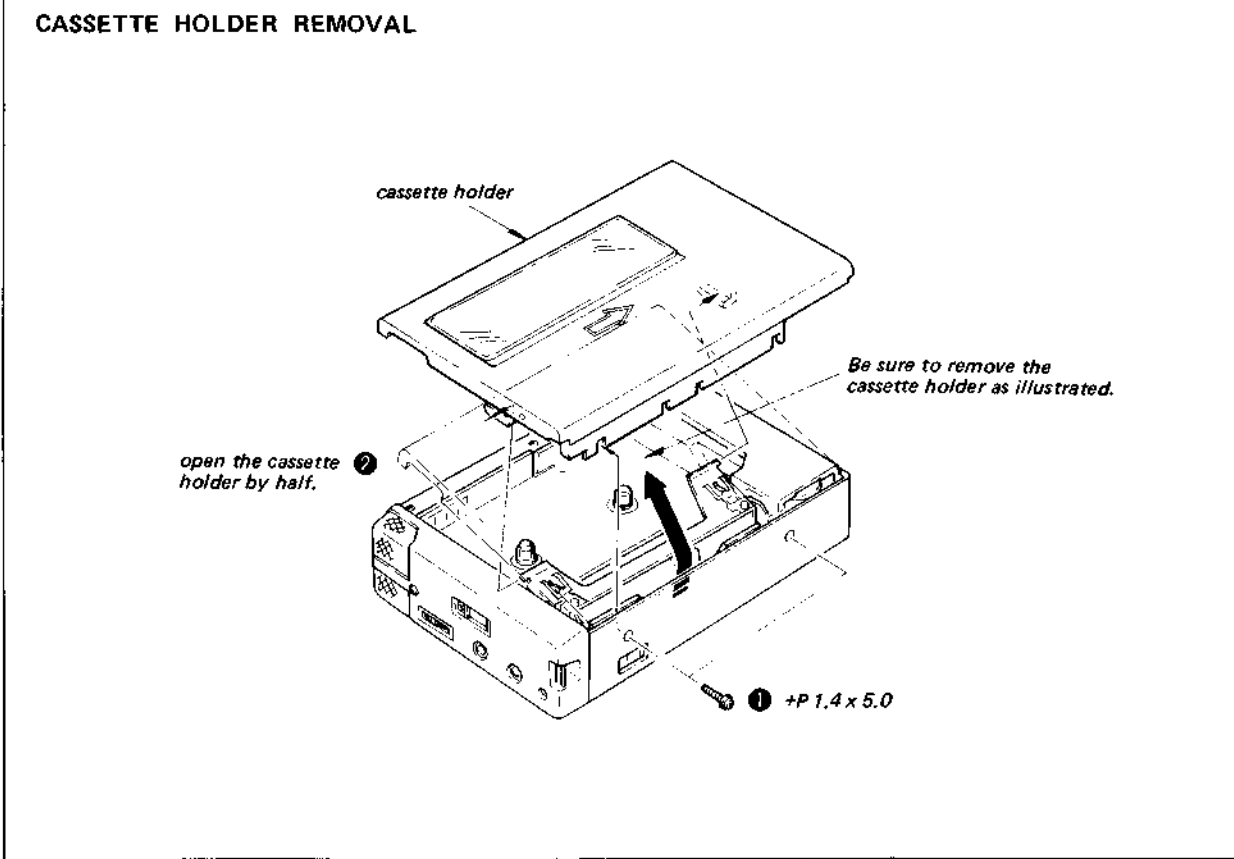
LOWE

REEL

SECTION 3  
DISASSEMBLY

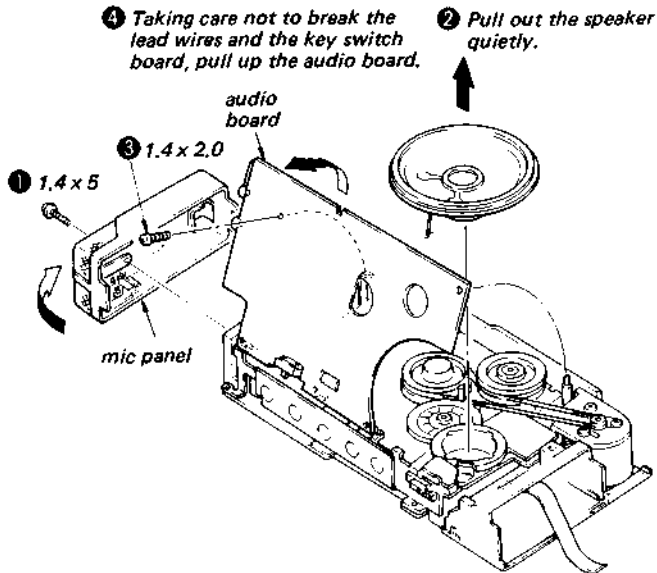
TCS-370 TCS-370

Note: Follow the disassembly procedure in the numerical order given.

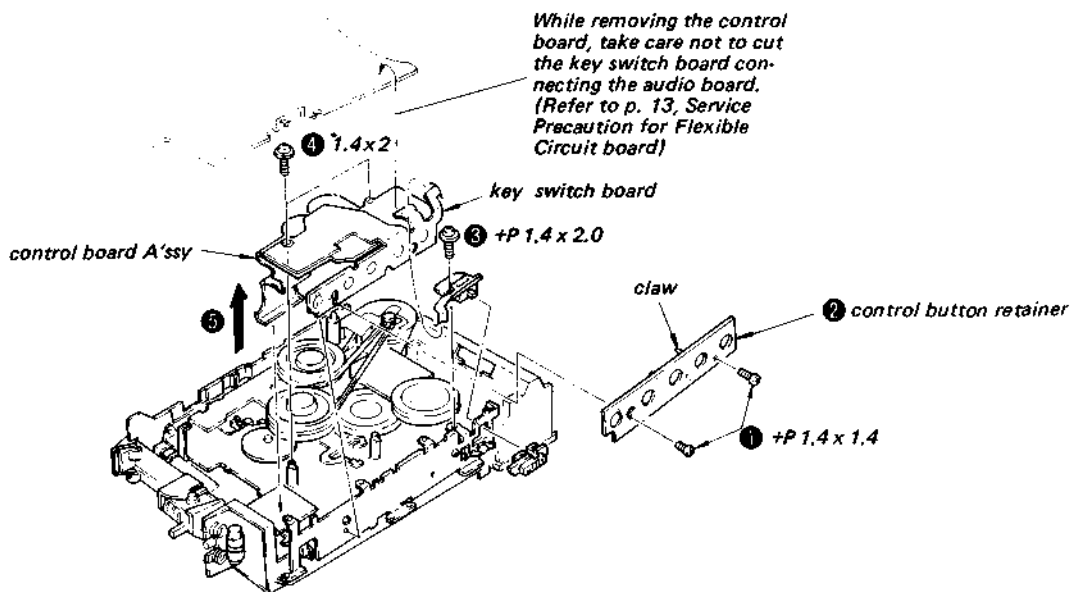




MIC PANEL, AUDIO BOARD REMOVAL

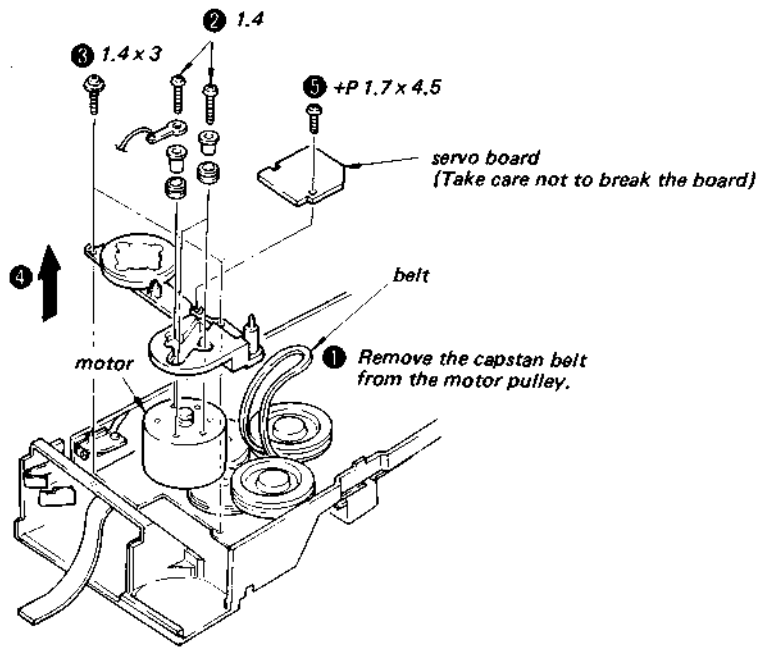


CONTROL BOARD REMOVAL



When lifting up the control board in the step 5, the pins driving the mechanism deck section are released. When reassembling them, refer to "NOTES ON CONTROL BOARD ASSEMBLY" on page 15.

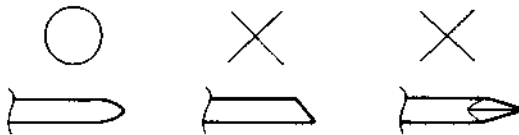
**MOTOR BOARD**



**Service Precaution for Flexible Circuit Board**

1. Keep the temperature of the soldering iron  $270^{\circ}\text{C} \pm 10^{\circ}\text{C}$ .

• Shape of the tip of the soldering iron.



2. Do not apply the soldering iron to the pattern more than 5 seconds or 20 times.
3. Do not push the pattern forcefully while the soldering iron is applied to it.
4. Do not bend the flexible printed circuit board.
5. Hold the component side of the printed circuit board.

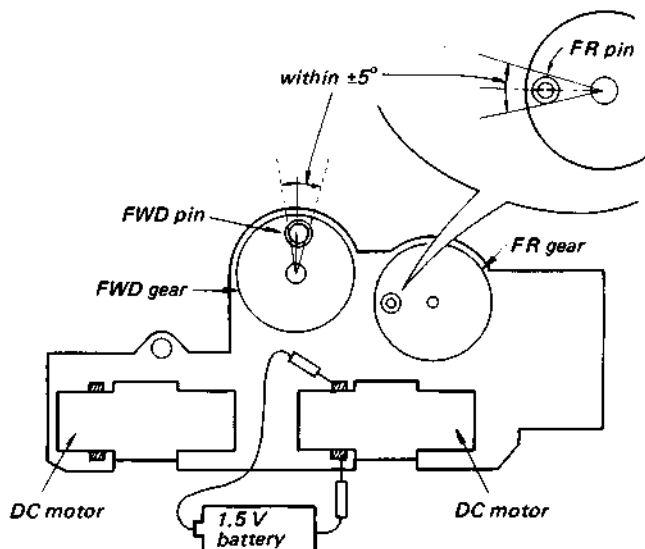
NOTES ON CONTROL BOARD ASSEMBLY

Confirmation of Stop Position

- When setting the control board on the mechanical chassis, place the FWD pin and FR pin in the positions indicated.

|        |                      |
|--------|----------------------|
| Angle: | within $\pm 5^\circ$ |
|--------|----------------------|

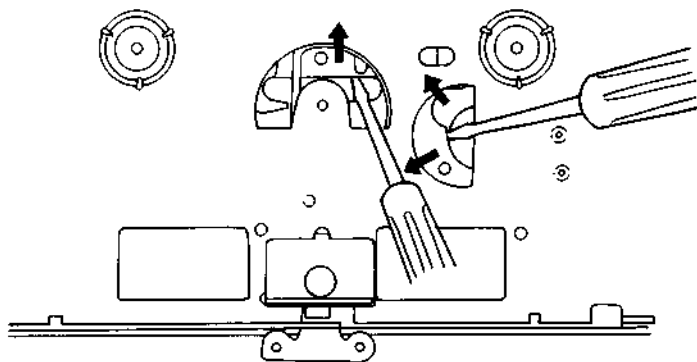
- If the pin position does not match up, connect a 1.5 V battery to the motor terminal as shown in the diagram at right, and match up the angle. (Cut main power at this time.)



Confirmation of Drive Pin Position

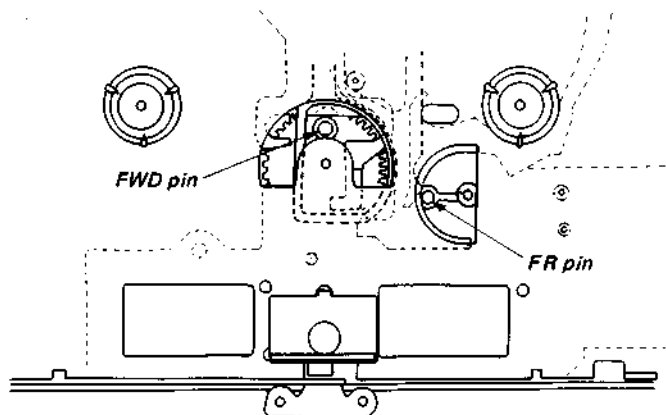
Before Setting:

- When setting, press in the operation plates with the end of a screwdriver from the front of the set (cassette side) and engage the FWD pin and FR pin.



When Set:

- Confirm that the FWD pin and FR pin are set at the proper angle and are engaged correctly.



**SECTION 4  
ADJUSTMENTS**

**4-1. MECHANICAL ADJUSTMENTS AND MEASUREMENT**

**PRECAUTION**

1. Clean the following parts with a denatured-alcohol-moistened swab:
 

|                      |              |
|----------------------|--------------|
| record/playback head | pinch roller |
| erase head           | rubber belts |
| capstan              | idlers       |
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

**Torque Measurement**

| Torque       | Torque meter | Meter reading                                 |
|--------------|--------------|---|
| Forward      | CQ-102C      | 26 – 36 g·cm<br>(0.36 – 0.50 oz·inch)         |
| Fast Forward | CQ-201B      | More than 85 g·cm<br>(More than 1.18 oz·inch) |
| Rewind       | CQ-201B      | More than 75 g·cm<br>(More than 1.04 oz·inch) |
| Back Tension | CQ-102C      | 2.5 – 4 g·cm                                  |

**Tape Pulling Force Measurement**

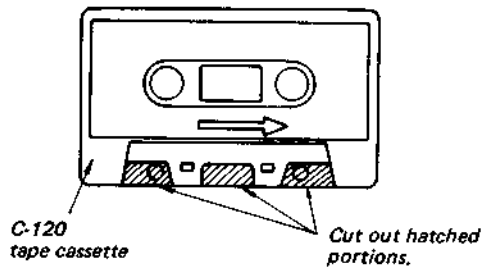
|     | Meter | Meter reading     |
|-----|-------|-------------------|
| FWD | CQ403 | More than 60 g·cm |

**Head Height Adjustment**

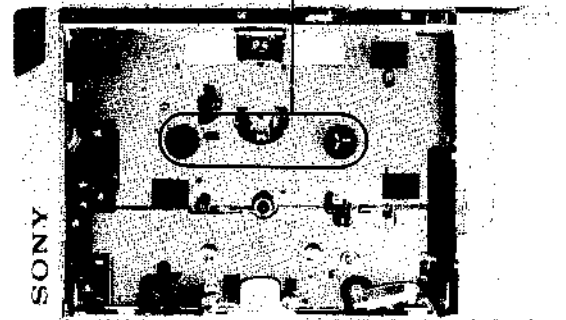
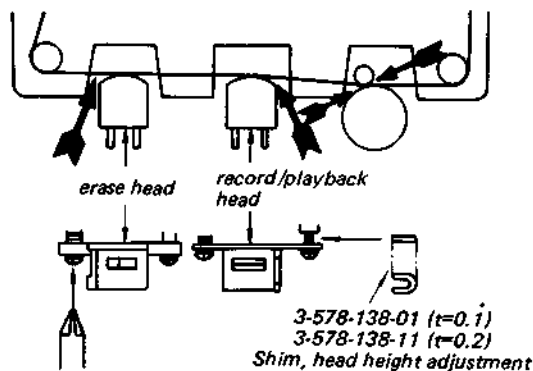
Power Voltage: 2.5 V

**Procedure:**

1. Prepare an adjustment cassette as shown below.

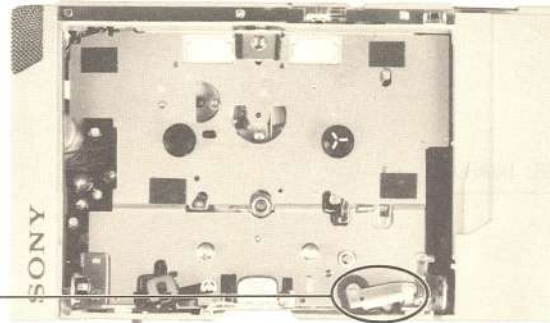
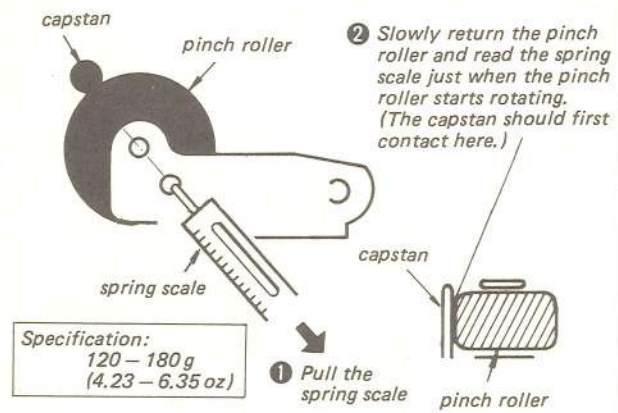


2. In record mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions shown by arrows.



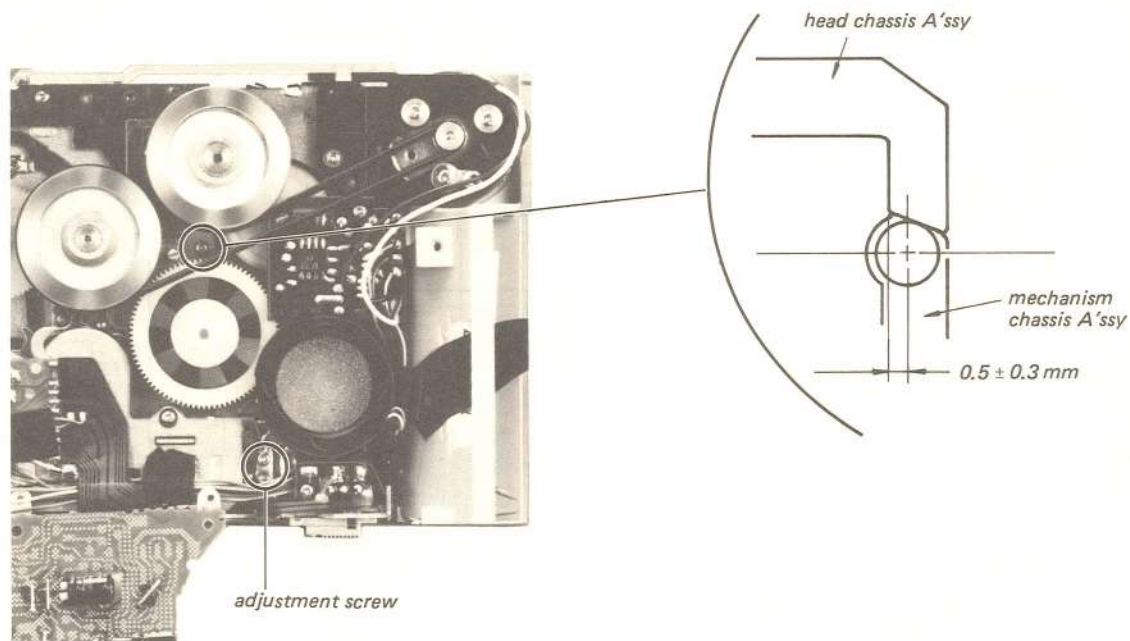
**Pinch Roller Pressure Measurement**

Power Voltage: 3 V  
 — Playback Mode —



**Solenoid Position Adjustment**

— CUE or REV Mode —



Adjust the screw for the specified clearance.

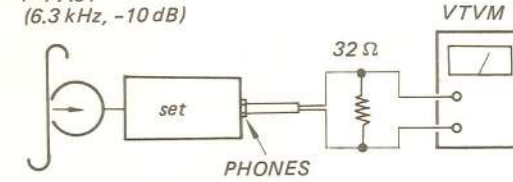
**4-2. ELECTRICAL ADJUSTMENTS**

**Record/playback Head Azimuth Adjustment**

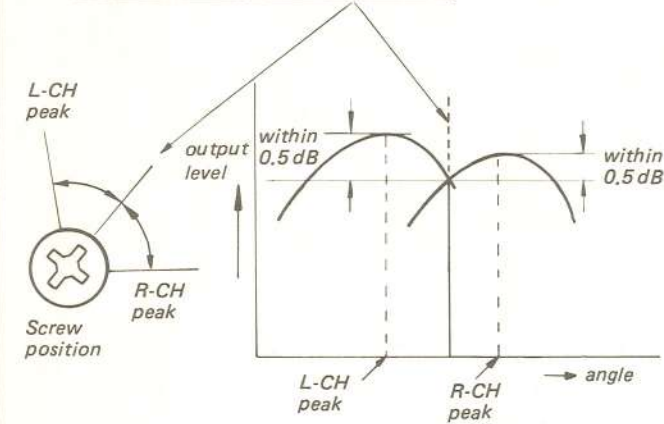
**Procedure:**

1. Mode: playback

test tape  
 P-4-A81  
 (6.3 kHz, -10 dB)

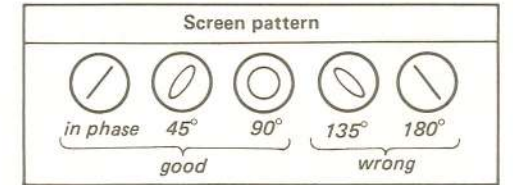
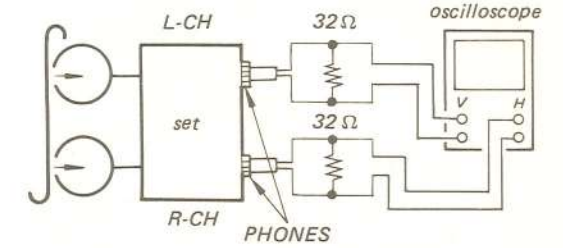


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

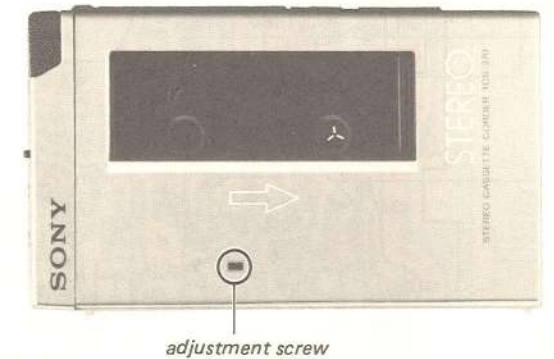


3. Phase Check  
 Mode: playback

test tape  
 P-4-A81  
 (6.3 kHz, -10 dB)



**Adjustment Location:**



**Tape Speed Adjustment**

**Setting:**

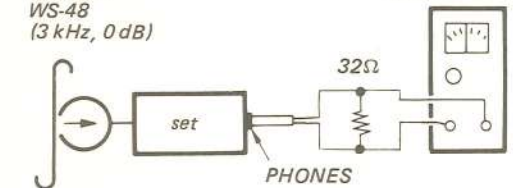
VOLUME control: mechanical mid  
 SPEED control: mechanical mid

**Procedure:**

Mode: playback

speed checker  
 LFM-30  
 or  
 digital frequency  
 counter

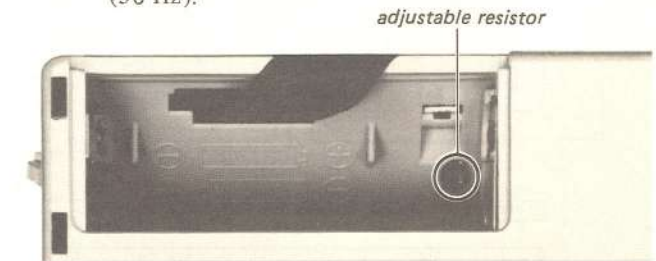
test tape  
 WS-48  
 (3 kHz, 0 dB)



**Specification:**

| Speed checker | Digital frequency counter |
|---------------|---------------------------|
| -0.5 to +0.5% | 2,985 ~ 3,015 Hz          |

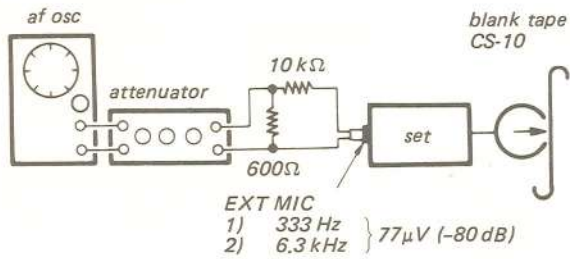
Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).



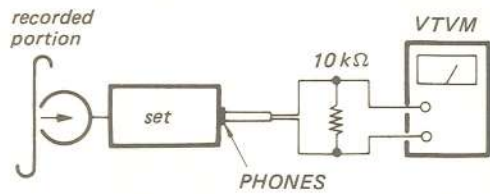
### Record Bias Adjustment

**Procedure:**

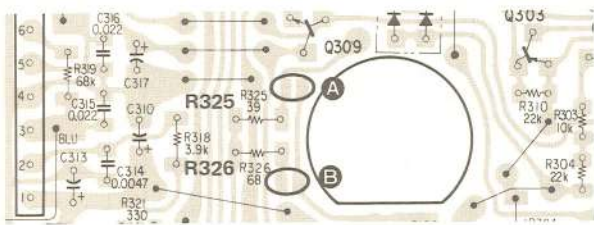
1. Mode: record



2. Mode: playback



1. Set the 333 Hz signal for -20 dB (77.5 mV).
2. Adjust the VOL control for -20 dB (77.5 mV) reading on VTVM.
3. Change the pattern connection ( **A** or **B** ) so that the output level of 6.3 kHz signal is within 6 dB relative to that of 333 Hz signal.
4. If necessary, repeat steps 2), 3).

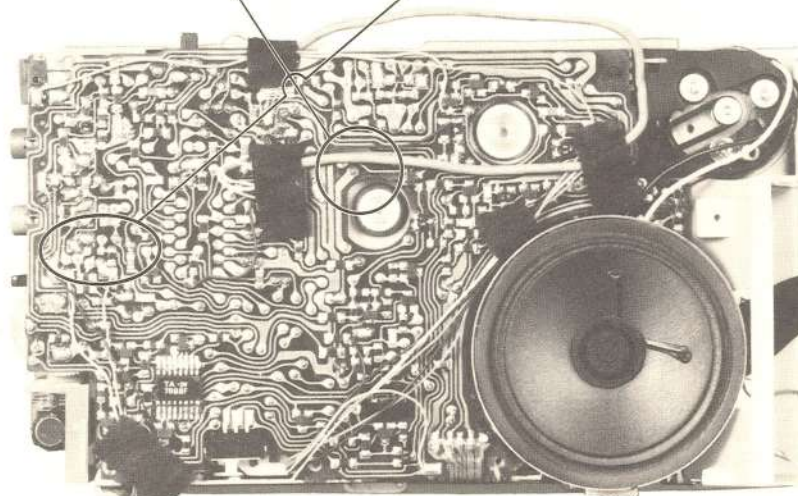
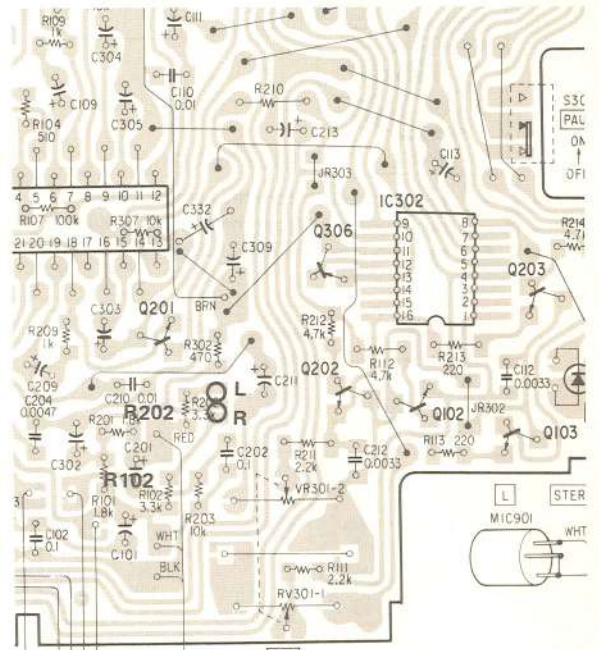


### Microphone Sensitivity Adjustment

When replacing the microphone, perform this adjustment.

| Mark of Microphone | Pattern Connection |
|--------------------|--------------------|
| BLACK              | OPEN               |
| RED                | SHORT              |

Adjustment Location: Audio Board  
(Conductor Side)



A B C D E F G H I J K L M N O P

5-1. MOUNTING DIAGRAM

1

2

3

4

5

6

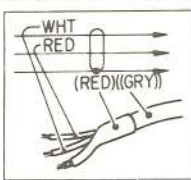
7

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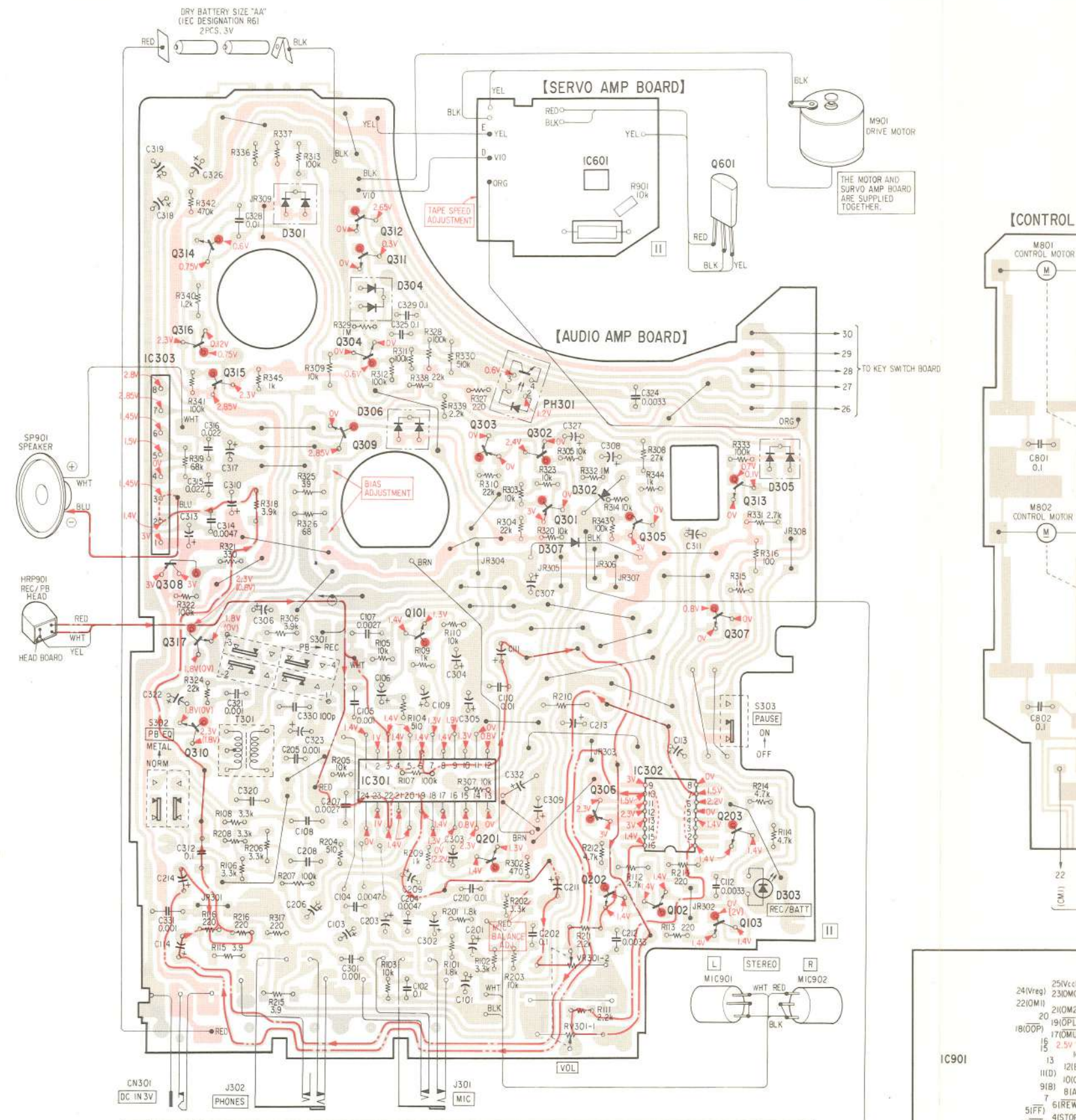
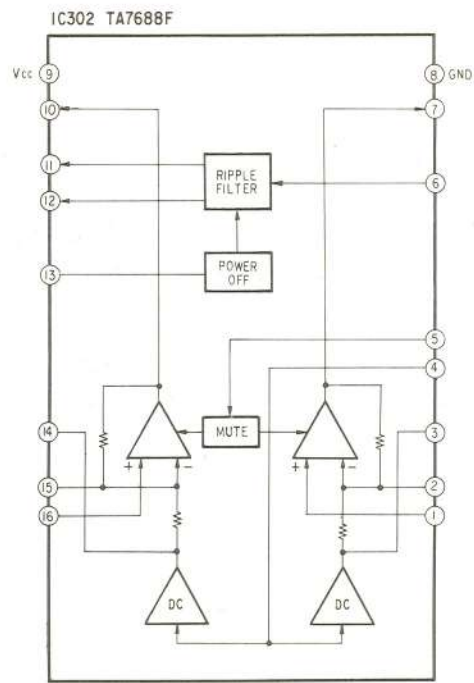
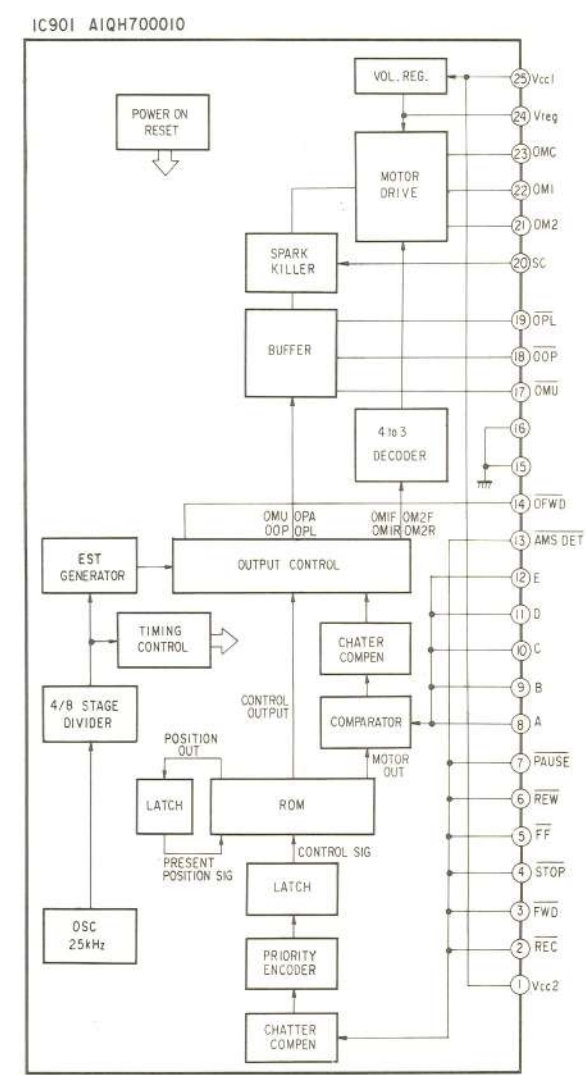
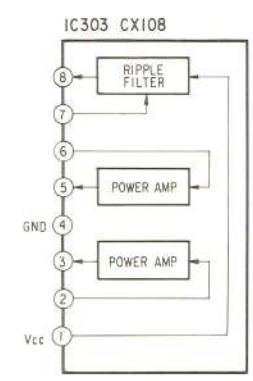
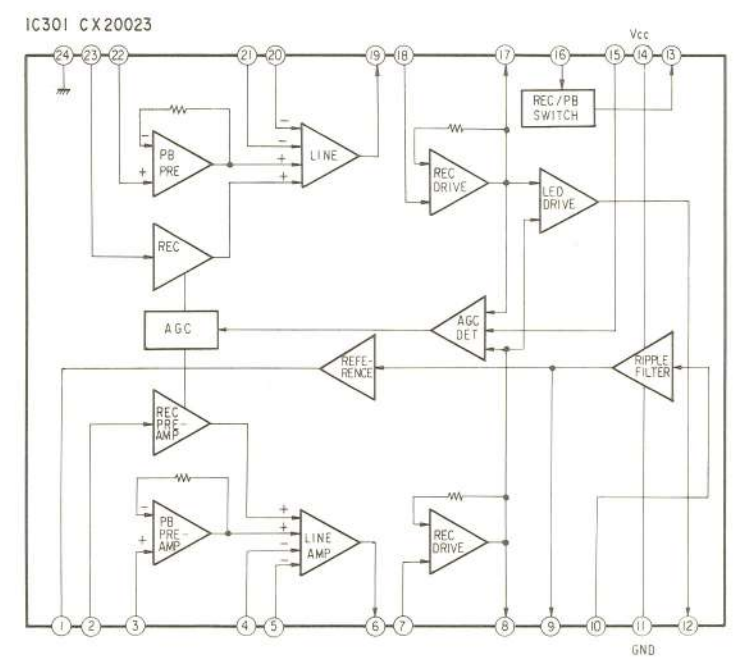
9

10

Note:  
● Color code of sleeving over the end of the jacket.



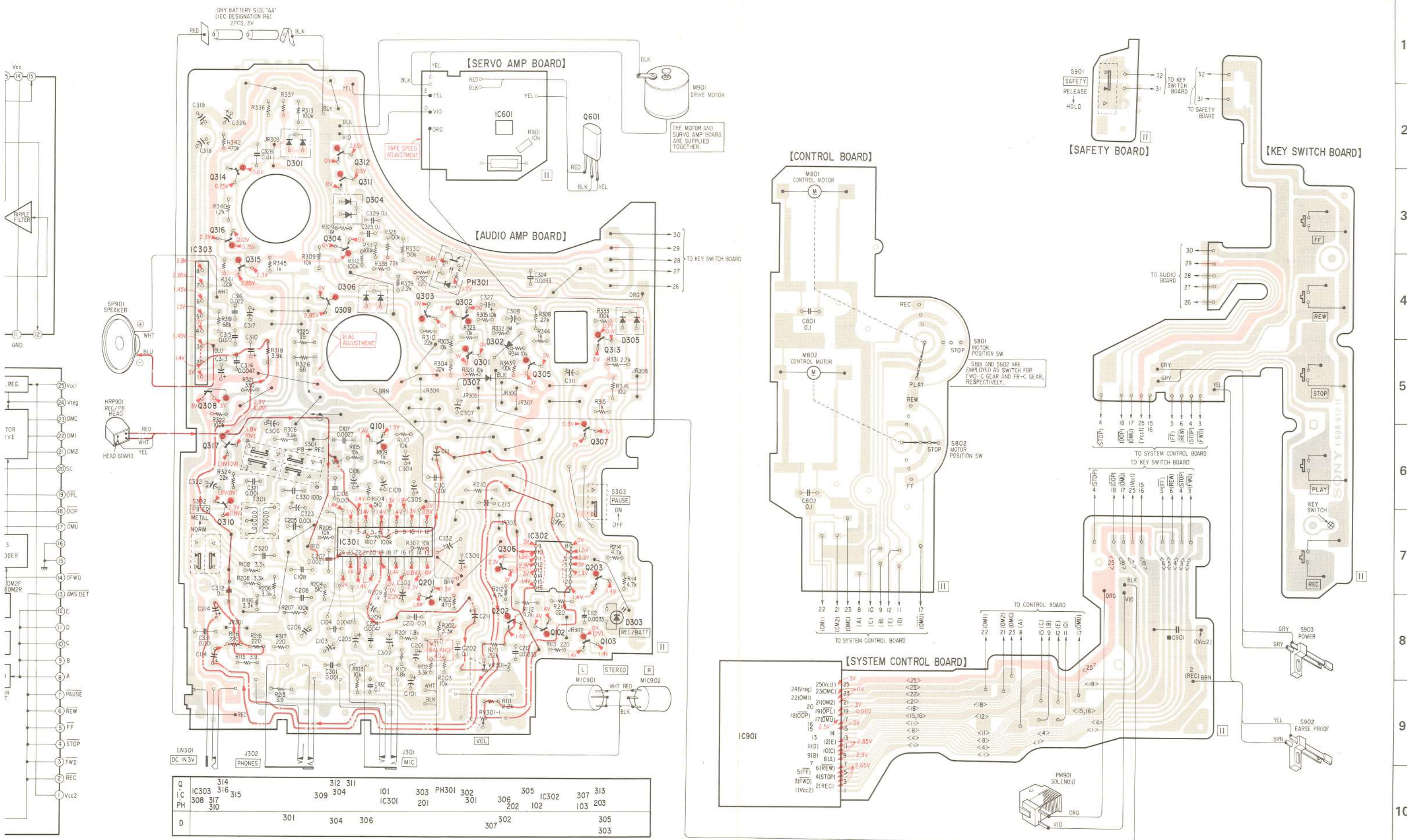
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : part mounted on the conductor side.
- : B + pattern
- : signal path
- : L-CH signal path
- : R-CH signal path



|    |       |     |     |     |     |       |     |     |     |
|----|-------|-----|-----|-----|-----|-------|-----|-----|-----|
| Q  | 314   | 312 | 311 | 101 | 303 | PH301 | 302 | 305 | 313 |
| I  | IC303 | 316 | 315 | 309 | 304 | IC301 | 301 | 306 | 307 |
| C  | 308   | 317 | 310 |     |     |       |     | 302 | 203 |
| PH |       |     |     |     |     |       |     | 102 |     |
| D  |       | 301 | 304 | 306 |     |       | 307 | 302 | 305 |
|    |       |     |     |     |     |       |     |     | 303 |

|    |         |
|----|---------|
| 25 | Vcc1    |
| 24 | Vreg    |
| 23 | OMC     |
| 22 | OM1     |
| 21 | OM2     |
| 20 | OPL     |
| 19 | OPL     |
| 18 | OMP     |
| 17 | OMU     |
| 16 | OMU     |
| 15 | DFWD    |
| 14 | AMS DET |
| 13 | E       |
| 12 | D       |
| 11 | C       |
| 10 | B       |
| 9  | A       |
| 8  | PAUSE   |
| 7  | REW     |
| 6  | FF      |
| 5  | STOP    |
| 4  | FWD     |
| 3  | REC     |
| 2  | Vcc2    |

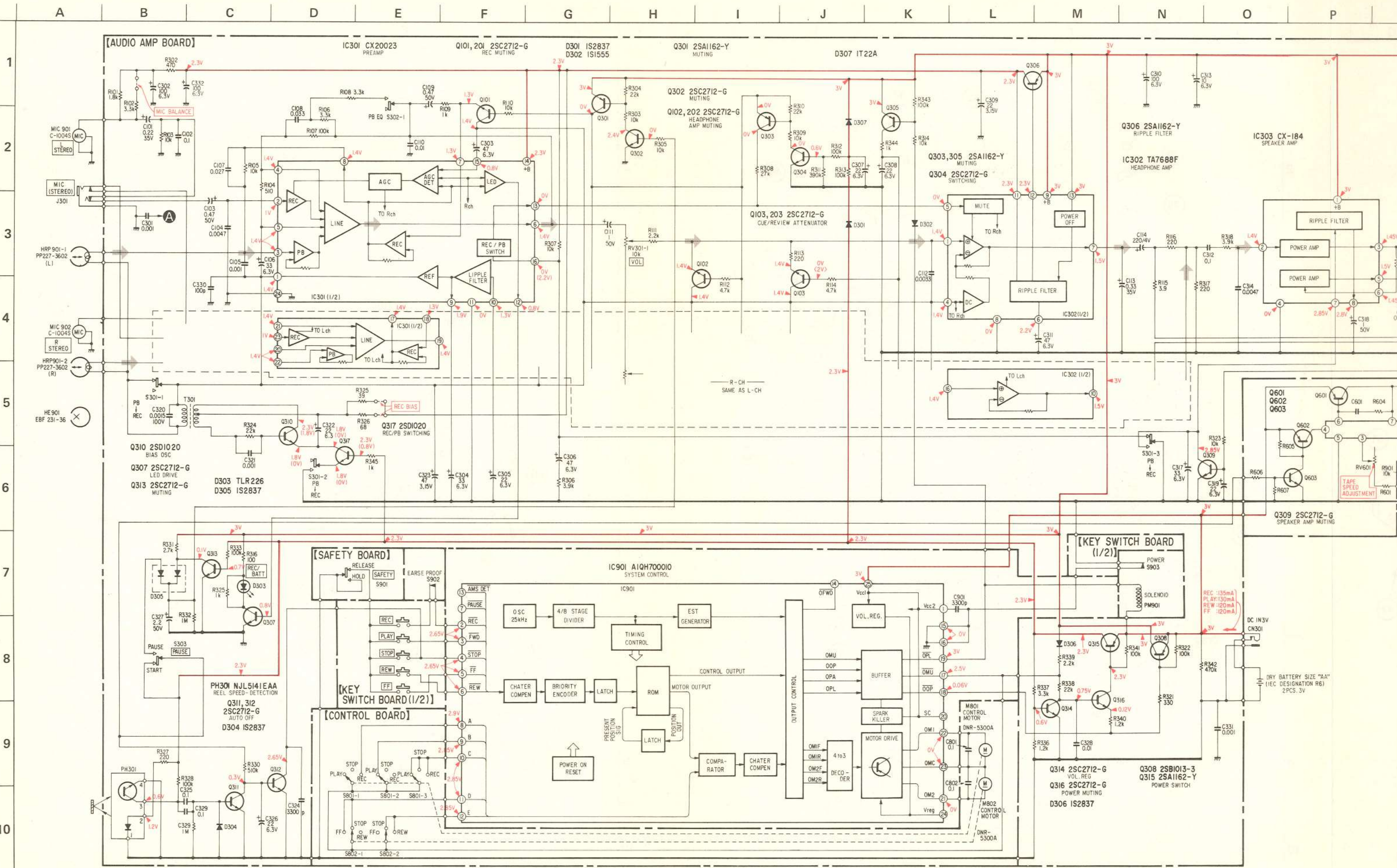
G H I J K L M N O P Q R S T U V W



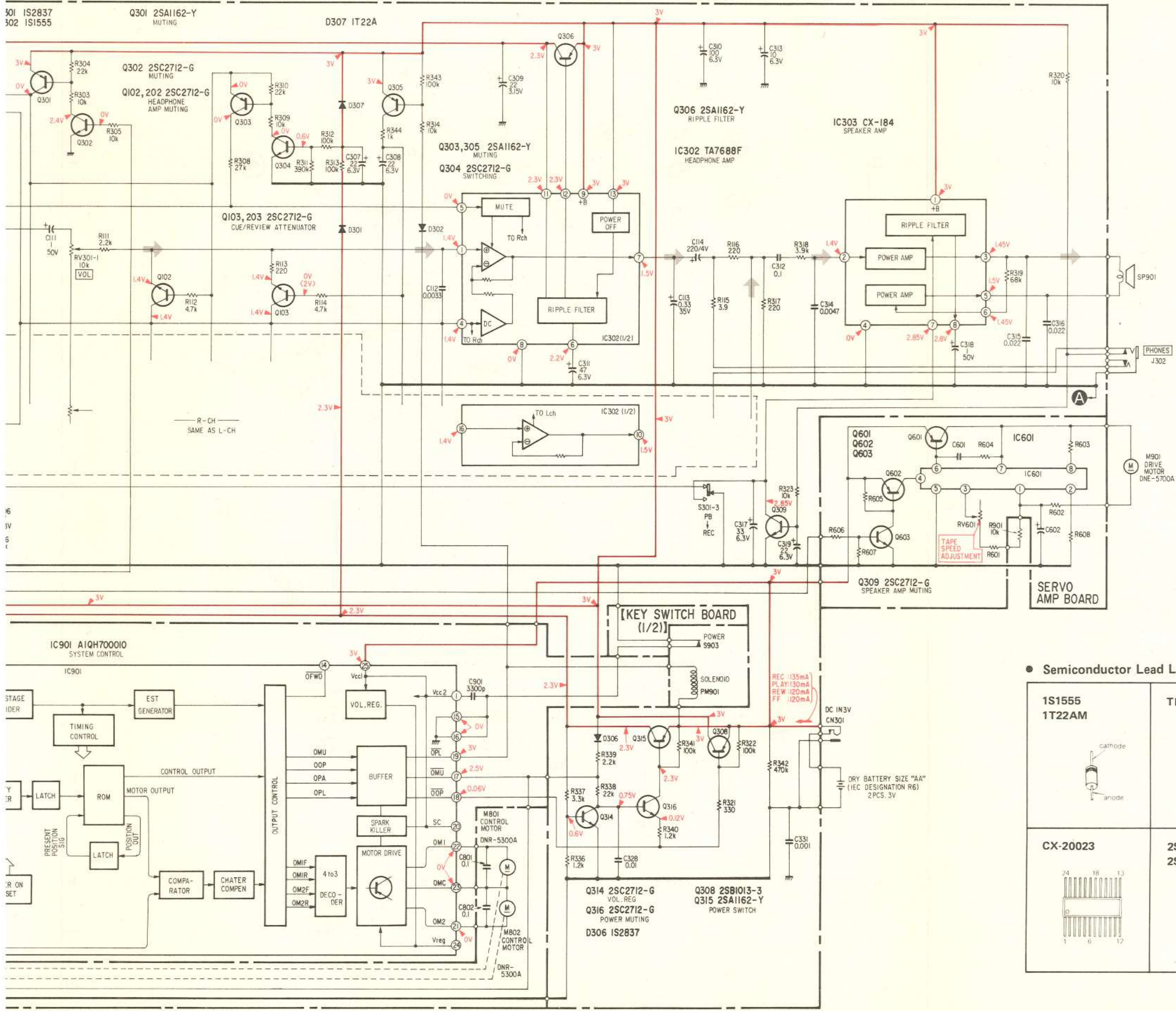
|   |       |     |     |     |       |     |       |     |     |       |     |     |
|---|-------|-----|-----|-----|-------|-----|-------|-----|-----|-------|-----|-----|
| Q | IC303 | 314 | 312 | 311 | IC301 | 303 | PH301 | 302 | 305 | IC302 | 307 | 313 |
| I | 308   | 317 | 315 | 309 | 304   | 201 | 301   | 306 | 102 | 103   | 203 |     |
| D |       | 310 |     | 301 | 304   | 306 |       | 302 |     |       | 305 | 303 |

|       |          |          |       |         |
|-------|----------|----------|-------|---------|
| IC901 | 24(Vreg) | 25(Vcc1) | 26    | <25>    |
|       | 22(OM1)  | 23(OMC)  | 23    | <22>    |
|       | 20(1OM2) | 21       | 3V    | <21>    |
|       | 18(100P) | 19       | 0.06V | <18,16> |
|       | 15       | 17       | 0V    | <17>    |
|       | 13       | 14       | 2.85V | <13>    |
|       | 11(D)    | 12(E)    | 11    | <11>    |
|       | 9(B)     | 10(C)    | 2.9V  | <9>     |
|       | 7        | 6(REW)   | 2.65V | <7>     |
|       | 5(FF)    | 4(STOP)  |       | <4>     |
|       | 3(FWD)   | 2(1REC)  |       | <3>     |



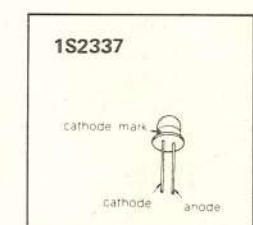


H I J K L M N O P Q R S T U V W



- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{pF}$  50WV or less are not indicated except for electrolytics and tantalums.
  - : panel designation.
  - : adjustment for repair.
  - : B+ bus.
  - Volts are dc with respect to ground unless otherwise noted.
  - Readings are taken under no-signal conditions with a VOM (20  $\text{k}\Omega/\text{V}$ ).  
 ( ) : REC  
 [ ] :  
 < > :
  - Voltage variations may be noted due to normal production tolerances.
  - AC voltage readings in the bias oscillator with a VTVM.
  - Total current is measured with no cassette installed.
  - Switches
- | Ref. No. | Switch         | Position |
|----------|----------------|----------|
| S301     | REC/PB         | PB       |
| S302     | PB EQ          | NORM     |
| S303     | PAUSE          | START    |
| S801     | MOTOR POSITION | PLAY     |
| S802     |                | PLAY     |
| S901     | SAFETY         | RELEASE  |
| S902     | ERASER PROOF   | REC ON   |
| S903     | POWER          | ON       |
- : signal path

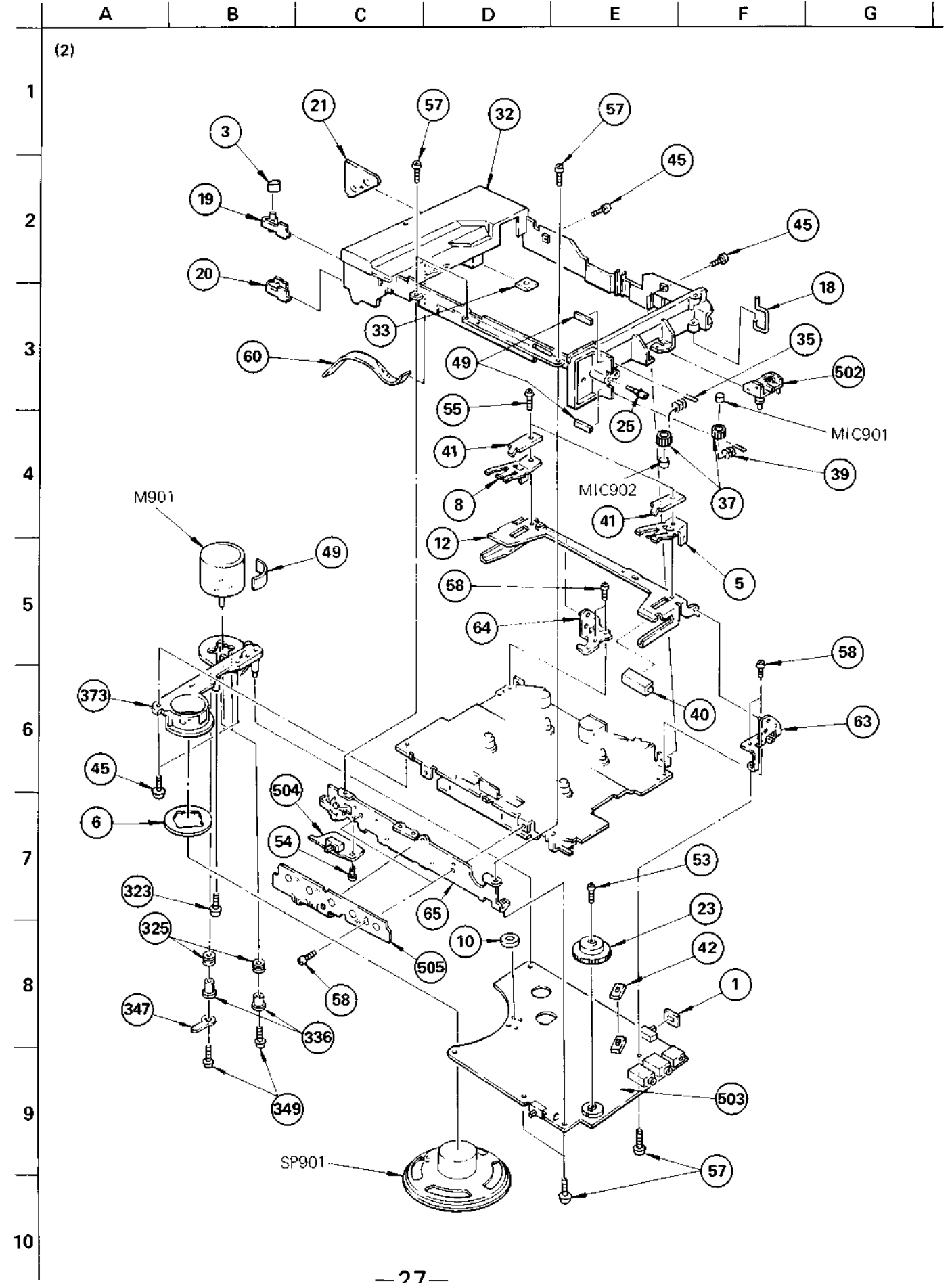
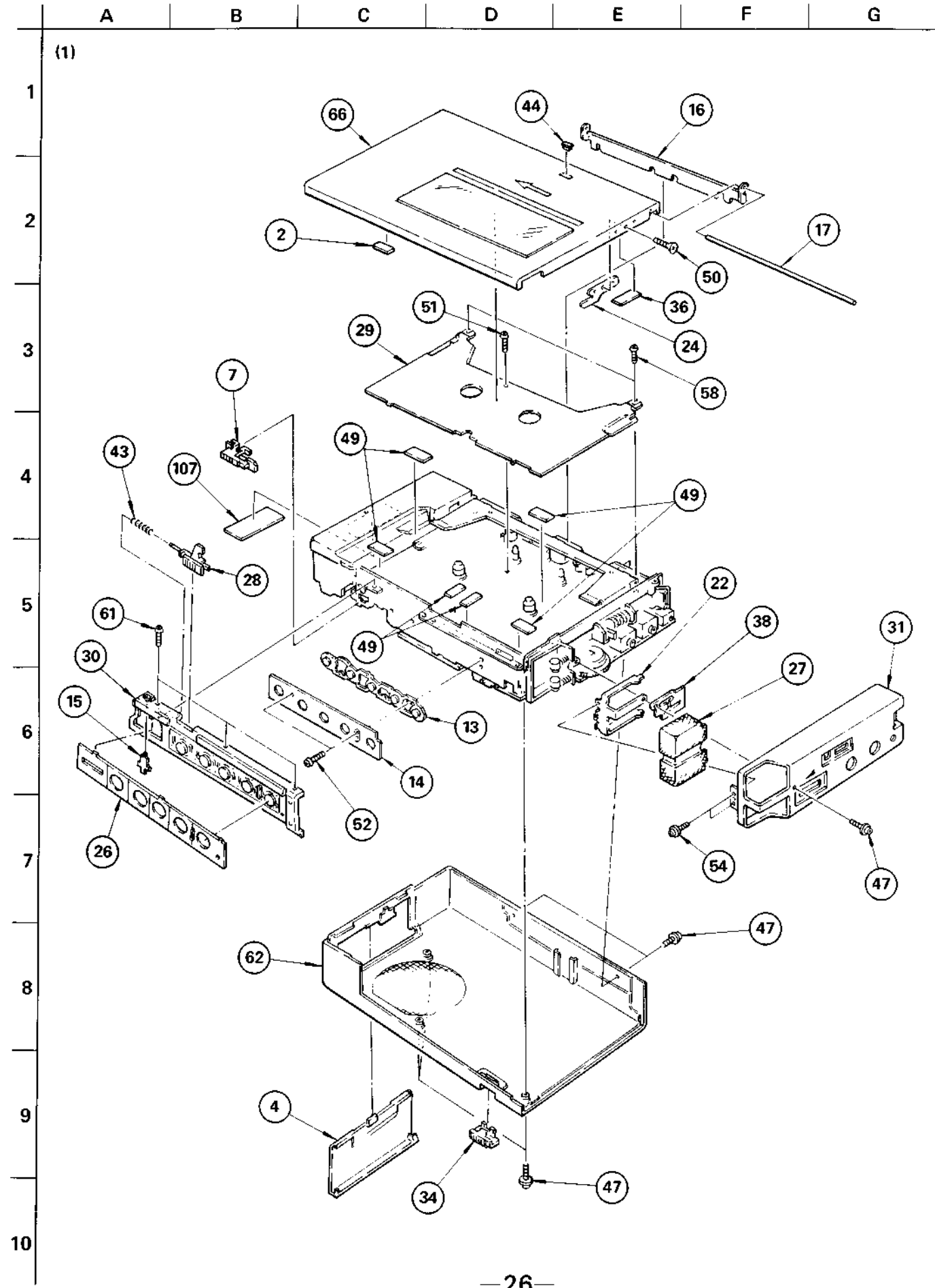
**Note: Voltages are measured with a VOM (50k $\Omega$ /V).**

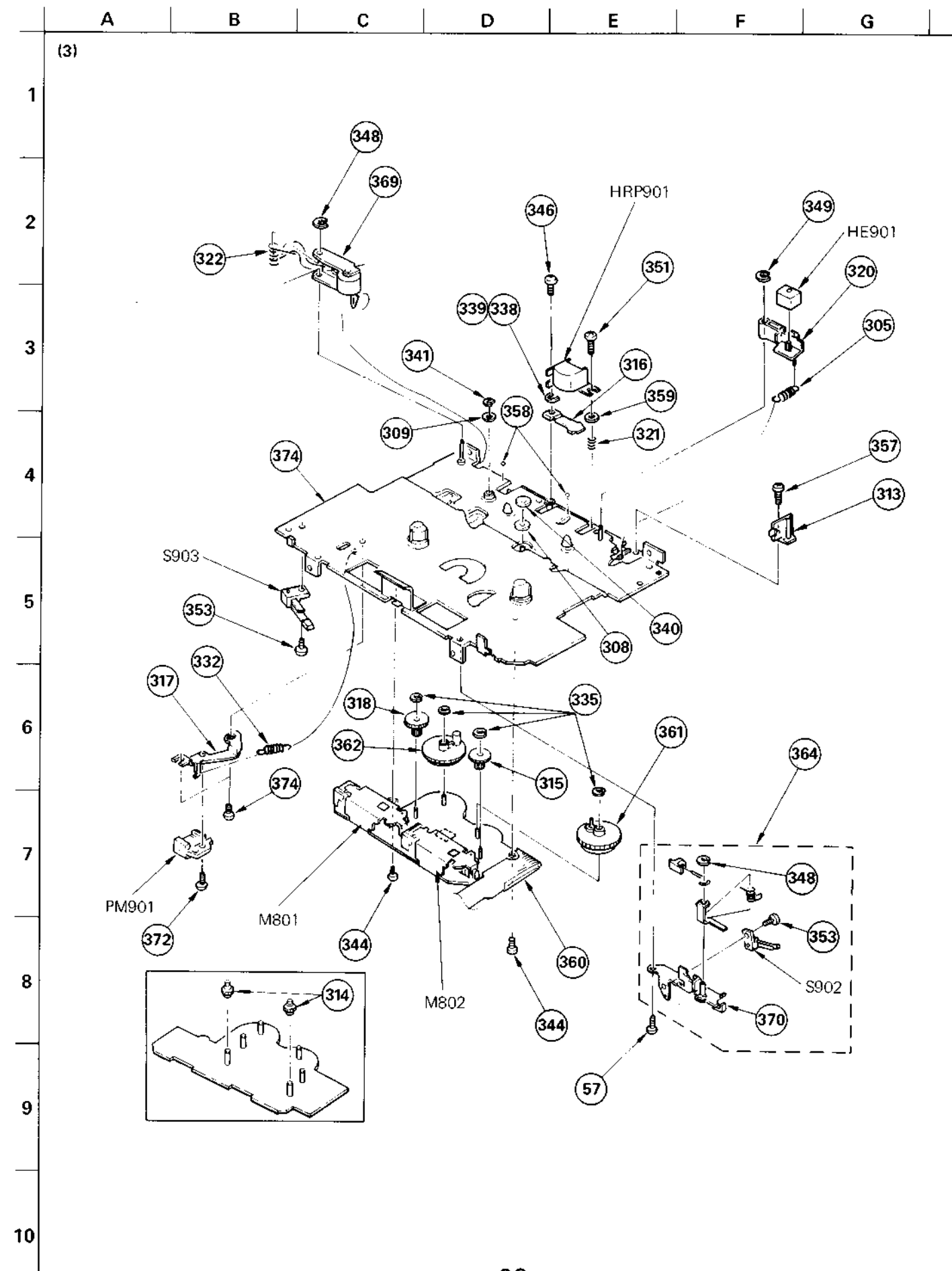
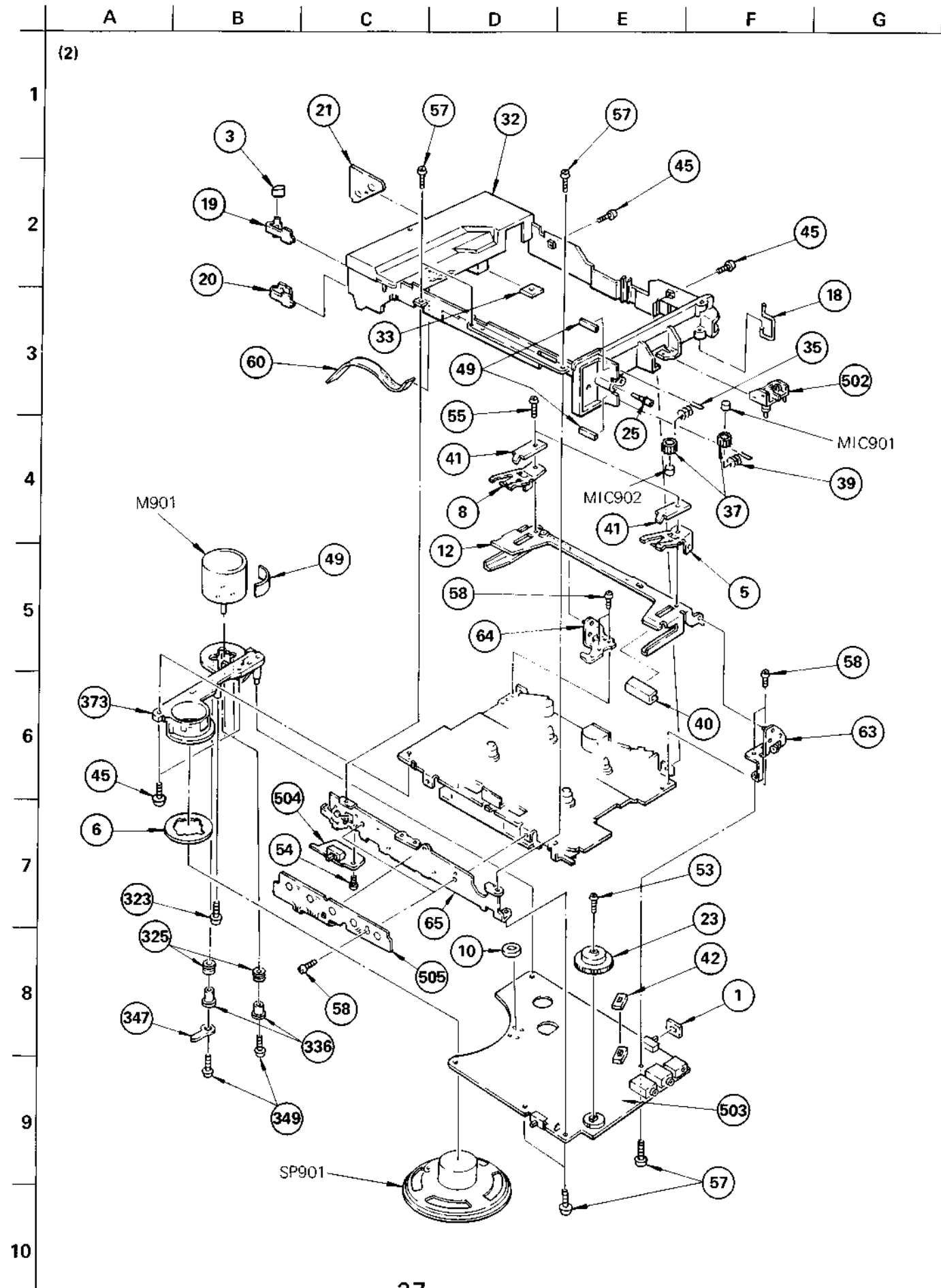


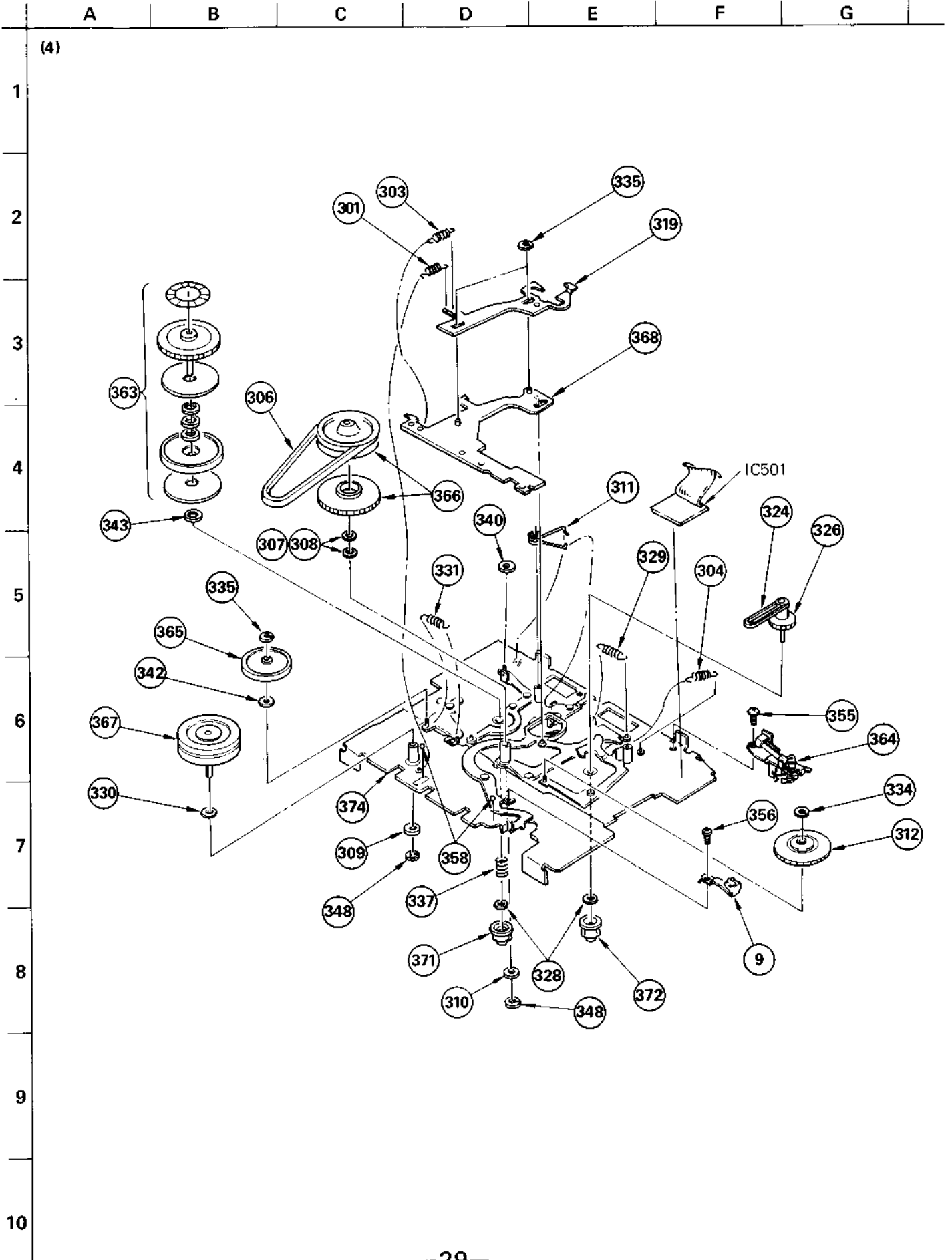
**Semiconductor Lead Layouts**

|                             |                                 |                       |                                 |                                 |
|-----------------------------|---------------------------------|-----------------------|---------------------------------|---------------------------------|
| <b>1S1555</b><br>1T22AM<br> | <b>TLR226</b><br>               | <b>NJL514E-AA</b><br> | <b>TA7688F</b><br>              | <b>CX-184</b><br>               |
| <b>CX-20023</b><br>         | <b>2SA1162</b><br>2SA1162-Y<br> | <b>2SB1013-3</b><br>  | <b>2SD1020</b><br>2SD1020-F<br> | <b>2SC2712</b><br>2SC2712-G<br> |

SECTION 6  
EXPLODED VIEWS AND PARTS LIST







## GENERAL SECTION

| No. | Part No.       | Description                      |
|-----|----------------|----------------------------------|
| 1   | 3-305-887-00   | COVER, SWITCH                    |
| 2   | ♣;3-308-143-00 | SHEET, INSULATING (C)            |
| 3   | ♣;3-308-401-00 | RETAINER, BATTERY                |
| 4   | 3-308-404-00   | (BLACK)...LID, BATTERY CASE      |
| 4   | 3-308-404-01   | (SILVER)...LID, BATTERY CASE     |
| 5   | 3-308-409-00   | SPRING (A)                       |
| 6   | 3-308-419-00   | CUSHION, SPEAKER                 |
| 7   | 3-308-421-00   | KNOB, SAFETY                     |
| 8   | 3-308-422-00   | SPRING (B)                       |
| 9   | 3-308-427-00   | SPRING                           |
| 10  | ♣;3-308-430-00 | RETAINER, REFLECTOR, PHOTO       |
| 11  | ♣;3-308-431-00 | SHEET, INSULATING                |
| 12  | 3-308-434-00   | HOLDER, CASSETTE                 |
| 13  | 3-308-436-00   | PLATE, CLICK                     |
| 14  | ♣;3-308-438-00 | RETAINER, BUTTON, CONTROL        |
| 15  | 3-308-547-00   | KNOB, DETECTION                  |
| 16  | ♣;3-312-702-00 | RETAINER, CASSETTE LID           |
| 17  | 3-312-703-00   | SHAFT, CASSETTE LID              |
| 18  | ♣;3-312-704-00 | SHAFT, STRAP                     |
| 19  | 3-312-709-00   | TERMINAL (A), BATTERY            |
| 20  | 3-312-711-00   | TERMINAL (B), BATTERY            |
| 21  | 3-312-712-00   | TERMINAL (C), BATTERY            |
| 22  | ♣;3-312-713-00 | RETAINER, MICROPHONE NET         |
| 23  | 3-312-717-00   | KNOB, CONTROL                    |
| 24  | ♣;3-312-719-00 | RETAINER, HOLDER, CASSETTE       |
| 25  | ♣;3-312-720-00 | SHAFT, STOPPER, MICROPHONE PANEL |
| 26  | 3-312-722-00   | ORNAMENT, CONTROL BUTTON         |
| 27  | 3-312-723-00   | NET, MICROPHONE                  |
| 28  | 3-312-726-00   | KNOB, EJECT                      |
| 29  | 3-312-727-00   | PANEL, REEL                      |
| 30  | 3-312-728-00   | BUTTON, CONTROL                  |
| 31  | 3-312-729-01   | (SILVER)...PANEL, MICROPHONE     |
| 31  | 3-312-729-11   | (BLACK)...PANEL, MICROPHONE      |
| 32  | ♣;3-312-730-02 | (SILVER)...CHASSIS               |
| 32  | ♣;3-312-730-12 | (BLACK)...CHASSIS                |
| 33  | ♣;3-312-734-00 | PLATE, NUT                       |
| 34  | 3-312-738-01   | (SILVER)...KNOB, PAUSE           |
| 34  | 3-312-738-11   | (BLACK)...KNOB, PAUSE            |
| 35  | 3-312-739-00   | SPRING (A)                       |
| 36  | ♣;3-312-740-00 | PLATE, GROUND                    |
| 37  | 3-312-741-00   | CUSHION, MICROPHONE              |
| 38  | 3-312-747-00   | FOIL, GROUND                     |
| 39  | 3-312-748-00   | SPRING (B)                       |
| 40  | 3-312-751-00   | STOPPER (A)                      |

## GENERAL SECTION

| No. | Part No.       | Description                            |
|-----|----------------|--|
| 41  | 3-312-752-00   | STOPPER (B)                            |
| 42  | 3-570-921-00   | SPACER, SWITCH                         |
| 43  | 3-578-104-00   | SPRING, COMPRESSION                    |
| 44  | 3-579-767-00   | (SILVER)...ORNAMENT, HOLE, ADJUSTMENT  |
| 44  | 3-579-767-11   | (BLACK)...ORNAMENT, HOLE, ADJUSTMENT   |
| 45  | 3-703-502-31   | SCREW                                  |
| 46  | 3-703-502-41   | SCREW                                  |
| 47  | 3-703-502-71   | (SILVER)...SCREW                       |
| 47  | 3-703-502-72   | (BLACK)...SCREW                        |
| 48  | 3-703-502-81   | (SILVER)...SCREW                       |
| 48  | 3-703-502-82   | (BLACK)...SCREW                        |
| 49  | 3-831-441-XX   | SPACER                                 |
| 50  | 7-627-451-07   | (SILVER)...SCREW, PRECISION +K 1.4x1.6 |
| 50  | 7-627-451-08   | (BLACK)...SCREW, PRECISION +K 1.4x1.6  |
| 51  | 7-627-551-07   | SCREW, PRECISION +P 1.4x1.6            |
| 52  | 7-627-551-47   | SCREW, PRECISION +P 1.4x1.4            |
| 53  | 7-627-552-37   | SCREW, PRECISION +P 1.7x3              |
| 54  | 7-627-850-07   | SCREW, PRECISION +P 1.4x2              |
| 55  | 7-627-850-17   | SCREW, PRECISION +P 1.4x2.5            |
| 56  | 7-627-850-27   | SCREW, PRECISION +P 1.4x3              |
| 57  | 7-627-850-37   | SCREW, PRECISION +P 1.4x1.4            |
| 58  | 7-627-850-47   | SCREW, PRECISION +P 1.4x1.6            |
| 59  | 7-627-850-57   | SCREW, PRECISION +P 1.4x3.5            |
| 60  | 9-911-816-01   | RIBBON, BATTERY                        |
| 61  | 9-911-838-XX   | CUSHION                                |
| 62  | X-3312-712-1   | (SILVER)...CABINET (LOWER) ASSY (S)    |
| 62  | X-3312-713-1   | (BLACK)...CABINET (LOWER) ASSY (B)     |
| 63  | ♣;X-3312-701-0 | PLATE (A) ASSY, BEARING                |
| 64  | ♣;X-3312-702-0 | PLATE (B) ASSY, BEARING                |
| 65  | X-3312-704-0   | PLATE ASSY, CONTROL                    |
| 66  | X-3312-710-1   | (SILVER)...LID, CASSETTE ASSY (S)      |
| 66  | X-3312-711-1   | (BLACK)...LID, CASSETTE ASSY (B)       |

### NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu\text{F}$ . Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu\text{F}$ , PF:  $\mu\text{uF}$ .

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### SEMICONDUCTORS

- In each case, U :  $\mu$ , for example:  
UA...:  $\mu\text{A}$ ..., UPA...:  $\mu\text{PA}$ ..., UPC...:  $\mu\text{PC}$ ,  
UPD...:  $\mu\text{PD}$ ...

### COTLS

- MMH : mH, UH :  $\mu\text{H}$

ACCESSORY & PACKING MATERIAL

| No. | Part No.     | Description                     |
|-----|--------------|---------------------------------|
| 101 | 1-528-027-11 | BATTERY, NEW SUPER (SUM-3) (NS) |
| 102 | 3-312-746-01 | CUSHION                         |
| 103 | 3-312-743-01 | SPACER                          |
| 104 | 3-312-760-01 | INDIVIDUAL CARTON               |
| 105 | 3-312-762-01 | HEADPHONE CARTON                |
| 106 | 3-312-755-01 | SHEET, PROTECTION               |
| 107 | 3-527-213-00 | LABEL, SERIAL NUMBER            |
| 108 | 3-570-631-71 | BAG, POLYETHYLENE               |
| 109 | 3-701-308-00 | (BLACK)...LABEL, PRODUCT COLOR  |
| 109 | 3-701-309-00 | (SILVER)...LABEL, PRODUCT COLOR |
| 110 | 3-701-625-00 | BAG, POLYETHYLENE               |
| 111 | 3-773-339-11 | (AEP,UK)...MANUAL, INSTRUCTION  |
| 112 | 3-773-339-41 | (E).....MANUAL, INSTRUCTION     |
| 113 | 3-795-565-11 | INSTRUCTION                     |
| 114 | 8-893-527-00 | TAPE, DEMO (CD-814)             |
| 115 | 9-511-519-00 | HEADPHONE (MDR-W3)              |

MECHANISM SECTION

| No. | Part No.       | Description                  |
|-----|----------------|------------------------------|
| 301 | 2-270-832-00   | SPRING, TENSION              |
| 302 | 3-307-948-01   | WASHER, NYLON                |
| 303 | 3-308-450-00   | SPRING, TENSION              |
| 304 | 3-308-451-00   | SPRING, TENSION              |
| 305 | 3-308-452-00   | SPRING, TENSION              |
| 306 | 3-308-460-00   | BELT, CAPSTAN                |
| 307 | 3-308-471-01   | WASHER (FR)                  |
| 308 | 3-308-471-11   | WASHER (FR)                  |
| 309 | 3-308-472-01   | WASHER (C)                   |
| 310 | 3-308-472-11   | WASHER (C)                   |
| 311 | 3-308-475-00   | SPRING                       |
| 312 | 3-308-486-00   | GEAR, REW                    |
| 313 | 3-308-500-00   | GUIDE, TAPE                  |
| 314 | 3-308-502-00   | WHEEL, WORM                  |
| 315 | 3-308-503-00   | GEAR (B), FR-C               |
| 316 | 3-308-505-00   | SPRING                       |
| 317 | ♣;3-308-515-00 | BRACKET, PL                  |
| 318 | 3-308-523-00   | GEAR (C), FWD-C              |
| 319 | ♣;3-308-525-00 | LIMITER, HEAD CHASSIS        |
| 320 | 3-308-527-00   | LEVER, ERASE HEAD            |
| 321 | 3-308-534-00   | SPRING, COMPRESSION          |
| 322 | 3-308-544-00   | SPRING (B)                   |
| 323 | 3-309-597-41   | SCREW (1.4), TAPPING         |
| 324 | 3-312-708-00   | BELT, COUNTER                |
| 325 | 3-312-732-00   | CUSHION, MOTOR               |
| 326 | 3-312-733-00   | GEAR, S                      |
| 327 | ♣;3-312-734-00 | PLATE, NUT                   |
| 328 | 3-533-073-00   | WASHER                       |
| 329 | 3-545-588-00   | SPRING, TENSION              |
| 330 | 3-545-715-00   | WASHER                       |
| 331 | 3-547-668-00   | SPRING, TENSION              |
| 332 | 3-559-402-00   | SPRING, TENSION              |
| 333 | 3-563-105-00   | SHEET, INSULATING, MOTOR PCB |
| 334 | 3-570-615-00   | POLY-WASHER (DIA.1.2)        |
| 335 | 3-570-615-11   | POLY-WASHER (DIA.1.2)        |
| 336 | 3-570-772-00   | SPACER (M)                   |
| 337 | 3-578-123-00   | SPRING, COMPRESSION          |
| 338 | 3-578-138-01   | SEAM                         |
| 339 | 3-578-138-11   | SEAM                         |
| 340 | 3-578-242-11   | WASHER                       |
| 341 | 3-578-254-00   | RING, RETAINING, E1.2        |
| 342 | 3-701-436-01   | WASHER, 1.6                  |
| 343 | 3-701-437-11   | WASHER                       |
| 344 | 3-703-502-11   | SCREW                        |
| 345 | 3-831-441-XX   | CUSHION                      |

**NOTE:**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

**CAPACITORS:**

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF: μF, PF: μμF.

**RESISTORS**

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

**SEMICONDUCTORS**

- In each case, U : μ, for example:  
UA...: μA..., UPA...: μPA..., UPC...: μPC,  
UPD...: μPD...

**COILS**

- MMH : mH, UH : μH

## MECHANISM SECTION

| No. | Part No.       | Description                    |
|-----|----------------|--------------------------------|
| 346 | 7-621-772-08   | SCREW +B 2X3                   |
| 347 | 7-623-505-01   | LUG, 2                         |
| 348 | 7-624-101-01   | RING, RETAINING E-1.2          |
| 349 | 7-624-102-04   | STOP RING 1.5, TYPE -E         |
| 350 | 7-627-552-67   | SCREW, PRECISION +P 1.7X4.5    |
| 351 | 7-627-554-27   | SCREW, PRECISION 2X6 TYPE 1    |
| 352 | 7-627-850-07   | SCREW, PRECISION +P 1.4X2      |
| 353 | 7-627-850-17   | SCREW, PRECISION +P 1.4X2.5    |
| 354 | 7-627-850-27   | SCREW, PRECISION +P 1.4X3      |
| 355 | 7-627-850-37   | SCREW, PRECISION +P 1.4X1.4    |
| 356 | 7-627-850-47   | SCREW, PRECISION +P 1.4X1.6    |
| 357 | 7-627-850-67   | SCREW, PRECISION +P 1.4X4      |
| 358 | 7-671-110-01   | STEEL BALL 1.2MM               |
| 359 | 7-688-001-01   | W 2, SMALL                     |
| 360 | A-3120-019-A   | PC BOARD (A) ASSY, CONTROL     |
| 361 | A-3120-020-A   | GEAR (A) ASSY, FWD (C)         |
| 362 | A-3120-021-A   | GEAR (A) ASSY, FRC             |
| 363 | A-3130-028-A   | TABLE ASSY, REEL, T            |
| 364 | A-3152-019-A   | LEVER ASSY, ERASING PROTECTION |
| 365 | X-3308-404-0   | IDLER ASSY, FWD                |
| 366 | X-3308-405-0   | PULLEY ASSY, FR                |
| 367 | X-3308-406-0   | FLYWHEEL ASSY                  |
| 368 | ♣;X-3308-411-0 | CHASSIS ASSY, HEAD             |
| 369 | X-3308-412-0   | PINCH LEVER ASSY               |
| 370 | ♣;X-3308-413-0 | BRACKET ASSY, SWITCH           |
| 371 | X-3308-414-0   | CLAW ASSY, T REEL              |
| 372 | X-3308-418-0   | CLAW ASSY, S REEL              |
| 373 | ♣;X-3312-706-0 | BRACKET ASSY, MS               |
| 374 | ♣;X-3312-707-0 | CHASSIS ASSY, MECHANICAL       |

## ELECTRICAL PARTS

| Ref.No. | Part No.       | Description                             |          |     |       |
|---------|----------------|---|----------|-----|-------|
| 501     | 1-464-203-13   | CIRCUIT UNIT, SYSTEM CONTROL(1) (IC901) |          |     |       |
| 502     | 1-548-541-31   | COUNTER                                 |          |     |       |
| 503     | ♣;1-609-474-00 | PC BOARD, AUDIO                         |          |     |       |
| 504     | ♣;1-609-580-00 | PC BOARD, SAFETY                        |          |     |       |
| 505     | 1-609-612-00   | PC BOARD, KEY SWITCH                    |          |     |       |
| C101    | 1-131-404-00   | TANTALUM                                | 0.22MF   | 20% | 35V   |
| C102    | 1-163-038-00   | CERAMIC CHIP                            | 0.1MF    |     | 25V   |
| C103    | 1-123-610-41   | ELECT                                   | 0.47MF   | 20% | 50V   |
| C104    | 1-163-017-00   | CERAMIC CHIP                            | 0.0047MF | 10% | 50V   |
| C105    | 1-163-047-91   | CERAMIC CHIP                            | 0.001MF  | 10% | 50V   |
| C106    | 1-123-646-41   | ELECT                                   | 33MF     | 20% | 6.3V  |
| C107    | 1-163-052-00   | CERAMIC CHIP                            | 0.0027MF | 10% | 50V   |
| C108    | 1-130-489-00   | MYLAR                                   | 0.033MF  | 5%  | 50V   |
| C109    | 1-123-610-41   | ELECT                                   | 0.47MF   | 20% | 50V   |
| C110    | 1-163-021-00   | CERAMIC CHIP                            | 0.01MF   | 10% | 50V   |
| C111    | 1-123-611-41   | ELECT                                   | 1MF      | 20% | 50V   |
| C112    | 1-163-015-00   | CERAMIC CHIP                            | 0.0033MF | 10% | 50V   |
| C113    | 1-131-344-00   | TANTALUM                                | 0.33MF   | 20% | 35V   |
| C114    | 1-123-827-41   | ELECT                                   | 220MF    | 20% | 4V    |
| C201    | 1-131-404-00   | TANTALUM                                | 0.22MF   | 20% | 35V   |
| C202    | 1-163-038-00   | CERAMIC CHIP                            | 0.1MF    |     | 25V   |
| C203    | 1-123-610-41   | ELECT                                   | 0.47MF   | 20% | 50V   |
| C204    | 1-163-017-00   | CERAMIC CHIP                            | 0.0047MF | 10% | 50V   |
| C205    | 1-163-009-00   | CERAMIC CHIP                            | 0.001MF  | 10% | 50V   |
| C206    | 1-123-646-41   | ELECT                                   | 33MF     | 20% | 6.3V  |
| C207    | 1-163-052-00   | CERAMIC CHIP                            | 0.0027MF | 10% | 50V   |
| C208    | 1-130-489-00   | MYLAR                                   | 0.033MF  | 5%  | 50V   |
| C209    | 1-123-610-41   | ELECT                                   | 0.47MF   | 20% | 50V   |
| C210    | 1-163-021-00   | CERAMIC CHIP                            | 0.01MF   | 10% | 50V   |
| C211    | 1-123-611-41   | ELECT                                   | 1MF      | 20% | 50V   |
| C212    | 1-163-015-00   | CERAMIC CHIP                            | 0.0033MF | 10% | 50V   |
| C213    | 1-131-344-00   | TANTALUM                                | 0.33MF   | 20% | 35V   |
| C214    | 1-123-827-41   | ELECT                                   | 220MF    | 20% | 4V    |
| C301    | 1-163-009-00   | CERAMIC CHIP                            | 0.001MF  | 10% | 50V   |
| C302    | 1-123-661-41   | ELECT                                   | 100MF    | 20% | 6.3V  |
| C303    | 1-123-647-41   | ELECT                                   | 47MF     | 20% | 6.3V  |
| C304    | 1-123-646-41   | ELECT                                   | 33MF     | 20% | 6.3V  |
| C305    | 1-123-618-41   | ELECT                                   | 22MF     | 20% | 6.3V  |
| C306    | 1-123-647-41   | ELECT                                   | 47MF     | 20% | 6.3V  |
| C307    | 1-123-618-41   | ELECT                                   | 22MF     | 20% | 6.3V  |
| C308    | 1-123-618-00   | ELECT                                   | 22MF     | 20% | 6.3V  |
| C309    | 1-131-391-00   | TANTALUM                                | 22MF     | 20% | 3.15V |
| C310    | 1-123-661-41   | ELECT                                   | 100MF    | 20% | 6.3V  |
| C311    | 1-123-647-00   | ELECT                                   | 47MF     | 20% | 6.3V  |

### NOTE:

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- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF, PF: μμF.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

### SEMICONDUCTORS

- In each case, U: μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

### COILS

- MMH: mH, UH: μH



## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description           |          |     |       |
|---------|--------------|-----------------------|----------|-----|-------|
| C312    | 1-163-077-91 | CERAMIC CHIP          | 0.1MF    |     | 50V   |
| C313    | 1-131-383-00 | TANTALUM              | 10MF     | 20% | 6.3V  |
| C314    | 1-163-017-00 | CERAMIC CHIP          | 0.0047MF | 10% | 50V   |
| C315    | 1-163-037-00 | CERAMIC CHIP          | 0.022MF  | 10% | 25V   |
| C316    | 1-163-037-00 | CERAMIC CHIP          | 0.022MF  | 10% | 25V   |
| C317    | 1-123-646-41 | ELECT                 | 33MF     | 20% | 6.3V  |
| C318    | 1-123-611-41 | ELECT                 | 1MF      | 20% | 50V   |
| C319    | 1-123-618-41 | ELECT                 | 22MF     | 20% | 6.3V  |
| C320    | 1-108-367-00 | MYLAR                 | 0.0015MF | 10% | 100V  |
| C321    | 1-163-009-00 | CERAMIC CHIP          | 0.001MF  | 10% | 50V   |
| C322    | 1-131-385-00 | TANTALUM              | 22MF     | 20% | 6.3V  |
| C323    | 1-131-393-00 | TANTALUM              | 47MF     | 20% | 3.15V |
| C324    | 1-163-015-00 | CERAMIC CHIP          | 0.0033MF | 10% | 50V   |
| C325    | 1-163-038-00 | CERAMIC CHIP          | 0.1MF    |     | 25V   |
| C326    | 1-123-618-41 | ELECT                 | 22MF     | 20% | 6.3V  |
| C327    | 1-123-612-41 | ELECT                 | 2.2MF    | 20% | 50V   |
| C328    | 1-163-059-91 | CERAMIC CHIP          | 0.01MF   | 10% | 50V   |
| C329    | 1-163-038-00 | CERAMIC CHIP          | 0.1MF    |     | 25V   |
| C330    | 1-163-181-91 | CERAMIC CHIP          | 100PF    | 5%  | 50V   |
| C331    | 1-163-047-91 | CERAMIC CHIP          | 0.001MF  | 10% | 50V   |
| C332    | 1-123-661-00 | ELECT                 | 100MF    | 20% | 6.3V  |
| CN301   | 1-507-850-00 | JACK, EXTENTION POWER |          |     |       |
| D301    | 8-719-100-05 | DIODE 1S2837-T2       |          |     |       |
| D302    | 8-719-815-55 | DIODE 1S1555          |          |     |       |
| D303    | 8-719-812-26 | DIODE TLR226          |          |     |       |
| D304    | 8-719-100-05 | DIODE 1S2837-T2       |          |     |       |
| D305    | 8-719-100-05 | DIODE 1S2837-T2       |          |     |       |
| D306    | 8-719-100-05 | DIODE 1S2837-T2       |          |     |       |
| D307    | 8-719-422-21 | DIODE 1T22AM          |          |     |       |
| HE901   | 8-825-542-10 | HEAD                  |          |     |       |
| HRP901  | 8-825-507-20 | HEAD (PP227-3602)     |          |     |       |
| IC301   | 8-759-907-36 | IC CX20023            |          |     |       |
| IC302   | 8-759-200-95 | IC TA7588F            |          |     |       |
| IC303   | 8-751-840-00 | IC CX-184             |          |     |       |
| J301    | 1-507-838-21 | JACK                  |          |     |       |
| J302    | 1-507-838-00 | JACK                  |          |     |       |
| JR301   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR302   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR303   | 1-216-295-00 | METAL CHIP            | 0        | 5%  | 1/10W |
| JR304   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR305   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR306   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR307   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR308   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |
| JR309   | 1-216-296-00 | METAL CHIP            | 0        | 5%  | 1/8W  |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description           |      |    |       |  |
|---------|--------------|-----------------------|------|----|-------|--|
| M801    | 8-835-067-01 | MOTOR, DC (DNR-5300A) |      |    |       |  |
| M802    | 8-835-067-01 | MOTOR, DC (DNR-5300A) |      |    |       |  |
| M901    | 8-835-076-01 | MOTOR, DC (DNE-5700A) |      |    |       |  |
| MIC901  | 8-814-183-50 | C-1010A               |      |    |       |  |
| MIC902  | 8-814-183-50 | C-1010A               |      |    |       |  |
| PH301   | 8-719-751-42 | DIODE NJL5141E-AA     |      |    |       |  |
| PM901   | 1-454-326-00 | SOLENOID, PLUNGER     |      |    |       |  |
| Q101    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q102    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q103    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q201    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q202    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q203    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q301    | 8-729-216-22 | TRANSISTOR 2SA1162    |      |    |       |  |
| Q302    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q303    | 8-729-216-22 | TRANSISTOR 2SA1162    |      |    |       |  |
| Q304    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q305    | 8-729-216-22 | TRANSISTOR 2SA1162    |      |    |       |  |
| Q306    | 8-729-216-22 | TRANSISTOR 2SA1162    |      |    |       |  |
| Q307    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q308    | 8-729-801-83 | TRANSISTOR 2SB1013    |      |    |       |  |
| Q309    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q310    | 8-729-102-03 | TRANSISTOR 2SD1020    |      |    |       |  |
| Q311    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q312    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q313    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q314    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q315    | 8-729-216-22 | TRANSISTOR 2SA1162    |      |    |       |  |
| Q316    | 8-729-271-23 | TRANSISTOR 2SC2712    |      |    |       |  |
| Q317    | 8-729-102-03 | TRANSISTOR 2SD1020    |      |    |       |  |
| R101    | 1-216-055-00 | METAL CHIP            | 1.8K | 5% | 1/10W |  |
| R102    | 1-216-061-00 | METAL CHIP            | 3.3K | 5% | 1/10W |  |
| R103    | 1-216-073-00 | METAL CHIP            | 10K  | 5% | 1/10W |  |
| R104    | 1-216-042-00 | METAL CHIP            | 510  | 5% | 1/10W |  |
| R105    | 1-216-073-00 | METAL CHIP            | 10K  | 5% | 1/10W |  |
| R106    | 1-216-061-00 | METAL CHIP            | 3.3K | 5% | 1/10W |  |
| R107    | 1-216-246-91 | METAL CHIP            | 100K | 5% | 1/8W  |  |
| R108    | 1-216-061-00 | METAL CHIP            | 3.3K | 5% | 1/10W |  |
| R109    | 1-216-049-00 | METAL CHIP            | 1K   | 5% | 1/10W |  |
| R110    | 1-216-073-00 | METAL CHIP            | 10K  | 5% | 1/10W |  |
| R111    | 1-216-057-00 | METAL CHIP            | 2.2K | 5% | 1/10W |  |
| R112    | 1-216-214-91 | METAL CHIP            | 4.7K | 5% | 1/8W  |  |
| R113    | 1-216-033-00 | METAL CHIP            | 220  | 5% | 1/10W |  |
| R114    | 1-216-065-00 | METAL CHIP            | 4.7K | 5% | 1/10W |  |
| R115    | 1-216-140-00 | METAL CHIP            | 3.9  | 5% | 1/8W  |  |

### NOTE:

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- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu$ F. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF:  $\mu$ F, PF:  $\mu$ F.

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

### SEMICONDUCTORS

- In each case, U :  $\mu$ , for example:
- UA... :  $\mu$ A..., UPA... :  $\mu$ PA..., UPC... :  $\mu$ PC,
- UPD... :  $\mu$ PD...

### COILS

- MH : mH, UH :  $\mu$ H

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description |      |    |       |
|---------|--------------|-------------|------|----|-------|
| R116    | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W |
| R201    | 1-216-055-00 | METAL CHIP  | 1.8K | 5% | 1/10W |
| R202    | 1-216-061-00 | METAL CHIP  | 3.3K | 5% | 1/10W |
| R203    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R204    | 1-216-042-00 | METAL CHIP  | 510  | 5% | 1/10W |
| R205    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R206    | 1-216-210-91 | METAL CHIP  | 3.3K | 5% | 1/8W  |
| R207    | 1-216-246-91 | METAL CHIP  | 100K | 5% | 1/8W  |
| R208    | 1-216-061-00 | METAL CHIP  | 3.3K | 5% | 1/10W |
| R209    | 1-216-049-00 | METAL CHIP  | 1K   | 5% | 1/10W |
| R210    | 1-247-855-00 | CARBON      | 10K  | 5% | 1/8W  |
| R211    | 1-216-206-91 | METAL CHIP  | 2.2K | 5% | 1/8W  |
| R212    | 1-216-065-00 | METAL CHIP  | 4.7K | 5% | 1/10W |
| R213    | 1-216-182-00 | METAL CHIP  | 220  | 5% | 1/8W  |
| R214    | 1-216-065-00 | METAL CHIP  | 4.7K | 5% | 1/10W |
| R215    | 1-216-140-00 | METAL CHIP  | 3.9  | 5% | 1/8W  |
| R216    | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W |
| R302    | 1-216-041-00 | METAL CHIP  | 470  | 5% | 1/10W |
| R303    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R304    | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W |
| R305    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R306    | 1-216-212-91 | METAL CHIP  | 3.9K | 5% | 1/8W  |
| R307    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R308    | 1-216-232-91 | METAL CHIP  | 27K  | 5% | 1/8W  |
| R309    | 1-216-222-91 | METAL CHIP  | 10K  | 5% | 1/8W  |
| R310    | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W |
| R311    | 1-216-111-00 | METAL CHIP  | 390K | 5% | 1/10W |
| R312    | 1-216-097-00 | METAL CHIP  | 100K | 5% | 1/10W |
| R313    | 1-216-246-91 | METAL CHIP  | 100K | 5% | 1/8W  |
| R314    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R315    | 1-216-049-00 | METAL CHIP  | 1K   | 5% | 1/10W |
| R316    | 1-216-174-91 | METAL CHIP  | 100  | 5% | 1/8W  |
| R317    | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W |
| R318    | 1-216-212-91 | METAL CHIP  | 3.9K | 5% | 1/8W  |
| R319    | 1-216-242-91 | METAL CHIP  | 68K  | 5% | 1/8W  |
| R320    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R321    | 1-216-037-00 | METAL CHIP  | 330  | 5% | 1/10W |
| R322    | 1-216-097-00 | METAL CHIP  | 100K | 5% | 1/10W |
| R323    | 1-216-073-00 | METAL CHIP  | 10K  | 5% | 1/10W |
| R324    | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W |
| R325    | 1-216-164-00 | METAL CHIP  | 39   | 5% | 1/8W  |
| R326    | 1-216-170-91 | METAL CHIP  | 68   | 5% | 1/8W  |
| R327    | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W |
| R328    | 1-216-246-91 | METAL CHIP  | 100K | 5% | 1/8W  |
| R329    | 1-216-121-00 | METAL CHIP  | 1M   | 5% | 1/10W |

## ELECTRICAL PARTS

| Ref.No. | Part No.     | Description                  |         |    |       |
|---------|--------------|------------------------------|---------|----|-------|
| R330    | 1-216-263-00 | METAL CHIP                   | 510K    | 5% | 1/8W  |
| R331    | 1-216-208-00 | METAL CHIP                   | 2.7K    | 5% | 1/8W  |
| R332    | 1-216-121-00 | METAL CHIP                   | 1M      | 5% | 1/10W |
| R333    | 1-216-097-00 | METAL CHIP                   | 100K    | 5% | 1/10W |
| R336    | 1-214-559-00 | METAL                        | 1.2K    | 1% | 1/8W  |
| R337    | 1-214-569-00 | METAL                        | 3.3K    | 1% | 1/8W  |
| R338    | 1-216-081-00 | METAL CHIP                   | 22K     | 5% | 1/10W |
| R339    | 1-216-057-00 | METAL CHIP                   | 2.2K    | 5% | 1/10W |
| R340    | 1-216-200-91 | METAL CHIP                   | 1.2K    | 5% | 1/8W  |
| R341    | 1-216-097-00 | METAL CHIP                   | 100K    | 5% | 1/10W |
| R342    | 1-216-113-00 | METAL CHIP                   | 470K    | 5% | 1/10W |
| R343    | 1-216-097-00 | METAL CHIP                   | 100K    | 5% | 1/10W |
| R344    | 1-216-049-00 | METAL CHIP                   | 1K      | 5% | 1/10W |
| R345    | 1-216-049-00 | METAL CHIP                   | 1K      | 5% | 1/10W |
| R901    | 1-216-073-00 | RES, CHIP                    | 10K     | 5% | 1/10W |
| RV301   | 1-228-598-00 | RES, VAR, CARBON             | 10K/10K |    |       |
| S301    | 1-554-029-00 | SWITCH, SLIDE                |         |    |       |
| S302    | 1-554-222-00 | SWITCH, SLIDE                |         |    |       |
| S303    | 1-554-142-00 | SWITCH, SLIDE                |         |    |       |
| S901    | 1-553-510-00 | SWITCH, SLIDE                |         |    |       |
| S902    | 1-553-682-00 | SWITCH, LEAF                 |         |    |       |
| S903    | 1-553-682-21 | SWITCH, LEAF                 |         |    |       |
| SP901   | 1-503-223-00 | SPEAKER (050F009)            |         |    |       |
| T301    | 1-433-251-00 | TRANSFORMER, BIAS OSCILLATOR |         |    |       |

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- Due to standardization, parts with part numbers (▲-▲▲▲-▲▲▲-XX or ▲-▲▲▲-▲▲▲-X) may be different from those used in the set.

### CAPACITORS:

- All capacitors are in  $\mu\text{f}$ . Common capacitors are omitted. Refer to the following lists for their part numbers.  
MF:  $\mu\text{f}$ , PF:  $\mu\text{f}$ .

### RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

### SEMICONDUCTORS

- In each case, U:  $\mu$ , for example:  
UA:  $\mu\text{A}$ , UPA:  $\mu\text{PA}$ , UPC:  $\mu\text{PC}$ ,  
UPD:  $\mu\text{PD}$

### COLLS

- MMH: mH, UH:  $\mu\text{H}$

**Sony Corporation**  
Consumer Products Group  
Technical Support Dept.

9-951-101-11  
(with MDR-W3)