Radio Controlled Soaring Digest

May 2010 Vol. 27, No. 5

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Back cover: Tony Utley captured this frame from one of his airborne videos. The camera platform was his Radian (note the folded prop) and the 'ship out front is an AVA.

R/C Soaring Digest

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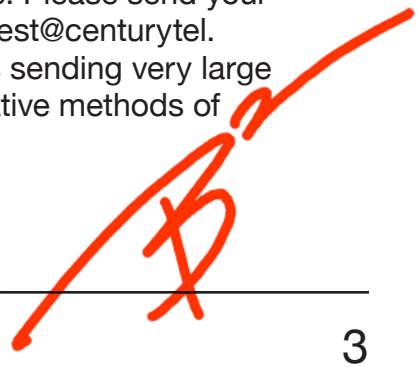
In the Air

We had just started writing these editorial comments when we received word from Michelle Goodrum that the 2012 F3J World Championships will be held in South Africa. Michelle drew up the bid and submitted it to FAI. The PowerPoint presentation is included in this issue starting on page 25, Michelle received confirmation from Johm Brink, Chairman of the the Model Gliding Association of South Africa, who was in Luzanne. Well deserved congratulations to all concerned.

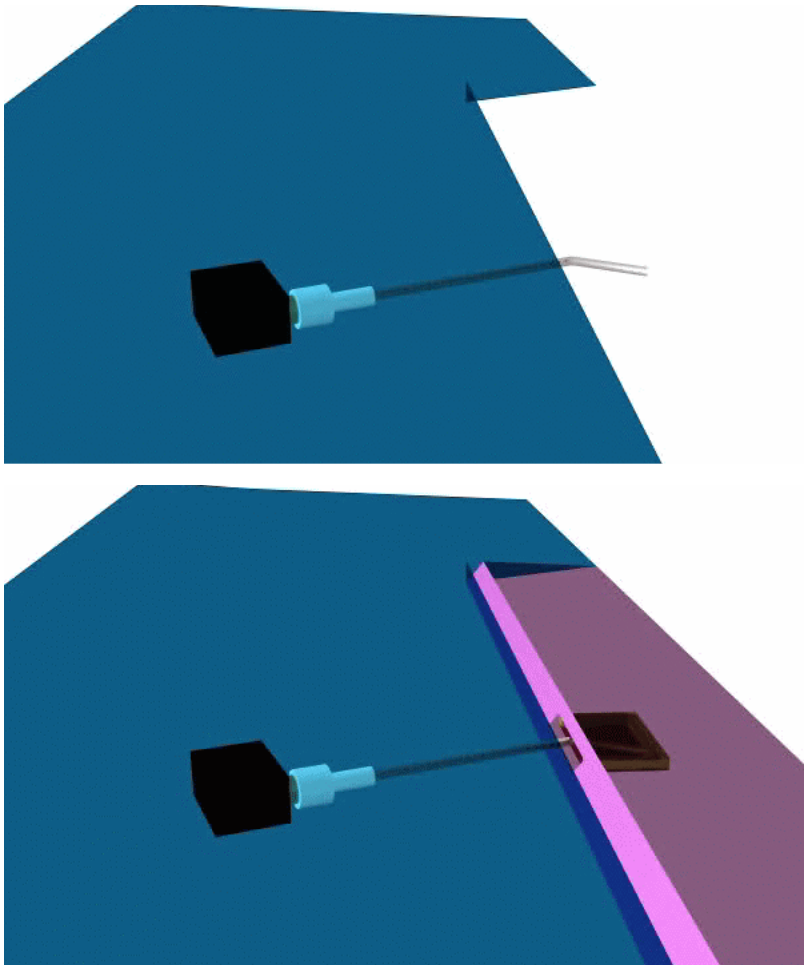
A report concerning a rather unexpected flying experience is in line for publication in the next issue of *RCSD*. As a supplement to this report, we would very much like to include information on wave lift and so are asking for a reader with the requisite knowledge to submit materials on the subject before the submission deadline, May 15. A comprehensive explanation using both text and graphics is encouraged.

If you don't know a thing about wave lift, you are still encouraged to submit materials to *RCSD*. Any subject related to RC soaring is fair game. Please send your submissions through the <rcsdigest@centurytel.net> email address. If this means sending very large files please contact us for alternative methods of submission.

Time to build another sailplane!

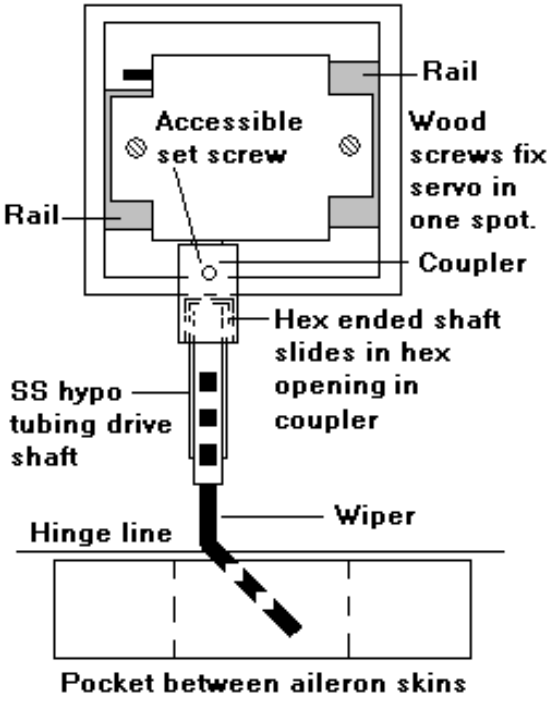


Harley Michaelis' improved Rotary Driver System



Left: Freeze frames from Thomas Broeski 's RDS animation showing the servo-driven bent shaft moving an aileron up and down. In this arrangement, the servo is mounted at 45 degrees to the hingeline.
Left: <http://adesigner.com/brass/rds.htm>
Right: <http://adesigner.com/brass/rds2.htm>

Right: Aileron RDS installation with servo at 90 degrees to hingeline.



Guys, as you may have heard, my RDS concept has caught on with Europeans flying F3B, etc. and has started being used in other type of RC craft, too, to improve performance. The expectation is that it will work its way into mainstream modeling.

This article has to do with getting the RDS into mainstream usage here in the US as well as having superior RDS hardware to use ourselves. As my contacts in RC are with the sailplane community, I'm addressing this for your consideration.

I use the term "coupler" for what fastens to the servo. What extends from the coupler I refer to as the "drive shaft." Its bent end has to fit the pocket with a very precise "slightly snug fit" to avoid slop and adverse bind.

The coupler is the heart of the RDS. The RDS mission statement is: "To make wings of RC aircraft clean, stealthy, more beautiful and without the parasitic drag of external hardware, to perform at their maximum aerodynamic potential."

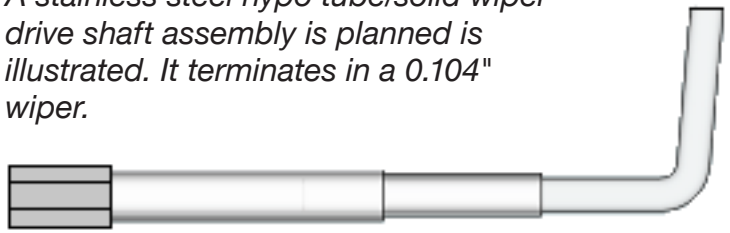
The actual coupler is 3/8" x 5/8" and cylindrical in shape. The end that fastens to the servo output gear is splined 1/8" deep to receive a "double-splined" adapter from an adapter tree that contains several adapters. One or the other fits the splines of all popular servos commonly used.

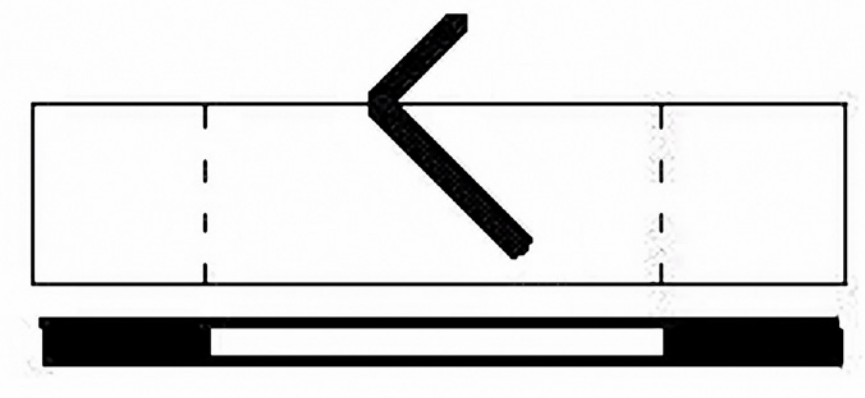
The drive shaft can be a solid wire as Tom Broeski illustrates, but where torsional rigidity is important, the drive shaft is assembled from telescoping pieces of round stainless steel hypo tubing terminating with a bent "wiper" of SS. Mark Drela worked out a combination of diameters and gauges that makes a perfect drive shaft for broad application.

In the coupler planned for mainstream use, the opening on the other end is hexagonal in shape. The Drela shaft is fitted with a 3/8" long piece of 3/16" diameter hex shaped brass that has been reamed out to fit the larger diameter of hypo tube used. The machining on the coupler is such to prevent the shaft assembly from turning in the coupler, but allow it to slide fore-aft during deflection, as is needed for essential reasons somewhat complicated to explain.

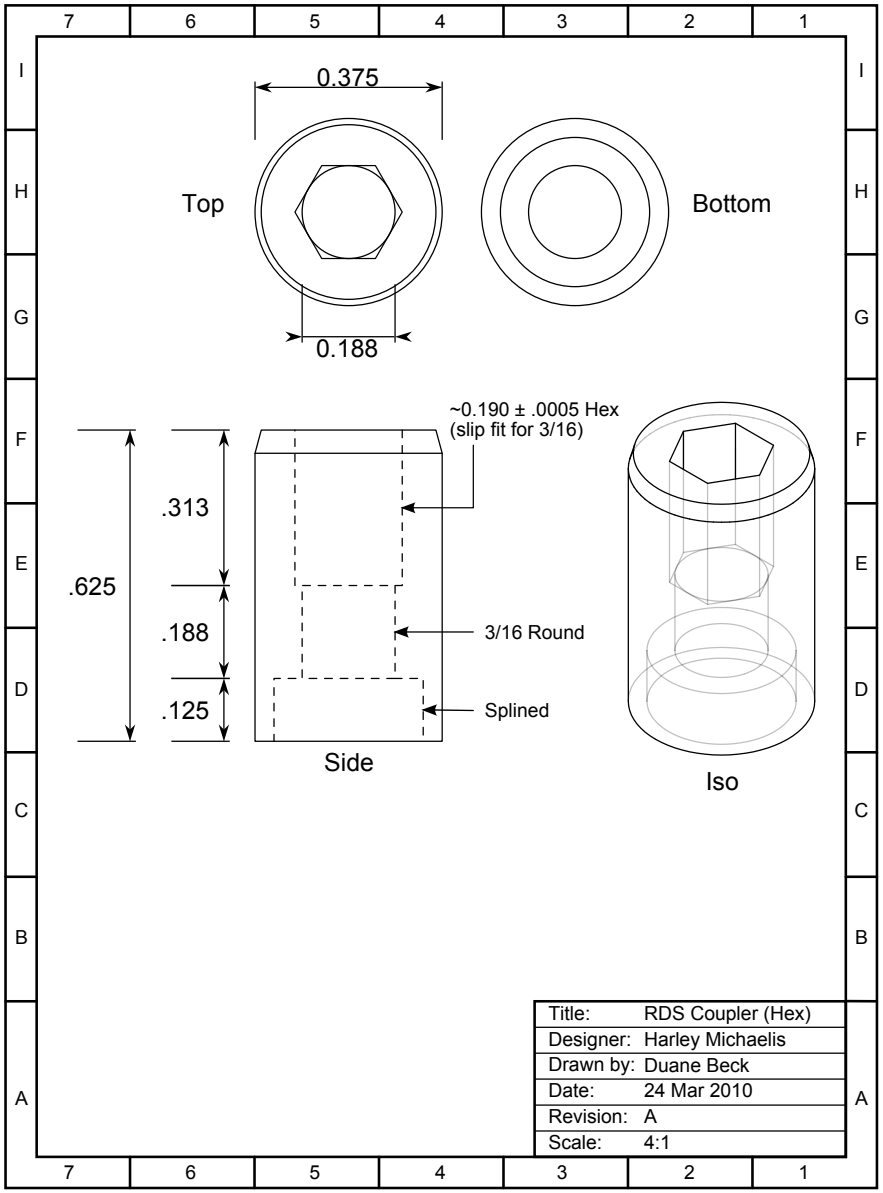
The coupler servo end will be left as is to use the existing tree of double splined adapters that fit popular servos and others compatibly splined. Behind the splined end, the coupler receives a setscrew that secures it on the gear with a neat little internal innovation. A brass sleeve, as shown, can go either side of the setscrew to beef up the coupler for heavy duty applications.

A stainless steel hypo tube/solid wiper drive shaft assembly is planned is illustrated. It terminates in a 0.104" wiper.





Pockets are a bonded 3-layer affair, as illustrated here, with tops and bottoms precisely spaced to avoid slop and adverse bind.



RDS coupler drawing by modeler Duane Beck detailing a much-refined Kimbrough RDS coupler that will work for sailplane applications, including F3B, etc., but is also suited to"mainstream" modeling.

While the RDS concept is simple, making it "user friendly" for use in all kinds of moldies, bagged or built-up, fixed wing aircraft with moving surfaces has been a major challenge. I discovered over 40 issues that had to be addressed and have been resolved by component mechanical design, materials used and instructions I'm writing to put online.

For your reference, I'm attaching a drawing by modeler Duane Beck. It details a much-refined Kimbrough RDS coupler that will work for sailplane applications, including F3B, etc., but is also suited to "mainstream" modeling.

Referring to the drawing, the end that goes over the output gear will be left, as is, splined to receive the existing double-splined adapters, one or the other of which will fit most servo output gears.

Adjacent to the splined recess there is to be a 3/16" round chamber. then a 5/16" long hexagonal shaped 3/16" diameter opening. While the snug fit of the splined adapters to the output gear and coupler may be ample to keep the coupler attached, provision is made for positive securing, as illustrated below, without dealing with the regular servo screw, which has been a pain.

Not shown in Beck's drawing, the coupler will be drilled for a set screw to be captured behind the thinned down head of a long screw that extends into the round chamber. In operation, no axial force is tending to pull off the coupler, but jiggling from vibration may be an issue in motorized craft. To remove the coupler or adjust it on the output gear only requires loosening the set screw, rather than fiddling with a servo screw.

The hex-shaped rear opening is precision-sized to receive a hex brass ended drive shaft allowing it to slide fore-aft, but not rotate. This sliding enables compensation for non-coincident hinging and pocket planes and also allows the elbow of the wiper bend to seek the "sweet spot" during deflection. "Float" would also be possible at the hingeline. The slight flex in the plastic coupler and the fit of the hex parts will allow a little "universal joint" like action

to facilitate guiding the bent wiper into the pocket. However, tilting of the servo mount may still be needed, for example, if hinging is high and the pocket is low.

A stainless steel hypo tube/solid wiper drive shaft assembly planned is illustrated. It terminates in a .104" wiper to be offered in several low radius bends. The hex brass front end will come reamed out to .166" to receive the larger .165" OD hypo tube.

Shown in the photo is an existing Kimbrough coupler and the accompanying tree of double-splined adapters. For high stress applications, the new coupler body of the same diameter will also accept a press fitted sleeve of brass tubing to reinforce the hex opening. A 4-40 set screw was run into the coupler to indicate the chamber location.

Not apparent in the coupler drawing, the juncture between the round chamber and the hex opening acts as a “stop” for the hex ended drive shaft. This stop is a key element in sizing shaft length. It’s detailed in the Installation Instructions I’m currently in the process of writing. Incidentally, all parts can be silver soldered outside of the wing. The assembled shaft with bent wiper can then be installed from the hingeline.

If this coupler gets into production, doing a fine RDS installation will be possible. Expect that you’ll be able to buy an ARF with it pre-installed. Thing is, for our mutual enjoyment we must come up with the money to get the improved coupler into production.

I contacted Kimbrough Products about refining the existing coupler as shown in Beck’s drawing. Kimbrough, a small firm, must use their capital for producing RC car accessories for which there’s a market well known to them. Their tool maker, Brian Wood, dba Visionary Tool in Brea, California asks $2,200 to do that work.

(I also wanted to have a near “universal” molded pocket made to fit the .104" wiper. The quote for the tooling on that is $3,250. Because it’s the refined coupler that’s essential to bring a “USA-made RDS” to market, we can do without a molded pocket for now.)

Flyer-machinist Walt Dimick, who owns IRF Machineworks, and who has offered a fine line of precision RDS accessories for years, will exclusively distribute the couplers and his line of accessories. Kimbrough will wholesale the new couplers exclusively to him, discontinue the old ones, and no longer sell couplers to the public.

As Kimbrough will only make a small profit from what quantity Walt will order they will not pay Brian for his RDS tooling work.

The immediate issue, then, is to raise the needed $2,200. The RC forums are not receptive to being used to raise money, so it looks like it will have to be from modelers within the sailplane community leading the way. Although I’ve likely built my last plane and won’t have a chance to enjoy using the new mechanics, I’m willing to take the lead and pitch in $500. I’m inviting you who receive this to contribute what you care to and forward this information to others you think may be interested.

Please make **checks** (not cash or MO’s, etc.) payable to Visionary Tool and send to me at 26 S. Roosevelt, Walla Walla, WA 99362. If the $2200 is *not* raised, my intent is to incinerate the checks and notify all.

So I can tally what comes in without opening the envelopes, please jot a numeral, without the $ sign, by the return address. If enough comes in, I’ll box up the checks to Brian.

If excess comes in, it can be kept in an “RDS Advancement Fund” for future needs such as the one-piece molded pocket, a micro sized coupler for DLG’s, etc.

Please don’t dally. It’s now or never. Let’s not lose this opportunity to collectively make a significant difference in our hobby/sport.

Questions? e-mail me directly at harleym@bmi.net.

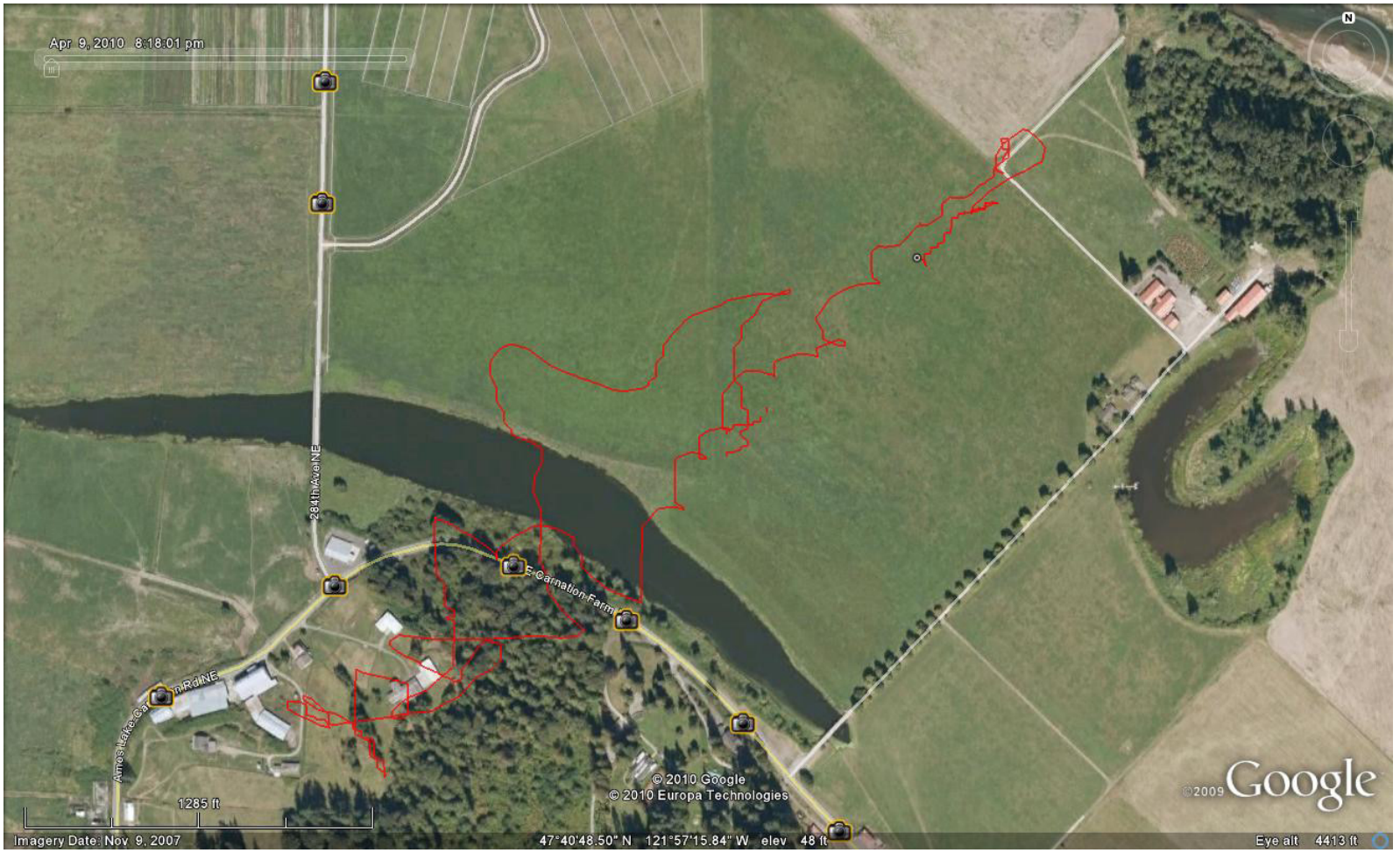
— Harley Michaelis

Dave Friant, DaveFriant@msn.com

SkyTraceGPS

Google Earth

Supra Pro Competition



Cam Korey

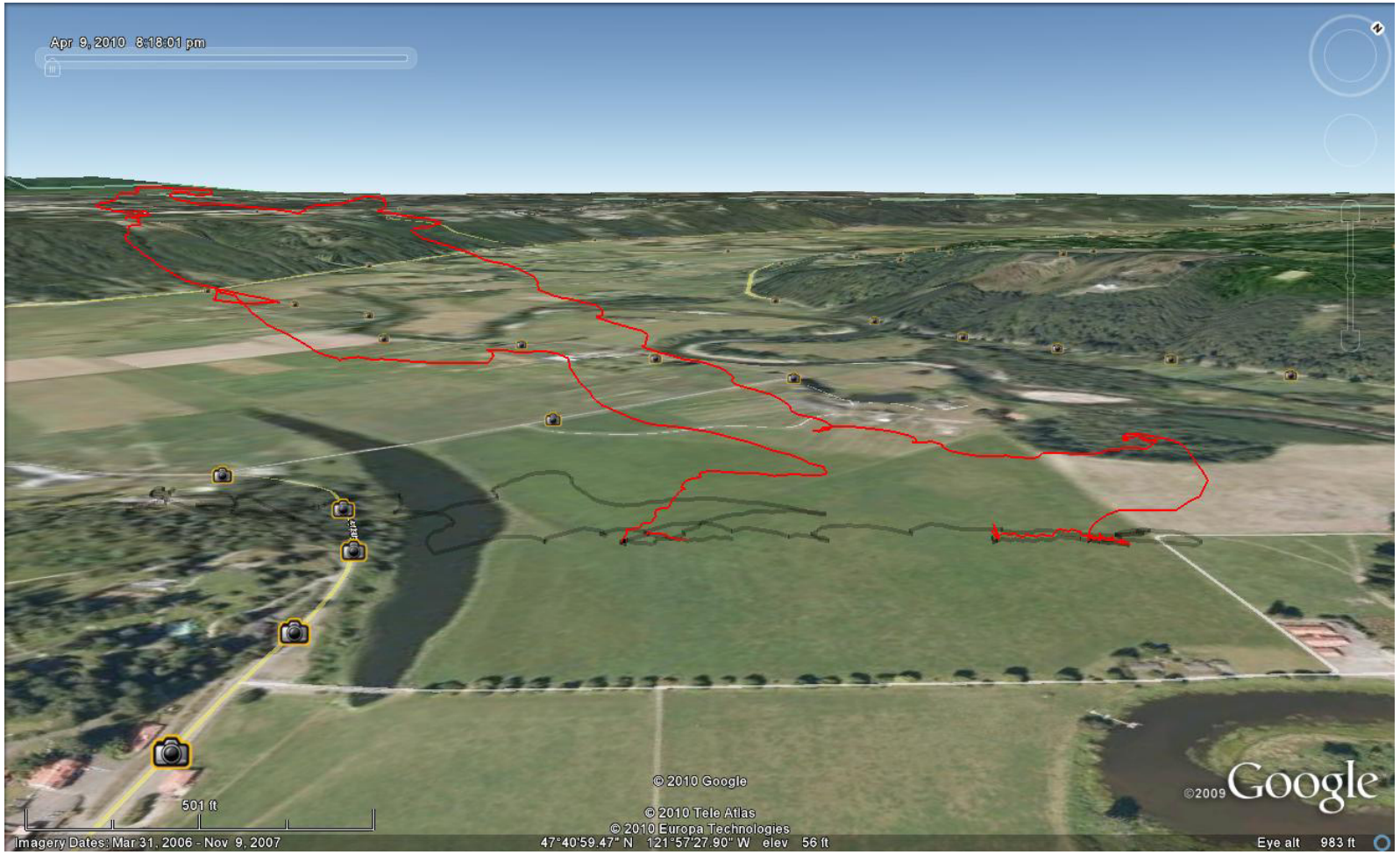
I installed a GPS system designed for R/C aircraft in my new Supra Pro Competition and launched its maiden flight at Camp Korey today, April 10. The attached images show a flight path across the field and over the west ridge. The highest altitude was 953' above the ridge.

The GPS data was downloaded to my PC and then plotted on Google Earth©. A JPEG file was created from the image and attached to an email message to the Seattle Area Soaring Society Google Group.

This is really cool technology and allows me to get a better understanding of how high my plane is and how far away it is.

I was surprised to learn how far over the west ridge I actually traveled. I would have never thought I went that far without the information gathered with the GPS.

The SkyTraceGPS is simple to use and costs $129. It can be purchased from Magellan Technologies at <http://www.magtechinc.net/SkyTraceGPS.htm>.



Louisville Area Soaring Society
Summer 2010 Two Channel Contest Series

The Louisville Area Soaring Society will hold its annual "2 Channel" soaring contest series at our home field, Charlie Vettiner Park in Louisville Kentucky. The concept of the contest is to foster and welcome participation by anyone at any level of soaring capability and to provide a starting point to any soaring pilot who wishes to participate in larger contests or the achievement of League of Silent Flight tasks. Any sailplane may be used, but only TWO functions are allowed.

Contest Information

Type will be Simple Duration

There will be 3-4 rounds per contest to be determined by weather and the contest director. There will be a minimum of 3 scoring rounds. At the discretion of the CD, the first round may be a "no score" practice round of 2 minutes duration.
There will then be 3 scoring rounds flown. Rounds will be a minimum of 3 minutes and a maximum of 10 minutes.
If the model succeeds in achieving the maximum time in the round, an additional 2 minutes is allowed, without further flight score, to land the model. Flight beyond the 2 minute landing allowance voids the flight for flight score.

Scoring

Scores will be simple duration raw, 1 point per second, with normalized scores available.

Spot Landings

Spot Landings will be scored with the club's 100 point landing tapes.

Launching Equipment

Club will supply launching equipment.

Dates:

There will be 5 contest dates.
May 2, June 6, July 11, August 8, and September 5, 2010

Entry Fee

An entry fee of $2.00 per pilot will be collected. These funds will be held until the final contest and the top 8 for the entire summer series will receive a payout. There also have been some donations of various items that will be given out as prizes.

If you need more information, contact
Allen Burnham (Indiana) allenbsmail @ yahoo.com
Tony Utley (Kentucky) nex12go @ aol.com
Check out our web site at http://louisvillesoaring.org

TOLEDO a geek's guide

Text by Pete Carr WW3O, wb3bqo@yahoo.com
Additional photos by Tom Nagel, tomnagel@iwaynet.net

About a month ago the people in the MP8K and M*2K Yahoo Groups started a thread about meeting at Toledo for the Show. It sounded like fun so I made arrangements to attend. My son Jeff, who was 15 years old when we last went to the Show, met me there. The new Seagate venue is smaller but easier to navigate and the parking is a whole lot easier.

The Yahoo Groups thread had mentioned that Dan Thompson, WB4GUK, would have some transmitters and software at the Saturday morning meeting. I was interested in listening to his discussion since I'd bought an upgrade chip for an Ace MicroPro transmitter from him. He certainly didn't disappoint! He used a remarkably small laptop computer to interface with the transmitter. The interface itself was an interesting piece of programming with adapters for both serial and USB computer connectors. The program he used would display much the same information as available on the LCD display on the transmitter but in an easy reading format. In addition, he had a display of the stick initialization procedure that let the user check for dirty sticks or mechanical flaws by watching the laptop screen and moving the sticks. Obviously such parameters as endpoint adjustments and expo setups were much easier to adjust using the laptop.

Ron Morgan had a red Ace transmitter there with the MicroPro encoder conversion that was very well done. The neatness of the wiring and switch installation were a work of art.

Wayne Craig had a machined single stick assembly that was really excellent. He is using a couple of types of pots that were very small and would fit up into the 3-axis stick.

Carl Luft was also there to share in the fun. Carl and I talked about the slope site at Cumberland Maryland. There was a

The Kennedy Composites booth with a lot of eye candy. The composite ships are even lighter and stronger with much smaller radio rooms. Barry supports the F3J Team where T-shirts were for sale. Photos by Tom Nagel and Pete Carr

Spring 2010 event there which had good air but wasn't well advertised.

Dan had quite a group gathered around his chair as he explained the various features of the transmitter and interface. The net effect was to show us the capabilities of the chip and program that many of us had not explored.

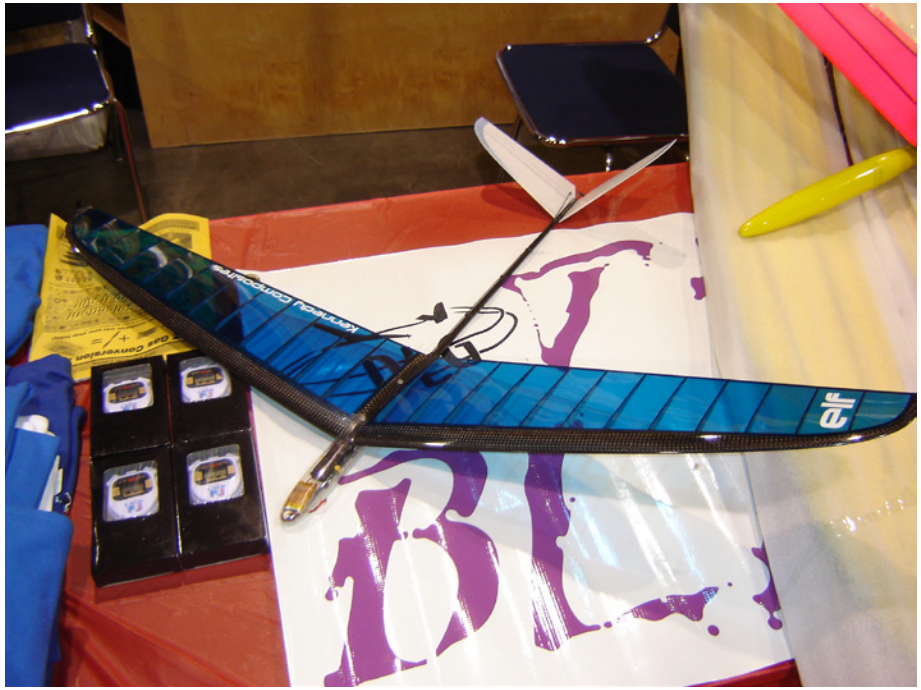
Later, as I talked with several of the radio manufacturers at their booths it was apparent that Dan and his equipment are light years ahead of them from the programming standpoint.

Since many of the MP8K and M*2K Groups are converting their transmitters to 2.4 GHz, the advanced features of these old radios make them exceptionally competitive today and in the future.

I had mentioned earlier about talking to the radio manufacturers. It was a good chance to get up close to the equipment rather than looking at magazine pictures. The stuff is truly amazing for its small size and innovative design.

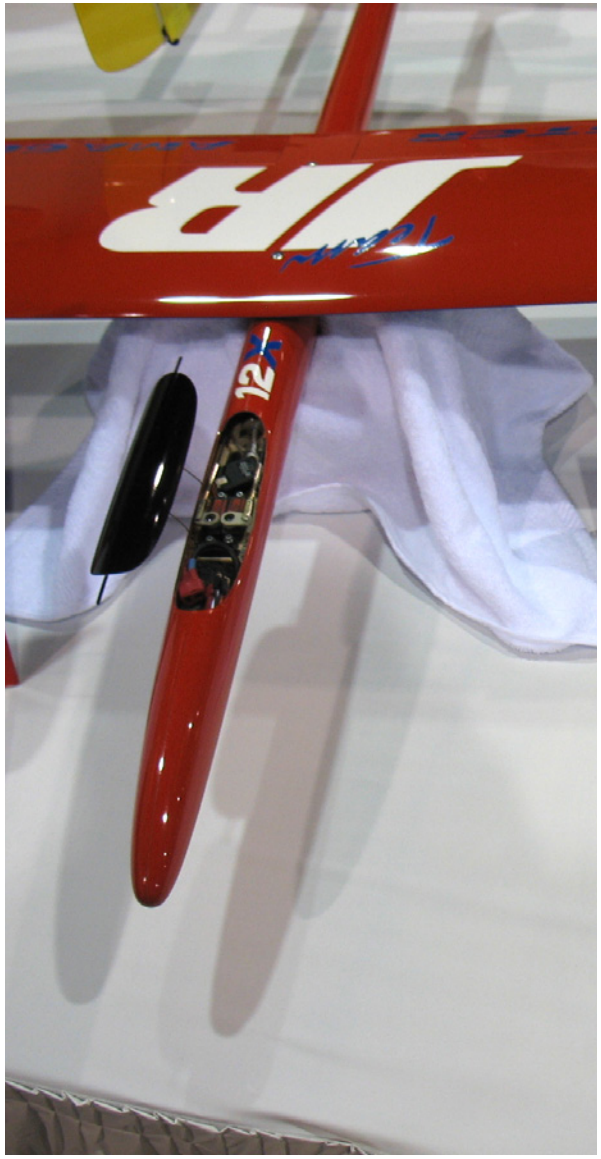
I was especially impressed by the Spektrum SPMAS2000L linear servo used in ultra small electric planes. This is paired up with the AR6400/ARL400L receiver to make a control unit that fits on the end of your thumb. A small electric called a Night Vapor with this control system was flown out over the crowd for over 5 minutes that also had on board lights. The young pilot caught the ship in mid air effortlessly since there was no place to land.

I remember that they used to fly R/C blimps around the Show at the old arena and I thought that was neat at the time.



Also available was a very nice 'walnut" size hand launch glider called the Elf. The transparent fuselage showed how the radio was installed with so much carbon around it.
Pete Carr

The sailplane category of display competition had several beautiful ships including Marc Gellart's Tragi Cluster. The canopy was detached to show the very sanitary radio installation.
Pete Carr

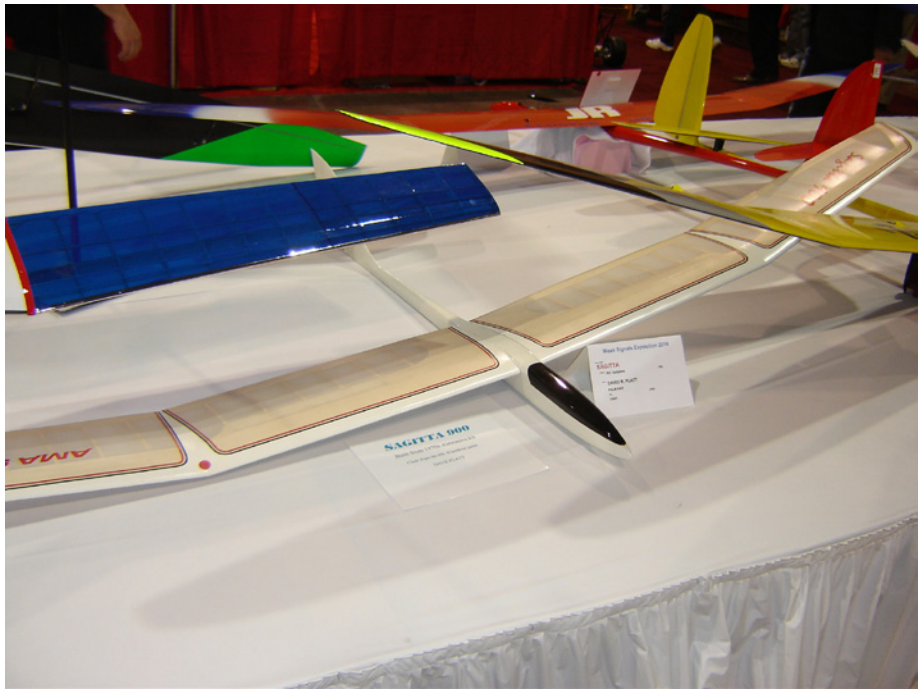


Detail of Marc Gellart's Tragi Cluster.
Tom Nagel

Above left: Also displayed was a Bubble Dancer. This ship is the latest version of an over grown hand launch glider with excellent workmanship. The transparent red covering really showed off the woodwork in the wing and tail. Pete Carr

Above right: Displayed was a very nice example of a Mirage sailplane. This design was notable for its offset rudder, straight center section of the wing with big dihedral in the tips. Pete Carr

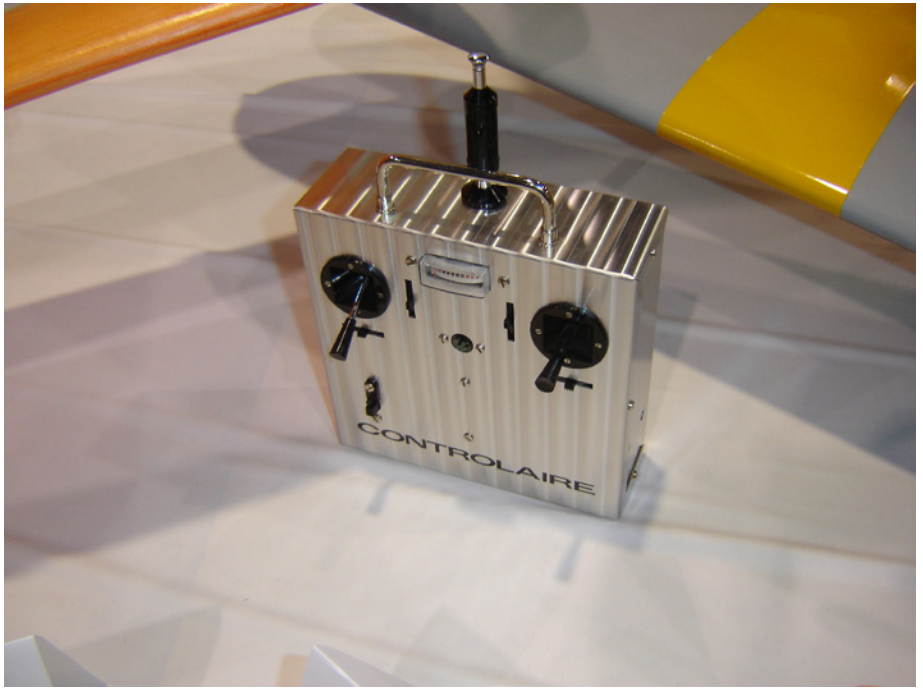
Left: Two wonderful examples of balsa sailplanes were this Korda Glider and Floater. These were silk and dope covering with hand painted lettering. The new ultra light weight radios and batteries would give these great old ships a new level of performance.



Above: Dave Platt, of power scale fame, built this very elegant example of a Sagitta 900 in silk and dope covering. The trim and finish of this ship were exceptional.

Above right: The Full Size Plans booth had this sailplane hanging over it, a Thermic 100. The booth very packed with people using the laptops to view plans that were offered so I didn't get any further details of the ship. Their URL is listed in the Resource section.

Right: The Skip Miller booth was always packed with people so I took this picture Sunday before the Show opened. Many of the offerings were both electric and thermal.



Upper left: This Orbit Reed transmitter was sitting next to a vintage power ship on the display table. Having been dazzled by all the small 2.4 GHz radios it was great to see where multi-channel radio began. Harold DeBolt would be so pleased. Pete Carr

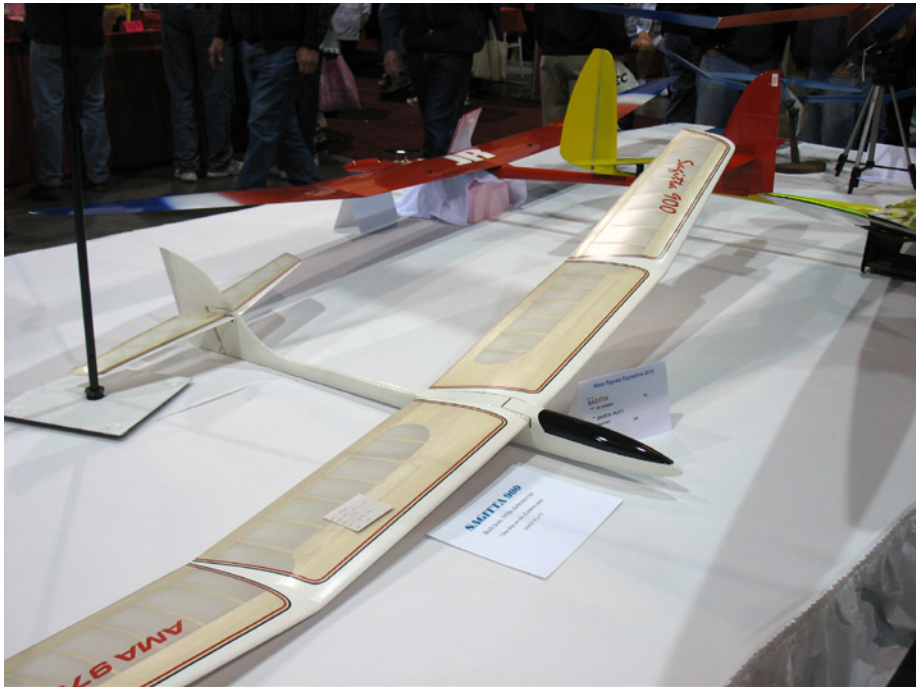
Upper right: Another old radio on display was this Controlaire proportional transmitter. It was absolutely the cleanest old rig I've seen with no scratches and perfect plastic sticks. I'll bet the inside looks just as good. Pete Carr

Left: This Orca 4-meter sailplane was a steal at $1875.00 at the Skip Miller booth. Pete Carr

Above: This Minus electric was a good example of the laser cutting of parts that has added a next level of performance to small ships. Pete Carr

Above right The ICARE booth had this Gladiator electric for a very good price. It looked new but may have been carefully flown and used. Pete Carr

Right: The Avia at the top of this stack of electrics was interesting for its carbon tube wing spar and very light construction. The price was pretty light too. Pete Carr



Upper left: *Dave Platt's Sagitta 900, built from a 1970s kit. Tom Nagel*

Upper right: Brilliant yellow Icon 2, and Lawrence Latowski's red and blue Frank Zaic Floater and blue and white Dick Korda Towliner. Tom Nagel

Left: The Icare booth. Tom Nagel

This micro-small stuff raises that to a whole new level.

I stopped to talk to Barry Kennedy but he was mobbed with people. His offerings were breathtaking in fit and finish and the prices also took your breath away! There is no doubt that the molded ships are getting stronger and lighter while the fuselages continue to get smaller. I also admired their various colors which add some variety to the flight line of models. Most all of these ships were in the 3+ meter span range with nothing smaller that I saw. For those of us who like the 2-meter and 100 inch span stuff there was only some electric sailplanes in those sizes.

The display competition for models had some beautiful Tragis and Icons with some wood ships in there, too. There was a very nice Sagitta 900 and a Mirage that was beautifully built. It would be very hard to pick a winner out of this group since they all were the peak of their craft.

Many of the aircraft on display and at the booths were made from laser cut parts. This method of parts construction makes for some lovely structures.

There was a vendor that was cutting foam with a CNC cutter right in his booth. I didn't note his name and wish I had. The material he was turning out was very intricate and would make the structure of the tails of sailplanes a work of art.

Over in one corner of the Show was a fellow and a bunch of laptop computers. This was the booth for Full Size Plans, the "magazine" for full size printed model plans. Hanging above the tables was a 'ship that looked similar to a Bird of Time. The ship looked like it was covered with silk and dope with a clear plastic canopy. Again, the booth was very crowded so I didn't get to inquire about the model. The Full Size Plans "magazine" is bi-monthly at $36 per year.

Many of us remember the old Thermic Sniffler from the dawn of R/C soaring. A new version of this thermal indicator was offered at the Show by Winged Shadow Systems of Streamwood, Illinois. This is the Thermal Scout. It is a small circuit board that connects between the receiver and rudder servo and wags the rudder when the model encounters lift. It is small enough to fit into a DLG glider or anything larger. It can be disabled from a separate channel on the transmitter for launch and landing and is powered from the flight pack. There is no radio link to the ground so current drain is very small.

Jeff and I really enjoyed our visit to Toledo and the chance to chat with everyone. It was also a terrific learning experience with exposure to the latest technology and equipment. Please check the contact list of e-mail addresses and web sites for more information on the vendors I've mentioned.

RESOURCES:

Full Size Plans:
www.fullsizeplans.com
info@fullsizeplans.com

Thermal Scout:
www.WingedShadow.com

Radio Controlled Ultralights:
www.rcultralights.com

Hobby Shack:
www.globalhobby.com

Horizon Hobby:
www.horizonhobby.com

Hobbico: www.hobbyco.com

True RC Inc.: www.TRUERC.com

MP8K Yahoo Group

M*2K Yahoo Group

VisionAire Corp. *Vantage*

Drawings courtesy of Mark Nankivil, nankivil@covad.net

The Vantage was to be a small business jet aimed at smaller companies and private individuals. These potential clients had previously relied on piston-powered aircraft or turboprops. The Vantage could provide access to airports with 2500' runways and was to feature a very spacious cabin. Construction was mainly of composites.

VisionAire Corporation was formed in 1998 by James O. Rice Jr. Because finding enough money was found to be problematic, the program took longer than expected to get started. Money problems eventually drove VisionAire out of business as well.

Scale models were used for initial testing, and Scaled Composites started construction of the proof-of-concept aircraft early in 1996. First flight was on November 16th 1996.

In May of 1998 VisionAire opened its $6 million, 116,000 square foot assembly facility in Ames Iowa. Projected plant capacity was predicted to be 115 aircraft per year. VisionAire also had an option to lease an adjacent 17 acres for plant expansion.

Plans at the time called for the first representative aircraft, VT1, to fly in January 1999; VT2 was scheduled to follow two months later. Additionally, two static-test airframes for structural and systems testing were to be built, with certification set for 1999. FAR Part 23 Amendment 51 certification was planned. Scheduled production was to rise to 66 in 2000 and 115 in 2001.

VisionAire ran out of money before production started, and a group out of South America bought the leftovers in an auction but ended up doing nothing with the design.

The Scaled Composites airframe is apparently currently residing at the University of Iowa - Ames and is an instructional airframe.

The Vantage's most notable feature was its single JT15D turbofan engine buried in the rear fuselage and fed by two air inlets on either side of the fuselage. The JT15D has been in operation since 1982 and is the powerplant for the Beechjet 400 and Citation V. Other notable features included the mid fuselage mounted forward swept wing of relatively large area and graphite composite airframe.

Performance

Max. Mach:	0.65
High-speed cruise:	350 kts (648 km/h)
Stall speed:	130 km/h with gear and flaps down
Climb rate:	20,3 m/s
Max. cruise altitude:	12500 m (41000 ft)

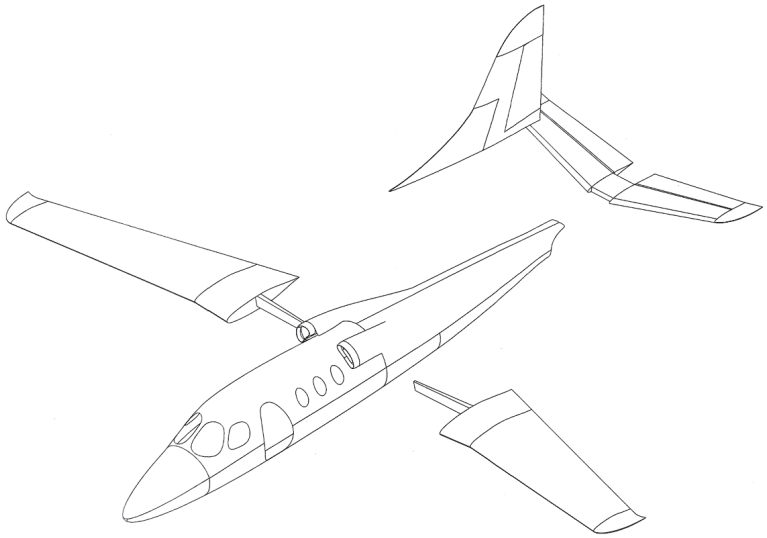
Runway requirement over 50' obstacle: 763 m

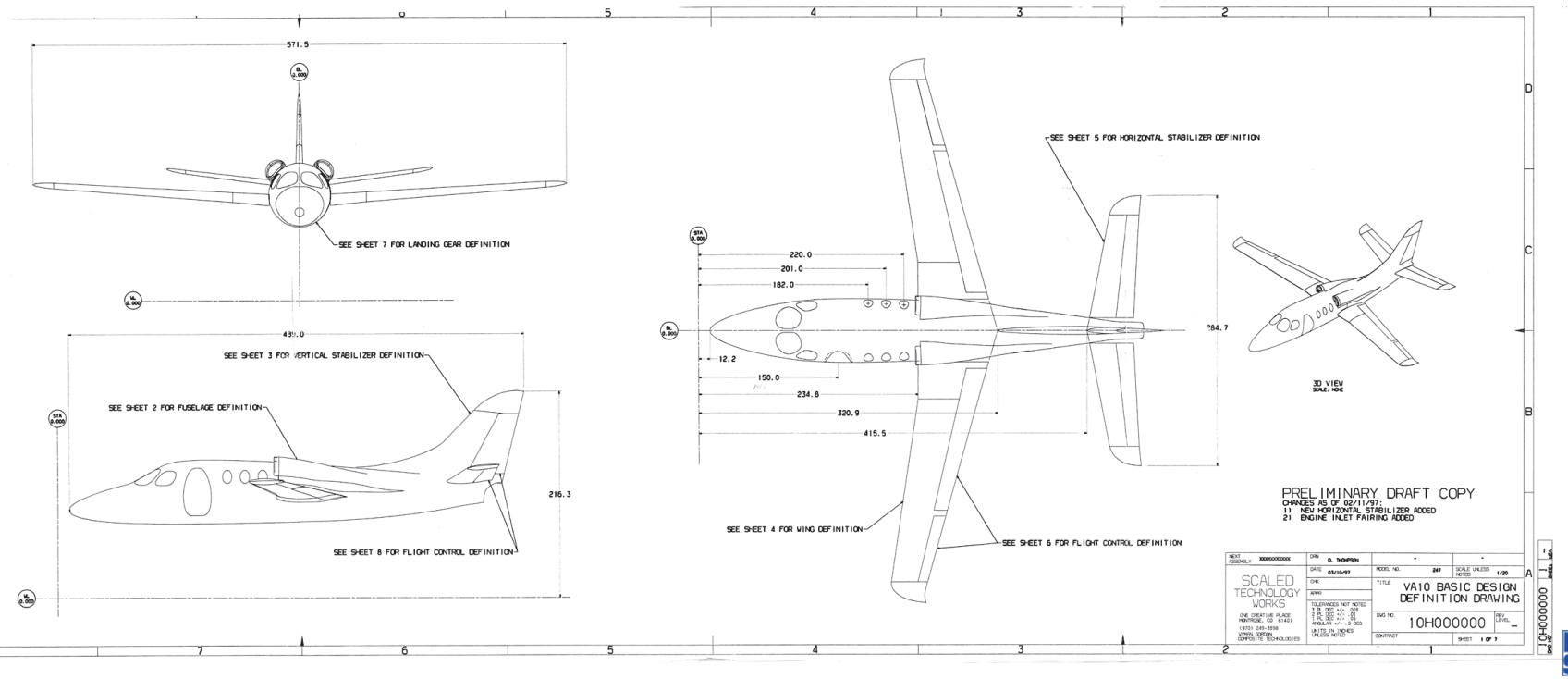
Range at high speed cruise at 40000' with IFR rules and 45 min reserve:

- 2915 km with pilot and full fuel
- 2685 km with pilot and 2 passengers
- 2130 km with pilot and 4 passengers
- 1850 km with pilot and 5 passengers

Dimensions

Length: 12,43 m
Height: 4,16 m
Span: 14,48 m
Wing area: 20,6 sq m





Friedman-Myrtle Canard

A Preliminary Aircraft Design

Mark A. Friedman and Tim Myrtle

This concept aircraft was designed by Mark A. Friedman and Tim Myrtle in 1992 as partial fulfillment of MANE 154A, University of California, Los Angeles, School of Engineering and Applied Science, Mechanical, Aerospace and Nuclear Engineering Department, Oddvar Bendiksen, Ph.D.

154A. Preliminary Design of Aircraft. (4) Classical preliminary design of aircraft, including weight estimation, performance and stability, and control consideration. Term assignment consists of preliminary design of low-speed aircraft.

The submitted report

> "...presents the preliminary design of a four place single engine light utility aircraft. The design utilizes a canard layout to take advantage of the safe stall characteristics inherent in this planform. High aspect rtatio wings, retractable landing gear, and a pusher propeller make it a clean and efficient design. The mid-engine and split tail arrangement contribute to a high level of stability, while pleasing aesthetics and a conventional seating arrangement provide for comfort and satisfaction. Combining eficiency and relatively light weight results in long range capability and high top speed."

The full report provided the drawings reproduced here along with the process used to achieve the optimal design.

Our thanks to Mark A. Friedman, M.D. for allowing us to reproduce his copy of the Preliminary Aircraft Design report which he and Tim Myrtle co-authored in 1992. Dr. Friedman received an undergraduate degree in Aerospace Engineering from UCLA and is currently an orthopedic surgeon practicing in Gig Harbor Washington.

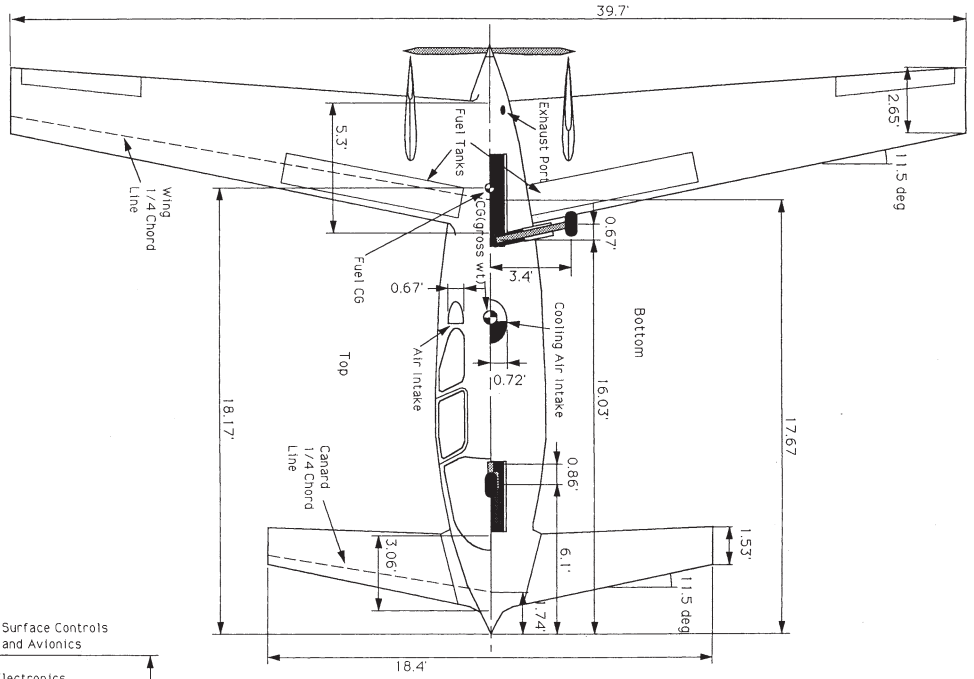
AIRCRAFT PERFORMANCE SPECIFICATIONS

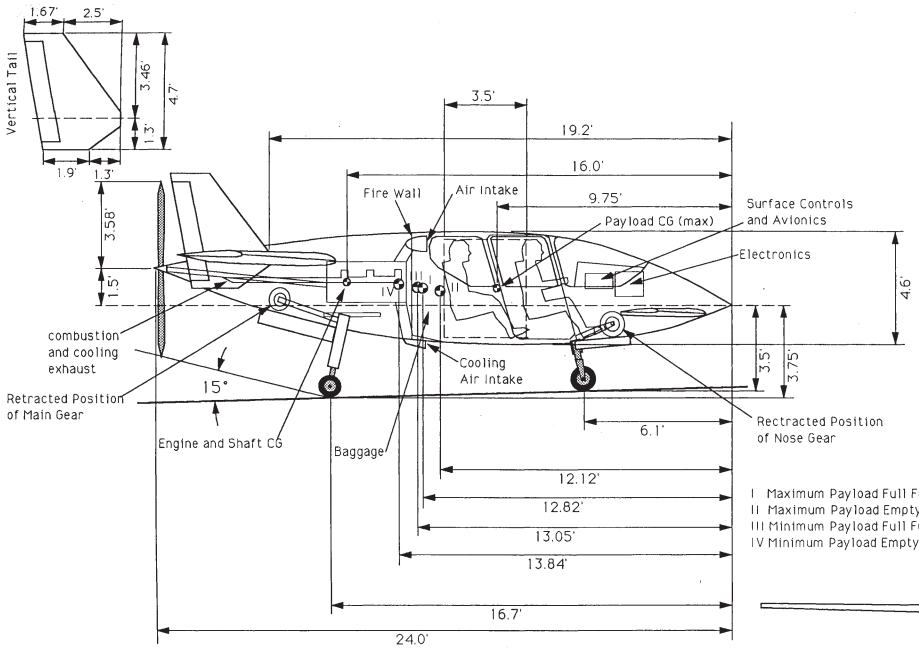
Stall speed at max loading, powered	65mph
Max speed at max loading at sea level	195mph
Top speed at cruise altitude	190 mph
Cruise altitude	7,000 ft
Cruising range with max loading conditions	1197 mi
Takeoff speed	75 mph
Takeoff distance at max loading conditions	1,561 ft
Rate of climb at takeoff speed	1,329ft/min

AIRCRAFT PHYSICAL SPECIFICATIONS

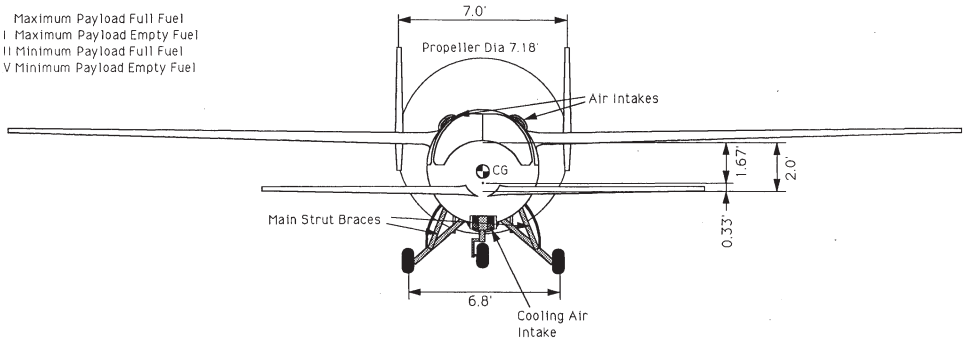
Wing span	39.7 ft
Wing aspect ratio	10
Maximum wing lift coefficient	1.42
Wing incidence angle	1.40°
Wing twist	3° washout
Canard span	18.4 ft
Canard aspect ratio	8
Maximum canard lift coefficient	2.20
Assumed fractional load on canard	0.37
Aircraft length	24.0 ft

Engine type: Avco Lycoming 0540-134135, 6 cylinder horizontally opposed direct drive





I Maximum Payload Full Fuel
II Maximum Payload Empty Fuel
III Minimum Payload Full Fuel
IV Minimum Payload Empty Fuel



Phantom Flyers/MVSA – St Charles, MO/O'Fallon, MO

Here we go!

One Plane Sailplane Fun Contest

Note: This contest is restricted to members of the Phantom Flyers and MVSA clubs.

Phantom Flyers Field
St. Charles, MO
Map on reverse

This is a **Vista** from Tower Hobbies. It is a Rudder/Elevator 2-meter sailplane and ***it is the plane that we would like everyone to use, however this time we will allow other sailplanes with rudder and elevator control. Ailerons and flaps not allowed. Spoilers if any must be taped down. EP sailplanes must remove prop or tape blades back.***

This plane has a low price ($55) and easy, short assembly (2-5 hours)

adding up to high-flyin' fun and contest challenges!

Build one or borrow one but don't miss this event!

Other Designs Allowed With Appropriate Handicap!

Beginners encouraged!

Make this your first adventure into the challenge and satisfaction of sailplane exhilaration.

$5 Landing Fee

High Start and Winch furnished By MVSA

First launch 0900

May 15, 2010

Contact:
Harold Weaver
weavair@charter.net
(636) 346-4761

Model Gliding Association of South Africa

F3J World Championships 2012

Bid proposal to FAI

Courtesy of Michelle Goodrum, michelle@murdoog.co.za

Location – Johannesburg

4

The **heartbeat of South Africa**.

Built on the discovery of gold, today it continues to produce its own unique treasures.
Passion!
Pride!
Endless possibilities!

Experience the cosmopolitan cities and the awesome natural splendour of South Africa. An overnight flight from most major cities of the world, Johannesburg opens the door to an unforgettable experience.

5

Venue: East Rand Polo Field

Approximately 400 x 350 m lawn in a flat agricultural setting.

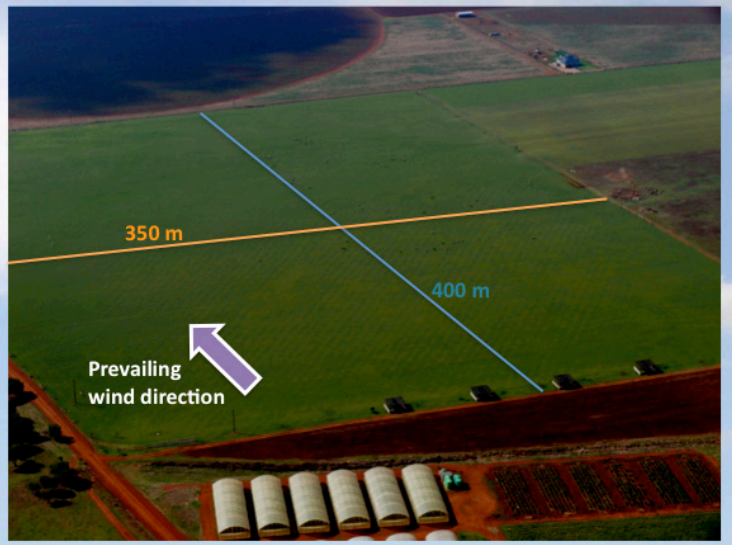
15 minutes drive from Johannesburg OR Tambo International Airport, within 20 km of numerous lodges and B&B's offering superb 3-5 star accommodation at affordable prices.

The 2009 SA F3J Senior Team Trials were held at this wonderful venue.

Description	Specifications
Co-ordinates	**S 25° 59' 44.17"** **E 28° 21' 59.38"**
Altitude	Approx 1600 m / 4800 ft
Sunrise	6:45 am (Aug 2012)
Sunset	5:45 pm (Aug 2012)
Ave Min / Max Temp	6 °C / 19 °C for the month of August
Ave Rainfall	6 mm for the month of August

6

Venue: East Rand Polo Field



7

Format: Pre-contest

Date	Time	Description
Fri 3 Aug	7:30 - 17:00	Round 1
Sat 4 Aug	7:30 - 17:00	Round 2
	18:00	Prize giving & BBQ (Braai)

Entry fee : Euro 50 per senior pilot
Euro 35 per junior pilot

Scoring: Juniors and senior pilots fly together and are scored as equals.

Prizes: Certificates for all competitors
Trophies for the top 3 competitors

8

Format: F3J World Championship

Entry fee: Euro 250 per senior pilot or manager
(3 senior pilots & 1 team manager per country)
Euro 150 per junior pilot
(3 junior pilots & 1 team manager per country)
Euro 50 per tow person or helper

Prizes:

Individual: Certificates for all competitors
Trophies and medals for the first 3 junior pilots
Trophies and medals for the first 3 senior pilots

Team: Trophies and medals for the first 3 junior teams
Trophies and medals for the first 3 senior teams

9

Format: F3J World Championship

Date	Time	Description
Sun 5 Aug	8:00 - 17:00	Pilot and model processing Registration
Mon 6 Aug Tue 7 Aug Wed 8 Aug Thur 9 Aug Fri 10 Aug	7:30 - 17:00	Round 1 – 8: Seniors Round 1 – 8: Juniors (alternating through the contest)
Sat 11 Aug	10:00 – 15:00	3 Senior fly-off rounds 3 Junior fly-off rounds
	16:00	Prize giving at the field
	19:00	Banquet
Sun 12 Aug	9:00 – 17:00	Backup day in case of bad weather Game drive or tour

10

Venue facilities

Individual tents for each team
One or two large tents with full catering facilities
Wireless internet facilities
Central organizers tent

Transmitter impound tent
Portable toilets
First aid facilities
Security

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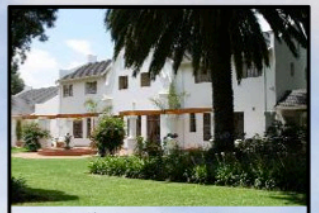
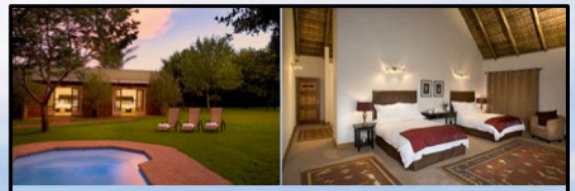
Accommodation

African Tribes Guest Lodge
www.africantribes.co.za
40 guests



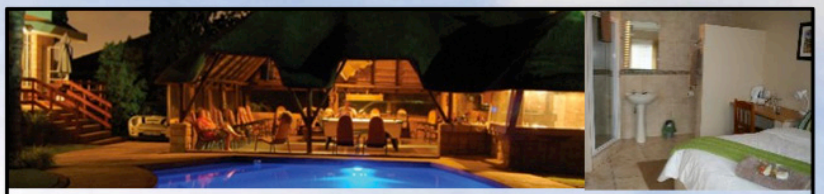
Le Chateau Guest House
www.lechateau.co.za
30 guests



The Safari Club SA www.safariclubsa.co.za
30 guests

12

Accommodation



Sunrock Guest House www.sunrock.co.za 40 guests

Avant Garde Lodge w.avantgardelodge.co.za
40 guests

Prices range from
Euro 20 – 80 per person B&B per night

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Budgeting information

Approximate cost of economy return flights to Johannesburg (current pricing)

Continent	City	Price (Euro)	Airlines
Australia	Perth / Sydney	1000 - 1700	SAA / Qantas
Europe	Frankfurt / London / Paris	650- 1400	SAA / Air France / KLM BA / Emirates / Virgin
USA	Atlanta / New York	1000 - 1400	SAA / Air France Delta / United

Approximate cost per day for car rental (current pricing based on 2 week rental period)

Type	Description	Price (Euro)
Group B	VW Polo hatchback, manual, with air conditioner	30 / day
Group N	VW Caravelle or similar van, manual with air conditioner	90 / day

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Budgeting overview

Description	Approximate prices (Euro)
Flights	Australia ± 1300 Europe ± 1100 USA ± 1200
Car rental	± 30 - 90/day
Accommodation	± 50 (Bed & breakfast)
Lunch	± 5 (Hamburger & cold drink)
Dinner	± 15 (Medium cost)
Banquet	± 50
Beer	± 2

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Travel and tourism

Johannesburg (Western Suburbs):

Krugersdorp Game Reserve
Sterkfontein caves
Ngwenya glass village
Dirt Ryder adventure park
Maropeng (Cradle of Humankind)
Rhino & Lion Nature Reserve
Balloon safaris
Elephant sanctuary

Johannesburg (Northern Suburbs):

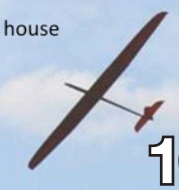
Johannesburg zoo
Lion park
Montecasino bird sanctuary
Johannesburg Botanical Gardens
Phumangena Zulu kraal
Lipizzaner school

Johannesburg (Eastern & Southern Suburbs):

Alexandra township
Gold Reef City
Apartheid museum
Nelson Mandela museum / house

Johannesburg (Central):

Gandi square
Nelson Mandela theatre
Johannesburg art gallery
SAB World of Beer



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Travel and tourism

North West Province

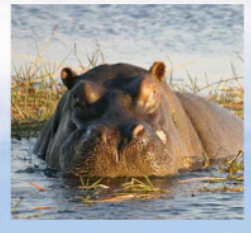
Sun City & Palace of the Lost City
Magalies meander
Pilanesberg Game Reserve
Balloon safaris

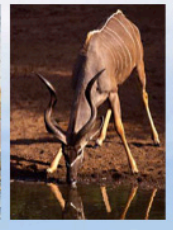
Mpumalanga

Kruger National Park
Sudwala caves

Limpopo

Waterberg game reserves
Timbavati game reserve





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Travel and tourism

Kwazulu Natal

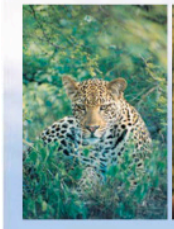
uShaka marine world
Zulu battlefields
Hibiscus & Elephant coasts
Midlands meander
Drakensberg
Hluhluwe & Mkuze National Parks

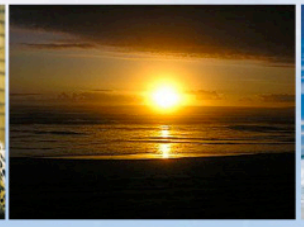
Eastern Cape

Wild coast
Addo Elephant Park
Knysna
Oudtshoorn
Tsitsikamma
Jeffrey's Bay

Western Cape

Stellenbosch winelands
Cape Town
Shark diving





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Summary

The Model Gliding Association of South African intends to host a superb 2012 F3J Thermal Duration Model Gliding World Championships, equal to the excellent standards set by previous host countries.

The organising committee are experienced hosts and competitors of international model gliding contests and will organise a professional event on a first-rate field, equipped with all the required facilities. They will make this event a rewarding experience for all participants.

A variety of affordable, good quality accommodation is available close to the field. Easy access to and from Johannesburg's airport, OR Tambo International, enables accompanying friends and family to experience the wonders of the surrounding areas and explore the diverse beauty of South Africa's other 9 provinces.

19

2010

RAF Hawk Display Scheme

A follow-up to the article of the same title in the March 2010 issue of *RCSD*.

Painting of XX263 was completed over a period of about one month. First flight with the new color scheme took place on March 25th. For photos of the aircraft being painted, see <http://www.valleyaviationsociety.net/display_hawk_2010.htm>

All photos published here are from <http://www.rafhawkdisplay.com/downloads.html> unless marked otherwise.

http://airfixtributeforum.myfastforum.org/index.php?component=content&topicid=18670&highlight=