

Service News

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DX7II TEST PROGRAM SPECIFICATIONS

These specifications cover the procedures to test manually the DX7IID and DX7IIFD. Effective version V 1.6, the test program has been built into the internal ROM.

Note that, once the system enters the test program mode, the performance, voice A, voice B, and system setup memory are all initialized.

[A] TEST PROGRAM ENTRY:

While holding down [EDIT], press [16], and then press [32].

[B] RAM CHECK:

After the system has entered the test program mode, the internal RAM is automatically checked.

Result OK : The test program goes to C.

NG : The test program halts.

* The following message appears when the result is NG.

NG

[C] BATTERY CHECK:

The battery is automatically checked.

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The LCD on the control panel shows the test version and the result of the battery check at the same time, and then the test program goes to D.

- Result OK:

TEST VO. OXX. ΔΔ □□v

- Result NG: The battery voltage is too low or too high.

TEST VO. OXX. ΔΔ IIv
NG

The numbers on the right show the battery voltage. The actual voltage is 1/10 of the value shown.

[D] A4 SOUND GENERATION:

The followings are output: sine wave 880 Hz \pm 5%; -12 dB \pm 3 dB (load 10 kilohms) at Output terminal; -1 dB \pm 3 dB at Phones terminal.

[E-1] PANEL SWITCH EVENT QUEUE:

When the following message appears on the LCD, the system automatically enters the panel switch event queue regardless of any other message being shown.

TEST VO. OXX. ΔΔ

The corresponding test can be executed by pressing the following panel switches.

- [YES]: The test immediately following the one executed before is executed. If the system has just entered the test program mode, the program starts with TEST V,CA check.
- [NO]: The test just executed is reexecuted. If the system has just entered the test program mode, it leaves the test mode entering the play mode.
- [1] ~ The test numbered the panel switch pressed minus 1 is executed.
[25]: * [1] to [24] on DX7IID.

[E-2] EXECUTING THE TEST:

Pressing [YES] or any one key from [1] to [25] ([1] to [24] on DX7IID) causes the following message to appear on the display.

XΔ

"XΔ" indicates the number 1 greater than the test number.

This message does not, however, appear during the LCD check. "□" also appears, depending on the test item, that shows the number necessary for the current test.

XΔ o□

The result of the test and version number, where applicable, are shown after the test has been completed.

TESTVLI ▽ ▽. ◇ ◇ XΔ o□
OK (or NG)

* If the test ends NG for some reason or as a result of no change in A/D check, keyboard scaling check, cartridge protect switch, and type switch, you may proceed as follows to bring the system to return to panel switch event queue, i.e., the [E-1] state.

You may also perform the following procedure, then press [YES] to skip a test on to the subsequent one.

While holding down [POLY/MONO], press [PAN], then press [YES].

TEST PROGRAM [TEST IVCA CHECK:

Immediately after the system has entered the VCA check, make sure that the sound level both for channels A and B is attenuated by -63 dB±5 dB as compared with the A4 sound generation output level. At this time, the following is shown on the display.

1 1

Each time [YES] is pressed, the right-hand side number on the LCD is incremented by 1. Now, make sure that the relative level of channel A with reference to A4 changes as follows.

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1st:	-36 dB	±4 dB
2nd:	-18 dB	±3 dB
3rd:	-9 dB	±2 dB
4th:	-4.5 dB	±1 dB
5th:	-2.2 dB	±1 dB
6th:	-1.1 dB	±1 dB
7th:	-1 dB	±1 dB
8th:	-63 dB	±5 dB

On the 9th depression and onward, channel A is exchanged for channel B and the levels are the same as in 1st through 8th depression. The right-hand side number on LCD becomes 11 on the 8th depression, thereafter it is incremented by 1. The 16th depression causes the system to return to the [E-1] state.

[TEST 2] LCD CHECK:

All dots of the LCD flash OFF and ON. When [YES] is pressed, the system enters the [E-1] state.

[TEST 3] SEVEN-SEGMENT LED CHECK:

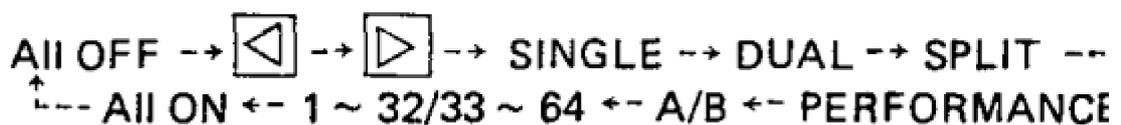
The 7 segments of the LED display light up as follows.

All OFF → Segments light up, one by one → All ON

Depression of [YES] causes the system to enter the [E-1] state.

[TEST 4] SWITCH LED CHECK:

The switch LEDs light up as follows.



Depression of [YES] causes the system to enter the [E-1] state

Depression of [YES] causes the system to enter the [E-1] state.

[TEST 5] PITCH BENDER CHECK:

Move the bender through the sequence 50 → 99 → 20 to 80 → 0 to 50 and check to see if the numerals shown on the display changes mildly. If the pitch bend checks okay, the message "OK" appears with the system entering the [E-1] state. If the pitch bend center is out of alignment, the message "NG" shows.

[TEST 6] MODULATION WHEEL CHECK:

Move the wheel through sequence 0 → 20 to 80 → 99 → 20 to 80 → 0 and check to see if the numerals shown on the display changes mildly.

Messages and other conditions are the same as in the pitch bender check.

[TEST 7] CS1:

Same as the modulation wheel check.

[TEST 8] CS2:

Same as the modulation wheel check.

[TEST 9] AFTER TOUCH CHECK:

0 to 1 → 20 to 80 → 95 to 99 → 20 to 80 → 0 to 1

[TEST 10] FOOT CONTROL CHECK:

Same as the after touch check.

[TEST 11] FOOT VOLUME CHECK:

Same as the after touch check.

[TEST 12] BREATH CONTROL CHECK:

Same as the after touch check.

[TEST 13] FOOT SWITCH 1 CHECK:

When the switch is turned OFF and ON and OFF, the right-hand side number on the LCD should change from 0 to 1 to 0. If it checks okay, the message "OK" appears with the system entering the [E-1] state.

[TEST 14] FOOT SWITCH 2 CHECK:

Same as the foot switch 1 check.

[TEST 15] KEYBOARD SCALING CHECK:

Scale from 36 (= C1) through 96 (= C6).

Touch the key with a force of initial touch \$10 (Break 28 ms Make) or more.

If it checks okay, go to the next key.

The following message appears each time the key is turned ON and OFF.

- Key is properly turned ON -> OK
- Key is properly turned OFF -> OK
- An illegal key (not shown on display) was touched -> NG
- An illegal key (not shown on display) was released -> NG
- Initial touch is small -> NG

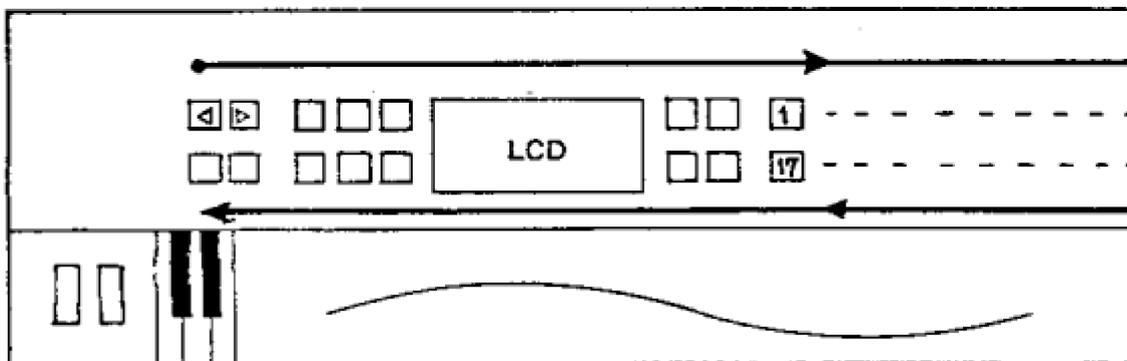
If scaling up to 96 (= C6) checks okay, the system enters the [E-1] state.

[TEST 16] PANEL SWITCH CHECK:

The number "16 43" appears.

The numbers on the right indicate the switch numbers at the bottom.

Turn the switches ON and OFF in the following sequence.



If any switch does not check okay, you cannot proceed with the subsequent switch.
If all switches check okay, the system enters the [E-1] state.

[TEST 17] CARTRIDGE READ/WRITE CHECK:

Perform the read/write check using the RAM cartridge. (For this check, be sure to turn OFF the protect switch.)

Depression of [YES] initiates the check sequence. If it checks okay, the message "OK" appears; if not, "NG" shows.

* Ignore the following three tests, TESTs 18 through 20. They are performed in the factory.

[TEST 18] CARTRIDGE PROTECT SWITCH CHECK:

[TEST 19] CARTRIDGE TYPE CHECK:

[TEST 20] CARTRIDGE MODE CHECK:

[TEST 21] MIDI CHECK:

Connect MIDI IN and OUT and press [YES]. This will initiate the loop test. If the loop test checks okay, the message "OK" appears; if not, "NG" shows. A second depression of [YES] causes the system to enter the [E-1] state.

* No test function can be invoked in TESTs 22 through 24. So, press [YES] to skip them up to TEST 25 Disk Read/Write Check.

To leave the test mode while you are in any TEST from 22 through 24, press any switch other than [1] to [25], [YES] and [NO] with the system in [E-1] state.

[TEST 22] EXIT:

No test function is provided.
The system enters the [E-1] state.

[TEST 23] LED STEP FEED:

No test function is provided. This is one of the factory test items.
The system enters the [E-1] state.

[TEST 24] 16 SOUND GENERATION CHECK:

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No test function is provided. This is one of the factory test items.
The system enters the [E-1] state.

[TEST 25] DISK READ/WRITE CHECK:

On DX7IIFD only

When the following message appears:

Please set disk! 25

Insert a formatted floppy disk and press [YES]. This will initiate the test.
While the system is in the test, the following message is shown.

** BUSY ** Now executing!

The test takes approximately 15 seconds and, if the test checks okay, the message "OK" appears.

If the test does not check okay, the above message remains shown even after the lapse of the 15-sec. period or the message "NG" appears.