DESIGNING A CUSTOM GMK-KEYCAP SET GUIDELINES

When designing a GMK keycap set there are certain requirements needed to have a set quoted and approved for production. This guide will go over in detail everything you need to know to create a keycap set from start to finish through GMK.

For the process we are specialized in double-shot injection and also UV-Printing. The material we are using is ABS, which has the best outcome for doubleshot-printing and give a crisper and clearer legend. We are currently working with the CHERRY profile.

! PROVIDE A RENDER FOR A QUOTE

Provide a Render for a quote

The render should include:

1. all keycaps, kit layout/s (don't forget the row identification numbers)
2. color codes (you can choose from our stock color or create a custom color)
3. for any new legends include .svg files (see our guide for designing new legends)
4. Mark any non-standard keys (for example convex keys or homing keys), if part of the set.

1. STEP: SELECTING LAYOUTS AND KITS

Language Layouts

GMK has a number of different language layouts available. It is very important step as you will want to make sure you are including the keycaps that people are currently wanting in the keyboard comunity, to cover specific layouts and/or certain needs you have in mind for the set. If you are unsure of what keycpas to include, we would recommend starting an interest check on one of the keyboard forums such as the Interest Check page on GeekHack or Deskthority.

It is possilbe to create new legends for a cost, though there are specifications that need to be followed when creating a new legend.

| Belgian | Czech | Danish | French | German | Greek | Hungarian | Italian | Korean/Hangul |

| Norwegian | Polish | Portuguese | Russian/Cyrillic | Slowenian | Spanish | Swedish (Finnish) |

| Swiss (French/German) | US-English | US-English (Arabic sublegends) | US-English (Cyrillic sublegends) |

| US-English (Greek sublegends) | US-English (Hangul sublegends) | US-English (Hiragana sublegends) |

| US-English (Katakan sublegends) | Hiragana | Katakana | UK-English |

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2. STEP: SELECTING COLORS

When selecting the colors, we would recommend to start to look over the stock color options that GMK has to offer. There is a range of **38 different colors** you can choose from. If you'd like a closer look you can always order a color sample kit from the GMK webstore as well.

In the picture below you can see all the stock colors GMK has to offer:

RO1	P3	V1	RO2	3C	MG1	V2	N6	CV	GE1
DY	TU2	TU1	N5	V4	3A	3B	AE	N7	BR1
U9	L9	T9	3K	2M	GR1	WS2	WS24	CP	WS1
SW1	CR	N9	BV	CC	2B	BJ	CB		

If you would like a color that is not offered as a stock color we can match and create custom colors as well. With nearly infite custom color options, for custom colors our preferred system is currently **RAL.**

RAL

for the first color samples it is nearly perfect matching on the first try.
You can choose from the RAL color palettes „RAL Classic" or „RAL DESIGN"

Pantone

if you want to work with PANTONE, there plastic chips are a good backup system if you can't find a RAL color that is suitable.
You can purchase these directly from Pantone.

HEX, RGB, CMYK color codes are not accepted for custom colors as they are not physical colors.

We would recommend you to purchase the RAL color fan or the physical pantone color chip, if you are sure about your color choice. Keep in mind, that the colors on the screen look different from the color in real life!

UNIQEY

For our keycaps we use double-shot process to get the best and a durable quality. It is limited to one base color and one legend color.

If you would like **more than 1 color for your legends, all additional colors** can be accomplished **with UV-Print.**

Note: for UV-Print we use the color charts of Pantone and ROLAND.

For **LED-Keys,** the legend is UV-printed because the double-shot injection is already used for the transparent plastic.

SPECIAL EFFECTS

We are also offering keycaps with Special Effects. For these we are using a special multi-component material mixture to create the very unique keycap.

The Streaking Effect offers best results on lighter base colors and is available in 3 different streaking levels: Light (L), Medium (M) and High (H) streaking characteristics:

| Light | Medium | High |

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Very important: The multi-component material mixture will change the look of base colors of the keycap itself, e.g. if you choose "stock color A" and add the streaking effect, "stock color A" will change the look. Means, if you want to use "stock color A" for both standard and Special Effect version mixed in one keycap set, they will look different and will not match!

For rendering keycaps with Streaking Effect, please use the following structures for reference:

Download here: „Light"   „Medium"   „High"
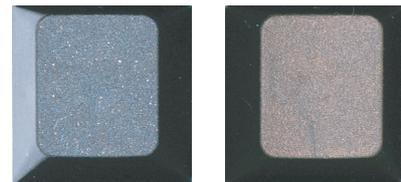
Again, please keep in mind that every key will be unique, the rendering is just a reference but not showing the final streaking effect and keycap.
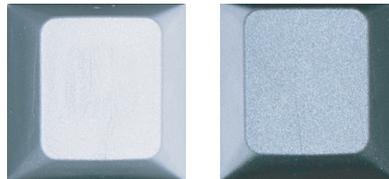
DIFFRENT OPTIONS FOR SPECIAL EFFECT COLORS

The Speckled Effect looks good on lighter base colors:

The Flitter Effect is best on darker base colors for contrast:

We also offer Metallic Effect as an option:

Very important: due to the production process, each keycap using Special Effects will be unique and different. Especially the flow of the streaking effect will vary and cannot be controlled to always look the same. **Every keycap will be unique!**

We would recommend you to purchase the Special Effect keycap samples in order to design your keycap set successfully. Keep in mind, that the colors on the screen look different from the color in real life!

3. STEP: DESIGNING A NEW LEGEND

If you want to add a new legend in your set or design a very unique keycap icon. Our engineer team will have a look on it, to check if it is producable. But to be sure everything works the way you designed it, there are some specificaions that needs to be followed.

If you want to use an existing novelty or any icon from a licensed or trademarked brand, please contact the original creator of the design and ask for permission/licence. And send us the conformation for the licence.

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GENERAL INFORMATION

This guide should help you to create the perfect unique legends for your set.
Check your design with the specifications, that needs to be followed.
In the specification is the base color showed in white and the color for the legend is blue.

LEGEND COLOR

BASE COLOR
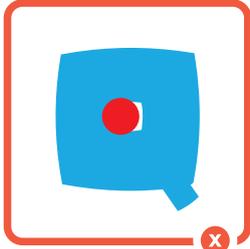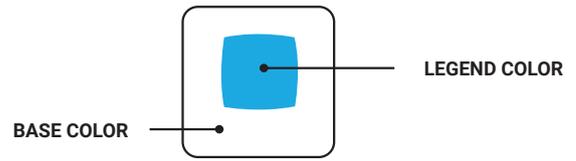
Enclosed area is too small for reverse injection
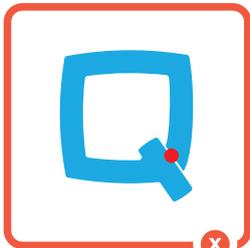
Enclosed areas should have a min diameter of 0.6mm
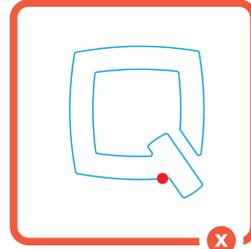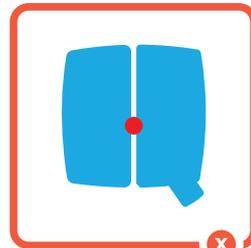
Line thickness is too thin

The minimum thickness of a line is 0.3mm

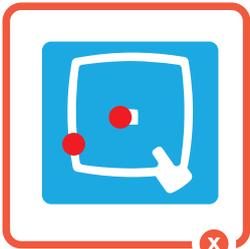**Distance between legend segments is too thin**

Distance between legend segments should be at least 0.4mm

The long thin line between legend segment is too thin

Long lines between legend segments need a thickness of 0.4mm

Diameter for base color is too thin

Base color should have a min diameter of 0.6mm
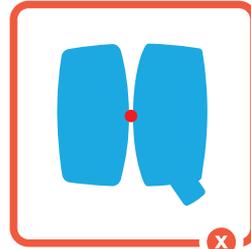
Distance between legend segments is too small
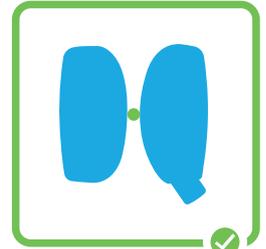
Distance between convex contours needs a distance of 0.3mm

Terminated edge is too thin

Edges need a minimum radius of 0.1mm

Please check to make sure all specifications are met

PLACEMENT OF THE LEGENDS

If there isn't any explicit length, we size the legend in its maximum up.

9.6mm

12mm

1x1

When you want to place it different, plase let us know with a frame of the key size or the actual size you want your novelties on.

9.6mm

7mm

12mm

1x1

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Here you can check the size for your new legend design. Be aware that the space on the keycap is smaller than the acutal top surface.

1x1
9.6
12

1x1,25
14.4

1x1,5
19.2

1x1,75
24

1x2
28.7

1x2V
9.6
31

ISO-Enter
19.2
14.6

1x2,25
12
33.5
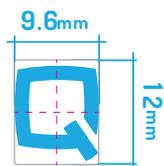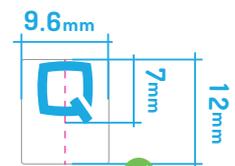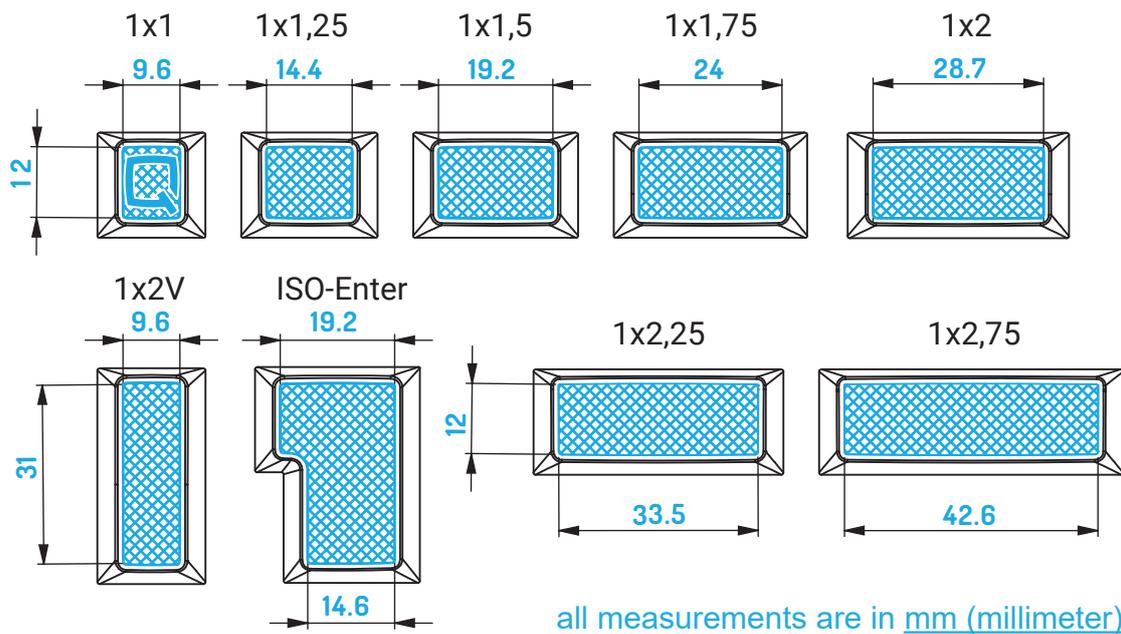
1x2,75
42.6

all measurements are in mm (millimeter)

When you are satisfied with your creation and regarded all the specifications, **convert all the fonts and lines, that are in the file, to a shape.**

Make sure all new symbols/novelties are saved as one file. This helps us to reference/compare the size of the icons to each other. In the end **check if all the legends are the correct size for the keycap you want them** to have.

Save it as a **.svg, .ai or other vector file**.

4. STEP: CREATING RENDERS

There are many ways to create renders of your kits. You can create custom templates in Illustrator/Photoshop/Inkscape/etc, or you can use an online tool like KLE if you are not able to create your own template. One important thing to note about using a tool like KLE is that you can't properly render GMK legends or add new custom legends/novelties to the render.

If you go this route please make sure to **include all novelties with cap sizes/legend orientation, row identification in the render files.** For each new symbol/novelty we need a vector file.

Renders help you and us to express your idea.

R1	Esc	F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 PrtSc / Scroll Lock / Pause Break
R1	` , !1 "2 £3 $4 %5 ^6 &7 *8 (9)0 _- =+ Backspace 2u	Delete Home PgUp
R2	Tab 1.5u Q W E R scooped T Z U bar I O P { [}] Enter	Insert End PgDn
R3	Caps Lock 1.75u A S D F G H J K L ;: @' ~#	
R4	Shift 1.25u | \ Y X C V B N M <, >. ?/ Shift 2.75u	↑
R4	Ctrl 1.25u Win 1.25u Alt 1.25u 6.25u C Alt Gr 1.25u Win 1.25u Menu 1.25u Ctrl 1.25u	← ↓ →

C = convex (R4 C spacebar)

2.75u C	6.25u C	2u C
6u C+ centerd spacebar stem		
6.25u C		
7u C		

source: www.keyboard-layout-editor.com

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AVAILABLE KEYCAP SIZES

Here is a list of all different keycap sizes we have in our portfolio.

	ROW 0	ROW 1	ROW 2	ROW 3	ROW 4	ROW 4C	ROW 5	ROW 1-2	ROW 2-3	ROW 3-4	ROW 4-5	ROW 4-4	ROW 3-4-5
1x1	✅	✅	✅	✅	✅	🔵	✅						
1x1.25	⚠️	✅	✅	✅	✅	🔵	✅						
1x1.5	⚠️	✅	✅	✅	✅		✅						
1x1.75		✅	✅	✅	✅	🔵	⚠️						
1x1.75 stepped				✅									
1x2	⚠️	✅	✅	✅	✅	🔵	✅	✅	✅	✅	✅	✅	
1x2.25				✅	✅	🔵							
1x2.75					✅	🔵							
2x2												⚠️	
1.25x2x1									✅				
1x2x1.75									⚠️				
1.5x2x1.25 ISO-ENTER									✅				
1.5x2x2.25									⚠️				
1.5x2x1										⚠️			
1.25x2V 1.25x2x1.25											⚠️		
1x3						🔵							⚠️
1x4.5						🔵							
1x6 centered						🔵							
1x6 off-centered						🔵							
1x6.25						🔵							
1x7						🔵							
1x1 LED	✅	✅	✅	✅	✅		✅						
1x1.25 LED					✅								
1x1.5 LED		✅			✅								
1x1.75 LED				✅									
1x1.75 LED stepped				✅									
1x1 deep dish				✅									
1x1 dimple|dot				✅									
1x1 bar				✅									

✅ Keycap molds in our portfolio and for double-shot injection

🔵 Keycap molds in our portfolio and only single-shot injection

⚠️ Keycaps with this symbol have tooling for double-shot injection, but aren't used for regular layouts

All listed keycaps can be double-shot injected, except Spacebars|4C.
If you want a LED keycap, keep in mind that the legend can only be UV-printed. The transparent material for the LED is double-shot.

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5. STEP: PRICING

Knowing how we price our keycaps is a very important aspect to consider when creating a new custom set. There are many variables that will affect the overall price of each kit.

The main aspects that affect pricing are:
- – number of keycaps in each kit
- – number of standard or custom colors used
- – number of new legends and novelties
- – Keycap size
- – Quantity ordered (Minimum order quantity/MOQ of 150 sets if only standard colors are used, 250 sets if custom colors are used)

6. STEP: GETTING A QUOTE

Quotes are provided to vendors and direct sellers. Two rounds of quotes are included in our pricing.

In order to optimize this process, please submit your final design to a vendor of your choice. Most designers have several vendors per different region in the world. Just choose one that you want to work with or is close to you, regionally. Vendors know what sells in which mix etc. and will be able to assist you in your process to optimize your design beforehand. Or know when it is best to place the GB to maximize interest and sales. Most known vendors have worked with us already.

Then the vendor should submit the final design (render) to us for quote.

! SUMMARY | GERENAL INFORMATION

Hopefully this article was helpful in guiding you through the process of creating a custom GMK keycap set.

If you have any further questions please don't hesitate to reach out to us via the contact form on our website or on the dedicated keyboard forums (GeekHack, Reddit, Deskthority).

The files should be max. 25 MB. You can use .zip to compress the files. For the renders a resolution of 72 dpi/ppi is enough.

Although we can't design your kits or set for you, we will always be glad to assist with any questions you may have during the process.

We are looking forward for your own idea of a GMK keycap set.

Note: GMK renders are not for puplic use.

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