Radio Controlled Soaring Digest

July 2010 Vol. 27, No. 7

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Front cover: Eric Poulain launching a 5m Air 100, an aerobatic old timer, at the mythic slope of "Le Menez Hom" in Britanny, France. Photo by Pierre Rondel Canon Powershot G2, 1/400 sec., f4.0, 21mm

Back cover: Southern California Soaring Clubs (SC2) poster for their upcoming man-on-man contest scheduled for July 24th at the AYSO Soccer fields in Riverside California.

R/C Soaring Digest

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R/C Soaring Digest (RCSD) is a reader-written monthly publication for the R/C sailplane enthusiast and has been published since January 1984. It is dedicated to sharing technical and educational information. All material contributed must be exclusive and original and not infringe upon the copyrights of others. It is the policy of *RCSD* to provide accurate information. Please let us know of any error that significantly affects the meaning of a story. Because we encourage new ideas, the content of each article is the opinion of the author and may not necessarily reflect those of *RCSD*. We encourage anyone who wishes to obtain additional information to contact the author.

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RC Soaring Digest is published using Adobe InDesign CS5

In the Air

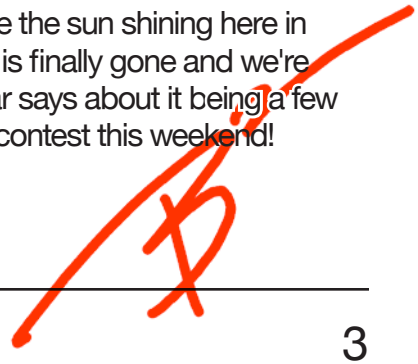
This issue has a plethora of photographs and so the PDFs are relatively large. We hope you enjoy going through these 78 published pages.

"RC-DLG Practice, Adlers Nest, Brasil," because it includes several extended image sequences, allowed us to explore a rather unique page layout. Computer monitors are growing in size and we believe this layout presents the photos in a viable way for the majority of *RCSD* readers. We would very much appreciate feedback, positive or negative, on the format of these pages.

On the topic of viewing *RCSD* PDFs, there are a couple hints we can pass on which may make your reading more enjoyable. Adobe Acrobat Reader (Version 5 or higher) can be set for Two-Up and Show Cover Page During Two-Up. This combination of settings places all odd number pages on the right and even numbered pages on the left, creating facing pages just as a printed magazine. You can then use the zoom function as needed to read specific pages or take a closer look at details.

As this is being written we finally have the sun shining here in the Pacific Northwest. Maybe winter is finally gone and we're into spring, despite what the calendar says about it being a few days into summer. Flying tomorrow, contest this weekend!

Time to build another sailplane!



Federación Argentina de Aeromodelismo

64th National Aeromodelling Contest

Open

21 May 2010 — Embalse Córdoba, Argentina

Photos courtesy of Pablo Calás

Condensed from Daniel Martinez' commentary <http://faanacional2010.blogspot.com/2010/05/open-fue-todo-para-solans.html>:

This year the responsibility of the organization fell on Director Rubén Torres and Co-director Jorge Brun as Co-director. Very very very good management of all, agile and firm resolutions to the few problems that appeared, deep knowledge of the category, experience in these functions, knowledge of the software, etc.

A boat horn was used to mark the twelve minutes of working time.

This was this first National in which I participated and we began early, the flights followed one another without delays, and we flew seven complete rounds.

At the end of the day Javier Solans was crowned the National Champion Open 2010. (Hugo Salvador was second and Rodrigo Salvador was third.)

I want more nationals like this.

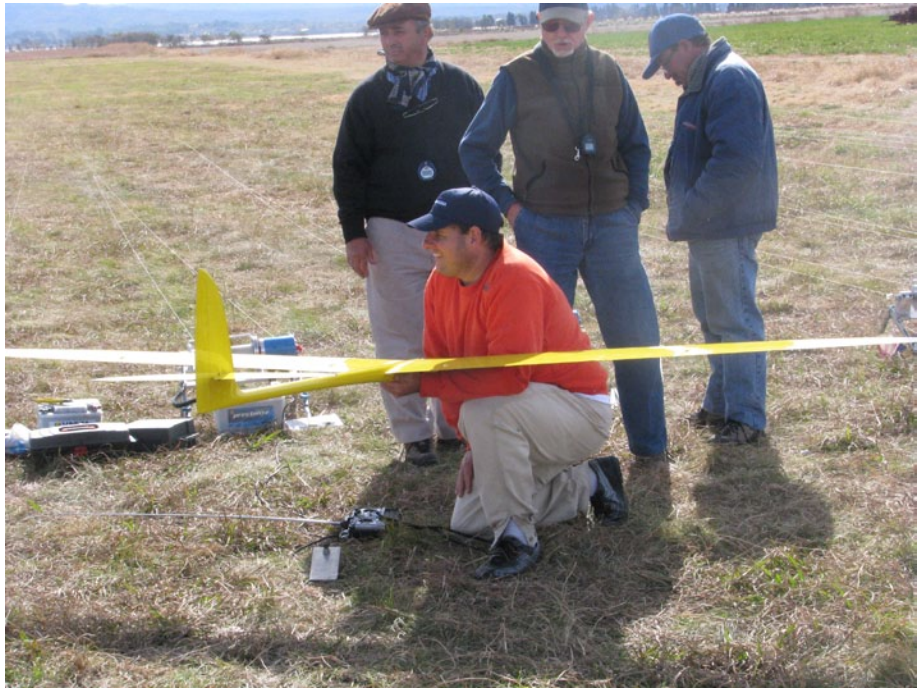

T10CAP
Multi Function display
PCM 1024
10 CHANNEL TRANSMITTER
Futaba


3
3


5


Element
Skateboards


Sizma II

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Sirena II


SIGMA

Federación Argentina de Aeromodelismo

64th National Aeromodelling Contest

Standard

22 May 2010 — Embalse Córdoba, Argentina

Photos courtesy of Pablo Calás

Condensed from Daniel Scardamaglia's commentary <http://faanacional2010.blogspot.com/2010/05/bardet-se-llevo-todo-en-standard.html>:

It is a pleasure tonce a year to see the boys of the interior, who by the way are more and more competitive.

Frederico "Bear" Helman served as Contest Director and the boys of the Technical School of Embalse were responsible for the hi-starts and landing area. I believe that it was a great idea to prepare these boys so that they fulfill the work of assistants and they were very efficient.

The wind was moderate. In order to fly maximums we had to try to take advantage of the dynamics produced by the woods. The task was not very easy to realize since it is difficult to correctly calculate where to place the model so that it stays; the sector to fly and to stay within is very small and the seven minutes of the flight seem interminable. It is also difficult to make it to the landing area with sufficient height.

"Chiqui" Dondero of the Club de Planeadores del Atlántico and Adrián Bardet of Ciudadela fought head-to-head until the end, resulting in a fly-off, a first for this event. The fly-off was decided by landing points, with Adrián Bardet the champion, second "Chiqui," and third Alejandro Arroyo.

This year we had a very good organization and participation was quite relaxing with everything scheduled ahead of time.

I hope future National competitions will allow me to see my friends from the interior again.


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Federación Argentina de Aeromodelismo

64th National Aeromodelling Contest

Minitermicos 23 May 2010 — Embalse Córdoba, Argentina

Photos courtesy of Pablo Calás

Condensed from Alejandro Arroyo's commentary <http://faanacional2010.blogspot.com/2010/05/en-minitermicos-reino-el-chiqui.html>:

Hugo Bustos was Contest Director, Juan Besone was in charge of scoring, and the boys from the La Cruz Farming School carried out the arduous work of retrieving towlines to the participants in an efficient form.

Because of the weather conditions,flying these small models was not an easy task for the 32 participants. During the first three rounds the contest leaders were Ernesto Dondero and Alejandro Arroyo, both with perfect scores.

But the climate changed at the fourth round with strong winds gusting to 30 km/h, generating short flight times and even some broken models. Adding ballast and taking advantage of the dynamics generated by the trees became the flight strategies.

In Round 6 Andrés Balas of C.A. Ciudadela received 1000 points for a commendable time of 1': 40"! He was in third place on the podium. Second place went to Alejandro Arroyo, Ernesto Dondero garnered first, both representing the Club Planeadores del Atlantico.

This year I consider that the contest was organized in optimum form. This creates a great responsibility for the future organizing groups.


Fenix


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FUERZA AEREA

PUNTAJE FINAL OPEN - LA CRUZ - CORDOBA - 21/05/10

Puesto	Nombre	Club	Vuelo 1	Vuelo 2	Vuelo 3	Vuelo 4	Vuelo 5	Vuelo 6	Vuelo 7	Total FAI	Min	TOTAL
1	SOLANS, JAVIER	DELTA	1000	986	1000	1000	576	1000	856	**6417**	576	**5841**
2	SALVADOR, HUGO	FDC	569	1000	885	1000	1000	757	1000	**6211**	569	**5642**
3	SALVADOR, RODRIGO	FDC	970	1000	1000	736	789	818	991	**6304**	736	**5568**
4	MARQUEZ, RAUL	CAR	804	809	611	897	1000	893	1000	**6014**	611	**5403**
5	ROMANUTTI ALBERTO	PUC	997	924	845	655	734	867	969	**5991**	655	**5336**
6	PISARELLO, MARTIN	CAR	840	779	678	723	923	786	766	**5495**	678	**4817**
7	MARTINEZ, DANIEL	PUC	726	811	733	683	457	1000	776	**5186**	457	**4729**
8	ROMANUTTI PEDRO	PUC	985	594	589	466	707	867	761	**4970**	466	**4503**
9	RODRIGUEZ, EDUARDO	CAT	1000	50	169	521	471	949	843	**4003**	50	**3952**
10	MARAÑON, FRANCISCO	CALP	618	159	234	694	800	747	852	**4103**	159	**3944**
11	SOLANS, ADOLFO	DELTA	359	262	759	543	681	419	753	**3776**	262	**3514**
12	PISARELLO, ALBERTO	CAR	899	429	0	0	0	0	0	**1328**	0	**1328**

RESULTADO FINAL NACIONAL STANDARD 2(

Puesto	Participante	Club	1ra Ronda	2da Ronda
1º	BARDET, Adrián	CAC	1000,00	1000,00
2º	DONDERO, Ernesto	CPA	1000,00	1000,00
3º	ARROYO, Alejandro	CPA	220,66	1000,00
4º	SCARDAMAGLIA, Daniel	DEL	995,62	992,97
5º	BARDET, Mariano	CAC	840,26	1000,00
6º	CALAS, Pablo	CCA	1000,00	891,54
7º	CURTO, Germán	SFCO	689,28	989,97
8º	DIAZ, Juan José	FDC	0,00	822,01
9º	SALVADOR, Rodrigo	FDC	772,30	908,89
10º	CAPUANI, Franco Alberto	CAC	1000,00	759,22
11º	MARAÑON, Francisco	CALP	933,48	814,90
12º	FERNANDEZ, Fabian Alejandro	NEW	822,62	0,00
13º	AZCURRA, Marcelo	RIO IV	665,21	861,17
14º	SEIJO, Carlos	CAC	702,41	590,16
15º	GACCIONE, Cristian	AAQ	884,03	468,23
16º	SOLANS, Javier Damián	JUN	852,11	904,56
17º	BALAS, Andrés	CAC	612,68	417,61
18º	SANCHEZ, Diego	CACSJ	0,00	410,84
19º	FERRERO, Oscar	SFCO	667,40	492,41
20º	FRIDMAN, David	CAC	705,10	297,97
21º	SOLANS, Adolfo Damián	JUN	558,76	426,23
22º	SCANDIZZI, Marcelo	RIO IV	665,21	391,10
23º	EZCURRA, Walter Daniel	CAC	0,00	0,00
24º	CARRIZO, Luis	SJU	853,39	345,37
25º	VIOTTO, Hugo	ASFCO	886,21	505,85
26º	TORLETTI, Nahuel Santiago	ACSF	0,00	274,00
27º	RUSSO, Fernando	RIOIII	659,62	0,00
28º	LACOMBE, Carlos Rodolfo	JUN	711,16	317,73
29º	VECA, Angel	CACSJ	774,62	284,16
30º	PALACIOS, Nicolás	CCA	800,88	0,00
31º	BLANCHERO, Cristian Alejandro	CACSJ	143,19	217,39
32º	BIZZERA, Daniel	CAC	0,00	0,00
33º	QUIROZ, Gustavo	CAC	0,00	0,00
34º	BLANCHERO, Orlando David	CACSJ	428,88	0,00
35º	LOPEZ , Osornio	CALP	540,48	421,40
36º	SANCHEZ, Miguel	CACSJ	794,31	0,00
37º	SALVADOR, Hugo	FDC	0,00	0,00
38º	SCANDIZZI, Juan	RIO IV	0,00	0,00
39º	BARDET, Ignacio	CAC	0,00	0,00

010 - LA CRUZ - CORDOBA - 22/05/10

3ra Ronda	4ta Ronda	5ta Ronda	6ta Ronda	Puntos Descartados	Puntaje Final
1000,00	1000,00	1000,00	0,00	0,00	**5000,00**
1000,00	1000,00	1000,00	0,00	0,00	**5000,00**
1000,00	1000,00	915,25	944,33	-220,66	**4859,58**
958,33	571,43	912,83	969,76	-571,43	**4829,53**
596,92	1000,00	1000,00	895,07	-596,92	**4735,34**
914,85	918,63	693,00	1000,00	-693,00	**4725,02**
1000,00	316,92	952,60	1000,00	-316,92	**4631,84**
860,26	948,61	973,37	997,86	0,00	**4602,11**
693,83	731,87	1000,00	1000,00	-693,83	**4413,06**
572,69	766,20	750,61	984,13	-572,69	**4260,15**
1000,00	839,44	507,49	435,37	-435,37	**4095,31**
928,24	725,27	672,41	922,25	0,00	**4070,79**
849,46	74,73	728,45	946,47	-74,73	**4050,76**
978,17	614,08	661,40	967,32	-590,16	**3923,38**
814,41	327,62	971,98	725,91	-327,62	**3864,56**
967,74	0,00	0,00	995,72	0,00	**3720,13**
982,80	804,88	436,83	848,07	-417,61	**3685,25**
722,58	795,73	577,88	787,58	0,00	**3294,61**
145,83	109,21	937,50	1000,00	-109,21	**3243,14**
345,81	614,56	881,47	623,58	-297,97	**3170,52**
595,70	411,13	565,31	907,13	-411,13	**3053,12**
945,41	448,35	334,05	586,72	-334,05	**3036,80**
893,01	601,71	900,86	604,75	0,00	**3000,34**
435,19	664,79	698,28	0,00	0,00	**2997,01**
548,46	393,29	396,15	555,56	-393,29	**2892,23**
541,94	498,59	534,99	810,46	0,00	**2659,98**
411,89	573,17	0,00	913,61	0,00	**2558,30**
490,74	241,97	355,93	614,38	-241,97	**2489,94**
553,24	287,91	338,98	415,03	-284,16	**2369,79**
79,30	472,53	389,72	570,19	0,00	**2312,61**
68,82	622,54	631,47	436,29	-68,82	**2050,87**
458,33	182,93	665,91	527,00	0,00	**1834,17**
303,49	504,23	505,64	473,86	0,00	**1787,22**
283,87	557,93	0,00	0,00	0,00	**1270,68**
0,00	0,00	0,00	0,00	0,00	**961,89**
0,00	0,00	0,00	0,00	0,00	**794,31**
0,00	0,00	0,00	0,00	0,00	**0,00**
0,00	0,00	0,00	0,00	0,00	**0,00**
0,00	0,00	0,00	0,00	0,00	**0,00**

RESULTADO FINAL NACIONAL MINITERMICOS - LA CRUZ - CORDOBA - 23/05/10

Puesto	Participante	Club	1ra Ronda	2da Ronda	3ra Ronda	4ta Ronda	5ta Ronda	6ta Ronda	Puntos Descartados	Puntaje Final
1º	DONDERO, Ernesto	CPA	1000,00	1000,00	1000,00	773,33	1000,00	1000,00	-773,33	**5000,00**
2º	ARROYO, Alejandro	CPA	1000,00	1000,00	1000,00	863,33	658,18	806,12	-658,18	**4669,46**
3º	BALAS, Andrés	CAC	753,33	1000,00	1000,00	263,33	856,67	1000,00	-263,33	**4610,00**
4º	BARDET, Ignacio	CAC	1000,00	1000,00	0,00	1000,00	1000,00	581,63	0,00	**4581,63**
5º	VADILLO, Felipe	LPL	1000,00	530,00	1000,00	936,67	750,00	806,12	-530,00	**4492,79**
6º	SOLANS, Javier Damián	JUN	1000,00	0,00	460,00	1000,00	1000,00	1000,00	0,00	**4460,00**
7º	SOLANS, Adolfo Damián	JUN	1000,00	0,00	760,00	756,41	1000,00	906,67	0,00	**4423,08**
8º	BARDET, Adrián	CAC	1000,00	330,00	866,67	470,00	1000,00	1000,00	-330,00	**4336,67**
9º	CAPUANI, Franco Alberto	CAC	750,00	853,33	363,33	630,00	1000,00	900,00	-363,33	**4133,33**
10º	CISNEROS, Fernando	CCA	663,33	1000,00	363,33	1000,00	583,33	506,67	-363,33	**3753,33**
11º	FERNANDEZ, Fabian Alejandro	NEW	466,67	1000,00	416,67	746,67	1000,00	520,00	-416,67	**3733,33**
12º	HELMAN, Federico "Oso"	CCA	1000,00	0,00	1000,00	263,33	1000,00	419,64	0,00	**3682,98**
13º	SCARDAMAGLIA, Daniel	DEL	1000,00	0,00	1000,00	0,00	894,55	705,36	0,00	**3599,90**
14º	PETRONE, Luis	CPA	616,67	1000,00	330,00	1000,00	0,00	583,33	0,00	**3530,00**
15º	SALVADOR, Rodrigo	FDC	463,33	1000,00	600,00	633,33	806,67	420,00	-420,00	**3503,33**
16º	BAÑOS, Julian	AAQ	483,33	1000,00	470,00	525,64	1000,00	0,00	0,00	**3478,97**
17º	CALAS, Pablo	CCA	453,33	1000,00	1000,00	0,00	1000,00	0,00	0,00	**3453,33**
18º	FAVETTA, Rafael	AAQ	766,67	490,00	0,00	790,00	1000,00	406,67	0,00	**3453,33**
19º	BRUN, Jorge	ALAS	413,33	1000,00	783,33	500,00	490,00	260,00	-260,00	**3186,67**
20º	EZCURRA, Walter Daniel	CAC	1000,00	413,58	0,00	256,67	723,33	520,41	0,00	**2913,99**
21º	SANCHEZ, Diego	CACSJ	606,67	438,27	396,67	0,00	766,67	553,33	0,00	**2761,60**
22º	SANCHEZ, Miguel	CACSJ	393,33	0,00	483,33	709,40	752,73	183,33	0,00	**2522,13**
23º	QUIROZ, Gustavo	CAC	0,00	256,67	400,00	433,33	646,67	526,67	0,00	**2263,33**
24º	RUSSO, Fernando	RIOIII	633,33	300,00	943,33	0,00	0,00	316,67	0,00	**2193,33**
25º	SEIJO, Carlos	CAC	466,67	453,33	366,67	570,00	298,18	0,00	0,00	**2154,85**
26º	LACOMBE, Carlos Rodolfo	JUN	336,67	396,67	406,67	0,00	1000,00	0,00	0,00	**2140,00**
27º	FRIDMAN, David	CAC	473,33	444,44	456,67	296,67	429,09	325,89	-296,67	**2129,43**
28º	CARRIZO, Luis	SJU	446,67	296,67	263,33	0,00	340,00	581,63	0,00	**1928,30**
29º	BARDET, Mariano	CAC	650,00	600,00	560,00	0,00	0,00	0,00	0,00	**1810,00**
30º	MARQUEZ, Raul R.	CARcia	530,00	0,00	620,00	0,00	556,67	0,00	0,00	**1706,67**
31º	PUENTE, Hector	APA	446,67	0,00	350,00	0,00	0,00	0,00	0,00	**796,67**
32º	BAÑOS, Alfredo	AAQ	380,00	0,00	0,00	0,00	0,00	0,00	0,00	**380,00**
33º	BIZZERA, Daniel	CAC	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
34º	BOIERO, Roberto Andrés	APA	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
35º	MARAÑON, Francisco	CALP	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
36º	TIZON, Hugo	BRA	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
37º	VECA, Angel	CACSJ	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**

Flying the **Futaba 10CG** 2.4 GHz Radio

By Pete Carr WW3O, wb3bqo@yahoo.com
Photos by Rick Skellen

Launching into an angry sky! While the clouds looked pretty turbulent the air was surprisingly smooth and buoyant for a late afternoon flight test.

I'm a firm believer that every 20 or so years a pilot should upgrade his radios. I promised myself to do that just as soon as my Futaba 9VAP rig, that I've been flying since the dawn of time, finally quit. Well, I'm still waiting. The sticks are just as tight as when it was new and the range is fabulous. The transmitter has had its memory battery changed once and the airborne pack has been replaced eight or nine times. About once a year I use DEOXIT on the on-off switches to keep them clean and corrosion free but otherwise the radio has survived on benign neglect.

The 9VAP came from the factory on channel 08 (50.960 MHz) in the 6-meter Ham band.

Since not a lot of modelers are Hams, the 6-meter R/C band is very quiet. Getting a frequency slot at big contests like the AMA Nats is easy with no crowding on that band. Still, I'd watched the growth of the 2.4 GHz band and the new radios that were being used. It was especially apparent that the new band was for real when I attended the Cumberland Slope sailplane event last fall. The very large scale sailplanes and tugs all used 2.4 GHz and performed flawlessly. It was time to go and explore the new radios.

Futaba 10CG System Highlights

Frequency:2.4-2.48 GHz
Control Functions: Ten
Servo Resolution: 2048
Batteries: TX-600 ma NiCad, RX-600ma NiCad
Stick Spring Tension: Adjustable if back cover is removed
TX current drain: Approximately 180 ma
TX weight: Approximately 1.3 pounds with battery
RX weight: Approximately 6.37 grams for the R6014
Model Memory Size: 15, more with the CAMPac module

The Apache goes up the line guided by the Futaba 10CG. In spite of a slight cross wind the ship stayed straight.

There are three things that are important to a sailplane pilot. Range, range and range!

We fly our big ships out to the limits of visual range on a regular basis. Add a gaggle of sailplanes such as the 12-per-flight group events at the Nats and you get a recipe for disaster if the radio link isn't in top form. My 9VAP has done everything I asked of it so it was natural to go back to Futaba for a replacement.

After looking over the Futaba web page and the specs of the various R/C systems I chose the 10CG radio. It has a very large menu of mixing options, a super large LCD display screen and an excellent receiver. The layout of the various switches is similar to the 9VAP so the position of my hands would not need to change when flying. These switches are selectable for whatever functions you choose. The biggest change is the trims setup. These are digital trims on the 10CG with a graphical display on the screen of each ones' position and an audible beep as the increments are changed. Trim range is menu driven so you can set each one to the needs of its control surface. This is a big improvement from the one-size-fit-all method of mechanical trims.

I received the 10CG about a week after the Toledo Show. It arrived in a foam tray with the transmitter, receiver, on-off switch and flat pack airborne battery. The included 117 page manual was a far cry from the one for the 9VAP. Back then, programming of the various mixing functions, throws and adjustments was a very daunting task. I recall that one of the sailplane pilots from California even wrote a book on how to program the Futaba! Things are better now.

The original PCM receiver was flying an 8 function sailplane of original design called the Apache with Vladimir stabs. It has ailerons, inner and out flaps plus rudder and elevator. As with all sailplanes the flaps are a way to control both lift and drag under specific flight conditions. For example, when flying into the landing spot on a windy day, you need very little drag since the ground speed of the ship is already limited by the wind velocity. Conversely, on a dead calm day you need everything hung out in order to slow the ship down. The inner flaps do just fine on landings. The main reason for the outer flaps is in rapid descent from very high altitude while working the timed contest task. The Apache is very clean so it picks up a lot of speed in the descent. I've found that the outer flaps, used alone, will allow a 60-70 degree dive with rapid descent. The bonus is that the flaps are far enough out on the wing not to boil turbulence over the flying stab. I set the ship up to descend with a profile view so I can closely monitor the dive angle. With this arrangement I can come down to two or three hundred feet of height before leveling out to prepare for landing.

The R6014 receiver is about the same physical size as the PCM unit I'd been using. The difference is that the PCM receiver had top connector sockets for the servos and battery connectors while the new receiver has end connectors. Fortunately there was plenty of room to comfortably install the receiver and servo wiring in the radio room. Then it was time to deal with the antennas.

Futaba's 2.4 GHz receivers use Dual Antenna Diversity reception to pick up signals from the transmitter. There are two antennas that exit the receiver case which are known as coaxial antennas. These antennas are made from coax cable where a section of outer shield is removed. This exposes a resonant length of center conductor which actually picks up the signal. The two coaxial antennas are supposed to be positioned at 90 degrees from each other. The theory is that one antenna or the other will pick up a clear signal no matter how the receiver is oriented in relation to the transmitter. I used two short lengths of inner Nyrod, one glued to the fuselage side and the other one glued to a piece of balsa crosswise in the fuselage between the rudder and elevator servos. The antennas were inserted into the inner Nyrod so they could be easily removed if needed. The instructions also mentioned the use of large radius bends in the antenna cables so care was taken for this during installation. The antennas are located fairly close to the servos but

The two transmitters are about the same size yet the 10CG is much lighter than the 9VAP. Resolution of the 10CG is double the 9VAP at 2048 verses 1024.

The two Futaba receivers are ready to swap. End connectors on the R6014HS make it slightly longer to install than the old PCM receiver. Also, antenna placement may take some thought when the receiver is used with full carbon fiber fuselage layups.

The Futaba 10CG with the Apache at the end of a successful test session.

The receiver antennas are inserted into two lengths of inner Nyrod that hold them at ninety degrees from each other. One Nyrod is glued up under the edge of the fuselage and the other is supported by a piece of balsa and positioned between the rudder and elevator servos. While this location is close to the servos no signal loss has been experienced.

so far no range trouble has been found. Some radio manufacturers use several receivers mounted throughout the model to achieve reliable reception. Futaba states that their single receiver will do the job if the antennas are positioned as recommended.

Included with the system are a pair of NiCad batteries. These are both 600 ma capacity and the airborne pack is flat configuration. The flat pack is too wide to fit in most sailplanes and its capacity is suitable only for 3-4 servo ships. Since the system supports 10 functions it seemed odd that this small capacity airborne pack was included. The transmitter LCD display indicates battery voltage and there is an audible low-voltage alarm as well. The Apache uses a square 1600 ma NiMH battery to power the receiver and eight servos. There is no problem with battery “brownout” even if all the servos are deployed at the same time.

The Apache fuselage uses an aluminum wing rod and the area under the wing is reenforced with carbon fiber. There are also carbon fiber wing spar caps and some extra carbon bracing at the wing roots. The rudder servo uses pull-pull cables made from old Controline lines and there is a wire bundle going from the receiver back to the wing connectors. This metal/carbon/wire-rich area has not had the slightest effect on radio performance.

This is the bottom of the Apache wing. Servo locations and double-clevis push rods with all-thread can be seen. This arrangement is absolutely slop-free and very strong.

The Apache turns toward the field for landing. Wing dihedral is about three degrees per panel so a little extra rudder deflection was programmed to smooth the turns.

I read the 10CG booklet cover to cover, even the helicopter chapters, because there is always something new to learn and discover. The chapter on sailplanes is useful but deals mostly in ‘canned” mixes rather than the combinations I use. The “P-mix” menu turned out to be similar to the old 9VAP setup with its four mixing combinations. Menus are arranged differently but once inside a menu the mixing was very easy to set up. There are four buttons on either side of the transmitter screen that do programming. These were much easier to use than the tiny buttons along the bottom of the 9VAP screen. The much larger back-lit LCD screen on the 10CG also made programming very easy.
The Apache is a complex aircraft that has been flown two seasons in varied conditions.

This history means that there was already a programming “wish list” and also a list of stuff I’d like to try. For example, while there is differential deflection of the ailerons I’d like to add Exponential deflection as well. Another good example is a programmed switch that deflects the flaps slightly for launch and in thermal situations. The numbering of the ports for the servo connections on the new R6014HS receiver are different from the R129DP. I listed the mixing controls by name, then converted them to receiver servo connector numbers. This made programming less confusing. Once that was done it took about 10 minutes to complete the initial programming.

Flap/elevator mixing deflects the elevator down when the flaps come down. The amount of movement is a percentage of elevator for full flap. However, the amount is not a percentage of 100. This confused me at first since I assumed that 100 percent was full flap and the number of degrees of elevator movement would be a percentage of 90 degrees. It isn’t. The net result was that I had to revert to the amount that worked with the old Futaba and start there.

My ships with full flying stabs all have a Magic Marker dot on the vertical fin where the flying stab sits when neutral. I also have a dot at down stab deflection with the flaps down. This small deflection of the stab equaled 40 percent on the mixing programmed menu. Those of you who have worked with the Ace MicroPro transmitter may remember that this issue was present there, too.

The first trip to the flying field with a new set up can be stressful. I usually start off with some hand tosses just to set elevator trim and test the CG. In this case the CG had not been changed and the elevator was right on its dot so I expected no surprises. There weren't any, except that the new transmitter rounded shape was a change when I threw the ship and dropped my hand to the sticks. The other change was the slightly stiffer springs on the sticks. After the first toss I lengthened the stick tips and that made the sticks seem less stiff. The manual tells you how to remove the case back and adjust stick tension. Once satisfied that the Apache was trimmed I set out the winch for the first launch. Using five degrees of inner flap had always worked well on launch so I used that again. The ship rotated just fine and climbed out well. Previously I'd used two clicks of throttle stick for the five degrees of flap but had a switch programmed for it now. I promptly forgot which switch that was and wound up doing the ping and zoom with the flaps down. Not good!

Landing the Apache can be a challenge. The small cross section makes it hard to judge distance and speed. Due to the high grass I normally retract the flaps just before touchdown.

Once that bit of learning was done the rest of the launches were routine. Flight tests required that I readjust the mixing ratios, especially aileron-to-rudder to get a proper turn. It needed a little more rudder deflection. Also, while at altitude I dropped the flaps full down as for landing and watched the ship for pitch changes. It did pitch down more than I liked but was okay. I reduced the flap-elevator ratio once on the ground.

My contest landing procedure is to wind up at two to three hundred feet and upwind of the spot at just under a minute remaining. I then circle while keeping the airspeed up with a clean ship. At 30 seconds to go I break out of the circle and go downwind with five degrees of flaps while loosing altitude. The time spent going downwind is a function of the wind speed and the time. At about 10 seconds remaining I turn cross wind and then into the wind on final approach. If I'm high then I drop the flaps all the way down and dive the ship into the spot. If I'm low or the wind picks up I leave the five degrees of flap and fly it on in that way. This sailplane will drop very quickly if flaps are retracted and that is not easily controllable so I don't do it. The five degree flap set up is the best compromise for the majority of landing conditions with this sailplane.

Have you ever flown in big lift, been uncomfortably high, when your timer tells you there are two minutes remaining in the flight? You immediately drop the flaps and the nose, dive out of the lift and plummet down to 300 feet and right into the biggest sink hole in history, ending up landing 30 seconds short! These extreme dives are hard to master. My solution is to drop the outer flaps and leave the inner ones retracted. The outer ones are smaller so they don't slow the ship as much. As mentioned before, they are outside the span of the stab so pitch control is not effected. This dive procedure works very well in getting down from great height quickly and in a predictable manner. The extra control lets me come out of the dive higher than normal with enough altitude cushion to cover any unexpected sink. There is no elevator mixing in this condition as I'm already working the elevator to fine tune the dive angle.

The new Futaba 10CG transmitter has a nice handle near the antenna. The old 9VAP had one too. Sometimes, out of sheer laziness I would picked the 9VAP by its antenna. I tried that same thing with the 10CG and the antenna came loose in my hand. The antenna didn't break, I just side-stressed the antenna mount plastic and it popped loose. The antenna mount is designed to swivel for best orientation toward the aircraft. There is a small tang on the inside of the swivel that holds the antenna to its mount. Since it came loose I looked inside and found only a small diameter hookup wire. I had expected a coax cable connection to the antenna. That doesn't matter since the transmitter talks to the receiver quite reliably. You should be aware that the 10CG antenna is not as substantial as those telescoping types and use the handle instead. Page 6 of the instruction manual states that you should not pick up the transmitter by its antenna. This same situation may apply to other brands of 2.4 GHz rigs as well since their antennas look very similar.

To sum up, the Futaba 10CG radio is excellent in all areas. If anyone is presently flying Futaba gear this new radio is a seamless swap. The digital trims are very nice to use and the LCD screen indicates right where they are positioned. The variable display brightness is the best change from the 9VAP since it's very easy to see, even in bright sunlight. Although a neck strap is included, the 10CG is light enough not to need it, unless you are tackling the LSF 8-hour flight.

If you are looking to upgrade to a new radio the 10CG will fill your needs for years to come.

Resources:

http://www.Deoxit.com
Makers of contact enhancer fluid

http://www.futaba-rc.com
R/C radio manufacturer

Futaba is exclusively distributed by
Great Planes Distributors
P.O. Box 9021
Champaign IL 61826

RC-DLG Practice

Adlers Nest, Brasil

Marco Aurelio S. Fração, markimtv@hotmail.com





We were training with the new Steigeisens at our private field that is located in Mairinque, São Paulo Brazil. The Club name is Das Adlers Nest (German for “Eagle’s Nest”).








Sequences above and below: Bruno Pavani








Sequence above: Marco Aurélio Silveira Fração

Sequence below: Marco Aurélio Fração









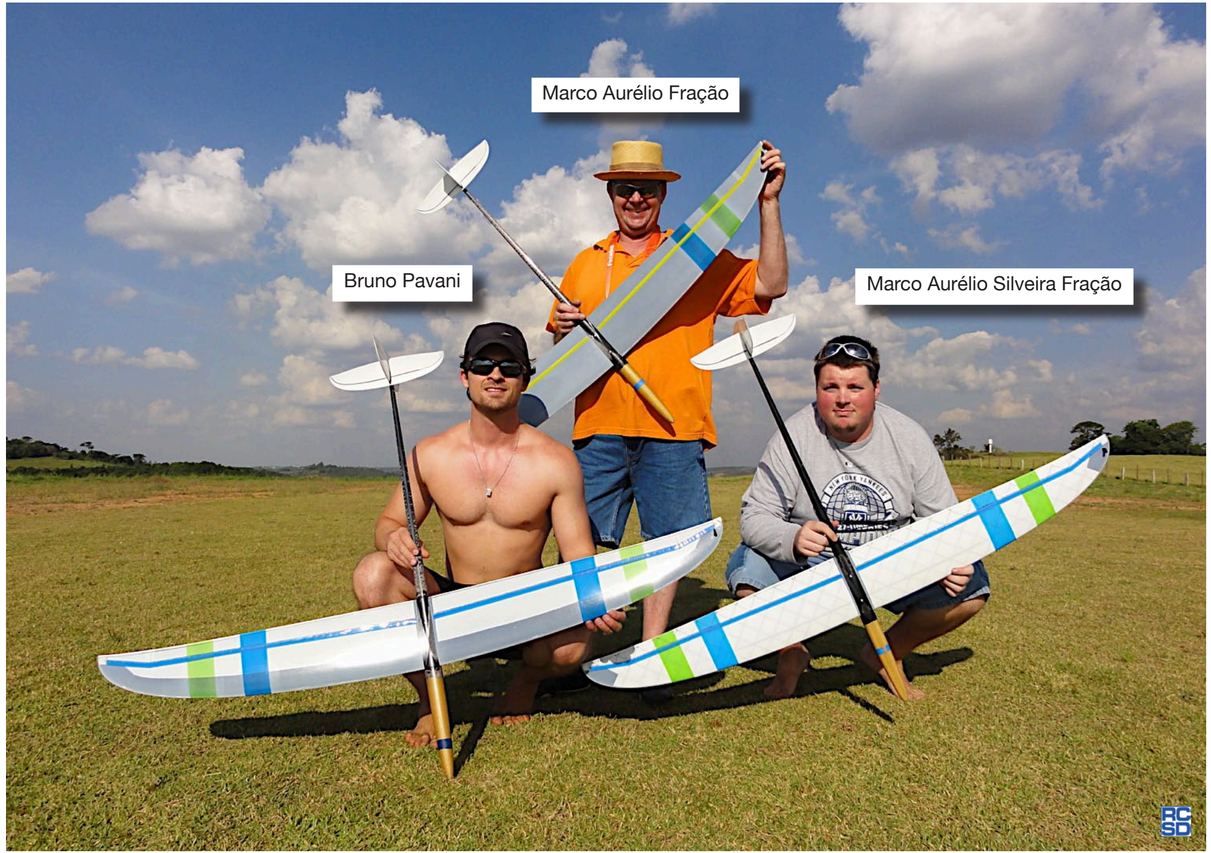
Sequence above: Marco Aurélio Silveira Fração

Sequence below: Marco Aurélio Fração





The Steigeisen is the new DLG from the Logo design team. It is designed around the new F3K rules which require models the launch very high, range far up wind and down wind, out hang the competition, and still maintain user friendly flight characteristics. The Steigeisen does all that and more! The model is already excelling in F3K competitions, most notably winning the 2009 F3K Euro Tour.
The Steigeisen is available in the United States through Skip[Miller Models
<http://www.skipmillermodels.com/ProductDetails.asp?ProductCode=Steigeisenasp?ProductCode=Steigeisen>



As a tailless enthusiast I have developed three airfoils: one plank airfoil and two for swept wings with the emphasis on massive lift. They aren't intended to be high speed airfoils, but nothing will out-lift them.

Andrew Raney, slodog@swbell.net

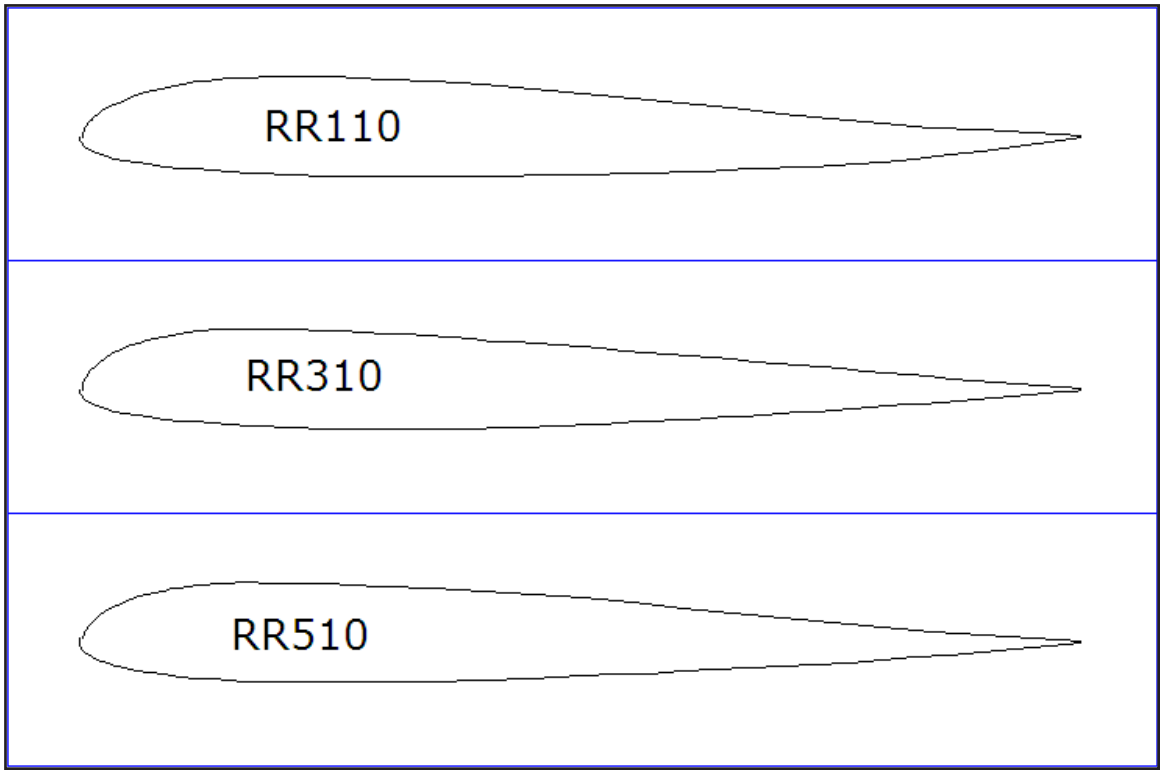
HEAVY LIFT airfoils for tailless sailplanes

The following sections for tailless sailplanes were designed for maximum lift. Comparing them to other popular sections is somewhat of an apples to oranges kind of deal, but I'll include them in the polars to show the tremendous lifting ability by comparison.

Above a lift coefficient of 0.9 these airfoils are at their best, like when scratching around for lift at low speed with too much ballast or crankin' out hard turns!

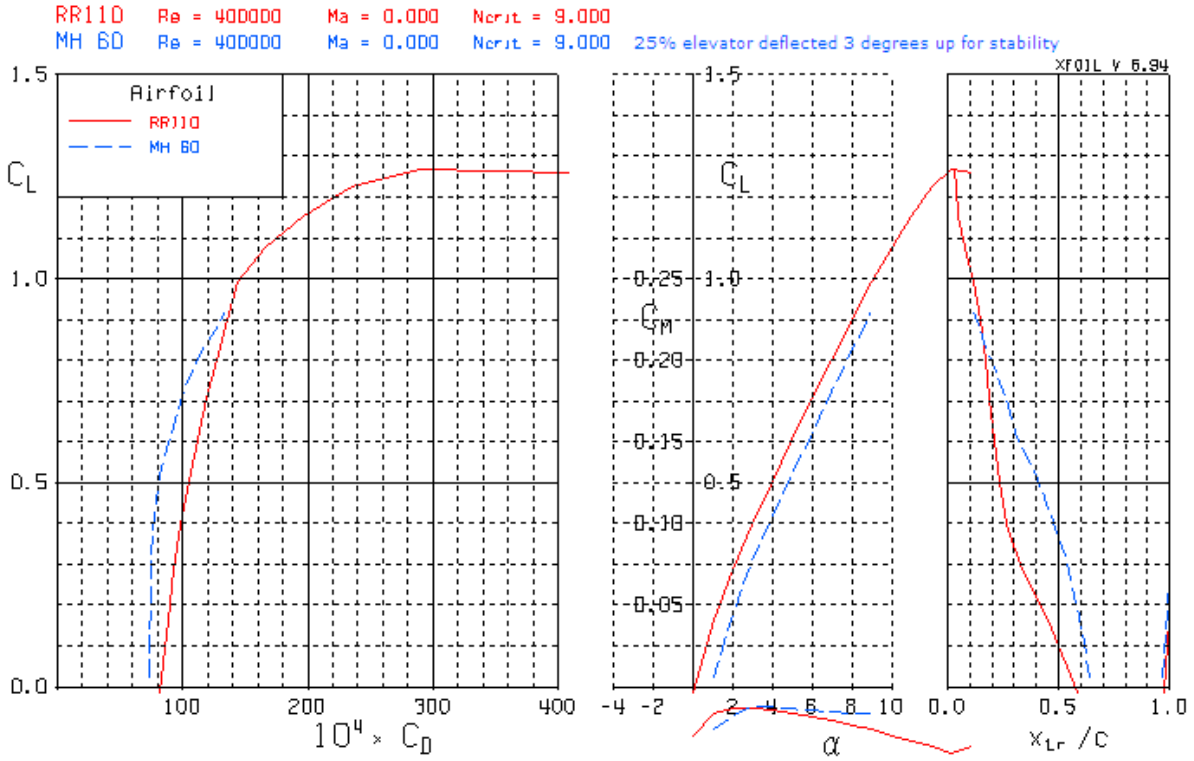
Most other sections will be producing huge amounts of drag and on the ragged edge of a stall. The RR sections are just getting to their good L/D.

Between 0.2 and 0.9 is where we pay for the ability to make massive amounts of lift. (Don't look at the polars in this area.) At lift coefficients below 0.2, their drag is not far behind the best sections.



RR110

Designed for Plank type aircraft. Rule of thumb — when Cmo = 0.05 x Cl, you have trim speed. With a Cmo of +0.0130 at Cl 0.25 it will be in trim at recreational pace. Maximum L/D 54 at Cl 1.2 without flaps. My personal preference is straight, untapered, no dihedral, elevons only on outer 60% of the span. Not running elevons full span gives a nicer “stall” behavior by creating washout with up elevator. It also leaves room to put undersurface flaps.

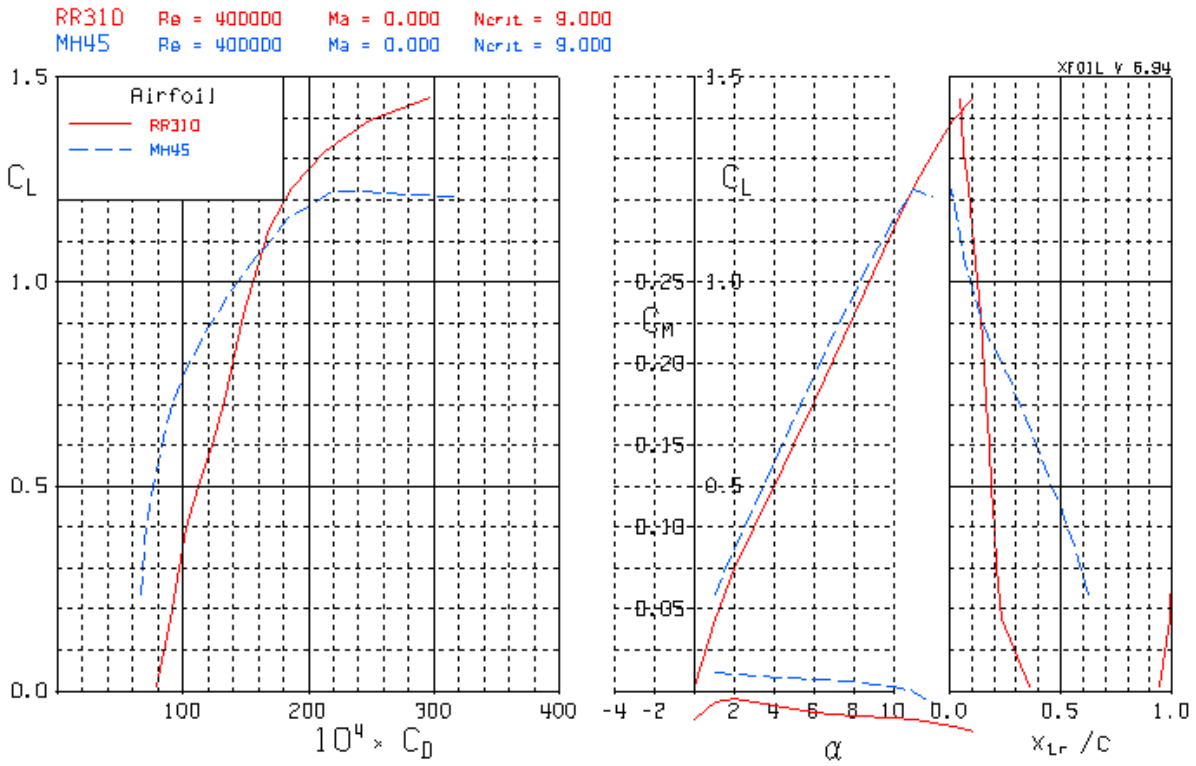


POLAR 1 Re 400,000

The RR110 is shown with a modified MH 60, which in this case has a 25% elevator deflected up 3 degrees to match the Cmo of the RR110, as required by a plank planform. The lift curve shows the lift peaking at 1.27, and almost non-existant stall break. The MH60 in this configuration stalled at 0.9. Both airfoils have the same L/D max, the RR110 just achieves it at a Cl of 1.0.

RR310

The big lifter. Maximum Cl = 1.45 at 14°, Cmo = +0.025. Intended to be the tip airfoil on a swept wing planform, it will also work on a plank with up elevator trimmed.



POLAR 2 Re 400,000

The RR310 is shown here with an unmodified MH 45. Notice the slightly positive Cmo to the slightly negative Cmo of the MH 45, which has a better L/D max, but above a Cl of 1.1 the RR310 is making noticeably less drag, up to a Cl max of 1.45 at 14 degrees. This is without flaps!

TECHNICAL TID-BIT

Reynolds number can be calculated via

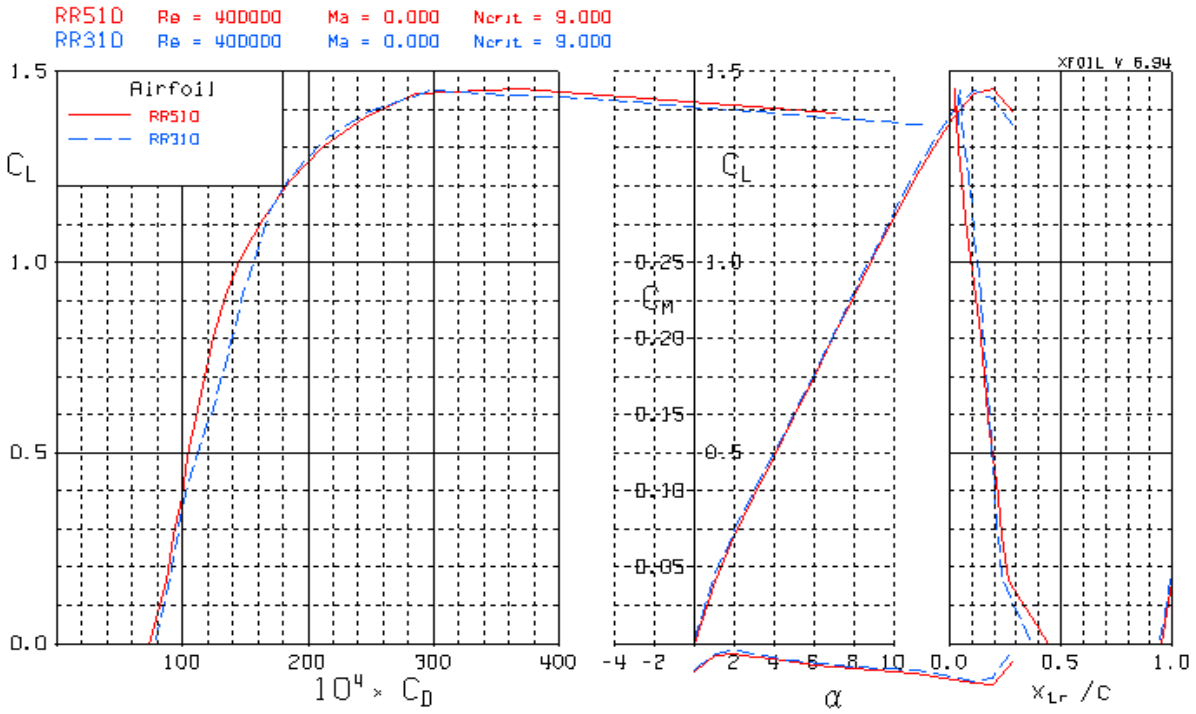
Re = wing chord in inches x speed in mph x 780

A 10 inch chord at 51 mph = Re400,000,
a 6 inch chord at 21 mph = Re100,000

RR510

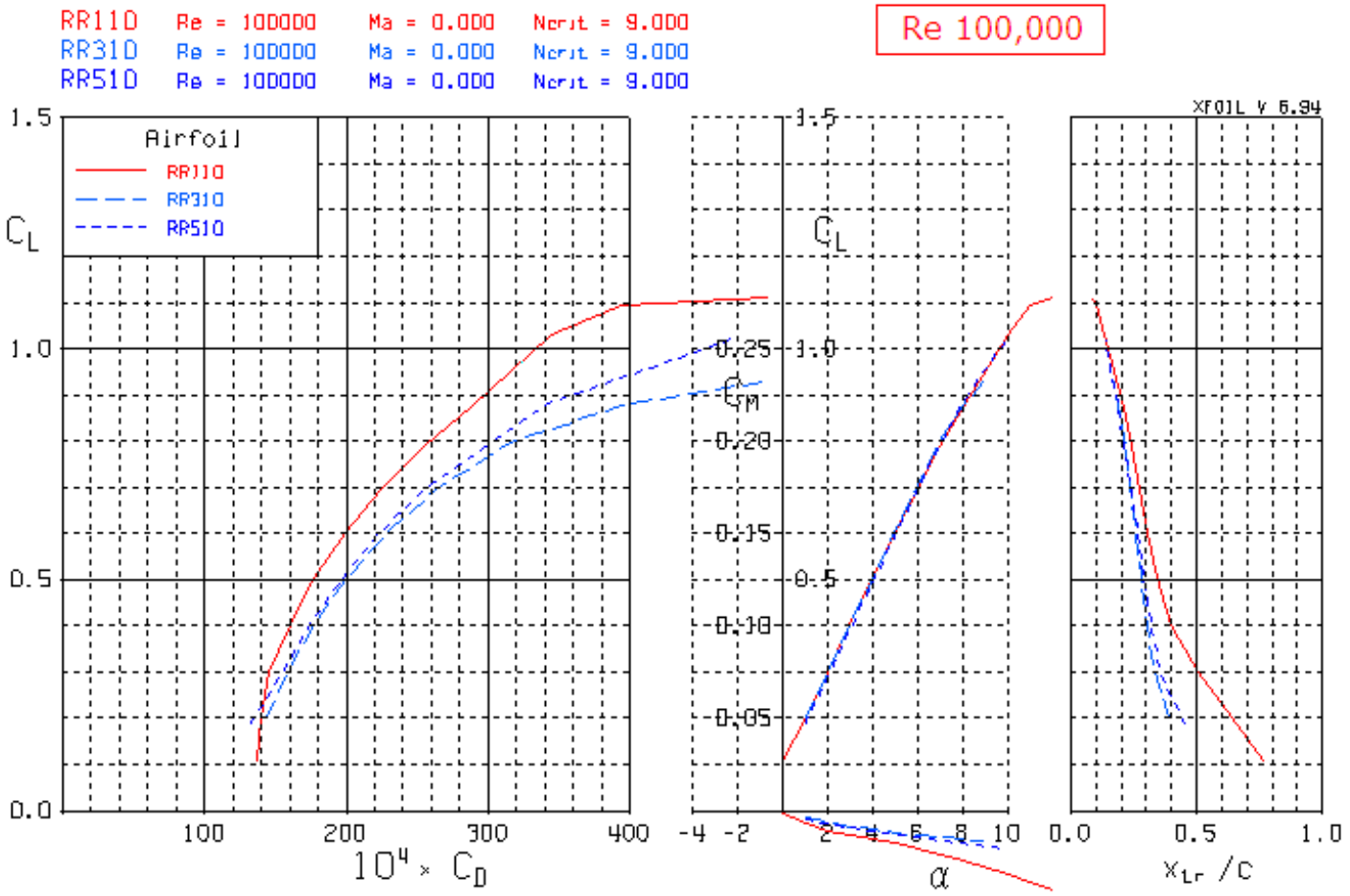
Intended to be the root airfoil to the 310 tip. Maximum Cl = 1.44 at 14°, Cmo = 0.026 with no flap. Lift goes to 1.68 with a 25% flap 10 degrees down.

The 310/510 combo was designed specifically to keep the tips from stalling. Thinning the 510 to 9% will further enhance the difference in stall characteristics.



POLAR 3 Re 400,000

Comparing the RR510 to the RR310 there is only a slight difference between them. The RR510 just winning in the drag department. L/D max of 69 at a Cl of 1.0.



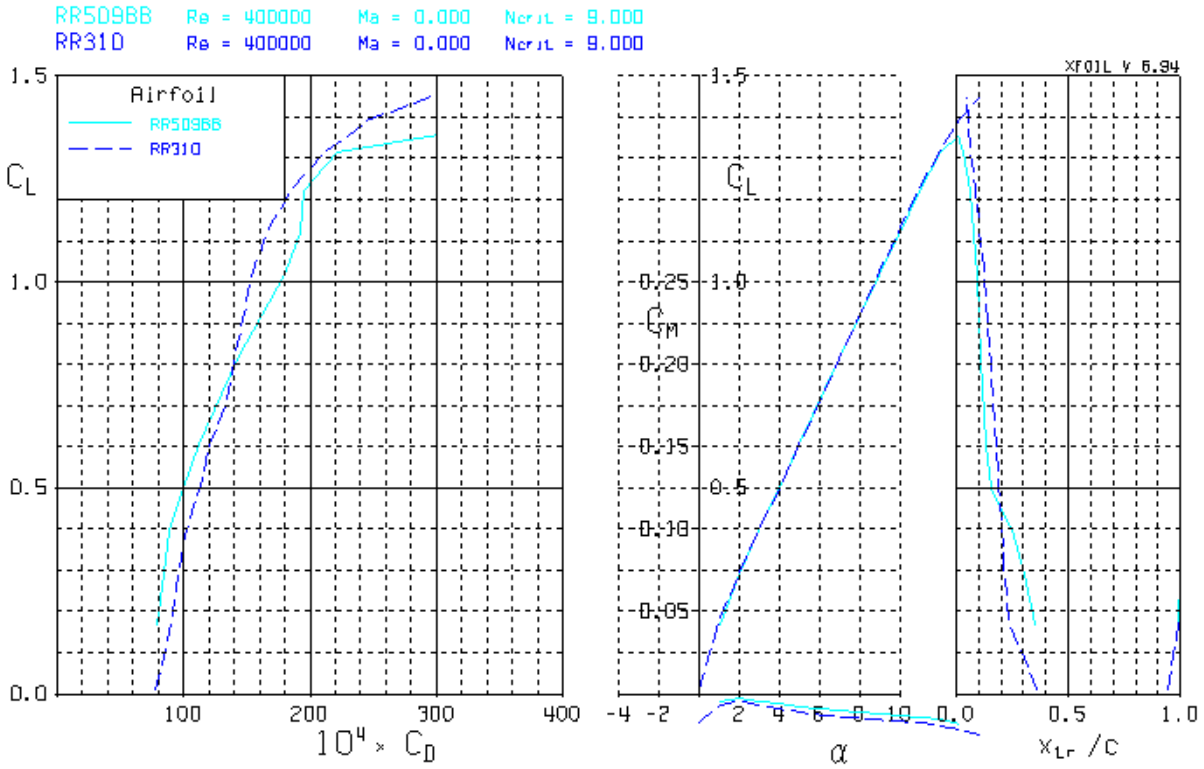
POLAR 4

Showing the RR series at Reynolds number 100,000

Even at this small scale the stability and lift are good. The RR110 clearly the better airfoil choice for a really small model if strong lift is required.

I removed some of the reflex while thinning the 510. The resulting RR509BB, while it still needs some smoothing work, is quite impressive!

Teamed with the 310 it should make a strong lifting combination with good low speed characteristics.



RR110

1.000000	0.001000	0.380780	0.053536	0.000035	0.001075	0.404247	-0.039422
0.993117	0.001451	0.362664	0.054796	0.000044	-0.000947	0.423119	-0.039151
0.981559	0.002179	0.344594	0.055901	0.000428	-0.003004	0.442004	-0.038848
0.968193	0.002976	0.326285	0.056867	0.001249	-0.005044	0.460912	-0.038518
0.952735	0.003839	0.307682	0.057744	0.002499	-0.007013	0.479830	-0.038163
0.935345	0.004737	0.289176	0.058561	0.004152	-0.008890	0.498761	-0.037786
0.916889	0.005642	0.271239	0.059248	0.006193	-0.010676	0.517696	-0.037393
0.898341	0.006553	0.253827	0.059713	0.008626	-0.012386	0.536560	-0.036982
0.880094	0.007504	0.236474	0.059901	0.011480	-0.014044	0.555341	-0.036546
0.862104	0.008549	0.218736	0.059897	0.014815	-0.015671	0.573988	-0.036122
0.844186	0.009753	0.200917	0.059858	0.018725	-0.017289	0.592235	-0.035717
0.826066	0.011148	0.183622	0.059674	0.023347	-0.018920	0.610233	-0.035165
0.807582	0.012691	0.166677	0.059204	0.028869	-0.020583	0.628600	-0.034448
0.788838	0.014303	0.150187	0.058445	0.035543	-0.022293	0.647265	-0.033710
0.770140	0.015946	0.134381	0.057390	0.043684	-0.024060	0.666016	-0.032932
0.751645	0.017641	0.119347	0.055889	0.053599	-0.025866	0.684825	-0.032120
0.733279	0.019424	0.104896	0.053901	0.065480	-0.027671	0.703614	-0.031281
0.714881	0.021305	0.091060	0.051448	0.079266	-0.029410	0.722267	-0.030425
0.696369	0.023278	0.077973	0.048572	0.094634	-0.031023	0.740577	-0.029544
0.677755	0.025320	0.065833	0.045354	0.111159	-0.032479	0.758272	-0.028710
0.659077	0.027393	0.054858	0.041909	0.128471	-0.033780	0.774794	-0.027794
0.640342	0.029458	0.045204	0.038376	0.146298	-0.034944	0.791132	-0.026396
0.621538	0.031503	0.036922	0.034882	0.164461	-0.035998	0.808373	-0.024777
0.602673	0.033537	0.029937	0.031515	0.182837	-0.036965	0.826052	-0.023182
0.583792	0.035566	0.024099	0.028320	0.201202	-0.037871	0.843728	-0.021470
0.564968	0.037571	0.019231	0.025305	0.219345	-0.038637	0.861618	-0.019562
0.546290	0.039524	0.015166	0.022455	0.237454	-0.039231	0.879613	-0.017517
0.527844	0.041392	0.011765	0.019748	0.255610	-0.039669	0.897337	-0.015345
0.509628	0.043135	0.008920	0.017161	0.273837	-0.039968	0.914858	-0.012990
0.491518	0.044726	0.006550	0.014669	0.292137	-0.040136	0.932442	-0.010525
0.473319	0.046200	0.004596	0.012254	0.310555	-0.040185	0.949998	-0.008097
0.454920	0.047646	0.003019	0.009901	0.329099	-0.040139	0.966608	-0.005808
0.436337	0.049137	0.001791	0.007602	0.347793	-0.040019	0.981045	-0.003780
0.417690	0.050658	0.000896	0.005358	0.366597	-0.039860	0.993083	-0.002055
0.399125	0.052143	0.000317	0.003176	0.385404	-0.039661	1.000000	-0.001050

RR310

1.000000	0.001000	0.404599	0.049309	0.000114	0.001410	0.416271	-0.038551
0.992416	0.001531	0.387235	0.050693	0.000006	-0.000493	0.433829	-0.038022
0.978856	0.002487	0.369921	0.052061	0.000281	-0.002431	0.451401	-0.037434
0.963039	0.003599	0.352763	0.053274	0.000956	-0.004436	0.468982	-0.036788
0.946482	0.004717	0.335559	0.054463	0.002088	-0.006444	0.486577	-0.036089
0.929887	0.005954	0.318527	0.055578	0.003693	-0.008421	0.504183	-0.035341
0.912966	0.007438	0.301473	0.056489	0.005790	-0.010354	0.521797	-0.034546
0.895601	0.008938	0.284267	0.057276	0.008423	-0.012256	0.539419	-0.033708
0.878035	0.010447	0.267133	0.058081	0.011681	-0.014150	0.557048	-0.032828
0.860370	0.011972	0.250195	0.058768	0.015713	-0.016066	0.574685	-0.031909
0.842662	0.013498	0.233155	0.059219	0.020748	-0.018034	0.592330	-0.030954
0.824946	0.015025	0.215812	0.059515	0.027121	-0.020084	0.609976	-0.029965
0.807247	0.016551	0.198345	0.059748	0.035260	-0.022226	0.627628	-0.028942
0.789598	0.018069	0.180940	0.059905	0.045524	-0.024420	0.645283	-0.027889
0.772065	0.019591	0.163651	0.060010	0.057986	-0.026572	0.662942	-0.026804
0.754718	0.021060	0.147047	0.060001	0.072275	-0.028568	0.680605	-0.025692
0.737530	0.022489	0.131417	0.059588	0.087811	-0.030343	0.698266	-0.024552
0.720343	0.024027	0.116343	0.058570	0.104108	-0.031888	0.715931	-0.023385
0.702984	0.025545	0.101697	0.056935	0.120874	-0.033233	0.733597	-0.022193
0.685436	0.027047	0.087512	0.054673	0.137932	-0.034417	0.751260	-0.020975
0.667783	0.028572	0.073909	0.051782	0.155192	-0.035474	0.768924	-0.019732
0.650083	0.030097	0.061085	0.048302	0.172578	-0.036435	0.786587	-0.018464
0.632366	0.031624	0.049308	0.044321	0.190058	-0.037329	0.804249	-0.017171
0.614646	0.033151	0.038871	0.040007	0.207420	-0.038153	0.821908	-0.015854
0.596932	0.034678	0.029999	0.035579	0.224670	-0.038829	0.839562	-0.014512
0.579237	0.036203	0.022739	0.031245	0.241926	-0.039352	0.857214	-0.013144
0.561590	0.037726	0.016961	0.027141	0.259221	-0.039739	0.874860	-0.011752
0.544047	0.039240	0.012435	0.023327	0.276553	-0.040001	0.892496	-0.010333
0.526611	0.040681	0.008919	0.019802	0.293921	-0.040146	0.910112	-0.008888
0.509204	0.042020	0.006209	0.016545	0.311326	-0.040183	0.927682	-0.007419
0.491729	0.043272	0.004146	0.013529	0.328759	-0.040122	0.945117	-0.005932
0.474157	0.044474	0.002606	0.010729	0.346219	-0.039968	0.962174	-0.004449
0.456603	0.045665	0.001496	0.008129	0.363701	-0.039729	0.978233	-0.003025
0.439135	0.046888	0.000737	0.005717	0.381208	-0.039409	0.992276	-0.001756
0.421792	0.048075	0.000297	0.003485	0.398731	-0.039015	1.000000	-0.001050

RR510

1.000000	0.001000	0.433627	0.048776	0.000051	0.002309	0.457625	-0.036343
0.993140	0.001357	0.417098	0.049994	0.000016	0.000344	0.474705	-0.035602
0.981608	0.001992	0.400655	0.051090	0.000160	-0.001864	0.491644	-0.034789
0.968294	0.002778	0.384223	0.051963	0.000882	-0.004311	0.508302	-0.033863
0.953030	0.003749	0.367712	0.052703	0.002349	-0.006929	0.524600	-0.032961
0.936293	0.004897	0.351070	0.053449	0.004745	-0.009687	0.540582	-0.032355
0.919506	0.006100	0.334291	0.054314	0.008342	-0.012609	0.556388	-0.031975
0.902552	0.007319	0.317412	0.055258	0.013605	-0.015758	0.572242	-0.031400
0.885698	0.008499	0.300530	0.056186	0.021202	-0.019170	0.588436	-0.030449
0.868993	0.009675	0.283783	0.057010	0.031609	-0.022713	0.605098	-0.029360
0.852294	0.010920	0.267156	0.057671	0.044477	-0.026070	0.622036	-0.028339
0.835550	0.012288	0.250362	0.058164	0.058901	-0.029007	0.639006	-0.027389
0.818769	0.013725	0.233367	0.058605	0.074180	-0.031483	0.655924	-0.026508
0.801987	0.015139	0.216471	0.058981	0.089951	-0.033542	0.672733	-0.025734
0.785268	0.016455	0.199573	0.059259	0.106034	-0.035247	0.689366	-0.025015
0.768664	0.017744	0.182709	0.059446	0.122326	-0.036652	0.705891	-0.024176
0.752155	0.019126	0.165920	0.059538	0.138768	-0.037799	0.722502	-0.023168
0.735646	0.020703	0.149848	0.059386	0.155326	-0.038724	0.739235	-0.022153
0.719019	0.022444	0.134129	0.058733	0.171971	-0.039456	0.755883	-0.021185
0.702221	0.024261	0.118632	0.057548	0.188684	-0.040019	0.772393	-0.020099
0.685292	0.026061	0.103380	0.055791	0.205453	-0.040431	0.788956	-0.018844
0.668318	0.027813	0.088440	0.053416	0.222269	-0.040711	0.805639	-0.017586
0.651354	0.029516	0.073911	0.050381	0.239120	-0.040871	0.822240	-0.016378
0.634407	0.031175	0.059946	0.046652	0.256010	-0.040924	0.838636	-0.015041
0.617456	0.032812	0.046776	0.042216	0.272907	-0.040882	0.854924	-0.013544
0.600482	0.034453	0.034774	0.037139	0.289859	-0.040754	0.871249	-0.012124
0.583465	0.036123	0.024479	0.031656	0.306653	-0.040549	0.887667	-0.010869
0.566417	0.037826	0.016417	0.026220	0.323250	-0.040188	0.904052	-0.009556
0.549418	0.039560	0.010669	0.021300	0.339898	-0.039756	0.920172	-0.008139
0.532595	0.041291	0.006804	0.017096	0.356667	-0.039374	0.936051	-0.006917
0.516016	0.042915	0.004257	0.013572	0.373452	-0.039074	0.951930	-0.005981
0.499626	0.044329	0.002592	0.010606	0.390168	-0.038761	0.967383	-0.004942
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1.000000	0.001000	0.402658	0.043810	0.000365	-0.001265	0.430795	-0.031864
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0.882067	0.009574	0.261385	0.052468	0.021131	-0.014281	0.566436	-0.027761
0.864561	0.010871	0.243662	0.053289	0.026758	-0.016695	0.584049	-0.026891
0.846946	0.012242	0.226484	0.053990	0.034037	-0.019028	0.601526	-0.025920
0.829275	0.013664	0.209877	0.054443	0.043738	-0.021267	0.618853	-0.024856
0.811629	0.015086	0.193460	0.054540	0.056065	-0.023697	0.636074	-0.023791
0.794029	0.016457	0.176732	0.054279	0.069323	-0.026148	0.653279	-0.022829
0.776446	0.017755	0.159852	0.053776	0.082754	-0.027884	0.670584	-0.022021
0.758844	0.019000	0.143191	0.053005	0.097863	-0.029002	0.688068	-0.021296
0.741198	0.020211	0.126692	0.051920	0.115128	-0.030017	0.705723	-0.020570
0.723495	0.021408	0.110525	0.050511	0.132169	-0.030990	0.723460	-0.019788
0.705734	0.022609	0.094671	0.048719	0.149681	-0.031982	0.741184	-0.018944
0.687927	0.023832	0.079367	0.046581	0.166986	-0.032951	0.758834	-0.018037
0.670091	0.025076	0.065763	0.044143	0.183768	-0.033771	0.776391	-0.017059
0.652242	0.026333	0.053767	0.041089	0.200342	-0.034338	0.793893	-0.015995
0.634394	0.027594	0.042858	0.037341	0.216955	-0.034594	0.811428	-0.014827
0.616555	0.028848	0.033155	0.033106	0.233749	-0.034684	0.829096	-0.013563
0.598730	0.030088	0.025011	0.028745	0.250677	-0.034808	0.846885	-0.012235
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0.491979	0.037383	0.002831	0.008943	0.349266	-0.034016	0.952140	-0.004849
0.474153	0.038651	0.001568	0.006579	0.365790	-0.033783	0.967686	-0.003697
0.456294	0.039937	0.000606	0.004457	0.382215	-0.033640	0.981254	-0.002614
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Oncle Sydney's Gossip Column

Seventh F3J World Championships 2010

France welcomes 29 FAI countries to Dole-Tavaux

"Allons! Enfants de la Patrie! Le jour de gloire est arrive!"

Sydney Lenssen, sydney.lenssen@virgin.net

As the Federation Francaise d'AeroModelisme prepares to welcome 130 plus of the world's top F3J pilots to Dole-Tavaux in the Jura Department at the end of July, nobody knows if the day of glory will arrive on the podium for the French pilots or teams. One matter is sure. Bruno Delor, FFAM president, and Stephane Champanet, contest director, together with their legion of helpers will be ready to make the 7th world champs into a festival of pilot skills and a contest of fun, fine food and wine and excitement.

The graduated landing tape, introduced only two years ago to separate the tight margins between pilots, has instead boosted competitive determinations. Contests in 2010 to date have shown that winning slot times now need to better 9:54 minutes and only landings of 98 or more might secure the targetted 1,000 points. August weather in Jura promises to be warm and thermally most of the time, which will encourage top pilots to go for two-second launches even in preliminary rounds. I have seen several one-second launches - no not two-second - in this year's Eurotour flyoffs and the model is released almost horizontally to gain speed not height.

Don't expect to see many new models, although there will be new wings and extended tip panels. Most of the established F3J sailplane manufacturers have honed their models to such finely tuned performance that it takes some rotten weather, a slight slip or error to miss flying out 10-minute slots. My hope is that some rounds, perhaps early morning, late evening or after the odd storm, will present harsher challenges and rock the form book.

Regular Gossipers know that the pre-FAI contest column gives predictions on senior flyoff places, new champions and team winners. Many tell me that they first turn towards the end of the column to get these guesses. So to confuse, we'll start with it! Don't forget to make your own forecasts for flyoff places, let me have them before the contest starts, and he or she who gets most correct will get a prize!

So in no particular order, my flyoff places go to Turkey's Mustafa Koc on the assumption that his business priorities totally reduce for a week to allow him to concentrate 100%. He will be flying the new Prestige - about which more later. He could be joined by Murat Esibatir from the same Soarist Club.

Juraj Adamek from Slovakia deserves a flyoff place for he's been even hotter this season. Then France must surely gain a home country place and it should then be Lionel Fournier who led the field until the last hurdle in Poland last year. No slip ups this time please!

Arend Borst from Canada will be in France after the fracas prior to Turkey in 2008, this time with his son Simon as a junior pilot. They are still waiting for extra models at the time of writing, and it's my view that Canada has the most simple yet difficult qualifying process to gain a team place. But Arend's hugely competitive mindset, going back to freeflight days of his youth in Holland, will lead to a flyoff place.

After last year's super Eurochamps in Wloclavek, it would be good to see a Polish pilot in the flyoffs and my bet goes on Wojciech Byrski who came fourth a couple of weeks ago in Osijeka.

Another list of long established expert and successful pilots cannot be ruled out, but some will need to be because there are too many. These are Jiri Duchan from the Czech Republic, Joe Wurts flying for the first time in the New Zealand F3J team, Philip Kolb, surely Europe's most ofttimes winner but still waiting to be world champion. Also from Germany, Tobias Lammlein almost became champion in Turkey, David Hobby from Australia, already twice world champion and trained professionally as a reader and rider of air, and if I had to pick a wild card it would be Carl Strautins, another Aussie who can amaze on his day.

When Daryl Perkins flew for the first time in the Turkey F3J WCs, he was convinced

Philip Kolb in the 2008 F3J WCs flyoffs, where yet again the champion's place evaded Europe's most successful pilot. Will 2010 Dole-Tavaux be the end of his trail to win every top award?

that he's missed the flyoffs two rounds from the end of the preliminaries. "That means I shall have to compete in 2010," he told me, "I am determined to add another WC win to my record." In fact he did get in simply because his team-mate Cody Remington blooped in the final round. Both pilots could easily make the French flyoffs, with Cody having had the edge in both the US team trials and last week's team practice comp in the Rockies. Few F3J pilots will have put in more spot landing practice than these two in recent months - see Tube videos.

Other pilots who have successful track records such that you would expect to see them in the flyoffs are Craig Goodrum from South Africa, Ricardas Siumbrys from Lithuania, Primoz Rizner from Slovenia, last year's European champion and prime adviser to Bulgaria's NAN Models, Marco Generali from Italy, Jo Grini from Norway and Sasa Pecina from Croatia.

But it's not my job to just pick the easiest bets. I look for unlikely contenders in with a chance and these are Shuhei Okamoto from Japan returning to F3J WCs after having had to stay away due to public duties, Sotir Lazarkov who triumphed in Osijeka and is such an F3J mainstay in Bulgaria, Austin Guerrier from UK who assures me he will nail his landings when it counts. For sheer determination and dedication, I include Aleksandr Volkov from Russia. One Russian pilot travels

Already double world champion, the 2010 F3J WCs in France will give David Hobby and his teammates a chance to pull off a third champion's medal. All indications are that standards have reached an even higher plane, but that's the challenge that David relishes.

24 hours by train to reach his nearest airport, which is then 3 hours from Moscow, and then onwards to Lyon or Paris to reach Dole.

So far I have picked 20 plus pilots for possibly 12 places.

Deep breath: my final list of flyoff places is: Mustafa Koc, Juraj Adamek, Lionel Fournier, Arend Borst, Tobias Lammlein, David Hobby, Craig Goodrum, Jiri Duchan, Cody Remington, Austin Guerrier, Primoz Rizner and Shuhei Okamoto.

Champion team this time will be Germany with USA second, and the next champion of the F3J world will be Cody.

TEAM NEWS

On to team news: I try to contact all team managers a few days before this Gossip asking for latest information, although I know that for those who don't read or write English, or for those who are immersed in work or preparations for France, it must be difficult. To those who replied, many thanks.

Saddest news is that all three Turkey juniors, Esra Koc, Ali Ersu and Cem Aktay, amongst the first to register, have been forced to withdraw, according to TM Serdar Cumbus, due to "Very difficult school exams." What a pity that the education authorities don't recognise the importance of FAI scheduling. But I also applaud those junior F3J pilots still

Primoz Rizner from Slovenia, already the current European champion and set to help host next year's Eurochamps in Bovec, will have an ambition to become world and european prizewinner. That's a tall order and that's what makes every FAI championship such a teaser of possibilities.

Mustafa Koc showing off the new wing for Prestige, sat at this stage on the fuselage and tails from a Pike Perfect pending production of the complete model. See Gossip for the scant details so far of this exciting "no expense spared" development.

Philip Kolb, joint designer with Benjamin Rodax, poses with the new Prestige wing, manufactured at the Fineworx factory in Istanbul run by Murat Esibatir and Philip. Don't start hankering after your own Prestige because it is unlikely to be produced commercially.

Murat Esibatir clutching his Fineworx Prestige at the Osijeka Eurotour, first competitive outing for the new model, an ambitious triumph for Murat, Philip Kolb and Mustafa Koc.

Photos courtesy of Larry Jolly

studying who place their hobby second to academic progress.

Turkey will have their usual senior team, Ilgaz "Doctor" Kalaycioglu, Murat Esibatir and Mustafa Koc. They want to fly the new Prestige produced in Turkey by Fineworx, the no-holds barred, no-expense spared F3J special which they hope will forge the way ahead in moulded models. Prestige was on public show for the first time at the Italian Lodi Eurotour, or at least the wing was on show. Fuselage, fin and tailplanes were still in the moulds and prototype wings were fitted to Pike Perfect bodies. Will this model prove to be the biggest excitement of 2010?

When Brazil competes in the WCs, most pilots wonder what spectacular designs they will be sporting on their track-suits and T-shirts. They won't disappoint I'm sure! Team manager is Norberto Padovanni from Santo Andre; this trip will be his first "international" flight outside Brazil and he's more nervous about that than his TM duties. Senior team will be Mario Sergio de Lucca from San Paulo flying a Pike Perfect with regular and extended tips, travelling this time with his son Lucas who will be a helper. He flew in Canada and also Slovakia. Marlon Luz also hails from Sao Paulo, he flew in Turkey and pilots Supras. Marlon and Mario fly together most weekends. Third pilot is Mauro Lucio Lopes from Rio de Janeiro, also a Supra fan, and with distances so wide the three only get togther 2/3 times a year at competitions.

Host nation France will have a new team manager, Ivan Moquereau who was a pilot last year in Poland. He feels very honoured this time to represent his country in this special year, he is also fourth pilot should anything untoward happen. With three Explorers, first pilot will be Lionel Fournier who came so close to the flyoffs in Wloclavek and he will surely feel the pressure of the home venue. Jean Bernard Verrier flies Supra Pros, it's his first WC, but he knows Jura well and made the flyoffs last year in the French Eurotour. Bertrand Wilmot is in the team for the third time and is hoping to control the adrenalin this time. Drink more wine is the answer to that!

Junior team is Robin Galeazzi who has competed before in Turkey and elsewhere and flies Xplorers with Lionel as spotter. Remi Cutivet is the youngster at 13 years old and sees this year as a stepping stone for his F3J future, while Jean Baptiste Demay at 18 years old, this will be his first and last as a junior. All the locals in Jura will be rooting for these six!

Another new TM is David James from New Zealand, best known for contest directing many National Soaring Championships and their team trials. Late withdrawal of Sven Zaalberg, who came so close to triumph in Turkey, has made room for Les Stockley who also flew in Turkey as did Scott Chisholm. For the first time Joe Wurts will fly for his "new nation" team in an F3J WC. He did fly for NZ last year in the F3B WC in the Czech Republic, a lonesome role from all accounts. This time we wish him the success which his record surely deserves.

Try to see the DVD produced by the Slovakian F3J (Litteam) team after last year's Eurochamps in Wloclavek. Don't miss it! It shows how the Slovaks produced probably the best performance in the contest, and details how the whole team of wives, pilots and helpers went about making their holiday in Poland an enjoyable experience. Can they do the same in France: could be!

This year Patrik Michnac will again be TM, Jan Littva junior will be determined to elevate his title of junior Eurochampion to World status and he will be helped by senior pilot/father Dr Jan Littva, the team's senior coach and back as a pilot for his country after 10 years. Main favourite among the pilots is Juraj Adamek who is already well placed in the Euroleague together with Juaj Bartek, the hardened pilot. Helpers as everyone knows hold a vital role in the path to success, and Patrik tells me that Dusan, Pat'o, Misso, L'ubo, Jano, Julius and Ad'o are more than ever coordinated - "everyone has run 100 metres in less than 10 seconds at the last team trial." Contrast that with the US towmen, chosen on weight and strength. Contrast it also with the Canadian team where Kevin Nerling, an F3J and RC newcomer will be TM and towman together with Landon Langley. Senior team will be Arend Borst who needs no introduction save a reminder that he was world champion in Lapeenranta (1992), Eric Heemskerk who also flew in Finland and at Red Deer, and Keith Thompson from Chilliwack whose prime experience is slope soaring. Welcome addition to Canadian efforts will be junior Simon Borst who I am reliably informed came second in the combined S & J team trials, not because he followed dad into lift, but he looked for and found his own patches of good air.

Germany's TM will be Stefan Eder, still youthful, still in deep voice, and probably today's grandfather of F3J, better known today as designer of the Satori and other winning designs from Aer-o-tec. I wonder how many Satori's will be flying in Dole; they are selling well in the US and around Europe, my friend Andre has one and reckons it's the easiest to fly high performance F3J model ever, launches high and penetrates like an arrow. We'll see!

Germany will have full teams of seniors and juniors, hardly surprising from a country which has more F3J pilots and contests than anywhere. Senior team is also long established with many triumphs including team champions in Canada in 2004. They are Tobias Lammlein, still

studying in Switzerland, Philip Kolb now resident in Istanbul - and well able to make a speeches in Turkish - and stay-at-home leather-hatted Karl Hinsch. They are all expecting to fly different models, Tobi sticking with HKM's High End, Philip seeking early wins for the new Prestige and Karl Hinsch relying on his faithful Pike Perfects.

Benedikt Feigl will be competing as present world champion, flying NAN Models, Xplorers 3500 and 4000, and says he is "fully motivated." Can he become the next pilot to win two championships? Will he do better than brother Sebastian who last year in Poland did not live up to expected form in defending his Eurochampion title.

Junior team will have an 11-year old newcomer, Max Finke, nerveless with uncanny F3J skills, flying a model new to me "Tortuga," a treat in store to see. He will be joined by experienced Manuel Reinecke flying Aspires and old-hand Timo Ganser with his Xplorers. They will be eager to regain the reputation of being the junior team beat.

Manfred Wirtz leads the Dutch and we can expect a large team of supporters waving lots of orange in France. One newcomer to the senior team will be Jaap Kooy flying Super Starlight and Sharon Pro, and his mates are stalwarts from many a year, Cor de Jong with Pike Perfects and Peter Zweers with Super Starlights. I have followed progress of Lesley van der Laan for many years, he has doubled in height, and it comes as a shock to realise that this year will be his last as a junior pilot. Egbert van der Laan will be his coach and they are hoping for a final triumph which would be well deserved.

Erik Morgan gained a team place for Norway but for reasons unknown had to give up his place, only to find that he could make it and so will travel as a helper. His pilot place is taken by Jostein Myre joined by Jo Grini and Per Pedersen. They have two juniors, Stein Marius Pedersen who is 17 and Fredrik Grini aged 13. Helpers will be Stig Magne Olsen, Charles Obschonka, an Aussie working in Norway, and the rejuvenated Erik Morgan. In his usual modest way, TM Grini reports that "Norway is expecting Jojo to be in the final and win it all." Nuff said!

Finland's Janne Savolainen will be by himself again this year and looks to join in with the Brits. He was to fly with Tuomo Kokkonen who has a vital work project. Janne's wife and 18-month old baby are off to a wedding. He will bring his masterful use of English expletives to steer his Pike Perfects.

Theo Arvanitakis is Australia's TM and will drive the efforts of twice champion David Hobby, Carl Strautins and Jim Houdalakis, first timer but no stranger. David and Jim have been working on special launching techniques - even faster? - and David has been modifying his tips in some "unique" way which boosts dead air hang time - something to watch for. Meanwhile, Carl has been flying seven days a week from a very short bungee and "has become as one with his Pikes." Sounds very dangerous.

The British team will have a new manager, Nick Kidd, who has been flying F3J for only a few years. He lives on the Isle of Wight and for every contest he needs a ferry before he starts his long trecks across the country. Many F3J pilots in Britain moan at the travel distances required to stand any chance of a team place. I say to them: take a look at what happens in Russia, Canada, USA, Australia and many other countries. Some individuals on official BMFA committees urge the F3J league organisers to spread more contests across the regions to attract wider participation. What they can't do is to persuade more pilots to enter. In Britain F3J pilot numbers are sadly slowly falling. Nick sets a shining example in enthusiasm.

UK's senior team will also have a newcomer, Mark Devall, who has flown thermal contests since the year dot but has never made the top grade at international level. He will need some beginner's luck but he's not lacking in confidence at this stage. Both Austin

Guerrier and Colin Paddon are not new to championships and although form for both has been variable this year, it is on the up and Colin won Radioglide two weeks ago.

Mark's place is due to Adrian Lee's decision to give up F3J competitions in favour of another of his hobbies, running, a decision which might surprise many pilots from around the world who have known him over the past 20 years. He has represented the UK more times than any other pilot, his hand-built self-designed High Fives were known for all being red on top and blue below, for most being rather heavier than you'd expect and each having surprising performance under his control. More recently, due to shortage of time, he has flown Graphites. He was undone because he was adamant that if he could "make-do and win" with what he'd got, then why change?

Adrian is not the easiest man to know. He was gifted and funny when he impersonated Rowan Atkinson's Mr Bean. He was Britain's most consistent and successful thermal flyer in the UK's notoriously unkind weathers. He made many flyoffs but never became an FAI champion, which is sad. Should he change his mind in the coming years, he will be welcomed back into the fold.

Croatia could well get onto the team podium, led by Damir Kosir, pilots Arijan Hucaljuk, Sasa Pecinar and Antun "Bearhug" Sikic. Juniors are Arijan "one-second launch and practice every afternoon" Hucaljuk, Marijan Balasko and Miro Suver. Gossipers sometimes ask why I don't predict flyoff places and winners for junior pilots. The simple answer is that they are under enough pressure at an FAI championship without being tagged as a favourite. It is also less easy to follow form. If forced to pick a new junior world champion, it would be Arijan.

Of all the teams with a language problem, Romania has the hardest job making itself understood. They organise many FAI championships in all classes and make a good job look simple. But when it comes to the boring model processing, they always miss some details. In France we shall welcome TM Traian Tomescu with senior pilots Milea Catalin, Florica Ionut and Iordan Gheorghe. Sadly the juniors have been left at home this time.

Italy will be in Dole with lots of fans in full voice. No nation can get voices to carry so far down the safety corridor The Gallizia family has been tackling this year's Eurotour with zest, turning up in Turkey, Bulgaria, Slovakia and home base at Lodi, all before the middle of May. Father Giuseppe has gained his reward by topping the Eurotour league after five contests, with Marco and Carlo his sons sitting in ninth and tenth places. They'll have a job keeping it up for eight more events, but they deserve a big cheer.

Third son is the current world junior champion Giovanni Gallizia who has been studying in the USA for the past year and has not been able or allowed to fly models. He is due back in Italy any day now and will be coming to the WCs to defend his title. The big question is whether he will pick up all his skills with minimum practice? I am confident that he will.

Giorgio Dittadi is Italy's TM again with an established senior team of Marco Salvigni, Marco Generali and Thomas Truffo. You can seen why the Gallizia's have been practicing, for Carlo and Marco are in the junior team with the third pilot being Federico Montanini. Let's see if someone can repeat recent championship triumphs.

I already hinted at what's expected of Primoz Rizner but he is also closely rivalled by Bojan Gergic and Jan Hlastec in Slovenia's senior team led by TM Pavel Prhavc, yet another top pilot. Junior team is Jure Marc, Robert Ratjac and Metod Meolic. All the Slovenians will be acutely conscious that Bovec is the venue for next year's Eurochamps. Success in France will set the scene well. To my mind Bovec next year will become a flying site of world reknown.

As I write, South Africa is howling with vuvuzelas - don't bring them to France

please - and the World Cup Football Finals. Few people realise that they are merely practicing for the next FAI F3J World Championships in 2012, to be held in Johannesburg in the first half of August and organised by the Model Gliding Association of South Africa. Michelle Goodrum is part of the organising team along with Lionel Brink and Wolfgang Steffny.

This first successful bid from south of the equator - which means it will be winter time down there - was accepted by FAI in Lausanne in April. All the delegates were determined to get out from under Iceland's volcanic cloud at the time. It's going to be a long way to travel, but what an exciting prospect!

In France TM will be Herman Weber assisted by Johan Bruwer snr, the pilots led by Craig Goodrum, flyoff man from Turkey in 2008 and not bad at F3J for an F3B man, Chris Adrian and Paul Carnall. They bring three juniors too, Jason Weber who will help his dad, Ryan Nelson and Tsepho Molefe. Again the aim must be to take medals back home in preparation for 2012.

To another part of our shrinking world, Japan will be led by TM Hirochi Ohata with pilots Shuhei Okamoto, Akira Oshima and Tsuneo Horiuchi and sadly no juniors. I hope that Shuhei will bring his super mini-chuckies - his Craftroom firm produces an exciting collection - and

One competition in France will be to see who is the youngest junior in the contest. One contender is Ivaylo Dimitrov from Bulgaria posing in front of the podium at Dupnitsa this year where he had the misfortune to have his fuselage and tail cut off by a rival during launch. As part consolation, Sebastian Feigl who won the Eurotour event, then donated his prize of an Xplorer to Ivaylo, a super gesture.

his absence in recent WCs is explained by his public duties as a politician.

Estonia are back again too, led by TM and pilot Edvin Penart together with Partel Peeter Kruuv and Priit Leomar, a welcome return. Lithuania pilots are regulars at WCs and they too have a TM/pilot in Valdas Braziuans, plus top pilot Ricardas Siumbrys and Donatas Pampikas. I shall be cheering them on.

Bulgaria has become a leading F3J country, they run perhaps the most enjoyable and informal Eurotour on the circuit with super friendly hospitality. It is also the home of NAN Models, I guess today's most prolific model glider factory. So far podium places have eluded their native pilots, but all is set to change for Sotir Lazarkov has just won the Osijeka Eurotour. In France he will carry TM duties as well as flying and he will have his daughter Yuliya Lazarkova in the junior team along with the diminutive Ivaylo Dimitrov and Filip Stamenkov. Two remaining senior pilots are Konstantin Ranov and Valentin Valchev. Bulgaria will be a force to be reckoned with in Jura.

This year I was due to visit the Ukraine for the Wilga Cup but sadly could not make it. Vladimir Gavrylko will lead the team and is also a prolific producer of top class glider and electric models. Linked with Dr Drela in the US, he is working on the next radical development to the Supra Pro, although we probably

What a glorious place to practice with you new model in Bulgaria's winter mountains. Yuliya Lazarkova, pride of father Sotir and flying juniors in France.

won't see it in France. Senior pilots in the team are Vladimir Makarov, Oleksandr Chekh and Oleksandr Petrenko who are all having success in the Euroleague. They also have two juniors, Andriy Ordyna and Artem Parkulab. I aim to make the trip next time!

Top prize for travel determination and distances should go to the Russian team who have already travelled tens of thousands of miles for Eurotours in preparation for France. TM and senior pilot is Alexey Shchegolev with Dmitry Gashnev and Aleksandr Volkov in support, The team will have two juniors Dmitry Gushchin and Nikita Derzhavinskiy. Will this time be the opportunity for a top place?

Belgium will have its Eurotour at the beginning of July, three weeks before the big jamboree, and that will enable the seniors and juniors to hit their highest form. Led by TM Chris Denolf, there are no surprises among the seniors Tom Mertens, David Claeys and Chris Gyssens. Junior team is Daan Menjoie, Amou Verheijen and Vincent Beckers.

Sweden has TM Antero Hurtig and pilots Conny Ulvestaf, Magnus Hedlund and Lennart Arvidsson, but no juniors this time. The team reserves its appearances to the big events!

Switzerland's team holds no surprises with TM Rueti Baumgartner and his son Reto as pilot with Koni Oetiker and Ernesto Weber and I wish them luck with their dedicated enthusiasm and jovial helpers.

Last but not least is the Czech Republic, home of the most famous and long established moulded model builders and many of the world's best pilots. But is this fame on the wane? I am surprised that they have only one junior this time, Tomas Kadlec, so for once they won't be team prize contenders. Senior pilots are Pavel Kristof, Jan Vacha and Jiri Duchan who came ever so close to winning the WCs in Turkey. Martin Rasjner is TM and I am pleased to see that Samba's Vlastimil amd Jaroslav Vostrel will be there as helpers, and you could not have better experienced men. I hope to see Jane Vostrelova.

I have gossiped about two USA pilots, but of course I should detail the whole team. Let me also put on record the generous support they receive from their sponsors and modellers across the continent. Every two years they donate raffle prizes and put their hands in their pockets and raise remarkable dollars which go a long way to paying the hefty bill to attend, like tens of thousands of dollars. No other nation matches it. Well done!

The USA has a new TM with Michael Verzuh, a popular choice, but I am sorry not to see Jim Monaco this time. Dave Beardsley is assistant manager and will also help his son, Brendon together with juniors Conner Laurel and Michael Knight. Richard Burnoski is the senior pilot I have not mentioned and who will not forget his ballast ever again! I am not sure if he will continue to fly Supras or if he has converted to Satoris - maybe a mix. He hails from the Chicago area which again illustrates just how far team members need to travel to get together. US helpers and supporters are a well-knit bunch who back their pilots to the hilt. They will surely go home with medals!

As each year passes in FAI championships, F3J enthusiasts become a closer family of friendly rivals. If you check, not a dozen of the pilots are new this year to the circuit. It is almost unhealthy. But it is very warming.

In France next month, 16 of the pilots competing flew in the first WCs at Upton in England 12 years ago, one Jan Vacha having been as a junior then. I've got the records but not the time to check how many have flown in every WCs since. That is why Euro and World championships have that magic blend of camaraderie and competition. Long may it continue and let France add its own touch of excellence.

And to everyone, BON CHANCE!

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