

# Flightlines



**Control Line Model Aircraft**

**When is a Glider Not a Glider**

**Report From the IAA  
Negotiating Committee**





*A couple of Photo's fFrom the Weston Park Model Show 2015*



# Contents

<b>MACI Committee 2016</b>	<b>Page 2</b>
<b>Editorial</b>	<b>Page 3</b>
<b>Update From the IAA Negotiating Committee</b>	<b>Page 4</b>
<b>Control Line Model Aircraft</b>	<b>Page 8</b>
<b>When is a Glider Not a Glider</b>	<b>Page 19</b>
<b>MACI Contest Calendar</b>	<b>Page 23</b>

**On the Cover: 2 Mtr 'Pro Glider' See page 19**

***The next MACI Council Meeting will take place on Tuesday  
March 29th 2016 in the Maldron Hotel, Portlaoise, at 8:00pm.***

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

# M.A.C.I. Executive Council and Officers 2016

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# Editorial

The January MACI Council meeting was bought forward to Friday 8th January owing to the IAA's introduction of new 'Drone' legislation and the effect it was likely to have on Irish Aeromodelling. There was much discussion, (and even some conflicts), as to how it would affect our members and what action we could take. Due to time constraints the meeting was adjourned to the following Tuesday, (12th), as no agreement was reached.

When the meeting recommenced, a draft proposal to put to the IAA was presented. This again caused much discussion, and with some alterations was passed by the meeting. This draft proposal was sent to club secretaries. A negotiating committee of three was elected to take the proposal to the IAA. A sub committee of nine people were also elected to look at the MACI rules and procedures to see if they needed any updating. The meeting was again adjourned as the rest of the agenda had not been dealt with.

The Negotiating Committee met with the IAA on the 19th January where the MACI proposal was put to them. You can see the result overleaf.

The Meeting was finally concluded on the 2nd February.

Once again this is a short issue of Flightlines, even though there has not been an issue out since the October one last year. I really am desperate for articles and photographs. Any contributions you can make would be most welcome.

Safe Flying.

*Chris Clarke*

# **Update from the IAA Negotiating Committee**

In Dec of 2015 the Irish aviation Authority (IAA) published a new Statutory Instrument (S.I. 563) to update the relevant existing S.I from year 2000 covering the regulations for use of model aircraft and other recreational devices. Changing technology in the past few years has brought about a need to regulate the use of drones, a new category not in use in 2000 and only covered by various IAA guidelines and recommendations amended as their widespread use became apparent over the years.

The demand for tighter regulation has been happening all over the world with the USA and the EU being at the forefront of regulation. Indeed the IAA has claimed to be the first authority in the world to have implemented mandatory registration of all drones >1Kg within an “Asset management system”.

Many countries are now finalizing their regulations and because of the myriad types of unmanned aircraft most bodies are now simplifying their descriptions to cover any remotely operated flying device as a “Small Unmanned Aircraft (SUA) and then to impose risk categories determined by weight from 1 Kg to 150 Kg.

## **How does all this affect the MACI member?**

Principally for the purpose of Irish legislation there will be no distinction between a drone, an RPAS (Remotely piloted Aircraft System) and a “recreational model aircraft”, everything we fly, multirotor, aeroplane, glider or helicopter is now defined as an “SUA”.



The new S.I has unfortunately brought our activities under the far more restrictive conditions intended to be imposed on drones only. We have outlined our objections clearly to the IAA and we have received a very sympathetic response.

The MACI negotiating team met with senior management of the IAA on 19<sup>th</sup> January 2016 and submitted the MACI proposals. Since then we have been progressing with the IAA on the wording of exemptions and what changes would be required in the MACI organisation to meet the new regulations.

The IAA have stated that it was not their intention to adversely affect our long standing operations and a legal exemption to many of the paragraphs in S.I. 563 is being formulated in light of our submission.

A contentious issue for modellers worldwide has been the principle of “model registration” by the aviation authority, Ireland appears to be no different. The IAA has taken guidance from the EU and believes that Ireland will be conforming to the proposed EU system of mandatory registration of all devices classified as an “SUA” > 1Kg by 2017.

One of the biggest challenges for us as an organisation will be the requirement to ensure that only pilots trained to an IAA agreed level may fly models above 4Kg weight. The European Aviation Safety Agency (EASA), the body tasked with implementation of the new regulations on behalf of the EU, will be recommending this value to all EU Aviation Authorities based on risk assessments.

Our discussions with the IAA have provisionally approved our MACI training scheme and the suitability of our “A” certificate level qualification as meeting the requirements to fly models above 4 Kg.

The exemptions and rule changes being discussed with the IAA are designed to allow us continue our activities as we currently enjoy them. To achieve this from within the framework of S.I. 563 we must be prepared to make small but significant changes to our organisation in the future.

The IAA are expected to respond shortly with an exemption order allowing MACI members to continue “operating in accordance with their rulebook, flying on MACI registered flying sites as advised to the IAA”

We have been advised by the IAA that the registration of all models over 1Kg on the IAA “Asset” database before their first outdoor flight is mandatory. MACI has been advised that the registration will be valid for a period of 2 years and the cost to MACI members in 2018 will be set at €2.50 per model renewed at that time.

The IAA have now advised that the registration system has been suitably updated to include different types of SUA. The IAA has now asked that MACI members begin registering their individual models.

The system is managed entirely by the IAA so please follow the guidelines at <https://www.iaa.ie/general-aviation/drones/drone-registration>.

The negotiating committee continues to discuss the finer points of this process and will have the final document for discussion and voting at the EGM being called for this purpose in April 2016. The committee will be recommending acceptance of the final document.

Signed on behalf of the IAA Negotiating Committee



# **Wanted**

I like vintage R/C (besides the more state of the art multi rotors)

I also have a collection of older engines ; about 80 Cox engines and a few older OS 2 strokes.

I am looking for older engines people might have in a dark corner of their shed/attic, the ones that are dirty, stuck, and those that look like they have been buried.

Those that they did not get around to throwing away but never will use again.

I love taking those engines apart, clean them, change broken parts, (if available), and get them to run again.

Once they run they will end up becoming shelf decoration since I already have many planes.

Also for that reason there is not a big budget to pay for them besides shipping.

Christian Mulder  
cmulder002@hotmail.com

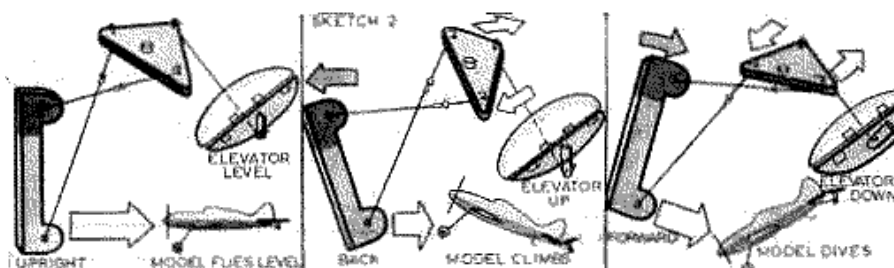
# Control Line Model Aircraft – the original fly by wire??!

*A personal journey Ivan Bolton IRL 165*

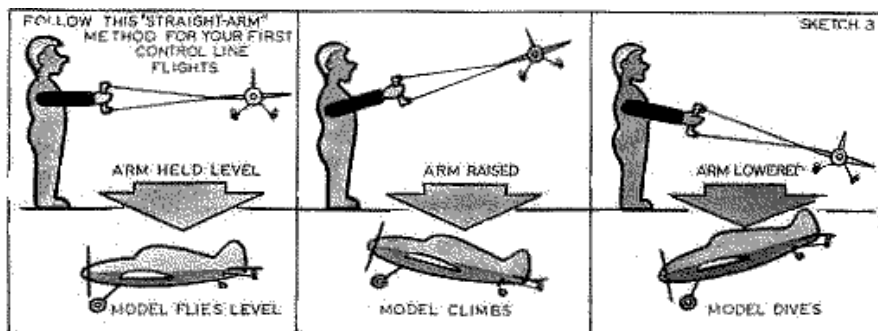
## Part 1 'The older I get the better I used to be' Vincent Corwell

### Genesis

21<sup>st</sup> century fly by wire, nothing new about that - it was invented by aeromodellers as a simple way, from the 1940s onwards, of having direct control of their models. This came long before viable (and affordable) radio control systems became available. Basically the models flew in a circle, usually in an anti clockwise direction, at the end of two braided steel lines, up to 60 feet long, attached to a handle held by the pilot. The pilot had two controls - up and down. Move the wrist (or arm if you were a beginner) up for up and down for down and that was it. The control system in the model was cheap, simple and, if done properly, totally reliable.



It even provides an automatic levelling action. In level flight if the arm is raised or lowered, the model will follow suite until it is level with the arm again. See below. Although this illustration is to show how to approach a first flight, the principal is the same, If the handle is held in a fixed position and the model rises, the bellcrank will start to feed in down elevator. The reverse applies if the model starts to loose altitude. The intensity of this effect depends on a number of factors, and for the beginner, may feel like it does not happen at all, but be assured, it does exist.



When I began serious aeromodelling in the early 1960s there were two options for me: free flight and control line. Radio was there but only for those with very thick wallets and certainly not for pocket, birthday and Christmas moneyed 13 or 14 year olds. I dabbled with gliders, rubber power and free flight (Usually Keil Kraft kits) but tired quickly of fishing models out of trees. I more or less gave up free flight when I lost my lovely Mills 75 powered Keil Kraft Southerner Mite in the Fifteen Acres in the Phoenix Park on a balmy summer's evening in 1963. Slightly too much fuel in the tank gave nearly a one minute engine run (instead of the usual 25 sec) and off it went climbing gracefully in a well trimmed circle over the trees towards the American Ambassador's residence, on a flight trajectory followed by so many out of control R/C models ever since. Apart from a brief foray into FF competition flying an AM 25 (2.5cc diesel) and later AM 35 (3.5cc diesel) powered Dixielander and a Sans Egal A2 glider, circa 1965, it was control line for me all the way.

In the 1960s Dublin control line flying was broken up into 4 main disciplines:

**TEAM RACING** with three classes of racer

½ A (1.5 cc diesel engines) 46' lines Usually the Oliver Tiger Cub proved unbeatable in this class



***Stan Cussen and John McNally with Countdowns by Dick Place a popular ½ A teamracer Nationals 1965. The late Johnny Carrol in the centre. Note the MACI numbers!***

A (FAI) with 2.5 cc diesel engines 52' 2 3/4" lines. Powered by Oliver Tigers, ETA 15s and later Super Tigre 15s



*Con Carroll with one of Gerry  
Hands beautiful Oliver Tiger  
powered FAI team racers*



*Joe Devenish with his FAI Team  
Racer*

*Both Nationals 1965*

Class B with 'enormous' 5cc (.29 cu in.) glow engines. Circa 60' lines. The engine of choice here was the ETA 29.



*Dermott O'Flynn with his Class B Dalesman ETA 29 glow powered.*

The races consisted of three pilots flying together in a circle for 100 lap heats and 200 lap finals (70 laps and 140 laps respectively for Class B) races with pit stops etc . Model speeds varied per lap from up to 80mph ½ A , 90 mph A (FAI) and up to a staggering 115 mph with class B models. Pilots ran around each other in the centre of the circle coping with take offs and landings for fuel pit stops and varying model speeds. It took these models 2.5 seconds (fast) to 3 seconds (slow) to complete one lap. Good team race pilots were, therefore, a highly prized commodity. The other part of the team the pitman, equally important, fuelled and started the motor and managed refueling and starting at pit stops. Consistent wins were only possible if the team, pilot and pitman worked in complete harmony and this took many hours of practicing to achieve. Back then (up to 1967 when I quit) the goal in FAI team race was to complete 100 laps in under 5 minutes with only one pit stop. Do that and you would be at, or near, the top for sure.

### COMBAT

These models were kept simple. They were usually 'flying wings' powered by 2.5cc diesels. (Oliver Tigers or PAWs ) They flew on 50 foot lines two to a circle. Each towed a streamer. The aim and object for each pilot was to achieve as many cuts as possible on the other pilot's streamer in the course of a combat bout. Models did not survive long!!! This was very popular and many people today to whom you mention control line flying will mention their enjoyment of combat flying. I hated it!!!





***Dominator. By Mick Davis (free Aeromodeller plan). Anyone who flew combat in the 60s had one of these***

## STUNT

There were two classes:

MACI stunt for beginners. Models up to 1.5 cc for beginners, flying a simple aerobatic schedule.. The model of choice here was Gordon Cornell's Princess. The motor a PAW 1.5 diesel. 35 foot lines. My very first competition success came in the 1964 Nationals with a PAW 1.5cc powered Princess when I beat Tommy Joyce by all of 1 point!!!!



***The Princess by Gordon Cornell. The old Aeromodeller plan is still readily available.***

FAI Stunt. This was the serious and competitive stunt class with 15 maneuvers including loops, bunts, inverted flight, square and triangular maneuvers. A very challenging schedule flown with what were really under-powered models (today's large powerful 60 and 70 powered models fly the same schedule and it is still challenging!!) All were, and still are, judged for precision by a judge or judges. The most popular models were the Nobler, the Thunderbird and the Crusader. Motors were Merco 35s or if you could get one the Fox 35 and later the OS 35s. It's flown today as Classic.



*One of the most iconic of the FAI stunters in the 1960s  
The George Aldrich Nobler, powered by 35 Glow engines.  
Fox or OS 35s or even Merco 35s usually. This is a recent  
build (2015) from the old original 1960s Green Box Nobler Kit  
Electric Power!!*

## **SCALE**

As the name suggests these were exact replicas of the real thing flown on lines.

So that was it the Dublin control line scene in the 1960's. Of course there were the names: Paul Brennan, Gerry Hand, Con Carroll, Joe Devenish, Eugene Redmond(RIP), Graham Dixon, Peter Bedell, Peter Deane, Bob Montgomery, Dermot O'Flynn, Johnny Carroll(RIP), Tommy Joyce. There were lots more of course but these are the people I personally remember.

## North Dublin Aeromodelling Club (NDAMC)

My aeromodelling life changed when I joined NDAMC around 1963/64. I was introduced to team racing by Paul Brennan. I went from a dabbler to a fanatic inside two years. The club practiced EVERY possible Saturday in Baldonnell, over the concrete, in search of the then elusive 2.5 or sub 2.5 second lap and the sub 5 minutes per 100 laps time. We tweaked motors tried different propellers, fuels and oils and practiced and practiced our starting and flying techniques. The most important instrument was the stopwatch!

Of course we all flew stunt models as well, the odd bit of combat and some scale models (Peter Bedell's Aichi Val, my Brandenburg Sea Monoplane and Bob Montgomery's Fokker Triplane spring to mind) but team racing was where it was at for us.



Brandenburg Sea Monoplane

I built one of these from a Model Aircraft Magazine plan. It had an AM 25, 2.5 cc diesel and I used to fly it off concrete and tarmac in scale competitions on a dolly attached to the floats. My specialist maneuver in competitions with it was one loop!

### Disappointment and Disillusionment

The watershed for me in this part of my aeromodelling career was the World Championships at RAF Swinderby in England in 1966. I was to go with Peter Deane as his pitman in FAI Team Race. However, financial constraints (a mother nearly a year in hospital with attendant bills to be paid by my father) prevented me from going. Graham Dixon took my place (no better man) and they placed 11<sup>th</sup> in the FAI team race there. Results below (first 11 of 48 results)

Individual Classification			FLIGHT		
Place	NAME	COUNTRY	Heat 1	Heat 2	Final
1	Stockton/Jehlik	U.S.A.	4.28	4.25	9:22
2	Hohenberg Turk	Austria	4.33	-	9.23
3	Sherovalov/Radchenko	U.S.S.R.	5.22	4.25	11.23
4	Gurtler/Klemm	Czechoslovakia	4.36	6.10	
5	Turner/Hughes	Gt. Britain	6.35	4.42	
6	Sundell/Sundell	Finland	6.12	4.43	
7	Trnka/Drazek	Czechoslovakia	4.45	4.47	
8	Lutkat/Lulkat	W. Germany	4.51	4.48	
9	Gombocz/Toth	Hungary	4.51	4.48	
10	Fontana/Amodio	Italy	5.00	4.49	
11	Deane/Dickson	Ireland	7.45	4.50	

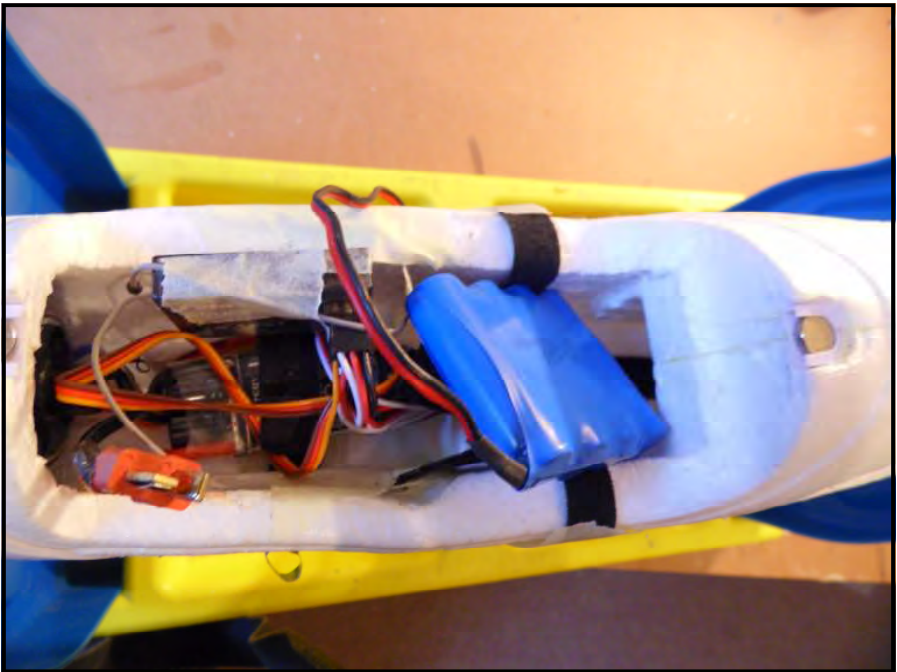
With this bitter disappointment the good had gone out of team racing for me and although I continued for a while I never felt the same about it afterwards. College and study intervened and my racers, motors and other C/L models were sold off to buy books . Apart from a brief foray with a new FAI Stunter in 1970 (A Bob GialdinaiMerco 35 powered Olympic sold on quickly to Peter Deane) and building and flying a Keil Kraft Caprice A1 class glider in Cavan, where I had ‘emigrated’ to go teaching it was all over for me, aeromodelling wise. Little did I know then that I would not return to control line until 2009, some 38 years later and oh boy had things moved on!!

To be continued.....

## When is a Glider Not a Glider?

Recently while recovering from a general anaesthetic, (after having my wallet opened) I pondered the following question; When is a glider not a glider?..... When it's got a motor, perhaps?

“Well, maybe that's not strictly true,” I thought. “Isn't that like saying a car isn't a car if it has a hybrid power system?” I guess powered gliders are hybrid's too, well,...sort of.



*Ni-Mh are a bit of a squeeze*

I must confess I've always been a bit of a purest when it came to model flight. My view was that if I wanted to fly a model with a propeller I'd fly a 'proper' powered model, and if I wanted to fly gliders I'd fly a 'proper' glider.

I supported myself in this concept by insisting that the extra weight of a flight battery and the increased drag of even a folding propeller would greatly reduce the models' glide ratio and therefore had to be a bad thing. However,.....

I remembered, as a young lad, being offered my first splif. I declined the offer maintaining that I wasn't into smoking such substances. The girl who had offered me the chance to 'open my mind' dismissed me as a 'square' (old fashioned) and walked out of my life, never to be seen by me again. (Pity,...she had a lovely bum.) But that experience taught me a valuable lesson. 'Don't knock what you haven't tried.' (Especially when it's being offered to you by an attractive girl)

So,.....returning to matters aeronautical,.....I recently scummed to curiosity and purchased a foamy Powered Glider.

With a 2mtr span, it's a pretty 'standard' sort of powered glider. It only cost me £120 plus shipping as I already had an old 3S Li-Po to fit in it.

I found it can glide, very slowly. ( The foamy, not the Li-Po.) That it can climb, very quickly. And it's glide ratio?..... ain't at all bad.

However I wanted to test my long held theory that the extra weight of the flight battery and prop drag would have a negative effect on the glide slope. So, I took a small (500mAh) 4S Ni-Mh battery with me to the slope as well as the models' 'normal' 1200 mAh 3S Li-Po.

At the time of this experiment the sun was shinning on the slopes of Mt. Lienster and the breeze was very light, probably no more than 7 Kph. I first launched the glider with the Li-Po in it. There was sufficient lift for the model to fly without the use of the motor and ten minutes of soaring was enough to establish the abilities of the model to glide, without power, in those particular conditions. After landing I set about changing the batteries over to the smaller Ni-Mh.

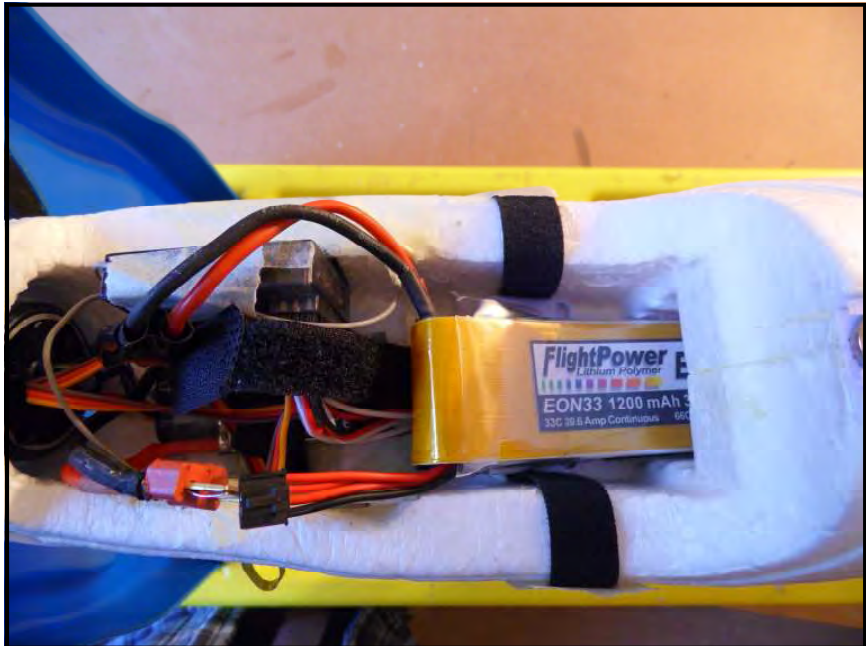
That's when I hit the problem. Although the Ni-Mh battery was smaller overall, it was a different shape and didn't want to fit in the fuse within the space provided at the CoG. Of course any sensible pilot would have checked this out back in the workshop, but as my dear wife so often reminds me, I am “only” a man, and the thought of the different battery shape hadn't occurred to me.



I must tell you that trying to affect this change of batteries through the confined space of the 'cockpit' of this little glider was not without it's annoyances. Not least of which were a gaggle of young children who insisted on flocking around me and asking silly questions such as, "Are you going to crash it?" "Can I have a go?" (presumably at crashing it) and, "Is it going to fly above the clouds?". To which I replied, "No NO, and NO!" (Personally I think all children should be put down at birth, although I understand that there are a few people in the world who don't agree with me on this point.)

Back in my workshop such difficulties as fitting different batteries into confined spaces is rather easier as I can relieve my frustrations with copious high volume utterances of obscene language. But once again the presents of these 'young people' prohibited me obtaining such relief.

Persistence, I am told, is a virtue and eventually the Ni-Mh was shoe-horned into place, and the prop blades removed although I left the spinner in place to maintain aerodynamic efficiency. So how did it fly? Well, in all truth, I really couldn't detect any difference! Presumably there must have been an improvement in the models' gliding ability having lost nearly 350 grams of all up weight, but I found no discernible difference.



*Li-Po's Fit Nicely.*

I've known for years that if I can get a glider to sufficient height it's normally able to find some degree of lift, even on the calmest of days. But apart from using a tug (aero-tow) to tow the glider up to that critical height I had no way of getting mine up there, until now

**To summarize then:**

1. Although there must be a flight penalty for the weight of a larger battery and the prop drag these seem only marginal when viewed from a general “sport” gliding point of view.
2. The ability to gain considerable height when lift conditions are poor at ground level is a definite advantage.
3. The knowledge that you can always get your model back to the landing zone and thereby forego the “Walk of Shame” when your model would otherwise have landed out is a another benefit.

Since that first flight, my little powered glider it has accompanied me often to the slope and some times to the flat field.

Hybrid gliders have been around for years and I have always ignored them. Maybe it's time I changed, me thinks.

***Keith Crittenden***

IRL 4906



# 2016 Contest Calendar

For Up-To-Date details visit  
**[www.maci.ie](http://www.maci.ie)**



## **Scale**

- July 24      Leinster Scale Championships.      Laois Club Site  
*Contact Steve Elster 086-2653332 [elsters@tcd.ie](mailto:elsters@tcd.ie)*
- Sept 11      National Scale Championships  
*Contact Steve Elster 086-2653332 [elsters@tcd.ie](mailto:elsters@tcd.ie)*

## **Helicopter**

- April 3      F3N Round 1      Waterford  
*Contact Barry Kennedy 089-2454774 [helicopter@maci.ie](mailto:helicopter@maci.ie)*
- May 15      F3N Round 2      Boora, Co. Offaly  
*Contact Barry Kennedy 089-2454774 [helicopter@maci.ie](mailto:helicopter@maci.ie)*
- June 12      F3N Round 3      Brinny, Co. Cork  
*Contact Barry Kennedy 089-2454774 [helicopter@maci.ie](mailto:helicopter@maci.ie)*
- Aug 27-28      Irish Helicopter Nationals      Carron, Co. Tipperary  
*Contact Barry Kennedy 089-2454774 [helicopter@maci.ie](mailto:helicopter@maci.ie)*

## **Control Line**

- April 23      Shannon Control Line Fly In      Shannon Club site  
Free tea and coffee (and Mrs McCarthy's famous bakewell cake).  
Even if you don't fly C/L - come and watch real fly by wire in action.  
*Contact Dermot O'Flynn 061-331810 [dermot.oflynn@yahoo.com](mailto:dermot.oflynn@yahoo.com)*
- May 7-13      F2A,B,C,D Control Line European Championships 2016  
Whitman Park, Perth, Australia.  
*Contact [office@cl-wch2016per.org](mailto:office@cl-wch2016per.org)*

## **Aerobatic**

May 7-8	North Munster Aerobatic Championships	Carron, Co. Tipperary <i>Contact Gordon James 086-8269840</i>
May 28-29	Munster Aerobatic Championships	Brinny, Co. Cork <i>Contact Ray Keane 087-2591341</i>
June 18-19	South Leinster Aerobatic Championships	Enniscorthy, Wexford <i>Contact Brian Carolan 087-6501284</i>
July 9-10	Leinster Aerobatic Championships	Ballyhealy, Ballivor, Co Meath <i>Contact Bill Thompson 086-2622089</i>
Jul 28-Aug 2	F3A European Aerobatic Championships	Untermunkheim, Germany <i>Ewald Trumpp +49-7906-8383 contest.director@ec-f3a-2016.de</i>
Aug 20-21	Irish Aerobatic Nationals	Roundwood, Co Wicklow <i>Contact Tony Greene 086-0212549</i>
Sept 9-11	F3A Triple Crown	Enniscorthy, Co Wexford <i>Contact Brian Carolan 087-6501284</i>
Sept 24-25	Autumn Aerobatic Activities	Carron, Co. Tipperary
Oct 8-9	Back up date for canceled events	TBA. <i>Contact Ray Keane 087-25913</i>

## **Glider**

April 16-17	SR Slope Fest	Mount Leinster, Co. Wexford
Sept 24-25	ISR Slope Fest - End of season	Mount Leinster, Co. Wexford



*Is this a touch over 1 kg?*





*Adam Kelleher, Bandon model flying club, 7 years of age, prop hanging his Klik NG*