



A Glossary Of Mechanical Keyboard Terms

Welcome back to Velocifire. In case you get confused by the professional keyboard terms and abbreviations, we collect common terms and abbreviations with an easy-understanding and precise definition here. Some certain terms are used by mechanical keyboard enthusiasts. The glossary is to provide a quick and easy way to know and expand your mechanical keyboard knowledge.

40%: extremely small form keyboard. No alphanumeric keys, F-row or numpad. Some keys are in a non-standard size.

60%: a style of keyboard which is about 60% the size of a full-size keyboard, by means of omitting the top function row, the navigation cluster and the numeric keypad. Access to the missing keys is typically achieved through a Function layer.

6KRO: 6 key rollover. A keyboard with 6KRO can recognize 6 keys pressed simultaneously without key blocking or ghosting.

80%: refers to tenkeyless/TKL layout.

ABS: acrylonitrile butadiene styrene, a material used for keycaps. ABS keycaps are generally lighter than their PBT counterparts.

Actuation force: the pressure is needed to press a key and register a keypress, measured in grams. Heavier switches take more force to press down.

Actuation point: the point at which a key press is recognised by the keyboard. The amount of force required to reach this point is used as a measure of the switch's stiffness.

Alps/Alps switch: a mechanical switch that was once produced by a Japanese company of the same name in the 1980s. Alps adopts a rectangular stem incompatible with other keycaps.

ANSI: the standard physical keyboard layout for the United States and the Netherlands, among some other countries. Modern full-size ANSI keyboards generally have 104 keys, including wide Enter and left Shift keys.

Anti-ghosting: some keyboards are with limited key rollover. When the limit is reached, unintended characters are registered, known as ghosting. Anti-ghosting is an engineering term to avoid the problem.

Backlighting: LEDs installed in switches to provide illumination.

Bottom out: press a key to its full depth. Mechanical keys actuate before bottoming out, meaning fast-typing and less force.

Buckling spring: a loud and heavy mechanical switch that uses a large spring that buckles at the actuation point, hence the name. Used by IBM in their Model M, and has since become rather rare. Modern equivalents are produced by Unicomp.

Cherry MX: mechanical switches made by the Cherry Corporation, featuring a distinctive cross shape. Named by their colors (e.g. Cherry MX Red), each of which has a unique combination of

weighting and feedback.

Clicky: a keyboard or switch that makes an audible “click” sound when pressed. Clicky switches often include a tactile bump as well (see Tactile). Switches without the extra audible feedback are called as “non-clicky”.

Compact layout: any layout smaller than the standard 104-key layout.

Debouncing: as a switch reaches its actuation point, it will bounce around a bit before it comes to rest. Debouncing is the act of correctly interpreting when a key is pressed, without reporting multiple actuations. This is largely a solved problem in modern keyboards.

Doubleshot: a method to produce ABS keycaps, wherein the legends are integral to the keycap.

Full-size (104-Key): A full-format keyboard, which includes a numeric keypad (for the opposite, see Tenkeyless). Also called by the number of keys included (e.g 105-key for a full-size British keyboard). The Filco Majestouch is an example of this style.

Ghosting: an issue where pressing a combination of three or more keys results in the registering of an addition, unpressed key. Ghosting is prevented by manufacturers by blocking any keys which might be ghosts, but this limits the number of keys that can be pressed simultaneously. See Key Rollover.

ISO: the standard physical keyboard layout for most of the world, with the notable exception of the United States and the Netherlands (see ANSI) and Japan (see JIS). British, German, Spanish, French and Nordic are all examples of ISO layouts, although each has a different logical layout (e.g. the first six letters are QWERTY in the UK and QWERTZ in Germany). Modern full-size ISO keyboards have 105 keys, including tall Enter keys and small left Shift keys.

JIS: the standard physical keyboard layout for Japan (for western layouts, see ANSI and ISO). A modern full-size JIS keyboard has 109 keys, including additional keys to the left and right of the shortened space bar, in order to facilitate entry of characters from various Japanese alphabets.

Key Blocking: another problem happens when a keyboard rollover is maxed out. Blocking refers to the keyboard refuses to interpret any further keypresses.

Key puller: a tool helps remove keycaps from a keyboard.

Key Rollover (KRO): a limit to how many keys can be simultaneously pressed and correctly registered by the keyboard, often expressed. If you press more keys than your keyboard can register, some key inputs will be missed. Low numbers like 2KRO are typical of low-cost rubber dome keyboards, while 6KRO is the usual standard for a mechanical keyboard. Some keyboards are capable of more; other common figures are 10KRO and NKRO. Modifier keys (e.g. Shift, Ctrl, Alt, Win) do not count towards this limit.

LED: light emitting diode. Most modern switches are with LEDs built in for sample backlit or “RGB” light.

Legends: letters, numbers, and symbols marked on keycaps.

Linear: a keyboard or switch that lacks a tactile bump or click – instead, the resistance increases linearly as the key travels downwards.

Macro keys: keys that are programmed to automatically execute a longer string of predetermined keystrokes.

Mechanical keyboard: a high-quality keyboard or switch that utilises a mechanism with a metal spring in order to register key presses.

Membrane: a contact sheet is used under the domes in a rubber dome keyboard or without rubber domes.

N-Key Rollover (NKRO): a keyboard with NKRO can register as many keys simultaneously as you care to press down. See Key Rollover.

O-rings: rubber rings are placed over keycap stems to dampen the sound of bottoming out and slightly cushion the bottom of the keypress.

PBT: abbreviation for polybutylene terephthalate, a plastic material used for keycaps. PBT keycaps tend to wear better and have a slightly more abrasive feel than the ABS counterparts.

Ping: a distinct noise you can sometimes hear from the spring inside a mechanical switch.

Polling rate: it means more to a mice than a keyboard.

Polling rate	Response time (millisecond)
125 Hz	8 ms
250 Hz	4 ms
500 Hz	2 ms
1000 Hz	1 ms

Rubber dome (RD): a standard non-mechanical keyboard uses a sheet of rubber to cover electrical switches, which are activated when the key is depressed. Rubber dome over membrane switch, used in non-mechanical keyboards.

Rubber dome: a non-mechanical keyboard that uses a rubber dome to provide resistance and tactility, mounted above a membrane sheet that registers the key press. Rubber domes are found in the vast majority of keyboards sold, thanks to their low cost.

Spring: the metal spring inside each mechanical key offers resistance, depressing when it's pressed. A stronger spring means more actuation force.

Tactile: a keyboard or switch that provides feedback you can feel, normally a "bump" or sudden increase in resistance that occurs as the key reaches its actuation point.

Tenkeyless (TKL/80%): A keyboard that does not include a numeric keypad, in order to minimise size and weight. These keyboards can allow for a more comfortable hand position and are more portable, a reasonable tradeoff if you do not often use the numeric keypad. The Filco Majestouch TKL is an example of this style. For the opposite of Tenkeyless, see Full-size.

Topre: electro-capacitive switches, consisting of a slider in a housing, above a rubber dome, above a coiled spring, above a circuit board. While the switch includes a rubber dome component, it is normally considered a mechanical switch rather than a rubber dome.

Travel: the distance that a switch moves from the top to the bottom of a key press. On an average laptop keyboard, key travel is noticeably lower than on the average desktop keyboard.

