

Mechanical Keys Explained

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Preface

This paper was made with the intent of explaining to every retarded, plebian that insinuates membrane, commonly know as rubber-domes, are superior to their mechanical counterparts; though, with argument, they really can't be considered counterparts as the mechanical key is vastly superior to the ubiquitous rubber-dome, which will be explained in this document.

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Mechanical switches are completely different. They feel pleasing to use, so good in fact that once you have made the switch, you can never go back. With each press, depending on the type of switch, there is either a smooth linear feel or a tactile sensation accompanied by a responsive click. Unlike the 'one size fits all' approach with membrane keyboards, you actually want to get fitted to use a mechanical keyboard like you're buying a nice suit or dress; a keyboard almost bespoke with the variables being switches, O-rings, lubrication and generation. More will be read on that subject later on; now let us discuss a few of the common switches and how they differ.

The biggest player in the mechanical keyboard industry is Cherry. They have been making their famous 18k gold-plated corrosion resistant MX switches since the early 1980's when they brought the MX Black switch to market in 1984. Today, Cherry supplies MX switches for some of the best keyboards on the market, that continually, without fail, encourage productivity and continues to create unique designs that evolve with the industry. As the gold standard in mechanical switches, Cherry offers several variations in design to meet everyone's personal preference. Each 'color' in their lineup functions differently from another. They even divide the feel of the press by a 'tactile' category, a 'clicky' category and a 'linear' category.

[Things get more complex here, so don't be discouraged if this is above your intelligence.]

To help educate on the subject, I will quickly define some of the phraseology that lies ahead.

Actuation: How far the key must be pressed before that character is registered.

Throw Distance: How far the key can be pressed before bottoming out.

Force: The amount of pressure a finger needs to apply to compress the spring.

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Actuation vs Reset: The length it takes on the upstroke before a downstroke can be reapplied to register that character again.

With that general knowledge passed onto you, I have included the most common MX colors for light reading. [*Topre and buckling will be discussed later on.*]

MX Switches

*Apart from the factual specifications these are my own views on what they are best for, If you think different keep to yourself because **no** one cares about **you**.*

MX Black: 2mm actuation, 4mm throw, 60g force.

:linear and best for gaming as it is tremendously quick to bring the key back to the top.

MX Red: 2mm actuation, 4mm throw, 45g force.

:linear; are faster to push down than Blacks, they are the most common key for gaming

MX Brown: 2mm actuation, 4mm throw distance, 45g force.

:tactile; are a decent compromise between the 'gamer' MX Red and made for typing as the MX Blue's are. These are the best all-round switches that are recommended to the large majority of the people that start in the Mechanical world.

MX Blue: 2mm actuation, 4mm throw distance, 50g force.

;clicky; are preferred for people that type more than they game. These are the loudest of the Cherry MX Family and are arguably the most affordable option.

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That's a pretty good summary for the most popular that Cherry offers but due to increased demand for mechanical 'gaming' switches many companies have come forth with their own designs.

Razer offers 'custom' Green and Orange switches developed by an unnamed source. These are very similar to the MX Blue switch.

Green: 1.9mm actuation, 4mm throw, 50g force.

Orange: 1.9mm actuation, 4mm throw distance, 45g force.

Logitech offers 'Romer-G' switches that was developed by Japanese company Omron, famous for precision mouse switches, they are very similar to the MX Brown switch. Only a select few keyboards of Logitech's line-up currently consist of these switches, such as the Orion Spark.

Romer-G: 1.5mm actuation, 3mm throw distance, 45g force.

SteelSeries offers their own patented QS1 switch. This is very unique that is certainly not a Cherry clone like the Logitech or Razer variants. This switch is only available, at the time of writing, on the M800.

QS1: 1.5mm actuation, 3mm throw distance, 45g force.

What should I get?

[not completed, probably wont ever be, still helpful]