

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.

The screenshot shows the homepage of the KKmulticopter website. At the top, the logo "KKmulticopter" is displayed in a stylized font, followed by icons for different configurations: a stylized 'K', 'II', 'III', 'IV', 'VI', and 'Y'. Below the logo, there are several sections:

- Translate:** A dropdown menu showing various national flags.
- Main Menu:** A list of navigation links including Home, Aerial Photography, KKmulticontroller, Motors, ESCs, Airframes, Battery, Photos, Videos, and Community Forum.
- Unique Visitors:** A text box stating "Since this website has been active we have had over 200 000 unique visitors and over 2000 KKmulticopter pilots register on this site." Below this is a globe with markers for "Tama, Okayama" and "Port Orchard, Washington".
- Donate to KapteinKUK:** A section with a "Make A Donation" button.
- Which KKmulticopter are you building?:** A poll with radio button options for KKtricopter, KKquadrocopter, KKsexycopter, KKY6copter, KKPowerTower/singlecopter, KKdualcopter, KKXcopter, KKtwincopter/Osprey, and KKY4copter. There are "Vote" and "Results" buttons.
- Product SlideShow:** A section for displaying product images.

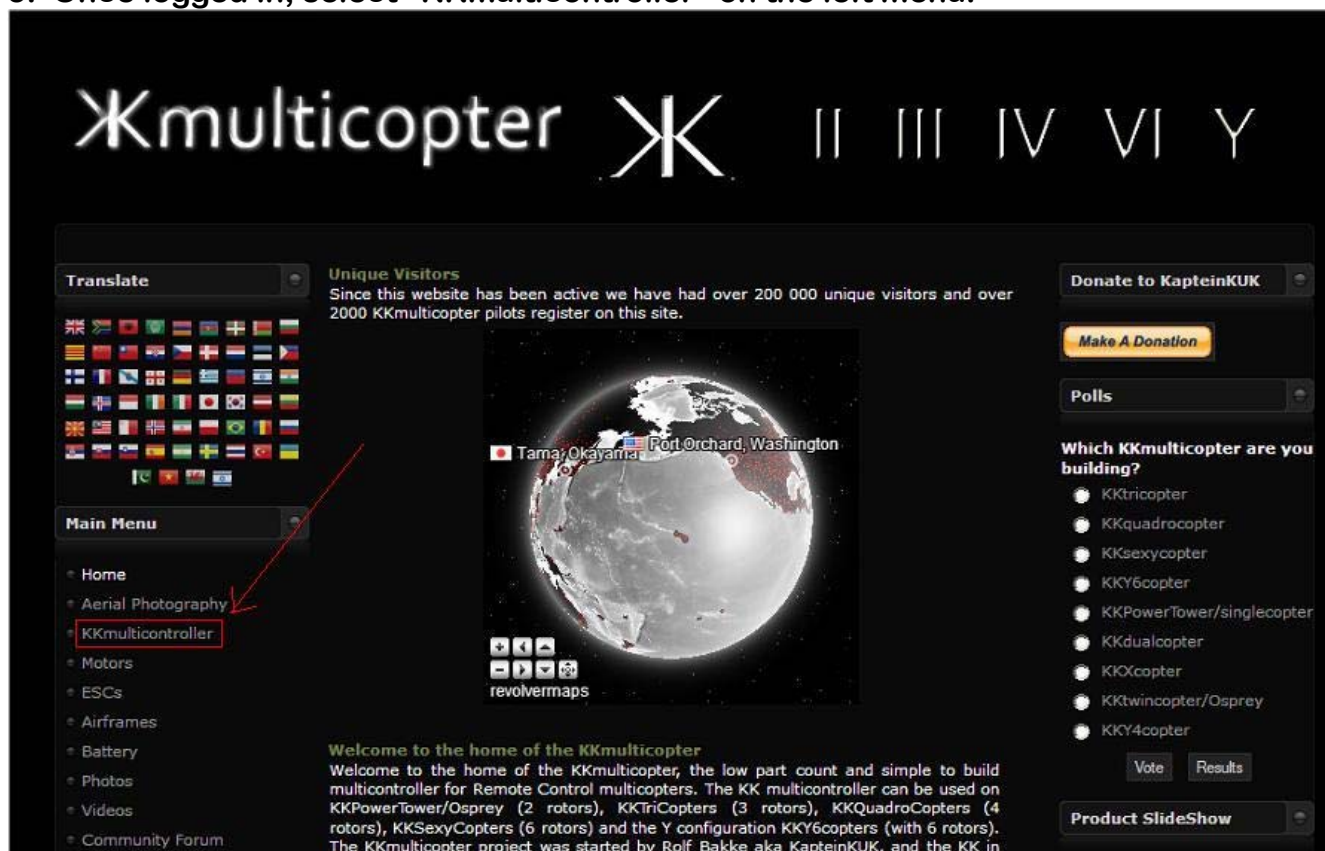
At the bottom of the globe, there are social media icons and the text "revolvermaps".

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

The screenshot shows a website interface for 'KKmulticopter'. On the left, there is a navigation menu with items like ESCs, Airframes, Battery, Photos, Videos, Community Forum, FAQ, Pre-Flight Check, Testimonials, Credits, Classifieds, Contact, Shop, Official Resellers, and Terms & Conditions. Below the menu is a search bar with a 'Select' dropdown and a 'Go' button. A login form is visible with fields for 'Username' and 'Password', a 'Remember me' checkbox, and a 'Login' button. A red arrow points to a 'Register' button located below the login form. The main content area features a video player titled 'Tricopter HD FPV - The Warehouse' with a play button and a progress bar showing 0:00 / 2:17. Below the video, it says 'from Jago Svensson'. On the right side, there are sections for 'Product SlideShow' (showing a circuit board), 'Online Members' (None), and 'Visitors' (We have 33 guests online). At the bottom right, there is a list of visitor statistics by country: 20.1% United States, 13.8% Germany, 7.1% France, 5.9% Japan, and 5.7% United Kingdom.

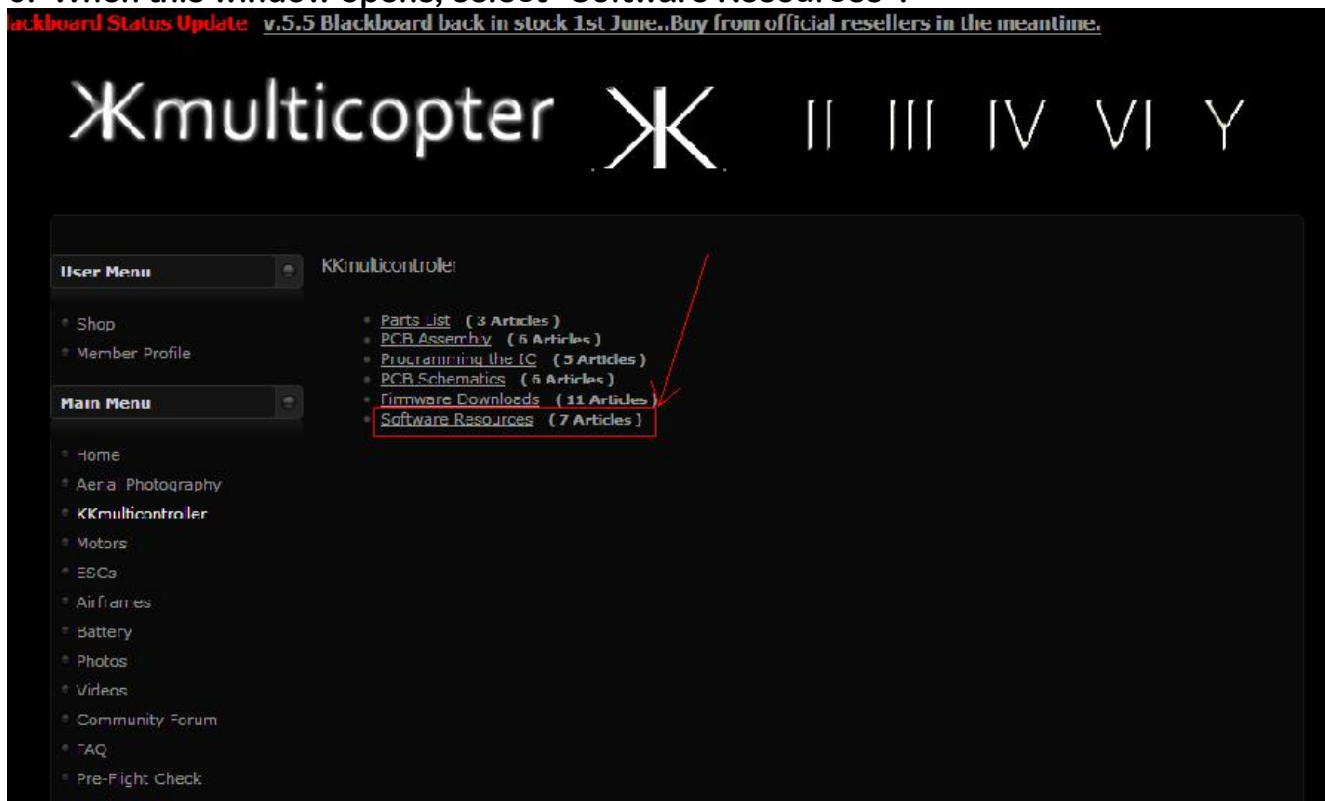
4. Once you have registered, login.

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



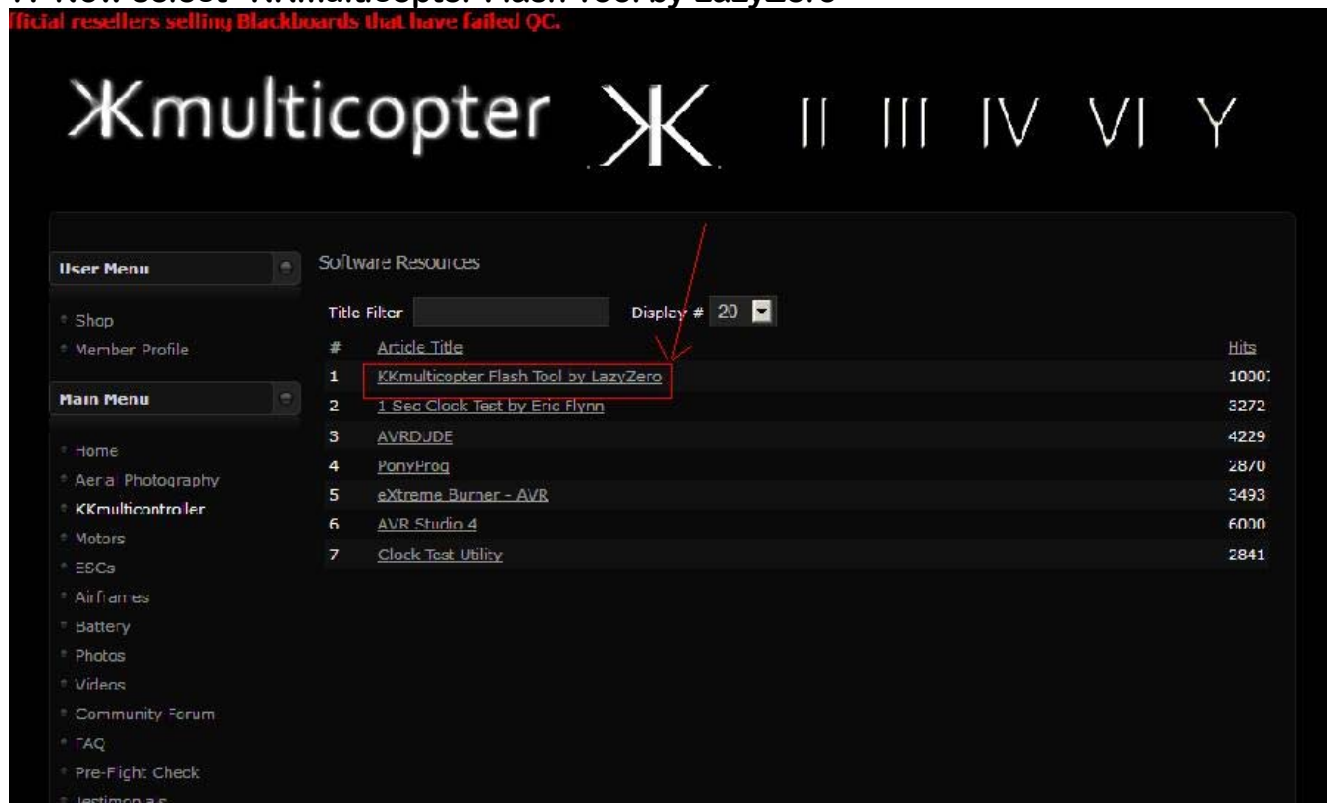
6. When this window opens, select "Software Resources".

Blackboard Status Update v.5.5 Blackboard back in stock 1st June..Buy from official resellers in the meantime.

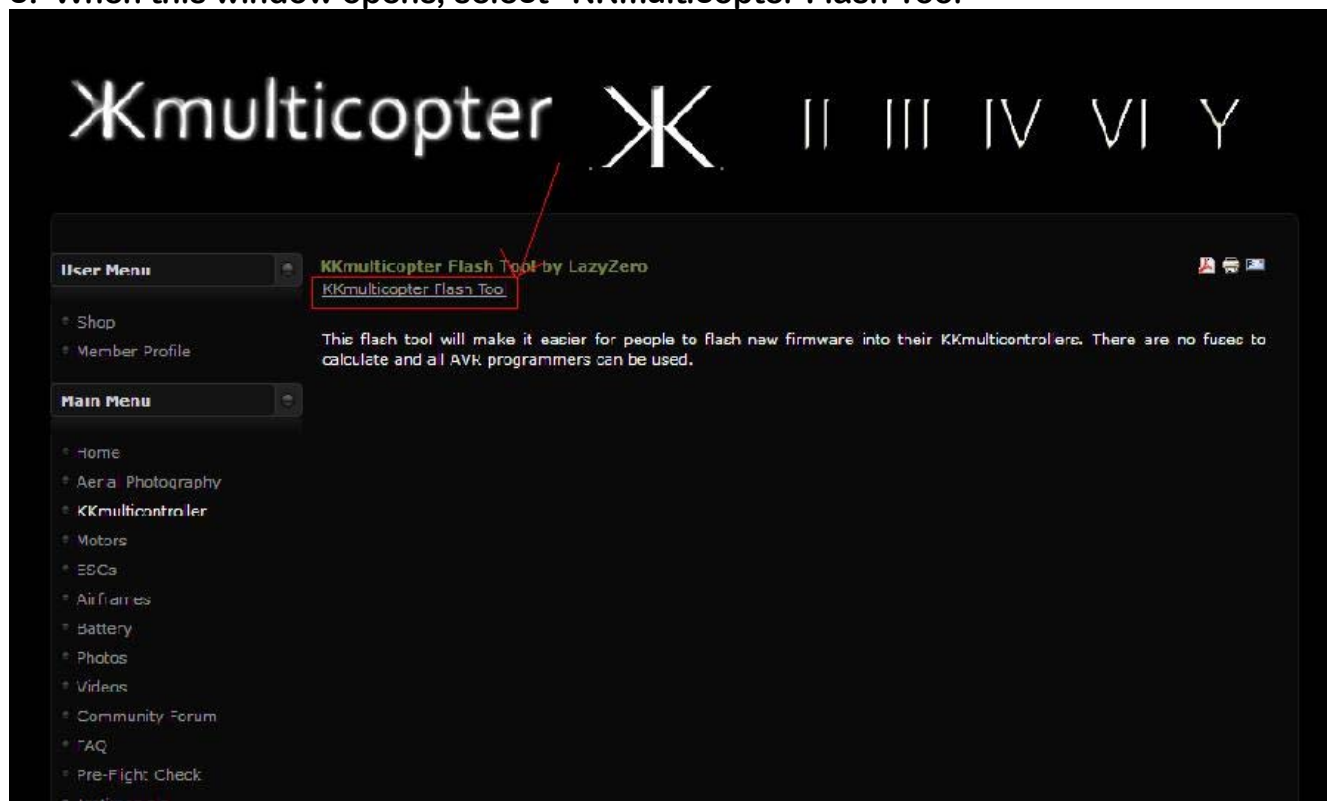


7. Now select "KKmulticopter Flash Tool by LazyZero"

Official resellers selling Blackboards that have failed QC.



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 "übersetzen".

The screenshot shows the Die Molls website with the article "KKmulticopter Flash Tool". A red arrow points to the "Translate" button in the top navigation bar. The article content includes a screenshot of the KKmulticopter Flash Tool software interface, which has fields for "programmer" (avrisp2 Poole Programmer), "port" (usb), "controller" (Blackboard 164 (36k8 flash)), and "firmware" (V6 (V2.4 (m16)) kkmulticopter.kf (trimmed by lazzero.de)).

The screenshot shows the Google Übersetzer interface. The URL "http://lazzero.de/en/modellbau/kkmulticopterflashtool" is entered. The source language is set to "Deutsch" and the target language is "Englisch". A red arrow points to the "Übersetzen" button. The article content from the previous screenshot is visible in the background, showing the "KKmulticopter Flash tool" title and the software interface screenshot.

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

Google Übersetzer Ansicht:

Von: Nach:

Download

Beta version of the upcoming next version:

- Windows / Linux [KKmulticopter flash tool V0.60 Beta 9](#)
- Mac OS X [KKmulticopter flash tool V0.60 Beta 9](#)

You may have to enlarge the window to see all elements. I have to work on [GUI](#) for a bit stable version. see [changing](#) for more information

Latest stable software versions:

- Windows / Linux [KKmulticopter Flash Tool v0.53](#)
- Mac OS X [KKmulticopter Flashtool V0.53.2](#)

If you have problems running the newest version above, you can also try the last stable releases below.

- Windows / Linux [KKmulticopter flash tool V0.33](#)
- Mac OS X (up to Libn) [KKmulticopter flash tool V0.33](#)

If you run a version older than 0.11, you will not get a update notification due to a bug in the software.

Before running on Windows with KKmulticopter Flash tool to USB programming dongle, make sure to install a driver based on libusb on your computer. On Linux and Mac OS X, you normally need to install additional drivers not drivers.

If you have already installed AVRStudio, you have to remove the Jungo driver for your AVRISP mkII.

Please report if your programmer is not working correctly with this software, using the form at the end of the page. There is a FAQ that may solve some of your questions.

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".

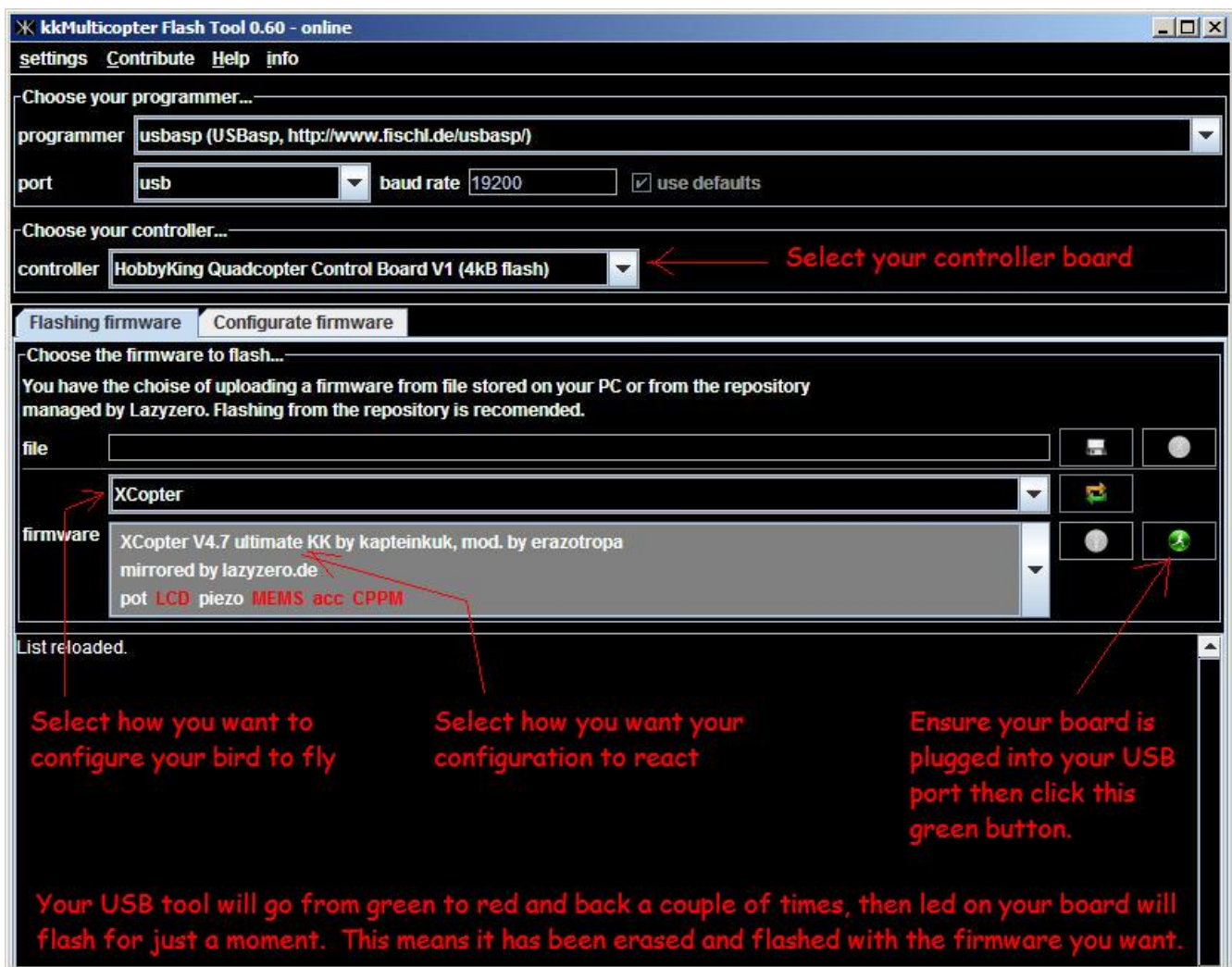
16. Once in this folder, there are four contents. Select the "avrdude" application.

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.