



Crosswinds



Newsletter for the
Spring Area Radio Kontrol Society

July
2007

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GREETINGS FROM THE
PRESIDENT
By Wally Warren



Well, ready or not, here we all go with a new year, and a host of new officers!

Since most of the members won't be at the meeting on July 11, let me take this space to introduce myself and let you all know what you have gotten into.

First, as anyone that knows me can attest, I am an absolute, certifiable aviation nut. Aviation is my life, my hobby, and my job. Always has been, and, hopefully always will be.

I currently own and operate my own aviation inspection business that specializes in Non-destructive testing (x-ray, ultrasound, etc.) of corporate jets and helicopters. The best way to characterize what I do is to think of me as a doctor of airplanes - I inspect them and tell the maintenance folks that it's broken, THEY figure out what to do to repair it! I'm one of the few people who can truly say that I wouldn't trade my job for ANY other - no matter the wages made, or hours that they work.

I've been enjoying this hobby/sport of ours since I was a tyke, due to the fact that my father was an Air Force fighter pilot that also flew ALL types of model aircraft since his own childhood. In the 1960's we flew control line, free flight and R/C together in the deserts around Tucson, Arizona. That was back in the days when each direction of the stick (actually a self-centering toggle-switch) on the Orbit 10-CH transmitter was considered a "channel". My how things have changed! Heck, now you move a stick and fifteen different channels are mixed together to make the airplane do things that weren't even dreamed of in the 1960's.

I took a little hiatus in the late '70's to check out cars and girls (oh, and some schooling, too), but I never could help but dream of all things aviation related.

Once I got out of A&P school in Waco, TX in the early '80's, I jumped back into the model airplane thing after a move to Northern California and a job with United Airlines. I REALLY started heating the modeling juices up when I met a group of guys in the Bay area that were heavy into Scale Warbird racing.

My all-time favorite piston powered airplane is the P/F-82 Twin Mustang. I scratch built one just for the SWRA races and it was quite a sight to hear rounding the pylons at over 140mph. We built so many fast, fun airplanes that I look back now and wonder how I had the time for all of that!

The racing thing was great fun, but then a new style of airplane came along that just blew us out of the water - Scale Aerobatics (Extra 300's, Cap's, etc.). I got hooked, and still am to this day.

Just to let you know, there is NO type of modeling that I think is more or less important or takes better skills than another. We ALL benefit from the skills and technologies developed from each segment of our sport. I wish I could build as light and straight as the control-line guys, trim like the free-flighters, and concentrate like the R/C Pattern dudes. I fly for fun and am fond of saying that: "If it EVER stops being fun, I'll stop flying models". It hasn't, yet, and doesn't look like it will anytime, soon!

This year I hope that those who are experienced in this modeling thing will take some time to mentor the new folks - old, or young, and realize that your investment of time will reap great rewards someday - even if you never see the end results of your labors.

We'll get into the "issues" next time. Until then:

Hang in there, be an encourager to someone else, and let's go flying!

See you at the field.

Wally Warren
281-794-0947

JUNE MEETING HIGHLIGHTS

Jeff Giesbrecht is in the process of moving our website to a new server and gave a demonstration of the new layout to the members present. If anyone has suggestions, photos or ideas, please send them to Jeff at jsg@eaglewings.com

The following Officers were elected for the 2007 - 2008 Club Year.

President	Wally Warren
Vice President	Mark Hunt
Treasurer	Michael Meyer
Secretary, Newsletter	Diane Marson

Mark Hunt gave an extremely informative presentation slideshow in Power Point on the development of his *Pentathalon*, a 2 meter pattern ship.

Mark borrowed some ideas from the Voodoo Express designer Nat Penton, and in recognition of this he included some of Nat's name in the naming of his plane.

Mark showed the first napkin concept of the *Pentathalon*, and how, using modern day drafting software, it quickly was transferred to a three dimensional model. Mark had three sets of parts laser cut, and he showed how the burn lines were offset to accommodate for the thickness of the laser line. Templates were also cut for the foam parts of the plane. These were covered with contest grade balsa, using Gorilla glue and a vacuum bagging technique.

Mark has successfully competed in several pattern contests this year, in the Masters class.



JUNE MODEL OF THE MONTH

THE "QUICKIE-SOMETHING"

by Rod Kuntz

Purchased as part of an estate sale, this airplane had been gathering dust for a long time. Failing to find an interested buyer for it on eBay, I decided to refurbish it and let it fly again.

A bit about the plane as it is an interesting design:

- Fully symmetrical airfoil with a tapered wing design (both the chord and the thickness from root to tip).
- Foam core wing, balsa sheeted.
- Very solid fuse construction, sides appear to be $\frac{1}{4}$ " balsa.
- Solid wood vertical and horizontal stabs.

Very streamlined with wheel pants and with a full size spinner installed.



I installed standard 45 oz-in servos for all control surfaces. On the aileron servos, I ran one to the aileron plug and the other to Auxiliary 1 on the receiver. With this hook-up I have both ailerons and they also function as flaps while maintaining aileron function at the same time. I installed a mini HS-81 MG in the fuse due to space restrictions to run the throttle.

I managed to squeeze an OS .46 FX into the cowl cutout, mounted at 90 degrees, with muffler fitting nicely out the bottom between the gear legs. Due to low ground clearance, the biggest prop I could install was a 10x6 (probably will try a 10x6 3-blade sometime to see if it will go faster still). 1100 maH battery was installed in a hatch cut into bottom of plane on one of the fuse formers approximately 3" behind the wing trailing edge.

With the small wheels on grass it needed a bit of a run to get off, but once up it climbed out great at around $\frac{3}{4}$ throttle. 2 clicks of up on elevator, one click each right rudder and aileron and it was rock steady. Handles great under power, and as you probably guessed from the shape, it is fast.

Tested the stall characteristics next, putting it in a 30 degree climb and slowly pulling back power. When it stalled it did so fairly slowly, and the nose dropped straight down...easy to recover.

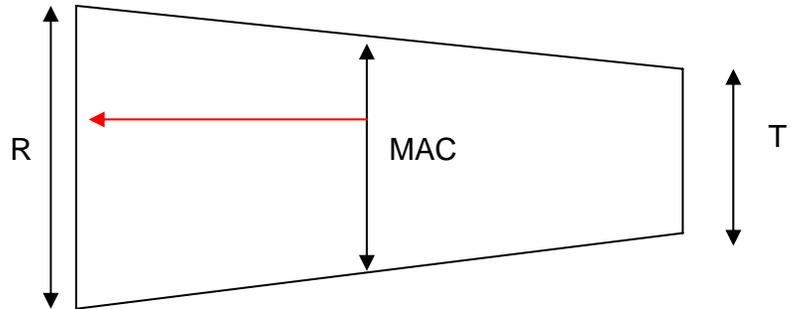
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MODEL OF THE MONTH THE QUICKIE SOMETHING *con't.*

Now the tricky part...we had no documentation of any kind on the plane, and had to find the correct balance point, or the maiden flight would be very short. My son Roderick provided me with the equation (from one of his textbooks on building) to calculate the Mean Aerodynamic Chord (MAC) for a tapered wing. The formula is:

$$MAC = \frac{2/3 (R^2 + RT + T^2)}{R + T},$$

where



R= wing chord at the root

T= wing chord at the tip

In this case R measured 10.5", and T measured 7.75", resulting in a MAC at 9.2" from the root (shown as the black double arrow labeled MAC. You then measure 25% from the leading edge to get your CG/balance point. This was 2.3".

However, our balance device could not stretch out that far, so I extended the balance point back to the inner wing edge beside the fuse (shown by the red line). This put the balance point exactly 3" back from the leading edge beside the fuse.

Having solved that the next step was to see if that worked in actual flight. Tuesday morning June 6 was selected as the fateful day, as it was very calm (I don't need a lot of complicating factors on first flights...I already have 10 thumbs, none of them very smart).

With the small wheels on grass it needed a bit of a run to get off, but once up it climbed out great at around $\frac{3}{4}$ throttle. 2 clicks of up on elevator, one click each right rudder and aileron and it was rock steady. Handles great under power, and as you probably guessed from the shape, it is fast. Tested the stall characteristics next, putting it in a 30 degree climb and slowly pulling back power. When it stalled it did so fairly slowly, and the nose dropped straight down... easy to recover.

Next was landing, and on the advice of my technical aviation advisor (No. 1 son), I brought it in over the fence under a good bit of power. Then it really is just pulling power back to a bit under $\frac{1}{4}$ and it settles down firmly. However, I think if one was to pull power back to idle, as you do with many plane, it will have the glide characteristics of an Acme brick. All in all, I think it will be a fun sport plane; but I think I will pull off the cute little wheel pants and put on some slightly bigger wheels to deal with the grass.

LOTS OF VIDEO FOOTAGE TO WATCH.....



CARVIN 2005 INDOOR MODEL AIRPLANE CONTEST submitted by Nick Marson

Great video of the winner of 2005 indoor fly contest.
Watch the airplane flying backwards !!!
Pilot is Armin Mangelmann of Germany

<http://video.google.com/videoplay?docid=-8185503357916397815&hl=en>

This will really cool you off....Lazy Bee in the snow....

<http://www.youtube.com/watch?v=kMLRjvZr3ZY&mode=related&search=>

Plane loses one wing and pilot manages to land it.

<http://www.youtube.com/watch?v=C-qTjuBRD6M&mode=related&search=>

Let's travel to Stockholm and fly through the tunnel under the city.

The Challenge was to do the impossible and fly an 80" wingspan, 13 lb. plane through a 2.42 mile tunnel from a moving car. The electric motor provides 22 lb. of thrust and a top speed of 120 mph.

<http://www.youtube.com/watch?v=W-QJLOVLq7M>

FROM GENERAL AVIATION WEBSITE.... submitted by Lee Dillenbeck

"Small planes represent the ultimate in safe, fast and efficient personal transportation—most of the time. Here are some videos that capture both the joy and beauty of personal flight, as well as those moments when things go terribly wrong." Here Are lots of videos, some from inside the cockpit.. Or a cub that can take off in just 18' For those of you not familiar with the term "STOL", it stands for "Short Takeoff And Landing".

http://www.alexisparkinn.com/general_aviation_videos.htm

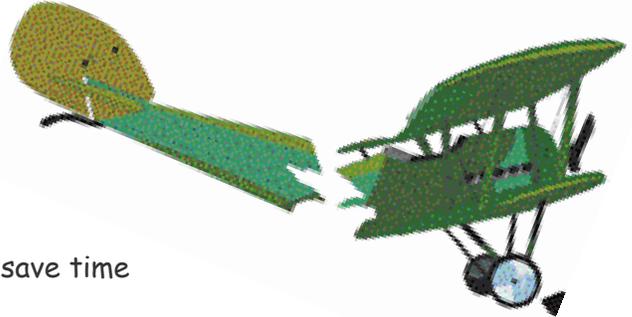
Plane landing <http://www.ebaumsworld.com/video/watch/24463>

Plane landing on camper <http://emuse.ebaumsworld.com/video/watch/21410/>

*Reprinted from the May 2007 Issue
of the AMA Insider*

From the D.C. Radio Control Club,
Montgomery County, Maryland

TABLE OF EXCUSES



Please give excuse by the number in order to save time

1. I didn't know you were waiting for the pin.
 2. Did you see my airplane get glitched?
 3. I ain't got it.
 4. I have more crashes because of bad radios.
 5. That airplane was always squirrely.
 6. I don't know who did it, but someone must have turned on their transmitter and shot me down.
 7. I just lost control; everything went dead.
 8. I thought I was on the field.
 9. That's that only time I ever left my transmitter on. Can you help me pick up the pieces?
 10. I didn't know you were in the landing pattern, next time I'll look before I taxi out. Do you think it can be repaired?
- Optional- I didn't realize I was that low when I flew over the pit area. Are three models a record?

Editor's note.....the above may have been written in Maryland.....but I think I've heard some of them at SPARKS.....

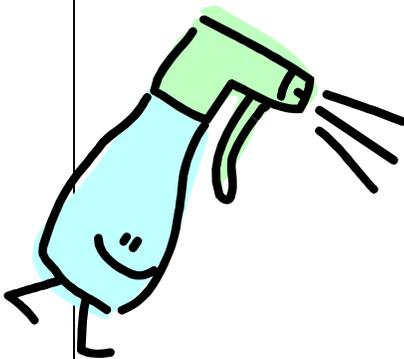
**Reprinted from the May 2007 Issue
of the AMA Insider**

From the Central Arizona Modelers Inc., Sedona, Arizona



QUESTIONS FOR YOU TO PONDER

- Why doesn't Tarzan have a beard?
- Why does Superman stop bullets with his chest, but ducks when the bad guy throws a revolver at him?
- Why do Kamikaze pilots wear helmets?
- If people evolved from apes, why are there still apes?
- Why is it that no matter what color bubble bath you use, the bubbles are always white?
- Is there ever a day when mattresses aren't on sale?
- Why do people constantly return to the refrigerator with hope that something new to eat will have materialized?
- Why do people keep running over a string a dozen times with their vacuum cleaner, then reach down, pick it up, examine it, then put it down to give the vacuum one more chance?



GREAT IDEA FOR MAKING CLEAN UP A SNAP from Ben Schultz

Don't think that I am the first person to think of this, but as I was cleaning my plane a few days ago and I think everybody knows what I am talking about when you can't get the bottle to spray if it's 1/2 full or less.

Also when you have to spray with the bottle on its side to get under a plane, it won't. Well, I said to myself "this bottle might work better with a fuel clunk on a soft hose inside the bottle." So I cut the plastic tube inside the bottle to only about an inch long and attached fuel tube and a clunk. Guess what??

It works great. Now I can turn the bottle in any direction and spray nonstop.

THE NEW RP-4 AIRCRAFT SHOWN HERE, IS BEING BUILT TO ATTACK THE WORLD 3, 15 AND 100 KILOMETER SPEED RECORDS.

Submitted by
Mike Rose



ENGINES: Two high performance V-8 engines power the RP-4, representing the best compromise among size, weight, power and availability. Tandem mounted, each engine drives its own propeller. The front engine drives the front prop directly and the rear engine, through gearboxes which bypass the front engine, drives the rear prop in contra rotation. Independent fuel and cooling systems allow for single engine operation



Propellers: Utilizing NASA Unducted Fan Technology, two four-blade propellers with variable pitch hubs were constructed. The blades consist of 84 layers of prepreg carbon fiber and are 58 inches in diameter.

Cooling: During engine warm up, thermostats cycle engine water through the oil sump heat exchanger to quickly bring engine oil to operating temperature. Once up to temperature, the thermostats then direct engine water to a series of aluminum tubes within the wing. These tubes are immersed in 50 gallons of water which carry engine heat to the wing surfaces which are cooled by the slipstream. Separate series of tubes are provided for each engine enabling autonomous cooling of either engine. Wing water can be diverted through an auxiliary radiator located in the tail cone for cooling on the ground if needed. The forced induction systems generate high inlet temperatures and induction air is directed through evaporators charged by air conditioning compressors. This system also provides conditioned air to the cockpit.



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Fuel: A 100 gallon fuel cell below the wing supplies fuel to engine-driven pumps which feed the injectors.

Gear: All gear retract aft into the fuselage. The main gear articulates as it retracts holding the wheels parallel to the fuselage throughout retraction.

Wing: The RP-4 wing is one of the most complex ever constructed. Less than 3 inches at its thickest point, it nevertheless contains flaps and ailerons as well as 200 feet of tubing and nearly 400 fabricated fittings and connectors which comprise the cooling systems.

Fuselage: Built entirely of large diameter chrome moly tubing, the fuselage is skinned in 60 thousandths aluminum and is 31 inches in diameter.

Empennage: The vertical and horizontal stabilizers are, like the wing, both riveted and bonded together. The vertical stabilizer houses the nav/comm antennas as well as pitot and cockpit ventilation systems.

Performance: The RP-4 is designed to be a high performance aircraft. (really?)

Eric Hereth, master machinist, fabricator and welder, built all components of this remarkable aircraft from scratch, with the exceptions of engine long blocks, wheels, and hydraulic components. Jerry Baer assisted in all phases of construction.

"Infrared" from a Pilot's view and Bubba's Guide

submitted by Mike Rose

First the latest techno....

<http://www.youtube.com/watch?v=uy3N27zs6cE&eurl=http%3A%2F%2Fblog%2Eamahchewahwah%2Ecom%2Ftag%2Faviation%2F>

This is an F-16 on a visual landing to Aspen at night. The right half of the view is the pilot's normal visual path to the runway during darkness — in other words, totally black. The left side of the screen is the [Forward Looking Infrared \[FLIR\]](#), which paints the heat signature of the outside terrain for pilots so we can see at night as though it were daytime. ... You have to love FLIR ... takes all the fun out of night VFR!

Now here is "Bubba's guide to Infrared technology"

<http://www.youtube.com/watch?v=6mV4ecEbV1s&mode=related&search=>

WORLD'S BIGGEST CHOPPER

by Rod Kuntz

I got these photos from an uncle in Canada recently. The world's largest helicopter landed at a small airport in British Columbia this week. It's destination is a new mine to be used to carry mining equipment and cargo in to the mine. Owned by a Russian company, it's called the Utsky.



Check this thing out!!

Reports are that it needs a very solid, consolidated landing area as the rotor wash will pick up and throw rocks nearly as big as basketballs like projectiles.

Specs include:

- Crew of 6 (2 pilots, 1 navigator, 2 engineers, 1 loadmaster)
- Can carry a large dump truck & an SUV; a semi-trailer will fit inside; or 75 troops ready to go.
- Burns nearly 500 gallons of fuel per hour.
- Has a 360 mile range.
- Costs \$30,000 per hour to rent.
- Total length is 132 feet.

Has 8 blades and they are 2 feet wide.

Looks a bit like a MI-26. If that is the case, it has 2x11,400 shaft HP turbines, has an empty weight of a bit over 62,000 lb. and a max loaded take-off weight (MTOW) of 110,000 lb.

Not bad for a chopper when you compare it to something like an Embraer Regional Jet ERJ-145 (45 person capacity) with MOTW of around 46,000 lb. and a Boeing 737-800 (capacity around 120) with a MOTW of around 174,000 lb.



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Many Thanks to Lee Dillenbeck, Rod Kuntz,
Nick Marson, Mike Rose and Ben Schultz

Hey members, You may have noticed this issue is rather slim and I have resorted to using articles from the *AMA Insider* publication.

The *Insider* collects material from newsletters across the country and distributes it to club newsletter editors.

Please, can't our members write an article, take photos, submit interesting stuff to keep our newsletter afloat.

I would appreciate your contributions. Thank you, Diane Marson

Send to dgmarson@earthlink.net