

## Huano Fi Switch Review

-ThereminGoat, 07/02/23

I know that it's been a bit more than the usual time since we last gathered here for a full-length review, and for that I'd like to apologize. For those of you who don't follow me on Instagram or Twitter, you probably did not see that last week I had a family member pass away unexpectedly. As a result, I had to cut out the normal writing weekend to return home for the funeral as well as to help take care of everything surrounding that situation. Of those of you who do follow me on those platforms and saw this announcement, I'd like to say thank you for all of the warm wishes and heartfelt messages that were sent my way – they certainly made dealing with all of it just a bit easier. Now, barring any sort of changes to my writing schedule from unexpected circumstances or keyboard meetups looming over the horizon, I should be back to my every-other-week style of full-length reviews with the in between weeks being filled with force curves, scorecards, and all odds and ends of documentation. You know I couldn't go *too* long without writing about switches before exploding.

In addition to the kind regards that were sent my way last weekend, I also hosted a brief Q&A on Instagram like I try to do every few months. One question in particular which I had left hanging without an answer I thought would be fun to answer here, as I'm not entirely sure how much my general reading audience knows of me: "What else do you do in your free time besides switches?" Given my recent change in career and free time increase as a result of leaving graduate school, I've been diving much deeper into making food as well as picking up playing Magic: The Gathering again. When I'm not working on switches, I find a nice similarity between these two hobbies in that I'm always trying to read up on all the variety of options there are out there and constantly playtesting/cooking new things I've never had a chance to try before. To answer the immediate questions that have come to the minds of fellow MTG players as well as cooks out there, I've been recently playing a lot of Lotus Field in Pioneer (MTG) as well as improving my baking skills however I can. In particular, I'm still trying to work on perfecting a pulled pork, broccolini, and provolone sandwich with spicy garlic aioli I made months ago.



**Figure 1:** I'm getting hungry just looking at it again...

And before I get everyone too nerdy or hungry, I should probably get back to my *true* hobby that overtakes those others by miles: *switches*.

## Switch Background

One of the most interesting perspective shifts I've seen in the community over my many years of collecting switches has been in the effort and lengths people will go in packaging switches. Only a handful of years ago, it wouldn't be all that uncommon for your switch groupbuy order to arrive in an off-brand Ziploc bag with or without vague Sharpie scrawling denoting what might be inside. Both early Zeal sales as well as Gazzew's original sales pipeline through r/mechanicalkeyboards employed this method, and to this day I look back on some of those packages as some of my fondest maildays to receive. Even without all the fancy packaging, custom colored flair, and collectible stickers to match, in a weird way it almost felt *more* personal and as if you had just had a friend or relative send you something in the mail. However, with the rise in popularity of both of these switch brands, as well as the community at large in the following years, packaging had to become more streamlined, efficient, and broadly applicable to orders of any and all sizes. As a result, the rise of stylized bags for switches, flimsy cardboard boxes, and all other manner of better than basic packaging began showing up in the majority of switch releases starting in the early 2020's.



**Figure 2:** Example of early Zeal switch packaging from Reddit. (Credit to u/FatPandaz)

Paralleling the rise in custom switch offerings past 2018, as well as the near exponential growth in keyboard interest as a result of the COVID-19 pandemic, all manner of switch packaging has begun taking on a more sophisticated look in recent years. On the functionality side of things, switch bags from large vendors such as Cannonkeys and Novelkeys not only became reusable by way of a Ziploc-style slider but *also* became ecologically friendly with a material change that is reportedly biodegradable. Looking more towards aesthetics than functionality, a range of smaller western facing vendors and some eastern-facing brands began implementing fully customized boxes with plastic trays holding sets of 35 switches (or sometimes more) upright and in a nice, neat, and orderly fashion. Within short time, this packaging design extended to larger brands like Tecsee, Durock/JWK, and Gateron, specifically for

switches I've documented in my short article on 'Fancy Switch Boxes' such as Drop Holy Panda X, Chosfox x JWICK Voyager, Rubre hose Grey and Browns, and many more. And splitting down the middle of both the function- and form-driven crowds is the creative, reusable packaging featuring collectible stickers from vendors like Dangkeeb s, most known for their DK Creamery and Milk series of switches. However, even amongst the intense competition for audience attention and brand recognition, *none* of these fancy packaging methods reached the same level of extravagance and over-design as TTC's Lunar New Year releases in 2022 and 2023.



**Figure 3:** Cannonkeys and Novelkeys reusable bags as of late 2022/early 2023.



**Figure 4:** Example 35-count switch boxes featuring Rubre hose Brown and Grey switches from Tecsee.



**Figure 3:** Intersection of form and function with the Dangkeeb's' themed reusable milk switch bottles.

Celebrating the Year of the Tiger in 2022 and Year of the Rabbit in 2023, TTC has released two different lines of switches celebrating Lunar New Year festivities prominently with serialized 'OG' switches – each of which feature a unique serial number imprinted on the top housing. While this technology, in and of itself, was revolutionary at the time of its debut in 2022, the implementation of truly uniquely designed switches was nearly eclipsed by the over-the-top packaging that they came delivered in. For the Year of the Tiger, TTC's OG Tiger switches came packaged in specially orange-colored resealable packages with fancy foiled stickers on the exterior, a custom molded plastic insert to prop up the switches, and even a plug-and-play LED switch holder and matching keycap – all just for 10 serialized switches. Moving ahead to the Year of the Rabbit, TTC went even further overboard, increasing their serialized switch box offerings from only packs of 10 switches to include a 35 and 100-count serialized switch offering in addition to the traditional 10-slot ones. Matching the effort put into the Tiger 10-count boxes, each one of these offerings had custom designed boxes, special switch-related inserts, and full color, beautifully decorated cards celebrating the new year. With prices starting around \$2-3 per switch for the serialized TTC LNY switches and their fancy packaging, most western consumers are already more than likely wondering why the hell someone would spend this kind of money on something as simple as switches. But what if I told you that it could get even *crazier* than this...?





**Figure 6:** Sealed TTC OG Tiger serialized switch box of 10 with additional keycap and LED switch holder.



**Figure 7:** TTC OG Rabbit serialized switch box of 100 outer design.



**Figure 4:** TTC OG Rabbit serialized switch with celebratory insert card and included special edition keycap.

Designed and released in 2023 as part of a Lunar New Year special, Huano's Hi Fi switch duo are not only the reason that I'm reviewing these switches here today, but are without a doubt the most insanely packaged, extravagantly marketed switches I've had a chance to review yet. Coming in a customized, multi-tiered box roughly 5.5 x 7 x 12.5 inches in size, 66 complete and 33 partial Hi and Fi switches are accompanied by stickers, extra springs, aftermarket lubrication and brush, a switch puller, 66 transparent keycaps that put SA Polyclear to shame, and a two-part USB cable with aviator connector as well. Don't think that all of this effort was paid to the packaging just to ignore the switches either. The Hi and Fi switch duo, which are pink and purple respectively, both feature Huano's custom 'overflow color' patterning as well which is a first among all switch manufacturers to date. Only available in the complete box set from Huano, this roughly 50gf bottom out linear switch duo and associated goodies comes in at a price of about \$75 per box of 66 completed/99 total switches prior to shipping out of China, which is the only place these are available as of the time of writing this review. Without much further information from Huano regarding whether or not they intend to continue or improve upon this insane packaging design for Lunar New Year's 2024 celebration, the Huano Hi Fi 2023 LNY box will simply have to stand as the most excessive switch packaging to date. (For a breakdown and intense comb-over of all of the components of this box, please check out the 'Other' section below.)



**Figure 5:** So damn big it wouldn't even fit in my light box for photographs!

## **Fi Switch Performance**

*Note:* The Huano Hi Fi 2023 LNY box contains both 'Hi' (Pink) and 'Fi' (Purple) linear switches which are functionally identical to each other as will be shown below. For the sake of consistency and clarity, I will *only* be reviewing the performance metrics of the Fi switches below. Any and all references to the Hi switches otherwise will be explicitly stated and/or shown.

### Appearance

Even in spite of all of the attention and hype built up around the packaging of the Hi and Fi switches instead of the switches themselves, out of the box they are initially as stunning as the packaging itself. Featuring Huano's new 'overflow color' style design, the top housings of both switches are translucent with a hydro-dipped-like color combination with a complex array of purples, pinks, and even a dash of blue all present in a swirling, intermingled pattern. The Fi switches, in particular, carry a more purple tone to their overflow color top housings which is further accented by the pastel purple bottom housing and stem which match each other. Beyond this unique, easily recognizable color scheme, a premium Huano nameplate as well as mold-level details help distinguish these switches as specifically being made by Huano, and not other companies attempting similar design techniques like Haimu and TTC.



**Figure 6:** Huano Fi switch and its components.

Looking first at the top housings of the Fi switches, they are without a doubt the prettiest top housings I have seen on any normal MX-style switch that I've reviewed to date. As mentioned above, each top housing carries swirls and discernable streaks of pinks, whites, purples, and a hint of blue around the nameplate region that even somewhat permeate into the internal color of the housings as well. While this overflow color style of design may initially appear unique to each and every switch, it's worth noting that *however* this process is carried out, it produces nearly uniform and consistent swirling in each Hi and Fi switch. Viewed in a well-organized lineup, the aforementioned singular blue undertone can actually be seen in the exact same spot across a dozen different switches. At the more technical and less artistic level, the Huano Fi top housings feature an inverted 'HUANO [LOGO]' nameplate as well as a thinly bifurcated, rectangular LED slot – features common among other premium Huano offerings. Internally, there is very little that appears unique to Huano molds with the exception of the mold marking and its placement. Located the upper lip of the Fi top housing underneath the nameplate region, the Fi switches feature a single letter followed by double digit number mold stamp. Both the implementation and placement of this style of marking is, to the best of memory, unique to not only Huano but unique among other Huano-made switches which I've reviewed on the site thus far.





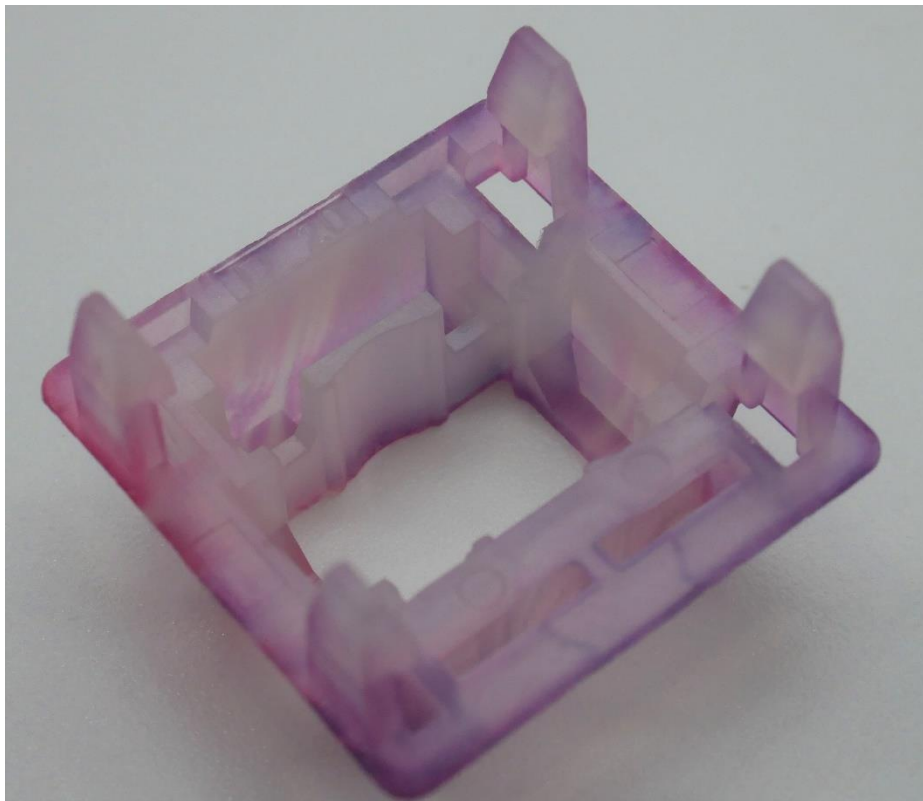
**Figure 8:** Huano Fi top housing exterior showing inverted 'HUANO' nameplate and thin, bifurcated LED slot design.



**Figure 7:** Closeup zoom of 'overflow color' swirl design in Huano Fi top housing exterior.

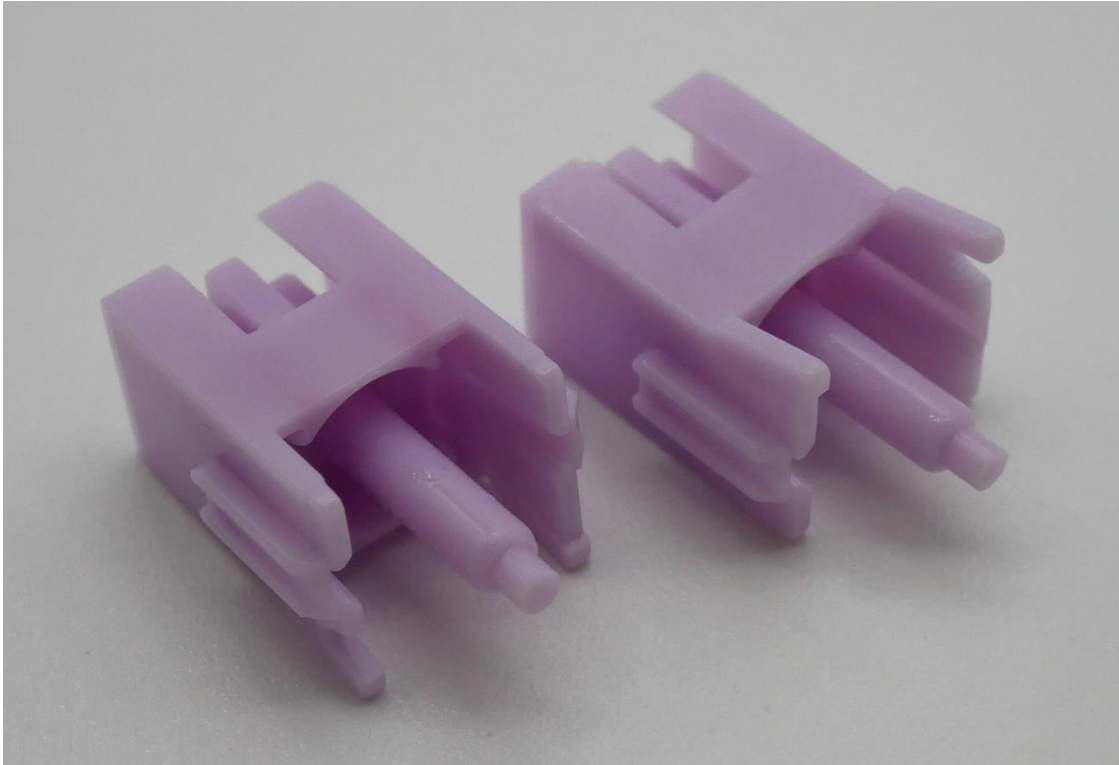


**Figure 10:** Overflow color swirl pattern present in Huano Hi switches which also shows the repetition of pattern location and size across numerous switches.



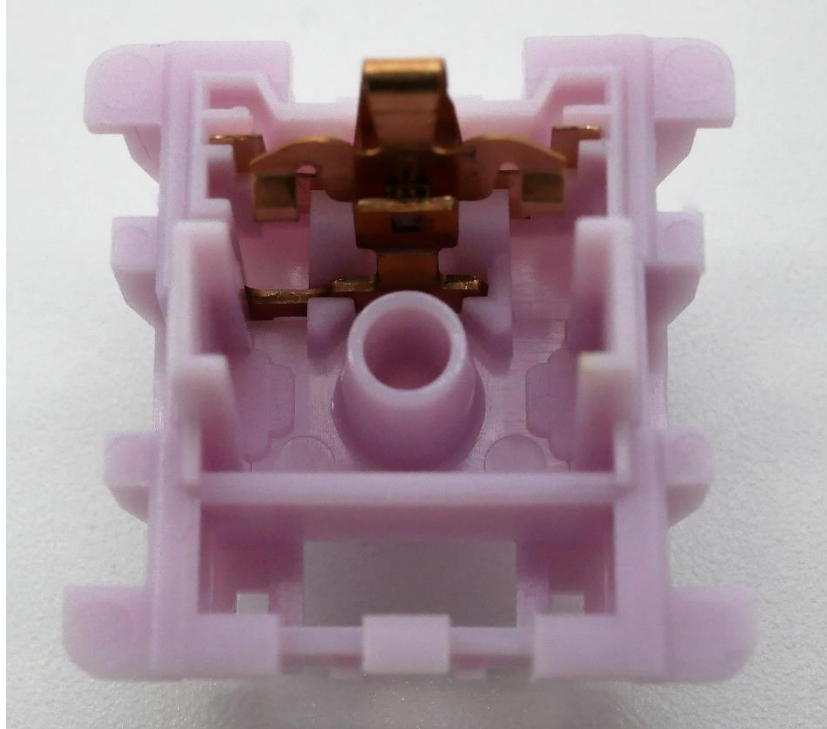
**Figure 9:** Huano Fi top housing internal design showing mold marking on upper edge of housing as well as saturation of overflow color design to the interior of the housing.

Moving next to the stems of the Huano Fi switches, these linear, dustproof stems appear nearly identical in their design features to those of the Pineapple switches covered in my Huano Pineapple Switch Review. These features include slider rails with raised edges to reduce friction, a heavily tiered center pole, and otherwise barren, detail-less front and back plates. For what it is worth, though, the Fi stems do at least appear to come from a unique mold, though, given that they are nearly a millimeter longer in total length than the Huano Pineapple switches. In addition to their design features, it is worth noting that the 33 prebuilt Hi and 33 prebuilt Fi switches in the Huano Hi Fi 2023 LNY box both come with a very thin, consistent coating of factory lubrication. While I am not entirely certain if this is identical to the lube that was provided in the bottom tier of the box, the visual thinness of said lube leads me to believe it could potentially be what was used here.



**Figure 11:** Huano Fi stem front and back side showing ridges on edges of slider rails, tiered center pole, and lack of features on front and back plates.

Finally arriving at the bottom housings of the Huano Fi switches, these too are fairly similar in design to those of the Huano Pineapple switch bottom housings, though they do feature *some* distinct differences. Similarities between the two, and thus assumedly many other premium Huano offerings, includes the eight mold ejector circles along the upper rim of the switch, the two ‘buckets’ present in the LED/diode slot opening that help corral diodes into place, as well as the presence of a low profile, flat south side spring collar. The one unique feature of the Huano Fi switches is the padding at the bottom of the slide rails in the base of the housing, which are shaped somewhere between a sideways playing card club and a curiously tilted robot head if I had to take turn it into a Rorschach test. Externally, both the Huano Hi and Fi switches are 3 pin/plate mount in design and feature a pair of mold markings above each of the diode pin out holes. Above the left diode hole is a single capital letter and above the right diode hole is either a one- or two-digit number marking.



**Figure 16:** Huano Fi bottom housing internal design showing eight mold ejector circles along upper edge and uniquely shaped bottom out padding at the base of the slider rail guides.

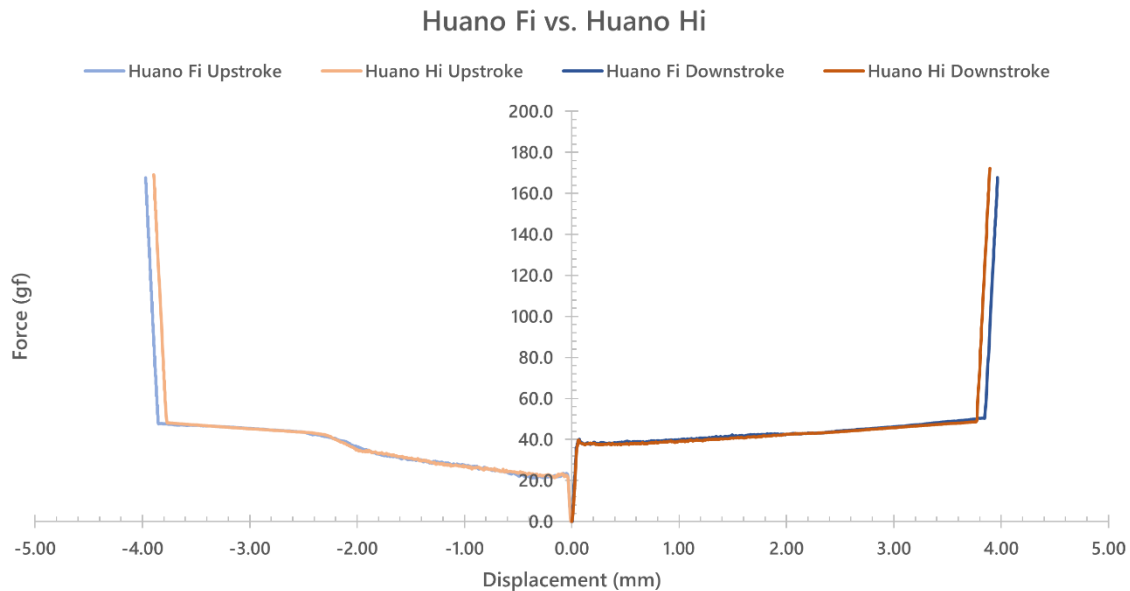


**Figure 12:** Huano Fi bottom housing external design showing three pin construction and two different mold markings near diode pin holes.



## Push Feel

With respect to their straight out of the box feeling, the Huano Fi switches are decent performers without necessarily being standout for any one particular feature you might look for in a linear switch. The prebuilt Fi switches are rather smooth overall, without any scratch present across the entire batch of switches in my box and very little variation in the feeling of the stroke across this lot as well. The factory lubrication is on the thinner side, all things considered, but given that it is well applied it accomplishes the job well even while feeling less present and gummy to the touch than something like a switch that you would lube by hand yourself. This thin application of factory lubrication does well to accent the well balanced but thin housing collisions at either end of the stroke without dampening them down over break in time. The roughly 50-55 gram bottoming out weight of the Fi switches doesn't do them any favor in this regard either. As for the housing collisions, specifically, they are a bit thin and cheaper feeling than would be preferable in switches at this price point, but they don't necessarily carry the same 'cobbled together' feeling that some straight, no frills polycarbonate switches have had previously. That being said, though, this feeling doesn't carry the same sort of implied intentionality in design that something like the Kinetic Labs Huskies have with respect to their housing collisions. It is worth noting as well that a direct comparison of the Huano Hi and Fi switch force curves below shows that they are indeed identical in terms of design and functionality and only differ based on their outward appearance.



**Figure 13:** Force curve comparison of Huano Hi and Huano Fi switches showing near identical functionality.

Contextualizing the performance of these switches with respect to their price point, however, is a challenge in and of itself. The first two pieces of information to consider here are that the Huano Hi Fi 2023 LNY box comes at a price of approximately \$75 and that it contains 66 prebuilt, from the factory switches. At this price point, the 33 Hi and 33 Fi switches (which are functionally identical) are roughly \$1.13 per switch. Taking into consideration that there are all parts and factory lube available for another 33 Hi and/or Fi switches in the box as well, this would lower the price point pretty significantly to \$0.75 per switch with that price extended over all 99. At \$1.13 per switch, while these are certainly decent performing they are definitely way overpriced for their positive traits, and especially so when considering the more negative ones such as the housing thinness. The price point of \$0.75 per switch, however, is much more reasonable and in line with their high quality aesthetic design *and* performance quirks. Whether or not you will be able to necessarily replicate the factory lubing consistency of the prebuilt Hi

and Fis if you chose to build the remaining 33 switches yourself, though, is an entirely different question. While I was able to get pretty close to a similar feeling switch upon attempting to construct a few of them myself given what was present in the box as it was delivered, it took quite a few switches for me to really dial in the delicacy of the factory lubing application, leaving me with a small handful of switches feeling significantly more gummy and heavy-handed than the factory constructed ones. Your mileage on this matter will certainly vary.

### Sound

As for the sound of the Huano Fi switches, they inevitably do match the description of their push feeling like most other switches before them. Sitting a bit on the louder side than most linear switches out there, the housing collisions are the prevailing feature of their sound profile providing short, pointed, and ever so slightly rounded at the edges sounds of a medium-to-medium high pitch. They certainly don't sound as thin and plasticky as they feel in hand, however this region of sound for linear switches is a rather hit or miss area with respect to the community appreciation of them. By comparison, deeper sounding switches, or at the least sounds commonly attributed to nylon housing collisions, have a much broader degree of variation which the community is generally on board with. Another feature not so much present in deeper sounding linear switches that is present here in the Huano Fis is a variability in pitch of the housing collisions at faster actuation speeds. Specifically, as one types faster on the Huano Fis, they pitch up quite noticeably over slower, more average typing speeds. Beyond the housing collisions, the switches are fairly free from spring ping and/or scratchiness, both on an individual level as well as with respect to their cross-batch consistency.

### Wobble

The Huano Fi switches have a slightly better than average stem wobble when compared to all switches I've reviewed on the website thus far, though not by much for what it's worth. There is a noticeable, but most likely unproblematic amount of both N/S and E/W direction stem wobble that is just a hair bit greater in the E/W direction than in the N/S direction. Like the push feeling and sound discussed before it, the wobble is also rather consistent across the batch of switches delivered in the box.

### Measurements

<b><i>Huano Fi Switch Measurements</i></b>			
	<b>Component</b>	<b>Denotation</b>	<b>mm.</b>
Stem	Front/Back Plate Length	A	7.10
	Stem Width	B	5.54
	Stem Length with Rails	C	8.39
	Rail Width	D	1.92
	Center Pole Width	E	1.84
	Rail Height	F	5.04
	Total Stem Height	G	13.40
Bottom Housing	Diagonal Between Rails	L	9.52
	Interior Length Across	M	9.55
	Rail Width	N	2.55
	Center Hole Diameter	O	2.21
Top Housing	Horizontal Stem Gap	X	7.78
	Vertical Stem Gap	Y	6.26
Methods	Number of Switches Used		3
	Replication Per Measurement		3

If you're into this level of detail about your switches, you should know that I have a switch measurement sheet that logs all of this data, as well as many other cool features which can be found under the 'Archive' tab at the top of this page or by clicking on the card above. Known as the 'Measurement Sheet', this sheet typically gets updated weekly and aims to take physical measurements of various switch components to compare mold designs on a brand-by-brand basis as well as provide a rough frankenswitching estimation sheet for combining various stems and top housings.

Huano Fi	
<i>Switch Type: Linear</i>	<i>Huano</i>
Total Stem Travel	3.845 mm
Peak Force	50.4 gf
Bottom Out Force	50.4 gf
# of Upstroke Points	1131
# of Downstroke Points	1161

**Figure 20:** Numerical details regarding the stock Huano Fi switch force curve diagram.

The latest in the content-adjacent work that I've picked up, the new 'Force Curve Repository' is now hosted on GitHub alongside the Scorecard Repository and contains all force curves that I make both within and outside of reviews. In addition to having these graphs above, I have various other versions of the graphs, raw data, and my processed data all available for each switch to use as you please. Check it out via the 'Archive' tab at the top of this page or by clicking any of the force curve cards above.

Break In

<b>Huano Fi Break In Testing</b>			
Metric	Activations		
	17,000	34,000	51,000
Push Feel (Overall)			-
Smoothness			-
Ping (Spring/Leaf)			
Wobble (Overall)	-	-	-
Stem Wobble	-	-	-
Top Housing Wobble			
Sound (Overall)	-		-
Scratchiness			
Ping (Spring/Leaf)			

Color Scale			
Improvement	+	++	+++
Deterioration	-	--	---
Null Change			

## **Break In Notes:**

### 17,000 Actuations

- At 17,000 actuations, the only novel change in the Huano Fi switches is an increase in variability of the sound of housing collisions. Likely due to the factory lubrication on the stems migrating into their final resting spots, the switches broken out this far had quite a bit further range of pitch and volume to their housing collisions than any given stock batch.
- Like many other switches tested in on the break in machine thus far, there is a slight increase in the stem wobble of the Huano Fis even out at 17,000 actuations. This increased stem wobble is especially noticeable in the E/W direction.

### 34,000 Actuations

- Interestingly, at 34,000 actuations the increased variability in housing collisions noted above does not appear to be present at all. On the whole, the batch broken in this far did have an overall higher pitch to its housing collisions than stock switches, though this lack of increased variability over a stock batch may just be a batch-to-batch variance rather than an actual break in note.
- The increased stem wobble of the Huano Fi switches over their stock form is still present at 34,000 actuations, though does not appear to have increased significantly over the 17,000-actuation batch.

### 51,000 Actuations

- On the way to 51,000 actuations, the housing collisions of the Huano Fi switches continued to increase at pitch, making those broken into this point sound significantly and notably different than stock Fis. On the whole, I wouldn't say that they necessarily sound all that bad in this form, though they do have a bit more of a thin and plasticky sound to them than in stock form.
- There is the slightest presence of scratch in some of the switches broken in out to 51,000 actuations that isn't present in stock form. Given just how minor this is, I'd have to say these have to be among the switches that have changed the least via my breaking in testing since I implemented such in my review process.

### Other

With absolutely no competition, the most interesting and unique aspect of the Huano Hi and Fi switches is the limited edition, completely decked out box that they come inside of. While briefly touched on in the Switch Background section of this review, in this section I will go through a detailed breakdown of the box as well as what is contained in each of the compartments of the box. It is worth reiterating, again, that the box was priced at \$75 prior to shipping, contains 66 factory built Huano Hi and Fi switches, as well as components to build another 33 ones with aftermarket modifications. The box and its compartments are as follows:

The first compartment in the box is actually directly under the lid, lifting up to reveal the shipping and purchase order invoice, a sheet of LNY 2023 stickers, and then top housings, bottom housings, and stems to build 16 Hi and 17 Fi switches.



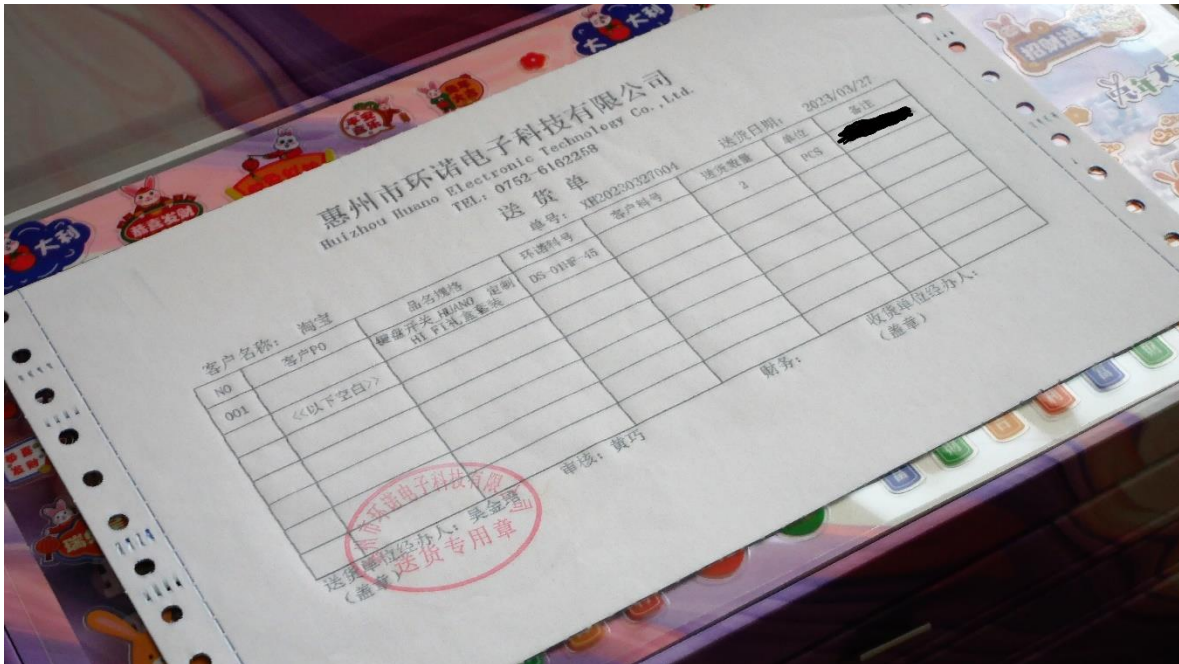


Figure 22: Purchase order invoice for Huano Hi Fi switch box.

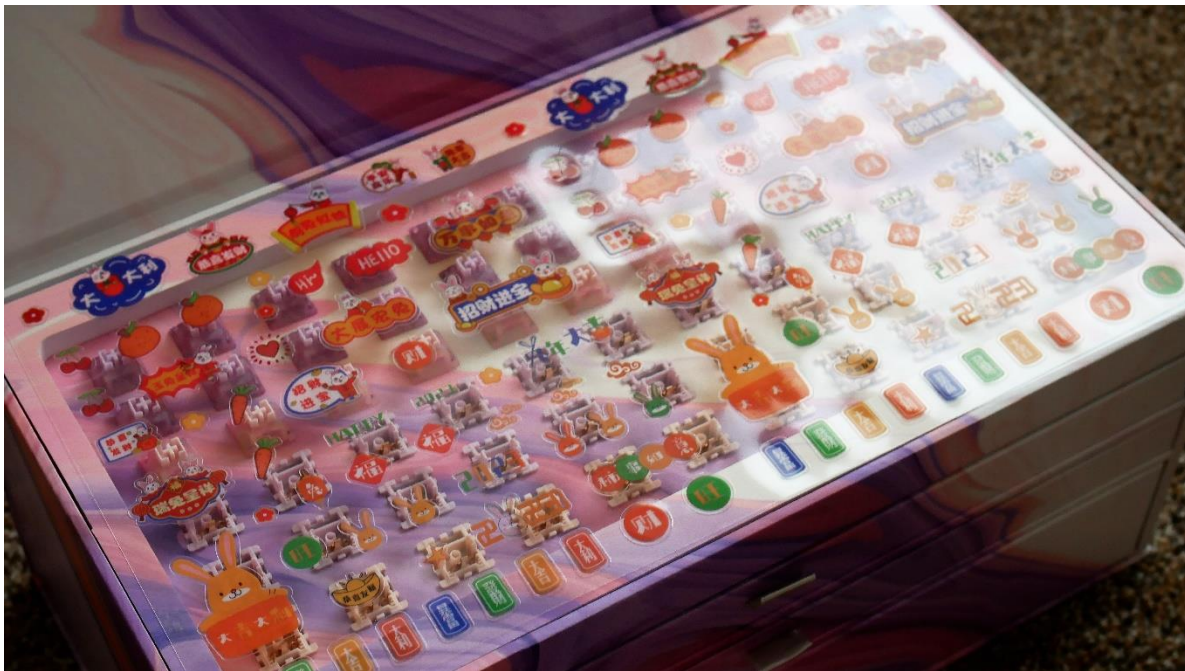


Figure 14: Celebratory LNY sticker sheet in top of Huano Hi Fi switch box.



**Figure 16:** Switch top housings, stems, and bottom housing in the top compartment of the Huano Hi Fi switch box.

The second compartment, or first pull-out drawer, contains 33 prebuilt Hi and Fi switches, embedded in a hard foam carrier tray. This tray is fixed to the bottom of the drawer and is the same material which held the components in the first compartment as well as all other components in other compartments.



**Figure 15:** Huano Hi and Fi complete, from the factory assembled switches in first drawer of the box.



The third compartment, or second pull-out drawer, contains 66 uniform profile, taller, SA-like clear keycaps that are not only impressively clear in their own right, but put recent attempts at clear caps like SA Polyclear to shame.



**Figure 17:** Clear, tall OEM keycaps from the second drawer of the Huano Hi Fi switch box.

The fourth and final compartment, or the third and largest pull-out drawer contains two containers in the upper right-hand corner for factory spring and lube, a lubrication brush, pair of tweezers, switch puller, and two halves of a USB C to USB A combined cable.



**Figure 18:** Third and final drawer of the Huano Hi Fi switch box with springs, lube, modification tools, and two-part USB cable.

## 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 switches to the Huano Fi switches side by side.



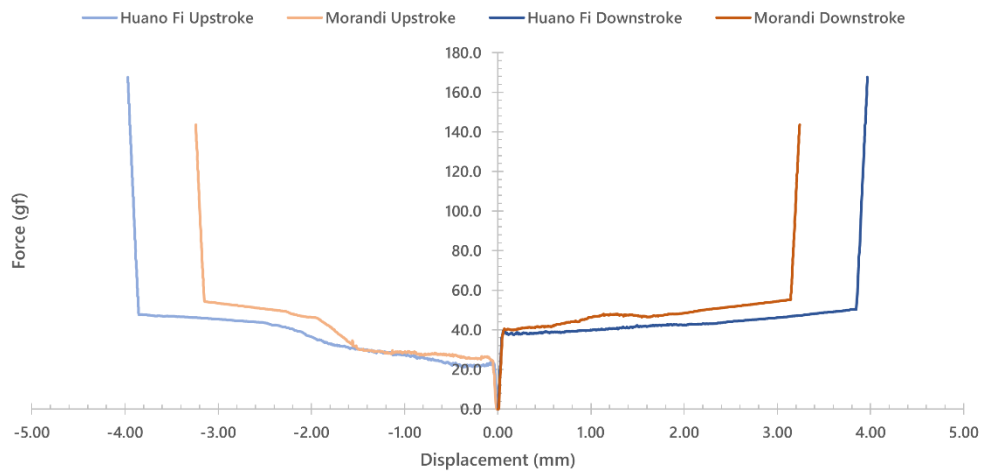
**Figure 19:** Switches for comparison. (L-R, Top-Bot: Wuque Studio Morandi, Cherry MX 'New Nixie', Novelkeys Dream Cream, Huano Pineapple, KTT Darling, and Gateron UHMknown)

### Wuque Studio Morandi

- In terms of their push feelings, the Morandi switches are a bit more smooth than the Huano Fi switches, though this is almost certainly a function of the differences in their lube application. Whereas the Huano Fis have a thin, barely noticeable amount of stem lube, the Morandi have a much thicker, higher viscosity lube which feels more slippery and masking.
- The Wuque Studio Morandi switches are a bit better than the Huano Fi switches when it comes to both N/S and E/W direction stem wobble.
- With respect to their overall sound profile, the Morandi are much more quiet, subdued, and towards the subtle end of the spectrum than the Fis, which instead are louder, higher pitched, and thinner sounding in their housing collisions.



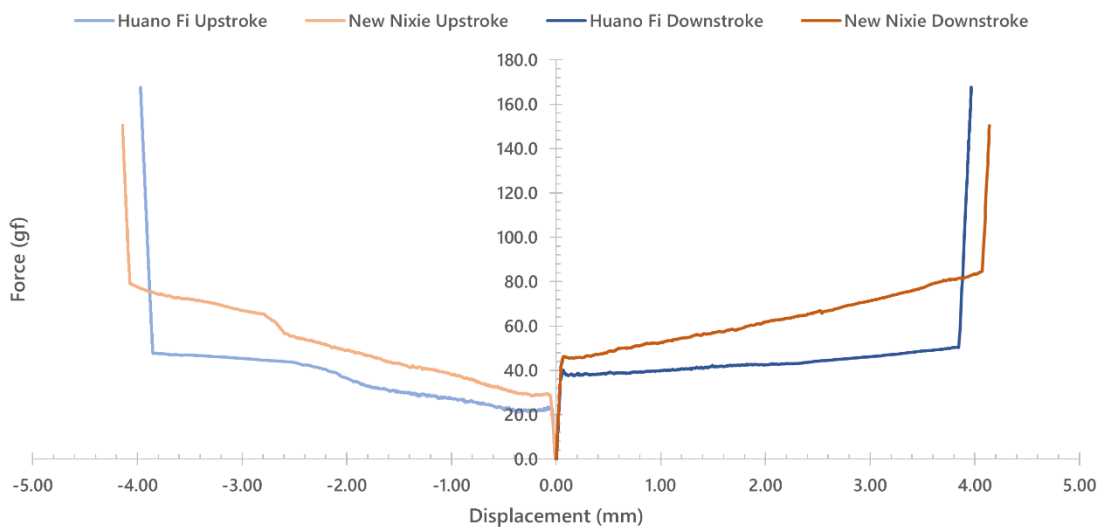
### Huano Fi vs. Wuque Studio Morandi



### Cherry MX 'New Nixie'

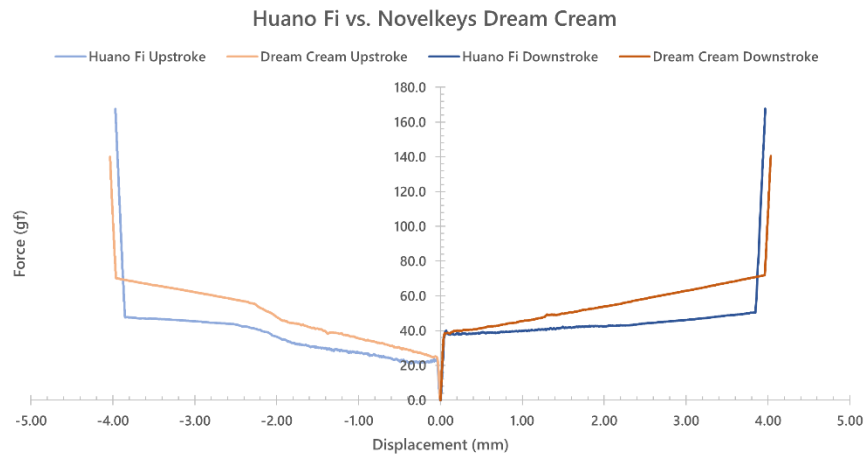
- Even with Cherry's improved factory lubing application in their 'New Nixie' line of switches, the Huano Fi switches are still smoother and don't have that subtle background scratch that Cherry's 'New Nixies' do.
- Interestingly, the Huano Fi switches are worse than the New Nixies in terms of both their N/S and E/W direction stem wobble. This would definitely *not* hold true in a head-to-head comparison between the Huano Fis and most other Cherry-made switches.
- Much like the sound comparison note made above for the Wuque Studio Morandi switches, the Fis are noticeably louder, higher pitched, and thinner sounding than the Cherry MX New Nixie switches.

### Huano Fi vs. Cherry MX 'New Nixie'



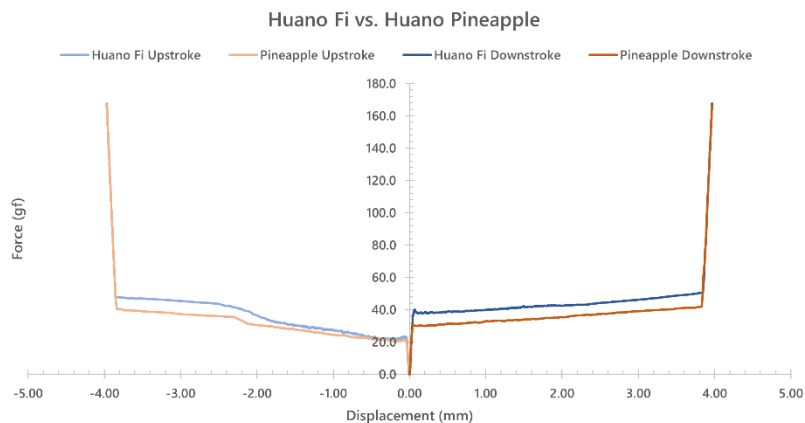
## Novelkeys Dream Cream

- While the Novelkeys Dream Creams and Huano Fi switches are similar both towards the louder end of the spectrum with respect to their housing collisions, the force and pointedness of the bottom out in the Fis makes them sound *significantly* louder than the Dream Creams at bottom out.
- The Huano Fi switches are just a hair bit more smooth than the Novelkeys Dream Creams, which is not all that surprising when reminded of the fact that the Dream Creams are only broken in at the factory and *not* factory lubricated.
- Of all of the switches on this list not made by Huano, the Novelkeys Dream Creams are the most similar to the Huano Fis in terms of their stem wobble. However, the Fis have just a tiny bit less stem wobble in the E/W direction.



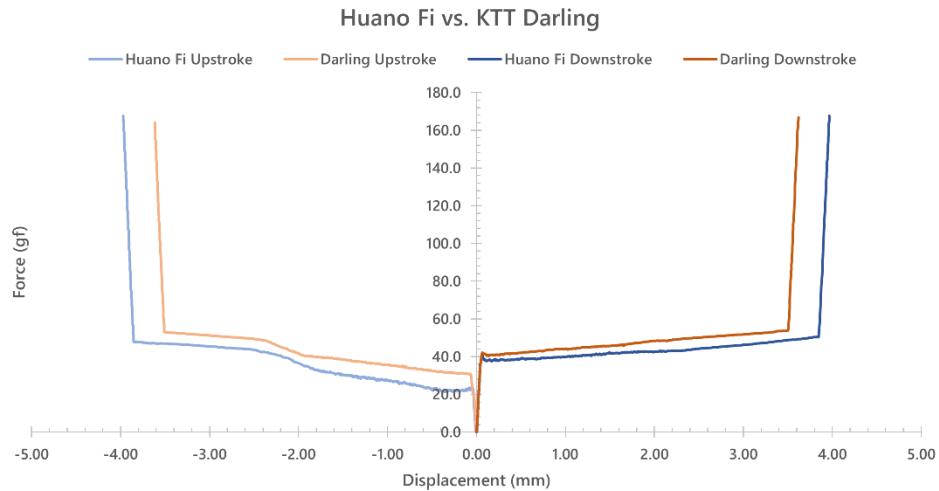
## Huano Pineapple

- Of all of the switches on this comparison list, the firmness and pointedness of the bottoming outs between the two are the most similar. That being said, the Fis have a touch more force behind their bottom out than the Pineapples and resultingly feel a bit stronger.
- The two switches are nearly identical in terms of their smoothness, and I wouldn't be at all surprised if they share factory lube and/or factory lubing technique.
- In terms of sound, these two switches are similar with respect to their overall volume, though the tone of the Fi switches is a bit more rich and full bodied by comparison. I suspect this must be a difference purely of the housing materials though I say that with absolutely zero evidence to back it up whatsoever.



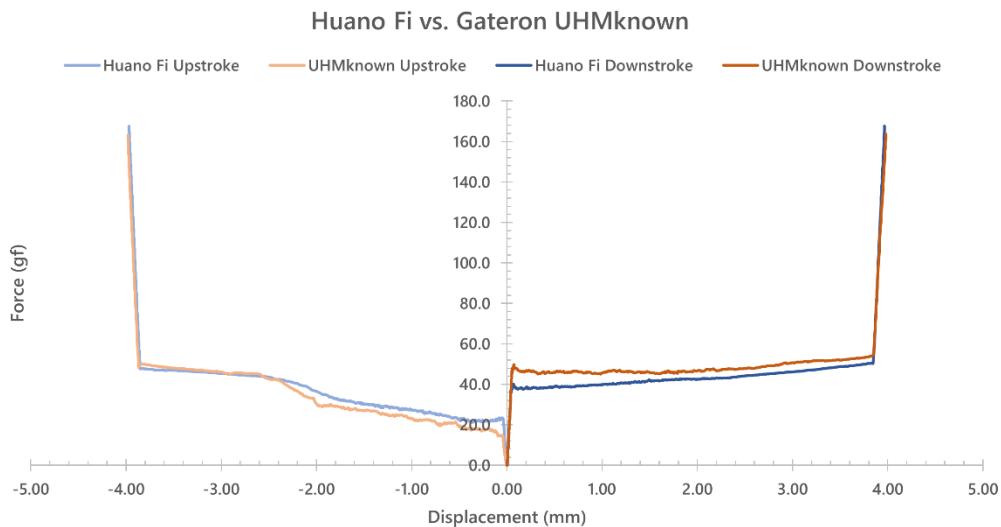
## KTT Darling

- Much like with most other switches on this comparison list, the KTT Darling switches have a much more quiet and deep sound at the point of bottoming and topping out than the Huano Fi switches.
- The KTT Darling switches are better with respect to stem wobble in both the N/S and E/W directions than the Huano Fi switches.
- In terms of head-to-head, out of the box smoothness, the KTT Darlings have a touch more scratch and 'character' to their stroke than the comparatively smooth, unwavering Huano Fi switches.



## Gateron UHMknown

- The Gateron UHMknown switches have a sort of scratchy, grainy quality to their feeling that the Huano Fi switches simply don't have as a result of their factory lube application.
- The Gateron UHMknown switches are a bit worse than the Huano Fi switches when it comes to stem wobble, and especially so in the E/W direction.
- In terms of their overall volume and sound profile, like most switches on this comparison list, the Gateron UHMknowns are quieter, more subdued, and less hard on the ears than the Huano Fi switches with respect to their intensity.



## 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.

Huano Fi		
<i>Switch Type: Linear</i>		<i>Huano</i>
28	/35	Push Feel
18	/25	Wobble
6	/10	Sound
13	/20	Context
8	/10	Other
73	/100	<b>Total</b>

### Push Feel

The Huano Fi switches are fairly typical for higher end, premium made Huano switches boasting a very thin but well applied amount of factory lube and good cross batch consistency with respect to feeling. Even in the absence of spring ping or grit from scratch, though, these switches do feel a tad on the thinner side as a result of their pointed, mildly sharp housing collisions at both topping out and bottoming out. That is not to say, though, that these necessarily feel cheap or plasticky like some full polycarbonate switches before them.

### Wobble

Slightly tighter in the E/W direction than the N/S direction, the Huano Fis are slightly better than the running average of all modern mechanical keyboard switches I've reviewed, though with some room for improvement that people sensitive to wobble may not appreciate.

### Sound

With a sound to match their push feeling, the Huano Fis are on the louder end of the linear spectrum with a well-balanced set of high volume, medium-high pitched, and slightly rounded sounds at topping out and bottoming out. The variation in this pitch with higher actuation speeds, as well, is something worth noting.

### Context

Considering that these switches are Lunar New Year box exclusives and have no effective western marketing push, these switches are very likely to remain mysterious to the vast majority of audiences outside of China. That being said, though, Huano's push for new aesthetic concepts with the 'overflow color' patterning is a great sign of potential future prosperity.



## Other

Much like with the TTC OG Tiger and Rabbits, these switches are incredibly fun purely as a result of their associated packaging and gimmick. While perhaps a bit underperforming and weirdly packaged at that price point, this find of frivolity should be encouraged by switch brands.

## Statistics

Average Score			Huano Fi		
26.5	/35	Push Feel	28	/35	Push Feel
17.1	/25	Wobble	18	/25	Wobble
5.6	/10	Sound	6	/10	Sound
12.7	/20	Context	13	/20	Context
6.1	/10	Other	8	/10	Other
68.0	/100	<b>Total</b>	73	/100	<b>Total</b>
Huano Fi Overall Rank			T-#73/245 (73/100)		
Huano Fi 'Hard' Rank			T-#74/245 (52/70)		
Huano Fi 'Soft' Rank			T-#67/245 (21/30)		

If you are looking at this statistics section for the first time and wondering where the hell are the other 244 switches that I've ranked are, or what 'hard' versus 'soft' ranks refer to specifically, I'd encourage you to head on over to my GitHub linked in the table above or at the links in the top right hand of this website to check out my database of scorecards as well as the 'Composite Score Sheet' which has a full listing of the rankings for each and every switch I've ranked thus far.

## **Final Conclusions**

At the end of the day, I fully recognize that the Huano Hi and Fi switches are both incredibly unlikely to end up in the hands and keyboards of the vast majority of my audience or really anybody in the western keyboard community at all. While TTC Tigers and Rabbits have had the tiniest amount of mainstream attention drawn to them because of their strong performance at their price point, these Huano switches just don't pack the same pound-for-pound value that those premium LNY competitors do. Are these switches decent performing in a vacuum? Absolutely. Do I think that that statement necessarily holds true when you contextualize this performance at their price point of either 66 or 99 switches? Questionably so. Anybody who is interested in a good switch and especially enticed by this new 'overflow color' technique which Huano has implemented in the Hi and Fi top housings should absolutely splurge on this box and enjoy it for all of the fun the gimmick provides. Aside providing a fun mantle, bookshelf, or keyboard room display piece in the future, very few people have really gotten to experience what it's like to get super premium, high end switch packaging before and it evokes the same sort of joy and warm feelings that cracking open a brand-new keyboard case with all the frills, stickers, and extra PCBs and plates. However, if you're just looking for the best switch to spend your money on, maybe this isn't the box for you.

For those of you who don't want to shell out that kind of money the extra frills that come with this LNY box, though, admittedly this review also serves its purpose in letting you know of Huano's latest developments. Ever since their return to the limelight following the explosion of custom switch offerings, Huano has time and again provided interesting, slightly higher end switches at a range of price points which do hit some of the appeal points that many keyboard enthusiasts are seeking out. Recognizing that big fancy product roll outs with features such as these overflow color top housings often trickle down into more cost effective, mainstream products in due time, this is your notice to keep an eye out on what all Huano has in store. While they do admittedly have quite a bit to improve on with respect to stem wobble, housing material thickness, and general marketing strategies, I have a feeling they are one or two small design tweaks away from a switch that could really stand as a flagship design for them. I really wouldn't recommend sleeping on Huano.

## 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. Matt 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 'GOAT' for 10% off your order when you check them out!**

### Proto[Typist] Keyboards

- An all-things keyboard vendor based out of the UK, proto[Typist] is a regular stocker of everything from switches to the latest keyboard and keycap groupbuys. While I've bought things from the many times in the past, they also are a sponsor of my work and allow me to get some of the great switches I write about!

### Divinikey

- Not only do they stock just about everything related to keyboards and switches, but they're super friendly and ship out pretty quick too. Divinikey has been a huge help to me and my builds over the last year or two of doing reviews and they'll definitely hook you up. **Use code 'GOAT' for 5% off your order when you check them out!**

### ZealPC

- Do they really need any introduction? Zeal and crew kicked off the custom switch scene many years ago with their iconic Zealios switches and the story of switches today couldn't be told without them. **Use code 'GOAT' (or click the link above) for 5% off your order when you check them out!**

### MechMods UK

- A rising vendor based in the UK, Ryan and crew have been a pleasure to work with and have nearly everything you'd need to build your first or fourteenth keyboard. **Go build your latest or greatest one right now with them by using code 'GOAT' at checkout for a 5% discount!**

### Dangkeeps

- A longtime supporter of the website and the collection, Dangkeeps has quite possibly the widest variety of switches of any vendor out there. Not only is their switch selection large, but it rotates and is constantly adding new stuff too. **You're going to need 5% off your order with my affiliate to save off the cost of all those switches!**

### SwitchOddities

- The brainchild of one my most adventurous proxies, SwitchOddities is a place where you can try out all the fancy, strange, and eastern-exclusive switches that I flex on my maildays with. **Follow my affiliate code and use code 'GOAT' at checkout to save 5% on some of the most interesting switches you'll ever try!**

### Cannonkeys

- Does anybody not know of Cannonkeys at this point? One of the largest vendors in North America with keyboards, switches, keycaps, and literally everything you could ever want for a keyboard always in stock and with an incredibly dedicated and loving crew. **Follow my affiliate link above in their name to support both them and I when you buy yourself some switches!**

### Kinetic Labs

- One of the most well-rounded keyboard vendors out there, Christian and crew have been supporters of all my switch and switch-adjacent needs for some years now. **I'm honored to have them as an affiliate and think you should check them out using my affiliate link above to support both them and I when you check out their awesome products!**

### Keebhut

- Want to try out some switch brands that fly under most vendor's radars? Keebhut is always seeking out that next latest and greatest and has been super helpful in hooking me up with new brands over the past year. **They are all about sharing that love as well, and want to give you 5% off your next order with them when you use code 'GOAT' at checkout!**