GO:KEYS

SERVICE NOTES
Issued by RJA

Table of Contents

GO-61K/GO-61KL

Revise Information

Jun. 19, 2017	p. 15	Changed the specification
Jan. 5, 2018	p. 15	Changed the procedure

Cautionary Notes

Before beginning the procedure, please read through this document. The matters described may differ according to the model.

Back Up User Data!

User data may be lost during the course of the procedure. Refer to **Data Backup and Restore Operations** (p. 14) in the Service Notes and save the data. After completing the procedure, restore the backed-up data to the product.

Part Replacement

When replacing components near the power-supply circuit or a heat-generating circuit (such as a circuit provided with a heat sink or including a cement resistor), carry out the procedure according to the instructions with respect to the part number, direction, and attachment position (mounting so as to leave an air gap between the component and the circuit board, etc.).

Parts List

A component whose part code is ******** will not be supplied as a service part because one of the following reasons applies.

- Because it is supplied as an assembled part (under a different part code).
- Because a number of circuit boards are grouped together and supplied as a single circuit board (under a different part code).
- Because supply is prohibited due to copyright restrictions.
- Because reissuance is restricted.
- Because the part is made to order (at current market price).
- Because it is carried in electronic data on the Roland web site.
- Because it is a package or an accessory irrelevant to the function maintenance of the main body.
- Because it can be replaced with an article on the market. (battery or etc.)

Roland Japan Warranty

Please send the problem report with followings when the defect occurred within one year from production and within one month from the first customer's purchase.

- Model name:
- Serial number:
- Version:
- Purchase date by the first customer: yyyy/mm/dd
- Symptom:
- Frequency: always, sometimes or seldom
- Confirmed the symptom at your service dept: Yes/No

Please send the problem report to rjasc@roland.co.jp.

Specifications

Roland GO:KEYS: Music Creation Keyboard

Keyboard

Number of Keys

61 keys (Ivory Feel and Box-shape Keys with velocity)

Touch Sensitivity

Key Touch: 3 types

Sound Generator

Maximum Polyphony

128 voices

Parts

8 parts

MIDI Format

Conforms to GM2

Number of Tones

Over 500 tones

* *GM2 compatible sounds are included.*

Effects

Multi-Effects / Chorus / Reverb

* *Only Reverb level is adjustable.*

Master Tuning

415.3 H–466.2 Hz (adjustable in increments of 0.1 Hz)

Transpose

-5–+6 (in semitones)

Octave Shift

-3–+3

Sampling Frequency

44.1 kHz

Loop Mix

Loop Mix Set

12 sets

Number of Patterns

672 patterns (12 sets x 56 patterns)

Chord

Interactive Chord function

Tempo

Quarter note = 5–300

Performance Pad

Number of Pads

10 (5 x 2)

Function

Bender: Pitch Bend / Modulation
Effect: Roll / Filter

Recorder

Save Format

Standard MIDI Files (Format 0)

Song Storage

99 songs (within the limits of Note Storage)

Note Storage

Approx. 30,000 notes

Tempo

Quarter note = 5–300

Resolution

96 ticks per quarter note

Bluetooth

* *This function is not available for GO-61KL.*

Bluetooth Ver 4.2

Profile Support: A2DP(Audio), GATT(MIDI over Bluetooth Low Energy)
Codec: SBC (Support to the content protection of the SCMS@5 T method)

Other

Display

Character LCD (with backlit)

Amplifier Power Output

2.5 W x 2

Speakers

12 x 6 cm (4-3/4 x 2-3/8 inches) x 2

Connectors

PHONES / OUTPUT jack: Stereo miniature phone type
AUX IN jack: Stereo miniature phone type
PEDAL jack: 1/4-inch phone type
USB COMPUTER port: USB Micro-B type (MIDI)
DC IN jack

Power Supply

AC adaptor or Alkaline battery (AA, LR6) / Rechargeable Ni-MH battery (AA, HR6) x 6

* *Carbon-zinc batteries cannot be used.*

Current Draw

1,000 mA

Battery Life for Continuous Use

Rechargeable Ni-MH batteries (AA, HR6): Approximately 6 hours (When using batteries having a capacity of 1,900 mAh.)
Alkaline batteries (AA, LR6): Approximately 4 hours

* *This figure will vary depending on the actual conditions of use.*

Dimensions

877 (W) x 271 (D) x 82 (H) mm
34-9/16 (W) x 10-11/16 (D) x 3-1/4 (H) inches

Weight (excluding AC adaptor)

3.9 kg
8 lbs 10 oz

Accessories

Owner's Manual (#5100055363)
Leaflet "USING THE UNIT SAFELY" (#********)
AC adaptor (#5100047387, #5100047386, #5100047388, #5100047389, #5100047391, #5100047390, #5100047392)

Options (sold separately)

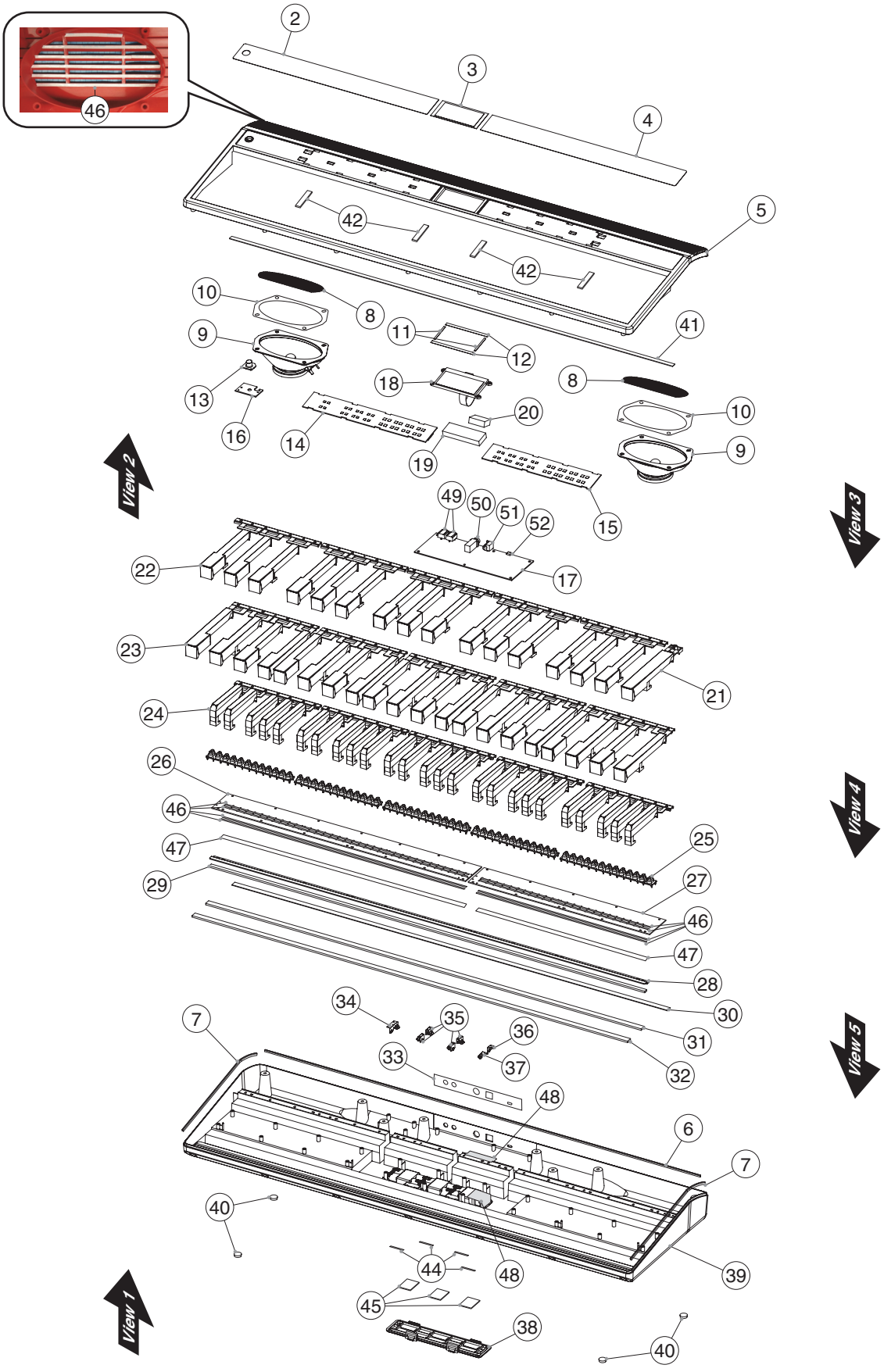
Keyboard stand: KS-12
Pedal switch: DP series

* *AC adaptors for 100V, 117V U and 230V EU supplied as repair parts are different from the AC adaptors packed with the products when shipping.*

* *Printed matters will not be supplied after the end of the production. Then, download the electronic file from the Roland web site.*

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

Exploded View



Exploded View Parts List

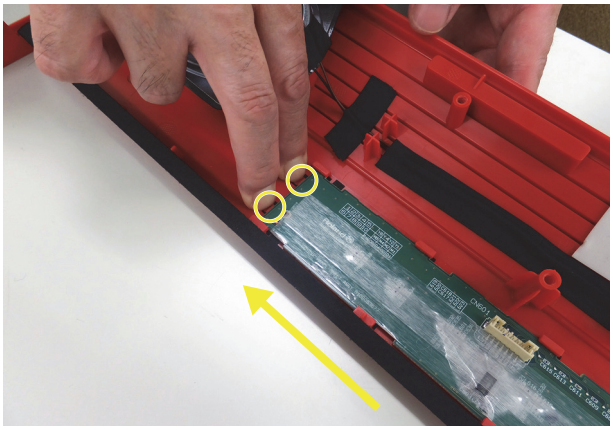
No.	Part Code	Part Name	Description	Q'ty
2	5100054421	PANEL SHEET LEFT		1
3	5100054422	PANEL SHEET CENTER		1
4	5100054423	PANEL SHEET RIGHT		1
5	5100054324	TOP CASE		1
6	5100055423	ABSORPTIVE FELT	850X7XT0.5MM BLK	1
7	5100055424	ABSORPTIVE FELT	260X7XT0.5MM BLK	2
8	5100055362	SPEAKER NET		2
9	5100054442	SPEAKER	BE-DQ813F-02	2
10	5100055422	SPEAKER CUSHION FELT	132X81XT1	2
11	5100054427	LCD CUSHION SHORT		2
12	5100056538	LCD CUSHION LONG		2
13	5100054839	RUBBER SWITCH	POWER	1
	5100053677	PANEL SHEET ASSY		1
	** This unit includes the following parts.*			
14	********	PANEL-L BOARD		1
15	********	PANEL-R BOARD		1
16	********	PWR-SW BOARD		1
17	5100053675	MAIN BOARD ASSY		1
18	5100054926	LCD	QSG1202-20-BTDSWS-R STN NEGA	1
19	5100055420	SPACER CUSHION SPONGE	71X24X10	1
20	5100055421	SPACER CUSHION SPONGE	30X20X10	1
21	5100054432	N-KEY C-DASH	MSK-3P	1
22	5100054430	N-KEY DFA	MSK-3P	5
23	5100054428	N-KEY CEGB	MSK-3P	5
24	5100054434	SHARP-KEY 5P	MSK-3P	5
25	5100054440	RUBBER SWITCH	13P	5
26	5100053681	PWB ASSY	MSK-3P 36KEYS	1
27	5100053682	PWB ASSY	MSK-3P 25KEYS	1
28	5100054436	KEY STOPPER		1
29	5100054437	KEY LEVEL CUSHION A		1
30	5100054439	KEY STOP CUSHION B		1
31	5100056454	KEY STOP CUSHION C		1
32	5100054438	KEY STOP CUSHION A		1
33	5100056335	PCB CUSHION		1
34	5100004225	BATTERY TERMINAL	PM A(754-08052-03-00)	1
35	5100004226	BATTERY TERMINAL	PM B(754-08052-04-00)	4
36	5100004223	BATTERY TERMINAL	PLUS(754-08052-02-00)	1
37	5100004224	BATTERY TERMINAL	MINUS(754-08052-01-00)	1
38	5100054328	BATTERY COVER		1
39	5100054326	BOTTOM CASE		1
40	12359137	RUBBER FOOT	SJ-5012 BLK	4
41	5100055361	KEY FELT BLACK		1
42	5100056543	PANEL CUSHION		4
44	5100056334	BATTERY COVER CUSHION		4
45	5100006034	BATTERY CUSHION	(761-08052-01-00)	3
46	40122534	DOUBLE-FACED TAPE	#500 W3MM 20M 136P	-
47	5100031395	PWB FILTER	H301 W13MM 100M (M)	-
48	40122556	DOUBLE FACED ADHESIVE TAPE	#575 W30MM 30M	-
49	04452945	3.5MM JACK	YKB21-5344N	2
50	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	1
51	13449717	ADAPTOR JACK	HEC2392-01-150	1
52	5100048112	USB CONNECTOR	105017-0001	1

Disassembly Procedure

1. Remove screws **a** (x 15) in **View 1** at **Plain View (1)** (p. 8).
2. Slowly tilt the Top Case toward the rear and disconnect the wirings (x 3) and the flat cable (x 1).

Removing the Panel Board

1. Disconnect the wiring (x 1) connecting to the Panel-R Board.
2. While pressing downward the hinges at two locations shown in the figure by your fingers, slide the Panel-R Board in the direction of the arrow and remove it.



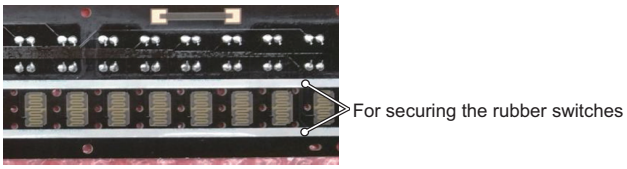
3. Remove the Panel-L Board in the same way.

Important Notes on Assembly

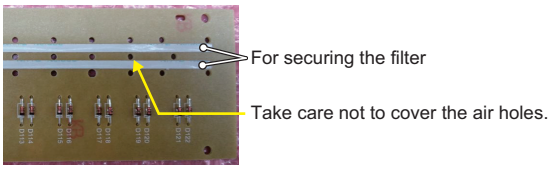
Attaching Keyboard

1. Apply the double-sided adhesive tapes (#40122534) to the contact circuit board (#5100053681, #5100053682).

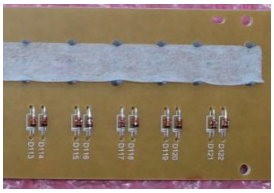
Upper side



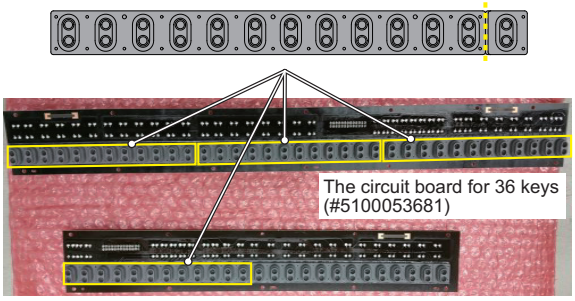
Backside



2. Apply the filter (#5100031395) to the contact circuit board.

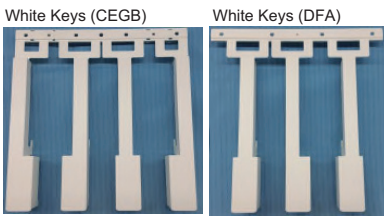


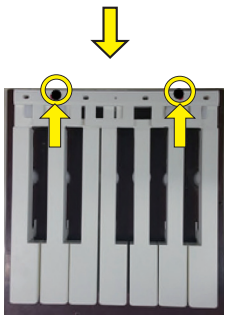
3. Cut the four rubber switches (#5100054440) at the location shown in the figure.



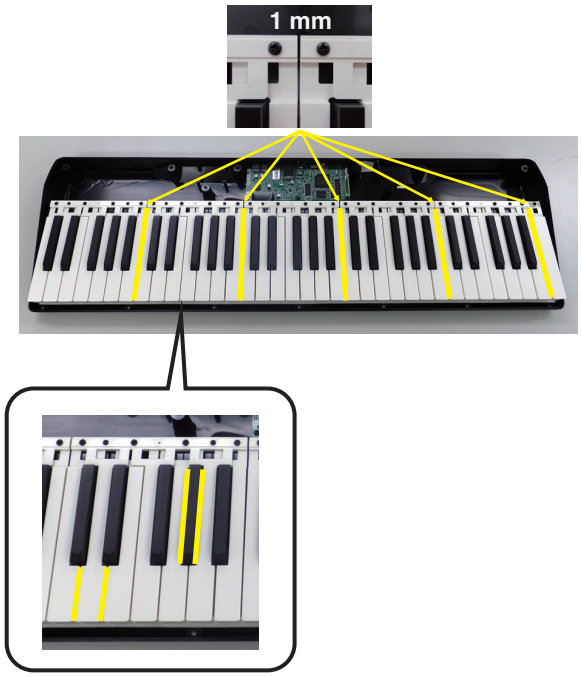
The circuit board for 25 keys (#5100053682)

4. Secure the rubber switches.
5. Align the white keys (#5100054430, #5100054428) so that the gaps between key and key are evenly and tighten the screws.



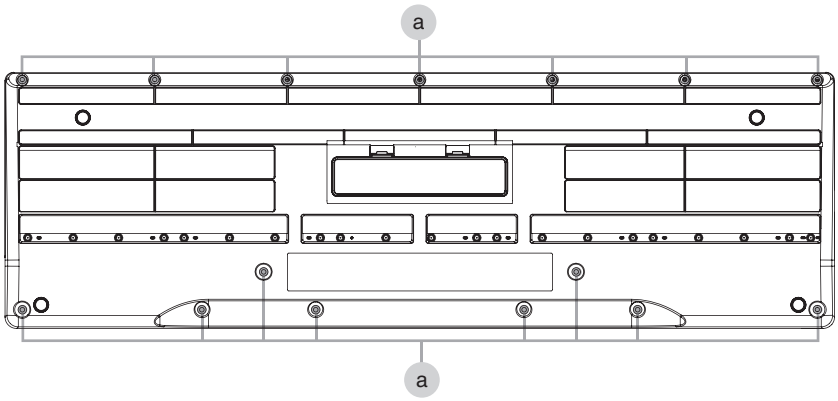


6. Put the white keys on the black keys and make a unit as one octave.
7. Tighten the screws from the octave unit of the center in sequence. Tighten the screws so that the gaps between each key within one octave and the gaps between each octave unit are evenly by visual checking.

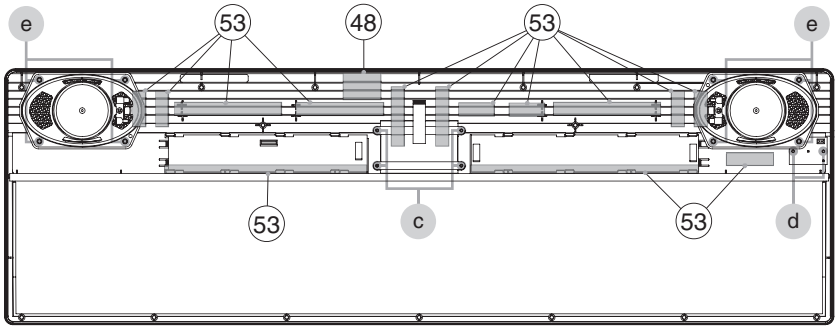


Plain View (1)

View 1



View 2



View 1

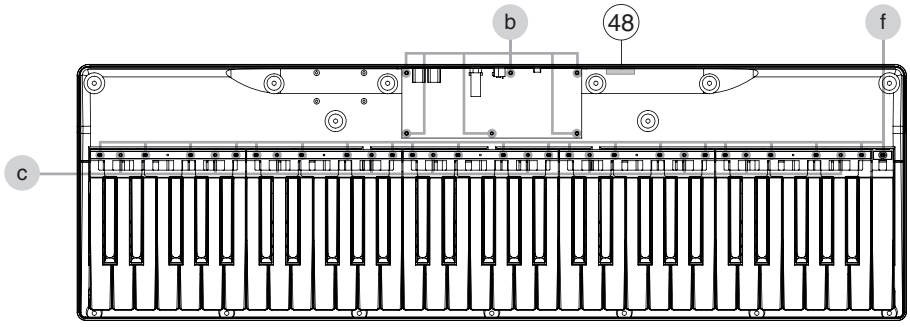
No.	Part Code	Part Name	Description	Q'ty
a	40012345	SCREW 4X10	BINDING TAPTITE B BZC	15

View 2

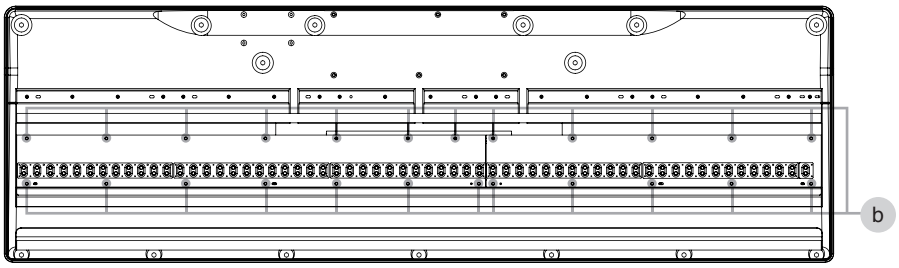
No.	Part Code	Part Name	Description	Q'ty
48	40122556	DOUBLE FACED ADHESIVE TAPE	#575 W30MM 30M	-
53	40122812	ACETATE TAPE	NITTO #5 BLACK W15MM 30M	-
c	5100038406	SCREW 2.6X6	BINDING TAPTITE P BZC	4
d	5100023206	SCREW 2.6X8(JC7000220R0)	BINDING TAPTITE P ZC	2
e	40011123	SCREW 4X8	BINDING TAPTITE B FE BZC	8

Plain View (2)

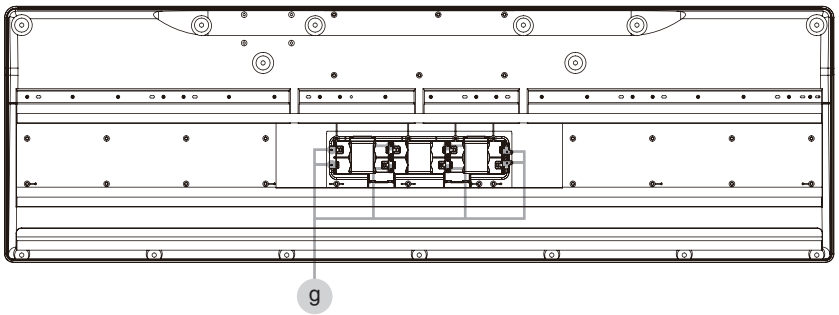
View 3



View 4



View 5



View 3

No.	Part Code	Part Name	Description	Q'ty
48	40122556	DOUBLE FACED ADHESIVE TAPE	#575 W30MM 30M	-
b	40011323	SCREW 3X10	BINDING TAPTITE P BZC	6
c	5100038406	SCREW 2.6X6	BINDING TAPTITE P BZC	10
f	40129812	SCREW 3X18	BINDING TAPTITE P BZC	21

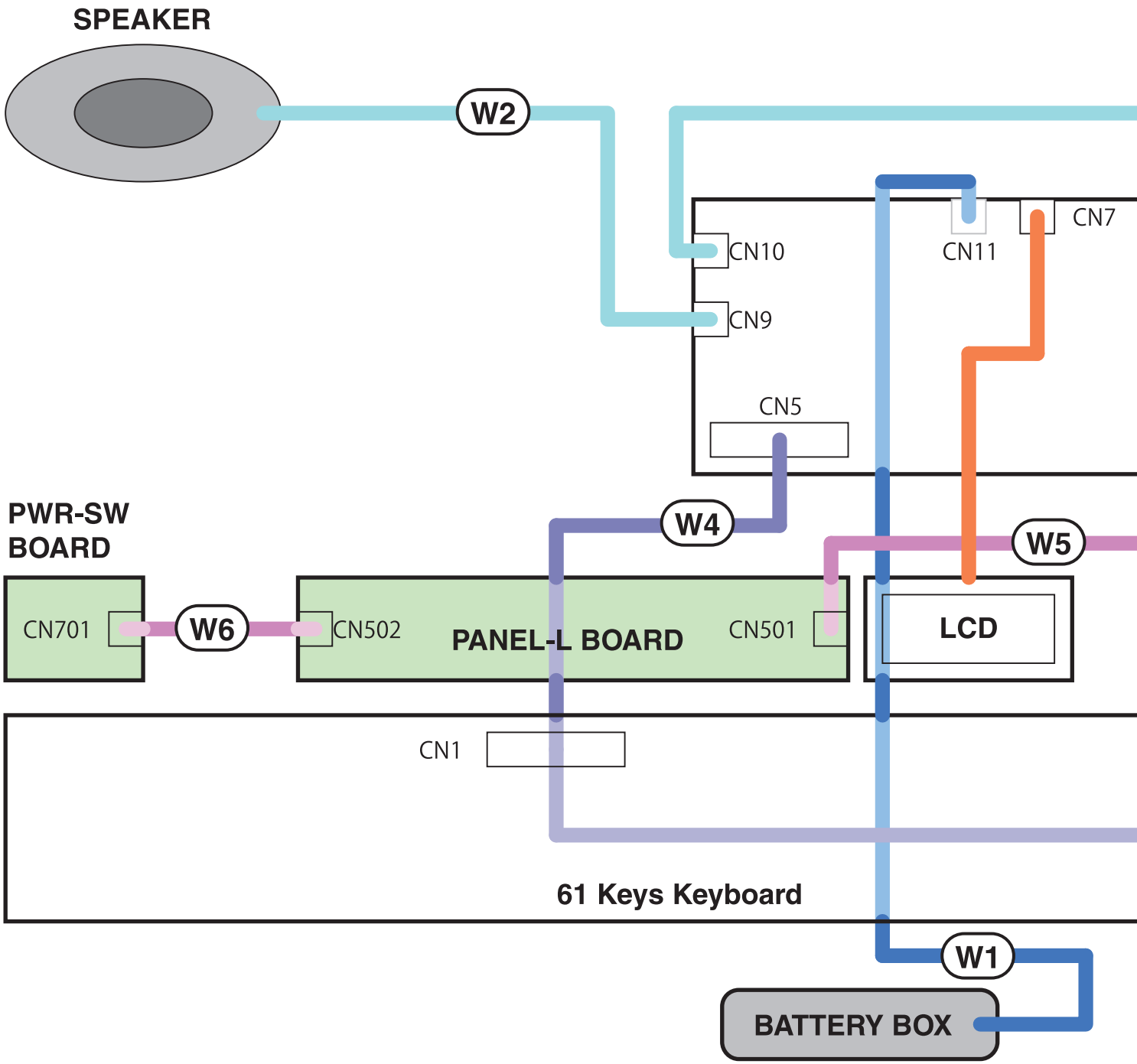
View 4

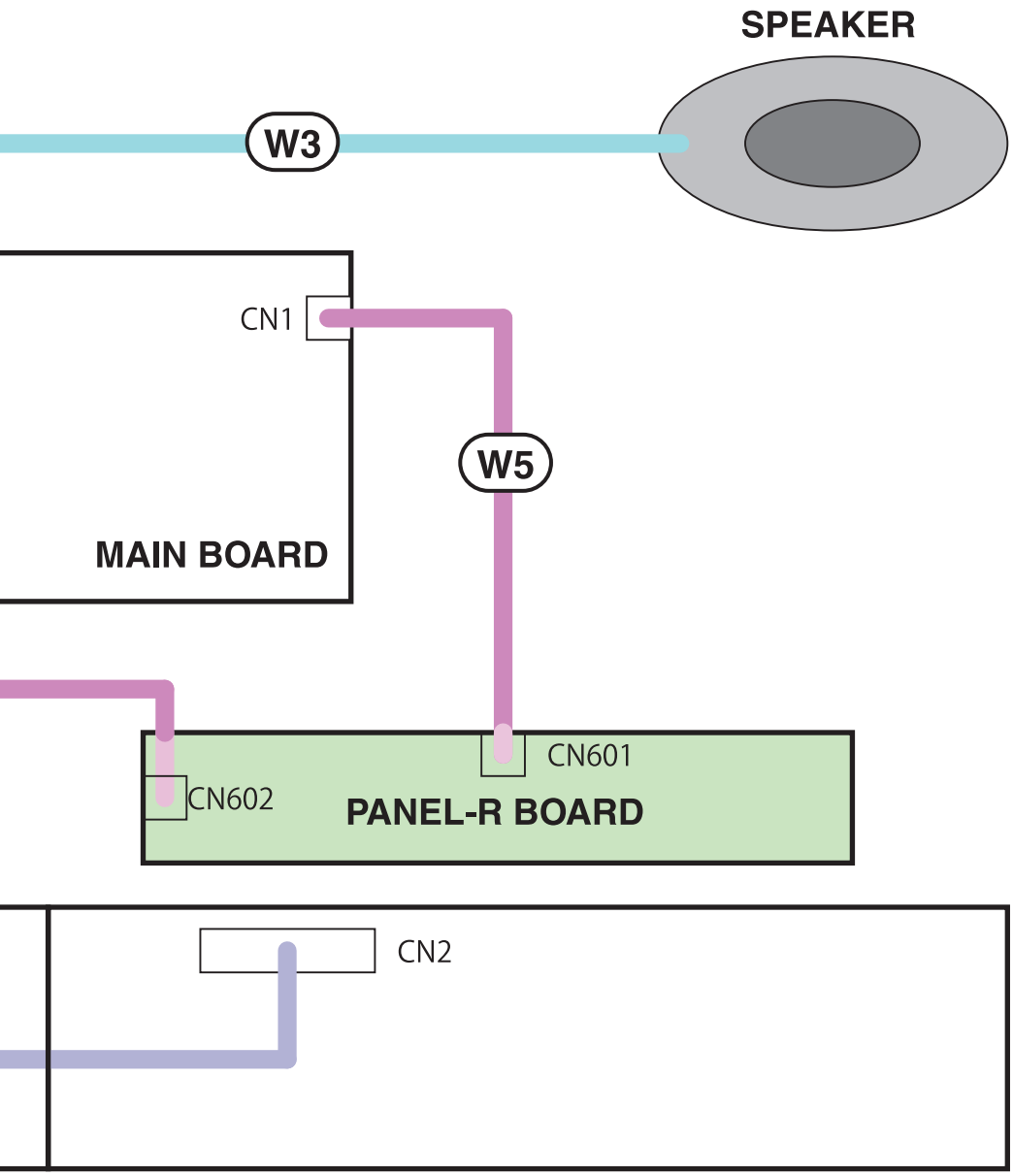
No.	Part Code	Part Name	Description	Q'ty
b	40011323	SCREW 3X10	BINDING TAPTITE P BZC	24

View 5

No.	Part Code	Part Name	Description	Q'ty
g	5100000734	SCREW 1.4X6	PAN TAPTITE P FE BZC	8

Wiring Diagram





No.	Part Code	Part Name	Description	Q'ty
W1	5100054336	WIRING	W1 (BATTERY)	1
W2	5100054337	WIRING	W2 (SP-L)	1
W3	5100054338	WIRING	W3 (SP-R)	1
W4	5100054331	CABLE ASSY FOR MSK-3P	26WAY 290+180MM W/3 HEADER	1
W5	5100054340	WIRING	1061#28 7X150-PHR-PHR-F	2
W6	5100054339	WIRING	1061#28 2X150-PHR-PHR-F	1

Parts List

Safety Precautions:
The parts marked ⚠ have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons, parts with parts code ******** cannot be supplied as service parts.
- Supply is prohibited due to copyright restrictions.
- It is carried in electronic data on the Roland web site.
- The part is made to order (at current market price).
- It can be replaced with an article on the market. (battery or etc.)
- It is a package or an accessory irrelevant to the function maintenance of the main body.
- A number of circuit boards are grouped together and supplied as a single circuit board (under a different part code).
- Reissuance is restricted.
- It is supplied as an assembled part (under a different part code).

Note: The parts marked # are new. (initial parts) The description "Q'ty" means a necessary number of the parts per one product.

CASING

#	5100054324	TOP CASE			1
#	5100054326	BOTTOM CASE			1
#	5100054328	BATTERY COVER			1

CHASSIS

#	5100054436	KEY STOPPER			1

KNOB, BUTTON

#	5100054839	RUBBER SWITCH	POWER		1

SWITCH

#	5100054440	RUBBER SWITCH	13P	for Keyboard	5

JACK, EXT TERMINAL

	04452945	3.5MM JACK	YKB21-5344N		2
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)		1
	13449717	ADAPTOR JACK	HEC2392-01-150		1
	5100048112	USB CONNECTOR	105017-0001		1

DISPLAY UNIT

#	5100054926	LCD	QSG1202-20-BTDSWS-R STN NEGA		1

SPEAKER, BUZZER

#	5100054442	SPEAKER	BE-DQ813F-02		2

PWB ASSY

#	5100053675	MAIN BOARD ASSY			1
#	5100053677	PANEL SHEET ASSY			1
	* *This unit includes the following parts.*				
	********	PANEL-L BOARD			1
	********	PANEL-R BOARD			1
	********	PWR-SW BOARD			1
#	5100053681	PWB ASSY	MSK-3P 36KEYS	without Rubber SW	1
#	5100053682	PWB ASSY	MSK-3P 25KEYS	without Rubber SW	1

WIRING, CABLE

#	5100054331	CABLE ASSY FOR MSK-3P	26WAY 290+180MM W/3 HEADER		1
#	5100054339	WIRING	1061#28 2X150-PHR-PHR-F		1
#	5100054340	WIRING	1061#28 7X150-PHR-PHR-F		2
#	5100054336	WIRING	W1 (BATTERY)		1
#	5100054337	WIRING	W2 (SP-L)		1
#	5100054338	WIRING	W3 (SP-R)		1

SCREWS

	5100000734	SCREW 1.4X6	PAN TAPTITE P FE BZC		8
	5100038406	SCREW 2.6X6	BINDING TAPTITE P BZC		14
	5100023206	SCREW 2.6X8(JC7000220R0)	BINDING TAPTITE P ZC		2
	40011323	SCREW 3X10	BINDING TAPTITE P BZC		30
#	40129812	SCREW 3X18	BINDING TAPTITE P BZC		21
	40011123	SCREW 4X8	BINDING TAPTITE B FE BZC		8
	40012345	SCREW 4X10	BINDING TAPTITE B BZC		15

MISCELLANEOUS

#	5100054428	N-KEY CEGB	MSK-3P	5
#	5100054430	N-KEY DFA	MSK-3P	5
#	5100054432	N-KEY C-DASH	MSK-3P	1
#	5100054434	SHARP-KEY 5P	MSK-3P	5
#	5100055362	SPEAKER NET		2
#	5100054421	PANEL SHEET LEFT		1
#	5100054423	PANEL SHEET RIGHT		1
#	5100054422	PANEL SHEET CENTER		1
	12359137	RUBBER FOOT	SJ-5012 BLK	4
	5100004223	BATTERY TERMINAL	PLUS(754-08052-02-00)	1
	5100004224	BATTERY TERMINAL	MINUS(754-08052-01-00)	1
	5100004225	BATTERY TERMINAL	PM A(754-08052-03-00)	1
	5100004226	BATTERY TERMINAL	PM B(754-08052-04-00)	4
#	5100056334	BATTERY COVER CUSHION		4
	5100006034	BATTERY CUSHION	(761-08052-01-00)	3
#	5100054437	KEY LEVEL CUSHION A		1
#	5100054438	KEY STOP CUSHION A		1
#	5100054439	KEY STOP CUSHION B		1
#	5100056454	KEY STOP CUSHION C		1
#	5100056538	LCD CUSHION LONG		2
#	5100054427	LCD CUSHION SHORT		2
#	5100056543	PANEL CUSHION		4
#	5100056335	PCB CUSHION		1
#	5100055420	SPACER CUSHION SPONGE	71X24X10	1
#	5100055421	SPACER CUSHION SPONGE	30X20X10	1
#	5100055361	KEY FELT BLACK		1
#	5100055422	SPEAKER CUSHION FELT	132X81XT1	2
#	5100055423	ABSORPTIVE FELT	850X7XT0.5MM BLK	1
#	5100055424	ABSORPTIVE FELT	260X7XT0.5MM BLK	2
#	5100031395	PWB FILTER	H301 W13MM 100M (M)	-
	40122812	ACETATE TAPE	NITTO #5 BLACK W15MM 30M	-
	40122556	DOUBLE FACED ADHESIVE TAPE	#575 W30MM 30M	-
	40122534	DOUBLE-FACED TAPE	#500 W3MM 20M 136P	-
	40122445	ADHESIVE CEMEDINE SUPER-X	NO.8008 170G/135ML	-

ACCESSORIES (Standard)

⚠	5100047385	AC ADAPTOR	PSD-100 2	for 100V	1
⚠	5100047387	AC ADAPTOR	PSD-120Z 2 (117VBL)	for 117VBL	1
⚠	5100047386	AC ADAPTOR	PSD-120 2 (117V TW/CS)	for 117VU, 117VU/CS	1
⚠	5100047388	AC ADAPTOR	PSD-220 2 (220VCN)	for 220VCN	1
⚠	5100047389	AC ADAPTOR	PSD-220K 2	for 220VK	1
⚠	5100047391	AC ADAPTOR	PSD-230E 2 (230V UK)	for 230VE	1
⚠	5100047390	AC ADAPTOR	PSD-230 2 (230VEU)	for 230VEU	1
⚠	5100047392	AC ADAPTOR	PSD-240 2 (240VA)	for 240VA	1
#	5100055363	OWNER'S MANUAL	MULTILANGUAGE		1

* *AC adaptors for 100V, 117V U and 230V EU supplied as repair parts are different from the AC adaptors packed with the products when shipping.*

Verifying the Version

1. Touch **SETTING** several times to display **VERSION**.
   The version information is displayed on the screen.
2. Touch **EXIT**.
   The initial screen returns.

Data Backup and Restore Operations

Items Required

- Computer
- USB cable (A <-> Micro B)

Backup Procedure

Both song data and the system settings saved in the unit can be backed up completely by the following procedure.

* *However, pairing information of Bluetooth can not be backed up. When returning the product to the customer, request him/her to pair by himself/herself again.*

1. Connect the **USB COMPUTER** connector on the rear panel to the computer using the USB cable.
2. Touch **SETTING** several times to display **BACKUP**.
3. Touch **ENTER**.
   The **BACKUP** drive appears on the computer's screen.
4. Copy the **GO-61** folder on the **BACKUP** drive to the computer.

   * *Copy the entire **GO-61** folder to the computer. The backup cannot be executed correctly when only folders or files in the **GO-61** folder are copied.*
5. End the USB connection using the proper procedure for the computer.
   The initial screen returns.

   * *Sometimes the backup may not progress if the connection with the GO-KEYS is terminated on the computer side. In that case, after terminating the connection on the computer, touch **EXIT**.*
6. Disconnect the USB cable.

Restore Procedure

1. Connect the **USB COMPUTER** connector on the rear panel to the computer using the USB cable.
2. Touch **SETTING** several times to display **RESTORE**.
3. Touch **ENTER**.
   The **RESTORE** drive appears on the computer's screen.
4. Copy the **GO-61** folder which has been backed up on the computer to the **RESTORE** drive.

   * *Copy the entire **GO-61** folder to the **RESTORE** drive. The restoring cannot be executed correctly when only folders or files in the **GO-61** folder are copied.*
5. End the USB connection using the proper procedure for the computer.
   When the connection is terminated, the restore operation starts.

   * *Sometimes the restoring may not progress if the connection with the GO-KEYS is terminated on the computer side. In that case, after terminating the connection on the computer, touch **EXIT**.*

   When the operation finishes, **Completed. TurnOffPower** is displayed.
6. Disconnect the USB cable and reset the power.

Performing a Factory Reset

Executing the following procedure resets all song data saved in the unit and each setting to their factory default. By this method, you can get the result same as **Factory Reset** (p. 18) in Test Mode.

1. Touch **SETTING** several times to display **FACTORY RST**.
2. Touch **ENTER**.
   A confirmation screen appears.
3. To execute the factory reset, touch **ENTER**. To cancel it, touch **EXIT**.
   When touching **ENTER**, **Executing...** appears on the screen and the factory reset is executed.
4. Turn off the power.

Updating the System

Items Required

- Computer
- USB cable (A <-> Micro B)
- Update file (obtained via Service Net)

Procedure

1. Make sure the power to the unit is turned off, then connect the **USB COMPUTER** connector on the rear panel to the computer using the USB cable.
2. Double-tap ⏻ and keep pressing when the second tapping.
3. Make sure that **Roland** and then **UPDATER** are displayed on the screen, release your finger.
   The **ROLAND** drive appears on the computer's screen.
4. Copy the update file (**go61_s_up.bin**) to the root folder of the **ROLAND** drive.
5. Eject the **ROLAND** drive and disconnect the USB cable.
   The update starts automatically. The update takes approximately 30 seconds.

   * *Never switch off the power while the update is in progress.*

   When **Finish!** appears, the update has finished.
6. Reset the power.

Test Mode

Items Required

- AC adaptor (PSD-series device)
- Pedal switch (DP-2, etc.)
- 1/4-inch monaural phone plug
- USB cable (A <-> Micro B)
- Amp-equipped monitor speaker (x 2)
- Oscillator
- Oscilloscope
- Noise meter
- Computer
- Stabilized power supply unit

- AA Ni-MH batteries (x 6) or alkaline AA batteries

Only for GO-61K model

- Mobile device capable of Bluetooth LE (iPhone, iPad or etc.: iOS 9 or later)
- Software program capable of Bluetooth MIDI (GarageBand or etc.: the latest version)

* *Install it to the mobile device capable of Bluetooth LE just described.*

Entering the Test Mode

* *The procedure of Entering the Test Mode is changed as follows from version 1.20 or later.*

1. Verify that nothing is connected to the **PHONES/OUTPUT** jack on the rear panel.
2. Connect the AC adaptor.
3. Connect the pedal switch to the **PEDAL** jack on the rear panel.
4. Hold down the pedal switch and the rightmost key (C7) of the keyboard and press and hold ⏻.
   Continue to hold down the pedal switch, the rightmost key (C7) of the keyboard and ⏻ until the screen like the following appears.

5. Disconnect the plug from the **PEDAL** jack.

Quitting the Test Mode

Turn off the power.

Skipping the Test Items

Immediately after entering the Test Mode, you can select each test item by touching 🔊 or 🔉 and skip to the selected test item by pressing ⏻.

* *When entering **Model Select** (p. 15), selecting the test item by touching 🔊 or 🔉 is not possible. And also the test item cannot be skipped while testing is in progress.*

Test Items

The following test items are executed in the normal mode.

Version

This verifies the version.

Touch ＋ to advance to the next test item.

Model Select

This makes the setting for the model of the unit being tested.

1. Touch ▶/■ or **LOOP MIX** to select the model.

   * *Correct model name for the unit being tested is printed on the sticker at the bottom face. Select the model name correctly because the Bluetooth function should be enabled or not if the model name has -L or not at the end of it.*

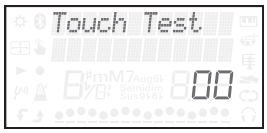
   Without -L: the Bluetooth function is enable.
   With -L: the Bluetooth function is not enable.

2. In case of GO-61K, touch ▶/■. In case of GO-61KL, touch **LOOP MIX**.
   The model setting is written.

3. Touch ＋.
   ~~The model setting is written and~~ execution advances to the next test item.

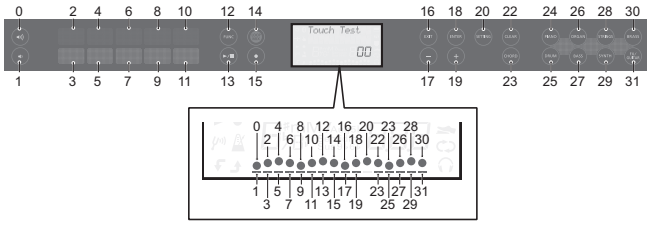
Touch Test

This verifies the operation of the touch switches.

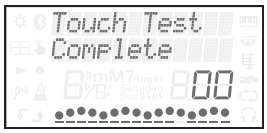


1. Touch the switch shown in the figure below and verify that the icon (● or ▬) corresponding to the touched switch on the screen lights up.

* *The switches can be touched in any sequence.*



When all switches have been touched, a screen like the following appears.



2. Touch ＋ to advance to the next test item.

Device Test

The operation of each device is tested automatically.

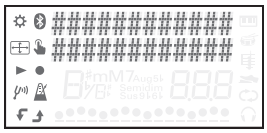
* *The test result for the Wave ROM is not displayed here. In this* ***Touch Test*** *(p. 16), testing of the entire Wave ROM starts and it continues in the background while the other tests are executed. For the test result, check* ***WaveROM Test*** *(p. 17).*

When testing for all devices has finished, execution automatically advances to the next test item.

LCD Test

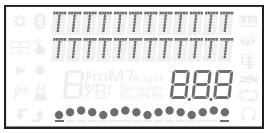
This verifies the display of the LCD screen.

1. Touch ＋.
The screen lights up like the following.

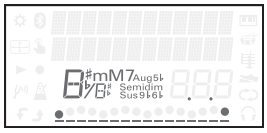


2. Touch ＋.
The screen lights up like the following.

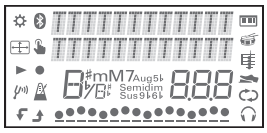
3. Touch ＋.
The screen lights up like the following.



4. Touch ＋.
The screen lights up like the following.



5. Touch ＋.
All segments light up with maximum contrast.



6. Touch ＋.
All segments light up with minimum contrast.

7. Touch ＋ to advance to the next test item.

Bluetooth Test

This test item is performed in the normal mode (**Bluetooth Test** (p. 18)).

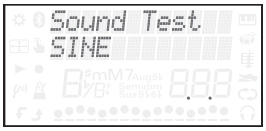
Touch ＋ to advance to the next test item.

* *Note that high-volume sound is output from the speaker when execution advances to the next test item. The volume level can not be adjusted.*

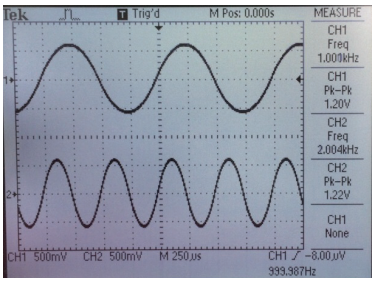
Sound Test

This verifies the operation of the speakers and the **PHONES/OUTPUT** jack.

* *Note that high-volume sound is output from the speaker.*



1. Verify that signals like the following are output from the speakers (L/R).
   Speaker L: 1-kHz sine wave
   Speaker R: 2-kHz sine wave
2. Connect the oscilloscope to the **PHONES/OUTPUT** jack (L/R).
3. Verify that speaker output are muted and the waveforms like the following are output.

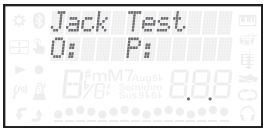


PHONES/OUTPUT L: 1-kHz sine wave at 1.2±0.2 Vpp
PHONES/OUTPUT R: 2-kHz sine wave at 1.2±0.2 Vpp

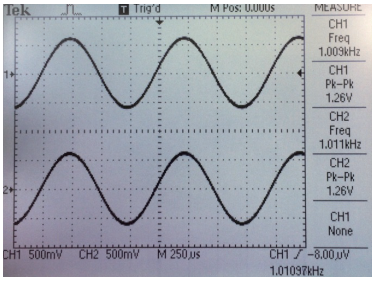
4. Touch + to advance to the next test item.

Jack Test

This verifies the operations of the **AUX IN**, **PHONES/OUTPUT** and **PEDAL** jacks and performs testing for residual noise.



1. Connect the oscillator to the **AUX IN** jack (L/R) and input signals like the following.
   AUX IN L: 1-kHz sine wave at 1.2 Vpp
   AUX IN R: 1-kHz sine wave at 1.2 Vpp
2. Verify that signals like the following are output from the **PHONES/OUTPUT** jack (L/R).



PHONES/OUTPUT L: 1-kHz sine wave at 1.35±0.2 Vpp
PHONES/OUTPUT R: 1-kHz sine wave at 1.35±0.2 Vpp

3. Detach the oscillator and the oscilloscope.
4. Connect the noise meter to the **PHONES/OUTPUT** jack (L/R) and verify the noise levels.
   PHONES/OUTPUT L: -80 dBm or less (DIN-Audio)
   PHONES/OUTPUT R: -80 dBm or less (DIN-Audio)
5. Connect and disconnect the noise meter.
   The display of **O:** changes to **O:OK**.
6. Connect a 1/4-inch monaural phone plug to the **PEDAL** jack.
   The display of **P:** changes to **P:OK**.
7. Disconnect the plug.
8. Touch + to advance to the next test item.

USB Test

This verifies the operation of the **USB COMPUTER** connector.

1. Connect the **USB COMPUTER** connector to the computer using the USB cable.
   OK is displayed on the screen.
2. Disconnect the USB cable.
3. Touch + to advance to the next test item.

WaveROM Test

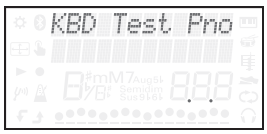
This verifies the result of the checking for the entire WAVE ROM area.

* *This item starts after **Device Test** (p. 16) has been executed. If **Device Test** (p. 16) has not been selected, **Not Started** is displayed on the screen and the test also does not start. In this case, re-enter the Test Mode again.*

When **OK** appears, touch + to advance to the next test item.

Keyboard Test

This verifies the operation of the keyboard.



1. Play all keys, and verify that notes are produced with piano sound. And also verify that the volume level changes and velocity values displayed on the screen change according to the velocity with which the keyboard is fingered.
2. Touch +.
3. Play all keys and verify that notes are produced with organ sound. And also verify that the volume level changes and velocity values displayed on the screen change according to the velocity with which the keyboard is fingered.
4. Touch + to advance to the next test item.

Factory Reset

This performs a factory reset.

Touch ＋.
The factory reset is executed.
When the factory reset has finished, execution automatically advances to the next test item.

Erp Test

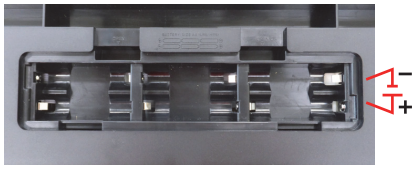
This checks the auto-off function.

Touch ＋ and verify that the power to the unit is turned off.

Battery Test

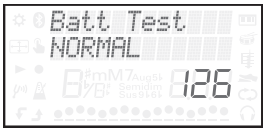
This verifies the detect operation of the battery voltage.

1. Disconnect the AC adaptor.
2. Connect the stabilized power supply unit to the terminals of the battery box as shown in the figure below and apply **+7.0 V**.



The unit enters the Test Mode.

3. Touch ►/■ .
NORMAL is displayed on the screen.

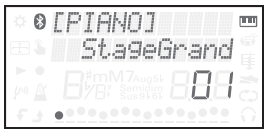


4. Set the output voltage of the stabilized power supply unit to **+6.0 V**.
BATT LOW is displayed on the screen.
5. Set the output voltage of the stabilized power supply unit to **+5.5 V**.
UNCONTROL is displayed on the screen.
6. Set the output voltage of the stabilized power supply unit to **+7.0 V**.
Complete is displayed on the screen.
7. Press ⏻ to turn off the power.

This completes the testing in the Test Mode.
The following tests are performed in the normal mode.

Pop Noise Test

This verifies the pop noise.



1. Connect the AC adaptor.
2. Repeat turning on and off the power three times and verify that no artifacts or abnormal noises are heard from the speakers.
3. Connect the amp-equipped monitor speakers to the **PHONES/OUTPUT** jack.
4. Repeat turning on and off the power three times and verify that no artifacts or abnormal noises are heard from the monitor speakers.
5. Detach the monitor speakers.

Battery Driving & Shock Noise Test

This verifies the operation by battery power, and make an impact on the product and verify that no artifacts or abnormal noises are heard.

1. Disconnect the AC adaptor and set the batteries in the Battery Box.
2. Press ⏻ to turn on the power.
3. Touch **LOOP MIX**.
4. Press the leftmost key.
The pattern (drum sound) is played back.
5. Verify that the pattern (drum sound) is heard from the left and right speakers.
6. Lift the front end of the unit about 5 cm and drop it, and verify that the momentary power interruption does not occur and no artifacts or abnormal noises are heard.
7. Touch ►/■ to stop the playback of the pattern (drum sound).
8. Press ⏻ to turn off the power.

Bluetooth Test

This item tests the Bluetooth function. (Only for GO-61K model)

* *For explanation in this section, we will choose iPhone as an example of the mobile device with Bluetooth function.*

Verifying the Bluetooth Audio Function

1. Place an iPhone near the GO-61K.
2. On the iPhone, enter **Settings** and set **Bluetooth** off.
3. Touch **SETTING** several times to display **BT PAIRING**.
4. Touch **ENTER**.
Pairing... is displayed and GO-61K waits for a response from the iPhone.
5. On the iPhone, enter **Settings** and set **Bluetooth** on.
6. Tap **GO:KEYS Audio** displayed on the Bluetooth screen of the iPhone.
When pairing succeeds, **Connected** is displayed on the right of **GO:KEYS Audio** and **Connected** is displayed and the Bluetooth icon ( ) lights up on the GO-61K's screen.
7. Play back any music in the Music application of the iPhone.
8. Verify that sound is produced from the speakers on the GO-61K.

* *When verification of all Bluetooth functions has finished, cancel the registration of the Bluetooth device and execute the factory reset.*

Verifying the Bluetooth MIDI Function

1. Place an iPhone near the GO-61K.
2. On the iPhone, enter **Settings** and set **Bluetooth** on.
   * ***GO:KEYS MIDI*** *does not appear on the Bluetooth screen. Paring operation should be carried out not on the Bluetooth screen but in GarageBand. Advance to the next step as it is.*
3. Start GarageBand on the iPhone.
4. Tap (or) at the upper right of the GarageBand screen.
5. Tap **Details** and **Bluetooth MIDI Devices**.
6. Tap **GO:KEYS MIDI**, and when you are requested to pair, tap **Pair**.
   When pairing succeeds, **Connected** is displayed on the right of **GO:KEYS MIDI** and the Bluetooth icon ( ) lights up on the GO-61K's screen.
7. Touch and hold on the GO-61K to set the volume to **0**.
8. Play the keyboard of the GO-61K to verify that sound is produced from the iPhone.
   * *To adjust the sound volume, use volume buttons on the iPhone.*
   * *When verification of all Bluetooth functions has finished, cancel the registration of the Bluetooth device and execute the factory reset.*

Canceling the Registration of the Bluetooth Device and Factory Reset

1. Tap **Settings** and **Bluetooth** on the iPhone, and tap ⓘ at the right of **GO:KEYS Audio** to cancel the registration of this device.
2. Cancel the registration of **GO:KEYS MIDI** in the same way as step **1**.
3. Follow the procedure in **Performing a Factory Reset** (p. 14) to execute the factory reset.
   * *Executing the factory reset can erase the information of the Bluetooth device used for testing. However, the information of the Bluetooth device paired by the customer is also erased. When returning the product to the customer, request him/her to pair by himself/herself again.*

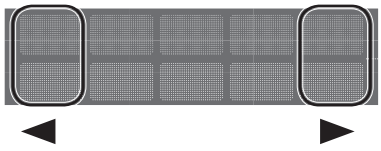
Adjustment Method of the Button Sensitivity

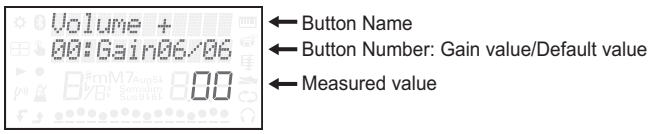
If you feel that the button sensitivity is markedly sluggish or sensitive, adjust the **Gain** value of the target button.

* *The button sensitivity may vary according to the environment or person who operates. Normally it's no problem if the factory reset is executed to return the unit to the factory-default state. However, the adjustment procedure is described below for reference. Execute it as required.*

1. Press to turn on the power.
2. Touch **SETTING** several times to display **VERSION**.
3. Touch **ENTER** five times.
   The following screen appears.

4. Touch the leftmost or rightmost performance pad shown in the figure to select the target button.





* *The buttons corresponding to the button numbers are as follows.*

5. Touch − or + to set the **Gain** value (03–06).
   Setting the value larger makes the measured value of the corresponding button larger and its sensitivity higher.
   * *Touching each button shows the measured value for the button. The value of 14 to 25 is one of the indications.*
   * *When verifying the measured value of − or +, write down the* ***Gain*** *value of them. If the* ***Gain*** *value is changed after that, return it to the value that you wrote down.*
6. Press .
   The **Gain** value is written to the unit and the display returns to the **VERSION** screen.
7. Press to turn off the power.
   * *Executing a factory reset returns the* ***Gain*** *value set here to their factory defaults.*