

Opblack Switch Review

-ThereminGoat, 02/13/2021

While I usually like to start out these reviews with a bit of introspection and/or reminiscing about time passing, its mostly because I aimlessly wander through life until nanoseconds before a deadline or big date for a project comes around, at which point I proceed to plow through all of the work at Mach speeds. (Note, there will be no plowing through a big date this Valentine's day because of the pandemic.) However, this final semester of undergraduate studies, with all its associated difficulties and long-term projects coming to an end, has forced me to become acutely aware of reality and how time crawls by the second. As a result of being absolutely busy at seemingly all points of the days and weeks, I feel painfully aware of each passing day and the amount of work that I'm piling off into the distance. One such project, in particular, has been my undergraduate thesis for the Chemical Engineering research that I do. As of March 31st, 2021, I will have officially defended and submitted my thesis in its entirety and culminated a couple of years' worth of my own research work stacked upon at least a decade of work in the subject area by my graduate students before me. Simply put: *Holy shit* do I have a lot of writing and preparation between here and there that I've been slacking on.



Figure 1: My current writing progress on my thesis, as of today.

Have no fear though about my thesis or any of my other school related work taking over my fondness for switches and blinding me of my one, slightly expensive obsession in life. Alongside my ever-growing pile of work, I'm getting an ever-growing pile of switches to show off, review, and add to what has been an amazing collection to build thus far. As well, in a bit of more fun news, its growing to the point that I have just ordered my acrylic for my *third* tester to be cut since I have basically run out of room entirely on these current testers. The fact that I've even made it this far, just shy of 900 switches at the time of writing this, is honestly insane to me and I really think this might be the year to hit 1000 switches.

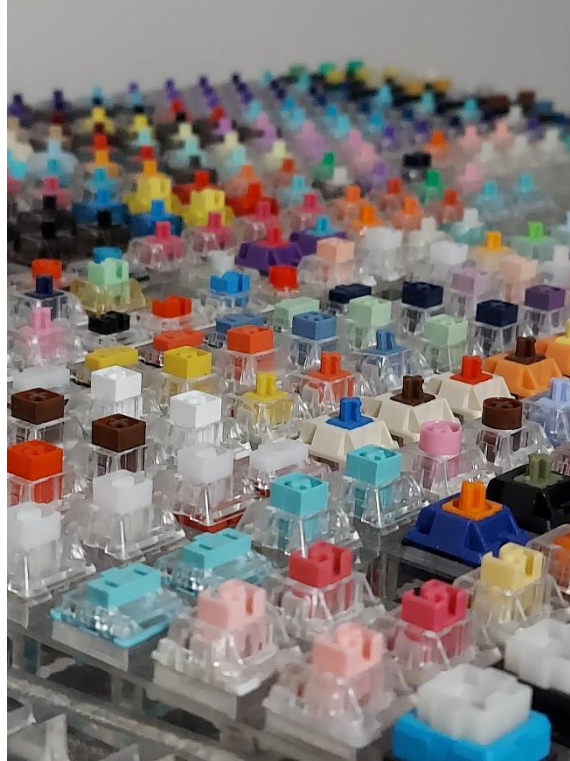


Figure 2: A side shot of just one of the testers currently packed nearly completely with switches.

Switch Background

To date, there are not all that many Durock/JWK switches that have been made and saw a subsequent rerun in their exact original fashion as before. In fact, the only super noticeable switches to have done this a few times as of the time of writing this are switches such as the C3 Equalz Fruit lineup and PrimeKB’s Alpacas, and even those began to experience ‘updates’ after a few iterations of restocking. Opblacks, however, are among the first non-permanently stocked Durock/JWK switches to receive a re-groupbuy after their initial release, narrowly beating out the EV-01 recolors by a few days. So, in order to go over the history of these switches that now stand as a small, but not insignificant milestone in Durock/JWK history, let’s go all the way back to the start.

Announced by way of ZFrontier in early September of 2020, 43 Studios announced their soon-to-groupbuy switches known as Opblacks. Coming as the fifth installment of switches released by 43 Studios in their short year of switch designing, these switches were designed specifically with the intent to pay homage to Cherry Nixdorf Black switches, which are currently among some of the most sought-after vintage MX switches. Thus, in homage to the Nixdorf Blacks that came before it, 43 Studios developed a “step by step” process to create a new, secret top housing material to match the milky consistency of the original Nixdorf switches since the original designer of Nixdorf has passed away and would be unable to be contacted regarding the material of the top housings. With the top housings made out of a still unidentified mystery mix of materials, the JWK made switches would feature a black, polished Nylon bottom as well as a black POM stem and zinc-plated, silver colored 65g ThicThock DL linear springs, which would match one of the two identified spring variant colors within the original Nixdorf switches.

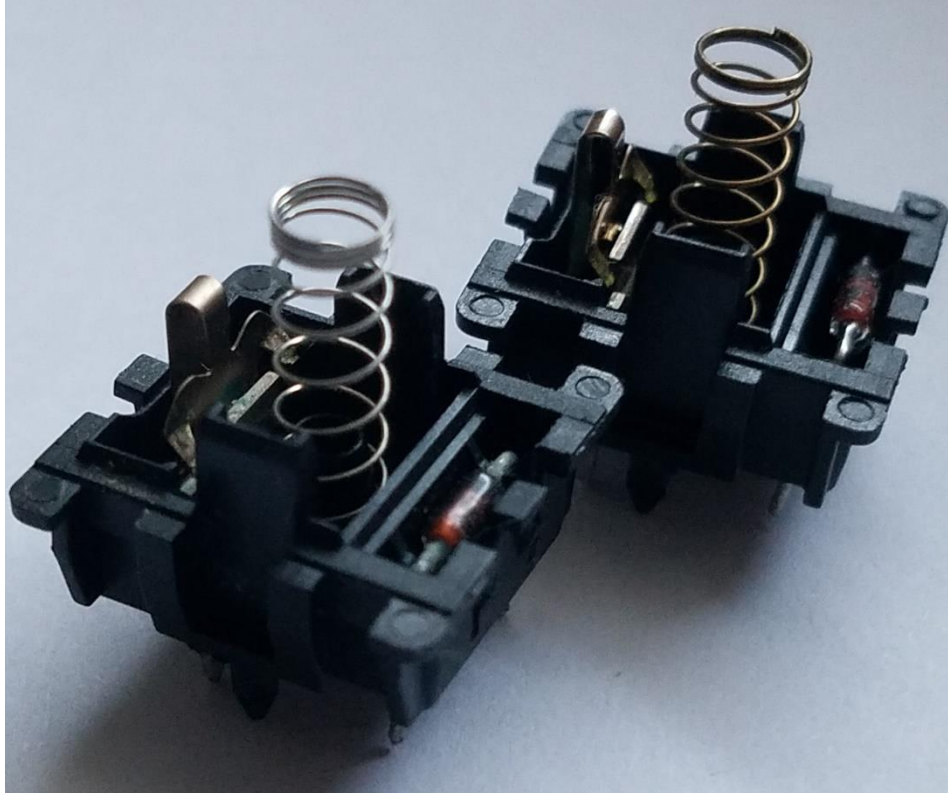


Figure 3: Original Nixie switch springs including silver-colored (Left) and copper-colored (Right).

Unlike previous 43 Studios groupbuys before this one, though, this would be the first new release to have western-facing proxies, making them easily accessible outside of China for the first time. Being distributed by Keypresso, Ilumkb, ThicThock, and MyKeyboard.Eu, the original groupbuy started on September 23rd of 2020 and stretched just under three weeks' time to October 10th of 2020. While the initial estimated shipping date of the switches was around December of 2020, it wasn't until late January to early February of 2021 that the switches from the first round of sales were shipped out to consumers. The original pricing was \$6.75 per 10 pack, making them fairly mid-ground in terms of Durock/JWK groupbuy switch prices.

Shortly after the successful groupbuy and closing of the R1 Opblack switches, 43 Studios also did go on to release a much shorter, smaller, and quieter groupbuy for 'Opgrey' switches, which were a tactile offshoot of the original Opblack design. Drawing inspiration from no known Nixdorf switches, the Opgrey switches featured the same housing scheme with a tactile, dark-grey stem and a 65g bottom out spring. These were also sold for the same price as the R1 Opblack switches.

Finally, rounding out the history of the Opblack switches, the second and current round of sales for the switches began on February 7th of 2021. Largely due to the success of the initial sale and quiet approval from the community at large about their performance, 43 Studios chose to run these switches with the exact same details and through the exact same western-facing distributors as the first time around. The only minor detail that



Figure 4: Opgrey switch photo from advertisement.

was changed between the listings of R1 and R2 Opblacks, though, is that the more recent sale has stated that the Nylon bottom housings were made using the same molds as the all-black H1 switches created by HHHH, which were insanely popular in their own sale. The groupbuy is set to run until February 26th of 2021, with an estimated shipping date of ‘Q3 2021’, putting the second arrival of these switches squarely in the vicinity of August of 2021.

Opblack Switch Performance

*Even though both rounds of these switches should, in theory, be identical to each other, this review and the following commentary is on R1 Opblack switches.

Appearance

As we dove into a bit above in the Background section of this review, the inspiration for the Opblack switch design and appearance was that of the ever-popular Cherry MX Nixdorf Black linear switches. Thus, emulating the design of these switches, the Opblacks feature a milky top housing, black nylon bottom housing, a polished black POM stem, and a zinc-coated, silver appearing 65g spring. While from a distance these switches definitely do appear to pass the eye test with the Nixdorf-esque flair, up close they definitely are recognizably different. Aside the obvious fact that these switches don’t feature the same in-switch diodes as is commonly found in Nixie switches, there is a subtle difference in the opacity of the top housings between Nixdorf Blacks and Opblack switches. Even though both are milky, as can be seen below, the Opblack switches appear slightly more opaque and smoothly white in color, whereas the Nixdorfs have a more inconsistent and more clear top housing design tint to them.



Figure 5: Top-down view of Nixie Black switch housings (Left) and Opblack switch housings (Right).

Taking a bit of a deeper dive past the initial comparison test of these switches, the internal comparisons of the molds and more technical aspects of the switches brings up some very interesting points. First, we will take a look at the springs, which are zinc-plated 65g 'DL' ThicThock springs. Short for 'Deliciously Linear', these no longer available springs from ThicThock are silver in colored and specifically chosen in order to match the original, silver-colored springs found in many of the original Nixdorf switches (with the other variant I've shown in my Nixie Black review being copper colored). Being a spring sold aftermarket and not directly stocked in JWK switches normally, this adds the Opblacks to the shortlist of JWK switches featuring 'aftermarket' and non-conventional springs such as the new Cobalt POM switches from PrimeKB, and Okomochi and Pinoko V1s. Expanding this list past switches that were actually sold on market, the Oxblood switches teased by DaleSnail in mid to late 2020 which would have featured TX springs would also be added to this list.

Looking next towards the top housings of the Opblack switches, they feature the '43 Studios' name in the seemingly Comic Sans font they've grown into over their previous few switch releases. Inspecting the mold stamps on the top housings, as well, it appears they fall in line with the Durock/JWK V1 molds, which are the same molds featured in the original Alpaca V1 switches. While this isn't entirely all that surprising as the two other molds that I've explored on this website hadn't been created until well after the R1 groupbuy for Opblacks were completed, it still puts into perspective where these switches were released within the history of JWK. An additional point of note about the listing of these top housings, is that they feature a certain 'mystery material' that brings about the milky behavior similar to Nixdorfs. Without much data to go on, it has been known for quite some time that 'milky' Gateron switches are made with nylon mixed with fiberglass in order to give to generate their cloudy appearance. Additionally, as I am able to demonstrate below with old Zilent V1 switches, the addition of mold extrusion sprues back into the hopper that grinds pellets for the injection molding machine can add to the cloudiness of top housings in some capacity. Obviously, neither of these affects appear perfectly mimicked in either the Cherry Nixdorf Blacks nor the Opblacks, but it does open the door to the potential thought that this 'mystery material' could either be some part fiberglass or reground injection sprues.

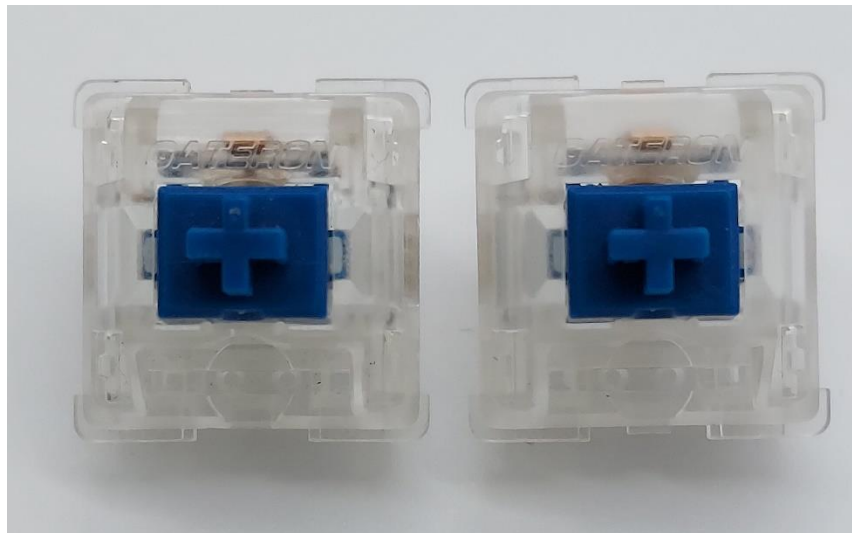


Figure 6: Zilent V1s demonstrating a difference in clarity as a result of recycling mold sprues.

Surprisingly, the bottom housings of these switches also yield some interesting results in regard to the finer more technical aspects, though this time about the marketing surrounding the Opblacks, rather than the manufacturing. Purely looking at the mold pressing for the switch, the presence of a single letter bottom of bottom housing mold marking as well as the extra mold circle rings around the top of the bottom housings puts these squarely in line with the 'new', V1.5 mold markings that the Lavenders came

with. Now, this is particularly interesting for two different reasons. The first reason that this stands out so much is that this completely invalidates the idea that the Lavender switches had “new” molds, as per their marketing, as the Opblack switches firmly predate the sale of Lavenders by 4 or so months. The second reason that this is interesting, is that the R2 sales of Opblacks (and only the R2 sales), which are reported to be the same as the original R1 Opblack runs, include an extra line of marketing stating that the bottom housing molds will be the same as H1 switches. However, upon inspection, H1 housings appear more like the V1 molds and do not feature the extra set of mold pressing rings along the top edge of the bottom housings seen in the Opblack switches. Thus, the following is the list of potential historical or marketing-based issues that arise from these conflicting points:

1. Lavender switches were not actually made with “new” molds, and instead are using molds that had existed at some point prior and were shared with the Opblack switches.
2. Opblack R2 switches are not actually the same as R1, and feature differently molded bottom housings between the two switches.
3. Opblack R2 switches *are* actually the same as the R1 switches, and this extra line of marketing is false as they don’t share a mold with H1s at all.

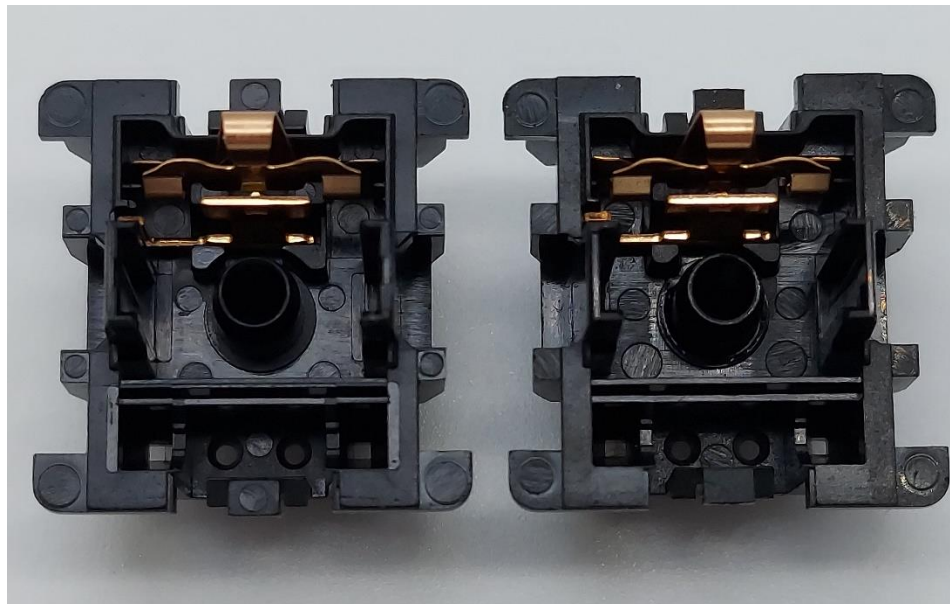


Figure 7: Bottom housing mold markings of Opblacks (Left) and H1s (Right).

Thankfully for my wary fingers after having written all of these points above, the stems of these switches are comparatively extremely boring. Coming unlubed from the factory, these feature the same untampered slide rails, and high, corner-bounded mold circles on the back plates of the stems as do the V1 stem molds from Durock/JWK as seen previously in Alpaca V1s and Lavenders.

Push Feel

Surprisingly, for coming intentionally unlubed from the factory, these switches are quite damn smooth. Without specifically comparing to or pointing out companies directly, there are entire production lines and brands of switches that feel less smooth than this, *that come with factory lube*. While I’ve always been personally suspicious of the touted improvements to smoothness in switches brought about by ‘polishing’, or smoothing the pieces of the bottom housing slider rails and the sides of the stem that come into contact, in order to reduce friction, these are honestly the switch to make a case for the practicality of the method. These really are a great example of just how smooth you could get switches

purely based on polishing, alone. As well, across all of the Opblacks I tested, this smoothness appeared to be consistent throughout the entirety of the stroke.

As for the bottoming and topping out of these switches, they do suffer a fair amount with respect to the overall push feel of the switches. Even though they have a fairly soft, and light bottoming out feeling for a 65g weighted spring, it does feel noticeably less ‘solid’ than I would have expected of a nylon bottom housing. However, this isn’t bad by any stretch of the imagination and a bit of a welcomed deviation from the norm. The top housing, however, feels quite thin and only a slight bit thicker than some of the top housings Durock/JWK has produced with polycarbonate top housings. Based on the push feel, as well as the sound of these switches that I discuss below, I do have some suspicions that the base material to these top housings may be polycarbonate in addition to the potential aforementioned fiberglass or mold sprues.

Sound

So far, here are the following trends that I’ve fairly well established from the handfuls of other reviews that I’ve done to date:

1. Switches with a higher spring weight *tend* to have less wobble than those with lighter spring weights.
2. Pink switches, 9 times out of 10 are above average switches regardless of what they are or who makes them.
3. People don’t actually read these entire reviews, so the ability for me to slip in meta jokes to segues like this and go unnoticed to 90% of my viewers is hilariously high.

Keeping this growing list in mind, I think it is about time to finally add something that I’ve noted what feels like countless times prior in older reviews: “The sound of a switch, more often than not, matches the push feel notes.”

These are fairly quiet switches with no sound to them as a result of scratch or unevenness in the polishing of the switches. Additionally, they feature a fairly quiet, slightly dampened bottoming out sound that isn’t altogether reminiscent of other nylon housings with a thin topping out sound that is similar, yet also not quite the same as polycarbonate top housings. Sometimes, it really is just that simple.

Wobble

For being a relatively popular JWK-made switch in terms of the first-round sale success, these switches have surprisingly average wobble among the switches made to date. There is a noticeable amount of in-hand stem wobble in both the N/S and E/W directions that may be noticeable with keycaps on depending on your personal sensitivity to stem wobble. As well, in some but not all of the switches in my batch, there is some amount of give in the top housings in both directions. While this obviously will necessitate the usage of switch films in order to get over this issue, it wouldn’t be all that surprising if they would be defacto chosen by many purely for the overall ‘deepening’ of the sound that they could provide in the switches.

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 Opblacks side by side.



Figure 8: Switches for comparison. (L-R, Top-Bot: Lavender, H1, Cherry Nixie Black, Gateron Milky Yellow, SP Star Grey, KTT Red Wine)

Lavender

- Being that Lavender switches come factory lubed, its not entirely surprising that these come stock-for-stock smoother than the Opblack switches. That being said, you can very easily apply lube after purchase to Opblacks to get them to a comparable, if not better, level of smoothness.
- The topping out of the Lavender switches is significantly quieter in terms of sound and more solid feeling than the Opblack switches.
- Even with the differences in lubing, the bottom out feeling of these switches is fairly comparable and they are hard to distinguish based on blind testing of this metric alone.

H1

- While the H1s and Opblacks both have a similar feeling and topping out experience, the Opblacks are ever so slightly louder and higher pitched in terms of the topping out sound.
- Even with a slight bit of factory lubing on the H1 stems, the H1s are comparable in terms of smoothness, if not on average between multiple test switches slightly scratchier than the Opblacks, which is a bit surprising. Yet again, another testament to the improvement brought about by the ‘polishing technique.
- Even though the H1s don’t have the same potential top housing give, they do have nearly identical amounts of stem wobble to the Opblacks in both the N/S and E/W directions.

Cherry Nixdorf Black

- While I definitely do have a bit of a soft spot for my collection’s Nixie Black, as I certainly obtained mine from a very well worn and smooth lot, I do believe that with proper aftermarket modifications that the Opblacks could reach the same level of smoothness as the Nixie switches.
- As stated above in the Appearance section, the Opblacks have a noticeably cloudier and more opaque top housing than the Nixie Black switches.

- In both N/S and E/W directions, the Nixie Blacks definitely do outperform all of the Opblack switches that I tested it against.

Gateron Milky Yellow

- Without being much of a surprise to those familiar with all of the switches on this list, the Gateron Milky Yellows are not only significantly scratchier than the Opblacks, but are the scratchiest switches on this entire comparison list.
- As well, the Milky Yellows do have a bit more stem wobble in the N/S and especially the E/W direction.
- The Gateron Milky housings produce a similar sounding bottom out to that of the Opblacks, but also produce a noticeably deeper and more firm sounding topping out than the Opblacks.

SP Star Grey

- Much like with the Gateron Milky Yellows, the SP Star Greys produce a significantly deeper and more ‘full bodied’ topping and bottoming out sound than the Opblacks, though it is definitely more noticeable in these than in the comparison with the Gateron Yellows.
- While the stem wobble in both directions of the SP Star Greys is markedly lesser, they do suffer a bit more from the E/W top housing wobble issue that necessitates the involvement of switch films for optimal separation.
- For the fact that they the SP Star Greys are just a fractional bit smoother to the push feel than the Opblacks, they do have a noticeable amount of scratch to their sound that isn’t there in the Opblacks at all.

KTT Red Wine (Translucent Top)

- In total, the KTT Red Wine switches are noticeably quieter and more muted in terms of sound than the Opblacks in stock form. This gap narrows or completely disappears upon lubing of the Opblack switches.
- Surprisingly, purely based on cost comparison alone, the KTT Red Wines definitely do have a noticeably less wobbly stem to them than the Opblack switches.
- There is a more noticeable scratch feeling to the Red Wines as compared to the Opblacks, though it is consistent and likely unnoticeable unless you are typing at slower speeds or very attentive to scratch feeling in linear switches.

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.

Opblack		
28	/35	Push Feel
15	/25	Wobble
6	/10	Sound
14	/20	Context
6	/10	Other
69	/100	Total

Push Feel

While the general smoothness of these switches really does this score a massive benefit due to the fact that the switches intentionally come unlubed from the factory, the slightly less-than-thick bottoming out feeling mixed with the much lighter and thinner than desired topping out really holds back this score from its true potential.

Wobble

The wobble on these switches is fairly par for the course from the earlier era JWK molds that they use. Running middle of the pack with respect to stuff offered now, there is a potentially noticeable amount of N/S and E/W direction stem wobble with an inconsistent-across-batch top housing wobble that may necessitate the usage of switch films.

Sound

First and foremost, for being unlubed these switches are picturesque for quietness in the actual push stroke sound. The less than strong points for these switches, though, is the not quite as thick and deep sounding bottom out as normal for nylon and slightly thicker and more muted than normal topping out sound as compared to JWK polycarbonate releases.

Context

With a fairly wide accessibility and decent price for a JWK switch, this seemingly popular switch only really suffers from the confusion in marketing that is indicative of a mess-up somewhere in the JWK family line. Definitely a strong showing from 43 Studios, nonetheless.

Other

While I never thought I'd be on board with the idea of 'look alike' switches, these are an interesting tribute to Nixie switches and employed a bit of effort and design uniqueness in getting a new type of milky top housing onto the market. I hope we continue to see this kind of ingenuity moving forward from other design companies.

Statistics

Average Score			Opblack		
25.6	/35	Push Feel	28	/35	Push Feel
16.0	/25	Wobble	15	/25	Wobble
5.8	/10	Sound	6	/10	Sound
11.9	/20	Context	14	/20	Context
5.9	/10	Other	6	/10	Other
65.2	/100	Total	69	/100	Total
Opblack Overall Rank			T-#20/64 (69/100)		
Opblack 'Hard' Rank			T-#20/64 (49/70)		
Opblack 'Soft' Rank			T-#15/64 (20/30)		

Final Conclusions

I'm not going to lie to you here: I thought this would be a fairly cut and dry, perhaps overly positive review as compared to some of the more in-depth reviews that I've done lately. Switches like this that seem to have overarching positive reviews by the community and have achieved historical firsts like being among the first not-in-stock Durock/JWK switches to be rerun really tend to be fairly boring and 'positive' reviews. However, the slew of questions this does raise about the actual marketing of these switches (or Lavenders), the top housing materials, and the true historical timeline of JWK/Durock moldings certainly makes this switch more interesting than I had anticipated. While I don't think I will necessarily be getting any answers to these questions any time soon, the baseline fact remains that these aren't bad switches by most performance standards, and I anticipate these switches will be around long enough in one form or another in order for me to be able to figure out more about them. So, for the time being, even though I am slightly perplexed about things, I am overall fairly happy with how these switches turned out stock and would definitely consider using them at some time for some undetermined keyboard piled up in the corner of my room that I've been slacking on building for some time now.

Further Reading

ILUMKB R1 Opblack Switch Sales Page

Link: <https://ilumkb.com/products/opblack-switch>

Wayback: <https://web.archive.org/web/20210213034913/https://ilumkb.com/products/opblack-switch>

MyKeyboard.eu R2 Opblack Switch Sales Page

Link: https://mykeyboard.eu/catalogue/opblack-switches-r2-10-pack_3309/

Wayback: https://web.archive.org/web/20210207195236/https://mykeyboard.eu/catalogue/opblack-switches-r2-10-pack_3309/

Keypresso R1 Opblack Switch Sales Page

Link: <https://keypresso.ca/collections/switches/products/opblack-linear-switches>

Wayback:

<https://web.archive.org/web/20210213035253/https://keypresso.ca/collections/switches/products/opblack-linear-switches>

Keypresso R2 Opblack Switch Sales Page

Link: <https://keypresso.ca/collections/switches/products/group-buy-opblack-linear-switches-r2>

Wayback:

<https://web.archive.org/web/20210213035349/https://keypresso.ca/collections/switches/products/group-buy-opblack-linear-switches-r2>

ThicThock R2 Opblack Switch Sales Page

Link: <https://thicthock.com/collections/switch/products/opblack-linear-switch>

Wayback:

<https://web.archive.org/web/20210213035506/https://thicthock.com/collections/switch/products/opblack-linear-switch>

Keebtalk post about Opgrey Switches

Link: <https://www.keebtalk.com/t/opgrey-in-stock-linear-switches/12222>

Wayback: <https://web.archive.org/web/20210213035706/https://www.keebtalk.com/t/opgrey-in-stock-linear-switches/12222>

Opblack Switch Sound Test in Archon FX2

Link:

https://www.youtube.com/watch?v=l8UkWPjUStc&ab_channel=%EA%B0%9C%EB%83%A5%EC%93%B0_kbd

Opblack Switch Sound Test in F1-8X

Link:

https://www.youtube.com/watch?v=pwrLfess7O0&ab_channel=G_GOM%CA%95%E2%80%A2%E1%B4%A5%E2%80%A2%CA%94