

Partition Recovery Software

Partition Table Doctor

User Guide

Version Number 3.5

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Introduction

Short View

Partition Table Doctor is the only real software for Harddisk partitions recovery when you experience a drive error (other than hardware failure). This versatile tool automatically checks and repairs the Master Boot Record, partition table, and the boot sector of the partition with an error, to recover the FAT16/FAT32/NTFS/NTFS5/EXT2/EXT3/SWAP partition on IDE/ATA/SATA/SCSI Harddisk drives. It can create an emergency floppy disk or a bootable CD to recover the bad partition even if your operating system fails to boot.

Summary Features:

- Backup Partition Table
- Restore Partition Table
- Rebuild Partition Table
- Fixboot

Additional Features:

- Check Partition
- Active Partition
- Hide Partition
- Surface Test
- Rebuild MBR (Master Boot Record)
- Edit Sector
- Copy Sector
- Undo Changes
- Browse Root

New Features:

- Browse Root (only support FAT12/ FAT16/ FAT32/ NTFS)
 - ✓ You can browse the root of the specified partition in main window.
 - ✓ You can browse the root of the searched partition in the Interactive Mode of Rebuild Partition Table.
 - ✓ You can browse the root of the partition before it is fixed by Fixboot function.
- Restore Partition Table - It can display a diagram of the backup partitions before you restore partition table from file.
- Rebuild Partition Table - A warning message will appear if one of the original partitions is lost, you can decide whether continue or not.
- Backup sectors - Now you can backup sectors to any disk.
- Partition Chart - Fixed the partition chart display problem: break bounds sometimes.
- Fixboot - Under the interactive mode of 'FIXBOOT', invalid characters cannot be accepted as file name or volume label.
- Surface test - When more than 10000 bad sectors have been found, 'surface test' will stop.

- Exchange the shortcut key between 'Rebuild Partition Table' and 'Contents'.
- Partition cutline bar has been added for identifying the file system by different colors.
- More creative and convenient Toolbar.
- Unlock Harddisk - The function has been removed.
- Create Emergency Disk - The function of DOS version has been removed

Notes for Using And Running

Partition Table Doctor is the only real software for Harddisk partitions recovery when you experience a drive error (other than hardware failure). This versatile tool automatically checks and repairs the Master Boot Record, partition table, and the boot sector of the partition with an error, to recover the FAT16/FAT32/NTFS/NTFS5/EXT2/EXT3/SWAP partition on IDE/ATA/SATA/SCSI Harddisk drives.

Partition Table Doctor managers under MS-DOS, FreeDOS, Windows 95/98/ME, Windows NT 4.0, Windows 2000, Windows XP and Windows 2003.

Besides starting Partition Table Doctor from the Windows Start menu, you can also start it from Windows Explorer or My Computer. It can create an emergency floppy disk or a bootable CD to recover the bad partition even if your operating system fails to boot.

When running, Partition Table Doctor will automatically check the Master Boot Record, partition table, and the boot sector of the partition. If the partition table on the Harddisk drive is damaged, Partition Table Doctor will ask you to rebuild partition table for partition recovery on the Harddisk drive. If the boot sector of one partition was damaged, the partition will be marked "X", you can right click the partition and choose "Fixboot" to fix the boot sector of the partition. More partition recovery information see "How to Recover Lost Partition By Partition Table Doctor" of the help file.

The partitions circumstantialities will be displayed using chart and tables. The cylinder diagram in the top displays all allocated partitions' position. The type and other detail parameters of partitions are listed in a table on the middle of screen. About the meanings of these parameters, please refer to "About Partition Table".

Before operating on a partition you must select it first. To select a partition, just click on the partition in the diagram or in the table. And also you can use Up or Down key for selecting.

In order to prevent mistakes, all operations except Restore sectors from file, Copy sectors, Fill sectors are not wrote to Harddisk immediately. They are saved in memory buffer instead. While complete and there are no errors, you can select "Save" from menu "General". Then Partition Table Doctor write all your operations to Harddisk one-off. On Windows, Partition Table Doctor gives you the option of undo changes. In the unlikely event you need to reverse the changes made by Partition Table Doctor, you can use the undo file to return your disk to the state it was in prior to the repairs.

Order

The information below helps you to order a full version of Partition Table Doctor.

The main page where you can get complete information on how to order a full version for Partition Table Doctor is on Order page at PTDD Group web site:

<http://www.ptdd.com/register.htm> .

Order page contains information on prices, payment terms, and delivery options.

Once we get authorisation of your purchase, we'll send a full version of Partition Table Doctor for you immediately.

Copyright

Internet:

<http://www.ptdd.com/>

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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!

FAQ

Ask: Will Partition Table Doctor run natively on my operating system?

Answer:

Partition Table Doctor runs natively on the following operating systems:

DOS Windows 95/98/ME Windows NT Windows 2000 Windows XP Windows 2003

Ask: How does Partition Table Doctor help me find lost partitions?

Answer:

Partition Table Doctor can recover FAT16 / FAT32 / NTFS / EXT2 / EXT3 / SWAP partitions. More partition recovery information see [How to recover lost partition](#).

Ask: Does Partition Table Doctor support all the hardware?

Answer:

Partition Table Doctor basically supports every type of Hardware. However, some hardware products have inherent errors, which become noticeable when using Partition Table Doctor. For more details see [Problems with Hardware](#).

Ask: Will Partition Table Doctor work on any size hard drive?

Answer:

Partition Table Doctor has been officially tested on drives up to 250 GB. However, users have not reported any problems when using Partition Table Doctor on drives larger than 250 GB.

Ask: Is it possible for Partition Table Doctor to manage one operating system(s) together with another operating system(s)?

Answer:

Yes, the Partition Table Doctor can manage individual operating systems completely separately. Therefore, every individual operating system works with every other operating system.

Ask: Will Partition Table Doctor run under Linux?

Answer:

Partition Table Doctor does not run natively under Linux. You can recover Linux partitions by running Partition Table Doctor from another operating system or from the Partition Table Doctor emergency diskettes or bootable CD.

Ask: I am unable to find lost partitions after "Rebuild MBR" with Partition Table Doctor.

Answer:

Rebuild MBR only rebuild "main boot code" in the master boot record. More partition recovery information see [How to recover lost partition](#).

Ask: How does "Undo Changes" work?

Answer:

On Windows, Partition Table Doctor gives you the option of undo changes. In the unlikely event you need to reverse the changes made by Partition Table Doctor, you can use the undo file to return your disk to the prior state. By default, Partition Table Doctor creates an undo file automatically when you have make changes (i.e. Save, Rebuild MBR, and Fixboot).

Ask: Cannot write to Harddisk under MS-DOS or FreeDOS.

Answer:

Go to BIOS setup and disable the "Anti Virus" or "Virus warning" option in "Advanced BIOS Features".

Ask: When I boot from Partition Table Doctor emergency diskettes, all the menu items display "null". How do you fix it?

Answer:

Partition Table Doctor basically supports every type of video card. However, some video cards have inherent errors, which become noticeable when using Partition Table Doctor.

Please follow these steps to fix it:

1. Go to BIOS Setup and enter "Advanced BIOS Features" and set "Gate A20 option" to [Normal], save and exit.
2. If the first step doesn't work and you have a USB mouse connected, please plug-in your PS2 mouse instead.
3. If the second step doesn't work, we recommend you change the VIDEO card and try again.
4. If the third step doesn't work, setup the Harddisk on another computer running Windows as slave Harddisk to recover partitions.

Ask: Size of Harddisk displayed by Partition Table Doctor is different from the real size of Harddisk.

Answer:

You can go to BIOS Setup and Run HDD IDE AUTO DETECTION to configure the Harddisk.

Ask: After running "Rebuild Partition Table", when rebooting I received message "Error loading operating system. Use startup disk and Mbr Doctor to rescue MBR, press any key to reboot".

Answer:

Computer motherboard BIOS could have inherent errors, which are incompatible with Partition Table Doctor.

Please follow these steps to solve the problem: 1. Enter CMOS, run IDE HDD AUTO DETECTION to configure the Harddisk, choose LBA mode. 2. If the first step doesn't work, boot from Partition Table Doctor emergency diskettes and close the program, type ptd /mbr.

For example:

ptd /mbr (default Harddisk1)
ptd /mbr hd2 (for Harddisk2)

Ask: I want to recover lost partitions on my external Harddisk drive, will Partition Table Doctor help me?

Answer:

Partition Table Doctor can recover lost partitions on external Harddisk drives.

Ask: Is tech support free?

Answer:

Yes! It's free for all.

Ask: I have more questions - who should I write to?

Answer:

Please send your additional questions to support@ptdd.com.

Ask: I have tested the Demo version of the Partition Table Doctor and now would like to purchase it. How do I do that?

Answer:

You can go to the online shop.

Ask: I want to purchase Partition Table Doctor, but I don't have a credit card.

Answer:

Purchasing Partition Table Doctor without a credit card, please see "Order".

Ask: How do I get updates of the Partition Table Doctor?

Answer:

Current updates of the Partition Table Doctor are (only) obtainable via the Internet. Currently, all updates are free!

Ask: I have lost my full version of Partition Table Doctor. Can you help me?

Answer:

Please email us at support@ptdd.com. Please include your name, address, email address, and order confirmation number (if you have it). We will be glad to help you.

Problem / Solution

Problem with Hardware:

Problem:

The BIOS cannot support Interrupt 13 Extensions

Solution:

For drives larger than 8.4 Gbytes, you will have to use "LBA" with LBA mode enabled. If system BIOS has an "LBA" setting, try that first. Otherwise obtain a new version of BIOS that supports the interrupt 13 extensions from the system or BIOS manufacturer.

Problem:

BIOS with Anti-Virus Options (Almost All BIOS)

Solution:

You should "Disable" the "Anti Virus" option in BIOS setup.

Problem:

Cannot write to Harddisk under pure MS-DOS or FreeDOS.

Solution:

You should "Disable" the "Anti Virus" option in BIOS setup.

Problem:

Size of Harddisk display by Partition Table Doctor is different from the real size of Harddisk.

Solution:

You should Setup BIOS and Run HDD IDE AUTO DETECTION to configure the Harddisk.

Problem:

Warning after the 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 Partition Table Doctor modifies the master boot record. That is the reason why some anti-virus programs erroneously report this as a virus. Please permit the modification if you want Partition Table Doctor modify the Partition table.

Problem with Software:

Problem:

Cannot allocate more memory. Program is too big to fit in memory.

Solution:

Restart computer and run Partition Table Doctor.

Problem:

Cannot use mouse under pure MS-DOS or FreeDOS.

Solution:

If you want to run Partition Table Doctor under MS-DOS using mouse, you'd better "Create Emergency Disk". Also you can run `ctmouse.exe` under pure MS-DOS before run Partition Table Doctor.

Program

Menu: General

Reload

Press “Ctrl+L” key or select “Reload” from “General” menu. Reload means restart Partition Table Doctor.

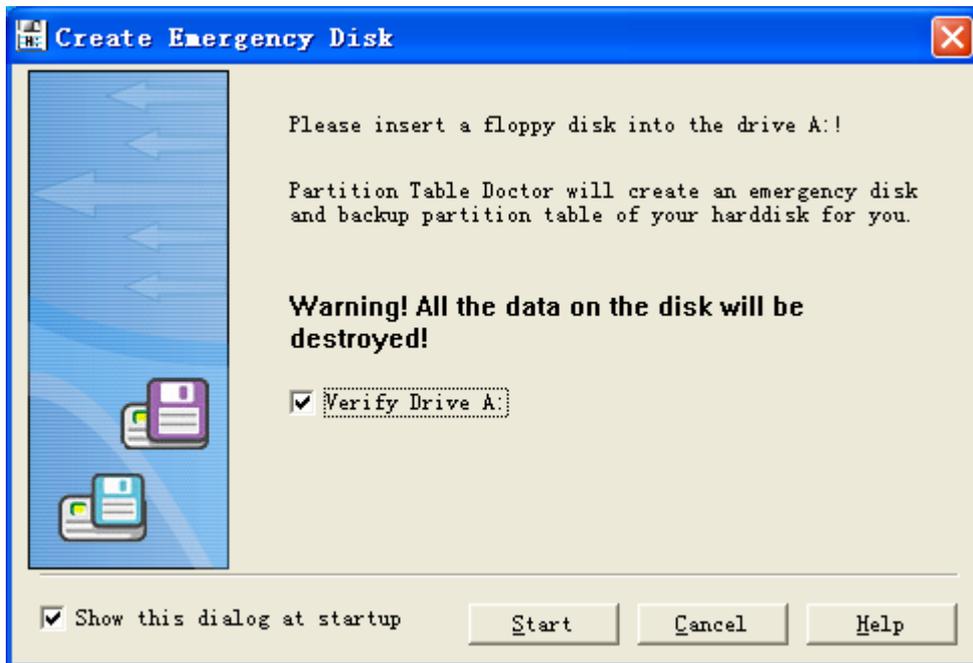
Reports

Press “Ctrl+P” key or select “Reports” from “General” menu. You should enter a file name for the reports of your Harddisk partition table. The report contains details of Harddisk information and Cylinder/Head/Sector parameters of each partition on one Harddisk.

Save

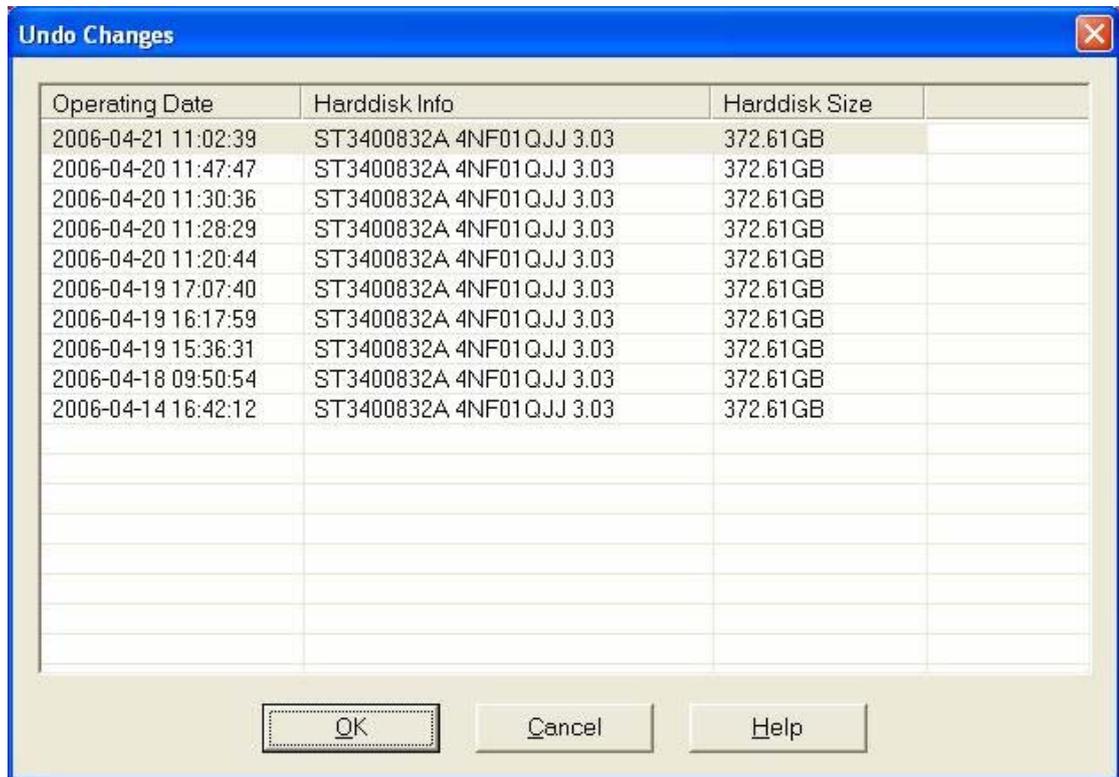
Press “Ctrl+S” key or select “Save” from “General” menu. In order to prevent mistakes, all operations except “restore file to sectors”, “copy sectors”, “fill sectors” are not wrote to Harddisk immediatly. They are saved in memory buffer instead. If you want to save modification, we recommend you should save modification before exit.

Create Emergency Disk



Select "Create Emergency Disk" from "General" menu and insert an empty 1.44M floppy disk in your floppy disk drive. After "Create Emergency Disk", setup BIOS and boot from the emergency floppy disk to recover partition. We recommend you should Create Emergency Disk when you first run Partition Table Doctor. The Emergency Disk contains partition tables of your Harddisks. Backup is better than recovery!

Undo Changes



On Windows, Partition Table Doctor gives you the option of undo changes. In the unlikely event you need to reverse the changes made by Partition Table Doctor, you can use the undo file to return your disk to the state it was in prior to the repairs. By default, Partition Table Doctor creates an undo file automatically when you have made changes (i.e. "Save", "Rebuild MBR", or "Fixboot").

Warning: If you are not satisfied with the results of the repair, click the "Undo Changes" menu immediately. You should not try to undo the changes if you have "Fill Sectors".

Exit

Press “Alt+F4” key or select “Exit” from “General” menu. If you have modified the partition table, Partition Table Doctor will automatically detect the modification, but we recommend you should save modification before exit if you want. After save modification, you should reboot computer immediately. If you run Partition Table Doctor under MS DOS or FreeDOS, Partition Table Doctor will reboot immediately, but if you run Partition Table Doctor under Windows 9X or Windows ME, you could choose Start->Close system to reboot computer immediately.

Menu:Partition

Edit Properties

	Cylinder	Head	Sector
	0-9728	0-254	1-63
Start CHS:	1275	0	1
End CHS:	1656	254	63

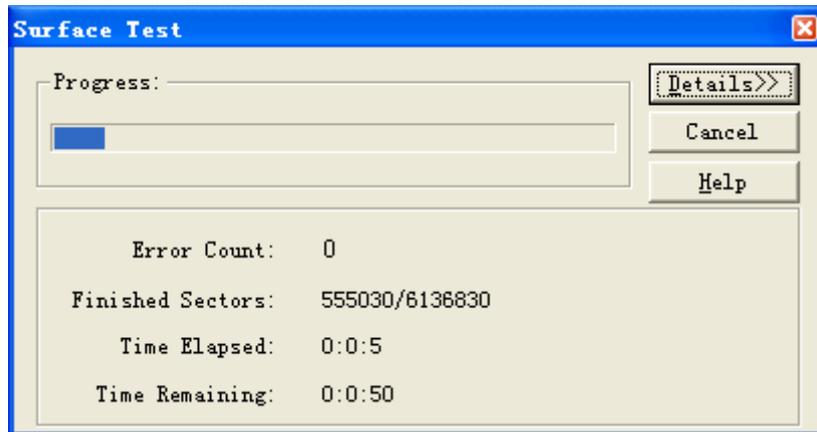
This function permits you to configure every parameter of the partition table. Right click the partition you want to configure and choose “Edit properties”. A configuration dialog will be displayed on screen. Select the parameter you want to change. Then type its value. Select “OK” to complete the change or “Cancel” to give up.

Note: This function can only change parameter of partition table but cannot resize the partition.

Check Properties

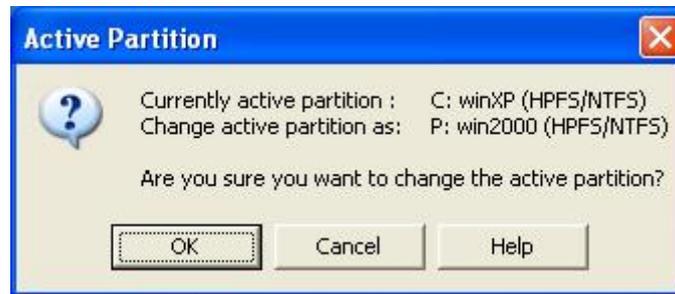
Partition Table Doctor will automatically check all parameters when loading or updating partition table. To check it manually, just press “F4” key or select “Check properties” from “Partition” menu.

Surface Test



This function is used for checking bad sectors on one partition. **It checks partitions not by "clusters" and doesn't label out the bad sectors on one partition.** Partition Table Doctor will check every sector and display when it found a bad sector. While complete, a bad sectors list file **surface.txt** will be created.

Active Partition



Right click the partition you want to active and choose “Active”. Only one Primary partition can be activated. To unactive one partition, right click the partition and choose “Set Inactive”.

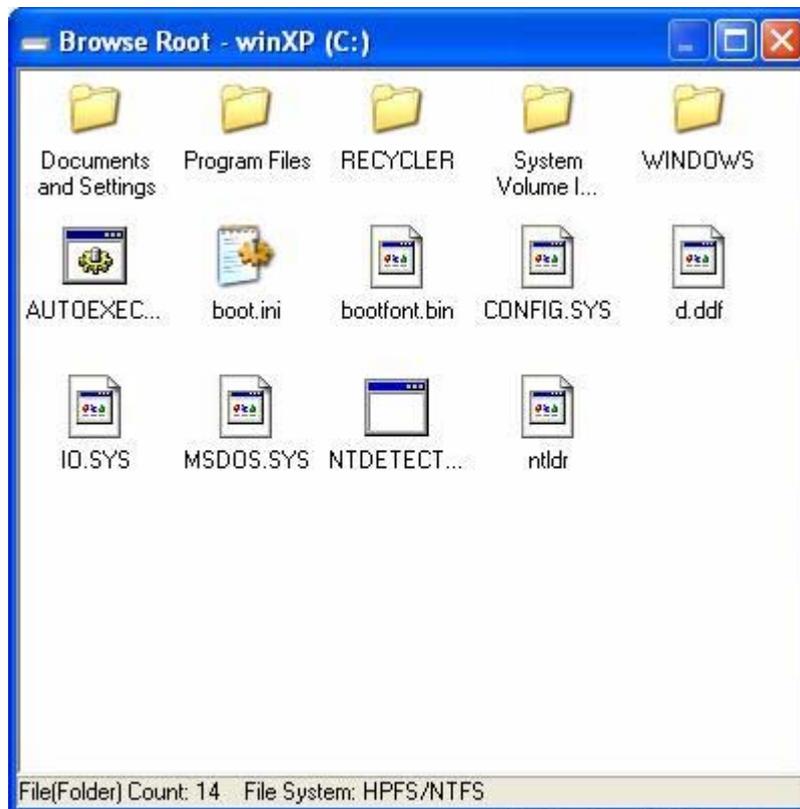
Hide Partition



Right click the partition you want to hide and choose “Hide”. To unhide it, right click the partition and choose “Unhide”.

Hide partition support **FAT16/FAT32/NTFS/Linux EXT2/Linux EXT3/Linux SWAP** file system.

Browse Root



Select **Browse Root** on the 'Partition' menu.

The function is used to preview the folders and files in the root directory on this partition, but not including subdirectory.

You can easily find the function button on the tool bar, on the **Partition** menu, and during the process of rebuilding partition table and fixing boot sector, you can also find it.

By this function, you can confirm if the partition you operate on is the one you want to fix or recover.

In partition list (main window and Rebuild Partition Table function), usually, if the partition can be previewed by Browse Root, then the partition can be recovered.

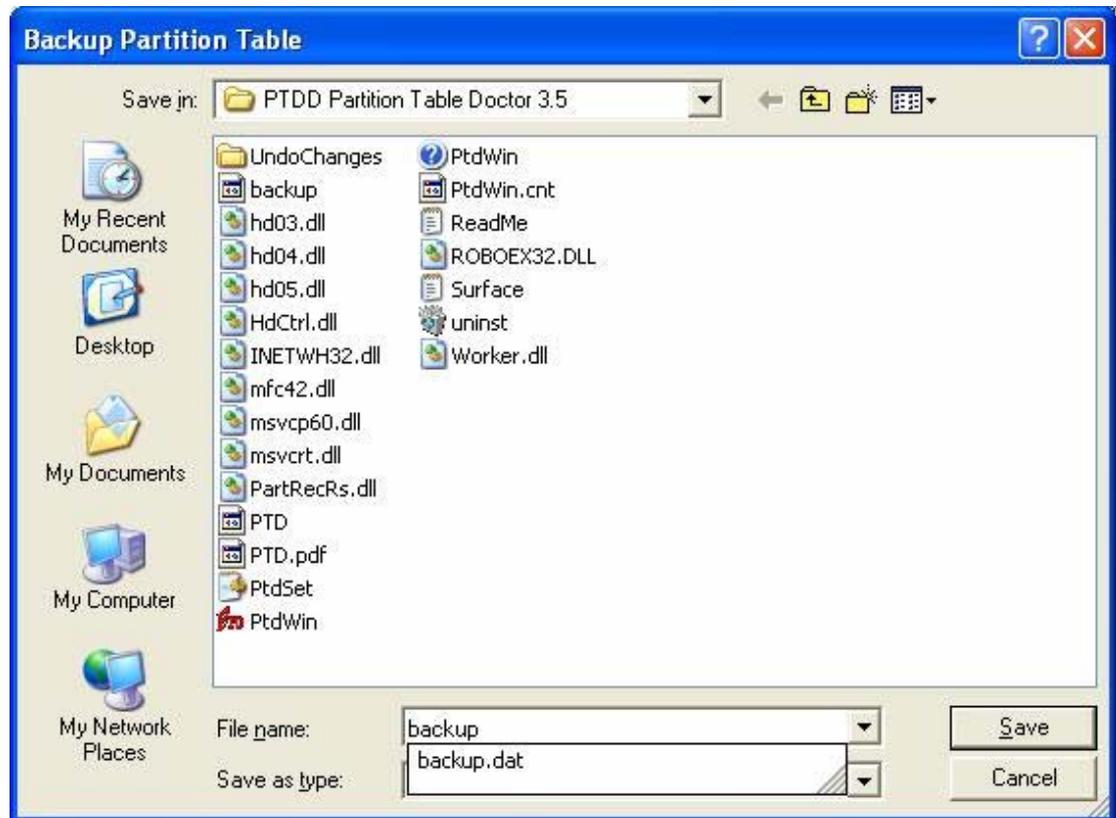
If the partition cannot be previewed by Browse Root, you can use Fixboot to fix the partition.

If the partition still cannot be accessed by Operating System, we recommend you use Data Recovery Wizard to recover your lost data.

Please visit <http://www.easeus.com/> for more information.

Menu: Operations

Backup Partition Table

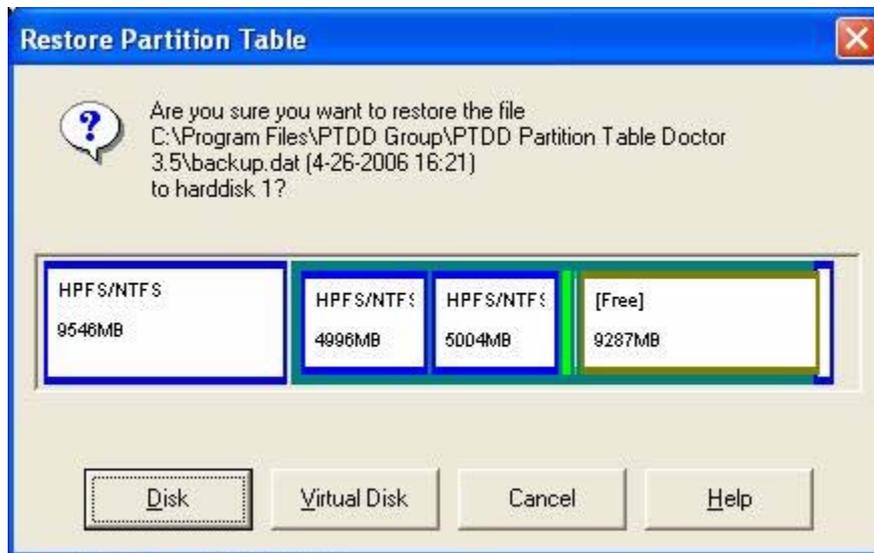


In order to backup the Harddisk partition table and boot sector of partition to a file, press "Shift+F1" key or select "Backup Partition Table" from the "Operations" menu, then enter the backup file name for saving. You can backup the file not only to the prime but also any Harddisks connected to this machine or removable disk drive. And we recommend you the latter.

If you have backup partition table and boot sector of partition to a file, when you meet Frequent Partition Error, you just restore partition table to recover partition table and boot sector of partitions.

Note: If you boot from Partition Table Doctor CD and want to backup partition table to floppy drive, you cannot backup it to drive A:, because the drive A: is virtual drive of CD, you can backup partition table to drive B:(i.e. b:\disk.dat).

Restore Partition Table



To restore the partition table and boot sector of partition from a backup file, press "F2" key or select "Restore partition table" from "Operations" menu, then enter the file name for restoring to the Harddisk. If you have not created backup file of partition table and boot sector of partition, you can use rebuild partition table to recover partitions automatically.

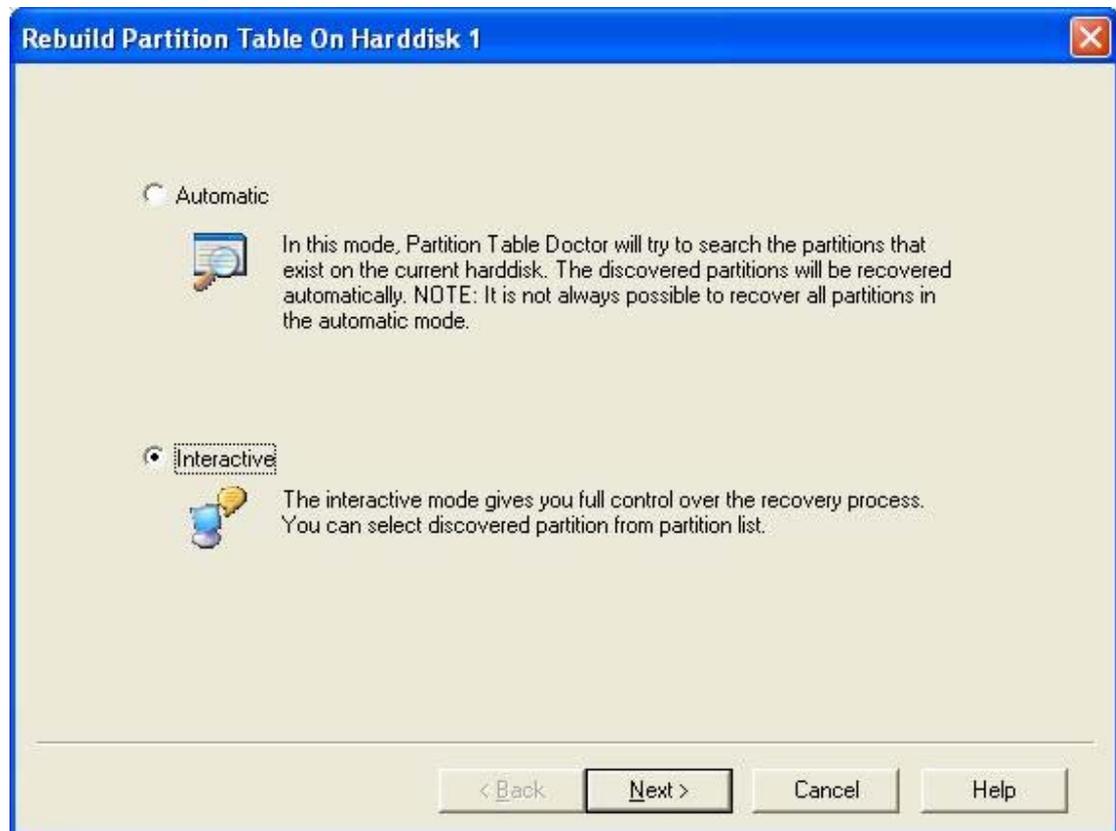
There are two choice: "Disk": restore file directly to Harddisk. **Warning: This operation could not be recovered under DOS.**

If you are not sure about your backup file, we recommend you choose "Virtual Disk" choice, this choice uses memory instead. You are able to confirm that the partition table is just what you want by the graphic mode displayed on the dialogue box of partitions information.

It is applied by pressing the "Ctrl+S" key or selecting "Save" from the "General" menu later-on. If you choose "Virtual Disk", boot sector of each partition will not be restored!

On Windows, Partition Table Doctor gives you the option of undo changes. In the unlikely event you need to reverse the changes made by Partition Table Doctor, you can use the undo file to return your disk to the state it was in prior to the repairs. By default, Partition Table Doctor creates an undo file automatically when you have make changes.

Rebuild Partition Table



Support System

FAT16	FAT32	NTFS
Linux EXT2	Linux EXT3	Linux SWAP

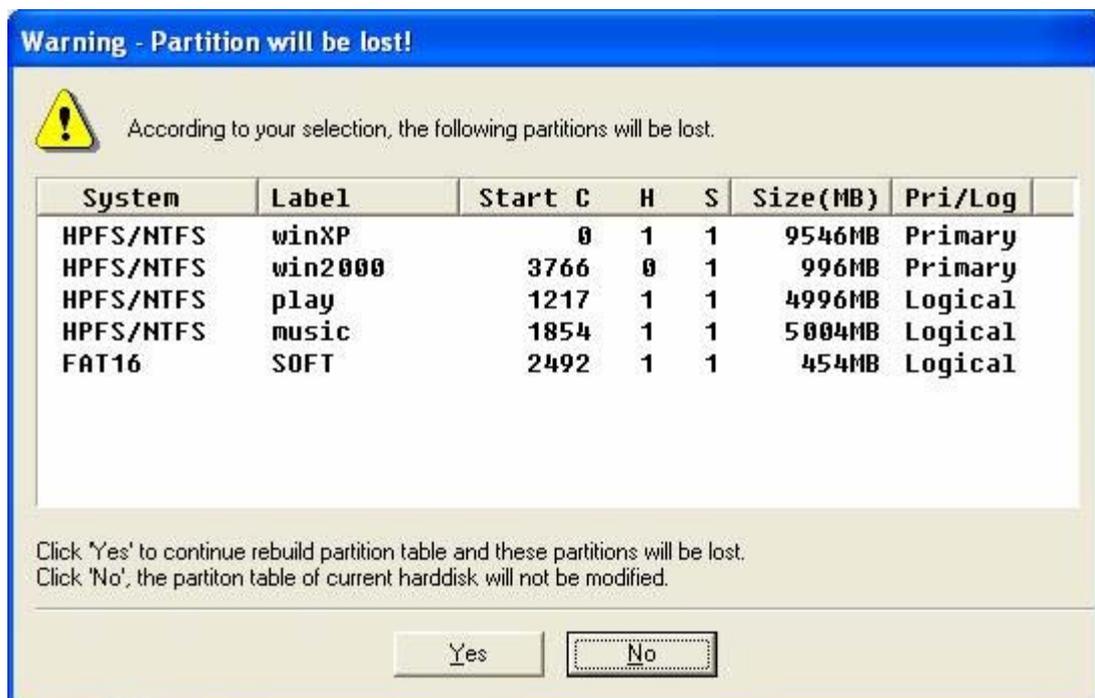
Most, if one FAT16/FAT32/NTFS partition was marked with “X” by Partition Table Doctor; that “X” indicates the boot sector of the partition is corrupt. We suggest using [Fixboot](#) in Partition Table Doctor.

If partition table was destroyed by virus or other defeat, "Rebuild Partition Table" can help you to recover partition. Searching process is able to run with "Auto" mode or "Interactive" mode.

Auto mode will automatically save every partition found without process control within search processing. The Auto Mode process is the same in most situations. The Interactive mode allows you to select each partition found in Partition Table Doctor manually. When rebuilding the partition table in Auto mode and errors occurring switch to the Interactive mode. Searched partitions will be displayed on screen in time sequence within search processing. During the Interactive mode, before choosing these detected partitions, ‘Browse’ option will provide you a preview of the

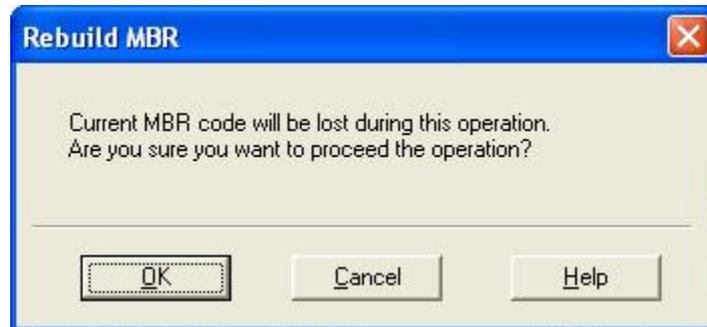
folders and files in the root directory on this partition for a more intuitional adjustment on it. If it appears the same as the previous one that means this function can fix it. Once you have chosen improperly partitions to recover that will lead to current partitions' loss, the dialogue box will prompt you which partitions will be lost and whether to continue.

Rebuilding the Partition Table uses more memory than writing to the Harddisk directly. You can search repeatedly until the partitions which you need has been found and apply by pressing the "Ctrl+S" key or selecting "Save" from the "General" menu later-on. The "Rebuild Partition Table" function item is located under the "Operations" menu.



Note: If you're sure that Partition Table Doctor has found all partitions, please save before exiting.

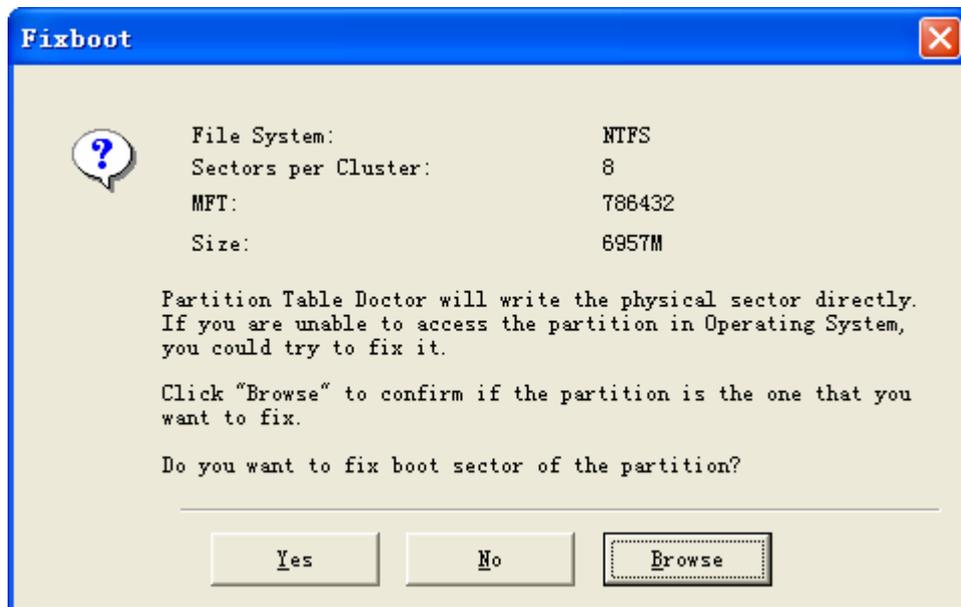
Rebuild MBR (Master Boot Record)



Select "Rebuild MBR" on "Operations" menu or press "F7" key. Use this function to manually rebuild the master boot code (located on cylinder 0, head 0 and sector 1) when it was destroyed and the computer couldn't boot from it.

Note: This function only rebuild "master boot code" in the master boot record. If you want to recover partition, you can use restore partition table or rebuild partition table.

Fixboot

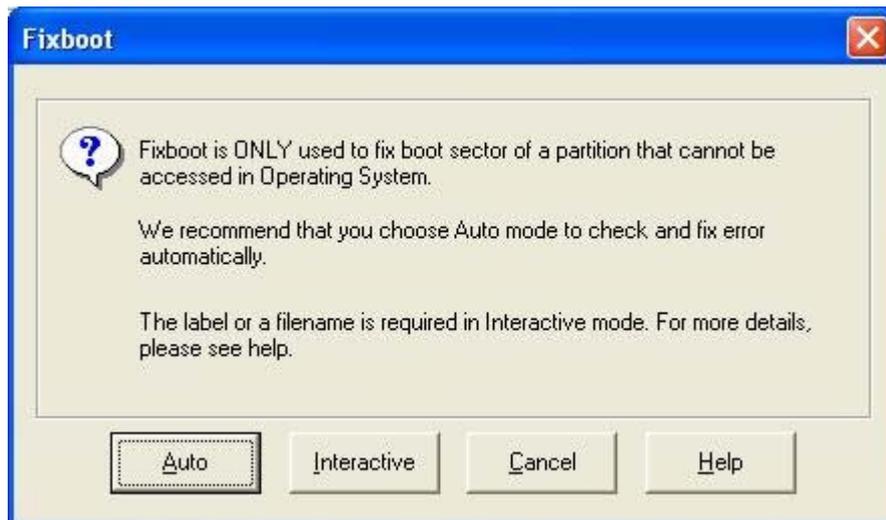


The partition's first sector is also known as the boot sector. What the MBR is for entire drive, that the boot sector is for an individual partition: like the MBR, the boot sector contains information that the system needs to locate the materials that are needed to start the operating system. A corrupt or missing boot sector is a serious problem. Without it the partition cannot be accessed.

Possible (but not all) symptoms are:

- Invalid media type reading drive
- Abort, Retry, Fail?
- File system is displayed as 'RAW'
- Windows may ask if you want to format the drive
- File names contain 'weird' characters
- 'Sector not found' messages

If boot sector of one FAT16/FAT32/NTFS partition was corrupt, it will be marked with "X" by Partition Table Doctor. If you cannot access the FAT16/NTFS partition and the partition was marked with "X", right click the partition and choose Fixboot. Partition Table Doctor will automatically check and repair the boot sector of the partition. If you cannot access the FAT32 partition and the partition was marked with "X", right click the partition and choose Fixboot. There are two choices:



“Auto” mode: Partition Table Doctor will automatically check and repair the boot sector of the partition. We recommend you choose this mode. If “Auto” mode doesn't work, you could choose 'Interactive' mode. You must input the Label for the partition or file name (the file is in the Root Folder).

If you do not know what file name to input, follow the file name that is suggested:

Bootable partition: **io.sys** **msdos.sys** **ntldr** **bootlog.txt**
Other partitions: **_restore** **recycled**

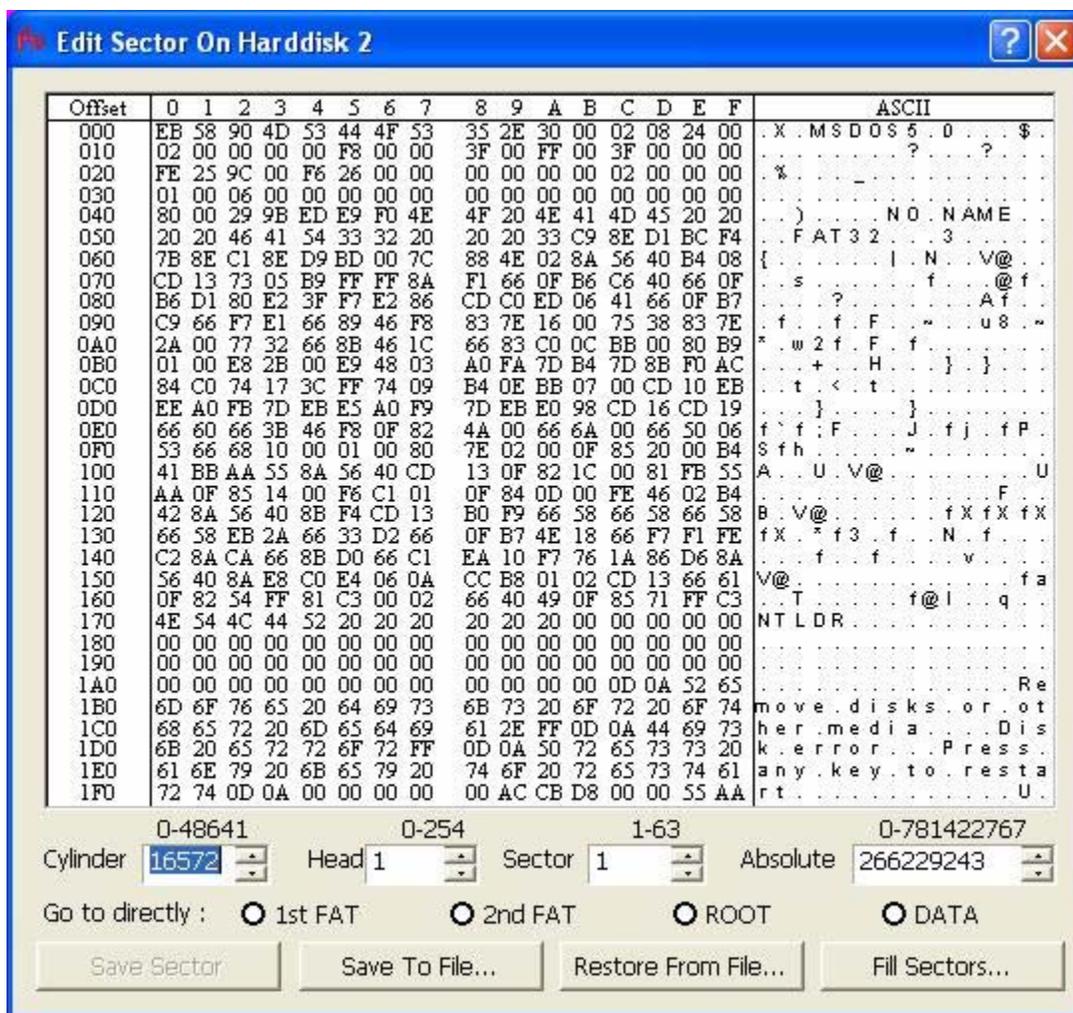
File name cannot support long name or wildcard character by DOS version of Partition Table Doctor.

Browse: In both of the modes, Partition Table Doctor will provide you a preview of the folders and files in the root directory on this partition before ‘Yes’ option being chosen to make the change valid on a dialogue box. If it appears the same as the previous one that means this function can fix it.

Note: For FAT16/FAT32 partition, fixboot is very good at repairing boot sector of partition. For NTFS partition, even if boot sector is correct but MFT (Main File Table) is corrupt, symptoms are the same. We recommend you download the demo version of Partition Table Doctor to check whether boot sector of partition was corrupt. Most, scandisk will destroy more than they retrieve. Please stop scandisk from starting at logon: Opening msconfig and then clicking advanced there was the option to disable scandisk after a bad shutdown.

Menu: Sector

Edit Sector



You can view and edit ANY sectors on your Harddisk by Partition Table Doctor. Press "Ctrl+F1" key or select "Edit Sector" from "Sector" menu, The "Edit sector" window will be displayed. **The first sector of current partition will be displayed by default.**

To view other sectors, just set the position of the sectors. Use mouse to move cursor to "Cylinder", or "Head", or "Sector" or "Absolute" field then enter a value. The sector pointed by the cylinder, head and sector will be displayed immediately. Using "Page Up" or "Page Down" keys, you can view other sectors forth and back. If you want to edit sector, press "Insert" key or use mouse to hit any position on current sector, then enter HEX value. **"Edit sector" doesn't directly edit sector on Harddisk(using memory instead)** . If you want to save modification on sector immediately, press "Ctrl+H" key or

select "Save Sector" to save modification on sector. Press "Esc" key or use mouse to move cursor to "Cylinder", or "Head", or "Sector" or "Absolute" field or buttons on "Edit sector" window to leave "Edit". If modification has occurred on current sector, the "Save to sector" dialog will be displayed, you can choose "Yes" or "No".

In addition, you can save some of the sectors started from current sector into a file. Enter start absolute sector and count, file name. Also you can restore file to sectors, just enter start absolute sector and count, file name.

For securely erasing (shredding) data, and also simply for filling disk sectors with zero bytes, just enter start absolute sector and count. This function can erase all data on one Harddisk. More information see Fill Sectors.

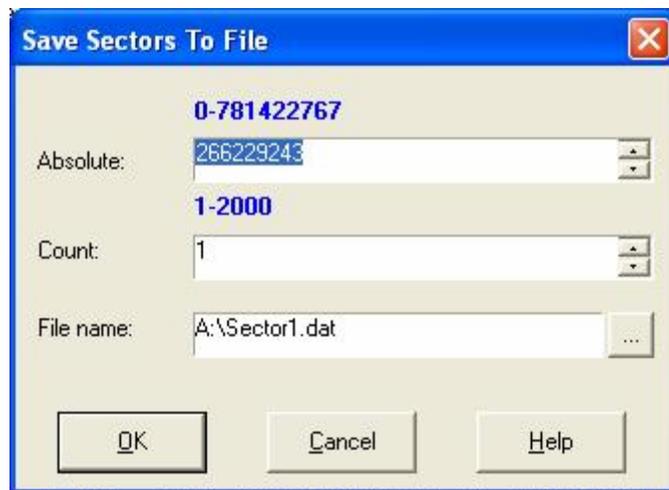
Save Sector

If you want to save modification on sector immediately, press “Ctrl+H” key or select “Save Sector” to save modification on sector.

This feature allows you to save the results of sector editing or to reject it.

If you have made changes in a Harddisk sector and decided to exit the editor without saving them, you will see a warning about the necessity of saving.

Save to File

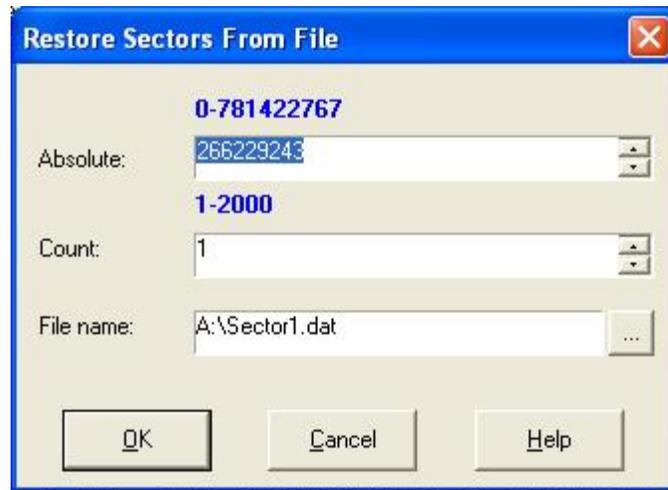


To save some of the sectors started from current sector into a file, click Save to File button.

The selection of “Save to file...” results in opening the Save Sectors To File window. In this window enter the start absolute sector and count, file name and its path or locate a file by clicking the “...” button. The maximum of count are **2000**.

To save a file click the OK button.

Restore Sectors From File



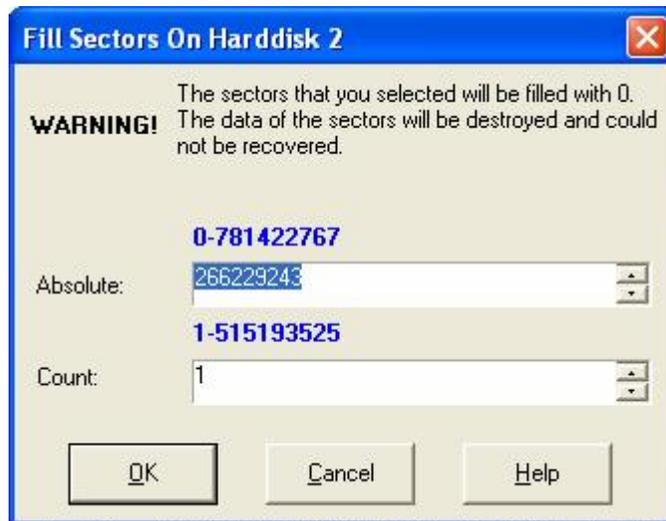
To read a block from a file and insert it to a disk sector you can click Restore From File button.

The selection of Restore From File results in opening the Restore Sectors From File window.

In this window enter the start absolute sector and count, file name and its path or locate a file by clicking the ... button. The maximum of count are **2000**.

To restore click the OK button.

Fill Sectors



"Fill sectors" is the best utility you need to securely erase all traces of your activity on computer. You can have many reasons for this, even if you didn't mind about it so far: computer is being rented and it will be returned possibly with your private information you don't want to disclose, you could donate your old computer, you could give your computer to friend for a while, your computer could be stolen or even seized, may be your company regularly inspects your workstation on weekends (or, may be parents?). In any such case the information, which can tell much about you personally and your activities, could be accessed by anyone else. You even deleted all data you have noticed could be sensitive, but it still could be there, on Harddisk, in the form of temporary files, as some strings in configuration files or in registry, and even in the form of magnetism of storage media you have surely forgotten about. Don't give anyone a chance to discredit you, please use "Fill sectors"!

Don't leave your secrets on your old HDD. Don't forget to erase your Emails, Internet History and Cache, Contact data, Financial data, Trade Secrets or just private files you want to get rid of.

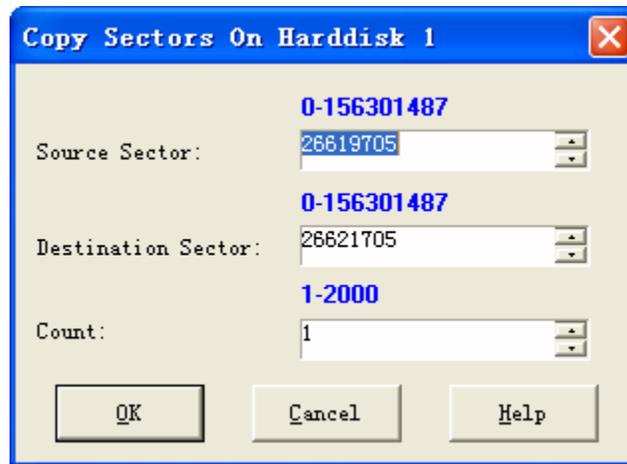
Just run "Fill sectors" and select area of your Harddisk: just enter start absolute sector and count and start the wiping process. You can feel certain that all personal information is eliminated. When specified, "Fill Sectors" erases all data including partitions, folders, directories, files, file tables and master boot record information. It erases all viruses including master boot sector viruses.

If you want to securely erase your all data on you Harddisk, just enter absolute with zero and count with the maximum of number sectors(see Count: 1--XXXXXXX) of your Harddisk.

It's easy, quick and safe.

- Windows Version: Can wipe sectors on none-system disk drive only.
- DOS Version: Can only run pure MS-DOS environment.

Copy Sector



This function can copy some sectors to another position on one Harddisk. For example, you may copy the backup boot sectors of a FAT32 partition to the destroyed boot records for recovering. To copy, you must enter source and destination position sectors and the number of sectors that wants to be copied. The maximum of number sectors are **2000**.

Menu:View

Harddisk Parameters

This function displays: model, serial number, size (GB), cylinder, head, sector of current Harddisk.

Dec (Hex)

For convenience, the parameters for Partition Table Doctor display partition table in decimal numbers by default. The menu item **Dec (Hex)** under **View** menu is used for conversing between hex and decimal display.

Others

Frequent Partition Error

SYMPTOMS:

When we try to boot after hardware testing procedures, we'll see just blank screen without any messages.

Solution:

Please run Partition Table Doctor, it can automatically check and repair partition table error.

SYMPTOMS:

Not found any Active Partition in HDD

Solution:

Please run Partition Table Doctor, and it will report some messages as follows:

ERROR: No Active Primary partition on Harddisk1.

Do you want set Active primary partition on Harddisk1?

Please click 'Yes' button to solve this problem.

SYMPTOMS:

DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER

Solution:

Please run Partition Table Doctor, and it will report some messages as follows:

ERROR: No Active Primary partition on Harddisk1.

Do you want set Active primary partition on Harddisk1?

Please click 'Yes' button to solve this problem.

SYMPTOMS:

Invalid partition table

Solution:

Please run Partition Table Doctor, and it will report some messages as follows:

ERROR: Invalid Boot Indicator of primary partitions on Harddisk1.

Do you want correct the error?

Please click 'Yes' button to solve this problem.

SYMPTOMS:

Missing operating system

Solution:

Please run Partition Table Doctor, and it will report some messages as follows:

ERROR: Partition 1 on Harddisk1 Absolute start sector is 16191.

The right start sector is 63.

Do you want correct the error?

Please click 'Yes' button to solve this problem.

SYMPTOMS:

Boot infection or Boot virus

Solution:

Please run Partition Table Doctor, and choose 'Rebuild MBR' function on 'Operations' menu. More details see 'Rebuild MBR'.

SYMPTOMS:

Invalid Drive Specification messages. We want to find my lost partition.

Solution:

Please run Partition Table Doctor, and choose 'Rebuild Partition Table' function on 'Operations' menu. More detail sees 'Rebuild Partition Table'.

SYMPTOMS:

- Invalid media type reading drive
Abort, Retry, Fail?
- File system is displayed as RAW
- Windows may ask if you want to format the drive
- File names contain weird characters
- Sector Not Found messages

Solution:

Please run Partition Table Doctor, and choose 'Fixboot' function on 'Operations' menu. More detail sees 'Fixboot'.

How to Recover Lost Partition

Mostly, Partition Table Doctor will help you recover partition except for physical damage, or Harddisk failure or other storage medium failure.

Mostly, scandisk will destroy more than they retrieve. Please stop scandisk from starting at logon:

Opening msconfig and then clicking advanced there was the option to disable scandisk after a bad shutdown.

Partition was recognized by system depend on partition table and boot sector of partition. For more partition table details see "About Partition Table ". If partition table or boot sector of partition was destroyed by virus or deleted accidentally, you will not see partition you need. But the partition was not really lost.

If you know more knowledge about partition table and boot sector of partition, you could manually use "Edit sector" to recover partition.

Of course, Partition Table Doctor will automatically check & repair partition table or boot sector of partition error to recover partitions.

MBR And Partition Table Error:

SYMPTOMS:

- When we try to boot after hardware testing procedures, we see just blank screen without any messages
- Not found any [active partition] in HDD
- DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER
- Invalid partition table
- 'Invalid Drive Specification' messages - Partition deleted by FDISK or PartitionMagic or Super Fdisk

Partition Table Doctor will automatically repair most of partition table errors; also you can use Rebuild Partition Table.

Boot Sector of Partition Error:

SYMPTOMS:

- Missing Operating System
- Invalid media type reading drive
- Abort, Retry, Fail?
- File system is displayed as 'RAW'
- Windows may ask if you want to format the drive

- File names contain 'weird' characters
- 'Sector not found' messages

If boot sector of one FAT16/FAT32/NTFS partition was corrupt, it will be marked with “X” by Partition Table Doctor.

Fixboot is very good at repairing boot sector of partition.

‘Reboot computer and you will find everything is back as if nothing had happened’

At last, go into Windows Explorer and copy your data from the repaired drive to the working drive.

How to Recover Lost Partitions From External Harddisk Drive

1. Setup the External Harddisk on the computer.
2. Run Partition Table Doctor to recover lost partitions .

How to Create Bootable CD

Turn all of your bootable floppies into bootable CD's [the easy way]

A. You need a Cd-Burner, Nero Burning ROM v5.5 or higher

1. Load up Nero Burning ROM, select Recorder->Burn Image->choose File Ptd.iso.
2. In the Burn option, choose "Determine maximum speed" and "Write", then Burn.
3. Done

B. You need a Cd-Burner, Roxio Easy CD Creator

1. Put the blank CD in your drive
2. Start Easy CD Creator
3. Select "File", "Record CD from CD Image...."
4. From the browse window that comes up, select the type of file, then browse for the image file, When found, select it, select "Open".
5. Answer any dialog box that appears.
6. Select "Start Recording".
7. Done

If you have not A CD-Burner or Nero Burning ROM or Roxio Easy CD Creator, please buy the Bootable CD of Partition Table Doctor. Please be aware of adding a CD-ROM.

Boot from the Recovery CD and get partition back!

Please note that if you cannot boot from the bootable CD, please use another CD-ROM to boot or use another CDR (CD-RW) disk to burn the bootable CD, because some CD-ROM or CDR (CD-RW) disk have inherent errors.

About Partition Table

Partition is a piece of disk space marked to belong to some operating system. Partition table is located in the first sector (**cylinder 0, head 0 and sector 1**) of each Harddisk. It has information about sizes and locations of partitions on Harddisk. The partition information is started on offset **1BEH** of master boot sector. Each partition entry is 16 bytes long. The total partition table is **64 bytes long**. Then partition table is limited to **maximum 4 entries**. That's, there are maximum 4 partitions, called primary partition, can be created on Harddisk.

But many people want to create more than 4 partitions. The extended partition is designed for this. Master extended partition is a primary partition. Differing from other partitions, the first sector of extended partition is not a boot sector, but another partition table, called logical partition table.

Commonly, there are only two partition entries in logical partition table. One points to a partition, called logical partition. And the boundary of this logical partition must be limited in the extended partition. The other entry, if needed, of the extended partition table points to next logical partition table. Similarly, its boundary is limited in its parents extended partition. The next logical partition table may have two partition entries too. The one points to a logical partition. The other points to another logical partition table and the rest may be deduced by analogy. Therefore, many partitions could be created in extended partition.

Now let us have a look at the layout of a partition entry.

The 16 bytes of one entry are as follows:

OFFSET	BYTE	DESCRIPTION
0	1	Boot label. Tell computer to boot from this partition
1	1	Starting head
2	1	Lower 6 bits (bit 0 to bit 5) is starting sector. Higher 2 bits (bit 6 to bit 7) is the higher bits of starting cylinder
3	1	The lower 8 bits of starting cylinder
4	1	Partition type
5	1	Ending head
6	1	Lower 6 bits (bit 0 to bit 5) is ending sector. Higher 2 bits (bit 6 to bit 7) is the higher bits of ending cylinder
7	1	The lower 8 bits of ending cylinder
8	4	Leading sectors of this partition
12	4	Number of sectors of this partition

- (a) Boot label (offset 0): Most disks have one primary partition, but some people want to have more than one operating system on their computers, therefore, they have to create other primary partitions. In order to tell the computer which operating system is ready to boot from, one "Active" partition is needed. That's why partition table always keeps an indicator of the currently "Active" partition - the one from which the computer boots. In Partition Table Doctor or Super Fdisk, the active partition is figured out by "Active" with "Yes".

- (b) Starting position (offset 1-3): Describes the partition's starting position, the cylinder, the head and the sector. Also called starting CHS. starting head = (OFFSET 1) starting sector = (OFFSET 2) & 0x3f starting cylinder = (((OFFSET 2) & 0xc0)<<2)|(OFFSET 3)
- (c) Partition type (offset 4): Indicate what file system is in the partition. For example, 06 or 0E indicates a FAT file system. 0B or 0C indicates a FAT32 file system. 07 indicates NTFS or OS/2 HPFS file system.
- (d) Ending position (offset 5-7): Describes the partition's ending position, the cylinder, the head and the sector. Also called ending CHS.
- (e) Leading sectors (offset 8-11): The number of sectors before this partition. If we count all sectors on Harddisk sequentially from zero, this field will exactly point to the first sector of this partition.
- (f) Number of sectors (offset 12-15): The total number of sectors on this partition. So the size of this partition will be (Number of sectors)*512/1048576 MB.

Updates

Any updates will be informed at your registered email.

Current updates of the Partition Table Doctor are (only) obtainable via the Internet.
Currently, all updates are free!

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Command Options

Use this function to manually rebuild the master boot record (located on cylinder 0, head 0 and sector 1) when it was destroyed and the computer couldn't boot from it. Partition Table Doctor will check and rebuild the MBR automatically.

For example: `ptd /mbr` (default Harddisk1)
`ptd /mbr hd2` (for Harddisk2)

Change Harddisk

Use mouse to hit the Disk drop-down list on the Toolbar, and choose Harddisk you want. Also press “Tab” key between the Disk drop-down list and table, Press “Enter” key and then Press “Up” or “Down” key to choose Harddisk you want. Partition Table Doctor supports four Harddisks.

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 Partition Table Doctor. 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 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 full version of Partition Table Doctor!

The Partition Table Doctor 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/>

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