SECTION 2 - INTRODUCTION TO HARDWARE

What is hardware?
What hardware should I have?
What is stored on my machine?
What can I fix myself?
How do I adjust my monitor?

- **WHAT IS HARDWARE?**

Your hardware consists of:

⇒ PC (this is the term we use for the CPU "Central Processing Unit" or processor)
⇒ Monitor (VDU or screen)
⇒ Keyboard
⇒ Mouse
⇒ Printer
⇒ Cables

You may additionally have:
⇒ Scanners
⇒ Speakers
⇒ Floppy Disks
⇒ Jet Direct Box

⇒ **Your PC**

The pc has a make and generic number on the front e.g. RM 6266 Accelerator.
On the back or side it will have a model and serial number e.g. D4243, W0.....
The serial number is the pc's unique number.

There may also be a unique Systems number which we have stuck on the front left of the PC. This is helpful to quote when sending faults to Helpdesk.

Drives
Your pc has an internal hard drive where program information is stored. This is called your C: drive. On the Common Desktop you do not have access to C:. Instead you have a D: drive which is also on the hard drive. You can use D: to store programmes or large pieces of information which may be impractical to store on a shared drive (see section 5). There will be a floppy drive in which you use disks to transfer/hold information. You should use 3 ½ " formatted disks (N.B. You can format the disks yourself, or use ready formatted ones, non-formatted disks are for use with Macs). You may also have a CD-ROM drive (see section 10 on the use of CD-ROMs).

Connections
The connections for cables are all at the back of the pc. They all have different names e.g. parallel port, SCSii (pronounced 'scuzzy') port, serial port, keyboard and mouse ports, ethernet connection. It's not really necessary for you to know what each is called but it is important to know what is attached (Systems will usually know which port is which by what is attached to it).

Ethernet Cables:

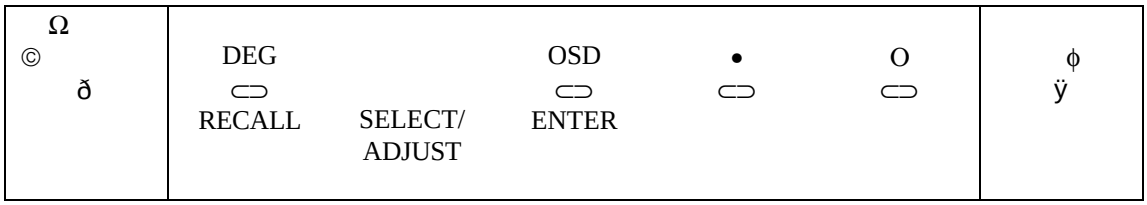
Ethernet cabling comes in two types in the library. The newer type (called UTP) UTP has a phone-like connector and the older type. has a metal ring which twists into place (kind of like a TV aerial connector). It's handy for Helpdesk to know what type you have.

⇒ MONITOR

Your monitor will also have a unique serial number on the back. Please quote this when referring faulty monitors to Helpdesk. If you can't see it, quote the unique Systems number on the front left of your pc. Monitors come in all shapes and sizes. Common Desktop PCs all have colour monitors. There should now be at least one Common Desktop machine at each service point.

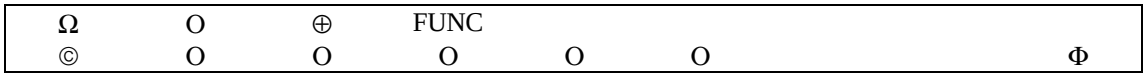
Below are two examples of how to adjust the screen image of your monitor. You may have a monitor with slightly different function keys. They all work on similar principles. If you need more help please ask Helpdesk.

Example 1:
To adjust what you see on the screen use the buttons at the bottom front of the screen.



- Use the <OSD/ENTER>, a coloured box should appear.
- Use the <SELECT/ADJUST> to highlight the function you want to adjust.
- When it is highlighted press <OSD/ENTER> again. The colour should change from black to pink.
- You can then adjust up or down using <SELECT/ADJUST>
- When the settings are correct press <OSD/ENTER> again to store
- Use <SELECT/ADJUST> to get to exit and <OSD/ENTER>
- You can adjust the brightness and contrast this way, or you can use the special buttons which are immediately to the right of the OSD/enter button.

Example 2:



- Press <FUNC>
- Keep pressing until the function you want to adjust is highlighted
- use <⊕>, <O> to adjust

⇒ KEYBOARD

The keyboard is based on a typewriter's QWERTY keyboard with some additions. It is used both to input text and to carry out some control functions.

- <Num Lock>,<Caps Lock> and <Scroll Lock>. (<numbers lock>, <capitals lock> and <scroll lock>). Check you have them on the correct setting before typing in or you may have to retype pieces of work.
- <Ctrl>,<F1>, <F2> etc. Be careful of using the <Control> and <Function> keys as they are strictly function keys. This is especially important in some applications as you may accidentally perform functions you didn't mean.

- <Return> and <Enter> are generally used interchangeably. Just occasionally you may encounter a programme where they are different.
- The Windows key (bottom second from left) is used to pop up the Windows 95 menu. You may also have a button on the bottom right which looks like a menu. This can be used instead of right click.

- <Print Scrn> which works in some applications (but not in WORD)
- <Pause/Break> freezes the screen (good if you're scrolling through a long list).
- <Page Up> and <Page Down> are self explanatory.
- <Insert> changes the way data is edited on screen. Without <Insert> your typing may type over rather than be inserted at the place you want. <Home> and <End> are also edit function keys.
- <Home> takes you to the start of a line,
- <End> takes you to the end of a line.
- <Alt> is used in conjunction with other keys e.g. Alt-Tab and Alt-F4. It just allows one button to have two different functions.

The functions of the other keys will be described in further sections. For an introduction to basic functions see section 4.

⇒ MOUSE

The mouse is a pointing and command giving tool. It has a rotating rubber ball underneath, as this moves in contact with a flat surface, the pointer moves. f the mouse runs off the edge of the mouse mat or table, it's OK to pick it up and put it down again. The pointer will stay where it is while you do this. You should always use a mouse mat. If you need one please contact Helpdesk. The mouse ball should be kept clean as this helps the tracking. There are arrows underneath the mouse casing to show you which way to unscrew the cover. Take the rubber ball out and wipe it, give the inside of the mouse a shake in case there is any dust inside. Using the left and right click will be discussed in section 4. If you find it difficult to use a mouse, for instance, if you are left handed or suffer from R.S.I.; Systems can provide you with a tracker ball instead of a mouse. These are very easy to use and can be requested by emailing helpdesk@srv4.lib.ed.ac.uk.

⇒ PRINTERS

There are many different types of printers used in the library. Every machine on the Common Desktop should be attached to a printer. Most are networked printers which are shared by departments. In hardware terms the most important things are that the power works, the lights flash, the paper tray is full and the serial number is clear (usually found underneath or on the back). More information about Printers can be found in Section 6

Loading paper
Please make sure your printer is loaded with paper at all times. If you are having problems loading paper please ask a colleague or e-mail Helpdesk. Trying to print to an empty printer can cause error message to be constantly sent to you e.g. "printer is off-line". I f you get these messages when trying to print please check you paper before checking anything else.

Paper jams
As long as you feel confident to do so, it is fine to fix paper jams if they occur but please don't force anything or stick objects into the printer. Paper jams which can't be fixed should be reported to Helpdesk as they may need to be reported to EUCS engineers.

Toner/ribbon
New ribbons/toner cartridges are obtained from the General Office. It's helpful to quote the model number of the old cartridge/ribbon.

⇒ JET DIRECT BOX

This is a small grey box which connects your printer to the network. It has a button with 'Status' 'Test' and 'Activity' underneath. There should be a green light indicating the Jetdirect box is on (note: this light flashes all the time) and active. If there are any problems Systems may ask you to print a Jetdirect test page. Press the button once. This test page includes vital information about the Jetdirect's address on the network. It is important to print this before switching the Jetdirect off.

⇒ ETHERNET POINTS

Every PC connected to the network has an individual hardware address. This provides information about what is connected to the network. If you look at the point where your ethernet cable is attached to the wall you will see a box with numbers on it. The older wiring is a large cream coloured metal box. The newer wiring (UTP) is connected to what looks like a phone connection.
The numbers correspond to a port and a segment. T he port is the individual number for that connection to one machine. The segment is the number of the network to which you and your nearest colleagues are attached (for more information see section 1).
If you can see the Ethernet point please quote the port and segment numbers to Helpdesk when reporting problems about the Network.

⇒ SCANNERS

Bar-code scanners
There are 2 types of scanners in the library. The most common is a hand-held bar-code scanner used at service points and in cataloguing. They are plugged into your pc via your keyboard connection. As they read bar-codes they should throw a red light onto the bar-code strip and should also beep once indicating the bar-code has been read successfully. Occasionally they can mis-read so you may have to repeat the scan.

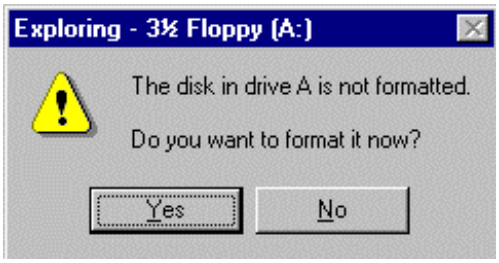
Reprogramming a bar-code scanner
There are instructions for re-programming scanners held by each department which uses scanners. If you need a copy please contact helpdesk.
Flatbed scanners
These are used to scan in images e.g. for use with exam papers. As they are not widely used we won't go into too much detail. Any irrevocable faults should be reported to Helpdesk.

⇒ FLOPPY DISKS

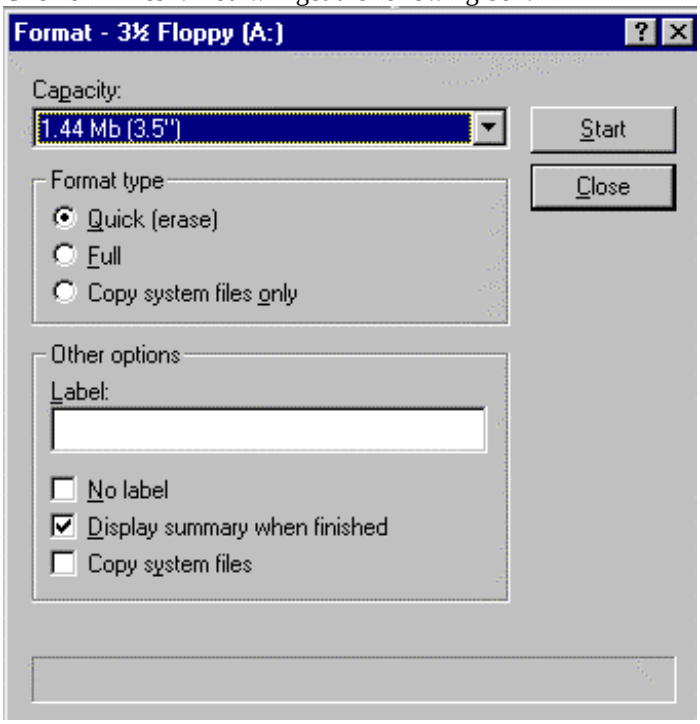
In order to save your work to a floppy it needs to be formatted (unless you are using an Apple Mac, which you won't be if your at work). You can use a disk which is formatted already, or format your own. Make sure the disk looks clean and the metal tape cover is not loose.

WARNING: Only format empty disks. You cannot format used disks as all contents will be cleared. If you're unsure, check the disk first.

To format a disk put your disk in the A: drive. Go into Windows Explorer and click on A:. If the disk is formatted (i.e. no message pops up) then carry on and use the disk. If the disk is unformatted you will see this message:

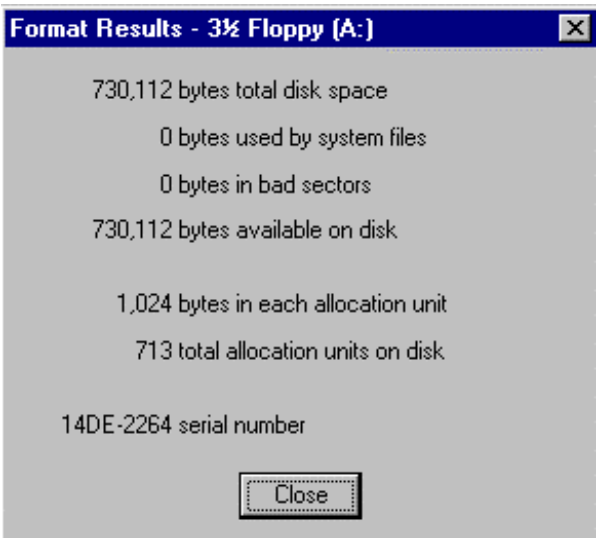


Click on <Yes>. You will get the following box:



Make sure the correct capacity is shown (1.44 Mb or 720 Kb) double density will be 1.44. If you got the disk from the library it is most likely to be one of those.
In *format type* choose *full* . Then click on <Start>. It will take a little time before the formatting process starts.

This shows the progress. You have the option to Cancel if you wish. I f not wait until this box appears:



Close the box and carry on using the disk. If you get any error messages it may be that you chose the wrong capacity e.g.

Just OK this and try a different capacity. If you still get error messages try a different disk.

If you're having a problem with reading from, or saving to a floppy ,check your machine for viruses (see section 6). You should always check any floppies that you use at home for viruses before you use them at work.

⇒ SPEAKERS

It is not common policy for the library to provide speakers for use with PCs. Exceptions are few and far between. Any non-obvious problems should be reported to Helpdesk.

⇒ REPORTING HARDWARE FAULTS TO HELPDESK

What we need to know from you:

- As much information about the fault as possible
- What you've tried to fix yourself
- The user and location of the item
- All serial numbers of equipment involved (if you can see it easily)