

## First Flight!

Written by Coyt Barringer  
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The X4 UAV flies! About two weeks ago we took the plane out to a field and tried to fly it (regular RC mode - no AutoPilot). After a few minutes of debugging, X4 was up!

Here is the video of the first flight from the GoPro:

As you can see from the video, there were a few problems. The main one was an issue with lift. After some research, we found out that the ESC, Motor, and Propeller WERE ALL TOO SMALL FOR THE PLANE! A new 60 Amp Turnigy Plush ESC and some 9x6E pusher props have been ordered. The motor will be ordered after we test the plane with the new ESC and props. Overall, the first test was a huge success because we had a fun flight, nothing broke, and we found several areas that need to be improved.

We now have two long range XTend 900Mhz 1w Data Radios so we can begin building and programming the Autopilot and other control systems. Step one is to implement a regular RC transmitter and receiver with the XTend modules. Signals from a controller on the ground will be sent via Serial over the air using the XTend "Zigbee" modules. The receiving Zigbee module on the plane will convert the Serial control data into PPM signals for the servos on the plane.

The overall next steps:

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- Continue testing the plane
  
- Setup the Ardupilot and Ground Station
  
- Start building the main flight controller and data links

There is still a ton of stuff to be done, but we now have the perfect platform to build on. Let the fun begin!