

Instructions on how to flash the Golbat 40% keyboard (on a Windows machine)

Abridged version from the group buy post:

Step 1: Go to <http://www.enjoyclick.org/tkg/#>. This is the site that will be building the main firmware for the board.

Step 2: Choose the Kimera as the keyboard (not the two headed)

Step 3: Click the config button and replace the text in the "matrix mapping" box with the following code <http://pastebin.com/Bf2uQWHv>

Step 3.1: Modify the Row mapping to be 1-4, and Column mapping to be 5-16.

Step 4.1: Go to keyboard layout editor and setup your mapping

<http://www.keyboard-layout-editor.com/#/gists/83b7eb12b3bccdf4c55d>

Step 4.2: When you're making your layouts, make each layout separately AND INCLUDE BOTH LEGENDS.

For example, the "." key requires the "." and ">" in the mapping to work.

See the help section on enjoyclick for all the symbols to use

Step 5: Paste the layouts for each layer into the corresponding boxes on enjoyclick
(<http://www.enjoyclick.org/tkg/#help>)

New address :kai.tkg.io or yang.tkg.io.

The golbat in GB1, choose kimera-golbat v2.

The golbat in GB2 will add into the tkg web tool after it finish.

Step 6: Choose your fn options.

NOTE: fn covers a wide range of options including LEDs, not just changing layers.

Step 7: See the following for details on the LEDs <http://pastebin.com/zSVN4f9j>

Step 8: Download your firmware as a .EEP file

Step 9: From the following toolkit, <https://github.com/kairyu/tkg-toolkit>, download the files in the windows tree.

Step 10.1: Run the batch file "setup.bat" from the toolkit.

This only has to be done the first time you're flashing your board.

Step 10.2: The options tree is as such "12Kimera core>N>1.Default>1.ateml_dfu"

Step 11: Click the reset button on the golbat PCB (it's on the back).

Step 12: Run "zadig_2.1.2.exe" and Install the Driver (Not WCID).

This only has to be done the first time you're flashing the golbat.

Step 12.1 :When you go to the "TOOL" folder and open "ZADIG_2.2" make sure your device is in boot mode (by pressing button first).

Then under "options" click "List all devices" and select "ATm32UDFU" then you will be able to "INSTALL DRIVER"

Step 13: Drag and drop the .EEP firmware file (Icons on the folder) that you created onto the batch file "reflash.bat"

With screenshots.

How to install Driver:

Go to <https://github.com/kairyu/tkg-toolkit> and click on the “Clone or Download” button on the right side of the screen.

Choose, “Download as ZIP” and download the folder.

kairyu / tkg-toolkit

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A collection of tools used for supporting TKG (TMK Keymap Generator).

139 commits 2 branches 0 releases 4 contributors

Branch: master New pull request

Create new file Upload files Find file Clone or download

kairyu Rename osx to mac (since WWDC 2016)

common	Merge commit kairyu/tkg-firmware@9c8a7e6	
linux	Update binary files for linux and osx	
mac	Rename osx to mac (since WWDC 2016)	
windows	Remove unnecessary old drivers	a year ago
.gitignore	Add .gitignore file	2 years ago
.gitmodules	Remove submodule, prepare for subtree	a year ago
README.md	Remove unnecessary badge	a year ago

Clone with HTTPS Use SSH

Use Git or checkout with SVN using the web URL.

https://github.com/kairyu/tkg-toolkit.git

Open in Desktop Download ZIP

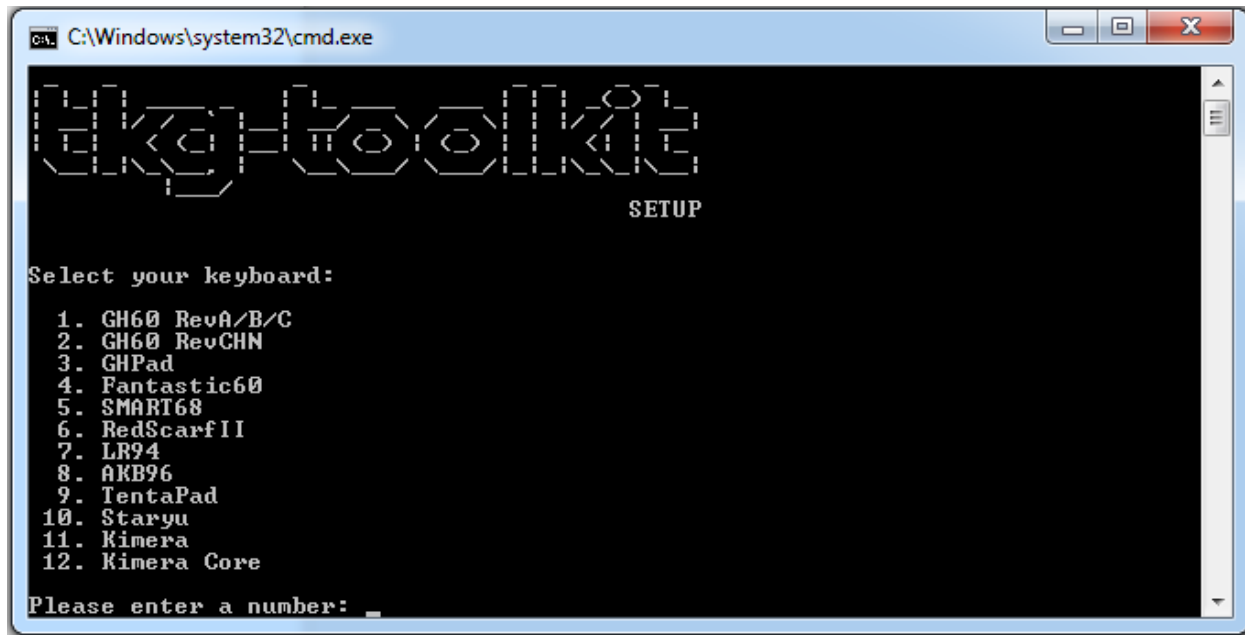
Once downloaded, extract the files to a folder.

Go to the windows folder and execute setup.bat

File Explorer path: < Golbat > tkg-toolkit-master > windows >

Name	Date modified	Type	Size
bin	7/3/2016 9:55 AM	File folder	
conf	7/3/2016 10:41 AM	File folder	
script	7/3/2016 9:55 AM	File folder	
tool	7/3/2016 9:55 AM	File folder	
keymap_8.eep	7/3/2016 1:06 PM	EEP File	3 KB
reflash.bat	6/20/2016 11:41 PM	Windows Batch File	3 KB
setup.bat	6/20/2016 11:41 PM	Windows Batch File	5 KB
util.bat	6/20/2016 11:41 PM	Windows Batch File	3 KB

A new window should appear that looks like this:



The options should be selected in the following order:

12 Kimera Core

N

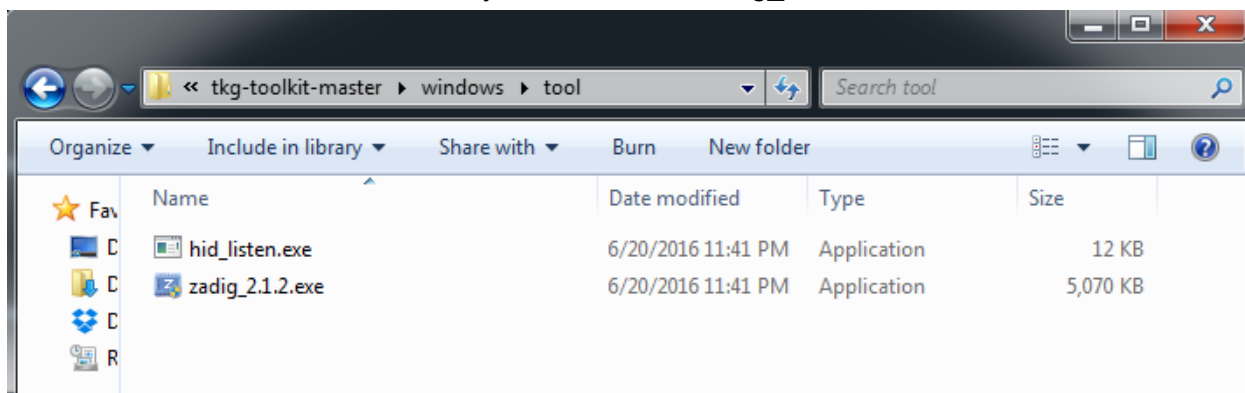
1 Default

1 ateml_dfu

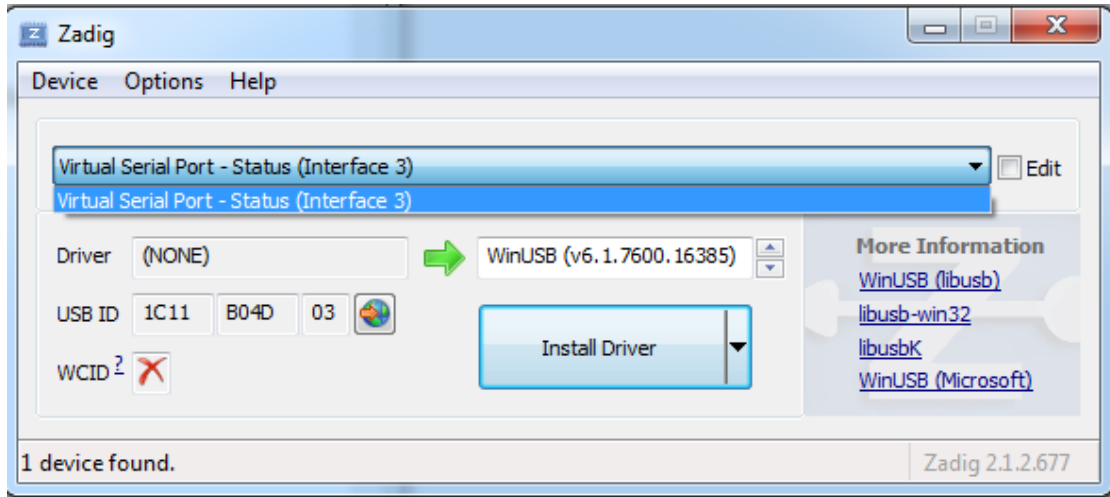
After that has been done, you can close the window if it is still open.

Next, click the reset button on the back of the Golbat keyboard. (You will need to remove the back plate to do so).

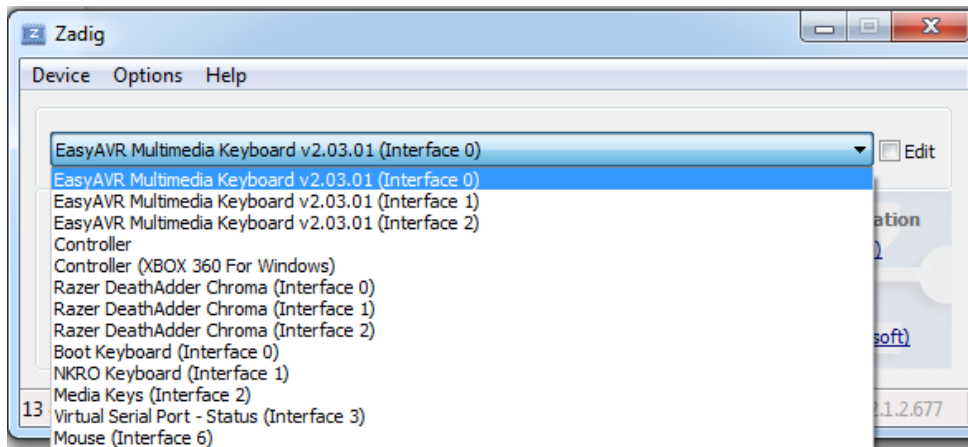
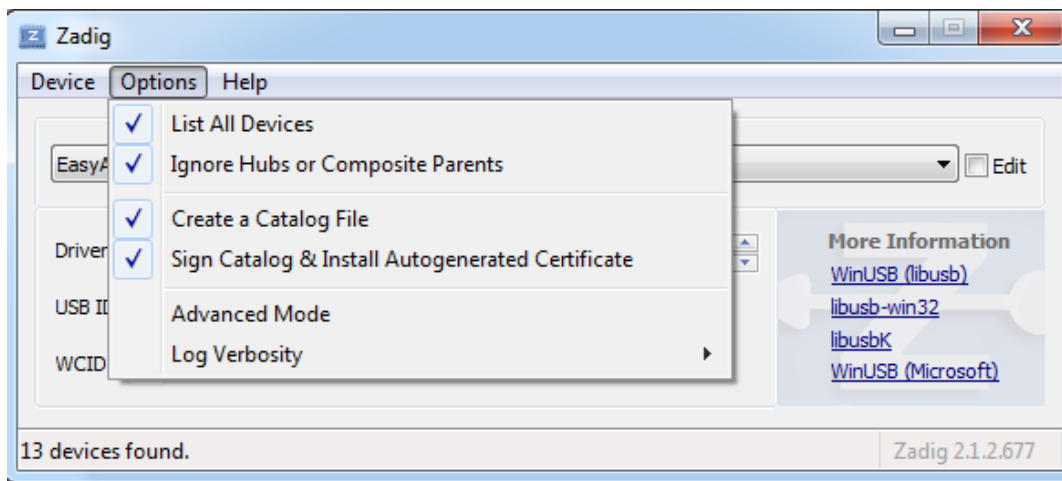
Then, under the windows/tool folder, you can find the zadig_2.1.2.exe execute.



The new window should look something like this.



If you do not see the keyboard device listed (ATm32UDFU), go to Options -> List All Devices and it should then show up.



Then click on the Install Driver button (Not WCID). That will then install the driver.

Creating your layout:

Layout can be designed in <http://www.keyboard-layout-editor.com/>

A maximum of 3 layers is supported. (1 default and 2 function)

Each layout has to be created separately.

Here is mine:

Default:

```
["esc","q","w","e","r","t","y","u","i","o","p","backspace"],
[{w:1.25},"fn1","a","s","d","f","g","h","j","k","l",{w:1.75},"fn1"],
[{w:1.75},"lshift","z","x","c","v","b","n","m","<\n",{w:1.25},">\n.","rshift"],
[{w:1.25},"lctrl","lgui",{w:1.25},"fn2",{w:2.25},"return",{w:2.75},"space",{w:1.25},"fn2","menu",{w:1.25},"rctrl"
]
```

FN1

```
["tab","!\n1","@\n2","#\n3","$\n4","%\n5","^\n6","&\n7","*\n8","(\n9",")\n0","backspace"],
[{w:1.25},"fn1","pgup","home","no","?\n/","|\n\\",":\n;","_\n-","+ \n=","\" \n\"",{w:1.75},"fn1"],
[{w:1.75},"lshift","pgdn","end","no","no","no","no","{\n[","}\n]",{w:1.25},"up","rshift"],
[{w:1.25},"lctrl","lalt",{w:1.25},"del",{w:2.25},"return",{w:2.75},"space",{w:1.25},"left","down",{w:1.25},"right"
]
```

FN2

```
["~\n`",{w:1.25},"fn7","fn8","fn9","fn10","fn11","fn12","fn13","fn14","fn15","fn16","backspace"],
[{w:1.25},"fn6","copy","paste","no","fn20","fn21","fn19","fn17","fn18","fn22",{w:1.75},"fn3"],
[{w:1.75},"find","f1","f2","f3","f4","f5","f6","f7","f8",{w:1.25},"f9","f10"],
[{w:1.25},"ctrl","alt",{w:1.25},"fn2",{w:2.25},"return",{w:2.75},"space",{w:1.25},"fn2","fn4",{w:1.25},"fn5"]
```

Creating the eep file to be flashed to the keyboard.

<http://tkg.io/#> creates the eep file

Kai.tkg.io New Link

Yang.tkg.io New Link (Chinese)

The screenshot shows the TMK Keymap Generator website. The browser address bar displays 'tkg.io/#'. A warning banner at the top states: 'This website is under construction, any feature will be removed or be modified at any time without advance notice.' The navigation bar includes 'TMK Keymap Generator BETA', 'Home', 'Help', and 'About'. The 'General' section is active, showing 'Keyboard' set to 'Kimera' with 'Config' and 'Detail' buttons. The 'Layer' section shows 'Layer Mode' with 'Normal', 'Simple', and 'All-in-One' tabs. 'Number of Layers' is set to 2. There are two text input fields for 'Layer0' and 'Layer1', each with the placeholder text 'Paste URL or Raw Data here'. The 'LED' section is empty. At the bottom, there are three buttons: 'Burn .eep file', 'Download .eep file', and 'Download .c file'.

Make sure keyboard is correct. (Kimera)

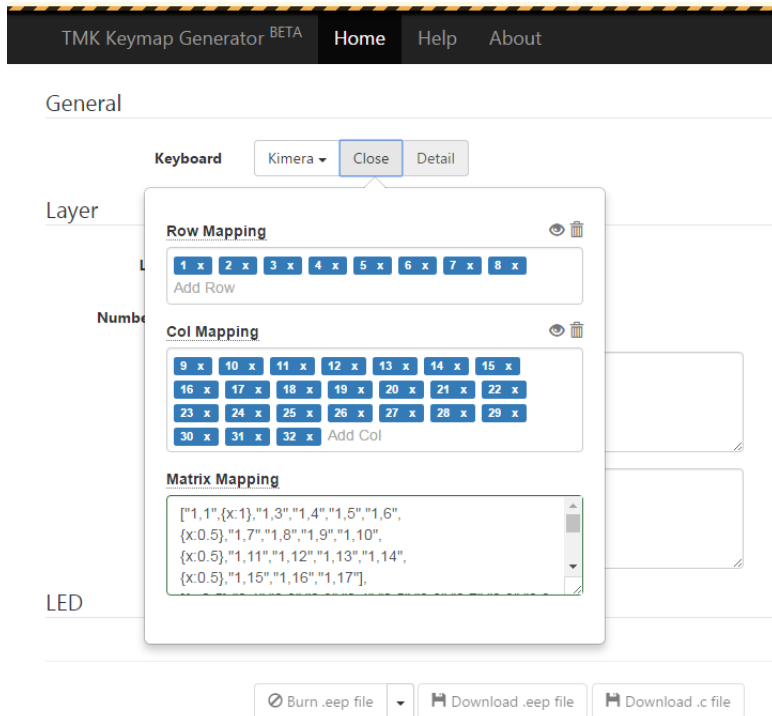
Go to Config and make sure everything is setup correctly.

****New functionality as of 1/29/2017**

Presets are available for selection to make your life easier. Continue to Page 8 after selecting Golbat v2 from the preset option.

The screenshot shows the TMK Keymap Generator website with the 'Config' page selected. The 'Keyboard' dropdown is set to 'Kimera - Golbat v2'. A 'Preset' modal window is open, showing 'Golbat v2' as the selected preset. The modal contains three sections: 'Row Mapping' with a table of 4 columns and 1 row, 'Col Mapping' with a table of 4 columns and 1 row, and 'Matrix Mapping' with a text area containing a complex keymap definition. The background shows the 'General' settings page with 'Layer Mode' set to 'Normal' and 'Number of Layers' set to 2. The 'LED' section is empty. At the bottom, there are three buttons: 'Burn .eep file', 'Download .eep file', and 'Download .c file'.

Change the Row Mapping, Col Mapping and Matrix Mapping.



Matrix mapping should be replaced with below:

```
[["1","1","1,2","1,3","1,4","1,5","1,6","1,7","1,8","1,9","1,10","1,11","1,12"],
[{w:1.25},"2,1","2,2","2,3","2,4","2,5","2,6","2,7","2,8","2,9","2,10",{w:1.75},"2,12"],
[{w:1.75},"3,1","3,3","3,4","3,5","3,6","3,7","3,8","3,9","3,10",{w:1.25},"3,11","3,12"],
[{w:1.25},"4,1","4,2",{w:1.25},"4,3",{w:2.25},"4,5",{w:2.75},"4,7",{w:1.25},"4,10","4,11",{w:1.25},"4,12"]]
```

Row mapping and Column mapping have to be changed as well.
How it should look like.

TMK Keymap Generator ^{BETA} Home Help About

General

Keyboard

Kimera ▼ Close Detail

Layer

Number

Row Mapping

1 x 2 x 3 x 4 x Add Row

Col Mapping

5 x 6 x 7 x 8 x 9 x 10 x 11 x 12 x
13 x 14 x 15 x 16 x Add Col

Matrix Mapping

```
[ "1,1", "1,2", "1,3", "1,4", "1,5", "1,6", "1,7", "1,8", "1,9", "1,10",  
  "1,11", "1,12",  
  [{w:1.25}, "2,1", "2,2", "2,3", "2,4", "2,5", "2,6", "2,7", "2,8", "2,  
    9", "2,10", {w:1.75}, "2,12"],
```

LED

⊗ Burn .eep file ▼

📁 Download .eep file

📁 Download .c file

Once that has been setup, copy the layout you created in keyboard layout editor.
Under Raw data.

keyboard-layout-editor.com

Preset

Color Swatches

Character Picker

Add Key

Delete Keys

Undo

Redo

Cut

Copy

Paste

esc

q

w

e

r

t

y

u

i

o

p

backspace

fn1

a

s

d

f

g

h

j

k

l

fn1

lshift

z

x

c

v

b

n

m

<

>

rshift

lctrl

lgui

fn2

return

space

fn2

menu

rctrl

Properties

Keyboard Properties

Custom Styles

</> Raw data

Summary

Tools

1

["esc", "q", "w", "e", "r", "t", "y", "u", "i", "o", "p", "backspace"],

2

[{w:1.25}, "fn1", "a", "s", "d", "f", "g", "h", "j", "k", "l", {w:1.75}, "fn1"],

3

[{w:1.75}, "lshift", "z", "x", "c", "v", "b", "n", "m", "<\n", {w:1.25}, ">\n.", "rshift"],

4

[{w:1.25}, "lctrl", "lgui", {w:1.25}, "fn2", {w:2.25}, "return", {w:2.75}, "space", {w:1.25}, "fn2", "menu", {w:1.25}, "rctrl"]

Paste it in the layer(s) you set up.

TMK Keymap Generator

BETA

Home

Help

About

General

Keyboard

Kimera

Config

Detail

Layer

Layer Mode

Normal

Simple

All-in-One

Number of Layers

-

3

+

Layer0

[{w:1.75}, "lshift", "z", "x", "c", "v", "b", "n", "m", "<\n", {w:1.25}, ">\n.", "rshift"],
[{w:1.25}, "lctrl", "lgui", {w:1.25}, "fn2", {w:2.25}, "return", {w:2.75}, "space", {w:1.25}, "fn2", "menu", {w:1.25}, "rctrl"]

Layer1

[{w:1.75}, "lshift", "pgdn", "end", "no", "no", "no", "no", "{\n[", "]\n}", {w:1.25}, "up", "rshift"],
[{w:1.25}, "lctrl", "lalt", {w:1.25}, "del", {w:2.25}, "return", {w:2.75}, "space", {w:1.25}, "left", "down", {w:1.25}, "right"]

Layer2

, "fn22", {w:1.75}, "fn3"],
[{w:1.75}, "find", "f1", "f2", "f3", "f4", "f5", "f6", "f7", "f8", {w:1.25}, "f9", "f10"],
[{w:1.25}, "ctrl", "alt", {w:1.25}, "fn2", {w:2.25}, "return", {w:2.75}, "space", {w:1.25}, "fn2", "fn4", {w:1.25}, "fn5"]

Fn

Next define the FN functions.

I had several functions defined for my layout and every one has to be set up.

There are several types of functions supported so feel free to play around to find what suits you.

Fn

Fn1	Layer action > Momentary ▾	layer	1 ▾	
Fn2	Layer action > Momentary ▾	layer	2 ▾	
Fn3	Key action > Modified key ▾	modifier	Left ▾	None ▾
Fn4	None Key action Normal key Modifier key Modified key Layer action Set def Momentary Toggle On Off Set Key advanced action Dual role modifier	key	None ▾	 
Fn5				
Fn6				
Fn7				
Fn8				
Fn9				
Fn10				
Fn11				

I have not researched on LED functionality and do not know of macro support.

Once the everything is complete, download the layout as a .eep file

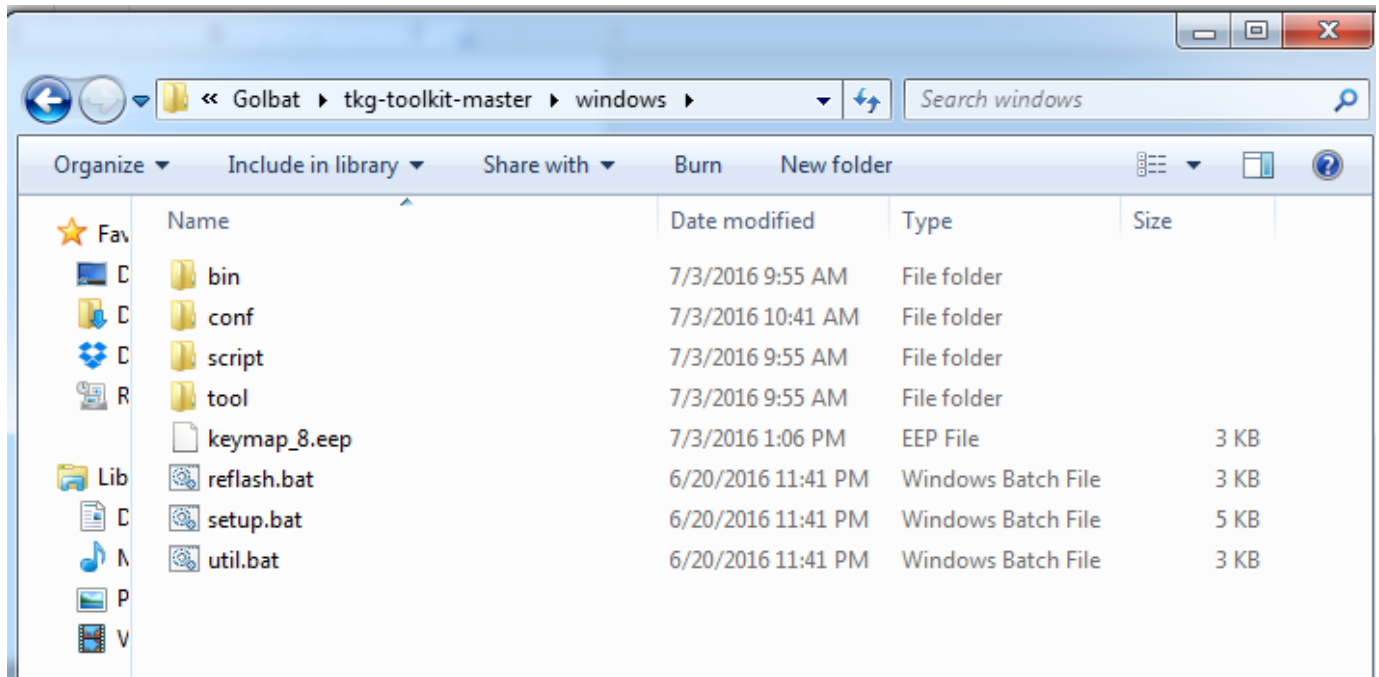
 Burn .eep file ▾

 Download .eep file

 Download .c file

To flash the layout to the keyboard:

1. Make sure the reset button has been clicked on the back of the board.
2. Make sure the drivers have been installed.
3. I recommend copying the eep file to the same location as the tkg-toolkit-master/windows



Drag the eep file and drop it in reflash.bat in windows explorer mode.
That will flash the layout on to the board.

Source:

<https://geekhack.org/index.php?topic=78510.0> GB thread.

<http://pan.baidu.com/s/1c2zAPFy> Document created by Greatfirewall (mostly in Chinese)

<https://geekhack.org/index.php?topic=86635.msg2343159#msg2343159> Guide thread.