Clear Dope

June 2025

The Chair

Derek Honeysett

Mick & friends c. 2014

Welcome to the June edition of Clear Dope. I have to start by saying that CADMAC recently lost another long term member, Mick Blundell. Mick had only stopped making models in the last couple of years, and had been a member of CADMAC for fifty seven years. I have personally known Mick for many years, and judging by the emails I have received from CADMAC members the sadness of his recent passing was felt by many.

You have all probably heard the news that our Portshole flying site is now on the market; a report on the situation is in the following pages.

Recently we seemed to have lost the warmer easterly winds; cooler weather and decent south west winds have developed which means one thing: slope soaring. On the afternoon Friday 23rd May several of us met on the Trundle where we enjoyed really nice conditions with plenty of lift. I managed to get my 2m Fox glider going really well; this model needs to be flown fast, and will drop a wing if you don't watch your airspeed. If you have never tried slope soaring it is something you should try; please don't think it's just boring gliders as some of the models flown in the stronger winds are fully aerobatic and very fast.

A couple of weeks ago at Thorney I witnessed Jeff test flying Mark's Twin Otter; this model looked fantastic, had a great colour scheme and flew extremely well. Mark was able to fly this model during the morning and the smile on his face when he left said it all.

Leicester Model Hawk after it's first flight in 2013; not flown since Goodwood 2023

To see a lovely scale model like this had me thinking how far aeromodelling has come from when I started whilst still at school in the mid-seventies. To build something like this back then would be many hours work, it would have to be powered by two reliable i.c. engines, and you would most certainly need to learn how to fly/land on one engine!

Over the summer months CADMAC along with our regular club light flying evenings has quite a few events planned including: the scale fly in, summer BBQ & electric glider competition, evening flying on Thorney Island, pre-2000 fly in, thermal/electric glider competitions, and an aerobatic competition in memory of Peter Doe. Please look at the calendar on our website for a full list.

I look forward to seeing you during the summer.

Editors notes

Firstly, on behalf of the whole club, a huge '*Thank you*' to David Draper. David has very generously donated a 'ride-on' mower for taking care of the runway at Portshole. This will make the chore of mowing 'the patch' far quicker and much more pleasurable than at present!

The hard workers

David with the new mower

The Future Of Portshole

The club has known for some time that there are plans to sell the current Portshole site, and the recent activity at the site prior to it going on the market has been noted by many members. You should know that over a year ago the landlord made provision for another site which, while not ideal in some eyes, is workable. During the intervening year, committee members have also been searching for an alternative venue: adverts have been placed, and two local farmers have been approached (one is prepared to allow only 'occasional individuals', the other had no interest), but so far no viable site has been found. If anyone knows of a suitable site that is available and can be used, please get in touch.

In the meantime our site reps Ken and George have been liaising with the current owner about the timescale and provision of the new site. Ken is our "focal point" for developments in the situation; he is in regular contact with the landowner and is being kept abreast of developments as and when they happen. In this respect he will also oversee the move to the new site, as and when necessary. This may happen sooner rather than later if any interest is shown in purchasing the current site, but for now flying may continue at Portshole as normal.

Popham

Several members attended the Popham Model Show (10th-11th May). From all accounts the event improved dramatically from last year and, helped by excellent weather, was enjoyed by all!

Which of these two mechanised objects is more lethal?

Now to work out how I get these past Lorraine!

Portshole Funfly

Ray Shivjee organised the first competition of the year: a Funfly at Portshole on 14th May. He kindly sent in the following photos of the event.

There were 5 disciplines: Climb & Glide, Triple Thrash, Bomb Drop, Touch & Go, and Limbo.

Final results were:
1st Adrian 20 points 2nd Ray 17 points 3rd Jeff 16 points 4th Steve 14.5 points 5th Tim 7.5 points

Sidlesham

Another 'Thank You' to David Draper: he has arranged for CADMAC to use the Sidlesham Memorial Recreation Ground for occasional flying. The site is relatively small, flying over a football pitch surrounded by floodlights, so aircraft restrictions as for Fishbourne will apply; the grass, however, is exquisitely smooth! The site is shared with the local football club, so ultimately a schedule of availability will created if the site proves to be popular. An 'introductory' evening is planned for Thu 19 June from 4pm onwards. Please come along with your 'Fishbourne' models and try the new site!

The next issue of CD is scheduled for early August.

May we point out that the deadline for submission of articles for the next issue is **31st July 2025**!

Articles may be sent in any format to:

fsdibden@gmail.com
robin.colbourne0@gmail.com and/or
editor@cadmac.co.uk

You might like to consider build articles, repairs, model reviews, 'I learnt about modelling from that' ... the list is endless. We look forward to hearing from you!

Best, Fraser Dibden & Robin Colbourne

CAA Flyer ID / BMFA — Jeff Cosford

Many of you have taken and uploaded the Registration Competency Certificate recently.

A significant number of members that currently fly at CADMAC sites hold “A” or “B” certificates, and are permitted to fly under “grandfather rights”. However, they have yet to upload the RCC details onto the BMFA website, and to stay legal this will have to be done by November. So, if this applies to you please ensure that you address the issue by taking the online test.

Please be reminded that one’s BMFA documents can be viewed on the Internet; this may assist with those that have ‘Flyer ID’ issues to resolve by the end of the year. Membership ID can also be uploaded into an Apple Wallet.

If you are unsure what to do, ask me or meet up with someone who has already taken the test for help.

On a related subject: please ensure that all of your models display your Operator ID!

Doors to automatic – Sick bags not included! — Simon Woodhead

Have you ever wondered what it would be like to be a passenger in one of our marvellous flying machines. How terrifying!

Well, here is your opportunity to discover just what it feels like.
The project is called “***Passenger FPV***“.

How Does it Work?

A FPV camera, video transmitter and GPS attached to a Flight Controller board sends video data to a set of goggles worn by the passenger. The pilot (me) flies the plane by conventional VLOS, whilst you, a volunteer, enjoy a virtual seat in the cockpit.

I have chosen the Precision Aerobatics AMR 60 Bi-plane, as this model is highly manoeuvrable and has the spare payload capacity to accommodate the FPV kit.

The FPV video system uses the DJI goggles V 3, as I already have these for my Avanta 2 DJI drone so it made sense to use them again. On board the AMR 60 bi-plane, the FPV kit comprises of the DJI O4 Air Pro camera and 4K 60 fps transmission unit. The system is powered by a 3 S Lipo via a Flight Controller board, (F405 Wing Speedy-bee) flashed with INAV software. The INAV software is programmed to provide the telemetry to the goggles, so you can see, speed, height and artificial horizon. I have also attached a GPS which shows the direction home.

In this version 1, the camera is fixed. Version 2 will use a gimbal system allowing head tracking. Head tracking is when you move your head, the camera follows the movement. If anyone knows how to make this work in INAV with DJI kit please let me know.

The 4K 60 fps camera is mounted on a 3 D printed mount attached to a Go-Pro adapter (see right). The standard plane cockpit cover has been replaced with a CAD designed flat bed cover 3 D printed from light weight ASA aero filament to support all the video equipment and attach to the plane. The GPS and video antennas can be seen on the right front of the cockpit cover with the FPV battery to the rear.

What Does it feel like?

No idea, I'm always the pilot!

Preflight checks will include familiarisation with the DJI Goggles and adjusting the dioptre settings to suit your eyes (Glasses not required). Emergency exit doors are to your left and right of your seat.

All passengers are requested to remain seated for the duration of the flight -about 5 mins, as disorientation may cause you to fall out of the plane 😊 if you try and walk about. On-board refreshments may be consumed during the flight but if you feel sick, double tap on the sides of the goggles and the view with show what is in front of you rather than from the cockpit. Double tap again and you are back onboard. If you still feel queasy, ask fellow pilots near by permission to throw-up. Wait for everyone to reply before executing this manoeuvre to your left or right of your seat, preferably not in your lap.

When you disembark, be prepared to feel unsteady on your feet as you stagger back to reality.

When I'm on site and you see the Yellow AMR 60 bi-plane, be ready to volunteer and enjoy the ride.

Thank you for flying CADMAC Airlines 😊

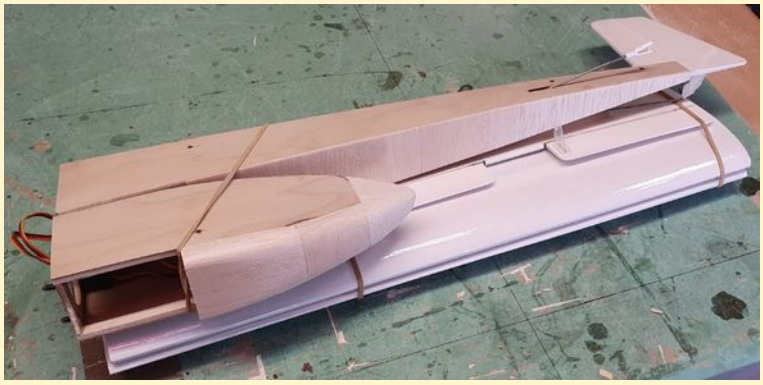
Rudder/Elevator Models

Lee Cowen

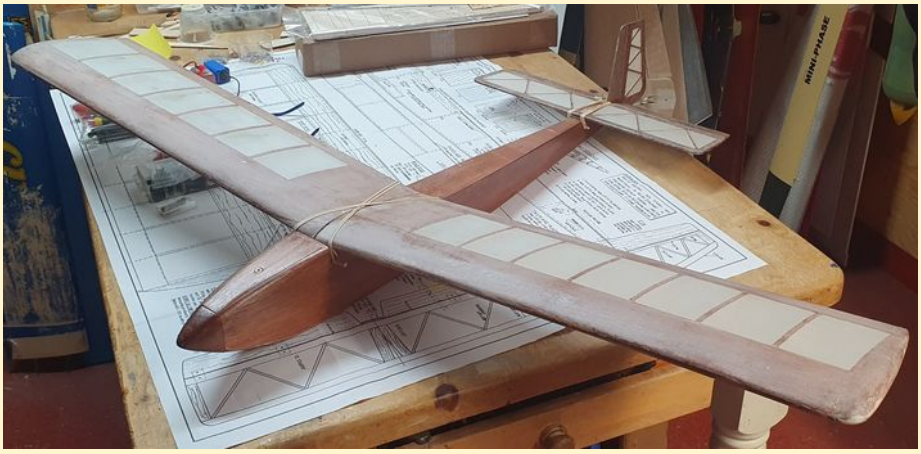
Are Rudder/Elevator models for learning? I thought so, but I was wrong.

Only able to park a motorbike at work I decided to make small models that fit inside a topbox, settling on a 34" Soarcerette, 18" Limit EX, and a little scale 30" Kirby Kadet. (Plans available online or from Outerzone). The Limit EX needs a good blow and is as mental as you would expect. The Kadet is light and draggy so struggles to penetrate but flies OK in light wind, but it is the Soarcerette that surprises and the reason for this little article.

Learning with an Avoncraft Cub in the early 80's and progressing to an aileron wing I never really looked back to R/E only. However – the little Soarcerette has changed that and is my most flown model in recent years.



Built mostly from scrap wood with the addition of a mylar strip to simply 'fold' the fuselage and a two piece wing. It can be flown surprisingly accurately, will roll, loop, spin, fly inverted 'just' and handle quite a wind speed range. Sure it's no 'full house' aerobatic missile, but it is so simple and has really put the fun back into flying for me; it just makes me giggle, so much so I felt the need to tell everybody - so I can only apologise for that!



Of course, Dave Hughes' Soarcerer is the original, and utterly entertaining to fly; obviously it takes years of experience to make a new model look so shoddily built….!

Microaces Aviatik (Berg) D.1 Build

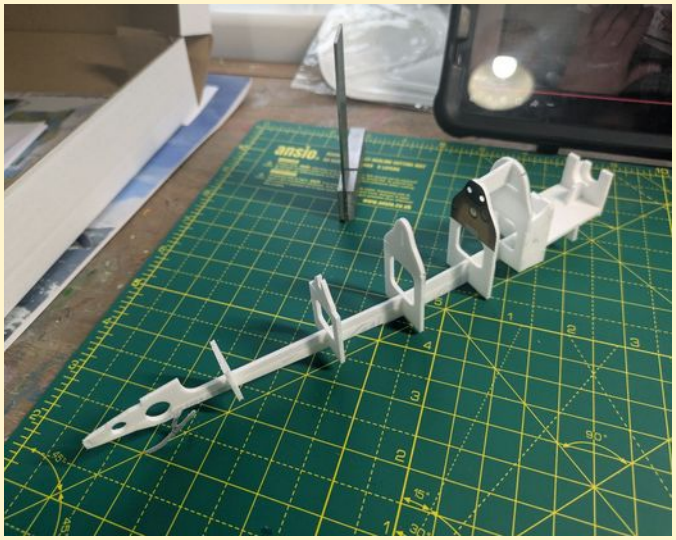
Ray Shivjee

Last Christmas, I was fortunate enough to receive the latest Microaces Secret Santa kit as a gift. Every year, the company produces a different Xmas kit, the idea being that nobody knows what they are getting until Christmas day.

Last year the model was an Aviatik (Berg) D.1, which apparently is an Austro-Hungarian built WW1 plane. The kit arrives in secret Santa wrapping and includes a brushed motor. Also in the box was a Spektrum receiver block with 2 linear servos.

A little bit of pre-build research resulted in the purchase of a ball tool that is used for cake making apparently and a selection of sanding sticks from Amazon. In addition, a trip to Home Bargains was necessary to acquire some reading glasses so I could see what the hell was going on!

Kit contents were various bits of printed foam, plastics, stickers and rigging wire, along with a rigging tool, which I really needed my new £1.75 glasses for.



No real instructions were provided apart from a parts list and bevelling guide. The build guide is a YouTube video, which works well although is a bit frustrating having to constantly rewind bits.

The airframe is built around a foam crutch, with the printed sheets having to be attached after bevelling, as per the guide.

Where the bevels meet, the use of the ball tool ensures a clean joint with no white bits of foam showing.

Once the main airframe is complete, it's time to break out the magnifying glass and get the rigging done. This process is made possible with the ingenious included rigging tool and lots of frustration!Final touches are to paint, weather and install the included dummy engine. This is a resin 3d print which is highly detailed, but light in weight.

I purchased a couple of the recommended batteries which are eflite 1S jobs, although some foam had to be removed from the battery bay to allow them to fit and allow the hatch to close.

The build took a lot longer than expected, mainly due to constantly rewinding YouTube and waiting for the Foam2Foam glue to fully set, but I was fairly happy with the final result. In hindsight, I would probably have started with one of the beginners Microaces kits first but think I have gotten away with it.

First flights took place indoors whilst I was testing out a potential new sports hall. Ground handling was skittish to say the least, but once airborne, the Berg just needed a couple of clicks of trim and, much to my surprise, flew beautifully.

If I haven't bored you to tears yet, there is a video of the model flying on the club Facebook site.

Peter Doe's Chipmunk

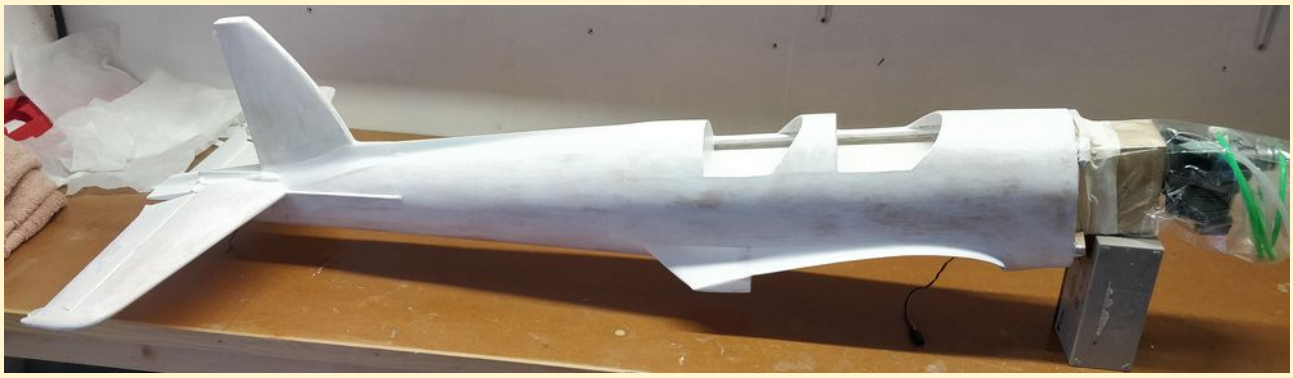
David Hayward

Many of our members will remember Peter Doe who we sadly lost last year. Peter had been a member of CADMAC for many years, always friendly and with a great sense of humour made him a popular member of the club. Peter was an accomplished pilot who loved aerobatics and revelled in sharing his passion through advising and instructing other members in pursuit of achieving the BMFA 'B' test.

At the beginning of 2024 Peter asked if I would finish building a de Havilland Chipmunk he had started from an Airsail kit. I was of course only too pleased to help Peter finish the build, the wings and tailplane were almost complete, so the task entailed building the fuselage, fitting engine, radio etc, covering and painting.

It was I believe some time in February and I had just cleared the decks from the previous project and looking to make a start on the Chipmunk. I hadn't built an Airsail kit before but all the wood etc appeared good quality and was accompanied by a comprehensive instruction manual. The fuselage started to take shape over the following weeks and I kept Peter up to date, sending images of progress along the way.

With the fuselage complete it was time to arrange fixing/fitting of wings, tailplane and engine; here is an image at about that stage.



Then on to finishing, the wings were covered with Solarfilm Polyester Supershrink, everything else was covered in tissue/dope and then painted with Guild paints plus a coat of gloss fuel proofer for good measure. Derek kindly supplied and skilfully painted the two pilots.

It's now about mid April and with the model complete, I contacted Peter and arranged to deliver it one Thursday morning. We assembled the model on a dust sheet in the middle of his lounge and I'm pleased to say he was absolutely delighted, a real pleasure to see.

Peter was keen to run and set up the engine, an SC FS61, in preparation for the maiden flight, so we relocated into the back garden and spent some running and tinkering with the engine.

Very disappointingly Peter's health deteriorated and unfortunately he never flew the Chipmunk, however, he was resolute I should have the model and put it to good use. To that end, I will be entering the aerobatic competition in August flying Peter's Chipmunk.

A few of images of the finished model…

And recently Derek put some air under it's wings so we could have the pleasure of seeing it in flight...

You can also see a video of the flight here: Peter's Chipmunk, and soon on Youtube & Facebook.

Spot the difference!

Tim Kerss

Before

After

We all know of questions that invite inane answers. Why climb a mountain? Answer: Because it's there. What is the meaning of life? 42. Why do you need yet ANOTHER model? Because I do. Add to the list of such questions: "Why spend a lot of time, effort and about £50 replacing the undercarriage on an FMS Olympus when it could have been done in an afternoon for about a tenner?" The answer, in this case, was "because I could".

To explain; the FMS Olympus F3A is a fine model and is great value for money, but its Achilles' Heel has to be the supplied undercarriage which seems to made from cheap Chinese alloy, or "Ch'alloy", and bends backwards after even the smoothest of landings. The result is a need to re-bend the undercarriage forward after almost every flight; something that is not ideal when it's attached to a relatively frangible foam fuselage.

A few months ago, my first Olympus was subjected to an "unscheduled arrival" having just attempted the dreaded double-roll manoeuvre at full power, and the result was a wrecked front fuselage, which had to be unceremoniously transported home, and thereafter went to the local skip in black bin-bags! However, surprisingly, the wings and tail survived, and it was this that got me thinking about an alternative, more robust landing system. I knew that one option that has been very successfully mastered by Steve Newman is to replace the Ch'alloy wire with a strong proper steel wire undercarriage, and there are a host of carbon alternatives that, with a little ingenuity, could be fitted instead.

However, one of the main reasons for me taking up RC flying in earnest after I retired was the fact that many models feature devices that are found of full-size aircraft over and above the primary controls. In particular, I love the incorporation of flaps, slats, spoilers, airbrakes and especially retractable undercarriage. Obviously, in the early days the latter were used with mixed success as they represented a "joint" and thus potential weak point in the landing gear. However, the introduction of effective suspension and beefier units has meant that those on modern models are much more robust and forgiving.

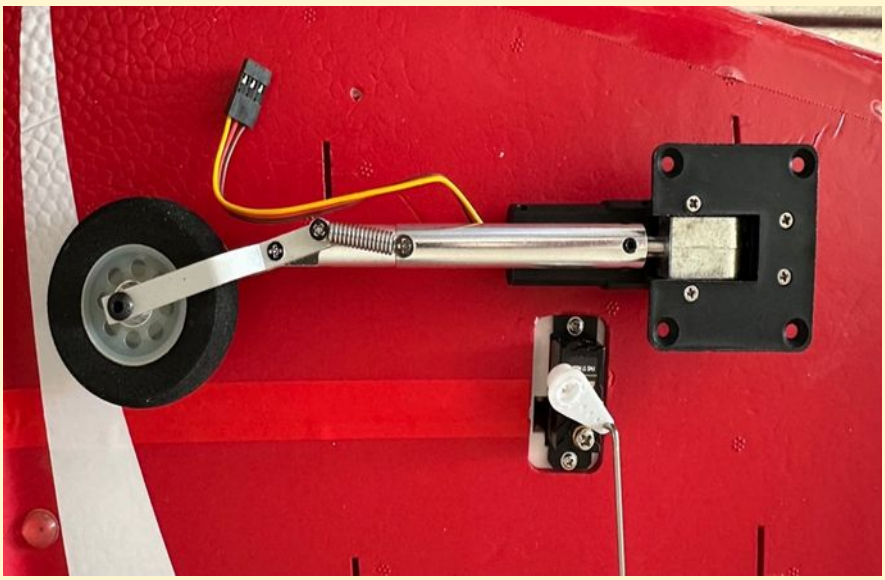
It was with this in mind that I decided to take the plunge and sacrifice the Olympus wing set from my crashed model for an experiment to create a version with retracts.

My initial concern was that the retract system should be strong and flexible enough to withstand MY landings! To that end I was mindful of the legs on my Hobbyking Skysword which were long, featured limited vertical suspension, and were angled at a straight 90 degrees to the fuselage. The result was that all but the lightest of touchdowns imparted a massive bending moment on each leg, and re-bends back to the vertical were often required.

Accordingly, based upon the fact that the majority of retract units on my EDFs have 4mm shafts, I decided to use a set with 5mm shafts. The servo units were quite chunky, and before ordering them I had to check that they would fit inside the Olympus wings. Regarding the legs themselves, having measured the sitting height of my current Olympus, I chose 150mm long 5mm units that included wheels that angle back from the vertical with suspension provided by two springs attached to each wheel. The units absorb the vertical loads as well as the tangential force at touchdown, and I have to confess to buying the components from Ali Express (a Chinese company!) for a total cost of about £40.

The next question was the direction of retraction. Logic suggested that I should mount the retract motors close to the wing roots as this would provide a very adequate depth to accommodate them, and would concentrate the load forces towards the strongest part of the airframe with the reduced moment-arm from the aircraft's centreline. However, as with the Spitfire, the resulting wheel spacing would be narrow and, I believed, would make the aircraft more susceptible to tipping over, particularly in a crosswind. Accordingly, I chose to mount the units such that the wheels folded away from the centre, giving a wider spacing when extended, but risking greater shock on the wing spars on landing.

The above decision, combined with the geometry of the undercarriage leg led to yet another challenge. The fact that the wheel unit was angled back meant that the main wheels were taken significantly closer to the centre of gravity (C of G) and that, to ensure that there wouldn't be a propensity for the model to tip onto its nose, I would need to mount the retract units as far forward in the wing as possible. Moreover, the units also needed to clear the aileron servos. The problem was that the closer I came wing leading edge, the thinner was the wing – and the retract units weren't exactly slim! In the end I reached a compromise whereby the wing was just thick enough to accept the servo units, and the wheels sat forward of the recommended C of G by only about an inch. This was real "fingers-crossed" exercise for me, and the good old "That Looks About Right (TLAR)" principle was invoked!



The process of preparing the wings and fitting the retracts went as expected, and was as shown in the sequence of attached photos. However, being the first time I'd attempted such a project here are a few of the learning points for me.

1. Cutting into the foam:

I cut the vertical walls of the grooves that would accommodate the undercarriage legs with a knife, and the wheel wells with a jig saw. Having the gouged out as much foam as possible with a thin-bladed knife I used a rotary tool fitted with a circular grinding stone to finish the job and to bore the grooves and wells to the required depth. To my pleasant surprise the frictional heat generated by the stone rubbing the foam resulted in a remarkably smooth finish.

2. Retract unit mounts:

The retract units were screwed into hard wood bearers secured into the foam with epoxy. I made the bearers as long as feasibly possible to reduce the risk of them being ripped out in a hard landing. One of the challenges, however, was that the positioning of the gear meant that one set of the retract units' fixing holes lay directly over the main wing-spar's carbon rod tube. To turn this into a "bearer" I inserted and epoxied a hard wood dowel inside the tube, and shortened the main wing-spar slightly. Finally, to provide extra strength and load distribution I attached plywood sheeting to the mounting bearers and surrounding foam on the lower surface of the wing.

Having fitted the retracts into the wings I now needed a fuselage to attach them to. As if by magic my prayers were answered when a second hand Olympus came up for sale one of our WhatsApp groups, which saved me the pain of forking out £140 for just a replacement bare fuselage and canopy. The wings were dutifully swapped, fixed, and the project was complete …. almost.

3. Final finish:

All that remained was to spruce up the beast ready for its first flight. This was never going to be a prize-winning model; the wings had suffered a degree of damage in the unscheduled arrival that inspired the project. However, in time-honoured fashion, blue and red paint colour matches were obtained in tester pots from B&Q, and the icing on the cake was the application of some CADMAC logos. For the latter I have to thank David Hayward who recommended using inkjet prints onto sticky-backed A4 vinyl white paper; a revelation which opens up possibilities for numerous other models in my collection. Having printed onto white vinyl (although clear is also available), the decals were cut to shape for application.

The first flight:

I'd be the first to admit that the new undercarriage configuration did look quite spindly when viewed for the first time, and the model has the appearance of a praying mantis. However, the mounting structure felt firm and sound, and the shock-absorption was definitely good. Also, I was pleased to note that, in spite of the wheels being closer to the C of G, the model sat comfortably on the tail wheel with the battery installed. So, with the bold announcement "here goes nothing!", Olympus 2 took to the air. Gear up, and she flew just as she should; no trim change, no different to the original. Unfortunately, a loose rudder connection meant an earlier-than-planned return, but the landing was faultless and, most importantly, the gear took it in its stride.

So, did it make a difference, and was it worth the time and money?

Well, from my perspective the omens look good; she certainly looks better in the air, sleeker and meaner, and the gear appears sturdy enough to handle even my landings; but in the overall scheme of things it was a "sledgehammer" solution to crack a nut.

As I said from the outset, extra controls on an aeroplane fascinate me; indeed ..... I was THAT child who was transfixed by the full 5 minute build sequence of the space ship "Zero X" in the film "Thunderbirds are Go!". Remember that? (Even the director, David Lane, states in the DVD director's commentary that "most kids these days don't have the interest or attention span to sit and watch this"). For those who want to know more, here it is: https://youtu.be/JcOWIp7rW_Q?si=6SdKdFLWAmqC4F6O. So, yes, I do need to get out more!

Overall, however, this has been an interesting project for me personally and one that, to date, appears to have achieved the aim of not having to bend the wheels forward after every landing; that said, it won't mitigate against another "unscheduled arrival", and I wouldn't go out of my way to recommend it to others.

Design Classics – 'The Lidl Glider'

Robin Colbourne

Second in a series looking at trendsetting models.

This issue's offering is a slight departure from the original concept of the series. However, in terms of the category, namely, models likely to be seen at most clubs around the world, it fits perfectly.

The Lidl Glider has been around since 2017. It didn't take R/C modellers long to appreciate the potential of its robust EPP foam construction and one piece 34" (860mm) wing, all for less than a London pint. Sold as a free-flight beach toy, it appears on the middle aisle at the end of May.

Perfect for quick and cheap experimentation. as a glider or with a multitude of brushless set ups (single,multi, EDF), a few even have glow motors. There are actually three sizes of Lidl Glider (34", 16" and an 8" one with a catapult). This article focuses on the largest one.

A thriving Facebook group https://www.facebook.com/groups/303874000069865 shares photos and files on members conversions, many using bits of multiple gliders, plus a whole host of 3D printed parts have been designed to simplify conversions. George at 4Max even has pictures of a customer's conversion on his website, with the required powertrain and servos all listed.

Separating the EPP Canopy reveals a substantial M12 bolt noseweight, which can be removed along with some foam to make space for a battery, receiver and ESC. Flattening the in-built tip dihedral is preferred for aileron and twist wing conversions. This is achieved by heating the wing and weighting it down until it has cooled in flat form.

The Twist Wing

Underside - spar and servos

One of the simplest and easiest conversions is a twist-wing set up, with servos in the fuselage raising and lowering the wing leading edges. This bypasses the need for control surfaces, hinging and an elevator pushrod. Construction fully described in this YouTube video: https://youtu.be/XUWQkNxdRGg?si=0VJQ-eWDWgF4R1T

A picture says a thousand words, so I'll do the rest with pictures showing that you are only limited by your imagination:

Gliders



Electric





Pastiche Designs


Canards



VTOL



IC-Engined


FPV



Crosswind Operations

Ray Shivjee

In all my previous clubs, there have been dedicated runway axes with associated defined circuit patterns, so if the wind was blowing across the runway, then one would have to adopt crosswind takeoff and landing techniques. This resulted in consistent circuit patterns and models always being flown directly in front of the pilot's box, which is always to be preferred.

On joining CADMAC, I was a little surprised to find that we are at the mercy of wind direction at both sites with pilots always opting to take off directly into wind, regardless of pilot box position and runway orientation.

At Portshole with its E/W runway pilots often stand in the northerly pilot's box, take off away from themselves and then hang a 90 degree turn to join a circuit that overflies the barn which is prohibited! Thankfully, the sole use of the southerly pilot’s box at Portshole is now being encouraged and it is great to see pilots trying out crosswind ops. Similarly at Thorney with an easterly wind, the use of the westerly pilot’s box results in having to take off directly away from the designated flying zone and across the massively long N/S runway then making an immediate left turn to avoid the prohibited area.

Like the full size, our models with full house controls are more than capable of operating in crosswind conditions, which in my opinion would result in safer operations at both sites. I wonder if CADMAC practices of always operating directly into wind stem from the club's long history and the use of mainly 3 channel models in the early days of RC which did require an in to wind takeoff and landing?

What follows is a brief explanation of takeoff and landing techniques and I apologise if it is stating the obvious .....

Take offs

A crosswind take off is relatively simple and all that is required is to keep the model straight on the runway axis with rudder (as we normally do) and holding a little in to wind aileron to keep the wings level on the ground run.

Ignoring the yaw effects of a spinning propeller, for a crosswind from the right, left rudder and right aileron inputs will be necessary to keep the model straight with wings level. Obviously, the opposite is true if the wind is from the left.

Once safely airborne all that is required is to neutralise the rudder and aileron inputs and the model will weathercock into wind and naturally track the runway direction. Job done!

Landing

There are two main crosswind landing techniques, these being the crab method and the sideslip method. For simplicity and because it is probably easier, I will describe the former.

In a crosswind, the model will need to be crabbing in to wind to maintain alignment with the runway centreline as per the diagram below. This is simply achieved on final approach by keeping the wings level with the nose pointing in to wind a sufficient amount for the model to track the runway centerline.

This into wind crab is maintained all the way until the flare/round out is initiated.

What is now needed is to get the aircraft pointing straight down the runway and this is achieved by applying rudder and aileron inputs during the flare.

For a right crosswind, apply left rudder to make the nose point along the runway. Unfortunately, the secondary effect of yaw (our rudder input) is roll and in this example the right wing will lift, so right aileron will need to be applied to hold the wing down. To stop any sideways drift, aim to touchdown with the into wind wing slightly down. This will result in landing on one wheel first, which is normal.

Clearly, the crosswind landing is a bit tricker than the take off, but it is easy to practice crabbing then using cross controls in the air before committing to a first crosswind landing attempt.

Once again, apologies if this article is teaching you to suck eggs, but if not, give the above techniques a go.

We have 2 great runways at CADMAC. Let's use them properly!

Sticking Points
Getting the best from epoxy

Robin Colbourne

Rather than write at length about epoxies, a lot of which you will already know, here are ten lesser known facts and tips.

Correct adhesive/hardener mix ratio is vital. Epoxies don't evaporate any solvent, so any imbalance in the ratio of adhesive and hardener means the surplus of either won't set.

Digital scales, under £10 from Ebay or Amazon (weighs to 0.01g) will help ensure the ratio is correct before mixing. Once dispensed, remove excess from the greater quantity. You will be chasing your tail if you try to get a perfect balance by adding more of one or the other part.

The slower the set, the stronger the bond. 24 hour epoxy will give the strongest bond, whilst 5 minute epoxy will tend to stay slightly rubbery and is best for field repairs. 30 minute epoxy is a good compromise as it speeds up the number of building stages that can be achieved in a day, however if you can prep all the joints for one gluing session at the end with 24 hour epoxy, that is the best option.

A cheap digital scale enables accurate ratios of adhesive and hardener

Since it is not dependent on solvents, unmixed epoxy lasts for years. If you haven't used it recently, mix a small test batch and glue some scraps of plywood or lolly sticks together. Check it cures fully and peel apart the test bonds. The wood fibres should separate before the epoxy can peel from the joint. The aerospace industry does this with batches past the advised 'best before' date to 're-life' the adhesive.

This 30 minute epoxy is a good compromise between speed and strength. I'll write the cap colours on the bottles before I start using it, to be certain I don't get them muddled.

Preparation of the surfaces to be bonded is vital. Wipe the surface with isopropyl alcohol or meths on a clean tissue. Abrade the surface to increase the surface area, then clean it again with same solvent on another clean tissue. Birch plywood has a release agent on the surface which must be cleaned off with alcohol for a strong bond.

Always have a hairdryer or heat gun to hand. When bonding non-porous materials, warming the parts immediately before applying the epoxy ensures that the viscosity of the epoxy is reduced on contact, thus fully wetting out the surface. This ensures a bond without air bubbles on the surface which would weaken the bond. In addition, as the parts cool, the epoxy will be drawn into the joint.

Dating from the early 1970s, this 24hr Araldite still works fine. A bit of warming from the hot air gun gets it flowing.

Gently warming epoxy reduces its viscosity, both to get it out of the bottle (if stored in a cold garage) and after application to help it flow into the joint. It also enhances the cross-linking as the epoxy sets, giving the epoxy its strength.

The green digital hot air gun from Lidl allows me to set the temperature so it doesn't boil the epoxy. The Weller gun is a bit more manageable but can get too hot. Neither is essential if you have an old hair dryer. The coffee and Pringles tops are ideal for mixing epoxy.

Unless you are prepared to risk being on the receiving end of domestic wrath, keep an old hair drier for epoxy work. Sticky fingerprints won't be appreciated on the family favourite.

Don't overheat the epoxy; 50°C is plenty. If the epoxy starts bubbling, its bond strength will be reduced.

If you want to prevent the epoxy running off a joint and to give a bit more strength to a fillet, add some cotton flock or 'flox'. These short cotton strands are a structural filler which also prevents wet epoxy from slumping. It is recommended to coat the surfaces with unfilled epoxy mix before applying the flox mix, so keep a bit of the mixed plain epoxy to one side for this. You can get a similar effect to flox mix by mixing balsa dust into your epoxy if you gather some up after doing sanding.

Once the joint has set, for maximum strength and reliability, a post-cure will help achieve full cross-linking of the adhesive and hardener, as well as raising the 'Glass Transition Point'. This is the temperature at which the epoxy will soften again, either coming apart completely, or moving and resetting in an undesired position, A warm car in the Sun, a hot attic or heat from a speed controller or IC engine exhaust could be sufficient to cause this.

To post-cure, place the component in a warm environment for 12 hours or so at 60+°C. In front of a domestic radiator would work. If you can build and enclosure round it to contain the heat, even better. It is important that any stressed joints (e.g. pulled in fuselage sides) are secured in alignment (e.g. clamped) whilst post-curing. Full-size glider builders and repairers use a hot box that resembles a glider trailer, but built from insulation foam panels and lined with radiators down the insides.

Homebuilt composite aeroplanes have been flying since the 1970s, if not earlier, so there are good resources available online for their builders to become familiar with epoxies. This illustrated précis of the Rutan VariEze and LongEze guide is pretty informative: http://www.aryjglantz.com/2013/03/composite-basics.html

The Joy of Six

Tony Parrott

There's no doubt you can get fun from small, cheap planes. But why stop there when there's so much more fun to be had flying bigger, more expensive ones?

It is my opinion, and therefore a fact, that far too many aeromodellers have failed to invest sufficiently in their own enjoyment. Now while this obviously isn't healthy there is a cure. However, before I get into the details we need to look into just why this issue needs to be addressed right now and not put off until tomorrow. Quite simply, with the average age of aeromodellers being what it is tomorrows are in limited supply. All the more so when you consider that very few flyers die at the field with most hanging up their transmitter years before they finally check out. So, with flying time in an even shorter supply than you may have originally thought do not waste what's left upgrading to four or five cells. No, you need to jump straight to six.

Most of the major manufacturers have you covered in this regard but if I'm only going to recommend planes I've owned then the FMS Olympus is definitely one for the shortlist. Priced up at around £300 it's an absolute delight to fly and is very possibly the best value for money foamy on the market. If I had to retake my B test tomorrow, and could choose any plane, then this would be the one. Wind tolerant, power for days and a precision that belies its price point. You need one of these in your hanger.

Those of you that prefer scale flying are equally well catered for. My pick of the bunch here, once again based of stuff I own, has to be the Eflite Carbon T28. Make no mistake the smaller version is very good but Eflite knocked the ball clean out of the park with the two-metre, 6S version. Yes, it's twice the price but as far as I'm concerned it's an order of magnitude better in terms of the smile it puts on my face. Obviously as I write this I've no idea exactly where the article will appear within the club's online comic. What matters is the second you've finished reading it get immediately online and check out your options. The target I'm setting you all is to have ordered your next plane before the sun sets. What If you end up getting the wrong one? Sell it and buy another, this isn't rocket science. Just remember, you are more than likely dangerously under-invested in the hobby and this is possibly your last chance to do something about it. BUY, FLY, REPEAT.

2025 Diary Dates

For the most up-to-date details, please check the CADMAC website.

June	Saturday 7th – PM	Thorney	Air Cadets
June	Thursday 12th	Fishbourne	Light Flight & Electric on the field
June	Sunday 22nd	Thorney	Scale Comp (flying only. Competitors to decide winner)
July	Thursday 10th	Fishbourne	Light Flight & Electric on the field
July	Sunday 13th	Thorney	Pre 2000 design Fly-In
July	Wednesday 16th	Portshole	Electric Gliding Portshole + Barbecue
July	Thursday 24th	Trundle	Evening fly-in
August	Saturday 9th	Thorney	Gliding Competition
August	Thursday 14th	Fishbourne	Light Flight & Electric on the field
August	Sunday 24th	Thorney	Aerobatic Competition
September	Thursday 11th	Fishbourne	Light Flight & Electric on the field
September	Thursday 18th	Trundle	Evening fly-in
September	Saturday 20th	Thorney	Gliding Competition
October	Thursday 9th	Fishbourne	Talk by Jon Porter from Microaces
October	Thursday 16th	Trundle	Evening fly-in
October	Saturday 18th	Thorney	Gliding Competition
November	Sunday 9th	Thorney	Remembrance Gliding Competition
November	*Wednesday 12th*	Fishbourne	Talk by Chris Foss
December	Thursday 11th	Fishbourne	AGM

The important upcoming dates to remember:

Fishbourne 12th June

Scale Comp 22nd June

BBQ 16th July

In addition, the following extra dates have been granted for evening flying (1800 -2100) at Thorney:

Wednesday 18th June
Wednesday 25th June
Wednesday 16th July
Wednesday 23rd July

CD Brain Teaser: How did this happen? Jeremy Stuttard

Study this photo, and see if you can work out what happened:

The model is an E-Flite Radian XL. The ESC was removed before taking the photo, but was undamaged. There was no damage to the airframe other than what you can see in the photo.

In the hope that we can all benefit from a bit of '**I learnt about flying from that**', please submit your thoughts on either the WhatsApp groups or Facebook. We shall collate the answers, and publish what happened, in the next issue of CD!

CD Quiz: The Wall – June 2025

Readers familiar with 'Only Connect' on TV, will need no introduction to 'The Wall'. The grid contains four sets of words: in this case all are full-size or model related. Group four sets of four words together to complete the wall.

Timber	**Marlin**	**D-21**	**Viper**
Futura	**Tsunami**	**Tasman**	**Comet**
Oxcart	**Habu**	**Nemesis**	**A-12**
Husky	**SR-71**	**Mystery Ship**	**Bigfoot**

April 2025 'Clear Dope' - The Wall - Quiz Answers

The order of your rows may be different provided the answers in each group match these.

Group 1 - Models Kits by Galaxy Models			
			
Magician	Fiesta	Gold Cloud	Escort

Group 2 – Aircraft built by De Havilland Canada			
			
(DHC-1) Chipmunk	(DHC-4) Caribou	(DHC-6) Twin Otter	(DHC-2) Beaver

Group 3 - Models Kits by Keil Kraft – an extra point if you spotted they are all Bill Dean designs!			
			
Playboy	Pirate	Cadet	Bandit

Group 2 – Aircraft built by Convair			
			
(B-58) Hustler	(F-106) Delta Dart	(B-36) Peacemaker	(CV-990) Coronado

Arun & Chichester (Air) Enthusiasts Society

AirACES

www.airaces.org.uk

Patrons – Sqn Ldr Richard (Dick) Kharegat RAF (Ret'd) – ex Vulcan, Victor, B52 Pilot
Sqn Ldr Rod Dean RAF (Ret'd) – ex Hawker Hunter Pilot and Display Pilot

PRESS RELEASE

Monday 23rd June 2025 - 1845 for 1930 hrs
Boxgrove Village Hall, PO18 0EE

'Saving 'Charlie November'

The Historic Britten-Norman Islander – G-AVCN'

Presented by Mr. Bob Wealthy

Bob Wealthy will give an illustrated account of the project to save the Britten-Norman Islander aircraft 'Charlie November' G-AVCN and return it to the Isle of Wight where it was built as the third BN-2 Islander aircraft. It was constructed and delivered to Glos Air in 1967 – and is the oldest of the type still surviving.

Saving 'Charlie November' began in late 1999, with G-AVCN being dismantled and shipped back to Bembridge in 2000. Restoration of this Islander aircraft took 23 years and the landmark completion stages will be explained by Bob, who will also cover the origins of the Britten-Norman Company and the BN-2 Islander's operational history.

AirACES is an aviation talk society, providing its members with regular talks, given by experts in many different fields related to the world of aviation.
VENUE – Boxgrove Village Hall, The Street, Boxgrove, Chichester, PO18 0EE
6.45 pm for 7.30 start. Members £5, Non-members £10 and under 16s FREE.
Doors open at 6.45 no pre-booking, no reserved seating

For further information about AirACES, please see www.airaces.org.uk
Email: airacesuk@gmail.com or call Air Aces on 07423 670703

Safety Corner

Be S.M.A.R.T. with your transmitter.

S = Switch - Ensure it is OK to switch on and that all your frequencies are safe to use.
M = Model - Ensure the correct model is selected.
A = Aerial - Ensure the aerial (as installed) is secure, extended, and orientated correctly.
R = Rates - Ensure you have the correct rates, modes and trims selected.
T = Transmitter - Check that your transmitter voltage is safe to use.

When do we use SMART? Before *every* flight, and before making your model 'live'.

When do we need a Failsafe?

For All Model Aircraft
Any powered model aircraft fitted with a receiver CAPABLE of operating in failsafe mode (i.e. PCM receivers, Digital Signal Processing (DSP) receivers or 2.4 GHz equipment) must have the failsafe set, as a minimum, to reduce the engine(s) speed to idle on loss or corruption of signal.

This means that you will have to carefully consider what type of receiver you are using in ANY i/c or electric powered model, even the smallest.

Models over 7.5 Kg
A radio fail-safe device MUST be fitted and operational to all models over 7.5 Kg.

Remember that the purpose of a failsafe is not to land the model but to prevent it from flying away in the event of radio failure. You should test it regularly as part of your pre-flight checks.

In the last issue, we reminded you of the '**SWEETS**' acronym; it is often difficult to assess the two '**E**'s (Eventualities & Emergencies) with respect to your individual day of flying. A case in point - the recent incident at Thorney Island, of which this is an excerpt from the BMFA/AAIB report:

"Eight flights had previously been flown, and at take-off met conditions were fine for flying. The model flew a circuit however, a bank of sea fog rapidly blew across the flying site. Pilot endeavoured to carry out a quick return and land as soon as possible but visual contact was lost."

This incident happened very quickly (I was there! – Ed.) and visual contact was lost within seconds. What would YOU do?

Walking to the Portshole barn on a blustery day:

Bryan looks over at Eric and comments, "Windy, ain't it?"

Eric replies, "No, it's Thursday."

Ray Shivjee's Extra

Mark Woodason's Tasman

George Gilchrist's F-22

Tony Parrott's HUGE Extra

Your CADMAC Committee

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