



The components of a PC

or Understanding the Sales jargon

What is a PC



Desktop



iPad



Laptop



Smartphone

- While they can all process data your ability to change the components varies
- For some it is at model level for others it is at component level
- Or even somewhere in-between



The Must Haves

- A case
- Show information
- Ability to to enter data
- Sound
- Process data
- Store data



The Must Haves

- A case
 - laptop or desktop
- Show information
 - a screen, hardware and software to make it work
- Ability to enter data
 - keyboard, mouse, touchpad, touchscreen
- Sound
 - speakers, hardware and software to make it work
- Process data
 - processor, temporary storage (RAM)
- Store data
 - Drives (hard drives, solid state drives (SSD))
- Power
 - Power unit, battery



Changing Bits

- Most new computers don't have optical drives.
- Floppy drives have not been around for some time.
- Most new computers will have an SD card reader.
- There are various types of ports
 - USB – comes in various flavours
 - Firewire
 - Network
 - HDMI
 - VGA – less common these days



Thoughts

- Most things that make up a computer vary in price between cheap and very expensive.
- You do not need to understand the detail. Just be familiar with the terms and roughly what it does.
- If you hear the words faster or more powerful then you can assume that it also means more expensive.

The Motherboard



- The essential component of any PC
- It is where you place your memory, processor, any add in cards
- Cost varies between moderate and very expensive

- It is where all your external connections are provided
- Most motherboards provide sound capability
- Some motherboards provide graphic capability

The Processor



Many variants
Generally more
expensive than
intel



Many variants
i3
i5
i7

- The heart of a computer
- 32bit or 64bit – you really want a 64bit
- How fast it can run – speed
- How many calculations it can do at the same time – cores/threads
- There are different processors for smartphones, iPads, laptops

RAM



- Temporary storage while the computer is running
- All content lost when the computer shut down
- Generally the more you have the better – 4Gb not enough, 8Gb minimum, 16Gb or 32Gb if you are dealing with large files i.e. picture editing
- It can be increased later
- **You need a 64bit processor to handle more than 3Gb of RAM**

Hard Drives



- Where you store your software and files (data)
- Come in two sizes – 5.25” and 3.5”
- Only the 3.5” can be installed in a laptop
- Both 3.5”and 5.25” can be installed in a desktop.

- Come with a number of spin speeds – 5400rpm and 7200rpm being the most common
- Faster spin speeds are better
- Not the fastest when starting (booting) the PC
- The cheapest of the storage mediums available

SSD Storage



- Can be considered as an internal USB stick
- Must fast access times than a mechanical hard drive
- Come in only one two size – 3.5
- Can replace an existing hard drive

- More expensive than the mechanical hard drive
- Large capacities are very expensive

M2 SSD Storage



- New version of solid state drives
- Can be considered as an internal USB stick
- Must fast access times than a mechanical hard drive
- Can only be fitted to a motherboard
- Motherboard must support M2 SSD drives
- Can be even faster than the standalone SSD drive
- About the same price as a standalone SSD drive
- Large capacities are very expensive
- New PCs now tend to use M2 SSD storage, if fitted

Power Unit



Graphics cards



- Essential if you want to see anything
- Can be built into the motherboard

Printers



Laser Printer



Inkjet Printer

AirPrint
Discover wireless printing.
For iPad, iPhone, iPod touch and Mac,
from anywhere in your home.

An illustration showing an iPad, an iPhone, and a printer, representing wireless printing capabilities.

- USB connection
- Network Connection
- Wireless printer
- WPS

Sound



- Usually built into motherboard
- Can have a separate card
- Speakers connect via a jack of usb socket
- You can also connect a microphone



- Webcam
- Built into laptops
- Connect via usb socket

Speakers and webcams are essential if you plan to Skype



What to look for

- If you are looking for a long lasting well working Computer then:
- Minimum spec you should aim for is –
 - CPU: Intel i5 or higher OR AMD Ryzen 5 or higher
 - RAM: 8GB (minimum)
 - Hard drive: 256GB solid state (minimum)
- You are looking at around £500 for the minimum specification
- The above cost does not include a carry case or mouse
- Remember, your new computer is unlikely to have a DVD/CD drive