

# Know How

## Reinstalling Windows 98

Windows not running like it used to, or not at all? Learn to start all over again by reinstalling your operating system. Tremayne Sargeant gives you a guided tour.

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### Know How Reinstalling Windows 98

At one stage or another, you may find that your copy of Windows may not run like it used to. It may feel a bit sluggish, or take a little longer doing the things you normally do with it. This happens over time, as the process of installing and uninstalling applications fills up the hard disk. The end result is a cluttered operating system with plenty of old files and applications that just aren't used anymore. So how do you return Windows to its original splendour? You could attempt the laborious process of fixing each file one by one, but this just isn't practical. Sometimes it's worth taking drastic measures - yes, this means reinstalling your operating system (OS).

Unfortunately many end users have a deep rooted fear of reinstalling an OS, or for that matter just playing around with anything apart from the applications that they're accustomed to. This form of techno phobia usually ends up with the user spending anywhere from \$50 to \$180 getting a 'specialist' to take the

machine away for a day or two and work their 'magic' on it - or in other words you pay someone else to format your machine and reinstall the operating system.

Reinstalling an OS can be broken down into several easy to follow steps, and like any task, before you



begin you should prepare yourself - have everything at hand before you start, and more

importantly, make sure you have all the correct tools for the job.

Probably the most important tool needed for this job, aside from the Windows CD, is the boot disk. A boot disk is just a 3.5in floppy disk - it contains the files needed to start (or boot) the machine into the command interpreter (command.com), or more commonly known as the MS-DOS command prompt. Unfortunately just having command.com on the disk isn't enough - you will need a few support files

for example; format.com, fdisk.exe, himem.sys, vide-cdd.sys (or similar), mscdex.exe, sys.com and the list goes on, but these will all be explained later on.

Secondly you will need all the Windows hardware drivers such as those for your video and sound cards. These are normally supplied with your hardware and you will need to read the installation documents to find out how to install them correctly - if you have misplaced the drivers, most companies supply them on their Web sites.

### Simple steps: The back up

The first step of the process is very important - backing up your files. Double check that you have everything, and once it is done I suggest an 'idiot check', (it is known as this for one reason - the way you feel if you do lose any files after a format.) The check is just to make sure you have absolutely everything and it's definitely a case of 'you can NEVER be too careful.' One common question that comes up when talking about backing up information is 'what do I back up and what do I leave?' The simple answer: you



back up any files you have created, documents, spreadsheets, graphics, sound files - anything you have spent time working on. You don't need to backup the actual programs that are installed on your machine, things like MS Word or Excel, as you will be reinstalling these from the original discs. The only programs that need to be backed up are ones downloaded from the Web, even then you only need to back up programs you want to keep. Make sure that you keep the installation files, not the installed program itself.

## The boot disk

Most versions of Windows are shipped with a boot disk, if you have misplaced yours don't despair, making a new disk is a relatively simple process. There are several ways to make one, by far the easiest - go to the Windows control panel and double click on the Add/Remove programs icon then select the Startup Disk tab - once there click on the create disk button, Windows 98 will copy every file you need on to the disk for you. Once the disk is created, test it to make sure it is ok. To test the disk, restart the machine with the boot disk still in the floppy drive - if the disk is working you should see something like this, a:\>, appear after a few minutes.



```
C:\>dir e: /w

Volume in drive E is Win98 SE
Volume Serial Number is D01A-EC6A
Directory of E:\

[ADD-ONS]      AUTORUN.INF      ICDSAMPLE1      [DRIVERS]      README.TXT
SETUP.EXE      SETUP.TIP.TXT    [TOOLS]
               4 file(s)        10,647 bytes
               5 dir(s)         0 bytes free

C:\>
```

**Figure 1:** When checking for your CD-ROM drive, be sure to look on drive E.

## The dreaded DOS command line

Please note this assumes you have: 1 floppy drive (a:), 1 hard drive with 1 partition (c:) and 1 CD-ROM drive (d:)

After you have tested your boot disk and after you have performed the idiot check for any stray files, it is time to put the boot disk to work. Restart your machine with the boot disk inserted into the floppy drive - and wait until you see the DOS prompt a:\> The Windows 98 boot disk has done two important things to your system: it has added a temporary RAM drive and has given it the drive letter d: and then copied the contents of a CAB file on the boot disk to that drive. The second thing it has done is installed a DOS driver for your CD-ROM and assigned it as drive e:

Just as a quick test insert the Windows 98 CD into the CD-ROM drive - wait for around five seconds for the drive to read the disc then type in this command: DIR E: /W <press enter> you should see a directory list similar to the one shown above.

If you don't get a listing do not go on with the format - you will need to find the device drivers for your CD-ROM drive.

If you did get a listing you are now ready to format the hard drive, the command is fairly easy:

FORMAT C: /S <press enter>. Note that the /s with some systems may stop the format with a memory error. If this

happens just use FORMAT C: <press enter>. When the format completes using this method you will need to use the command: SYS A: C: <press enter>. This transfers system files to the hard drive, which allows the drive to boot into the Windows 98 environment.

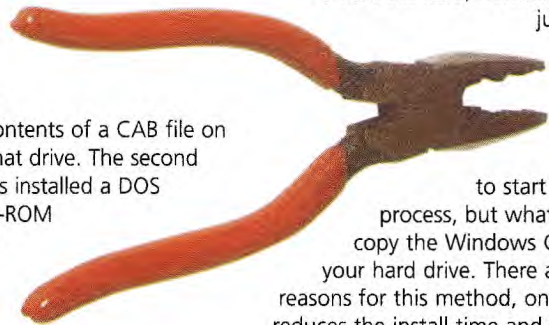
At the end of the format process you will be prompted to enter a volume label for the hard drive. This offers you a chance to give your c: drive a name - normally I just press enter to leave it blank. That's the hard part of the install out of the way, now we can carry on with the Setup routine. We are going to cheat a little bit here; normally you would

just change to your CD-ROM drive and type 'setup' and press enter to start the install process, but what we will do is copy the Windows CAB files to your hard drive. There are two reasons for this method, one is that it reduces the install time and secondly you don't need to use your Windows CD every time you add a device to your system - Windows will look for any of its drivers on your hard drive provided you don't delete the CAB files.

The steps to copy the files are as follows:

- 1) C: <press enter>
- 2) MD CABS <press enter>
- 3) CD CABS <press enter>
- 4) COPY E:\WIN98\ <press enter>

Make sure you type the lines exactly as they are written here as DOS isn't very forgiving with typos, and yes that is a full stop at the end of the copy command - it tells DOS to copy all files from the







**Figure 2: A Startup disk allows you to start your PC without an Operating system on the hard drive.**

specified directory.

Once the files are copied you can run the Setup program and start the actual Windows install process. To run the Setup program just type: `SETUP` <press enter>. Setup will prompt you to press enter to continue, at this stage Scandisk will perform a quick test on your hard drive.

in around 35 minutes. If you want greater control of what is installed you can choose to do the advanced setup, where you can pick and choose what components you would like installed.

Once you have selected what type of installation you want, Windows will prompt you to create a Startup disk (boot

disk), as you already have one you can cancel this process when it asks you to insert a blank floppy disc. When you press 'next' the install wizard will start copying files into the Windows directory - this can take a little while to perform - so as the first prompt states: sit back and relax while the wizard copies the files. Once the file copy process has finished the system will automatically reboot, (and make sure the boot disk is removed before you restart.) In this stage the wizard will search your system looking for both Plug and Play devices and any legacy devices. If it finds any it will install the appropriate device drivers automatically or ask you to supply the drivers on disk. Again this stage is just a matter of sitting back and watching a progress indicator. When this stage finishes the machine will reboot again, and after a few minutes, it will show a 'found new hardware' window. (This is just Windows detecting what monitor is attached to your system.)

Once this has finished Windows will display the standard user logon screen. That's it - that's all there is to installing Windows 98, once you have gone through the process a couple of times it will become easier and you can start looking at the advanced options. So now you have a fresh install of Windows 98, you can start loading all the device drivers for your hardware and reinstall all your applications.

Once the test is finished you may be required to manually exit Scandisk. To do this use the right arrow key on the keyboard to select exit and press enter. The Windows install wizard will then start, from this point you will need to read the prompts very carefully. Even though the install process is fairly easy, it does pay to read the information being displayed.

As a general rule of thumb you can just keep pressing next all the way through the install process, this will install all the typical Windows applications and will have the system up and running

specified directory.

## Glossary of DOS Commands

### -Dir:

Directory listing  
information displayed in 'My Computer' or 'Windows Explorer' when you view the contents of a folder  
example: `dir c:\` (would list the files in the root directory of c drive)

### -MD:

Make Directory  
Makes a folder  
Example: `MD CABS` (would make a directory named CABS)

### RD:

Remove directory  
delete a folder, the folder must be empty before you can use this command  
Example: `RD CABS` (would remove the directory named CABS)

### -Copy:

Copy file(s)  
Copies files from one location to another  
Example: `Copy d:\win98\` (Would copy all files from d:\win98 and place them in the current directory)

### -Sys:

Transfer System files  
Transfers System files from one drive to another.  
Example: `sys a: c:` (Would copy system files from a: drive to c:)

### -Format:

Initialise a disk for use with an operating system (deletes everything on the disk)  
Example: `Format c: /s /q` (Would perform a quick format and copy the system files back onto the disk - similar to the sys command.)