**MC-505**

**SERVICE NOTES**

*First Edition*

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</table>

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**SPECIFICATIONS / 主な仕様**

- **Tone Generator**
  - Maximum Polyphony: 64 voices
- **Built-in Effects**
  - Reverb, Delay, EFX (24 types)
- **Patches**
  - Preset: 512, User: 256, Card: 512
- **Rhythm Set**
  - Preset: 26, User: 20, Card: 20
- **Sequencer**
  - Tracks: 8 + Mute Ctrl
- **Songs**
  - 50
- **Mix Output Jack L(MONO), R**
- **Direct Output Jack L(MONO), R**
- **Headphone Jack (stereo)**
- **MIDI Connectors (in, out)**
- **Foot Control Jack**
- **Memory Card Slot**
- **Power Supply**
  - AC100V/50kHz, AC117V, AC230V, AC240V
- **Power Consumption**
  - 15W
- **Dimensions**
  - 462(W) x 320(D) x 110(H) mm
  - 18-3/16(W) x 12-5/8(D) x 4-3/8(H) inches
- **Weight**
  - 5 Kg / 11 lbs 1 oz
- **Accessories**
  - Owner's Manual Set(English) (PNo. 71010678)
  - Owner's Manual Set(Japanese) (PNo. 71010601)
  - Card Protector (PNo. 01346312)
- **Power Supply**
  - 100V (PNo. 00894367)
  - 117V (PNo. 00894376)
  - 230V EU (PNo. 00894389)
  - 230V E (PNo. 00907001)
  - 240V A (PNo. 23495124)
- **Options**
  - Stereo Headphones RH-20/80/120
  - Pedal Switch DP-2/6, BOSS FS-SU
  - Audio Connection Cable PJ-1M
  - MIDI Cable MSC15/25/50
  - SmartMedia S2M-5/S4M-5
- **Display**
  - LCD: 16 characters x 2
  - 7 Segments, 6 Digits (LED)
- **Software Version**
  - approx. 95,000 notes (Internal)
  - approx. 220,000 notes (2M Card)
  - approx. 480,000 notes (4M Card)
- **Weight**
  - 5 Kg / 11 lbs 1 oz

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  - Preset: 26, User: 20, Card: 20
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**MC-505 Service Notes**

Printed in Japan (CR) AD00 1
### LOCATION OF CONTROLS / パネル配置図

**FRONT VIEW PARTS LIST**

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<th>Part Number</th>
<th>Part Name</th>
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<td>1</td>
<td>01343112</td>
<td>J R-KNOB MF BLK/LCG</td>
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<tr>
<td>2</td>
<td>01013545</td>
<td>ROTARY POT. RK09L12D0 10KBX2</td>
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<td>3</td>
<td>01013556</td>
<td>ROTARY POT. RK09L1140 10KB</td>
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<td>4</td>
<td>01342545</td>
<td>ROTARY POT. RK09L1140 10KB with click</td>
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<tr>
<td>5</td>
<td>01343478</td>
<td>TACT SWITCH SKQNAE</td>
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<tr>
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<td>05090745</td>
<td>LED (Green) SLR-325MCT31</td>
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<td>7</td>
<td>00900145</td>
<td>D S-KEYTOP SD1H BLK</td>
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<td>01012978</td>
<td>D S-KEYTOP SX1H MCG</td>
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<td>9</td>
<td>01129767</td>
<td>D S-KEYTOP SX1H DRD</td>
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<td>D S-KEYTOP MD1H RED</td>
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<td>17</td>
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<td>D S-KEYTOP SD1H A CLR</td>
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<td>18</td>
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<td>19</td>
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<td>TACT SW. SKUJG8R</td>
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<td>TACT SW. EVO QJU/50Q</td>
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<td>7-segment LED SL 9051S</td>
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<td>01343089</td>
<td>D BEAM CONTROLLER ESCT BLK</td>
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<td>01345912</td>
<td>F S-KNOB S BLK LCG</td>
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<td>37</td>
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<td>SLIDE POT. EWA KNE C10 B14</td>
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<td>38</td>
<td>01346112</td>
<td>MOLD KNOB BLK</td>
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<td>42</td>
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<td>ROTARY ENCODER EVO VEN F01 24B</td>
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**Roland MC-505**

![Roland MC-505 Control Panel](image-url)
**WARNING:**

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

**ATTENTION:**

CET APPAREIL NUMÉRIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU RÈGLEMENT SUR LE MATÉRIEL BROUILLEUR DU CANADA.

---

**REAR VIEW PARTS LIST**

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<tr>
<th>No.</th>
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<th>Part Name</th>
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<tbody>
<tr>
<td>1</td>
<td>134391175 G</td>
<td>S-BUTTON S1H BLK</td>
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<td>PUSH SW. SDDLB1-B-D-2 TV 5 5A/250V</td>
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<tr>
<td>3</td>
<td>01341178</td>
<td>CARD CONNECTER CN0155-3013-0</td>
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<td>4</td>
<td>01343101</td>
<td>CARD ESCUTCHEON D C-ESCT 5XH BLK</td>
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<td>5</td>
<td>13429825</td>
<td>MIDI JACK YKF51-5054</td>
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<td>6</td>
<td>22150756</td>
<td>JACK NUT 2</td>
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<td>13449283</td>
<td>JACK HLJ7101-01-3010</td>
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<td>13449284</td>
<td>JACK HLJ7001-01-3010</td>
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EXPLAINED VIEW / 分解図

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<th>No.</th>
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<td>12359139</td>
<td>Foot FF-018 BLK</td>
<td>FF-018 BLK</td>
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<tr>
<td>2</td>
<td>01343067</td>
<td>Bottom Cover</td>
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<td>3</td>
<td>01450512</td>
<td>Wiring Power</td>
<td>Wiring Power</td>
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<tr>
<td>4</td>
<td>71010656</td>
<td>Inlet Board Assy</td>
<td>Inlet Board Assy</td>
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<td>01451678</td>
<td>Switching Regulator KW1AA265</td>
<td>Switching Regulator</td>
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<td>71013567</td>
<td>Main Esct Set (Main Board)</td>
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<td>01343123</td>
<td>PWB Holder</td>
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<td>71010634</td>
<td>Panel Esct Set</td>
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<td>Top Panel</td>
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<th>No.</th>
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<tr>
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<td>Binding Tap tight B 3x6mm</td>
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<td>Binding Tap tight B 3x6mm BZC</td>
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<td>Binding Tap tight P 4x8mm BZC (x2)</td>
<td>Binding Tap tight P 4x8mm BZC</td>
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<td>40011201</td>
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<td>Sems 3x6mm BZC (x1)</td>
<td>Sems 3x6mm BZC</td>
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<td>22150756</td>
<td>Jack Nut 2 (x8)</td>
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<td>40011745</td>
<td>M4 Nut with Spring Washer ZC (x1)</td>
<td>M4 Nut with Spring Washer</td>
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## PARTS LIST / パーツリスト

### SAFETY PRECAUTIONS

The parts marked # have safety-related characteristics.

Use only listed parts for replacement.

### CONSERVATIONS ON PARTS ORDERING

When ordering any parts listed in the parts list, please follow the specification in the side sheet.

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<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>MAX. CURRENT</th>
<th>MIN. VOLTAGE</th>
<th>MAX. VOLTAGE</th>
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<td>Ex 10</td>
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<td>Shrink Seal</td>
<td>3000 mA</td>
<td>30 V</td>
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<td>Ex 11</td>
<td>22532027</td>
<td>Shrink Seal</td>
<td>3000 mA</td>
<td>30 V</td>
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### NOTES

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### LED / ディオード

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<td>HD30P21L71</td>
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### RESISTOR / 恒流抵抗

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### INDUCER / ファンホルダー

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</tbody>
</table>

### CRYSTAL OSCILLATOR / 振動子

<table>
<thead>
<tr>
<th>#</th>
<th>01343072</th>
<th>HD30P21L71</th>
<th>Red</th>
<th>IC on MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>01343073</td>
<td>HD30P21L71</td>
<td>Red</td>
<td>IC on MB</td>
</tr>
</tbody>
</table>

### CONNECTOR / コネクタ

<table>
<thead>
<tr>
<th>#</th>
<th>01343074</th>
<th>HD30P21L71</th>
<th>Red</th>
<th>IC on MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>01343075</td>
<td>HD30P21L71</td>
<td>Red</td>
<td>IC on MB</td>
</tr>
</tbody>
</table>

### PARTS LIST / パーツリスト

<table>
<thead>
<tr>
<th>#</th>
<th>01343076</th>
<th>HD30P21L71</th>
<th>Red</th>
<th>IC on MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>01343077</td>
<td>HD30P21L71</td>
<td>Red</td>
<td>IC on MB</td>
</tr>
</tbody>
</table>
IDENTIFYING THE VERSION NUMBER / パージョンナンバーの確認方法

1. Turn the power on.
2. While holding [TEMPO/MIXER], [PTN/SONG] and [PATCH], press keyboard pad [12] [14] [16] in order.
3. The system program version will be displayed. Every time press the keyboard pad [16], readout on the display changes as follows.

SYSTEM
CPU
DATA

SYS Version=1.00
CPU Version=1.00
DAT Version=1.00
Bld=100 97/12/05
Bld=022 97/09/28
Bld=030 97/09/29

SAVING AND LOADING THE USER DATA / ユーザーデータのセーブとロード

1. Insert a memory card (2MB or 4MB type) into the memory card slot.
2. Hold down [SHIFT] and press keyboard pad [15]. This takes you to the screen for formatting cards.
3. Press [ENTER]. The following display will appear, and the User Backup operation will be carried out.

CARD:Format
Are You Sure?
Processing...
Keep Power ON!

3. Press [ENTER]. The following display will appear, and the format operation will be carried out.

CARD:Format
Complete!

4. When formatting ends, the following display will appear.

Processing...
Keep Power ON!

5. Press [EXIT] to exit the setting page.

CARD:User BackUp
Are You Sure?

3. Press [EXIT]. The following display will appear, and the User Backup operation will be carried out.

Processing...
Keep Power ON!
4. When User Backup has been completed, the following display will appear.

CARD: User Backup Complete!

5. Press [EXIT] to exit the setting page.

User Backup complete.

Restoring the Saved Settings Back to Internal Memory (Backup Load)

* This operation loads the contents of a backup file that was saved on a card block into internal memory.

1. Make sure that the memory card is inserted in the memory card slot.

2. Hold down [SHIFT] and press keyboard pad [15].

You will enter the CARD section’s Format page.

3. Press PAGE [>] twice to select the Backup Load page.

4. Press [ENTER]. The following display will appear, and the Backup Load operation will be carried out.

CARD: Backup Load
Are You Sure?

4. Press [ENTER] The following display will appear, and the Backup Load operation will be carried out.

PROCESSING...
Keep Power ON!

5. When Backup Load is completed, the following display will appear.

CARD: Backup Load Complete!

6. Press [EXIT] to exit the setting page.

Backup Load complete.

FACTORY PRESET / ファクトリープリセットデータのロード

1. Turn the power on while holding down the [SHIFT].

Display shows as follows.

FACTORY PRESET

FACTORY PRESET

2. Press [ENTER] button to load the factory preset data.

To abort a command, press [EXIT] button.

FACTORY PRESET

FACTORY PRESET

ALL

NOTICE: It takes a few minutes to complete the data loading.

Never turn the power off during this procedure.

To abort a command, press [EXIT] button.

Never turn the power off during this procedure.

CARD: User Backup Complete!

CARD: Backup Load Complete!
# TEST MODE / テストモード

### NOTICE

Before executing test mode, be sure to backup user data as explained in the section “Saves and Loading user Data”. And when you execute test mode, the various parameters will be given special settings. After executing test mode, be sure to load the Factory preset data, and then User data.

### Required Items

- MIDI Cable
- SmartMedia x2 (Formatted / Protected)
- Foot pedal (DP-4 2s)
- Monitor Speaker (MA-12 etc.)

### Entering the TEST MODE

1. Connect the Monitor Speaker to the MIX OUT of the MC-505.
2. Turn the power on while holding down (DBeam TYPE), [DBeam OK] and [FUNC].

You will enter the TEST MODE and the following basic display will appear.

### MC-505 Test Mode

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ver1.00</td>
<td>This is the initial display of the test mode, press [ENTER] button while holding down (SHIFT).</td>
</tr>
</tbody>
</table>

### Exiting the TEST MODE

When LCD display ends, the following display appears.

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Test Mode ends automatically.</td>
<td>At the initial display of the test mode, press [EXIT] on the main board while holding down (SHIFT).</td>
</tr>
</tbody>
</table>

### Result of Test Check

- Prg NG! Check IC4 on MAIN BOARD
- Dat NG! Check IC6 or IC7 on MAIN BOARD
- Ram NG! Check IC8 on MAIN BOARD

### Troubleshooting for MIDI test / メディアニートテストトラブルシューティング

1. Memory Test
   1-1. Press [ENTER] button while holding down (EXIT).
   1-2. When the test of the each device end, display -- will change to "ok".

2. MIDI Test
   2-1. When MIDI test starts, the following display appears.
   2-2. Make a loop with MIDI cable that connects MID IN and MIDI OUT.

### Factory Data Set

Press [ENTER] button to load the factory preset data.

### Exiting the each Test Item

Press [EXIT] button while holding down (EXIT).

### Troubleshooting for MIDI test / メディアニートテストトラブルシューティング

When MIDI Test ends normally, MIDI Test runs automatically.

1. Memory Test
   1-1. Press [ENTER] button while holding down (SHIFT).

2. MIDI Test
   2-1. When MIDI test starts, the following display appears.
   2-2. Make a loop with MIDI cable that connects MID IN and MIDI OUT.

### Exiting the TEST MODE

### Saving and Loading User Data

When you execute test mode, the various parameters will be given special settings. After executing test mode, be sure to load the Factory preset data, and then User data.

### Exiting the each Test Item

Press [EXIT] button while holding down (EXIT).

### Troubleshooting for MIDI test / メディアニートテストトラブルシューティング

When MIDI Test ends normally, MIDI Test runs automatically.

1. Memory Test
   1-1. Press [ENTER] button while holding down (SHIFT).

2. MIDI Test
   2-1. When MIDI test starts, the following display appears.
   2-2. Make a loop with MIDI cable that connects MID IN and MIDI OUT.

### Exiting the each Test Item

Press [EXIT] button while holding down (EXIT).

### Troubleshooting for MIDI test / MIDIテストトラブルシューティング

When MIDI Test ends normally, MIDI Test runs automatically.

1. Memory Test
   1-1. Press [ENTER] button while holding down (SHIFT).

2. MIDI Test
   2-1. When MIDI test starts, the following display appears.

### Exiting the each Test Item

Press [EXIT] button while holding down (EXIT).
When MIDI Test ends normally, Card Test runs automatically.
| or in the initial display of the test mode, press keyboard Pad [5] while holding down [SHIFT].

4-1. When Pedal test starts, the following display appears.

4-2. Connect the Foot Pedal to the Pedal Jack.

4-3. Step on a Pedal. And check that "on" have been displayed.

4-4. Foot off the Pedal. And check that "off" have been displayed.

4-5. Pedal test ends and next test runs automatically.

Troubleshooting for Card test / Card Test トラブルシューティング

Card Protect---
Read/write ---

Remove the card once, and insert the card with not write protected.
Does the LCD display "OK"?

Troubleshooting for Card test / カードテスト トラブルシューティング

5. SW & LED Test

When Pedal Test ends normally, SW & LED Tests runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].

5-1. When SW & LCD test starts, the following display appears.
All the LEDs turning on?

5-2. Press all the buttons one by one. Then each names of buttons appear on the display.
And buttons that have corresponding LEDs are put out LEDs.
To check the 7 segment LED and Best LED, use [WAVE SELECT] button.
Check that the segment light in order, and Best LED turns RED and Green.

5-3. If test ends normally, press [ENTER] to start next test.

5-4. If test ends normally, press [ENTER] to start next test.

5-5. SW & LED Test

When Pedal Test ends normally, SW & LED Tests runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].

5-6. Encoder Tests

When Switch and LED Test ends normally, Encoder Test runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].

5. SW & LED Test

When Pedal Test ends normally, SW & LED Tests runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].

Encoder Test

When Switch and LED Test ends normally, Encoder Test runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].

6-1. Encoder Test

When Switch and LED Test ends normally, Encoder Test runs automatically.
| or in the initial display of the test mode, press keyboard Pad [6] while holding down [SHIFT].
7-1. When AD test starts, the MC-505 goes into standby mode. Move each knob, name and value of the knob are displayed. Move all the knobs and sliders fully one by one. (excluding "VOLUME" and LOW BOOST)

NOTE: To prevent the error, not to move the knobs or slider simultaneously.

Check that the value changes 0 from 127.

7-2. When test ends, press [ENTER] to start next test.

Troubleshooting for the Encoder Test / Encoder Function Troubleshooting

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Test Name</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Encoder Test</td>
<td>Encoder</td>
<td>When Encoder Test ends normally, Encoder gets to 0 and 127 after each rotate. If not, encoder may not be working properly. Then, check encoder drive, encoder frequency, encoder feedback, encoder signal, encoder counter, encoder phase-reset, encoder data, and encoder offset.</td>
</tr>
</tbody>
</table>

9-1. Rotate the VOLUME knob fully clockwise, and rotate the LOW BOOST knob fully counterclockwise.

9-2. Connect the Monitor to the MIXOUT Jack of the MC-505. Also connect the Headphone to the PHONES Jack. In the case of using one Monitor, be sure to insert the opened plug into the PHONES Jack of the MIXOUT. If the Monitor is connected to the PHONES Jack of the MIXOUT, connect the Monitor to the MIXOUT Jack of the MC-505, and connect the Headphone to the PHONES Jack of the MIXOUT. Turn the VOLUME knob fully clockwise, and turn the LOW BOOST knob fully counterclockwise.

Check that no undesired waveform or voltage detected. Check the power supply of the panel. Check the analog switches (74HC4051;IC3,4,7 on PB) for no short circuit. Check the capacitor that is attached to the potentiometer for short circuit.

8. DBeam Test

8-1. When passing your hand over the DBeam controller, the value appears on the LED. If not, the LED may not be working properly. Then check the connection of the DBeam controller to the MC-505. If the value is not detected, check the DBeam controller.

8-2. When test ends, press [ENTER] to start next test.

9. Sound Test

9-1. Rotate the VOLUME knob fully clockwise, and rotate the LOW BOOST knob fully counterclockwise.

9-2. Connect the Monitor to the MIXOUT Jack of the MC-505. Also connect the Headphone to the PHONES Jack. In the case of using one Monitor, be sure to insert the opened plug into the PHONES Jack of the MIXOUT. If the Monitor is connected to the PHONES Jack of the MIXOUT, connect the Monitor to the MIXOUT Jack of the MC-505, and connect the Headphone to the PHONES Jack of the MIXOUT. Turn the VOLUME knob fully clockwise, and turn the LOW BOOST knob fully counterclockwise.

Check that no undesired waveform or voltage detected. Check the power supply of the panel. Check the analog switches (74HC4051;IC3,4,7 on PB) for no short circuit. Check the capacitor that is attached to the potentiometer for short circuit.

8-1. When passing your hand over the DBeam controller, the value appears on the LED. If not, the LED may not be working properly. Then check the connection of the DBeam controller to the MC-505. If the value is not detected, check the DBeam controller.

8-2. When test ends, press [ENTER] to start next test.

9-3. When sound test starts, sound output from L ch of the MIXOUT and Headphone. Every time press the [ENTER] output channel is switched. At first, MIX-555 output sinusoidal wave from each jack, and next square wave form is output. Change the connection of the monitor to the corresponding jack. Pitch of the sound is different depends on each jack.

Verify that no undesired sound is heard. Verify that no undesired waveform or signal detected.

8-3. When passing your hand over the DBeam controller, the value appears on the LED. If not, the LED may not be working properly. Then check the connection of the DBeam controller to the MC-505. If the value is not detected, check the DBeam controller.
9-5. Rotate the LOW BOOST knob fully clockwise.

Next press [OCTAVE] located near the LOW BOOST knob.
Verify that no undesired sound is heard.
Verify that no undesired waveform or voltage detected.


Troubleshooting of the Sound Test / サウンドテストトラブルシューティング

<table>
<thead>
<tr>
<th>Sample of Test</th>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When LOW BOOST and OCTAVE function are used.</td>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting for the Sound Test / サウンドテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting of the LCD Test / LCDテストトラブルシューティング

<table>
<thead>
<tr>
<th>Troubleshooting of the LCD Test / LCDテストトラブルシューティング</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. LCD Test</td>
</tr>
<tr>
<td>When LOW BOOST and OCTAVE function are used.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting of the DSP Test / DSPテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting for the LCD Test / LCDテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting for the DSP Test / DSPテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting of the Sound Test / サウンドテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting for the LCD Test / LCDテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.

Troubleshooting for the DSP Test / DSPテストトラブルシューティング

<table>
<thead>
<tr>
<th>Check Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check C1, C2.</td>
</tr>
</tbody>
</table>

When LOW BOOST and OCTAVE function are used.
### Upgrading Flash Rom Software Version / MIDIによるバージョンアップの方法

MC-505 uses the FLASH MEMORY. So the program can be update by transferring the data from the upgrading disk (SMF format), through MIDI.

**NOTICE** : Before executing this software upgrade including "Factory Preset", saves user data referring to the section "Saving and Loading user data", if necessary. If not, the user data will be erased.

**Required items**

- MC-505 Version Up Disk Set (Pho. 17048658)
  (The version up disk contains the MC-505 program converted into SMF data.
  Obtain the latest version from the service center.
- MIDI cable

**Update procedure**

1. Connect MIDI OUT of the Sequencer with MIDI IN of the MC-505.
2. Turn the power on while holding down [TEMP/MIXER], [PTN SET] and [PATCH] button.

   Display shows as follows.

```
V= ENTER/N= EXIT
```

3. Press the [ENTER] button, then MC-505 checks the ROM ID number.

   Display shows as follows.

```
+---------------------+---------------------+---------------------+---------------------+---------------------+
| ROM ID number       | ROM ID number       |
+---------------------+---------------------+---------------------+---------------------+---------------------+
```

4. Press MC-505 Sys-VerUp

   Display shows as follows.

```
V= ENTER/N= EXIT
```

5. Press the [ENTER] button.

   Display shows as follows.

```
Please Send Data
```

   Check to see that the display shows as described above and then playback the SMF data.

   When the update procedure is in normal operation, [PATCH] LED will blink.

   The No. names are as follows.

   - 000001 mxl
   - 000002 mxl
   - 000003 mxl

   (For cases where program data volume is small, the file count is less)

### Notice / 修理作業時の注意事項

1. **Adjusting Dbem controller**

   When you replace MAIN EECT ASSY, Dbem controller adjustment is necessary.

   1-1. Remove the bottom cover.
   1-2. Connect the test probe of the oscilloscope to the Tap Point of the MAIN BOARD.
   1-3. Adjust the voltage output from TP 1 to 0V by using VR1.

   **NOTICE** : When you adjust the voltage, be sure to keep MC-505 in a horizontal position, and keep any object and strong light (fluorescent lamp etc.) away from around the photocell.

   Please don’t observe the voltage in a state of the photocell side down.

2. **Group wires**

   The wirings that connect MAIN EECT BOARD ASSY and PANEL BOARD are as follows.

   This action is necessary to keep wirings from contacting with Power Supply Unit.

   Once you cut the tie, please take this action again for safety.

### Maintenance of the LCD Test

- **Check**
  - One of the LCD is not lit or it is lit in abnormal pattern.
  - Contrast of the LCD is pale, even if it is set to the normal condition.
  - Contrast of the LCD is high, even if it is set to the normal condition.
  - Under light, the LCD is not lit.

  **Check Result**

<table>
<thead>
<tr>
<th>Check Item</th>
<th>Check Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD08</td>
<td>LCD08 is lit.</td>
</tr>
<tr>
<td>LCD09</td>
<td>LCD09 is lit.</td>
</tr>
</tbody>
</table>

5. **Check to see that the display shows as described above and then playback the SMF data.**

   When the update procedure is in normal operation, [PATCH] LED will blink.

   The No. names are as follows.

   - 000001 mxl
   - 000002 mxl
   - 000003 mxl

   (For cases where program data volume is small, the file count is less)
CIRCUIT BOARD / 基板図
MAIN ESCT SET (71013567)
+5V when muting, otherwise -15V