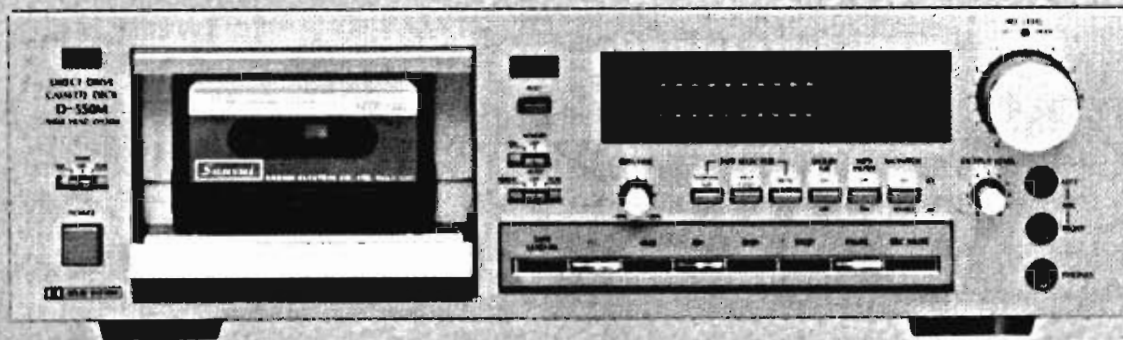


# SERVICE MANUAL

DIRECT DRIVE CASSETTE DECK

## SANSUI D-550M

(Silver & Black Model)



### • SPECIFICATIONS

|   |   |
|---|---|
| Track   | 4-Track (2-Channel Stereo)  |
| Tape speed  | 4.8 cm/sec. (1-7/8 ips)   |
| Heads   | Record/Playback: FH Head<br>Erase: Double Gap Ferrite Head        |
| Motor   | Capstan: FG Servo DC Motor<br>Reels: DC Motor                     |
| Wow and flutter                                   | within 0.035 % WRMS   |
| Fast wind time                                    | approximately 75 seconds (C-60)                                   |
| Frequency response (Record/Playback)              |   |
| Normal Tape (LH) (-20 VU)                         | 20 to 17,000 Hz<br>(25 to 16,000 Hz $\pm$ 3 dB)                   |
| Metal Tape (-20 VU)                               | 20 to 22,000 Hz<br>(25 to 21,000 Hz $\pm$ 3 dB)                   |
| (0 VU)  | 25 to 13,000 Hz $\pm$ 3 dB  |
| Signal to noise ratio (Record/Playback)           |   |
| Metal Tape (without Dolby Noise Reduction Effect) | better than 60 dB (weighted)                                      |
| (With Dolby Noise Reduction)                      | better than 70 dB (above 5 kHz)                                   |
| Erase factor (Metal Tape)                         | more than 65 dB at 1,000 Hz                                       |
| Input sensitivity and impedance (0 VU, 1,000 Hz)  |   |
| MIC   | 0.4 mV/200 $\Omega$ ~ 5 k $\Omega$                                |
| LINE IN (REC)                                     | 70 mV/47 k $\Omega$   |
| Output level (0 VU, 1,000 Hz)                     |   |
| LINE OUT (PLAY)                                   | 400 mV  |
| PHONES  | 95 mV   |
| Power requirements                                |   |
| Power voltage                                     | 120, 220, 240 V (50/60 Hz)<br>For U.S.A. and Canada               |
|   | 120 V (60 Hz)   |
| Power consumption                                 | 26 W  |
| Dimensions  | 430 mm (16-15/16") W<br>128 mm (5-1/16") H<br>282 mm (11-1/8") D  |
| Using rack mounting adaptors                      | 480 mm (18-5/16") W<br>128 mm (5-1/16") H<br>302 mm (11-15/16") D |
| Weight  |   |
| Silver panel type                                 | 5.9 kg (13.0 lbs.) net  |
| Black panel type                                  | 6.0 kg (13.3 lbs.) net  |

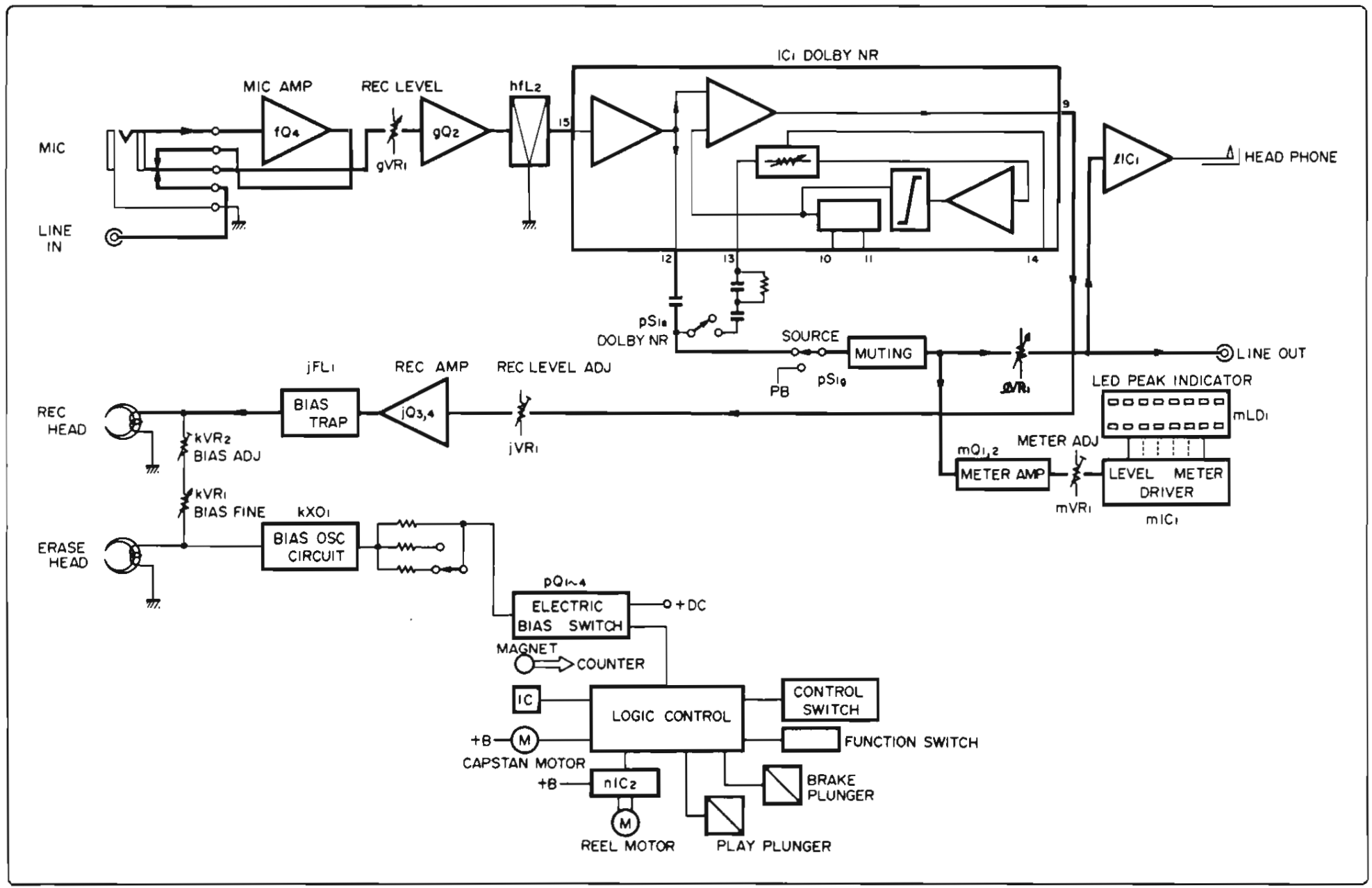
\* Design and specifications subject to changes without notice for improvements.

*Sansui*

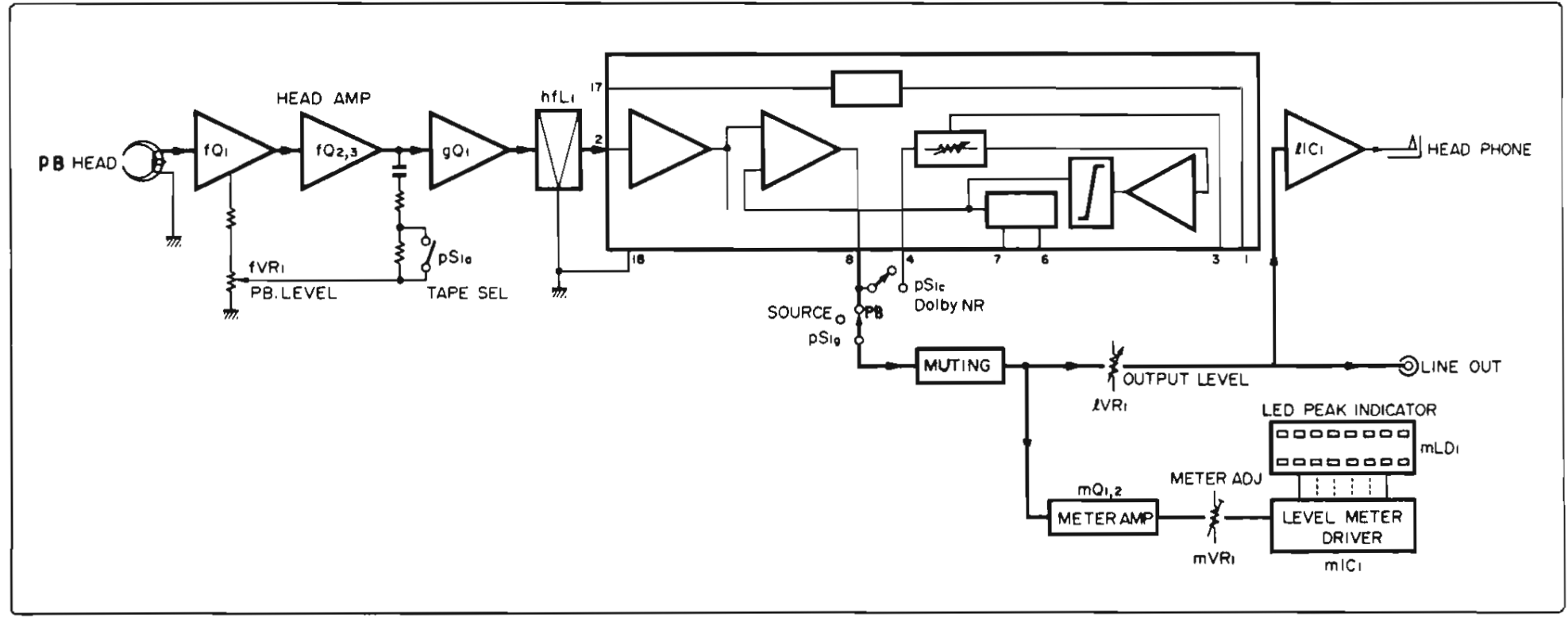
SANSUI ELECTRIC CO., LTD.

# 1. BLOCK DIAGRAM

## 1-1. Recording Operation Block Diagram



## 1-2. Playback Operation Block Diagram



## 2. OPERATION OF BACK TENSION SERVO (Refer to Fig. 2-1.)

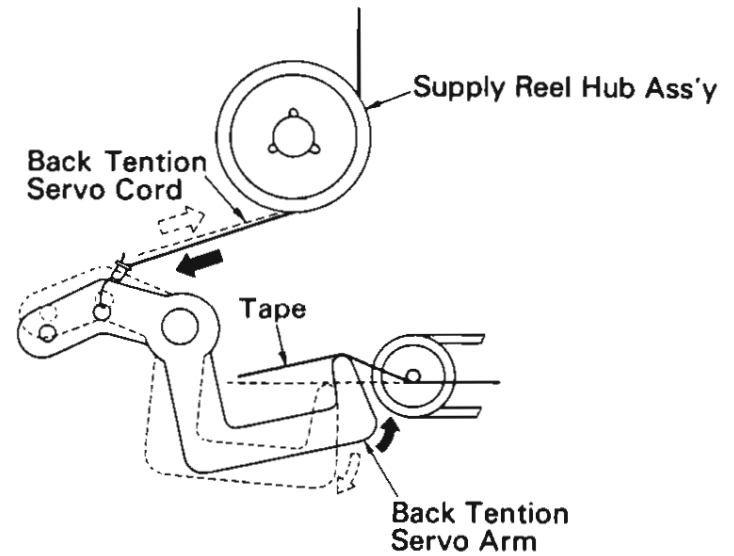
This cassette deck has three separate heads and two separate amplifiers for simultaneous monitoring of recording. Therefore, the tape transport mechanism is the most precise part in the deck. However, head-to-tape contact mostly depends upon tension of a pad in a cassette half during tape running. To avoid improper pad tension, Model D-550M features "Back Tension Servo Mechanism" that detects and controls tape tension automatically.

First, when most tape is on the supply reel, the back tension servo arm presses the tape due to weak tape tension, and resultly the supply reel hub ass'y is braked by the back tension cord.

Second, when most tape is on the take-up reel, the back tension servo arm is pressed downward by the tape due to strong tape tension, and resultly the brake to the supply reel hub ass'y is weakened by the back tension cord.

As above expressed, the tape tension is always regulated by mechanical servo even when the tape tension is changed slightly.

Fig. 2-1

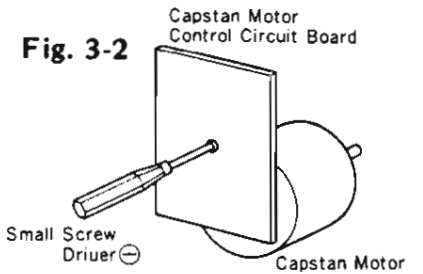
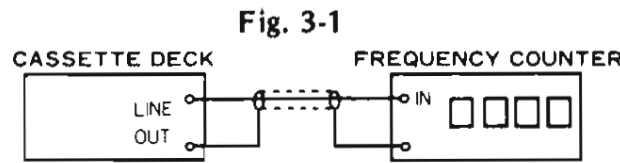


Since the mechanism operations and electrical operations employed in D-550M is similar to that of D-350M, the explanation of these operations are omitted from this manual, therefore please refer to the page 2, 3 on service manual of D-350M.

## 3. ADJUSTMENTS

### 3-1. Tape Speed Adjustment

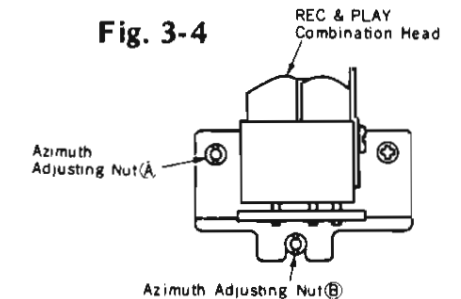
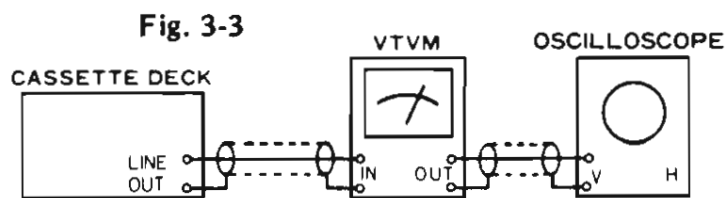
- Note: 1. Use Sansui Test Tape, SCT-S3K (3 kHz signals are recorded on the tape).  
2. Connections are shown in Fig. 3-1.



| STEP | SUBJECT         | MEASURE OUTPUT             | SETTING                         | ADJUSTMENT                               | ADJUST FOR          | REMARKS                 |
|------|-----------------|----------------------------|---------------------------------|--|---------------------|-------------------------|
| 1.   | TAPE SPEED Adj. | LINE OUT Frequency counter | Playback the TEST TAPE SCT-S3K. | Turn semi-variable resistor as Fig. 3-2. | 3000 Hz $\pm$ 45 Hz | Use small screw driver. |

### 3-2. Playback Adjustment

- Note: 1. Before this adjustment, clean REC/P.B. head surface.  
2. Output Volume . . . . . MAX.  
3. For this adjustment, use Sansui Test Tape, SCT-F10KN, SCT-L400N and SCT-F1K.  
4. Set the Dolby NR switch to be OFF.  
5. MONITOR SWITCH . . . . . TAPE  
6. Connections are shown in Fig. 3-3.



| STEP | SUBJECT             | MEASURE OUTPUT       | SETTING  | ADJUSTMENT  | ADJUST FOR                    | REMARKS  |
|------|---------------------|----------------------|--|---|-------------------------------|--|
| 1.   | REC/P.B. Head Adj.  | LINE OUT VTVM, Scope | Playback the TEST TAPE SCT-F10KN   | Adjust the azimuth adjusting Nut (A) in Fig. 3-4. | MAX. Output on both channels. | After this adjustment, lock the Nut with paint.<br>* Not turn the azimuth adjusting Nut (B) except that replaced Rec & Play Back Head.<br>* Refer to main parts replacement D on page 8 when replaced REC & PLAY head. |
| 2.   | Playback Level Adj. | Same as above        | Set TAPE SELECTOR to NORMAL (LH) position. Playback the TEST TAPE SCT-L400N. | Adjust each fVR1 on L-CH and R-CH.                | 540mV $\pm$ 2dB               | See Top View on page 11.   |

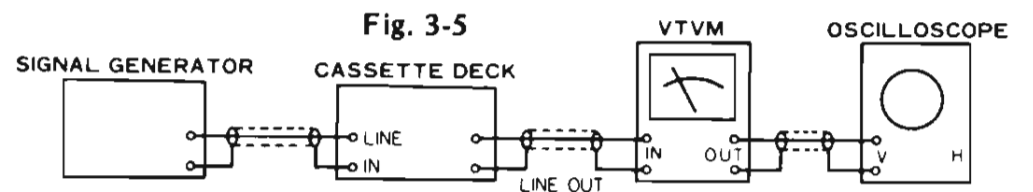


| STEP | SUBJECT                           | MEASURE OUTPUT | SETTING  | ADJUSTMENT | ADJUST FOR | REMARKS   |
|------|-----------------------------------|----------------|--|------------|------------|---|
| 3.   | High Frequency Equalization Check | Same as above  | Set TAPE SELECTOR to NORMAL (LH) position<br>Playback the TEST TAPE SCT-F1K. | _____      | _____      | Read output levels on both channels.  |
|      |                                   |                | Playback the TEST TAPE SCT-F10KN.  | _____      | _____      | Confirm that the output levels are within $\pm 3\text{dB}$ comparing with the above readings. |

Note: On STEP 3, set the TAPE SELECTOR to HIGH (CrO<sub>2</sub>) position during playback of SCT-10KN, and confirm the indication on VTVM drops approximately 3dB ~ 4dB.

### 3-3. Peak Level Indicator Adjustment

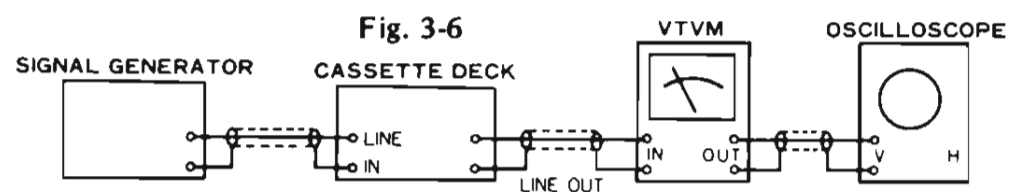
- Note: 1. Set the TAPE SELECTOR to be NORMAL (LH) position.  
 2. Output Volume . . . . . MAX.  
 3. Set the Dolby NR Switch to be OFF.  
 4. MONITOR SWITCH . . . . . SOURCE  
 5. Connections are shown in Fig. 3-5.



| STEP | SUBJECT                         | INPUT SIGNAL                            | MEASURE OUTPUT      | SETTING  | ADJUSTMENT   | REMARKS   |
|------|---------------------------------|---|---------------------|--|--|---|
| 1.   | Peak Level Indicator Adjustment | Feed 1kHz, 140mV from S.G. into LINE IN | LINE OUT VTVM Scope | Load the TEST TAPE SCT-SA<br>1. Adjust the REC Level Volume for obtaining 510mV on VTVM. | 1. Light the 0dB point on level indicator to adjust mVR1 (L-ch) and mVR1 (R-ch).<br>2. Adjust the REC LEVEL Volume for obtaining 500mV on VTVM, then confirm the 0dB point on level indicator go out.<br>3. If not, adjust mVR1 (L-ch) and mVR1 (R-ch), until SETTING 1 ~ ADJUSTMENT 2 will be obtain. | mVR1 (L-ch) and mVR1 (R-ch) are shown in Top View on page 11. |

### 3-4. Recording Adjustment

- Note: 1. For this adjustment, use Sansui Test Tape.  
 2. Output Volume . . . . . MAX.  
 3. Connections are shown in Fig. 3-6.  
 4. Bias Fine Volume . . . . . Center  
 5. MONITOR SWITCH . . . . . SOURCE  
 6. Set the Dolby NR switch to be OFF.



| STEP | SUBJECT                 | INPUT SIGNAL  | MEASURE OUTPUT      | SETTING  | ADJUSTMENT   | REMARKS  |
|------|-------------------------|---|---------------------|--|--|--|
| 1.   | REC Level Adj.          | Feed 1kHz, 100mV from S.G into LINE IN.                         | LINE OUT VTVM Scope | Load the TEST TAPE SCT-SA.<br>Set TAPE SELECTOR to HIGH (CrO <sub>2</sub> ) position.<br>1. Depress PLAY and REC button.<br>2. Adjust the Rec Level Volume for obtaining 380mV on VTVM.<br>3. Push off the MONITOR switch to be TAPE, then record and Play back the 1kHz signal.<br>4. Confirm that the output levels on both channels are 380mV $\pm 2\text{dB}$ on VTVM. | 1. If not, turn jVR1 (REC, L-CH) and jVR1 (REC, R-CH) until output level 380mV $\pm 2\text{dB}$ on both channel are obtained.<br>2. Repeat this REC Level adj. until the indication on VTVM will be 380mV $\pm 2\text{dB}$ . | jVR1 (REC, L-CH), and jVR1 (REC, R-CH) are shown in Top View on page 11. |
| 2.   | Frequency Response Adj. | Feed 1kHz 7mV (-20dB) and 10kHz (-20dB) from S.G. into LINE IN. | Same as above       | Load the TEST TAPE SCT-SA.<br>Set TAPE SELECTOR to HIGH (CrO <sub>2</sub> ) position.<br>1. Record and Play back the 1kHz and 12kHz signals from S.G., then confirm that both output levels equal.   | 1. If not, adjust kVR2L for L-CH and kVR2R for R-CH slightly until the output levels will be equal.  | kVR2 (L-ch) and kVR2 (R-ch) are shown in Top View on page 11.            |

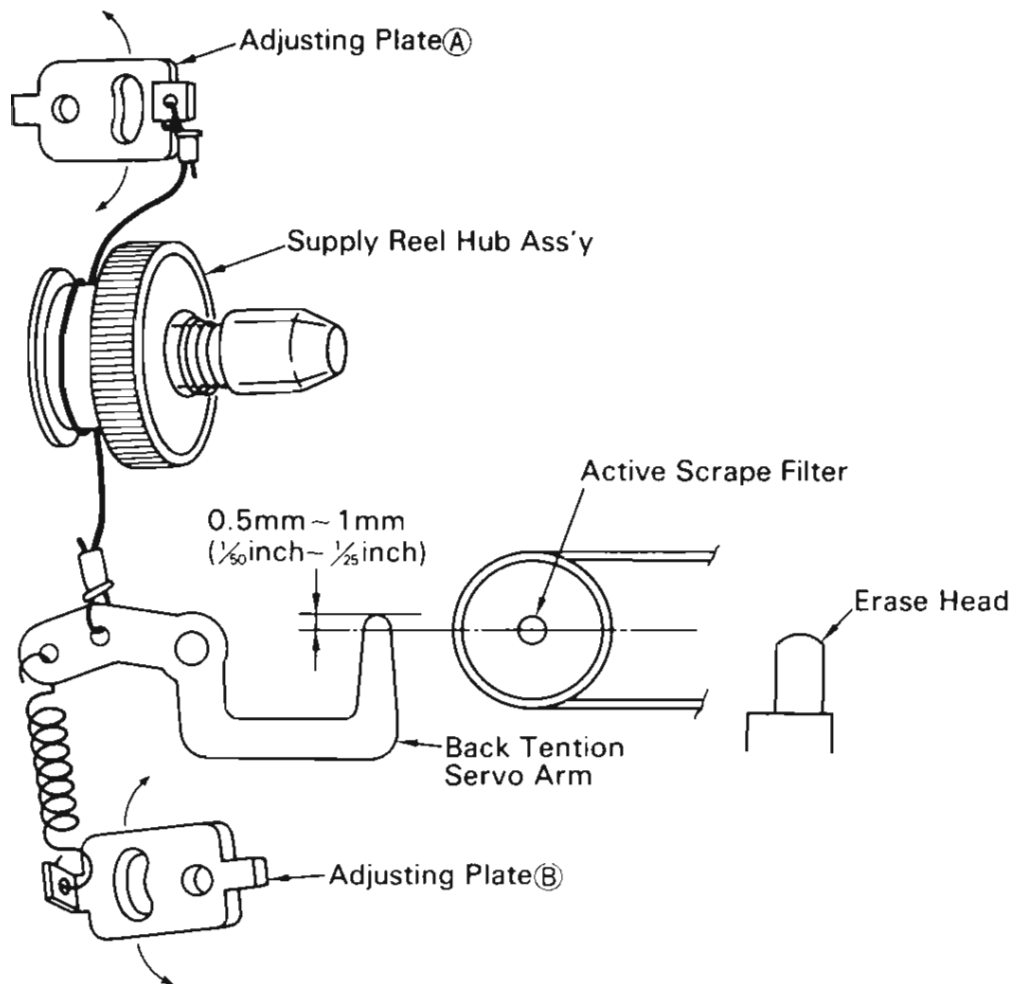
| STEP | SUBJECT                       | INPUT SIGNAL | MEASURE OUTPUT | SETTING  | ADJUSTMENT  | REMARKS   |
|------|-------------------------------|--------------|----------------|--|---|---|
| 3.   | Play back side bias trap Adj. | —            | Same as above  | Load the TEST TAPE SCT-SA.<br>Set TAPE SELECTOR to METAL position.<br>1. Push off the MONITOR switch to be TAPE.<br>2. Set the Rec Level Volume to be minimum. | Adjust each hFL1 on L-CH and R-CH, until the Bias signal will be minimum on Scope and VTVM. | hFL1 (PB, L-ch) and hFL1 (PB; R-ch) are shown in Top View on page 11. |

### 3-5. Back Tension Servo Adjustment (See Fig. 3-7)

Note: 1. Use Torque meter for Back Tension.

| STEP | SUBJECT                 | MEASURE OUTPUT | SETTING  | ADJUSTMENT  | ADJUST FOR  |
|------|-------------------------|----------------|--|---|---|
| 1.   | Back Tension Servo Adj. | —              | 1. Remove Bonnet, Front panel and mechanism cover.<br>2. Put a paper between the points of half switch (as <sub>2</sub> )<br>3. Depress PLAY Button. | Adjust the adjusting plate (A).   | It is to adjust the tip of Back Tension Servo arm so as to 0.5mm to 1mm upward from the center of active scrape filter. |
|      |                         | Torque meter   | 1. Take off a paper at the points of half switch (as <sub>2</sub> ).<br>2. Load the torque meter.<br>3. Depress PLAY Button.                         | Adjust the adjusting plate (B) in Fig. 3-7 until the Back Tension on torque meter will be 3g-cm to 4g-cm. |   |

Fig. 3-7



### ◆ List of Sansui Test Tape

| Name of TEST TAPE               | Recorded Frequency | Description                                   |
|---------------------------------|--------------------|---|
| SCT-F40                         | 40 Hz              | Playback Frequency Response Check             |
| SCT-F1K                         | 1 kHz              | High Frequency Equalization Check             |
| SCT-F10k                        | 10 kHz             | REC/PB Head Adjustment                        |
| SCT-L400N                       | 400 Hz             | Playback Level and Indicator Level Adjustment |
| SCT-S3K                         | 3 kHz              | Speed Check and Wow & Flutter Check           |
| SCT-LH NORMAL (LH)              |                    | Recording Bias Adjustment                     |
| SCT-SA HIGH (CrO <sub>2</sub> ) |                    | REC/PB Level Adjustment                       |
| SCT-CS Fe-Cr                    |                    | Frequency Response Check                      |

### ◆ Tape Selector Position

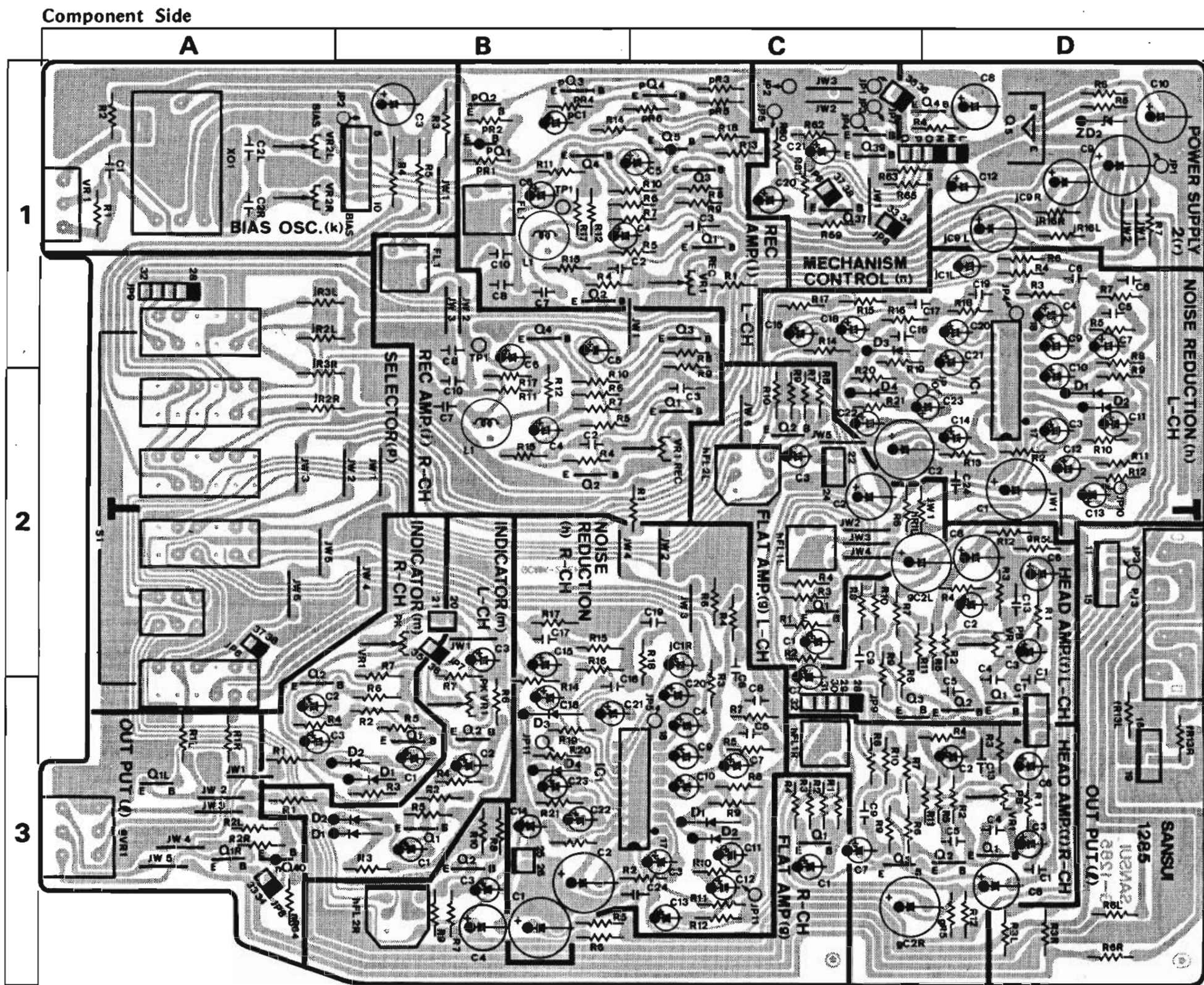
| TAPE BANDE TONBAND | BIAS FINE |   |      | TAPE SELECTOR            |
|--------------------|-----------|---|------|--------------------------|
|                    | -20%      | 0 | +20% |                          |
| FUJI DR            |           |   |      | NORMAL (LH)              |
| ER                 |           |   |      |                          |
| MAXELL UL          |           |   |      |                          |
| UD, XL I           |           |   |      |                          |
| TDK D              |           |   |      |                          |
| OD                 |           |   |      |                          |
| AD                 |           |   |      |                          |
| SCOTCH CRYSTAL     |           |   |      |                          |
| MASTER I           |           |   |      |                          |
| SONY AHF           |           |   |      |                          |
| BHF                |           |   |      |                          |
| CHF                |           |   |      |                          |
| BASF LH, SLH I     |           |   |      | HIGH (CrO <sub>2</sub> ) |
| FUJI UR            |           |   |      |                          |
| MAXELL XL II       |           |   |      |                          |
| XL II-S            |           |   |      |                          |
| TDK SA             |           |   |      |                          |
| SA-X               |           |   |      |                          |
| SCOTCH MASTER II   |           |   |      |                          |
| SONY SHF           |           |   |      |                          |
| BASF SCR           |           |   |      | METAL                    |
| FUJI SR            |           |   |      |                          |
| MAXELL MX          |           |   |      |                          |
| TDK MA, MA-R       |           |   |      |                          |
| SCOTCH Metafine    |           |   |      |                          |
| SONY METALLIC      |           |   |      |                          |
| SONY Dual          |           |   |      | * ① NORMAL<br>② HIGH     |
| BASF FCR           |           |   |      |                          |

\* ① REC/ENR/AUFNAHME ② PLAY/REPRO/BIEDERGABE

# 4. PARTS LOCATION & PARTS LIST

## 4-1. G-1285 Play & Rec Amp. Circuit Board (Stock No. 07098501)

●Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual.



### Parts List

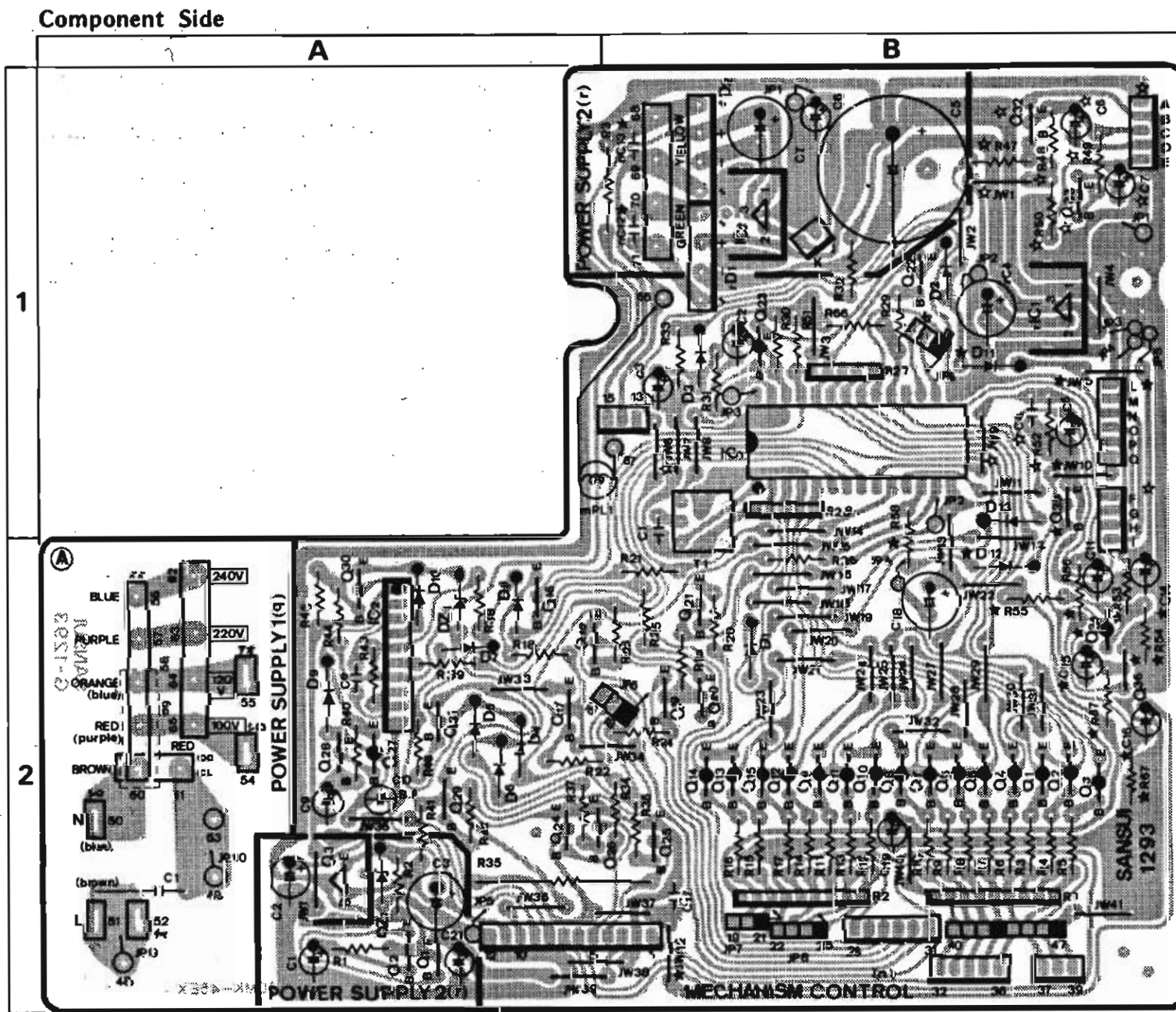
| Parts No.   | Stock No.   | Description | Parts No.   | Stock No. | Description | Parts No.   | Stock No. | Description |
|-------------|-------------|-------------|-------------|-----------|-------------|-------------|-----------|-------------|
| ●Transistor |             |             | IQ1         | 03068301  | 2SC2320     | pQ4         | 03068301  | 2SC2320     |
| fQ1         | 07225401    | 2SC2320L    | mQ1         | 03068301  | 2SC2320     | or 07194801 | 2SC1815   | 2SC1815     |
|             | or 03060701 | 2SC1313     | mQ2         | 03068301  | 2SC2320     | or 46057201 | LC945     | LC945       |
| fQ2         | 07225401    | 2SC2320L    |             |           |             | rQ4         | 03068301  | 2SC2320     |
|             | or 03060701 | 2SC1313     | nQ37        | 03068301  | 2SC2320     | or 07194801 | 2SC1815   | 2SC1815     |
| fQ3         | 07225401    | 2SC2320L    | or 07194801 | 2SC1815   |             | or 46057201 | LC945     | LC945       |
|             | or 03060701 | 2SC1313     | or 46057201 | LC945     |             | rQ5         | 03083901  | 2SD313AL    |
| gQ1         | 03068301    | 2SC2320     | nQ38        | 03068301  | 2SC2320     | ●IC         |           |             |
| or 07194801 | 2SC1815     |             | or 07194801 | 2SC1815   |             | hIC1        | 07224700  | HA11226     |
| or 46057201 | LC945       |             | or 46057201 | LC945     |             | ●Diode      |           |             |
| gQ2         | 03068301    | 2SC2320     | nQ39        | 03068301  | 2SC2320     | hD1         | 07225500  | 1N60        |
| or 07194801 | 2SC1815     |             | or 07194801 | 2SC1815   |             | hD2         | 03117600  | 1S2473D     |
| or 46057201 | LC945       |             | or 46057201 | LC945     |             | or 46092700 | US1035    | US1035      |
| jQ1         | 03068301    | 2SC2320     | nQ40        | 03012701  | 2SA999      | hD3         | 07225500  | 1N60        |
| or 07194801 | 2SC1815     |             | pQ1         | 07206801  | 2SA952      | hD4         | 03117600  | 1S2473D     |
| jQ2         | 03068301    | 2SC2320     | pQ2         | 03068301  | 2SC2320     | or 46092700 | US1035    | US1035      |
| or 07194801 | 2SC1815     |             | or 07194801 | 2SC1815   |             | mD1         | 03117600  | 1S2473D     |
| jQ3         | 03068301    | 2SC2320     | or 46057201 | LC945     |             | or 46092700 | US1035    | US1035      |
| or 07194801 | 2SC1815     |             | pQ3         | 03068301  | 2SC2320     | mD2         | 03117600  | 1S2473D     |
| jQ4         | 03068301    | 2SC2320     | or 07194801 | 2SC1815   |             | or 46092700 | US1035    | US1035      |
| or 07194801 | 2SC1815     |             | or 46057201 | LC945     |             |             |           |             |
| jQ5         | 03012701    | 2SA999      |             |           |             |             |           |             |



| Parts No.    | Stock No. | Description                                    |
|--------------|-----------|--|
| ●Zener Diode |           |  |
| rDZ2         | 03179200  | RD15E-B  |
| fC3          | 00325200  | 10μF 35V E.C.                                  |
| fC5          | 46072600  | 8pF 125V S.C.                                  |
| fC9          | 00406600  | 0.015μF 100V F.C.                              |
| mC12         | 00304300  | 10μF 16V E.B.                                  |
| fVR1         | 07240800  | Semi Variable Resistor 200Ω (B), PB LEVEL Adj. |
| hFL1         | 07196800  | Low Pass Filter, PB bias trap                  |
| hFL2         | 07196900  | Filter VSL-252GS, Rec                          |
| jC7          | 00407200  | 0.027μF 100V F.C.                              |
| jFL1         | 07196800  | Low Pass Filter, trap                          |

| Parts No. | Stock No. | Description                                    |
|-----------|-----------|--|
| jVR1      | 07241300  | Semi Variable Resistor 10kΩ B, Rec Level Adj.  |
| kXO1      | 07250000  | OSC Block BO-1                                 |
| kVR1      | 07246500  | Variable Resistor 100kΩ B, Bias Fine           |
| kVR2      | 07241400  | Semi Variable Resistor 20kΩ B, Bias Adj.       |
| IVR1      | 07250600  | Variable Resistor 10kΩ, output level           |
| mVR1      | 07241800  | Semi Variable Resistor 500kΩ B, meter Adj.     |
| pS1       | 07250700  | Push Switch, tape sel, dolby, MPX Fil, monitor |
| pJ3       | 07249100  | 4P Input/Output Terminal Board                 |

4-2. G-1293 Mechanism Control Circuit Board (Stock No. 07097801)



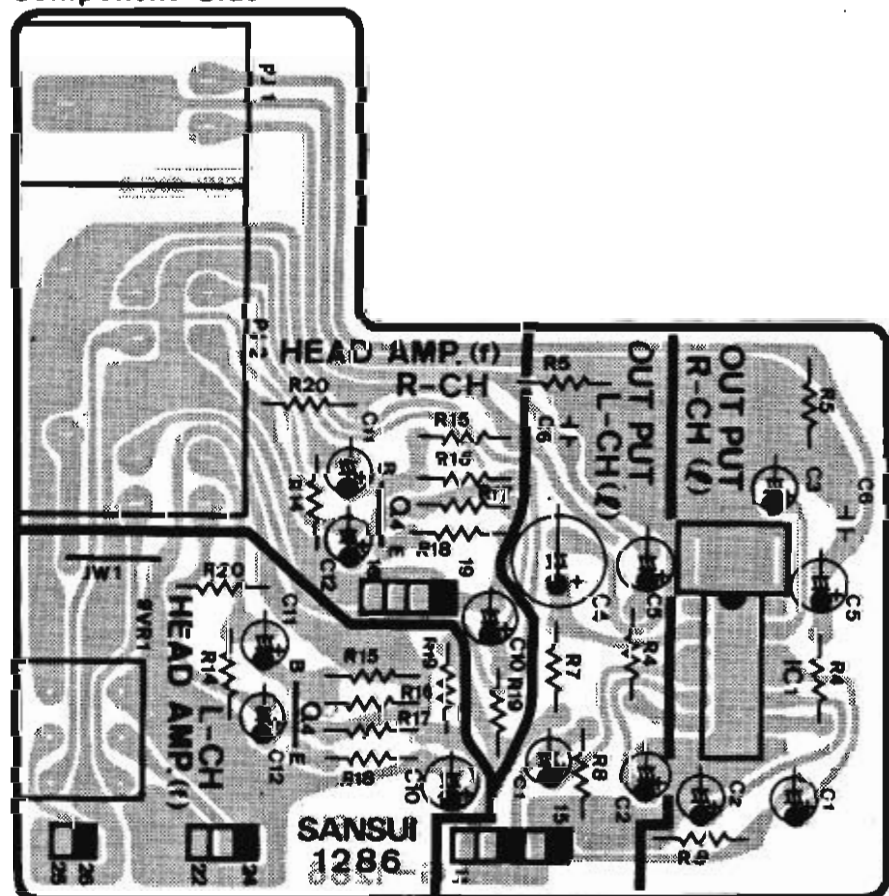
Parts List

| Parts No.   | Stock No. | Description | Parts No. | Stock No.   | Description | Parts No. | Stock No.   | Description |
|-------------|-----------|-------------|-----------|-------------|-------------|-----------|-------------|-------------|
| ●Transistor |           |             |           |             |             |           |             |             |
| nQ1         | 03012701  | 2SA999      | nQ13      | 03012701    | 2SA999      | nQ19      | 03068301    | 2SC2320     |
| nQ2         | 03012701  | 2SA999      | nQ14      | 03012701    | 2SA999      |           | or 07194801 | 2SC1815     |
| nQ3         | 03012701  | 2SA999      | nQ15      | 03012701    | 2SA999      |           | or 46057201 | LC945       |
| nQ4         | 03012701  | 2SA999      | nQ16      | 03068301    | 2SC2320     | nQ20      | 03068301    | 2SC2320     |
| nQ5         | 03012701  | 2SA999      |           | or 07194801 | 2SC1815     |           | or 07194801 | 2SC1815     |
| nQ6         | 03012701  | 2SA999      |           | or 46057201 | LC945       |           | or 46057201 | LC945       |
| nQ7         | 03012701  | 2SA999      | nQ17      | 03068301    | 2SC2320     | nQ21      | 03068301    | 2SC2320     |
| nQ8         | 03012701  | 2SA999      |           | or 07194801 | 2SC1815     |           | or 07194801 | 2SC1815     |
| nQ9         | 03012701  | 2SA999      |           | or 46057201 | LC945       |           | or 46057201 | LC945       |
| nQ10        | 03012701  | 2SA999      | nQ18      | 03068301    | 2SC2320     | nQ22      | 03068301    | 2SC2320     |
| nQ11        | 03012701  | 2SA999      |           | or 07194801 | 2SC1815     |           | or 07194801 | 2SC1815     |
| nQ12        | 03012701  | 2SA999      |           | or 46057201 | LC945       |           | or 46057201 | LC945       |

| Parts No. | Stock No.   | Description | Parts No. | Stock No.   | Description | Parts No.       | Stock No.   | Description          |
|-----------|-------------|-------------|-----------|-------------|-------------|-----------------|-------------|----------------------|
| nQ23      | 03012701    | 2SA999      | •Diode    |             |             | •Zener Diode    |             |                      |
| nQ24      | 07206901    | 2SC2001     | nD1       | 03111600    | 1S2473D     | nDZ1            | 03186000    | RD5.6E-B             |
|           | or 03069101 | 2SC2060     |           | or 03111800 | 1S1588      | rDZ1            | 03163100    | RD13E-B              |
|           | or 07254901 | 2SC1741     | nD2       | 03111600    | 1S2473D     | •IC             |             |                      |
| nQ25      | 07206901    | 2SC2001     |           | or 03111800 | 1S1588      | nIC1            | 07232500    | μPD554C-031          |
|           | or 03069101 | 2SC2060     | nD3       | 03111600    | 1S2473D     | nIC2            | 07233100    | BA6109               |
| nQ26      | 07206901    | 2SC2001     |           | or 03111800 | 1S1588      | rIC1            | 07232400    | μPC78M10H            |
|           | or 03069101 | 2SC2060     | nD4       | 03111600    | 1S2473D     | rIC2            | 03609200    | FS7805M              |
|           | or 07254901 | 2SC1741     |           | or 03111800 | 1S1588      |                 | or 07183500 | μPC78M05H            |
|           | or 03068301 | 2SC2320     | nD5       | 03111600    | 1S2473D     | •Block Resistor |             |                      |
| nQ27      | 07206801    | 2SA952      |           | or 03111800 | 1S1588      | nR1             | 46046300    | 8-22kΩ               |
|           | or 07254801 | 2SA854      | nD6       | 03111600    | 1S2473D     | nR2             | 46046300    | 8-22kΩ               |
| nQ28      | 03068301    | 2SC2320     |           | or 03111800 | 1S1588      | nR27            | 46038900    | 4-22kΩ               |
|           | or 07194801 | 2SC1815     | nD7       | 03111600    | 1S2473D     | nR28            | 46038900    | 4-22kΩ               |
|           | or 46057201 | LC945       |           | or 03111800 | 1S1588      | nR35            | 00155100    | 33Ω 3W N.I.R.        |
| nQ29      | 03068301    | 2SC2320     | nD8       | 03111600    | 1S2473D     | nC10            | 00304300    | 10μF 16V E.B.        |
|           | or 07194801 | 2SC1815     |           | or 03111800 | 1S1588      | nC12            | 00406400    | 0.012μF 100V F.C.    |
|           | or 46057201 | LC945       | nD9       | 03117700    | 10E-2       | nC13            | 00406400    | 0.012μF 100V F.C.    |
| nQ30      | 03068301    | 2SC2320     | nD10      | 03111600    | 1S2473D     | nT1             | 42306100    | Clock Pulse Osc Coil |
|           | or 07194801 | 2SC1815     |           | or 03111800 | 1S1588      | qC1             | 08302200    | 0.01μF 125V C.C.     |
|           | or 46057201 | LC945       | nD11      | 03111600    | 1S2473D     | mPL1            | 07234400    | Lamp 8V 150mA        |
| nQ31      | 03068301    | 2SC2320     |           | or 03111800 | 1S1588      | rR3             | 00137700    | 10Ω 1W N.I.R.        |
|           | or 07194801 | 2SC1815     | nD12      | 03111600    | 1S2473D     | rC5             | 08300100    | 4700μF 25V E.C.      |
|           | or 46057201 | LC945       |           | or 03111800 | 1S1588      |                 | or 07265000 | 4700μF 35V E.C.      |
| nQ34      | 03012701    | 2SA999      | rD1       | 03117000    | RB-152      |                 |             |                      |
| nQ35      | 03068301    | 2SC2320     | rD2       | 03117000    | RB-152      |                 |             |                      |
|           | or 07194801 | 2SC1815     |           |             |             |                 |             |                      |
|           | or 46057201 | LC945       |           |             |             |                 |             |                      |
| nQ36      | 03068301    | 2SC2320     |           |             |             |                 |             |                      |
|           | or 07194801 | 2SC1815     |           |             |             |                 |             |                      |
|           | or 46057201 | LC945       |           |             |             |                 |             |                      |
| rQ1       | 07206901    | 2SC2001     |           |             |             |                 |             |                      |
|           | or 03069101 | 2SC2060     |           |             |             |                 |             |                      |
|           | or 03085201 | 2SD438      |           |             |             |                 |             |                      |
| rQ2       | 03068301    | 2SC2320     |           |             |             |                 |             |                      |
|           | or 07194801 | 2SC1815     |           |             |             |                 |             |                      |
|           | or 46057201 | LC945       |           |             |             |                 |             |                      |
|           | or 03086101 | 2SD357      |           |             |             |                 |             |                      |

4-3. G-1283 Headphone Amp. & Mic Amp. Circuit Board (Stock No. 07098601)

Component Side



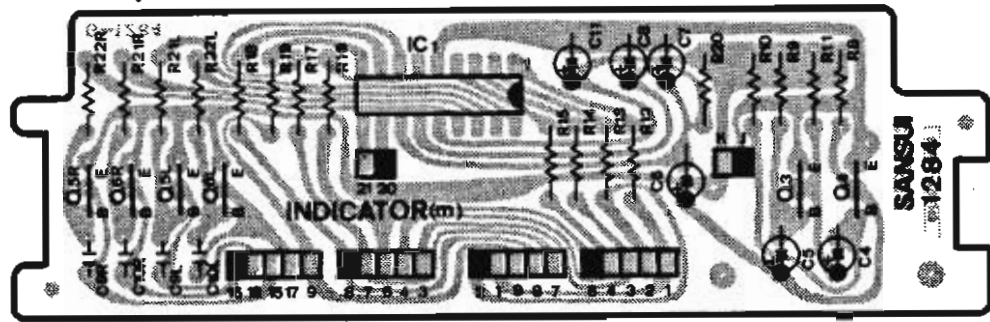
Parts List

| Parts No.   | Stock No.               | Description                                |
|-------------|-------------------------|--|
| •Transistor |                         |  |
| fQ4         | 07225401<br>or 03060701 | 2SC2320L<br>2SC1313                        |
| gVR1        | 07235400, 1             | Variable Resistor 50kΩ A x 2,<br>REC LEVEL |
| •IC         |                         |  |
| lIC1        | 07224500                | LA4170                                     |
| pJ1         | 07194300                | Head Phone Jack                            |
| pJ2         | 07200300                | Mic Jack                                   |



### 4-4. G-1284 Peak Meter Circuit Board

Component Side (Stock No. 07098401)



**Parts List**

| Parts No.          | Stock No.   | Description             |
|--------------------|-------------|-------------------------|
| <b>•Transistor</b> |             |                         |
| mQ3                | 03068301    | 2SC2320                 |
|                    | or 07194801 | 2SC1815                 |
|                    | or 46057201 | LC945                   |
| mQ4                | 03068301    | 2SC2320                 |
|                    | or 07194801 | 2SC1815                 |
|                    | or 46057201 | LC945                   |
| mQ5                | 03012701    | 2SA999                  |
| mQ6                | 03012701    | 2SA999                  |
| <b>•IC</b>         |             |                         |
| mIC1               | 07224000    | MSL9350RS, meter driver |

### 4-5. G-1291 Function Switch Circuit Board

(Stock No. 07098301)

**Parts List**

| Parts No. | Stock No. | Description                |
|-----------|-----------|----------------------------|
| nLD1      | 07250800  | Light Emitting Diode (ORG) |
| nLD2      | 07250900  | Light Emitting Diode (GRN) |
| nLD3      | 07250900  | Light Emitting Diode (GRN) |
| nLD4      | 07250900  | Light Emitting Diode (GRN) |
| nLD5      | 07251000  | Light Emitting Diode (YEL) |
| nS1       | 07234700  | Push Switch                |
| nS2       | 07234700  | Push Switch                |
| nS3       | 07234700  | Push Switch                |
| nS4       | 07234700  | Push Switch                |
| nS5       | 07234700  | Push Switch                |
| nS6       | 07234700  | Push Switch                |
| nS7       | 07234700  | Push Switch                |
| nS8       | 07234700  | Push Switch                |

• Note: The circuit board, G-1294, G-1295 & G-1303 are not supplied as the assembled. However, the individual parts on the circuit board are provided by orders.

### 4-6. G-1294 Memory/Auto Switch Circuit Board

**Parts List**

| Parts No. | Stock No. | Description          |
|-----------|-----------|----------------------|
| nS9       | 07249900  | Slide Switch, auto   |
| nS10      | 07249800  | Slide Switch, memory |

### 4-7. G-1295 Timer Switch Circuit Board

**Parts List**

| Parts No. | Stock No. | Description  |
|-----------|-----------|--------------|
| nS11      | 07249900  | Slide Switch |

### 4-8. G-1303 Power Switch Circuit Board

**Parts List**

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
|           | 07267100  | Push Switch |

**• Abbreviations**

|                  |   |                 |  |
|------------------|---|-----------------|--|
| C.R. . . . . .   | Carbon Resistor                             | E.L. . . . . .  | Low Leak Electrolytic Capacitor          |
| S.R. . . . . .   | Solid Resistor                              | E.B. . . . . .  | Bi-Polar Electrolytic Capacitor          |
| Ce.R. . . . . .  | Cement Resistor                             | E.BL. . . . . . | Low Leak Bi-Polar Electrolytic Capacitor |
| M.R. . . . . .   | Metal Film Resistor                         | Ta.C. . . . . . | Tantalum Capacitor                       |
| F.R. . . . . .   | Fusing Resistor                             | F.C. . . . . .  | Film Capacitor                           |
| N.I.R. . . . . . | Non-Inflammable Resistor                    | M.P. . . . . .  | Metalized Paper Capacitor                |
| C.C. . . . . .   | Ceramic Capacitor                           | P.C. . . . . .  | Polystyrene Capacitor                    |
| C.T. . . . . .   | Ceramic Capacitor, Temperature Compensation | G.C. . . . . .  | Gimmic Capacitor                         |
| E.C. . . . . .   | Electrolytic Capacitor                      |                 |  |

# 5. EXPLODED VIEW AND PARTS LIST

Parts List

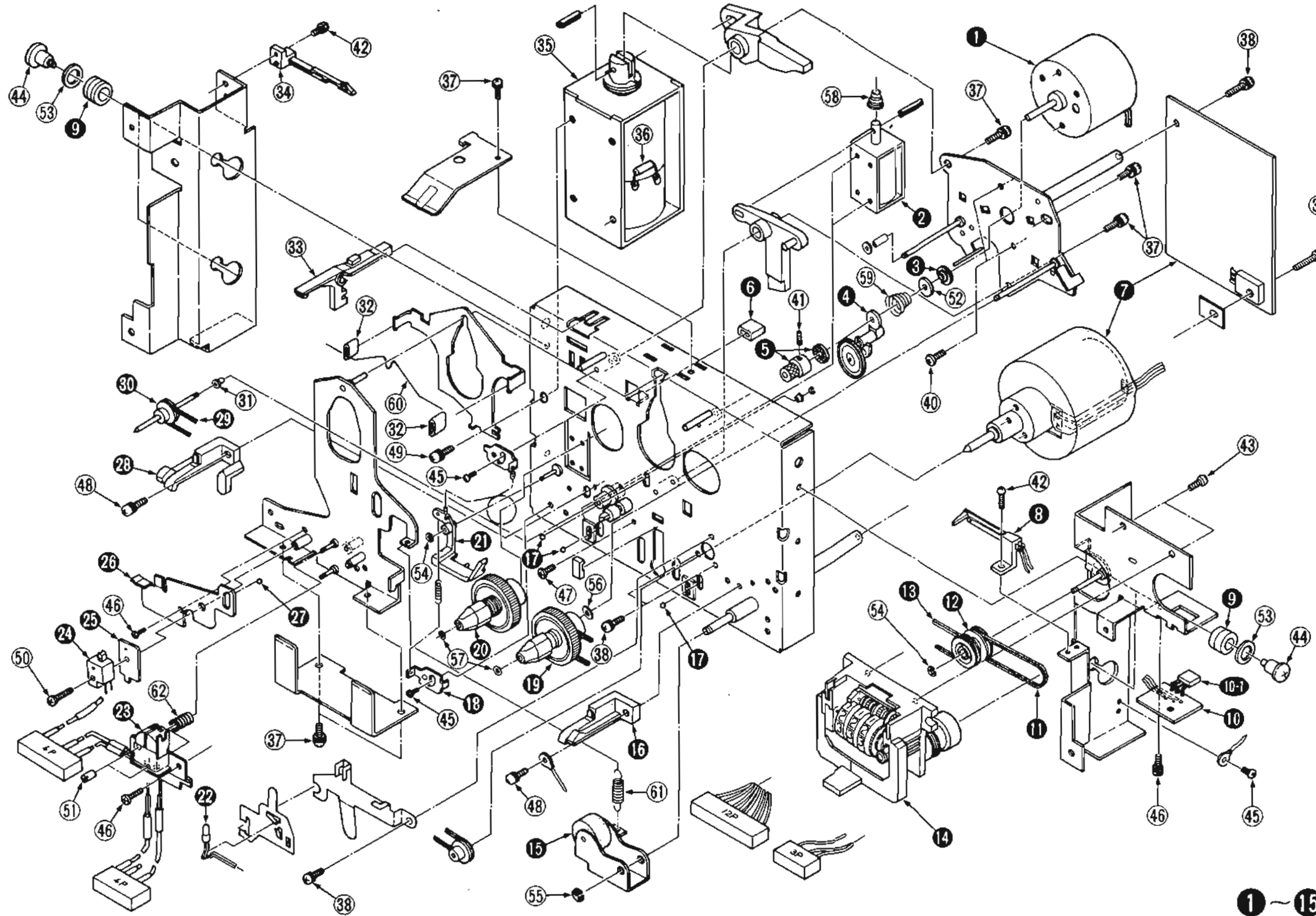
| Parts No. | Stock No. | Description                       | Parts No. | Stock No. | Description                         |
|-----------|-----------|-----------------------------------|-----------|-----------|-------------------------------------|
| 1         | 07736200  | Reel Motor                        | 34        | 07719600  | Leaf Switch, rec sensor             |
| 2         | 07719900  | Plunger Solenoid, Brake           | 35        | 07719800  | Plunger Solenoid, play, rec         |
| 3         | 09446600  | Spring Support                    | 36        | 07733000  | Diode                               |
| 4         | 07735200  | Idler Ass'y                       |           |           |                                     |
| 5         | 07733500  | Pulley Ass'y                      | ●Screw    |           |                                     |
| 6         | 07734000  | Cushion                           | 37        | 08321300  | Pan Head M2.6 x 4                   |
| 7         | 07720100  | Capstan Motor Ass'y               | 38        | 08321400  | Pan Head M2.6 x 6                   |
| 8         | 07719700  | Leaf Switch, cassette sensor      | 39        | 00436800  | Pan Head M2.6 x 8                   |
| 9         | 07734100  | Mechanism Support Cushion         | 40        | 07736400  | Pan Head M2.6 x 3                   |
| 10        | 07733400  | Tape-Run Sensing Circuit Board    | 41        | 07736600  | Slot-type M2 x 3.5                  |
| 10-1      | *03614000 | Hall IC D6838                     | 42        | 09446300  | Pan Head M2 x 5                     |
|           | *09447100 | Hall IC DN838                     | 43        | 00440400  | Pan Head Tapping M2.6 x 4           |
| 11        | 07734200  | Counter Belt (B)                  | 44        | 07732900  | Pan Head M4 x 11.2                  |
| 12        | 07733800  | Pulley, counter                   | 45        | 00436700  | Flat Countersunk Head M2.6 x 6      |
| 13        | 07733900  | Counter Belt (A)                  | 46        | 08321500  | Pan Head M2 x 4                     |
| 14        | 09402600  | Counter                           | 47        | 07736300  | Pan Head M2 x 3                     |
| 15        | 07735300  | Pinch Roller Ass'y                | 48        | 00448000  | Pan Head M3 x 8                     |
| 16        | 09446500  | Cassette Holder, right            | 49        | 00449100  | Pan Head M3 x 6                     |
| 17        | 65400300  | Steel Ball                        | 50        | 07736700  | Pan Head M2 x 13                    |
| 18        | 07661100  | Adjusting Plate (B), back tension | 51        | 09447300  | Adjustment Nut, head                |
| 19        | 07733100  | Take-up Reel Hub Ass'y            |           |           |                                     |
| 20        | 07735600  | Supply Reel Hub Ass'y             | ●Washer   |           |                                     |
| 21        | 07735700  | Back Tension Servo Ass'y          | 52        | 07732700  | Plain, idler spring, M7 x 2.1 x 0.5 |
| 22        | 07720000  | Lamp.8V 50mA                      | 53        | 07733700  | Plain, mechanism support            |
| 23        | 07736000  | REC/PB Combination Head           | 54        | 00488900  | E-type washer D-1.5                 |
| 24        | 07736100  | Earth Head                        | 55        | 00489000  | E-type washer D-2                   |
| 25        | 07660900  | Plate, earth head                 | 56        | 07732800  | Poly-thrust, M5.4 x 2.1 x 0.5       |
| 26        | 07660800  | Guide Plate                       | 57        | 07732600  | Poly-thrust, Reel Hub               |
| 27        | 07734800  | Steel Ball                        |           |           |                                     |
| 28        | 09446400  | Cassette Holder, left             | ●Spring   |           |                                     |
| 29        | 07711900  | Capstan Belt                      | 58        | 07734300  | for Brake Plunger                   |
| 30        | 07711700  | Pulley Ass'y, capstan             | 59        | 07734600  | for Idler                           |
| 31        | 07711800  | Bearing, capstan pulley           | 60        | 07734500  | for Brake                           |
| 32        | 07734000  | Brake Shoe                        | 61        | 07734700  | for Pinch Roller                    |
| 33        | 09446800  | Rec Senser Lever                  | 62        | 09447000  | for Head Adjust                     |

\* When Replacing Hole IC, refer to Service Bulletin, Ref. AN-123.

Abbreviations

|  |   |   |  |   |
|--|---|---|--|---|
| 1. Pan Head Tapping Screw . . . PT Type    | 5. Pan Head SEMS B Screw . . . PSB Type     | 9. Flat Counter Sunk Wood Screw . . . FC Type | 13. Binding Head SEMS B Screw . . . BSB Type | 17. Toothed Lock Washer (External) . . . TLE Washer |
| 2. Washer Head Tapping Screw . . . WT Type | 6. Binding Head SEMS F Screw . . . BSF Type | 10. Round Head Wood Screw . . . RH Type       | 14. Spring Washer . . . S Type               | 18. Wave Washer                                     |
| 3. Pan Head Screw . . . P Type             | 7. Binding Head Screw . . . B Type          | 11. Hex. Socket Setscrew . . . SC Type        | 15. Plain Washer . . . P Type                | 19. Hexagon Nut H Type Nut                          |
| 4. Pan Head SEMS A Screw . . . PSA Type    | 8. Flat Counter Sunk Head Screw . F Type    | 12. Slot Type Setscrew . . . SS Type          | 16. Retaining Ring (E Washer). E Type        |   |

<EXPLODED VIEW>



- 1 ~ 15
- 16 ~ 30
- 31 ~ 45
- 46 ~ 62

## 6. MAIN PARTS REPLACEMENT

(See Exploded View left)

### A. Mechanism Chassis

- 1) Remove bonnet and front panel ass'y.
- 2) Loosen two screws on mechanism cover ass'y to remove it.
- 3) Take out G-1303 (Power switch circuit board) and G-1295 (timer switch circuit board).
- 4) Plug out 4 connectors (K) on G-1293 (Mechanism Control Circuit Board) and G-1285 (PB/Rec Amp Circuit Board) and cut off the vinyl bands. (See Top View on page 11.)
- 5) Loosen 4 screws fixing mechanism chassis and, the mechanism chassis is easily off.

### B. Idler Ass'y (4) and Reel Motor (1)

- 1) Take out mechanism chassis, and counter (A) belt.
- 2) Remove thrust washer (7) at reel hub ass'y (take up supply) (19), (20), and reel hub ass'y from mechanism chassis.
- 3) Loosen one screw (41) around pulley to pull out the pulley, then remove idler ass'y from reel motor.
- 4) Next, to remove reel motor, take out idler spring (59), washer (52) and spring support (58).
- 5) Loosen two screws (38), (39) fixing capstan motor control circuit board.
- 6) Loosen three screws (37) fixing reel motor mounting plate and take out reel motor.
- 7) Loosen one screw (40) around pulley to pull out the pulley, then remove idler ass'y from reel motor.
- 8) Next, to remove reel motor, take out idler spring (59), washer (52) and spring support (58).
- 9) Loosen two screws (43) fixing reel motor and reel motor can be off from reel motor mounting plate.

### C. Capstan Motor

- 1) Take out mechanism chassis first.
- 2) To remove this motor, loosen two screws (38), (39) fixing capstan motor control circuit board, and three screws (37) fixing capstan motor.

### D. REC & PLAY Combination Head (23)

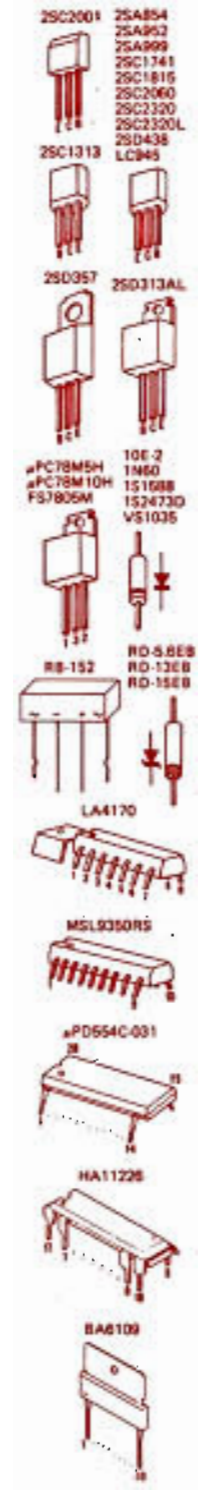
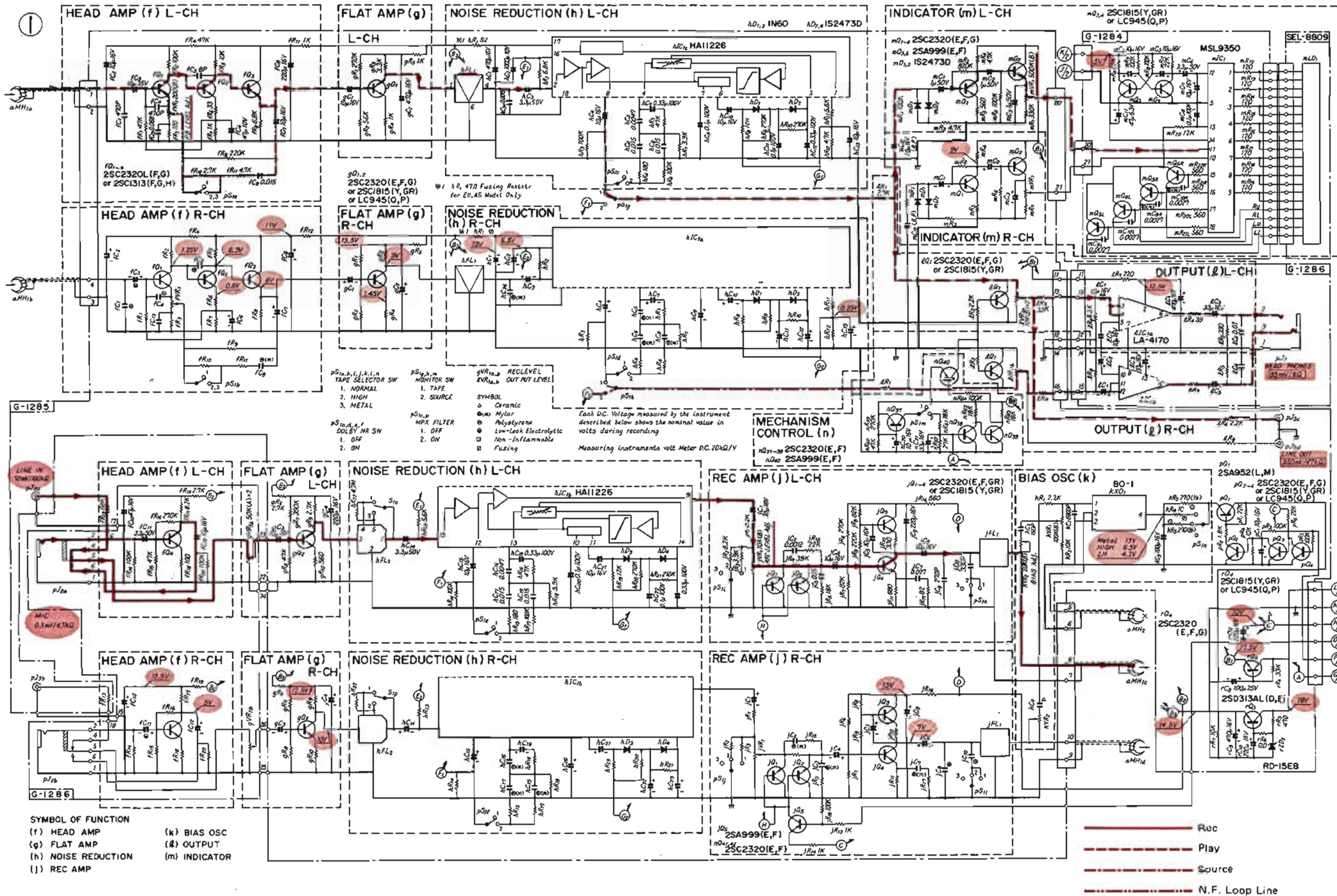
- 1) Remove bonnet, front panel ass'y and mechanism cover.
- 2) Loosen an azimuth adjusting nut (B), then confirm the quantity of turn. (See Fig. 3-4 on page 2)
- 3) Loosen one screw (46) fixing REC & PLAY head and azimuth adjusting nut (A).
- 4) Take off cord from REC & PLAY head.
- 5) To attach REC & PLAY head, perform Step 4) inversely at first, bind an azimuth adjusting nut (B) as quantity as loosen at step 2).

### E. Back Tension Servo Ass'y (21)

- 1) Remove bonnet, front panel ass'y and mechanism cover.
- 2) Take out E-type washer (24).
- 3) Take off the spring hooked to adjusting plate (25) (26).
- 4) Take out two poly-thrust washer (57) fixing supply reel hub ass'y (20).
- 5) Loosen one screw (45) fixing adjusting plate (A) with back tension cord. (See Fig. 3-7 on page 4)
- 6) Take out back tension servo ass'y (21).



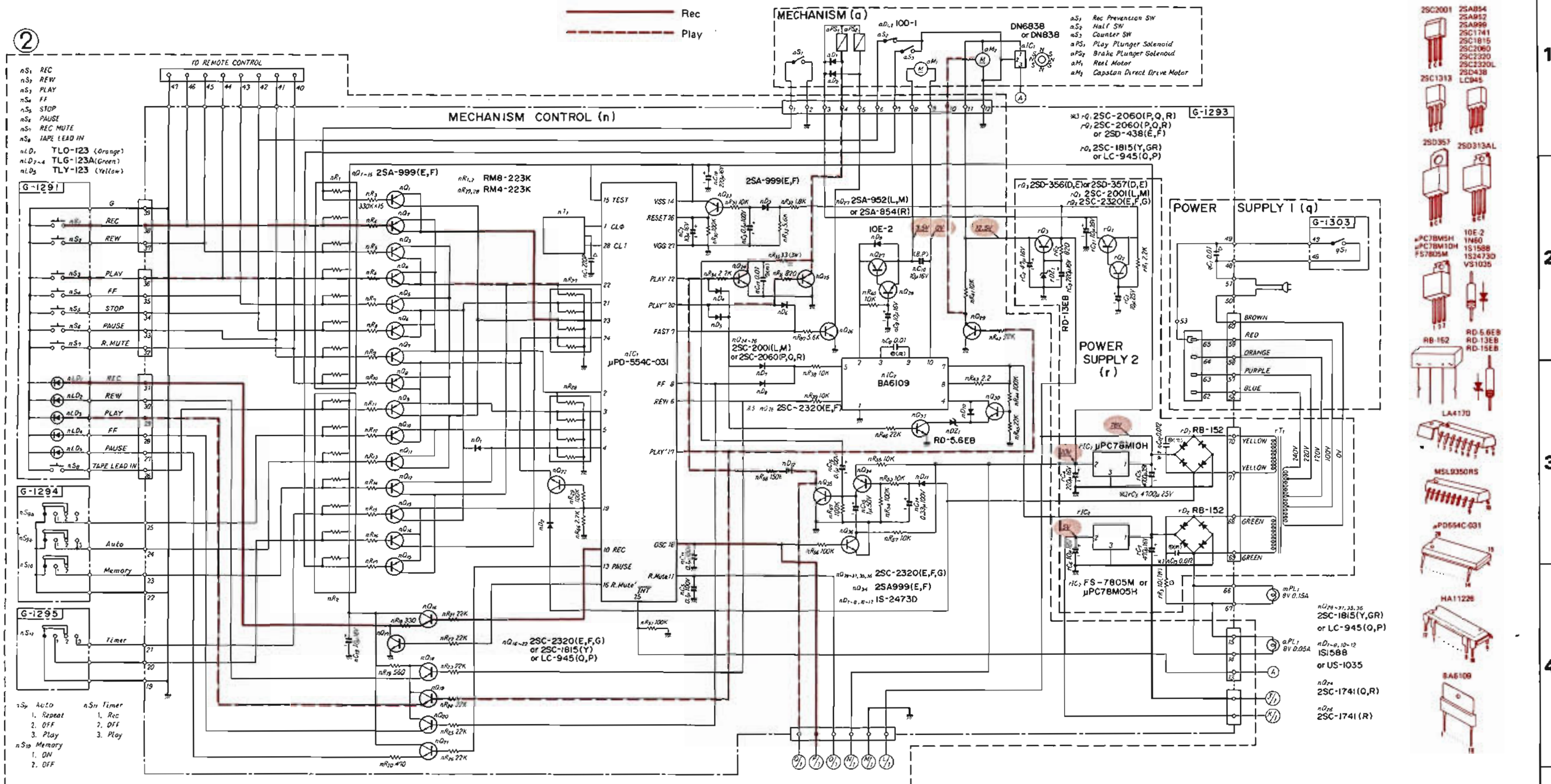
7. SCHEMATIC DIAGRAM 7-1. Amplifier Section



1  
 2  
 3  
 4  
 5

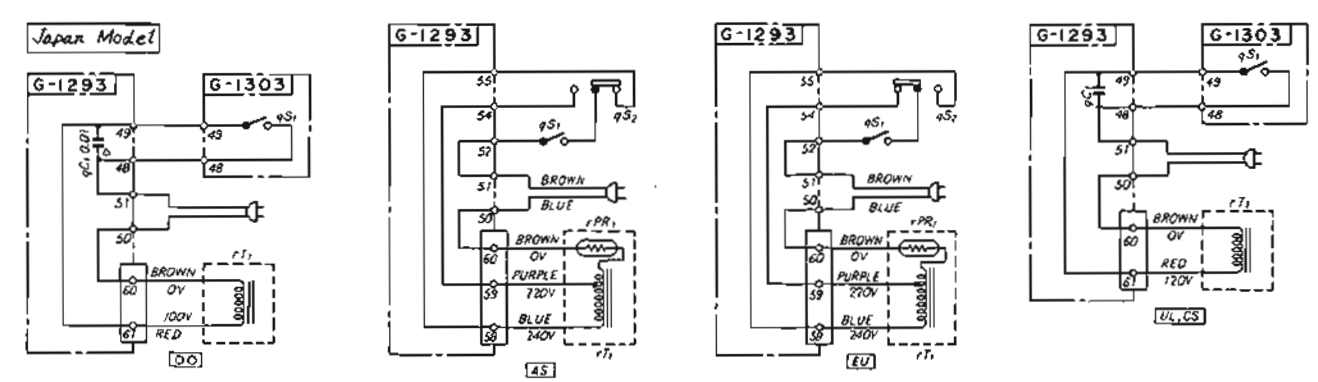


7-2. Control Section

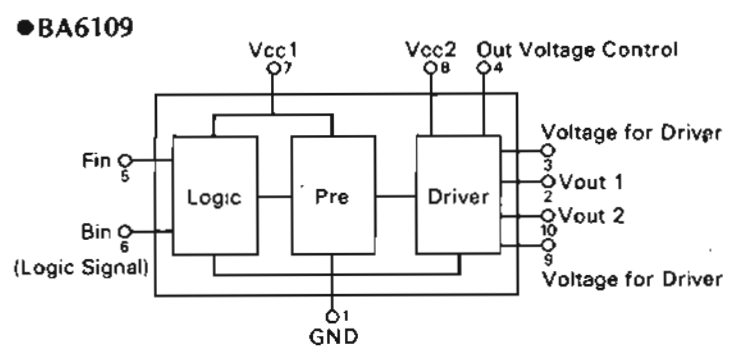


**SYMBOL**  
 a Ceramic  
 B(M) Mylar  
 (B.P.) Bi-Polar Electrolytic  
 □ Non-Inflammable Resistor  
 □ Using Resistor  
 \*1 Japan Model Only  
 \*2 CSA Model Only

Each D.C. Voltage measured by the instruments described below shows the nominal value in volts during recording.  
 Measuring instruments volt Meter D.C. 20kΩ/V



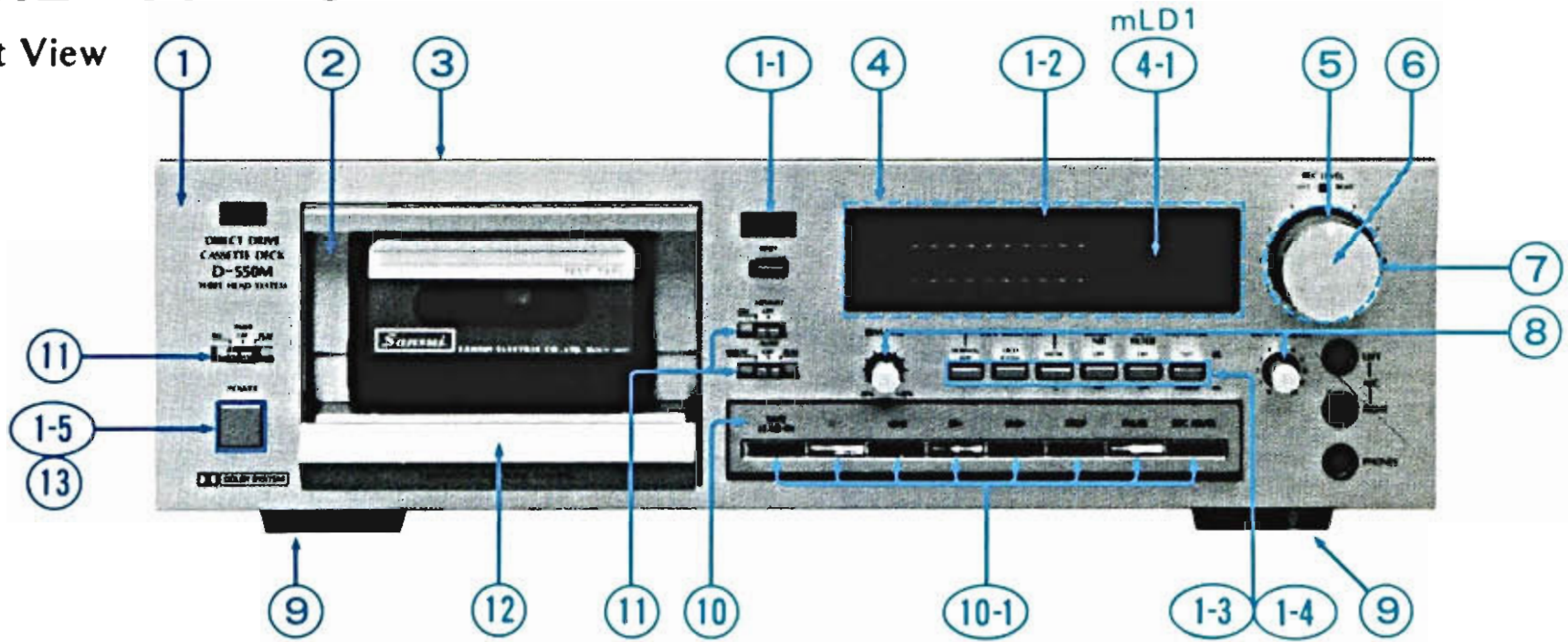
**SYMBOL OF FUNCTION**  
 (a) MECHANISM  
 (n) MECHANISM CONTROL  
 (q) POWER SUPPLY 1  
 (r) POWER SUPPLY 2



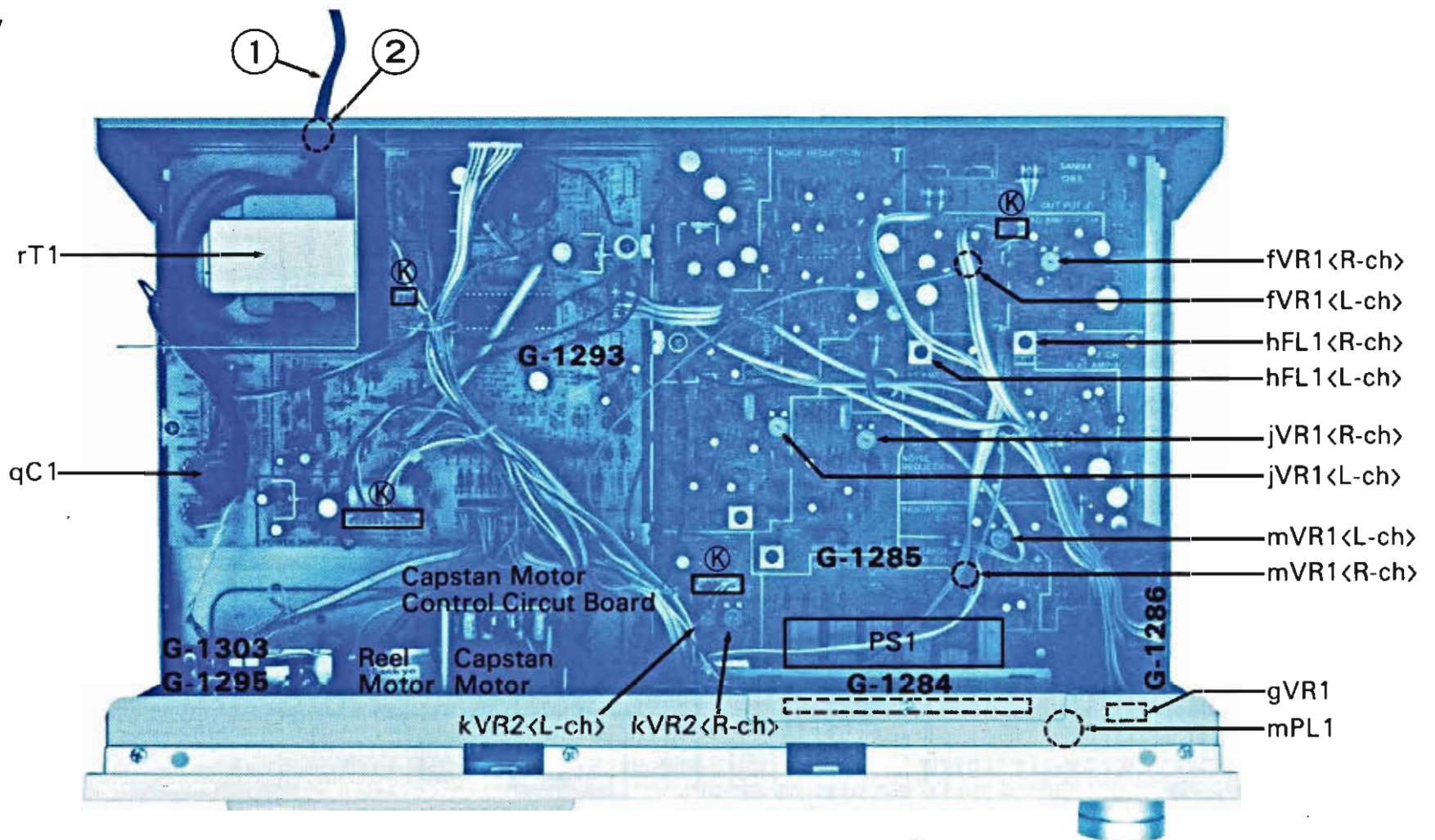


# 8. OTHER PARTS

8-1. Front View



8-2. Top View



Parts List <Front View>

| Parts No.                   | Stock No. | Description                               |
|-----------------------------|-----------|---|
| 1-1                         | 07603800  | Counter Lens                              |
| 1-2                         | 07604300  | Peak Level Indicator Cover                |
| 1-4                         | 07610700  | Guide Cushion                             |
| 4                           | 07632000  | Peak Level Indicator Frame Ass'y          |
| 4-1                         | 07604400  | Peak Level Indicator Scale Plate          |
| mLD1                        | 03194100  | LED Ass'y SEL8809, peak level indicator   |
| 7                           | 07506900  | Masking Sheet, rec level VR               |
| 9                           | 55073500  | Leg                                       |
| 10-1                        | 07623800  | Knob, control                             |
| <b>&lt;Silver Model&gt;</b> |           |   |
| 1                           | 07654900  | Front Panel Ass'y                         |
| 1-3                         | 07630800  | Push Knob Ass'y, tape sel, dolby, MPX Fil |
| 1-5                         | 59560800  | Knob Guide, power                         |
| 2                           | 07631420  | Mechanism Cover Ass'y                     |
| 3                           | 07610900  | Bonnet                                    |
| 5                           | 07603600  | Knob, rec level right                     |
| 6                           | 07603400  | Knob, rec level left                      |
| 8                           | 07603300  | Knob, bias fine, output level             |
| 10                          | 07636000  | Control Panel Ass'y                       |
| 11                          | 07604100  | Slide Knob, timer, auto, memory           |
| 12                          | 07604500  | Head Cover                                |
| 13                          | 53195000  | Knob, power                               |

| Parts No.                  | Stock No. | Description                                |
|----------------------------|-----------|--|
| <b>&lt;Black Model&gt;</b> |           |  |
| 1                          | 07655100  | Front Panel Ass'y                          |
| 1-3                        | 07630900  | Push Knob Ass'y, tape sel, dolby, MPX Fil. |
| 1-5                        | 59560900  | Knob Guide, power                          |
| 2                          | 07631510  | Mechanism Cover Ass'y                      |
| 3                          | 07611000  | Bonnet                                     |
| 5                          | 07603700  | Knob, rec level right                      |
| 6                          | 07603500  | Knob, rec level left                       |
| 8                          | 07604000  | Knob, bias fine, output level              |
| 10                         | 07636100  | Control Panel Ass'y                        |
| 11                         | 07604200  | Slide Knob, timer, auto, memory            |
| 12                         | 07604600  | Head Cover                                 |
| 13                         | 53196500  | Knob, power                                |

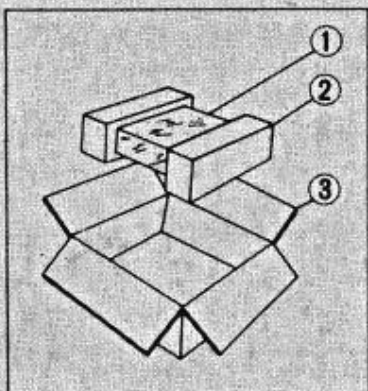
Parts List <Top View>

| Parts No. | Stock No.   | Description                  |
|-----------|-------------|------------------------------|
| 1         | 38005700    | Power Supply Cord            |
| 2         | 39106000    | Strain Relief                |
| mPL1      | 07234400    | Lamp 8V 150mA                |
| rT1       | 15003701    | Power Transformer            |
| gVR1      | 07235400, 1 | Variable Resistor, REC LEVEL |
| pS1       | 07250700    | Push Switch,                 |



## 9. PACKING LIST

| Parts No. | Stock No. | Description          |
|-----------|-----------|----------------------|
| 1         | 91167610  | Vinyl Bag            |
| 2         | 07632300  | Styrofoam Packing    |
| 3         | 07655400  | Carton Case (Silver) |
|           | 07655600  | Carton Case (Black)  |



## 10. ACCESSORY LIST

| Stock No. | Description                   |
|-----------|-------------------------------|
| 38103300  | Pin Plug Cord                 |
| 07642100  | Operating Instruction         |
| 07712200  | Rack Mounting Adaptor (Black) |

**Sansui**

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