

TROUBLE LEARNING FPV – HOW TO IMPROVE MY FLYING?



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Doug from our Multicopter Group was frustrated by his slow progress of FPV learning , and asked how he could improve his flying. The outpouring support and suggestions from our group members were simply amazing and encouraging. That's why I feel I have the need to share it to everyone, maybe it would be useful to someone who has the same frustration too.

Also check out [Sirdude's post](#) about how he struggled with FPV, but finally getting good at it.

Doug:

My first experience with FPV (after learning LOS) has not gone well... Something about the lack of perception in all directions really causes me to not be able to "get it". I am thinking of putting the goggles aside and just going with a screen.

a) good/bad idea?

b) 7" big enough? 10" better?

c) Should I go with a mounting bracket on my FlySky transmitter or a tripod/other mount?

I suspect most of you are using goggles and can disregard my newbiness but I really thought, due to my video-gaming "career", that this would be something much more natural. I see your videos and think "Oh yeah, I can do that" but when I put the goggles on I can barely last 20 seconds

I also need to find a really good spot. I always seem to have space restrictions... So you guys think switching to, or at least trying a monitor to learn is not going to help that much? I can see how it might be distracting/disorienting to switch between the 2 perspectives.

Using Monitor/Screen or FPV Goggles ?

Björn:

I know this feelings – but usually this is a result of the wrong goggles. Get a decent FPV Goggles helps a lot!

I started on FPV and still can't fly LOS and I skimmed on the goggles and I sorely regret it, my first few flights really sucked, it didn't "click" until I could see well. Definitely invest in the higher end Dominators or a Headplay, and don't give up, just do it a few times and things will begin to click. You'll have this "ah ha" moment and you'll be hooked like the rest of us.

Aaron:

Honestly I find myself being distracted with a screen and end up looking at the quad instead of the screen. Bad news if your LOS skills lack. Keep at it with the LOS though, never know when it could save you from a crash, lose video and then.

Evan:

I flew with a screen for months with no problems. Goggles really help you focus on what's ahead though. It took a while to get used to FPV even with a screen. Just suck it up and stick with it. You'll get used to FPV quicker than you think.

Timo:

If you get yourself a monitor look for at least 800×480 resolution, the 480×270 thingies you get everywhere are really crap and it's hard to spot any details..

Oscar:

Lots of great suggestions there! Thanks Guys! Doug don't give up!! ;) I flew with a 7" monitor for 1 year when i started, it was all fine, but it wasn't easier than my DomV2 goggles... at the end of the day, i think it's just a matter of getting used to what you use!

Fly Forward in FPV !!!

Glenn:

Doug give it some time, get a boat load of props lower your rates and just do gentle manoeuvres.

Kevin:

My first few weeks (after I learned the “always move forward rule”,) I set the camera level to the craft without any tilt and just moved super slow, flying large circles, close to the ground. The two things to concentrate on are altitude and turns. It helps to have a spotter to watch your craft LOS while you fly FPV and call out your approx. altitude so you get used to what different heights look like. You can then watch the ground recording and say, “Whoa! I thought I was a foot off the ground, but was really like 20 feet!”

What camera lens are you using? I find a 2.8mm lens is a good balanced view, not too wide, not too narrow. I first learned using a Mobius as an FPV cam... Really bad idea! Laggy and too wide screen. Really hard to tell distances.

Sascha:

I had that issue in the very beginning, among other things, because I still was “programmed” to steer like in LOS.. i.e. flying backwards to return to me or to avoid an obstacle. Fly like it was a video game or like you are driving a car and it will eventually “click”. Forward is the way to go, don’t even bother to fly backwards and sideways.

Zoltán:

Just some comments, always go forward and if you want to look around just make a smooth small circle with yaw. Start with stabilized mode and use Goggles to able to focus on the screen only. Learn the “distances” as they will seem to be different than they are. Goto a big flat place and put something at middle that you can turn around. Learn the turn manoeuvres like using yaw and roll and throttle at the same time, to avoid drifting

Practice with Simulators

Jordan:

I can also relate, flying LOS for a while my first few FPV attempts were very discouraging. Almost quit there.

connected to my computer, and also connected my Taranis TX. Then when I went to my next FPV session, I feel like it was life changing :)

Aslo try to fly mostly forward, in the direction you see at first. Hope that helps.

Just Keep Practising!

Zul:

Keep it going. We all have the same issues like yours for the first time. Once you earn it you will never look back again. Good luck. Practice make perfect. Keep it up.

Timo:

You could try different lenses to get the 'right' fov, very important to get a natural feeling without too much distortion, else it always feels strange and uncomfortable. It shouldn't be too hard if you have some gaming background to get used to fpv in a few days. If you're not 100% safe flying LOS I find autolevel helpful to keep the copter slow. It will take some time to judge distances and speed correctly and cost you a lot of props and nerves :)

Stefan:

Doug, I have been struggling with this for months now, same thing after 20sec I crash, because am somewhere else then I thought I was, I use a headplay, also thought maybe to get a screen for learning, don't know. Can fly LOS pretty well, but that doesn't seem to help for FPV

Doug:

I've got the Quantum DIY. I know they are cheap but the cost was too attractive to ignore. I figured if I liked it, I'd eventually upgrade and let my kid wear them while I was flying. I'll have to check the lens, not sure about the lens but I'll look into alternatives...

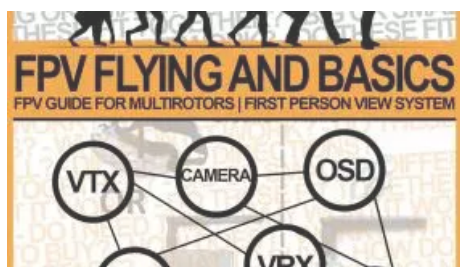
I think the bottom line is I need to log some hours! thanks folks

keep running. it will click all of a sudden.

Abbey:

My first fpv flight I was so scared. Once I got over that these things break and can be fixed it helped a ton. Takes a little to get use to with goggles but you get it. Fly nice and high so you don't have to worry about the ground. You got this!

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8 thoughts on “Trouble Learning FPV – How to Improve my Flying?”

Dan

23rd April 2017 at 1:47 pm

I'm glad I found this post, it has a lot of positive comments.

I haven't had the best start with radio controlled flight myself.

I started off quite a few years ago with a Radio controlled Helicopter (the Esky Honey Bee King 2) which is 6 channel and managed to destroy the blades pretty quick. I then stupidly upgraded components on it thinking it would help and had a pretty big crash resulting in bent and broken components which I have

So I got the Pheonix simulator and have practiced a bit on that but still never felt confident enough to fly the Heli again.

Anyway christmas last year my partners brother came over with 2 identical drones (Revell Formula Q) which weren't working but had all the accessories with them and said if I could fix at least one of them I can have them. Of course I said I could and a few days later I took a look at them and ended up replacing the motor and a MOSFET on the best drone with parts from the other and it works again.

Since I got this drone for free and have all the spare parts from the other I wasn't scared to crash it which I think helps a lot and I picked up being able to fly it line of sight in about 3 flights and practiced hovering in my spare box room over the winter as there isn't anything in there but it is a small space for a fairly big drone so forces you to do small corrections.

I originally planned to use the drone as a way to learn the controls better so I can then move onto flying the much harder helicopter which is still collecting dust and I probably will do so in time but I enjoy flying the drone so much that I decided to buy a small Hubsan X4 H107C so I could fly around the house and learn a lot more (anyone on here who doesn't own a Hubsan X4 should definitely consider getting one, it's a brilliant quad for learning if your just starting out). I started taking videos of my flights with it and naturally have gained an interest in FPV.

At first I considered buying the FPV model of the Hubsan X4 as it isn't very expensive, but instead I opted to use my X4 as a base and build my on mini FPV quad. I mounted the Hubsan flight controller board to an Eachine QX90 frame and installed some 8.5mm Racestar Motors, attached the blade guard from the Hubsan and fitted Laybird props and soldered a small Eachine FPV Camera to the points on the flight controller board that the original camera was connected too. I then bought so decent but not too expensive goggles.

I figured I'd be pretty good at FPV as I play a lot of flight simulators and I picked up LOS fairly quickly but I didn't realise how wrong I was until I crashed the first 10 times. The thing I find hard with it is if you are driving a car or flying a plane which I've actually done you automatically turn your head in the direction you want to travel in and I find myself turning my head with the goggles on and then getting somewhat confused that I'm not looking in that direction. It's hard to describe but it's very hard to detach yourself from that automatic reaction. I also find that being able to hear the quad confuses me even more as I know where it is based on my hearing but it's kind of hard to relate to the screen as you kind of feel like the sound should be following the headset as if your inside the quad piloting it, if that makes sense.

The big mistake I have been making is trying to learn while making the most of my time.

make more progress, unfortunately like the OP I also have limited space (hence the mini quad) but I do have some fields nearby so I will have to try there.

TripleCap

24th July 2016 at 8:51 am

Im an FPV noob as well.. these comments are very encouraging.. Every time I put the goggles on, after about 2 and a half seconds i freak out thinking im going to hit myself or something else. I've seen soooo many videos on YouTube from people like Mr. Steele, and Charpu and I am amazed at what can be done in these machines.. Im gonna keep trying and hopefully the fear will eventually go away.

Colin S

16th December 2015 at 9:15 am

Hi Oscar. Thanks again for all the knowledge you've archived for us — you've been critical in getting me soaring! Let me share what helped me out!

Id like to second what the others have said regarding “flying forwards”, using a simulator, etc. but here's what really cracked the fpv problem for me: creating a race gate.

Our brains are wired for stereoscopic vision — we use our dual viewpoints to see depth — and the kinesthetic sense of body as a reference point to judge from. Both these inherent abilities are used in conjunction with newly-gained flight skills when learning LOS.

Now we switch to FPV. We lose our body's feel as a point of reference, and we lose our stereoscopic vision, so we have no depth perception. However, just like a one-eyed man can learn to judge distances, so can we with our one (camera) eye.

I ended up building a 4' x 4' race gate from Pvc pipe, cushioning it with pool noodles. Then I started flying into it, and eventually, through it. The gate is light enough that I have yet to break a prop on it when I crash, and bit by bit, my brain has been trained on how to act with my 'new body' and 'one eye'. Having that known frame of reference to use in the FPV perspective has flattened my learning curve immensely. I know how high I am instinctively, have developed proximity skills, and can judge distances well.

Try it, Doug!! Home Depot for PVC, target for pool noodles, and 1-3 sessions with your new gate and I guarantee you'll notice the difference.

Oscar Post author

16th December 2015 at 4:21 pm

yes very true :D it's always good to start learning with some reference for distance like markings on the ground, or trees :)

Sean Wright

1st December 2015 at 8:17 am

Hi Oscar,

A big +1 on the simulator. I received my Taranis several weeks before my quad parts, so started using FPV Freerider while I was waiting. The first time I used it I thought "OMG, it's so difficult I'll never be able to fly FPV". This was even after flying a cheap toy quad LOS for some time, but it just felt completely different and so much harder than I expected. I was actually quite shocked and disappointed, as I thought I'd be better than that.

It took quite a long time and and awful lot of crashes (thankfully no broken props in the sim!) but eventually it "clicked" as so many people say. And even though the sim does not correspond exactly to a real quad, what you're doing is building up your muscle memory, so you can react without thinking (if you have to think about it, your quad is already in the dirt!). Make sure you are using a real radio and not a game controller of course.

After that my first few real FPV flights were SO much easier than they would have been. I could feel myself making the same corrections I learned in the sim without even thinking. I would have broken a LOT of props and other stuff otherwise. Definitely the best \$5 I've spent on the hobby so far.

Oscar Post author

1st December 2015 at 4:49 pm

Hi Sean, so right! LOS and FPV are two almost completely different things. Practice is the key like you said.

Stambo

1st December 2015 at 12:00 am

Hi Oscar

Something I have not seen mentioned here that has helped a lot of people I know is to put the FPV gear on a ground based vehicle first. Doesn't have to be fast or flash but the better ones are a lot smoother. Duct tape and velcro mounted is fine as it is only temporary.

This get's you used to the goggles first before you add flight to the equation.

When you finally get to flying, you are already familiar with the goggles and determining distance is much easier.

And I totally agree with the many suggestions above.

Slow forward flight only, don't try to hover, head in the direction you can see.

Also for a start, don't try to fly too low, you can crash in to the ground, you can't crash in to the sky. :)

Oscar

Post author

1st December 2015 at 4:23 pm

yea, that's a sound suggestion! thank you for that Stambo!

I only check blog comments once or twice a week, if you want a quick reply you can post your question on this forum IntoFPV.com... You might get a faster response from me there (multirotor related only).
