**Compare 2**

**This version does not contain pictures and some paragraphs have been deleted.**

## Main Parts of a Personal Computer

### Understanding the main parts of a personal computer and peripheral devices

#### The System Unit

* The "system unit" is the name given to the main PC box which houses the various elements which go together to make up the PC. For instance within the system unit is the computer system's motherboard, which contains all the main components, such as the CPU. The system unit also houses items such as the hard disk, the floppy disk and CD-ROM drives etc. System units come in two basic varieties, the tower version, as illustrated, or a desktop version, which is designed to sit on your desk with your monitor on top of the system unit.

#### The System (Mother) Board

* The system (mother) board is contained within your system unit and all the vital computer systems plug directly into the system board. The CPU is normally housed on your system board along with all the other electronic components. Other items such as the hard disk are attached to the system board, either directly or via cables. These boards are getting smaller and smaller as the components become more integrated. If you open up a modern system you will find that it is mainly full of air.

#### The CPU

* The CPU (Central Processing Unit) is normally an Intel Pentium (or equivalent) and it is one of the most important components within your computer. It determines how fast your computer will run and is measured by its MHz or GHz speed. Thus, a 2 GHz Pentium is much faster than say a 1 GHz Pentium CPU. It is the CPU which performs all the calculations within the computer, when running programs such as word-processors, spreadsheets and databases. See page 21 for more information.

#### Memory (RAM)

* The RAM (Random Access Memory) within your computer is where the operating system is loaded to when you switch on your computer and also where your applications are copied to when you start an application, such as a word processor or database program. When you create data, (e.g. letters and pictures), these are initially created and held in RAM and then copied to disk when you save the data. As a rule of thumb, the more RAM you have installed in your computer the better. These days you will commonly find over 128 Megabytes of RAM installed.

#### ROM-BIOS

* The ROM-BIOS (Read Only Memory - Basic Input Output System) chip is a special chip held on your computer's system (mother) board. It contains software which is required to make your computer work with your operating system, for instance it is responsible for copying your operating system into RAM when you switch on your computer.

#### Serial Port

* The serial port is a socket located at the back of your computer which enables you to connect items to the computer, such as a modem. They are commonly labelled as COM1 or COM2.

#### Parallel Port

* The parallel port is a socket located at the back of your computer which enables you to connect items to the computer, such as a printer. It is commonly labelled as LPT1 or LPT2.

#### Universal Serial Bus (USB)

* The Universal Serial Bus is a relatively new item within the PC. You will see one or more USB sockets at the back of the system unit, allowing you to plug in devices designed for the USB. These devices include printers, scanners and digital cameras.

#### The Keyboard

* An Input device. The keyboard allows you to type information into the computer. It has evolved over the years and many people now use a Microsoft style keyboard, which has additional keys designed to make Microsoft Windows easier to use.

#### The Mouse

* An Input device. When using an operating system, such as Microsoft Windows, you use the mouse to select drop down menus, to point and click on items, to select items and to drag and drop items from one place to another.

#### CD

* Most computers are now supplied with a CD-ROM (Compact Disc - Read Only Memory) drive. CD-ROM discs look exactly like music CDs but contain computer data instead of music. The advantage of a CD-ROM is that it can hold a vast amount of data (equivalent to the storage capacity of over 450 floppy disks). The other big advantage of CD-ROMs is that they are interchangeable. This means that you can own a range of different CD-ROMs and choose which one to insert into your CD-ROM drive.

#### DVD Drives

* Short for "Digital Versatile Disk”. Similar to CD-ROM drives but allows you to use DVD disks, which contain vastly more information than a traditional CD-ROM disk. These also transfer the data from the disk to the computer far faster, allowing you to watch movies on your computer screen. A CD-ROM can store 650 MB of data, while a single-layer, single-sided DVD can store GB of data. The two-layer DVD standard allows a capacity of GB. A double-sided DVD increases the storage capacity to 17 GB (or over 25 times the data storage capacity of a CD-ROM).

#### Hard (Fixed) Disk

* Hard disks are the main, large data storage area within your computer. Hard disks are used to store your operating system, your application programs (i.e. your word processor, games etc) and your data. They are much faster than CD-ROMs and floppy disks and can also hold much more data. The picture shows the inside of a hard disk (which you would not normally see). Hard disks are installed within the system unit of your computer.

#### Sound cards and speakers

* Many computers are now supplied with sound cards and speakers which means that when you run 'multi-media' programs, you can listen to sounds which are played back via your computer. If you have a microphone and suitable software, you can also record sounds. You can even purchase special software which will allow you to talk to your computer and get the computer to type the words you have spoken on your screen. In time, this type of software may replace the keyboard.

#### Printers

* Most data is printed once you have created it and there are a vast number of different printers available to accomplish this. Most common are ink jet and laser printers both of which can now produce coloured output (at a cost).

#### Scanners

* Scanners allow you to scan printed materials into your computer, which can then be stored within the computer. These pictures can then be altered, resized and printed as required.

#### Recordable CDs

* CD-ROMs are read-only devices, but increasingly people are purchasing a special type of CD drive unit which allows you to record data, music or video to your own CDs. These devices require the purchase of special CDs to which you can write, called CD-R (Compact Disc – Recordable).

#### Tape backup

* A tape backup unit allows for regular backing up of your data. These tapes can store a vast amount of data at a low cost. DAT (Digital Audio Tape) devices are commonly used for backups. The DAT tapes which are used can backup enormous amounts of data (i.e. over 4 GBytes per tape). The devices are also fast and reliable.

#### What is PCMCIA?

* Portables by their very nature are very compact and require smaller than standard parts such as hard disks and CD-ROM drives. Many portables are supplied with special adaptor sockets which enable what are called PCMCIA compatible hardware to be connected to them. PCMCIA components tend to be more expensive than standard computer parts which are designed for more bulky desktop computers.