

# Radi- Controlled Soaring Digest

August 2010

Vol. 27, No. 8



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**Front cover:** The cover this month is a departure from the norm in that it is not a photograph. Rather, it is a piece of computer artwork from Carlos Ribeiro of Brazil. Carlos created this image of an ASW-28, along with others presented on pages 44 through 47, using readily available software. Carlos is also involved in computer animation through his company TWiST FX. Please visit <<http://www.vimeo.com/twistfx>> to see a sampling of produced videos.

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# R/C Soaring Digest

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## In the Air

As many of you know from reading "Onclé" Sydney Lenssen's column last month, the Pacific Northwest will be without a significant portion of the Seattle Area Soaring Society for the next couple of weeks.

All three of the US Junior F3J Team members (Brendon "Dippin' Dots" Beardsley, Michael "Chainsaw" Knight and Connor "Stealth" Laurel) are SASS members, their fathers are all competitive RC sailplane pilots within SASS and will be serving either as team members or as support staff, and several other SASS members are either team members or are going to Dole-Tavaux aerodrome as enthusiastic spectators.

The United States F3J Team, along with teams from other countries, will be leaving for France within the next few days.

Best of luck to everyone at Dole-Tavaux, regardless of national origin!

Coverage of the 2010 F3J World Championship will appear in a future issue of *RCSD*, perhaps as early as the September issue, but more likely October.

A reminder... Please note the *RCSD* email address was recently changed. It is now <[rcsdigest@centurytel.net](mailto:rcsdigest@centurytel.net)>.

Time to build another sailplane!

# BLACK EAGLE TROPHY PSS FESTIVAL

HOSTED BY TWO OCEANS SLOPE SOARERS  
CAPE TOWN JUNE 19TH AND 20TH 2010

Kevin Farr, kevin@fvdv.co.za

with photos ©Cobos Botha sponsored by WiFly.co.za,  
and by Malcolm Riley, Peter Vergeer and Kevin Farr

## THE IDEA

The Black Eagle Trophy PSS Festival flew gracefully into the annals of the Cape slope soaring scene over the weekend of the 19th and 20th June 2010. With 21 pilots entered, the event promised to be packed as most pilots had two aircraft at least to add to the mix.

Following the hosting and success of the second Two Oceans Slope Soarers Aerobatics event in January, it was felt that there should be more development in our club sphere, and driven by Damian Hinrichsen's suggestions and constant requests for a relevant date, we set a date for a PSS event that was a good six months away from the Aerobatics event and slap bang in the middle of winter.

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*The P-38 heads out on a video sortie. Cobos Botha photo*





*What a view from the event area. Photo by Kevin Farr*



Left: A gaggle of warbirds over the Sentinel. Cobos Botha photo



*Above: The kill. Photo by Peter Vergeer*



*Above: Anton Benning's Impala on the cruise. Cobos Botha photo*  
*Right: Christo Le Roux and his P-40 Warhawk. Cobos Botha photo*



We were hoping to garner the standard winter North Westers that pepper this part of the world in association with each approaching frontal system. With the idea of hosting an event established, we decided to create the event around the impressive and threatened Black Eagles that grace our slopes in Cape Town as well as other parts of the country. Hence the Black Eagle Trophy PSS Festival by name and an agreement to donate a portion of each entry fee to the Percy Fitzpatrick Institute of African Ornithology, for the study and preservation of the varying raptor populations that inhabit the slopes we soar on.

This followed our need to create a conservation platform within the slope soaring fraternity and give something back to the environment we utilize so readily.



*Close-up shots of Christo Le Roux's P-40 Warhawk showing the detail incorporated in his large scale model. Photos by Cobos Botha*

## THE PLAN

With the TOSS committee firmly set on a course of action, the planning started, the rules and documents created, the contestants entered, and many entrants started the mammoth task of getting their pride and joy slope soarers ready for the competition that was barely six months away.

Based on the three available classes, Foamy, Sportsman and Expert class, with a lot of scratch building as well as revamping and total overhauling of ARF kits began in order to match each available class.

Being a bit of a foamie combat club, Damian Hinrichsen had the vision of creating a fleet of slope warbirds that were EPP foam based, allowing for the combat zone to be filled with the sight of scale warbirds in hot pursuit of each other. With this in mind he quickly went about drawing up the plans for at least 10 different warbirds ranging from the indomitable Spifitre to the Zero, with Mustangs, P40 Warhawks, Messerschmitts, Focke-Wulfs and many more thrown into the mix. Along with the well known slope aeromodeller Anton Benning, they cut the initial fuselage shapes while Anton created the wings,

wing spars and relevant pushrod systems as part of these fantastic little kits.

With huge enthusiasm the entire field of entries got about building these foamy slope soarers which proved to be brilliant in their simplicity and saw the black EPP foam being taken down to shape, covered with Orocove, given the relevant decals, and dusted with a protective varnish for the final finish.

Panel lines and detail became part of the build and many superbly finished models rolled off the desktop line and into the foamy class, ready for the inevitable battle.



Above: A foamy Mustang. Cobos Botha photo

Right: Lionel Brink and his large scale Tucano. Cobos Botha photo



There was a stark dearth of slopers on the slopes in the weekends leading up to the event as many of the pilots hid in dark corners concentrating on the large scale warbirds, finalized each with delicate detail that annoyingly seemed to take longer than it should .

#### THE BIG SHOW

A beautiful morning dawned on the 19th July 2010 in our part of the world. A few intrepid slopers were seen on the slopes as early as 7:15 am staring into the dark while awaiting the arrival of dawn and the first few flights of the day. Our skinny little Cape Peninsula is such a sitter for a good North Wester and mother nature duly delivered. Not a howler by any note, but with more than sufficient



*Damian Hinrichsens immaculate ME109. Cobos Botha photo*



*Marc clears off the dust before relaunching the Zero. Cobos Botha photo*



*Herbie Newton, static judge for the day.  
Cobos Botha photo*

lift to start the event and take whatever the day threw at us. Early morning was light but flyable and the foamies entered the judging area and were duly awarded points by the static judge for the day, Herbie Newton, and then released skywards to open up a days warbird combat that was to prove hugely successful.

These foamy warbirds were sometimes incredible in their detail and realism as applied by the differing individuals and proved an absolute revelation in the light lift and gaining more attributes as the lift improved throughout the day. One competitor racked up three and a half hours of flight time from maiden flight to

the end of the day's proceedings. Some kind of stick time, that.

This was followed by the Sportsman class that was punctuated by the two meter plus class of plane with some great renditions entered; from the Mustangs of Damian Hinrichsen and Bobby Purnell to Malcolm Riley and



*One of the Mustangs caught in flight. Cobos Botha photo*



*The P-38 homeward bound. Photo by Malcolm Riley*

Anton Benning's Impalas, Lionel Brink's Tucano, Chris Leal's Me 109, Carlo Davis's Sea Fury and A10 Warthog, and Marc Beckenstrater's enviable Mosquito.

The premise being that ARF kits could be entered, and in true fashion some stunning conversions of power kits hit the slope. Toss away the motor, add vast amounts of lead and away we go.

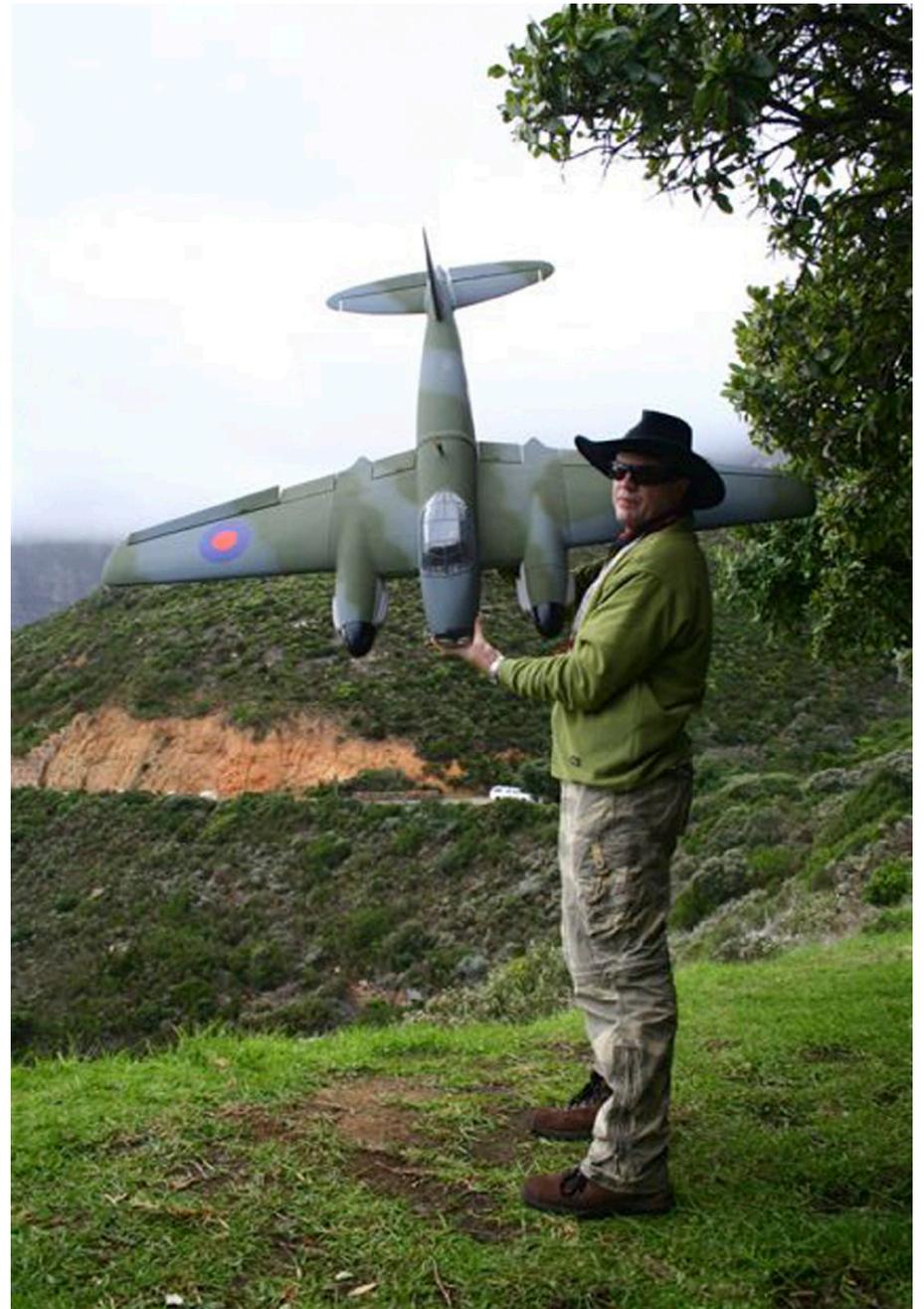
That not being enough, large amounts of detail were then added to create realistic interpretations that go well beyond simple ARF's. Some, such as Dave Greer from Durban, scratch built a lost foam ME 109 and entered the class as well. In general the standard of the models was extremely high and were presented beautifully in all their glory. The final class was the Expert class, again made open to the ARF's and scratch built, but with the emphasis based on detail, detail, detail.

In this class only two intrepid individuals entered who felt that their application to detail as required in the class designations was up to scratch as it were. Christo Le Roux entered a magnificent P40 Warhawk that had to be seen to be believed, with a sound system incorporated that had all and sundry titivated as the "engine" spooled up, gained speed to full revs and then had the ability to emit a wail of gunfire.

The second entrant was Steve Meusel's scratch built Polikarpov I-15. This beaut of a subject was a first for us slope folk



*Steve Meusel and the Polikarpov I-15. Cobos Botha photo*



*Marc Beckenstrater and the Mosquito. Photo by Malcolm Riley*



*Left: A Sea Fury awaits some wind. Cobos Botha photo*  
*Above: Sunday morning glory. Cobos Botha photo*

this side of the world, and given the fact that none of us have flown a biplane on the slope, proved to be a much debated subject.

During the day the wind grew in strength but still maintained a bit of an on and off affair, but by mid afternoon was more than sufficient to see Anton Benning flying his small scale Impala for increased periods of time.

With a chance for flight and with the wind just being sufficient, the P-38 Lightning took to the air with a camera mounted on board, had a half hour flight till the lift once again proved a little light for this 30 oz wingloading warbird and the inevitable landing had to be applied.



*Left: A few of the foamies that were present. Cobos Botha photo*

*Above: Damian Hinrichsen stares into the future. Cobos Botha photo*

In the end there was just a shade too little lift to expect the guys to maiden large scale warbirds on the day, but a week later in insane lift at the St. James site and on the back of a 60km/h wind, every single one of the warbird gliders took to the air to prove their mettle. They all flew like a dream and the big surprise of that day was to see the Polikarpov biplane tearing up the air with grace.

On the PSS day the combat zone and the foamies ruled the sky, many a beating was taken, many a fetch had from down the slope, and humour and strapping tape ruled the day till sunset forced the closure of the slope. The shadows were lengthening and evening approached with a few individuals still on the slope nattering away, when the mascot of the festival arrived in the growing dark.



*The entrants and their warbirds. Cobos Botha photo*



*The Black Eagle Trophy. Photo by Kevin Farr*



*Cobos Botha photo*

A large Black Eagle flew in right over our heads as if in blessing and circled it's way up the peak in the dusk without so much as a wing beat, amply showing us landlubbers the true art of flight.

The sunburnt and somewhat tired individuals then headed for a meal at Dixie's to swap war-stories while sipping a relaxer.

Sunday dawned as beautiful as Saturday without a single cloud in the sky, but the wind gods deserted us and only the very lightest of gliders were able to stay up as mist moved in an enveloped the bay. A healthy breakfast was on offer and general natter filled the air while all

waited for even the slightest whiff of wind and the electric gliders plied vertical power in place of lift.

Mid morning saw the conditions unchanged and the awards ceremony then took place.

#### THE AFTERMATH

The first order of business was to hand over the cheque for the sum of R 2500-00 to Dr. Rob Simmons and Dr. Andrew Jenkins of the Percy Fitzpatrick Institute of African Ornithology, based at the University of Cape Town, which was gracefully accepted. Due to the presence of a few of the raptor research specialists

on the slope for most of the morning, a great relationship was established that bodes well for slope soaring's involvement with the research institute itself, as well as future investments in the protection and study of the raptors that grace our slopes.

With the generous sponsorship of the hobby shops, people involved in the sport and the members of Two Oceans Slope Soarers, we were blest with ample prizes to give out in all categorizes from first to third as well as spot prizes based on TOSS committee decisions for those spot prizes.

The prize winners were as such and well done to them all for the effort instituted in creating the PSS model of note that garnered the desired results.

**Expert Class:**

1. Steve Meusel - Polikarpov i-15
2. Christo Le Roux - P40 Warhawk

**Sportsmans Class:**

1. Marc Beckenstrater - Mosquito
2. Bobby Purnell - Mustang
3. Chris Leal - Me 109

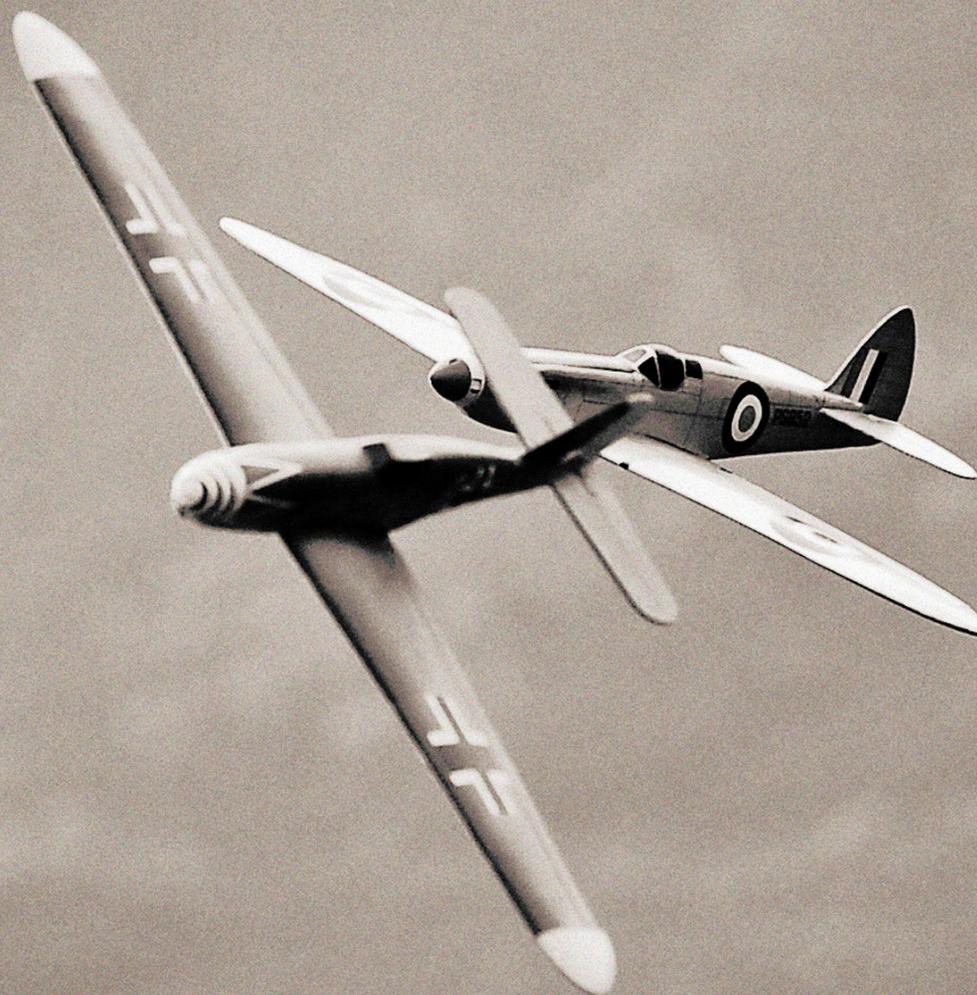
**Foamy Class:**

1. Bill Dewey - Heine
2. Christo Le Roux - Mustang
3. Marc Beckenstrater - Zero

And to all our sponsors and Two Oceans Slope Soarers members who selflessly helped to create a fantastic festival, our gratitude for being actively involved in the resurgence of PSS in the Cape Town area.

Hobby Warehouse, Clowns Hobbies, Southern Hobbies, Anton Benning of AB models, Christo Le Roux, Steve Meusel for the warm beenies, Chris Leal for financial support of the Black Eagle fund, and Kevin Farr and Iris van der Vlist for design and print of the t-shirts. If there are any sponsors and diligent supporters we have failed to acknowledge, please forgive us.

Here's looking forward to next year and more success with PSS.



*Cobos Botha photo*

Seattle Area Soaring Society

# F3J at Old Carnation Farm

Seth M. Arlow, M.D., arlow2@msn.com

Anyone who has flown a contest knows that a few minutes' separation in launching times can make the difference between making your time with ease, and sinking out like a rock, not to mention gusts blowing through the landing zone when you're on final!

F3J removes that element from the equation: pilots in each group launch at the same time, have identical tasks, fly in the same air, and, if they make it, land at the same time.





*The 2010 F3J Junior Team: Mike “Chainsaw” Knight, Brendon “Dippin’ Dots” Beardsley, and Connor “Stealth” Laurel*



*Alyssa “Shark Bait” Wulick, Brendon “Dippin’ Dots” Beardsley, Daryl Perkins and Cody Remington discuss the Airtronics SD-10G radio system while CD Dave Beardsley keeps the contest running smoothly.*

This makes for drama and excitement, and there was plenty of both on June 26<sup>th</sup> at Old Carnation Farm (Camp Korey), the new home field for the Seattle Area Soaring Society.

In addition to the “usual suspects,” the SASS soaring regulars, we were joined by soaring legends Daryl Perkins and Cody Remington, two of the senior members of the 2010 US F3J Team. Their visit was thanks to Jim Laurel, to whom all SASS members are very grateful. Of course the entire Junior US F3J team was there: Mike “Chainsaw” Knight, Brendon “Dippin’ Dots” Beardsley, and Connor “Stealth” Laurel. The Senior Canadian F3J team also flew — VERY well!

The contest started off with a bang — literally! Two very skilled and experienced pilots, Dave Friant and Ole Skotvold, launched next to each other, that is to say 75 feet apart, and their planes collided just after launch. The impact was like a thunderclap, and both planes were destroyed. Bits of Dave’s brand new Competition Light Supra rained down for over a minute, and Ole’s Pike Superior was all but cut in half. It was a shocking and heartbreaking moment, aside from being a very rare event. Ole returned to the contest with his non-molded back

up plane, and Dave has pledged to return to the field once the grieving is past.

The contest proceeded without incident afterwards. All tasks were ten minutes with spot landings. There was a 30 point penalty for flying over ten minutes, which means that, tactically, it is better to land, even off field, if you're running over your time.

The first two rounds were in cloudy but dry conditions; the remaining two rounds were in clear sunlight. Four or five pilots flew at a time, in randomized groups, and the scores for each round were normalized, with the best performing pilot getting 1000 points.

As might be expected, given the expertise of the contestants, the scores of the top experts were very close. The winner, Arend Borst, Canadian National Champion, scored an amazing 3999.57 out of a possible 4000 points. He lost the 0.43 points short of perfection thanks to Dave Beardsley, the Contest Director, who flew a stunning first round before retiring to run the contest.

Cody Remington and Daryl Perkins, of the US Team, took second and third.

*Jim Laurel and  
Dave Beardsley*



*Daryl Perkins  
ready to launch  
off one of the new  
SASS winches.*





*Brendon Beardsley launches Daryl Perkins' Supra. Simultaneous launches were the norm for this contest, just as in regular F3J competition.*



*Alyssa “Shark Bait” Wulick, templates in hand, gets her Supra control surfaces set up with the help of grandfather Bill “Papa” Kuhlman. Alyssa is planning to compete in the F3J Junior Team Trials next year.*



*Despite the intensity of the contest, there was time for some relaxation. US Junior Team aircraft are in the foreground.*

To give an idea of how tight scoring can be, the fourteenth place finisher had two perfect rounds; the fifteenth had three (out of four) perfect rounds. Consistency is key!

In Sportsman class, Paul Measel was a solid lead at the halfway point, before inconsistency struck. Seth Arlow and relative newcomer Larry Eich finished first and second, separated by barely seven points.

The increased prominence of competition flying at SASS has been noted, particularly with the excitement generated by “The Boys” earning selection to the US F3J Team for the World Championship in France this summer. Some feel that this has de-emphasized recreational flying.

As a middling “stick” I can only repeat the old, but true adage: regardless of your skill level, you will learn more in minutes of competition flying than you will learn in hours of casual flying.

Thanks to all who made this such a great day — Dave Beardsley, CD and party organizer, Jim Laurel, who made Cody and Daryl’s visit possible, Doug Brusig, field cook and “the human line retriever,” Rick Helgeson and his field mowing team, and winch designer/ builder Mark Vance, with Rick Como — the matched winches performed flawlessly!

# Electrifying

## a Supra

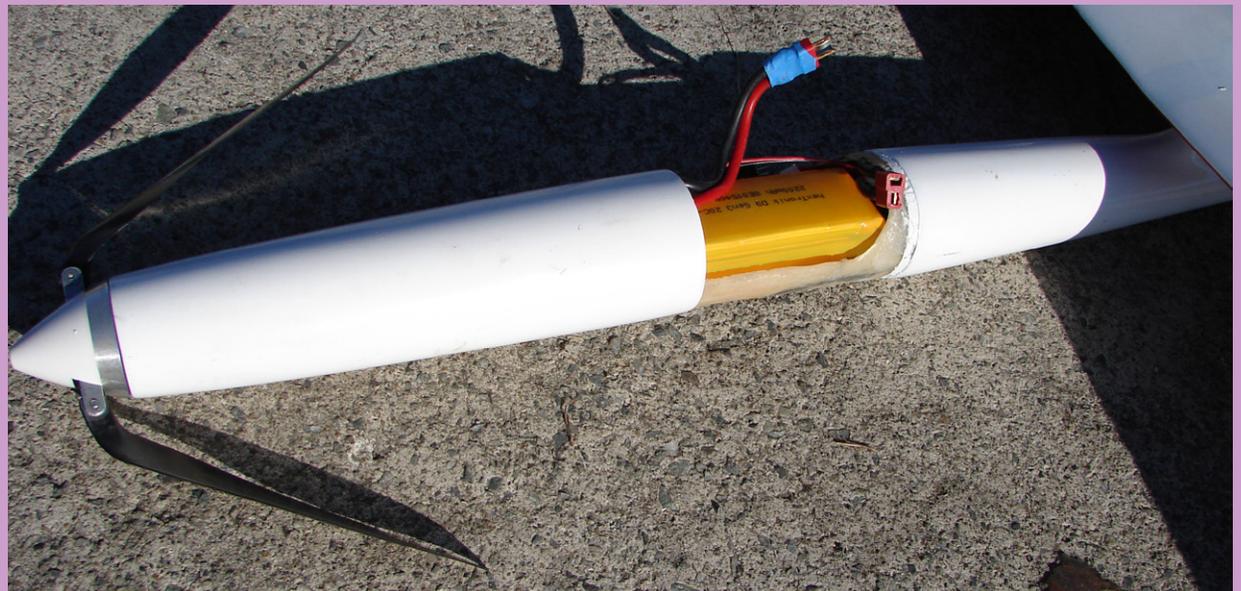
Gert Nieuwoudt, [gnieuwoudt@telkomsa.net](mailto:gnieuwoudt@telkomsa.net)

I have been playing with electric models since the late '90s. Since I have a glider passion it naturally spilled over to electrifying my gliders as well. By now I had several models with which I competed in e-glider events.

Most of my models were done on a limited budget with most of my moneys still going for a model in the open class. With the Nats coming up in September and all the talk about the FAI rule for a new e-glider class, my fingers got itchy to get a better model together.

This year we also allowed e-gliders with height limiter to participate in the postals alongside the winch launch models.

My previous model was a home-built put together from parts I had laying in the garage. It is a 2.5m built-up E205 wing with a fuselage and boom construction similar to the Bubble Dancer.









The model was put together as light as possible in order to have a small power house zoom it in the shortest time possible to 200m. The 400 watt power plant achieved this with the 1.1kg model in less than 10 seconds. I was able to achieve second place in last year's Nats with this model. This model is, however, not suited for windy weather and is limited to good weather days which never happen in competitions.

Flying a new Explorer in the thermal league, my Supra was gathering dust which made me figure out a new use for the model and other parts I have.

I converted a home-built Supra fuselage in a short time to house the power plant in the nose cone.

I removed the servos for rudder and elevator from the servo tray and removed the servo tray to have space for a 4-cell 2200mAh LiPo battery pack — the largest battery I was able to fit in the space.

The servos were installed in the rudder base with one 4-wire servo lead running inside the boom. The nose cone was cut and fitted with a firewall to fit an E-Flight 15 outrunner. The motor and speed control is fixed to the nosecone which slides over the battery tray created from the servo tray. The speed control is fixed with Velcro to the top inside of the nose cone and sits on top of the battery once closed.

The largest part of the nosecone is 50mm in diameter so everything fits tight.

I had many trial fits and re-adjustments until I was successful.

The 13x8 folding prop uses a 42mm Graupner spinner. The nose cone with motor is now fixed with a plastic bolt from the bottom into the battery tray. The receiver is pushed back into the fuselage.

I use a 4-cell Lipo battery to power the motor, but make use of the balancing connector to connect two cells via a BEC to power the receiver and servos. One of the other cells I use to power my altimeter logger.

Getting all this connected and closed up is actually very easy now that I had some practice with it at the field. I only do this once and do all my flying before any disconnection and switch off.



Reaching any of the components is easy as the nosecone with motor and speed control can be removed by disconnecting and the battery can then be accessed. I was able to position all the components such that the CG is more or less at the preferred spot without adding any additional lead.

I had a few flights already in the past week and after the initial trimming of the flight modes (I do not need launch mode anymore!) I was very pleased with the results.

The model came out at 2050g AUW so it flies a bit faster than I am used to with the Supra. The 430W power

plant launches the model to 300m in 30 seconds as per the attached graph from my alti-logger. This is good enough for now but can be improved for competition purpose.

I use about 1200 mAh from the battery for an afternoons launches. The motor with this setup use an average 30A. My motor function is connected to the butterfly switch on my transmitter so it is either on full throttle or off.

By using less expensive components I proved that you do not need to break the bank to own and enjoy a competitive electric glider.

What a breeze to go out to the field for a quick practise session after work. As I am the lone glider pilot in this area it is quite a shlep to drag the winch and battery out to the small field (actually a power model field) and do the setup each time.

I can also launch immediately after a landing and do not have to fetch the line for the winch. All in all I get more flying time!

Time to build a new glider again.

Cheers

Gert Gnieuwoudt  
Secunda, South Africa



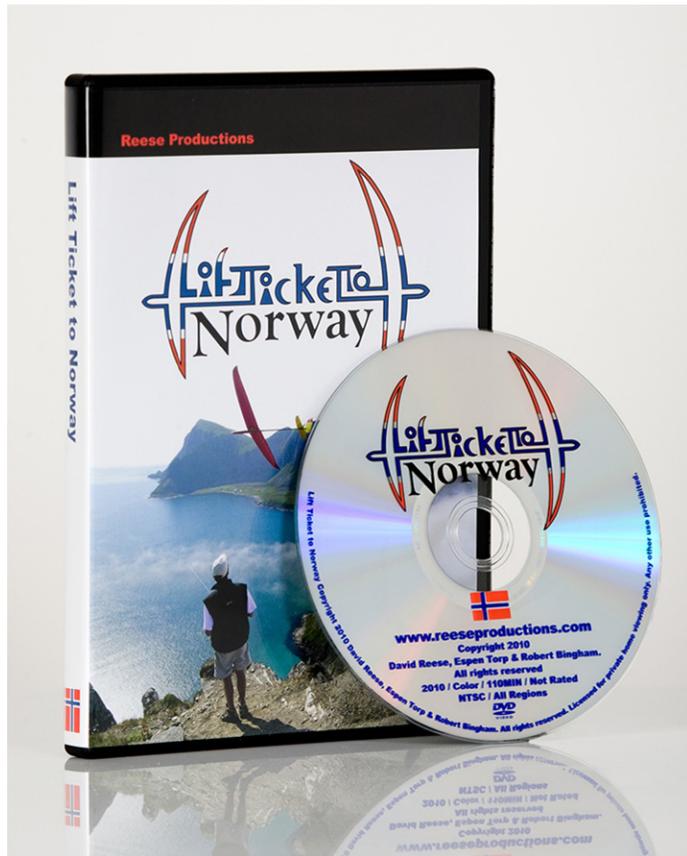


Mark Southall flying his Ascot during an F3F practice session at Rhossili Point, South Wales (GB). Rhossili is located at the most Western part of the Gower Peninsula. The slope is one of the most beautiful I have seen — coastal site, for west wind direction, and the view is superb! Pierre Rondel photo. Canon Powershot A650 IS, ISO 80, 1/500 sec., f6.3

# LifTicKette Norway

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## A review by Paula Garwood

“Lift Ticket to Norway,” is a video which documents a three-week slope soaring trip in Norway, covering many miles over the road by van, and over the waves by ship. The video demonstrates, and documents in a visually spectacular way, slope soaring locations that make the imagination soar.

The main characters are Dave Reese, Bob and Darcy Bingham from California, and Espen Torp from Norway. Other flyers from around Norway make appearances as well. The trip is well documented by three videographers and two still photographers.

Whoa... before I go any further let me declare that I am not a slope soarer, but the wife of a slope soarer and although I am not a slope soarer, by being married

to one for decades I am amazed at how much I actually know about slope soaring.

My husband (the slope soarer) is a personal friend with Dave Reese. Dave Garwood has flown with Dave Reese in Utah and in California. My husband Dave admires Dave Reese and finds him to be a talented, cheerful, and energetic fellow, as well as a first rate glider pilot.



On this three week trip that you get to enjoy vicariously by watching the video, they fly 17 model airplanes, including sailplanes, electrics, and a helicopter. Approximately 19 flying locations are shown, including epic locations like the 1100 meter Troll Wall - the tallest rock face in Europe, flying over fjords with cruise ships below, and slope soaring ABOVE the clouds.

The flying is absolutely spectacular. They include dynamic soaring, fabulous hand catching, and a 2300 foot Drop Shot (when the wind wasn't right). Really exciting stuff and fun to watch. In all the slope videos that I've seen, the pilot is just standing there at the edge. That part looks the same, but in this video you have the SCENERY. Norway is positively gorgeous. The scenic views and landscapes are overwhelmingly breath taking. A wife/partner could watch and enjoy this fully with their pilot. I kept saying "Look at that, that's beautiful."

I don't want to minimize the role of the pilots here either. They would walk out onto these rock ledges or cliffs, hundreds of feet high and LEAN OVER the edge (holy crap!) to test the wind and hand launch their planes. I personally like the purity of hand launch, so these guys impressed the hell out of me.

There is dialogue. These guys are clever and articulate and had fun ribbing each other while deciding where to fly, what





to fly and how to fly it. I particularly fell in love with Espen's endearing way of continuously helping every friend, companion, and acquaintance, plus his cool accent. Bob Bingham is one cool dude as well, laid back and competent, and a top gun glider pilot.

The music was perfect. I will say it again, the music was perfect. The selections went with the flow of the video and the flying. The music was relaxing and melded smoothly within the driving, talking, flying sequences. The actual sound was crisp and clean and just a total pleasure.

I want to go to Norway now, just to walk around and look at all the awesome topography. It's striking, like nothing I've ever seen (except in Lord of the Rings movies).

What a trip! Three weeks, 17 planes, 19 flying locations, flying above the clouds, dynamic soaring, hand launching, hand catching, a Drop Shots more. A totally cool trip, cool video, expertly executed.

Get it, watch it, you will be glad you did.

LINKS:

Dave Reese Productions  
[www.reeseproductions.com](http://www.reeseproductions.com)

Still photos from the trip to Norway  
<http://picasaweb.google.no/aerotorp/LiftTicketToNorway#>



# Updating the

# Ace MicroPro 8000 Transmitter

By Pete Carr WW3O, [wb3bqo@yahoo.com](mailto:wb3bqo@yahoo.com)



Dan Thompson, WB4GUK, has been a moderator of the MP8K/M\*2K Yahoo Group for several years. I finally met him in person at the 2010 Toledo Show along with many others from the Group. While the main focus of the Toledo meeting was the migration to 2.4 GHz RF link, there was some discussion about upgrade chips for the old MicroPro 8000 encoder. This subject was installed at the top of my to-do list of projects.

The MicroPro transmitter was a breakthrough in the industry because it offered computer mixing of controls and an LCD display to interface with the pilot.

It also was a kit so people who like to “melt metal” (solder) could build our own.

The companion receiver was the single conversion Silver Seven, and later the MicroPro 810 which was double conversion.

The entire kit was developed using a procedure that had the builder check off each step in the building process. There was also extensive coverage of test equipment used to troubleshoot the radio if needed.

Many of us who built the various Ace kits will admit that they learned as much about test equipment and troubleshooting as they did about the

radios. For that reason there is an abundance of “warm’n fuzzy” feelings about the Ace and the MicroPro in the R/C community.

Several weeks ago I e-mailed Dan about obtaining an upgrade chip for my transmitter. He replied that I could send him a check and he would send it right out. I did that and the chip arrived in one of those Post Office Flat Rate boxes.

In keeping with today’s internet-oriented world there was no paperwork enclosed with the chip. Installation and initialization of the new chip is covered in the original user manual for the MicroPro.

The design of 25 years ago already saw the need to modernize the software and made provisions to swap the chip in the field.

Working with EPROM (Erasable Programmable Read Only Memory) chips does require some care. Modern chips have protection against static electricity damage; still, some reasonable precautions should be taken to drain the

static from your hands during installation. This is easily done by clearing all but the needed tools from your bench. I normally have a towel on the table as a work surface but that can generate static so it was removed.

Once you are settled at the bench, remove the transmitter case back panel being very careful to disconnect the two cables to the RF deck. My rig also uses a

**The MicroPro transmitter was a breakthrough in the industry because it offered computer mixing of controls and an LCD display to interface with the pilot.**

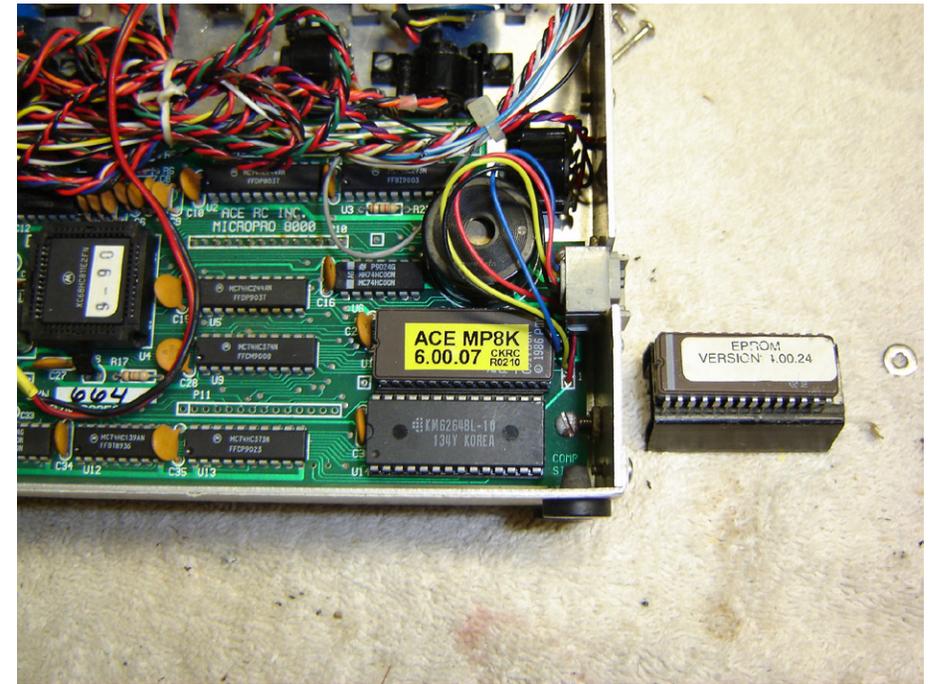
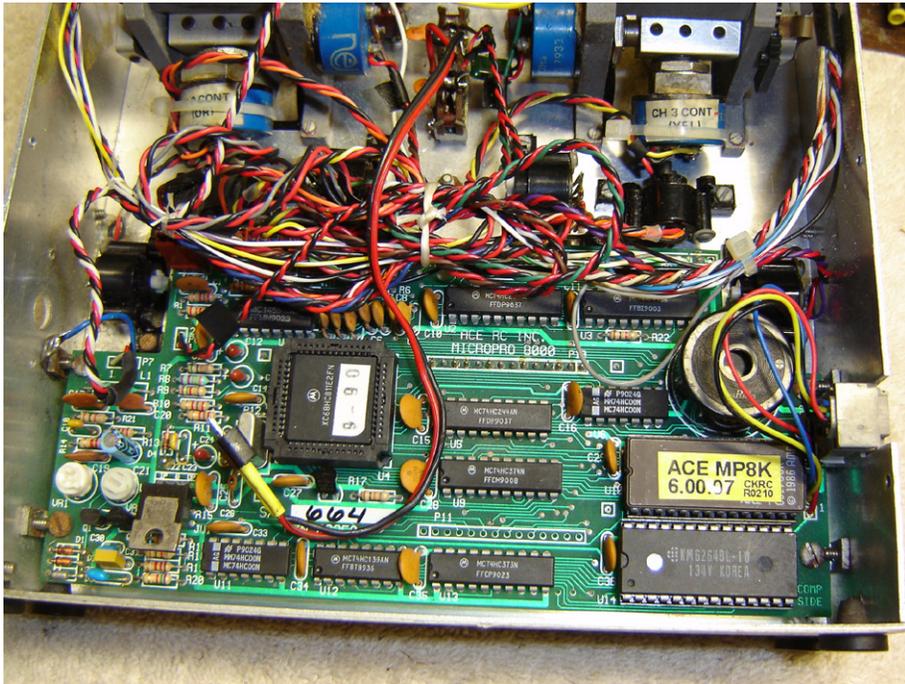
3-pin Deans connector in the cable from the 9.6 volt battery to the on-off switch. The battery is located just below the RF deck on the back panel so must also be disconnected.

Dan had shipped the new chip inside a static-free carrier taped with Scotch tape to seal the ends. He had also sent along a large paper clip with one end bent at 90 degrees. This was the extraction tool to remove the old chip from its socket. I

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This is the Kestrel two-meter sailplane with the Ace MicroPro 8000. Testing a new radio or checking out a repaired/upgraded one is easier when the aircraft is a proven design with no bad habits.

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*The Ace MicroPro transmitter has the new EPROM chip installed. It is located in the lower right side of the encoder board with the label indicating the version number. The area around the chip socket is crowded so take your time with the install.*

*The new chip is in the socket while the old chip sits in the static protected holder next to the transmitter. You may slide the RJ-45 connector up and out of the transmitter case right side to give easier access to the socket area.*

removed the tape but left the chip inside its carrier. To prevent static damage I held onto the aluminum transmitter case with one hand at all times so any charge would drain away. I used to have a static drain wrist strap that connected to ground and did the same thing. If you don't have a wrist strap this procedure works just as well.

Using the bent paper clip I pried the end of the EPROM chip up a little, then

moved to the opposite end and pried that up. I worked alternately to raise the chip gradually from the socket until it popped free. I then set the old chip down on the bench with its pins upward.

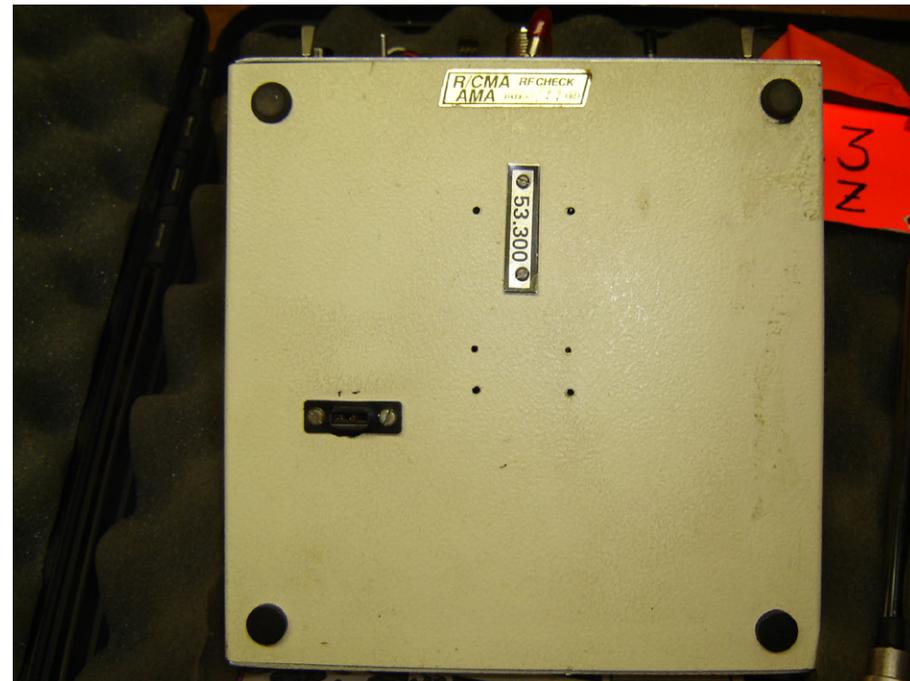
The new chip has a label on top and a small indent to the left side. The new chip needs to go into the socket on the circuit board with the label right side up and the indent on the left.

The work area on the board is crowded with the RJ-45 connector, Sonalert, and another chip close to where the new chip goes.

Take your time and verify that all the chip pins are properly aligned with the socket. Once aligned you can simply press the chip down into the socket. Take your time and check that no pins have folded up under the chip.



*The MicroPro sits in its carrying case along with the operations manual. I carry the manual since some features are hard to program from memory.*



*This is the rear cover of the transmitter. The frequency label is located where the RF deck is installed inside. Below and to the left is the charge jack. Inside and next to the charge jack are two 4-cell square packs wired for 9.6 volts and attached to the cover with Velcro hook and loop material.*

Once you are satisfied that the installation is correct reconnect the cables to the transmitter rear panel and close it up.

The Ace User Manual, page 54, discusses the software upgrade and install of the EPROM.

This is followed by a procedure to set the joysticks and initialize the EPROM. These are fairly simple. If the expected results don't appear in the LCD display just start

over again. You can't hurt the chip or the radio.

The old Ace chip would sound the Sonalert once on power-up. The new one sounds two beeps from it. That tells you that the chip has powered up okay. From there you can scroll through the menus to see what the new chip holds.

I've wanted to explore the use of two elevator servos with two independent elevators as used on some of the

advanced 3D aerobatic ships. The old chip didn't support this arrangement but the new one does. That is a small example of the modern features that await you with this upgrade.

Dan has uploaded a PDF file that fully explains the details of the new chip programming and features. To obtain this file go to [www.yahoo.com](http://www.yahoo.com), then Groups, then MP8K, then Files, then MP8KL7.pdf. The 24 page file gives you the information

needed to tailor the radio to the needs of your particular model.

It's so nice to be able to enter the name of the aircraft in the transmitter LCD display instead of having to remember which program number goes with which aircraft. I used to have to carry a card in the transmitter bag with the names and numbers, but the new chip does that for me now.

The main menu of programming options is very similar to the old one. If you scroll through the options you will find a sub menu which is where the new goodies are located.

Option selection is done using the aileron stick along with the trim, option, and preset switches.

Experienced Ace MicroPro pilots will quickly adjust to the new sequences while newer ones will be thrilled at the simplicity of the operations. Dan's file is very well organized. Should you have any questions you can always e-mail him at [WB4GUK@aol.com](mailto:WB4GUK@aol.com).

The MicroPro encoder is the interface that connects the pilot's fingers to the aircraft. It should be a seamless extension of the pilot's commands.

When the original encoder was produced there were defined limits on these commands. Some of it was technology and some of it was the learning curve we all were climbing.

Things are much better now on both fronts. It's now possible to know what you want to achieve and easy to make the radio send your desires to the aircraft.

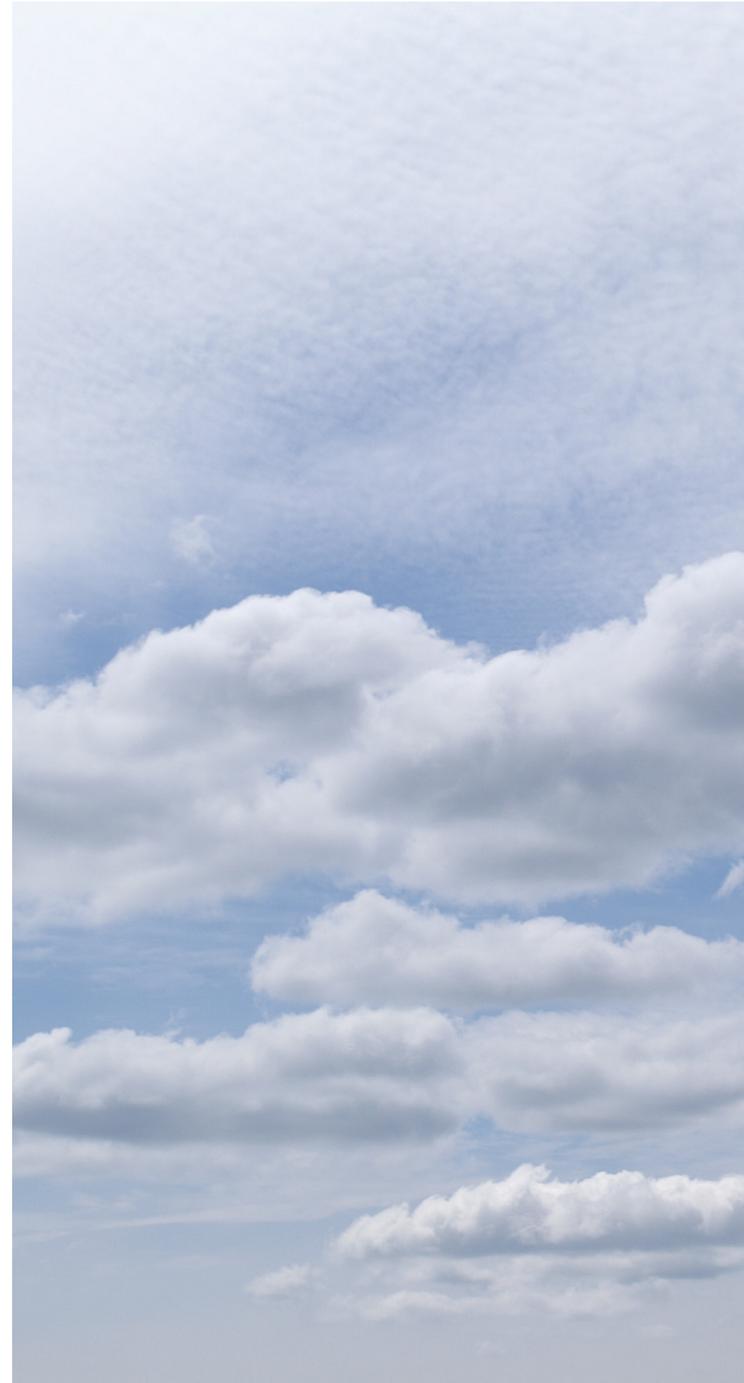
I decided to take an old three channel ship out for testing with the upgraded MicroPro. It's a two meter sailplane kit called a Kestrel which was bought many years ago from Northeast Sailplanes at [www.nesail.com](http://www.nesail.com). I modified the design to have a flying stab, sheeted rib/spar wing and flaps. The ship is about 15 years old and has served me very well.

I installed the radio in the Kestrel and set up throttle to elevator mixing as well as 5 degrees of flap launch preset.

There were absolutely no surprises with the radio. The RF link is on 53.3 MHz in the 6-meter Amateur band but, as I mentioned before, any of the R/C bands will work just as well.

For those of you that have a MicroPro, I highly recommend this upgrade as an easy and affordable way to extend the life of a wonderful rig.

For those of you that have passed one up on Ebay or R/C Universe, you might want to reconsider. The new chip gives this radio all the features found in the latest models while giving enormous satisfaction to the pilot.





# NEW ENGLAND AERO TOW 2010 SEPTEMBER 24-26



Soar the Connecticut skies as we host our annual three day weekend of AMA-sanctioned scale sailplane aero tow from our beautiful flying site in Salem, CT.

**Towing from a manicured grass field, the surrounding farm fields and rural terrain produces great thermal activity!**

What's more, the Connecticut coast area has lots to offer to families and vacationers including beaches, great seafood, the historic town of Mystic and the Mystic Seaport, the ocean beaches of Rhode Island and the 24-7 action at the Mohegan Sun and Foxwoods Casino Resorts. The towns of Norwich, New London, Groton, Flanders, Niantic, Mystic, Lyme and Westerly all offer a range of accommodations. Both casinos are close to the field and have hotel operations.

😊 **NOTE TO BEGINNERS:** If you've ever had an interest in aero tow, but have shied away from attending events like this one, [please join us for some hands-on learning](#). If you own a scale sailplane or are just interested in getting started, we'll be certain to take the time to help you understand the basics, get some quality stick time, and come away from the experience ready to take on future aero tows (or Sunday) with the skills and confidence you'll need.

**Tow fee:** \$30 for three days, \$15 for any one day. Food and beverages available for purchase at the field

**Registration:** Please send your name, address, phone number, AMA number and channel/frequency via e-mail to: [spasierb@optonline.net](mailto:spasierb@optonline.net) or call 203-246-5881 with any questions. Current AMA membership required to fly.

**Powerful tugs capable of towing sailplanes up to 10 meters! Come fly with us!**  
*Door Prizes - Sailplane and Gear Raffle - Awards - 50/50*

**Tow Master and Event Director:** Len Buffinton  
**Registrar/AMA Contest Director:** Steve Pasierb

**860-395-8406**  
**203-246-5881**

**lbuff1@comcast.net**  
**spasierb@optonline.net**

## ***"Directions to our Salem, Connecticut Site"***

N 41 29.497, W 72 13.585 From intersection of CT Routes 85 & 82, go East on Rt. 82 approx 3 miles. The entrance to the field is on the right. If you come to Rt. 354 (Gardner Lake) you have gone ¼ mile too far. From I-395 take Exit 80, Rt. 82 toward Salem. The field is about 6 miles on the left, ¼ mile past Rt. 354.

# THE ART OF CARLOS RIBEIRO

Carlos Ribeiro, [chtabajara@gmail.com](mailto:chtabajara@gmail.com), [www.twistfx.com.br](http://www.twistfx.com.br)



Landing Supra

My name is Carlos Ribeiro. I'm an F3jJ and F3K flyer from Brazil, and have worked with computer graphics since 2000. I spent about two days of work in my spare time to do the Supra landing render on the opposite page.

Everything in this image was made in Autodesk 3ds Max, even the grass.

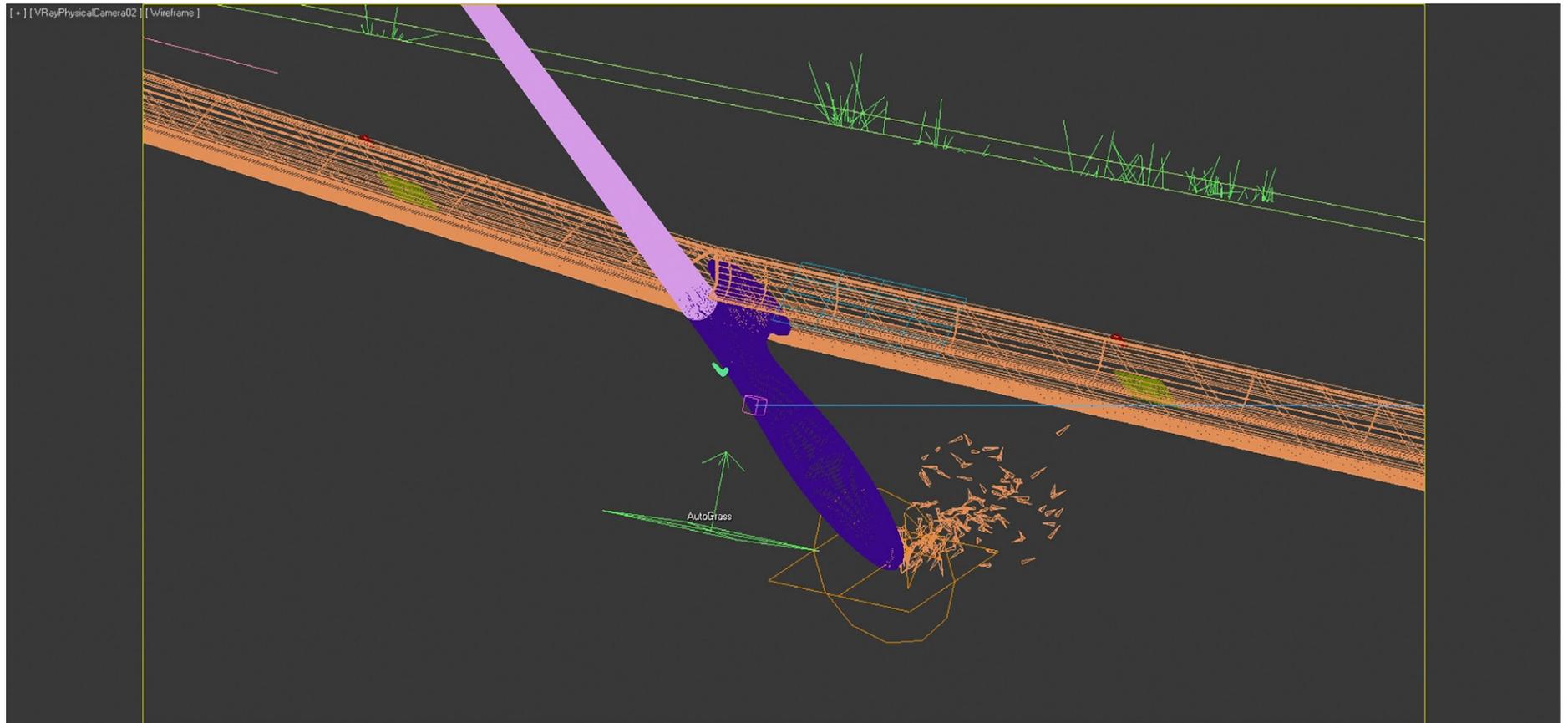
The first step was modeling the Supra using the plans and my model as reference. See the screen grab below.

After that I'd planned this shot to improve my 3D grass-making skills, and the landing moment was a perfect time to capture.

With this I bring together two passions that I have, 3D animation and sailplanes.

I also created the image of the ASW-28 on the front cover of this issue, as well as an image of a Supra in flight and another of the ASW-28 in a blue sky with clouds in the background. These last two are presented on the next two pages.

To see other works that I've done in my company, visit <http://www.vimeo.com/twistfx>.



Initial wireframe modeling of the Supra



Image of a Supra in flight



ASW-28  
Segelfliegen

A close-up, low-angle shot of the tail section of a white aircraft, likely an ASW-28, flying against a dramatic sunset sky. The sky is filled with soft, textured clouds in shades of orange, yellow, and red. The aircraft's tail fin is visible on the right side, featuring a small green and yellow logo and the letters "TV" in blue. The aircraft's wing or fuselage extends from the top left towards the center of the frame.

**ASW-28**