

Beginner's guide to the Newbies guide using a Turnigy9x radio and Crius multiwii SE by menace69

Here's my beginner's guide to the newbies guide for setting up a stock turnigy 9x radio with a Good luck buy (or other) X525 kit using the Crius SE multiwii controller. Very specific hardware I know but since a lot of people buy these combos (and I have no short term memory) I figured why not. Make sure you also get ATX-Heli's awesome guide before you start (<http://www.rcgroups.com/forums/showthread.php?t=1551599>) there is some great info in that thread if you feel like going through all 160 pages—the guide you want is the “newbies guide to setting up the crius..”

Step 1: Configure the radio

Some basic tips (for the really new like me). The standard stick setup for most people is “mode 2” this means the throttle and yaw (or rudder) are on the left stick and the elevator (pitch) and roll are on the right stick. The upper right switch “gear” is great to use for on/off type controls.

Throttle is channel 3, yaw is channel 4, pitch is channel 2 and roll is channel 1 (this is important when wiring the multiwii—so you don't mix them up like I initially did). Mode on multiwii is AUX1 and goes to channel 5.

First, follow your manual for the turnigy 9x (actually a eurgle 9ch radio)
<http://www.hobbyking.com/hobbyking/store/uploads/529892926X11510X47.pdf>

And

<http://www.hobbyking.com/hobbyking/store/uploads/529892926X11510X33.pdf>

go into the menu and set up your default model (when you turn it will have “mode 1” as the second line—this is actually “model 1” not mode 1). Choose a name—I chose “quad” then choose “acro” under “type sele”. Use “ppm” under “modevat” and “mode 2” under stick set. Remember to hit menu to save your settings, not exit as you go through the menus.

To connect your receiver to the multiwii goes like this:

Using the funny lead that has three plugs on one end and a single plug on the other. Take the three headed end, and plug each one into a spot on the multiwii—the colors should be toward the inside of the board on the signal (S) pin: brown to throttle, orange to roll and red to pitch. Then take the other end and plug it in vertically to the receiver so one plug hits the signal pin of all three channels with orange going to channel 1 (the colors should be on the side with the front name sticker). Then take the standard lead and connect “yaw” to channel 4 on the receiver—make sure you get the orientation right (signal is orange, red is + and brown is -). Do the same for “mode” and connect it to channel 5.

On your radio go to the wrench icon and select it. You will now see menu page 1 of 2. Scroll through until you get to page 2 and select “aux-CH”. Again using the buttons change CH5 to “gear”. You can setup the other channels if you like but only to the dial trims on the radio.

When that’s done open up ATX heli’s guide and follow the instructions for ver 1.9 (your package that the multiwii came in should say ver 1.9 or 2—mine was 1.9) If you are using XP 32 bit you may need additional drivers.

(<http://www.ftdichip.com/Drivers/D2XX.htm>)

Multiwii gui quick tips: to start Click the COMx (x being a number) and it should turn green, then click start down below. Sometimes it doesn’t start, unplug it and retry—might be an XP thing...

“arm” the multiwii by holding the left stick down and to the right-you should see a blue light come on. Then you should see values under the 4 throttle profiles in the upper right.

The goal here is you want mid-stick or rest positions of 1500, and full on and off positions to read 2000 and 1000 respectively. **Don’t use the trims on the face of the transmitter.**

On your transmitter, go to the wrench screen and find the sub-trims setting-- go into that. Adjust your AIL (aileron or roll), ELE (elevator or pitch), throttle and RUD (rudder or yaw) settings so they read 1500 in the GUI (remember to press menu to leave the screen, not exit)

Then go to your E.point screen and adjust to get as close to 1000 and 2000 in the GUI as you can for each of the settings.

Optional: Click the acc and bar to come on when aux is set to high. To do this, click the box under the high column that corresponds to the acc and bar settings. You then have to “write” these settings to multiwii by clicking write (you may have to click read first, before you can write—not sure)

This means when you flick your “gear” switch you can turn on or off the accro and baro sensors on the board. Some say it flies better being able to turn them on or off depending on what your copter is doing. I left mag alone since I don’t care if my copter is aligning to a particular compass direction—if you do then include it as well.

I haven’t got aux2 to work—apparently you have to modify some multiwii code for that which I have yet to do.

If you have the skywalker 20A ESC that comes from GLB you will need to calibrate them as well. Unplug everything from the receiver and plug each ESC in one at a time to channel 3. First push the throttle stick to the top, then power on the esc. You should hear a couple of beeps, then drop the throttle to the bottom. You should then hear three short beeps (for a 3 cell battery) and a long beep. It is then calibrated.

You can then adjust your PID settings to adjust—that’s way past beginner’s so I’ll stop here.

Some have said they use the ftdi board plugged into the PC **while** a battery is plugged in and some have said this caused their board to die. I guess your mileage may vary on this one...I opted to not do this as I have very bad luck...