Flightlines

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Focus on Workshops

Gee Bee 'Zeta'

Taking Off & Landing

February 2012

A Couple of Reminders of Scale Models in Clear Blue Sky

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The views expressed within are those of the individual contributors, and not necessarily those of the MACI Committee.

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Editorial

Hello everyone, first off can I wish you all a belated happy New Year.

In the October edition there was some text omitted from the 2nd last paragraph of the article "The Fokker Triplane" on page 10. Below is the paragraph as it should have appeared;

"Firstly there was the design influence of bird wings, and their sections were associated with low profile drag. Regarding early wind tunnel tests, there existed no knowledge of the all important boundary layer airflow and Reynolds Numbers, (RN) related scale effects. Small scale 'thick' aerofoil sections tested at low RN can produce relatively high drag, which is not reflected in their performance in full scale use working at high RN. Further, the cause of high drag was not understood - high pressure drag due to boundary layer failure."

I would be extremely grateful that, if you want to contact me, whether it's to submit an article, photographs or any other subject concerning Flightlines, to please use the email address; flightlineseditor@maci.ie This will assist me greatly in having all of the material in one place.

Unfortunately I have had a complete melt down of my PC and one of the biggest losses has been my e-mail programme, which means that my e-mails have all disappeared into cyber space. If anyone has submitted articles and they have not appeared in this edition, could you please re-submit them using the e-mail address above. The e-mails sent to this address are kept on the web server, so even if my PC goes down again they will not be lost.

Oh well, as long as it's only the computer that suffers a virus this winter then I won't complain too much.

The deadline for any submissions for the April edition is 31st March.

Safe flying

Chris Clarke

Shannon MFC Glide-In

The annual glide in of the Shannon MFC was held on sat the 11th of June 2011 at Tountinna, near Ballina, Co Tipperary. We had a fine turn out of about 20 fliers with at least 2 gliders each, so plenty of shapes, colours and sizes on the slope!! A light S/W breeze blew all day so for the most part we were restricted to flying lightly loaded models such as gentle ladies, birds of time, etc.

A most enjoyable day was had by all and we finished up promising to do it all again in 2012. Many thanks to everyone who attended and hope to see you all soon. Roll on the summer!!

Gerry Buckley,
SMFC Glider Sec.

Focus on Workshops.
Eamonn Keenan.

Very little introduction is required for one of our well known scale enthusiasts, the legendary scale builder and flyer of scale aircraft, the most venerable Mr Eamonn Keenan. To those who don't already know, there may be a few at most, Eamonn is a long time scale modeller, a keen competitor at scale competitions where his building skills as well as his flying skills are judged in his preferred class, F4C.

Eamonn at his trusty jigsaw.

The Eamonn workshop is a purpose built unit separate from the family residence, a well designed building incorporating a workshop and art studio. The workshop is well laid out and optimum use made of space for storage of aircraft, tools, plans and parts.

As one would expect, the environs of the workshop is neat and all items within easy reach, whether this be a particular tool, source material of wood, metal, plastic or other product, silver solder or specialised power tool.

On the building board currently, and nearing completion is a rarely modelled prototype from the famous Granville Brothers stable of Gee Bee aircraft, the Gee Bee Zeta. Power is a Laser 150. In order to replicate the steel tubing (visible in the cockpit) he has silver soldered lengths of bundy tubing, scavenged from rejected brake tubing once fitted to older cars. It is light and strong.

Zeta fuselage under construction.

The subject colour of the Zeta is red with black letters, and this masterpiece will be finished by Eamonn in his chosen material of coverite, then sprayed or hand painted in the red of the prototype and letters in black applied. It is worthy of mention that only one Zeta was constructed and this aircraft flown on nineteen occasions only before storage in the 1930's. The aircraft is at present on public display in the car and aircraft museum in Springfield, Mass. U.S.A.

What the Zeta will look like on completion.

Every Scale enthusiast has another aircraft or two in his workshop, and on display stored on a sturdy model rack was a fine Piper Cub, clipped wing, in familiar yellow colours with precise black letters and insignia. This aircraft is powered by a Laser 90 and is known to fly very well on the field.

Piper Cub.

The next project for Eamonn is likely to be a Fokker DVIII, he already has possession of the Balsa USA kit, and assisted with numerous scale documents, photographs, archive materials and plans of the prototype acquired over the years, the said kit will be modified in a wizardly way to emulate the prototype. This aircraft when complete for next year will be powered by a specially imported 26cc petrol engine. Of particular interest, this fine gas engine has the usual walbro carburettor mounted not to the front or side, but instead to the rear behind the crankcase and a wrap around exhaust.

With such a comprehensive and all-embracing collection of tools and materials on view, it was daunting to ask the question – "What's your favourite tool?" In awe and of a mind that a quick clip on the ear might follow such an impertinent question, the given response was measured and certain.

It was explained that in the science of scale building the accurate fabrication of all components is essential, particularly hardwood formers, wing ribs and related parts. The dremel fret saw is used frequently to cut such components and a well-used power tool with excellent results. These results were plainly to be seen everywhere in the Eamonn workshop.

The photographs which accompany this article will give the reader a lasting impression and lesson in what is good workshop management and design. Only a wizard in scale will cast such a spell, and thank you to Eamonn for your courtesy in allowing a fellow scale enthusiast the opportunity to visit your workshop ,and in so doing let other scale heads read about what only can be described as scale magic.

Eamonn points out features of gas engine.

Paul Fetherstonhaugh

50 Years & Counting

Readers might be interested in my 50th anniversary celebration. In the early 60's I competed in Class'B' team racing at the Nats. at Baldonnel Aerodrome. The model was a slightly modified Dalesman powered by an ETA .29. I was well on my way to winning when restarting problems derailed my efforts. Time moved on and I moved away from aeromodelling to pursue other interests. I exchanged most of my models for a motorbike.

I retained a strong affection for the Dalesman and often mentioned it when I returned to the hobby in the 90's. I got very excited when I heard that a friend, (John Hamilton, of stunt fame), had built a Dalesman powered by an ETA .29. A series of hints and appeals to John's generous nature saw me acquire the model this year.

Thus I achieved my dream of owning a Dalesman once more and memories came flooding back. Shown are 2 photos of myself posing with the Dalesman, one from the 60's and the other taken today. I don't know when 'pans' disappeared from the models because they certainly gave them a mean and slippery look.

Dermot O'Flynn

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Retroplane - Paris, France - July 2011

A partial view of the "Parade of Fuselages" during the opening ceremony. Quite an impressive sight, around 150 assorted fuselages all lined up for inspection. They were still arriving as we were putting them away!

Ger Buckley's T30 Slingsbey Prefect seen here just after take off for its first flight at Retroplane 2011

Just a small selection from the aircraft parking lot!

Les Gosnell, Cork MAC, and Ger Buckley, Shannon MFC, debating the fine point of French flying techniques!

Ger Buckley with his 1921 Vintage Scale glider at Retroplane 2011. Note the Cherbourg type background...Looks just like Ireland!

Irelands adopted Frenchman doing what he does best. Fred was the "launcher of choice" for most of the entrants at Retroplane 2011

MASTERS SCHEDULE 2012/2013

1)	½ Clover with ¾ Inside Loops.	K	3
2)	Stall Turn.	K	2
3)	Slow Roll.	K	3
4)	½ Square Loop (exit inverted).	K	2
5)	Triangular Loop (exit inverted).	K	3
6)	½ Loop.	K	2
7)	45º Up 2 of 4 point roll (exit inverted).	K	3
8)	Pull, Pull, Push, Humpty Bump.	K	2
9)	2 Turn Spin.	K	3
10)	Pull, Pull, Pull, Humpty Bump (½ Roll Up).	K	2
11)	Cuban 8 (½ Rolls).	K	3
12)	½ Loop (exit inverted).	K	2
13)	Square Loop (exit inverted).	K	3
14)	Figure 9.	K	2
15)	4 Point Roll.	K	4
16)	½ Square Loop on Corner (exit inverted).	K	2
17)	Figure Z with ½ Roll.	K	3
		Total K	**44**

Early 20th Century Wind Tunnel Testing

In the October 2011 edition of Flightlines, I made reference to the 13% Gottenberg 298 aerofoil wing profile adopted by Anthony Fokker for the Fokker Triplane in the article entitled "The Fokker Triplane".

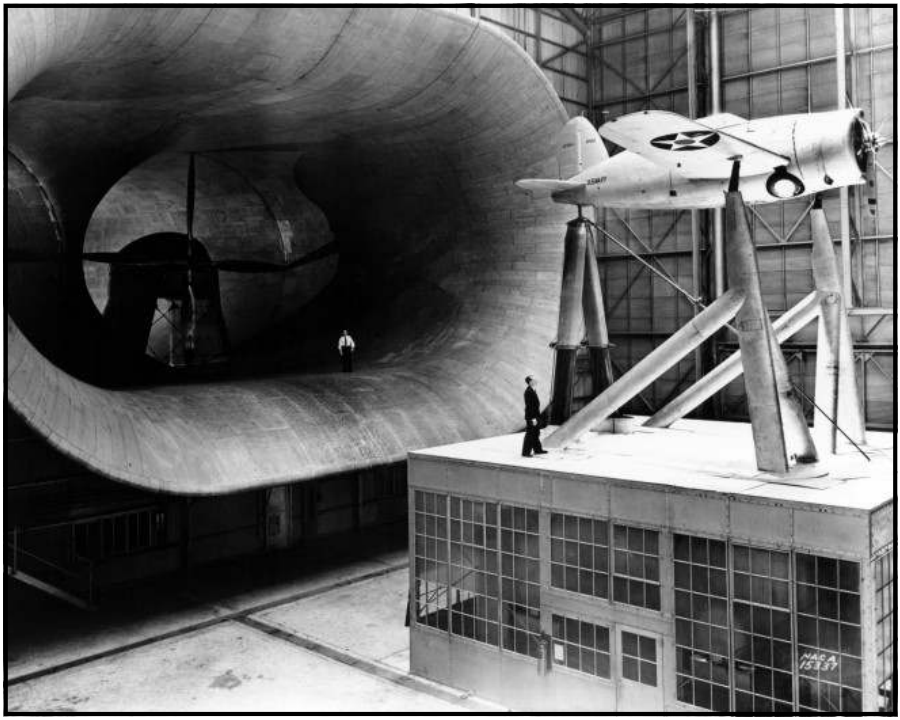
The measurements and understanding of boundary layer airflow was a direct result of experiments obtained largely with models placed in a wind tunnel at the Gottenberg Institution in Germany. While I was aware that wind tunnels were in use in many countries, and that even before powered flight was possible, wind tunnels were used to study aerodynamics. By the outbreak of World War One, at least 19 wind tunnels had been built in Germany, Britain, Russia, Australia, France, Denmark, the USA and Italy.

Further reading revealed that at this time, wind tunnels were mainly used for fundamental research rather than development associated with a particular aircraft type. Nevertheless, some manufacturers tested very extensively. Junkers, for example, made about four thousand wind tunnel tests on four hundred models between 1914 and 1919. (Makes a nonsense of the 'fact' that aircraft of the era were crude 'canvas and string' affairs, and were largely at the cutting edge of current technology).

I referred previously to Ludwig Prandtl's (The Fokker Triplane - Oct.2011) work in understanding boundary layer airflow. In 1910, using models in wind tunnels, he demonstrated that the characteristic Zeppelin pencil form airship hull was not the optimum for low drag and a more favourable bow shape was devised.

The reader should not be duped into thinking that the wind tunnels of the era were trouble free constructions. Far from it. There were many limitations in the smoothness and straightness of the air flow speed and size, and results were difficult to assess. Crude tunnels could give spurious results. By the 1930's it was possible to test real aircraft in giant wind tunnel, but at the end of World War One, even the largest wind tunnel in Germany At the Zeppelin laboratories had only a 9.5 feet wide working section.

The limitations of wind tunnels led the firm of Junkers to overestimate the best thickness for aircraft wings. The tunnel used had an unrepresentative low speed and high turbulence. Nonetheless, the initial tests eventually led to the successful development of Junkers cantilever wings.



1931: The world's first full-scale wind tunnel opens at Langley Field near Hampton, Virginia USA

The increasing use of wind tunnels as a design and development tool, and increasing awareness of their limitations led to a proposal by the German Aeronautical Research Institute to test, full scale, a real aircraft and check the correlation with wind tunnel results. The aircraft chosen was the Roland C2 Walfisch. Aerodynamically, this was probably the most advanced aircraft in Germany at the time (1915). It's wing design relied on sections developed by Gustave Eiffel (he of the Eiffel Tower in Paris), in France before World War One and more recent German wind tunnel analysis. The elegant, low drag fuselage shape was determined after many tests at Gattingen on a 1/5 scale wind tunnel model, (umhhh - maybe a 1/5 scale r/c flying model , Laser 80 and……!).

During WW1, it was standard German practice to access a new design by flying against an existing, well established aircraft under the same conditions. In this way the Roland C2 showed a dramatic 19mph in level speed at low altitude over contemporary braced biplanes.

To test a full size aircraft, other than by the comparison method, the German Aeronautical Institute adopted the novel idea of mounting the aircraft on top of a tower made of steel tubing, which in turn was mounted on a specially adapted flat car, pulled behind a locomotive. A suitable section of track was identified South of Berlin where there was a flat, straight stretch for about 3 miles. In order to carry the aircraft in clear air, and above signals and telegraph wires, the tower, which was detachable, was erected on a ballasted heavy duty flat car, which was then towed by the locomotive.

Roland CII Walfisch

The aircraft was mounted in flying attitude and attached to the top of the tower by the fuselage and the main undercarriage. As stated, the tower was made from steel tubes and wire braced. Long fairings below the main-wheels isolated the aircraft from the aerodynamic effects from the framework. Each fairing enclosed a steel tube framework carrying hydraulic load transducers to measure the aircraft loads in all directions. Observers were accommodated on the flat car below and had indications of time, distance acceleration and wind speed.

It was envisaged that a track test would be far more accurate than a wind tunnel when investigating control effectiveness, radiators, wing bracing, undercarriage drag, propeller effects, fuselage streamlining and checking what could be dangerous flight attitudes. It was accepted that even with the track aligned with the prevailing wind the unpredictable effects of gusting would render useless tests in anything more than nominal winds. Typically gusts cause speed fluctuations of about a third of the mean wind-speed so meaningful tests require wind-speeds of less than, say, five knots. Inclement weather could further reduce the opportunity for test runs. Consequently, tests were made on calm days early in the morning. Work on the track began in earnest in March 1916.

The test track increasingly suffered from shortage of material and workshop capacity. The track was in some disrepair and needed ballast added. Furthermore, the large, heavy, elevated test specimen imposed severe rolling moments untypical of conventional rail practice and difficult to accommodate with standard track, wheels and suspension. Initially only 70kph (43 mph) was possible, unrealistic for an aircraft with a top speed of around 165kph (103mph) in level flight at low altitude.

The track was modified with strengthened rails and further rails were added to give lateral support to the wheel flanges. Then, l00kph (62mph) was possible. However, despite mounting the tower on rubber pads, the shock and vibration were so high that it was difficult to measure and record meaningful results.

Some potentially useful work was initiated on high speed suspension but the fortunes of war changed priorities. The Hindenburgprogramm, introduced in October 1916, soon occupied all men, materials and industrial capacity. Every-where war production took absolute priority. Even so, the Hindenburgprogramm was lagging badly when, on 6 April 1917, the United States declared war on Germany. The Amerikaprogramm resulted. The track test, an inevitable victim, was abandoned in spring 1917.

Eamonn Keenan

Gee Bee 'Zeta'

In the concluding part of 'Undeserved Reputation' part3, I charted the demise and subsequent dispersion of the Granville Company's assets during 1933. Despite this, Howard "Pete" Miller, chief aeronautical engineer with the Granville Bros. Aircraft Inc. remained involved with the family.

The Springfield Airport, the manufacturing base of the Gee Bee aircraft remained in operational use and a number of local pilots, during 1936, Approached Miller with a proposal for him to design a small aircraft which could be built and sold at a reasonable price. The design of the 'Zeta' was laid out and construction was commenced and completed in 1937.

Mark Granville test flew the aircraft and reported excellent flight characteristics. Subsequently the pilot/stockholders, numbering about 15, availed of the opportunity to fly the 'Zeta'. However, the depression, the high cost of materials, the lack of orders for private aircraft and a shrinking market, dictated that it was to be a one off example. An application for CAA certification was never sought although the testing, design and engineering analysis was complete.

The only 'Zeta' ever built, now in the Springfield Museum.

One of the stockholders, Romie Lambert, who hangered the 'Zeta' for several years since it's construction agrees to keep it in lieu of unpaid rent. Over the intervening years, Lambert kept it in immaculate condition and in 1978, donated it to the Springfield Transportation Museum, where it resides along with a replica of the Bee GeeR-1 racer and other memorabilia associated with Bee Gee aircraft and the Granville Company.

When Henry Haffke published plans for a scale model of the 'Zeta' in the July issue of RCM, I was immediately attracted to its graceful and purposeful lines, unusual strut arrangement and attractive colour scheme. But surely it couldn't come from the Gee Bee stable of aircraft which I then assumed were a dangerous series of aircraft and best avoided as scale flying models.

Correspondence over the years with Henry Haffke, (friend of the Granville family), dispelled for me their undeserved bad reputation and I built my first 'Zeta' in the mid 80's. It was powered by an inverted OS 60 Blackhead. The combination worked great until I had a disagreement with an electric pylon.

Incidentally, the OS Blackhead was purchased after seeing and talking about how well it performed in Paddy Bolger's Hurricane, (Limerick Club), back then.

Currently I am in the process of building a 1/4 scale version of the 'Zeta' which will be powered by an inverted 150 Laser four-stroke. I am using an enlarged copy of the original plan, (nothing is ever discarded in this modellers den!), but incorporating a number of modifications and updates to enhance the scale appearance. In order to replicate the steel tubing visible in the cockpit area and windshield frame, I have silver-soldered steel bundy tubing, scavenged from old cars in a breakers yard. It is very light and strong and will allow me to fabricate the attachment points for the struts on the windshield frame.

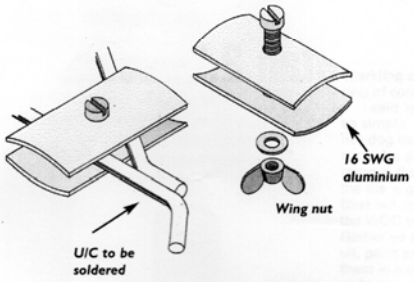
Collins dictionary defines 'Zeta' as the sixth brightest star in a constellation…… now you know.

Eamonn Keenan

Hints & Tips

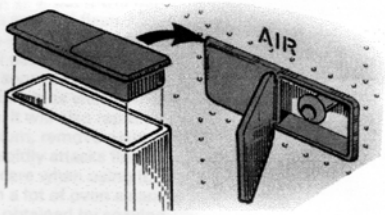
U/C SOLDERING CLAMP

Binding and soldering the ends of wire undercarriages while keeping them flat and in line, can be made much easier with a simple clamp. The clamp as shown is made from 18 SWG aluminium plates about 2" square. The curve means that there is only edge contact, so reducing any heat loss. It can be used with soldering irons or torches. In use, position everything and gently tighten, make any final adjustments and tighten fully.



MINTY ACCESS HATCH

To make a simple access hatch for retract or radio charging connections, glue in the lid from a Tic Tac box or a similar container.



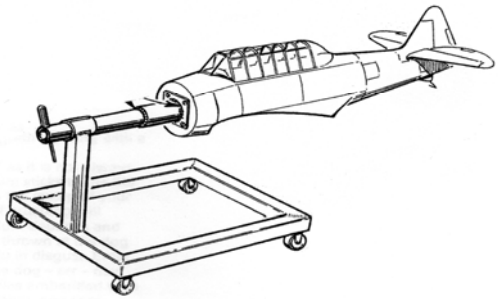
When ABS cowls crack or need extra strength at screw holes etc. use ABS glue from a plumbing supplies store. At the same time you buy the cement, buy a small can of the appropriate thinners.

Mix the cement & thinners 50/50 and paint on to the cowl and apply some nylon or glass bandage and spare pieces of ABS. Do not allow the mixture to pool or it will soften the cowl too much.

This cement is great for adding extra scoops and panels. Just remember to use it sparingly and work in a well ventilated area.

Make a Spray Stand

Base could be an old TV stand or similar. Make it up so that it allows the model to be rotated.



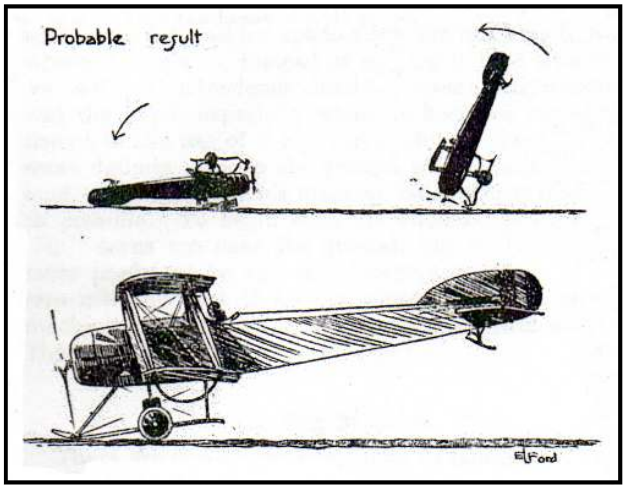
Taking Off and Landing (Circa 1918)

In a previous article in Flightlines entitled 'Handling Tail-draggers' we were given the 'how to' when taxying and taking off a wide variety of prototypes. It was also a very practical lesson for those of us who fly and judge at competitions. The 'take off' and 'landing' manoeuvre in competition has a high 'K' factor and how they are executed can often have a big bearing on scores achieved (and lost). Judges notes will make a distinction as to how a tricycle equipped model and a tail-dragging prototype should take off and land, but they naturally don't refer to specific aircraft type. This is where the article, 'Handling Tail-draggers' is most useful. So the next time you take off your Pitts Special model for example, the tail should lift immediately and you are running on the main gear, whereas your Skybolt model needs a much longer run (relative to model size) before the tail comes up. Different again to your Sukhois and Extras where a three point take off and landing are the order of the day.

In a how to fly instruction manual published in 1918 are fascinating articles on practically everything connected with the equipment and the flying of aircraft of the day, and is most instructive. I have concentrated on the 'take off' and 'landing' aspects and in future articles I'll document some of the instruments and their use, which one could expect to find in aircraft of the 1918 era.

Signals to Mechanics.

The usual method of signifying to the mechanics that the pupil is ready to get off is to wave the hand above the head, whereupon they will withdraw the chocks from under the wheels. When the chocks are withdrawn, the pupil will do well to see that all the mechanics are standing clear. It happens sometimes that one of them, possibly holding down the tail, has not seen the signal, and he or his clothing may easily become entangled in the machine if the pupil went off unexpectedly.



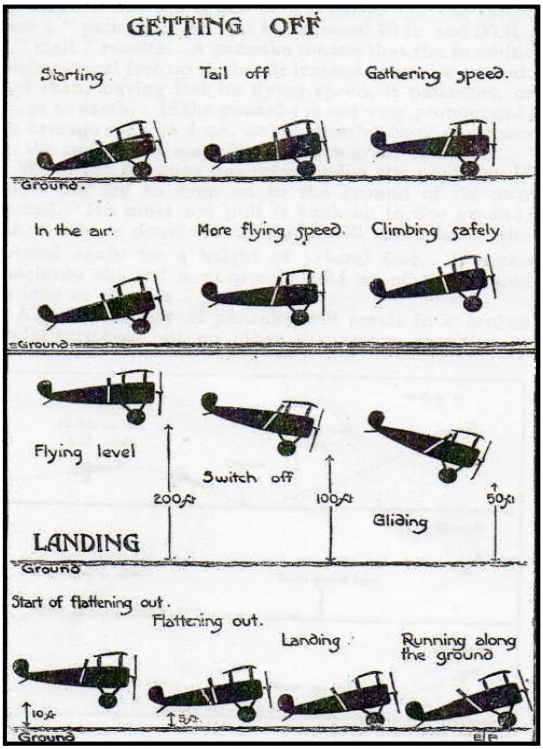
Getting off with the tail too high, with the possible result that the machine might turn turtle.

There is another point which the pupil must guard against, and that is the possibility of the chocks being withdrawn in mistake before he is ready, or, alternatively, in a mechanic starting up the engine without first seeing that the chocks are in position. If the pupil were not already warned against these possibilities, he might easily run over the mechanic, owing to the forward rush of the machine, through the throttle being too wide open, or, in the case of a rotary type of engine, which cannot be throttled down so well as a stationary one, through keeping the switch on too long.

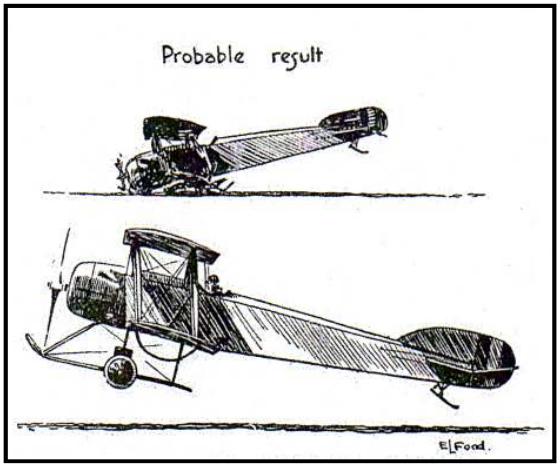
Having satisfied himself on these points, the pupil should make certain that he has a clear run in front of him and that there are no other machines in the neighborhood, either getting off or landing, which can possibly baulk him. This applies especially to machines which might be landing over his head. If he has to taxi out some distance in order to get into the wind, he should make certain that he allows himself ample room in order to clear such obstacles as woods, trees, or sheds.

Getting Off.

Now comes one of the two more difficult parts of a pupil's initial flying experience - the start. It is a good plan to get under way slowly and to open up the engine gently, thus gathering speed gradually. Then, if the machine should tend to swing sideways it can be counteracted by ruddering in the opposite direction before the sideways swing develops into anything serious. A machine may swing sideways when starting for a variety of reasons. Sometimes it is due to the pupil, who is often liable to over-rudder on the ground until the machine is edging in the desired direction. This causes it to swing sideways further than intended. The rudder should be eased off as soon as the machine starts to swing in the required direction. This applies more particularly to fast machines.



Getting off and landing. The movements of the control lever are indicated by the white line on the fuselage (exaggerated). It is of the greatest importance both in getting off and landing, for the pupil to look ahead, so as to have some mark in view by which he can keep the machine straight.



Getting off with the tail too low and without sufficient flying speed. Unless the control lever is immediately put forward, the machine will stall and crash.

Another possible reason for a machine swinging is that the pupil, in opening the throttle, which is placed on one side, may allow his foot to act automatically in conjunction with his hand, i.e., if he opens the throttle with the left hand he may push his left foot forward at the same time. When in doubt, it is a good plan to switch off altogether and to make a fresh start, unless the machine is already in the air.

Engine Economy.

It is desirable to get under way gradually. This saves the machine, which should at all times be treated as a fragile and very sensitive piece of mechanism. It is well, also, to throttle down the engine a little in the air, for it is never a good plan to run it "all out" at any time. On a long flight it pays to throttle down the engine every now and then and to glide down a thousand feet or so.

The pupil starts by moving his stick forward slightly as he gains speed, and by getting his tail well up, but not too high, for, if on a tractor, the propeller might hit the ground, gathering speed gradually and slowly and almost imperceptibly pulling the control lever towards him. When he feels the machine in the air he can ease the control lever forward momentarily in order to allow the aeroplane to pick up speed. The speed will then increase, but the rate of climb will decrease. Generally, it is wise for a pupil not to climb the machine at its lowest flying speed, but rather to allow three or four miles an hour for possible mistakes. The use of the instruments which indicate the speed of the machine is described in Chapter VI.

Land on a Mark.

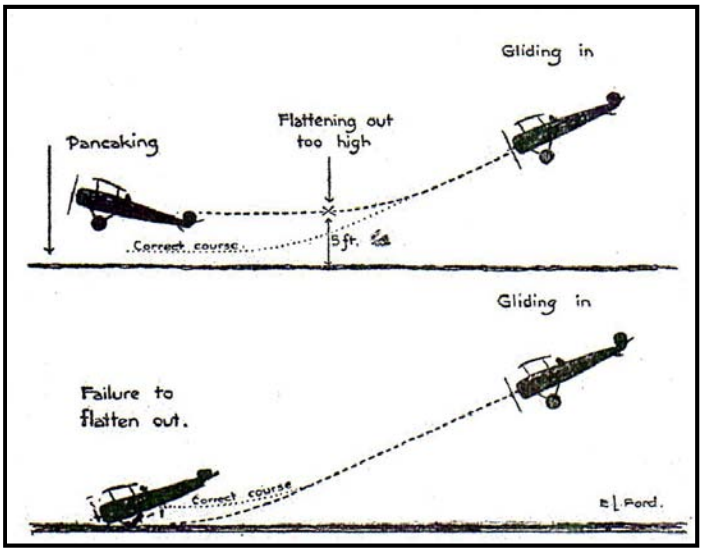
No pupil can expect to make a perfect landing at the first, nor yet the second attempt. It is all a matter of practice, and the best way to obtain proficiency is to practice landings. He can also practice landing on one particular spot in the aerodrome. By flying in a big aerodrome he is all too apt to allow the machine to land where it wants to, instead of making it land where he wants it.

This tendency should be strenuously avoided, and the pupil, especially when he becomes more pro-ficient in the use of "S" turns, should always fix on some definite spot on the ground where he intends to land, and then make his machine land as near that spot as possible. To begin with, he should not make his "S" turns too near the ground, but as he becomes more proficient he can turn lower and lower, always remembering that if he has plenty of speed on the machine he will also have plenty of control over it. The reverse is equally true.

Landing Mishaps.

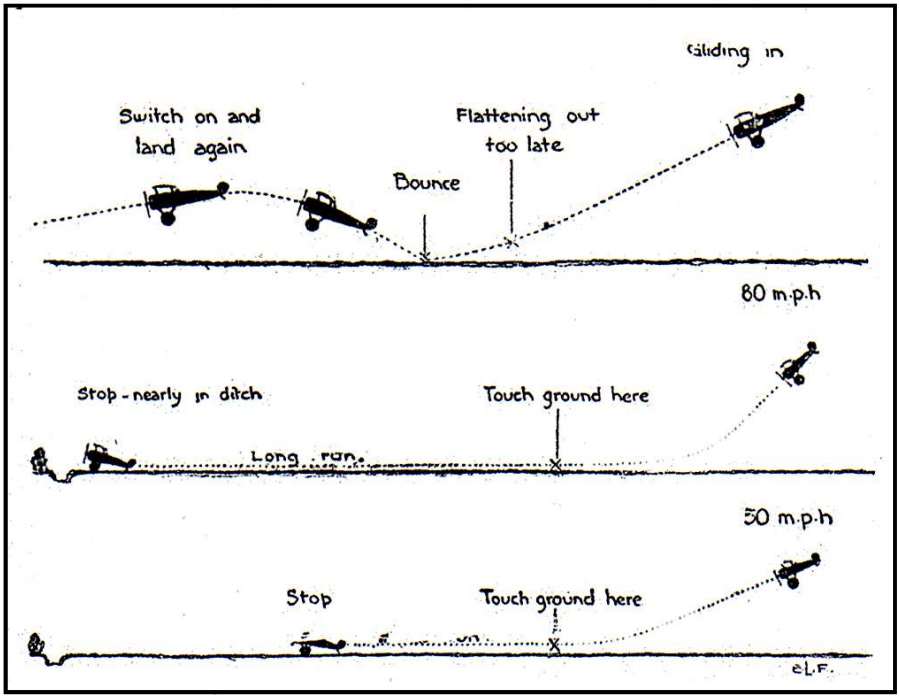
There are two alternative faults in landing, one very much worse because it is more dangerous than the other. A pupil can either fail to flatten out and thus flies into the ground, in which case he probably smashes his machine in landing by turning it over; or he flattens out too much or too early. In the latter case a "pancake," or, if it be between 10 ft. and 20 ft., a "stall" results. A pancake means that the machine lands several feet up in the air instead of on the ground, and then, having lost its flying speed, it pancakes, or drops to earth. If the pancake is not very pronounced, no damage may be done, as the elastic shock absorbers on the under-carriage will take up a great deal of it.

When the machine has once landed the pilot should allow the tail to drop on to the ground of its own accord. He must not pull it back on to the ground, for if this is done the machine will often leave the ground again for a height of several feet. In some machines the tail is purposely held up off the ground as long as possible.



Bad landings. "Pancaking," result of flattening out too high; and the effect of omitting to flatten out, or flattening out too late.

A worse variety of pancake will result in a broken under-carriage, but no other damage to machine or pupil. The worst form of pancake, which takes place when the machine loses its flying speed at a height of 20 ft. to 30 ft., often develops into a stall, which means that the machine loses its flying speed in mid-air, followed probably by a sideslip, when the machine crashes down on one wing and is hopelessly smashed. In this case the pupil may be hurt, although, if the height is not great, he may not be seriously injured, as the wings act as a cushion to the blow by breaking up and thus absorbing the shock. The only method of saving such a catastrophe is to put the nose of the machine down to allow it to regain its flying speed, or else put on the engine and so allow it to pull the machine out of its precarious position: both these operations could only be performed by experts, as the air space is generally too small to allow of this evolution being performed successfully. An expert would get the machine to earth safely by putting the control lever forward and then moving it back again instantly; but the operation requires a quick touch and an accurate eye if it is to be performed successfully. Pupils should not try such a maneuver, as it will generally result in their flying into the ground. If the engine has failed, they will do better to allow the machine to pancake.



Preventing a bad landing by putting on the engine after bouncing. Fast and slow landings and their ultimate effect on the "carry" of the machine.

Bouncing and Bumpy Landings.

There is another faulty method of landing, which results in the machine leaping or bouncing over the ground, owing to its speed being too great when it touches the ground first and the angle of descent not being sufficiently small to allow it to run along the ground. The best method of counteracting this fault is to put on the engine slightly between the bumps and then to flatten out and attempt to make a better landing. This also is by no means an easy operation, even for an expert, whose machine may have been made to bump unexpectedly by striking a ridge of ground, or an unseen bank. If the pupil pulls back the control lever too quickly, when the machine still has flying speed, he will "balloon," or go up, and had better then put his engine on and try again after another circuit. On most machines an ideal landing would be to allow the tail skid and the wheels to touch the ground together. This is called a three-point landing and indicates that the machine has been held off the ground up to the very-last moment.

In landing, it is always good practice to come down slowly and to attempt to strike the ground at the lowest possible speed in conjunction with safety. This does not mean that it is advisable to glide as slowly as possible, as this is dangerous practice, and if turns be attempted on a glide of this kind a stall may result. Instead, it means that when the machine is within 15ft. to 30ft. of the ground the speed may be cut down so that the velocity is as low as possible near the ground. The advantage of this is that the run, or the carry, of the machine when it has once landed is considerably reduced, which assists the pilot in making a landing in a small field. If he landed very fast his carry would be further, and there would be more chance of his running into obstacles or turning over if he had to land on soft ground.

Some pupils, when they see that they are going to overshoot the mark, instead of making another circuit and profiting by their previous mistake, attempt to hit off their landing place by bringing the machine down at a much steeper angle than its ordinary flying speed. This is a common fault and is quite ineffectual, because the machine will have gathered so much extra speed on its descent that it will lose its flying speed much more slowly when flattened out, and will glide across the aerodrome and finally run into a hedge or dyke at the other end owing to its increased momentum.

Eamonn Keenan

2012 Contest Calendar

For Up-To-Date details visit
www.maci.ie

Scale

Please note
All Scale Championships, except the Scale Nationals, will be held on a Saturday. In the event of a large number of competitors or bad weather on the Saturday, then the Sunday will be utilised. Please check with the contact below, or visit the MACI web-site, on the Friday that the competition is going ahead.

15th April	Scale Fly-In *Paul Fetherstonhaugh 087 1331736 scale@maci.ie*	Laois
13th May	Scale Fly-In *Melvin Inwood 045 433050*	Curragh
27th May	Scale Fly-In *Paul Fetherstonhaugh 087 1331736 scale@maci.ie*	Laois
23rd/24th June	Leinster Scale Competition *Paul Fetherstonhaugh 087 1331736 scale@maci.ie*	Laois
14th July	East Coast Scale Champs *Contact Liam Jackson 087 2562293*	Roundwood
11/12 August	Scale Gala (competition) *Declan Henegan 087 2625868 declan.h@unison.ie*	Midland MFC
2nd September	Scale Fly-In *Contact Melvin Inwood 045 433050*	Newbridge
16 September	Scale Fly In *Declan Henegan 087 2625868 declan.h@unison.ie*	Midland MFC
Scale Nationals	Venue and date to be decided	

F3A

28th/29th April	Leinster Champs	Model County MFC
	Brian Carolan 087 6509848 brian@emeraldhobby.com	
19th/20th May	Munster Champs	Cork MFC
	Noel Barrett 021 2475971 nbarrett@indigo.ie	
16th/17th June	Tipperary Champs	Carron MFC
	Gordon James 086 8269840	
30th June/ 1st July	Tripple Crown	Scotland
14th/15th July	South Leinster Champs	Model County MFC
	Brian Carolan 087 6509848 brian@emeraldhobby.com	
Jul 26 - Aug 5	F3A European Champs	Chateauroux, France
	Pierre Pignot +33 5 49235532 pierre.pignot@orange.fr	
18th/19th August	F3A Nationals &Team Trials	Tipperary MFC
	Gordon James 086 8269840	
25th/26th August	Backup for Nationals	
	Gordon James 086 8269840	
15th/16th September	AAA & Team Trials	Cork MFC
	Noel Barrett 021 2475971 nbarrett@indigo.ie	
22nd/23rd September	Backup for Team Trials	
	Noel Barrett 021 2475971 nbarrett@indigo.ie	
6th/7th October	Back up date for first event cancelled.	
	Angus Balfour 086 0407648 aerobatics@maci.ie	

Helicopter

14th April	F3N Championships	Athlone
	Noel Campion 087 9670668 helicopter@maci.ie	
12th May	F3N Championships	Shannon
	Noel Campion 087 9670668 helicopter@maci.ie	
16th June	F3N Championships	CMAC Brinny
	Noel Campion 087 9670668 helicopter@maci.ie	
1st/2nd September	Heli Nationals	Carron Tipperary
	Noel Campion 087 9670668 helicopter@maci.ie	

Control Line

12th August	Control Line Nationals	Cork MFC	Brinny
	Ralph McCarthy 087 8322791 ralph.mccarthy@cit.ie		

Gliding

6th/7th May	Fly In (Aerotowing + Slope Soaring)	Cork MFC
	Richard O'Brien 087 9810851 glider@maci.ie	
TBA	Gliding Nationals	Tountilla

The next MACI Council meeting will take place on Tuesday April 17th 2012 in the Killeshin Hotel, Portlaoise, at 8:00pm.

Kevin Barry seen here struggling under his 5 metre Slingsby Petrel.

Waterford Model Flying Club

20th - 22nd April 2012

FUN FLY!

◆ Jets ◆ Turbine Helicopters ◆
◆ Fixed Wing & Helicopter Pilots Welcome ◆

On-site Catering & Camping

Admission: Pilots €20 Spectators €10

Special Guest

Ali Machinchy

http://www.waterfordmodelflying.com
info@waterfordmodelflying.com
086 0404 505 (Rob) | 087 225 9564 (Richie)