

# 1 Flight Instructions

## 1.1 Pre-Flight

Checks:

- Check that all subsystems are plugged in
- Check that propeller holders are screwed on solidly and are tight
- Check that all screws are tight
- Check battery charge level
- Check that all wires are tied or taped down well and will not interfere with propeller movement
- Check that controller voltage is near maximum

## 1.2 First Flight

Your first flight should be performed with the quadcopter tied down solidly and so that it can not flip. The quadcopter is armed by pushing both control sticks down and to the right for 4 seconds. Do so. The blades should begin to spin gently.

The optimal control scheme is as follows:

- Left stick vertical motion should increase or decrease vertical thrust.
- Left stick horizontal motion should induce in-place rotation of the quadcopter.
- Right stick vertical motion should cause the quadcopter to move forwards if the stick is moved in the up direction, and backwards if moved in the down direction.
- Right stick horizontal motion should cause the quadcopter to move left if the stick is moved in the left direction, and right if moved in the right direction.

Note that the directions given are with respect to the quadcopter's current orientation.

While the blades are spinning slowly, slowly increase thrust until the quadcopter is near takeoff, but not until it actually lifts off. Then move all controls slightly to check whether they are bound properly. The sticks may be switched, directions may be inverted, and/or controls may be swapped. If they are, land,

and after disarming the quadcopter (by pushing both control sticks down and to the left, and holding it for 4 seconds), switch them until they are right.

Once the controls are corrected, re-arm the copter and take off.

Once in the air, practice keeping the copter stable in the air. After becoming successful at this, begin moving it slowly in various directions and getting the feel for it. Everything else is just becoming more familiar with the controls.

Some important things to remember:

- The quadcopter has finite battery. If you are not using MavLink to monitor it, land as soon as responsiveness begins to drop noticeably.
- If the quadcopter goes out of range, it will keep flying in its current direction (unless MavLink tells it otherwise). Keep it close
- Wireless interference may affect range.
- Props can be replaced; humans can't. Don't fly close to people.