

Normal DIN connectors are rarely used anymore. Most computers use the mini-DIN PS/2 connector; but an increasing number of new systems are dropping the PS/2 connectors in favor of USB. No matter which type of connector is used, two principal elements are sent through the connecting cable. The first is power for the keyboard. Keyboards require a small amount of power, typically about 5 volts, in order to function. The cable also carries the data from the keyboard to the computer.

The other end of the cable connects to a port that is monitored by the computer's **keyboard controller**. This is an integrated circuit (IC) whose job is to process all of the data that comes from the keyboard and forward it to the operating system. When the operating system is notified that there is data from the keyboard, a number of things can happen:

- It checks to see if the keyboard data is a system level command. A good example of this is **Ctrl-Alt-Delete** on a Windows computer, which initiates a [reboot](#).
- The operating system then passes the keyboard data on to the current application.
- The current application understands the keyboard data as an application-level command. An example of this would be **Alt - f**, which opens the File menu in a Windows application.
- The current application is able to accept keyboard data as content for the application (anything from typing a document to entering a URL to performing a calculation), or
- The current application does not accept keyboard data and therefore ignores the information.

Once the keyboard data is identified as either system-specific or application-specific, it is processed accordingly. The really amazing thing is how quickly all of this happens. As I type this article, there is no perceptible time lapse between my fingers pressing the keys and the characters appearing on my monitor. When you think about everything the computer is doing to make each single character appear, it is simply incredible!