Neapolitan Ice Cream Switch Review

-ThereminGoat, 05/02/2021

Usually as I approach the end of the two-week interval in between switch reviews being posted, I typically have in mind either a group of switches or a singular switch that I'm hoping to get to really pore over and discuss at length in my upcoming review. Thankfully, due to circumstances very close to the time of this writing which we will discuss below, my choice in switch to review has become somehow *more* relevant to the times than it was before. That being said, though, it isn't as if I had only a small amount of switches to choose for a review and simply got lucky this time. In fact, I'm currently sitting on what feels like a ton of 'in limbo' switches that I've not yet announced in mail day posts or added to the collection.

Fully intending to not spoil how the sausage gets made, not every switch that I get in during the week gets posted up on my Instagram, Twitter, or for review. Due to the fact that some weeks I'll get 30 new switches in and other I'll only get a few, I typically tend to spread out my 'mail days' to get to introduce all of you to as much of the switches I'm adding to my collection as possible. Thankfully, I actually have a fairly sizeable backlog of switches incoming or already here due to this attempt to spread things out, and these Neapolitan switches were some of them as well. I actually obtained these in the same package from Cannonkeys as the rest of the very unique mail day that you have may have seen posted a short while ago.



Figure 1: Yes, all of these and Neapolitans came in the same package.

In case you're wondering why I've decided to home in on this small detail of all things to kick off this review, its because of *how* I've been able to acquire a backlog like this: my gracious supporters both in switches and on Patreon. While I'm certainly not opposed to paying for switches for the collection, the situation I've found myself in recently is one where I end up having a fair amount of my switches donated or gifted from kind people around the community who both appreciate my work and want to see the collection grow. So, to those of you who have sent me switches in the past few months, paid or otherwise, know that you've not only helped out in my collection but also in providing continually new and exciting content to the community at large. Thank you to everyone who not only reads and enjoys the content that I put out, but especially to those I've taken the time to more thoroughly thank over on the 'About' page of

my website. If you've never visited there before, you should absolutely go take a look at the slew of people that I owe a lot of my gratitude to for their continued support of my plastic addiction.



Figure 2: Especially check out the Patreon supporters since they literally paid to be up there.

Switch Background



Figure 3: Neapolitan Ice Cream switches and their parts.

In this instance, I've decided to kick off the 'Switch Background' section with a photograph as I've been told pictures are worth about 1000 words or so, and I quite frankly don't have 1000 words to speak on the history of these switches. Coming alongside the Taro Ball, Coffee Chip Ice Cream, and Chromed out Tecsee switches in my previous week's mail day post from Cannonkeys, Upas was extremely excited to share these new, upcoming Cannonkeys switches with me. And, for the record, that is not an author's liberty taken in saying that Upas was excited. He genuinely was pushing for me to open the box of switches I got from him before I had opened my mystery-colored Clarabelle that had arrived at the same time.

Coming in as a milky clear, pink, and toasty brown tricolored switch from Tecsee, Cannonkey's Neapolitan Ice Cream switches were literally described to me as I was tearing open the packaging as 'one-switch Zyko replacements', which was a fairly lofty statement to make upon seeing the switches for

the first time. Though, aside the pretty strongly worded description of this tactile switch, they also boasted an interesting stock spring, the sheer length and goldenness of which I had not seen before. Oh, and the bottom housing molds are also custom ordered and owned by Cannonkeys, further adding to the serious resume this switch already boasted before I could get through the stupid amounts of bubblewrap he sent them with.

Now, given that I pulled up 750 words short of that thousand-word description about the background of these switches that I would want to normally aim for, I do want to point out the excellent timing of current events within switches that explains my increased interest in pushing out this review. First of all, though, let's have a very brief discussion on the increasingly popular Zykos switches and frankenswitches as a whole.

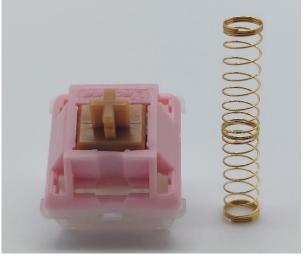
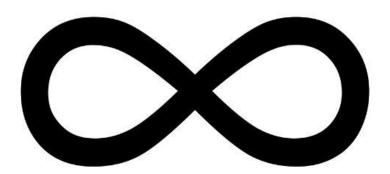


Figure 4: I mean seriously, just look at how tall the springs are in these switches.



Aside having a really damn cool formal name for the symbol of a 'lemniscate', this number above is often the one I refer back to when people like to ask me why I don't review or collect frankenswitches. For those of you unaware or new to this website, frankenswitching refer to the act of interchanging parts of multiple switches together into one 'frankenstein-like' switch. While this could be something as simple as putting a new stem into a switch or changing the top housings, it can also be significantly more complex and involve different top housings, bottom housings, and stems from three different switches, such as in the event of Zykos. If you consider something like 500 different MX style switches, and I have a fair bit over that amount currently in my collection, simply attempt to imagine the amount of possible combinations that can be made from those components alone. Even though this is technically a finite number unlike infinity, it may as well effectively be infinite for the sake of my recently graduated, examed-out brain.

In addition to this effectively endless amounts of combinations that *can* be made from these components, people often are inclined to give what feels like absolutely random-ass names to these switch combinations and then use them offhandedly in conversation as if I'm supposed to know immediately what their '1990's Fruit Salad Switch' is supposed to be. This behavior alone has caused me to become very wary of recognizing frankenswitches or addressing them as it legitimizes this sort of confusing behavior and makes my life, at the extreme least, more difficult. That being said, though, I have no problem in addressing ones that I have deemed as having actual, historical significance to the history of keyboard switches such as Ergo Clears, Holy Pandas, and now most recently Zykos, it seems.

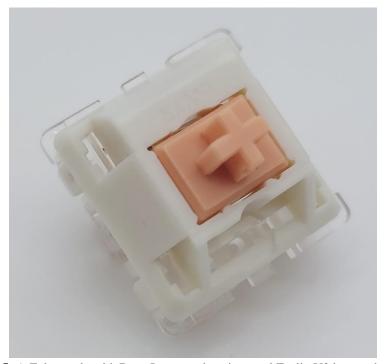


Figure 5: A Zyko made with Drop Invyr top housings and Zealio V2 bottom housings.

Zykos, for those of you unaware, are a frankenswitch first devised by Chewwy of Mechs On Deck while he was creating yet another frankenswitch by the name of Zandas, which I won't discuss because of my abovementioned sentiment regarding frankenswitches. Consisting of a Zealio V2 bottom housing, an Invyr, BSUN, or YOK Panda top housing, and a Halo Clear or Halo True stem, Zykos are the highly tactile switches that all of those finger-snapping tactile junkies in the hobby have come to love. Typically, these also tend to have significantly higher spring weights in them such as the stock 78g Zealio V2 spring you'd harvest alongside the bottom housing in these switches, as this higher weight is said to 'improve' the strength of the tactile bump and make it stronger. While I currently have none of these in my collection, and only the few I threw together above for this review, I have talked with Chewwy about getting a hold of some of the original ones for the collection once upon a time, but at this rate we've not spoken in a long enough time that reaching out again would give that same kind of awkward vibe like when you run into that person from high school you kind of had a crush on but was unsure of how to bring it up when you're grocery shopping in your hometown because your mother forced you to come back from college just so she could make you "one last (not) good homecooked meal" before you move away to graduate school and she straight up forgot to buy sauce for the pasta. You all get that vibe, I'm sure

In addition to Zykos switches already fetching a pretty costly price given the three different switches required to make them, these have only recently gotten even *more* expensive. Coming in the form of an announcement on 4/30 to take effect starting on the 5/1, Zeal has recently announced that his

switches would see a \$0.10 per switch cost increase for reasons that I'm not going to get into here. That being said, the areas I lurk about online which discuss switches immediately began to mention and talk about Zykos, and how they've become an even *less* viable option given the price hike. So, in a very well-timed fashion, this review that I had planned to start writing a couple of days ago offers, at least based on the sticker advertisement, a one-switch stock option for those literally poor Zykos fans out there.

Neapolitan Ice Cream Switch Performance

Appearance

Needless to say, the external appearance and color scheme of these switches was clearly aimed and designed in tandem with the name of 'Neapolitan Ice Cream' switches. Featuring a pink top housing, milky white 5-pin bottom housing, and tan brown stem, these high strength tactile switches also feature a double staged, golden spring inside of them which is definitely outside of the norm for switches I've both seen and reviewed here previously. Past this point, they don't really bare much in terms of noticeable, distinct features the average person would be keen to look into. Keeping in mind that I am a goat and not a person, though, we will go ahead and run through some of the more minute details with respect to each of the components.

Moving on to the strawberry pink top housing, nothing externally is entirely striking in terms of appearance. The top housings are 4 pin style in nature and feature a raised Tecsee branding on the nameplate as is in line with a lot (but not all) of their recent releases. Moving to the underside of the top housings, we are presented with a very similar setup and mold imprints as was noted in my Naevy V1.5 switch review, as these switches are also made at the Tecsee factory. A set of mold circles on all four edges of the underside lip are noted as well as in the E/W edges where the slide rails collide with the top housings. The only thing marginally different in these than in the Naevy V1.5 switches is that the mold label located in the inside center of the LED slot is a single numeric character rather than a strange symbol. This would likely indicate that these are stock molds for top housings whereas the Naevy V1.5 switches may have custom, AEBoards' owned ones.

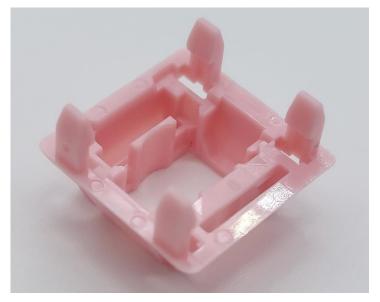


Figure 6: Bottom side of Neapolitan Ice Cream switch top housings showing mold circles and number.

Looking next to the chocolate brown stem, again nothing is necessarily ultra-noteworthy about these stems but they do certainly differ from the Naevy V1.5 stems which I rolled through before. While these stems still have the same slide rail taper and mid-set, front plate mold circles, the Neapolitan stems lack the high-set injection sprue mark and the double tapering of the stem as noted in the Naevy V1.5 stems. That being said, though, the stem still does feature a pretty aggressive taper which reduces the overall diameter of the stem quite noticeably by 0.7 mm towards the very end of the center pole.



Figure 7: Angled Neapolitan stem shot showing the center pole taper, angled slider rails, and front-set mold circles.

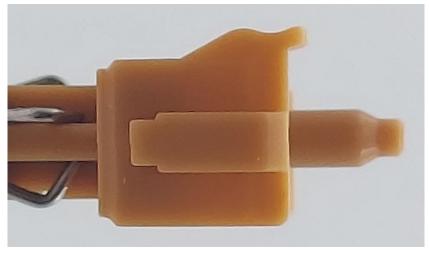


Figure 8: Side profile of Neapolitan stem showing off the tactile bump structure of the legs.

Finally checking out the milky white, vanilla bottom housings, the most noteworthy intangible feature is that these are custom paid for by Cannonkeys and will not be present in any switches outside of ones that they offer. The upper rim of the bottom housing features a set of four mold circles on both the East and West sides parallel of one another as well as a much more noticeable one at the bottom of the LED/diode enclosure. Additionally, reinforced slightly raised edges on the inside of the bottom housing can be noted around the center hole as well as at the base of the slide rails on either side, though these have been noted before in other previous switches. The outside of the bottom housing, as well, is fairly plain on the details. The entire base of the underside is shiny and smooth with the exception of the two raised pads where the leaf legs protrude from. Mold markings on the underside consist of a center, raised diode symbol as well as an 'upside' down, large, numeric character between the leaf pins much like classic Invyr switches which also came from Tecsee.

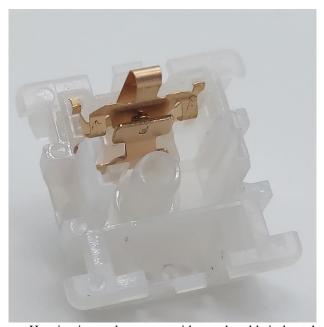


Figure 9: Neapolitan Bottom Housing internal structure with noted mold circle at the bottom of the LED slot.

The largest surprise which stood out to me when viewing the internals of this switch up close is that it appears the Neapolitans come from the factory with a slight bit of lubing on the leaf where the legs of the stem would interact with it. While no other component of the switch is lubed, this thin application on the leaves is typically done to reduce some of the harsh ping that is noted when highly tactile stem legs interact with the leaves of a switch. When done by hand, this is often a very tricky thing to get correct as overlubing can quickly deaden the tactility of an otherwise highly tactile switch, though you'll note from my comments below that this is not the case with respect to this lubing on the Neapolitans.

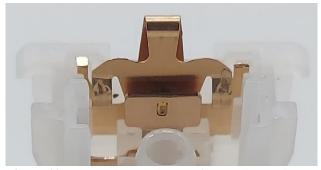


Figure 10: Factory lube on leaves of Neapolitan switches.

Push Feel

To be entirely honest, I've stated in reviews previously that I am not the biggest fan ultra-heavy, or super-strong tactile switches mostly because I've got fragile fingers and trying to type something like this review on Holy Pandas would kill me. Keeping that in mind, one of my biggest gripes with this area of switches as a whole is that in stock form these tend to have very strong, noticeable, and not always coherent leaf interactions with stem legs. Often times, when 'good' tactile stems are swapped into other leaves, they have a sort of ping-heavy feeling to them in addition to the strength of tactile bump which takes a lot of the clean feeling out of the switch. Well, that is until I really started messing around with these.

The Neapolitan switches have a quite early-in-stroke tactile bump that is obviously fairly large but at the same time is quite clean and snappy compared to what I've come to expect of these ultra-heavy switches. While I'm uncertain of the specific weighting of the springs in the Neapolitans, they feel closer towards the high 70-gram range which struck me with surprise as they feel 'lighter' than the traditional 78g Zykos I created for this review. That is not to say, though, that these are necessarily lesser tactile bumps. I genuinely think that the 'lightness' of the tactile bump comes in part due to a much more coherent, less clunky, and less pingy interaction between this stem and leaf as a result of the factory added lube to the leaf, which I was pleasantly surprised by.

In addition to the tactile bump, which is really the only thing people want to know about here, the switches are a tad on the scratchy side in their stock form, though the samples I received had no factory lube on the stem rails, so it's not entirely surprising. The bottoming out, as well, was decently firm, a bit pointed, and on the side of muted relative to the tactile bump, which is fairly commonplace for switches like this. They do, however, bottom out on the stem pole based upon the height of the stem relative to the housing at full press, which is worth considering based upon your preference. The last component of the push feel *really* worth discussing is the topping out. While the tactile bump is still strong and fairly soft, the topping out of this switch is much more snappy and pronounced than the tactile bump, though not in such an aggressive way as to make it feel out of place.

Sound

This is one of those ever-common instances, yet again, in which the feeling of a switch fairly closely resembles the sound of the switch. Going through the switch motion, there is a subtle underlying scratch sound that is noticeable and especially so at slower speeds as there is an effective post-bump 'hang-time' between the tactile bump and bottom out sounds. The bottoming out, as well, is a bit sharp and muted though again only really noticeable at slower speeds due to the sound of the tactile bump and the topping out. Moving towards the first of the primary sound drivers in this switch, the tactile bump is snappy and softly crisp sounding but definitely a hair towards the quieter end of highly tactile switches. The topping out though, being the second primary sound driver in this switch, is significantly louder than any other component of this switch and takes over at higher activation speeds. Snappier, louder, and even a bit higher pitched than the tactile bump of the Neapolitans, I have a feeling that this sound in particular will be the 'make or break' feature of these switches for a lot of people.

Wobble

Of all of the interesting features of these switches, the wobble is probably the biggest weak point among them. With respect to stem wobble, there is a fairly noticeable amount in both directions but a significantly greater N/S direction stem wobble. While it's not egregious in the slightest, it is a tiny bit more than I've come to expect of recent switch releases. As well, the other big weak point of the wobble of the switches is that they seem to consistently have a slight E/W top housing wobble even prior to

opening them. Granted, this is the exact type of feature that films were designed for, so I imagine that people will have no issues using those here for this wobble as they likely will already be trying to deepen up the sound a bit.

Measurements

Neapolitan Ice Cream Measurements							
Component		Denotation	mm.				
	Front/Back Plate Length	Α	7.16				
	Stem Width	В	5.54				
	Stem Length with Rails	С	8.62				
Stem	Rail Width	D	1.96				
	Center Pole Width	E	1.94				
	Rail Height	F	5.17				
	Total Stem Height	G	13.82				
	Diagonal Between Rails	L	9.37				
Bottom	Interior Length Across	M	9.40				
Housing	Rail Width	N	2.54				
	Center Hole Diameter	О	2.08				
Тор	Horizontal Stem Gap	X	7.52				
Housing	Vertical Stem Gap	Y	5.90				
Methods	Number of Switche	3					
methods	Replication Per Meas	urement	3				

As an interesting side note, since I'm sure this will get asked at some point, the springs for these switches are around 22.50 mm long on average.

<u>Other</u>

One thing worth noting here that I didn't necessarily discuss in the heavily contextualized background section of this review, is that much like with my Gateron Hippo switch review, I am still lacking details on the exact release date and price of these switches. While the Gateron Hippos ended up turning out great in the range of \$0.55 per switch or thereabouts, which was within my realm of expectations, my initial guess with literally no other information is that the Neapolitans will certainly be cheaper than the sum of components necessary to make traditional Zykos switches on your own.

Comparison Notes to Other Notable Tactile Switches

Note – These are not aimed at being comprehensive comparisons between all factors of these switches as this would simply be too long for this writeup. These are little notes of interest I generated when comparing these pieces to the Neapolitans side by side.



Figure 12: Switches for comparison. (L-R, Top-Bot: Kailh Polia, Zealio V2 (78g), TTC Blueish White, Moyu Black, Gazzew U4T, Invyr Holy Panda)

Kailh Polia

- Both Kailh Polias and Neapolitans have their tactile bump located at that beginning of the downstroke and have an initial lead into the bump that feels extremely similar.
- While there is a bit more stem wobble in both directions on the Polias than the Neapolitans, overall, they don't suffer from the same top housing wobble given the winglatch style housing that Kailh used.
- While they are both similar in terms of overall tactile strength, the Polias feel just a tiny bit larger in terms of the tactile bump, whereas the Neapolitans feel a bit shorter and punchier.

Zealio V2 (78g)

- Even though the Neapolitans are distinctly louder than the Zealio V2 switches, it's worth pointing out that the noise is as a result of the housing collisions and tactile bump rather than the ping that primarily makes up the bulk of stock Zealio V2 sound.
- The Zealio V2 switches of a comparable weight to the Neapolitan samples I received all have a fraction of a millimeter greater pretravel distance to the tactile bump while also have distinctly less intense tactile events.
- The differences noted in tactile bump strength also rings true with respect to topping out of both of these switches. While they are both quite intense in terms of the force of topping out, the Neapolitans do have a slightly stronger, louder, and more sharp topping out feeling.

TTC Blueish White

- While the tactile bump of the Neapolitan switches is definitely stronger than the Blueish Whites, it feels much more singular and less 'full bodied' than the Blueish White tactile bump. Given that this is a bit of a hard difference to put words to, I'd try to imagine the difference as if the tactile bump had more of a 'surface area' to occur on in the Blueish Whites than the Neapolitans.

- Both the stem and top housing wobble in the Blueish Whites are significantly better in all directions than the Neapolitan switches.
- The Neapolitans have much louder, crisper, and less scratchy sound to them than the Blueish Whites, which have a notable velvety scratchy noise underlying the stroke of the switch.

Moyu Blacks

- Of all of the switches on this initial list, these are the most similar to the Neapolitans in terms of overall tactile bump strength, size, and placement.
- Even though the tactile bumps of these two switches are fairly similar, the bottoming outs are drastically different. The Moyu Blacks are noticeably sharper, more plasticky feeling, and a great deal more harsh in the bottoming out than the Neapolitans, and partly why I'm always worried about the performance of switches that bottom out on the stem poles.
- There is noticeably lesser stem wobble on the Moyu Blacks than the Neapolitans, and they don't have the same out-of-box top housing give that would encourage the usage of films.

Gazzew U4T (68g)

- While the U4Ts are certainly snappy tactile switches and towards the higher end of the tactility scale than not, they simply don't match up to the Neapolitans in terms of raw tactile strength.
- The Neapolitans overall are much more sharp, loud, and crisper sounding than the U4Ts which have a very different sound profile that is more muted and dampened.
- Also, much to nobody's surprise who has tried Gazzew's U4 line prior, the U4Ts absolutely blow the Neapolitans out of the water with respect to both stem and top housing wobble.

Invyr Holy Panda (OG)

- While fairly similar in terms of the tactile strength of the bump between these two switches, the more noticeable difference between these two is how much more quick and short the tactile bump of the Neapolitans is compared to the Holy Pandas.
- Coming unlubed in both cases, these switches both have a nearly identical scratch profile. Thus, if you were somebody who would choose to lube Holy Pandas of any type, I'd imagine you'd feel inclined to do that same here too.
- As you may have been able to ascertain from the other comparisons on this list, the Neapolitans are certainly towards the louder end of heavy tactile switches and they definitely do come out louder than the already fairly unsubtle Holy Pandas.

Bonus Round

Given that the Neapolitan switches were literally designed with Zykos in mind, I couldn't help but feel obligated to compare the few I threw together for this review with my Neapolitans. These are made with Drop Invyr Panda top housings, Zealio V2 bottom housings, Halo True stem, and various Zealios springs.

Zykos

- Having never really sat down and messed with Zykos prior, I was genuinely surprised how much the recommendation of "higher spring weights make them more tactile" held true. The 78g versions of the Zykos I made are significantly more snappy than that of the 67g and lower ones.
- Comparing similar spring weights, though, the tactile bump of the Neapolitans is quite similar in terms of overall strength but noticeably 'softer' and less aggressive than the bump and topping out of the Zykos switches.
- The Neapolitans, again, come with a slightly more sharper and high-pitched sound to them in the tactile bump and topping out experience than the original Zykos switches, which are already fairly loud to start out with.

Scores and Statistics

Note – These scores are not necessarily completely indicative of the nuanced review above. If you've skipped straight to this section, I can only recommend that you at least glance at the other sections above in order to get a stronger idea of my opinion about these switches.

Neapolitan Ice Creams						
30	/35	Push Feel				
14	/25	Wobble				
7	/10	Sound				
16	/20	Context				
8	/10	Other				
75	/100	Total				

Push Feel

With scratch being really the biggest drawback to the Neapolitans, they really do stand out amongst the ultra-tactile group of switches as a competitively strong yet not overly aggressive tactile switch with fairly good showings at all collision points with the exception of some added sharpness in the bottoming out on the stem pole.

Wobble

In stock form, the switch has a fair amount of stem wobble with it much more noticeable in the N/S direction than the E/W. The biggest feature, though, is a wobble in the E/W direction of the top housing which will likely require films past people's predilection to supplement with them for sound-based changes.

Sound

Among the more controversial points of this switch, I believe, they're fairly flat in the high-pitched range, snappy, but not overly sharp nor pingy at any point of the stroke. The lack of ping mixed with the higher pitched, yet soft sounding bump and topping out definitely give it a more unique sound among releases as of late, and I'm here for it.

Context

Coming in as a strong attempt at a 'stock Zyko', the necessity of these switches only further has increased with Zeal's third price hike. While unreleased as of this posting, I have my suspicions the community at large will really enjoy these switches.

Other

In addition of filling a 'void' in the community for heavy tactiles, Upas and crew made some serious leaps in this switch with the spring, new bottom housing molds, and overall switch picture that definitely is an exciting step forward in the heavy tactile circle for switches.

Statistics

Average Score			Neapolitan Ice Creams				
25.9	/35	Push Feel	30	/35	Push Feel		
16.2	/25	Wobble	14	/25	Wobble		
5.8	/10	Sound	7	/10	Sound		
12.3	/20	Context	16	/20	Context		
6.0	/10	Other	8	/10	Other		
66.2	/100	Total	75	/100	Total		
Neapolitan Overall Rank			T-#17/81 (75/100)				
Neapolitan 'Hard' Rank		T-#21/81 (51/70)					
Neapolitan 'Soft' Rank			T-#2/81 (24/30)				

Final Conclusions

Here we are at yet another 'Final Conclusion' section. Even though I feel like I have just said this a review or two ago, it very easily could have been five reviews ago and I've forgotten, so I'll say it again: It is not often that switches genuinely surprise me. With that meme in mind, I was fairly impressed with how these Neapolitan Ice Cream switches turned out. Especially not being a fan of heavy tactile switches, I found these to be a refreshingly clean and sharp tactile switch which clearly wasn't aiming to just crank up the tactility as far as humanly possible while letting the rest of the fundamentals go completely out of the window. The added bonus, as well, of these switches distinctly aiming to mimic Zykos due to their high component cost only further makes me excited as it integrates a new feeling into the stock options of switches that hasn't been available prior. While my brittle bones and tendons may not necessarily come around to using heavy tactile switches, such as Zykos, any time soon, I think that Neapolitan Ice Cream switches would be a place I'd personally want to start if I ever had a heavily tactile build in mind. On the flip side, the rest of you tactile junkies will be immediately slapping these into everything ranging from Tofus to Keycults without much hesitation, I'd imagine.

Sponsors/Affiliates

Mechbox.co.uk

- A wonderful UK based operation which sells singles to switches that I've used above in my comparisons for collectors and the curious alike. Mike has gone out of his way to help me build out big parts of my collection, and buying something using this link supports him as well as my content!

Keebcats UK

- A switch peripheral company based out of the UK which sells everything switch adjacent you could ask for, they've been a huge help recently with my film and lube supply for personal builds, and they want to extend that help to you too. Use code 'GOAT15' for 15% off your first order when you check them out!

Further Reading

Minterly's Zykos Switch Video

Link: https://www.youtube.com/watch?v=wJWWFFLk8LU&ab_channel=Minterly

Mechs on Deck Fjell R4 with Zykos Build Stream

Link: https://www.youtube.com/watch?v=eguEQ9SQv2w&ab_channel=MechsOnDeck

Mechs on Deck Keycult 1/60 with Zykos Build Stream

Link: https://www.youtube.com/watch?v=POkv8RFnho0&ab_channel=MechsOnDeck

Cannonkeys' Switch Sales Page

Link: https://cannonkeys.com/collections/switches?page=1

Wayback:

https://web.archive.org/web/20210501235504/https://cannonkeys.com/collections/switches?page=1