

# The built-in Nextor partitioning tool — FDISK

The Nextor's kernel has an embedded utility called FDISK for partitioning of storage devices attached to Nextor device-based drivers.

The tool has a user interface based on menus, so anyone should be able to use it by just following the instructions provided on the screen (when in doubt, look for hints on what to do next in the lower line of the screen). There are, however, some facts to consider that are not mentioned in the tool itself:

- The tool allows creating up to 256 FAT12 and FAT16 partitions on any block device attached to the Nextor device-based driver. MSX-DOS drivers and Nextor drive-based drivers are not supported
- Partitions from 100KB (the minimum supported partition size) up to 32MB will be FAT12, partitions from 33MB to 4GB (the maximum supported partition size) will be FAT16
- Partitions of 16MB or less will have three sectors per FAT or less, therefore they can be used in MSX-DOS 1 mode
- Partitions up to 32MB will have a MSX-DOS 2 boot sector, partitions of 33MB and more will have the standard boot sector
- To get an optimum cluster size, it is recommended to define the partition sizes as powers of two (that is: 1M, 2M, 4M, 8M, 16M or 32M for FAT12 partitions; 64M, 128M, 256M, 512M, 1G, 2G or 4G for FAT16 partitions). If this is not possible, it is better to select the partition size as slightly smaller than the closest power of two than slightly higher (that is, for example 31M is better than 33M)
- Remember that Nextor can handle devices with FAT16 partitions and standard boot sectors; if you use a factory-partitioned device of 2GB or less, you probably don't need to partition it, unless you want to create MSX-DOS 1 compatible partitions (4GB devices are usually shipped with a FAT32 partition, so you will need to partition it with FDISK anyway)
- When creating new partitions you can choose which one(s) will have the “active” flag set, thus being eligible for automatic mapping at boot time; it is also possible change the flag on already existing partitions
- The partitioning tool works in MSX-DOS 1 mode too. Note however that the tool will always allow you to create partitions larger than 16M, which are not compatible with MSX-DOS 1



With this tool it is not possible to add new partitions to the already partitioned device. All existing partitions **must be removed** before creating new ones.

To start FDISK partitioning tool, just type

```
_ FDISK
```

or

```
CALL FDISK
```

from the MSX BASIC and press Enter. The utility works properly with both 40 columns and 80 columns mode, so it can be used on MSX1 and later computers.



Please note that starting the FDISK tool will delete the current BASIC program located in RAM.

## Select the device driver

```
Nextor disk partitioning tool
```

```
-----  
1. Sunrise IDE
```

v.0.1.7 on slot 1-1

ESC. Exit

-----  
Select the device driver

Select driver:

## Select the device

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1

1 . OPENMSX HARD DISK

ESC. Go back to driver selection screen

-----  
Select the device

Select device:

## Select the logical unit

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1

OPENMSX HARD DISK (1)

1. Size: 100M

ESC. Go back to device selection screen

-----  
Select the logical unit

Select logical unit: **1**

## Create partition

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1  
OPENMSX HARD DISK (1)  
Logical unit 1, size: 100M  
Unpartitioned space available: 100M

Changes are not committed  
until W is pressed.

(No partitions found or defined)  
A. Add one 100M partition  
P. Add partition...

T, Test device access

-----  
Select an option or press ESC to return

<b>A</b>	Add new partition fixed size
<b>P</b>	Add new partition custom size
<b>T</b>	Test device access
<b>Esc</b>	Discard changes

## Add new partition fixed size

By default, the partition size is equal to the maximum available space on the device (but less than 4 GB).

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1  
OPENMSX HARD DISK (1)  
Logical unit 1, size: 100M  
Unpartitioned space available: 0K

Changes are not committed  
until W is pressed.

S. Show partitions (1 defined)  
D. Delete all partitions  
U. Undo add 100M partition

W. Write partitions to disk

T. Test device access

-----  
Select an option or press ESC to return

<u>S</u>	Show partitions
<u>D</u>	Delete all partitions
<u>U</u>	Undo add partition
<u>W</u>	Write partitions to disk
<u>T</u>	Test device access
<u>Esc</u>	Discard changes

## Add new partition custom size

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1  
OPENMSX HARD DISK (1)  
Logical unit 1, size: 100M

Add new partition

Enter partition size in MB (1-100)  
or partition size in KB followed by  
"K" (100-32767): 20

-----  
Enter size or press ENTER to cancel

Enter 20

Nextor disk partitioning tool

-----  
Sunrise IDE on slot 1-1  
OPENMSX HARD DISK (1)  
Logical unit 1, size: 100M  
Unpartitioned space available: 80M

Changes are not committed  
until W is pressed.

S. Show partitions (1 defined)  
D. Delete all partitions  
A. Add one 20M partition  
P. Add partition...  
U. Undo add 20M partition

W. Write partitions to disk

T. Test device access

-----  
Select an option or press ESC to return

<u>S</u>	Show partitions
<u>D</u>	Delete all partitions
<u>A</u>	Add one partition
<u>P</u>	Add new partition custom size
<u>U</u>	Undo add partition
<u>W</u>	Write partitions to disk
<u>T</u>	Test device access
<u>Esc</u>	Discard changes

## Delete all partitions

If you press the D key, the program will prompt you to confirm the selection:

-----  
Discard all defined partitions? (y/n) █

If you confirm the selection and press Y, then all partitions will be deleted and the program will go to the [Create partition](#) screen.

## Add one partition

Another section is added, the same size that was specified for the last created section.

## Show partitions

Nextor disk partitioning tool

-----  
One new partitions defined

\* 1: FAT12, 20M  
2: FAT12, 20M

-----  
ESC = return, 1-2 = toggle active (\*)

- `Esc` — Return to previous screen
- Use the numeric keys to select the number of the active partition

## Test device access

```

Nextor disk partitioning tool
-----

Sunrise IDE on slot 1-1
OPENMSX HARD DISK (1)
Logical unit 1, size: 100M

Now reading device sector 123

-----

Press any key to stop...
```

## Write partitions to disk



Please remember to write all changes to partitions before quitting the FDISK tool! Otherwise your changes will be lost.

Before saving the partition table to the program disk, it will warn you that all data on it will be destroyed and their recovery will be impossible:

```

Nextor disk partitioning tool
-----

Sunrise IDE on slot 1-1
OPENMSX HARD DISK (1)
Logical unit 1, size: 100M

Create 1 partitions on device

THIS WILL DESTROY
ALL DATA ON THE DEVICE!!
This action can't be canceled
and can't be undone

Are you sure? (y/n) █

-----
```

If you confirm the selection and press `Y`, the partition settings will be saved to disk:

```

Nextor disk partitioning tool
-----

Sunrise IDE on slot 1-1
OPENMSX HARD DISK (1)
Logical unit 1, size: 100M

    Creating partition 1 of 4 ...

                Done!

    If this device had drivers mapped to,
      please reset the computer.

-----
Press any key to return...

```

By pressing any key, the program will display the following screen:

```

Nextor disk partitioning tool
-----

Sunrise IDE on slot 1-1
OPENMSX HARD DISK (1)
Logical unit 1, size: 100M

Changes are not committed
until W is pressed.

S. Show partitions (1 defined)
D. Delete all partitions

T. Test device access

-----
Select an option or press ESC to return

```

If you have finished partitioning the disk, exit the program and restart the computer.

<b>S</b>	Show partitions
<b>D</b>	Delete all partitions
<b>W</b>	Write partitions to disk
<b>T</b>	Test device access
<b>Esc</b>	Discard changes

## Discard changes

Cancel all settings and return


-----  
Discard changes and return? (y/n) █

If you confirm the selection and press **Y**, all settings will be lost and the program will go to the [Select the logical unit](#) screen.

## Undo add partition

If you press **U**, the creation of the last section will be canceled.

## Links

 [Nextor 2.1 User Manual — 3.5. The built-in partitioning tool](#)



<http://sysadminmosaic.ru/en/msx/nextor/fdisk>

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