

The logo consists of three overlapping squares: a yellow one at the top, a red one on the left, and a blue one at the bottom. A black crosshair is centered over the intersection of the squares.

St Pauls RC Academy

COMPUTER HARDWARE

CDT
Department

Graphic Communication



Hardware Devices

- Hardware is the name given to any piece of equipment that is used along side a computer (including the main computer system itself).
- These hardware devices can be split into three categories:
 - Input
 - Process
 - Output



Input Devices - Keyboard

- Used to input written information to the computer quickly.
- Always set out using the QWERTY layout. This is the internationally accepted method of designing keyboard layouts.



Input Devices - Mouse

- The most common method of inputting information into a drawing package.
- Used to draw lines, boxes, etc.. quickly.
- Normally used with a mousemat to prevent the mouseball from slipping as it is moved.



Input Devices - Trackerball

- Very similar to a mouse.
- Does not need a mousemat as the ball is on top. The user moves this ball instead of the whole object like a mouse.



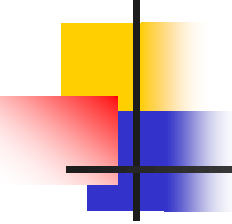
Input Devices - Joystick

- Mainly used for playing computer games.

Input Devices - Graphics

Tablet

- Used like a paper and pen to input drawings to the computer.
- The tablet senses the position of the pen and this is converted to the position on the screen.
- Can be used to quickly trace hand produced drawings onto the computer.



Input Devices - Digital Camera

- Used to take photographs of something similar to a traditional photographic film camera.
- Unlike these film cameras, digital cameras do not have their photographs processed by chemicals.
- The photographs are uploaded onto a computer into a art package where the picture can be manipulated and modified using special effects.



Input Devices - Flatbed Scanner

- This is used similarly to a photocopier.
- Instead of the image being reproduced on a piece of paper, it is saved as an image on the computer and can be modified or printed.
- OCR (Optical Character Recognition) can be used to scan text into a word processor to be modified as a text document.



Input Devices - Handheld Scanner

- Does the same thing as a flatbed scanner but is used by dragging the scanning bar across the picture or text.
- This can result in a fuzzy image being produced as a person's hand can shake while scanning.
- Also, the user is limited to scanning smaller objects.



Output Devices - Monitor

- This is the screen you can see your work on.
- For graphics work a 17 inch monitor or larger is recommended to see the best effects of your work.



Output Devices - Flatbed Plotter

- This is a piece of equipment used to produce a hard copy of your drawing.
- Normally used only for CAD drawings.
- Pens are used to draw the lines so it is an accurate method of producing line drawings.
- The pen is moved by a mechanical arm across the sheet of paper.
- The paper is fixed onto the plotter bed.



Output Devices - Drum Plotter

- A drum plotter is similar to a flatbed plotter in that pens are used to provide a hard copy of CAD produced line drawings.
- This method moves the paper back and forth using rollers while the pen only moves along a fixed arm.



Output Devices - Ink-jet Printers

- Ink-jet printers are another method of gaining a hard copy of a drawing or text from a computer.
- The paper moves down the printer while the ink cartridge prints the page in lines.
- Refill cartridges can be expensive but this is a good way of printing drawings with lots of areas of block colours.



Output Devices - Laser Printers

- Laser printers are a very fast method of printing copies of your work. They can be used for any purpose and give a high quality result.
- Very good at producing presentation work due to the quality of print.



Input & Output Devices - Modem

- Some equipment can be used for both inputting and outputting information.
- A modem is one of these.
- It can be used to send e-mails or other information to anyone in the world also connected to the Internet.
- Also it can be used to receive e-mails and web pages and download information from the Internet.



Input & Output Devices - Fax

- This is similar to a telephone but with a machine that reads what is written on a piece of paper and sends it down the phoneline to another fax machine.
- It can be used to send or receive fax messages.
- It is like a cross between a photocopier and e-mail.



Process Devices - The CPU

- This is the Central Processing Unit where all the information that goes on in the computer is processed in order to gain some use from it.



Storage Devices - Hard Disk

- The computer's hard disk is non-removable. In other words it can only be used with 1 computer (the one you are working on).
- It can be written to and read many times.
- It has a very large storage capacity. 60Gb hard drives are now available and their capacity is increasing all the time.
- The hard disk must be defragmented and maintained regularly or will corrupt and cause many problems with the computer.



Storage Devices - Floppy Disk

- This is a removable disk.
- It can be used for transferring small amounts of information between computers
- It holds only 1.44Mb of data.
- Floppy disks must be scanned for viruses regularly to prevent infecting computers they are used with.



Storage Devices - Zip Disk

- A Zip disk is similar to a floppy disk in that it can be written and read to as many times as you like.
- It holds far more information however, at a capacity of anywhere between 100 - 250Mb.
- These disks require a special type of drive and can be expensive.



Storage Devices - CD ROM

- These disks can hold large amounts of data - 650Mb.
- Special CD ROM drives are required to be able to write to a CD. These are becoming cheaper with time.
- Special CD's are also required.
- Some can be written to only once and are called CD-R's.
- Some can be rewritten to many times and are called CD-RW's.



Storage Devices - DVD

- These type of disks are used to record visual data like films.
- They can store very large amount of data. Anywhere between 4.7Gb - 17Gb can be stored on a DVD.
- There are drives that allow users to record onto special DVD-Rs or DVD-RAMs but these are expensive.

