

Installing Windows 95/98 on a new empty hard disk.

To install Windows on a new computer with an empty hard disk the following steps are required:

1. [Create a boot floppy](#)
2. [Partition the disk](#)
3. [Format the disk](#)
4. [Copy Windows Setup files to the hard disk](#)
5. [Run the Windows setup program](#)

If Windows is to be installed onto a brand new hard disk which has never before been used, then hard disk must be properly prepared before it can be used.

Creating the Boot Floppy

Because a computer with an empty hard disk will not boot up (as there is no operating system on the hard disk), before you can begin to install Windows 95 or Windows 98 on a empty machine you will need to create a special boot floppy that can be used to start up the new computer.

You must create this disk on another working Window 95 or Windows 98 computer.

This disk can be created by the following four steps.

1. [Start an MSDOS window](#)
2. [Create a boot floppy](#)
3. [Copy utility files to the floppy](#)
4. [Set up the floppy to load the CDROM device driver](#)

1) Start a MS-DOS Window

To start an MSDOS window Choose MS-DOS prompt from the start menu or choose 'RUN' from the start menu and then enter the filename 'command' as the program to be run.

2) Creating a boot floppy:

A bootable floppy disk can created from the MS-DOS prompt by either of the following two commands:

- Sys a: (This command will add system files to a floppy without destroying existing data)
- Format a:/s (This command will wipe out any data already on the floppy disk.)

3) Copy the Utility Files.

The following MSDOS utility programs will be needed and must be copied onto the disk.

As a minimum you should have at least:

- Fdisk.exe
- Format.com

- Edit.com
- Edit.dat
- mscdex.exe.

These utility files can be usually be found in the c:\windows\command folder on the hard disk of any windows 95/98 computer. It is important to note however that you should only use the utility files from the same computer that you used to make up the boot disks. Utility files from other version of the same operating system may not work.

These files can be copied with the MSDOS commands

```
Copy c:\windows\command\fdisk.exe a:\*.*
```

```
Copy c:\windows\command\format.com a:\*.*
```

```
Copy c:\windows\command\edit.com a:\*.*
```

```
Copy c:\windows\command\edit.hlp a:\*.*
```

```
Copy c:\windows\command\mscdex.exe a:\*.*
```

4) Load The CDROM device driver

The boot disk will need a device driver file that matches your CD-ROM. These files can be different for each make and model of CD-ROM. However usually modern CD-ROMs can work with any ATAPI standard driver. If you did not get a device driver file with your CD-ROM you can usually get a compatible one from another machine.

The name of the CDROM device driver can vary. However they will always have the file extension .SYS. for example NECIDE.SYS or ATAPI_CD.SYS

If this file was found on the root disk of a machine for example it could be copied to the floppy disk with the command

```
Copy c:\ATAPI_CD.SYS a:\
```

To enable the CD-ROM you must load the device driver for the CDROM and then run the Microsoft CD ROM extension patch 'MSCDEX.EXE'.

To do this create a text file called 'Config.sys' in the root folder of the floppy disk by typing in the command :

```
Edit a:\config.sys
```

Enter a line to load the device driver in the editor. This line will look like:

```
Device=ATAPI_CD.SYS/D:CD01
```

The /D does not refer to disk d:, it is simply a label that will be used to link the device driver to the MSCDEX command.

Save this file to disk and then reboot the machine with the floppy disk in the drive You must still however type in the following command to make the CD-ROM available after the machine starts up.

MSCDEX/D:CD01

Note that the label that you supply to the MSCDEX program must be the same as the label that you specified to the device driver in the config.sys file.

Note that the above command 'MSCDEX/D:CD01' could be entered into a text file called 'AUTOEXEC.BAT' if you do this then the command will execute automatically each time the computer reboots.

Partitioning the disk

As part of the process of [preparing a disk for use](#), a hard disk can be divided up into anything from one to four logical hard disk partitions. However even if a hard disk is to be used as a single logical hard disk it must still be partitioned before it can be used. The act of partitioning creates the partition table. A hard disk cannot be used unless it contains a partition table. This partition table tells the BIOS how the disk should be divided up and where it should load the operating system from.

The FDISK program can be used to partition a disk. After booting up the computer with your boot floppy disk run the fdisk program this can be done by typing in the command 'FDISK'.

If you have used Windows98 or a later version of Windows 95 to make up your boot disk you will be asked if you want to enable large disk support. If you answer 'yes' to this question then any partition that you create will be of type FAT32 if you answer 'no' then any partition that you create will be of type FAT16. [FAT 16 and FAT32 systems](#) each have different benefits under different circumstances. It is important to note that at this stage the partitions are marked as being of one or another, the file system is not actually laid out until the partition is formatted.

Choose to create your partition by selection from the menu. If you wish to have your entire disk work as a single partition then you must ensure to make that disk a partition a primary DOS partition. You must also use the menu to ensure that the partition that you wish to boot from is marked as **'active'**. Note however that IF you choose to use the whole hard disk as a single partition then the FDISK program will automatically mark that partition as active.

After quitting from the FDISK program it is important that you **reboot the machine** before continuing.

Formatting the disk

When the machine restarts you must format the new hard disk partition before it can be used. This can be done by typing in the command 'FORMAT c:/s'. Note that this task will take some time to complete. The /S qualifier used in this command also puts the operating system onto the hard disk after it has been formatted.

Copying Windows Setup Files to the Local Hard Disk

Windows 95 and 98 are best installed from the hard disk rather than from CD-ROM. This will save users having to search for the installation CDROM if they make minor changes to the configuration of the computer. To do this insert the WINDOWS CD-ROM into the CDROM driver and then type in the following commands:

MD WIN95

CD WIN95

COPY D:\WIN95*.*

If you are using Windows 98 rather than Windows 95 simply substitute the numbers 98 for 95 in the above example.

Running the Windows Setup Program

To begin installing Windows 95/98 run the setup program by typing in the command

C:\win95\setup for Windows 95 or

C:\win98\setup for Windows 98.

Windows will take over the installation from this point and prompt for all necessary inputs.