

Contents	Page
Editorial	2
Chairman's meanderings	3
From the Secretary's Cockpit	4
What's the rudder there for?	5
Crosswind Techniques	6
More on Balsa Wood	7
Safe handling of LiPo batteries	8



My Jodel D120 almost ready to bring to the field.

Date for your diaries

The traditional Club Christmas Dinner is booked at Oxshott Village Sports Club on **December 1st**. Tickets will be the same as last year - £16.50. Reservations to Graham Bentley.

The views expressed in this newsletter are those of the contributors and not the official opinion of the L.M.F.C. unless otherwise stated.



Editorial

by Ernest Harrison

A long hot summer is officially over and the footballers have returned – even tiny GIRLS playing football! I think most people would agree that the hot weather has been over the top and not what one expects of an English summer.

As Newsletter Editor I have the sometimes-challenging task of producing a newsletter to some sort of quality standard and timescale. As you can imagine it can be like getting blood out of a stone to get contributors to contribute and to do this on time. I am sitting at my computer now wondering whether I should edit out the duplications in contributions or leave them in to show that contributors have similar thoughts. Part of me says 'no one reads this stuff anyway so it doesn't really matter!' Another problem I have right now is that I have no recent photographs. Should I trawl some from the archives or should I decide to have an edition with no pictures? I decided, unilaterally, to photograph my almost completed Jodel and to go for a black and white edition! Guess what colour the model is.

I know this is a recurring problem for all club newsletter editors but it would be really nice to get input and feedback from more grass root members.

Talking of grass, Frank has done an heroic job in keeping the runways in good order and has even mowed the huge area in front of the pits so that spectators can see the action and not just imagine tigers in the long grass. Thanks also to Bernard for acquiring and installing the smart seating at the rear of the pits area.

We have had 'lout' problems with the shed being broken into on two or three occasions and, recently the benches in the pits were vandalised. We have also had graffiti artists and the odd small fire. We have also had a few horse incursions.

The most memorable 'out landing' of the summer must have been when Mike Austin recovered his model from the river with help from Geoff.

On returning, Geoff asked 'Do you want the good news or the bad news?'

The good news was that the model had been recovered.

The bad news that one of the club waders had been lost in the process.

We await the incident report with more than the usual amount of curiosity.

N.B. Mike later returned with snorkelling gear and recovered the lost wader. Ted, with his usual startling efficiency, had already bought enhanced replacements!

I recently switched to high speed broadband. BT did their usual 'less than impressive' job and it took countless calls and visits from 3 different engineers to fix an underlying noisy line problem. Their wonderful high-tech noisy line test had pronounced our connection to be in good order even though we could hardly hear incoming speech! The 30 metres or so of wire between the house and the nearest pole was eventually replaced – problem solved. I now average around 3mb per second and one loss of sync per month against around 0.5mb and a record of 55 losses of sync in 1 day previously.

I am using a bit of software which allows one to measure the real speeds of a broadband connection. If you are interested you can find a free copy at <http://www.abeltronica.com/velocimetro/pt/?idioma=uk&newlang=uk>



Chairman's Meanderings

by Ted Dalley

I don't know how we have found time to fly. We have had a plethora of distractions.

Nick Dumville has succumbed to an increasingly rare distraction and is now married. Our congratulations and best wishes for the future, Nick.

One of our friendly dog walkers was kind enough to get in touch to tell us that a bit of shed wall had been used to fuel a bonfire. By the time Frank and I arrived with wall patching materials, the door was also detached. The shed now has elegant new hinges and parts of the patchwork resemble our kitchen. Unfortunately, all the first aid kits and the fire extinguishers vanished. I have put a bag of very basic first aid supplies on a hook just inside the shed door. Please be aware that when I am yelling at you to keep your mitts away from the *** propeller that this is totally in line with the Club policy of minimising costs and subs. First aid supplies are expensive.

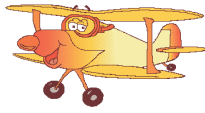
We have had a number of horse invasions (our grass is much better than theirs) the number to ring is Mrs. Harrison 07930 193480 if a round up is required. Frank has patched their fence but suspects vandal damage has also contributed to at least some of the escapes.

Gorgeous weather and a barbie meant a good turnout for the fun-fly competition in July and thanks to everyone who entered. The three events were balloon bursting, with loops and rolls, touch and goes and finally hitting the target with an empty can in tow. Seb put in a very good effort for his first attempt at funfly and Rich bravely tried touch and goes with (Ted's) rudder only model, but after the three events Mick was victorious. Considering it was such a lovely evening, it was disappointing to have only five entrants in the competition, especially as on the average summer club flying day, funfly and 3d models are in abundance. So lets have more competitors next year. Many thanks to Ray for organising the event.

Frank's Beaufighter made a bid for the record of shortest first flight. It now looks slightly more weathered around the cowl but flies beautifully. His Pushycat is also worth seeing/hearing - blink and you've missed it! One of our regular dog walkers was convinced it was a jet and was totally amazed to see the tiny little electric motor in it. (which turns at around 24000 RPM)

Many of us had a very good day out at the Hop Farm. An excellent model and full-size air show. Several of the traders had such a good day on the Saturday that by the time we arrived on Sunday they had packed up and gone home.

That's a Saturday booked for 2007 then.



From the Secretary's Cockpit

by Mick Saxton

I have not received too many enquiries this year from potential new members, this is a worrying trend. We can however welcome Sahib Alizadeh who recently joined the club with a "Blackhorse Electric Trainer" which flies very well and with its LiPo battery set up flies for long enough to make tuition on electric power feasible. One word of warning – the instructions did not mention the need to glue the control surface hinges a serious omission on a model aimed at newcomers to the hobby.

It is a long time now since I have turned up at the field with a shiny new model; the reason for this is basically that I have run out of space in my garage. If anyone would like my "Ucando" it could be for sale complete with engine and servos. Part of the problem is bicycles - "I hate bicycles". One day, a long time ago when my kids were small, I made the mistake of allowing them to keep their bicycles (which were also small) in my garage / workshop. Now they have grown as have their bicycles, what's more the boys seem to need more than one bicycle each now, the result is that the bicycles have now taken over my workshop and my new projects are best left safely in their boxes.

There have been a couple of incidents where models have crashed due to Rx battery failure. An onboard LED indicator might have prevented these, as might an "on load" check with a multimeter. I know Geoff and Ernest and Bruce normally have meters with them and I am sure one would help do a check if you have any doubt about the charge state of your pack. I regularly cycle my packs and measure their capacity using my electric flight charger again. I would willingly measure other members' packs - this procedure just takes a little longer.

Recently some of our members helped the adjacent football club with moving some stray horses from their pitch; the result was that the horses were forced from the football field and on to ours at which point the footballers all disappeared and made no attempt to get the horses into the correct field. We will attempt to strengthen the fence so that the footballers cannot drive the horses from their field and on to ours. They are not our horses and we don't want them in our field. So much for good neighbourliness!

I am intending to run the indoor flying again this winter season – the dates have not yet been confirmed but I have applied for the second Friday of the month from October through until April. Once the dates are confirmed they will be posted on the web at <http://www.leatherheadmfc.org.uk/indoorflying.htm>



What's the Rudder there for?

by Geoff Bignold

Most four-function trainers will fly around reasonably satisfactorily with little or no need for the application of rudder movements. We make use of this in training by concentrating, initially, on use of the ailerons to bank the model and of the elevator to lift the model around the turn. This simplifies matters for the beginner. At this stage of learning to fly, use of the rudder is confined to controlling the direction of progress during the take-off run.

However, making turns without using the rudder has disadvantages. These become much more obvious when we come to fly models with high aspect ratio and with ailerons on only the outboard sections of the wings (gliders, and many scale subjects).

To understand what is happening, let's think about a left hand turn. The ailerons are applied to induce the necessary degree of bank. The port aileron goes up reducing lift on that side, while the starboard one goes down and causes the lift created by its wing to rise. Changes in lift for the two wings are accompanied by changes in induced drag, with the higher drag being on the starboard wing which is operating at higher lift. The result is a tendency for the aircraft to yaw to the right; i.e. the opposite direction from the intended turn. Technically this is called "adverse yaw". If the correct amount of left rudder is applied to overcome this, the result is a much smoother and more efficient turn.

It is, therefore, a good idea to practice introducing rudder control in turns before the habit of ignoring its presence becomes too ingrained. When it comes to undertaking more complex manoeuvres the use of the rudder will no longer be optional, and so it is best not to let bad habits develop. Good slow axial rolls require the right amount of rudder to keep the nose up; knife-edge flying, flick rolls and spins all require substantial application of the rudder. Some of the more difficult scale biplanes can be very resistant to turning one or both ways unless you co-ordinate aileron and rudder inputs.

Eventually it becomes second nature to use the rudder whenever there is advantage to be had from it. Of course, the down side of this is when somebody offers to let you "try out" a fixed rudder model. When this happened to me recently I was amazed to find how often I stirred the left stick on the transmitter and how frustrating it was when I did not get the expected result!

So one answer to the question "What is the rudder there for?" is, of course, to enable you to make your model fly better. Ray's article on Crosswind Techniques, which follows, adds a second, equally important, answer.

Happy landings!



Crosswind Techniques

by Ray Shivgee

With the winter coming and the dreaded footballers about to make an appearance we will soon be in the situation of using only one runway, regardless of wind direction.

Taking off and landing in crosswinds is often off-putting, but with the correct technique it need not be an issue. It does, however, require confidence in the use of the rudder.

The take off case is the most simple;

During the take off run the wind will tend to weathercock the model into wind - so to counteract this a rudder input is required to keep the model on the runway centre-line. While all this is going on, the wing on the upwind side will want to lift-so this must be stopped by a little into wind aileron to keep the wings level. We will therefore reach take off speed and get airborne with crossed controls (aileron and opposite rudder). Once in a safe climb, neutralising the aileron and rudder will cause the aircraft to weathercock into wind and track the runway centreline.

Crosswind landings are a little trickier;

The problem we have is that on finals, to keep the model tracking the centre line, we need to fly with the nose pointing into wind so the aircraft doesn't get blown away from the runway. Obviously on touch down, if we did nothing, the aircraft would land pointing sideways - not good for the undercarriage and it would then diverge from the runway centreline. For a successful landing the aircraft nose needs to be pointing straight down the runway on touchdown and this can be achieved in two ways - both requiring use of the rudder digit!

The first method is called the wing down technique;

On short finals push the aircraft nose straight in line with the runway using rudder and hold the rudder input. Unfortunately, the secondary effect of rudder is roll, so the upwind wing will start to lift. An aileron input is required simultaneously to hold the upwind wing down. What we are trying to achieve is a cross controlled condition with the upwind wing slightly lower than the downwind one. (a sideslip)

Hold this sideslip during flair and touchdown and that's it. Try practising this sideslip manoeuvre at a safe height before using it on landings!

The second method of crosswind landing requires doing more things at once, but is possibly easier;

Fly a normal approach with the model crabbing into wind on finals.

During the flare/round out push the nose straight with rudder and stop the upwind wing from rising with a little opposite aileron. All being well, the model should touchdown pointing straight down the runway and rollout in a straight line.

Easy!



More Balsa Wood

By Stuart Tucker

Following my article published in the last edition of the club newsletter I recently received a letter from an old friend in Colorado Springs, Colonel John A de Vries, a retired member of the United States Air Force. During World War 2 he flew P-51 Mustangs in the Pacific theatre of operations and whilst on a tour of the Aleutian Islands he got to fly the very last derivative of the Mustang - the P-51H
John de Vries wrote:-

An addition to your article on balsa wood. The wingtips, outboard of the ailerons, of the P-51 were filled with a big hunk of balsa. It was, of course, the same internal shape as the wing tip. I guess the idea was that the finely shaped wing tip was made of rather fragile aluminium and the balsa was used to keep it from getting bumped. I found out about this at Johnson AFB in Japan. We had a model airplane club and the base commander gave us a small one-room house as a club meeting and building place. We, of course, ordered most of our stuff from a hobby shop in Hawaii but balsa was still a premium material, so we scrounged balsa wing tips from otherwise crumpled Mustangs for model making purposes. We had to cut out strips and block from the tip balsa and we built mostly U-Control models. Although it isn't of any great importance, we flew our models on the base's baseball diamond.

For those of you who are wondering what "U-Control" is (or was) it is the original term for control-line flying. I assume that it was called U-Control because of the very elongated letter "U" that the steel lines formed with the handle being the bottom part of the "U".

Whilst browsing through some old copies of "Aero modeller" I came across the following advertisement in the March 1944 issue

VACANCIES ON THE STAFF

Vacancies exist in the Photographic and Editorial Departments of the 'Aero modeller' at Head Office, North London. Applications should be addressed to the Managing Director, Aero modeller Offices at Leicester and marked "personal" in the top left hand corner. Applicants should be 16 to 18 years of age. The positions are permanent and offer good prospects and a commencing salary of £2 to £2.10s.3d per week will be paid. Applicants should be of good education and of Matriculation standard with a sound interest in model aeronautics.

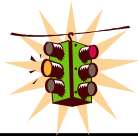
What £2 or £2.50 would equate to in present day salaries I have no idea!

If there are those among you who are wondering what "Matriculation standard" was let me explain. The matriculation was the final set of exams that one took at the school leaving age of 16. It was considerably tougher than today's G.C.S.E. exams inasmuch as, if you sat for twelve subjects (which was usual) over a two week period in July, you had to achieve passes in at least five of them, one of which had to be a minimum achievement of 60% plus. English was a compulsory pass! You could take twelve subjects and get 100% in eleven of them but - fail in English and you failed the whole exam!

Your next chance would come a year later when you took the same twelve subjects again (assuming that you had decided to stay on for another year).

There was no choice as to what the pupil would like to take. He had to sit the exams picked out for him!

I know this from bitter experience. I was one of them!!!



Safety Matters

By Graham Bentley

As more of us are now flying electric models and using the latest technology, which includes Lithium batteries, I thought it might be worth drawing your attention to the following cautions that appear on the Overlander website.

Buyers should understand there are risks, known and yet unknown, in the use of Li-Poly batteries. [Only use chargers designed specifically to handle Lithium Polymer batteries.](#)

- Double check the charger, number of cell selection setting, and mAh before every charge.
- Only charge the batteries on a non-flammable non-conducting surface, such as bare cement floor.
- Do not charge the battery inside the model plane, in a car, in your home, on furniture or wood floor/carpet, or anywhere near flammable material.
- Monitor the charging of the battery pack at all times. Do not leave the battery unattended.
- Place a fire alarm above the Li-Poly battery charging location. Follow the fire alarm installation instructions.
- After any crash, inspect the battery pack for damage. Discard the pack if there is any sign of damage.
- *Store the pack fully charged in a cool and dry location and out of reach of children.* Insulate the male lead with a short piece of fuel tubing. Do not assemble packs in series into parallel packs, as mismatch could result in fire.
- Do not carry or leave Lithium Polymer/Ion with model fuels such as Petrol/Gas or Methanol
- Do not store Lithium Polymer batteries inside a car. For transport to/from the field use a fire-resistant, non-conducting box.
- Do not short the battery as it may catch fire. Tape the two output wires together so that you can't connect the battery to itself. Use the club standard wiring for 5mm gold connectors – Battery black wire to male connector.
- If you accidentally short a battery, quickly remove the short and observe the battery for 10 minutes. It may swell up and possibly even catch fire.
- Do not discharge Lithium Polymer batteries below the voltage recommended according to the number of cells.

If, after reading the above, you would like even further information, go to the Overlander website or the BMFA website.

Your model

you're flying it

your responsibility