Waltham Chase Aeromodellers

Newsletter 26-02-2017

1. Introduction

In this news letter we have an ARTF build, a scale build, a piece on control line, a report on multirotor racing and some photos from indoor events. Many thanks to Stewart Storrow, Kevin McGhee, Bill Straughan and Pete Sander. If you are building something, have been somewhere or just have something that will be of interest please drop me an email.

2. Message from the Chairman

After some very cold weeks through February 2017, which deterred even the most hardy flyers in the club, we have finally been blessed with some warmish weather, attracting a good number of members over the week end of 18th and 19th February, including a prospective new member. The strip at Tangier View Farm is in excellent condition, after a very dry autumn and winter, so why not come along and have a fly.

I thought I would take my own advice this winter and brought my ancient Ben Buckle Majestic Major back to flying condition. On it's last flight, the mild flutter in the tail plane became violent and broke, making it necessary to build a new one.

After removing the covering on the old tail plane, I found the balsa frame had become fuel damaged and was rather like the wick in a candle. The designer had upsized the model, without taking into account the higher aerodynamic forces on a much larger model, making the tail plane vulnerable to flutter. I beefed up the leading and trailing edges of the new frame, with 10mm strip doublers and hoped this would do the trick. This was built flat on the building board, using the original plan, kindly given to me, when I purchased the old air frame from Steve Warren. Vital when you need to repair or replace anything on a model.

I covered the assembly with Solartex and refitted the elevators. The original fin was then glued with epoxy, into position and when dry, the tail unit was bolted back into place and the closed loop control wires were reinstalled. So then to the flying field on Saturday 18th February, a lovely, warm, quiet sunny day. Richard Bristow conducted the test flights and after adjusting the elevator with some built in "down", she flew beautifully and better still, no sign of any flutter in the tail plane. We again flew her on the Sunday and I had a go, as did the builder, Steve Warren, who had great enjoyment flying his creation again. A successful, small project.

Chairman Pete seen at TVF with an actual aeroplane, with an engine. And RC

Pete Sander February 2017

3. Multi Rotor Racing at Popham

Every 2 weeks there is an "Arrive and Fly" event at the Drone Zone outdoor drone racing track at Popham airfield. Details here: http://kwad.club/events/

I think you might have missed that gate Stew

I attended the event on 8th Feb and had a great time. The team running the event are very supportive of newbies, and the skill levels present are very diverse. There were some of the top pilots in the country in attendance completing laps in under 30 seconds and also people like myself who had difficulty even finishing a lap!

It costs £20 to fly for the day, or you can pay for a yearly membership for approx. £90. The yearly membership also allows you to fly on the RC field next to the drone track. Facilities on site include: a snack van(providing hot food, coffee tea etc...), toilets, and a marquee with tables for preparation/repairs and charging facilities.

FPV flyers in the wild

At the beginning of the day racers are organised into heats of 4 people and each assigned a Video channel. One of the restrictions is that all VTX's must not exceed 25mW and must be capable of tuning into raceband frequencies. Once you've been assigned a video channel, that is your channel for the rest of the day. The heats are organised into even raceband frequencies(2,4,6,8) and the next heat by odd race band frequencies(1,3,5,7). After an initial technical difficulty with some ones VTX (it was outputting too high power), there were zero video problems throughout the day, which I found very impressive!

Each heat lasts about 4-5 minutes, and if you crash you are out until the end of the heat when you are allowed to enter the course to collect your quad. During the day i flew in about 15 heats (only completed about 5 laps total though), which gave me plenty of opportunities to race and experience flying. The track was very tight and technical, and is surrounded by netting to catch any stray quads.

The whole event was very relaxed and friendly with pilots swapping tips on racing lines and discussing equipment choices throughout the day. I highly recommend it for anyone who wants to experience a drone race, but i would also suggest that you get some practice in on a racing simulator prior to the event, to make the most of your time there. This is the one which I've found to be most realistic: https://www.dronesimulation.co.uk/

The scores on the doors

I'm very likely to be attending in the future, so perhaps I'll see some of you there. Happy to answer any questions about the event that any of you may have.

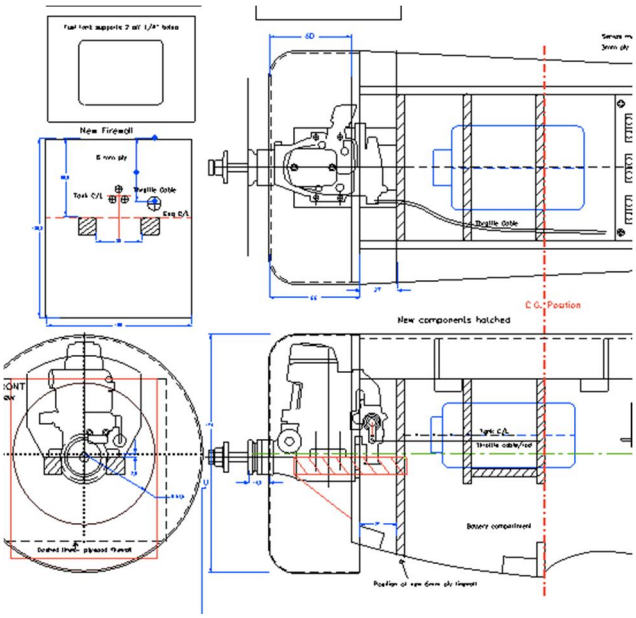
Part of the course and safety net

Stewart Storrow

4. Nieuport 17c

Some time ago I acquired some odds and ends from a Flair Legionnaire kit, presumably aborted by the previous owner. These consisted of the plans, an aluminium cowl, the dural cabane struts and a quantity of very soft balsa strip (discarded).

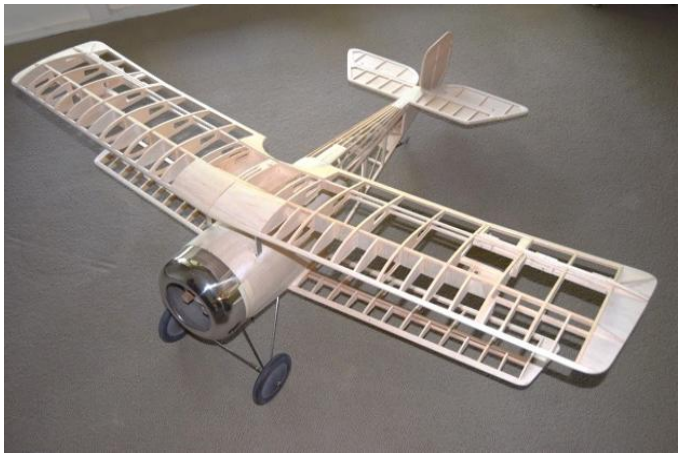
I have always liked the Nieuport 17 so I decided to use these bits as the basis for a semi-scale model that looks the part, but remains fairly simple. Also I wanted to learn how to use some new CAD software, as my AutoCad version is very old now and also won't run on a Mac, which is what I mostly use.



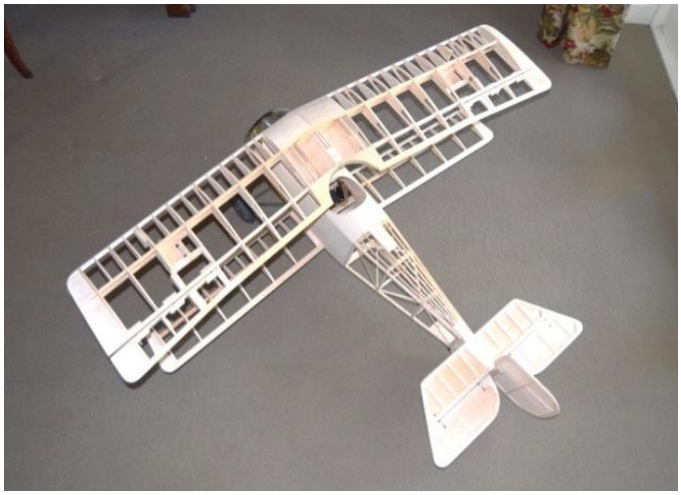
Part of Kevin's extensive design and drawing work

The outlines of the Flair plan were mostly used, except for the rear fuselage, and internal structures were modified to incorporate my preferences and to enhance the scale appearance. Wings have additional ribs and riblets, spruce-balsa-spruce sandwich main spars, basswood sub-spars, modified tips and ailerons. Fuselage structure was redesigned to accommodate my engine, tank and radio gear, and the rear structure modified to incorporate internal bracing using bamboo barbeque skewers. Also the top deck aft of the cockpit was re-designed for better appearance. Tail surfaces were constructed using the sheet core method instead of the strip-wood originals. Engine is an OS FS52 Surpass, mounted on beech bearers with a second firewall inserted further aft to permit mounting in roughly the scale position.

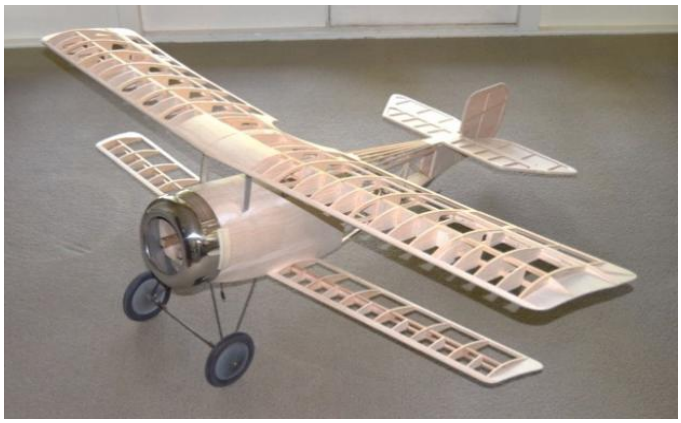
The finish will be Solartex for fabric areas, and probably very thin aluminium for the metal areas. The colour scheme is to be decided. Nearly all Nieuport models are finished in silver, I may do something different. There are many alternative scale colour schemes.



The Nieuport comes together



I'm looking forward to seeing this one finished



Oh, I do like a Biplane (Does it show?)

The photos show the current state of the model (all held together with masking tape). The woodwork is nearly finished, but plenty left to do, probably about half way to the finished model in terms of time. Should be finished in summer 2017.

Kevin McGhee

5. Control Line Flying

The club are hoping to include control line flying at this summer's club barbeque event, so I thought members may need some information about this aero-modelling discipline.

When I first got interested in flying model aeroplanes, all I could afford was either free flight or control line flying. Radio control was way too expensive in the early 1970s for school boy pockets. Control line was most attractive as it could be conducted in relatively confined areas and I was very lucky that my mum and dad had a paddock sized lawn, well away from the house where we could fly models powered by motors up to 1.5cc (.10 cu.in). My early efforts to learn this skill were disastrous. I started with a Keil Kraft Phantom control line trainer. It would take off and I would manage less than one lap and crash the model, which broke and need serious repair. After two more crashes the model was a complete write off. The Phantom proved to be a flop as a trainer. When I next visited Hobby Lobby in Southampton, I discussed my problem and was advised that the Veron Colt was a much better trainer, being almost indestructible .

After saving like mad, I finally had enough cash to purchase a Colt. The entire model was constructed from all machined balsa, with no shaping, carving or heavy sanding and went together like a simple Airfix kit. When it was finished, a friend and myself spent an afternoon, taking turns and taught ourselves to fly control line. The Colt was a fabulous trainer. With every heavy arrival, it just bounced and was ready to restart. All we managed to break was the balsa fin, which it didn't need to keep flying.

Once we had learned the basics of control line flying, the Colt became boring and I moved onto the excitement of sport "stunt" models. There are still a few kits available from The Vintage Model Company and Belair Kits. Once you get to this stage, I would recommend the Keil Kraft Gazelle, Keil Kraft Skystreak 26 or Mercury Viper, all for 1cc to 1.5cc (.06 cu. in. To .10 cu. in.). They are all strongly built, light and easy to repair. Once you get the hang of stunt flying, you can move onto combat wings or large specialised stunt models with coupled flaps and elevators.

If any members are interested in learning to fly control line, I have a couple of trainers, based on the original Veron Colt (sadly no longer available) and I am happy to give instruction, using my Colt mk II trainers, powered by 1cc diesels. Alternatively, you may wish to build your own. I have plans for the Colt mk II available and I can guarantee this is the best control line trainer available. Also, you may prefer a kit and I can recommend the Keil Kraft Phantom-Mite for .75cc (.049 cu. in) or the Keil Kraft Champ for .75cc – 1cc (.049 cu.in - .06 cu. in), both available from The Vintage Model Company website. If you don't fancy using a diesel, there are glow plug motors of this size available.

When learning to fly control line, it is vital to remember you only need tiny control input from the handle and the best way to achieve this is to hold your arm straight and control the model by slightly raising or lowering your whole arm. You should also set up the elevator to minimum throws to start with and increase the throws as you get better. In no time you will be able to achieve a wing

over. Please remember, adults take longer to learn control line flying than children (early teens) due to dizziness, but once you get used to keeping your eyes on the model and not the background, it becomes much easier.

Once you become proficient on the trainer, you can move onto other disciplines, such as stunt, combat, team racing, speed, scale and carrier landing. All great fun and can feed those with a competitive spirit. I hope this generates interest in this facet of the hobby and remember, it is the the only way to fly a model aeroplane by direct feel from your own body, for hand eye co-ordination.

Pete Sander

6. Learn From the Misfortune of Others

Recently this fast foamy lost a control surface in flight. The aircraft, of course, went out of control.

Failed elevon live hinge

In another incident a multirotor prop failed in flight. Although the pilot hit disarm instantly the aircraft shot out of control. There is nothing to suggest that the pilots in either instance missed a visible defect but this is a reminder that checking hinges and props is on the BMFA pre-flight check list.

7. Beagle "Pup" B121

Having just completed my 'Black Horse' Super Air I realised that this was not quite the model I had hoped, whilst it is a great kit and I am sure will fly very well. But I was looking for a slightly smaller good 'hack' model and the Super Air is better than that, so……..

I started looking around to see what I could find and tripped over a pretty aircraft called the 'Beagle Pup 121', the full-sized aircraft was designed as a single-engined all-metal two-seat aerobatic aircraft or a four-seat touring aircraft. I liked the look of this, being 46 – 50 sized and 1164 mm span it would be more transportable.

So, I ordered it costing £99.56 from Germany, ordered on a Monday and turned up on that Friday.

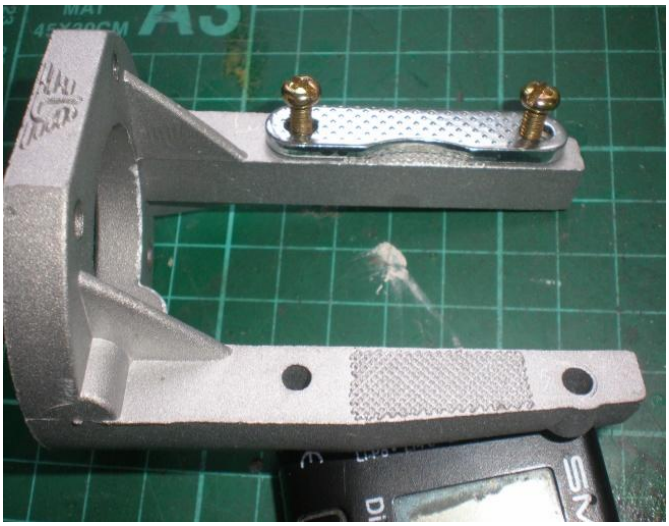
A big box arrives

And the contents…fus…

…and wings

The top of the fuz it ABS and is very nice, it would have been hard to replicate this shape in balsa. OK, let's go……..

I decided to start at the front and mount the motor, the manufacturer supplies an engine mount that is more a 50 upwards with a funny type clamp affair.



Odd engine mount. Destined for a new life as a paper weight

Yea, I could see this working… Not. As the motor I am using was at the minimum size, a LA 46 I went to the local model shop and purchased a two part 60 sized mount as I had to put the motor well forward to accommodate the cowl.

Engine fitted

Lots of fuel proofer applied, time for the throttle cable and nose wheel snake to be inserted. Then the tank, which had been very well thought out. It was the bump type but was square where it went up against the fire wall and it just clipped in. I did fix it as well, but full marks for this bit of the build.

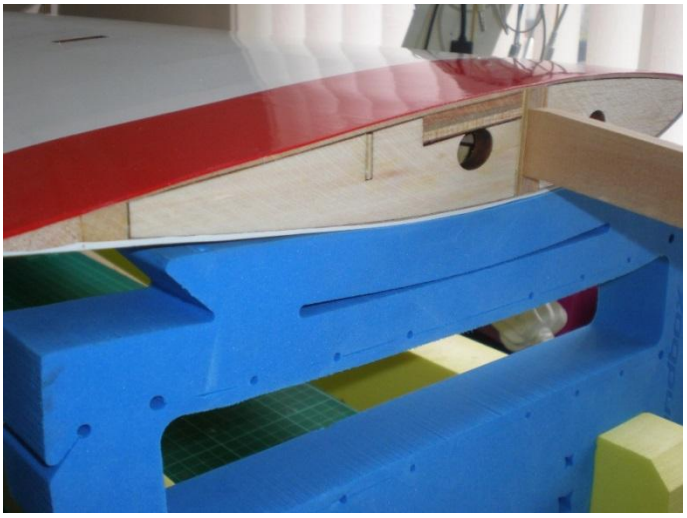
Big fuel tank

The servo bay was ok with the tail feather push rods installed.

The push rod exits at the tail end needed attention, but not much. Electrics in and connected, looking good.

Fus done, just the wings to do!

Ok, now the wing, handkerchiefs to the ready. The wing joins together with a spar which glues in to place. The ply plate next to the spar carries the under-carriage, some minor fiddling and they went together, but…… when they did the leading edge of the wings did not meet (nor the trailing edge), it appeared that one of the wing boxes was out by 1-2 mm. Ok I have seen so I glued the spar into one wing and allowed to time to dry


The problematic wing joiner

The plan was to PVA the spar and epoxy the face of the ribs, clipping them 'straight'. Here we go, glue applied and pushed the wing halves together. They stopped 1/8" short of each other!!!!!!! So I stood the wing upright (on my slippers) and pushed, broke both wing tips. Tried to pull them apart, no go, epoxy dripping out of the gap. Put the wings flat on a stand and put masking tape around the gap and set aside. Later after much wailing and drinking went back to them and started to fill the gap with wood and more epoxy, layer after layer until it was flush. The wing dowels were now further apart than they should be so had to open out the firewall. Feeling better, I turned to the wing tips which I got back into shape, just need to shrink back the covering, what could go wrong?
Shrunk back the first tip, no bother, but the iron was still heating as I went to the other…… Yes, burnt a hole in the covering, after self-mutilation with the iron found some red solar film and patched it, not too bad.
Did final assembly and touched up the paintwork.

It looks great!

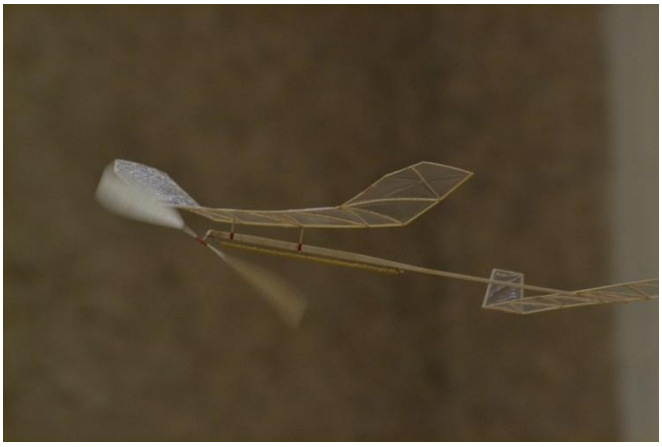
One of our members used to fly this type and he says that it looks right.
I will report on flying once the weather gives me a chance.

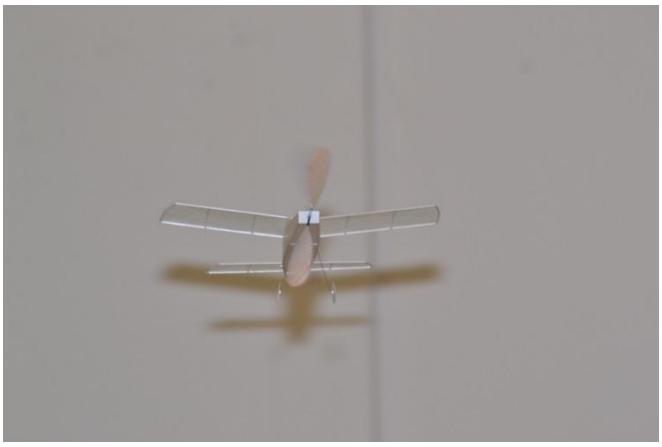

It's a good looking model. Not bad for 100 quid

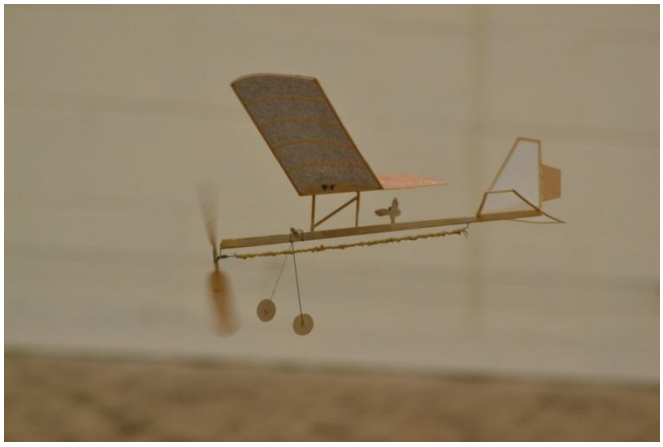
Plane Crazy,
Bill Straughan

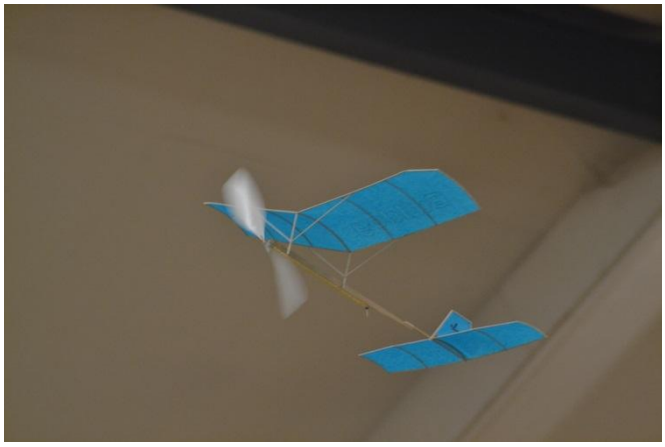
8. Indoor Free Flight at Wickham

Alan asked me along to the indoor free flight which takes place a Wickham community centre. I couldn't help but be impressed by skill and patients required to build so light and then to trim an aircraft so precisely it will execute a perfect flight in the confines of the hall without any intervention. Sorry, I have no details of the models.
Flitehook where in attendance so I was able to buy some more balsa to glue to my Chipmunk so as to make it a bit heavier.



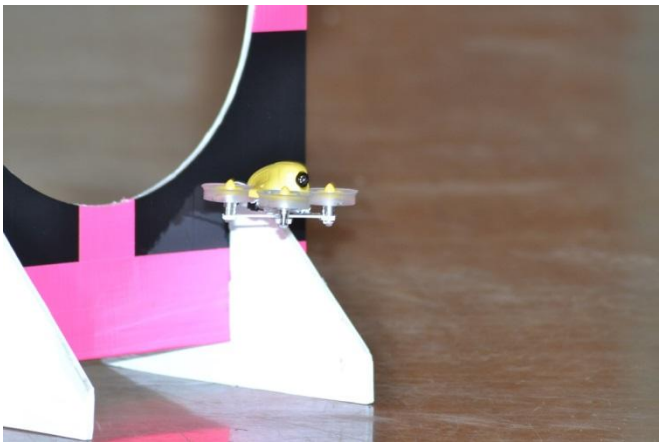


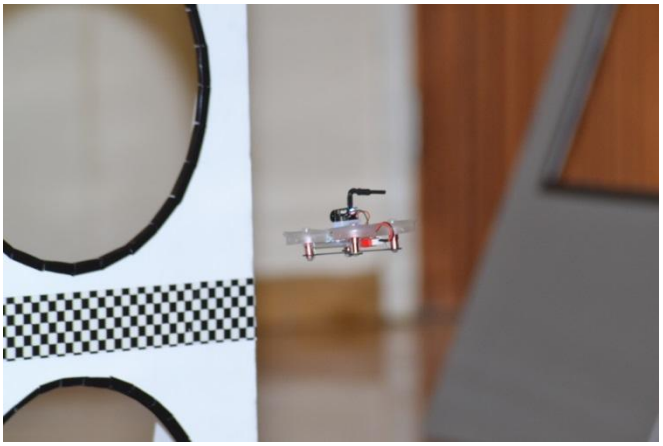




7. Indoor FPV at Wickham

The indoor FPV events at Wickham Community Centre are proving very popular. Between the indoor RC events at Havant and Flemming Park and the RC, Free flight and FPV at Wickham you can fly most weeks.
For details of the indoor events check the web site or contact Alan.





Alien chest burster caused a mild distraction

Pete Sander & Richard Bristow 26-02-2017