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Specifications

Keyboard: 76 keys, velocity sensitive, with channel Aftertouch
Display: 3 x 7 segments
Realtime controllers: Data Entry slider, Bender/Modulation lever, channel Aftertouch, Hold Foot Switch socket, Foot Pedal socket
Memories: 128 Patches
Connections: MIDI In, Out A, Out B, Thru, Expression Pedal, Sustain Footswitch, DC IN (adaptor)
Compatibility: GM/GM2/GS, all MIDI messages
Power supply: Batteries, AC/DC adaptor (DC 9V)
Dimension: 1195 (W) x 270 (D) x 113 (H) mm
Weight: 7.7 Kg
Supplied accessories: 6 x dry batteries (AA type), MIDI cable, Owner’s Manual, Music Rest
Options: Roland ACA adaptor (9V, 200mA); DP-2, DP-6, or BOSS FS-5U footswitch; EV-5, Boss FV-300L expression pedal
Specifications subject to change without prior notice. All other trademarks mentioned in this manual are the property of the respective companies.

DISASSEMBLY

SILKSCR. BOTTOM CABINET ASSY REMOVAL SCREW x10 Pcs
SELF TAP SCREW 3,5x16 TCTCPBZ    Cod. J2289131
**KEYBOARD PARTS LIST**

76 KEY KEYBOARD TP/9-AT  Code: 7772109000

<table>
<thead>
<tr>
<th>Ref</th>
<th>PARTS NAME</th>
<th>PARTS NUMBER</th>
<th>n.</th>
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<tbody>
<tr>
<td>1</td>
<td>KEY SPRING gr.63</td>
<td>J2179101</td>
<td>76</td>
</tr>
<tr>
<td>2</td>
<td>NATURAL KEY C5 (gr.10)</td>
<td>J2579112</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>DO</td>
<td>J2579113</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>NATURAL KEY D6 (gr.10)</td>
<td>J2579115</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>NATURAL KEY E7 (gr.10)</td>
<td>J2579114</td>
<td>6</td>
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<td>5</td>
<td>NATURAL KEY F1 (gr.10)</td>
<td>J2579115</td>
<td>7</td>
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<tr>
<td>6</td>
<td>LEAF CONTACT BOARD W/ RUBBER ASSY</td>
<td>7659005000</td>
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<td>7</td>
<td>RIGHT CONTACT BOARD W/ RUBBER ASSY</td>
<td>7659040000</td>
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<td>8</td>
<td>PLASTIC CHASSIS</td>
<td>J2589101</td>
<td>1</td>
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<td>9</td>
<td>GUIDE BUSHING INFERIOR</td>
<td>J2359104</td>
<td>76</td>
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<td>10</td>
<td>GUIDE BUSHING SUPERIOR</td>
<td>J2158789</td>
<td>76</td>
</tr>
</tbody>
</table>

*CONTACT BOARDS ARE COMPLETE WITH RUBBER CONTACTS*
PARTS LIST A-37

SAFETY PRECAUTIONS:
- The parts marked "#" are new (Initial Parts).
- The parts marked "=" are used parts for RJA already used by RJA but new (Initial Parts).
- The parts marked "" are new (Initial Parts).

NOTE:
- The parts marked "A" are used parts for RJA already used by RJA.
- The parts marked "#" are new (Initial Parts).
- Use only listed parts for replacement.

RCB = Right Control Board
LCB = Left Control Board
CPU = CPU Board
PS = Power Supply B.
JB = Jack Board
AFT = Bounce After Touch Board

DIODE
- 1501915RI DIODE 1N-4148 On LCB / RCB / On RIC on LC 1
- 15339108 DIODE DA-2043 D1 on LCB 1
- 32685102 LED DIODE 5 L-5 RD-3 / RED D1,2 on LCB / D1,2,3 on RIC 16
- 10015045RI ZENER DIODE BZX79C 6.5V D1,2 on LCB 1
- J3910705 DIODE 1N-4002 D1 on PS 1

RESISTOR
- J3571001 RESISTOR ARRAY EXP-415E-103-J RA3,4,5,6 on CPU 1
- J3910705 RESISTOR ARRAY EXP-415E-103-JV RA2 on CPU 1

POTENTIOMETER
- J303101 LIN. POT. CURSOR 100KB 10 MS VR1 on LCB 1

CAPACITOR
- J240103 ELECTROL. CAPAC. 1000uF 5V C1 on LS 1
- J240104 ELECTROL. CAPAC. 1000uF 5V C2 on LS 1
- J240105 ELECTROL. CAPAC. 47uF 50V C3 on LCB 1
- J360103 ELECTROL. CAPAC. 1000uF 5V (SM) C4 on LS 1
- J360104 ELECTROL. CAPAC. 1000uF 5V (SM) C5 on LS 1
- J360105 ELECTROL. CAPAC. 1000uF 5V (SM) C6 on LS 1

INDUCTOR, COIL, FILTER
- 22208320 MUSIC SCORE HOLDER 1

CRYSTAL, RESONATOR
- 0090404000 X-TAL 16MHZ MA-406 X1 on CPU 1
- 11124012 QUARTZ 10MHZ MA-406 X2 on CPU 1

CONNECTOR
- 13159111 POWER SWITCH SSP1 21
- J3169105 SWITCH EVQ-PAE 05 R SW1,2,3,4,5,6,7 on CPU / SW1 => 15 on LCB 22

BATTERY
- 7695108001 16P FLAT CABLE (24) -2C From CN4 on CPU to LC 1
- 7700420000 BOUNCE-TO-AFTERTOUCH ASSY 1

WIRING, CABLE
- 7605100001 16P FLAT CABLE (24) -2C From CN4 on CPU to LC 1
- 7700120000 3P CABLE ASSY (64) -2C P.2 From CN10 on CPU to CN401 on AFT 1

SCREW
- J2889132 SCREW 3.9X16 TC TC PR BRUN 1
- J2889155 SCREW 3.9X16 TC TC PR BRUN 2
- J2889151 SCREW 3.9X16 TC TR PRT H.8 BRUN 3

PACKING
- K2863020 RIGHT POLYST. END-SIDE A-37 1
- K2863021 LEFT POLYST. END-SIDE A-37 1

MISCELLANEOUS
- K2168117 LED SPACEY H.5 D.E.S.5 16
- J3951011 SPACEY 3MT AR. SJ012 4
- K3248470 ANTI-SLIP COVER PS 1
- 120295320 BATTERY HOLDER FOR 6 BATTERIES 2
- 22365708 HOLDER P/SUPER POWER CBL 1

ACCESSORIES
- 23446228 MIDI CABLE 1M - BLACK 1
TEST MODE

ITEMS REQUIRED:
- MIDI cable;
- Dumper Pedal;
- Expression Pedal EV-5;
- Digital multimeter.

HOW TO VISUALIZE THE SYSTEM PROGRAM VERSION
Turn the instrument on, while keeping pressed the button 2 of section PATCH. After a few seconds, the display will visualize a writing identifying the software version: i.e.: VER 100 - 26 July 2001

To exit, turn the instrument off.

HOW TO CARRY OUT THE FACTORY SETUP

Turn the instrument on while keeping the button WRITE pressed. After a few seconds, the display will visualize the writing Factory setup.

The Factory Setup function re-establishes the instrument's factory settings.

HOW TO ENTER TEST MODE

Turn the instrument on while keeping pressed the button 1 of section PATCH. After a few seconds, the display will visualize the following writing:

TEST ROLAND A - 37 VERSION 1.00

Then the display visualizes:

Every button of section Patch corresponds to a test to carry out.

Button 1 ⇒ Panel check ("F": Front, "R": Rear);
Button 2 ⇒ Keyboard check
Button 3 ⇒ Memory check

Turn the instrument off to exit test mode.

Note: After carrying out the tests, the instrument automatically performs the Factory Setup.

1) PANEL CHECK (FRONT / REAR)

Once entered test mode, press button 1. The display visualizes:

If you press button 1, you check the Front Control Panel (a).
If you press button 2, you check the sockets placed on the Rear panel.

Press EXIT to come back to the previous menu.

a) Front Panel check (Controls)

Once you have entered the control panel check, press button 1. The display visualizes:

If you press the button 1, you check the buttons.
If you press the button 2, you check the LEDs.
If you press the button 3, you check the Controls (modulation, bender, data entry).

Buttons check

Once you have entered the front panel test mode, press button 1. The display visualizes pict. A:

A

If you press the buttons of the control panel one after the other, the display will visualize their name. When you release the button, the display will visualize: OFF (See pict. B).

Press EXIT and WRITE at the same time to exit. The test procedure automatically goes back to the previous menu.

Note: It is not possible to go on to the following step if this test is not carried out correctly.

If you exit the test before checking all the buttons, the display indicates the name of the untested buttons. Press EXIT to go back to the main menu.

LED check

Once you have entered the control panel check, press button 2.

The control panel LEDs and the display segments will light in sequence.
Press EXIT to leave this test.
Press EXIT again to go back to the main menu.

Control check (modulation, bender, data entry)

Once you have entered the control panel check, press button 3.
The display visualizes:

Pressing the button 1, you check the MODULATION (bender lever).
Pressing the button 2, you check the BENDER.
Pressing the button 3, you check the DATA ENTRY potentiometer.

MOODULATION

Once you have pressed the button 1, the display visualizes:
Pict. A (value 0) if the bender lever is released;
Pict. B (value 127) if the bender lever is moved completely forward.
Press EXIT to leave.
Press EXIT again to go back to the main menu.

**BENDER**

Once you have pressed the button 2, the display visualizes:
- Pict. A (value 0) if the bender is in central position;
- Pict. B (value 63) if the bender lever is moved completely rightwards;
- Pict. C (value -63) if the bender lever is moved completely leftwards.

Press EXIT to leave.
Press EXIT again to go back to the main menu.

**DATA ENTRY**

Once you have pressed button 3, the display visualizes:
- Pict. A (value 0) if the potentiometer slider is in low position;
- Pict. B (value 127) if the potentiometer slider is in high position.

Press EXIT to leave.
Press EXIT again to go back to the main menu.

**b) Rear Panel check (Socket)**

Once you have entered the rear panel test mode rear panel, press button 2. The display visualizes:

Press button 1, to check **DUMPER and EXPRESSION pedals**.
Press button 2, to check the **Power battery**.
Press button 3, to check the **MIDI**.

**DUMPER and EXPRESSION pedals check**

Once you have entered the rear panel test mode, press button 1. The display visualizes:

Press button 1, to check the DUMPER pedal.
Press button 2, to check the EXPRESSION pedal.

**DUMPER PEDAL**

Insert the Dumper Pedal into the HOLD SWITCH socket.
Once you have entered the pedals test mode, press button 1.

If you press the pedal, the display visualizes the status (ON) of the pedal (Pict. A); when you release the pedal, the display visualizes its new status (OFF) (Pict. B).

Press EXIT to leave.
Press EXIT again to go back to the main menu.

**EXPRESSION PEDAL**

Insert the Expression Pedal into the FOOT PEDAL socket. Once you have entered the pedals test mode, press button 2.

Before pressing the button, the display visualizes 0 (Pict. A). If you press the pedal to all its stroke, the display visualizes 127 (Pict. B).

Press EXIT to leave.
Press EXIT again to go back to the main menu.

**Power Battery check**

Once you have entered the rear panel test mode, press button 2.
The display visualizes a value representing the power battery charge level, expressed in % value (i.e.: 100 = 100 %).

Press EXIT to leave.
Press EXIT again to go back to the main menu.

**Midi check**

Once you have entered in the rear panel test mode, press button 3.
The display visualizes:

Connect MIDI IN and MIDI OUT A sockets by a Midi cable.
In case of correct data transmission and reception, the display visualizes the writing “go”. In case of failure, the display visualizes “A - I”.

Press EXIT to leave.
Press EXIT again to go back to the main menu.

Press button 2. The display visualizes:
Connect MIDI IN and MIDI OUT B sockets by a Midi cable. In case of correct data transmission and reception, the display visualizes the writing "go". If the transmission is not correct, the display visualizes "b - I".

Press EXIT to leave. Press EXIT again to go back to the main menu.

2) KEYBOARD CHECK

Once you have entered test mode, press the button 2:
The display visualizes:

Press button 1, the display visualizes:

Connect one of the Midi outputs (OUT A or OUT B) to the Midi in of another musical instrument or of a dedicated equipment, provided with a sound source. Press the keyboard keys. When the keys are released, the display visualizes OFF. When you press a key, you hear a Piano sound and the display visualizes the velocity level (from 0 to 127).

Released key Pressed key

Press EXIT to leave. Press EXIT again to go back to the main menu.

AFTER TOUCH CHECK

Once you have entered the keyboard test, press button 2.
The display visualizes:

Press the keyboard keys. When the keys are released, the display visualizes 0. If you press the key, the display visualizes the level of the After Touch function, according to the pressure put on the key.

Released Key Key pressed at max pressure

Note: When carrying out this test, make sure you press the key properly. In case a key does not reach 127, try pressing a few other keys. In any case, a tolerance 08-10% is acceptable.

Press EXIT to leave. Press EXIT again to go back to the main menu.

3) MEMORY CHECK

Once you have entered in test mode, press button 3. The display visualizes:

The instrument carries out the DEVICE CHECK (Pict. A) automatically.

Caution: Don't turn the power off during this test. If the power goes off accidentally, carry out the test again.

At the end of all the tests, make sure the display visualizes the writing "go" (Pict. B). This means that the instrument memory has been implemented correctly. In case the display visualizes the writing "Err", it means that the memory is damaged.

Press EXIT to leave.

To exit, turn the power off.

Note 1: When you turn the power on again, the Factory Setup is carried out automatically.

Note 2: If you press EXIT when the display visualizes the main menu, you enter test mode again.
POWER SUPPLY PCB ASSY & CIRCUIT DIAGRAM
ASSY  7772105000

View from component side

LEFT CONTROL PCB ASSY  ASSY  7772102000

View from component side
CIRCUIT DIAGRAM (LEFT CONTROL PCB ASSY)

ALL LEDS ARE: 5L53SRDD_RED

ALL SWITCHES ARE: EVOPAE05R
RIGHT CONTROL PCB ASSY & CIRCUIT DIAGRAM

ASSY 7772101000

View from component side

FROM LEFT CONTROL BOARD (CN1)

TRANSPOSE

START/STOP

ENTER

WRITE

DOWN

UP

START/STOP

EXIT

TRANSPOSE

FROM LEFT CONTROL BOARD (CN1)
LEFT CONTACT PCB ASSY w/RUBBER  ASSY 7695005000

RIGHT CONTACT PCB ASSY w/RUBBER  ASSY 7695004000

CIRCUIT DIAGRAM (LEFT CONT.PCB ASSY)

CIRCUIT DIAGRAM (RIGHT CONT.PCB ASSY)