

# *The Board Room*



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# Budget Keyboard Highlight: Fall 2022

Looking for a nice-looking custom keyboard that won't break the bank? There are a plethora of options, but here's a couple that we personally recommend!

For those who don't feel comfortable modding their keyboard, the Vortex Race 3 is a great option for those just getting into the hobby. Usually around \$125-150, it's a great entry level keyboard, especially if you're able to find one on sale. It's a 75% keyboard that features a number of differently-colored keycaps in both Windows and Mac layout to suit any setup's aesthetics that are slightly similar to the RGB modifiers that keyboards like the IBM Model M spacesaver featured. While it only features Cherry MX switches, they will still provide a nice typing experience for a beginner. Some potential downsides to this keyboard are the lack of RGB LEDs and few modding capabilities, as the switches are soldered in.

If you're looking for an overall quality keyboard with limited upgradeability, this keyboard may be for you. While it does have programming capabilities, it may be daunting for beginners, though most beginners likely won't feel the need to change much about this if it's their first mechanical keyboard.

*"My keyboard brings me satisfaction with every click, without frustrating people on the other side of my microphone. It's not only aesthetically pleasing, but provides a nice tactile feedback and game-time responsiveness."*

*-Ian Schombs, owner of a Vortex Race 3*



A better option for those who are more comfortable with modding their keyboard is the Keychron K8, which is a great option for those who look to upgrade down the road. Sitting comfortably around the \$70-80 price point, this keyboard is a wonderful deal for someone's first entry into the hobby. Along with many other Keychron keyboards, this board features the option of a hot swappable PCB, which helps to provide an upgrade path down the road. If you're looking to mod the keyboard on an even stricter budget, you could modify the switches that come with the keyboard by removing them and lubing the internals, along with lubing the stabilizers with dielectric grease.

This keyboard also features bluetooth functionality, allowing you to connect it to your computer wirelessly. It also features n-key rollover while in wired mode, but only 6-key rollover while running via bluetooth. While it doesn't feature programmability through QMK like a number of Keychron's other offerings, for a beginner keyboard that really isn't that big of an issue.

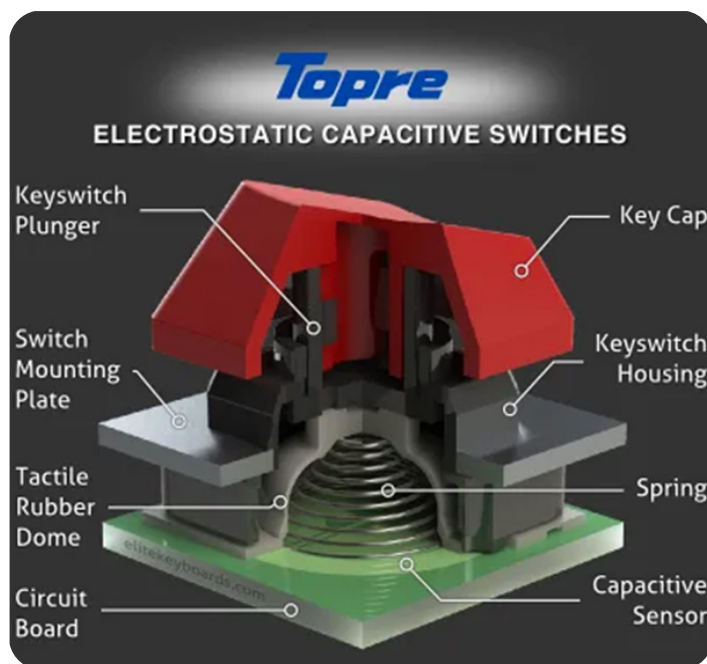


# Topre

## A Non-Mechanical Mechanical Keyboard?



Topre switches are quite a hot topic of discussion, as many believe that they are amazing keyboards and should be part of the mechanical keyboard family. On the other hand, another group believes they're nothing but membrane keyboards with conical springs added to them.



While not mechanical in the way the keypress is registered, Topre keyboards seem to have gained quite the following in the community. With their distinct change to the normal membrane keyboard formula of using electrocapacitive rubber dome switches, it seems to have improved the typing experience quite a bit when compared to standard membrane keyboards and made it able to be compared to high quality mechanical switches. However, that also means you're going to be paying the premium similar to keyboards that feature high quality mechanical switches. The majority of Topre keyboards offered are above \$300, and some go well into the \$500 range. Beyond the \$300 range I don't particularly see the appeal of these boards, because at that price point you can build your own board that can rival and even beat the high-end rubber dome switches that Topre boards. However, there is an argument that you can't build your own Topre keyboard, as it would be difficult to make something of that build quality on your own. Topre is known for their high quality products in the enterprise world; not only manufacturing high quality keyboards, Topre also manufactures air conditioning equipment, temperature logistics products and other electronic devices.

In the end, it all comes down to personal preference when buying a new keyboard, but it's better to be smart with your money and buy something you really want rather than follow a trend.

# Non-Standard Layouts: Do they really help?

While not the most common layout, Dvorak and other non-standard layouts make a number of claims that draw a good amount of discussion in the community, citing faster typing speeds, fewer errors, and a lower chance of carpal tunnel, but does the claim really hold up?

Patented in 1936 by August Dvorak, along with his brother-in-law William Dealey, the original Dvorak layout was aimed at being quicker and more ergonomic than the QWERTY layout.

The Dvorak layout places most of the commonly used consonants and vowels on the home row in order to reduce the amount of space your fingers have to move.

While Dvorak sounds like it should be beneficial at first glance, some decided to dig deeper to find the real answer. In 1956, the first study was conducted by Earle Strong from the U.S. General Services Administration, which had found that there was no efficiency balance between QWERTY and Dvorak. However, the small sample size and the earlier adoption of QWERTY may have skewed the results a bit. With these suspicions, another study was conducted in 1990 by Stan Liebowitz and Stephen Margolis, which claimed that QWERTY being earlier to the market than Dvorak gave it a decisive advantage in public adoption. As for Dvorak's efficiency claims, they also found that there was little to no advantage for the layout.

Well, if QWERTY and Dvorak have negligible differences in typing experience, are there any benefits to using a completely different layout, like Colemak? While there haven't been any studies done on Colemak, its backstory is a bit different compared to Dvorak. This layout is the third most popular layout in the world, and is built off of QWERTY with the intention of making typing more comfortable and efficient. The letters that are most prevalently used are moved to the home row, so that there's less finger movement, similar to what Dvorak was looking to accomplish. Despite there not being any studies done to see if Colemak is actually better, considering how Dvorak ended up making a negligible difference, I believe Colemak will likely suffer a similar fate.

Similarly to Colemak, Azerty is also a layout built off of QWERTY which is predominantly used in France. While there is no knowledge of the layout's origin, it is mainly used in France and Belgium.

**The modern-day QWERTY layout in the US**

**The original DVORAK layout, intended for typewriters**

**The modern-day DVORAK layout in the US**

**The modern-day COLEMAK layout in the US**

**The modern-day AZERTY layout in France and French-speaking parts of Belgium**

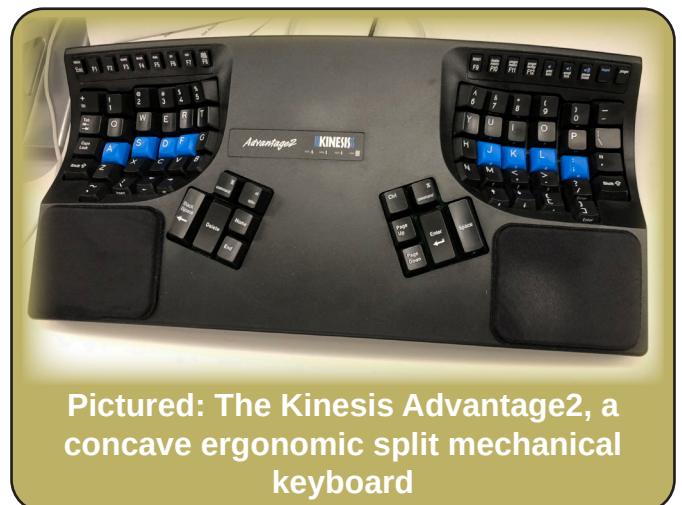
# The New Wave: Split / Ergonomic Keyboards



Throughout the past few years, the market for keyboards has exploded. The sheer number of split and ergonomic keyboards has increased by quite a large number, and has greatly helped lower the bar to enter this subsection of the hobby. Featuring keyboards like the Keychron Q8, Ergodox EZ, and a wide variety of other options, this type of keyboard just seems to keep getting better and better.

While I haven't been using split and ergonomic keyboards long enough to type at the speeds I normally can, I understand their allure and see the benefits that draw people in. Ergonomic and split keyboards are two separate descriptors for keyboards, but both can definitely be used to describe some. For example, despite it being a membrane keyboard, Microsoft's ergonomic keyboard is a great example of this, with an about average ergonomic layout, and the keyboard being split down the middle. For a visual reference as to what this keyboard looks like, it's similar to the leftmost keyboard in the above image. As for a mechanical example of this, the Keychron Q8 is somewhat similar. While it's harder to feature the curves that membrane ergonomic keyboards like the one on the left in the top image or Microsoft's can with mechanical keyboards, some manufacturers have found a solution. To make up for this, mechanical keyboards tend to take a different approach, with concave designs that are aligned so that the switches and keycaps can properly fit together without feeling awkward.

Comparing split keyboards to traditional mechanical keyboards seems to be similar to comparing QWERTY to other non-standard typing layouts, with the caveat that the limiting factor to achieving faster typing speeds or typing more efficiently seems to be yourself. Getting used to using an ergonomic and / or split layout keyboard is relatively similar to getting used to a new layout, but you at least have the slight muscle memory of the QWERTY layout to be able to use. If you're a fast typer with normal keyboards, then it may take a few weeks to months to get back to the typing speeds you're used to when switching key layouts or keyboard layouts.



**Pictured: The Kinesis Advantage2, a concave ergonomic split mechanical keyboard**

# The KING

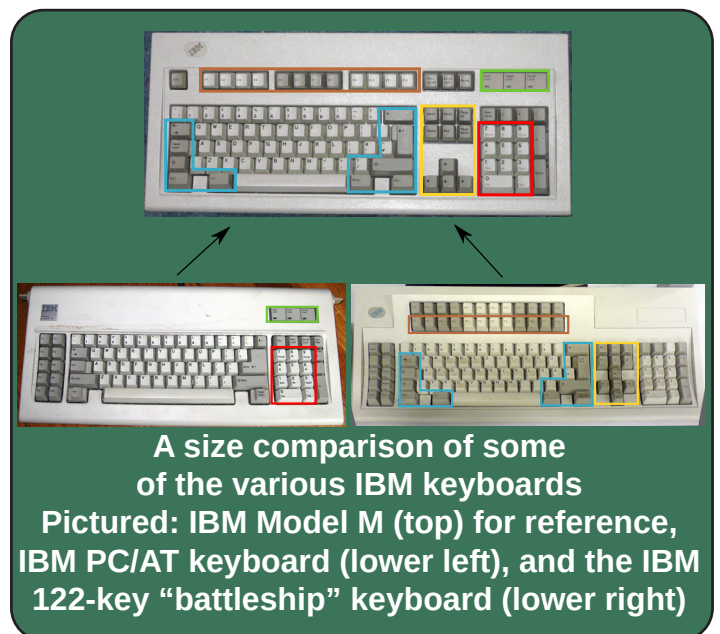
## of Keyboards: The IBM Model M



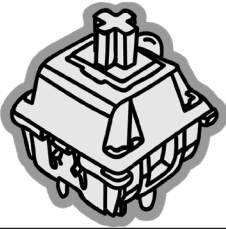
The grandfather of all keyboards with seemingly a cult following, the IBM Model M is hailed as the “greatest keyboard of all time,” and could definitely be considered the most well-known keyboard of all. Beginning manufacturing in 1985 alongside IBM’s desktop computers, the keyboard featured buckling spring switches, which made it very loud but made it able to provide an insanely tactile typing experience. While the computers might not’ve survived, and would be considered obsolete even if they did, the keyboards they came with have shown their quality by surviving and continuing to be sought after. Besides the Model M, there are a wide variety of similar keyboards IBM manufactured that were in other form factors or layouts, such as the Model F, the Model M space saver, and the 122-key terminal model, which many have deemed a “battleship” or “battlecruiser” due to its sheer size.

Now being manufactured by Unicomp, the Model M and other similar models are still being sold to those who are interested in them under a slightly different name, called the New Model M. Along with the New Model M, they also offer the PC 122, which is a new version of the “battleship” model of Model M. While they may have a noticeably different exterior aesthetic to them, they still use the same style of buckling spring switches and keycaps that many have been known to love. Along with this, the newer generation now features a USB connection, rather than the previous PS2 connection, meaning

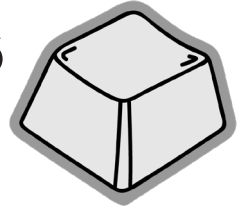
you no longer have to buy an adapter to connect the keyboard to your computer. The only potential downside to the new offerings from Unicomp is that they lack N-key rollover and user programmability, as they only have 2-key rollover. However, this is likely an issue many won’t notice unless they’re intentionally trying to have it occur.



**A size comparison of some of the various IBM keyboards**  
Pictured: IBM Model M (top) for reference, IBM PC/AT keyboard (lower left), and the IBM 122-key “battleship” keyboard (lower right)



# Do **Cherry** MX switches deserve the hate?



While Cherry MX switches might be the most prevalent type of switches on the market, many enthusiasts denounce them and stray away from buying products that use them.

It may be that these enthusiasts have consumed the “forbidden fruit” of high-end switches and can’t go back anymore. Even after switching to Zealio V2s after coming from several different kinds of Cherry MX switches, not even I feel that I can go back.

While not hard proof, whenever I ask my friends to blindly compare a few of my keyboards, they tend to gravitate toward the higher-end switches, mainly saying that they feel smoother and less “scratchy.” Despite them not having any knowledge of the switches or keyboards themselves, they can tell the difference in smoothness between switches, even when one high-end keyboard is put up against multiple keyboards that feature Cherry MX switches.

On the other hand, you also have to consider why they’re wildly popular. Not only are they predominantly used in businesses and pre-built keyboards for consumers, but they have “clones” produced by other companies that are sold on online storefronts for cheaper prices. If other companies copy what they’re doing, it shows they’re definitely doing something right.

Along with this, another thing to ponder is that this hobby is entirely subjective, as it all depends on a plethora of attributes

you like in a keyboard. For example, you may prefer a particular kind of keyboard layout, a particular type of switch, or a particular aesthetic. You may believe that your keyboard with Cherry MX switches is your favorite, and that’s perfectly fine. Others may just have a personal preference toward switches that aren’t Cherry, and just might not like their typing experience.

Besides that, while some might prefer to not use Cherry MX switches, the majority of those people aren’t going to put you down for using them, and will probably just be glad that you share a particular interest with them. This hobby was never meant to shame anyone for their preferences, and has always been about whatever you feel most comfortable using and what you think is acoustically or aesthetically pleasing to you.



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## **Editor’s Note**

This magazine was primarily created as part of an editing and design class, but I felt that I needed to choose a subject matter that was close to me and something that I was knowledgeable on. Since approximately 2017, I’ve been a member of the mechanical keyboard hobby and community. Seeing it grow to the point where it is now is astonishing, and I’m glad to see the number of improvements to things that many back then considered as part of the hobby. While many still take part in group buys, long shipping times and limited production runs bring quite a few detractors, and made it difficult to get the things you wanted. By the time you saw a post online that inspired you to buy a particular board or keycap set, the group buy had been ended for quite a while and you never knew if or when it was coming back. Nowadays, you can find a plethora of keyboard products with short shipping times on a number of sites.

I would also like to give credit to the number of places where I retrieved images for this magazine issue from, as I didn’t have the opportunity to take pictures of all of these keyboards myself. All images were found under creative commons or were marked as “for commercial or creative use.” The images for the first article are from two separate reviews from [rtings.com](#). As for the second article, the images are from [ActualidadHardware](#), a Spanish tech review site, and the graphic was provided by [elitekeyboards.com](#). The images for the third article are from Wikipedia, as they were free to use and relatively standardized. As for the images for the fourth article, they were provided by [Wirecutter](#), a product review website, as well as Wikimedia. The images for the fifth and sixth articles were provided by Wikimedia, which is a website for free educational content.

-Logan Knab

