COMPUTER KEYBOARD



A computer keyboard is a device which uses arrangement of buttons or keys to act as mechanical levers or electronic switches. Following the decline of punch cards and paper tape, interaction via teleprinter style keyboards became the main input method of computers.

History of Computer Keyboard

With their strange "QWERTYUIOP" sequence of keys, modern computer keyboards clearly evolved from late 19th century manual typewriters. Instead

of keys mounted on a circuit board, typewriters used an intricate system of levers and springs to bang noisy metal hammers against a sheet of paper. As electric and electronics were developed, the number of moving parts gradually diminished yet it's quite hard to settle on any single person or keyboard that made the decisive switch from mechanical keyboards to electronic one.

Uses of Computer Keyboard

In normal usage, the keyboard is used as a text entry interface for typing text and numbers into a word processor, text editor or any other program. Keyboards are also used for computer gaming - either regular keyboards, or keyboards with special gaming features, which can expedite frequently used keystroke combinations.

A keyboard is also used to give commands the operating system of a computer.

How Keyboards Work

A keyboard has its own processor and circuitry that carries information to and from the processor. A large part of this circuitry makes up the key matrix.

The key matrix is a grid of circuits underneath the keys. In most keyboards, each circuit is broken at a point below each key. When you press a key, it presses a switch, completing the circuit and allowing a tiny amount of current to flow through. The mechanical action of the switch causes some vibration called bounce, which the processor filters out. If you press and hold a key, the processor recognizes it as the equivalent of pressing a key repeatedly.

When the processor finds a circuit that is closed, it compares the location of that circuit on the key matrix to the character map in its read-only memory. A character map is basically a comparison chart or lookup table. It tells the processor the position of each key in the matrix and what each keystroke represents.

Also, a computer can use a different character map, overriding the one found in the keyboard. This can be useful if a person is typing in a language that uses letters that don't have English equivalents on a keyboard with English letters.