



PERIPHERAL DEVICES

PRINTERS

- a **printer** is a peripheral which produces a text or graphics of documents stored in electronic form into a physical print media such as paper or transparencies.
- Printer quality and performance is measured by DPI. (Dots Per Inch)
- Examples of printers? *
- Laser printer, Dot Matrix, Inkjet, Multifunction (Fax/Printer), Thermal/Label Printer, Network Printer

Ink Jet Printers

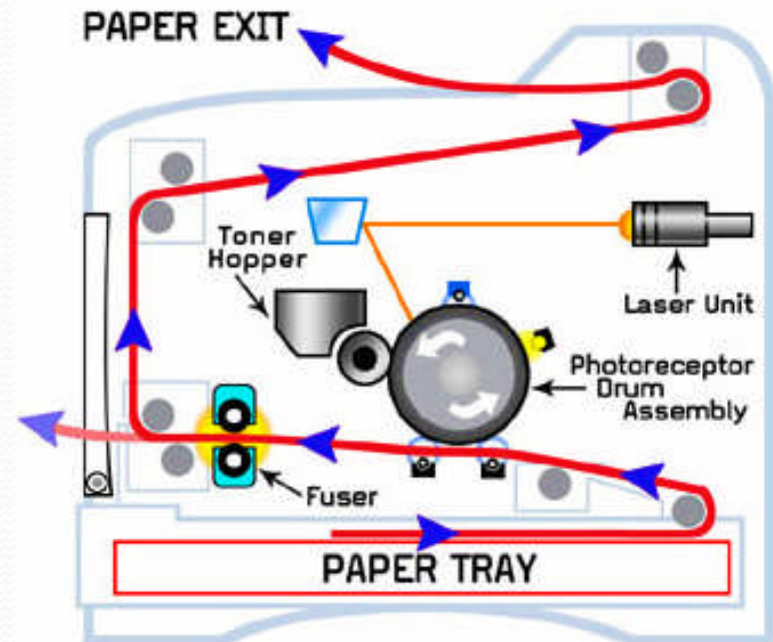
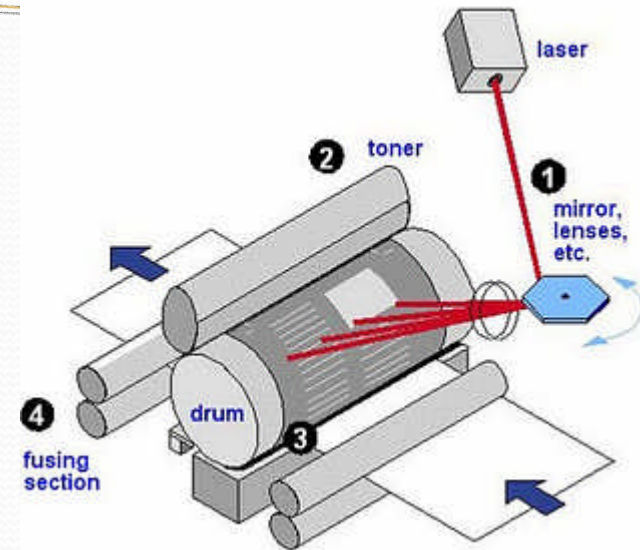
- The most common type of computer printer for the consumer market
- An ink jet printer places an image onto a piece of paper by spraying tiny droplets of liquid ink directly onto the paper.
- Ink cartridges can be removed and replaced as needed, with some printers using only one cartridge for all inks and others using separate cartridges for each color (typically cyan, magenta, yellow and black.)

- Ink jet printers tend to be the quietest of all the consumer printers, have a very quick warm-up time, are relatively cheap to use, and the quality of color prints can be high resolution.
- the ink can be expensive, plus the water-based ink makes prints that are vulnerable to water damage. Most ink jet printers tend to have a resolution of 300 DPI.



Laser Printers

- A laser printer is a toner-based computer printer that uses a laser beam to produce an image on a drum, which then electrically attracts powdered toner to the paper to form an image.
- Laser printers in black-and-white, prints very quickly and accurately, especially text.
- Laser printers use a disposable toner cartridge, much like a photocopying machine.



- Black-and-white laser printers use one toner cartridge, while color laser printers can either use one cartridge for all colors or separate cartridges for each color that can be replaced individually.
- The resolution of laser printers can be much higher than those of ink jet printers---ranging from 1200 DPI on consumer models all the way up to 2400 DPI for professional machines
- Printer and toner can be expensive depending on printing quality.



Dot Matrix Printers

- Very durable, heavy duty, **low cost** of use.
- Uses a print head with 9 to 24 pins, that strikes the paper through an ink ribbon (like an old fashioned typewriter)
- The print head transfers one line of text or graphic at a time, using an array of little dots and while advancing the paper little by little until the printing is complete.
- The paper comes with removable edges that are perforated with a line of little holes that are used to roll the paper as it prints.
- Printing quality is not as high as that of ink jets or lasers, they are also noisy, not as fast as the other printers.



Multi functional printer

- (Fax/Phone/Printer) combine top-quality color ink-jet or laser printing
- Faxing, color copying and color scanning,
- Telephone line.
- Suitable for office use



Thermal printer (or direct thermal printer)

- produces a printed image by selectively heating coated thermal paper
- when the paper passes over the thermal print head, the coating **turns black in the areas where it is heated**, producing an image.



PLOTTERS

- Expensive, large-scale printers that are very accurate at reproducing line drawings.
- They are commonly used for technical drawings such as engineering drawings or architectural blueprints.
- The two basic types of plotters are called flatbed plotters and drum plotters.



Network Printer

- Provides output capabilities to all network users.
- Printer can be shared by using wired/wireless Ethernet NIC card behind the printer connected to the network.
- Save both space and money when you share over a network.
- Medium to High volume Network printer is used in office.



Low volume

speeds ranging from 18 to 30 pages-per-minute, designed to meet every need, application and budget in the workgroup environment.

Medium Volume

speed from 25 to 45 pages-per-minute and are designed to handle the workloads of busy workgroups or departments.

High Volume

speed from 55 to 75 pages-per-minute, used by large corporations, big offices.

Keyboard and Mouse

- Keyboard remains the most commonly used and most versatile device used for direct (human) input into computers.
- A keyboard typically has characters engraved or printed on the keys and each press of a key typically corresponds to a single written symbol.
- The United States or Dvorak Simplified layout are commonly used by popular operating systems
- Common keyboard layouts are QWERTY-based
- Connected either through USB or PS/2 connectors.

OLDER P/2 Keyboard and Mouse



Wireless Keyboards

- Bluetooth Keyboards: use a bluetooth technology, which provides a greater range than the radio frequency keyboard and infrared keyboards.
- Infrared (IR) Keyboards: must be in the line of sight of the receiver.
- Radio Frequency Keyboards: the radio frequency keyboards provides a greater range than the infrared keyboards

- ***Wired Keyboards***

The PS/2 and USB are the two wired connections that connect the keyboards to your desktop computers

- **On-Screen Keyboard** – virtual keyboard projected on screen of display device and controlled with the mouse.
- **Compact/Thumb Keyboard** – small size keyboard normally used on small devices such as PDAs, Smartphones, labelling machines, etc.
- Other types: Foldable Keyboard, Multimedia/Gaming keyboards (with specific buttons to play multimedia or game functions), Ergonomic and Infra-red laser projection keyboard.

Types of Keyboard?*

Wired



Wireless



On-Screen

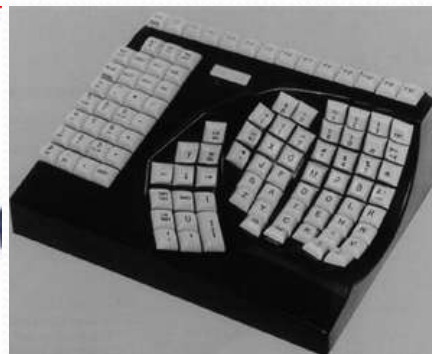
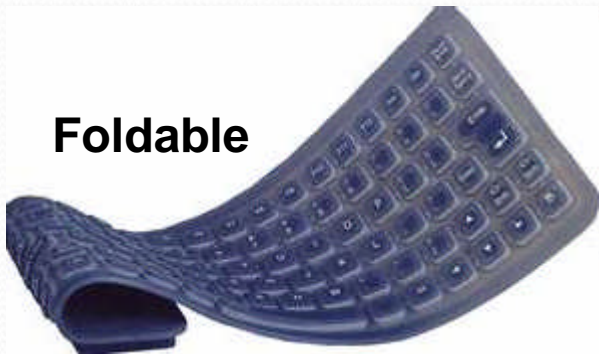


Multimedia/Gaming



Ergonomic

Foldable



Thumb / Compact



MOUSE

- **Mechanical mouse:** uses hard rubber ball that rolls as the mouse is moved.
- **Optical mouse:** Uses an LED sensor to detect tabletop movement and then sends off that information to the computer for merry munching.
- **Programmable mouse:** extra buttons can be programmed to do specific things, such as navigate the Web or turn pages when you're reading a document.
- **Trackball mouse:** using a rotation sensitive ball to roll and control the pointer.

