**Computer Memory**

You can store data on your hard disk, while data which is being processed is stored in RAM (Random Access Memory). Data which is stored on a hard disk can be permanent, while data in RAM is only temporary. Normally when people talk about memory in relation to a PC, they are talking about RAM.

Random Access Memory (RAM) is the main 'working' memory used by the computer. When the operating system loads from disk when you first switch on the computer, it is copied into RAM. The original IBM PC could only use up to 640 KB of memory (just over half a megabyte), whereas a modern computer can effectively house as much RAM as you can afford to buy. Commonly modern computers are supplied with over 128 MB of RAM. As a rough rule, a Microsoft Windows based computer will operate faster if you install more RAM. When adverts refer to a computer having 128 Mbytes of memory, it is this RAM which they are talking about. Data and programs stored in RAM are volatile (i.e. the information is lost when you switch off the computer).

Read Only Memory (ROM) as the name suggests is a special type of memory chip which holds software which can be read but not written to. A good example is the ROM-BIOS chip, which contains read-only software. Often network cards and video cards also contain ROM chips.

The 'Read Only Memory Basic Input Output System' chip is a chip located on the computer's system (mother) board, which contains software. This software performs a variety of tasks. When you first switch on the computer the ROM-BIOS software performs a self-diagnostic to check that the computer is working OK. This software then loads your operating system from the disk into the RAM.

Most modern computers are actually supplied with a flash BIOS rather than a ROM-BIOS. This chip contains exactly the same type of in-built software, but has the advantage that the software on the chip can be upgraded. This upgrade is achieved by simply running a small program supplied by the computer manufacturer.

The picture which you see on your screen is a form of data and this data has to be stored somewhere. The on-screen pictures are held in special memory chips called video memory chips; these chips are usually located on the video card. A modern computer will be supplied with several Megabytes of video memory.