

Moyu Black Switch Review

-ThereminGoat, 08/20/2020

I was going to open this review by completely ripping off a low-effort, Microsoft Paint edit of Anthony Fantano's 'Track Review' screen, textboxed over to say 'Switch Review' so that I could appear 'hip' and 'relevant' with the younger generations reading this since I've already shilled out jokes to the older audiences. That being said, Melonhead's title screens have too much movement and motion blur for me to be able to capture a decent screenshot of it to make this rip-off. Consider the effort taken in describing this as about the same amount as I would have actually put into the edit.

Self-aware laziness acknowledged, I have been quite busy over the last week or two with switches yet again. For some reason, the flood of switch updates, interest checks, and groupbuys seems to remain unbounded and I can only hope that it slows down here this upcoming week for my sake and sanity. As well, I recently introduced my switch scoring system not only to help deepen and further expand my longform reviews, but to hopefully provide a shortened means by which I could review more switches that are entering into my mailbox day by day. Thus, in order to deal with the ever increasing flow of switches coming in, I am excited to announce that I will now be hosting one page switch 'scoresheets' on my newly opened GitHub page. Aside hosting the scoresheets for my longform reviews, I also will be planning to upload sheets for switches that I would otherwise not write about in reviews in order to give you all some more opinions and rankings of switches to aid in your finding of an 'endgame' build. The links for this GitHub repository will be able to be found under my 'Contact' page, as well.



Figure 1: Speciesism aside, I do feel like my documentation is starting to turn into this.

Switch Background

Opposed to some of the more traditional switch histories that I've pulled out for a long-form review, the actual pathing of the Moyu Black switches from first discovery into the hands of the people is what mainly attracted me towards reviewing them. Initially, Moyu Blacks first made their appearance on Everglide's eastern facing sales pages (Aliexpress, TaoBao, etc.) around May of 2020 with little to no information. As time progressed over their first few weeks of release, more and more information was added to these pages including claims of being comparable to Holy Pandas. After hitting these 'magic

phrases' that perks up the ears of the western markets, u/victor082 of Reddit chose to conduct an interest check on r/mechmarket for these switches with the intent of running a small groupbuy of at least 3,000 switches. This groupbuy initially started with a stated price of "Less than \$1 per switch", though things quickly spiraled out from there.

After getting pinged with over 120 responses to the IC form wanting switches, myself included by the way, u/victor082 and his buddy who had initially introduced the Moyu Blacks to him had realized that they were quickly out of their depth with this groupbuy. Rather than floundering it, or choosing to cancel it altogether, they chose to hand off the groupbuy to Drop with the idea that they would be much better at supplying, distributing, and managing switches at that large of a volume. However, upon the transferring of the switch groupbuy to Drop, and much to the dismay of many of the initial people who had filled out the interest form, the "less than \$1" price tag shot up to \$1 per switch for the bare minimum pack size for Drop (70 switches). While there were ever so minor discounts for packs of 90 or 110 switches, many people were unhappy with this price hike for a relatively untested and unknown switch. As well, and only furthering the confusion about these switches more, Drop chose to market the Moyu Blacks with a "differently translated" name of Everglide Dark Jades. Both of these issue, though, did not stop Drop from selling at least 36,000 of the switches, though, sometime around June of 2020 with shipments arriving to people around late July to early August of that same year.

To the best of my knowledge, this is the first time (and hopefully the last) that something of the sort has happened in which Drop picked up the handling of an otherwise smaller groupbuy in order to "help with distribution". Aside my ardent and vocal displeasure about Drop's lack of accessibility for unknown switches given minimum pack quantities of 70, their choice to price hike the switches from initial offerings and subsequent success with the sale will only further encourage this kind of behavior in the future. As well, and in significantly minor importance to the community at large, their decision to rename an already named switch for their own sales purposes is only going to further complicate the already diverse, expanding, and ever complex modern mechanical keyboard switch scene.



Figure 2: Fuck you too, Drop.

Moyu Black Switch Performance

Appearance

The comparison of these switches to Holy Pandas, from their inception, has been problematic and will continue to be problematic with respect to appearances. Looking at these switches at arms-length, they look nearly exactly like one would expect an unbranded Invyr Panda V3 to look like. Their top and bottom housings are distinctly more pearlescent white than some of the more recent Holy Panda switches, which have begun to feature a slightly more greyish-white, or off-white color to the housings. While this may easily be a result of the difference in material between the more recently released POM-based Holy Pandas (and clones), the PBT top and bottom housings of the Moyu Blacks are still nearly as smooth to the touch as their competition and feature virtually no texture or grain to them.

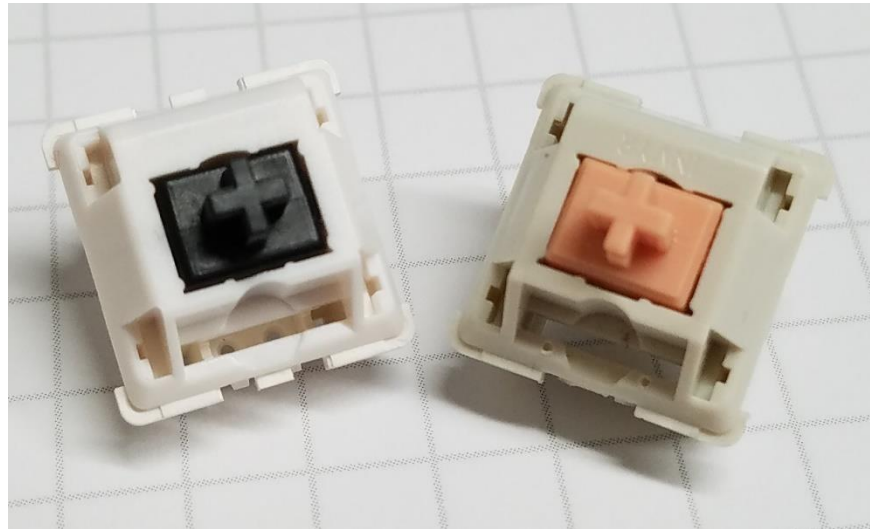


Figure 3: Moyu Black (Left) and Massdrop x Invyr Holy Panda (Right).

Within the housing, as well, the black stem is nearly identical looking to any other Invyr or YOK Panda iterations, though upon inspecting it outside of the housing, it becomes evident that the history behind these switches are not the only strange thing about them. Compared to a more conventional MX-style stem, the center pole of these switches is notably longer and does certainly affect the push feel of these switches, as described below.

Push Feel

With respect to tactility of these switches, which are the most prominent feature of the push feel of them, there is little left to the imagination as to why they were compared to Holy Pandas out of the gate given their similar weighting at 67g of bottoming out force. The Moyu Blacks not only have a strong downstroke tactile bump, but an even sharper and stronger upstroke bump, which isn't shocking given the force curve diagram that was listed alongside these switches on Drop. That being said, though, is about the only thing from the force curve diagram that I trust as realistic.

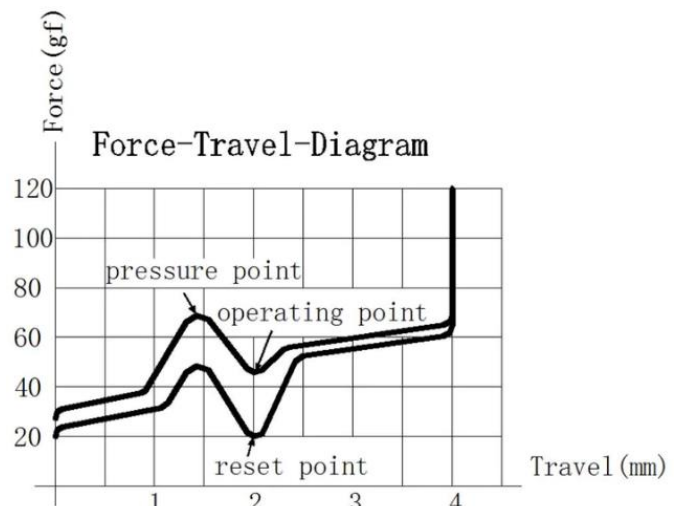


Figure 4: Moyu Black force curve as provided by Drop.

Looking at the force curve diagram above, it's obvious to tell that the downstroke tactile bump is more front-loaded in the actuation of the switch, though I fundamentally disagree about *where* the location of this is. While I don't have a set of calipers with me due to traveling and being on internship, I don't feel as if the slight pretravel to the bump is an entire millimeter in length. In fact, I feel that the tactile event is actually more front loaded and closer to 0.5 – 0.75 mm into the downstroke rather than the 0.9 mm pretravel noted on the force curve. As well, another reason that I feel that this force curve isn't entirely accurate is because of the elongated center pole on the stem of these switches. The added length to this piece actually causes the switch to be unable to 'bottom out' in a traditional term, and instead stops it a fraction of a millimeter higher than other MX style tactile switches. While this does lead to a slightly firmer "bottoming out", I am not keen to believe that it is either better nor correctly represented on the force curve diagram that shows a full 4 millimeter stroke length.

Aside the issues with the elongated center stem pole and what I feel is a lack of accuracy with the force curve diagram, these aren't by any stretch of the imagination *bad* tactile switches. The sheer strength of the tactile bump, like with many super-tactile switches, does help to distract a bit from the slight scratch in the stroke feel as well. Ultimately, in an age of tactile switches that are attempting to out-tactile each other and produce the strongest bumps, these definitely do have some sway from just the bump, alone.

Sound

The sound of these switches is quite interesting as compared to what I remember of other tactile switches in the past, though it very much does fit the push feel of the tactile bump. The downstroke bump produces a sharp, short, and punchy sound whereas the upstroke bump produces a similarly pitched, yet significantly louder and more resounding tone, which is almost the opposite of other strongly-tactile switches out there.

Aside the unique tactile bump sound of these switches, there are two detractors on the flip side that definitely do take away from the overall sound experience of these switches. First of all, even with the sounds produced from the tactile bump, there is a slight scratch noise to the linear regions of travel that is noticeable in terms of sound. As well, there is this odd phenomena with the true bottoming out of this switch in which the center pole bottoming out is sometimes accompanied by a sharper click noise, almost as if the stem hasn't quite finished interacting with the leaf at point of bottom out. In the sound category *alone*, these are very much the clicky switch fan's tactile, both because of the bottom out noise as well as the noise of the tactile bump in both directions.

Wobble

Even though it doesn't suffice to state for the average reader – Moyo Blacks are almost certainly of Everglide production based on the wobble alone. As can be seen from the other Everglide switches which I have recently scored in the GitHub repository mentioned above, the Moyo Blacks have quite a fair amount of stem wobble in the N/S direction, with an ever so slightly lesser wobble in the E/W direction. In contrast to this, there is no top housing wobble and unless opened and closed a few times, these likely would not *need* switch films.

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 Moyo Black switches side by side. (Edited on 9/20/2020)



Figure 5: Switches for comparison. (L-R, Top-Bot: Massdrop x Invyr Holy Panda, Zealio V2 78g, Koala, NK Blueberry, Kailh Crystal Box Royal, Star Purple)

Massdrop x Invyr Holy Panda

- While both these Holy Pandas and the Moyo Black have a tactile bump that starts at the beginning of the downstroke, I believe there is a sub-millimeter linear pre-travel in the Holy Panda as compared to the Moyo Black.
- The overall strength and sharpness of the Moyo Black tactile event is a bit greater than that of this Holy Panda.
- On the flip side, there is a slightly greater wobble in the Moyo Black stem in both the N/S and E/W direction as compared to the Massdrop x Invyr Holy Panda.

Zealios V2 (78g.)

- While a bit of spring ping is noticed in both of these switches, the 78g Zealios ping is ever so slightly louder and higher pitched than that of the Moyo Black.
- The tactile bump sound of the Moyo Black is more full bodied and almost snappier than the 78g Zealios bump.
- The 78g Zealio V2 has comparable E/W stem wobble as to the Moyo Black, but a noticeably decreased N/S stem wobble.

Koala

- While scratch is noticeable in the push feel of both of these switches, the reduced noise of the tactile bump of the Koala as compared to the Moyo Black actually causes the scratch sound in the Koala to become more noticeable.
- The bottoming out feeling of the Koala is noticeably a bit softer and doesn't have the same plastic-y punch that the Moyo Blacks have.
- The Koala switches flat out do better than Moyo Blacks in terms of N/S and E/W stem wobble, though the top housings do sit a fair bit looser and thus may eventually require films if opened a couple of times.

Novelkeys Blueberry

- At arm's length and all typing speeds, the Blueberry switches have a significantly greater sound than the Moyo Blacks, both in terms of the tactile bump sound as well as scratch that is present.

- Even though the Blueberry switches have a longer tactile bump event than the short, quick burst that is the Moyo Black, they feel as if they have roughly the same magnitude of force and are instead just spread out over different stroke lengths.
- Of all the switches on this list, surprisingly, the Blueberries have the most comparable N/S and E/W stem wobble to that of the Moyo Blacks.

Star Purple

- While ever so slightly softer and ‘more round’, the tactile bump on the Star Purple switches actually sits in almost identically the same spot. (This lends some credence to the belief that Star switches are also manufactured at JWK, like Moyo Blacks.)
- On the flip side, though, there is an obvious improvement in the Star molds as the Star Purple has lesser N/S and E/W stem wobble as compared to the Moyo Black switches.
- The spring ping is louder in the Star Purple as compared to its quieter tactile bump event, with the exact opposite being true for the Moyo Black.

Kailh Crystal Box Royal

- For those who are curious, the only difference between the normal Box Royals and Crystal Box Royals is a “crystal clear” bottom housing rather than the white bottom housings normally used.
- The tactile bump event of the Box Royal sits closer to the mid-point of the downstroke as compared to the beginning-of-stroke event of the Moyo Black.
- While softer in overall magnitude, the Box Royal tactile bump feels as if it occurs over a similar distance to the Moyo Black and thus has that same ‘punchy’ type feel to the bump.

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.

Push Feel

While the push feel of these switches isn’t necessarily bad with respect to the strength of the tactile bump, the biggest detractors from the score are due to the odd choice to lengthen the center pole and noticeable inversion of upstroke versus downstroke bump size. Interesting design choices aside, I don’t think that the Moyo Blacks have the potential for longevity as a “good” switch.

Wobble

As stated in the review above, the Moyo Blacks are almost certainly Everglide property based on their stem wobble, alone. That being said, the higher spring weighting in the tactile switches from Everglide (such as these and the Hexin Bamboo Greens) does help improve the stem wobble by keeping it more firmly pressed against the top housing at resting position.

Sound

The strange clicking-like sound of these switches is quite off putting given that it is either not as noticeable as or completely different than the lighter Everglide tactile option in the 60g Hexin Bamboo Greens. As well, the scratch in the few linear portions of this switch really did not help the score at all. The main feature in the tactile bumps of the switch, though, did sound quite nice and are really the only redeeming factor of the sound of these switches.

Context

In context, I think that these switches are certainly interesting historical pieces with respect to the attempt to create a “Holy Panda alternative” as well as in the history of Drop. That being said, though,

they are quite inaccessible given their connection to Drop and packaging, as well as through the price hike in the transfer of control of the groupbuy over to Drop. I don't imagine these will be around that long, all things considered.

Other

While I did give these a decent score with respect to the other category, I do so mostly because of the interesting and historical nature of these switches and how it may be a signal of a changing of tides in the future. The actual switch as a mechanical device is otherwise flawed and while it does explore interesting concepts and design changes, it fundamentally fell flat on execution.

Statistics

Average Score			Moyu Blacks		
25.6	/35	Push Feel	25	/35	Push Feel
14.6	/25	Wobble	15	/25	Wobble
6.1	/10	Sound	5	/10	Sound
12	/20	Context	9	/20	Context
6.4	/10	Other	6	/10	Other
64.7	/100	Total	60	/100	Total
Total Switches Ranked			8		
Total Tactiles Ranked			2		
Moyu Black Rank			#6 Overall, #2 Tactile		

Final Conclusions

Sitting down to actually consider which switch I wanted to write for this current review, I was honestly surprised that I had found so much depth of history, interesting design choices, and just general oddities in a switch that was simply slated to be another attempt at cloning a Holy Panda. While by no means atrocious as an altogether switch, it appears that the Moyu Blacks, production wise, suffered from the issue that many of these new, up-and-coming Holy Panda tactile switches suffer from – they focus so much on trying to create an as strong or stronger tactile bump while letting the other objective facets of what makes a switch ‘good’ slip. If Everglide had taken more time in tweaking the molds for some of the components, as well as actually testing if this shortened travel distance as a result of a longer center pole was truly necessary, I think they would have a much better longevity at the \$1 price range enforced by Drop.

However, the Moyu Blacks are more important not for their tangible qualities, but their intangible qualities and associated history, nuance, etc. The groupbuy choices setup by Drop, who at the time of writing this article are currently under fire (yet again) for selling artisans that they don't actually own the rights to, are setting a dangerous precedent that I feel many smaller groupbuys will be shoehorned into if we as a community are not careful enough to vote with our wallets. While the switch, itself, will be forgotten, these kinds of impacts and choices surrounding switches in general will very much have an effect on the market as a whole – and I want to make sure people are aware of just how serious something like this can be.

Further Reading

Drop “Everglide Dark Jade” Sales Page

Link: <https://drop.com/buy/everglide-dark-jade-black-mechanical-keyboard-switch>

Wayback:

<https://web.archive.org/web/20200819202536/https://drop.com/?origin=%2Fbuy%2Feverglide-dark-jade-black-mechanical-keyboard-switch>

u/victor082 Moyu Black Interest Check

Link:

https://www.reddit.com/r/mechmarket/comments/gn29kg/ic_moyu_black_%E5%A2%A8%E7%8E%89%E9%BB%91_switches/fr8g154/?context=8&depth=9

Wayback:

https://web.archive.org/web/20200819202624/https://www.reddit.com/r/mechmarket/comments/gn29kg/ic_moyu_black_%E5%A2%A8%E7%8E%89%E9%BB%91_switches/fr8g154/?context=8&depth=9

KPRepublic’s Everglide Dark Jade Sales Page

Link: <https://kprepublic.com/products/everglide-eg-dark-jade-tactile-switch-5pin-rgb-linear-50g-force-mx-clone-switch>

Wayback: <https://web.archive.org/web/20200819202819/https://kprepublic.com/products/everglide-eg-dark-jade-tactile-switch-5pin-rgb-linear-50g-force-mx-clone-switch>

TaeKeyboard’s Everglide Dark Jade Video

Link: <https://www.youtube.com/watch?v=fh8dXXZm4jk>

Switch Sound’s Everglide Dark Jade Typing Demo

Link: <https://www.youtube.com/watch?v=cCT6ffXVPBY>

Parke Mech’s Everglide Dark Jade Typing Demo

Link: <https://www.youtube.com/watch?v=OYy01R6s-SE>