

Gateron Hippo Switch Review

-ThereminGoat, 04/04/2021

I have returned! Whether it be for better or for worse, I've officially now made it through one of my last big hurdles of my undergraduate career with my undergraduate thesis defense. While there is still a month left of classes, and an entire five years of graduate school ahead of me here in the fall, I'm extremely excited to have passed that milestone so that I can get back to spending the entirety of my weekends working on switch related content and reviews. I also suppose I should shove relaxing and enjoying free time a bit in there somewhere as well, but at this point I'm not even sure what the concept of "free time" means anymore.

Coming in tow with my return, though, I do have a few official "announcements" regarding changes that have happened with respect to content over the last few weeks and in the weeks to come. First and foremost, as many of you may have seen from the last review, I now officially have an affiliate link with Mechbox.co.uk that supports me as well as them whenever you buy some switches to help fill out your collections or ultimate testers there. You should definitely be checking them out via my affiliate link that's in their logo on the 'About' page. Secondly, and much more recently, I've now officially collaborated with the team over at Switches.mx in order to bring my scorecards directly to their page for any overlapping between their insanely well put together database and my insanely verbose scorecards. After buying stuff at Mechbox you should definitely head over their way to support them and take a look around their new, revamped site. And finally, my last announcement is this:



Figure 1: You have no clue how long I spent getting it exactly to this measurement for the photo.

Granted upon me by the wonderful collective known as my Patreon supporters, I've officially bought a CD-6" ASX Digimatic Caliper from Mitutoyo! Recommended to me by my machinist friend who is a daily driver of this exact model, he said it would be perfect for all of my switch measurement needs knowing full well that will be many. While I've not finalized how exactly I'd like to do measurements in this review, and you will likely see adaptations and changes as we move through the next few weeks, know that I am looking forward to officially now introducing measurements into my reviews as well. Not only does this bump up both my word count and thus my self-esteem, it'll also

simply be more information that I can pack into these already long reviews so that you all can get even more details from these reviews. I really hope this turns out to be a great addition.

Switch Background

Thankfully, given the fact that I am now buffing out reviews with a measurement section, the Background section for the Gateron Hippos will be much more shorter than recent releases. For lack of any other solid explanations this early along, the reason that this section is so short is that these have only been *very* recently teased by Kinetic Labs on their social media platforms nine days ago with the vague hint that they will be selling ‘in April.’ Thankfully, they were more than generous in sending me a couple for my collection and I couldn’t help but tear them apart and analyze them given their historical uniqueness. *“But aren’t they just Gateron switches, Goat? How are those going to be unique at anything other than color?”* Well, these are not just a ‘GaDeRoN ReColOr’ this time.

What makes the Gateron Hippo switches so unique, relative to the grand scheme of both teased and released custom Gateron switches, is that these will be the first Gateron switch to feature a “majority UHMWPE” stem. While I, as well as Kinetic Labs, asked closely for more information as to what exactly the percentage of UHMWPE that would constitute a “majority” was, Gateron chose to keep this a secret from us at this time. That being said, though, while these are the first (and at the time of writing only) Gateron switches featuring UHMWPE stems, they were surprisingly *not* the first to hint at this capability existing from Gateron. Taking a whole extra six day walk into the past from the announcement of the Gateron Hippo switches, Keybee ‘Honey Switches’ were first teased in an interest check on Reddit, consisting of UHMWPE stems in custom colored Gateron Ink housings. However, due to the high pricing of these at interest check of \$0.99 per switch, the idea was rather swiftly panned and the switch details were modified to a much more cost friendly venture with an unstated manufacturer that will most likely end up being JWK if these pass the IC phase.

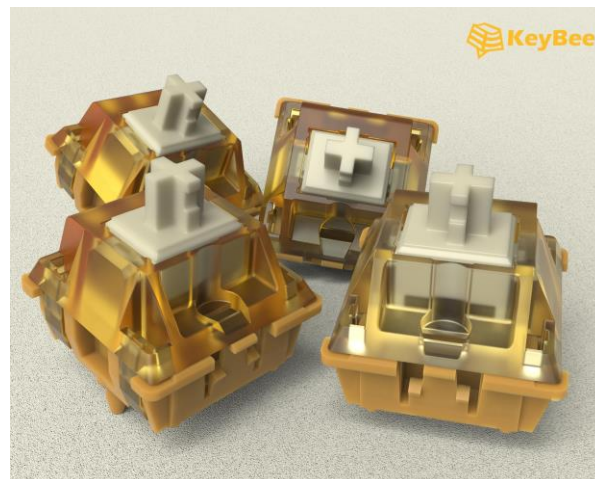


Figure 2: Keybee Honey Switch render.

Sweeping this ultra-pedantic historical footnote aside, though, the Gateron Hippo switches in their soft, lavender colored housings and clearish-whiteish-hyphenatedish-milkyish colored UHMWPE stems became the first Gateron switch to see such a release. Coming stocked as prototypes with 63.5-gram springs, Kinetic Labs have informed me that these will most likely be the initial spring weight upon release but with future, alternative spring weight offerings. I’d assume that this will be carried out in similar fashion to their Penguin switches which have been sold like this for some time now. Past this discussion of materials and spring weighting, though, there were no other details that I was able to pick up

from them other than that initially the stems were going to be dyed a certain, unstated color as well, though apparently the UHMWPE stems struggled retaining the dye during the test batches.

Gateron Hippo Switch Performance

Appearance

These are cute as shit. I'm not exactly all about the 'uwu' type of vibes in terms of keyboard or keycap design, and especially not so with respect to my switches. While I do think that there have been particularly cute looking switches in the past, this pale lavender with milky-clear stem appearance works incredibly well together and does press a certain cute button that I've not seen hit in some time. As well, definitely worth noting here is that for once the roughness and textural grain to Gateron KS3 style top housings actually *helps* the custom chosen color rather than slightly marring the overall finish. Whereas Gateron switches with dark housing colors such as Linjärs have a bit of a visual grain to them as a result of the surface finish, the grain here actually helps to give this ultralight lavender color almost a matte feel which I am particularly enamored by.

While I've only recently begun my process of meticulously photographing molds and internal structures for JWK and Durock switches, I see no reason why I should stop here simply because it is a Gateron made switch. Starting first with the stem and the spring, both are fairly plain and simple relative to some of the more exciting interior designs we've seen of late. The spring is silver colored and thus is likely a steel-based spring whereas the stems in the switches come completely unlubed from factory. The stem comes in quite boring with no interesting design choices of note. My only real pointer here is that the location of the mold circles is on the front plate of the stem rather than in various positions on the backplate that has been common among all of the JWK switches I've reviewed thus far. Even though this is likely insignificant, it is interesting, nonetheless.



Figure 3: Front side of the UHMWPE Hippo stem showing front plate mold circles.

With respect to the top housing, though, there are a couple more points of interest that I want to discuss. Looking first at the exterior structure, the GATERON nameplate is 'upright' on these switches with the bottom of the logo facing inwards towards the stem. While this may seem particularly strange to note, recent releases in the form of some versions of Gateron Kangaroo Inks as well as the Gateron Cap Browns feature "flipped" nameplates and thus I felt the need to distinguish such. Flipping them over and inspecting the internals, it's noted that the mold number is too difficult for me to photograph as it is extremely small and located on the deepest face right next to the switch-hole opening. The other point of

note is that the underside of the LED slot features an inward half-enclosure that is not something noted on any of the molds I've photographed for JWK stuff prior.

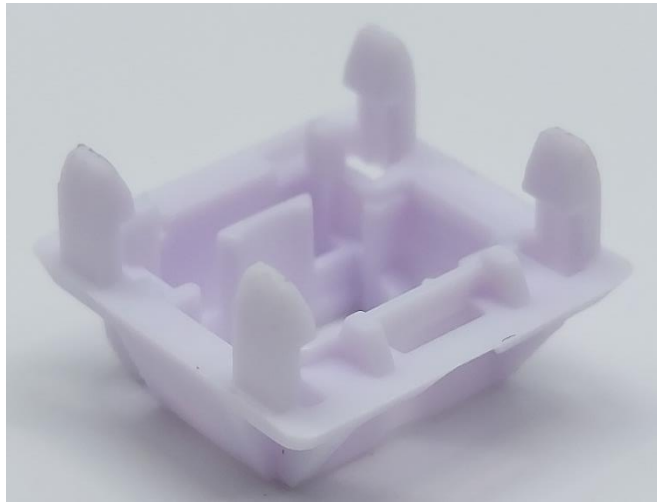


Figure 4: Bottom side of Hippo top housing showing the partial LED slot enclosure.

Moving to the bottom housing, much like with the top housing of the Hippopotamuses (?) the exterior is significantly less interesting than the interior of the switches. As can be seen below, the bottom housings are fairly plain with a single-letter mold marking in the similar location within the LED/Diode-pinouts as JWK switches and it also features a significantly raised diode symbol front and center. Internally, as can be seen from the angled shot, I'd like to note that there is a variable length stem rail outer wall thickness as we move down the rail as well as a bar across the very bottom of the slide rails on both sides. As well, the LED slots feature a strange, stepped v-shaped region effectively separating the inner two LED/diode slots from the outermost ones.

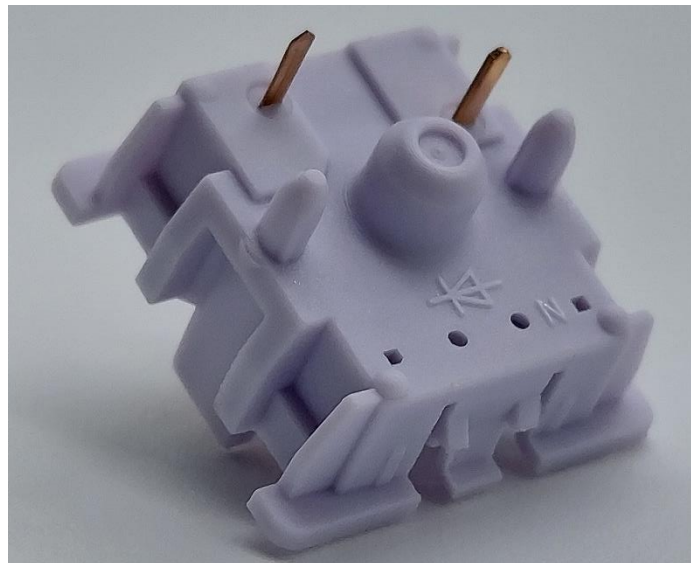


Figure 5: Bottom side of Hippo bottom housing showing raised mold letter as well as diode symbol.

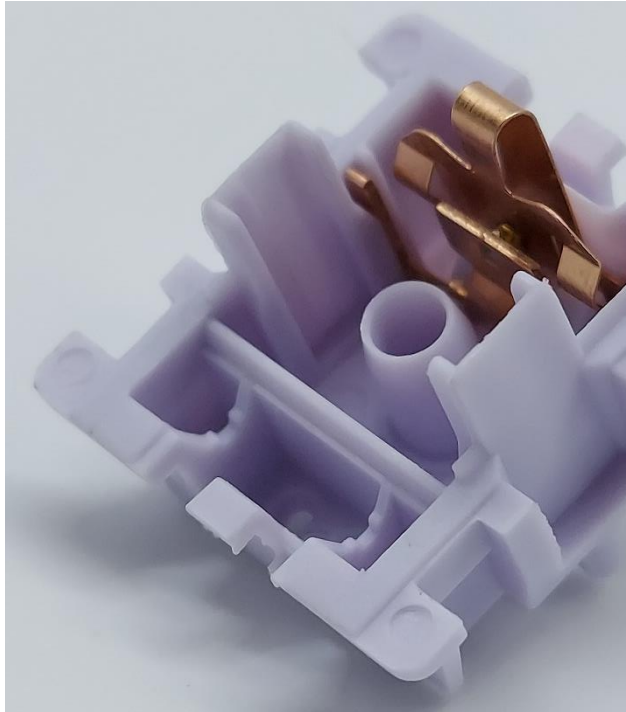


Figure 6: Angled shot of interior of Hippo bottom housing with particular notice of stem rail shape on sides and bottom as well as the stepped LED/diode slot gaps.

Push Feel

Without much thought required, I immediately recognize that this is the section that many if not all of the people who clicked on this article were most interested in reading. So, to answer everyone's favorite question that at least two people on Reddit will inevitably ask me in the thread where I post the link to this review rather than actually just reading the damn thing, yes, they are noticeably smoother than other Gateron stock KS3 switches. Do I think that they are absolutely free from scratch? No. In fact, there's a bit of a subtle, small-grain scratch to the switches that is most likely a function of the grain of the top housing in the slider rails. In the testing I was able to do, small amounts of lubricant (205g0, as if that really matters) significantly deadens this consistent scratch feeling but does not altogether eliminate it.

Past the smoothness of these switches, they're otherwise fairly solid linear switches in terms of push feel and really highlight the appeal of Gateron KS3 style, all-opaque switch housings. All of the switches I tested carried a solid, structurally sound feeling bottom out with a lighter, but not insanely different topping out feeling than compared to the bottom out. That being said, there is some slight inconsistency in how exactly thin feeling the topping out experience is, but on a board, with caps, it becomes significantly more difficult to recognize versus just testing them in hand.

Sound

Unlike the surprising, break-through push feel performance for a Gateron switch, it inevitably falls back into line with the time-tested feature of having a sound profile that matches the push profile. The switches are fairly deep and decently muted but with a more flat in tone than sharp sound, and carry a subtle scratch noise that is more noticeable in hand and at higher activation speeds. The one tiny difference between push feel and sound is that the variability in topping out experiences with respect to sound of the Gateron Hippo switches is quite a bit more noticeable than the feeling, even with keycaps on. With that variability noted, though, it's really not bad in the slightest and definitely something that I think

many people won't have an issue with after lubing (and unnecessarily filming these like they do a metric ton of switches for some odd reason).

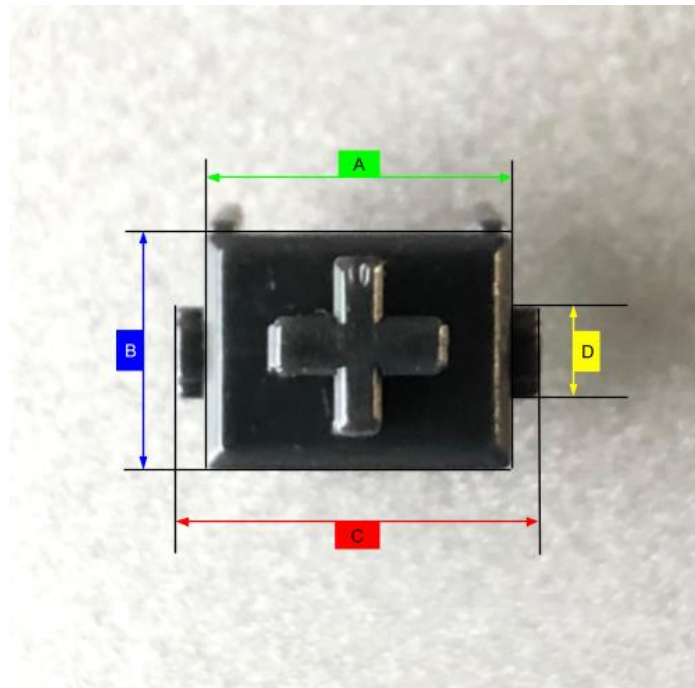
Wobble

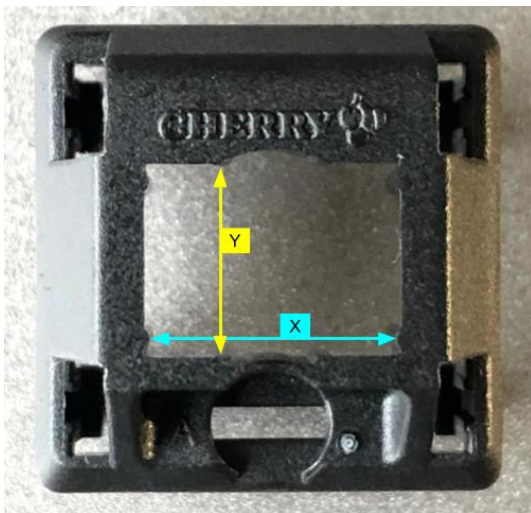
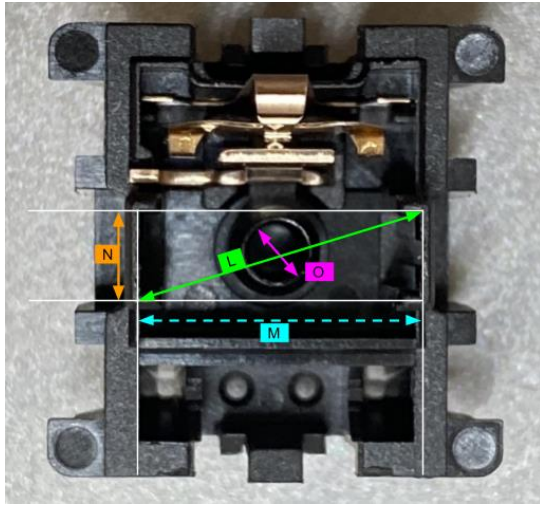
The wobble on the Gateron Hippos is also another fairly noteworthy point of interest in regards to their performance. While I am uncertain as to whether this is the result of new top housing molds *or* the more likely potential in new stem molds for the UHMWPE stems, these have significantly better stem wobble in both the N/S and E/W directions as compared to their older, KS3 counterparts. In fact, I'd imagine this stem wobble within the range of most likely unnoticeable with anything below SA or MT3 height of caps to the majority of users unless they are particularly sensitive to stem wobble. As well, there is no top housing wobble even after opening and closing one of them a handful of times for testing, photographs, etc.

Measurements

While I have always been a fan of doing things my own way as you might have been able to gauge by my very longwinded review style, I do want to say that I am a man enough of a goat to recognize when there is already a good system in place for something. Instead of devising my own standard of measurements, I believe that a system I saw introduced first by Kisenon, who is a Japanese switch collector, is an insanely good way to track measurements on switches, and thus I will be using that for my measurements from here on out. (I would like to strongly recommend you go give them a follow of support @Xe_ry on Twitter as well.)

The following measurements in this review and beyond will be tracked on based on these photos and these letter designations:





Additionally, I do want to point out that I will work to incorporate these measurements into some form of an Excel sheet as well, though I don't have one devised at the time of writing this review. Thus, I will simply state the measurements this time and have a much more pleasing graphical representation as well as overall tracker in the future.

Number of Switches Tested: 3

Number of measurements per switch: 3

Measurement Averages:

Stem

A – 7.27 mm

B – 5.58 mm

C – 8.69 mm

D – 2.26 mm

E – 1.94 mm

Bottom Housing

L – 9.40 mm

M – 9.57 mm

N – 2.54 mm

O – 2.20 mm

Top Housing

X – 7.57 mm

Y – 5.90 mm

Comparison Notes to Other Notable Linear 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 Gateron Hippos side by side.

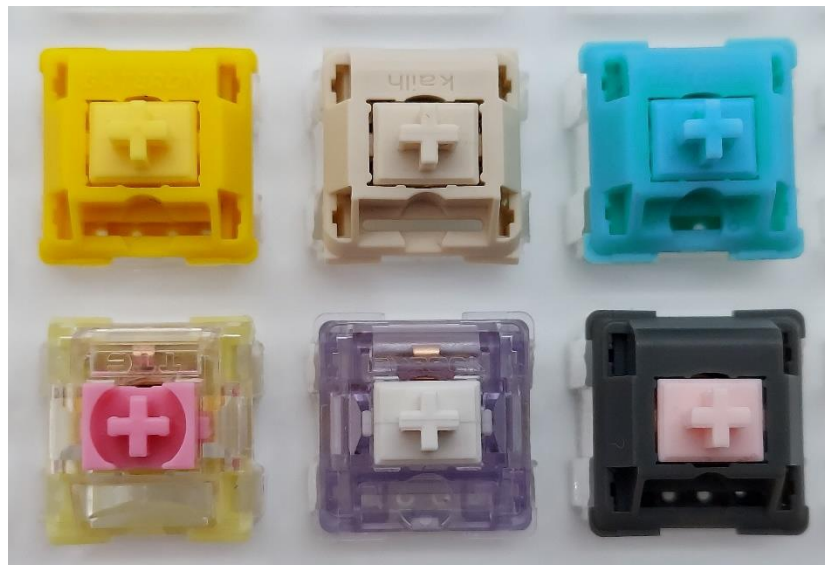


Figure 11: Switches for comparison. (L-R, Top-Bot: Gateron Cap Yellow, Novelkeys Cream, Gateron Giant, TTC Gold Pink, Lavender, Alpaca V2)

Gateron Cap Yellow

- While the scratch sound and feeling between these and the Hippos are quite similar, it is much greater in magnitude on both fronts for the Gateron Cap Yellow switches.
- There is noticeably greater stem wobble in both the N/S and E/W direction in the Gateron Cap Yellows than the Hippos, but especially so with respect to the E/W direction.
- The topping out sound of the Gateron Yellows is a slight bit deeper than the topping out sound of the Gateron Hippos, but it is still proportionally louder and higher pitched than the bottoming out in its own switch.

Novelkeys Cream

- In no surprise to anybody who has tried them before, the stock Novelkeys Creams are significantly more scratchy than the Gateron Hippos.
- As well, much like with the Gateron Cap Yellows, there is a noticeably greater amount of stem wobble in the Novelkeys Creams than in the Gateron Hippos
- Scratch sound aside, I would say that both stock and broken in Novelkeys Creams are much louder overall at all points than the Hippos.

Gateron Giant

- Of all of the switches on this list, these are the only switches with a noticeable amount of spring ping in terms of sound which is quite jarring.
- The same notes I made above in regards to how the grain of the Gateron top housings helps complement the light color of the Hippos also does apply here to the Giants, but not quite to the same extent since it is a bit of darker/colder blue than the Hippo lavender.
- While the Giants and Hippos have the same consistency in the scratch feeling across the stroke, the Giants are significantly more scratchy in both sound and push feel.

TTC Gold Pink

- Of all the switches on this list, the TTC Gold Pinks are the most similar to the Hippos in terms of sound profile – including scratch, bottoming out, and topping out.
- Also, they share fairly similar stem wobble with the TTC Gold Pinks maybe having a hair more stem wobble in the N/S direction.
- The bottoming out feeling of the TTC Gold Pinks, while sounding quite similar to the Hippos, does feel a bit thinner and less substantial than the thick KS3 style housing used in the Hippos.

Lavender

- Even hand lubed with some level of skill that I'd like to think I have acquired this far along in the hobby, I do struggle getting the Hippos to the same level of smoothness as the Lavenders. I can get close, and even sufficiently lubed for my own personal usage in a board, but its difficult to get them to nearly identical smoothness.
- The stem wobble in the N/S and E/W direction for the Lavenders is much better than the Hippos.
- As well, given the large amount of factory lube applied to Lavenders relative to other JWK/Durock switches, it does significantly dampen the sound and make the Lavenders extremely quiet for linear switches in general – and especially so compared to the Hippos.

Alpaca V2

- Much like with the Lavenders, the Alpaca V2s are significantly smoother and more muted in terms of overall sound when compared to the Hippos.
- While the two switches feel relatively similar in terms of bottoming out experience, the Alpaca V2s are a bit more muted and 'cushiony' feeling.

- As well, the stem wobble on the Alpaca V2s is not matched by the Gateron Hippos, as if they really stood much of a chance to be honest.

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.

Gateron Hippo		
28	/35	Push Feel
19	/25	Wobble
5	/10	Sound
14	/20	Context
7	/10	Other
73	/100	Total

Push Feel

While these are not exactly the most perfectly smooth stock linear switch out there, they are definitely a noticeable improvement on the other custom colored Gaterons of the past few years. As well, a fairly solid bottoming and topping out experience as is commonly noted in the opaque, KS3 style housings was also seen here as well.

Wobble

Most certainly one of the biggest selling points about the Hippo switches that I discussed in my full review of them is that they have a distinctly reduced stem wobble versus both stock and other custom Gateron offerings, which is definitely going to up the appeal of these for frankenswitching. Otherwise, no top housing wobble noted even after a couple of openings.

Sound

The stock sound of the Gateron Hippos is probably one of the weakest points of them due to the general inconsistency in between the loudness and pitch of the topping out. While minor lubrication seemed to reduce this a bit, I’d imagine more aggressive lubing, filming, or other modifications may be needed to reduce this variation even further.

Context

While not officially released yet at time of posting, their handling by Kinetic Labs gives me good indication that the contextual rollouts in terms of availability and pricing will be excellent for this switch and it already has plans for further spring weight options (past the 63.5 g option) in the future. The score might be higher if we had more information about it.

Other

A historical first by Gateron with their first shot at an UHMWPE stem, and they did it fantastically. Not only is there improved smoothness, but excellent tolerancing on the stem wobble which makes me genuinely excited for future customized Gateron switches.

Statistics

Average Score			Gateron Hippo		
25.7	/35	Push Feel	28	/35	Push Feel
16.2	/25	Wobble	19	/25	Wobble
5.7	/10	Sound	5	/10	Sound
12.2	/20	Context	14	/20	Context
5.9	/10	Other	7	/10	Other
65.7	/100	Total	73	/100	Total
Hippo Overall Rank			#18/73 (73/100)		
Hippo 'Hard' Rank			#19/73 (52/70)		
Hippo 'Soft' Rank			T-#15/73 (21/30)		

Final Conclusions

Shortly following the posting of the Keybee Honey Switch interest check, I was genuinely questioning whether or not Gateron even had the capability of producing UHMWPE stems, and if they would even be a noticeable improvement on performance of their switches given the other less than perfect metrics of their stock releases. Thankfully though, the shortly thereafter appearance of the Gateron Hippos on my desk have made me feel significantly more assured and excited about the possibility of UHMWPE stems in Gateron switches. In addition to even impressing me with respect to the stock, unlubed smoothness, they even stepped their game up a bit further with respect to their molds and tolerancing of their switches and have made themselves a potential solid competitor if the price will be right for them upon release.

Thus, unlike the vast majority of the switch reviews that I do, I was fundamentally left a bit blank with regards to the price of these switches on release. While I, personally, have no problem dropping crazy amounts of money into switches, I recognize that a large part of my audience as well as the community at large is deeply invested in finding the perfect performance per price balance in a switch. With the recent rise of KTT as a budget friendly but still fairly eastern-centric brand of switches, western markets feel primed for a budget-friendly, high quality switch to take the market. Do I think these have the ability to truly be a budget friendly, moderate to high performance switch? Absolutely, and especially so with the amount of beginners teaching themselves aftermarket modification techniques much more earlier on in their time in the hobby. The big question that I along with everybody shares, though, will be answered in the details we are all waiting for in their release later this month.

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!

Further Reading

Kinetic Labs' Instagram Teaser

Link: <https://www.instagram.com/p/CM4vs28HHt5/>

Kinetic Labs' Twitter Teaser

Link: <https://twitter.com/kineticlabs1/status/1375467276267364353>

KeyBee Honey Switch First Interest Check

Link: https://www.reddit.com/r/mechmarket/comments/md07xw/ic_keybee_honey_switches/

Wayback:

https://web.archive.org/web/20210331022601/https://www.reddit.com/r/mechmarket/comments/md07xw/ic_keybee_honey_switches/

KeyBee Honey Updated Geckhack Interest Check

Link: <https://geekhack.org/index.php?topic=112088.0>

Wayback: <https://web.archive.org/web/20210403232622/https://geekhack.org/index.php?topic=112088.0>