E-X30

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Cautionary Notes

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

User Data Cannot Be Backed Up

This product cannot back up user data to external media. And user data cannot be written on paper.

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.)
- Because it is sold as a product.

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 E-X30: Arranger Keyboard

Keyboard

61 keys (with velocity)

Sound Generator

Maximum Polyphony

256 voices

Parts

16 parts

Wave Memory

128 MB

Tones

Tones: 433 + 256 (GM2)
Drum Sets: 8 + 9 (GM2)

Effects

Reverb: 10 types
Chorus: 8 types

Transpose

-12– +12 (in semitones)

Octave

-2– +2

Arranger

Tempo

30–280

Styles

347 styles

One Touch Setting

4 settings/styles
with Tempo/Tone/Style/Transpose lock functions

Controls

START/STOP, SYNC START, INTRO/ENDING, FILL A, FILL B, FADE, CHORD

Scale Tunings

Scale Recall

12 user scale memories

User Scale Buttons

Instant quarter-tone tuning of each note of a scale (C–B)
Adjustable tuning range (-50– +50 cent) for each button
Tunings can also be saved to user program memories.

MP3 Pads

12 pads for MP3 playbacker via USB memory

Metronome

Beat

0, 2–9

Song

Internal Songs

160 songs

Recording

10 songs

MP3 playback

Others

Rated Power Output

10 W + 10 W

Speakers

Speakers: 10 cm (4 inches) x 2
Tweeters: 2.5 cm (1 inch) x 2

Controllers

Pitch bend wheel

Display

Custom LCD

Connectors

PHONES jack: stereo 1/4-inch phone type
OUTPUT (L/MONO, R) jacks: 1/4-inch phone type
MIC INPUT jack: 1/4-inch TRS phone type
SUSTAIN jack: 1/4-inch phone type
USB Computer port: USB B type
USB Memory port: USB A type
DC IN jack

Power Supply

AC adaptor

Current Draw

2 A

Dimensions

956 (W) x 360 (D) x 133 (H) mm
37-11/16 (W) x 14-3/16 (D) x 5-1/4 (H) inches

Weight (excluding AC adaptor)

6.2 kg
13 lbs 11 oz

Accessories

Owner's Manual (#17042226, #17042227)
Leaflet "USING THE UNIT SAFELY" (#********)
AC adaptor (#17042220, #17042221, #17042222, #17042223, #17042224, #17042225)
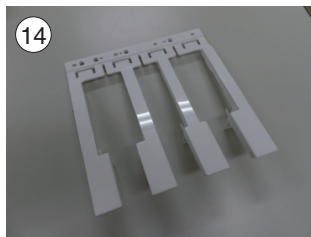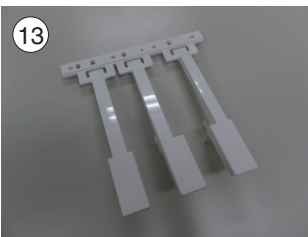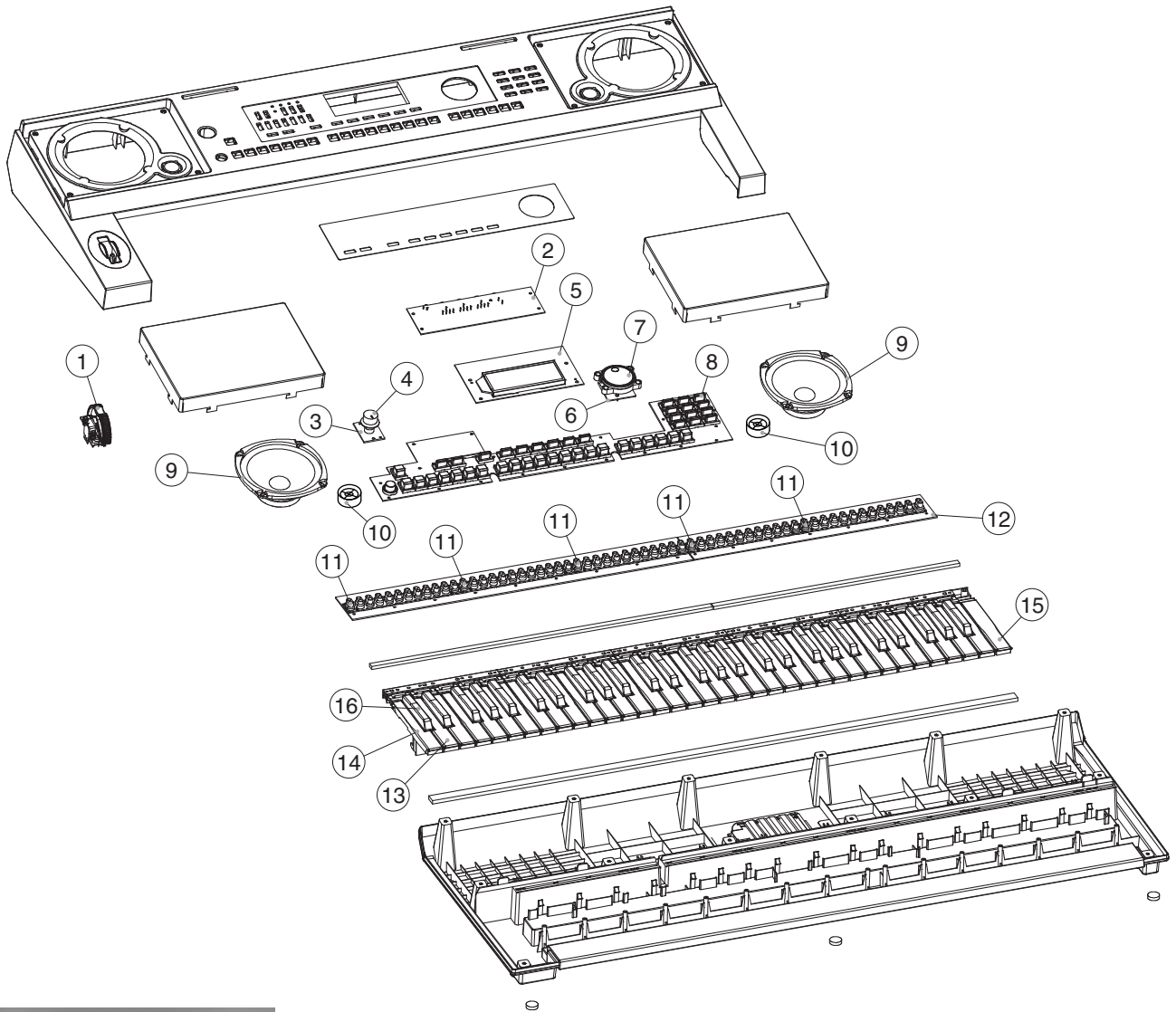Music rest (#17042139)

Options (sold separately)

Pedal switch: DP series

* *0 dBu = 0.775 Vrms*

* *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

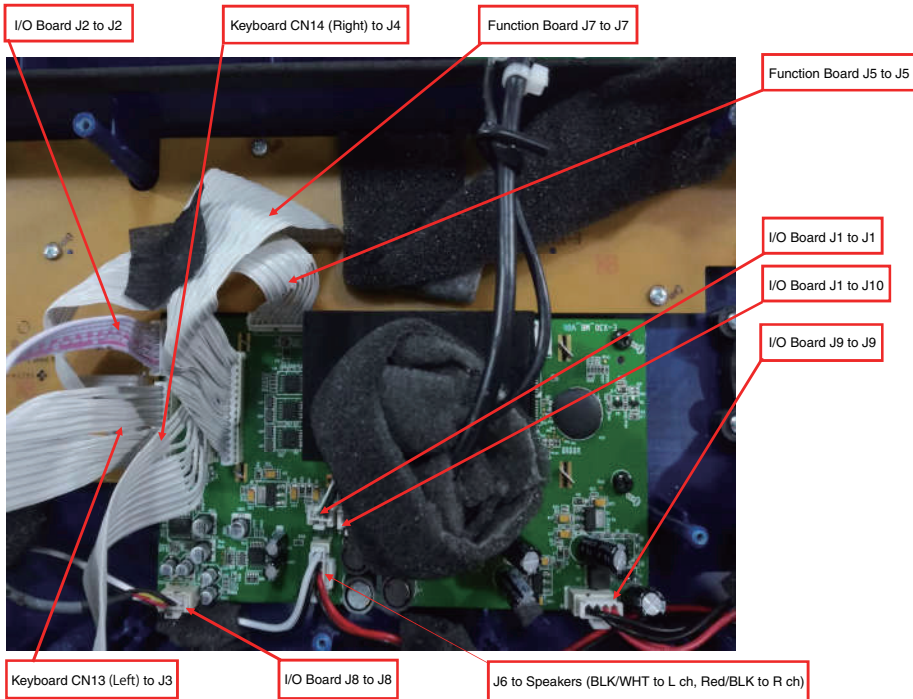| No.	Part Code	Part Name	Description	Q'ty
1	17042212	ROTATE WHEEL ASSY		1
2	17042213	JACK BOARD ASSY		1
3	17042214	VOLUME BOARD ASSY		1
4	17042126	VOLUME KNOB		1
5	17042215	MAIN BOARD ASSY		1
6	17042216	ENCODER BOARD ASSY		1
7	17042129	ENCODER KNOB		1
8	17042217	FUNCTION BOARD ASSY		1
9	17042218	SPEAKER		2
10	17042230	TWEETER		2
11	17042210	RUBBER SWITCH 13P		5
12	17042219	KEYSCAN BOARD	H+L WO/RUBBER SW	1
13	17042134	NATURAL KEY	3-KEY GROUP	5
14	17042135	NATURAL KEY	4-KEY GROUP	5
15	17042136	NATURAL KEY	SINGLE	1
16	17042137	SHARP KEY		5
17	17042138	BATTERY COVER		1

* *When replacing No.10 RUBBER SWITCH 13P for other than the highest position (right end) of the keyboard, cut 1P to change 13P to 12P.*

* *When parts except above are necessary for repair, replace the product itself with a new one.*

Accessories Parts List

Part Code	Part Name	Description		Q'ty
17042139	MUSIC REST			1
17042226	OWNER'S MANUAL	ENGLISH		1
17042227	OWNER'S MANUAL	CHINESE		1
17042220	AC ADAPTOR	FJ-SW1202000U	(28) for 117VU/CS	1
17042221	AC ADAPTOR	FJ-SW1202000E	(32) for 230VEU	1
17042222	AC ADAPTOR	FJ-SW1202000V	(36) for 230VIN	1
17042223	AC ADAPTOR	FJ-SW1202000B	(49) for 230VE	1
17042224	AC ADAPTOR	FJ-SW1202000C	(65) for 220VCN	1
17042225	AC ADAPTOR	FJ-SW1202000DR	(26) for 117VBL	1

Connecting Wirings

I/O Board J2 to J2
Keyboard CN14 (Right) to J4
Function Board J7 to J7
Function Board J5 to J5
I/O Board J1 to J1
I/O Board J1 to J10
I/O Board J9 to J9
Keyboard CN13 (Left) to J3
I/O Board J8 to J8
J6 to Speakers (BLK/WHT to L ch, Red/BLK to R ch)

Main board to other boards connection	
Main board	Other boards
J1	I/O board J1
J2	I/O board J2
J3	Keyboard CN13
J4	Keyboard CN14
J5	Function board J5
J6	Speakers
J7	Function board J7
J8	I/O board J8
J9	I/O board J9
J10	I/O board J1

Main Board J7 to J7
Main Board J5 to J5
Encoder to J2
I/O Board J3 to J3
Volume to J1
Pitch bender to J4
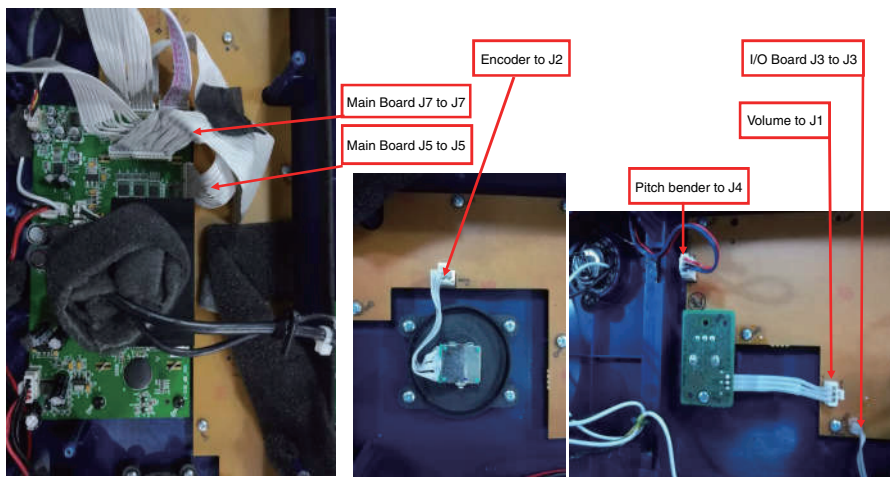
Function board to other boards connection	
Function board	Other boards
J1	Volume
J2	Encoder
J3	I/O Board J3
J4	Pitch bender
J5	Main Board J5
J7	Main Board J7

Main Board J9 to J9
Main Board J2 to J2
Main Board J8 to J8
Battery to CN1
Main Board J1 and J10 to J1
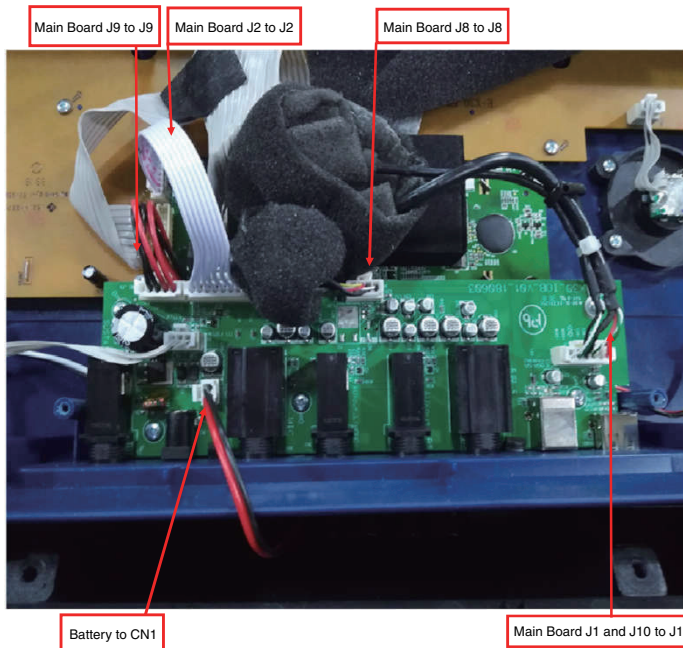
I/O board to other boards connection	
I/O board	Other boards
CN1	Battery
J1	Main Board J1 and J10
J2	Main Board J2
J8	Main Board J8
J9	Main Board J9

Checking the Serial Number

Turn off the power, then press and hold **STORE** + **M3** + **M4** and then press the power button to turn on the power.
Check the serial number.

System Self-test

Enter Self-testing Mode

Connect power supply, then press and hold **STORE** + **M2** + **M4** and then press the power button to turn on the power.

* *In the above step, it requires to press the power button so as to check the functionality of this button.*

Operation Procedures

The procedures are applicable to all test items.

To shift between the test items:
Next item:
  Press and hold **START/STOP** button, then press ∧ (right side of the panel) or
  Press and hold **START/STOP** button, then rotate the data dial clockwise.
Previous item:
  Press and hold **START/STOP** button, then press ∨ or
  Press and hold **START/STOP** button, then rotate the data dial counter-clockwise.

To shift between the test procedures:
Next step:
Press ∧ or rotate the dial clockwise.
Previous step:
Press ∨ or rotate the dial counter-clockwise.

To start testing: (Test will start only when manually started)
Press **1** button.

Device Information

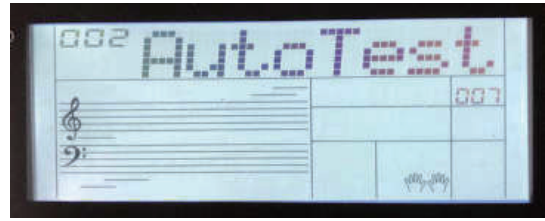When entered, the LCD will show the following image.
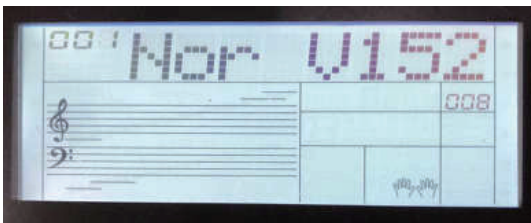
To turn the pages, press the ∧ / ∨ buttons.

Name	Indication	Format
Nor	Software version NorFlash	Vxxx, such as "V100"
SPI	Music pack version SPIFlash	Vxxx, such as "V100"
SN	Serial no.	SNXXXXXX, such as "SN000001"

Automatic Testing

When entered, the LCD will show the following image:

The test includes:
USB flash drive (check the reading/writing function in the background)
Nor Flash (check the reading/writing function in the background)
SPI Flash (check the reading/writing/erasing function in the background)
SDRAM (check the reading/writing function in the background)

Press the **1** button to start testing; it will show all test results after the testing.

* *Before pressing the **1** button, connect a USB flash drive to the USB connector (**TO DEVICE**).*
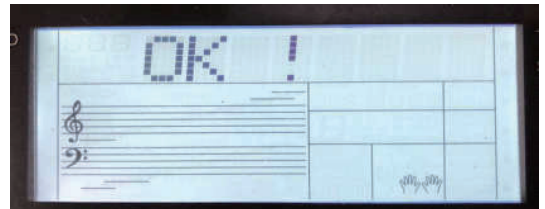
If there is an error in the item, it will show the ERR interface. Use the ∧ / ∨ to turn the pages.
The item that has not yet been tested will be marked with "----".
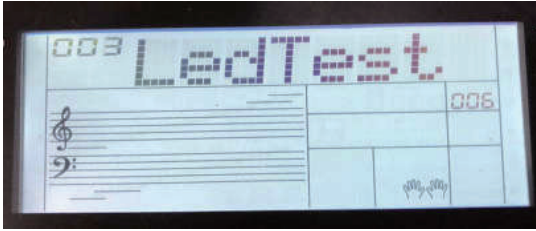If there is an error in the testing steps, the item name will be marked with "*".
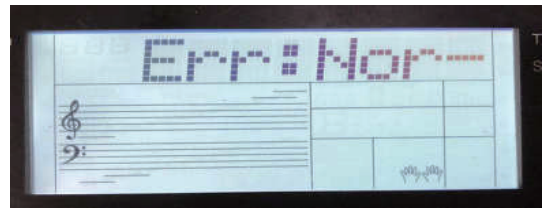
If all are OK, the LCD will display the following image:

LED

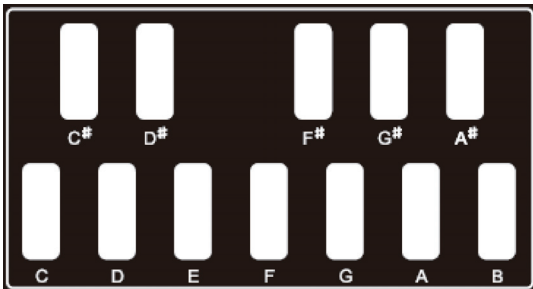When entered, the LCD will show the following image:

Testing procedures:

Press ⋀ to switch to the next LED mode.

Press ⋁ to switch to the previous LED mode.

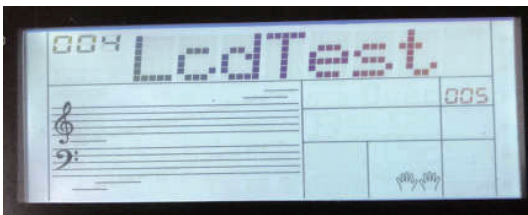Inspect the LED lighting status.

LED modes:
1. All lit in red.
2. All lit in green.
3. All lit in blue.
4. All lit in white.
5. All unlit.

LED panel layout:

LCD

When entered, the LCD will show the following image:

Testing procedures:

Press ⋀ / ⋁ to switch the LCD images; inspect the display effect.

Press ⋀ to switch to the next image.

Press ⋁ to switch to the previous image.

Pass: indicates the display effect is correct, no additional/lacking any pot, the display content is clear.

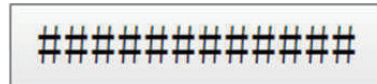Fail: any case other than the Pass one.

Test images:
1. Full LCD is lit.
2. Full LCD turns off.
3. The dot matrix area shows ">".

4. The dot matrix area shows "<".

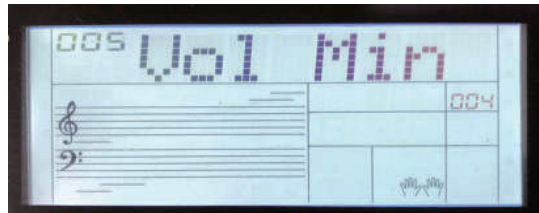5. The dot matrix area shows "#".

6. The dot matrix area shows "8".

7. The dot matrix area shows "X".

Knobs (ADC)

When entered, the LCD will show the following image:

During the operation, the LCD will indicate the current value.

Testing procedures:
1. Turn the corresponding knob to minimum.
   Pass: hear a tone of "OK"
2. Turn the corresponding knob to maximum.
   Pass: hear a tone of "OK"
3. Center (only for the controller that has a central value)
   Pass: rotate/push the controller to the middle position, the LCD shows a central value (64), then jump to the next item (this central value of 64 has already been internally adjusted to include variations. This figure must be 64.)

Follow the above procedures to test the knobs in the following sequence (when a knob is finished testing, the system will automatically start the next one. The LCD will indicate the test item.)

Function Buttons

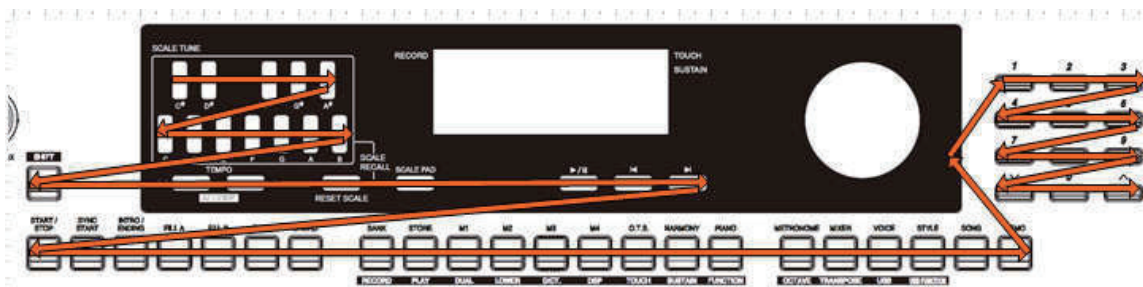When entered, the LCD will show the following image:
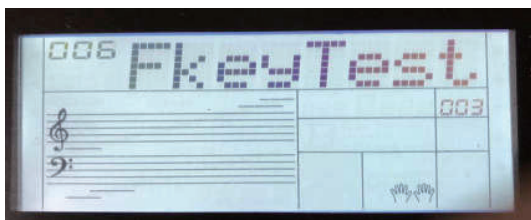
Testing procedures:

Check the buttons strictly in the order form left to right, up to down, as indicated by the arrowhead in the image below.

Press the first button in this sequence to start testing the function buttons. At the same time, the LED of next button that is to be tested will be lit.

Pass: hear a pass tone.

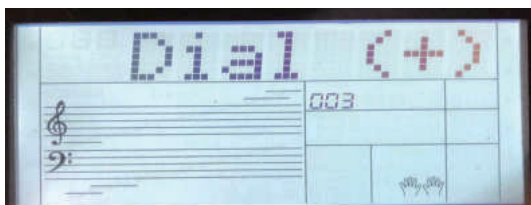Fail: hear a fail tone.

Data Dial

When the function button test is finished and passed, it will automatically start the Data Dial test.

When entered, the LCD will show the following image:
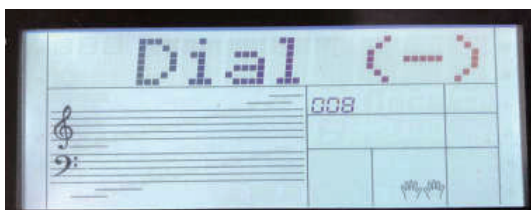
Testing procedures:

1. Rotate the data dial clockwise to increase the value.

Pass: when the value increase to 10, hear a pass tone.

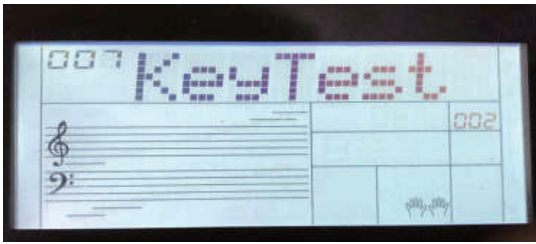2. Rotate the data dial counter-clockwise to decrease the value.

Pass: when the value decrease to 0, hear a pass tone.

Keys

* *This test item cannot be skipped in the middle of executing.*

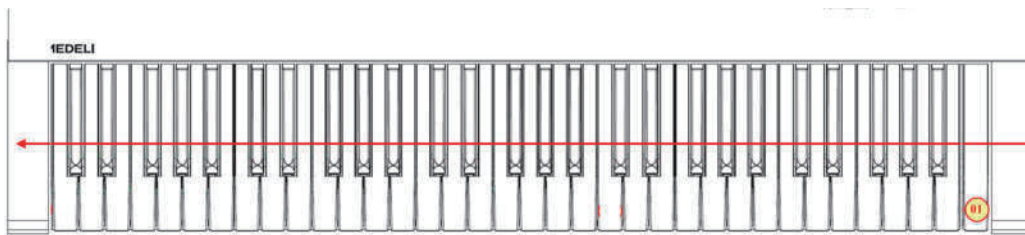When entered, the LCD will show the following image:
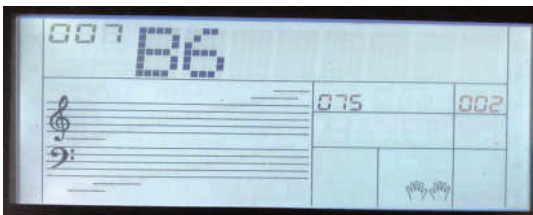

Testing procedures:

Press the keys strictly from right to left (indicated by the arrowhead in the image below) using medium touch force.

Pass: hear a pass tone.

Fail: When pressing a wrong key or the touch force is not within range, you will hear an error tone.
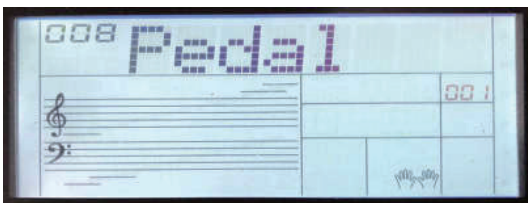

The LCD shows the currently pressed key and the touch level.

Pedal

* *Before entering this test item, connect the pedal switch to the **SUSTAIN** jack.*

When entered, the LCD will show the following image:
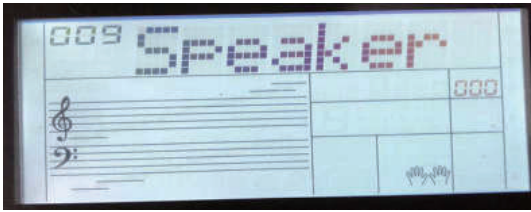

Testing procedures:

Press the pedal.

Pass: hear a pass tone.

Fail: hear an error tone.

* *If DP-2 is used, the pass or error tone sounds when releasing after pressing.*

Audio

When entered, the LCD will show the following image:

* *When connecting headphones, **Phone** is displayed.*
* ***Note that sound is produced at high volume. It is recommended to connect to the monitor speaker and adjust the volume.***
* *Pressing a key other than C4–C#5 will stop the sound.*

Keys and the corresponding audio signals to be tested:

No.	Key name	Audio test signal	LCD display
1	C4	Left pan	AUDIO CHECK PAN-LEFT
2	C#4	Right pan	AUDIO CHECK PAN-RIGHT
3	D4	Max. undistorted signal (L: 440 Hz sine wave, R: 1 kHz)	AUDIO CHECK LOSS-LESS
4	D#4	1 kHz sine wave	AUDIO CHECK SINE-WAVE-1KHz
5	E4	Tone test signal (Church Organ)	AUIDO CHECK CHURCH-ORGAN
6	F4	Sweep frequency signal 1 (range: 20 Hz–320 Hz)	AUDIO CHECK SWEEP-FREQUENCE-1
7	F#4	Sweep frequency signal 2 (range: 320 Hz–4800 Hz)	AUDIO CHECK SWEEP-FREQUENCE-2
8	G4	White noise	AUDIO CHECK WHITE-NOISE
9	G#4	100 Hz sine wave	AUDIO CHECK SINE-WAVE-100Hz
10	A4	300 Hz sine wave	AUDIO CHECK SINE-WAVE-300Hz
11	A#4	400 Hz sine wave	AUDIO CHECK SINE-WAVE-400Hz
12	B4	10 kHz sine wave	AUDIO CHECK SINE-WAVE-10KHz
13	C5	AP test signal (IMD)	AUDIO CHECK AP-IMD
14	C#5	AP test signal (Multi-tone)	AUDIO CHECK AP-MULTITONE

Testing procedures:

1. Disconnect the headphones.
   Pass: the LCD shows "Speaker"
2. Press the corresponding keys to hear the audio sound (from speakers).
   Pass: sound comes from speakers. No sound from headphones.
3. Connect the headphones.
   Pass: the LCD shows "Phones"
4. Press the corresponding keys to hear the audio sound (from headphones).
   Pass: sound comes from headphones. No sound from speakers.

Turning Off

In this procedures, it requires to press the Power button to turn off the instrument so as to check the functionality of this button.
   Pass: it turn off the power.
   Fail: it cannot turn off the power.

Other description

Aux Out and Mic: in normal mode, check the sound to see if they work properly.