Board Alignment

Version 1: Using Setup page, FC not mounted to drone yet

- We start with FC lying flat on table and the FC arrow pointing away from you. Next to it the frame also pointing away from you, so that you know how to rotate the FC to the orientation you want.
- We assume that the user has enabled Accelerometer in Configuration tab :-)

1. When FC leveled flat hit Calibrate Accelerometer
2. After hit Reset Z axis
3. Rotate FC the way you want to mount it to the drone, dont hit anything, move it nice and smooth. Write down the numbers of Heading, Pitch, Roll
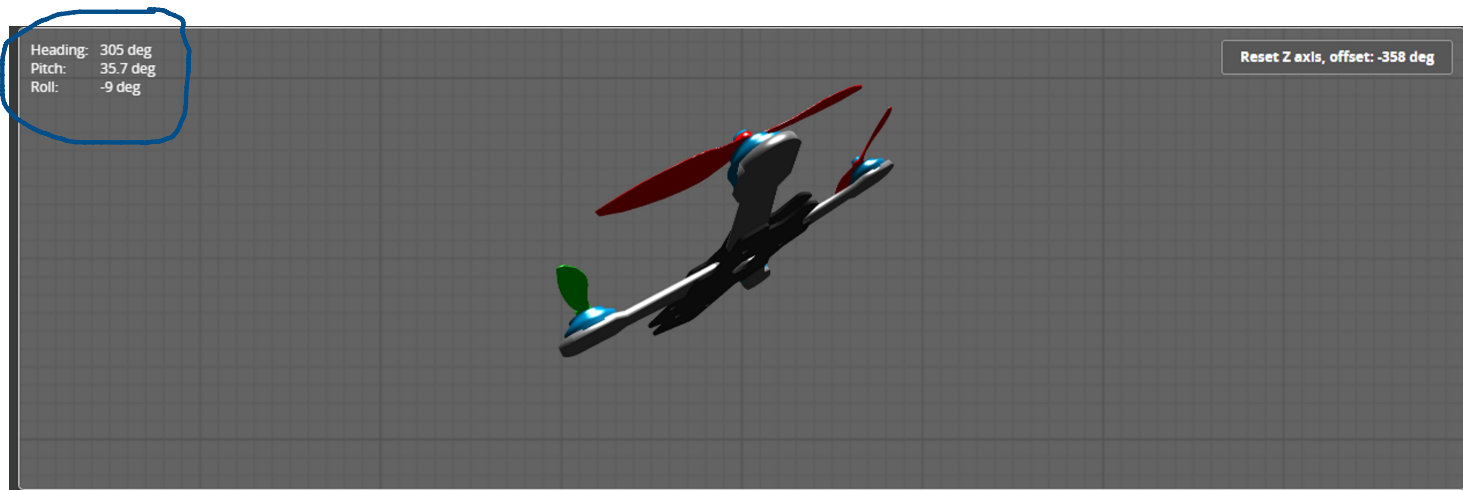
4. Go to Configuration page and insert the negative value of Roll and Pitch and the positive value of Heading into Roll Degrees, Pitch Degrees and Yaw Degrees and hit Save and Reboot. (Roll Degrees, Pitch Degrees, Yaw Degrees) = (-Roll, -Pitch, Heading). If your board alignment is not all too cracy round the numbers of Heading, Pitch, Roll in terms of 45 deg (but here wa have a weird alignment example).
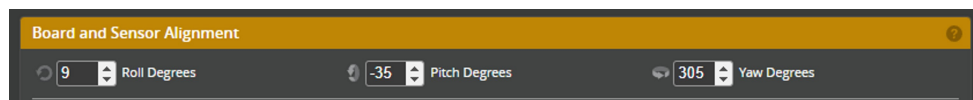
5. Go back to Setup page and test the alignment. If ok proceed, if not go back to step 2
6. Mount your FC to the drone
7. Repeat step 1. if you want to use something like levelmode
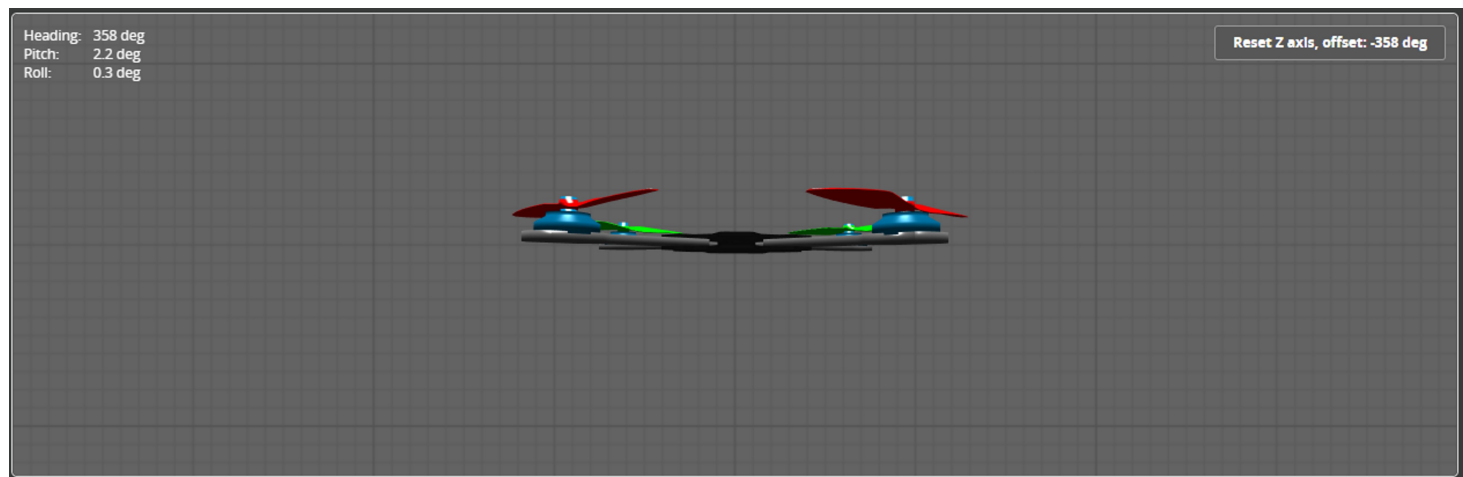
Some additional info:
- Standard 321-euler angles use the convention R = Rz(yaw) * Ry(pitch) * Rx(roll)
- Bf uses internally the convention R = Rz(-heading) * Ry(pitch) * Rx(roll), the heading value here is the displayed heading value from the Configurator, positive rotation around the z-axis pointing up results in a negative heading value. Internally bf names it yaw anyway. Whyyyyyyyyyyyyyyyyyyyyyyyyyyyy :....-)
- Bf uses for the board aligment the convention R = Rz(-yaw) * Ry(-pitch) * Rx(-roll), therefor we end up inserting heading, -pitch, -roll into the yaw, pitch, roll values of the board alignment. Still crying a bit inside :...-)

Assuming 99.9999754637548% of the users dont have a magnetometer we dont have information to correct yaw with the mahony filter bf uses the movement should be really smooth.

If the FC is already mounted the user has to rotate the drone so that the arrow on the FC is pointing forward at the beginning and make it level.

To make the above process easier and more logic i would suggest that the Setup page shows the values as
- Roll Degrees
- Pitch Degrees
- Yaw Degrees (here we flip the sign)
So that the user can simply insert the negative value of all 3 numbers.

This needs to be tested carefully. Rotation parametrisation and especially euler angels are pain and prone to errors :-)