RS-M85 MECHANISM SERIES

Specifications

Track system: 4-track 2-channel stereo recording and playback
Tape speed: 4.8 cm/s
Wow and flutter: 0.035% (WRMS), ± 0.10% (DIN)
Frequency response: Metal tape:
  20 — 20,000 Hz
  30 — 18,000 Hz (DIN)
  30 — 17,000 Hz ± 3 dB
  (O.U.)
  40 — 13,000 Hz ± 3 dB
CrO₂/Fe-Cr tape:
  20 — 18,000 Hz
  30 — 18,000 Hz (DIN)
  30 — 16,000 Hz ± 3 dB
  30 — 14,000 Hz ± 3 dB
Normal tape:
  20 — 16,000 Hz
  30 — 16,000 Hz (DIN)
  30 — 14,000 Hz
Signal-to-noise ratio: Dolby NR in: 69 dB (above 5 kHz)
Dolby NR out: 59 dB (signal level = max. recording level, Fe-Cr/CrO₂ type tape)
Fast forward and reverse time: Approx. 80 seconds with C-60 cassette tape
Inputs:
  MIC: sensitivity 0.25 mV, applicable microphone impedance 400 Ω — 10 kΩ
  LINE: sensitivity 60 mV, input impedance 68 kΩ
  Outputs:
  LINE: output level 700 mV, load impedance 22 kΩ
  HEADPHONE: output level 140 mV, load impedance 8 kΩ
Rec/PB connection: 5-P DIN type; input sensitivity 0.25 mV, impedance 4 kΩ
  output level 700 mV, impedance 1.5 kΩ
Bias frequency: 85 kHz
Motors:
  2-motor system
  Capstan: 1-quartz control phase-locked DC brushless direct-drive motor
  Reel table: 1-DC coreless motor
Heads:
  2-head system
  1-SX (Sendust Extra) head for rec/playback
  1-sendust/ferrite double-gap head for erase
Power requirements: AC: 110/125/220/240, 50-60 Hz
Preset power voltage: 240 V only for England
Power consumption: 35 W
Dimensions: 9.7 cm(H) × 45.0 cm(W) × 40.3 cm(D)
Weight: 10.5 kg

Specifications are subject to change without notice.
* 'Dolby' and the double-D symbol are trademarks of Dolby Laboratories.

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan
LOCATION OF CONTROLS
AND COMPONENTS

Fig. 1

1. Power Switch (power)
2. Eject Button (eject)
3. Cassette Holder
4. Tape Counter, Reset Button
5. FL (Fluorescent Level) Meters
6. Output Level Control (output level)
7. Input Level Controls (input level)
8. Headphones Jack (phones)
9. Record Button with Record Indication Lamp (record) (O)
10. Rewind Button (rewind) (◄◄)
11. Stop Button (stop) (■)
12. Playback Button with Playback Indication Lamp (play) (►)
13. Fast-Forward Button (ff) (►►)
14. Pause Button with Pause Indication Lamp (pause) (II)
15. Bias-Adjustment Control/"Metal tape" selector (bias adjust) (pull Metal)
16. Tape Selector (tape select)
17. Meter-Brightness/Function Selector (meter)
18. Function Selector (function)
19. Dolby Noise-Reduction Switch (Dolby NR)
20. Input Selector (input select)
21. Microphone Jacks (mic)
22. Line Output Jacks (LINE OUT) (R, L)
23. Record/Playback Connection Socket (REC/PB)
24. Line Input Jacks (LINE IN) (R, L)
25. Meter-Brightness-Adjustment Control (meter light)
26. Power Cord
27. Voltage Selector (VOLTAGE SELECTOR)
28. Remote-Control Connector (REMOTE CONTROL)
DISASSEMBLY INSTRUCTIONS

4. The head azimuth can be adjusted by removing the cassette lid.

---

<table>
<thead>
<tr>
<th>Procedure</th>
<th>To remove</th>
<th>Remove</th>
<th>Shown in fig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case cover</td>
<td>5 black screws (A)</td>
<td>2, 3</td>
</tr>
<tr>
<td>2</td>
<td>Bottom cover</td>
<td>9 screws (B)</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Front panel</td>
<td>2 cassette lid holding screws (C)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 red screws (D)</td>
<td>5, 6</td>
</tr>
<tr>
<td>4</td>
<td>Back cover</td>
<td>16 back screws (E)</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Cassette holder</td>
<td>4 screws (F)</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>FL level meter</td>
<td>Meter cover (G)</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 meter holders (H)</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Mechanism</td>
<td>4 red screws (I)</td>
<td>6, 8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 black screw (J)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tape counter belt (K)</td>
<td>6</td>
</tr>
</tbody>
</table>
DISASSEMBLY INSTRUCTIONS

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

<table>
<thead>
<tr>
<th>Procedure</th>
<th>To remove</th>
<th>Remove</th>
<th>Shown in fig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case cover</td>
<td>5 black screws</td>
<td>(A)</td>
</tr>
<tr>
<td>2</td>
<td>Bottom cover</td>
<td>9 screws</td>
<td>(B)</td>
</tr>
<tr>
<td>3</td>
<td>Front panel</td>
<td>2 cassette lid holding screws</td>
<td>(C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 red screws</td>
<td>(D)</td>
</tr>
<tr>
<td>4</td>
<td>Back cover</td>
<td>16 black screws</td>
<td>(E)</td>
</tr>
<tr>
<td>5</td>
<td>Cassette holder</td>
<td>4 screws</td>
<td>(F)</td>
</tr>
<tr>
<td></td>
<td>Face plate</td>
<td>Meter cover</td>
<td>(G)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 meter holders</td>
<td>(H)</td>
</tr>
<tr>
<td>5</td>
<td>FL level meter</td>
<td>4 red screws</td>
<td>(I)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 black screw</td>
<td>(J)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tape counter belt</td>
<td>(K)</td>
</tr>
<tr>
<td>6</td>
<td>Mechanism</td>
<td></td>
<td>(L)</td>
</tr>
</tbody>
</table>
# MEASUREMENT AND ADJUSTMENT METHODS

**NOTE:** Set lever switches and controls in the following positions, unless otherwise specified.

- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature: \(20 \pm 5 \degree C (68 \pm 9 \degree F)\)
- Meter selector: Peak, dim
- Dolby NR switch: OUT
- Tape selector: Normal
- Input selector: Line in
- Bias adjustment control: Center
- Output level control: Maximum
- Input level control: Maximum

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MEASUREMENT &amp; ADJUSTMENT</th>
</tr>
</thead>
</table>
| A. Power supply adjustment | +20V adjustment  
1. Connect voltmeter to the test point \(\nabla\) on the power circuit board and read voltage.  
   Standard value: \(+20 \pm 0.5 V\)  
2. If measured value is not in standard, adjust VR401 as shown in fig. 29.  
+5V adjustment  
1. Connect DC voltmeter to the test point \(\nabla\) on the power circuit board and read voltage.  
   Standard value: \(+5 \pm 0.4 V\)  
2. If measured value is not in standard, connect the point \(A\) on the power circuit board as shown on page 14. |
| B. Takeup tension  
Condition:  
- Playback mode  
Equipment:  
- Cassette torque meter (QZZSRKCT) |  
1. Mount cassette torque meter on UNIT.  
2. Place UNIT into playback mode and read takeup torque.  
3. Measure several times and determine the mean value.  
   Standard value: \(34 \pm 6\) gr-cm  
4. If measured value is not in standard, adjust VR601. |
| C. Head azimuth adjustment  
Condition:  
- Playback mode  
Equipment:  
- VTVM  
- Oscilloscope  
- Test tape (azimuth) --- QZZCFM  
- Tape path viewer --- QZZCRD | Record/playback head adjustment  
1. Test equipment connection is shown in fig. 9.  
2. Playback azimuth tape (QZZCFM 8kHz).  
3. Adjust record/playback head angle adjustment screw \(B\) in fig.10 so that output level at LINE OUT becomes maximum.  
4. Measure both channels, and adjust levels for equal output.  
5. After adjustment lock head adjustment screw with lacquer.  
Erase head adjustment  
1. Test equipment connection is the same above but use the tape path viewer (QZZCRD) instead of test tape (QZZCFM).  
2. Playback this tape.  
3. Adjust screw \(C\) shown in fig. 11 so that the tape may not get curled or malformed by tape guide of the erase head.  
4. After adjustment, lock heac adjustment screw with lacquer. |
| D. Tape speed  
Condition:  
- Playback mode  
Equipment:  
- Digital electronic counter  
- Test tape --- QZZCWAT | Tape speed accuracy  
1. Test equipment connection is shown in fig. 12.  
2. Playback test tape (QZZCWAT 3,000Hz), and supply playback signal to frequency counter.  
3. Measure this frequency.  
4. On the basis of 3,000Hz, determine value by following formula:  
   \[
   \text{Tape speed accuracy} = \frac{|f - 3,000|}{3,000} \times 100\% 
   \]
   where, \(f\) = measured value  
5. Take measurement at middle section of tape.  
   Standard value: \(\pm 0.4\%) \]
### Measurement & Adjustment

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Tape speed fluctuation**<br>Make measurements in same manner as above (beginning, middle and end of tape), and determine the difference between maximum and minimum values and calculate as follows:<br><br>
$$\text{Tape speed fluctuation} = \frac{f_1 - f_2}{3,000} \times 100\%$$<br>
$$f_1 = \text{maximum value}, f_2 = \text{minimum value}$$<br>**Standard value:** Less than 0.3% | |
| **Capstan motor circuit adjustment**<br>**Condition:**<br>- Playback mode<br>**Equipment:**<br>- VTVM<br>- Oscilloscope |<br>A. Standard DC power supply voltage adjustment<br>1. Measure the DC voltage between central point of VR703 and terminal of IC702 as shown in fig. 13.<br>- **Standard voltage:** 0 ± 0.35 V |<br>Fig. 13<br>2. If measured voltage is not within standard, adjust VR703 |<br>B. Phase lock point adjustment<br>1. Measure the DC voltage between terminal of IC702 and ground as shown in fig. 14.<br>- **Standard voltage:** 5.2 ± 0.1 V |<br>Fig. 14<br>2. If measured voltage is not within standard, adjust VR702 |<br>C. Position detecting signal output level adjustment<br>1. Connect oscilloscope to test point (T.P. [P.V.]).<br>2. Measure the peak-to-peak voltage of position detection signal of test point with the oscilloscope.<br>3. If the measured signal voltage is markedly different from the voltage shown in fig. 16, make the necessary adjustment with the VR701. |<br>Fig. 15<br>Fig. 16 |
| **Playback frequency response**<br>**Condition:**<br>- Playback mode<br>- Output level control --- MAX<br>**Equipment:**<br>- VTVM<br>- Oscilloscope<br>- Test tape --- QZZCFM |<br>1. Test equipment connection is as same as “Head azimuth adjustment” but use the test tape (QZZCFM) instead of head azimuth tape (See fig. 9)<br>2. Place UNIT into playback mode<br>3. Playback the frequency response test tape (QZZCFM)<br>4. Measure output level at 12.5 kHz, 8 kHz, 4 kHz, 1 kHz, 250 Hz, 125 Hz and 63 Hz, and compare each output level with the standard frequency 315 Hz at LINE OUT.<br>5. Make measurement for both channels.<br>6. Make sure that the measured value is within the range specified in the frequency response chart.<br>7. If measured value is not in standard, adjust VR1 (L.CH), VR2 (R.CH) (See fig. 29). |<br>Playback frequency response chart |<br>Fig. 17 |
| **Playback gain**<br>**Condition:**<br>- Playback mode<br>- Output level control --- MAX<br>**Equipment:**<br>- VTVM<br>- Oscilloscope<br>- Test tape --- QZZCFM |<br>1. Test equipment connection is shown in fig. 9.<br>2. Playback standard recording level portion on test tape (QZZCFM 315 Hz), and using VTVM measure the output level at LINE OUT jack.<br>3. Make measurement for both channels.<br>- **Standard value:** 0.66 ± 0.05 V |<br>Adjustment<br>1. If measured value is not standard, adjust VR3 (L.CH), VR4 (R.CH) (See fig. 29).<br>2. After adjustment, check “Playback frequency response” again. |
### Measurement & Adjustment

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Description</th>
</tr>
</thead>
</table>
| **1** Bias leak | 1. Test equipment connection is shown in fig. 18 (See AMP circuit board on page 10).  
2. Place UNIT into record mode.  
3. Adjust trap coils L9 (L-CH), L10 (R-CH), so that measured value becomes minimum (See fig. 29).  
4. Make adjustment for both channels.  
  
Condition:  
- Record mode  
- Input level control ... MAX  
  
Equipment:  
- VTVM  
- Oscilloscope  
  |
| **2** Erase current | 1. Test equipment connection is shown in fig. 19.  
2. Place UNIT into record mode and measure voltage at test point 7.  
3. Determine erase current with the following formula.  
   \[
   \text{Erase current (A) =} \frac{\text{Voltage across both ends of R159}}{1 \text{(Ω)}}
   \]  
   **Standard value:** 95 ± 5 mA  
   (Tape selector ... Metal)  
4. If measured value is not within standard, adjust VR803.  
  
Condition:  
- Record mode  
- Bias adjustment control ... Center  
  
Equipment:  
- VTVM  
- Oscilloscope  
  |
| **3** Bias current | A. Adjustment of metal tape  
1. Test equipment connection is shown in fig. 20.  
2. Place the test tape (QZCRZJ) in the cassette holder.  
3. Press the record and pause buttons.  
4. Set the tape selector to metal position.  
5. Supply 1kHz signal from AF oscillator through ATT to LINE IN.  
6. Adjust ATT so that input level is −20 dB below standard recording level.  
7. At this time, LINE OUT level indicates 0.066V.  
8. Record 1kHz and 13kHz signals.  
9. Playback and express in dB the difference between output levels of 13kHz and 1kHz.  
10. Make sure output level of 13kHz is not within +1 ± 2 dB compared with output level of 1kHz.  
11. If measured value is not within +1 ± 2 dB, adjust VR13 (L-CH) only.  

B. Adjustment of normal tape  
12. Set the tape selector to normal position (Test tape QZZCRA).  
13. Change test tape to normal tape (QZZCRA).  
14. Press the record and playback buttons.  
15. Record 1kHz and 8kHz signals.  
16. Playback and express in dB the difference between output levels of 8kHz and 1kHz.  
17. Make sure output level of 8kHz is not within +2 ± 2 dB compared with output level of 1kHz.  
18. If measured value is not within +2 ± 2 dB, adjust VR12 (L-CH), VR14 (R-CH).  

C. Adjustment of Fe-Cr tape and CrO2 tape  
19. Set the tape selector to Fe-Cr position.  
20. Change test tape to Fe-Cr tape (QZZCXY).  
21. Press the record and playback buttons.  
22. Record 1kHz and 8kHz signals.  
23. Playback and express in dB the difference between output levels of 8kHz and 1kHz.  
24. Make sure output level of 8kHz is not within +1 ± 1 dB, compared with output level of 1kHz.  
25. If measured value is not within +1 ± 1 dB, adjust VR15.  
26. Set the tape selector to CrO2 position.  
27. Change test tape to CrO2 tape (QZZCXR).  
28. Make the same measurements and adjustments described in steps 21 to 24 above.  
29. If measured value is not within +1 ± 1 dB, adjust VR16.  

Condition:  
- Record mode  
- Bias adjustment control ... Center  
  
Equipment:  
- VTVM  
- Oscilloscope  
- Test tape  
  
(Reference blank tape)  
- QZZCRA for Normal  
- QZZCJR for CrO2;  
- QZZCXY for Fe-Cr  
- QZZCJR for Metal  
  |

Fig. 18

Fig. 19

Fig. 20

Fig. 21
### Measurement

1. Test equipment connection is shown in fig. 21.
2. Place UNIT into record mode.
3. Read voltage on VTVM and calculate bias current by following formula:
   \[
   \text{Bias current (A)} = \frac{\text{Value read on VTVM (V)}}{10 \, \Omega}
   \]

   **Standard value:** around 600\mu A (Metal position), around 310\mu A (Normal position), around 350\mu A (Fe-Cr position), around 420\mu A (CrO₂ position)

### Overall gain

**Condition:**
- Record/playback mode
- Input level control → MAX
- Standard input level:
  - MC → −72 ± 3 dB
  - LINE IN → −24 ± 3 dB
  - DIN → −72 ± 3 dB
- Bias adjustment control → Center
- Output level control → MAX

**Equipment:**
- VTVM
- AF oscillator
- ATT
- Oscilloscope
- Test tape (reference blank tape)
  - ZZCRA for Normal
  - ZZCRI for CrO₂
  - ZZCRR for Fe-Cr
  - ZZCROZ for Metal

1. Test equipment connection is shown in fig. 22.
2. Place UNIT into record mode.
3. Supply 1kHz signal (−24 dB) from AF oscillator, through ATT to LINE IN.
4. Adjust ATT until monitor level at LINE OUT becomes 0.66 V.
5. Using test tape, make recording.
6. Playback recorded tape, and measure the output level at LINE OUT on VTVM.

   **Standard value:** 0.66±0.05 V

7. If measured value is not within standard, adjust the following VR.
   - Normal: VR9 (L-CH), VR10 (R-CH)
   - Fe-Cr: VR7 (L-CH), VR8 (R-CH)
   - CrO₂: VR5 (L-CH), VR6 (R-CH)
   - Metal: VR801 (L-CH), VR802 (R-CH)

### Fluorescent meter

**Condition:**
- Record mode
- Input level control → MAX
- Output level control → MAX
- Tape selectors → Normal position

**Equipment:**
- VTVM
- AF oscillator
- ATT

1. Test equipment connection is shown in fig. 23.
2. Set the meter function selector to the "bright" position.
3. Supply 1kHz signal (−24 dB) to the LINE IN jack, then press the record button.
4. Adjust the ATT so that the output level at LINE OUT jack becomes 0.66 V (standard input level).
5. Adjustment at "0 dB":
   - Adjust VR303 (L-CH) and VR304 (R-CH) so that the fluorescent meters show an illuminated indication up to "0 dB" when the input signal level is 0.9 dB higher than the standard input level.
   - Then confirm that the fluorescent meters show an illuminated indication up to "+1 dB" when the input signal level is 1 dB higher than the standard input level.
6. Adjustment at "−20 dB”:
   - Adjust VR301 (L-CH) and VR302 (R-CH) so that the fluorescent meters show an illuminated indication up to "−20 dB" when the input signal level is 15.1 dB lower than the standard input level.
   - Then confirm that the fluorescent meters show an illuminated indication up to "−15 dB" when the input signal level is 15 dB lower than the standard input level.
7. Repeat twice between steps 3 and 6 above.

### Overall frequency response

**Condition:**
- Record/playback mode
- Input level control → MAX
- Bias adjustment control → Center

**Note:**
Before measuring and adjusting, make sure of the playback frequency response (For the method of measurement, please refer to the playback frequency response).

1. Test equipment connection is shown in fig. 22.
2. Load reference blank test tape and place UNIT into record mode.

### Overall frequency response chart (Normal)

**Fig. 25**
<table>
<thead>
<tr>
<th>ITEM</th>
<th>MEASUREMENT &amp; ADJUSTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment:</td>
<td>3. Supply 1kHz signal from AF oscillator through ATT to LINE IN.</td>
</tr>
<tr>
<td>• VTVM</td>
<td>4. Adjust ATT so that input level is −20dB below standard recording level (standard</td>
</tr>
<tr>
<td>• AF oscillator</td>
<td>recording level = 0VU).</td>
</tr>
<tr>
<td>• ATT</td>
<td>5. At this time, LINE OUT level indicates 0.066V.</td>
</tr>
<tr>
<td>• Test tape (reference blank tape)</td>
<td>6. Record each frequency 30Hz, 40Hz, 70Hz, 700Hz, 1kHz, 2kHz, 7kHz, 10kHz and 13.5kHz (16kHz for CrO₂;</td>
</tr>
<tr>
<td>− QZZCRA for Normal</td>
<td>Fe-Cr and Metal) at the same level.</td>
</tr>
<tr>
<td>− QZZCRX for CrO₂</td>
<td>7. Playback and express in dB the difference between playback output level of each</td>
</tr>
<tr>
<td>− QZZCRY for Fe-Cr</td>
<td>frequency based on playback output level of 1kHz.</td>
</tr>
<tr>
<td>− QZZCRZ for Metal</td>
<td>8. Make sure that the measured value is within the range specified in the overall</td>
</tr>
<tr>
<td></td>
<td>frequency response chart.</td>
</tr>
</tbody>
</table>

**Adjustment-1**

1. When the frequency response between the middle and high frequency range becomes higher than the standard value, as shown by the solid line in fig. 27, increase, refer to bias current adjustment.

2. When it becomes lower, as shown by dotted line, refer to bias current adjustment.

**Note:**

1. For adjustment when the bias current is lower than the standard value use the procedure indicated in adjustment 2, because reducing the bias current beyond this point may worsen the distortion factor.

2. For the method of bias current measurement, refer to “Bias current adjustment” on page 5.

**Adjustment-2**

When the frequency response is flat in the middle frequency range and makes a sharp rise or drop in the high frequency range, as shown in fig. 28, adjust by turning the following peaking coils.

- Normal ...... L3 (L-CH), L4 (R-CH)
- Fe-Cr ......... L5 (L-CH), L5 (R-CH)
- CrO₂ ......... L7 (L-CH), L3 (R-CH)
- Metal ......... L801 (L-CH), L802 (R-CH)

**Dolby NR circuit**

**Condition:**

- Record mode
- Input level control --- MAX

**Equipment:**

- VTVM
- AF oscillator
- ATT
- Oscilloscope

1. Place UNIT into record mode, set the Dolby NR switch to OUT position and supply to LINE IN to obtain −34.5dB at TP9 (L-CH), TP10 (R-CH) (frequency 5kHz).

2. Confirm that the value at IN position is 8dB greater than the value at OUT position of Dolby NR switch.

3. When it is not in condition above, adjust as follows.

4. Set the VR201 to maximum.

5. Set the Dolby NR switch to IN position.

6. At this time adjust VR202 so that the reading of VTVM becomes 10dB greater than the value in step (1) above.

7. Adjusting VR201 make the reading of VTVM becomes 2dB smaller than the value obtained through the adjustment in step (6) above.
NOTE: The circuit shown in red on the conductor is B circuit.
   Values indicated in red are DC voltage between the chassis and electrical parts.
CIRCUIT BOARD

Main Control

Plunger Driving

IC (AN6251) equivalent circuitry

i^2L (Integrated Injection Logic)

Relationship of each operation mode with input/output

<table>
<thead>
<tr>
<th>Operation mode</th>
<th>Input terminal</th>
<th>IC (AN6251)</th>
<th>Output terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>REW</td>
<td>(2) REW IN</td>
<td></td>
<td>(12) PAUSE OUT</td>
</tr>
<tr>
<td>FF</td>
<td>(3) FF IN</td>
<td></td>
<td>(13) PLAY OUT</td>
</tr>
<tr>
<td>PLAY</td>
<td>(8) FWD IN</td>
<td></td>
<td>(14) REC OUT</td>
</tr>
<tr>
<td>PAUSE</td>
<td>(9) PAS IN</td>
<td>*</td>
<td>(17) D-PLAY OUT</td>
</tr>
<tr>
<td>REC</td>
<td>(10) REC IN</td>
<td></td>
<td>(19) STOP OUT</td>
</tr>
<tr>
<td>STOP</td>
<td>(6) STOP IN</td>
<td></td>
<td>(20) TIMS OUT</td>
</tr>
</tbody>
</table>

* Doesn't become "L" immediately even if playback button pushed; becoming "L" after a slight delay.

Hall IC

Control Key Switch
RS-M88

SCHEMATIC DIAGRAM

Power Supply Section

NOTE:
- S401 ----- Power ON/OFF switch.
- S402 ----- AC power voltage select switch.
- VR401 ----- Voltage (20V) adjustment VR.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise. K = 1,000Ω.
- Capacity are in microfarads (µF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition with volume control at minimum position.
  For measurement, use VTVM.
- △ indicates that only parts specified by the manufacturer be used for safety.
**EXPLODED VIEWS**

**MECHANICAL PARTS**

- M1: MD84306 Felt Sheet
- M2: SDC83008 Heat Sink
- M3: TBE3033 Heat Exchanger
- M4: DP1335 Steel Ball Holder-A
- M5: DP1335 Steel Ball B 3.5a
- M6: DP1335 Steel Ball C 2.5a
- M7: DP1335 Pressure Roller Lever Assembly
- M8: DP1335 Lever Spring
- M9: DP1335 Pressure Roller Spring
- M10: DP1335 Pressure Roller Assembly
- M11: DKL2636 Pressure Roller Lever-1
- M12: DKL2636 Heat Sink
- M13: DKL2636 Heat Exchanger
- M14: DKL2636 Condenser Clip
- M15: DKL2636 Steel Ball Holder-B
- M16: DKL2636 Steel Ball C 3.5a
- M17: DKL2636 Idler Lever Assembly
- M18: DKL2636 Idler Roller
- M19: DKL2636 Idler Assembly
- M20: DKL2636 Idler Spring
- M21: DKL2636 Idler Lever Assembly
- M22: DKL2636 Idler Roller
- M23: DKL2636 Idler Assembly
- M24: DKL2636 Idler Tunnel Assembly
- M25: DKL2636 Idler Assembly
- M26: DKL2636 Idler Roller
- M27: DKL2636 Idler Assembly
- M28: DKL2636 Idler Lever Assembly
- M29: DKL2636 Idler Roller
- M30: DKL2636 Idler Assembly

**SPECIFICATIONS**

- Pressure of pressure roller: 400±30gr
- Wow and flutter: JS (Test tape: OZCCWAT)