

Light Pen

OCTOBER 2016
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- It is a pointing device.
- Used to select a displayed menu option on the CRT.
- It is a photo sensitive penlike device.
- When the tip touches the screen, its photocell sensing element detects the light coming from the screen & the corresponding signals are sent to the processor.
- The user indicates his choice by touching light pen against a desired description of the menu.
- ^{mostly} Handheld devices like use a pen for data input.
- The pen (or called a stylus) is holded in our hand & write on a special pad or directly on the screen.
- It is also a pointing device.
- It provides a handy way to enter text into the computer for word processing. so it is very since it can be used for handwriting recognition.

Touch Screens

- Accept input by allowing the user to place a fingertip directly on the computer screen.
eg: well-suited for simple applications, such as ATM (automated teller machines) or public information kiosks. [Generally small booths set up in high traffic areas]

Some computers have touch screens which is sensitive to user's touch.

- Many techniques have been used to make the screen sensitive to touch.

i) Capacitive screen — it can sense changes in capacitance when & where the user touches the screen.

ii) Infrared screens employ light-emitting diodes & photo detector cells.

When the user touches the screen, some light beams are interrupted, & the computer then senses the position of the finger.

iii) Pressure-sensitive screens — uses a sheet of Mylar, containing rows of invisible wires

when the user applies pressure on the same the wires at that point make contact & a circuit is closed. This is sensed & fed to the computer.

Joystick, Pointing Stick & Track Pads

- It is a pointing device.
- Used to move the cursor position on a CRT screen.
- Its function is similar to that of a mouse.
- A joystick is a stick which has spherical ball at its lower end as well as at its upper end.
- The lower spherical ball moves in a socket.
- The joystick can be moved right or left, forward or backward.
- The electronic circuitry inside the joystick detects & measures the displacement of the joystick from its central position; the information is sent to the processor.

Eraser on Pointing Stick

- It is a pointing device. It is used on laptops where there is no space for conventional mouse. It looks like a pencil eraser.

- It is embedded among G, H and B keys on a keyboard.
- When a finger applies lateral pressure to the eraser, the pressure is passed on to the 4 force-sensing resistors employed to sense up, down & sideways forces.

Track Pads (Also called a touch pad)

- One of the latest pointing device.
- It looks like a small, gray window, about 2 inches wide.
- Like mouse (mice), trackpads usually are separate from the keyboard in desktop computers.
- Track pads include 2 or 3 buttons that perform the same functions as mouse buttons.

Pointing stick [conts...]

- Many portable computers now feature a small joystick positioned near the middle of the keyboard typically b/w the G & H keys. The joystick is controlled with either forefinger, & it controls the movement of the pointer on screen. Because users do not have to take their hands off the keyboard to use this device, they can save a great deal of time & effort.