Star-Tools PartitionStar

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Introduction

Short Overview

The harddisk partitioner *PartitionStar* offers you the following functions:

- Scope of functions like **FDISK** with many extra features

- **Unlimited support** of **all** operating and all file systems (incl. Windows 2000)

- **Decreasing** and **formatting** of FAT 12, 16, and **FAT 32 partitions**

- Two programs: One **program for DOS** and one for **Windows 95/98/ME/NT/2000/XP**

- Complete functionality with user interface as well as with **own script language**

- much more...

See also:

System Requirements

In order to be able to use the harddisk partitioner *PartitionStar,* you will need an Intel-compatible **80486** PC (or later model).

All operating systems and **all** file systems are supported, since the harddisk partitioner's How It Works is not dependent on the operating and/or file system.

There are two programs: One for DOS (starting with version 4.0) and one for Windows (starting with Windows 95 / NT 3.51).

See also:

Partitioning

Basics

Hard Disk Structure

Every hard disk consists of various cylinders, heads, and sectors. Every hard disk sector has 512 bytes. This is rather complicated and thus not suitable for users to save files on a disk in such a way.

The hard disk is first "formatted" to allow users to write files to that hard drive. This structures the many cylinders, heads, and sectors in such a way as to permit the storage of entire files. This structure is called a "file system."

The first hard disks appeared at the beginning of the 80s. At that time developers / users were only familiar with floppy disks. From that point of view, the space of a hard disk seemed very large. The developers thus decided to split large hard disks into smaller units or at least plan for partitioning large drives.

A file system is written to each of these partitions. Every user knows this file system under the term "drive." The Microsoft operating systems assigned letters such as C:, D:, etc. to these drives .

One of the reasons for dividing a hard disk is the size of the file systems. The other reason is the option of being able to utilize different file systems (e.g., one for DOS/Windows and another one for Unix/Linux).

The process of this division is called "partitioning."

See also:
  Primary and Secondary Partitions, # 5
  File Systems, # 6
  Formatting Partitions, # 10

Primary and Secondary Partitions

A hard disk can be partitioned into up to four partitions. This is due to the table where the position and size of the individual partitions is stored (partition table). This partition table was specified in the beginning of the 80s and is basically still the current status of technology. Since this partition table represents the first division, it is called the "primary partition table."

Several operating system developers combined their efforts to introduce a new standard. This new standard was to enable the subdivision of each of the four basic partitions into several parts (partitions). To achieve this, a different type of partition table storage is utilized, which has the potential of allowing an unlimited number of entries.

This divided partition is actually no partition in the true sense of the word because it cannot - and is not supposed to - contain any file system itself. It only serves to extend the option of partitioning the hard disk. This type of partition is thus usually called an "extended partition."

The partition table within this partition is then referred to as the "extended partition table" or more exactly the "secondary partition table."

These partitions (within this extended partition) are called "secondary partitions" or "logical drives." (The latter term, however, is not quite accurate since in technical terms, primary partitions are also

nothing more than a logical division of the physical hard disk and are thus logical drives as well.)

The technical differentiation between primary and secondary partitions is almost exclusively based on the entry within the respective partition table.

Not nearly all operating systems, however, have put secondary and primary partitions in the same category. For example, when booting from secondary partitions created with Microsoft operating systems certain restrictions apply.

See also:
  File Systems, # 6

File Systems

After partitioning, each of the partitions is further structured so that data can be saved in that partition. This structure is called a "file system." (A file system should not be confused with an operating system, which enables the starting and execution of programs.)

After a file system has been written to the hard disk it becomes difficult and even impossible in part to apply any changes (enlarge, reduce, move, or convert).

That is the reason you should decide carefully what you would like to do and whether this is realizable **before** partitioning a hard drive. Problems concerning this issue are discussed further down.

After the partition for a file system has been created (see further below), the file system has to be created within this partition. This is called "formatting" and is usually performed during the installation of the operating system.

See also:
  Primary and Secondary Partitions, # 5
  Formatting Partitions, # 10

Partitioning Programs

Several programs are available for partitioning, which can be carried out for almost every operating system. These programs are called "partitioners" or "hard disk partitioners."

Most operating systems have their own partitioning program. That program is often called "FDISK." Since these programs are often very cumbersome to use, other vendors offer programs such as this one.

Which program you use to partition the hard disk is actually not important since the partitioning itself is nothing more than dividing the hard drive. Because **all** operating systems understand exactly the same type of hard disk division (primary and secondary partition table), all of the partitioners available on the market **have to** be compatible with one another. (Some bootmanagers that manage their own partition tables are the exception. The bootmanager program *BootStar* is one such exception).

The functionality of the partitioning process is offered not only by the independent partitioners but also by other programs such as setup programs of operating systems or a variety of bootmanager programs.

<u>Creating</u>

<u>Planning a New Hard Disk</u>

As mentioned above, the subsequent change of an already carried out partitioning is very difficult. This means you should **think about what you want very carefully before you start** formatting a hard disk.

1. Operating Systems
  First, determine how many and which operating systems you would like to install. Remember that many operating systems cannot be booted from any other partition than the primary one. If you are planning to create more than four partitions, you should use a bootmanager, which can utilize more than four partitions (e.g., the bootmanager *BootStar*).

  Also, remember that computers are usually booted only from the first hard disk exclusively. If you would like to boot from a different hard disk than the first one, you have to use a bootmanager that supports this (e.g., the bootmanager *BootStar*). Even if the bootmanager permits booting from another hard disk it does not mean that this will always work with every other operating system.

2. File Systems
  Next, you should be thinking about the type of file system you would like to use. It is a good idea to use a separate file system (partition) for every operating system so that the operating systems do not interfere with one another or destroy each other.

  Here, you should take into consideration which operating system you will use to access another file or operating system (partition).

  Also take partitions without operating system into account, which you might use to save "only" files. These partitions can usually also be secondary partitions without causing any problems.

3. Operating System Problems
  Please make sure that your requirements are realizable.

  One of the biggest problems is that not all operating system are able to access all file systems. Even if the possibility exists, some file systems may have only a limited size or can be located only in a certain area on the hard disk.

  There is virtually no type of system planning that does not have some sort of restriction for the operating systems on the partitions.

4. Hardware and Software Problems
  Your final check should ensure that your plan is compatible with your hardware. Some hardware products have limitations (errors).
  Problems may also occur if you are using other software to manage file systems (e.g., Drive Imager) or partition tables (e.g., bootmanager programs).

Pay attention to this planning very, very carefully!!!

See also:
  Primary and Secondary Partitions, # 5

Modifying an Existing Hard Disk

The difference between using a new hard disk and an exiting one is that an existing one already has a file and operating system which are to be preserved and expanded with additional ones, which might cause some problems.

Exception: The existing file and operating systems (incl. all files) do not have to be preserved. In this case, the partitioning process is almost as simple and straightforward as for a new hard disk. Just remove all existing partitions and start over the same way as with a new hard disk.

If already existing file and operating systems are to be preserved, you have to decide how best to change the existing partitions since the space occupied by the old partitions is to be utilized for the new partitions in most cases. (A reduction of existing "FAT" file systems is possible with the hard disk partitioner *PartitionStar*.) If needed, delete a partition no longer required and create two new partitions instead or vice versa.

It is impossible to list all of the possibilities within the framework of this text. In many cases your creativity and skill is also a decisive factor. A program that can take care of **all** of these tasks in their entirety and without any problems does not exist and will most likely never exist either.

Indeed, there are programs with a range of functions for modifying an existing partition exceeding the functions offered by this program but these programs usually cost significantly more than our offered program or promise more than they can keep without threatening the stability and/or content of your existing partitions.

The worst case scenario is that even a small partitioner error at a critical location during the modification of an existing partition could potentially destroy the entire file system.

Always make sure you have backed up all of your critical data 100% before starting to modify an existing partition.

However, if you have made such a backup you can also just delete the entire hard disk including all of the partitions and create new partitions. This way you do not have to make any compromises due to existing circumstances. This solution is not really the fastest one but surely the most orderly.

See also:

Partition Types

Almost every operating system uses its own file system to save its data. The recognition of the file system is initiated via the partition type. Thus, the correct partition type has to be specified for each file system. (The partition type is specified in this program using hexadecimals.)

The following list cannot be complete since all manufacturers/vendors of operating systems can define their own types in a very short time.

MS DOS:
  FAT 12, partition smaller than 32 MB and ends below 8 GB: Type "01"
  FAT 16, partition smaller than 504 MB and ends below 8 GB: Type "04"
  FAT 16, partition smaller than 2 MB and ends below 8 GB: Type "06"

Windows 95:
  FAT 16, partition smaller than 2 GB and ends below 8 GB: Type "06"
  FAT 16, partition smaller than 2 GB and ends below 8 GB: Type "0E"

Windows 95b OSR 2, 98, ME:
  FAT 16, partition smaller than 2 GB and ends below 8 GB: Type "06"
  FAT 16, partition smaller than 2 GB and ends below 8 GB: Type "0E"
  FAT 32, ends below 8 GB: Type "0B"
  FAT 32, ends above 8 GB: Type "0C"

Windows NT:
  FAT 16, partition smaller than 4 GB and ends below 8 GB: Type "06"
  NTFS, begins below cylinder 1024: Type "07"

Windows 2000, XP:
  FAT 16, partition smaller than 4 GB and ends below 8 GB: Type "06"
  FAT 16, partition smaller than 4 GB and ends below 8 GB: Type "0E"
  FAT 32, partition smaller than 32 GB and ends below 8 GB: Type "0B"
  FAT 32, partition smaller than 32 GB and ends below 8 GB: Type "0C"
  NTFS, begins below cylinder 1024: Type "07"

OS/2:
  FAT 16, partition smaller than 2 GB and ends below 8 GB: Type "06"
  HPFS, partition smaller than 2 GB and ends below 8 GB: Type "07"

Linux:
  ext2fs, begins below cylinder 1024: Type "83"
  Linux Swap Partition: Type "82"

Expanded Partitions:
  Normal: Type "05"
  Partition larger than 8 GB or above 8 GB: Type "0F"

Others:
  If this list omits a partition type use the type "06" for the installation of an operating system. This type is then often corrected automatically during installation.
  If needed, check the manual of your operating system for additional information and notes about partition types.

See also:
  File Systems, # 6
  Creating Partitions, # 10
  Select Partition Type, # 21
  Properties of partition, # 20

  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Linux, # 15

Creating Partitions

The difficult part is behind you if you are clear about what partitions are and how to use them best for your hard disk.

The easiest way to create the individual partitions is in the order they appear on the hard disk. You then need only indicate the size and type of the respective partition.

The partition type represents a reference to the file system within the partition. However, it is nothing more than a reference. The partition type modification within the partition table does not change the file system.

Many formatting programs use the partition type as the criterion for which file system is to be created.

Partitioning Steps:
1. Determine the partition type
2. Select hard disk (when several hard disks exist)
3. Add the partition by specifying size and partition type
Finished!

See also:
  Partition Types, # 8
  Partition Table, # 22
  Properties of partition, # 20
  Select Partition Type, # 21

  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Linux, # 15

Configureing

Formatting Partitions

A file system has to be created for every individual partition after the partitioning process is finished (the partition has to be formatted).

Individual file systems can already be partitioned with this program. This is the easiest way because it prevents confusing one or several partitions with other partitions.

Before you utilize a(nother) program for formatting you should always verify once more that you have selected the right partition to be formatted!

If possible, you should first format all partitions before installing the operating systems. This prevents accidentally deleting an already installed operating system.

Most of the setup programs are also able to format partitions. However, these pose the risk to accidentally select the incorrect partition and thus delete an existing file system (operating system)!

See also:
  File Systems, # 6
  Formating, # 22

Installing Operating Systems

After the individual partitions have been successfully installed, you can begin with the installation of the individual operating systems.

This should be carried out with care as well. If you should accidentally select the wrong partition during installation, you might overwrite another operating system.

This risk can be lessened by activating the respective partition before starting the installation. This means that you select that partition as the boot partition. Just select the boot partition from the partition table and label it "active."

Most operating systems will then suggest the thus activated partition in their setup program during installation.

Using a bootmanager that hides all other partitions while installing the operating systems increases safety even more. This prevents selecting the wrong partition during the operating system installation. Such a function is offered by the bootmanager program *BootStar*.

See also:
Problems with DOS / Windows 95/98/ME, # 13
Problems with Windows NT/2000/XP, # 14
Problems with Linux, # 15

Booting

Booting without Bootmanager

Before being able to boot from another partition (another operating system), you have to select it in some way.

The are actually no standardized techniques for this. Without a bootmanager, you have to "activate" this partition in the partition table before booting another operating system.

Of course, this is quite awkward. That is the reason so many so-called "bootmanagers" are now available on the market. These programs allow users to select a partition and with that an operating system during booting.

The hard disk partitioner *PartitionStar* may be used to switch the active partition via command line options.

See also:
Booting with Bootmanager, # 11
Command Line Options (Overview), # 24

Booting with Bootmanager

Some operating systems include a bootmanager (e.g., OS/2, Windows NT/2000/XP). However, most of these bootmanagers are still rather cumbersome to use during installation and while running.

Of course, the whole purpose of a bootmanager included in an operating system is to boot this operating system. All other operating systems can and should! be ignored during this process. The configuration is quite often only possible by applying a lot of know-how or after using third-party software.

Some operating system independent bootmanagers, however, still do not support the booting of all operating systems. The reason for this is very simple: These bootmanagers already use some parts of certain operating systems. Any unrestricted functionality can therefore be guaranteed only in connection with these operating systems.

These types of bootmanagers are easy to recognize because they are installed within a partition. The installation has to be quite often carried out within a partition with a special operating systems as well (examples: NTLoader – the bootmanager of Windows NT or LILO – the bootmanager of Linux). The bootmanager of OS/2 is outdated and supports only hard disks up to 8 gigabytes in size, for example.

The bootmanager *BootStar* is completely file system and operating system independent, no matter which file or operating system is used. All file and operating systems are thus supported without limitations or restrictions.

See also:
  Booting without Bootmanager, # 11

Problems / Solutions

Problems (Overview)

General:

- For most operating systems, it might be necessary to set the harddisk in the BIOS to the "LBA" mode.

- While running DOS Hard drives, which need a software driver (either because of their size and/or age) usually cannot be used with the drive imager *DriveStar*.

- While running Windows the partition Windows has been started can't be copied or modified. The reason for this is Windows blocked the partition. You can solve this problem by using the **DOS version of this program**. Please note that this does **not function from within the DOS box** offered by Windows because the same problem would occur.

See also:
  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Linux, # 15
  Problems with Hardware, # 15
  Problems with Software, # 16

Problems with DOS / Windows 95/98/ME

General:
- For FAT 16 partitions, the maximum partition size is 2 GB.
- For MS-DOS up to version 4.x, only one primary partition at one time (boot image) may be visible. (However, it is not a problem to install several.).
- It is possible to boot from the 2nd harddisk only if no primary partition is visible on the 1st harddisk.

Installation starting above 2 GB:
  (works only with Window 95 and higher)
- Set up type "0E" partition.
- If other operating systems are to access this partition, type "0E" should perhaps be changed to "06" after the installation process.

Installation on second hard drive:
  When installing on the second hard drive, the power has to be disconnected to the first hard drive during the installation process.
  An alternative is to "manually" install DOS (with FORMAT, SYS, and COPY).

See also:
  Partition Types, # 8

  Problems (Overview), # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Linux, # 15
  Problems with Hardware, # 15
  Problems with Software, # 16

Problems with Windows NT/2000/XP

General:
- For FAT 16 partitions, the maximum partition size is 4 GB.
- Windows NT: It is possible to boot from FAT 16 (type "06") partitions only if the partition starts before cylinder 1024.
- Only one Windows NT/2000/XP partition may be visible at any one time.

NTLoader - BOOT.INI:
The file `BOOT.INI` contains the information on which partition Windows NT/2000/XP is installed. In this case the information concerns the position of the partition in the partitioning table of the master boot record. That means that the master boot record partition table and the file `BOOT.INI` from Windows NT/2000/XP have to be in agreement with one another.

The position in the master boot record partition table can be set in the boot image ("Positions in MBR").

The position in the `BOOT.INI` can be set as follows:

```
[boot loader]
default=multi(0)disk(0)rdisk(0)partition(1)\WINNT

[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINNT="Windows NT"
```

The information specified in "`partition(1)`" is decisive. If needed, all specifications entered have to be corrected! The specification for the first partition is the number 1.

Windows NT: Installation above 2 GB:
- To install above 2 GB, the partition has to be formated (FAT 16) with this program.
- IDE hard drives with 8 GB and larger are supported without any problems starting with Windows NT 4.0 - Service Pack 4 (SP4). Contributing to the solution is a new "Atapi.sys" driver. More information can be found on the Internet at:
  http://support.microsoft.com/support/kb/articles/q197/6/67.asp

Installation on 2nd harddisk:
To install from the 2nd hard drive, the power has to be **disconnected** to the 1st hard drive. After the installation of Windows NT/2000/XP is complete, the power is reactivated.

A small "boot partition" has to be created on the 1st hard drive. The size for this "boot partition" should be equal to the size of the named file or the "swap file."

Format (FAT 16) this partition with this program!

Then copy the files `NTLDR`, `NTDETECT.COM`, and `BOOT.INI` from the Windows NT/2000/XP partition to this "boot partition." The files have to have the attributes "`S`," "`H`," and "`R`".

The file `BOOT.INI` also has to list the 2nd harddisk in "`rdisk()`":

```
[boot loader]
default=multi(0)disk(0)rdisk(0)partition(1)\WINNT

[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINNT="Windows NT"
```

If necessary, all entered specifications have to be corrected! The entered specification for the first harddisk is a "0" (zero).

See also:
  Partition Types, # 8

  Problems (Overview), # 13
  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Linux, # 15
  Problems with Hardware, # 15
  Problems with Software, # 16

Problems with Linux

General:
  Linux can only be booted if the partition starts on a cylinder before cylinder 1024.

LILO Configuration - lilo.conf:
  The file `lilo.co` contains the information on which partition Linux is installed. This information refers to the position of the partition in the master boot record partition table. Thus, the master boot record partition table and the file lilo.conf from Linux have to be in agreement with one another.

  The position of the respective partition can be set in the boot image.

  The position of the file lilo.conf can be set as follows:

```
boot = /dev/hda1    ; IDE harddisk
boot = /dev/sda1    ; SCSI harddisk
```

  The specification `"hda1"` and/or `"sda1"` is decisive. If necessary, all entered specifications have to be corrected! The entered specification for the first partition is a "1".

See also:
  Partition Types, # 8

  Problems (Overview), # 13
  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Hardware, # 15
  Problems with Software, # 16

Problems with Hardware

ABIT **Controller:**

  Problem:
  • The partition tables contains errors

  Solution:
  • perhaps BIOS Update

SCSI Controller Adaptec 2940 Firmware Version 1.20-1.22:

Problem:
- The partition tables contains errors

Solution:
- Deactivate "`Interrupt 13 BIOS Extensions Support`" (Harddisks smaller than 8 GigaBytes)
- Firmware Update to version 1.23 or higher

IOMEGA ZIP Drives and Windows NT:

Problem:
Single error message "Drive not Ready" when starting the prorgam.

Solution:
Select "Ignore." (This prompt is based on a Windows NT bug.)

BIOS with Anti-Virus Options (Almost All BIOS):

Problem:
Warning after which a program tries to modify the master boot record. This is most likely a virus.

Solution:
This might be a message from an anti-virus program: The bootmanager BootStar modifies the master boot record. That is the reason why some anti-virus programs erroneously eport this as a virus. Please permit the modification because the harddisk partitioner *PartitionStar* can otherwise not be modify the partition table.

See also:
  Problems (Overview), # 13
  Problems with DOS / Windows 95/98/ME, # 13
  Problems with Windows NT/2000/XP, # 14
  Problems with Linux, # 15
  Problems with Software, # 16

Problems with Software

Bootmanager with Installation in the master boot record:

Problem:
The harddisk partitioner does not recognize the bootmanager. It thus cannot handle the "hidden" partitions correctly.

Solution:
Does not exist: You should utilize the harddisk partitioner *PartitionStar* if you have installed a bootmanager in the master boot record! (Exception: The bootmanager *BootStar*.)

Antivirus Programs:

Problem:
Warning after which a program tries to change the master boot record. This is most likely a virus.

Solution:
This might be a message from an antivirus program: The harddisk partitioner *PartitionStar* modifies the master boot record. That is the reason why some antivirus programs erroneously report this as a virus.

Norton AntiVirus:

Problem:
Norton AntiVirus reports a "Bloodhound.Boot" warning for the emergency disk.

Solution:
Not required: This message is just a warning about a potential virus and does not mean an actual virus has been detected.

See also:

Program

Menu "File"

Open Table

Program:
   Partition table / File / Open Table...
   Boot Image Table / File / Open Table...
   Extended partition table / File / Open Table...

You may load the content of a currently visible window (..., table, or opening message) from a previously created file.

If you load a partition table, the old partition table will be completely overwritten with the new one. In case you are loading an outdated or invalid partition table, you may use this feature to overwrite partitions.

An opening message text may be loaded from a normal ASCII file. The tables have to be loaded from a file previously created with this program.

See also:
   Save File, # 18

Save File

Program:
   Partition table / File / Save Table...
   Extended partition table / File / Save Table...

You may save the content of a currently visible window in a data file. These files should be stored on a floppy disk if possible so that continuous access is guaranteed even if you should encounter problems (with accessing the harddisk).

All files are saved in an ASCII file without any encoding. This means you might want to consider protecting them from any unauthorized access.

See also:
   Open Table, # 18
   Print, # 20

Copy Partition

Program:
   Partition table / File / Copy Partition...
   Extended partition table / File / Copy Partition...

You can copy the entire content of a currently selected partition to another partition. The content of the partition does not matter for the copying process. (For example, this will preserve the Windows 95/98/ME long file names.)

However, this function only works if the number of heads and sectors of the hard disk and the position

of the partition are identical on the hard disk. (Exception: FAT 12, FAT 16, or FAT 32 partitions. These can be copied as desired.)

If the selected target partition is larger than the source partition, the target partition is adjusted accordingly.

Open Master Boot Record

Program:
  File / Open Master Boot Record... / n[th] Harddisk

You may load the content of the master boot record in its entirety from a previously created binary file (*.bms). (This file should have been created during installation.)

In this case, you should make sure that the master boot record contains the bootstrap as well as the partition table and is written in its entirety from the partition table to the file of the master boot record. Loading an outdated or invalid partition table can result in the loss of partitions.

It rarely serves any purpose to load a master boot record. Should the restoration of the bootstrap be absolutely necessary, the following process might be helpful:
- Save partition table to file (*.bmt).
- Open master boot record.
- Open partition table from the file generated above (*.bmt).

See also:
  Save Master Boot Record, # 19
  Partition Table, # 22
  Open Table, # 18
  Save File, # 18
  Build Emergency Disk, # 19

Save Master Boot Record

Program:
  File / Save Master Boot Record... / n[th] Harddisk

You may save the entire master boot record to a binary file (*.bms). This file may later be used to restore the master boot record exactly as it has been saved.

See also:
  Open Master Boot Record, # 19
  Build Emergency Disk, # 19

Build Emergency Disk

Program:
  File / Build Emergency Disk...

You can create an emergency recovery disk, which will contain the following:
- FreeOS
- Program (DOS version)
- Master Boot Record as binary file (*.bms) for every hard disk

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- Partition table (*.bmt)
- Bootprofile table (*.bmi), only if BootStar is been installed

You may use this disk to restore your system if all or part of it has been destroyed (due to a technical error or by mistake).

Note:
It is not possible to create the emergency disk from the same drive used to start the program! (If necessary, please copy the program to another drive before building the emergency disk.)

The harddisk partitioner *PartitionStar* has no connection with FreeDOS. The harddisk partitioner *PartitionStar* does not use any function or functionality of FreeDOS. FreeDOS will be used only to make the emergency disk bootable.

FreeDOS is a completely independent and different program.

See also:
  Open Master Boot Record, # 19
  Save Master Boot Record, # 19

  Copyright, # 27
  Liability / Warranty, # 28

Print

Program:
  File / Print...

You can print out the actual partition table with additional detailed informations.

A completly overview of all partition tables can be printed by using the DOS program "PARTINFO.EXE" (attachted to this program).

See also:
  Open Master Boot Record, # 19
  Save Master Boot Record, # 19
  Build Emergency Disk, # 19

Menu "Edit"

Properties of partition

Program:
  Partition table / Edit / Properties...
  Extended partition table / Edit / Properties... / Selection

The following settings have to / can be made for each partition:

Size:
  Size of parition in MegaByte and in per cent

Start:

Beginning of partition

End:
  End of partition

Type:
  Pressing the button "Selection" offers a list from which to choose the partition type.

Name:
  Here you may indicate a name

Changing the ending information is only possible for FAT and expanded partitions. And then only if the corresponding space is available within the partition.

Before changing the size of a partition, you should - if possible - defragment the partition first. (Sorry, this program cannot offer a defragmentation function.)

See also:
  Partition Table, # 22
  Partition Types, # 8
  Select Partition Type, # 21

Select Partition Type

Program:
  Partition table / Edit / Properties... / Selection
  Extended partition table / Edit / Properties... / Selection

A list will offer different partition types. Select the one based on the file system to be used.

You may also select a partition type based on the operating system being used:
  Partition Types

See also:
  Properties of partition, # 20
  Partition Table, # 22
  Partition Types, # 8

Destroy

Programm:
  Partition table / Edit / Destroy...
  Extended partition table / Edit / Destroy...

You can destroy an existing partition. This overwrites all sectors of the partition on the hard disk directly. Exactly all existing datas will be overwritten and be setted to Null.

With this the enclosed datas will not be recovered by an hard disk editor.

See also:
  Remove, # 22
  Partition Table, # 22

Remove

Program:
  Partition table / Edit / Remove...
  Extended partition table / Edit / Remove...

You can remove an existing partition. This removes the reference pointing to this partition within the partition table. The used space on the hard disk is thus marked as "free".

However, the data contained within the partition are not deleted (overwritten).

See also:
  Destroy, # 21
  Partition Table, # 22

Formating

Program:
  Partition table / Edit / Format...
  Extended partition table / Edit / Format...

You can use this program to format a (n existing) partition. A selection of file systems is at your disposal for this purpose. This list contains only those file systems that can be formatted with this program.

If you would like to use a different file system, please utilize an external formatting program. Almost every operating system has such a program included.

Most of the setup programs of operating systems offer the opportunity to format a partition during the installation process as well.

See also:
  File Systems, # 6
  Properties of partition, # 20
  Partition Table, # 22

Menu "Windows"

Partition Table

Program:
  Windows / n^{th} Harddisk

This table displays all partitions of the harddisk.

You will see the following:
- Number (position) and name of the partition
- Active partition ("<A>")
- Start / end of the partition (only the cylinder specifications are indicated here. You will receive information that is more detailed if you edit the respective partition).
- Type of partition

See also:

Extended Partition Table

Program:
Partition table / Window / Extended Partition

You may edit the extended partition table the same way as the partition table.

If you would like to boot from a secondary partition, you have to activate that secondary partition within the extended partition table; then switch this extended partition from inactive to "active" in the partition table

Some operating systems do not support booting from secondary partitions at all or only if no primary partition is visible.

See also:

Menu "Help"

Registration

Program:
Help / Registration...

This menu item is only in the shareware version available!

Here you can type in your registration key, which you will receive after ordering.

This registration key always consists of an "User-ID" and a "Key."

All future installations performed with this program (EXE file) will be executable afterwards without any restrictions as well.

See also:

Command Line Options

Command Line Options (Overview)

All functions of this program may also be called from within "batch files" using so-called "command options." This is of special interest to companies that have to perform many installations.

Call:
```
PSDOS.EXE [/Hidden] [/File[:File]] [/MBR[:File][,HDDn]] [/ClearMBR[,HDDn]]
PSWin.exe [/Partition[:n[,HDDn][=tt]|:[NNN]-[s][,HDDn]|,HDDn]]
          [/Reboot[:Off]] [/Password:PPP] [/?]
```

/MBR
  Reinitializes the bootstrap in the master boot record, a default bootstrap will be generated.
  Return:
  "1," if successful.

/MBR:File
  Loads the master boot record.
  Return:
  "1," if successful.

/ClearMBR
  Deletes die MBR partition table(s).
  Return:
  "1," if successful.

/Partition
  Indicates the partition table.
  Return:
  Number of existing partitions.

/Partition:n
  Activates the "n"th partition.
  Return:
  "n," if partition exists.

/Partition:n=tt
  Changes the type of the "n"th partitons.
  tt is the type in hex
  Return:
  "n," if partition exists.

/Partition:n:s
  Loads the "n"th partition from "s"th partition.
  Return:
  "n," if successful.

/Partition:NNN-s
  Adds a new partition.
  NNN: Name of the partition
  s: Size in megabytes
  The "-" have to be given also the "s" is not present.
  Return:
  Count of partitions after adding the partition.

/Reboot
  Reboots the system (reset).

/Reboot:Off
  Turn off the system (requires "Advanced Power Management V1.2").
  Return:
  "0", if not successful.

/Password:PPP
  Permits calling the program and, if needed, creates a new password. This command might have to
  be issued first!
  PPP: Password for the bootmanager *BootStar*
  Return:
  "1", if incorrect password was indicated.

/Hidden
  Suppresses screen output.
  Return:
  None.

/File[:File]
  Reads commands from file. Details in the following section.
  Return:
  Taken over by last command or "0," if the file "file" was not found.

/?
  Displays this help.

The parameter ",[HDD]n" indicates the harddisk.

All entries start with "1" (e.g., 1st harddisk: ",HDD1"; 1st partition: "/partition:1").

The return value "0" (zero) always refers to an error (if not indicated otherwise).

See also:
  Script File, # 25
  Return Values Using Exitcode, # 26

Script File

An alternative to indicating all commands in a batch file is the "script file." More details about the
commands can be obtained in the section Command Options. Script files should have the extension
"*.scr." Within this file, all commands written in command option lines are indicated with "/."

Only one command may be written within one line. Commentaries start with ";"

If no file name is indicated, then the file PSDOS.SCR will be used.

The command "Hidden" should not be used in the script file, because output will not be suppressed
until this command has been called.

See also:
  Command Line Options (Overview), # 24
Return Values Using Exitcode, # 26

Return Values Using Exitcode

The return values within a batch file can be handled as follows:

```
COUNT.BAT:
PSDOS.EXE /partition
If Errorlevel 3 Goto LABEL3      ; The sequence must always
If Errorlevel 2 Goto LABEL2      ; view the highest Errorlevel
If Errorlevel 1 Goto LABEL1      ; first!

Echo INSTALL.BAT: No partitions exist!

:LABEL1
Echo INSTALL.BAT: One partition exists!
Goto END

:LABEL2
Echo INSTALL.BAT: Two partitions exists!
Goto END

:LABEL3
Echo INSTALL.BAT: Three or more partitions exist!
Goto END

:END
```

Additional information about batch programming is listed in the manual of the DOS operating system.

See also:
  Command Line Options (Overview), # 24
  Script File, # 25

<u>Others</u>

<u>Shareware (Restrictions)</u>

Notes for the shareware version:

You may test and evaluate this program free of charge and pass it along to other interested users as well (without any registration key). Proper and standard use, however, requires a registration of the program (buying the program).

Without a registration key, you can use the shareware version without any restrictions for 30 days.

One license is required for **each** computer using the harddisk partitioner *PartitionStar*! If several licenses are ordered, it is possible to obtain a key for all licenses.

See also:
  Registration, # 23
  Order, # 27
  Copyright, # 27
  Liability / Warranty, # 28

<u>Order</u>

Notes for the shareware version:

You can order the shareware version of this program by using the following ways:

1.   Using the online shop on the Internet.
2.   Using the enclosed order form "ORDER.TXT".

All other ordering details and prices can be found on the ordering form.

Updates of the shareware version may be downloaded from the Internet whenever they become available. Currently, all updates are free!

See also:
  Shareware (Restrictions), # 27
  Registration, # 23
  Copyright, # 27
  Liability / Warranty, # 28

<u>Updates</u>

Updates are very easy: Start the program of the new version.

See also:
  Order, # 27

<u>Copyright</u>

Copyright (C) of the harddisk partitioner *PartitionStar* rests with:

Copyright (C) 1997-2005 by Star-Tools GmbH

Postal Mail:
  Star-Tools GmbH
  Hopfenweg 207
  22851Norderstedt
  Germany

Internet:
  http://www.star-tools.com/

All listed trademarks are property of their respective owner(s)!

This program is delivered together with a limited version of FreeDOS. To be exact, it is possible to create a boot disk using this program together with FreeDOS. This program does not use any function or functionality of FreeDOS.

The copyright of this program has no connection with the copyright of FreeDOS. The rights of use of this program have no connection with the rights of use of FreeDOS.

FreeDOS is a completely independent and different program and is subject to the general rights of use and the General Public Licenses (GPL).

Source code to FreeDOS is available; either write to us for a copy of the kernel source code that we used, or visit http://www.freedos.org/ to download the latest version of FreeDOS!

See also:
  Frequently Asked Questions (FAQ), # 29
  Liability / Warranty, # 28
  Order, # 27

Liability / Warranty

If this program is used improperly, it may result in the **irretrievable destruction of all data on your harddisk**!

It is thus absolutely necessary to create a backup before using the harddisk partitioner *PartitionStar.* According to the ruling by the district court Konstanz 1 S 292/95 from May 10 1997, daily data backup is **reasonable** and can be **expected!**

Thus, any responsibility or liability for any losses or damages is not accepted!
UNDER NO CIRCUMSTANCES!

The purchase of this software is according to the BGB §494 (German Federal Legal Code) a "**trial purchase**". This means that the software can be evaluated **before** the actual purchase. The software is provided **as is** without warranty of any kind. Any rights for modifications or follow-up corrections **do not** exist.

Should you find any errors, please let our support staff know and we will try to correct the error within a few days.

Any bug notifications will be rewarded with a free registration key!

The harddisk partitioner *PartitionStar* is delivered together with a limited version of FreeDOS.

FreeDOS is a completely independent and different program. FreeDOS is
freeware and does not grant any warranty claims.

More about FreeDOS on the Internet at: http://www.freedos.org/

See also:
  Copyright, # 27
  Updates, # 27

Frequently Asked Questions (FAQ)

Does the harddisk partitioner *PartitionStar* support the operating systems / file systems XYZ?

  Yes, the harddisk partitioner *PartitionStar* functions independently from the operating or file systems!
  A few operating systems, however, have some limitations, which need to be observed when using the
  harddisk partitioner *PartitionStar*:
    Problems with DOS / Windows 95/98/ME, # 13
    Problems with Windows NT/2000/XP, # 14
    Problems with Linux, # 15

**Is it possible for the harddisk partitioner *PartitionStar* to manage the operating system(s) XYZ
together with the operating system(s) XYZ?**

  Yes, the harddisk partitioner *PartitionStar* can manage individual operating systems completely
  separate. Therefore, every individual operating system works with every other operating system.

Does the harddisk partitioner *PartitionStar* support the XYZ hardware?

  The harddisk partitioner *PartitionStar* basically supports **every** Hardware. However, some hardware
  products have inherent errors, which become noticeable when installing and using the harddisk
  partitioner *PartitionStar*:
    Problems with Hardware, # 15

**I have planned to do the following: XYZ. How can I realize this using the harddisk partitioner
PartitionStar?**

  We regret to inform you that we cannot supply individual installation and setup instructions.
  Please read the manual of your operating system. Additional problem solutions may be found on the
  following pages:
    Problems with DOS / Windows 95/98/ME, # 13
    Problems with Windows NT/2000/XP, # 14
    Problems with Linux, # 15

I have problems with the installation of the operating system(s) XYZ. Can you help me?

  We regret to inform you that we cannot supply individual installation and setup instructions.
  Please read the manual of your operating system. Additional problem solutions may be found on the
  following pages:

Problems with DOS / Windows 95/98/ME, # 13
Problems with Windows NT/2000/XP, # 14
Problems with Linux, # 15

I have tested the shareware version of the harddisk partitioner *PartitionStar* and now would like to purchase it. How do I do that?

Please use the order form included with the program. All price and delivery information is outlined in this order form.
As an alternative, you may use an online shop. You will receive your registration key faster that way.

How do I get updates of the harddisk partitioner *PartitionStar*?

Current updates of the harddisk partitioner *PartitionStar* are (only) obtainable via the Internet.

What is the cost of an update?

If you are using the shareware version, then the updates are currently free of charge. In all other cases, please consult your vendor/dealer.

I have lost my registration key for the shareware version. Can you send me my key again?

Unfortunately, we cannot offer this service because the cost would just about equal the cost of a new order.

History of Development

The following overview shows the development history of the harddisk partitioner *PartitionStar* :

All versions not listed here contain only very small error corrections or insignificant small changes. As long as you do not experience any system problems you do not need to update the program.

1.3x
Partition table can be printed

1.1x
Partition may be copied to other partitions

1.0x
First functional version. All function are transfered from the bootmanager *BootStar*

See also:
Updates, # 27