

OUTPUT DEVICES

Output devices convert machine-readable information into a people-readable form that is; they are used for obtaining the result of processed data from the central processing unit.

TYPES OF OUTPUT DEVICES.

1. Monitor.
2. Speaker.
3. Printer.
4. Plotters.

MONITOR

Monitor: It is used for viewing the result of the processed data (information). It is also known as display screen, video display terminal.

Two important characteristics of a monitor are the clarity of the image produced and the number of colors that can be displayed.

Images are formed by individual dots or picture elements or pixels. The greater the number of pixels and the smaller the dot pitch, the better the resolution.

Kinds of Monitor.

1. **Cathode ray tubes:** This is the common type of monitor for the office and the home is the cathode ray tube (CRT). They are similar in size and technology to televisions. The primary advantages are low cost and excellent resolution.
2. **Flat panel monitor or liquid crystal display:** They were developed because of the bulky nature of CRT. Unlike the technology using CRT, the technology for portable monitors involves liquid crystal. They are thinner than CRT.

Types of Monitor.

There are two types of monitor:

1. **Monochrome Monitor:** It uses a single or one color, displaying a single color on a background. It can use white against a black background.
2. **Colored Monitor:** It consists of many colors at a time. It has different levels of resolution that is, numbers of distinguishable sharpness of images on the screen.

PRINTERS

Printers: It is one of the output devices. They produce the most useful form of output for human interpretation on sheet of continuous stationary information output on a paper whether by a printer or by a plotter is called hard copy.

Printers can be classified into 2 categories:

1. **IMPACT PRINTERS**-they are printers that prints characters by an ink ribbon and pairing wires of hammer. For example:
 - A. **Line printers**- this are printers that prints a line at a time.
 - B. **Daisy wheel printers**: It prints characters at a time by impact.
 - C. **Dot-matrix printers**- Uses dot to form character and it is not of letters quality types.
2. **NON-IMPACT PRINTERS**-they are printers which work with something hitting a piece of paper. For example:
 - A. **Thermal printers**: It uses heat element to produce images on it sensitive papers. It prints using very small wires to been a special paper.
 - B. **Ink jet printers**: It print uses dot on ink it is an alternative to daisy wheel printers as a printing technic, which produces letter quality, output good enough for word processing.
 - C. **Laser printers**: It uses a technology similar to that used in photocopy machine. It uses a laser beam to produce images with excellent letters and graphics quality.

PLOTTERS.

They are special purpose output device for producing bar chart, maps and architectural drawings. They can produce high quality multicolor document and also document that are larger in size than most printer can handle. There are four types of plotters.

1. Pen plotter.
2. Ink-jet plotter.
3. Electrostatic plotter.

4. Direct image plotter.

SPEAKER.

Speaker is a voice output device which vocalize pre-recorded sound. It makes sound that resembles human speech but actually they are pre-recorded vocalized sound. Voice output is not anywhere near as difficult to create as voice input. They are stereo speakers and head phones.

It is connected to a sound card in a system unit. The sound card is used to capture as well as play back recorded sound. Voice output has powerful capabilities of assisting the physically challenge.