

Keyboard Explained

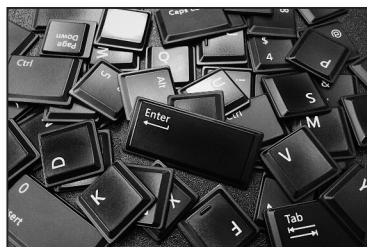
Discover the Meaning of Alt Gr, Pause, and the Other Unusual Keys on a Computer Keyboard

This article shows you:

- The keys you'll find on a standard computer keyboard
- What each key on a keyboard is used for
- How unusual keys like Scroll Lock and Pause were used

Computer keyboards are puzzling things. Like a typewriter, they contain all the keys we need for typing text, numbers and punctuation, but where a typewriter keyboard stops, the computer keyboard just keeps going, giving us a total of 105 keys.

Are they really all necessary, and if they are, what on earth could they all do? In this article, I'll explain what those mysterious extras are for (or, in some cases, what they used to be for) and when you might use them.



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Introducing the Standard 105-key Keyboard

Standard keyboards used to have 102 keys

Until the mid-1990s we used to talk about the 'standard 102-key computer keyboard'. The fact that such a term existed indicates that keyboards had had rather a lot of keys for quite a long time.

Part of the reason for this is that early computers didn't have a mouse – indeed, they didn't display anything on the screen that a mouse-like device could control – so the only way to control your computer was via the keyboard. And just as the mouse has gradually gained a wheel and additional buttons to help us do things with one click rather than several, keyboards quickly gained extra keys to help users do things with one key-press.

Microsoft suggested adding three more

Despite the arrival of the mouse, computer keyboards have continued to gain keys. When Windows 95 arrived, Microsoft decided it would be useful for keyboards to have three extra keys – two 'Windows' keys and a 'Menu' key – and keyboard manufacturers duly obliged, giving us the now-standard 105-key keyboard.

More recently still, many manufacturers have started adding extra buttons to their keyboards for controlling your web browser, adjusting the volume of your speakers, playing and pausing your media player, opening the Calculator accessory, and more. Although these buttons can't really be classed as 'keys', they do show that the evolution of the humble keyboard is continuing.

Old, unnecessary keys are still included

It's an unusual evolution, though. In the animal world, the bits and pieces that serve no useful function either evolve a different use or shrivel up and disappear. On the keyboard, as we'll see, there are keys that do nothing very useful on modern computers, but no-one has yet assigned them a new job to do, and they certainly don't seem to be shrivelling up!

An Alphabetical List of the Keys on a Standard Keyboard

Without further ado, let's take a tour of the keyboard and find out what all those keys do – or did! I'll explain them in alphabetical order, to make each one easier to find, and I'll throw in a few examples and tips along the way to point out uses you may not have discovered for the keys.

Alt

You'll find the Alt key immediately to the left of the Space bar (not to be confused with the Alt Gr key to the right, which I'll come to next). Short for 'Alternate', this is one of three 'modifier' keys on a keyboard (the other two being Ctrl and Shift). A modifier key doesn't usually do anything by itself, but it's used in combination with other keys to make something happen. For instance, pressing **Alt+F4** closes the window you're using; selecting any file or folder and pressing **Alt+Enter** displays the item's Properties dialog; and pressing **Alt+Tab** switches back and forth between the two open windows you've been using most recently.

*One of the
'modifier' keys*

Perhaps the most common use of the Alt key in Windows is to let you navigate a program's menu bar using the keyboard. Let's take the Notepad accessory as a typical example: press the Alt key and one letter of each item on the menu bar gains an underline. Type one of those letters (such as **f** for the **File** menu) and the corresponding menu opens. You'll see that each item on that menu also has a single underlined letter, such as **x** for **Exit**: press the letter for the action you want. Once you get used to the combinations you use most, you'll find you can tap out, for example, **Alt** then **f** then **x** in quick succession to exit Notepad.

*Used to navigate a
menu bar*

Some programs do have a menu bar but it's hidden. Examples are Internet Explorer, Windows Media Player



and Mozilla Firefox. In those cases, pressing the Alt key displays the menu bar. If you're using a program that doesn't seem to have a menu bar, pressing Alt is a good way to find out whether it does or not: if it turns out not to, that key-press shouldn't have caused anything else to happen.

Select controls in dialog boxes

The Alt key also offers a keyboard-driven way to navigate in dialog boxes and select options. As an example, start Notepad and choose **Edit > Replace** (or **Alt** then **e** then **r** if you prefer). When the Replace dialog appears, press the Alt key and each control (or the label beside the control) gains an underlined letter. You'll see that you can jump to the 'Replace with' box by pressing **Alt+P**, click the 'Replace All' button with **Alt+A**, or tick or untick the 'Match case' checkbox by pressing **Alt+C**.

Alt Gr

You can use Alt Gr in place of Ctrl+Alt

This is short for 'Alternate Graphic' (although no-one seems to know what that means) and it's found to the right of the Space bar. This key does nothing when used by itself, but your computer treats it as if you'd pressed the Ctrl+Alt keys together, providing a different and slightly easier way to use key combinations that involve pressing Ctrl+Alt and a third key.

Here's an example of using Alt Gr. Most modern keyboards show a Euro currency symbol on the 4 key. To type a Euro symbol you press **Ctrl+Alt+4**, or you can use the slightly-easier combination of **Alt Gr+4**.

Arrow keys

The arrow keys are arranged in a pyramid shape to the right of the keyboard's main collection of keys. They move the cursor in any direction in a text document or spreadsheet, or select the next or previous item in a list.

Backspace

Found at the far-right of the top row of the keyboard, this deletes the last character you typed, or the character to the left of the cursor. In a web browser, it takes you back to the last page you were viewing (equivalent to clicking the Back button), and in File Explorer it takes you back to the previous folder.

Deletes the character to the left of the cursor

Break

This does nothing useful on modern Windows systems. In old systems, once a program started running and outputting its stream of results, it would continue until it had finished (which might be minutes, days, or never). The Break key could be used to make it stop.

Caps Lock

When switched on (usually indicated by a lamp on the key itself, or elsewhere on the keyboard), every letter key you press will be typed as a capital letter (and you can use Shift when you need to type a lowercase letter).

Unlike a typewriter, the Caps Lock mode only affects the letter keys, not the number or symbol keys. So if you want one of the secondary characters, such as % or ? or £, you must still press the Shift key.

Ctrl

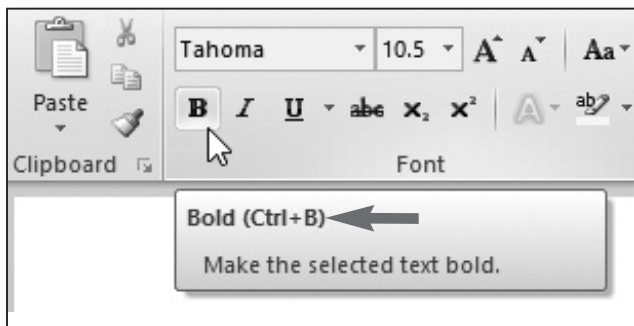
Short for 'Control', this is another of the keyboard's modifier keys (along with Alt and Shift). Your keyboard has two Ctrl keys, in the bottom-left and bottom-right corners, and you can use whichever is easier to reach at the time.

Ctrl does nothing when used by itself

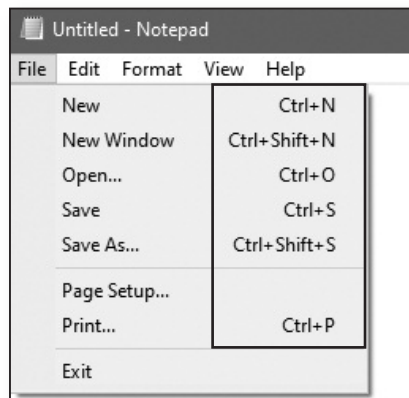
The Ctrl keys are used in combination with other keys to provide quick keyboard shortcuts in programs, reducing the need to reach for the mouse and grapple with menus and toolbars. There are two typical ways to discover a program's keyboard shortcuts:

It's used for keyboard shortcuts

- If the program has a toolbar or Ribbon, hold the mouse over a button and a tooltip should pop up to tell you its shortcut.



- If the program has a menu bar, you should see keyboard shortcuts noted to the right-hand side of the menu.



Delete

*Delete the character
to the right*

The Delete key erases whatever you've selected: some text in a document, an area of a picture, a cell in a spreadsheet, or anything else. In File Explorer, it removes the file(s) and/or folder(s) you've selected and sends

them off to the Recycle Bin: only if you 'delete' something from the Recycle Bin itself is it actually deleted from your hard drive. In a word processor, or anywhere else you've typed text, pressing Delete erases the character to the right of the cursor.

End

This is the partner to the Home key, explained later in this article. You use it to jump to the last icon in a folder, the bottom of a list or a web page, or the end of the current line in a document. Pressing **Ctrl+End** takes you to the end of a document.

Enter (also known as Return)

The main Enter key is at the far-right of the keyboard's main collection of keys, and is usually a large irregularly-shaped key. When writing a text document, press this key to start a new paragraph or a new line in a list. It's the equivalent of the carriage-return lever on a typewriter. The only difference is that you don't need to press it when you reach the right-hand edge of the page, because the program you're using will give you a new line automatically.

The equivalent of the carriage-return

The group of keys known as the 'numeric keypad' at the far right of the keyboard also sports an Enter key. Pressing either of these does the same thing, so you can use whichever is the easier to reach.



The Enter key also has a couple of mouse-saving uses:

- If you see a message dialog offering you a choice of Yes/No or OK/Cancel buttons, one of these buttons will be the default (or recommended) button, recognisable by a bold blue or black border. If that's the button you want to click, you can press Enter instead of using the mouse.

'Click' a default button

'Double-click' a selected icon

- The Enter key does the same as a double-click when a file or folder is selected in File Explorer: it opens the folder or file or runs the program.

Esc

Escape means no, cancel or stop

Short for 'Escape', this key does the same as clicking the 'No' or 'Cancel' button in a dialog. You can use it to quickly dismiss messages that pop up to tell you an error has occurred or a particular action is complete. (If a message box appears with just an OK button, you can press either Enter or Esc to close it – both do the same thing in this situation.)

More generally, you can think of Esc as the 'Stop it!' key. If a program has switched to a particular mode you want to get out of, or something annoying is happening, a press of the Esc key is a likely way to put an end to it (and it's unlikely to make anything worse).

Fn

An extra key on compact keyboards

The Fn (short for 'Function') key is usually found only on notebook computers, although a few special compact keyboards also have it. The key is usually found somewhere near the bottom-left corner of the keyboard, and the letters 'Fn' are often shown in blue or orange.

The Fn key is used in combination with other keys on the keyboard, and those keys will also have small symbols on them in the same colour as the Fn key. As an example, one of the keys may have a small blue or orange picture of the Sun on it: holding the **Fn** key and tapping that **Sun** key will increase the brightness of your computer's screen.



Notebook computers usually have fewer keys on their keyboards due to their size, which means that some keys have to serve three different purposes. Just as the Shift key is used to select the secondary purpose of a

key (usually a capital letter or a symbol), the Fn key is used to select its third purpose.

Function keys: F1, F2 and so on

The function keys form the topmost row of the keyboard and there are usually twelve of them labelled F1, F2, and so on up to F12.

These keys don't have any specific purpose – what they do (and whether they do anything at all) depends on the program you're using. When someone writes a program, they can decide that a particular function key will carry out a particular action, allowing users to carry out that action with one quick key-press. As an example, in some programs (notably the Microsoft Office programs such as Word and Excel) you can press the F12 key as an alternative to choosing File > Save As. In other programs, though, the F12 key may do something different, or nothing at all.

Programmers decide what function keys should do

One thing that has become traditional in software design is that the F1 key should be the 'Help' key. Whatever program you're using, and whatever you're doing, pressing F1 should display a help file explaining how to use the program (or the part of it you're currently working with).

F1 is traditionally the Help key

Home

This is the partner to the End key, mentioned earlier. You use it to jump to the first icon in a folder, the top of a list or a web page, or the beginning of the current line in a document. Pressing **Ctrl+Home** takes you to the top of a document.

Insert

The Insert key switches your keyboard back and forth between two modes: Insert and Overtyping. In Insert mode, when you click in the middle of a sentence and

Insert mode or Overtyping mode

start typing, the new text is inserted into the sentence, pushing the existing text out of the way to make room. In Overtyping mode, each character you type replaces the character to its right. If you find this happening while you type, press Insert to switch from Overtyping mode back to Insert mode.



This is probably the most irritating key on the keyboard, beating Caps Lock into second place. There's no indication you're in Overtyping mode: you only realise when you discover you're typing over existing text. No-one ever switches to Overtyping mode on purpose, and for that reason an increasing number of programs (notably Microsoft Word) disable this key.

Menu

Along with the two Windows keys, mentioned later in this article, the Menu key is a new addition to modern keyboards. You'll find it near the right-hand end of the keyboard's bottom row: it shows a picture of a small menu with a mouse pointer hovering over it.

Display an item's context menu

The Menu key was introduced for the benefit of Windows users with a one-button mouse and, as a result, no way of right-clicking things. (These days, of course, none of us has a one-button mouse, and the Menu key is largely unnecessary.) You can click something to select it and then press the Menu key to display the context menu that would appear when you right-click.

Num Lock and numeric keypad

Number mode or navigate mode

Over to the far right of your keyboard there's a block of number and arithmetic keys, known as the numeric keypad. These are dual-purpose keys: in the top left corner of the block there's a Num Lock key and this determines which mode the numeric keypad is in. In one mode, those keys act as a second set of Home, End, Page

Up, Page Down and arrow keys. In the other mode, which is far more useful, they become number keys. To switch modes, press the Num Lock key; on most keyboards, a light comes on to indicate that the keypad is in 'number mode'.

There are two especially useful things about the numeric keypad. First, its numbers are laid out like a calculator or telephone, in the places our fingers expect to find them (unlike the number keys on the top row of the keyboard). Second, it contains keys for Divide, Multiply, Subtract and Add in accessible places. For example, to reach the Multiply (asterisk) symbol in the main section of the keyboard you have to press Shift+8, which is often a job for two hands, whereas here everything falls under one hand and needs only one key-press.

Easy access to arithmetic symbols

The numeric keypad is perfect for any program that lets you enter numbers: the Windows Calculator accessory or a spreadsheet, for example. You can also use it to type numbers (such as your phone number) into a document, or as a simpler way to type the '*' and '+' symbols. The second Enter key on this keypad does exactly the same as the main Enter key – they can be used interchangeably, and they double as the Equals sign in most calculator programs.

Ideal when using calculators and spreadsheets

Page Up and Page Down

These keys take you upwards or downwards in a long document (or web page, or folder) in steps of roughly a page or a screen at a time.

Pause

In Windows, the Pause key does absolutely nothing – not a sausage. In old operating systems like MS-DOS, in which immense amounts of text might appear on the screen and scroll past before you had a chance to read it, you could use the Pause key to pause the operation

and read the text before allowing the next batch to arrive.

*PC and
Windows details*

This key does still have one use, however. If you press **Win+Pause**, it opens a Control Panel window displaying details about your computer and your version of Windows.

Print Screen

On your keyboard, this might be abbreviated in all sorts of strange ways, such as 'PrtScn' or 'Prnt Scrn'. In the old days (before the arrival of Windows), pressing this key automatically printed on paper whatever text you could see on the computer's screen.

*Take a picture of
your screen*

These days, it copies a picture of the screen to the clipboard (or, if you hold the **Alt** key and press **Print Screen**, it will copy a picture of just the window you're using). If you then start your favourite picture-editing program, or the Paint program, and choose **Paste**, the picture of your screen will appear in the program, and you can edit, save or print it from there.

Scroll Lock

This may also be abbreviated in unusual ways, and it's generally found next to Print Screen. It's an on/off switch, like Caps Lock and Num Lock.

*Few programs
use it (apart
from Excel)*

When switched on, it traditionally changed the way the arrow keys worked, causing them to scroll the page up and down or right and left, saving the need to use the scrollbars. The vast majority of modern programs take no notice of the Scroll Lock key, so it's another key that's largely decorative these days. One program that does take notice of it is Microsoft Excel: if you find that pressing arrow keys in Excel scrolls the page rather than moving the selection from cell to cell, that's a sure sign you've accidentally tapped the Scroll Lock key, so tap it again to switch it off.

Shift

There are two Shift keys, one at either side of the keyboard, and you can use whichever is most comfortable to reach at the time. These are used in conjunction with other keys to type a capital letter or the symbol shown at the top (rather than the bottom) of the key.

Sys Rq

Short for 'System Request', this is another key that serves no purpose on modern computers. In older systems such as MS-DOS, it acted as a sort of 'panic button': if the program you were using stopped responding and locked up, you could use Sys Rq to force the system to close it.

Tab

The Tab key is at the left of the keyboard, immediately above the Caps Lock key. Its most common purpose is the one it's always had on a typewriter: indenting a line of text from the left margin to the first (or next) tab point.

Indent text...

Its other use is for jumping from one control to the next in a dialog or a form on a web page. Imagine you're filling in a form that asks for your name, address, town, postcode, and so on. After typing into one text box, don't reach for the mouse and click the next box – just press the Tab key to jump straight into it.

... and navigate web forms and dialogs

Windows

The Windows flag key is one of the newer additions to modern keyboard and you'll usually find two of them on the bottom row. You can use whichever is easier to reach. By themselves they open the Start menu (or the Start screen in Windows 8.1). They can also be used in combination with other keys to carry out particular

Use the Win keys interchangeably

actions in Windows: **Win+E** to open File Explorer, **Win+D** to minimise all open Windows and return you to the desktop; **Win+I** to open Windows 10's Settings app; and **Win+L** to lock your PC.

Keys May Behave Differently in Certain Programs!

What I've described above are the ways the keys are *supposed* to work. However, it's important to remember that the final choice about what many keys do rests with the people who write the programs you use.

Programmers ultimately decide what keys should do

To take one example, I mentioned that the F1 key is traditionally used to display a program's built-in help file. Although traditional, there's nothing to enforce this: some programs don't include a help file, so the F1 key probably won't do anything in those programs; similarly, the programmer may have taken the unusual decision to make you press a different key for help.

Most programs behave in the same way

Programs watch which keys you press, or which combinations of keys, and do whatever they were programmed to do in response. Fortunately, most programmers are sensible folk who realise that we expect certain things to happen when we press particular keys, and make sure their program behaves as we expect. (They also know that if their program is too peculiar, no-one will use it!)

Some programs may make use of redundant keys

This freedom does lead to one extra point, though. Although some of the old keys like Scroll Lock and Pause are usually redundant, there's nothing to stop a particular programmer from putting them to good use! Although Windows itself takes no notice of these keys, you may one day come across a program in which these keys do something useful again.