**HOW HARD IS IT for a 1000 hr GA pilot to transition to a Canard?**

**Shaun Evans: San Diego, CA:**

*“Hello folks, this is my first post here. I'm looking at a Long-EZ that's for sale here in San Diego. My question is this: For a GA pilot with 1k+ hours in 172's and PA-28's and average talent, how hard is the transition into one of these? I've always wanted one, and always wanted to build one. My idea is to buy one and fly it while I build my own. Opinions welcome!”*

**David Orr: “**I help people find canards and have been doing it for almost 40 years.  My advice remains the same for that time.

If nervous, get a checkout pilot - if you are current, better because the back seat does not have full controls.

If calm, the plane goes where you point it.  The first pattern is usually a go around because you either used a little throttle (when none is needed) or you pointed down to fly down - which is unnecessary - you need to keep the nose up to keep the speeds 100 mph on downwind, 90 mph on base and 80 mph on final (adding 5 for altitude and for gusts.

I'm not far from you - if you want to go up in a roomy tandem, I can take you up and give you an orientation flight at John Wayne.

The stick is light - use finger and thumb rather than a fat fist until you are used to the small inputs you need to make.”

**Mike Beasley:** *“I had about 360 hours when I first flew my Long-EZ.   Did some flying with a buddy in his Cozy III flying from the right seat and did about 14-15 landings with him.   Flying the first flight in my Long-EZ was a non-event and my first landing was probably one of the best I’ve done so far.”*

**Del Schier:** *“Having flown a dozen different Cessnas and Pipers I think that canards are easier to fly; but different. I owned an EZ and now fly a Cozy. I have a friend that is a retired military fighter pilot and airlines pilot and he says his LongEZ is the best flying airplane he has ever flown.*

*Basically, they use more runway, as they are fast and don’t have flaps. You need 3000’ paved with no obstacles at sea level DA: more runway when you are learning to fly.  The castering nosewheel and differential braking to taxi works great and easy to learn. To land you fly the mains onto the runway and touch down with a zero sink-rate; you do not do a full flare landing. They are great in crosswinds, I operate at an airpark with 3000’ but only 25’ wide.”*

**Keith Spreuer:** *“Definitely different from 172s and PA 28 but with a 1000 hours certainly a good transition. Faster, less sink rate power off and no stall on landing. You will love it. Now the part about owning a flying one and building too...that's a tough motivation problem.”*

*My caution is to get the advice of knowledgeable canard owners about the condition and build of the one you are looking at.  I would recommend you get Marc Zeitlin in Tehachapi to do a pre-buy inspection of it.”*

*949-939-1479(Cell) Text first because i abhor the voluntary sales people who call me from all over.*

*ps I have a whole bunch of learning for new owners if you want me to send that.”*

**Ken Swain:** *“Welcome to the forum.  1K+ hours in spam cans is plenty of background to get started.  As far as model specific transition goes, keep in mind:  In the first few years, there was none.  We were on our own and Burt's 3 airplane suggestion was a good one.  More and more planes started popping out of basements and garages and it became easier to at least get a back seat ride or two in order to get familiar with the sounds, feelings, and stick forces of an EZ before flying your own.  That last item - stick forces - is for some folks the biggest difference.  Your brain needs to get used to the idea that an EZ has a WRIST controller, not the arm control that is used with a yoke.    
  
These days there are several ways to get a canard check out with an actual CFI should you or your insurance company want to go that route.  To the best of my knowledge, the good folks at RAFE have the only full dual control tandem seat canard for hire and they transition plenty of folks.  I gather that there are a few CFIs w/ Cozys who do canard training and that would be plenty to get you started as well, but others here would have to point you to exactly who is instructing these days.   
  
The comments re buying & flying one while building another are indeed valid.  The fun you'll be having flying will definitely slow your building, but at the same time it will also give you focus on what features you want your new bird to have.  
  
Last:  Definitely get a pre-buy inspection from someone w/ in depth composite canard knowledge.”*

Jose Velez: *“Vastly more important than flight hours is experience in different types of planes. Eventually, you will find that flying a LongEZ is easier than flying most other aircraft.  You don't worry too much about the traditional base to final stall spin, you don't have flaps to use, little rudder, if any, is required for T.O. or landings or maneuvering, they are great gliders, and the great climb rate on T.O. always gives me comfort.*

*However, there a few different peculiarities that you have to just experience and learn to adjust. The flight stick is very responsive and you don't move it much. The most important is that you don't flare on touchdown like you do on a Cessna. You stabilize your final approach speed (~75knots with greatly reduced power) and bring the ship down to the numbers relatively flat and let her settle on the mains. Oh, don't forget to drop your nose gear before your base to final turn!*

*My best advice is to get someone in a Cozy to give you some right seat time. That'll be exactly like a Long-EZ.”*

**Bill Allen, highly experienced Long-EZ pilot in the UK:**

*“…here’s some additional input.*

*My OP was on finding a video of me (landing and taking off) while looking for other such videos - and doing this for a CFI pal (not a newbie) who has a “wide and varied” experience over 40 years of GA instruction and aerobatic competitions. He flew in the back with me once. 40 years ago. I think the video was useful in showing the required rotation for T/O & landing.*

*Were I to be advising a “newbie” it would be different, and different in the UK to the USA. In the UK (where I am now) you will not be approved to make a first flight of new EZ type unless you can demonstrate time on type, so a builder crashing on first flight is rare here. (Someone else does that for him!) :^)*

*However, I take issue on the concept of extended taxi tests. Most aircraft are bad 3-wheel vehicles on the blacktop, and bad aerodynamically below the min speed for flight - it’s a twilight-zone that is fraught with off-airfield excursion risks, and added to that is the risk of brake fade after 2 or 3 runs. Put some builder adrenaline into it too and it might not work out well.*

*IMHO, that zone between landing and turning off the active runway, is one where I don’t want to linger longer than needed and encouraging a pilot who has no time on type to linger there, has risks which may offset benefits.*

*The Long-EZ/Varieze/Cozy are great aircraft in the landing phase after touchdown - unlike more conventional legacy types which can try to swap ends on you if you’re not quick enough.*

*The key thing, the key difference, is to underline “do not rotate beyond the angle which puts the canard above the horizon” - it’s not like saying “land good” - it’s a key item.*

*When I’ve helped others with a first flight, I’ve got them into the pilot’s seat and blocked up the nosewheel to give the sort of sight picture I would look for, so that they can soak in that sight picture.*

*I checked out a very experienced Air Force (Typhoons, so some canard read-across) pilot last month in my Cozy4. They select those guys for being able to soak up instructions better than me. He still tried to over-rotate the first takeoff and landing. Maybe doing slow speed wheelies down the runway would have helped in a Long-EZ, but not 2-place in a CZ4.  Ryszard Speed Canard would be the ideal solution, but those aircraft are rare now.*

*The other thing that often comes up is “speed control”.  It’s the same task no matter what the aircraft. If a pilot hasn’t asked for (or been told) the power settings for a stabilised approach speed, and is capable of maintaining it, he will never make a good landing.*

*Anyway, as usual, thread drift has taken us far into the long grass, and as we know, the variable of country, regs, weather, experience, runways etc. preclude a simple answer, but one thing I do know (but keep to myself so that other pilots think I have Special Powers to fly “one of those things”) is that the Long-EZ is the sweetest aircraft to takeoff/land (and operate).”*

**This is Izzy Briggs advice, which lines up more with Rutan’s advice – I think lots of time on the runway is a mistake before you fly:**

*“Telling folks not to “over-rotate” is like telling them to “land good”*

*The only way a new pilot can really learn how to get the right site picture, pitch input, trim setting, airspeed and control input force before flying the airplane is to slowly sneak up on flying speed over many gradually increasing speeds on the runway.*

*Start by trying to hold 35-40 knots, not 45. Almost everyone I’ve transitioned failed to hold 35 and instead blew right past, up to 50 before learning to pull the throttle back enough to maintain precisely 35.*

*Ok, now that the newbie has that speed mastered, add 5 and hold 40 for a pass or two. I hope we’re using a 5,000’ or longer runway for this effort.*

*Next, up it to 45. Canard elevator should be able to show some influence on the pitch now and ailerons can rock the wings back and forth.*

*Up to 50 now, Canard is getting lighter on this pass, maybe floating over bumps a little even. Try this for one or two more passes at 50.*

*This whole time with all these passes, our newbie is also getting accustomed to the cockpit, operating the aircraft, getting used to where to look on the panel for info and where to access controls all lowering the workload as our newbie gets used to the airplane.*

*55 and 60 next. Learning to control speed precisely in the previous passes really pays off here. The Newbie can now confidently target 60 knots and be reasonably sure to not blow past that speed. Why is that important? Because the Canard can fly before the Main wings can. This gives the Newbie time to practice controlling the pitch control of the aircraft attitude with lower risk of an unintended takeoff.*

*Newbie is smart and not on a rush which is why Newbie did this maneuver several times before going to 65 knots.*

*Ok, now the big one. Making sure the CG is in range, there is adequate fuel, canopy is locked and the pilot and plane are ready for flight, we can try 65 knots. Canard flies with little more than a gentle back pressure. No such thing as a “rotation” on this flight. When it’s ready to fly it will do the work, not like in a Cessna 172 where you have to haul back on the elevator to get the plane to pitch into a flying attitude.*

*At this point newbie and plane are ready to fly. Full throttle, we’ve been here before. Everything looks normal. Oil pressure good. Watching airspeed. Passing 60 the Canard starts to fly. Just hold that attitude. Passing 70, the aircraft should almost imperceptibly initiate a climb away from the runway. No rotation needed. As the speed increases the lift increases and the climb begins. Pitch for Vy and when there’s no more runway ahead and newbie is able, raise the nosewheel (if that’s the protocol).  Watch the CHT’s close and make sure to keep things under control (420 or leas is good).*

*Go high, practice some slow flight. Note the airspeeds. When the adrenaline wears off, go back to the airport. Set up for a 2 mile final. Newbie needs extra time to get accustomed to the speed, and difficulty in slowing things down. No flaps or CS prop here to induce drag…..*

*Coming over the numbers at a carefully controlled 75-80 knots, aiming for the touchdown zone, supernewbie flies down to level off over the runway about 75 knots and holds that and removes all power. Hold altitude, speed comes down. Keep holding it off, keep holding it off until all the energy is gone.*

*Mains gently touch down and now newbie is at 65 knots flying the canard, a maneuver practices many times previously.*

*No PIO, no drama. Just good, precise, professional airmanship. Good job Newbie!*

*It’s written in the POH, but what I wrote is what it actually feels like to execute the POH instructions (with some embellishments).*

*For crosswind landings, plunk it down in a crab. No low wing landings needed. Feels wrong but the plane can do it and you won’t drag a wing.”*