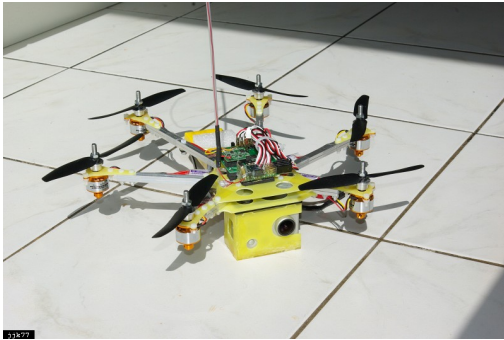


Hexacopter shrediquette MM6 style

Written by jjk



W. Thielicke shows his ne shrediquette MM6 on his [homepage](#), which was designed to carry the GoPro HD camera. This copter should be a reliable and solid platform for fpv flying. I liked the design so much and after i saw his [cameroon video](#) i decided to build a shrediquette clone asap.

I got the picture from his website in the original format so i could get some data to make my own frame with my hobby-milling-machine. The frame consists of 1.5mm gfk and the arms are made of 7.5mm x 7.5mm aluminium rods. Because William uses robbe roxxy motors and i wanted to use cheaper turnigy motors, i had to design my own motormounts. All screws in the design are nylon screws, so it is very lightweight but also solid.

In the pictures below you can see the size comparison with my hand and a part of the frame or even with my "big" fpv-tricopter. The MM6 will be a very small and agil copter.

Controllboard

Well, there are many different controlboards out there and as i already use a kk-multicopter-board for the tricopter, i decided to use a kk-board for the MM6 also. But i wanted to save money and choosed a WiiMotionPlus (wmp) as a gyro-pcb instead of 3 hk401b gyros. The kk-board needs only a small modification, you need another value for one of the resistors. I wisely decided to build in a microcontroller with more memory, instead of an atmega44 i build the board with a atmega168 with 4 times the memory. This allows me to even flash one of the biggest alternative firmwares available for kk-boards.

Firmware

As i wanted to test the new [XXcontrol KR firmware](#) from Minsoo Kim i flashed the 1.5 version but this one performs awful and after the [1.6 version](#)

came out, i flashed this one and the MM6 was a little bit easier to control, but sometimes flips or crashed for other reasons. So i decided to build my own firmware from the original kk firmware and changed some code to get it work with the wmp. Now it flies quite ok, but could be better.

Setup

As my setup should be as low cost as possible, i choose the following components:

- * 6 Turnigy C2226 1800kv motors ([link](#))
- * 6 Turnigy Plush 10a speedcontroller ([link](#))
- * GWS 5x3 propeller cw und ccw ([link](#))
- * kk-smd-Board with WiiMotioPlus
- * ACT DSL-4 rc-receiver

Pictures

{image}hexa_mm6/hexa_001.jpg{/image} {image}hexa_mm6/hexa_002.jpg{/image}

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