

Medlemstidning för föreningen Sveriges Linflygares Intressefrämjande av Stunt

LIVA

Nr 2-20



God Jul och Gott Nytt År!



Join the
Weatherman
HYPE

SPEED • STUNT • TEAM RACING • COMBAT



I detta nummer: Börja med El-stunt • Belgien anno dazumal
• MC-72 som stuntmodell • Ringmaster • James Mears Memorial
• Minns Ni 1965 • 35 Draken • Scarlet Witch • Västkusträffen
• Weatherman • Enya • Quiz • Tips från Frank • och mycket mer...



Stort sortiment av byggmaterial

Balsa, plywood, hårdträ,
rundstav, lister m m.



Proxxon

Vi är återförsäljare för
Proxxon maskiner och
verktyg.



MBS

Ö1 Tummelisa, byggsats.

Nyhet!
Bo Gårdstads
modeller och
Produktions-
rättigheterna till
Blue Phoenix

Verktyg

Många verktyg
för hobbyisten i lager.



MBS RC Models Din hobbybutik!

I Herrljunga sedan 2009

Balsa, modellflygplan, batterier, båtar,
dekaler, fartreglage, fläktar, färg,
hjul, kablar, klädsel, kolfiber, kontakter,
laddare, lim, lister, motorer, penslar,
piloter, plast, plywood, propellrar, skruv,
sändare, verktyg, väv, med mera.

Följ oss gärna på Facebook och Instagram!

mbs

RC MODELS

MBS RC Models

Björkvägen 1, 524 32 Herrljunga
info@mbs-rcmodels.se
www.mbs-rcmodels.se
Telefon 0730-69 09 75

LINA

• SPEED • STUNT •
• TEAM RACING • COMBAT •

LINA – Nyhetsbladet för medlemmar i Sveriges Linflygares Intressefrämjande av Stunt. Bladet behandlar dock alla former av linflyg. Syftet med SLIS och LINA är att bidra till linflygets utveckling genom spridning av kunskap, skapa kontakter, förmedla nyheter, publicera ritningar samt informera om tävlingar och resultat.

LINA utkommer med 2 nummer per år. Ansvaret att sätta samman tidningen delas av Ingemar Larsson och Niklas Löfroth. Bidrag till LINA mottages tacksamt av redaktionen! Ingen censur eller förkortning av bidrag utan bidragsgivarens tillstånd.

Från och med 2021 kostar 1 års medlemskap inom Sverige 250:- medan det för Norden/Europa/Världen är 300:-. Avgiften sätts in på Plusgiro 96 34 51-0.



SLIS Websida:

www.slis.org

Ordförande:

Staffan Ekström
Klockarevägen 10H
247 34 Södra Sandby
046-514 75
staffan.ekstrom@telia.com

Kassör:

Ove Andersson
Åsgatan 2C
724 63 Västerås
021-13 17 42
ovef2b@gmail.com

Sekreterare:

Niklas Löfroth
Skolbacken 12 C
656 71 Skattkärr
070-209 69 65
niklas.lofroth@icloud.com

Redaktör

Lina Nr 2 2020:

Ingemar Larsson
Forbondegatan 14
462 41 Vänersborg
0521-672 12
ingemar.larsson.vis@telia.com

Redaktör

Lina Nr 1 2021:

Niklas Löfroth
Skolbacken 12 C
656 71 Skattkärr
070-209 69 65
niklas.lofroth@icloud.com

Are you longing for ...

... a paper edition of LINA to bring into your favourite sofa together with your warmest blanket? Then you are not alone as this is what many of Lina's subscribers do. And it is easy to make your dreams come through, just read on the left side of this page. If you live abroad the easiest way is to contact one of the editors and PayPal the subscription fee to them. Maybe you want to give away a Lina subscription to your wife or a good friend, as an appreciated Christmas gift? ■

Ingemar Larsson

INNEHÅLL I DETTA NUMMER:

• How to start with electric Stunt av Ingemar Larsson.....	4-6
• Using Laser to get things in level av Roger Ladds	7
• Christmas Greetings av Ari Sipilä	7
• Belgium "anno dazumal" av Ingemar Larsson/Luc Dessaucy.....	8-11
• Time to build a Ringmaster av Daniel Petcu	12-14
• Fly-A-Thon / Christmas Greetings av Daniel Rota	15
• Året var 1965 av Ingemar Larsson med flera.....	16-20
• Austrian F2B Nationals av Heimo Stadlbauer.....	21
• The story of Landres av Jean-Paul Perret.....	22-24
• CLAPA F2B Nationals av Stephen White	25
• Macchi MC-72 as an F2B Model av Peter Germann.....	26-28
• Christmas Greetings av Stephen White	29
• Amusements - Model Quiz av Ingemar Larsson	30-31
• Saab 35 Draken av Ingemar Larsson.....	32-33
• Czech F2B / F2D Nationals av Jan Kopriva.....	34
• Italian F2D Nationals av Piero Incani	34
• Dansk Mesterskab av Luis P/Dan H/Steen L/Kent T.....	35
• Norgesmesterskap F2B & Weatherman av Norvald Olsvold.....	36
• Finska Mästerskapen / Kuopio Classic av Alf Lindholm	37
• Christmas Greetings av Roger Ladds	38
• Christmas Greetings av Joe Devenish	39
• James Mears Memorial C-t Bash av Arlene & Bob Mears	40-41
• The early years at Enya av Adrian Duncan.....	42-44
• Frank's DOs and DON'Ts av Frank Wadle.....	45
• Väst kustträffen av Michael Palm	46-47
• Scarlet Witch av Bruce Perry.....	48-50
• Christmas Greetings av Gunter Wagner	50
• Christmas Greetings av Peter Alstrup	51
• Weatherman-tävlingar av Ingemar Larsson.....	52-55
• Christmas Greetings av Walter B / Han E / Maris D / Magnus J	56-57
• Dansk Flymuseum av Luis Petersen / Ingemar Larsson.....	58
• RIP	59

• **On the cover:** "Everyone is flying Weatherman nowadays except me because I have seen the light". If you have a sharp tongue you might say this even if it's not really true. But it is true that Weatherman is hot in these days of corona and no IRL contests! The first page background must be a wallpaper pattern every devoted C/L flyer just want to have in every room in his home. Or might the beloved partner say NO? Well, maybe you have to limit the re-decoration to your work shop only...

How to start with electric Stunt

Introduction

This article have the intention to give an overview for those who intend to start with electric stunt, not to give a detailed description of every aspect of it. Hopefully you will know more after reading this article and from there move on and seek info on the web (or by talking to others who already fly electric). As with every subject you always find different opinions and I'm sure that some readers may have objections or additions to things said in this article. Well, we just have to live with that.....

I have tried to split the article into different sections, each with a single subject and then we tie it all together in the section on the timer/control unit (ESC), which can be said to be the brain in the system.

Model

If you fly IC today your first question might be: "Can I convert my existing IC model to electric?". The answer is yes but with a big BUT.... If you have an IC model that doesn't fly so well and your thoughts are "I can as well convert that one" then the advise is: Don't do it. A bad model doesn't get better just because you change it to electric. It is just a waste of time and might even discourage you. You can see examples of converted models where the electric motor is mounted in the existing bearers using an adapter and this can be done if the electric motor has a small diameter. A better idea is to rebuild the nose so you can attach the motor with a radial mount. Here you can choose two ways; one is to reinforce the back of the existing engine compartment and mount the electric motor there. Another way is to reinforce the nose ring and mount the engine there as it gives a stable mount close to the propeller.

Depending of what batteries you choose it might be necessary to rebuild the tank compartment as well. The CG will probably be close to the same spot as when you had an IC engine and you adjust it by moving the battery backward or forward. One thing to keep in mind is that the battery has the same weight no matter if it is fully charged or discharged so the CG will not change during flight as when using a fuel tank. So the decision if you should move the CG forward or leave it is up to you and how the model feels when you fly. But it is definitely worth trying different CG positions.

After this talk about rebuilding an existing model it is time to come with the best advice: Build a new model for your electric career!



View of the inside of Peter Germann's model and the battery pack holder.

Motor

How do I know what electric motor size to choose for my model? Well, the best option is to visit the web pages of different manufacturers and look at the specifications as it is common to list what equivalent IC engine a certain electric correspond to. Another thing to consider can be to choose a slightly oversized motor and not run it at max rpm. More on this in the ESC section.

Another way to decide the size could be to go by the weight, having a .35 model use an electric motor weighing around 150 grams, a .46 model to have a 180 gram motor and a 180-220 gram motor for a .60 model. You can also calculate by adding 10 Watts for every 30 gram of model.

Motors come in different diameters and different lengths. As you probably buy the motor before you start build your model this is no problem. You may find motors with a 16 mm front bearing but also some cheaper brands with 11 mm bearings. The 16 mm motors will withstand forces and inertia from the propeller much better and thereby last longer. If you also mount the motor in the front ring it will be even better.

Brands to consider can be OS, Axis, MVVS, Cobra or DualSky.



Front mount of motor 1 (Serge Delabarde).



Front mount of motor 2 (Serge Delabarde).



Motor seen from the front (Serge Delabarde).



A stable mount is essential for a good function (Serge Delabarde).

Get electrified now!

Batteries

Batteries are a science in itself especially with the LiPo's used here. Handled the wrong way they can start to burn and if you travel by plane to contests there are special rules for bringing them on your airline flight. Sizes, quality and price differs between brands even if they are of the same rating.

For a smaller model use a 3 to 4 cell battery and a 4 to 6 cell battery for larger models, with a capacity between 2200 mAh and 3700 mAh. As the formula $P=U \times I$ is valid here it means that more cells (=higher voltage) means you can have a lower mAh value. A battery should always be chosen so there around 20% of the capacity left when your flight is over as LiPo's don't like to be fully discharged. There is no need to cool the batteries during flight and on cool days it could even be an advantage not to do it. If you fly on cold days batteries should be stored in a "warm" cooling box (ie you use the cooling box to preserve the "warm" temperature) otherwise they will loose capacity.

Manufacturers use a C rating to describe how much they can be discharged without getting damaged (ie inflate, swell, run out of balance between cells, getting warm etc). A 25C battery cannot stand as much discharge as a 45C battery (which can take as low as 10% remaining capacity). A higher C value normally also means higher weight but also less heating up during flight. After a flight a battery must cool down before you charge it again and if you have discharged it too much you should start by short charging periods. Never store fully charged batteries, ie just charge them a little before storage.

Zippy batteries are cheap but can last as long as more expensive ones if you just take good care of them. Other brands are Nanotech and Turnigy.



Front view of Peter Germann's model.



Installation by Christoph Holtermann.

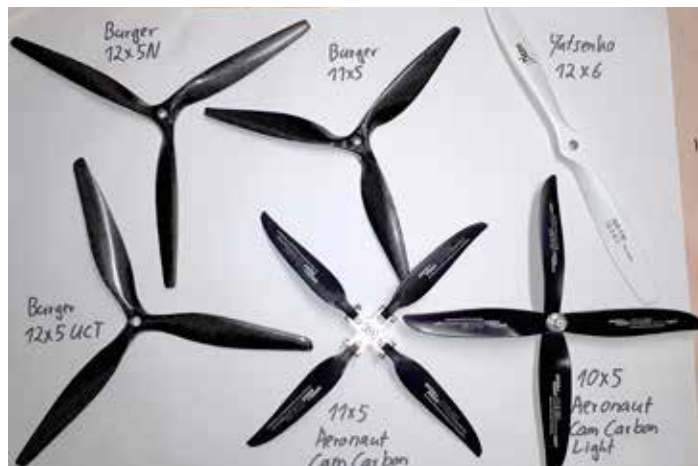
Propellers

As a start you can consider a propeller of 10" or 11" diameter for a .35 equivalent model and 11" (3 blade) or 12" (2 blade) for a .60 equivalent model. Both with a pitch of 5" or 6". But as you will see in the ESC section the size is dependent of many factors. Propellers used shall be stiff and light and carbon or wood is preferred to plastic ones. Avoid heavy props like some APC types. Using a 3 blade may be an advantage as this will cause less wear on the small ball bearings in the electric motors. Do not experiment with 4 blade propellers at least not as long as you are learning to fly electric.

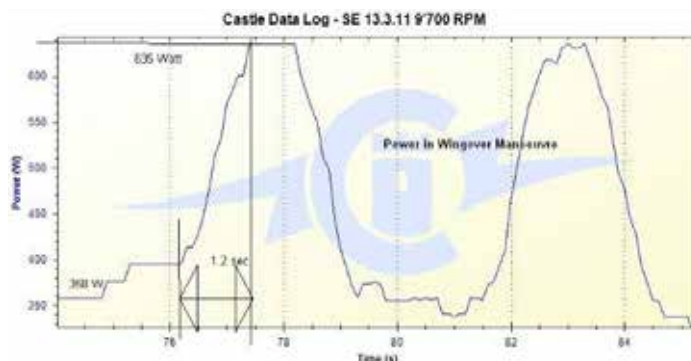
Example of ESC programming of Edge Lite 50A for AXI 2820/14 and 4S batteries used by Peter Germann.

Vehicle Type: Control Line
Governor Mode: Governor High
Initial Spool Up Rate: High (8)
Brake Strength: 100%
Brake Ramp: Medium
Voltage Cutoff Type: Soft Cutoff
Current Cutoff Type: Hard Cutoff
Battery Pack Voltage: 14.800
Motor Timing: Normal (5)
PWM Rate: 8 kHz
KV of Motor: 860
Power-On Beep: Enable
Link Live Enable: Disabled
Automatic Data Reset: 98%
Logging; 2 sample/second:

Throttle Type: Governor Mode
Governor Gain: Low (15)
Head Speed Change Rate: High (8)
Brake Delay: No Delay
Cutoff Voltage: Custom 12.8 V
Current Limiting: Very Sens. (50A)
Auto-Lipo Volts/Cell: Inactive
Motor Start Power: Medium (59)
Direction: Reverse
Gearing Info: No Gear./Direct Drive
Magnetic Poles in Motor: 14
BEC Voltage: 5.0 V
Auxiliary Wire Mode: Disabled
Firmware: V 4.25
 (Voltage, Current, Control Temp, Input Throttle, Controller Motor Power Output, Motor RPM, BEC Voltage).



Example of different props (Christoph Holtermann).



Log file showing power versus time in a wingover (Peter G).

Lines

You can begin with the same lines as you use for your IC model of the same size but very soon try both shorter and longer lines to seek the performance that you feel comfortable with. Just as you would do with every new model. Another thing you might want to test are stiffer lines (less flexible) as these will give more precise manoeuvres. Maybe the PAW Staystrate 3 strand 0.35 mm (soldered) lines can be an alternative (yes, they have the strength!). Even if you fly in an environment without any oil in the air you should always clean the lines before each flight.

Basic's about e-stunt!

Control unit and timer circuit

In the end all components used in your power line must work together, from Propeller to Motor to ESC (Electronic Speed Controller) to Timer to Batteries. Having one incorrect may spoil your whole setup. So it is important to use some extra effort here and seek information, both from fellow flyers and also from different web sites.

The ESC circuit can be a simple one just distributing the power from the batteries to the motor or it can be intelligent with several programming options. In the latter case you also need some sort of box or programming device to take advantage of the intelligence provided. This circuit may have a RPM Governor function which means that the RPM can be controlled depending on if you fly level or upwards or downwards (like a cruise control in your car). With this mode the ESC are set in Heli Mode (helicopter mode). Apart from the governor function the ESC also manage commutation. As the motors are brushless they do not have any mechanical commutator and instead this is done electronically by the ESC. And the last function of the ESC is power control by PWM (Pulse Width Modulation) so the motor can run as hard as you want. It is a good idea to have some sort of cooling intakes in your model to cool the ESC as it can be quite warm during flight.

The timer circuit in its simplest way will only control your flight time and turn the ESC off at a desired point. Also here you need some sort of programming box as you may want to set the flight time at your own preference. The box is necessary if you have an active timer where there are a lot of parameters to program, some also have the governor function to work together with the ESC to control RPM flying upwards and downwards as well as a brake function. Luckily for the beginner most of these functions can be turned off until you are more familiar with all these parameters.

When calculating your setup you start with the kV value for the motor. It tells you the RPM per Volt and for F2B you need somewhere around 650 to 890. To exemplify this we can take a motor with a kV of 760. This means that it will do 760 turns per minute per voltage. If we have a 4 cell battery (14.8 Volts as each cell gives 3.7 Volts) this gives us $14.8 \times 760 = 11248$ RPM which can be good for a 6" pitch prop. For a 5" pitch prop you would need a higher RPM. But to give the governor (ESC) something to work with you should aim for a kV that gives you 1000-2000 RPM higher than the RPM you want the motor to run at. In this example a motor with a kV of 820 would be ok. So this shows you that there are three variables to play with and that is why you can see different setups if you study different pilots.

Note that all ESC's don't work with all timers and vice versa and you must find a proper combination of these two. But that info can be found on the web or elsewhere. One popular brand for the ESC is JETI but many others can be found at for example Hobby King. For advanced timers you have the ones from Igor Burger and Keith Renecke as well as the Hobin system plus others. Begin with a simple setup and then move on when your knowledge increases!



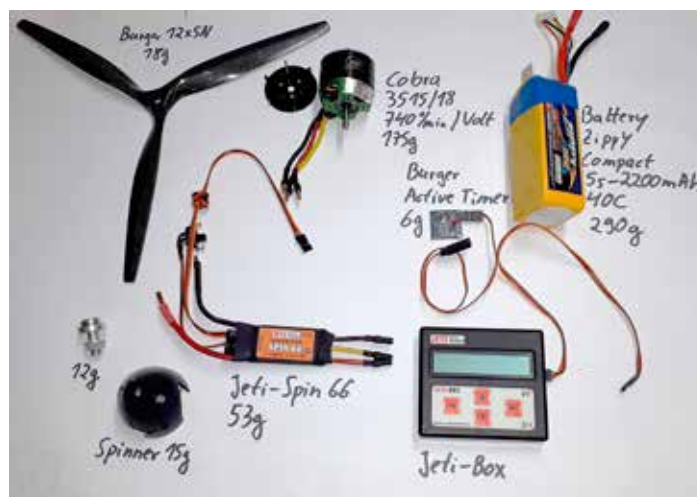
Programming unit for Hubin FM-9 Timers (Peter Germann).

Example of timer settings used by Peter Germann:

Delay at start:	35 sec
Run Time :	5 Min 10 sec
ESC Mode:	Phoenix New High
RPM, ca.	9'645
Popeller:	Fiala Holz 13 x 6 E3 Pusher
Lap time:	5.2 sec on 19.5 x 0.4 mm Lines

Trimming

Start with putting the CG at around the same spot as with your IC model. From there you have to do a fine-tuning to find your setting. Probably move the CG backwards and also adjust the lead-outs backwards. It is of most importance that your controls work with little friction. In an IC model the engine vibrations will loosen up the controls but as there are very little vibrations with an electric motor you can have a hunting or oscillating problem if your controls have a lot of friction. As mentioned earlier the battery doesn't change weight when unloading (like a fuel tank) and this must be considered when you trim your model (probably by moving CG backwards). Many pilots install the motor with a down thrust of 1-2 degrees as it helps trimming and cure hunting tendencies. Side thrust is not necessary but can be done with 1-2 degrees.



All parts you need (Christoph Holtermann)!

Conclusion

It takes knowledge to switch from IC to electric in Stunt! Using IC engines gave you challenges and it will be the same when switching to electric as there are no shortcuts to get a working system no matter what components you use. But sometimes it gives you a restart in your aeromodelling career to face a complete new way to make the plane move forward.

Seek more information

In order to become electrified you need to gather more knowledge than can be found in this article and here are some places to visit: www.stunthangar.com, www.controlline.org.uk, www.jetimodel.com, www.hobbyking.com, www.os-engines.co.jp/ and www.flyinglines.org/pw.trimflow1.html.

Acknowledgements

to Igor Burger, Serge Delabarde, Peter Germann, Bruce Hoffman, Christoph Holtermann, Jan Kopriva, Roger Ladds, Clamer Meltzer, Kevin Morgan, Barry Robinson, Frank Battam, Russel Bond and Mark Williams for their valuable contributions to this article.



Using Laser to get things in level



Modern technology has caught up with our hobby in more ways than one. I had read Chris Cox's article last year as published in the last CLAPTRAP and looked on good old e-bay for a 'crossline lazer' as he suggested. The excuse to "you know who" was it will be handy when we next decorate!! Oh yeh was the reply.

On receipt of my purchase for a princely sum of £20 I proceeded to set up a profile model I was completing and found it quite easy to use. I mean you do not need to be a Brain Surgeon to use this Tool, so much so the accompanying pictures tell their own story. The only thing you need is a reference point to set the lazer to. With the profile model that was the fin which had been attached to the fuselage flat on the bench. The pictures show a full fuselage model on which I had attached the stabilizer again on the bench making sure it was at ninety degrees to the fuselage center line so everything was referenced off that.

So there you have it, easy to use and a bit similar to a female as it can "multitask" also.

Roger Ladds

Christmas Greetings from

Ari Sipilä

59 Ares is my first controlline model for 40 years. I fly Rc models quite a lot, mostly F5J gliders and jets. I have always admired classic C/L models and especially the beautiful shapes of the 50's and 60's, which in my opinion are the best ever.

My Ares kit is made by Brodak and I tried to make it light, but still reasonably robust. It is covered with Orallight and decorative patterns are Orastick. Paint is also from Oracover brand. Works fine. I think the original painting pattern is nice. So i tried to copy it as accurately as possible with my favourite colors. Wheelpants are made from balsa and covered by Esaki silk and painted after that. Motor is a 2820 size brushless with 60A Yge speed control turning 10x5 pusher prop. Battery is 4s2200, governor is KR2 and flying weight is 1195g. I use mostly 62 feet Ukrainian lines.



Have had around 20 flights so far and it flies just great and is easy to fly.

Ari Sipilä, FIN

Belgium "anno dazumal"

by looking in the Dessaucy Family photo album

It all started as a question – how come Belgium had so many flying sites in the 50's and 60's and why did they organize so many Internationals and Champs? Was it a deliberate investment from the authorities or were there other reasons...

I passed the questions to Luc Dessaucy, well-known F2B and F2C flyer from Belgium, as his late father, Jean Dessaucy, was part of Belgian Aeromodelling at the time. Luc says that he doesn't think there was any particular reason for what happened in Belgium. Just that it is was the start of Control Line flying around the World and it met a lot enthusiasm from both pilots, the public and authorities. Some competitions took place at military airfields like Melsbroek (Brussels) and Bierset (Liege) while others were flown at the town square like in Knokke sur Mer. Etterbeek (also Brussels) had tracks made of recovered material from a temporary military airfield (bituminous material used extensively for aerodrome runways during the war).

In Genk the circles were paid for by the local municipality and Verviers financed their by having two Euro Champs. In Namur they flew on a suitable area at the citadel. Many clubs had sites with a hard track but not of the size to host International contests. It all started with the first Critérium in 1949 and continued for over 30 years until the last one (18th) in Genk 1981. Some of them also had the status of European or World Championship. In this article you can enjoy photos from 1949 to 1963 and it might very well be that we do a follow-up in a coming issue of Lina.

1st Critérium, Knokke 1949



Knokke, a small Belgian coastal city, hosted the first Critériums. The municipality (actually, one of the pilots was part of the Mayor's family!) offered the town square as flying site and they even dismantled some lamp posts so the 10 cc speed models could fly.

Only 5 countries took part in the two classes Speed and Stunt. To the left: French Stunt flyer Malfait is preparing for flight. Maybe he also flew speed? Many pilots at this time flew both classes.



2nd Critérium, Knokke 1950



Powell and Salter from GBR



Swiss Team properly dressed showing their models to the crowd



Excited Belgian audience

3rd Critérium d'Europe and Speed World Championships, Knokke 1951



Another view of the town square in Knokke. Looking at the photo you can imagine what kind of happening it must have been for the people living there. No noise complaints... All competitors had walking distance to the circle as they stayed at hotels around the square.



Meuwli (SUI) with his double elliptic speed model. Fascinating construction!

Speed Team of Belgium with a quite huge starter...



Belgium "anno dazumal"

by looking in the Dessaucy Family photo album

7th Critérium, Etterbeek 1956



Stunt winner Gérard Lecomte (BEL)



Tank volume control

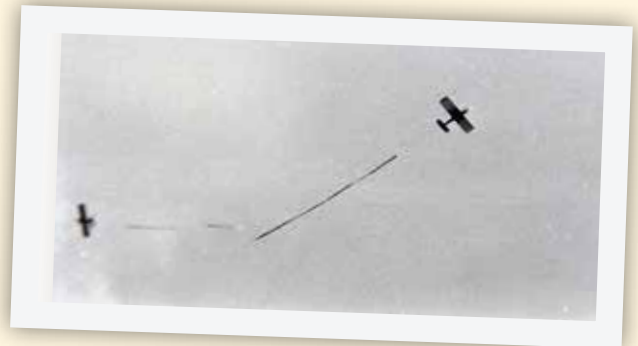
Combat!

More Combat!

8th Critérium, Etterbeek 1957



Belgium Team from left to right: Firmin Papegnies, Paulin Deligne, Marcel Deville, Jacques Simons, Fernand Piret, Henri Stouffs and sitting Jacques Janssens.



9th Critérium d'Europe and World Championships, Etterbeek 1958

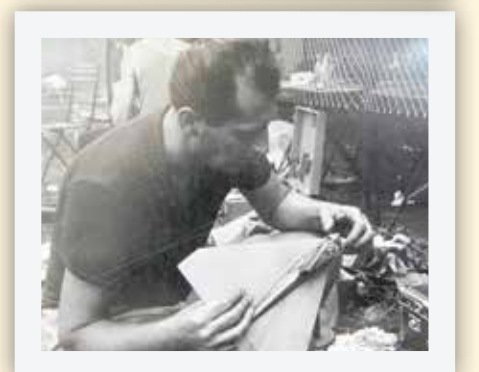


Néry Bernard from Belgium. Shortly after the photo was taken the model was destroyed in a crash.



View over the circle, models and pilots. This time pilots from 15 European countries took part in Speed, Stunt and Team Racing. The Etterbeek site, with two hard circles, was considered the best in the World at this time.

Sladky from Czechoslovakia used flat solid metal wings in his MVVS-powered speed model.



Belgium "anno dazumal"

by looking in the Dessaucy Family photo album

10th Critérium d'Europe, Etterbeek 1959



One of Belgiums most successful Stunt flyers, Louis Grondal. He won the World Champs in both 1960 and 1962 plus several Critériums and European Champs.

At that time you had to fly both the FAI pattern and the AMA pattern and this made Louis construct a model he called AMA Special later named as Grondal Nobler. More info can be found on outerzone.



Louis Grondal's wife holding his model.

11th Critérium des As, Genk 1961



The Organiser's staff in Genk.



Italian Jaures Garofali (in the center) surrounded by interested (!!!) fans.



By 1961 Genk had taken over as the best C/L flying site in the World. Looking at the photo you understand why. Four tarmac circles plus grass circles. Up to the left a small circle probably used for tether cars or just a small C/L circle... Note the Jury Tower in the center of the four circles and down left tents for the competing teams!

Later on all circles were moved and the European Champs in 1981 were held at another place within the area.



Spad model of German pilot Erich Heimann.

Belgium "anno dazumal"

by looking in the Dessaucy Family photo album



F2C winners, Zolotoversch/Kobets from USSR.

Genk were to host two more Internationals (1969 and 1981) while Liege (1965 and 1967) and Verviers (1975 and 1977) also hosted two contests.

Namur only had one in 1970 but that was a World Championship. But, as said in the beginning, that is another story.

12th Critérium des As, Genk 1963



British Combat Team; Pete Freebrey, Stu Holland (winner of F2D), Pete Smith and Peter Tribe.



Haenebalcke of Belgium flew F2D. The combat contest was flown on tarmac and not, as you could expect, on grass.



Yuri Sirotkine of USSR flew his MVVS 5.6 cc equipped Spacehound to a second place, only 14 points ahead of Finland's Juhani Kari.



Stunt pilots Maçon (BEL), Sirotkine (USSR) and Grondal (BEL) probably discussing square eights...



Close look at the engine in Kuznetzov's speed model.

Nice looking speed model.



Combat model of Swede Peter Evers. Super Tigre G20/15D for power.



Kuznetzov from URSS set a new World Record in one of the speed classes.



Time to build a Ringmaster

Ringmaster was constructed in the late 40's and has since been one of the world's most built C/L models. The S-1 variant we build here was constructed by Matt Kania in 1950 and sold as a Sterling Model Co kit. The model is easy to build and will give you pleasure for years to come. In fact, can a C/L flyer be without a Ringmaster in his collection? So let us start building one right now! The plan can be downloaded from outerzone.co.uk.



Let us start with the ribs for the wing. As they are of different size we first make three templates in plywood and put it into one package before sanding it to shape.

The three main ribs are made of plywood as they must be strong enough to hold the bellcrank. Here they are together but later glued and form a center unit with the bellcrank mounts.



When making the ribs you also make holes for the lead-outs and for the two carbon tubings used to stabilize the wing. The tubings also makes it easier to build a straight wing without any skewness. Use templates to get the distance between the ribs when gluing the wing together. Then glue the leading edge in place. As you see on the photo we use a flat board to build on and that the tubings rest on pieces of wood. Below you see that next step is to glue the two trailing edge balsa stripes. Use clothespins while the glue dries.



Here you can see the construction of the center of the wing and how the bellcrank will be attached. Below the job with the cap strips is almost finished.



The stabilizer and rudder are made from solid balsa and on the adjacent ends two carbon tubes are glued and then kevlar string is used to form hinges.



The fuselage and rudder are also made from solid balsa while the engine mounts are redwood. It is important to get the engine, wing and stabilizer on a zero degree line and best way to do this is to use a metal ruler.



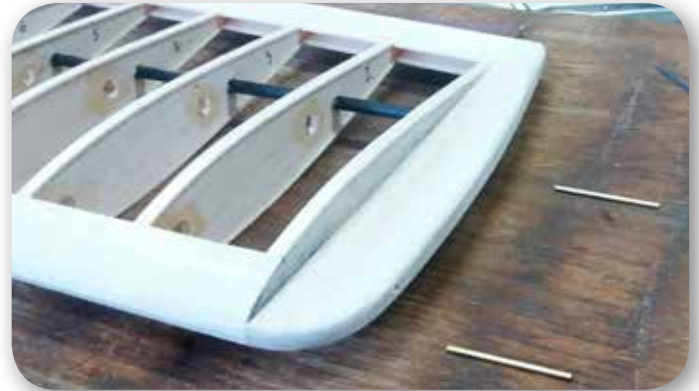
Daniel Petcu tells you how to do it!



Instead of a spur wheel, a piece of plywood is used.



Use a plastic horn or make one in plywood.



The lead-outs in the wing tip are reinforced with 2 mm copper tubing.



The bellcrank is made from a sheet of metal and in the center we want an axis with a diameter larger than the bolt (to get less friction). And one way is to make one in the lathe. Down to the right you can see the result.



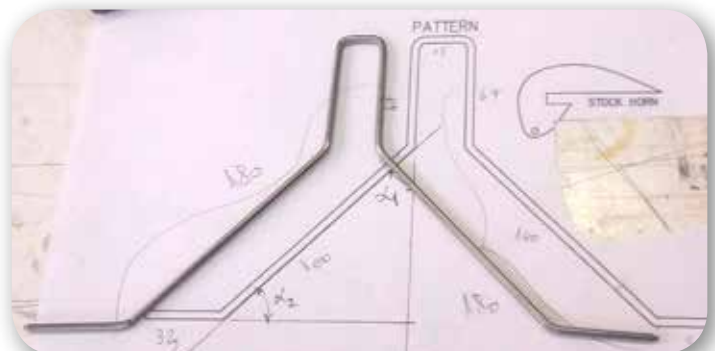
Now it is time to mount the bellcrank and before it is put in place you attach the lead-outs. They can be made from either piano wire or multi-strand wire. Also note that the front balsa strip in the leading edge is covered with balsa on all sides forming a box (the front carbon tubing is actually inside this box).



The landing gear is mounted before you attach the wing. To reinforce the front of the fuselage we glue 2 mm plywood on each side.



Landing gear is made from 3 mm piano wire and bent in a vise. Use templates to get correct angles. If you succeed it should look like the one on the photo to the right.



Make it a Ringmaster winter project!



When all wooden parts are made it is time to test that it fit together including engine. The original Ringmaster was flown with a Fox 15 and that is what we use here too.



Instead of the original Fox nut we made a new nut/small spinner. Looks much better this way, don't you think so?



While painting the fuselage the landing gear is removed and put back when the paint is dry. It is painted in the colors of the original Brotherhood of the Ring sticker. None of these parts are covered with silk etc before painting just because it will be a small load on this type of model.



And this is the finished model ready to fly! It is mandatory to attach a "Brotherhood of the Ring" sticker on the wing!



Before the wing is covered with transparent plastic film some parts are painted red and yellow just to give a better look.



And now you can enjoy your Ringmaster for years to come. Why not try to fly more than one at the same time. Of course without streamers...

Hopefully this article inspired you to build a Ringmaster during the winter and join our "Ringmaster society". A good start for that is to go to www.brotherhoodofthering.info and register as a member. On that site you find a forum for exchange of information, a calendar of activities, an album plus much more. Feel free to contact me if you want more info.



Daniel Petcu (Romanian branch of the Ring)

Fly-A-Thon

Every year a Fly-A-Thon (ie "fly-as-much-Ringmaster-as-you-can") is organised to honour Matt Kania's beloved Ringmaster control line model. It has been built and flown by more modelers than any other control line model airplane!

This event is not a contest and no registration is required and is open to all participants worldwide! There are no entry fees or prizes!



Take the chance to be part of something big and help make history by having more worldwide Ringmaster flights in a single weekend than earlier years. Any Ringmaster from 1/2A to Giant and all variants in between can be flown.

In 2020 the flights took part in October and amazing 5555 flights were done by 545 pilots worldwide. Can it be beaten next year?

More information can be found at www.ringmasterflyathon.com

Christmas Greetings from

Daniel Rota

Daniel sends his greetings by telling about his new record in F2G, electric speed, set at the Swiss Champs in September. Then he flew amazing 302,7 km/h. Here he will give us some data:

The model we use is named E-Agle and all of us here in Switzerland use the same model even if we have individual setups. The original was designed by Guy Ducas but is now modified.

Engines used are normally from LEO (L3025 or L3031). The rule limits are put on the batteries; max 42 Volts and max weight of 190 grams (1100 mAh). The control unit (ESC) is from Castle Poenix (Edge Lite 50A).

The Propeller you use for around 230 km/h is 4.75x4.50. With a 4.75x4.75 you can reach 250 km/h and with a 5x5 you can fly above 270 km/h.

A setup that does 270 km/h is quite easy to accomplish but when you are aiming for higher speeds it needs more effort.

It's ergonomic, easy to use and very safe. ■

Daniel Rota, SUI



Året var 1965

Visste Ni detta om 1965:

- > En Enya 15D-II kostade 73:-.
- > Vårtävlingen gick av stapeln på Bromma och samlade 75 piloter varav 7 danskar, 2 norrmän och 1 amerikan. Ove Andersson vann Stunt medan Speed vanns av Dirch Ehlers Danmark före Steve Wooley USA och Ove Kjellberg. I TR-A blev Jens Geschwendtner 3:a medan TR-int vanns av Kjell Axtilius. Roger Holmberg Linköping vann Combat-A och klubbkompisen Staffan Larsson vann Combat-int. Här kom Pelle Gelang på 3:e plats. Ulf Larsson kom 2:a i Combat 35 där finalen bjöd på en "kollision av grövsta kaliber med ett enormt regn av balsasplitter".
- > I Modellflygnytt pågick en het debatt om landslaget. Vissa hävdade att landslagsuttagarna inte skulle träna då detta slet på utrustningen vilket i sin tur skulle medföra att de presterade dåligt på mästerskap. Linflygarna ansåg dessa åsikter som "nys".
- > I maj hade Motala sin Stunt- och Combat-tävling. Nu vann Alf Eskilsson Stunt med Ove Andersson som 3:a. Combat 35 hade 15 deltagare och vanns av Staffan Larsson.
- > SMAE (engelska modellflygförbundet) sades ha 200 klubbar med 5400 medlemmar. Av dessa hade t ex 899 tävlat med segelmodeller, 52 i RC samt 332 lag som tävlat i Team Racing. Siffran lät så otrolig att jag kontrollerade den med Derek Heaton och han bekräftade den...
- > Rolf Hagel blev förste Elitflygaren efter de nya reglerna (föregångare till Stora Grabbars Märke). 25 poäng kvalificerade för märket och Rolf fick 42 poäng på direkten.



Matti Lahtinen från Finland flög till sig en 3:e plats i Speed vid NM i Norge. Pokalen är nyputsad och Matti tror det var denna modell han gjorde 193 km/h med. Vann gjorde Mattis landsman Ralf Ekholm på 211 km/h medan Jens Geschwendtner från Danmark blev tvåa med 194 km/h. Clamer Meltzer kom 7:a och satte norskt rekord med 165 km/h.

- > I Jönköpings Läns Modellflygförbunds Jubileumstävling vann Pelle Gelang Combat-int medan Roger Holmberg vann Combat-A. I Stunt kom Alf Eskilsson 2:a och Ove Andersson 3:a. Noterbart är att linbilåkare Leif Kärrman kom 8:a i Stunt!
- > EM gick i Liege Belgien. B-O Samuelsson gjorde landslagsdebut med fullt godkänd tid (12:e plats) men att största uppmärksamheten gick till den elektriska kompjustering Alseby/Hagberg (13:e plats) använde. Pelle Gelang var ende svensk i Combat och efter 3 omflygningar och ett antal trasiga modeller/motorer åkte han ut i 1:a omgången (mot den engelsman som sedan vann rasket). I Stunt segrade Juhani Kari från Finland medan hans landsmän bröderna Sundell kom 3:a i Team (med infällbart ställ). Bäste nordbo i speed blev Ralf Ekholm på plats 4 med 214 km/h och Ove Kjellberg blev 20:e med 186 km/h. I och med de goda finska insatserna vann Finland det totala lagguldet.



- > NM gick på Gardermoen utanför Oslo men då det var en militär anläggning finns inga foton från tävlingen. Staffan Larsson vann Combat efter att besekrat norske Andreas Ytreöy i finalen. Juhani Kari vann Stunt före Ove Andersson. Clamer Meltzer blev 4:a och Alf Eskilsson 6:a. Bröderna Sundell vann Team före två andra finska lag. Bröderna Hasling blev 4:a medan Axtilius/Ahlström blev 5:a och Samuelsson/Johansson 6:a. Finland vann lagtävlingen och tog nästan alla priser utom det till bäste norrmän där Andreas Ytreöy fick en RC-anläggning (!)..
- > SM arrangerades av Orion-klubben och fick ros för fint arrangemang. Rolf Hagel vann Speed och Ove Andersson blev 2:a i Stunt, Erik Björnwall 4:a och Alf Eskilsson 5:a. I Team kom Gösta Bengtsar 2:a och Kjell Axtilius 3:a. I Combat vann Peter Evers finalen mot Roger Holmberg.



B-O Samuelsson och L-E Johansson



- > Solnas Pokal kördes under kyliga förhållanden, eller mer korrekt är kanske kyla, bläst och regn. A-Team vanns av bröderna Geschwendtner och Team-int av bröderna Hasling. Att vara bröder från Danmark var tydligen ett vinnarkoncept! Ahlström/Fransson kom 2:a i A-Team medan Ulf Larsson kom 2:a i B-Team. För Kjell Axtilius blev det en 2:a plats i Team-int.



- > Under hösten drog två svenska lag i B-Team till Finland och Malms flygplats för att delta i en ovanlig tävling. Kvalheat om 200 varv och final om 1000 varv (med 4 lag!!!). Båda svenska lagen gick till final efter att haft de snabbaste kvaltiderna. Efter ca 150 varv landade den ena svenskmodellen i den ena finskmodellen med skatbo som följd. Trots att reglerna tillät att man drog in nya linor bröt båda lagen. Då det andra finska laget var tvunget att ta ett längre stopp för att löda fast landningshjulet (!!!) drog svenskarna mer och mer ifrån. Enligt reportaget såg piloterna, efter ca 750 varv, ut som de sprungit bredvid modellen hela tiden..... Strax efteråt landade finnarna för hårt och kom inte upp igen medan det svenska laget med upp bjudande av sina sista krafter kunde ta sig i mål. Tiden blev ca 46 minuter och man hade då haft 17 omtankningar. Lag 1 bestod av Svedling/Eklund och lag 2 av Kjellberg/Sannes. Kanske något att ta upp som tävlingsklass igen?

Året var 1965

Anders Ahlström minns

Året var 1965 och min bästa kompis var Per-Arne Fransson även kallad Pecka. Vi hade lärt känna varandra i 7:an där vi var klasskamrater och hade båda fått eller köpt en 1,5 cc motor med tillhörande linkontrollmodell. Dock hade vi inte en aning om hur vi skulle få igång våra motorer och jag minns att vi tillbringade många timmar med att försöka starta dem. Så en dag var det flygdag på Malmsslätt där även modellflygklubben LEN fanns. De lockade oss att komma till klubbens kurser och att flyga linkontroll. Rätt snart förstod vi hur vi skulle få igång våra motorer och att de enkla profilmodeller som vi hade bara dög att flyga planflykt med. En riktig combat-modell var det man skulle ha! Klubbens ledare hette Göran Alseby och han har betytt väldigt mycket för oss alla i LEN. Han startade kurser och ordnade olika PR-aktiviteter bland annat en sportlovsaktivitet i februari -65 där vi flög linkontroll inomhus i sporthallen.



Vintern -64/65 samlades hela klubben (linsektionen) kring projektet. Vi byggde ett antal combatplan, vilka var en nerskalad version av Spader Kung och med Baby Bee 0,8 cc glödstiftsmotor. Linorna var 8 meter. Det funkade riktigt bra och det gick att flyga riktig combat i sporthallen. Minns att vi klädde hela golvet med svart plast som skydd. En annan grej var dubbelkommando när nybörjarna skulle lära sig flyga. Det sparade många krascher och gjorde så att man kom förbi en tröskel i inläringen. Vid den här tiden 1964-65 så växte klubbens linflygsektion och vi var ca 15 aktiva. De flesta av oss var födda -49 och vi var skol- eller klasskamrater. Det fanns några äldre t ex Lennart Norrbom och så förstås Göran Alseby.

1965 var vi alltså ett gäng 16-åringar som var med i LEN-klubben. Vi hade en fin sammanhållning och den gemenskapen fortsatte



Peter Evers (Obs! Med kavaj!), Harald Sannes och Anders Eklund.

även utanför klubbens egentliga verksamhet. Mellanölet kom hösten -65 och vi drack nog en hel del av det samt hade skivspelare i klubblokalen och spelade den tidens tuffa musik som t ex Rolling Stones. På lördagskvällarna förvandlades klubblokalen till en festlokal

Vårtävlingen -65 blev min första tävling i Stockholm. På den tiden hade tävlingen 75 deltagare! Det var även deltagare från Danmark och USA och man blev väldigt imponerad och inspirerad av detta. Team Racing blev redan då min favoritklass. Kjell Axtilius och Kjell Rosenlund blev förebilder. Båda körde med Oliver Tiger. Vid en resa till London under sommaren -65 gick jag runt till olika hobbyaffärer och hittade till slut en Oliver Tiger MK III. Vilken känsla att öppna kartongen! Vilken finish på motorn! Här skulle byggas Team Racer.

Men tillbaka till VT -65. Jag flög tillsammans med Pecka i TR-A och min gamla Webra hade blivit upphöjd till Team-motor. Prestanda var väl inte lysande och våra konkurrenter från ÖSFK (Lennart Andersson, BEA Olsson, Njurling m fl) plus danskarna undrade vad katten hade släpat in på Bromma. De andra var överlägsna med sina Oliver Cub. Olyckligtvis pga vår dåliga rutin lyckades vi orsaka lintrassel för bröderna Geschwendtner och det resulterade i att vi fick lära oss en mängd danska svordomar. De tyckte att vi var pest! Men redan nu var LEN etablerat i combat. Roger Holmberg, Bernt Gustavsson, Bo Nilsson, Pecka Fransson osv. Staffan Larsson vann NM-combaten det året. Roger kom tvåa på SM efter den i vårt tycke oslagbara Peter Evers. Peter var combatens elegant och gentleman. Jag ser på en gammal bild från 65 att han har kavaj vid prisutdelningen!



Kjell Axtilius mekar sin AHLAX.



Göran Alsebys Arctic Circler.



Kjell Rosenlunds Miss FAI.



Uffe Larssons modell.

Varför var vi så bra i Combat?

* Sammanhållningen i klubben. Vi var ju flera som hjälptes åt på tävlingarna.

* Enhetliga modeller. Så gott som alla i LEN hade Spader Kung med Webra i Combat-A och Ruter Ess med Super Tigre i Combat-int. Jag minns att vi blev rätt duktiga på att meka med Super Tigre.

* Konstruktionen av våra modeller byggde på en hel del nytänkande. Bakom detta låg Göran Alseby och han jobbade på SAAB där han hade tillgång till expertis på både konstruktion och aerodynamik. Profilen till Ruter Ess togs fram av en SAAB-kille som hette Dillner. Det nya var att den profilen var mera rundad än vad som varit vanligt tidigare. Det gav bättre vändbarhet. Även hållfastheten var förbättrad jämför med andra dåtida modeller som hade furubalkar (tex Piraja). Frambalken var en lädkonstruktion vilket är både starkt och lätt. Konstruktion av fena och sidenklädd stabbe och motorblock klätt med glasfiber var också bra saker signerat Alseby.

Senare under 60-talet blev vi allt bättre även i Team Racing med SM-guld 68 (Bernt) samt två lag i finalen på SM 70, deltagande på EM-67 och VM -68 och -70 (Jag och Pecka). Vi lyckades så småningom besegra våra gamla idoler Rosenlund, Alseby och Axtilius. Men de fortsatte att vara förebilder...

Året var 1965

Pelle Gelang minns

Jag minns inte mycket från NM och inga foton finns (fotoförbud på Gardermoen)!! Jag minns bara att det var en jäkla lång resa (i Gunnar Klings farsas bil, tror jag) och att vi fick sova över i Gunnars kusiners fjällstuga i närheten. Har för mig också att det blåste och regnade och var allmänt otrevligt.

På EM i Liège var det fruktansvärt dålig organisation. Domaren hade aldrig sett en Combattävling, hade uppenbarligen inte läst reglerna och kunde inte prata engelska. Mötte engelsmannen Pete Smith och efter en krasch, där båda fick ta till reservmodellen kom engelsmannen upp i luften utan serpentin - en mekanikermis! Det blev omflygning! Sedan gick serpentinerna sönder i luften av sig själv mm....

Till råga på allt flögs combaten på betongbana!! Jag fick flera väldigt korta motorer! Pete Smith's modeller var ju bussar jämfört med mina! Mina var väldigt manövrerbara tack vare låg vikt och vingtankar(!), han kunde på sin höjd göra en stor looping vid behov, något som han aldrig behövde eftersom jag aldrig fick någon serpentin att försöka klippa!!

Jag var verkligen besviken efteråt och svenska lagledningen lämnade naturligtvis in en protest men det var ju svårt att rätta till i efterhand. Det hade ju suttit fint med en EM-titel!! Standarden var väldigt låg jämfört med svensk standard...

Göran Olsson minns

Mellan 1965 och 1967 tävlade jag några gånger i A-team och Team-int (F2C), helt utan framgång. På den tiden var jag medlem i MFK Nimbus. Kom i alla fall före Kjell Rosenlund i en tävling där han fick runt 9 minuter och jag runt 8! Alltså för 100 varv... :-). Var också ofta tidtagare på Brommabanan.

Dagen före högertrafikomläggningen kvaddade jag min teamkärra med Eta 15 pga okbrott och då bestämde jag mig för en paus för att bättra på betygen inför studentexamen -68. Pausen blev rätt lång, även om jag då och då flög med vad jag kunde lappa ihop. Faktiskt mer än efter det att Gösta drog igång mig, eftersom det då bara blev mekande.



Pelle och Staffan, båda i tidstypiska Beatles-frisyrrer.



Pelle fick sin modell kluven av engelsmannens "buss" och hamnade därför på bild i Aeromodeller.



Staffan Larsson vann NM i combat 1965 och han vårdar fortfarande ömt den pokal han då fick.

Bilden till vänster publicerades i östgötska tidningar efter hans NM-vinst.

Vad gäller Gardermoen var jag inte med eftersom jag i september 1965 var i USA där jag jobbade som Visiting Assistant Professor of Architecture på University of Kansas.

På fritiden fick jag för mig att bygga en J21-liknande team-racer med idén att trottla ner via el, fånga modellen med motorn igång och tanka om utan att starta om motorn. Bygget var kul men tyvärr(?) kraschade modellen vid första provflygningen. Den var lite baktung och mycket mer svårflugen än vad jag klarade. Idén var dum på flera sätt. Då trodde jag att skjutande propeller var bra eftersom slipströmmen inte störde aerodynamiken framtill. Långt senare, då jag blev vindkraft-intresserad, insåg jag att det är viktigare att propellern får jobba i ostörd luft.

I övrigt var jag runt och hälsade på modellflygare lite varstans i USA. Himla fin spin-offeffekt från hobbyn! Bland annat hälsade jag på hos Jim Dunkin och hans kompis och hade trevligt. Jim blev sen modellmotorsamlare av stora mått. Jag träffade också Bob Lauderdale, 10 cc speed, Duke Fox på hans fabrik, bodde en jul hos Pete Soule med fru i L.A. och gjorde då reportage hos Cox som hade fabrik i närheten. Pete var redaktör för Model Airplane News i USA.

I L.A. hälsade jag också på Bill Wisniewsky (2,5 cc speed) och fick se polisstationen i Watts County, L.A., inifrån. De var mäktigt stolta över sin enorma skjutvapenarsenal. Jag som hyllade upplägget med obehäpnade London bobbies fick ta del av motsatta idén!

En kul parentes i sammanhanget och som visar på ödets outgrundliga vägar är att Pelle och Måns, som båda deltog på EM i Liege och då bodde i olika delar av Sverige, ca 40 år senare skulle komma att bo i samma trappuppgång i ett hyreshus i Vänersborg!

Måns Hagberg minns



Måns med Artic Circler vid EM i Liege. Tiderna blev 5:28 och 4:55 (tävlingens bästa tid var 4:41) med den ombyggda ETA Mk II och det gav dem plats 13. Modellen var försedd med Mariotte-tank och ombyggnaden av ETA:n hade femfaldigat klytlan.

Jag har rätt diffusa minnen från EM i Liege. Göran Alseby och jag hade ju problemet att Göran bodde i Linköping och jag i Stockholm. Vi tränade alldeles för lite, egentligen tävlade vi bara. För att kompensera bristen på träning satte jag in en eldriven kompressionsjustering som Göran kunde sköta från handtaget medan vi kommunicerade med walkie talkie. Det var ett misstag, en ovanligt bra motor blev sämre och vi tappade fokus (Sen blev det förbjudet). Nere i Liege gick det inget vidare alls. Bara strul och trubbel. Göran skötte sin del bra men det var jag och pry-larna som strulade.

Året var 1965

Ulf Larsson minns



Här är jag vid Filbyter-tävlingen med mina kraschade modeller för Combat 35. Modellerna gick rasande fort, uppemot 180 km/h. Jag hade också en supertrimmad Fox 36X från USA vilken flög ännu fortare.

På 60-talet höll jag och mina kompisar i MFK Tigre på och byggde och flög allt möjligt för att det var kul. Men det skulle gärna vara stort och/eller gå fort. Vi flög pulsjet och byggde (efter ritning) en stor sexmotorig skalamodell för linkontroll. Den var så stor att det var svårt att hitta ett flygfält och dragkraften i linorna blev nästan för mycket. Men den flög!

Som man ser på de flesta bilder från denna tid var det innan hjälm och snabbtankning. Jag minns faktiskt en tävling när en mekaniker utan hjälm fick en landande konkurrent i huvudet då han satt och tittade ner på sin modell som skulle omstartas. Modellen som landade hade en stor vass spinner vilken gjorde ett ordentligt hål med kraftig blödning. Efter det blev hjälm hyfsat populärt, men det fanns inte så mycket att välja på. Cykelhjälmarna fanns ej så vi stal skyddshjälmarna på byggen.

De som mest förekom i prislistorna då var betydligt äldre och hade större resurser i form av tillgång till verkstäder och pengar för att de jobbade. Så för en skolgrabb som mig var tävlingsmotorer svårt ekonomiskt. Även på den tiden behövdes många motorer och modeller om man skulle tävla på toppnivå. När det gällde jetmotorer och skalamodeller



Pulsjet-modellen.



Den 6-motoriga skalamodellen som faktiskt flög!



Man byggde och flög alla möjliga modeller!

var det andra i klubben som betalade. Tiderna var annorlunda på många sätt, nyheter är ett exempel. Det kunde ta veckor innan man fick höra hur det gått på NM, EM och VM. Man såg verkligen fram emot Modellflygnytt och även engelska Aeromodeller.

Säkerhet och miljö värderades och hanterades annorlunda. Som tonårig skolyngling kunde jag gå till apoteket och köpa amylnitrat. Sen insåg jag att man kunde köpa det billigare på kemikalieföretaget Kebo. Vi samlade ihop pengar i klubben och den som hade körkort lånade en bil. Sen åkte vi till Kebo och köpte en liter amylnitrat och en 25-litersdunk eter över disk. Ingen frågade efter behörighet, vad det skulle vara till eller ens efter legitimation. Eter är ändå högexplosivt förutom att det är ett kraftfullt berusningsmedel. Amylnitrat är en stark hjärtmedicin. Om man blandade bränsle med för dålig ventilation började hjärtat slå dubbelt så fort. Det här hade jag i vårt garage och delade sen upp det i småflaskor. Vi köpte även andra farliga kemikalier som bensen, nitrobensen och nitrometan och experimenterade en hel del med bränslen, men det mesta luktade bara konstigt utan att förbättra effekten. Det enda som verkligen var effektivt var nitrometan i glödstiftsbränsle. Med en stor del nitro-

metan i bränslet kunde effekten öka 25-30%. Men det var dyrt och hälsovådligt och ansågs orättvist och blev alltså förbjudet.

Vi experimenterade inte bara med bränslen, utan även med olika utseende på linmodellerna. På tävlingar på den tiden kunde man hitta de mest udda konstruktioner. Ingen visste hur en optimal modell eller motor skulle vara.



Här är jag och min FAI-Team.



Mer FAI-Team och en lite äldre gosse!

Jens Geschwendtner minns

En ting der var stor og fik en afgørende rolle i vor klubs aktiviteter, var at vi fik etableret vores egen beton-cirkel på Amager Fælled. Den eksisterer stadigvæk, men kan nu kun anvendes til f.eks Weatherman.

En anden ting der skete i året 1965, var at vi fik "fornemt" besøg af Steve Wooley, F2B stuntflyver på USA's hold og som vi mødte i Ungarn i 1964. Han er blandt andet manden bag "Argus / Ares Stunteren! Han bragte internationale vingeslag ind i vor flyveverden og var virkelig en stor inspiration. Steve Wooley deltog i F2A I vartävlingen i Sverige – og kom for øvrigt igen på besøg i 1966.



Ove Kjellberg, Hans Svedling, Anders Eklund och Ulf Larsson med Kaffepetter.

Hans, jeg og andre danske var i Sverige og deltog i flere konkurrencer i 1965. Det startede med "Vårtävlingen på Bromma- I speed satte Dirch Ehlers ny dansk Rekord og vandt endda konkurrencen. Han anvendte de nye speed propeller fra "Top-Flite og som det ganske rigtigt spåedes at alle ville anvende i fremtiden.

Selv konkurrerede vi i A-Team Race og nåede finalen. Desværre blev vi og et af de andre Svenske hold diskvalificeret for overstørrelse tank ! Lidt pinligt! I FAI Team-Race blev Dirch Ehlers nummer 3 – også her med en ny dansk rekord ! Geschwendtner-holdet, kom i midten af det 20 hold store felt. Sidste disciplin jeg deltog i var 5 ccm speed, hvor jeg satte Dansk rekord med 214 km/t med min KB .29. Placeringen husker jeg ikke!

Vi var også i Norge, til Nordisk Mesterskab. I Stunt F2B var Juhani Kari favorit og han indfrie da også favoritskabet. Min bror Hans, deltog også i Combat – vi var alle vældigt imponerede af Andreas Ytreöy, og hans vel-

Året var 1965



Alf Eskilsson vid Vårtävlingen.

flyvende "Streamer-Eater modeller! Jeg stillede op i F2A speed og det lykkedes at bryde den finske dominans, da jeg klemte mig ind på andenpladsen (mellem 2 Finner). Det gik ganske dårligt for den danske deltagelse i T/R, 3 finske par fløj finalen.

Om efteråret rejste vi atter til Stockholm og deltog i "Solnas-pokal. Vi var 3 danske hold i FAI Team-Race og et i A-klassen. I A-klassen gik det vældigt godt, idet Hans og jeg vandt, ligesom FAI Team-Race også fik dansk sejr, da Per og Ole Hasling vandt finalen. En lidt speciel oplevelse havde det danske hold Niels-Erik Hansen og Luis Petersen, også deltagere i FAI Team-Race: Deres ene model brækkede fra hinanden i luften og den anden gik i spinn under flyvningen... Svenskernes ansigtsudtryk var uforglemmelige da vi hentede alle vore 1. Præmier.

Lidt eftertanker...

Det er mange år siden, der er mange mange minder. Jeg har fløjet linestyrt siden 1959 og er den dag i dag, – 61 år efter – stadig lige engageret – det er mit livs-hobby passion!

Jens Geschwendtner



Ungerska topplaget Molnar/Kutis modell.



Ove Kjellberg och Bengt Martinelle.



1965 kom Bo Widerbergs film "Kärlek 65" och det var antagligen därför Sören Andersson döpte sina Ruter Ess till detta namn...

Leif Kärrman minns

Det jag mest kommer ihåg efter 55 år är att Anders Grankvist och jag åkte till en Jubileumstävling på Hagshults flygfält utanför Värnamo. Vi lyckades med konststycket att få in två stora stuntkärre i min lilla hundkoja. Båda kärorna och vi kom oskadade fram till Hagshult. Tävlingen var den första och sista nationella stunttävlingen för min del!

Däremot flög jag många klubbtävlingar i stunt i AKG mellan 1962 och 1965. Vi som flög då var bl a Sven Samuelsson, Alf Eskilsson, Sven-Erik Martinsson, Claes-Olof Kall, Evert Hejde och många andra.

För min del blev det därefter några års uppehåll innan jag började tävla med RC-båtar under några år. Efter båtarna blev det en hel del år med linbilar. Det blev också ett par år med linflyg i F2A klassen.

Leif Kärrman

PARRA
AIRCRAFT ENGINES

www.control-line.eu

Austrian F2B Nationals



All pilots, helpers and officials

Weikersdorf am Steinfeld (Lower Austria), about 50 km southwest of Vienna, was the center of the Aerobatic contest on October 17th, 2020. Due to the corona, the international competition scheduled for May 2020 and the Austrian Championship of class F2B Aerobatics had to be canceled. However, the Austrian CL-Chairman Hanno Miorini found a partner at MFC Weikersdorf who carried out the Austrian Championship in class F2B.

Ten pilots from Tyrol, Upper Austria, Lower Austria and Styria were judged by Franz Oberhuber and Max Marksteiner. Vice President of Austrian Aeroclub Roland Dunger was the jury. In cloudy, but mostly windless weather, the contest director Heimo Stadlbauer was able to pull through three rounds without any problems.

After the third round we had a winner. Franz Wenzel from MBC Günselsdorf (Lower Austria) became Austrian Champion, followed by Walter Weinseisen from MBG Radfeld (Tyrol), and Helmut Kofler from MFC Wörgl (Tyrol). The beautiful Glass Cups for

the first three places were specially made by chairman Karl Nagl using laser technology.

Daniel Nagl from the organizing club flew the F2B program for the first time in competition, unfortunately the outside looping did not quite work in the second round and the plane crashed.

From a technical point of view five models with electric power were used. The proven and tested constructions have a span between 1.5 and 1.6 m, a weight between 1.4 and 2 kg. The main electric powered motor used were the AXI 2826/12 or 14 with 5 to 6s Lipo cells and the combustion engine 10 cm² Super Tigre.

The Austrian champion Franz Wenzel flew a "Gatto 14" that has a wingspan of 1554 mm and a weight of 2000 g. The AXI motor 2826/14 is controlled by a Jeti Spin 66, the 12x5 propeller consumes approx. 26 A from a 6s, 2.2 Ah Lipo battery.

Many thanks go to the chairman of the MFC Weikersdorf Karl Nagl, his helpers and the kitchen staff for holding the Austrian Championship in class F2B. The food was great!

Heimo Stadlbauer

F2B Stunt

Place	Name	Club	Results
1	Franz Wenzel	MBC Günselsdorf (Lower Austria)	2082,00 p
2	Walter Weinseisen	MBG Radfeld (Tyrol)	2025,20 p
3	Helmut Kofler	MFC Wörgl (Tyrol)	1917,05 p
4	Rudolf Trogbacher	MFC Neuhofen (Upper Austria)	1856,30 p
5	Adi Hansemann	Akaflieg Graz (Styria)	1834,10 p
6	Franz Marksteiner	MBG Radfeld (Tyrol)	1655,00 p
7	Hanno Miorini	MFC Weikersdorf (Lower Austria)	1598,10 p
8	Rudolf Königshofer	Landesverband (Upper Austria)	1524,40 p
9	Franz Ecker	Ikarus Enns (Upper Austria)	1375,70 p
10	Daniel Nagl	MFC Weikersdorf (Lower Austria)	908,60 p



Franz Marksteiner preparing



Franz Ecker and Franz Wenzel



Hanno Miorini flying Cardinal



Franz Wenzel with his Gatto 14



The story of –

LANDRES

by Jean-Paul Perret

Espace Victor Tatin Landres

– a site dedicated to C/L flying

In 1969 about ten C/L modelers met in a small village in eastern France and decided to form a club specialized in control line model flying. It was named Model'Club des Trois Frontières, MCTF (aka Model Club of the Three Borders). This village was located near Longwy very close to the borders of Belgium, France and a little further away Germany.

The local Vilette Aero Club, near Longuyon then agreed to lease a small area at the end of their track, which very quickly was transformed into a combat circle. From 1970 both local, national and international competitions were organized there. The organization was provided by Paulette and Jean Perret, parents of JPP and grandparents of Claire and Matthieu. But the noise of F2D training and competitions bothered the flying club pilots so MCTF was asked to leave and lost its circle in 1976. The network of acquaintances then sprang into action within the club (who had grown

to 30 members) to find a new place. And it was found in a few months thanks to the interventions of the local senator and a deputy, both passionate and interested in air activities. So the MCTF moved to Marville where two tarmac circles and a grass circle were created. At the end of 1978, the club learned that the 1979 European Championships, initially scheduled for Great Britain, had no organizer. What would be better to give the club a restart than organizing a sporting event of this size?

Few teams came, financial resources were scarce and despite the amount of energy produced by club members, the Champs was in large deficit. These early mistakes made it possible to learn a lot and to understand the real problems of organizing such competitions.

For 10 years the club stayed in Marville, organizing the French Grand Prix every year until 1993. And in 1989 it was notified

that we had to leave the Marville circles as a large car manufacturer sought land to set up a car factory. However, until the project materialized the club would continue to use these facilities. But the club moved again and still there is no car factory at this spot...

At this time in the late 80's, the government reformed the French economy and it caused many factories and mines to close and a lot of wasteland appeared. At this moment JPP, whose job was to re-organize the economic and social structure of the hard-hit regions of Lorraine, moved to Pont à Mousson. Thanks to his proximity to Michel Bertelle, Mayor of Blénod les Pont à Mousson, it was considered to create an aeromodelling school in Blénod les Pont à Mousson and then shortly after to organize the World Championships there (1990). The circles of Blénod would only be temporary as the place was to become the sporting center of the city.

In 1984 the Landres mine pit closed. The idea of transforming this mining wasteland into a sports and leisure area appeared possible, but money had to be found to develop the area and to establish sports or cultural activities there.

And what happened? JPP plus some members of his professional team plus some club members decided to initiate a project to show what could be done with this special mine area. This project included a Control Line Stadium and it is how the idea of building a stadium dedicated to control line in Landres was born. But the obstacle, the money for the project was not found. We were at the end of 1989 and the club's main focus was the organization of the World Championships in Blénod and the hope that these championships would be financially good to be able to invest the profit in the purchase of the grounds and the development of the site. The two projects (WC 1990 and the Stadium) were administrative linked and grants from the State, the Lorraine Region and the department made it possible to look upon the future more calmly.

To give a media display in front of all the funding organizations, the club took the name of CMBL at that time. Why? CMBL is a two-ways acronym. Modeling Circle of Blénod Lorraine and Modeling Circle of the Landres Basin. At the end of 1990 the land were bought by the club, thanks to a 10-year loan granted by local municipalities, seeing that the the first project was scheduled and had found funds from several institutional organizations. The prize of the ground was 15,000 €.

Fortunately, the World Championships in 1990 in Blénod was a success with a many competitors/spectators and perfect weather conditions and it gave the club a good base for the future. The winter of 1991 was devoted to putting together the financing and clearing the 4 hectares of land.

Only a few large fruit trees were preserved, they are still there today, despite the storms which from time to time thunder some down. Two years were needed to clean the land where the first 4 circles are located. A lot of hours of work together but also a lot of barbecues!

Public funding took some time to arrive. We live in France and administrative matters are complicated! But towards the



Sergio Tomelleri ITA flying speed at the 2018 World Championships. Note the electronic score board in the background.



Jean-Paul Perret presenting winners at one of the World Cups.

end of 1992 a very large rehabilitation project for mining towns was initiated in Piennes, then in Landres, and finally in Boulogny. Thousands of cubic meters of rubble were extracted from the roads and streets of these towns in order to refurbish the drinking water and sanitation pipes, but also the electricity and telephone networks. Huge amounts from the states and mostly from the European Community were entrusted to very large public works companies including ViaFrance which had been the main sponsor of the Blénod Championships, being the company which had also been entrusted with the construction of the Michel Bertelle Center. Professional and then friendship ties were established between the heads of the CMBL and those of the public works company.

What to do with these thousands of tons of rubble? To bring them to a landfill had a significant cost for companies but also for public finances. At that time, the recovery and processing of this rubble was not an issue as it would have been today.. The



Thierry Ougen FRA flying F2C at the 2008 World Championships.

topography of the land of Landres consisted of a slope going from the current level of the club house to that of the team racing circle. It was therefore necessary to create different floors in this slope to include the circles at different altitudes. Several cubic meters of this rubble were used to create the four floors on which the various circles are placed. Two years of work were necessary to reshape the landscape and allow the construction of each circle. The deal with one company, then two, then others permitted us to go further and was a win-win for the municipalities, for the companies and for the club.

Several million francs were thus saved, the transport allowing the removal of these materials being reduced to a few kilometers and no extra costs for deposit, it was easy to reach an agreement with the companies concerned and the municipalities. The companies in compensation for the possibility they had of depositing these inert materials on the site undertook to build the first three circles (two in tarmac

and one in grass) The first one at the level of the club house (old speed circle) was created in early 1993, the second stunt grass circle at the end of 1993 and the acrobatic circle in spring 1994. The stadium was officially opened in the presence of many politicians on July 13 1994. The day after (National Day), the French Grand Prix was organized in the presence of modelers from 17 countries.

The club house benefited from the same win-win method that was used to finance the circles. One of the companies that carried out the renovation of the pipes and which had also deposited thousands of cubic meters of soil on the stadium was completing the pipe work for a very large construction site in the Paris region ... Disney World (in Marne la Vallée). This company had an office on the Mickey's site made up of dozens of bungalows. As the work ended with the bungalows being financially amortized, the club was able to acquire them at a very low price (100 € each), all that remained was to transport them over the 300 kilometers which separated Landres from Marne la Vallée. The company accepted to bring back the bungalows for free...two per week...every Friday ...four week-ends and the game was over! During the summer of 1994 the club members worked every weekend to set up the bungalows as are today.

Since that time the stadium has grown with the addition of the team racing circle at the bottom of the slope in 1999 with a first use for the 2000 World Championships. This circle was funded through sponsorship and public subsidies.

After the 2000 Championships which were successful despite having a lot of rain ... the club then took some years only organizing the annual French Grand Prix but also began to organize the Grand Prix of Luxembourg. That means two big competitions every year! And then we decided to organize a new World Championship in 2008. Nothing changed on the Landres Stadium but its name. In 2008 the complex took the name of "Espace Victor Tatin", the



Frank Wadle GER flying in the F2B circle at the 2017 World Cup with his outstanding YAK-55.

opening was done by C. Eckert, Minister of Finances and many local politicians. For this occasion a fresco of 6m x 2.5m was installed in front of the club house. It represents the first captive flight of a model airplane performed by Victor Tatin. Since 2008, there has not been any major spectacular work on the Victor Tatin complex.

In 2015 LOR'FM (local radio station) decided to move and it became evident that the club had to buy their buildings in order to set up a local model school. After many hard negotiations this could be done thanks to the Mayor of Landres, a few months before the organization of the 2018 World Championships. A first school class is now ready and waiting for the end of the new lockdown. As preparation for the Champs the speed circle located at the level of the club house required new surface and there was also need for a training circle for team racing. This was done at the very beginning of 2018.

This site could not have been a reality without friendships between men, who have become the actors of this saga in spite of themselves. Between generations in families, between families themselves, between club members and also between political decision-makers and administrative decision-makers. Only the project interested them. Only the passion carried



The F2C circle with the Judges Tower.

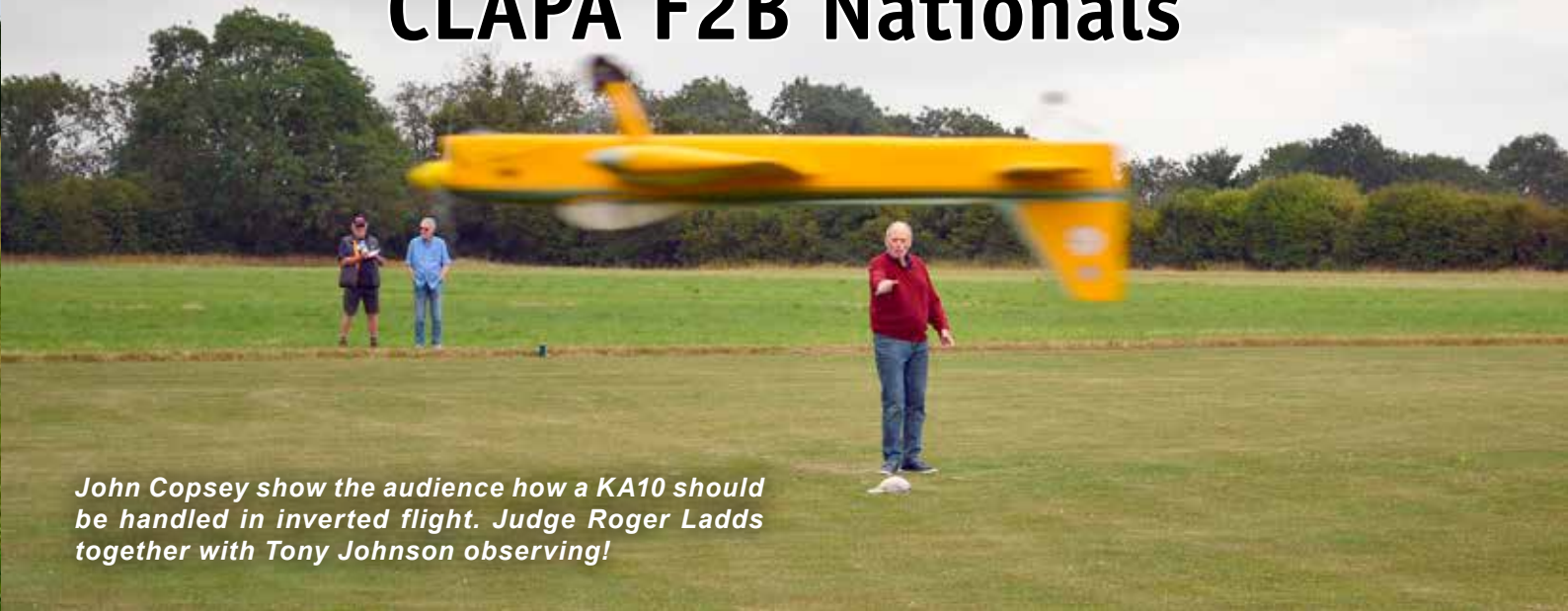
by the promoters of this project or for the sportive organizations attracted the attention of funders. And not what they could hope to derive as glory or power from such a project. It is the conjunction of financial and commercial interests that have made it possible to set up win-win operations. And this point is the most important because that saved a lot of money!

This is the story of Espace Victor Tatin. It's also a big part of our lives. More than 50 years! You are all welcome here!

Jean-Paul Perret

Cercle Modéliste Blénod Lorraine
— a club dedicated to C/L flying

CLAPA F2B Nationals



John Copsey show the audience how a KA10 should be handled in inverted flight. Judge Roger Ladds together with Tony Johnson observing!

The weekend of the CLAPA Championships had soon arrived after what felt like an age of hurrying up and waiting. The prospect of maintaining a respectable social distance and events not running quite as we remember them in the not too distant past- certainly did nothing to dampen the spirits of those that attended on the day.

I say 'day' as the dear ol' British weather once again put pay to any meaningful flying taking place on the Sunday, so on top of everything else, the flying schedule was condensed into a single day of, at times – quite intense activity.

It was, I felt at least – comfort and nourishment for the soul as we tentatively return to some semblance of normality to see familiar faces, hear familiar sounds and watch the dedicated pilots perform their aerial dances for the judges and spectators, a good number of people remarking how they were just glad to be out – even if it was on a windswept airfield!

Nevertheless, the beautiful backdrop of our dear British countryside certainly put pay to any chills felt by the unusual Northerly, at times-changeable, gusty and stiff breeze. The passing of the Battle of Britain Memorial Flight was an extra treat – (if not also a distraction for judges and pilots alike!), indeed – a minutes silence was observed on the field at 11am to mark VJ Day.

Considering the current situation, Vintage, Classic and F2B each saw some healthy and competitive flying – the enthusiasm and passion for the sport certainly shows no sign of waning as we start the second decade of the new millennia, encouragement indeed for us all that wish to take it forward and hopefully expand our activities at the National Flying Centre.

F2B saw 11 entries this year, again – fervently contested and ably judged by Mr Ken Reeves and Mr Roger Ladds. Mark Williams took

first place on the day, in – at times quite challenging conditions, bravo to all that entered the fray – the effects of lockdown and the reduced flying calendar certainly didn't dissuade those that entered from demonstrating their dedication and passion for the sport.

Thank you to all of you that work behind the scenes to make these events a reality, let's hope we can all gather once more, together – bound by our common interest, our humanity and sheer joy of hearing, watching and enjoying our sport of control line aerobatics, see you there.

Steve White



*More models than pilots on the field!
In front the Double Star .61 powered
Genesis of Mervyn Jones.*



Some of us that came..... keeping distance ...

F2B Stunt

Place	Name	Results
1	Mark Williams	1954,9 p (E)
2	Barry Robinson	1927,3 p (IC)
3	Glen Alison	1894,6 p (IC)
4	Mervyn Jones	1889,3 p (IC)
5	Brian Turner	1843,7 p (IC)
6	Kevin Morgan	1837,0 p (E)
7	Graham Leatherland	1808,0 p (IC)
8	Richard Stepney	1757,3 p (IC)
9	John Copsey	1554,5 p (IC)
10	Peter Deane	1510,7 p (IC)
11	Nick Zotov	1065,6 p (E)

Macchi MC-72 as an F2B Model



Being in control line stunt since the 60's when noisy 2.5 cc diesels flown on downtown Zurich schoolyards have been state-of-the-art, Peter Germann now lives in Widen, Switzerland. Staying in the hobby ever since he keeps competing in control line stunt and supports administrative F2B rule work for the FAI.

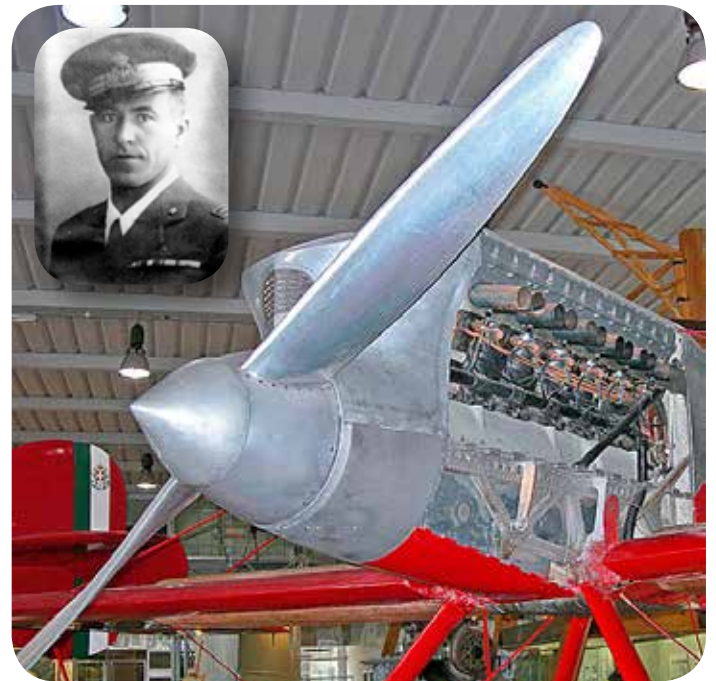
Nostalgia - Looking back 14 years to an Italian Inspiration...

After being in c/l stunt for many years as well as after numerous attempts to build the "ultimate" F2B machine I thought that the beginning of retirement in 2006 would be a good moment to interrupt the ongoing search for perfection. Furthermore, since there was a time when aviation was driven by men whose inner attitude was quite similar to the way stunt flyers are, the building of a model suitable to pay tribute to those men and their magnificent machines seemed to be an option for me. It of course had to be a truly rare bird and so me and scale enthusiast George Biber drove down the 500 miles from Switzerland to Rome, Italy, where the Italian Airforce museum is situated some 15 miles from Rome International Airport on the shores of Lake Bracciano. The site is very spectacular, hosting a number of Italian-built and perfectly restored aircraft such as a fleet of terrific looking race floatplanes, all of them in bright red, of course.



Macchi-Castoldi MC-72 had contra-rotating propellers and is a current World Record holder in its class.

These racers, definitely belonging to the sharpest looking airplanes of all times, are equipped with upright V- or W-engines. The same is true for the MC-72 of which five were built in 1930/31. Unlike earlier types, this airplane was equipped with a reduction gear bringing up the propeller shaft to almost the height of the cylinder heads. This made it a good choice for building it as a C/L stunt airplane. Originally, the MC-72 was built by Macchi-Castoldi to enter the famous Schneider-Cup races held between 1913 and 1931. It is a very complex airplane, driven by a liquid cooled V-24 engine. The AS-6 engine made by Fiat consists of two V-12's coupled in-line and a turbo-supercharger. It drives a pair of huge fixed pitch counter rotating propellers. Technical difficulties have delayed the project to the point where severe accidents happened and thus the MC-72 actually never took part in a Schneider-Cup race. However, once functioning more or less reliably, the 3000 HP of the 50 liters or 3'050 cubic inch motor have accelerated the relatively small and light (31 ft. span / 7'400 lbs. T/O wt.) machine to impressive speed, in particular when considering the drag of the enormous floats.



How about this for a mighty good looking front end? Impressive liquid cooled V24 engine. Francesco Agello was the pilot setting the record in 1934, flying over Lake Garda.

It was October 23 1934 when Pilot Francesco Agello thundering along at low altitude over Lake Garda, near the city of Desanzano in northern Italy established a new record speed of 709.2 km/h. Interestingly enough, this absolute speed record for piston engine propeller driven floatplanes was never beaten and is still valid. Record holder MC-72 serial 181 is on display in Bracciano, Italy. (<http://www.aeronautica.difesa.it/storia/museostorico/Pagine/default.aspx>.)

The Model: Building a competition control line stunt airplane based on the MC-72 was not difficult because all I had to do was to stretch original side and top view photographs in order to match proven stunt numbers and then build a conventional stunt airplane within the dimensions resulting. Much to my relief, there was no problem finding a unique, good looking and easy to do paint scheme. The airplane is Italian and it is red, period. I also took a little shortcut by simulating the original aircrafts brass made surface coolers by golden painted areas. It is obvious that my MC-72 is not to scale, but it really looks like the real thing. Apart from the floats, I must admit.

Macchi MC-72 as an F2B Model

Model data:

Span:	157 cm / 66 inch
Area:	45.2 square dm / 700 square inches
Hingeline-hingeline:	502 mm / 19 3/4 inch
Nose:	285 mm / 11.2 inch
Dry weight:	1'868 Grams / 66 oz
Wing loading:	41 Grams per square dm
Motor:	RO-Jett .76 RE
Venturi diameter:	5.5 mm / 0.216 inch
Glow plug:	Thunderbolt four stroke No. 115490
Pipe:	Aluminum 40 mm / 1.57 inch dia. 502 mm / 19 3/4 in to 1st baffle
Tank:	Uniflow metal 183 cc. No pressure
Fuel:	10 % nitro 20 % synthetic oil (Aerosave)
Propeller:	Brian Eather 2-blade undercambered, square tip 14 x 4 1/4 inch
T/O RPM:	8'400
Lap:	5.4 sec
Total run on full fuel:	6:30

Fuselage: Built-up as per what I would call the "Cardinal" method it is a closed box where I can install engine, tank and pipe from the front side. Fuselage sides are 3 mm balsa with the inside full-length laminated with 30z carbon fabric and with the nose section strengthened outside with 10z. glass. A dummy spinner, simulating the rear part of the counter rotating spinners and being made from balsa covered with 1/128 inch aluminum, has been attached to both the nose section of the fuselage and the cowl.

The canopy is a double frame made from 1/128 ply and flat 0.5 mm Plexiglas. In order to compensate the gyroscopic forces resulting from the large propeller I have added a rudder coupled to the elevators. Driven by the elevator horn and it deflects symmetrically to both sides, in and out, thus eliminating yaw resulting from prop gyro effect in turns. The fuselage structure weight, including rudder and cowl, was 304 grams.

Wing: Duplicating the original shape, the model has a rectangular wing with circular tips. With a chord of 300 mm and a span of 157 cm the area comes to 45.1 dm². Both panels are the same, with the fuselage being in center. Inner and outer flaps are the same, too, 70 x 550 mm being of the flat plate type with a thickness of 8 mm. The airfoil shows is 18% thick and the wing is built-up using the I-beam method. The wing structure weight, without flap horn and before covering, was 300 grams while the two flaps weighted in at 31 grams.

Stabilizer and Elevators: Again trying to copy the shape of the MC-



The RO-Jett .76 runs on a lightweight aluminum pipe. Note dummy rear spinner simulating the counter rotating system of the original aircraft

72 the empennage area is of 27 % of the wing. It is air foiled and its thickness in the center is 25 mm and 8 mm at the tips. Compensating the gyroscopic pitch-up moment generated by the propeller in circular level flight, I have installed the stabilizer with a 0.5° negative (down) angle of incidence. The stab spans 720 mm and its structure weight, w/o the elevator horn and before covering, was 43 grams. The pair of elevators came to 16 grams.

Landing Gear: The gear is made of flat 3 mm carbon-honeycomb-carbon plates bolted to wing mounted carbon brackets. The two legs are long enough to allow 45 mm ground clearance and weigh in at 9 grams each. The gear is positioned so that the wheels touch ground along a line tilted 15° forward from the C.G. In order to minimize critical nosing-in effect during the take-off run the tail gear was made high enough to allow the fuselage sitting almost parallel to the ground. The pair of landing gears with wheels pants and painted, tipped the scale at 75 grams.

Finish: Since we do have problems getting butyrate dope and system matched paints in Europe and because I do fly quite a lot over grass, the flying surfaces have been covered with Japanese silk (20 grams) while Silkspan GM (middle) was applied to the fuselage. It takes five to seven coats of 50% thinned nitrate dope, with very light sanding between two coats, to shrink and fill. The actual painting is done with a regular automotive two coat system where fast and flat drying base paint is covered with 2-component clear. Lettering and logos have been inkjet prints, by Claus Maikis, on water decals. I did apply two coats of clear on top and one coat on bottom sides, with no sanding



The open frame canopy is not easy to build and difficult to paint neatly.



MC-72 Control line stunt model. With relative small changes it is easy to get a semi-scale look on an F2B model.

Macchi MC-72 as an F2B Model



My version of MC-72/181, completed in December 2006.

flat and buffing out. The total surface of the MC-72 was 166 dm² and the resulting weight, from bare wood up, for silk, dope, base paint and clear was 232 grams. This comes down to 1.40 grams per dm². It is at this point important to note that this method, while definitely leading to solid, durable and reasonably nice looking results, does nowhere near reach the stunning quality of a US front row C/L stunt airplane.

Power Train: When flying a piped RO-Jett .76 in a 2'003 grams Cardinal I found the motor quite easy to handle. It was capable to pull the heavy airplane through the pattern with a lot of authority and at relatively slow speed (5.4 sec lap at 450 m) The motor does this in an unspectacular and very quiet way without too much of a power boost on the pipe. I was happy enough with the system to pull it from the Cardinal and to install it as is in the MC-72. The entire power train, including 2 inch spinner, 14 inch carbon prop, 6.5 oz. uniflow metal tank & shims, motor, 22 M3 Allen screws, filter, tubing, header, coupler, pipe and exhaust deflector comes to 698 grams.



December 2020 update: Today, 14 years later and after being converted to 4-cycle OS .71 power, the MC-72 is retired and on display at the Swiss Transport Museum in Lucerne, Switzerland. While I have since gone to electrics, I would like to suggest that, for the sake of sight and sound of your semi-scale projects, you may want to stay with IC power...

How did it fly? After having witnessed so many great flights performed by considerably different stunt ships, from Remi Beringer's superbly demonstrated Sportster far down to my own reasonably well functioning C/L converted Giles ARF, I found the MC-72 to be just an ordinary well performing F2B airplane. I therefore concluded that the design envelope of parameters for C/L stunt airplanes is wide enough to allow a bit of experimenting. Building a semi-scale F2B ship is both a challenge and a very rewarding experience. It is by itself well worth the effort. I do however suggest to stick to proven "stunt" numbers as far as arms, areas and weight/wing loading is concerned and to adjust the dimensions accordingly. Also, if in doubt, go bigger and install a little bit more power. Aviation history has brought us many unique airplanes worthwhile for C/L stunt and the community is always anxious to see and debate unusual concepts. Why don't you go ahead and search the internet for inspiration?

Peter Germann

Karlskoga F2B World Cup

14th - 15th of May 2021



Mark this in your calender!

Only World Cup status in F2B!



Friday: F2B, Semistunt, Weatherman, Minispeed, Semispeed
Saturday: F2A, F2B, Semistunt, F2C, Goodyear

Pre-registered pilots and more info at www.f2d.nu

in co-operation with Club of aeromodelers of the Czech Republic and CIAM FAI

Modelklub Svitavy

invites you to

2021 Svitavy World Cup F2D

open international contest

April 16 - 18, 2021

more info & registration: www.modelklub.svitavy.webnode.cz

Svitavy, Czech Republic

Christmas Greetings *from*

Stephen White



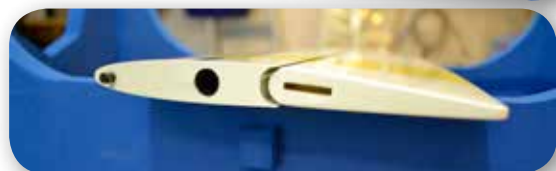
With the end of 2020 rapidly approaching and the much curtailed season drawing to a close, thoughts are already moving to next year and the adventures that await. One such excursion is that of a return to electric power for me in the form of a new model from Russia.

This Starlight story, for me at least – begins earlier this year when Roger Ladds had informed me of some exciting new developments being made in Siberia – Novosibirsk to be precise and a talented engineer by the name of Vasily Astrakharchik. During the 2018 World Champs, Roger has seen Vasily's close friend - Konstantin Baj flying one of the very first Starlight models built and was suitably impressed with the innovative design, flight characteristics and production quality – within months an order was placed to secure one of the first 5 models in production.

First impressions of the model are – I feel, quite striking; the outline, the smooth finish and colour scheme are a great combination, I am particularly interested to see how the Wortmann style aerofoil choice feels in the air. The powertrain is a BadAss 3515-710kv motor coupled with Igor Burgers' excellent active system, the Jeti ESC and his thin, flat back 3 blade propeller. Some experimentation is needed to find the best 5s lipo battery available over in England, certainly an enticing project for the winter months ahead.

So, even though this year has been somewhat of a non-starter flying wise – I'm looking forward to getting stuck in and seeing what this highly recommended new model has to offer – Onwards !

■
Stephen White, GBR



Amusements – Model Quiz

Now we have gone from engines to Silencers to propellers and this year we continue with models. Look at the outlines of these 26 classic models and figure out the names. Some of them are from Scandinavia, some from USA and some from other parts of the World. Email your answer to Lina's Editor! Winning the Quiz will not get you rich but instead you will collect much honour and respect from your fellow modellers!

Quiz answers Lina 2-2019

I think the propeller quiz was the most difficult of all we have had so far. Only five answers... The hardest nut of them all was the Bartels Combat propeller from the 70's. I bought one but never used it as the weight and thereby the strength is unbelievable making it impossible to break. But no rpm's on the engine!

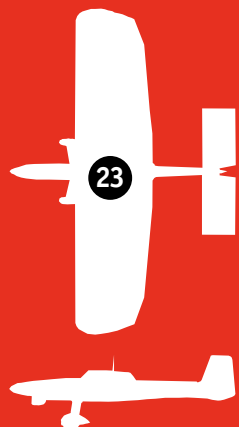
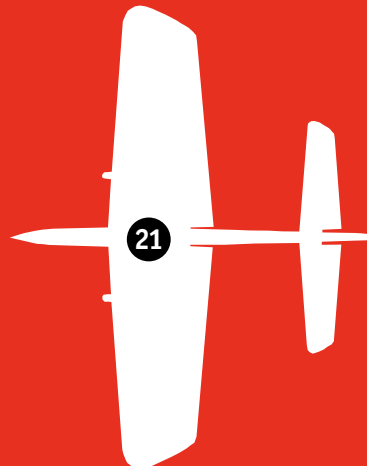
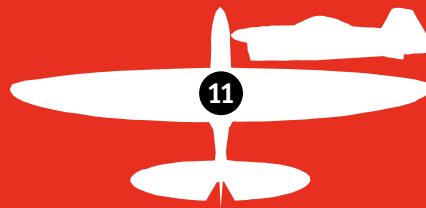
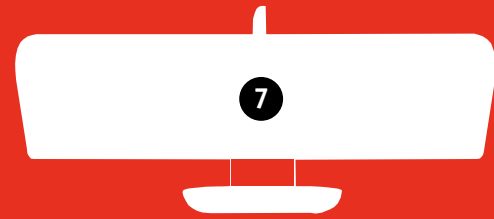
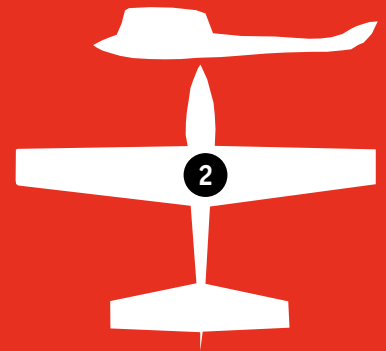
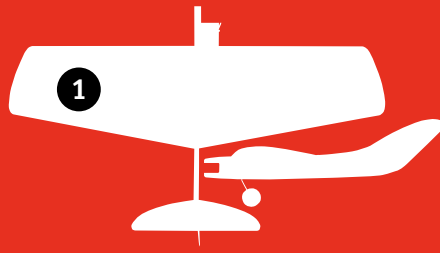
1. Maris Dislers	AUS	10 correct
1. Göran Olsson	SWE	10 correct
3. Harry Kolberg	NOR	9 correct
4. Jose Manuel Rojo	ESP	8 correct
5. Håkan Johannesson	SWE	5 correct

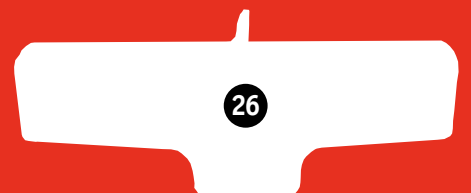
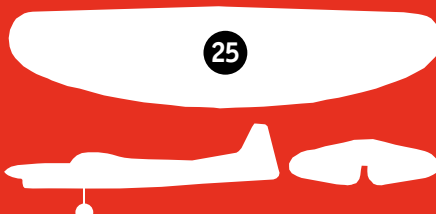
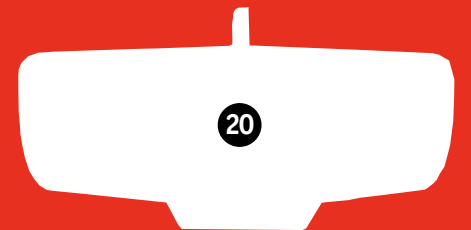
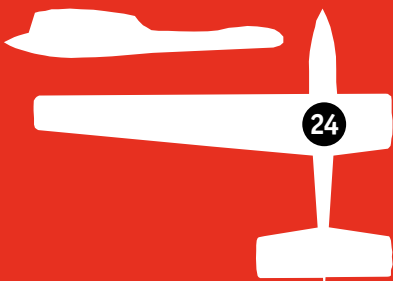
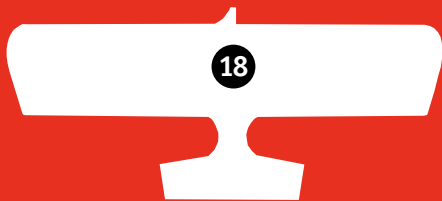
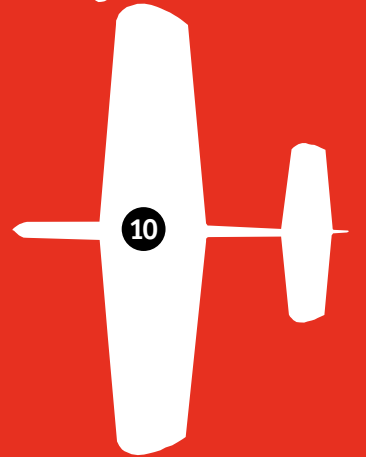
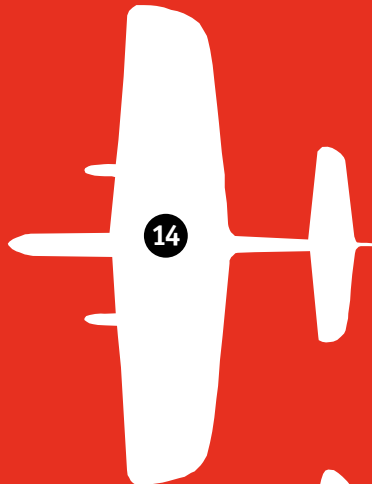
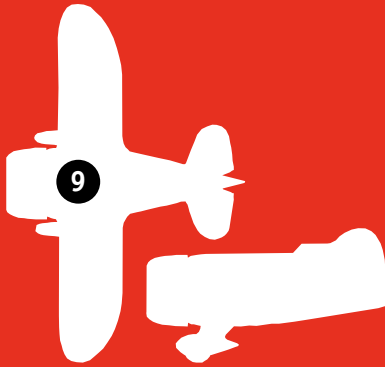
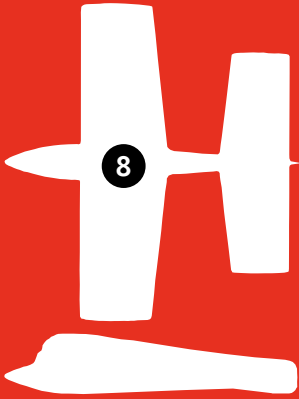
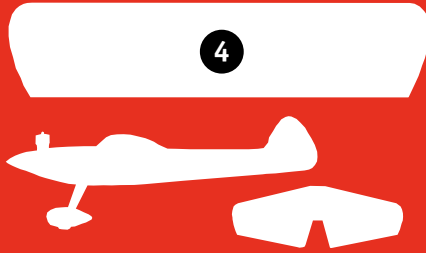
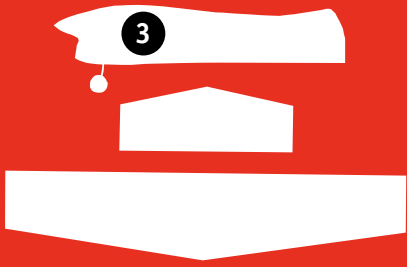
The propellers were:

- Zinger 10x6
- Tornado 8x4
- Bartels Combat 8x6
- Kavan 8x6
- Taipan 8x6
- Top Flite 10x6
- JXF 8x4
- Rew Up 11x6 EW
- Tornado 7x6
- Ishida 8x6
- Y&O 11x8
- Top Flite 8x4
- Graupner CAM Speed prop 6x6
- Master Aircsrew Scimitar 7x6
- APC 8x8
- Graupner Speed prop 6.5x6.5



3. Bartels Combat 8x6

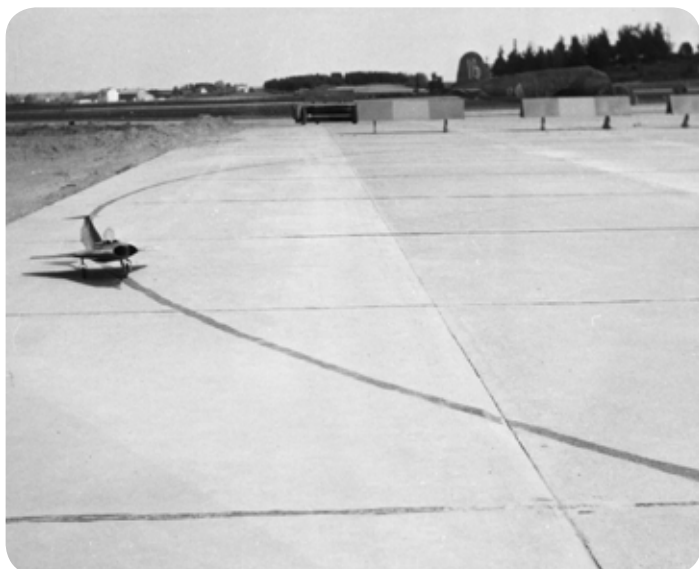




Saab 35 Draken



Lite annorlunda pylon mot den vi använder i speed!



Skulle nästan kunna vara en start i vilken tävling som helst!

Visste Ni att 35 Draken började sin karriär som en linmodell?

29 Tunnan kom i drift 1951 och den följdes av 32 Lansen 1955, båda med pilformade vingar. Men i försvarskretsar diskuterades redan 1950 behovet av ett flygplan som kunde flyga fortare än ljudet, bland annat för att kunna matcha kärnvapenbestyckade bombplan. Till detta kom ett antal andra egenskaper man ville eftersträva. Till slut föll valet på en konstruktion med dubbel deltavinge.

För att utvärdera flygegenskaperna gjorde man först en förminskad variant (71%) kallad Saab 210 (Lilldraken). Varför fick den då heta Draken? Jo, för tittar man på planet uppifrån liknar det en flygande drake, så enkelt var det. Innan Saab 210 kom upp i luften genomförde man redan från 1950 experiment och tester med modeller. I början var det både raketdrivna modeller som flögs i rak bana och som fotograferades med höghastighetskameror men även swingline-modeller testades. Senare kom även ett antal linstyrda modeller att byggas och dessa utrustades med pulsjet-motorer.

De första modellerna byggdes i balsa men eftersom pulsjeten utvecklade så mycket värme fick detta relativt snart överges och 3 modeller byggdes i aluminium. Vid provflygningarna använde man, som framgår av bilderna, en pylon likt vi gör i speed idag. Dock var det lite skillnad i styrningen då man inte använde ett traditionellt linflyghandtag utan det mer liknade vad som används vid polflygning. Veteranklubben SAAB har i sin samling av material en artikel skriven av Gunnar Löw där han beskriver de inledande Draken-försöken. Bland annat nämner han att pulsjet-motorn förde sånt oväsen att närliggande bostadsområden stördes...

35 Draken provflögs första gången 1955 och togs i bruk av Flygvapnet 1960 och var i aktiv tjänst tills 1999. Förutom Sverige kom de också att användas i Danmark, Finland och Österrike och fortfarande finns det ett antal flygande exemplar runtom i världen. Draken blev faktiskt det första överljudsplanet i aktiv tjänst i Västeuropa och 1960 slog man rekord genom att flyga i dubbla ljudhastigheten.



Saab 35 Draken

Totalt byggdes 644 stycken, ett hisnande antal för ett land som Sverige och om man sätter det i perspektiv till att det också byggdes 661 stycken 29 Tunnan och 450 stycken 32 Lansen och att alla dessa tre modeller introducerades under 10-årsperiod kan man förstå att Sverige hade ett av världens starkaste flygvapen under 50-talet.

Det har väl inte passerat omärkt att vår grenchef Bengt-Olof Samuelsson var en av Flygvapnets piloter under sin aktiva karriär. Mellan 1966 och 1972 flög han S35 vid F11 i Nyköping för att fortsätta med detta vid F21 i Luleå 1972-1979. Innan detta hann han även flyga både J29 Tunnan och S32 Lansen (förutom utbildningsflygplanen vid Ljungbyhed). Efter 1979 blev det flygning med SK60 och S37 Viggen (under 1990-97).

Av de 644 Draken som byggdes havererade 119 stycken och ett av dessa haverier stod Bengt-Olof för då han vid ett uppdrag 1970 fick motorbortfall. När motorn vägrade att återstarta fanns inget annat alternativ än att skjuta ut sig med katapulten. Detta Drakenplan har aldrig blivit bärgat och ligger kvar på Östersjöns botten.

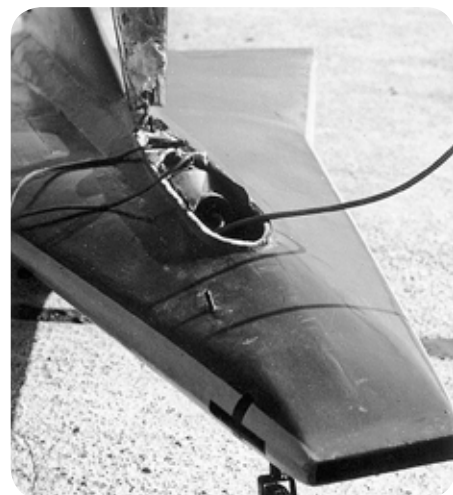
Mer information finns att hitta på Wikipedia samt Veteranklubben Saab's hemsida (saabveteran.se). Stort tack till Karl-Johan Berzelius på Saab och Tord Jonsson på Veteranklubben Saab samt Bengt-Olof för hjälp med material.

■
Ingemar Larsson



Kanske var det på Flygvapnets orienteringstävlingar B-O la grunden till den fysik han använt i F2C-cirkeln?

Nedanstående bilder får tala för sig själva men jag tror att Ni som varit i Bitterfeld eller Sebnitz och sett Krause & co köra sin pulsjet ser likheterna, inte bara med en modell i plåt utan också de tillbehör man behöver för att få igång motorn.



Känner Ni igen B-O här? Ingen Draken i bakgrunden men väl en Viggen!

The Czech F2B & F2D Nationals



2020 Czech F2B & F2D Nationals

Each year the Nationals in the Czech Republic is run in September and there was no change this year. Nationals for F2B took place in Hradec Králové, on the site where the 1974 and 1992 WCHs were held. All the three tarmac circles were full of life during Friday's practicing and Saturday's competition. Very nice sunny weather with almost no wind supported the good mood for the weekend.

F2B had 14 pilots with one from Slovakia. Only one junior, Daniel Skop, took part and it was his first competition in F2B. After three rounds, Zbynek Kravčík with his new Z50LX semi scale model finally became the winner, followed by Jirí Vejmla as the second and Pavel Benes on third place.

The only shade of the Hradec Králové flying site is that there's no possibility to fly combat there. So the F2D Nationals were held a week after in Boleradice, a small town close to Brno, on their nice airfield, primarily set up for RC models. 14 pilots arrived to take part, one from Germany and one from Austria. The border to Slovakia was unfortunately closed a day before... After 4 rounds only 3 pilots remained in the competition and all of them without any loss. First Martin Ráliš got out in R6. Later, Martin Zahálka was finally beaten by Pavel Kucera in round 8.

Jan Kopriva



Pavel, Zbynek and Jiri



Martin, Pavel and Martin

F2B Stunt

Place, Name	Result
1 KRAVČÍK, Zbynek CZE	2416,1
2 VEJMOLA, Jirí CZE	2381,6
3 BENES Pavel CZE	2356,9
4 KOPRIVA, Jan CZE	2314,2
5 MEISL, Kamil CZE	2294,4
6 RADOS, Roman CZE	2268,4
7 KAPUSCINSKY, Peter CZE	2259,8
8 SKRABÁLEK, Ján SVK	2231,3
9 VOSECKY, Lukás CZE	2004,5
10 HOBLÍK, Richard CZE	1968,7
11 HOBLÍK, Jaromír CZE	1909,3
12 WEIS, Tomáš CZE	1765,6
13 SVOBODA, Vladimír CZE	1609,3
14 SKOP, Daniel CZE	1488,3

F2D Combat

Place, Name	Result
1 KUČERA Pavel CZE	WWWWLWWW
2 ZAHÁLKA Martin CZE	WWWWWLL
3 RÁLIŠ Martin CZE	WWWWLL
4 BALAJKA Zdeněk CZE	WLWL
ŠPATENKA Radek CZE	LWWL
BUYANOV Vladimír GER	WWLL
7 SNOZA Tomáš CZE	LWL
ZAHÁLKA, Václav CZE	LWL
KRÁL, Milan CZE	WLL
KOPŘIVA, Jan CZE	WLL
11 JELÍNEK, Jaroslav CZE	LL
TOMAN, Dalibor CZE	LL
SMEJKAL, Radim CZE	LL
KÖNIGSHOFER, Rudi AUT	LL

The Italian F2D Nationals



Paolo, Maurizio and Adriano

F2D Combat

Place, Name	Result
1 ANASTASI, Maurizio ITA	W W W L W
2 PICCINI, Paolo ITA	W L W W W L
3 MOLTENI, Adriano ITA	W W L L
4 GIANDRINI, Antonio ITA	L W L
5 SBERNARDORI, Giacomo ITA	L L
6 ROSSI, Andrea ITA	L L



Competitors and officials

Dansk Mesterskab

Igen i år var DM henlagt til Herning. Forholdene bliver stadig forbedret. Nu er der varmt vand i hanerne. Vejrudsigterne var ikke alt for gode. Lørdag blæst og regn. Søndag godt vejr. Med det lille antal tilmeldte på asfalt banen, blev der kun fløjet en runde F2A, minispeed og Weatherman, i forventning om at vejret ville blive fint søndag. Super vejr søndag. I F2A var Lyhne var den eneste der fik tid. Minispeed med 2 deltagere, vandt Jens over Niels-Eriks COX, der nok var kokset til i indsningsventilen. Med 5 deltagere var Weatherman et åbent "opgør". Jens lagde ud med ny rekord i 2,5 cc. glød 106%. Luis havde fået styr på sin 10 cc. glød, så 112% og vinder. Niels-Erik er nu klar over at S/T G15 dages er talte. Desværre var der kun 2 deltagere i GY. Calle/Henning var ret suveræne i finalen, selvom Benny/Tom kæmpede bravt for at følge med. ■

Bane Sherif Luis

Dan og Aage blev Nr 1 og 2, ingen overraskelse... Nr 3 blev Calle Fanøe, som med sin eldrevne, og meget let bygget Trivial Pursuit, netop slog sønne, Allan Korup med 4,5 point. Allan havde købt en af Uffe Olesens stuntere. Dejligt at se, at andre har fået glæde af Uffe's ting. Her skal der lige tilføjes, at Allan kun havde fløjet én tur med modellen før DM. Et virkelig flot resultat! ■

Dan Hune

2020 var et lidt specielt år, da DM i flere år har været aftalt værende "Open DM", fik vi i år besøg af Natasha Dementieva fra Moldavien (Bosiddende i Belgien med André). I kampen mellem undertegnede og Kent vandt Kent.. Kent vandt også sin kamp da André fick en diskvalifikation. Undertegnede tabte sin kamp med Natasha - Hun kan altså godt finde ud af at flyve ryg-flyvning - Og selv om jeg blokerede for hun kunne blive ved med at løbe rundt om mig, var jeg ikke tæt på at lave det ene klip der kunne have fået mig i finaleopløbet. Kent og Ole havde et "motor mod motor crash" - Og Kent var heldig at få hans 1. model i luften igen, og vandt derfor på luft tid - Og Vupti - Kent var Dansk mester. ■

Steen Lysgaard



F2A Speed

1	N Lyhne-Hansen	Herning	260,1
2	O Bjerager	Comet	0
3	J Geschwendtner	Comet	-

F2B Stunt

1	D Hune	Herning	1852,3
2	A Wiberg	Herning	1543,4
3	C Fanøe	Herning	1295,8
4	A Korup	Kjoven	1291,3

Minispeed

1	Jens Geschwendtner	Comet	6 - 21,2 - 91,4 %
2	Niels-Erik Hansen	Comet	1 - 29,1 - 87,2 %

Weatherman

1	Luis Petersen	Comet	7G - 18,7 - 111,7 %
2	Jens Geschwendtner	Comet	3G - 19,4 - 106,1 %
3	Niels-Erik Hansen	Comet	3G - 21,2 - 97,1 %
4	Niels Lyhne-Hansen	Herning	4G - 23,5 - 80,4 %
5	Tom Pedersen	Herning	6G - 25,6 - 80,0 %

F2F

1	Calle Fanøe/Henning Forbech	Herning	4:40 9:21
2	Tom Pedersen/Benny Furbo	Herning	7:06 12:50

F2D Combat (Open)

1	Natasha Dementieva	Belgien
2	Kent Torup	Aviator
3	André Bertelsen	Herning
4/5	Steen Lysgaard	Herning
4/5	Ole Bjerager	Pingvinen
6	Michael Frandsen	Aviator

F2D Combat (DK)

1	Kent Torup
2	André Bertelsen
3	Steen Lysgaard
4	Ole Bjerager
5	Michael Frandsen

Dansk Mesterskab i Dieselcombat

Dansk Mesterskab, Diesel-Combat

1	Morten Friis-Nielsen	Herning	LWWWWW
2	Steen Lysgaard	Herning	WLWWWL
3	Bjarne Bertelsen	Pingvinen	WWWLL (W)
4	Kent Thorup	Aviator	WWLWL (L)
5-6	Ole Bjerager	Pingvinen	LWWL
5-6	Jörgen Aagaard	Pingvinen	LWWL
7-9	Tobias B-Nielsen (J)	Herning	LWL
7-9	Tom Pedersen	Herning	WLL
7-9	Calle Fanøe	Herning	WLL
10-12	Michael Frandsen	Aviator	LL
10-12	Jesper Buth	Pingvinen	LL
10-12	Andre Bertelsen	Pingvinen	LL



Om alle flyger samtidigt blir tävlingen snabbt avklarad!

Søndag formiddag stod 11 piloter og enkelt veloplagt junior pilot klar til at dyste om det Danske Mesterskab i Diesel-Combat. Da dette betød 12 kampe i de første to runder, var der behov for ikke at spille tiden mellem kampene. Trods en god kamp og en general flot præstation røg junior Tobias ud i 3 runde. Efter meget tætte kampe i kvart og semifinaler var der lagt op til et brag af en finale mellem diesel debutant Morten Friis og en rutineret Steen Lysgaard, som begge havde fundet en rigtig god indstilling af motorerne. Morten Friis løb af med første pladsen og dermed en flot andenplads til Steen Lysgaard. ■

Kent Thorup



Steen, Morten, Bjarne och Tobias.

Norgesmesterskap F2B & Weatherman



Årets NM Linekontroll F2B Stunt og Wheatherman var i år lagt til Starmoen ved Elverum i forbindelse med NM-Veka og gik av stapeln 28 juni.

Vær og vind var bra, selv om temperaturen (30+) var i høyeste laget!

Der var 6 deltagere i F2B og 5 i Weatherman. Dommere var Marte Meltzer og Morten Sitje. I F2B var der 4 modeller med IC (GLOW) motorer og 2 med Electro.

NRK var tilstede og filmet, men det ble vist minimalt (6 sekunder) på TV. Vi hadde også hyggelig besøk fra Bergen av to kamerater fra ungdomstiden på 60 tallet; Yngve Bjørndal og Helge Walle.

■
Norvald Olsvold

F2B Stunt

Placering	Namn	Klubb	Resultat
1.	Clamer Meltzer Discovery Retro .68	Stjørdals MFK	4009,0
2.	Per Vassbotn Discovery Retro .76	Agder MFK	3882,0
3.	Ingolf Steffensen Electro	Skedsmo MFK	3311,5
4.	Norvald Olsvold Discovery Retro .68	Skedsmo MFK	3274,0
5.	Roy Heitmann Electro	Hvaler IL	3090,0
6.	Tor Bortne OS La .46	Örnen MFK	2946,0

Weatherman Vintage Speed

Placering, Namn	Klubb	Resultat
1. Roy Heitmann	Hvaler IL	95,2 %
2. Per Vassbotn	Agder MFK	94,8 %
3. Tor Bortne	Örnen MFK	70,3 %
4. Jan Wold	Skedsmo MFK	6,8 %
5. Ingolf Steffensen	Skedsmo MFK	0



F2B SUPPLIES

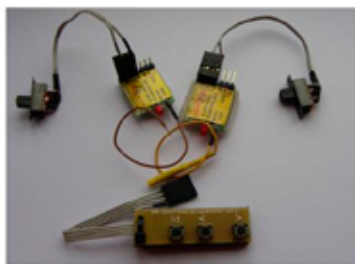
MOTUL MICRO 2T
Synthetic Oil

CUSTOM SERVICES:

Ready made
Lines
Fuel Tanks
Control
Systems

MERLIN Glow Plugs

EUROPEAN AGENT for Keith Renecke Timers



SUPPLIER OF TECHNO
HOBBY PRODUCTS

Stock Items:

Flight Boxes
Line Reels
Control Horns
Handles
Glow Plugs
Fuel Filters
Tipweight Box
Adj L.O. Guide
Wrist Straps

Roger Ladds. "Rochford", Station Road, Hubberts Bridge, BOSTON, Lincolnshire, PE20 3QT, ENGLAND

E-Mail: busterjudge@googlemail.com Mobile No: +44 (0) 7984694099

Finska Mästerskapet F2B



FM3: Kai Karma och Elias Mayer knästående Mikko Suokas



Ruska Classic: Aleksis Tammi, Matti Husso, Lasse Aaltio, Iita Husso, Mikko Husso, Elias Mayer och Alf Lindholm



Ruska Classic: Matti och Lasse bedömer Alf och Trumf Special.

Ruska Classic gick i Kuopio 26.9. Det var en fin höstdag; soligt, varmt och ingen vind. Deltagarna lyste dock med sin frånvaro, fyra tappra kom; en från Ekenäs och en från Helsingfors och de två andra var på hemmaplan då tävlingen flögs på Kurkimäki idrottsplan som har en jämn och fin gräsmatta. Ena domaren var också från Helsingfors. Totalt blev det ganska många kilometer för mig (900), Elias (650) och Lasse (650), Inget miljötank här inte... Domare denna gång var Lasse Aaltio och Matti Husso. Kiosken sköttes av Kurkimäen kisa damsektion. Resultaträknare var Aleksis Tammi.

■
Alf Lindholm



Elias Mayer med sin Classic Gieseke Nobler. Motor HP 40.

Deltävling 1 flögs i Kuopio på grund av coronan 25.7 på Kurkimäkis sportplan. Matti Husso skötte om arrangemanget och Kurkimäen Kisa skötte kiosken. På tävlingsdagen duggregnade det plus att blåsten störde flygningarna. Det dök upp bara fyra tävlande som dock klarade sig utan något haveri. Det gick som vanligt på senare år dvs Tuomas Juutinen vann och Kai Karma var tvåa då Elias Mayer valde att vara hemma. Domare var Lasse Aaltio och Matti Husso medan Aleksis Tammi var resultaträknare. Ett stort tack till Lasse Aaltio som hade kört upp från Helsingfors ca 650 kilometer tur-retur.

Deltävling 2 var i Nummela 15.8. Tävlingen flögs i ett vackert sommarväder dock lyste vinden med sin frånvaro och då vi alla som flyger stunt vet att det kan bli litet besvärligt ibland, när man hamnar i sina egna luftvrvlar, men även denna tävling klarade sig utan att någon kvaddade. Som vanligt så vann Tuomas även denna gång, dock ganska knappt. Endast 3 tävlande var på plats då tävlingen startade. Dock hade nu Elias tagit fram sin stunter och flög bra på gammal rutin. Domare som vanligt när tävlingarna försiggår ytterom Helsingfors Lasse Aaltio och Veikko Fagerström. Resultaträkningen sköttes av Kais fru Madeleine.

Deltävling 3 flögs på Malm 19.9. Vädet var blåsigt och svårfluguet. Domare Lasse Aaltio och Veikko Fagerström medan resultaträkningen sköttes av Madeleine Karma.

■
Alf Lindholm

Finska Mästerskapet F2B

FM1

1	Tuomas Juutinen	2193,55 p
2	Kai Karma	2029,35 p
3	Mikko Suokas	1854,95 p
4	Erkki Ylimäki	1732,40 p

FM2

1	Tuomas Juutinen	2127,45 p
2	Elias Mayer	2118,25 p
3	Kai Karma	2076,15 p

FM3

1	Elias Mayer
2	Kai Karma
3	Mikko Suokas

Totalt F2B Stunt

1	Tuomas Juutinen
2	Elias Mayer
3	Kai Karma
4	Mikko Suokas
5	Erkki Ylämäki

Ruska Classic

F2B

1	Alf Lindholm	1765,25 p
---	--------------	-----------

Classic

1	Mikko Husso	2217,10 p
2	Elias Mayer	2045,75 p
3	Alf Lindholm	1855,75 p

X-Klass

1	Aleksis Tammi	71,0 p
---	---------------	--------

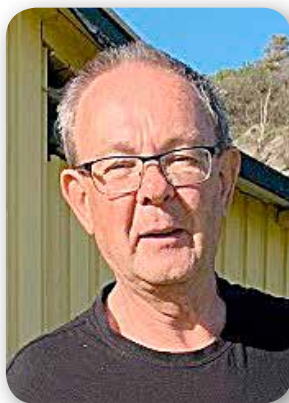
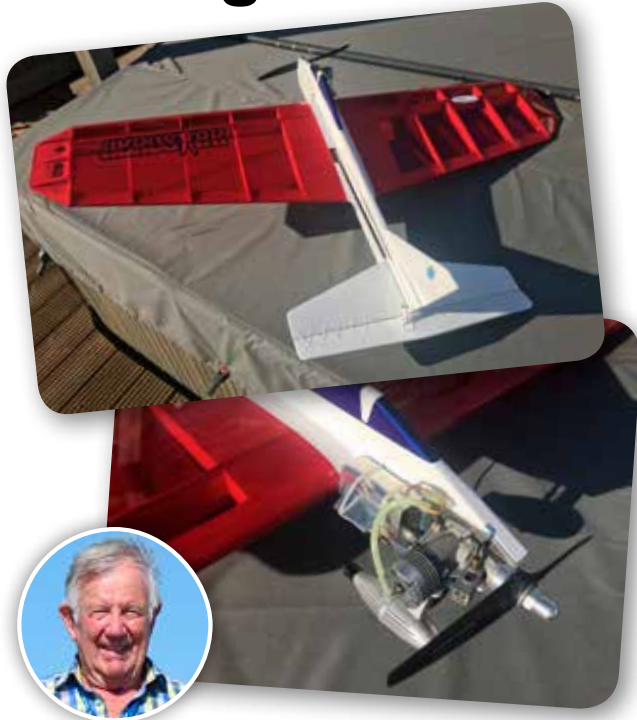
Christmas Greetings from

Roger Ladds

In 1978 a group of Combat flyers demonstrated Control Line Flying at Wembley Stadium where the Football World Cup was being played. For this occasion a model was designed called the Aerostar. Vernon Hunt recently obtained permission to produce a Laser cut kit of this model primarily for demonstration at a large venues where the public were also invited to "Have a Go".

I was asked to build one of the Kits to see if any improvements could be made. The nose was lengthened, the engine mounted on an alloy plate to aid adjustments, a 75 mm bellcrank substituted for the 50 mm supplied and an adjustable lead out set and wing tip weight box. Have we improved it? Well, the CG is now where it should be but the rest is waiting it's first flight. The original engines were Fox 40's of the period and I happened to have a later version with the tall backplate, so that is what you see fitted and the wing covering is "Polyspan".

Roger Ladds, GBR



Är Din SPRAY BAR böjd eller kass?

Då kan jag kan göra en ny åt Dig. Jag har så jag kan göra gamla OS och Enya som är knappt 4 mm i diameter med gänga M4x0,5. Kan även göra venturi enligt önskemål. Nya nålar är värre - men jag har gott om originalkonor till gamla Mills (grammofonstift).

Ingvar Nilsson
ingvarl.nilsson51@gmail.com
+46 702 07 44 94



Engine mounts



Glow Plugs



Rotating



Lapping Tools



Heads



Syringes

and much more

Send an email to eamodels@gmail.com
and get our pdf catalogue!

Christmas Greetings from

Joe Devenish

Both 'Score' models are ST60 powered with light-weight tube mufflers sourced from the late Tom Lay. The 'Impact' is also powered by an ST60, with a Kuentz muffler. These ST60 models use a clunk tank system with a 13x6 wood prop.



The ARF 'Nobler' came in a box crushed in the mail about eight years ago. I repaired the model slowly over the years, replacing all the control systems. I earmarked my Double Star 40 for power but changed my mind after seeing an Aero Tiger 36 in action at a competition in the US.

However, my favourite model is the first one I assembled: the Tutor 2 powered by the OS 46LA with a Kuentz muffler and original clunk tank. All up weight is 1340 grams. It came as an ARF from Top Flite some ten years ago and I replaced the controls and the wire undercarriage. The model/engine combination is truly superb and I'm grateful to Luc Dessaucy for the recommendation many years ago. A shame that this kit has been discontinued. As with the Nobler, I was fortunate to get both kits with light weight wood that has helped model performance.

Due to Covid 19 the local authority flying sites we used in the past, have been closed to the public. However, a flying pal got permission to use a local sports facility which is currently being renovated and where we fly on grass. This Aerobatic flying of mine is just for fun and I have no intention to compete in F2B.

Joe Devenish, BRA



James Mears Memorial Combat Bash



*James Mears
with his Raunchy*



Sepeid Goudarzi



Another good time at the Combat Bash again this year. 15 entries made it large enough for some great matches, yet small enough to stay laid back and fun.

This year we chose to fly Lester Haury's Air to Air event and a nostalgia fast event. We changed from our normal F2D because half of our normal entries was going to Poland for the World Championships. And several non F2D pilots wanted to see the museum and this was a great time to do it. As we know the Poland event was postponed until next year, so we very well do this same event next year. We will get back to F2D when we have all our pilots here in the USA.

We started our event off with a couple of WW I biplanes. Jeff Johnson flew a biplane at our last event and was so impressive to watch that



**Photos:
Moustafa F Goudarzi**

I had to build one myself. They fly so bad that he was at too bad of a disadvantage to continue with it at the previous event so I figured another biplane would equal it out for a great match. Jeff was powered with a Fox stunt 35 and mine was electric. They were both very well matched speed wise, but I had an advantage with a larger wing area. It was a really fun match to fly and to watch. I hope we get a chance to do it again. I'll add some landing gear on mine for our next showing.

The battle of electric. Vs. gas is still ongoing. Lester started this event in hopes of getting new pilots involved. Thinking that real looking airplanes might draw interest of newcomers. Plus thinking that electric power systems might take away the intimidation of having to start fuel engines. A few of us messed with the electrics for the sake of the experiment in hopes of the same outcome of newcomers to the event. Each one has its advantages in competition. Both have proven to be competitive. Lester gives a 100 point bonus to fly electric for an incentive to invest in this new adventure. After much experi-

James Mears Memorial Combat Bash



menting we have a good system that's cheap and easy to operate. The MACA web page will have the details of our electric system that will save you lots of time and money. The really good part is Lester has done what he set out to do. He has retrieved several old pilots that have been out of the hobby for year to get back in, and instilled the interest of some new pilots too. It's really great to see some new faces in the combat circle. I say his event has been a success and I look forward to every one he has.

Andy Mears took the win in this event with an electric Flite Streak. Bob Mears took a second flying a different electric airplane every match. And Lester took a third flying both electric and fuel. This may sound like electric has an advantage, but the real advantage is these guys didn't hit the ground. If you hit the ground with an electric, your probably not going back up.

After a great day of flying, we met for dinner at the Combat Museum. Burgers, homemade ice cream and cobbler was served up by the host, Bob and Arlene Mears. The smaller crowd made it easier to share combat information to anyone willing to listen. Several airplanes get added every year and it is an impressive sight for any control line pilot. The airplanes and engine displays start from 1949 and run up to our current F2D equipment.



All the MACA newsletters are there, several magazines, plans, flyers, fuel can, props.... about anything to do with combat since the beginning of the event.

Then we have door prizes given away, video's playing, and lots of discussion about the old days of combat. If you haven't made this event, you should put it on your to do list.

Sunday had a high wind forecast so we chose to do a single elimination nostalgia event in hopes of getting done before the wind really got up. These old engines and airplanes sure make you appreciate the new equipment we use today! They're inconsistent, moody, hard to set the needle, and hell on glow plugs.

I'm sure a lot of it is we don't really spend any time on equipment we fly once or twice a year. We spend our combat time on real equipment. But, headache of old engines and airplanes it was still a fun event. It does create many laughs watching ourselves try to make this old stuff work. Many airplanes were loaners and you had about 5 minutes to figure out how to make it work. That being said, A new pilot, Sepeid Goudarzi took his first win with a loaner Big Iron and a Veco 35. He flew the same airplane all day to take the win! Congrats Sepeid!

Thank everyone for showing up for the event. It has proven to be one of the many great events to attend, and we love having everyone here to enjoy it.

We're looking forward to next years event, and it will be determined what event we will fly as soon as we find out what the World Championship schedule will be.

Clear skies, calm winds
Bob and Arlene Mears

The early years at Enya



Adrian Duncan is a 73 year old modeler living in Canada. One of his main interests is Models/Model Engines and he runs a very informative web site.

This time we have chosen the story of the early years of Enya (in a compressed form). If you want to read the complete article visit <http://adriansmodelaeroengines.com>.

The Early days at Enya

The famous marque of Enya Metal Products Company occupies an honored place in the history of model aero engine development and production as being established in 1949 and remaining active today. However, the Enya enterprise began in post-WWI Japan as a family business. The patriarch of the Enya family was Hachiro Enya, who owned a small machine shop in Tokyo in which he produced medical instruments. He had five sons, named Ichiro, Jiro, Saburo, Yoshiro and Goro. The elder two sons Ichiro and Jiro became active as model aircraft enthusiasts as far back as 1930, when they started building rubber-powered model aircraft. Sadly, Ichiro Enya was killed in a motor vehicle accident in 1937. However, his younger brothers Saburo and Yoshiro had by now become actively involved with aeromodelling as well.

Japan's December 1941 entry into WW2 naturally put a stop to such recreational activities as aeromodelling, at least as far as the Japanese public was concerned. Jiro was drafted into the Japanese army, while Yoshiro ended up undergoing pilot training with the Japanese Army Air Force while still in his teens. Saburo was exempted from military service by virtue of his enrollment in engineering studies at Tokyo University, from which



Jiro Enya

institution he eventually graduated with a degree in Mechanical Engineering.

It was not until after the war that the next steps were taken towards the establishment of the Enya family's model engine manufacturing business. Apart from Ichiro, all the previously-mentioned members of the Enya family miraculously survived the war, and Hachiro's small machine shop soon resumed its former peace-time operations, with the sons (excluding Goro, who was then only 12 years old) helping their father.



Saburo Enya

During the immediate post-war period, the sport of aeromodelling in Japan received a huge boost through the presence of the US forces of occupation, a good few of whom were modellers in their free time. Their influence on the growth of the modelling hobby in general and power modelling in particular in Japan cannot be over-stated.

This new source of inspiration and potential custom was certainly not lost upon the Enya brothers, whose enthusiasm for aeromodelling had by no means diminished during the war. It was during spare moments in their father's workshop that the three brothers began to experiment with the development of their own model engine designs. No doubt Saburo's newly-acquired engineering skills were put to good use in this effort.



Yoshiro Enya

Being based in Tokyo, the Enya brothers benefited from a unique opportunity during these early post-war years. The sport of control-line flying caught on as rapidly in Japan as it did everywhere else, and it's an interesting commentary on the levels of tolerance displayed towards the rather noisy business of power modelling that one of the leading venues for control-line flying in Japan in the

late 1940's was an open square in the centre of Tokyo right in front of the Emperor's palace! The raucous sound of control-line models powered by the un-silenced large-displacement engines then in fashion must often have reached the Imperial ears!



Goro Enya

But things were different in the latter half of the 1940's, and control-line flying at this downtown site was a weekly occurrence and something of a local "event". Apart from the practice sessions that took place, the site was the venue for a series of major contests at which many of the competitors were American servicemen using the latest US-made engines. This gave the various Tokyo-based manufacturers such as the Enya brother's opportunity to make contact with American modellers, research American modelling and learn from their observations. Time was to show that they learned well ...

By 1948 the Enya brothers had produced a prototype of a 7 cc crankshaft front rotary valve (FRV) model, but they soon began to focus on a rather massive .63 cuin. job, of which Saburo reportedly made 7 prototypes before finally unveiling his design in public at a major 1949 Japanese flying meet held in the Tokyo square.



**The very first Enya -
7 cc spark ignition prototype**

The peer response to this doubtless noisy demonstration was sufficiently encouraging that the brothers initiated efforts to persuade their father Hachiro that their design should be put into production. Hachiro doubtless took some persuading! It seems almost certain that the workshop did not switch overnight to full-time model engine production. The engines were most likely constructed

The early years at Enya

individually on the basis of prior orders. Hachiro would have to be convinced through ongoing sales interest that there was a viable future in model engine manufacture.

Enya Production Commences

In October 1949 the Enya family began small-scale production of two variants of their newly-refined .63 cuin. engine, Types 1 and 2. These were both offered with either glowplug or spark ignition under the name Enya "Typhoon" 63. The "Typhoon" name was to become something of an Enya trademark during their first decade in business, being applied to a number of engines during that period.



**Enya Typhoon 63 -
Type 1 sparker no 2181**

Prior to the conclusion of WW2, the use of non-Japanese ciphers on Japanese products was forbidden by the Japanese government. But as soon as that prohibition ended, manufacturers began to fall over themselves using Anglicised names for their products. The Japanese makers tended to apply names to their products which reflected the related concepts of excellence, power and progress, as exemplified by evocative names such as Top Class, TOP, Great Leap Forward, Super Devil, Cherry and Hope. The name Jin Puu (or Gin Fuu, both meaning Great Wind or Typhoon) had been a commonly-used name for pre-war and wartime model engines. After WW2 it required only a short step for this to evolve into the Anglicized Typhoon name which was used extensively in the 1950's by Enya.



**Enya Typhoon 63 -
Type 2 glow model**

Returning to 1949, the two original "Typhoon 63" models were produced in rather limited quantities by Enya's later standards, consequently ranking today as the rarest Enya's of them all. Type 1 was a plain bearing crankshaft front rotary valve (FRV) engine, while Type 2 was a twin ball-race disc rear rotary valve (RRV) "racing" model.

At this early stage, both models were based upon a common central block with detachable front and rear covers secured by four screws apiece. Both models used lapped cast iron pistons for the most part, although a few examples have been reported with ringed aluminium pistons.

The company considered the Type 1 FRV version of the Enya 63 to have been their first quantity-produced model. In the latter part of 1952 this model was updated into the more familiar six-bolt front housing version with integrally-cast backplate, finally being replaced in 1956 by the first of the Enya 60 series.

The Enya brothers almost certainly saw the Type 2 variant as a "racing special" which had the potential to underscore their technical capabilities through strong showings in the contest arena against racing engines from elsewhere. It was doubtless never seen as a long-term quantity production unit, probably being sold strictly on a "special order" basis and production appears to have ended in 1951.

During the early stages of the glow-plug era when Enya was looking to get into the manufacture of such plugs, the necessary platinum-iridium wire was unobtainable in Japan. Enya formed a relationship with US serviceman Jerry Asner, who supplied them with such wire.

It must have been clear right from the start that in order to establish their fledgling model engine business upon a more financially-sustainable basis, the Enya brothers would have to diversify their product line very rapidly to embrace a more "popular" displacement category than the rather specialized and high-priced "big bore" .63 size. Their first move in this direction was to enter the .19 cu. in. category, which at that time was one of the recognized "economy" classes, hence being widely used.

A small curiosity... Apparently Saburo Enya travelled to work each day riding a bicycle which was fitted with a flywheel-equipped Enya 63 engine driving the front wheel through a spring-loaded friction roller. No need for a bell with this set-up – you'd have had to be deaf or dead not to hear him coming!!



**Enya Typhoon 63 -
six-bolt model no 6615**

The Range Expands

One question that deserves consideration at the outset is – why did Saburo Enya in effect tie the future of his family's evolving model engine business to the series production of a .19 cuin. model?? So why not an .09, for example?? The .099 cuin. category was at least as viable in Japan as the .19 category, and indeed appears to have occupied the same market niche in Japan that the .049's did in the USA at around the same time.

This is underscored by the fact that Boxer, Mamiya, O.S., Fuji and K.O all jumped on the .099 bandwagon very quickly beginning in 1949. So why not Enya in 1950? As matters transpired, they didn't enter the .099 cuin. sweepstakes with their excellent Model 3001 until May 1954.

A number of factors appear to have influenced Enya's decision to ignore the .099 displacement for the moment in favor of the 0.199 cuin. category. Firstly, the pre-war Japanese Class I encompassed engines up to a size of 3.2 cc rather than the American standard of 0.199 cuin. (3.27 cc). Japanese power modelers of that era seem to have focused on the larger-displacement categories, with manufacturers understandably following along.



**Saburo Enya
with original 7 cc prototype**

The early years at Enya



Enya Machine Shop, Kawagoe mid-60's

This changed after the war, when a number of Japanese manufacturers developed models to suit the increasingly popular .19 cuin. class. A major driving force behind this change was doubtless the fact that Class A (0.199 cuin.) was a very popular category among the many American modellers then resident in Japan as part of the occupation forces. The potential combined sales to these individuals and interested Japanese residents must have been seen by Enya.

Another major factor was doubtless the fact that as of 1950 the .09 market was already well served by domestic Japanese manufacturers. This most likely led to a perception by Enya that as of 1950 they were too late and that the .09 field was in danger of becoming over-crowded. Finally, there may have been the added attraction that while the actual manufacturing costs of a .19 would not be significantly greater than those for an .09, the selling price could be set higher. This would of course generate a greater unit profit for the new company.



Sandcast 3-bolt Enya 19 Red Head

We've already seen that there was competition for Enya in the .19 field as well. This was not a case of Enya entering a field in which there was little competition - rather, it must surely have been a case of Saburo believing that he could do better than the others and that in any case the domestic market as it then existed could absorb the 300 or so examples of the Enya 19 that they could produce annually at this time.

The first Enya 19 was introduced in February 1950, only some four months after the commencement of series production of the company's two Typhoon 63 models. This represents remarkably quick work on Saburo Enya's part! The new 19 featured a sandcast

crankcase with an integrally-cast exhaust stack discharging to the left. The detachable front housing was secured by three bolts, while the backplate was cast integral with the main crankcase. The very short vertical FRV intake was cast integral with the front housing. Both the head and prop driver of most examples of this model were anodized red. However, the color achieved through the anodizing process used by Enya at this time did not stand the tests of time and usage well. The majority of surviving examples tend to have rather faded anodized components.

The Enya 19 series bears the distinction of being the one displacement category which was represented in the Enya range almost throughout its long history. The original sandcast Red Head model just described survived in production with minor variations until late 1953, when the construction of a new factory at Nerima in Tokyo coincided with the introduction of a die-cast version of the Enya 19 designated the Model 4002. A few early examples of that model retained the red anodized head of the earlier variant.



Sandcast Enya 29 Red Head

Well prior to that point in time, Saburo had already moved to develop a larger companion model of generally similar design in the .29 cuin. class. This was a momentous addition to the range, because if one had to pick a single displacement category in which the Enya company was destined to finally earn the respect of modellers worldwide, it would probably be their .29 cuin. (5 cc) models.

The first Enya .29 was the Red Head model which made its initial appearance in April 1952, some two years after the initial appearance of its .19 sibling. Like the companion .19 and .63 models, the new .29 had a sandcast case with left-hand exhaust stack and integrally-cast backplate. However, it departed from both of its siblings by having a four-bolt front housing (the 63 featured a 6 bolt front housing by this time).

The head fins had a flat-topped contour and the head was anodized red. A few of the later examples also had red-anodized prop drivers of a different more cylindrical design. There is evidence in the form of an example in my



Stylish classic - Enya 29 Model 5002

own possession that Enya experimented with an over-bored .33 cuin. version of this model to allow the same airframe to compete in different classes simply by switching engines. This was a common practise among US manufacturers, making it quite logical for Enya to follow suit. The Enya 29 Red Head remained in production until late 1953, when a die-cast replacement appeared in the shape of the Model 5002 with its striking "airfoil" section exhaust stack on the right-hand side.

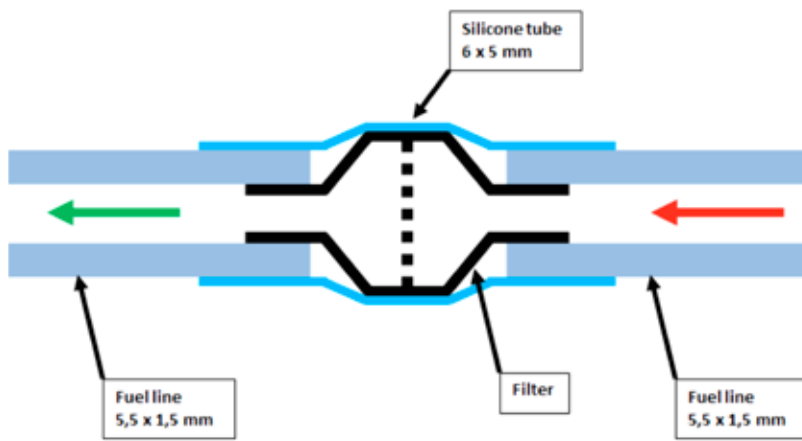


Enya 19 Model 4002

Throughout the period just described, Hachiro Enya had served as President of the company, a position that he was to hold until his death in 1963. He was succeeded by his son Jiro Enya. Saburo continued throughout to serve as Managing Director in charge of engine design and production scheduling.

We have now brought the story up to late 1953, at which time Enya had been in business for some 4 years and was steadily increasing its market share on the basis of its established models in the .19, .29 and .63 cuin. displacement categories. The company was also now operating out of a greatly-expanded factory and was moving into die-casting for most of its products. In addition, Saburo Enya was finally contemplating the long-delayed addition of an .09 model to the range, which eventually appeared in May 1954. And this puts an end to this part of the Enya story. ■

Adrian Duncan



A "small" Sullivan fuel filter (top) compared to the Dub Jett filter. The later wights less than 1g.

Frank's DOs & DON'Ts of STUNT



*Frank's personal view
on how to become
a better stunt pilot.*

Always use a good fuel filter

Okay, this is a given. We all know that a fuel filter is mandatory. My little hint here is more about what distinguishes a good fuel filter from a bad one, and how it should be installed. Of course there are the obvious properties a filter should have:

- It should have a fine mesh in order to filter even the smallest particles.
- It should be free of any leakage

And there is a third property that might be new to you:

- It should be small in size and volume

The fine mesh goes without saying. About every 50 flights I remove the filter from my plane and inspect it. Although I filter the fuel when I transfer it from my field box to the syringe I use for fueling, and another time when actually fueling the plane, I always find dirt in my filter. Usually it's very very fine lint (fibrous material). I have

no idea how this stuff made it into my fuel tank, after already being filtered twice, and I have no idea what it is. But without a super fine filter in the plane this stuff would find its way to the needle valve, and would probably lead to a lean run.

Leakage in the fuel system is the #1 cause for engine trouble. And the #1 cause for leakage can be found in the fuel filter. Until a while ago I used the Yatsenko type filters. These are constructed from two plastic parts glued together. Somehow the glue joint came loose causing a tiny leak. The result was a terrible engine run with all sorts of misbehaviors. I nearly crashed the model! To avoid such issues I cover the entire unit with a thin silicone tube.

These thin walled silicone tubes are for electrical insulation purpose and come in various sizes. They can be purchased at Conrad (www.conrad.se). The inner

diameter should be such that it is a tight fit over the entire unit.

This next aspect is particularly interesting when using an engine that consumes rather little fuel and is very dependent on the fuel pressure. I'm talking about the volume of the filter.

A filter with a big volume, such as the Sullivan "Crap Trap" act like a small fuel tank between the actual tank and the engine. The exposure of fuel volume inside the filter to G-forces and engine vibration seems to have an impact on engine characteristics. Especially the Retro Discovery engines seem to be sensitive for this. I can't really explain why it is that way, but I can assure you I have seen cases where a problematic engine was turned into a nice performer after a smaller filter was installed. Maybe the best filter available is the one from Dub Jett from the USA. It fulfills all requirements listed above.



Thomas Johnsson på väg ut i tävlingscirkeln.

Den 53:e västkustträffen blev till slut av. 2020 kommer det att talas om länge i framtiden, p g a den väldigt lyckade tävlingen vi höll, och lite p g a den pandemi vi drabbats av. Det diskuterades en del innan om vi skulle hålla tävlingen, men till slut sa vi att vi kör. Veckan innan det enligt tävlingskalendern planerade datum såg vi att det skulle bli riktigt skitväder vilket gjorde att vi sköt upp tävlingen en vecka. Vi blev iallafall sju man som kämpade om medaljerna.

Att vi sköt upp tävlingen var en lyckoträff för oss som kunde delta. Det var längesedan vi hade så gott väder. Domarna Kauko Kainulainen och Ingemar Larsson hade det

skönt i sina stolar med milda svaga vindar i nacken och omkring 20 grader i solskenet. Vinden kom också från rätt håll så vi slapp ha solen i ögonen.

Tävlingen flöt på utan några allvarliga incidenter. Trots att inga tävlingar har hållits tidigare i år så hade alla bra koll på sina prylar, motorerna startade och gick som de skulle. En del hade tränat mer och en del mindre. En som hade tränat mer var Niklas Löfroth som flög sin nya Thunder Gazer, han berättade att han hade gjort sin 200:e träningsflygning någon vecka innan tävlingen, sådant märks, nu flåsar han Staffan i nacken.

Apropå incidenter så var Lelle väldigt nära

Den 53:e upplagan av –

Västkustträffen



en, han kom lite lågt i en buntdel, fenan snuddade gräset men så som combates bekom det honom inget.

Det som flögs med kan indelas i 3 skolor. Staffan och Niklas flyger i pipskolan, pipade motorer med lite högre varv och mindre stigning på propellern. Staffan kör med OS 46 VF och en Impact-variant, Niklas med PA 75 och som tidigare nämnts, Thunder Gazer. Sedan har vi Yatsenko-skolan, flygplan med motorer som köps helt flygfärdiga. Lelle Nord har en Yatsenko Classic 3 med en Discovery 76. Sedan har vi Väst-kustskolan, (Jurassic-trimmet som Kauko kallar det) lite långsammare med motorer som går på 4-2-4. Man kan dock säga att Lelles kan ingå här. Far och son Johnsson använder Stalker 66 som framdrivning och flyger Blue Max, vilket är konstruerat av Japanen Kaz Minato, Thomas flygplan var nytt för denna säsongen. Undertecknad med en Stalker 61 som sitter i en ARF SV-II. Lille Emil som inte är så liten längre flyger med OS 46 LA och ett flygplan konstruerat av mig som vi kallar Spirit. Elskolan var det ingen som flög denna tävlingen.

Vi får hoppas att Covid-skiten är över till nästa år så vi kan få hit våra vänner från Danmark, Norge och Finland. Vi saknar er!

Michael Palm



Niklas premiärtävlade med sin Thunder Gazer utrustad med PA75 och 4-bladig propeller.



Lennart Nord och Staffan inspekterar det mycket lätta handtaget designat av Paul Walker.



Michael Palms SV11 fungerade mycket bra.



Thomas Johnsson flög sin nya Blue Max.



Att umgås i depån mellan flygpassen är väldigt trevligt.



Impact och OS 46VF – Vinnarreceptet med Staffan Ekström vid handtaget.

Resultat F2B Stunt Västkusträffen 19 september 2020

Placering	Namn	Klubb	Omg 1	Omg 2	Omg 3	2 bästa
1.	Staffan Ekström	Trelleborgs MFK	2092	2115	2142	4257 p
2.	Niklas Löfroth	Karlskoga MFK	1975	2076	2056	4132 p
3.	Lennart Nord	MFK Red Baron	2031	2062	1901	4093 p
4.	Michael Palm	Kungsbacka MFK	1855	1935	1901	3836 p
5.	Thomas Johnsson	Kungsbacka MFK	1669	1739	1747	3486 p
6.	Emil Palm JUN	Kungsbacka MFK	1329	1656	1475	3131 p
7.	Ingolf Johnsson	Kungsbacka MFK	1486	1496	1601	3097 p

Domare: Kauko Kainulainen, Ingemar Larsson. **Räknare:** Ingvar Nilsson. **Löpare:** Ola Lindgren



Kauko Kainulainen och Ingemar Larsson.



Scarlet Witch



It was 2016, and Jester 2 had been performing admirably, I also had a giant twin project occupying my building bench. I decided it was time to flow some of the sketches into a final product. My sketchbook had several cool features and some elaborate ideas, while the dreams were fun, some just didn't pass the practicality tests. The name Scarlet Witch was chosen very early. If you follow comic books at all or now even the movies you will know the character. Early comic art had very heavy lines and dramatic shading with bright colours and immersive layout. I knew that this style would be tough to use but I felt I could find a way. The colour palette was obviously red and pink and black and some other highlights. I had lots to go on. I finished the drawing and set to work with no final paint scheme in mind as the construction had just started. I have a feather cut foam cutting system and set to cutting the cores. The wing is the same as I used on the two Jesters and Merlin in a built up form. I like that it seems to perform well at the weights I

build to, and still provide a decent corner. The cores were vacuum bagged with balsa skins and then the internal coring is done. This allows a much thinner foam section and thus a lighter wing, the panels with LE and TE attached are 3.9 oz each. The fuselage has a molded turtle deck and bottom block including the cowling. I have the molds from Jester and adapting them to suit this model was quite easy. The parts are two pieces of light A-grain 1/16 balsa soaked in very hot water. The base piece is applied to the mold and a thinned slurry of titebond/water is smeared over the layer. A piece of heavy silkspan is then placed on top of the glue and the final piece is laid on top. The whole layup is then wrapped with an elastic bandage and set to dry. The canopy is custom molded and was covered in a previous article. I like the look of the opera windows on the side and this necessitated a custom mold. The airplane is also fully take apart and the canopy area is under stress so the tie in from turtle deck to nose block is important.

The stab on Scarlet Witch has a very sharp leading edge and is a build up structure. I will confess here that the first one was wildly overweight. I managed to build a replacement that is two ounces lighter. The landing gear are two piece and plug in from the sides. They are Randy Smiths carbon F2B gear and they have a rearward sweep. I like the look and they put the wheels where I wanted relative to the CG. I carve my own wheel pants and the mounting occurs inside the pant for a very neat and tidy installation. The power comes from a PA 75 with Smith pipe at 19", launch is usually 9100 rpm and it has had 14 inch three blades to 13.5 three blade undercamber props. I use the Georgia tune up, which is Randys recommendation on how to run the engine. It cycles perfectly, on at 10 o'clock and back off at 2 o'clock on the loops with small beeps of two stroke at the tops. I use a Sullivan 8 ounce squishy tank with a uniflow set up. 5% nitro fuel is great for spring and fall and I use 10% when the density altitude climbs through 4500 feet in the heat of summer.

Scarlet Witch is still in the trimming stages and it is showing great promise. The long tail delivers a very distinct turn with sharp exit. It has more corner than you would need in normal presentation but having extra is always good in the wind. I really like the look in the air and I catch myself admiring the model when I should be concentrating on the flying.

The paint ended up being a lengthy process, the design took a year to dream up with many iterations. The finish is a dope and tissue base with auto colours over that. I have a vinyl cutter and have spent some time with Corel draw. That said the paint scheme is much more elaborate than anything I've attempted before. Naturally, there are many things I would like to have different on the final paint, but hopefully only I can see them.

Scarlet Witch will see it's first contest next year, if everything goes well. It took four years to reach the air, but I'm satisfied with the result.

Bruce Perry
(madpilot170@gmail.com)

Specifications:

Model Name: Scarlet Witch

Designer: Bruce Perry

Construction type: Foam wing, Take apart (Walker style), Molded bottom block, cowling, turtle deck, Geodetic former layout in the fuse. Canopy is custom molded.

Wingspan: 64.375 inches

Wingarea: 705 sq inches

Moment arms: (Measured from the front of the wing to the back of the spinner and from hinge line to hinge line) nose moment 9.75 inches, tail moment 20 inches, overall length 49.25 inches.

Power package: PA 75, Randy pipe, 8oz Sullivan RST 8 squishy tank, hard plumbed uniflow. Launches at 9300 and delivers a 5.3 lap.

Propeller: 13.5 x 4.5 Bolly 3 Blade

Finish: substrate of dope, colours are all auto paint, the red is "Pull me over" red by GM, the pink is "Pink Panther" top coat is House of Kolor clear. This is then sanded and machine polished.

Line length: 66' x .018 braid on a Kaz hard point handle.



The wing has been masked with 3M vinyl. It has both shades of pink at this stage and the next color is "Pull me over Red".



The Mighty PA75 tucks in nicely. You can see the Sullivan RST 8 flexible tank and the plug in landing gear.



Small components are being prepped for sanding and polishing.



This is Scarlet Witch as it looked right after the clear and before polishing for hours....

Christmas Greetings from

Peter Alstrup

When I stopped flying C/L many years ago, the most advanced I had built was the Spectre model, designed by Dave Platt, bought in Malmö from Sven E. Truedsson. At that time I was a member of the Comet Club in Copenhagen and Luis Petersen was one of those who taught me to fly. I still remember my first Spectre. It looked just like on the lid of the kit box, but instead of red it was light chocolate brown and quite overpowered as there was a Super Tigre 5 cc in it.

A few years ago, I downloaded the Spectre drawing from Outerzone and rebuilt it. The difference between this and my first is that this one is that there is an electric motor with ESC in it and a 2S LiPo and a tiny R/C receiver with 3 channels so that you can control the gas from the outside. Used Oracover to cover it.

For me C/L is pure nostalgia and thought it might be fun to try again. During the years I have been flying R/C Jets but stopped with that now. Enjoys building according to drawings and preferably a bit like older models with IC engines. The model isn't flown yet but that will come...

Peter Alstrup, SWEDANE



New

New



New



New

Technohobbywest supplies from Ukraine

New

We are now proud to present the new THK09, available in both glow and diesel versions.

Priced at £170 + postage.

We are suppliers of PROF1, FORA, STALKER and YATSENKO. Engines, accessories and spare parts.

Technohobbywest are a good interface to Ukraine, where we are able to ship direct to you with easy payment options via PayPal or Western Union.



New

New

We are also suppliers of the Oliver based K12/15 and 19 combat diesel. For all your F2 needs - F2A, F2B, F2C and F2CN - we stock props fuel tanks and all the hardware.



Double World Cup Open Nordic Champs in Herning

20th - 24th of May 2021

Thursday: Arrival. Free training.
Friday: F2A + F2B (SWE), F2D (BEL)
Saturday: F2A + F2B (SWE), F2D (BEL)
Sunday: F2A + F2B + F2D (DEN)
Monday: F2A + F2B + F2D (DEN)

In addition there will be Weatherman Vintage Speed, Mini-speed, Beginner's Stunt, Goodyear Racing, F2F and F2C.

Pre-registered pilots and info at
herningmodellflyveklub.dk



Att flyga Weatherman innebär även avkopplande kaffepauser vilket Tord Vejdal här visar.

Myggvrålet



Sune Persson



Stefan Olsson



Jörgen Aagaard



Luis Petersen

WEATHERMAN VINTAGE SPEED, MYGGVRÅLETS MAILTÄVLING 18-19 JULI 2020

Placering, Namn, Klubb	Klass	Tid / Hastighet	%	Motor
1 Ingemar Larsson, Vänersborgs MFK SWE	6G	19,8 / 146,2	103,5 %	HP 40
2 Per Nordström, Nyköpings MK SWE	2G	22,8 / 127,0	103,1 %	Parra 09
3 Lennart Nord, MFK Red Baron SWE	3D	18,6 / 155,7	100,0 %	Zorro 15 D
4 Harry Kolberg, Skedsmo MFK NOR	1	16,9 / 85,7	99,4 %	Mills
5 Jens Geschwendtner, MFK Comet DEN	3G	19,6 / 147,7	99,0 %	Cyclon 15
6 Jörgen Aagaard, MFK Pingvinen DEN	3G	19,7 / 147,0	98,5 %	Cyclon 15
7 Per Stjärnesund, Västerås FK mod SWE	3G	20,0 / 144,8	97,0 %	Nelson 15
8 Luis Petersen, MFK Comet DEN	6D	23,7 / 122,2	95,8 %	Irvine 40 D
9 Juhani Karhunen VLK FIN	1	17,7 / 81,8	94,9 %	Mills
10 Sune Persson, MFK Jordfräsarna SWE	2D	21,6 / 134,1	93,5 %	Fora 09
11 Vernon Hunt, DMMFC GBR	3D	20,0 / 144,8	93,0 %	Fora 15
12 Anders Fridén, Uddevalla RFK SWE	3G	21,3 / 135,9	91,1 %	Rossi 15
13 Niels Erik Hansen, MFK Comet DEN	3G	21,4 / 135,3	90,7 %	ST 15
14 Stefan Olsson, Uddevalla RFK SWE	3G	21,5 / 134,7	90,2 %	Rossi 15
15 Bengt-Åke Fällgren, Karlskoga MFK	3G	21,9 / 132,2	88,6 %	Rossi 15
16 Göran Olsson, MFK Red Baron SWE	5G	20,9 / 138,5	88,5 %	ST 21/29
17 Niels Lyhne Hansen, Herning MFK DEN	4G	21,4 / 135,3	88,3 %	CS 21
18 Jan Wold, Skedsmo MFK NOR	1	19,1 / 75,8	88,0 %	Mills
19 Anders Hellsén, MFK Snobben SWE	7G	20,7 / 139,9	85,0 %	Rossi 61
20 Johan Larsson, Vänersborgs MFK SWE	2G	28,5 / 101,6	82,5 %	Fora 09
21 Tord Vejdal, Nyköpings MK SWE	3G	23,9 / 121,2	81,2 %	MVVS 15
22 Torbjörn Lundgren, MFK Snobben SWE	3G	25,5 / 113,6	76,1 %	MVVS 15
23 Jesper Buth R-n, MFK Pingvinen DEN	2D	27,4 / 105,7	73,7 %	THK 09
24 Martin Alkestrand, MFK Snobben SWE	3G	26,7 / 108,5	72,7 %	AP 15
25 Aaro Seppälä, RC-Nummela FIN	0D	16,7 / 86,7	72,5 %	MP Jet 1 cc
26 Kaj Johansson, Västerås FK mod SWE	3D	26,5 / 109,3	70,2 %	Oliver Tiger
27 Erik Huss, MFK Jordfräsarna SWE	3D	27,2 / 106,5	68,4 %	Fora 15

Årets femte mailtävling kom att ordnas av MFK Snobben och håller man en tävling i juli kan nog de flesta räkna med fin väder, vilket det också blev. Detta var första tävlingen efter det att vi beslutat införa en rekordlista för mailtävlingar för att göra det mer rättvist. Och det syns i listan då det bara blev två rekord och en tangering. Yours truly hade nu fått bra inställning på HP-motorn och det ledde hela vägen till seger. Problemet blir ju att bättra detta inför nästa tävling, ett problem som alla rekordsättare har. Men det är ju en del av charmen att testa nya vägar framåt och lära sig vad som ger utslag och vad som är mindre viktigt. Stackars Per Nordström fick se sig tappa segern med den ynka marginalen 0,4 % och som vanligt är det ett getingbo bland alla som ligger i 90-intervallet och kämpar om inbördes platser.

Med 27 startande tangerades rekordet från Jubelvrålet och återigen visades det att Weatherman är en populär klass i hela Norden. Ett bevis på detta är att vi kunde välkomna debutanterna Aaro Seppälä, Juhani Karhunen och Sune Persson.

Penguinman



Julio Isidro behövde inte bekymra sig för regn när han gjorde sina flygningar. Hans båda döttrar coachade honom!



Julio Isidro



Kaj Johansson



Per Nordström

Aj aj aj... Årets andra danska tävling blev inte så lyckad för våra danska flygare. Bäste dansk var Jörgen Aagaard och han kom först på 11:e plats. När de väl tagit sig upp ur fosterställningen deklarerade Jens att det var dags att åka till Kronborg. För att väcka Holger Danske och be om hjälp!

Bara svenskt i toppen av listan med fyra nya rekord. Och som vanligt var det ett getingbo där 90 %-flygarna höll till. Lite lustigt var att de två Mills-flygarna i Norge och Finland lyckades få exakt samma tid. Och samma sak hände Per och Johan som båda flyger 2G. Hur stor är sannolikheten för detta? Nya ansikten var Julio Isidro och Per-Inge Dyplin.

Ingemar Larsson



Anders Fridén var den ende som insåg att man måste äta Pingvinstänger när man flyger Pingvinmannen. Ett stopp på ICA löste detta!

WEATHERMAN VINTAGE SPEED, PENGUINMANS MAILTÄVLING 22-23 AUGUSTI 2020

Placering,Namn, Klubb	Klass	Tid / Hastighet	%
1 Lennart Nord, MFK Red Baron SWE	3D	17,8 / 162,7	104,5 %
2 Ingemar Larsson, Vänersborgs MFK SWE	6G	19,4 / 149,3	102,1 %
3 Göran Olsson, MFK Red Baron SWE	5G	18,3 / 158,2	101,1 %
4 Per Stjärnesund, Västerås FK mod SWE	3G	19,2 / 150,8	101,0 %
5 Harry Kolberg, Skedsmo MFK NOR	1	34,2 / 84,7	98,2 %
5 Juhani Karhunen, VLK FIN	1	34,2 / 84,7	98,2 %
7 Stefan Olsson, Uddevalla RFK SWE	3G	20,2 / 143,3	96,0 %
8 Johan Larsson, Vänersborgs MFK SWE	2G	24,1 / 120,2	94,6 %
8 Per Nordström, Nyköpings MK SWE	2G	24,1 / 120,2	94,6 %
10 Vernon Hunt, DMMFC GBR	3D	19,8 / 146,2	93,9 %
11 Jörgen Aagaard, MFK Pingvinen DEN	3G	20,8 / 139,2	93,3 %
12 Jan Wold, Skedsmo MFK NOR	1	36,4 / 79,6	92,3 %
13 Anders Fridén, Uddevalla RFK SWE	3G	22,0 / 131,6	88,2 %
14 Jens Geschwendtner, MFK Comet DEN	3D	21,1 / 137,2	86,1 %
15 Niels-Erik Hansen, MFK Comet DEN	3G	22,6 / 128,1	85,8 %
16 Erik Huss, MFK Jordfräsarna SWE	3D	21,7 / 133,4	85,7 %
17 Julio Isidro, CLP POR	1	39,4 / 73,5	85,3 %
18 Tord Vejdal, Nyköpings MK SWE	3G	23,2 / 124,8	83,6 %
19 Jesper Buth, MFK Pingvinen DEN	2D	24,7 / 117,2	81,8 %
20 Per-Inge Dyplin, Eskilstuna FK mod SWE	7G	22,1 / 131,0	79,6 %
21 Mona Hellsen, MFK Snobben SWE	5G	23,4 / 123,7	79,0 %
22 B-Å Fällgren, Karlskoga MFK SWE	3G	24,9 / 116,3	77,9 %
23 Anders Hellsen, MFK Snobben SWE	7G	23,1 / 125,4	76,1 %
24 Torbjörn Lundgren, MFK Snobben SWE	3G	26,9 / 107,6	72,1 %
25 Kaj Johansson, Västerås FK mod SWE	3D	26,0 / 111,4	71,5 %
26 Martin Alkestrand, MFK Snobben SWE	3G	30,6 / 94,6	63,4 %

Det Galaxiska Väst kustvrålet



Brätzellund-flygarna Stefan, Anders och Ingemar hade det blött när de klöv de galaxiska molnen.



Harry Kolberg



Aaro Seppälä



Jan Wold

WEATHERMAN VINTAGE SPEED, VÄSTKUSTVRÅLETS MAILTÄVLING 12-13 SEPTEMBER 2020

Placering, Namn, Klubb	Klass	Tid / Hastighet	%	Motor
1 Niels-Erik Hansen, MFK Comet DEN	3G	18,0 / 160,9	106,7 %	Cyclon 15
2 Aaro Seppälä, RC-Nummela FIN	3V	38,6 / 75,0	106,5 %	Viking
3 Göran Olsson, MFK Red Baron SWE	5G	17,8 / 162,7	102,8 %	ST 21/29
4 Jens Geschwendtner, MFK Comet DEN	3G	18,9 / 153,2	101,6 %	Cyclon 15
4 Per Stjärnesund, Västerås FK mod SWE	3G	18,9 / 153,2	101,6 %	Nelson 15
6 Per Nordström, Nyköpings MK SWE	2G	22,5 / 128,7	101,3 %	Parra 09
7 Lennart Nord, MFK Red Baron SWE	3D	17,7 / 163,6	100,6 %	Zorro 15D
8 Ingemar Larsson, Vänersborgs MFK SWE	6G	19,8 / 146,2	98,0 %	HP 40
9 Juhani Karhunen, VLK FIN	1	17,5 / 82,7	96,0 %	Mills
10 Jan Wold, Skedsmo, MFK NOR	1	18,0 / 80,4	93,3 %	Mills
11 Johan Larsson, Vänersborgs MFK SWE	2G	24,7 / 117,2	92,3 %	Fora 09
12 B-Å Fällgren, Karlskoga MFK SWE	3G	21,9 / 132,2	87,7 %	Rossi 15
13 Vernon Hunt, DMMFC GBR	3D	20,5 / 141,3	86,8 %	Fora 15
14 Luis Petersen, MFK Comet DEN	7G	22,7 / 127,6	85,5 %	HP 40
15 Harry Kolberg, Skedsmo MFK NOR	3D	28,6 / 01,2	62,2 %	DA Drabant
16 Kaj Johansson, Västerås FK SWE	3D	30,7 / 94,3	58,0 %	Oliver Tiger
17 Anders Fridén, Uddevalla RFK SWE	3G	0 / 0	0	Rossi 15
17 Stefan Olsson, Uddevalla RFK SWE	3G	0 / 0	0	Rossi 15
17 Tord Vejdal, Nyköpings MK SWE	3G	0 / 0	0	MVVS 15

”Holger Danske”-effekten finns och fungerar! Eller vad ska man säga när det åter blev dansk vinst genom Niels-Erik? Aaro hade letat fram en gammal dansk Viking och knep andraplatsen och vill man vara positiv kan man ju säga att det var dubbelt danskt i topp...

Det ”låga” (allt är relativt) deltagarantalet får skyllas på det dåliga vädret som gjorde att flera inte kunde flyga. Trots detta blev det 7 piloter som slog rekord. Tidigare tendensen med många 2,5-motorer fortsätter även om flera klasser syns i listan. Att vi hade 3 nollflygare får nog skyllas på vädret. För inte kan det väl vara de piloternas misstag eller brist på förberedelser som är orsaken?

Ingemar Larsson



Vänersborgsvrålet

Antalet W-flygare i Finland har ökat i år och här ses Antti, Aaro, Pertti och Matti på ett blött flygfält vid Malm.



Tom Andresen



Per Vassbotn



Jesper Buth Rasmussen



Mikal Hansen



Jens Geschwendtner



Per Stjärnesund

Återigen ställde vädret till det på flera platser runtom i Skandinavien och flera stycken blev utan tid. Men nog höll Holger-effekten i sig ännu en tävling och Niels-Erik lyckades återigen slå rekordet. Man kan nu ju tycka att rekordet i 3G kommer att bli mycket svårslaget i framtiden. Men man vet ju aldrig vad Holger hittar på....

Kul var att se Kristiansand med sina tre piloter på banan igen. Och i Finland kom två nya ansikten till start. Fortsätter den trenden kan det bli riktigt många W-flygare i Finland nästa år (och i Norden)!

Oavsett hur det kommer att bli med corona-läget under 2021 och fysiska tävlingar är det nog ingen tvekan om att mail-tävlingarna i Weatherman kommit för att stanna. Om man bortser från att vi alla inte kan träffas på en gemensam plats har det ju visat sig vara ett utmärkt sätt för mindre grupperingar att träffas och tävla mot andra i ett stort sammanhang utan att behöva åka långa sträckor.

Ingemar Larsson

WEATHERMAN VINTAGE SPEED, VÄNERSBORGSVRÅLETS MAILTÄVLING 10-11 OKTOBER 2020

Placering, Namn, Klubb	Klass	Tid / Hastighet	%	Motor
1 Niels-Erik Hansen, MFK Comet DEN	3G	17,4 / 166,4	103,4 %	Cyclon 15
2 Per Stjärnesund, Västerås FK mod SWE	3G	18,0 / 160,9	100,0 %	Nelson 15
3 Harry Kolberg, Skedsmo MFK NOR	1	16,9 / 85,7	99,4 %	Mills
4 Vernon Hunt, DMMFC GBR	3D	18,0 / 160,9	98,3 %	Fora 15
5 Jörgen Aagaard, MFK Pingvinen DEN	3G	19,1 / 151,6	94,2 %	Cyclon 15
6 Per Nordström, Nyköpings MK SWE	2G	24,0 / 120,7	93,8 %	Parra 09
7 Göran Olsson, MFK Red Baron SWE	0G	11,5 / 125,9	93,0 %	Cyclon
8 Matti Lahtinen, VLH FIN	3G	19,4 / 149,3	92,8 %	Demon 15
9 Ingemar Larsson, Vänersborgs MFK SWE	6G	21,0 / 137,9	92,4 %	HP 40
10 Jens Geschwendtner, MFK Comet DEN	3G	19,5 / 148,5	92,3 %	Cyclon 15
11 Lennart Nord, MFK Red Baron SWE	3D	19,8 / 146,2	89,4 %	Zorro 15
12 Johan Larsson, Vänersborgs MFK SWE	2G	26,0 / 111,4	86,5 %	Fora 09
13 Aaro Seppälä, RC-Nummela FIN	3V	45,0 / 64,3	85,8 %	Viking
14 Pertti Mela, Miniveneiljät FIN	2G	29,8 / 97,2	75,5 %	Cipolla 09
15 Kaj Johansson, Västerås FK SWE	3D	23,5 / 123,2	75,3 %	Oliver Tiger
16 Mikal Hansen, Agder MFK NOR	5G	24,2 / 119,7	73,6 %	Novarossi
17 Per Vassbotn, Agder MFK NOR	2D	28,0 / 103,4	72,1 %	Fora 09
18 Tom Andresen, Agder MFK NOR	3G	25,1 / 115,4	71,7 %	ASP 15
19 Torbjörn Lundgren, MFK Snobben SWE	3G	25,3 / 114,5	71,1 %	ST 15
20 Jesper Buth, MFK Pingvinen DEN	3D	26,2 / 110,5	67,6 %	MVVS 15
21 Antti Santala, VLK FIN	3D	34,4 / 84,2	51,5 %	MVVS 15
22 Martin Alkestrand, MFK Snobben SWE	3G	0 / 0	0	AP 15
22 Anders Fridén, Uddevalla RFK SWE	3G	0 / 0	0	Rossi 15
22 Anders Hellsén, MFK Snobben SWE	7G	0 / 0	0	Rossi 61
22 Stefan Olsson, Uddevalla RFK SWE	3G	0 / 0	0	Rossi 15
22 Luis Petersen, MFK Comet DEN	6D	0 / 0	0	Irvine 40

Christmas Greetings from **Walter Bernet**

On the 22-23rd of August we had our Scale and Semiscale Contest in Untersiggenthal. I took part with my Pilatus but in the 2nd flight I had bad luck...

The Pushrod to the stabilizer broke so I stopped the engine, going some steps backwards and the model only got some small damages... As I wanted to do the repair at home I retired from the 3rd round.

Winner in Semiscale was Peter Willmer GER with a Piper Cherokee, second André Meyer SUI with a Mitsubishi Zero and third Heiner Borer SUI with his Mustang P-51B.

The F4B Class only had two pilots and here Heiner Borer (Albatros DV) was ahead of Peter Willmer (Fairchild PT-19).

■
Walter Bernet, SUI



Christmas Greetings from **Han Esselaar**

My dream has always been to make all parts for F2A myself. Since some years I make my own plane and props from carbon in home made alu moulds. Then I started making pipes. Now I make engine heads and pistons. Last year I started making liners; turning, milling, chrome plating and internal grinding and lapping. Making a crankshaft is the last part I have to conquer to build it all myself.

In 2020 I decided it was time to make my dream come true. I designed the engine in 1 week and the crankshaft with dynamic balancing optimizing took 3 days of simulations. Bore is 14.85 and stroke 14.35. It has 3 ports. The crankcase is fully machined at home on a 4 axis Bridgeport. Inside turning on my mondiale Gallic Cnc. One thing I can't do are the ports and they are being spark eroded by Rob M. Also hardening of crankshaft I let others do.

I have always been impressed by the performance of speed parts made by extremely competent people (like the Profi team). It is very rewarding when I make a part myself and are able to fly fast too.

■
Han Esselaar, NED



Christmas Greetings from

Maris Dislers

My latest project is a 1/2A Kan Doo, reduced to 75% of Pete Cock's original 1948 Gold Cup winning model's size. Which puts the 1cc Redfin Millish 061 TBE SP in proportion to Pete's ED Mk 2 diesel. Mine has a few practical changes like a drop-off undercarriage for improved flight performance. It was quite common in the era, but Pete did not use it. The UC can be easily attached "permanently" if authenticity is important.

People who built the Kan Doo from the April 1976 AM plans were disappointed by an overweight and tail heavy model. Because it got important details wrong. Pete didn't authorize it and sought to set the record straight in a letter to the magazine (printed in the July 1976 issue), but almost no one read that and an undeserved reputation lingers. My smaller version flew very nicely in its first outing recently. With a little trimming, it should confidently fly the Vintage Stunt pattern of manoeuvres.

■
Maris Dislers, AUS



Christmas Greetings from

Magnus Jansson

The first model after a break of about 12 years was an Ares kit from Brodak, built entirely out of the box except for the fiberglass engine cover that I skipped and made my own in balsa, covered with silk and lacquered with Zapon lacquer. Painted with Multona Autolack spray paint and at last a thin layer of Spraymax 2k clearcoat as fuel protection. Engine is an OS 35FP with homemade venturi + needle. The tank is from Brodak and also the muffler. Flight weight 1250 grams.

The Messerschmitt is my own "construction" in size of a Flitestreak with wing profile from Super Chipmunk, covered in silk and weighing 950 grams. Engine MVVS 3.5cc with homemade silencer and needle, Painted with Rustoleum. Both are unfortunately unflown. Hope to get them in the air next season

■
Magnus Jansson, SWE



Danmarks Flymuseum - Stauning



Vid Stauning Lufthavn ca 50 km österut mot kusten från Herning hittar man Danmarks Flymuseum (inklusive Flyvevåbenmuseet). Kanske läge att planera in en tur hit nästa gång det är tävlingar i Herning?

Museet har en utställningsyta på närmare 8000 m² och där hittar man drygt 50 olika flygplan, bland annat de som använts i Flyvevåbnet. Samlingen omfattar flygplan från tidsperioden 1911-2000 och information om flygets historia både i allmänhet och i Danmark i synnerhet. Regelbundet har man också tema-utställningar. Dessutom finns ett otroligt stort antal modellmotorer och flygplansmodeller.

Mer information om öppettider, hur man hittar dit och samlingarnas omfattning finns på www.flyvemuseum.dk.



Preliminär tävlingskalender 2021

Datum	Tävling	Klasser	Plats	Arrangör	Kontaktman
Fre 10/4	Häxvrålet	Weatherman	Inlag, Kungsbacka	KMFK	Michael Palm, 0706-47 29 66
Lör 24/4	Snobben Cup 1	F2B, Weatherman	Mygglanda, Nymölla	Snobben	Anders Hellsén, 0738-47 83 12
Sön 2/5	Linflygets dag	Speed Open, F2C, Weatherman	Johannisberg, Västerås	Galax	Kjell Axtelius, 0702-99 54 54
Tor-Sön 14-15/5	World Cup F2B	Alla klasser (utom Combat)	Åbytorp, Karlskoga	KMFK	Niklas Löfroth, 0702-09 69 65
Lör 12/6	Oldtimerträff	Weatherman	Inlag, Kungsbacka	KMFK	Michael Palm, 0706-47 29 66
Lör 20/6	Kga-racet	Alla Speed- och Team-klasser	Åbytorp, Karlskoga	KMFK	Niklas Karlsson, 0703-73 89 97
Sön 3/7	Kga-combaten	Slow Combat, Combat 1.5	Åbytorp, Karlskoga	KMFK	Niklas Karlsson, 0703-73 89 97
Lör 31/7	Snobben Cup 2	F2B, Weatherman	Mygglanda, Nymölla	Snobben	Anders Hellsén, 0738-47 83 12
Lör-Sön 28-29/8	SM	F2A, F2B, F2C, F2D	Johannisberg, Västerås	Grenstyrelsen	Ingemar Larsson, 0703-40 44 05
Lör 11/9	Västkusträffen	F2B, Weatherman	Inlag, Kungsbacka	KMFK	Michael Palm, 0706-47 29 66
Sön 12/9	Galax Open	Speed Open, F2C, Weatherman	Johannisberg, Västerås	Galax	Kjell Axtelius, 0702-99 54 5
Lör-Sön 25-26/9	Vbg-pokalen/RM	Slow Combat, Combat 1.5, W-man	Brättelund, Vänersborg	VMFK	Ingemar Larsson, 0703-40 44 05
Lör-Sön 2-3/10	Snobben Cup 3	F2B, Weatherman, Ringmaster	Mygglanda, Nymölla	Snobben	Anders Hellsén, 0738-47 83 12

Världscuptävlingar mm (Ett urval! Komplet list på www.fai.org)

16-18/4	Svitavy World Cup (CZE)	D	Svitavy, Tjeckien
1-2/5	Bitterfeld World Cup (GER)	B,D	Bitterfeld, Tyskland
14-15/5	Karlskoga World Cup (SWE)	B mm	Karlskoga, Sverige 12/6
22-23/5	Hradec Kralove World Cup (CZE)	A,B	Hradec Kralove, Tjeckien S
20-24/5	NM/Viking World Cup (DEN+SWE+BEL)	A,B,D mm	Herning, Danmark
29-30/5	Sächischer Schweiz World Cup (GER)	A,B,C,D	Sebnitz, Tyskland
3-4/7	Barcelona World Cup (ESP)	D	Barcelona, Spanien
8-11/7	French World Cup (FRA+NED)	A,B,C	Landres, Frankrike
6-7/8	Warsaw World Cup (POL)	A, B, C, D	Wloclawek, Polen
9-14/8	Världsmästerskap	A, B, C, D	Wloclawek, Polen
28-30/8	British Nationals	A, B, C, D mm	Barkston Heath, England
4-5/9	Lugo World Cup (ITA)	A,B,C,D, F2F	Lugo, Italien
17-19/12	Gran Canaria Eurocombat (ESP)	Combat, Stunt	Las Palmas, Gran Canaria

Norska tävlingar

1-2/5	Kristiansand
Säsongsöppning	F2B + W
Hvam	
Sommerstevne	F2B + W
26-27/6	Sarpsborg
NM	F2B + W
18/9	Hvam
Årsavslutning	F2B + W

Finska Tävlingar

FM1 19/6	F2B	Nummela
FM2 17/7	F2B	Kuopio
FM3 14/8	F2B	Nummela
Ruska Classic 26/9	F2B-C	Kuopio

OBS! Notera att alla tävlingar och deras genomförande kan ändras beroende på corona-situationen!

† Leif O Mortensen 1940–2020



I januar 2020 fik vi meddelelse om at Leif O. Mortensen var gået bort efter flere års sygdom. Vi skylder Leif stor tak for den utrættelige indsats, han har gjort for linestyret modellflyvning. Det være sig som en del af Linestyings-Unionens bestyrelse, som formand for Aviator, som konkurrencepilot, som drivkraft i at udvikle banen og klubhuset i Hestekoens, som arrangør af bl.a. Limfjordsstævnet og som leverandør af alverdens materialer til vores modellflyvning og ungdomsskoleundervisning.

I 1955 blev han medlem af Aviator i Aalborg og har siden deltaget i et væld af konkurrencer. Så sent som i 2015 blev han Danmarks mester. Han opnåede også at blive Nordisk mester og har repræsenteret Danmark i F2B ved flere VM. Som konkurrent var han altid hjælpsom og en god kammerat. Han havde den indstilling, at hjælper du en kammerat til at vinde en konkurrence, så gør det ikke noget, at tabe til en god ven. I 70'erne var Leifs VW bus, proppet med fly og piloter, centrum for mange ture til stævner i hele landet. Det var i høj grad med til at tænde baccillen hos unge klubmedlemmer uden bil eller kørekort at komme med og se et DM i den anden ende af landet. I 80'erne gik turene jævnlige til Sverige og var med til at skabe det sammenhold og samarbejde om modellflyvning i vores to lande, der stadig eksisterer i bedste velgående.

I 1980 etablerede Leif og Helga Leif O. Mortensen Hobby, som de drev sammen. Længe før internettet gjorde verden lille, var de leveringsdygtige med specielle dele til linestyring, ingen andre førte. I butikken var der altid plads til en snak og et godt råd. Et hurtigt stop efter en tube lim var ikke mulig.

En stille og samtidig stor personlighed er ikke med os mere. Ære være hans minde.

/Hans Rabenhøj, Jesper Buth Rasmussen og Niels Lyhne-Hansen

† Jerker Vinnå 1948–2020

Som de flesta av oss började Jerker modellflyga redan som liten grabb och gick med i MFK Nimbus där han lärde sig linflyg och combat. Under ett par år i ungdomen bodde han i Prag där pappan var nyhetsreporter. Där gick Jerker med i en klubb och flög lina. Under 60/70-talen tävlade han i combat men sedan tog hans intresse för amerikanare över. Intresset var så stort att Jerker arrangerade bilutställningar. På nätet finns en intervju med Jerker som arrangör (Googla på Happy Car Show). På 2000-talet hittade Jerker oss i MFK Red Baron och tog upp linflyget igen. Det blev främst stunt och Jerker tävlade flitigt, både hemma i Sverige och utomlands. Han hade därvid glädje av sina kunskaper i tjeckiska då han träffade de tjeckiska/slovakiska flygarna, bl a Igor Burger, vilket han stolt visade bilder av bl a på SLIS webbsida.



Då han var storrökare drabbades han av svår kol och i slutet även covid-19.

Jerker var en färgstark person och han lämnar ett stort tomrum efter sig.

/Kamraterna i MFK Red Baron

† Stanislav Culachkin 1968–2020



I think it is difficult to find a person in F2D who would not know or at least heard of Stanislav Kulachkin. And it hurts to have to write about him in past tense - COVID took him away this year.

Stas was a great sportsman - a World Champion in 2008, a winner of many competitions and world cups. Stas was an important member of Moldovan team, contributing to the team getting to podium places, including 1st place at the Euro Champs. Aeromodelling was Stas' passion and a big part of his life. Stas trained two juniors who later became World Champions.

Stas will be remembered as a man with a big smile, a great heart and a dear friend. Rest in peace.

/Natasha Dementieva

3+ Hobby Service

The leading C/L Hobby Shop in Sweden!

ARF Models



P40B ARF



T-REX ARF



Vector ARF



SV-11 ARF

CLASSIC Models



Blue Angel



Ares



Gypsy



Thunderbird



Peacemaker

OLD TIME Models



Ringmaster



Smoothie



Vampire



Stuka Stunt



Nobler

Heavy Duty Plastic Snap Blade Knife

Before 45:- Now 25:-



Handle Light Duty Knife

Before 24:- Now 12:-



Li-Po Safe bags

18x22cm:

Before 67:-

Now 40:-

23x30cm:

Before 85:-

Now 56:-



Look into our web store
for details and prices!
www.3fobbyservice.jetshop.se

3F HOBBY SERVICE
www.3fobbyservice.jetshop.se
Mail: trefhobbyservice@allt2.se
Phone: +46 (0)70-62 61 370
Address: Gyllenhjelmväg 3, 611 36 Nyköping