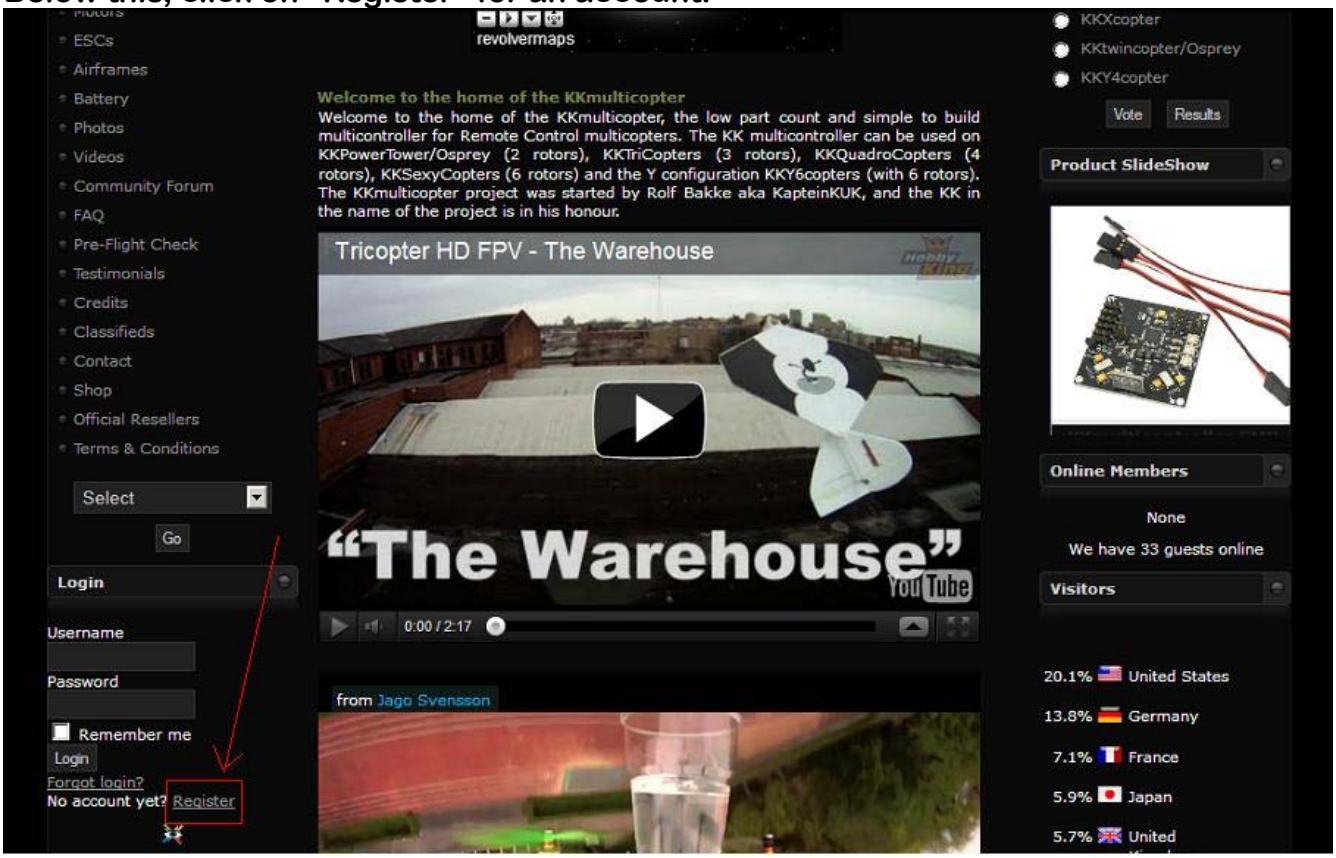
INSTRUCTIONS FOR FLASHING YOUR CONTROLLER BOARD

by: Ron Lampman

1. **Conduct a Google search for "www.KKmulticopter.com".**

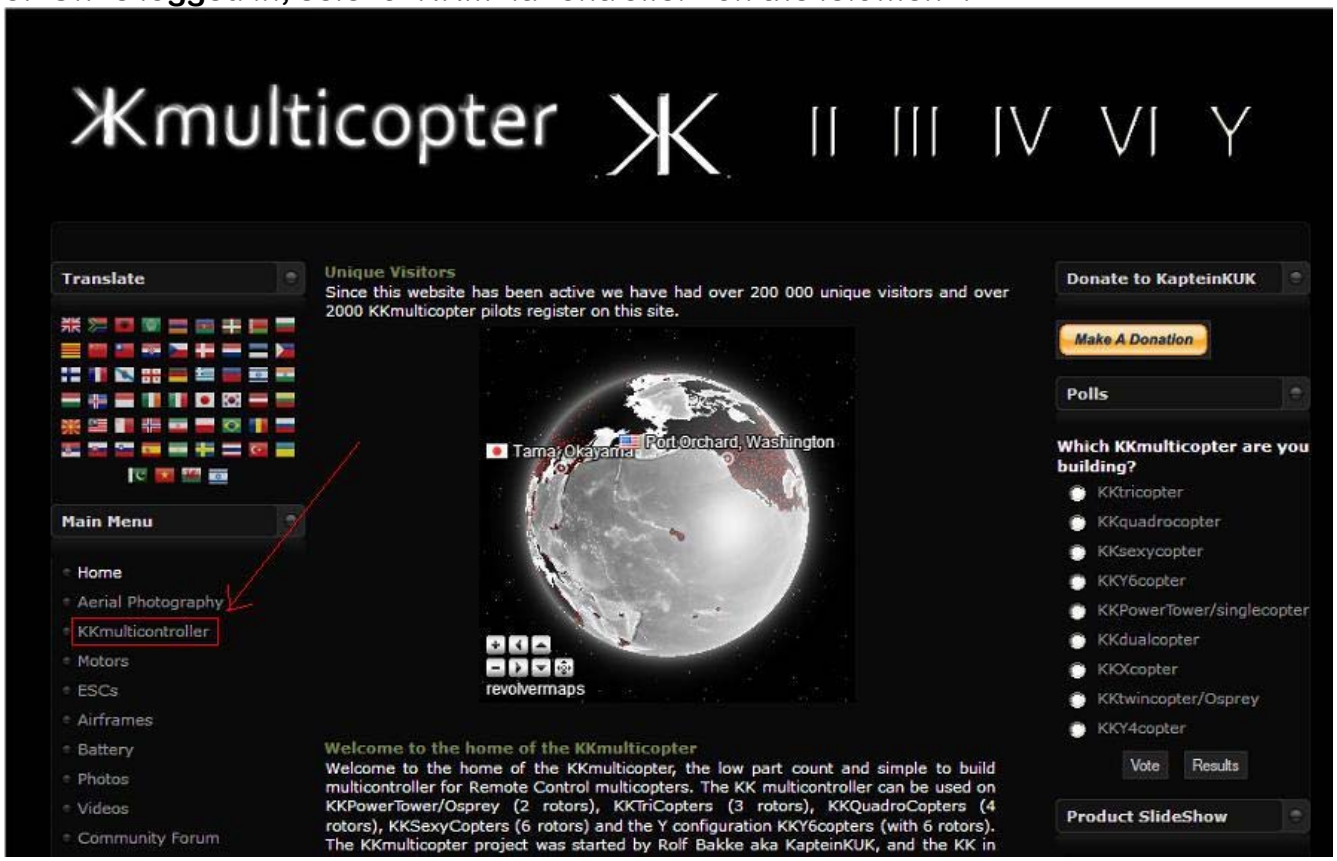
2. **Click on the link and it will bring you to the KKmulticopter site.**

3. Scroll down until you see "Username" and "Password" on the left hand side. Below this, click on "Register" for an account.

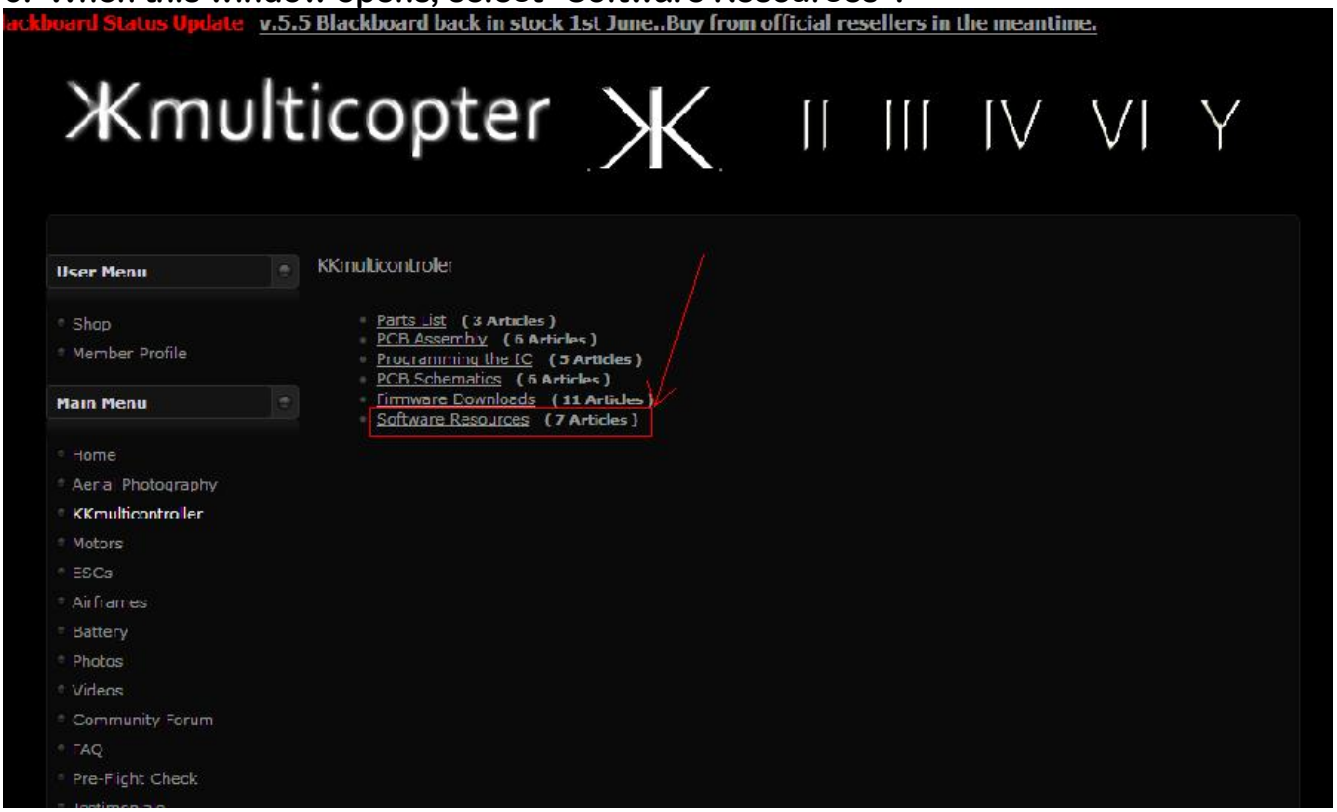


4. Once you have registered, login.

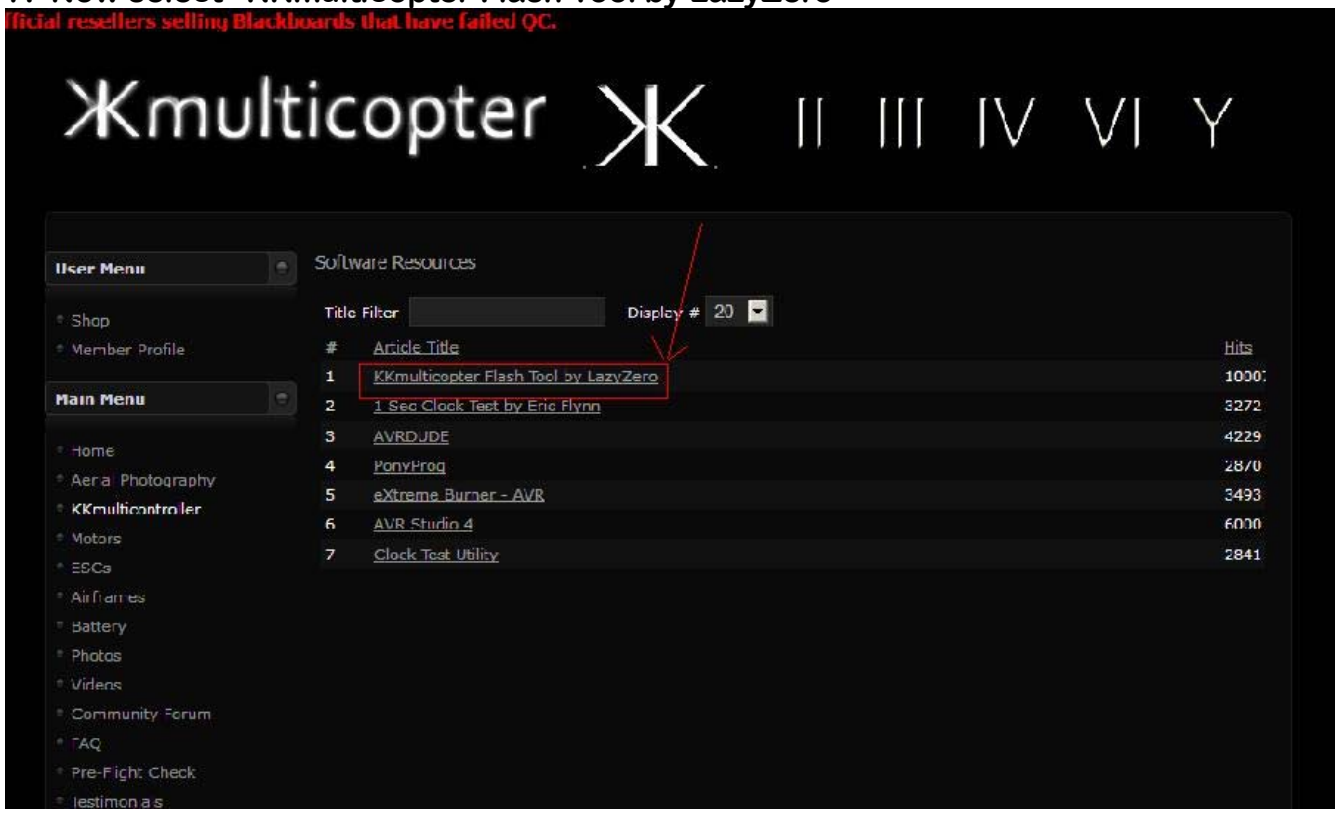
5. Once logged in, select "KKmulticontroller" on the left menu.



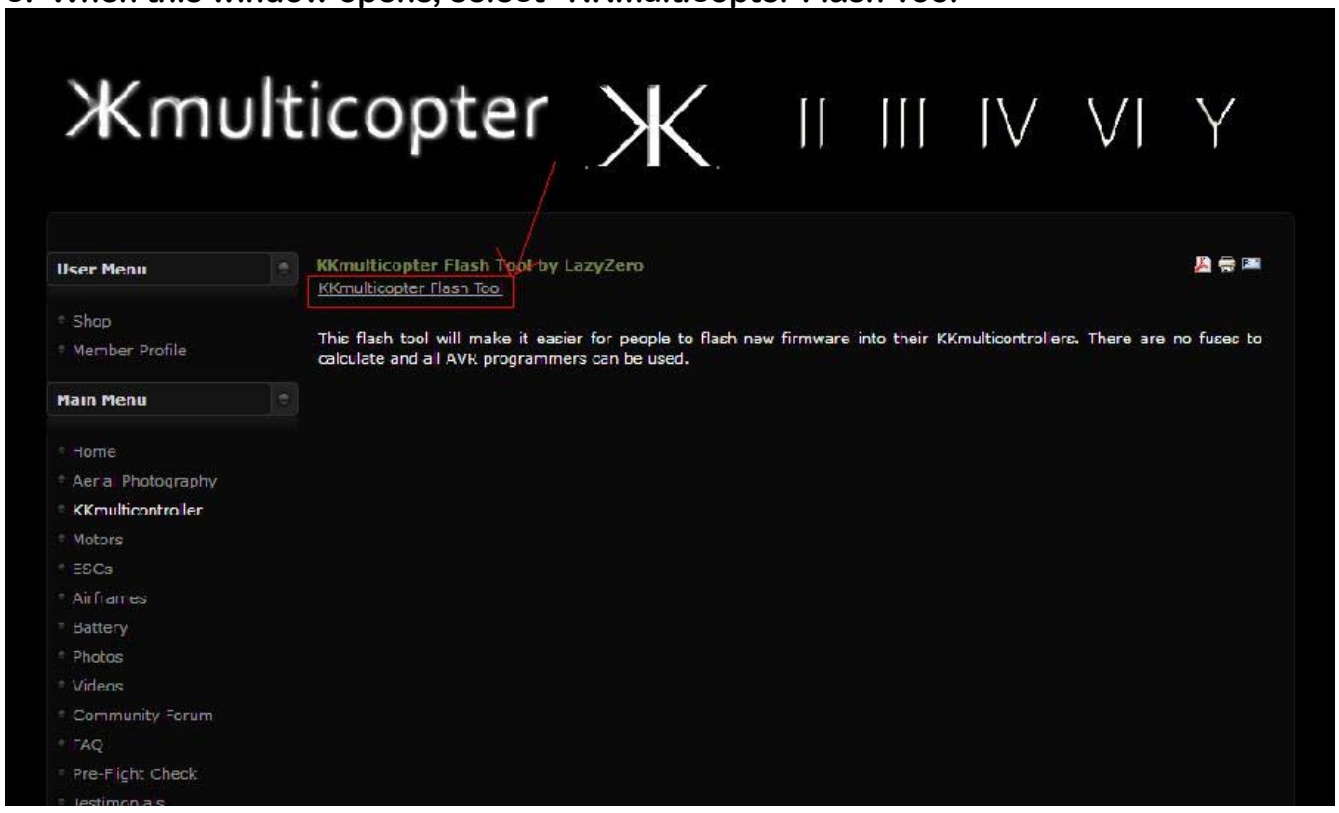
6. When this window opens, select "Software Resources".



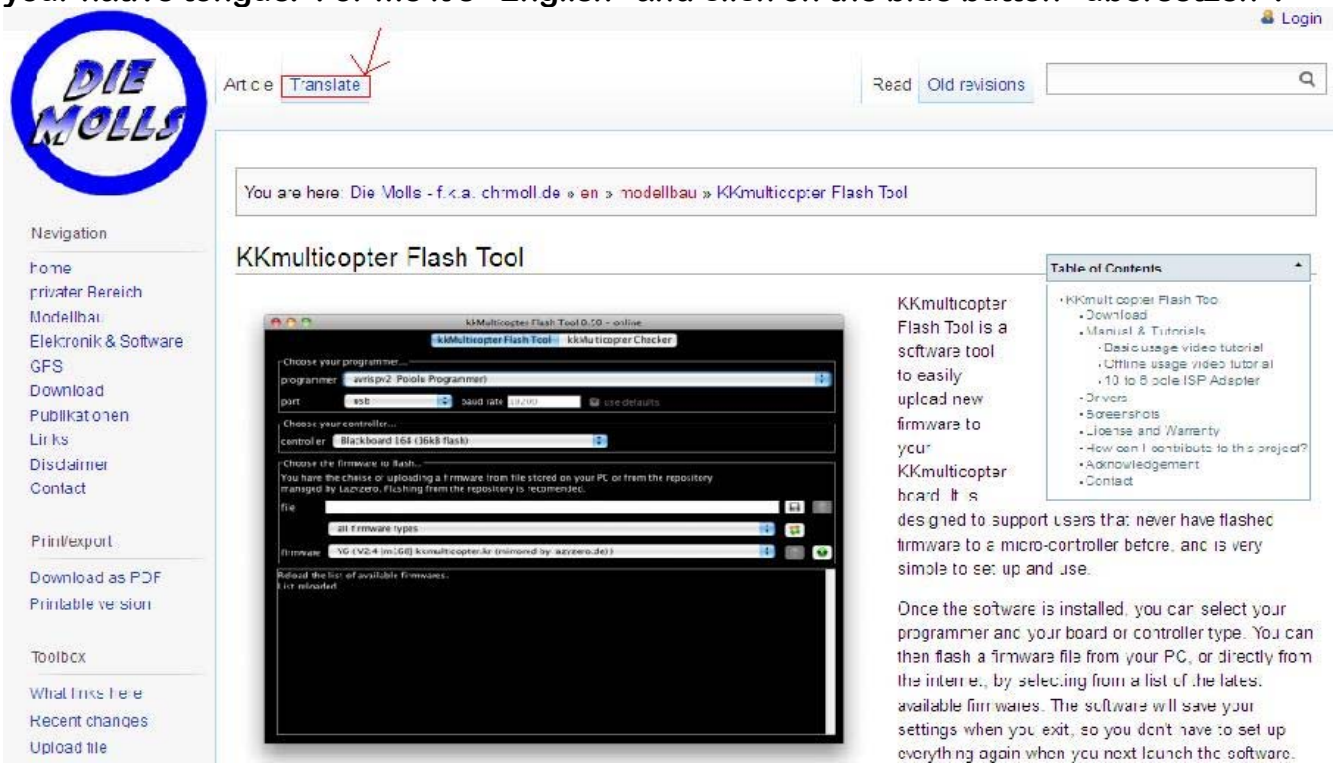
7. Now select "KKmulticopter Flash Tool by LazyZero"

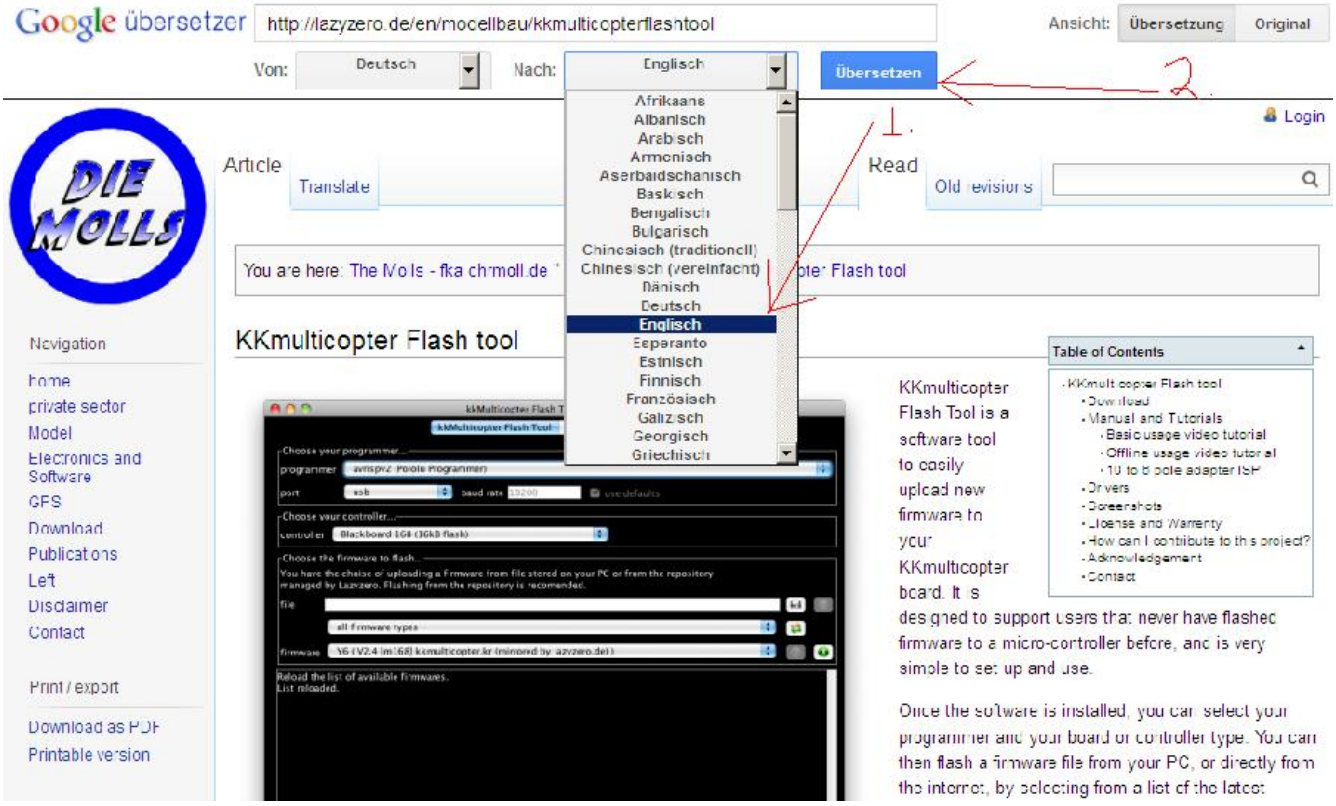


8. When this window opens, select "KKmulticopter Flash Tool"

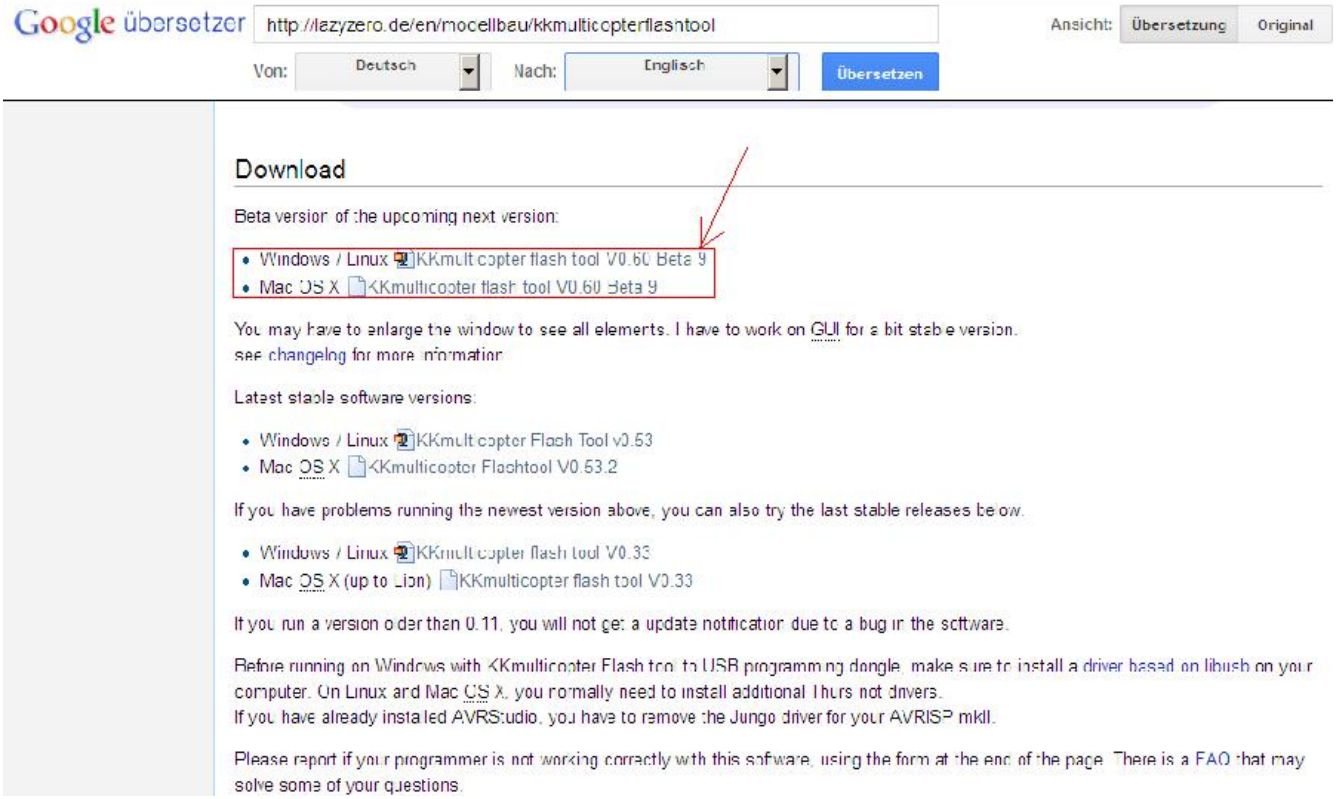


9. This brings us here and unless you speak Deutsch, you should translate it into your native tongue. For me it's "English" and click on the blue button "ubersetzen".





10. Now that it's translated, scroll down to "Download" and select the latest version for your machine, "Windows/Linus or Mac OSX". I need Windows.



11. Once you click it, it will ask if you want to open or save, I chose to save it. I created a file named "kkmulticopter" and placed the zipped file there.

12. Open the zipped file.

13. Select the folder labeled "lib".

14. Within lib, select the "avrdude" folder.

15. Within the avrdude folder, select the type of machine you are loading it on. "linux", "mac", or "windows".

16. Once in this folder, there are four contents. Select the "avrdude" application.

17. Double click on it and select "Extract All".

18. Once it's completed, you will have the tool to download from the web any type of firmware you need from the KK site for your project.

DOWNLOADING FIRMWARE TO YOUR CONTROL BOARD

1. Open the file that has your flash tool in it. There will be several contents but you want to select the "kkMulticopterFlashTool" that is a "command script" type. Click it and select "Run".

2. A script will run in the "C:\WINDOWS\system32\cmd.exe" window if you are using a PC. Once it has finished you will get a "kkMulticopter Flash Tool" window that is online.

3. If you are using the usbap flash tool, you do not have to change anything in the "Choose your programmer" window.

4. In the "Choose your controller" window, select the type of controller you are using by clicking on the drop down menu arrow. (I am reflashing my HK v.1 board for fun).

NOTE: If you plan on using a board for an airplane, you must have a v.2 or v.3 board to do so.

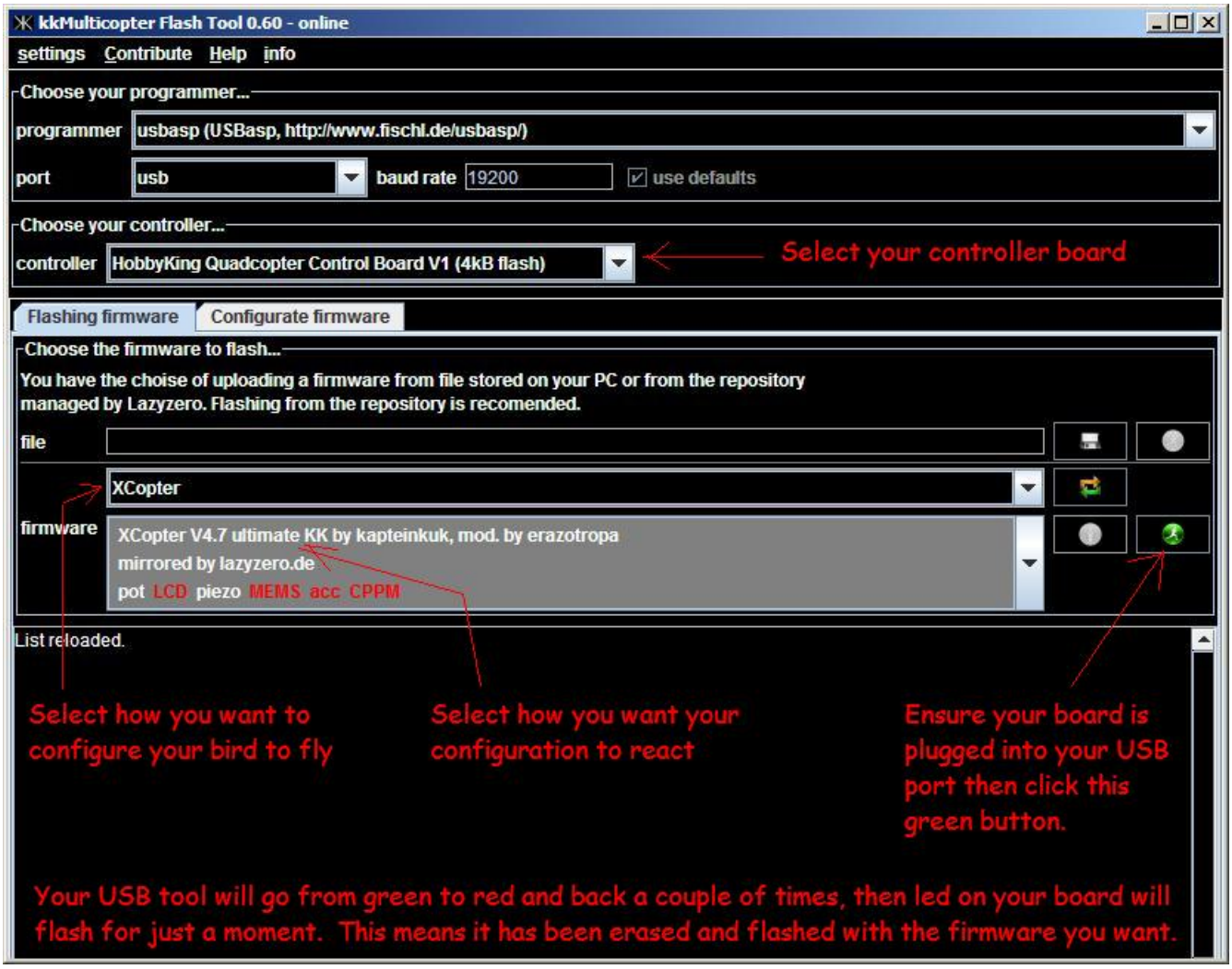
5. Skip the file window because you will be flashing your board from the internet in the firmware window.

6. Select the type of configuration you want to flash on your board. I chose "XCopter".

7. In the window under that, select the way you want your bird to fly. I selected "XCopter V4.7 ultimate"

8. Ensure your board is plugged in correctly to your USB device and the device is plugged into a USB port on your computer.

9. Click on the "green button" to the right of the firmware you selected.



10. Your USB tool will go from green to red and back a couple of times and then the LED on your controller board will flash for a moment. This means that the board has been erased and the firmware you selected has been flashed on it.

11. YOUR DONE! unplug your USB from the computer and your board from your tool, exit out of the "C:\WINDOWS\system32\cmd.exe" window and start plugging in your bird!

Use the instructions in the HK site under "Setting up The Quadcopter Controller to get your bird set up... such as throttle range and reversing.

Before you put props on it:

Plug a battery in and arm the board (right/left yaw with throttle down)
Spin it up until the motors just start turning.
Hold the bird by two opposite arms and tilt it back toward you.
The motor closest to you should spin up.
If not, change it with the motor that did spin up on the control board.
Do this on each motor to ensure your gyros are working properly.
Now to check the yaw gyro.
Turn your quad clockwise and the number 1 motor should spin up.
If not, reverse the gyro direction.
I found that my X copter is not numbered clockwise: 1, 2, 3, 4.
It is numbered the same as the HK Plus configuration: 1, 3, 4, 2.

I hope this helps! Happy flying all.