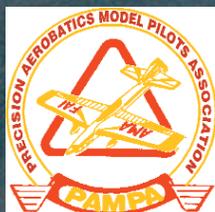
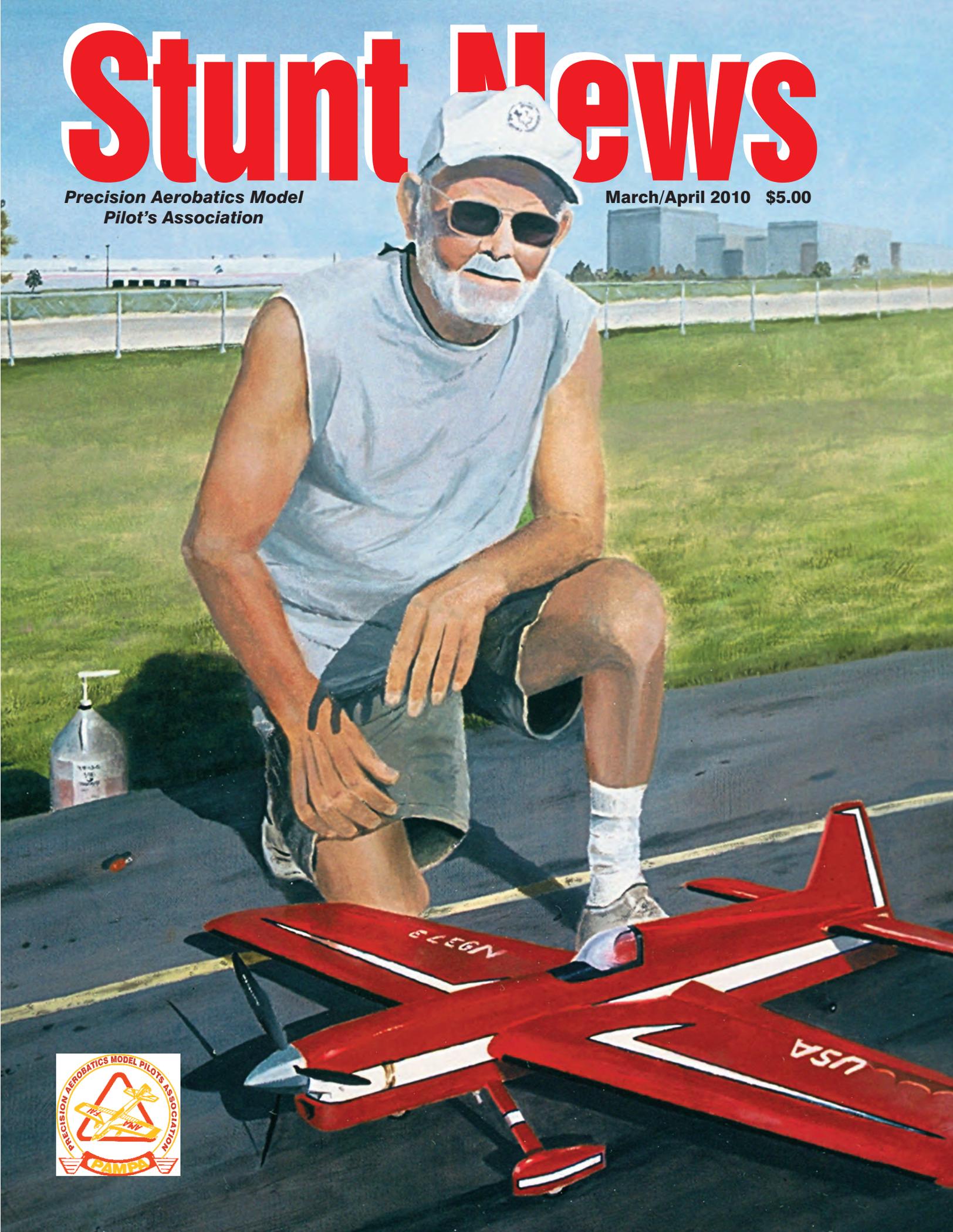


# Stunt News

Precision Aerobatics Model  
Pilot's Association

March/April 2010 \$5.00



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March/April 2010

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The little engine that could

**On the cover:** This month's cover captures the essence of one of CL Stunt's greatest champions, Bob Gieseke. This painting was created by Mike Keville from a photo to supplied to him by Don Hutchinson. It was presented to Bob by his daughter, who was secretly flown to last year's VSC banquet courtesy of Bob Shaw to make the surprise presentation.

**Inside cover:** Joe Parisi continues to produce stunningly beautiful airplanes that also perform outstandingly well. Here is his Hot Pursuit, a slightly modified version of Ted Fancher's Trivial Pursuit. It is powered by a PA 75 with pipe and with it Joe placed second at the Australian Nats. Photo courtesy of Peter White.

PAMPA, an AMA approved Special Interest Group, was founded in July 1973. Objectives include a means of communications among Control Line Stunt fliers, voting on issues affecting Control Line Stunt, and administration of the Control Line Precision Aerobatics event at the Nats.

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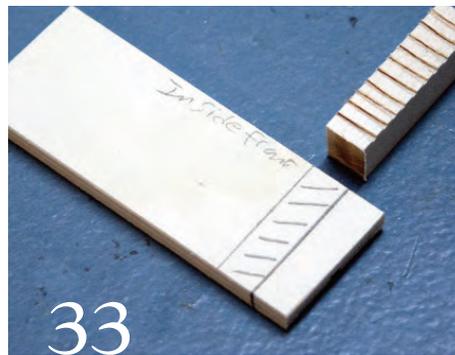
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# President's Column

By Bill Rich

Sooner or later the weather will break and we'll all get to see if our winter building projects were successful.

For the first time in many years, Florida's weather has not permitted much flying since November. It's now February and I'm really ready to hit the field. I guess we shouldn't complain much about the weather here, according to the news; the weather has been horrendous in most parts of the country. I've spent many an hour reviewing past tapes and DVDs of prior contests around the country.

In my previous column I wrote about some of our accomplishments during the past two years. In this column I'd like to review some of the key issues and projects that are moving forward.

Improvement of *Stunt News* will be an ongoing project. I have been very pleased with our new editor's stewardship of *Stunt News*. Liz Helms and Bob Hunt continue to impress with the quality of their work. We are still working towards improving the print quality of *Stunt News*; in particular, the black-and-white photos do not seem to print well in the current format. Take a look at the online version of *Stunt News* to get an idea just how good the photos can look.

This issue should put us back "on schedule" in terms of producing and delivering *Stunt News*. The content of *SN* continues to improve; you can look forward to thought provoking and very informative articles in the coming issues.

I would also like to appeal to all members to consider contributing articles for *SN*. You don't have to be a professional writer—Bob will edit where necessary. How-to construction articles, tips on flying, trimming, self-coaching, stunt clinics, stunt camps, and anything else that pertains to our hobby would be well received by the members.

A perfect example would be a how-to on constructing a rack to carry your planes to the field and work on them while there. Gene Martine just sent me a few photos and materials list for a stand similar to his. This would make a great short article for *SN*. I am going to ask Gene to write this up and submit it to *SN*.

Another example would be applying ink lines; no one does it quite like Gene. I'm sure each of you can think of one or two articles that would be of great interest to our members. Bob and Liz can only work with what they receive. I challenge each of you to consider submitting or encouraging others to submit an article.

Building our membership will also be an ongoing project. I'm not sure if we will ever approach the numbers of past years but I am certain there are many past members as well as potential members we can attract. In these highly stressful times everyone needs to find something he or she can enjoy and share with other like minded individuals.

Control Line Stunt has served me well for over 35 years. I was first introduced to PAMPA while attending a contest in Johnsville, Pennsylvania (as a spectator). I watched the likes of Windy Urtnowski, Jimmy Casale, Lou Dudka, Bob Hunt, and Glen Meador compete. I was hooked! Little did I realize the caliber of the pilots who were flying at that contest.

Even though I was hooked, the key was the encouragement I received to join PAMPA and start competing. Without this encouragement I might not have joined PAMPA and had the enjoyment I've experienced over the years.

I continue to understand the importance of attracting youngsters to Control Line Stunt; anything we can do to introduce them to

Control Line will pay off in future years. I also believe there are large numbers of young adults with disposal income who would enjoy our hobby and benefit from the competition and fellowship. We need to be on the lookout for these

people and extend a helping hand to introduce them to our hobby.

I have always thought we should do a much better job of marketing our online membership. Twenty-five dollars is an excellent value and should overcome the objection of high dues. I would especially like to see more overseas and non-US residents take advantage of this option. The current issue of *Stunt News*, as well as many previous issues, is available online, all in full color.

One project that could go a long way toward marketing PAMPA would be an overhaul and upgrading of our current Web site. I believe we need an interactive, secure Web site that would benefit our current membership as well as enable us to market more effectively to prospective members.

I am certainly no expert on Web sites and realize this may take an investment of money to move this project forward. I for one can see many applications of such a site. The biggest concern would be the confidentiality and security of members' data. If we could get there, we could actually renew memberships, order PAMPA products and plans, contribute to specific fundraisers, and communicate with our membership. The possibilities and applications are endless. The key is to make a commitment to secure such a site.

We need to remember that our current Web site is overseen by a volunteer who has a real job too. Once the upgrade was completed we would probably incur monthly or annual expenses to maintain the site. The availability of a secure site, with interactive capability, has been discussed since I became president. I am going to enlist the EC, as well as members with expertise in Web site design, to make this project a reality. If you have this type of expertise and would like to help with this project, please contact either me or your district director.

We are currently in the process of reviewing current PAMPA Products to upgrade and in some cases eliminate specific products. I believe we need to upgrade the quality of our apparel and look at past sales to eliminate items that are just not being ordered by the membership.

Part of this project would be to separate our plans from PAMPA Products. An outside vendor has made a proposal that has been approved by the EC. Eventually you will be able to order these plans from the vendor. Actually, if we can develop the secure site you would order directly from the PAMPA site.

This year even-numbered districts and the Vice President will be up for election. Brett Buck has indicated he will not run for re-election for the next term. Brett has served PAMPA well and will be hard to replace. I have not heard from the individual directors as yet. I would encourage anyone with interest in the administration of PAMPA to contact me regarding your willingness to serve. This organization is staffed by volunteers; we cannot function without willing volunteers. Please consider giving some of your time to help this organization grow and move forward. **SN**



# Starting Points ←

Beginner registration will open at 8.

The PAMPA Beginner event has been scheduled for Monday, July 12, 2010, and will be flown in the far northwest corner of the 600 X 600-foot grass area located northwest of the "L" pad. Going to the "L" pad and looking directly toward the AMA Headquarters and the AMA museum, you can visually find this site. The flying area for the Beginner event will be located in that line-of-sight.

Beginner registration will begin at 8:00 a.m. and the pilot's meeting will be at 8:30 a.m. We will begin flying as soon as we can. You must have been registered at the AMA "farm house" prior to being allowed to fly on the site. This is a safety and informational rule in place; the AMA needs to know of where you are so any contact from families at home can be better facilitated. You must be wearing at least a Mechanics or Entrants badge.

Beginner is divided into two age categories. Open pilots will fly together and then Junior and Senior fliers will compete against those age brackets only. Two identical perpetual trophies will be awarded: one to the Junior/Senior winner and the other to the Open winner. The perpetual trophies must stay within the Continental USA. Framed award certificates will be given to 10<sup>th</sup> place in each age category.

The New Albany Skyliners, the St. Louis-based Lafayette Esquadrielle, and the Peoria Area Wyreflyers will assist in the running of the event that day. Call or e-mail Allen Brickhaus if you can assist in any way during the July 12<sup>th</sup> event.

Generous stunt pilots and friends have donated engines, kits, handles, and sundry items for the pilots to choose after the awarding of the prizes. Any donations would be welcome as they go to the event fliers only. The young pilots are given a choice before the adults get their choice.

Be sure that each pilot has his or her AMA card, Nats badge, a safety thong on their handle, and an AMA or equivalent number permanently marked on the upper right wing surface, fuselage side, or vertical stabilizer. The markings must be at least one inch high. Contact Allen W. Brickhaus for assistance or donations at: PO Box 206/321 East Patton Street, Golconda IL 62938-0206; abkb801@shawneelink.net; or (618) 683-7611 at home.

## Step up to the plate

We are still trying to fill a few column positions here at *Stunt News*. Writing a regular column is a challenging thing, and it can be frustrating. Hitting a bi monthly deadline with pertinent information is not an easy thing—usually. So, why would anyone in their right mind want to volunteer for such a chore?

The only answer I can offer up is the satisfaction of knowing that you have contributed to the overall knowledge and enjoyment of the hobby/sport. We need some dedicated volunteers to step up to the plate and take on the responsibility of writing a column for the pages of *Stunt News*.

What specifically do we need? I have always believed that since this is primarily

a flying hobby/sport that a column on, well, flying would be a no brainer. This need not, and should not, be a column about specifically competition flying. Rather it should be one that covers the many facets of what happens in the center of the circle. (Hey, that would be a great name for it: "The Center of the Circle.")

We also need a column that deals completely on competition subjects. This column could certainly touch on flying subjects, but would also be one in which the philosophical aspects could be discussed.

I would like to see a new column that focuses on who did what in the past that brought us to where we are today. The fantastic models and technical innovation we see today have a history. We need to acknowledge and chronicle from whence we came.

How about one of you OTS aficionados volunteering to write about this fun event? There is a lot of interest in OTS and we really should have a section here dedicated to it. I started writing a Classic Stunt column a while back but the pressures of putting out the newsletter have made me shelve that for the past few issues.

Here's a thought: Let's alternate an OTS column and a Classic Stunt column. If anyone out there is interested in taking over the Classic Stunt column, give me a shout!

Please step up to the plate and take your turn writing and providing information for your fellow members of PAMPA. Fame, but not fortune, could be yours! —Bob Hunt *SN*

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# Level Laps

By Bob Hunt

**H**i all. Had enough winter? Man, am I ready for spring ...

My part of this report will be short as I have someone new to introduce and I want to let him explain what he will be doing for PAMPA in the coming months and hopefully years.

## Arlie

Those of you who know Arlie Preszler also know of the magnitude of his amazing service over the years to PAMPA. I won't even begin to try to list all the things that Arlie has done for us, mostly behind the scenes and with no glory asked for or given. He's just one of the very best of the "good guys."

Now Arlie needs something from us. I've heard that he's not been feeling well of late and he needs our prayers and/or our good thoughts. So, please take a moment right now and do whichever one of those suits your beliefs and style.

## Mystery Flier for the January/February issue ...

... and again nobody guessed it! Ready? (Drum roll here please.) It was Bart Klapinski! The photo shows Bart at three years of age in 1946. Bart told me that he remembers he was mad at his grandfather, who was taking this picture, because he wouldn't give Bart time to form a model plane from the sticks he's holding before snapping the photo. Bart says he loved model planes even then!

## Missing members in directory

Please check the last PAMPA Membership Reference Manual that you received and make sure your contact information is listed there. It seems that a few are missing. If your information was among the missing please contact the new Membership Chairperson, Noel Drindak, and let him know. Noel's e-mail address is [drindak@googlemail.com](mailto:drindak@googlemail.com) and his phone number is: (518) 399-5939.

## Stunt News print quality

The *SN* crew has been receiving a lot of kudos for the content and graphic layout quality of the past several issues; and for that we are very grateful. However, we have also received a

number of complaints about the black & white photo print quality in the printed issue. Those who take advantage of the fact that *SN* is available to all PAMPA members as an online download at the PAMPA Web site ([www.control-line.org](http://www.control-line.org)) can't understand why all PAMPA members don't just go there and see *SN* in glorious color and sterling image quality. The fact is that many just simply prefer to have a printed magazine in their hands to carry and read wherever (ahem) and whenever they please. To them the poor photo print quality is a nuisance and it's aggravating. Guess what? It's aggravating to the *SN* staff too!

My expertise is in the field of content and editing. Liz's talent is in the graphic layout arena and Bob Kruger's gift is in working on the Internet and making *SN* ready for the printer to download. I'd like to think that we are all exercising our talents well for PAMPA. The problem is that none of us are well versed in the art of printing. Couple that with the fact that we simply cannot afford the very best type/method of printing, and the result is a less than desirable photo rendering quality in our newsletter.

We have tried to work with our printer to solve this problem, and I must say that he (Charlie Arp at Pinney Printing) has been extremely helpful in giving us some things to try. The real problem is that we just don't know what we don't know! And, we really haven't got the time to learn at this point. I don't know about Liz or Bob, but I spend approximately 40-60 hours on each issue of *SN*.

In early February I was on the Stuka Stunt Forum site and saw a thread about the quality—or lack thereof—of the B&W photo reproduction in *SN*. Instead of finding just complaints, I read a very thought provoking post by Larry Fulwider on the probable problems faced by the *SN* staff in attaining acceptable photo quality. It was obvious that Larry knew the technicalities of printing very well and was able to boil some very technical subjects pertaining to it down into terms that we could all grasp. I immediately got out my PAMPA Reference Manual and retrieved Larry's phone number!

I asked Larry if he thought there was



## Deadlines

### Ad and Editorial copy

Issue	Deadline
May/June 2010	March 20, 2010
July/Aug 2010	May 20, 2010
Sept/Oct 2010	July 20, 2010
Nov/Dec 2010	Sept. 20, 2010

**Postmaster:** Send address changes to: Dave Gardner, 15107 SE 145 Pl., Renton, WA 98059-7308

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### Advertising rates: Page size and cost per issue

(H) x (W)	
1/8 page: 2.25 x 3.50 inches	\$10.00
1/4 page: 4.75 x 3.50 inches	\$35.00
1/2 page: 4.75 x 7.00 inches	\$70.00
Full page: 9.50 x 7.00 inches	\$140.00

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something we might be able to accomplish given our limited budget. I also asked him if he would consider volunteering to join the staff as our Printing Consultant. He was more than happy to do that.

I've asked Larry to prepare a piece that introduces himself and one that also states what our problems are and what we are going to try and do to fix them. So, without using up any more ink, here's Larry!

### Stunt News "Picture" Quality

"Well, it just looks like a bunch of spiders crawling over the page to me."

"A few years ago, I was showing a rookie printing trainee the fundamentals of how pictures are printed in books, and she was looking at a small area of a printed picture through a 7 power printer's loupe. Her spider comment was from looking at the little dots she saw through the loupe. 'I thought we were better printers than that!' she added. 'Welcome to the world of halftones on uncoated paper' I said.

"Many of you have commented on the pictures inside a typical issue of *SN*, and found them wanting. We are working on the problem!

"A key word in our discussion is *halftone*. Halftones are what we printers call printed pictures. The pictures in books and magazines are reproduced differently than the digital or analog pictures you see displayed on your monitor, a TV screen, or analog photographs from film cameras. For now, we're only discussing one color reproduction, or black on white (B/W) reproduction. (Surprisingly, color is far, far easier to reproduce!)

"Modelers are unusual in that they are more interested in the technical side of any issue than the 'Average Joe.' So, here is a brief semi-technical overview of where we stand on *SN* halftone improvement, and some of the technical difficulties, and some things we can't change. Also, I'll explain a little of the things we *can* change—i.e., the potential improvements.

"Our first limitation is that presses, xerography, and desktop printers *cannot print shades of gray*. Presses can only print two tones—solid black or white—where white comes from not printing anything at all. From Gutenberg to today, printing has remained an 'on-off'

process. At any point on a piece of paper, a press either prints a solid patch of ink or it prints nothing. Unlike a photograph, we can't print a face a little lighter in one place, and a little darker in another place. Printing is a 'binary' process.

"How do we create the illusion of shades of gray? Halftoning! Here is how halftoning works. Imagine placing a clear plastic grid of  $\frac{1}{4}$  inch squares over a large picture. Now, go in with a felt tip pen, and put a *solid black* dot in each square of the grid, the size of the dot dependent on how gray the picture is in that spot. Fill the whole  $\frac{1}{4}$  inch square for black areas of the picture, and put a pinpoint dot in the square for very light areas. Darker grays: bigger dots. Lighter grays: smaller dots. Some squares will have no dots at all. OK, now hang your grid on a white wall next to the original picture, stand back a few feet, and compare with the original picture. How closely does your grid mimic the original picture? If you have a lot of talent, it might look pretty good at a distance. If not, well ... you're normal.

"After your first try making a picture from dots, you can see some areas where you should have drawn bigger dots, and some places you should have drawn smaller dots. Halftone improvement, in general, is changing dots sizes to approximate more realistic shades of gray.

Today, halftones are computer generated from digital pictures, whether the original was a black and white original continuous tone photograph, or a file from a digital color camera. *To improve a halftone, we make some dots smaller, some bigger, and that is the primary way we play the game.*

"Just for fun, take the January/February issue of *SN*, get a magnifier, and look at the pictures you like and the ones you don't like. (A small 7 power loupe is ideal.) For example, look at the photo of Les McDonald on page 63. Would you put bigger or smaller dots in Les's hair? Face? Sky? Grass? Where are the biggest dots? The smallest dots? Compare the two similar side by side shots of Les on page 58.

How would you change the dot sizes to make the halftone on the right as 'snappy' as the one on the left? Or, how would you change the halftone on the top halftone of John McDonald on page 39?

"One place you can see an obviously

wrong dot size is the Color Selection Guide on page 52. The Jet Black swatch has some big white dots in it!

"Many, many variables affect halftone quality, but a *fundamental* is getting the right size dots. The current *SN* production does not have a step in the process where we can modify dot size. With current technology, that means someone will likely have to look at each halftone, and modify the dot sizes in some tonal ranges of each halftone. With the variety of input, there is no 'magic wand' adjustment we can wave over an entire issue. An overall adjustment *would improve some halftones and would also make others worse*. Individual halftone adjustment implies more prep time, which means money and work."

### "Spider" Dots and Paper

"In the beginning, I mentioned 'spider' dots. In our example where we filled in squares on a grid with a felt tip pen, imagine some bozo smeared some of your carefully crafted dots. Would that improve or hurt your 'dot picture'? Easy answer, huh?

"Let's modify our 'dots on a  $\frac{1}{4}$ -inch grid' experiment a little, to make it more comparable to printing.

"Step one: Take an X-Acto blade and cut a precise hole exactly where you had drawn each little dot.

"Step two: Smooth out a bed of coarse, white sand. Lay your mask carefully over the sand.

"Step three: Mist a light coat of black Rust-Oleum over the whole thing. (Too much paint, and the dots run together under the mask.)

"Step four: Remove the mask, and see what the picture in the sand looks like.

The substrate (sand) is relatively comparable to the texture of uncoated paper. Uncoated paper, common in many books, all newspapers, and *SN* inherently has a surface that accepts ink or toner less uniformly than a "slick" coated paper, such as *Model Aviation* and most popular newsstand magazines. The coated papers not only accept ink more uniformly, more ink can be applied without distortion of the dots. More ink, blacker ink, and greater contrast between the blacks and the white(r) paper. That is what those in the printing business sometimes call 'snap,' which is an intuitively understood word by most everyone. Our dots in the sand look

‘spidery’ in comparison, and our sand is a little dirty.

“Similarly, in *SN*, our printed dots are bigger, fuzzier, and less well shaped than the printing dots in the halftone file.

*Compensating correctly for those size and shape changes (that are sure to happen on press) is the key to printing better halftones.*

“If we did a comparable ‘grid experiment’ to mimic printing on coated paper, we might use frisket paper instead of clear plastic; we might use a 1/8-inch grid instead of a 1/4-inch grid for greater detail; and we might stick the frisket paper to bright white vinyl; and we might shoot with a DeVilbiss, really laying on the gloss black paint. Prettier ‘picture,’ for sure.

“The analogy isn’t too far off the mark. We do indeed use a coarser grid for *SN*. We use 100 lpi for *SN* halftones. *Control Line World* uses 120 lpi for good uncoated paper and a more expensive printing process. *Model Aviation* uses 150 lpi, more or less the standard for

coated papers, and can lay down high ink densities on the coated paper.”

### Improvements?

“Surprisingly, we can do more than you might think. If we can mathematically describe our shortcomings, we can, to some extent, mathematically compensate for them. The goal of our improvement team is to find economical and effective ways to change halftone dot sizes more precisely. I mentioned earlier that there is no ‘magic wand’ that we can wave over an entire issue. Fortunately, we can create sort of a magic wand we can wave over each individual picture. It is a technique in PhotoShop used by printers. We may find something that works as well outside of PhotoShop, or we may fail at finding a way of implementing the known techniques. We’re giving it a whirl, though.

“The improvements get more technical as we move from generalities to specifics—measurements of

reflectance are the inverse of the logarithms of absorbed light, for example, which is what we measure. However, there is a printing history of doing the mathematics so we can ‘fool the eye’ a little better.

“We are fortunate we have a talented designer and a competent printing company on our side. If we can remove some ‘mud’ from the halftones, we can have a very nice little magazine. Personally, I’m pretty optimistic. We’ll see how we do over the next few issues. I’m not sure how much we will have accomplished by the time this issue goes to press. Hopefully, we will see at least the start of some improvement.”

—Larry Fulwider

I think we are all very lucky to have someone with the obvious grasp of printing that Larry does. We were not able to implement any improvements in this issue, but with Larry’s help and guidance, I’m sure we’ll see better “dots” in our future. *SN*

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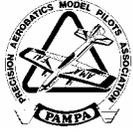
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# PAMPA Membership Application or Renewal Form

Please print legibly. Use one form per member. Make photocopies for multiple registrations.

Membership Year 2010	New Member	Renewal	Address change:
----------------------	------------	---------	-----------------

Name: \_\_\_\_\_ AMA No. \_\_\_\_\_ Age: \_\_\_\_\_

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# Thunder Gazer

## Part II

By Dave Fitzgerald



Dave fuels the Thunder Gazer for a flight at the 2009 Nats. He credits Jim Aron with helping to achieve the stunning paint scheme on the ship.

Well here is the construction part of the Thunder Gazer. This will not be a step by step construction article, but I will highlight differences from a conventional CLPA plane. This is a high performance plane and is fairly straightforward, but requires a certain level of craftsmanship and knowledge. My philosophy on design was, as I wrote before, to build a plane that could cut through wind and turbulence without hesitation. For

years, I have been impressed by Bill Werwage's ability to penetrate wind and fly like it isn't blowing while everyone else was in basic survival mode. I pondered this for quite a while and thought maybe his years of development, flying in a very turbulent site in Cleveland, had led him to a wing with a thinner airfoil, and less drag than the Trivial Pursuit. Less drag helps the engine pull the plane through the wind. However, sometimes drag is a good thing for an aerobatic plane. Maximum lift is not

necessarily hampered by a draggy plane. In fact, it can be helped by a kind of arrow tail-feather-like stabilization with a high drag tail, but I digress. I kept Bill's basic wing, airfoil section, taper, and high point location. I slightly reduced the wing area by not putting on the large bow wing tips from the P-47, and used Trivial Pursuit sized flaps; much smaller than the P-47. The result was a wing that generates adequate lift at greatly reduced maneuvering drag levels. I was concerned that the smaller wing would not provide enough lift with a heavier take-apart plane, but that was not the case. The flaps and elevator are a 1:1 ratio.

Because of the lower drag profile, control of the engine becomes critical. A well mannered engine is much more important. With lower drag, the plane just does not slow down in maneuvers. In fact, if the engine surges at all, the plane will noticeably speed up in a maneuver. This took a bit of getting used to, but the performance is impressive. I already talked a bit about the tail. From my tail experiments years ago, I decided on an airfoiled section to improve round maneuver tracking with decent corners. Corners seem to be less important in the European circuits than it is with an AMA competition. As I said, this model was designed for only one contest.

The rest of the configuration just fell into place within the above design criteria. The nose was just long enough, 10.5 inches, to accommodate an 8.25 ounce fuel tank. The tail I kept long enough where I thought the CG would work given the heavier PA 75 engine over the PA 61, so it ended up at 18.5 inches. I added a dorsal rudder to satisfy Brett Buck's penchant for a billboard-sized aft fuselage, made the rudder to look like a Trivial Pursuit, and voila, a Thunder Gazer is born.

I've had great success with Bob Hunt's Lost-Foam wing on Star Gazers III and IV, so I saw no reason not to continue with Bob's system. Using the Lost-Foam Wing Building System I figure saves around 2-4 ounces. The wing has  $3/4$ -inch asymmetry, and a

larger outboard flap. The outboard flap is 28 inches long and the inboard is  $26\frac{3}{4}$  inches long. The leftover span due to the asymmetry and differential flaps leaves about 2 inches available for a roll tab on the inboard wingtip.

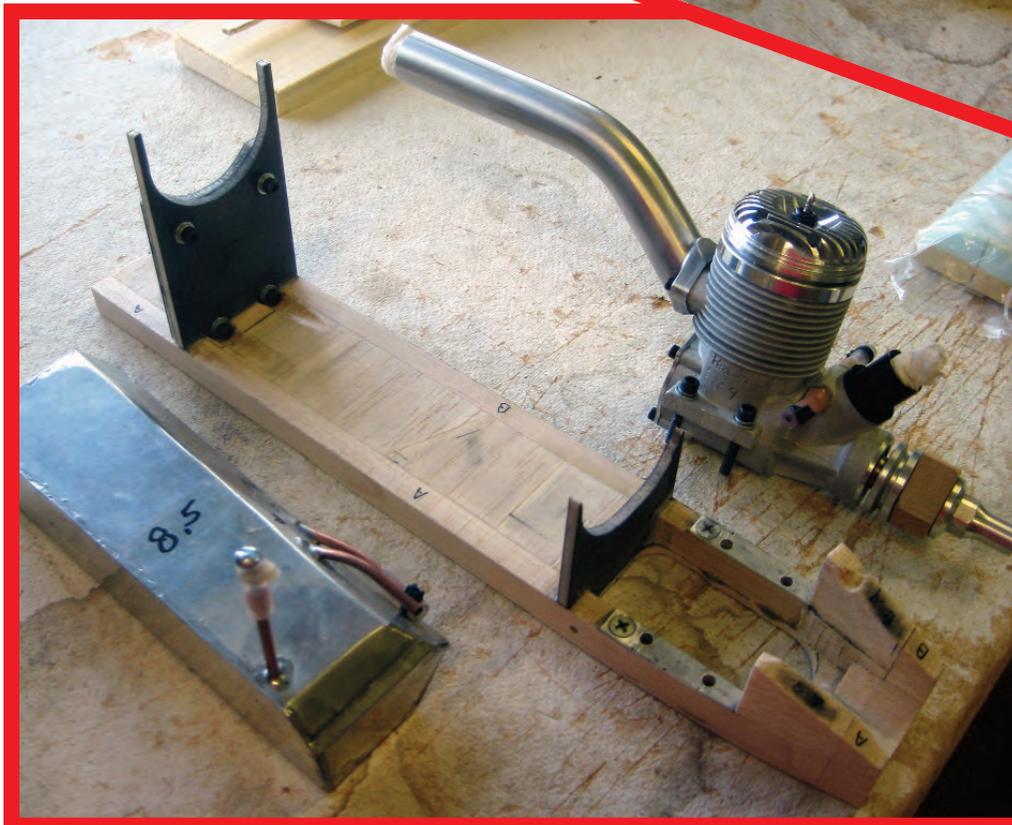
I slightly modified the wing for the one-piece take-apart system. Paul Walker published his Impact in *Flying Models*, dated May, 1991, plan number CF856. I essentially took his system, with his permission, and used it for the Thunder Gazer. This uses a one-piece wing; the fuselage comes off the wing. The rudder and vertical stab come off the back of the fuselage, leaving exposed the saddle for the horizontal tail, and the stab unbolts from the fuselage. This enables a transportation box that is roughly  $1/3$  the size of a one-piece plane. Caution, some airlines, namely Delta, still consider this transport box too large to take as checked baggage. There appear to be no problems with either Continental or United.

As an overall method of construction, I use CA for just about everything. *Do not use accelerator!* This crystallizes the glue and greatly reduces the strength. Mostly I use the thin CA glue, but for parts that need a little more penetration, I use medium, and for plywood or engine mounts, I use the thick. There are very few places I use slow-set epoxy. One place is assembly of the fuselage sides to the engine crutch, then fore and aft wing assembly bulkheads. That's it for epoxy. Other minor stuff is



Above: In order to keep from making the nose any longer than necessary, Dave recessed the top wing bolts—the ones by the cross grain between the rails—into the wood. That way he didn't need clearance for the fuel tank on the heads of the bolts. You might be tempted to use countersunk heads here: don't! That removes too much material on the bulkhead for the main wing attachment point.

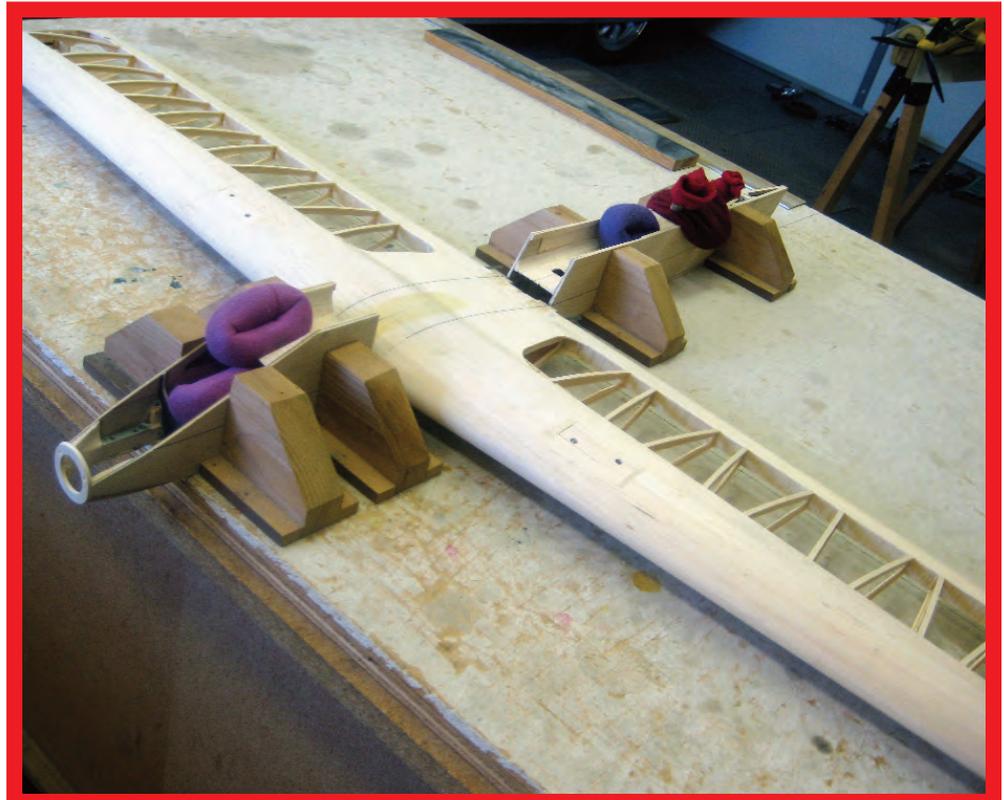
Left: Dave used  $1/8$ -inch carbon laminate bulkheads from Aerospace Composites. It's stronger than plywood, doesn't warp, and is about  $2/3$  the weight. Aft of the front bulkhead, he routed out the beams into a  $1/2$  I-beam cross-section. He used  $1/8$ -inch cross-grain balsa top and bottom on the I-beam rail, and white foam in the middle for vibration damping.





Above: Notice the curved front to the crutch. Mold the fuselage sides to match the curve and you'll end up with a much cleaner taper to the spinner. The  $\frac{1}{32}$ -inch plywood doublers extend to aft of the wing's trailing edge, also note the carbon veil laminated between the ply doubler and the  $\frac{3}{32}$ -inch fuselage sides.

Right: Wing bulkhead installation: Perhaps the crutch aft carbon bulkhead and the wing front bulkheads are the two most critical pieces on the plane. Make sure the fit is absolutely perfect. This determines the engine/wing/tail alignment. Practice fitting these pieces many times before you glue. If you can manage it, glue on the forward wing bulkhead, aft wing bulkhead and the aft fuselage wing mount at the same time. Doing this assures that you won't have any stress in the joints that might form cracks later. Use Saran Wrap between the bulkheads during gluing. You *do* want it to be take-apart after all! The forward wing bulkhead just gets tack glued. Once the glue at this joint has cured, remove the wing and build a supporting box structure around the bulkhead to the wing leading edge. This really forms the strength of the forward wing attachment.



aliphatic resin. Speed of the build was important.

The critical parts are the alignment of the wing bulkheads to the fuselage, and the tail saddle for the horizontal stab. All of the bulkheads that would normally be  $\frac{1}{8}$ -inch plywood are instead a carbon/balsa  $\frac{1}{8}$ -inch laminate from Aerospace Composites. That is the black you see in the pictures. You can essentially install the wing as you would normally, but with an extra bulkhead on the front part of the wing, and aft, angled bulkheads for the rear attach point. All the bolts are loaded in shear; nothing is held in tension.

Use  $\frac{1}{64}$ -inch ply along the top portion of the fuselage/wing interface to form a saddle for the wing to sit in. It's not really part of the wing alignment or loaded, it's just mainly there for appearances. This can be extended on either side of the fuselage, by about  $\frac{1}{4}$ -inch to form enough area for a fillet.

The saddle on the tail is done much the same way, extend the  $\frac{1}{64}$ -inch ply out from the fuselage for a fillet. When installing the wing attachments, bolt the two forward bulkheads together using 6-32 screws. When you install the bulkheads into the fuselage and attach it to the wing LE, use Saran Wrap, or similar material, between the two bulkheads to make sure the glue goes only where you want it. Once you look at the plans and pictures, the method of attachment should become clearer.

Just behind the bulkhead attached to the wing LE, build a balsa box up to the wing high point. This provides much more surface area for mechanical and structural support. It will keep the bulkhead from flexing with only one glue joint on the LE. Warning! Practice taking the wing apart many times to make sure of the fit, and interference.

Practice it with the pushrod in place. Make sure you have enough clearance to slide the pushrod through the

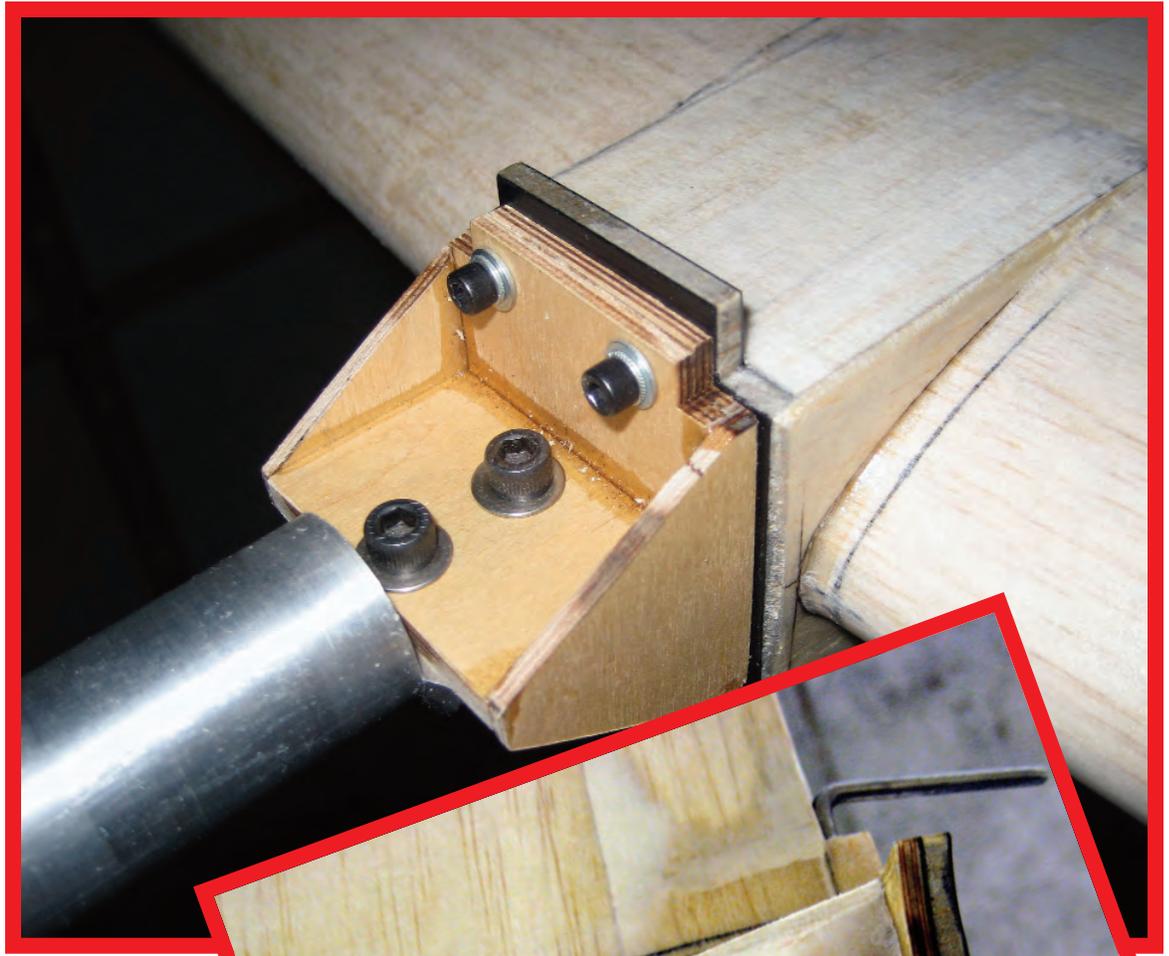


From these two pictures, you can see how the wing fits into the fuselage and how the wing saddle lines the wing cutout hole to form the fillet. Bolt access for the forward bulkhead is via the tank compartment; the aft mount access is through the pipe tunnel.



Right: This photo shows much better detail of the front bulkhead mount, as well as the box around the leading edge. Remember, the entire box fits between the fuselage sides, does not bind on the engine mounts, and must be clear enough for the pipe on the bottom.

Inset: Here is the aft mount minus the fuselage sides. Dave doesn't have a good photo of the fuselage side of this equation, so study the plans carefully. Make sure you have lots of bracing and gluing area on the fuselage side for the mount. It is doubled up on both sides just for gluing area. According to Paul Walker, this area is the only spot he has had trouble with in the past. Make sure to achieve good parts fit here, and even better glue joints.



fuselage, or enough room to attach the pushrod to the flap horn once the wing is almost in place. This is crucial. You don't want to find out you can't install the wing or pushrod after the whole thing is done. Use your favorite ball links here.

The tail, however, is a bit of a tricky installation. First, I essentially built a Lost-Foam tail using a core that, again, Bob Hunt was able to send me. Since the tail is airfoiled, building it straight could be a problem, that is, unless you use the cradle from the tail core. I built it just like the Lost-Foam wing: rib templates cut from the core, then using the cradle to assemble the tail. I sheeted only the stab with  $\frac{1}{32}$ -inch balsa. The elevators are not sheeted to save weight. I also built up the LE and TE of the stab, and LE and TE of the elevator from 2 pieces. All four LE and TE pieces use laminated vertical strips of .007 carbon laminate from Aerospace Composite Products. I would highly recommend using two narrow strips of carbon top and bottom on the stab TE and the elevator LE. Leave about a  $\frac{1}{32}$ -inch gap in the middle, between top and bottom strips. If you don't it is very difficult to install hinges through the carbon laminate.

You can build a foam tail. It's less work, but you might need nose weight if it comes out heavy. I used  $\frac{1}{4}$ -inch dowels, vertical, as hard wood for mounting points into the fuselage. To install the dowels, I mounted the dowels in  $\frac{3}{4}$ -inch round balsa doughnuts. You will need to drill the mount holes for four 2-56 mounting screws.

Since the tail is airfoiled, you can't just casually drill mount holes in the dowels. The front holes will be angled to just about

every surface back there. You drill perpendicular to the saddle mount, where the blind nuts will attach. Make the blind mount doubler and the  $\frac{1}{64}$ -inch saddle piece. Clamp this together with the stab. Then drill the 2/56 holes to ensure perfect alignment; install the blind mounts. Measurements are less than thousandths. This alignment is critical.

The other half of this critical alignment is the fuselage cutout for the stab on the fuselage sides—did I already say that the alignment is critical? The stab cutout holes in the fuselage don't have to be nearly as accurate as the saddle mount and doubler, but the better it is, the less time you will spend on the saddle installation into the fuselage.



Now, with screws in each dowel assembly and screwed together to the tail saddle and doubler, it's time to mount in the fuselage. Again, use Saran Wrap between the stab and the saddle/doubler assembly to prevent glue from making the whole thing not removable; same as the wing installation.

I used thick CA to assemble the tail into the fuselage. This gives you time to assemble for perfect alignment. The stab has  $\frac{1}{64}$ -inch positive incidence—this is important! The amount of positive incidence isn't really that important, but more to make sure that you do not build in negative incidence by mistake. That is fatal and cannot easily be corrected by any amount of trimming.

Once the glue is set overnight, the moment of truth is at hand. Try to unbolt the stab and see if it comes out. Again, practice taking the stab in and out a few times, while checking the alignment every time you install the stab. At this point you can shim one or more corners under the stab slightly to get a reliable alignment every time. It becomes more difficult to do after finishing.

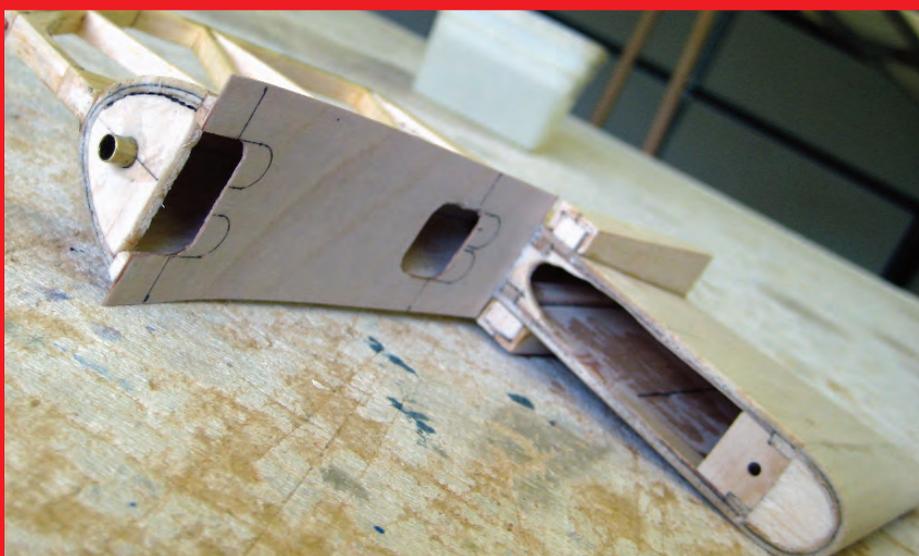
I was also very concerned about fuselage strength around the wing. In a one-piece plane there is a lot of strength normally given the wing by the fuselage sides. With this take-apart method, the wing now becomes a primary carry-through structure for fuselage longitudinal loads. A canopy cutout in the fuselage is a big structural hole, so I decided to go with a solid canopy and make sure the fore and aft parts of the fuselage

Above: Here you can see the finished saddle area and the alignment holes for the pins on the rudder assembly. Once the horizontal tail is bolted in place, the rudder slides forward and is screwed into place using the screw at the bottom of the assembly. Things can and do wiggle around back here, so again, alignment and a good fit is important. One trick: Once the rudder is mounted, use about a 3-inch long piece of clear Scotch tape around the bottom of the rudder/fuselage joint to keep the assembly immobile, and to seal the joint from exhaust residue.



You can really make the rudder break line anywhere you want in the back, but Dave chose the aft end of the stab because once the rudder assembly is removed, the pushrod/elevator horn is exposed and can be easily removed for disassembly or adjustment.

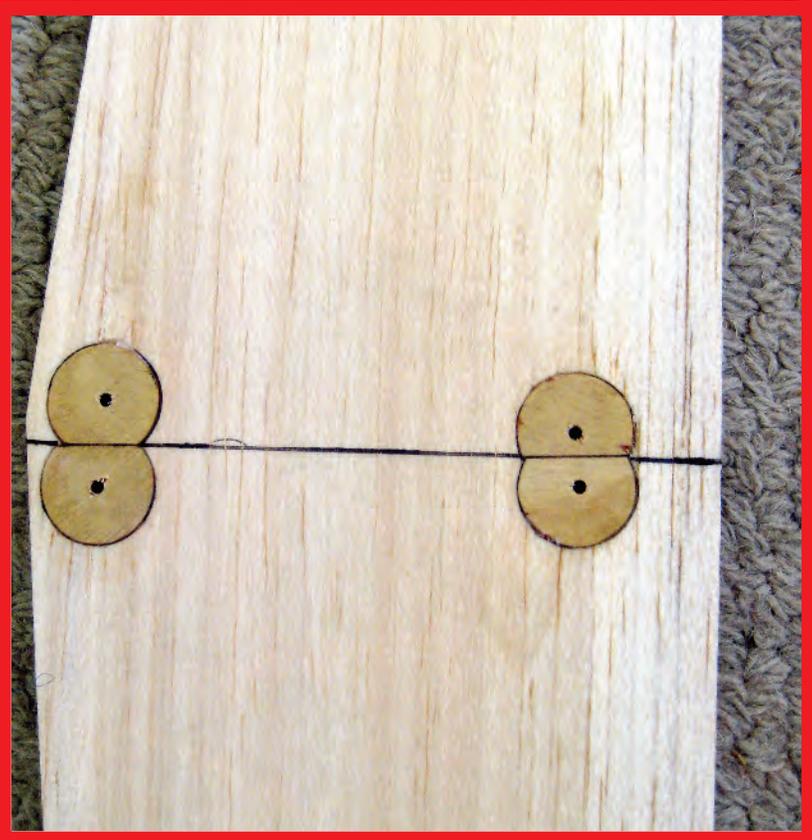
Left: At the bottom of the rudder assembly, you can see the hole for the one assembly bolt into the fuselage blind mount.





**Above:** Interior view of the horizontal stab: This is actually the tail for Dave's new plane, but the structure is the same. You can also see the carbon strip in the trailing edge to the stab.

**Right:** These plywood inserts on the bottom prevent you from crushing balsa when you tighten the mounting screws. These back up directly to the 1/4-inch dowels.



over the top of the wing didn't have a big structural hole for a cockpit.

I only have a few other tricks that may be of some help. All my top and bottom fuselage pieces are molded. The fuselage sides are  $\frac{3}{32}$  inch, as is the final thickness of the top and bottom molds. It is very difficult to mold  $\frac{3}{32}$ -inch balsa to a small radius, let alone to try to find a good piece of  $\frac{3}{32}$ -inch A-grain to mold. So, I mold two pieces. I use  $\frac{1}{16}$ -inch on the external side, with another  $\frac{1}{32}$ -inch piece under that for a total of  $\frac{3}{32}$ . It's much easier to mold using the two pieces.

Now for the secret part: It's a lot easier than, and much stronger than, carving a block. Also, I include a layer of carbon veil in between the two pieces of balsa, then glue them together with aliphatic resin, or white glue. Then in the finishing process, another layer of carbon veil goes over the balsa instead of paper, and

Here you can see the tail bolt pattern. When assembling the tail to the fuselage, the alignment with the tips vertically with the wing is essential of course, but also the wing hinge line to the stab hinge line is very important. No matter how tight you make your tolerances and holes, measure and check alignment every time you assemble the plane because there will be wiggle.



you have a multi-layered carbon/balsa laminate that is far stronger than balsa alone, and resists being sucked down over the formers for that starved dog look. The resulting piece ends up just as light as a one piece, but much stronger for only a little extra work.

Kevin Ferrell paid me a few visits this last winter, to watch how to build a take-apart plane. During one visit, I was using a fuselage drawing with the engine crutch laid on its side, to determine tank and fuel tube placement. I typically will plan this out and practice taking the engine and tank in and out over a couple of days before I finally decide on tank compartment geometry.

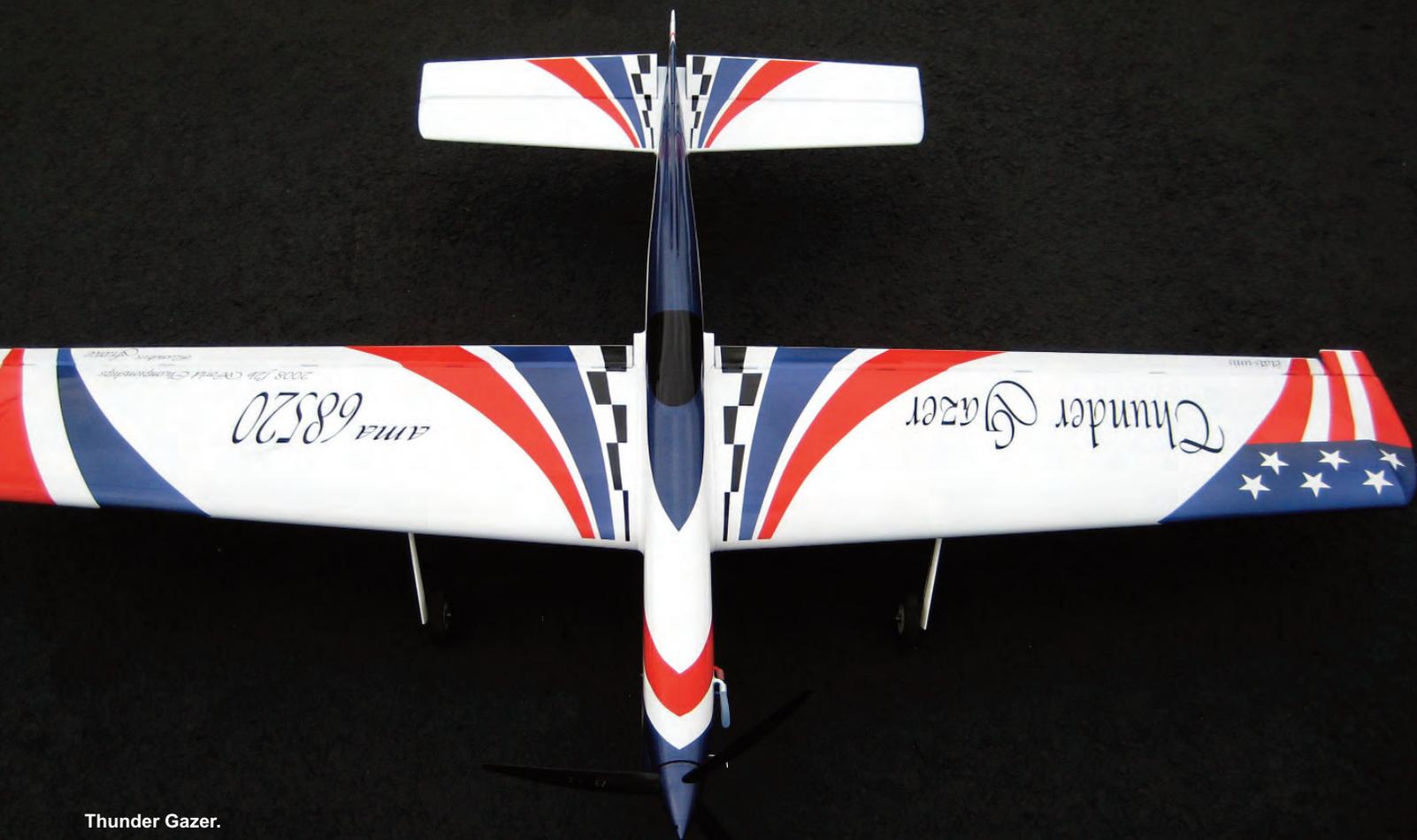
It is never too early to plan how you will run your fuel tubes from the outside to the tank. Also, the screw heads from the wing LE attach bolts are installed through the tank compartment. Make sure you can get to the screws and install/remove them with ease. Again, practice this several times before you decide on final locations.

The bolt heads will protrude into the tank compartment, taking up about  $\frac{1}{4}$ -inch more space. You might be tempted to use countersunk screws—don't do it. This removes too much material to yield any strength in the fuselage bulkhead mating surface. To counter the space issue, I recessed the top bolts up into the cross-grain wood between the engine mounts. I also placed the lower bolts low enough to be out of the way of the tank, thus saving  $\frac{1}{4}$ -inch of nose length.

I talked to Paul Walker extensively about assembly. He recommends, and I agree, that when you install the bulkhead into the fuselage for the wing LE, do your best to install the aft mount point at the same time. This will ensure a perfect alignment. What you don't need is for the plane to go together slightly differently every time you assemble it. The most critical attachment point on the entire plane is the Trailing Edge mount. The highest stressed point of load is concentrated all at the wing trailing edge/fuselage joint. Maximizing glue surface area on the mount points to the fuselage sides is very important—for both surfaces of the joint; the wing side and fuselage side of the bulkheads.

Paul Walker uses a set of jigs for alignment and assembly. I have favored using a very flat table and performing the assembly upside down on the top edge of the fuselage sides. I then turn the plane over for the tail saddle mating. Again, accurate fuselage sides are critical. Take your time laying these out. Pay particular attention to the wing cutout and tail incidence.

Also, a trick Ted Fancher and I learned several years ago from Bob Whitely is to put in just a bit of down thrust in the engine crutch. One eighth inch over the 12-inch engine bearers equates to just less than one degree. I also cut the front of the engine crutch sides to match the curve of the nose into the spinner, then when I glue the  $\frac{1}{32}$ -inch ply doublers on the nose, I mold the matching curve into the front part of the nose. I think this gives a little more strength and rigidity in the front versus sanding the sides for the spinner nose ring.



Thunder Gazer.

### Finishing

I use mainly Sig Dope for finishing my models. I used the Phil Granderson method of color application and decaling, and the Jim Tichy system of rubbing out the finish to a high gloss.

To start with, the flaps, fuselage, and tail each get a layer of .2 carbon veil in place of paper or fiberglass. I also only use Sig Lite-Coat for the base coats—no nitrate. I apply two coats of Lite Coat clear for the base and then I apply the carbon veil. Next I apply two more coats of thinned clear, one or possibly two coats of Sig Sanding Sealer with white, and a hint of light blue added for a better base for the first color, white. This coat is sanded back down to the carbon veil.

The base color is Sig White with automotive white toner added for better coverage. Automotive toner is the material that gives color to automotive paint. This material is mixed or added to a carrier medium, then sprayed on a car. The medium is the heavy part of automotive paint, so you add automotive toner to clear dope and get the best of both worlds—and any color under the sun your heart could desire.

Apply your masking and laser masks. The Metallic Blue is PPG automotive toner in Sig Lite-Coat clear. The automotive toners are very inert and don't seem to react at all to the lacquer type dope paints. You do have to be careful, even though they seem to be compatible; sometimes it is difficult to get other coats to stick on top of the automotive colored dope base. When finished with the color coats, apply five thinned light coats of Sig Lite-Coat clear.

Since I was on a very tight schedule, I elected to fly the plane

as soon as the painting was finished. I flew it for about 3 weeks before I rubbed it out with Jim Tichy's help. Jim is a master craftsman. All his planes are beautiful, as I said earlier, I don't try to reinvent the wheel, so I listened to Jim and enlisted his help in the final finish process. This process starts by wet sanding with 800 or 1000 sandpaper. Then just apply, by hand, Ghoram's paste silver polish until you have your desired shine. The effort is spectacular.

I was also concerned about fuel proofing the nose; Jim Aron recommended PPG clear. This was mixed as, 893 PPG Global Performance Clear—3 parts, D871 Medium Thinner—2 parts (twice what is indicated), D884 High Solids Hardener—1 part. I shot the automotive clear *on the nose only* to further fuel proof the areas most likely to be contaminated with raw fuel. A lot of effort is required to rub out and feather the overlapped area, but when finished you really can't tell where one starts and the other stops. Do not wait more than a couple of days to rub out the PPG. It becomes so hard when it is fully cured that it will take twice as much work to rub.

### Final thoughts

Basic flight trim numbers are: 0 degrees engine offset, 0 degrees rudder offset. Center of Gravity is about 30% back from the leading edge. The leadouts are positioned  $\frac{3}{8}$ -inch aft of the CG. I built in  $\frac{1}{2}$  ounce of tip weight, and added another  $\frac{3}{4}$  ounce for flight for a total of  $1\frac{1}{4}$  ounces. The flight weight is 64 ounces. Lighter would be better. Fly and trim as you desire. I have found the Trivial Pursuit/Star Gazer series very forgiving on

trim, and so is the Thunder Gazer. Trim as you like, this is a pretty good starting point. If you are interested in the plans or a kit of the Thunder Gazer, Eric Rule of RSM will have them both available soon. <http://www.rsmdistribution.com> and [RSM1RULE@rsmdistribution.com](mailto:RSM1RULE@rsmdistribution.com); (951) 678-1406.

In the end, I had a lot of help and I couldn't have accomplished this without many good friends. The Stunt community is made up of many very talented people in many disciplines, and I'm proud to call this my sport. Please feel free to call or E-mail me with any questions you might have. If you are a PAMPA member, I am also listed in the PAMPA membership directory: <http://www.stuntnews.org>. **SN**

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## “May the power of Tesla be with you.”

**Great batteries for E-CLPA:** Hyperion Batteries are perfect for our CLPA application. After many years of using the excellent Thunder Power batteries, I have converted all my ERC and ECL planes to Hyperion. An ERC flying buddy of mine is an aerospace engineer and tested all the batteries available for our hobby. He found that the Hyperion batteries were the best, at any cost.

Their hybrid RS Nano Technology gives them four times longer cycle life. They can be charged at a 5C rate, and fully charge in about 12 minutes when using a balancer during the charge. I am not brave enough to do a 5C charge but I do charge them at a 3C rate which gives a full charge in less than 20 minutes.

They come each in their own easy-open box that I use for storage and protection in my battery carry case. A 4S 4000 mAh 25C battery costs \$103. A 5S 4000 25C battery costs \$128.

Even after Thunder Power recently reduced its prices by 25%, (now about \$134, \$164 for the above, in 20C) the Hyperion batteries are still about 75% of this new lower TP price. I would still use Hyperion batteries if they were the same price as TP.

Please don't misunderstand me; Thunder Power batteries are still excellent for our use too. They are partially assembled here in the USA, and now with their new lower prices they are a good value too.

Please be very careful when using “off brand” batteries direct from China with our CLPA planes. They have a much shorter cycle life and have reliability issues that are unacceptable for our “hi-wire” use. With the low price of the excellent TP and Hyperion batteries there is no need to try and save a few dollars with “cheap” batteries. I think “Penny wise pound foolish” applies here.

As always, first check with your LHS for these batteries. If not available there, here are a few helpful links (When you go to the first link below we always have a current video on the first page that shows a new plane flying at our ERC/ECL field. I will try and get an ECL video up with my new P-47 ECL plane soon):

USA West: [www.pchobbies.com](http://www.pchobbies.com) (Call for info and order)

USA East: [www.allerc.com/product\\_info.php?cPath=3\\_4\\_93&products\\_id=4524](http://www.allerc.com/product_info.php?cPath=3_4_93&products_id=4524) (This site has detailed battery info)

When ordering your batteries and Ultra Dean Plugs from your LHS, or the above sites, also order the “EZ Solder Coupler” for Ultra Dean Plugs, 10 pieces MPI Maxx Stock No. 2818. These will make soldering your Dean Plugs a million times easier!

This is a fantastic ECL product for Deans plug users! Finally, an easy, inexpensive solution to the sometimes “too tight” Deans Plugs problem. This product is made in the USA and will make your ECL experience more enjoyable. I have put

them on all of my 32 LiPoly batteries. You can order them factory direct below from [www.hdiproducts.com](http://www.hdiproducts.com) or call (574) 753-6621.

**Progress in CLPA over the years:** Progress is often slow in CLPA, but we are moving forward. The CL modeling world has seen technological progress throughout its brief 60+ year history. Most of this progress has been with our power systems.

I remember seeing my first ignition engine when I was about 6 years old. It was big, heavy, complex looking and cranky to start. I only saw it run once; it had some problems and I never saw it in the air. It was the mid-1950s and the other people at our park were using “modern” glow engines.

In all my half century of modeling, I never heard one person say that we should have stayed with ignition engines and never moved forward using glow engines, never, not even once. Then came the excellent Dean, Rich and Bob tuned pipe idea for CL engines, providing us with a leap forward in power and noise reduction. The “old guard” fought them tooth and nail, with threats to ban the evil pipes before they ended modern civilization as we know it.

Then came smooth, powerful four stroke engines that are a perfect match for CLPA, smooth, powerful, torque right where we need it, and quiet. Without a perceived advantage over piped engines, they seemed to sneak in without too much controversy. Now we have a wonderful chance to make another real positive leap forward in technology by using electric power systems in CLPA.

Electric power solves several problems we face in CLPA. Electric power is extremely reliable; it does not take years of learning to get a consistently reliable/powerful run; it is quiet enough to save flying fields and open up new ones; and it does not use nitro that is rapidly disappearing and getting ever more expensive (even non-nitro model fuels are getting expensive). Even with these important advantages for our part of the model hobby, we still have some from the old guard who are trying to impede and even stop the progress of electric power systems in CLPA.

I came back to CL as a retread a few years ago, an old Combat flier from the 60s, 70s. I tried using a wet system to fly CLPA, and like everyone at the field I spent more time “fiddling” with the power system than I did flying the full pattern. After a few weeks I gave up on wet systems.

I had been flying ERC for many years and it was an easy transition to use this power source in my CLPA plane. With the help of Will Moore and his timer setup I was up and running in a flash. After a month of flying, I entered my first CL contest in over 30 years. It was not a pleasant experience.

Instead of having fun I had to fight off a protest against my electric power system. After several unpleasant discussions over the rules, I finally won the right to continue flying. The same scene was repeated at the next contest. At the third contest my scores from one judge were 70 points lower than the other judge.

I asked a friend about it and he told me that Clyde (not real

**After a month of flying, I entered my first CL contest in over 30 years.**

name) hated ARFs, hated MonoKote, and really hated electric power. He had told my friend that electric should be banned from CLPA. I of course had a MonoKote covered ARF with electric power. My friend said I was lucky I did not get an even lower score from Clyde.

A similar incident happened at my fifth contest, only here there was a 90 point difference and I was told by friends that the reason was the same. At this same contest I was called a cheater for flying an electric-powered model, and this was in front of other entrants just before my flight. Fortunately other entrants voiced a more positive opinion of my electric entry to help offset the negative views.

I have heard stories from other parts of the country where there is a negative bias against electric-powered planes. I hope we can move forward without this bias in the future. It would be good for the future of CLPA.

I would like to thank those of you who have contacted me on this issue and asked me to write about it. I would like to hear from those of you who have any information about the acceptance of electric systems in your area. I would like to hear from both sides of this issue so please keep those emails coming.

### And the survey says...

There was an Electric CLPA Survey taken at 2009 Golden State Championships. This survey (results included here) was from a random selection of 24 pilots at a major contest. If the pilots at this contest brought some of their trophies there would have been 19 National Championship trophies and two World Champion trophies. Most of these pilots are from Northern California and the Northwest. Some were from the very conservative Southern California area, so it is a cross-section of CLPA pilots in the West.

Overall, I found the results encouraging for the future of electric power in CLPA. You may want to answer the survey questions and see how your views compare with other competition pilots. We are making progress, slower than I had hoped, but faster than I feared.

Next time we will have an interview with a past World Champion who flies a beautiful electric-powered plane in competition. And we will also have photos of several electric installations.

Till next time: "May the power of Tesla be with you." *SN*  
Rudy Taube, e-mail: [imacone@aol.com](mailto:imacone@aol.com)

PAMPA STUNT NEWS SURVEY 10-09	Please circle one		
I have been flying CL for approximately. _____ yrs.	2 0%	5 37%	10 + 62%
I am a member of PAMPA	YES 75%	NO 20%	NEVER 4%
I Compete in approximately. _____ contests per yr.	1 16%	2 8%	3 + 75%
I am pleased to see Electric power allowed in CL events	YES 83%	NO 8%	NOT SURE 8%
Should E power be allowed in Old time Stunt?	YES 41%	NO 50%	NOT SURE 8%
Should E power be allowed in CLASSIC Stunt?	YES 41%	NO 41%	NOT SURE 8%
Should E power be banned from all PAMPA contests?	YES 7%	NO 87%	NOT SURE 7%
Do you think E power will HELP or HURT CL ?	HELP 75%	HURT 0%	NOT SURE 25%
Do you think E power will dominate CL within _____ years.	2 4%	5 50%	NEVER 45%
Do you think E power has an unfair advantage over wet systems?	YES 16%	NO 75%	MAYBE 8%
Do you read the electric column in PAMPA Stunt News?	YES 48%	NO 52%	SOMETIMES 0%
Do you think you will use E power in a CL plane within the next yr. ?	YES 29%	NO 45%	MAYBE 25%
Are you familiar with the ECL power systems in use today?	YES 41%	NO 29%	A LITTLE 29%
Would you like to learn more about E power for CL?	YES 67%	NO 20%	NO INTEREST 12%
Please write any E power comments you have below:			
<b>Rudy Taube, PAMPA SN ECL COLUMN, email: <a href="mailto:imacone@aol.com">imacone@aol.com</a></b>			

# It's In the Details

By Matthew Neumann

Although they are rather simple to make, there are a couple of different ways to make engine crutches for CL Stunt models. That is what this column is about this time.

The basic parts are essentially the same no matter how you construct them. You need two maple "sticks" and some balsa or foam filler pieces. For a typical Stunter the maple pieces or bearers are usually  $\frac{3}{8}$  by  $\frac{1}{2}$ -inch or  $\frac{1}{2}$ -inch square by however long is the nose of the plane. These usually have a cross-grain balsa or foam filler pieces put between them.

What I would like to do is discuss a couple of methods to make the crutch lighter yet still have sufficient strength to hold up over time.

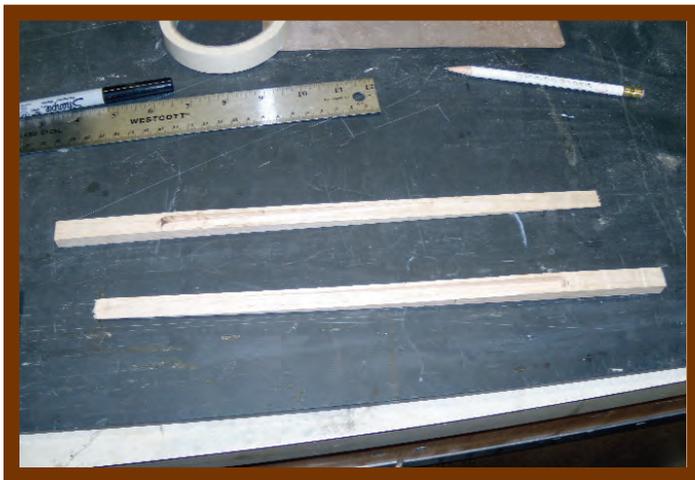
The first thing I would like to talk about is the maple pieces. These are the most obvious place where concentrated weight comes from. Let's face it; maple is considerably heavier than balsa or foam. So how do you cut back on the weight of these pieces without losing too much strength?

An easy way is to drill holes in the maple bearers. A  $\frac{1}{40}$ -inch diameter hole is, perhaps, the most common. These are drilled horizontally through the maple pieces starting about  $\frac{1}{2}$  inch behind the engine and are spaced appropriately all the way to the very back end of the crutch.

Although this has proven to work well for many people, it is not my first choice. I like as much gluing surface as possible when gluing my crutches to the inside of my fuselage sides. The more surface area the stronger the joint. The holes take away a lot of surface area for gluing. With the engine hanging on the end, I want as strong of a joint as possible.

Another popular method is to taper the maple pieces. Start the taper about  $\frac{1}{4}$  to  $\frac{1}{2}$ -inch behind the engine and go to a width of about  $\frac{1}{16}$ -inch at the back end of the bearer. This can easily be done with either a band saw or jig saw. This is the method I use.

After cutting with the band saw, I usually sand the sawn edges to get rid of the roughness. Most people would stop here but I go one extra step. I use a router table and cut out a notch in my bearers, taking out a few additional grams. This notch is about  $\frac{1}{4}$  inch wide but does not go all the way through the bearer. I leave about a  $\frac{1}{16}$ -inch thickness on the gluing side. When this is done it forms a "C" channel in the bearer.



Here is my maple pieces tapered and notched.

One word of warning here: When using a router be very careful. You have to use a guide of some kind to make the notch.

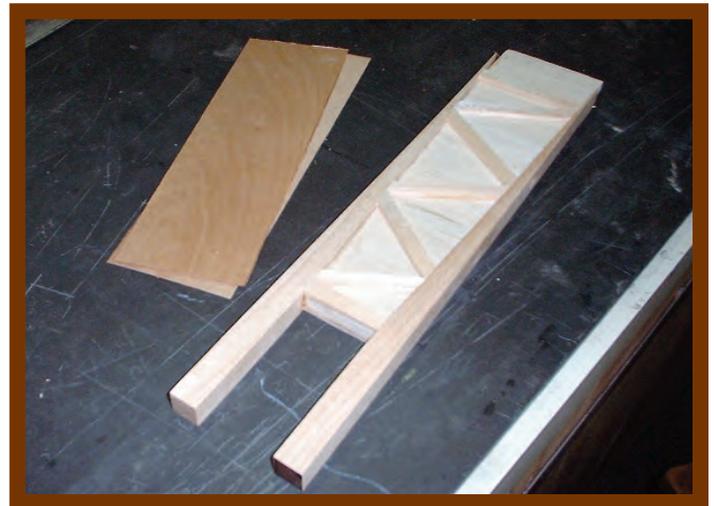
**Stunt News 20**

*Do not attempt this freehand.* I have a router table with a fence to guide my pieces. Make sure you hold the pieces very securely to the table and fence so it does not kick back on you. A very good tip to help prevent kick back is to only rout out about  $\frac{1}{16}$  inch of material at a time. Maple is very hard and routers just do not like to take too big of a bite at once.

Now let's discuss the filler material between the bearers. The most common method is to glue a piece of  $\frac{1}{2}$ -inch balsa in between the bearers with the grain running from side to side and not the length of the fuselage. This adds a lot of torsional strength as well as adding some vibration dampening.

Again I go a step further and have done this in two different ways. In the past several planes I have used a piece of  $\frac{1}{4}$ -inch thick balsa and glued it cross-grained (again, with the grain running from side to side) inside the notch of each bearer. I then took some  $\frac{1}{8}$ -inch thick by  $\frac{1}{4}$ -inch wide pieces of balsa and glued them in a zigzag pattern on the top and bottom. The bottom pattern would start on the opposite side of the top so if you could see both sides from the top or bottom, the patterns would form "Xs."

I then put a piece of  $\frac{1}{64}$ -inch plywood top and bottom that extends from the outside edge to the outside edge of the crutch. This method makes a very light and twist resistant crutch since you have air pockets instead of balsa filling in the entire area. The plywood also makes a harder surface for the "top" surface of the tank compartment, requiring less epoxy and dope to seal it from any fuel that may seep into the area.



Here is a picture of the zigzag method. The center piece of cross-grain  $\frac{1}{4}$ -inch balsa is then zigzagged with  $\frac{1}{8}$  by  $\frac{1}{4}$ -inch balsa and then covered in  $\frac{1}{64}$ -inch plywood. Sorry for the low resolution, this is the only picture I have of this method, but it should still give you a good enough idea of what I mean.

On my latest plane I have done something slightly different. I got the idea from David Fitzgerald in one of our conversations. Instead of using a balsa core, I used a foam core, replacing the  $\frac{1}{4}$ -inch cross-grain balsa with an extremely light  $\frac{1}{4}$ -inch sheet of white bead foam. I then put  $\frac{1}{8}$ -inch cross-grain balsa top and bottom to finish filling in the gap and finished it off with my usual  $\frac{1}{64}$ -inch plywood all the way across top and bottom. David fills the void completely with foam and then puts  $\frac{1}{8}$ -inch balsa cross-grain top and bottom. I like to use the  $\frac{1}{64}$ -inch plywood

because this gives more room in the tank compartment without the need to raise the engine that much higher on the bearers. Also, the plywood is less absorbent than balsa so if you do get a fuel leak in the tank compartment, you are less likely to absorb the fuel into the wood of the plane.



This is a picture on how I jig the engine crutch itself. I use two of these clamps to put pressure the entire length of the crutch. I can adjust the pressure by twisting the different knobs. Notice the cardboard. I use this as a guide to make sure the crutch is the same width from one end to the other. Also, when gluing, I like to use either 15 or 30 minute epoxy glue. It is fuel proof, flexible, and gives you time to adjust anything that needs adjusting before it sets up. Another jig you can use is one of the commercially available fuselage jigs. I did not use one because I don't have one. I will fix that with my next plane.



This is a picture of the bearers and the 1/8-inch balsa pieces ready to be installed. Notice the taper on the balsa to coincide with the taper of the maple pieces. Also note the grain direction.



This is a picture of the balsa installed in the crutch to finish filling in the gap. Also notice the maple pieces in the top right. These are to raise the engine off the main bearers to get more room for adjustment for the fuel tank. With this crutch I used foam and balsa. On my next crutch I plan to use all foam. I figure I saved about 1/4 ounce using the foam in my current crutch. The next one with all foam I should save even more.



This is what my engine crutch looks like after I install the foam in between the maple bearers.



This is a picture of the crutch and the plywood pieces ready to be installed.



This is a picture of the weights added to the crutch when I install the plywood pieces. Use epoxy glue and let it cure overnight. The plywood serves two purposes. Since it is considerably denser than balsa, it does not absorb oil as easily making the tank compartment more fuel resistant. It also ties all the pieces together giving much greater strength.



This is a picture of the completed crutch with the maple spacers and aluminum engine pads installed. The spacers along with the aluminum pads raise the engine  $\frac{1}{4}$ -inch off of the main crutch to give extra room to shim the tank if needed. The entire weight of the crutch is 63 grams. The crutch is 12 inches long by  $2\frac{1}{4}$  inches wide by  $\frac{1}{2}$ -inch tall except for where the engine sits which is  $\frac{3}{4}$ -inch tall.

All in all, making crutches is just not very difficult. The biggest thing is to make sure they are flat and have the same width from front to back. If the width varies, you will have trouble lining up your fuselage in the horizontal plane later on.

Also notice the black surface in the pictures. This is a piece of chalkboard that I found. It is perfectly flat and works well when you need to build smaller items on a perfectly flat surface. Building the crutch flat helps to line up the fuselage sides in the vertical plane later on. Not only that, but any twist will also make it harder to properly mount the engine as it will put added pressure in the case. That is something you do not want.

Remember, it is in the details. *SN*

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By Peter Germann



Claus Maikis: in search of excellence.

It was undoubtedly Claus Maikis who transferred the U.S. “beautiful airplane” paradigm to the European Stunt Scene in the early 70s.

The community over here owes Claus much for having brought us the eternal challenge of building the next airplane even more attractive and better. It was Claus, too, who first lived up to what he calls the essence of CL Aerobatics: The everlasting search for harmonic alliance between technical requirements and aesthetic needs.

Ever since, Claus has exercised sustainable influence on the F2B community by publishing many excellent airplanes, each one demonstrating the timeless beauty of a well built Control Line Stunter.



The beauty of a Control Line Stunt airplane.

## Lifetime Achievement Report: Claus Maikis

### Year and place of birth?

1939, Mannheim, South-Western Germany.

### Which was the year when you started to fly Control Line?

In 1955, when I was trying to master obscure fun type CL airplanes, not necessarily flying very well, but first of all being beautiful.

Around 1960 I entered Free Flight competition flying. Due to lack of suitable sites I then went back to Control Line, where I competed for a couple of years in F2A (Speed) and F2C (Team-Racing) until finally finding F2B (Stunt) being the ideal category for me.

### What are your other areas of interest and/or other aeromodelling categories practiced?

I do enjoy riding motorcycles and have owned a Yamaha SR 500 for a couple of years. What I really love to do, too, is sailing where I have had the privilege to own a Top Cat catamaran for many years. Otherwise, I have a passion for applied aesthetics, such as photography, drawing cartoons, water color painting, and graphics of all kinds.

### For you, which have been the outstanding F2B events in your career?

Witnessing, as a spectator, the 1970 World Championships in Namur, Belgium. It was there where I for the first time had the chance to see perfectly well built and beautifully painted models. Of course the airplanes of the U.S. Team (Werwage, Gieseke, Phelps) left me with the deepest impression because of their unseen before quality of painting and they had ink lines, too! It was in the following winter when I then built the most probably first German Stunter with ink lines.

### Which has been your best so far F2B airplane and why?

Actually, it has been two airplanes. First the M35 inspired by the full-size

Messerschmidt M 35 trainer airplane. It was quite lightweight and driven by the ST .60. The airplane brought me a ranking on 18 at the World Championships.

The second airplane was CHINA CLIPPER, built for the 1994 Worlds in Shanghai, China. Despite it being a bit heavy I was able to perform quite well flying it in a number of European contests.

**From your point of view, which are the essential inner values of building and flying CL Stunt models?**

Despite of, or perhaps because of, its simple technology CL Stunt offers easy access for those with a less deep technical

background and attracts at the same time those being challenged by the question of how to bring a simple system to utmost perfection. The Stunt community really appreciates its wide base of designers, builders, painters, pilots, and such very much and always pays tribute not to winners alone!

The building and flying of Control Line Stunt models embraces an extraordinary wide range of creative and personal fulfillment which is possibly not easy to be found in other sports. Technology means civilization and Aesthetics is equal to culture.

**Your opus has been and is undoubtedly significant for the Control Line Stunt Community. Today, what would be the message you would like deliver to the community?**

Recent developments, such as commercially available lightweight highly competitive airplanes, seem to offer a shortcut along the road to success. By purchasing competitive airplanes some try to eliminate the effort and the ado of building. I consider this a major misunderstanding because "The journey is its own reward." Overlooking this very basic paradigm means neglecting the essence of what we do. Or, as Brett Buck puts it: "Excellence is not a destination; it's a journey." *SN*

—Peter Germann  
January 23, 2010



Above: M 35,  
SuperTigre .60.



Right: Competing  
in Switzerland.  
Photo by Claudia  
Kehnen.

# We Have the Technology

By Noel Drindak

**F**uel Tubing and Fuel Filters: How much of an effect do they have? This column first appeared in *Stunt News* almost ten years ago. I'm repeating it because it addresses topics that are still being discussed, and because misunderstandings still exist. In addition, it explains "The Great Mystery of Stunt—The Two-Four Break."

In the March/April 1995 issue of *Stunt News*, Frank Williams wrote a great column about Stunt venturis. He presented results of measurements he made with various venturis and spray bars mounted in a ST 60 case, varying airflow to simulate different engine speeds. He plotted a set of curves of fuel draw versus RPM for four venturis. His results answered some questions for me (like which direction should the holes in a spray bar be pointed), but they left me with other questions.

Looking at his curves I could estimate the fuel draw of an engine. I could also estimate the draw necessary to pull fuel from the bottom of the tank with the nose is pointed up. What I still wanted to know was what the line losses were—the draw necessary to pull fuel through the tubing and filter. I asked Frank, but he had no data on fuel tubing and filters. He said that he'd like to know himself, and suggested that I make some measurements of my own. That sounded hard, so I put it off, but I finally did the measurements. I was surprised by the results.

My measurements were focused on finding the answers to a few basic questions:

- 1) What is the line loss per inch of medium ( $3/32$ -inch ID) fuel tubing?
- 2) How much of a restriction is a fuel filter?
- 3) Is there anything to gain by going to large ( $1/8$ -inch ID) fuel tubing? (Some fliers are doing this.)

I took data at two different flow rates—one characteristic of a 40-size engine and the other characteristic of a 60. My 40-size engine uses four ounces of fuel in a six minute flight—that's a flow rate of  $2/3$  ounce per minute. The 60 uses six ounces in six minutes—that's 1 ounce per minute. All tests were done using Aerotrend fuel tubing, Taffinder's 10PA fuel, and a Sullivan fuel filter. The temperature was 75° F for all tests. I don't claim great accuracy for my measurements, but I'm confident that they're within ten percent (sufficient to answer the questions). My results are:

## 40 Flow Rate Pressure Drops

- $3/32$ -inch tubing 0.12 in of H<sub>2</sub>O/in of tubing
- $1/8$ -inch tubing 0.02 in of H<sub>2</sub>O/in of tubing
- Fuel filter 0.27 in of H<sub>2</sub>O

## 60 Flow Rate Pressure Drops

- $3/32$  tubing 0.17 in of H<sub>2</sub>O/in of tubing
- $1/8$  tubing 0.03 in of H<sub>2</sub>O/in of tubing
- Fuel filter 0.33 in of H<sub>2</sub>O

To put these numbers into context let's consider a typical 60 sized model. Based on Frank Williams' results, let's assume an available fuel draw of 15 inches of H<sub>2</sub>O (that should be conservative). Also, assume we're using a uniflow tank (with the pickup at atmospheric pressure). Let's say the fuel pickup is 10 inches behind the needle valve. With the nose turned up, we have

to pull fuel up 10 inches to get it to the needle valve. That requires a draw of 8.72 inches of H<sub>2</sub>O (after correcting for fuel density). We'll assume a fuel tubing length of 10 inches (counting the tank tubing which has the same ID as the fuel tubing). The line loss will be 10 x 0.17 or 1.7 in of H<sub>2</sub>O. The fuel filter will drop 0.33 inch of H<sub>2</sub>O. Adding up the losses we get 8.72 + 1.7 + 0.33 = 10.75 inches of H<sub>2</sub>O. Subtracting from the available 15 inches of H<sub>2</sub>O leaves 4.25 inches of H<sub>2</sub>O (this will be dropped across the needle valve).

Note that in level flight we don't have to raise the fuel 10 inches, and the drop across the needle valve becomes 12.97 inches of H<sub>2</sub>O. Also note that with the nose pointed down, the drop across the needle valve is increased to 21.69 inches of H<sub>2</sub>O. *The change in fuel pressure across the needle valve with plane attitude is what gives us the 2/4 break.*

<u>Nose Up</u>	4.25 inches of H <sub>2</sub> O
<u>Nose Level</u>	12.97 inches of H <sub>2</sub> O
<u>Nose Down</u>	21.69 inches of H <sub>2</sub> O

We've already answered the first two questions. The remaining question is whether there's anything to gain by going to large fuel tubing. Looking at our example, using  $1/8$ -inch tubing would save line losses of 1.4 inches of H<sub>2</sub>O. Our nose-up drop across the needle valve would go from 4.25 inches of H<sub>2</sub>O to 5.65 inches of H<sub>2</sub>O. The larger tubing wouldn't hurt, but I doubt if you could tell the difference. On the other hand, going to larger tubing would have the same effect as moving the tank 1.5 inches closer to the engine. Some fliers would say this is worth doing. You'll have to decide for yourself. I hope my measurements will enable you to make an informed decision.

Doing this experiment I was surprised at how low the losses were, both for fuel tubing and for the fuel filter. I started by trying to measure the pressure drop across a foot of fuel tubing. I had to use *six feet* of tubing before I could measure pressure drops with any degree of accuracy.

Good luck with your next plane. **SN**

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# AUSSIE NATIONALS

*The 63<sup>rd</sup> Australian Nationals was held in Albury, NSW, from December 28<sup>th</sup>, 2009, to January 5<sup>th</sup>, 2010. Peter White reports.*

**A**lbury is a rural city in south eastern New South Wales on the NSW-Victoria border. In a country the size of Australia, it is probably the most central venue available and it is relatively close to Sydney and Melbourne, the two strongest aeromodelling communities in the country.

Melbourne is about 200 miles away; Sydney, 350; and Adelaide, 590. Brisbane is 860 miles away—a two-day drive—but Perth is 2280 miles—a solid four-day drive. For those looking for a little pick-me-up after a tough contest, about 30 miles west is Rutherglen, home to two of Australia's

internationally acclaimed classic wine styles, Rutherglen Muscat and Tokay or, for the politically correct, Liqueur Muscadelle.

The aerobatics events were flown on grass at Alexandra Park where there was room for up to seven circles; allowing for plenty of practice. The entire area was well mown for our purposes.

Weather was very warm throughout with light breezes that changed direction constantly and were accompanied by the occasional thermal. Rounds One and Two of F2B saw most fliers chasing the ever-changing breeze while the wind was up a



The winners in F2B Expert: (L-R) Peter White 3<sup>rd</sup>, Murray Howell 1<sup>st</sup>, Joe Parisi 2<sup>nd</sup>.

# ATIONALS!

little more for Rounds Three and Four bringing with it some turbulence from nearby trees and a factory across the road. These conditions continued on into Classic and Vintage days causing the occasional minor surprises.

Four rounds were flown with the best three averaged for the final score.

Thanks must go to all who officiated or



Placing first in Expert, Murray Howell's Yatsenko Shark, Kiev Express.



**Advanced**  
Seven fliers competed for the honours with Andrew Heath coming out on top and flying well with his ST60 powered Enigma.

Andrew's intersections and bottoms moved around a little while shapes were generally quite good. He also has a fine running 60 to make the job easier.

Col Collyer tended to fly high and large in Round One but improved on this in Round Two. He passed on the last two rounds due to commitments in other events

Perennial Denver Harvison flew his familiar derivative of Reg Towell's Caudron with an ST51 that started and ran flawlessly. Denver, who flies on his own most of the time, found his heights and shapes, particularly squares, varied somewhat and passed on Round Four.

Don Keysecker's Vector/O.S. LA46 combination appeared to handle well. Don, whose flying has improved over the last year or so, was caught by some surprise wind direction changes that blew him around.

Jon Witzke put in a reasonably good Round One with his LA46 powered Tutor looking quite steady. Unfortunately, during practice prior to Round Two the model was wrecked, putting an end to Jon's part in the competition.

Mike Davie, also flying a Tutor/LA46 acquitted himself very well in his first Nats aerobatics competition to take out second spot. Mike is a combat flier who shows a lot of promise in the aerobatics circle.

Peter Koch took out third place with a Vector/LA46 setup that performed quite well. Peter's heights and sizes improved as the event wore on and he settled in to the competition. As with many, his loops and intersections tended to wander.

Contest Director for the event was Paul Turner and judges were Russell Bond and Peter White.

helped in any way—in particular, CDs Doug Grinham and Paul Turner; judges Joan McIntyre, Alan Matthies-Harrison, Frank Battam, Russell Bond, Herb Hanna, Peter Koch, and Peter White; tabulators Sue Hegarty and Steve Vallve; various score sheet runners and line pull tester Don Keysecker.

## Expert

Brian Eather competed with his familiar Stalker 61 powered Firecracker, putting in good open shapes with consistent bottoms. In Round Three he encountered some weird turbulence causing him to battle for three laps to get his model up to 45° for the outside squares. An omitted set of manoeuvres in his Round Three flight may have changed the possible outcome for Brian.

Flying a quite new, slightly modified Firecracker/Stalker 61LS combination, Bruce Hoffman put in some quite good manoeuvres although bottoms tended to vary. Bruce had the misfortune to flame out in the wingover in Round Two but managed to land inverted with virtually no damage.

Pursuit, a slightly modified Trivial Pursuit, with a superbly running piped PA 75. Joe, as usual, put in countless practice flights over the duration of the Nats capping off his efforts with four very sharp competition flights.

Western Australia's John Quinlan flew Round One with his Score powered by a Stalker 61LS. Arriving on the death knock and having too little time to really zero in on a needle setting, he battled through his only flight with a slightly rich motor. Later that day John was called back to Perth by business matters and had to forfeit the remaining rounds.

Mark Ellins again slotted in some good flying between his various racing events. The Stalker 61LT EX in his ex-Doug Grinham Jazzer started and ran excellently. Mark is capable of

putting in a reasonably neat pattern despite competing in other pressure events at the same time.

Eventual winner by a narrow margin, NSW's Murray Howell is, like Joe, an intense competitor who puts in the time in the practice circle with appropriate results. Murray flew a Yatsenko Shark, barely putting a foot wrong while the Retro 60 produced power to spare irrespective of the heat,

**Left: Reg Towel's September Pops is his own design, but it was inspired by the French Berringer designs.**

**Below: Bruce Hoffman's Firecracker.**



Dallas (Herb) Hanna flew his familiar red and blue enlarged Grondal Nobler, aka AMA Special, after a mishap with his new model in pre-Nats practice. His MVVS 51 ran flawlessly at quite high revs while the model sat well in the air and flew crisp corners.

Flying his OD Firefly, Doug Grinham ran a side mounted Stalker 66 in a solid four-cycle through all manoeuvres. The side mount arrangement totally eliminated the quirky behaviour shown by most inverted 66s. Although he missed some of his intersections, Doug flew the Russian influenced profile model through some precise squares with neat pullouts.

Eventual second placegetter, Joe Parisi, powered his Hot





Doug Grinham's good-looking profile Firefly is powered by a Stalker 66.



Steve Masterton's Minx, an ex-Tim Gee model, shows some distinct Firecracker influence. It's powered by a Stalker 61.

humidity or wind—an impressive combination.

Queensland's Noel Corney returned to Nats competition with a Stalker 76 powered Trivial Pursuit. Some on-going run problems with the 76 caused Noel to pull out after flying two rounds.

Having improved the control geometry on his Wind Wonder, Paul Turner was able to put in some good patterns aided by a much more consistently running Stalker 61LT EX. This motor had caused Paul some grief for the last year or so with erratic running but appears to have settled in at last to do the right thing.

Peter Anglberger from South Australia showed up with a nice flying Vector 40/O.S. LA46 setup. He had a few problems keeping the model on track when the wind came up but in general the model performed well. Peter this year stepped up to Expert class where his improved skills can be put to the test.

Seasoned campaigner Reg Towell joined the fray with his Sea Fury derivative built around a Beringer wing with a swept forward hingeline giving more flap area. Reg's Saito 72 put out plenty of power to haul the 67 ounce model around with ease.



Peter Anglberger's Vector 40 from the Brodak kit.

Making a return to the Nationals scene after a twenty-five year absence was SA's Russell Bond. Russell flew his OD Bandolero 7 with an impressive PA 75 on muffler providing the urge. Despite weighing in the low 70 ounce range the Bandolero is quite snappy with no obvious stalling tendencies. For his first major competition in a long time, Russell handled the pressures well.

NSW flier Steve Masterton has been showing steady improvement for some time. Pullouts tend to vary in height but generally are neat. In an early practice session Steve seized a bearing in his Stalker 61 Pro Series. His replacement motor, a retired

63RD NATS							
F2B 2009/10							
	NAME	EXP.	RD 1	RD 2	RD 3	RD 4	TOT. PL
1	B EATHER		877.63	755.93	846.87	533.57	92238 5
2	T BONELLO		846.47	830.08	876.73	872.87	87876 7
3	P WHITE		505.57	746.43	843.77	964.97	93110 3
4	P TURNER		876.53	730.40	897.70	958.58	92888 4
5	J QUINLAN		695.10	DNF	DNF	DNF	215.03 16
6	R BOND		765.5	816.80	757.40	889.53	82388 13
7	B HOFFMANN		819.53	26.93	835.69	902.33	80976 8
8	S MASTERTON		786.43	843.87	832.73	860.57	84572 10
9	D GRINHAM		782.07	820.27	835.57	782.33	82672 12
10	M HOWELL		947	961.47	966.23	1001.10	9763 1
11	M ELLINS		766.07	803.93	826.93	863.93	83130 11
12	P ANGLEBERGER		731.0	778.93	684.27	825.03	77838 14
13	D HANNA		834.7	831.17	10.0	879.00	86516 9
14	J PARISI		937.23	957.77	972.37	982.23	97079 2
15	R TOWELL		876.43	872.47	916.27	924.50	91240 6
16	N CORNEY		721.10	643.97	DNF	DNF	47166 15
17	F BATTAM						
1	C COLTER	ADV	510.23	656.0	DNF		
2	D KEYSSECKER		692.0	72976	673.23		
3	D HARVISON		DNF	564.0	583.75		
4	P KOCH		381.0	722.23	770.23		
5	J WITZKE		594.0	DNF	DNF	DNF	198.0
6	A HEATH		852.23	730.75	776.5		
7	M DAVIES		708.5	773.5	714.75		

Above: The F2B score board.



Right: Murray Howell presents Paul Turner with a pewter mug and a bottle of Bailey's as a token of the competitors' appreciation of Paul's contribution to the 63rd Nats and our sport generally.



Paul Turner presents Murray Howell with the winner's plaque.

Stalker, ran in a strong deep sounding four-cycle with a gentle break up top to haul his Firecracker easily through the pattern.

Tony Bonello's Enigma 111 with its smooth running ST60 put up a good showing, its attractive green, red, and white colour scheme standing out in the air and on the ground. While bottom heights varied a little Tony's manoeuvres were generally well shaped and smooth.

The CD was Paul Turner and judges Joan McIntyre, Alan Matthies-Harrison, and Frank Battam.*SN*



Above: Herb Hanna's enlarged Louis Grondal AMA Special features an MVVS 51RE.

Above right: Joe Parisi's Hot Pursuit is powered by a PA .75 with pipe.

Right: Tony Bonello's Enigma III is a Jeff Reeves design and is powered by an ST 60.



### 63rd Australian Nationals F2B Aerobatics Technology Summary

	Competitor	Model	Model Notes	Motor	Motor Notes	Propellor	Fuel	Lines	Weight
<b>F2B Expo</b>									
1	Peter Angelberger	Vector 40	Brodak kit	O.S. LA 46	Brodak 40 NV, custom muffler	Eather 11.3" x 5.75" UC, 2B	7.5% Nitro, 10% Castor, 10% Synthetic	67" c/c x 0.015" 7str stainless	48 oz
2	Steve Masterton	Firecracker		Stalker 61		Eather 12.5" x 5.5", 3B	20% Synthetic, 20% Nitro	70" c/c, 4 str brass pl. piano wire	55 oz
3	Joe Parisi	Trivial Pursuit		PA 75	Pipe	Bolly 13" x 4.5 3B	10% Nitro, 15% Synthetic, 7% Castor	63" e/e x 0.018" 7 str stainless	62.5 oz
4	Dallas Hanna	AMA Special	118% x orig. dimensions	MVVS 51	Standard rear exhaust muffler	Eather 11.5" x 5.5" 2B	20% Castor, 80% Methanol	67" c/c x 0.018" 7 str stainless	58 oz
5	Russell Bond	Bandolero 7	OD	PA 75	Muffler	Eather 13.5" x 6" 2B (?)	10% Coolpower, 10% Castor, 5% Nitro	70" c/c x 0.018" 7 str stainless	70 oz
6	Doug Grinham	Firefly	OD	Stalker 66	Side mounted	r/w Zinger 13.5" x 5.5	11% Synthetic, 11% Castor, 10% Nitro	67" c/c x 0.018" 7 str stainless	58 oz
7	Bruce Hoffmann	Firecracker		Stalker 61		Eather 12.5" x 5.25", 3B, UC	20% Coolpower, 15% Nitro	64" c/c, 4 str brass pl. piano wire	58 oz
8	Tony Bonello	Enigma III	OD	ST60		Eather 12.5" x 5.25", 3B	20% Castor, 10% Nitro	66" c/c, 4 str brass pl. piano wire	59 oz
9	Brian Eather	Firecracker	OD	Stalker 61		Eather 12.5" x 5.00", 3B	20% Synthetic, 15% Nitro	67" c/c, 4 str brass pl. piano wire	58 oz
10	Paul Turner	Windwonder	OD	Stalker 61		Modified Zinger 13" x 5.2"	10% Coolpower, 10% Castor, 15% Nitro	67" c/c x 0.014" 3 str Laystrate 0	66 oz
11	Murray Howell	Yatsenko Shark		Retro Discovery 60		Yuriv Yatsenko 13.4" x 6" CNC	20% Synthetic Oil, 80% Methanol	68" c/c, 4 str brass pl. piano wire	58 oz
12	Peter White	GEO XL	Werwage design	Stalker 61		Modified Zinger 13" x 5.5"	20% Synthetic Oil, 80% Methanol	64" e/e x 0.015" 7 str stainless	58 oz
13	John Quinlan	Score	Top Flite ARF	Stalker 61LS		Zinger ? X ? 2B	80% Methanol, 20% Coolpower	64" e/e .015" seven strand	62oz.
14	Mark Ellins	Jazzier	D. Grinham design	Stalker 61		Eather 12" x 5.5", 2B	15% Coolpower, 5% Castor, 10% Nitro	61" c/c 0.015" "Toothy Critter"	60 oz
15	Reg Towell	September Pops	OD (Seafury)	Saito 72	The only remaining 4 stroke!	Eather 13" x 5", 2B, UC	20% Coolpower, 20% Nitro	68" c/c x 0.018", 7 str	not recorded
16	Noel Corney	Trivial Pursuit		Stalker 76		Eather 13" x 6" 3B	20% Oil (?), 10 % Nitro	63" e/e x 0.018" 7 str stainless	not recorded
<b>Adv F2B</b>									
1	Denver Harvison	Caudron Aiglou	OD	Supier Tigre 51		Zinger 12" x 5", 2B	20% Castrol M, 15% Nitro	61" e/e x 0.015", 7 str stainless	52 oz
2	Mike Davies	Tutor II	ARF	O.S. LA 46		Bolly Cubman 11.5" x 6", 2B	11% Castrol M, 11% C/power, 10% Nitro	64" e/e x 0.015", 7 str stainless	43 oz
3	Andrew Heath	Enigma	T. Bonello Design	ST 60		Eather 12" x 6", 3B (?)	not recorded	not recorded	not recorded
5	Peter Koch	Vector 40	ARF	Brodak 40		BYO 10" x 5"	11% Castrol M, 11% C/power, 10% Nitro	60" e/e x 0.015", 7 str stainless	44 oz
5	J. Witzke	Tutor II	ARF			Bolly Cubman 11.5" x 5", 2B	not recorded	not recorded	not recorded
6	Col Colyer	Vector 40	ARF	O.S. LA 40 (?)		not recorded	not recorded	not recorded	not recorded
7	Don Keyeseker	Vector 40	Brodak kit	O.S. LA 46		Zinger 11" x 6"	not recorded	not recorded	not recorded

# Removable Landing Gear Plate System

By Bob Hunt

**M**att Neumann wrote a very comprehensive and informative piece about how to install a strong, removable landing gear system for fuselage-mounted gear in his “It’s In the Details” column in the January/February issue of *SN*. Matt contacted me and asked me to think about writing a similar piece, as a guest columnist, about the method I have developed over the many years that I’ve been building wings professionally to mount light, strong, and removable landing gear in a model’s wing. I gave his request a lot of thought and finally decided that there is more to this than can be properly covered in a column format or even in a single article. I have decided to present this system in a two-part How-To series. The first part will deal with making and installing the landing gear plates in the manner that I have developed, and the second part will deal with the custom, airfoil-blended cover plate system that I first used on a model in 1976.

I documented this process in great detail with a camera and, hopefully, the story will be mostly told by the resulting photos and a minimum of text. At least that’s the plan.

**The first thing to address** is where the plates will mount in a given wing. I developed a method of installing plywood “ribs” or “clips” in a foam wing many years ago. These ribs/clips extend from the leading edge of the wing back to the front face of a full-depth spar. Typically this spar in a foam wing is made from  $\frac{1}{8}$ -inch Lite-Ply. The back edge of the landing gear “ribs” are glued directly to the spar. The spars and the LG ribs are, of course, installed prior to sheeting the wing’s surface. The bottom surface of the landing gear ribs are designed and crafted to accept a  $1\frac{1}{4}$  inch wide landing gear mount plate. The position of this plate chord-wise in relation to the spar will vary from design to design.



Typically in the “old days” we used  $\frac{3}{8}$  x  $\frac{3}{4}$ -inch grooved maple blocks for our landing gear mounts, and these fit into

notches in the Lite-Ply landing gear mount ribs. Over the years we’ve discovered that by making the landing gear mounts from a built-up sandwich of materials, and making them wider, yields both a stronger and lighter system.

When we adapted this system to built-up wings we attached a layer of  $\frac{1}{16}$ -inch birch plywood to the appropriate ribs to accept the landing gear plates. The actual sequence of making and installing the landing gear plates is exactly the same for built-up or foam wings.

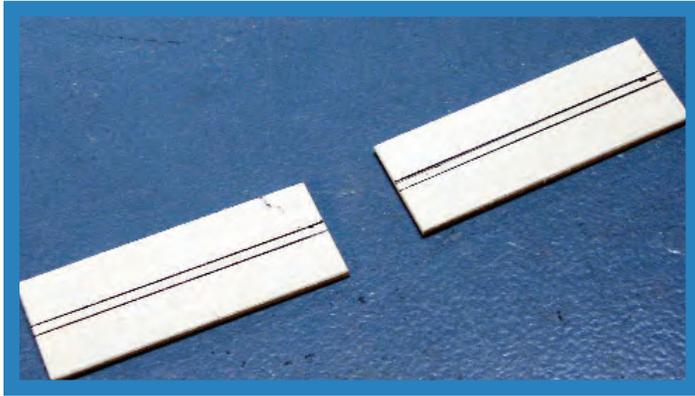
The first step in making the plates is to measure the opening in the bottom surface of each wing and layout and cut a  $\frac{1}{8}$ -inch Lite-Ply plate to match the opening. Label the side of the plate that will face into the wing (the top side of the plate) for proper orientation.



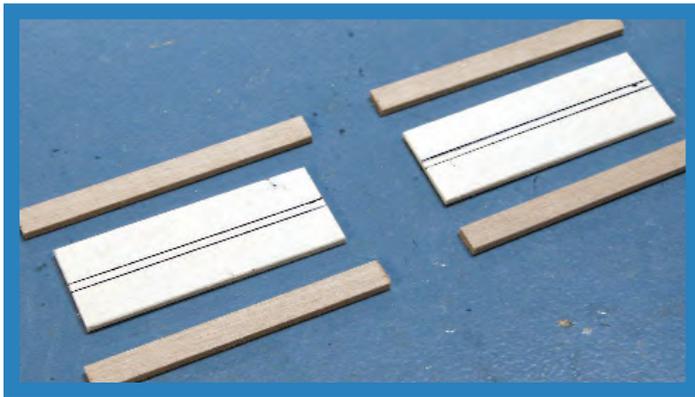
Test install the plate to insure that it fits the wing opening perfectly and also to be certain that it sits properly on the mount ribs in the wing. If it rocks at all that means the two landing gear rib mounts are not in line with each other. You will have to use a  $\frac{3}{4}$ -inch wide commercial emery board or a custom sanding block to adjust the mounts on the ribs to allow the plate to sit perfectly in place.



Measure to find the center of the Lite-Ply plates and then mark the desired position of the landing gear wire on the plates with a ball point pen. Typically I make the centerline of the wire correspond to the center of the landing gear plate.



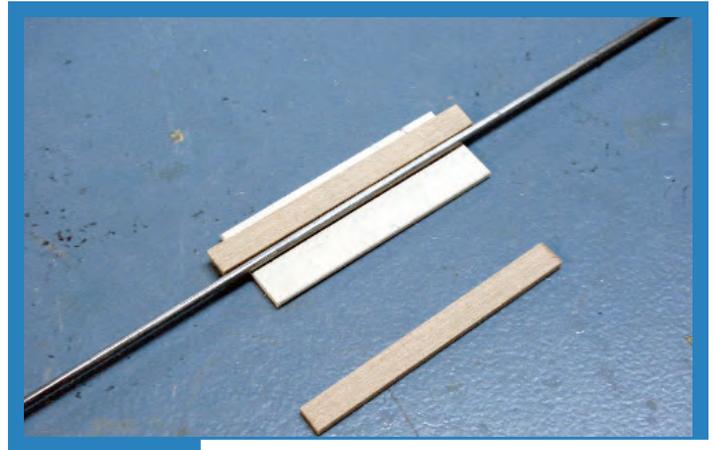
Cut 4 pieces of  $\frac{1}{8} \times \frac{3}{8}$ -inch basswood just a bit longer than the length of the landing gear plates. Sand the edges of the basswood strips smooth.



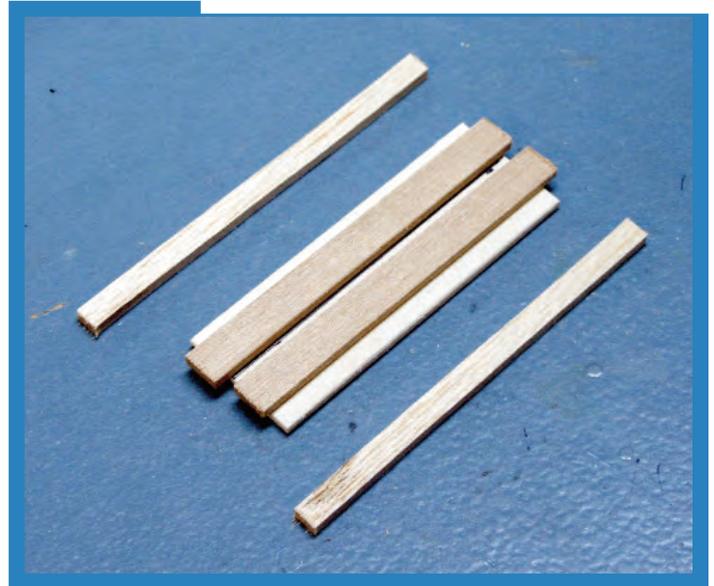
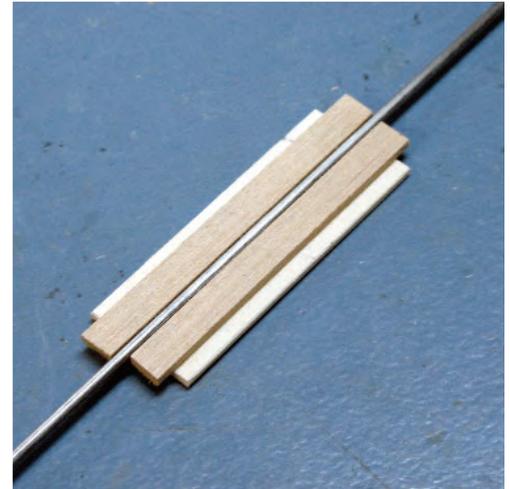
Using medium viscosity CA glue (I prefer the Zap brand), glue one of the basswood strips onto the landing gear plate with one edge of the strip positioned against one of the pen lines. Do not let any of the CA flow into the area between the two pen lines.

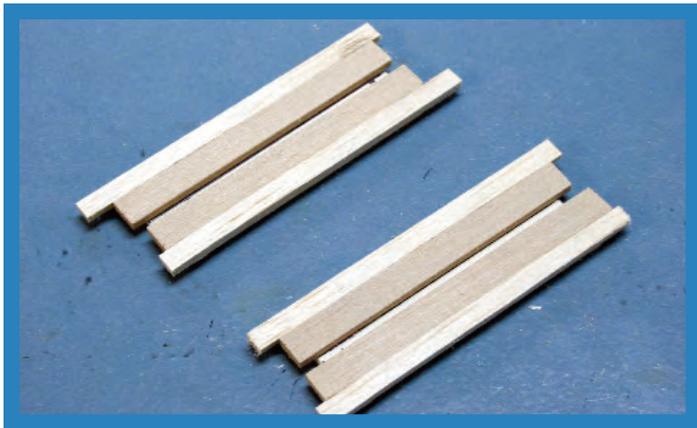


Place a length of  $\frac{1}{8}$ -inch diameter wire against the first basswood strip and then apply CA glue to the bottom of another basswood strip and position it firmly against the edge of the  $\frac{1}{8}$ -inch music wire. Be careful throughout this gluing process to not let any CA glue get into the resulting slot where the  $\frac{1}{8}$ -inch wire is positioned.

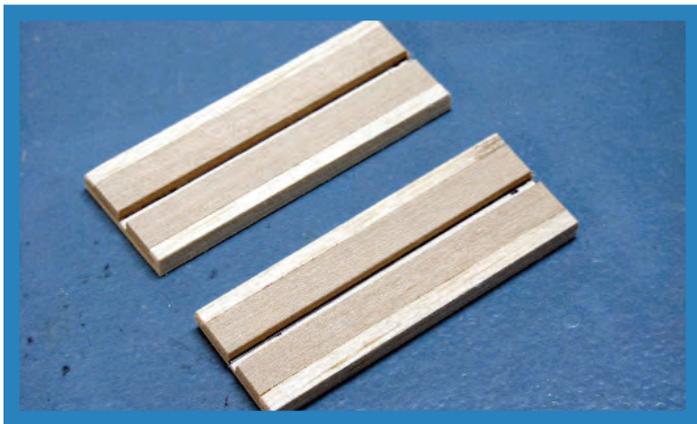


Fill in the area between the outer edges of the basswood strips and the edge of the landing gear plate with strips of very hard (high density)  $\frac{1}{8}$ -inch balsa. Again, use the medium CA glue for this operation.





Trim and sand the basswood strips and the balsa filler pieces to conform to the edges of the landing gear plate.



Fit the landing gear plate into the wing and, using a soft lead pencil, mark the point at which the landing gear rib in the wing contacts the landing gear plate. This mark should be made on the landing gear plate where you eventually want the “spur” block to be attached. The spur block will be made from a piece of hard maple and it will rest up against the landing gear rib, allowing it to be glued to the rib and transfer landing loads to the rib and eventually to the spar. Typically the spur block is located on the inboard end of the landing gear plate and outside the innermost landing gear rib.

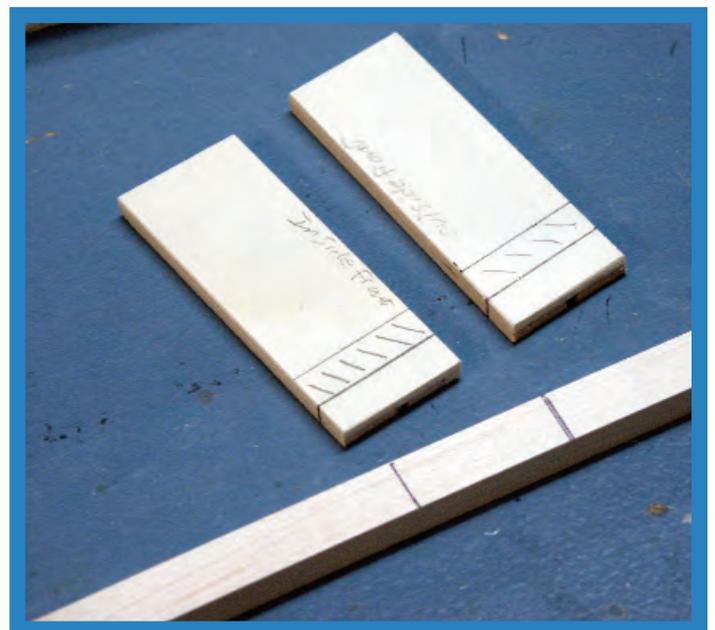


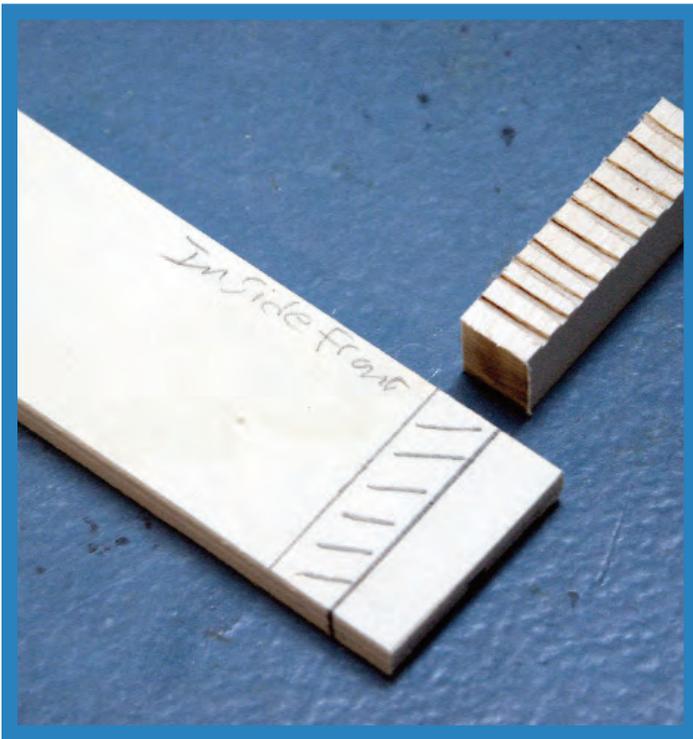
Transfer the pencil line to the upper face of the landing gear plate (side of the plate that will face up into the wing when it is installed). Mark out where the spur block will sit on the landing gear plate. This area is shown with hatch marks in the next photo.



Layout and cut two  $\frac{3}{8} \times \frac{1}{2}$ -inch maple spur blocks. Make these spur blocks just a bit wider than the width of the landing gear plate. They will be trimmed to fit the plate after they are installed.

Use a band saw or jigsaw to cut several shallow notches in the surface of the spur blocks that will be glued to the top of the landing gear plates. These notches will allow for more gluing surface and that in turn will yield more strength to this critical joint.



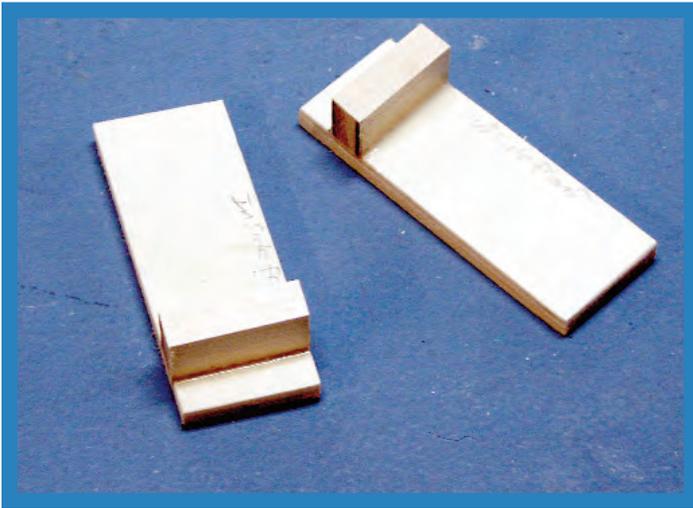


Mix up a batch of epoxy and microballoons and apply a liberal coating to the bottom of the spur block. Be sure to use enough epoxy to fill the notches completely. Position the spur block in the hatched area on the landing gear block and move it around a bit to allow the epoxy to fully coat the gluing area. Clamp the spur block securely to the landing gear plate and check to be sure it didn't slide off of the marked out area. Sometimes parts will move around as you try to clamp them. Double check each joint for accuracy! Remove any excess epoxy that may have oozed out and then let the assembly fully cure.

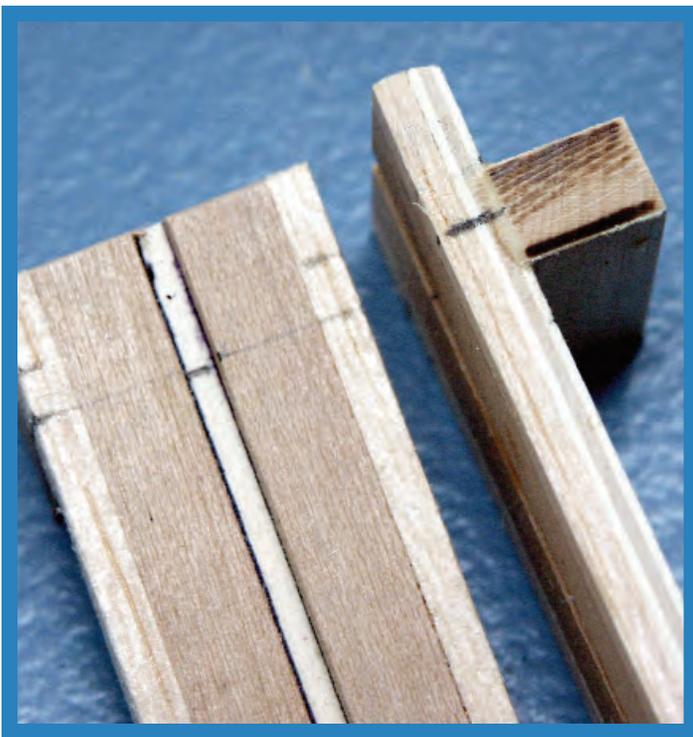


For the next gluing step you will need the items shown in the next photo. I use and recommend 45 minute cure epoxy for gluing the spur block to the landing gear plate. The 45 minute epoxy will soak into the wood more than a faster cure epoxy will, and it will yield a much stronger bond. You will need a mixing cup and mixing stick, a couple of spring clamps (I like the ones that Sears sells) and a bottle of microballoons. Adding some microballoons to any epoxy glue mix will add to the strength of the bond.

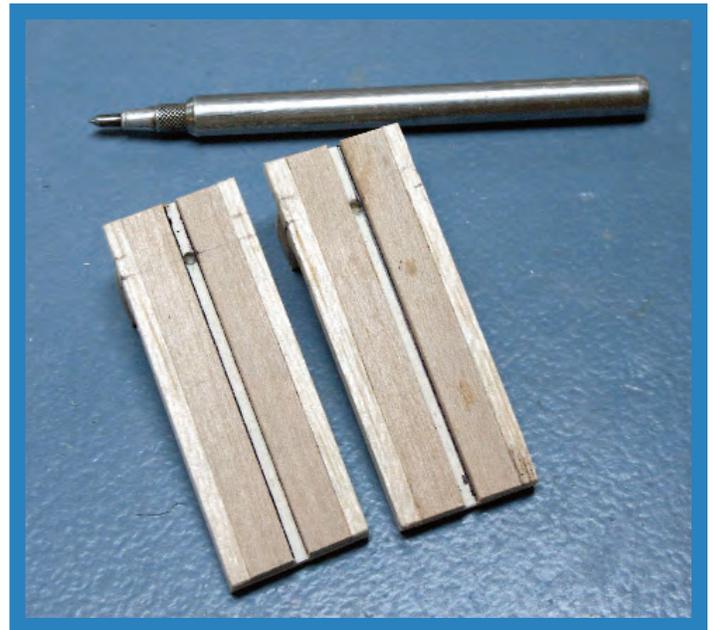
Remove the clamps and trim the edges of the maple spur blocks to conform to the edges of the landing gear plates. I use a band saw to trim the blocks close and then use a disk sander to finish the job.



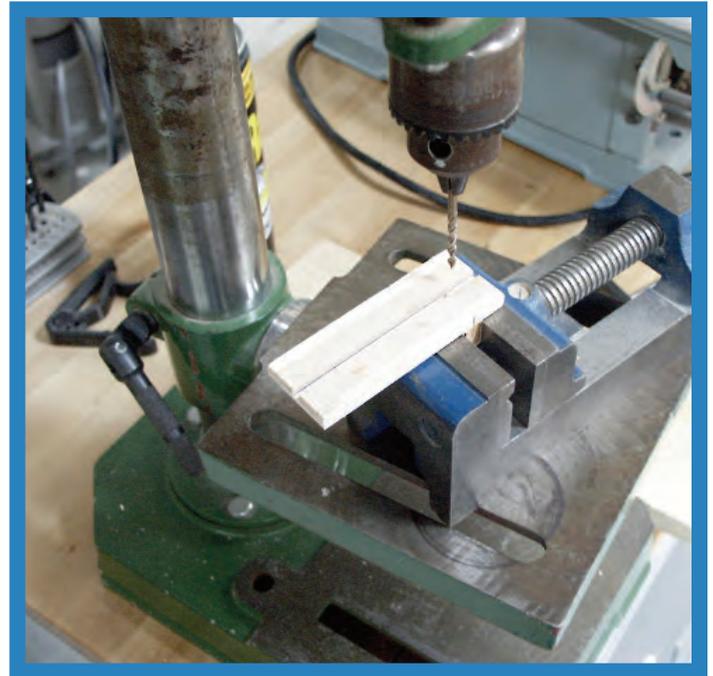
In the next step you will have to find the center of the spur block and transfer it to the bottom face of the landing gear plate. Extend this line across the bottom face of the landing gear plate and mark the plate in the center of the landing gear wire groove.



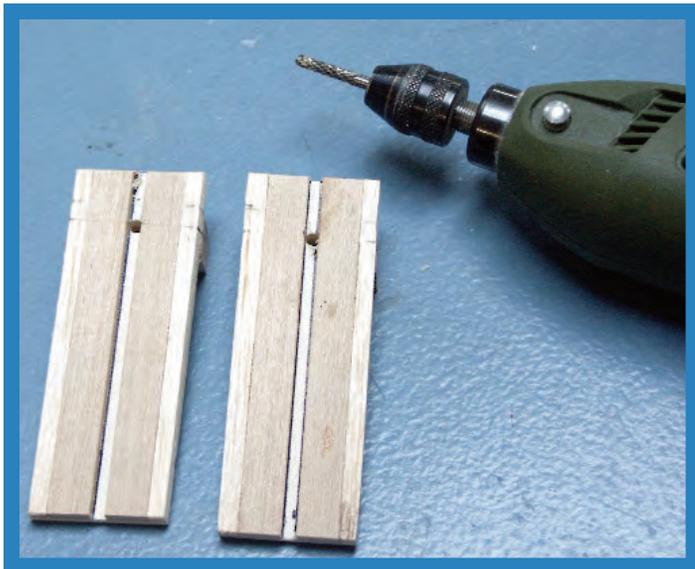
Using a scribe, make an indentation on the landing gear plate in the groove between the basswood pieces. This will be where you will drill a  $\frac{1}{8}$  inch hole to allow the landing gear wire to extend up into the spur block on each landing gear plate.



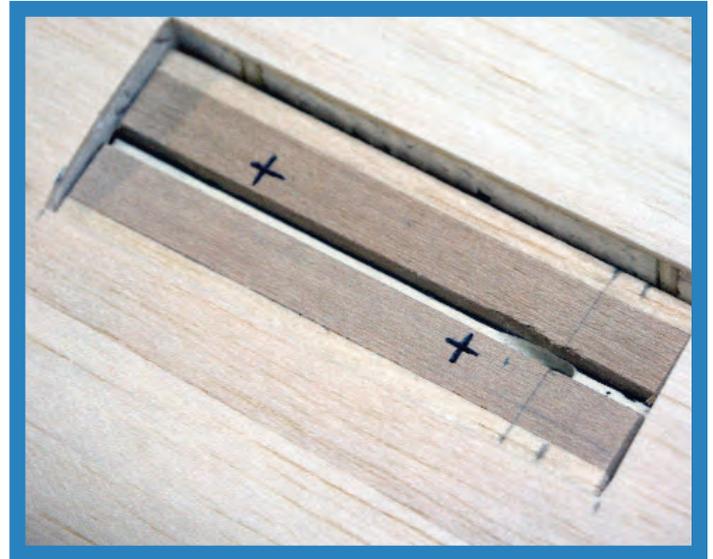
Position the spur block in your drill press vise and drill a  $\frac{1}{8}$  inch hole up through the spur block.



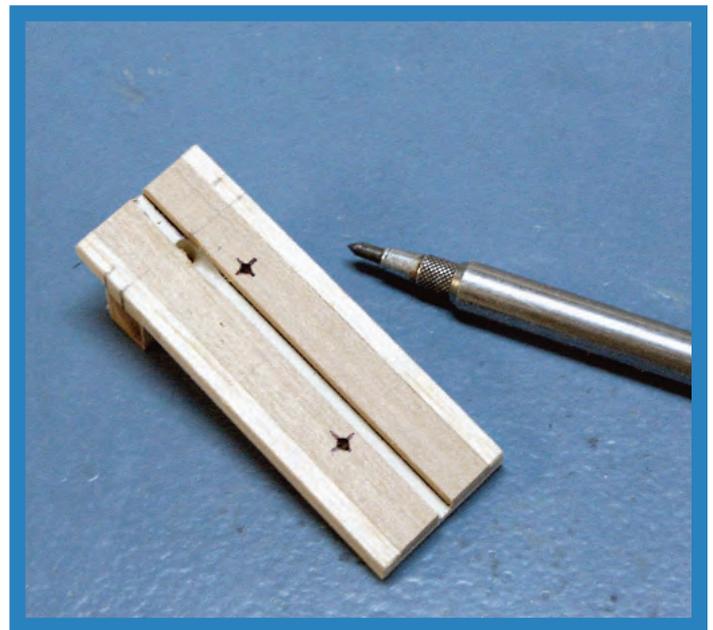
Using a  $\frac{1}{8}$ -inch diameter grinding bit, radius the hole you just drilled to accept the radius of the landing gear wire where it makes the bend from lying in the groove to going vertically through the spur block. The wire must be able to fit snugly in the groove on the bottom of the landing gear plate. If the hole is not radiused properly, the wire will not seat down in the groove and the cover plate which will be made later will not fit flush with the surface of the landing gear plate. The next three photos show this process.



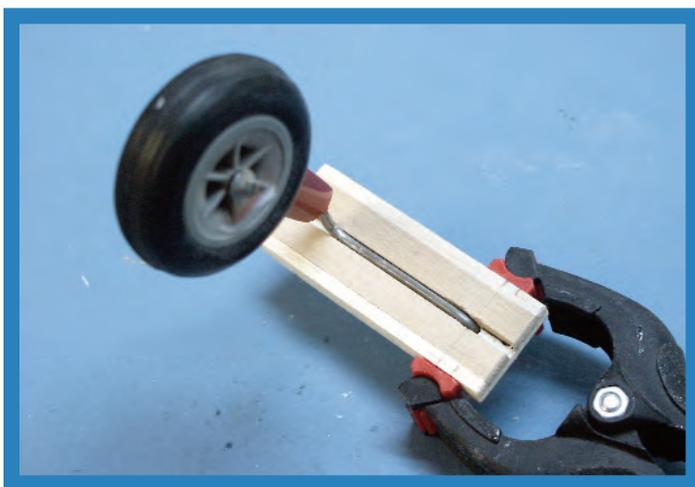
Place the landing gear block back into the cutout in the wing and mark where you want your cover plate hold-down screws to be positioned. This will vary from plane to plane. You want to be certain that you position them so they will not interfere with either landing gear rib in the wing panel. I use two hold-down screws; one forward of the groove inboard and one behind the groove outboard. The penciled "Xs" on the surface of the plate in the next photo depict this.

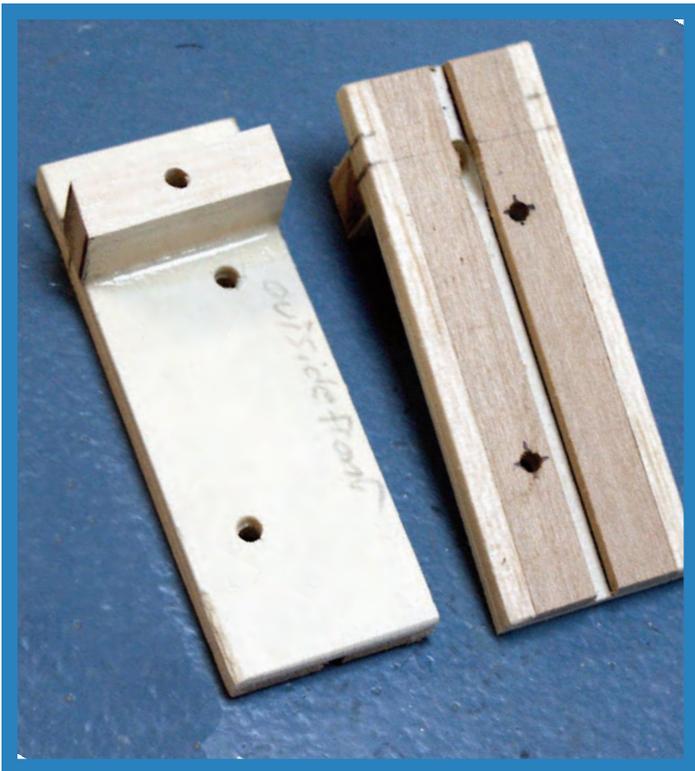


Again use the scriber to make indentations where the plate hold-down holes are marked.



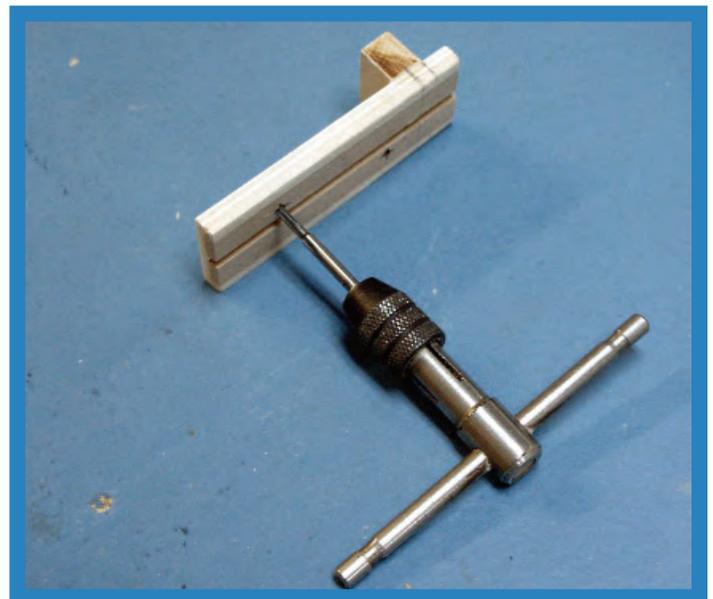
Drill at the indentations for a 4-40 screw body clearance. Turn the plate over and counter-drill the top of the landing gear plate to accept the body of a 4-40 blind nut.



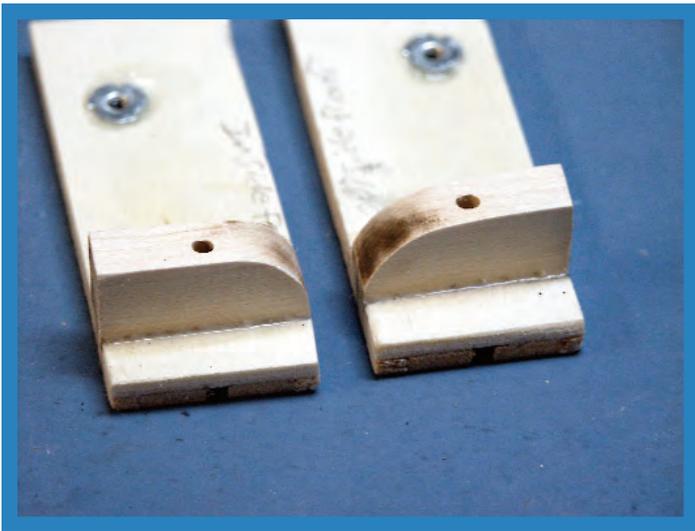


Install the blind nuts and carefully apply a small amount of CA glue around the edges of the nuts to hold them securely. You will not be able to access them later to re-install a blind nut, so make sure they are installed and glued in properly!

Just to be sure that no glue found its way into the blind nut threads, run a 4-40 tap through each of them before final installation in the wing.



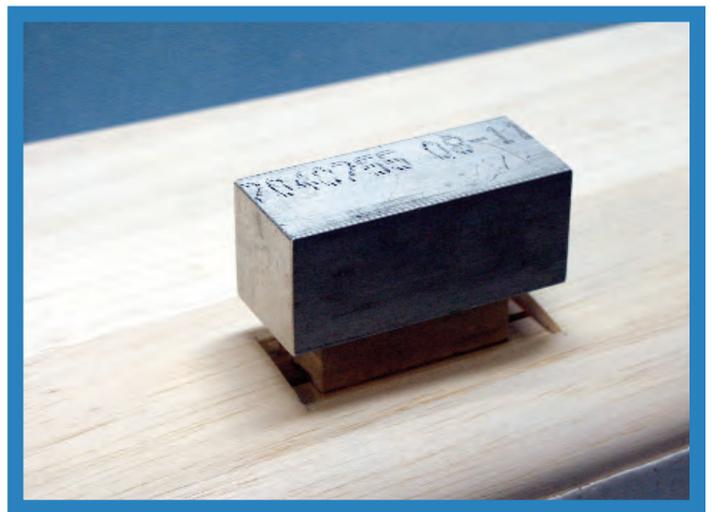
I like to take some of the material off of the front of the spur blocks. All the stress induced by landing will be transferred to the rear of the spur block and so a little weight can be saved here. I use a disk sander to curve the fronts of the spur blocks.



At this point the landing gear blocks are ready for installation in the wing panels. Before gluing the landing gear plates into the wing panels, put the inboard plate in place and look down the front leadout access hole to insure that the leadout will not come in contact with the top of the spur block. If it does, the leadout wire could chafe against the spur block and eventually break. Sand down the top of the spur block as required to achieve proper leadout clearance over the spur block.

For landing gear plate installation again use the long-cure epoxy and don't forget to add a bit of microballoons to the mix. Spread the epoxy on the surface of the spur block that will come in contact with the side of the landing gear rib in the wing and also spread a bit onto the surface of the landing gear ribs that will accept the plate system.

Place the plate in place and weight it down securely until the epoxy has cured.



**Okay, we're about halfway there!** In the next issue I will describe and show how to frame out the landing gear plate opening and make really knacky cover plates that hold the gear wire in place and also conform to the airfoil of the wing. **SN**



# Crash Repairs

By Windy Urtnowski

My poor Novanta Stunter has been crashed both at the Nats and the Lee, MA meets. Each time I repaired it I knew there would be a time I could use a rebuilt ship to test motors or new technology or just to have a spare ship for when modeling friends stay with us.

The Novanta has gone on to a life I never dreamed of when I built it. Many pilots have flown it, it's been a motor test bed, and now it's serving duty as my camera plane. I started with a Flip Mino camera mounted to the nose just ahead of the wing; it weighs only 3 ounces, and you'd hardly know it's there during a flight.

I expanded into a high-definition camera over the winter and made several different mounts so I can shoot forward, reverse, and toward-the-pilot views. During a recent test session I got some really cool video of what a Stunt pattern looks like from the model. What is amazing is how different a pattern looks



great, and I've never had a cup of hot coffee taste as good as after a day out on the frozen lake, with the snow coming down and the wind howling. With the air density at almost 100 and 20 degree temperatures, the performance is stunning; it's like doubling the wing area. I shot some still photos and had my Mino camera mounted on the ship; the footage was pretty unique looking down at the ice. A few tips I learned from the session: Use big wheels, motors make lots of power in low temps, don't get a lean run, and absolutely, *positively* get spiked shoes before walking out on sheet ice. Also, the background is very different when everything is white; sunglasses are a must, even when no sun is shining.

So again, another reason to save and repair every model possible. In modeling there's always something new to try. *SN*

when seen from the model, especially from the high-definition camera. It even captures the sound perfectly.

So to my Crash Repairs point: When you repair a ship, you never really can see into the future and imagine what uses it might have. I've said many times that ships are usually worth the effort of a repair. At the Lee, MA meet Bill Hummel was saying he'd never seen a ship repaired so efficiently ... thanks to my trusty crew of Dave Midgley, Woody Midgley, Nat Gifford, and Dave Eyskens. Yes, at the end of that second repair everyone from the repair crew got to fly it, making this a very special adventure.

One final adventure for the Novanta was flying off the frozen lake behind Billy Sargent's home; this was something I'd never experienced before. We made special shoes with ice spikes like those normally used on ice racing motorcycles. Traction was



# Beginnings

By Doug Dahlke

**H**ousekeeping: For those who asked, I did indeed submit a column for the “Special Issue 2009.” (*But it never made it to me... Ed.*)

**Reader Input (0210):** Joined wings strike Vancouver, Canada! While joined wings are hardly new, having been around for decades now, Harold Youds’ design might be considered by some as not technically a true joined wing; but it’s close enough for round numbers. This is the first instance of this layout appearing in sport stunt circles here—a very strong design for its weight.



Harold Youds, Vancouver, B.C., shows his latest design, the Diamond Back. Joined-wing designs are very strong. They seldom break stabs and wing breakage is much reduced. Is anyone able to talk about the “interesting” airflow between the wing TE and the extended stab? (What say there, Wild Bill?)

Right: Ever smilin’ Gerry Boyd shows both sides of his Youds Diamond Back design. Snort is produced by a rare, new-old-stock Super Tigre .15.



Nor was Harold Youds alone in being smitten by this fever. Here we see pal Gerry Boyd’s version of the same design with “apps” (Hey! Am I trendy or what?) of an avian paint job.

**Peoria, Illinois:** Wyreflyer Ken Selby will hopefully forgive me for pinching a picture of his beautiful Walker Firecat taken from his club’s newsletter of February 2008. Ken’s article is suggested reading for OTS fliers. Thoughtful readers are challenged to match the specs of the Ringmaster vs. Firecat wings, remembering that the Firecat was designed first. Thanks to Bill Zimmer for sending me a copy of his club’s newsletter.

**Vancouver Shindig:** The Vancouver Gas Model Club, B.C., recently held a Little Stunter Shindig. Looks like a fine turnout, guys.



Just like pearls and a black sweater for a lady, the simple beauty of Ken Selby’s Firecat sticks with you, long after the flash and gaud of some others have thankfully faded.



The Vancouver Gas Model Club lads held their first get together of little stunters and enjoyed a very good turnout as can be seen. On St. Patty's Day, leprechauns were said to be seen doing wee toe dances about the stunt circles. Are we seeing the future here?

**McMinnville, Oregon:** If you're in the vicinity, here's another model museum for you to see. Thank Frank Macy for these efforts. You should check first before going as things often change there, unless you're going there to see the Hughes Spruce Goose.



Here's one section, of one wall in the McMinnville, Oregon, model section of the museum. All modeling disciplines are represented. Macy photo.

**Electric Ukie:** As most of you have noticed, there have been some changes in the design and layout of sparkies. Persistent readers may recall an earlier column where a 1909 electric model flew successfully on a string. After a short 39 years, here's where commercial electric models had advanced to at ASTRAL Co. of the UK. Note this is a "remote control" model here, meaning a 5-foot circle.



A fellow has to wonder:

1. Does a "5-foot circle" mean diameter or radius? (You would sure hope it was radius!)
  2. What sort of span does this model have?
  3. Would new electronics allow stunt contests in the library?
- Remember, this is flown from outside the circle, therefore it is a "remote control" or "RC" for short, just as the ad says.

**You read it here first!** Rumor: the EAA and the AMA have noticed a lack of youngsters at their functions and got together at Muncie to talk about this common problem. (I refuse to believe that anything I ever said or complained about in the past played any part in this meeting, whatsoever.) It does have the potential of progress. Other than that, I have no comment.

*(I will take a bit of credit here, Doug, and there is much more to it than you might have heard. I was talking with Sean Elliot from EAA—who just happens to also be a CL Stunt flier and a fellow motorcyclist—awhile back and we agreed that EAA and AMA have the same need in finding and cultivating a new generation of aviation enthusiasts in order to survive in the future. We agreed that a meeting between the top EAA and AMA brass might help. I contacted my good friend and AMA President, Dave Mathewson, and Sean talked to the fellows in charge at EAA. The result was the first of what will hopefully be several fruitful meetings. I even received an "attaboy" from AMA's Executive Director, Jim Cherry for doing this. This association can only help our cause...—Ed.)*

**The Little Huski-Reel:** During the late 1940s, the Burn Hobbies Specialties of Greenfield, Massachusetts, offered this line reel, presumably to impatient or unreflective modelers. Although decades of molecular analysis, plus the portents of astrology have

yet to find anything favorable about this reel, apologists defensively say, "What's the problem? A reel is a reel!"

Not! What's not seen in the photo is how thin the reel is: just .280 inches. This allows a miserly 9/64<sup>th</sup> inch slot to wind your lines into, while walking in the grass. Otherwise, one or both lines will jump off the reel. You have to wonder who "designed" such a reel and what-in-the-%&#&\*@\*! he was "thinking?"



Here's the winner in our Worst Designed Line Reel contest! While the label says "For 'A' and smaller," it has only a 9/64-inch slot to wind up your lines! Really "user friendly!" To test this for yourself, mark a 9/64-inch space on a piece of paper, then imagine trying to keep the lines within that space while winding and walking. This circa-1949 reel was obviously designed by someone who had never flown ukie or handled lines.

### Building tips

Bill Novak, of Maywood, California, suggests using a cotter pin to sand small openings or tight corners.

### Sanding Small Openings

I use a cotter pin 1" long and a 1/2" by 3" strip of sandpaper to smooth small openings. One end of the strip is wedged in the legs of the cotter pin. The rest of the strip is wound around the pin in the direction shown and the other end of the paper glued down. This makes a sanding drum about 1/4" in diameter. Then I chuck the end of the pin in my electric drill.—William A. Novak, Maywood, Calif.



Ben Nielsen of Aurora, Nebraska, suggests that, after you remove paint from a can, take a small stick, dip it in the paint, and make a line on the outside, to show how much's left, what the dried color looks like and how much evaporation has taken place.

### How Much Paint's in the Can?

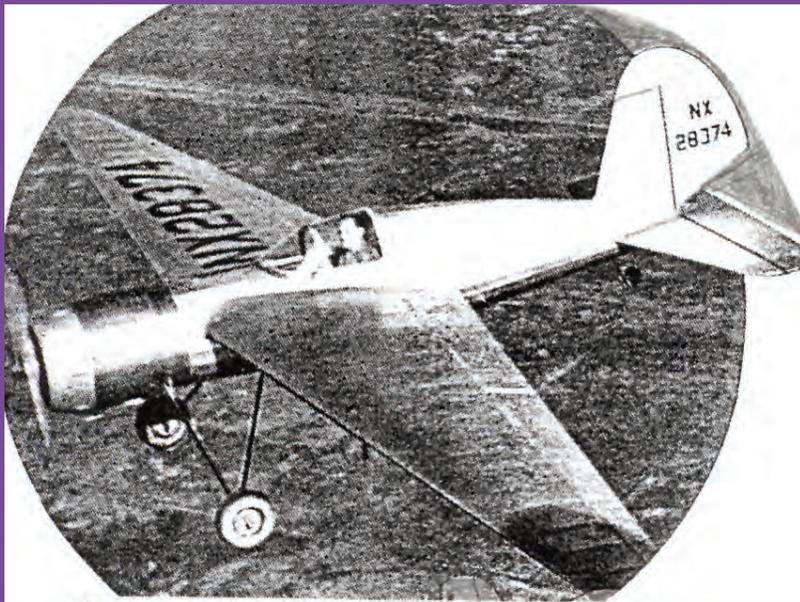


The colors we paint our models are all about reflected light. Since different models have different reflectivity needs (brightness), perhaps the reader can put this chart to use. Just Xerox a copy and tape it to your paint cabinet.

### PERCENT OF LIGHT REFLECTED BY VARIOUS STANDARD COLORS

WHITE (CASEIN)	90%
WHITE (FLAT)	84%
WHITE (EGGSHELL)	82%
WHITE (GLOSS)	81%
IVORY WHITE	79%
CREAM	74%
ALUMINUM	73%
IVORY TAN	67%
LIGHT GREEN	62%
YELLOW	60%
LIGHT GRAY	59%
BUFF	55%
LIGHT BLUE	52%
MEDIUM GREEN	49%
TAN	48%
MEDIUM BLUE	43%
ORANGE	40%
FRENCH GRAY	32%
DARK RED	14%
DARK GREEN	10%
DARK BLUE	9%
BLACK	2%

If model visibility is important to you, you may want to pay attention to this chart. Just make a copy and tape it to your paint cabinet.



The Thalman Special (right) has geodetic construction (basket weave of the ribs), unique among light-planes. Maker claims it will go 150 m.p.h., land at 35 m.p.h. with flaps, climb 1,000 feet a minute, withstand exceptional stresses, and cruise 900 miles.

The 1946 Thalman Special is shown here. Is this the penultimate scale/stunter? Note the music wire gear! More details in the text.

M.O.M. The perfect scale stunter? Lots of folks are, and have been, flying and stunting semiscale warbirds. There is, however,

a group who prefers civil aircraft. Also there are those who "need a break" from building only one category of model. Finally, there are those who are simply curious.

If any of these descriptions fit you, then you need to consider the 1946 Thalman Special, as it has mucho to offer.

1. Music wire is dead-on scale!
2. Stock wing ribs are geodetic!
3. Stock wing is a high efficiency, double taper.
4. Stock fuselage is circular, which equals lots of room.
5. Flaps are stock.
6. The original was designed to withstand heavy stress!
7. The stock landing speed is 35 mph!

You really should check this design out!

Send column submissions to 1393 E. Black Wolf Ave., Oshkosh WI 54902. *SN*

### *Fiction 'n Fact, from Doug's Almanac*

*Any change in attitude towards the Recruitment of beginners into our hobby Is unlikely until it no longer matters..*

(d.d.)

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## The Chris Stevens Story

It also didn't help that we discovered electric RC planes to distract us. Eventually the call of the control lines got to us and I returned the summer before 8<sup>th</sup> grade. One of my friends, Clark, joined my dad and me and learned the pattern at the same time I did. I began learning on the same Gotcha that I first flew when I was 6 and my friend learned on a Flight Streak that he bought. We all went to many competitions together and Clark and I competed against each other.

The first competition we both attended was a local competition in New Albany, where we were the only Beginners competing. That day I planted my Gotcha into the asphalt and broke both wings. Luckily, I had competed in Classic Stunt the day before with my dad's Nobler so both Clark and I walked away with first places. The Gotcha was easily fixed with epoxy and it was up and running again. That plane has taken so much abuse over the years that we have renamed fixing it to "Frankensteining" the plane back together.

I went on to compete in the 2004 Nationals. This time Clark couldn't join us for the trip up so it was just me and my dad. I didn't quite have the entire Beginner pattern

**Left: Chris Stevens with his Brodak ARC Vector 40 that he won beginner with in '07. This plane originally flew with a O.S. 40 but was replaced with a O.S. 46 LA.**

**Below: Chris Stevens checking line clips before a flight in senior at the L pad. He finished 3<sup>rd</sup> in '07. This Vector was replaced with a scratch-built version using an Aerotiger 36 for power. He won Intermediate in '09 with that plane.**



In this issue we'll be featuring Chris Stevens. For those who may not know, Chris won Intermediate at the Nats this past year. Here is his story:

**I can still remember** the first time that I flew a Control Line model plane. It was a warm summer evening with the sun just above the trees. My father, brother, and I had brought our two planes to the arboretum near our house. It had a large enough field at the time that we could just fly those planes. One was a Gotcha that we still have with us today and one was a Hacker that my brother flew. My dad would hold my hand every time that I flew just to keep the plane from crashing but by my third flight I had the courage to do it by myself. That evening, 12 years ago, was when I first flew a solo flight. Unfortunately that was also the last time that I flew a Control Line plane for about 6 years. It wasn't that it wasn't fun, it just so happened that things kept interfering, be it school, boy scouts, or finances.



***"When flying inverted, down is up and up is expensive."***

mastered when I competed so I placed fourth out of four. It was a good attempt for my first time and there were plenty of prizes available. I walked away with a Giles kit and a handle that I used the next year and also with an idea of the competition for next year. That year I met my new rivals and friends: Ryan Young, Grace Paris, and Thomas Case Jr.

After the Nats the next competition was another local one in Columbus, Ohio. I still remember the ride up to Columbus because it was just me and dad again and we talked about what I had learned recently in school and how to calculate the remaining time based off of speed and distance. That ride up is still one of my favorite memories of me and my father. At the competition there was a lot of down time because all the participants had to share a couple of circles in the lot. One of the ways that Dad and I kept busy was flying a couple of RC planes and a little  $\frac{1}{2}A$  Control Line model. The  $\frac{1}{2}A$  we could only fly in circles because it flew at a two second lap time and neither of us could keep up with it. The RC plane was a Formosa that my dad had made out of Depron foam. He was flying it around in the parking lot and was doing a few little stunts. The fun ended with a clang as the plane hit a light pole and fell to bits and pieces, reinforcing the idea that one shouldn't fly RC planes at a Control Line competition.

The last competition of that year was in North Carolina; we attended that one while also visiting my aunt. I was the only Beginner competing once again, but I was used to it. The circle that we flew in was on a hill with a steep drop on one side and a wall of trees on the other so turbulent air was a big problem. Luckily there was no real damage to any of our planes, although there were a few accidents. It was cloudy and rainy the entire trip but the flying was alright and the visit turned out alright. Unfortunately the next year I started Band Camp at Lafayette High School so I didn't get to go to the Carolina Criterium or the Columbus competition and I haven't been back in 5 years now.

The next year I began flying with the Giles that I had won at the Nats and the difference between the Gotcha and the Giles was like night and day. The Giles would glide forever and handled much smoother and tighter. I continued to learn the Beginner pattern but I was pretty slow at learning so I just finished lazy eights by the time the 2005 Nationals came around. I placed

fourth again but this time out of five competitors, so I felt that I had improved over last time. That year Thomas Case Jr. moved on to Intermediate. After the Nats I continued to practice but not as intensely and when Band Camp started I had no time to fly.

The next year I continued learning the pattern and I finally finished it in time for the Nationals. I felt like I could compete in 2006 and managed to place second and walked away with a Banshee kit for the next year. That year Ryan Young moved on to Intermediate and I had a new plane. The next year I felt very confident about flying at the Nats. I had all the months before the Nats to just practice perfecting the pattern as opposed to learning it and in 2007 I managed to fly my best flight ever. My dad likes to tell the story of how when I landed my smile was as big as the Giles wing.

I also competed in Junior that week. It was my first time flying on the L-pad and I was a little nervous. I only knew the Beginner pattern so I decided to try learning the rest of the pattern. I had seen many pilots fly the pattern and I was confident that I could attempt some of the maneuvers. My dad had the ingenious idea to try the pattern on the Banshee, my backup plane, which turned out to be a very good idea. When I got to the inverted flight, I was pretty shaky and was doing my best to keep it under control. I noticed the plane was headed towards the ground and I reflexively pulled up. Unfortunately I did not follow the age old advice, "When flying inverted, down is up and up is expensive." (*I like that! It gets the point across. —Ed.*) The Banshee was no more than two wings and splinters but the motor was miraculously intact. I then flew what part of the pattern I knew on the Giles and played it safe on the L-pad. It was better than leaving with two busted planes.

The next year I didn't fly; I applied for a fellowship at the University of Kentucky where I worked in a research lab for eight weeks out of the summer. That was a great opportunity for an upcoming senior in high school and looked very good on my résumé. That year I flew a little but I didn't have much time with the fellowship so I had quite a break from flying.

Now, one would think that a year without flying would make a person rusty. Well that was true for the take off but once I got in the air, after a year without flying, it was like that first time flying back when I was six. It was something that I had been missing for months, and I can imagine how it must feel for the pilots who return after years of being grounded. The year 2009 marked my greatest year of growth I had ever experienced. I graduated from high school and learned every maneuver that was missing from the Beginner pattern well enough to place first in Intermediate which gave me a free ticket to Advanced. I embraced the opportunity and practiced side by side with Dad for the rest of the week. I also got to know Ryan Young, Grace Paris, and Thomas Case Jr. better as friends and we keep in touch occasionally. I also got to know many of my dad's friends, including, but not limited to, Wes Akin and Eric Taylor, who we flew most of our practice flights with, Danny Banjock who flew with us and entertained us on our free day, and Rich Giacobone, who, in all politeness, said one of the most



Event Director, Allen Brickhaus presents the Eagle's Nest trophy to Chris at the 2007 Nats. This perpetual trophy goes to the winner of the Beginner Stunt event each year.

quotable things at the Nats: "It's probably none of my business, and maybe I shouldn't say anything, but shouldn't you be wearing shoes?" I wear flip flops while flying and Rich was worried about my stability and I thank him for his consideration. (That's okay, Chris, Rich wears shoes and all of us who know him worry about his stability anyhow ... —Ed.)

This was truly a remarkable year and I can't wait for the next time I'll be able to fly. Unfortunately I will have to take another leave of absence. I need to busy myself during the summer with more classes and research internships so I don't know when I'll be able to fly next. This may be the beginning of my hiatus from flying until I try to bring my own kids into it. I hope that's not the case but it depends on my schedule for the rest of the year.  
—Chris Stevens

Good luck in college Chris! Now let's just hope he will come back to this sport as we need everybody we can get.

As of the time I am writing this, we here in Vermont are in a firm grip of winter, even though our annual January thaw is here. Hope everybody is staying warm during this winter, and building away for the upcoming flying season. *SN*



Kenny and Chris Stevens pose together with their models. The SV-22 that Kenny is holding captured the Concours award at the 2006 Nats. Chris is holding his 2007 Beginner Stunt Champion Vector.

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# ALLEN'S EXCELLENT IRISH ADVENTURE

By Allen Brickhaus

*Editor's Note: After reading Peter Germann's description of some of the flying fields in Europe in his "Euro Scene" column, Allen Brickhaus contacted me and asked if I thought the following article about a flying circle that he visited in 2007 during a trip to Ireland might be of interest. I enjoyed his story and thought that you might as well. Take it away, Allen... — Ed.*

One circle that I feel is important to the Euro Scene is the one located just off of Holywood Road, in Belfast, Northern Ireland. In preparation for our 2007 trip to Ireland, I e-mailed five gentlemen from the Republic of Ireland and Northern Ireland. They answered so many questions for my wife, Kathy, and me. They offered advice about places to go, places to eat, and general daily need questions about life in the

Emerald Isle and how to get along with the populace.

Getting along with the residents of either the Republic of Ireland or Northern Ireland was a non-existent problem. Kathy and I felt at home even by the time we were asked for our passports and got into our rental car. This nine-day adventure was one of our dreams, and that dream became alive in our visit during the first days of August 2007. Chris Gilbert, Kevin Barry,





Maurice Doyle, Ralph McCarthy, John Hamilton, and Vincent Corwell were a treasure trove of thoughts and guidance for our trip.

Our journey began with a local flight in a 50-passenger twin-jet Bombardier CRJ-200 from the Evansville, Indiana, airport to Hartsfield Airport in Atlanta, Georgia. The noon flight helped us get to the red-eye Boeing 767 loading and leaving around 8:00 p.m. for Shannon, Ireland. We even managed to get some sleep on the overnight eastern-heading flight. We finally caught sight of the Emerald Isle around 8:30 a.m., as we descended through the cloud layer and gazed upon the green of Ireland. My last site of Shannon was in 1972 as I took a month leave from the 82<sup>nd</sup> U.S. Army Band in Stuttgart, Germany and visited my family in Perryville, Missouri. Our first few hours involved Customs and car rental. We were soon on our way. Now which side of the four-lane Motorway do I drive on and which is the passing lane? The cliffs of Moher and the Burren were our first contacts with the views of Ireland. The Burren became a twisty, barren drive, quite a different look to the rest of our journey. The cliffs of Moher held the exposure of well-known postcard pictures, with the true beauty fully overcoming the paper-printed images we were aware of from travel brochures.

Our first meals were consumed near the cliffs of Moher and north of the Burren with our first night's stay in Athlone. The Reeside B&B in Athlone allowed us to rest from the long flights and drive from our home in Golconda to the very middle of Ireland. Morning broke and our full Irish breakfast greeted us. Soon the towns of Mullingar, Kells, Ardee, Dundalk, and Newry led us to the Belfast area. We managed a brief stop in Ardee to

**Left: Just so there is no misunderstanding, Kathy and I both kissed the Blarney Stone at the Blarney Castle near the city of Cork, Ireland. Thus the reason for such lengthy reports.**



This is a stitched picture of the Belfast Circle I took in August of 2007. Three shots combined for the full affect of the tarmac surface.



**Kathy took this shot of me waiting for the ST .60 to shut down on John Hamilton's Tangerine. I noted that it did indeed shut down and roll to a stop well within the seven-minute FAI time limit. John knows his model and his engine.**

purchase a 220-volt hair curler for Kathy's use.

We first visited the Giant's Ring, which is hence a monument at Ballynahatty, near Shaw's Bridge, Belfast, and Northern Ireland, preserved by Viscount Dungannon. It consists of a circular enclosure, 200 yards in diameter, surrounded with an 12-foot-high earthwork bank with five entrances, and a small Neolithic passage grave slightly off-center. Then we ventured into the northeastern area of Belfast looking for the District of Sydenham and Holywood Road.

Maurice Doyle of Belfast met us at the flying site and then invited us into his home. There, his wife Helen met us at the door, and we had our first afternoon "tea." The view across their front garden framed the Irish Sea and the entrance to the Belfast Harbor. Maurice and Helen then showed us the sights of Belfast, including the Opera House, the Europa Hotel, the Thompson Dry Dock (where the Titanic and her two sister ships were outfitted), a full-sized bronze statue of C.S. Lewis and his "wardrobe" near the C.S. Lewis Library, and dinner at the Crown Bar.

We left Maurice and Helen and proceeded to Greyabbey, our next night's stay at the Ballynester House B&B. Another great, full Irish breakfast and a field of sheep with brightly-marked wool awaited us in the morning. The locals have a "color" of choice, not unlike our branding of cattle in our own west. The stay in Greyabbey was calm and we were again welcomed by the traditional Irish breakfast. We proceeded north back to Belfast and a get-together with Maurice Doyle and many of his Irish modeling buddies.

**Stunt News 52**

We again found Holywood Road and the gate to the flying field was open. The parking lot was full of cars they were emptied of their modeling contents and deposited in the pit area to the east of the Macadam circle. The tarmac surface was



**Kathy and I will well remember the quick friendship of John and Maurice. Maurice is holding John's Tangerine for his own flight. This is the model I flew in Belfast.**



Left: Shown are Eric Miller and his brightly painted P-38 Control Line model. Eric is the Scale guru in the area.

Below: Vincent Corwell snapped this shot of Ralph Mc Carthy and Kevin Barry practicing on the site in Belfast.



smooth and well-marked. A grass circle was also located just to the north of the tarmac and fliers were taking advantage of the gray and moderately windy day. Maurice greeted Kathy and me, and we were introduced to the CL community gathered that day in August of 2007.

John Hamilton owns a very nice model he calls the Tangerine, based loosely on the Trivial Pursuit, with power by an ST .60. He asked if I would like to fly the model. I was hesitant, as a crash by me, with a model not owned by me, might cause hard feelings. I accepted the challenge with the knowledge that the winds began to blow more forcefully.

The circle has trees close to the proximity on the south and east side. Thus I took John's Tangerine to the square eights and then opted to keep John's model in one piece and elected not to begin the rest of the pattern. I fully accept the concept of a yellow streak down my back, but I also desired to leave the circle as full friends with those I met that day.

Kathy and I spent about two hours on the site and the welcome was a warm one. With the shaking of hands and fond good-byes, Kathy and I left to continue our full nine days in Ireland. I give my thanks to Maurice Doyle, his wife Helen, and all the modelers at the field in Belfast. We had a great time and look forward to returning in 2012. *SN*



Kathy and I met Kevin Barry for the first time in our stop near the Blarney Castle north of Cork, Ireland. We spent time talking that evening and had lunch together the next day.

# The Stiletto

By Les McDonald

# Chronicles

## The Little Engine That Could

After returning home from the 1979 FAI Team Selection the first order of business would be to organize our “motor program.” My good friends at the K&B factory were helpful with this, but not near as excited as I felt they should be.

I gathered a good selection of standard K&B parts that were currently available, but in addition to those we needed crankcases and front housings from the earlier series 40s. In a short time I “sourced” a good supply of the “small bearing” front housings, but crankcases were elusive. Stan Powell would need to continue with the JB Weld solution, at least for a while.

Stan was able to solve the ring wear problem right away. Vic Garner, in Northern California, not only supplied us with piston rings made from a harder iron, but now they were perfectly round. Good parts fit was a major key to winning the battle, so we moved on into other details.

Bill Wisniewski, of K&B, sent a large batch of connecting rods and sleeves for me to select from. I would inspect these batches with a caliper, a micrometer, and my eyeballs, then send the “good stuff” to Stan and return the “rejects” to K&B. At one time I remember receiving more than fifty connecting rods and after inspection only sending Stan five or six. After that we started buying con rods from RPM. Round cylinder sleeves were also hard to come by but we made do.

We were test flying the new engines and, as you all know, when you fix one problem it creates another. The new, harder piston rings were wearing out the top portion of the sleeves. Mr. Wisniewski was the only one there who had a clue of what we

were trying to achieve and, thankfully, was sympathetic.

Once we had a good quantity of sleeves Stan researched around and found Henry Nelson to be the solution to the sleeve problem. Henry came up with a recipe that perfectly blended Vic Garner’s piston ring material to the chrome coating on our now perfectly round sleeves.



This photo was taken in early 1981. It shows Les with some of the more significant hardware that he collected flying the Stiletto 660. From left to right are the UHU World Cup (emblematic of the 1976 World Champion), the Al Lewis Perpetual Trophy from the 1980 King Orange contest, a crystal vase presented to Les when he won the 1980 World Championships, the Steve Wooley Memorial Cup which is presented to the individual World Champion, and the Walker Trophy for his win at the 1980 Nats.

*We were test flying engines and, as you all know, when you fix one problem it creates another.*

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*When we did see someone they would stare at our colorful vehicles and then look back down at the ground.*

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By early in 1980 I had good running engines that would last and a variety of props that suited the K&B. The old style Top Flite props now seemed to work best for me and I've often wondered if I had some of these props with me at the Lincoln Nats what could have been. Now there's a big "What If."

I retired Stiletto #11 but knew someday I would build another I-Beamer using different "numbers." It took up residence on a wall at my Mom's house, right next to the "Concours de Elegance" award. Thanks Arlie Preszler.

#### **A little break**

I had decided not to build a new Stiletto for 1980. With my new engine situation, recent success at the team trials, the acceptance of my "maneuver compression," and the tips from Wynn Paul, the 660 and I were "good to go."

Life is so easy when your program is working well. I even spent time around the house doing normal married guy things. I couldn't believe how fast Diane was growing up and it was obvious I hadn't done much "parenting." Nancy was a great Mom and I did pretend to be a father, but the Stunt thing was always there no matter what I was doing.

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*It was very apparent that, for me, competing at this level had become a job.*

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It was very apparent that, for me, competing at this level had become a job. Not a career, not an avocation, just a full time second job with no pay and lousy benefits. But in this short time, just before starting to practice for the 1980 season, I was on a vacation of sorts. I still worked at Orange Blossom Hobbies forty-four or forty-five hours a week, but without doing "Stunt stuff" I had extra time and even tinkered with my Yamaha "cafe racer" motorcycle a little bit.

The competition, and the effort it took, was not relaxing and certainly not fun but I kept at it. I got along well with my peers simply because we were not year round neighbors. We were "Stunt Fighters" on a common mission trying to beat each other during some sort of an adventure.

Ted Fancher, Bill Simons, Bob Whitely, Gene Schaffer, Bob Hunt, Al Rabe, and Bob Gieseke (and a few years down the road David Fitzgerald, Paul Walker, and others) were all great "Stunt Fighters," but they managed to maintain what appeared to be a balanced life. They all worked hard flying Stunt and were very accomplished but were able to separate themselves when necessary to function within the normal parameters of marriage and society.

Bill Werwage, Jim Casale, and I were a different breed. We only lived to win contests. Everything else rode in the backseat. I swear, alone, out on some practice field, if one of us got chest pains the only question would have been "How many more flights can I get in before I have to drive myself to the Emergency Room?" I have no regrets and I'm certainly not bitter. I'm proud of my success flying Stunt but I must make you aware of how difficult it was for me.

#### **Back to work**

After a few months of playing with my daughter, enjoying the company of my wife, getting a few things done around the house, and tinkering with my motorcycle, my vacation was over.

Bob Gieseke had withdrawn from the team. I didn't know why and it was none of my business. I suspected, since the death of Anna Mae, he had his hands full with the kids and was going to do the right thing by staying home and keep things under control. A perfect example of what I tried to explain in the paragraphs above. "The Bear" would put his family first, above all else. This is only a guess on my part and there may have been something else but I can't imagine what. Bob Gieseke is a good man!

Bob's withdrawal would move Werwage onto the team. For me that was a wash since either one of them was capable of winning. Besides I had learned my lesson, as with Hunt in England, that my predictions had no basis in reality. Anyone on a US Stunt Team could win one of these things just like Hunt and I had demonstrated at the two previous Championships.

I planned on attending three contests in 1980. The World Championships at Czestochowa, Poland, in mid July, the Nats at Wilmington, Ohio, a few weeks after that, and the King Orange International, near Jacksonville, at the end of the year.

As I had done in the past, Daylight Savings started and I began practicing. No panic this time. The engines were good for hundreds of runs lasting almost as long as a conventional "flat ring" motor.

Vince now had the experience to help with my flying and, although he wasn't my "official coach," we spent time trying to perfect the "tighter" pattern. We worked primarily on making the round loops and triangles fit "inside" the perimeter of the square maneuvers. Properly performed triangles and round loops would seem, to the judges, a bit small at first, but I wanted something distinctive in my patterns.

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*Travel to the contest site in Poland seemed simple enough.*

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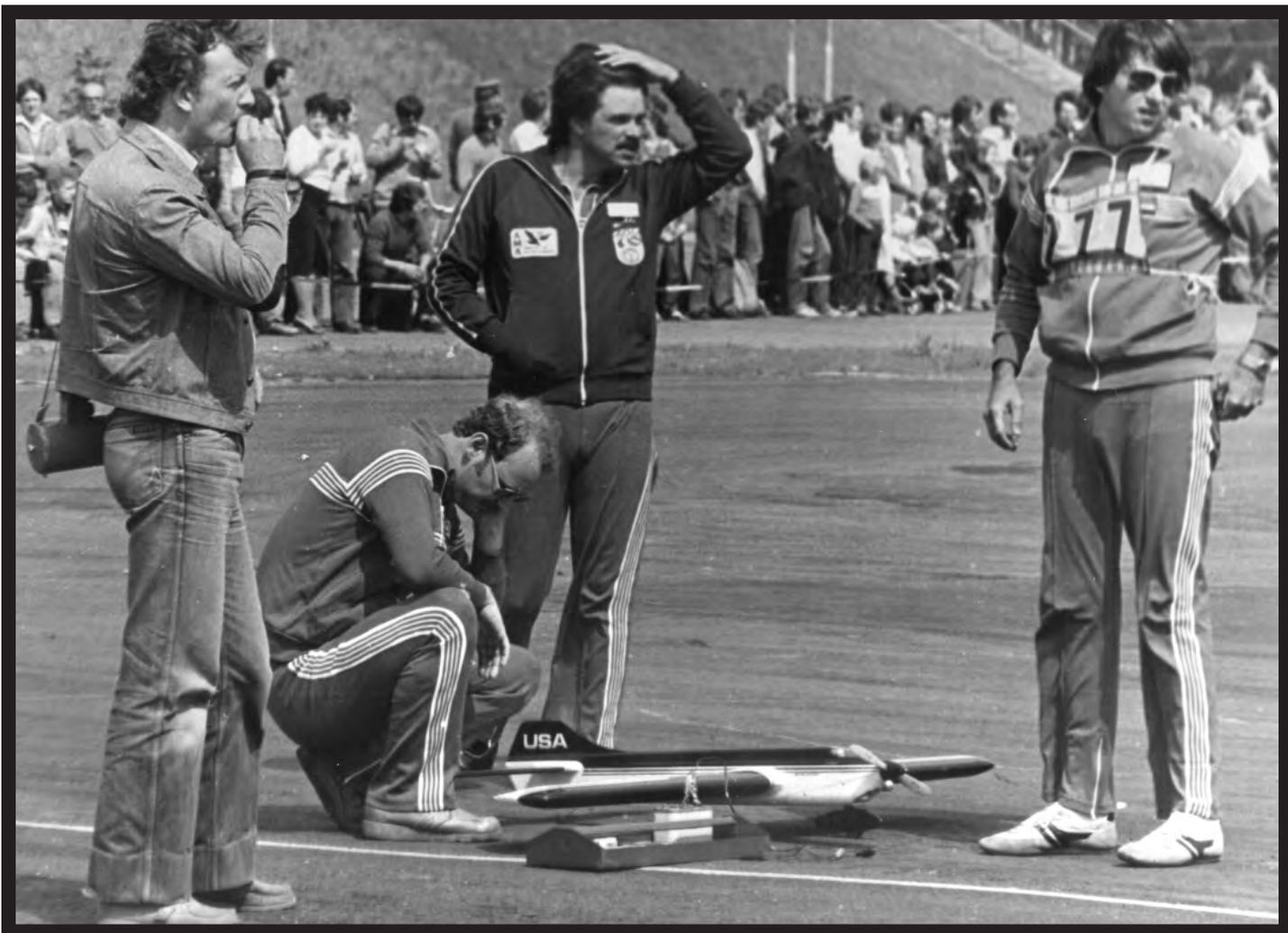
Since 1972 I had been trying to fly the same size maneuvers as everyone else and hoping to win with better intersections, bottoms, and shapes. All the good guys consistently fly good intersections, bottoms, and shapes, so I was just trying to achieve a pattern that looked a little bit different, closer to the rulebook in size.

#### **1980 World Championships**

Travel to the contest site in Poland seemed simple enough.

For both my flights between Miami and Frankfurt I had made prior arrangements with a well known German airline to handle my airplane box—or so I thought. I had no "inside connections" with this airline and that, my friends, makes a world of difference. Finally, after twenty or thirty minutes of whining, complaining, and paying way too much for "excess baggage" I was on my way.

Upon arriving in Frankfurt I hooked up with Don Jehlik, the Team Manager, his Assistant, Bill Lee, and the rest of the team. We gathered our fuel, picked up our rental vans, and headed east.



Left to right are the official time keeper, Bob Hunt, Bill Werwage, and Les McDonald, apparently waiting for the judges to take their positions to score one of Les's qualification flights at the 1980 World Championships.

The West German countryside is beautiful and our five Volkswagen Vanagans, all in bright shades of various colors, must have looked like some sort of circus caravan speeding down the Autobahn. (*How prophetic ... —Ed.*)

As we approached the “buffer zone” leading into East Germany we slowed down and watched the landscape gradually turn dreary. As we got closer to the actual border and the customs checkpoint it got downright depressing. Razor wire, gun towers, and machine gun-toting guards made for a quiet, somber two hours of waiting for clearance to cross into the land of light gray, dark gray, and black.

Our “transit visas” specified a direct route to Erfurt, our first overnight stop, and then to the Polish border. No deviation would be tolerated and we had twenty four hours to do it.

The trip was downright eerie. Driving through cities at five in the afternoon we saw very few people and even fewer cars on the streets. When we did see someone they would stare at our colorful vehicles and then look back down at the ground. No smiles, no waves, they just wanted to go on unnoticed. In contrast



With the judges finally in position, Les fires up Stan's K&B 40 as Bob Hunt holds.

to the black cars and gray buildings, huge signs painted red and white with the figures, in black, of a gloved hand holding a lightning bolt with wording, no doubt, extolling the virtues of Communism.

I was driving the bright green “Stunt Van” and pulled up in front of the hotel in Erfurt to unload our models. In an instant a very large soldier with an equally large machine gun appeared and motioned for me to move the van. I suggested that he should allow me just a moment to unload our precious models; not good judgment on my part. He started waving the large gun around and called for reinforcements. An even larger soldier with an even bigger gun showed up and demanded our passports. In just a few short minutes I knew this had gone beyond a “parking ticket.” We were now being detained; a precursor of things to come.

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*In just a few short minutes I knew this had gone beyond a “parking ticket.” We were now being detained; a precursor of things to come.*

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Eventually we were in our rooms, with our models and the passports back in our possession. Some lady “Handler” that had sorted it all out explained “things are a bit different here than in America.” Duh.

Later that same evening we saw, from the hotel windows, the same large soldiers that had confronted us earlier. They were still in uniform, but now obviously drunk and very rowdy on the street below. Needless to say, Werwage and I didn’t step out to find a drink.

Early the next day we loaded up and headed for Poland with Bill Lee leading the way. After driving around Erfurt aimlessly for a while one of the supporters, Dave Elias, explained to Bill that Poland is to the east so we should be driving into the Sun not away from it. Stunt people are simple people and we were so impressed by Dave’s leadership skills we promoted him from “supporter” to the semi-unofficial post of “Stunt Team Manager.”

Now on the road we were told to be on, heading east, we finally arrived at the border crossing into Poland. Our five little circus wagons and a rented Ford Fiesta lined up at the gate and waited. We all jumped out and started milling around our mini wagon train waiting for some official to stamp our passports and open the gate. No one was there, only us. No officials, no soldiers, no one to get us through. We were on the route provided by the East Germans and still within our timeline but this border crossing was closed and, we soon found out, had been for months.

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*We were on the route provided by the East Germans and still within our timeline but this border crossing was closed and, we soon found out, had been for months.*

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New plan: Screw the Commies, and their orders. We take off to the North, on back roads, trying to reach a city called Gorlitz, hopefully to cross into Poland there. Our colorful little caravan

passed missile sites, an airbase, tank and armor storage areas, and many other things forbidden to American eyes.

We could have blown these places to bits with the mighty USA-1, a deadly Stiletto, the well armed Genesis, or the always lethal Pampawagon.

We begged Bob Hunt to not take pictures and secretly conspired to misplace his camera. Billy and I just wanted to get out of East Germany and Wynn Paul started to realize that fried chicken was not in his immediate future.

It’s raining, it’s cold, and I’m a little annoyed and somewhat nervous that we never will be able to leave East Germany. We just drive and drive, looking for a way out. Have you ever had a similar dream?

Late in the afternoon we arrived at the border crossing in Gorlitz and found it to be functioning like the well-oiled Socialist machine it is suppose to be. We were close on time, but our main concern was the fact that we were 150 miles from where we were directed by the same well-oiled people in charge. It must have been near closing time since we were able to pass through the gate with little fanfare and on our way to Wroclaw, Poland, our second overnight stop. Some of the Team Race guys had rented a Ford Fiesta and within an hour were miles ahead of the rest of the caravan.

I blasted our little bright green Vanagan down the road into the cold, rainy night. I was leading our group of five brightly colored VWs across the Polish frontier when we came across a small car overturned in a ditch next to the road. Through the rain and darkness we saw team racers Walt Perkins, Tom Knoppe, and J.E. Albritton fumbling around the wrecked car and it soon became obvious that FAI team racers ain’t exactly Formula One drivers.

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*“Solidarity” was just taking roots with big changes on the way. Had we been aware the old guard was crumbling we would have cheered the people on because the old system really sucked.*

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I, and some of the other team members, had some experience with this sort of thing so we had the team racers and their Ford Fiesta up and running in less than 45 minutes. The car’s body was bent over to one side, most of the windows were broken, and the sheet metal was totally rearranged. Ever return a rental car with a scratch? I give them credit though, by noon the following day they had a new car.

At 4:00 a.m. we pull into the parking lot of the hotel in Wroclaw. All of us were exhausted and I only remember the scariest and rattiest elevator I’ve ever been on.

The next morning we took off towards the Sun once again and on to our final destination, the city of Czestochowa in South Central Poland.

Poland actually was pretty nice; austere, but nice. The people were friendly; not paranoid like the East Germans, and the citizens of Czestochowa seemed to enjoy hosting the Championships. Things were changing in their lives at the time, but we were oblivious to the food shortage, labor strikes, and major shifts in the political system about to take place in their country and beyond. “Solidarity” was just taking roots with big changes on the way. Had we been aware the old guard was crumbling we would have cheered the people on because the old system really sucked.

After traveling for almost five days, the agenda called for two things: get some sleep and find some place to practice. Sleep was easy, a place to practice turned out to be impossible.

The contest site was off limits and parking lots did not exist. Harold Pokorny, a member of the Austrian F2B Team, explained to us this was the first generation of Polish people to own personal cars, so not only did they lack parking areas they seemed not to have very many “rules of the road.” On top of this was a complete lack of skill and experience operating these little Fiat derivatives. Within an hour of arriving in Czestochowa we found the phrase “crossing the street” to be a frantic, daring challenge. Harold nicknamed these brightly hued, under-powered (thankfully) cars as “Kneecappers.” At least they weren’t all black like the cars of their East German neighbors.

We did find several places to “fly.” Actual practice was not feasible. *Flying* is rolling out a set of lines, launching the model, doing a few sky tricks, and plopping back down safely. *Practicing* is rolling out a set of lines, launching the model, and making a gradual, smooth, one lap ascent to five feet. Fly at five feet for about five laps and then, upwind, make a sharp vertical climb, perpendicular to the ground, passing directly, precisely at the top dead center of the sphere in which ... well you all know the other parts.

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*The muddy field was named “The Berea Tar Pits.” The pad with the kids, dogs, and bicycles became known as “The Torture Chamber.” And our “rented” sports field was lovingly called “The Penalty Box.”*

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We flew in places so confined and turbulent that attempting a complete pattern would be “risky” at best. One place was so muddy by the time you reached the triangles you could no longer move your feet.

Another place we tried to practice was an asphalt pad located near an apartment building. Kids, dogs, bicycles, and drunks ruled that spot. We could only get about two thirds of a circle over the asphalt portion. We had to fly out over two-foot high scrub grass for the other third. It was a very high-stress proposition to fly there ...

The “Militia” chased us off a soccer field we had paid money to use.

We actually gave descriptive names to these places. The muddy field was named “The Berea Tar Pits.” The pad with the kids, dogs, and bicycles became known as “The Torture



Here's the triumphant 1980 United States F2B contingent. Clockwise from left are Bill Werwage and his USA-1 who finished in third, the retiring 1978 World Champion, Bob Hunt, with his Genesis 40 who placed second, Wynn Paul with his tenth-place Pampawagon, and the newly crowned World Champion, Les McDonald, and his two-time WC winning Stiletto 660.

Chamber.” And our “rented” sports field was lovingly called “The Penalty Box.”

The total absence of a practice site in Poland soon became a major issue and, over the years, has morphed into a legendary, maybe even infamous, story in the world of FAI Stunt. What was an annoyance to Bill, Wynn, Dave Elias, and me turned into a very real and serious problem for Bob Hunt and that story is for he alone to tell. (*I'll give that some serious thought, Les. The State Department prohibited me from writing about it back then. I think they've probably forgotten the episode by now. —Ed.*)

The official flight circles at all these championships are only used for the competition flights and one official practice flight per contestant is allowed. Everyone seems to be okay with that. In Poland we faced other problems with their “practice agenda.”

At a typical World Championship each team is allotted thirty minutes on the circle with three team members. If you happen to bring along a defending World Champion, no time is to be added to compensate for the additional flight, so advance planning and coordination is required. We are Stunt guys, cunning and resourceful, so we handle it, but the organizers in Poland decided to be clever by splitting the Stunt entries into three practice groups. One group was assigned the actual Stunt circle, another group was put in the Speed cage, and the third bunch—which included us—was put on the Team Race circle.

We were not allowed to be anywhere near the official circle until our first round contest flights. The day before the competition started I spent a lot of time hanging around the outside of the “non active” official circle trying to study the surrounding terrain, background, and various wind scenarios. This didn't affect just the Americans; it affected two thirds of the Stunt entries. The contest site itself was first class all the way with a clubhouse, workshop, paddock, and pit areas. Bleachers for the Speed and Team Race circles, it looked like a “mini Daytona.”

Like all dedicated Control Line sites, the Stunt circle was



Les's win at the 1980 World Championships did not come easy. The conditions in Poland were very windy, rainy, and turbulent. In the end Les prevailed and established himself as one of the all-time greats in World Stunt competition.

surrounded by buildings, tents, and on one side, a six foot high wall lined with a row of large trees.

For two thirds of the contestants, Round One was our first flight on the "official" Stunt circle and Bob Hunt was leading at the end of it. Billy was in second, Compostella of Italy third, Hara in fourth, and me in fifth. I was hit several times with turbulence and my score showed it. Wynn Paul couldn't get out of the 2500s for the entire contest, except for a high-scoring Round Two flight, and was never a factor in the top group. He flew well but struggled with the bumpy air and couldn't separate himself from the large group of fliers between the ninth and thirteenth spots.

In the time between Round One and Round Two Billy made a casual comment about the wind coming between two trees next to the six foot high wall in one particular place. To this day I believe that simple utterance fed me the information I needed to win that contest. I was scheduled to fly in the middle of Round Two and began paying close attention to the place Billy pointed out as I watched other flights. During my Round Two flight I was now aware of this trouble spot, worked around it, and received the highest score for the entire contest. I was the only flier to venture into the 2900s. I went from fifth to first and would have felt pretty good had the weather been a bit more predictable.

Going into the final two rounds I was

of miracle flight to move me out of first. Hunt did fly a great pattern but, lucky for me, no miracles.

44 points ahead of Bob Hunt in second. Billy was only 4 points behind Hunt in third with Compostella and Hara farther back.

Round Three, the first finals round, was a bit unnerving for me. Windy, along with a cold drizzle, I could only manage a 2792.

Remember, I'm a lucky guy. Neither Bob nor Billy could make any gains and only Compostella got close, but I was still in first place. Fortunately for me all the Round Three scores languished in the middle 2700s.

By Round Four the final places were pretty well set and even though Bobby had the coveted last flight I knew he would have to get something over 2932 to win. Billy was entrenched in third after my 2871 flight and it was up to Bobby to fly some sort



The victorious United States Stunt fliers fill the podium as the Star Spangled Banner plays.



Les, Billy, Bob, and the infamous "Circus Stunt Vanagon." This photo was taken on the trip to Poland. That trip had some amazing twist and turns that could have landed the entire team in an East German prison ...

The final scores were 5802 for first, 5767 for second, and 5657 for third. Actually this was a big spread, not that I'm complaining, and it was the second time an American Stunt team filled the top three positions.

With my first place, Billy's third, and Wynn Paul in tenth, we also were able to keep the Team Trophy in America for another two years. This is important, especially to the AMA, since it somewhat justifies the funding for the whole affair. Thank You AMA and thanks also to the PAMPA members for the financial support.

Once again, up on the top step of the podium, with Bob Hunt on my right and Bill Werwage on my left, we waved, congratulated each other, and listened to our National Anthem in front of more than a thousand cheering people. It's an amazing feeling and I just wished we were in some other country.

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*During the banquet I was requested to attend some little ceremony in a stairwell so I could witness the Secret Police return a camera, some lenses, and a number of rolls of destroyed film to Bob Hunt.*

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I had no plans to "let it all hang out" at this banquet. "Just cause you're paranoid doesn't mean their not out to get you!" We still had a serious problem and would only be happy when we were on the West side of this rusting Iron Curtain.

During the banquet I was requested to attend some little ceremony in a stairwell so I could witness the Secret Police return a camera, some lenses, and a number of rolls of destroyed film to Bob Hunt. I did let my "temporary celebrity status" tell some sleazy little trench-coated Polish I-Spy creep what I thought about their "System." By the look on his face I was sure the translator was not repeating my tirade word for word in Polish

and was probably telling this little creepy guy how great I thought the meal was.

A special thanks to both Don Jelhik and Bill Lee for managing the whole team through many difficult situations. (*I'll second that thought.* —Ed.)

No sightseeing, no tourist stuff. We pack up early the next morning and head west, back through the enchanting land of light gray, dark gray, and black. The plan was to caravan, in the VW circus vans, from Czestochowa to Dresden, East Germany. Spend the night in Dresden and then hightail it back to Frankfurt, West Germany.

After a two or three hour wait at the Polish border we finally crossed into East Germany and set off for Dresden. Billy and I did what we always did after a contest: Drink.

We bought a case of beer and reviewed our most recent competition. Drinking beer in the back of a van would be considered very bad judgment, but in 1980 East Germany we observed it to be normal.

Over the years I had learned quite a bit from Billy during these traditional discussions, and now Bob Hunt and Wynn

Paul were able to participate in this deep, philosophical conversation. The difference here was that neither Wynn nor Bob was drinking, so after two or three hours the party only had two guys talking: Billy and me. We seemed to be the only ones that made any sense. One case of Wroclaw beer and three loaves of bread later we arrived in Dresden.

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*Within five miles the trees were green, the sky was blue, and the air smelled fresh for the first time in over a week.*

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Dresden had been leveled during World War II, so the primary mission of the ruling party was to rebuild it into a magnificent, modern city. A showcase to the world as to what the Great Communist Society was capable of achieving.

We were scheduled to stay that evening at the swank Interhotel Plaza. The circular driveway of our hotel was beautifully landscaped with terraced, lighted waterfalls, and there were many meticulously arranged gardens as well. There were a number of elegantly dressed people walking up to the entrance along this driveway. Into this very sophisticated scene rolled the U.S. Stunt Team with a case or two of Wroclaw beer empties.

Upon arrival at the main entrance of our hotel, Billy rolled out of the circus van's side door. He was sporting a Mickey Mouse tee shirt that exclaimed "Have You Kicked Your Model Airplane Today." His eyes were two red slits and he was looking a bit green. (*Billy always did have a good sense for color schemes.* —Ed.) He made a few strange noises and then up chucked on the glorious stairs leading up to this glass and marble example of Socialist architecture. This was not a rare occurrence in this part of the world since alcohol seemed to be a good place for these oppressed citizens to hide. The local patrons, dressed in gowns and evening garb, didn't seem to notice or even care. They knew some "less equal worker" would clean up Billy's mess. I simply

asked “You about done there Bill?” as we prepared to unload the van.

In the morning we cleaned up Billy and headed for Frankfurt. We still had one more border crossing to negotiate and it was uneventful until one of the “guards,” while searching through my stuff, impaled his finger on a “souvenir aero club pin.” He looked at me like I had just stabbed him with a knife. Surely I would be “detained.” Through watery eyes he reluctantly let me pass through the gate and in an hour or two we were free. Within five miles the trees were green, the sky was blue, and the air smelled fresh for the first time in over a week. Bob Hunt literally got out of the van and kissed the ground. Welcome back to West Germany and after that, the “Good Old USA.”

Finally back home I started preparing for the Nats. Stan provided me with fresh engines and, would you believe, Nancy organized another “Victory Party.” With all our friends in attendance and another “Stiletto cake,” the all-weekend-long occasion was a rousing success.

### The 1980 Nats

Nancy had not gone with me to a contest since 1974 and I was sure she would like to see Shareen and her other “Stunt” friends, not to mention show off the “baby” who by now was four years old. I knew Diane would have fun simply because she was four years old.

One of my customers at Orange Blossom Hobbies owned a rental car company and loaned me a Ford station wagon so I could take the family to the Ohio Nats. By now we had a new Mercury sedan but we needed more space for the kid and, hopefully, the Jim Walker Trophy.

Ever since I started working with Stan Powell on the K&B program, things had gone my way. It hadn’t been easy, but the lack of aggravation with my engines made life so much easier. The Stiletto, powered with Stan’s K&B engines, had been tested in battle over a broad spectrum of situations and prevailed every time except once. The one shortfall up to this point would be my third place at the ’79 Lincoln Nats. I considered third place to be a loss!

This would be my golden opportunity for a Nats win. In 1971

I was learning. In 1972 I was gaining experience. In 1973 I was psyched out by the wind. In 1974 I had been distracted with the new job and RC car racing. In 1975 I misplaced my inside round loops and lost by a single point. In 1976 I beat myself with a bad needle setting and a wrong decision. I had taken the year off in 1977 to try and put some stability in my family life and in 1978 I was in England during Nats week. In 1979 I didn’t have the proper propeller. I used all these excuses as reasons.

I now had the experience, the plane, the power package, the trick blue shirt with stars, and the confidence to win. I just had to fly better than everyone else and that’s what makes all this so difficult.

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*These Ohio contests and the early King Orange Internats in Miami were the roots of my fascination with Stunt models.*

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Ohio has always been a good place for me and not just because of my competition successes there. My mother grew up in Lakewood, a suburb of Cleveland, and later, after marrying my father, they lived in nearby Bay Village. They moved to South Florida in 1944 and I came along in 1945.

My folks still had family up there and I fondly remember our summer vacations, with my mom’s brother, in Olmstead Falls. During these summer vacations around 1953 and 1954, I remember so well my parents taking me to watch model airplane contests in the parks around Cleveland. The Stunt planes were magic to my eyes and their beauty burned into my little brain.

Could this be the reason I always preferred dedicated Control Line fields over the parking lots or expansive runway venues? Is it possible I saw Milton Boos, John Havel, or Emil Cipra fly? Perhaps even Bill Werwage? Many years later Billy told me I probably didn’t watch him fly or see his planes but I really wanted to believe I did.

These Ohio contests and the early King Orange Internats in Miami were the roots of my fascination with Stunt models. This exposure had nothing to do with competition or who placed first that day. It was all about magnificent models making wonderful figures, breathtaking pullouts, and graceful landings under the blue summer skies, surrounded by the smell of fresh cut grass and castor oil lingering in the gentle breeze.

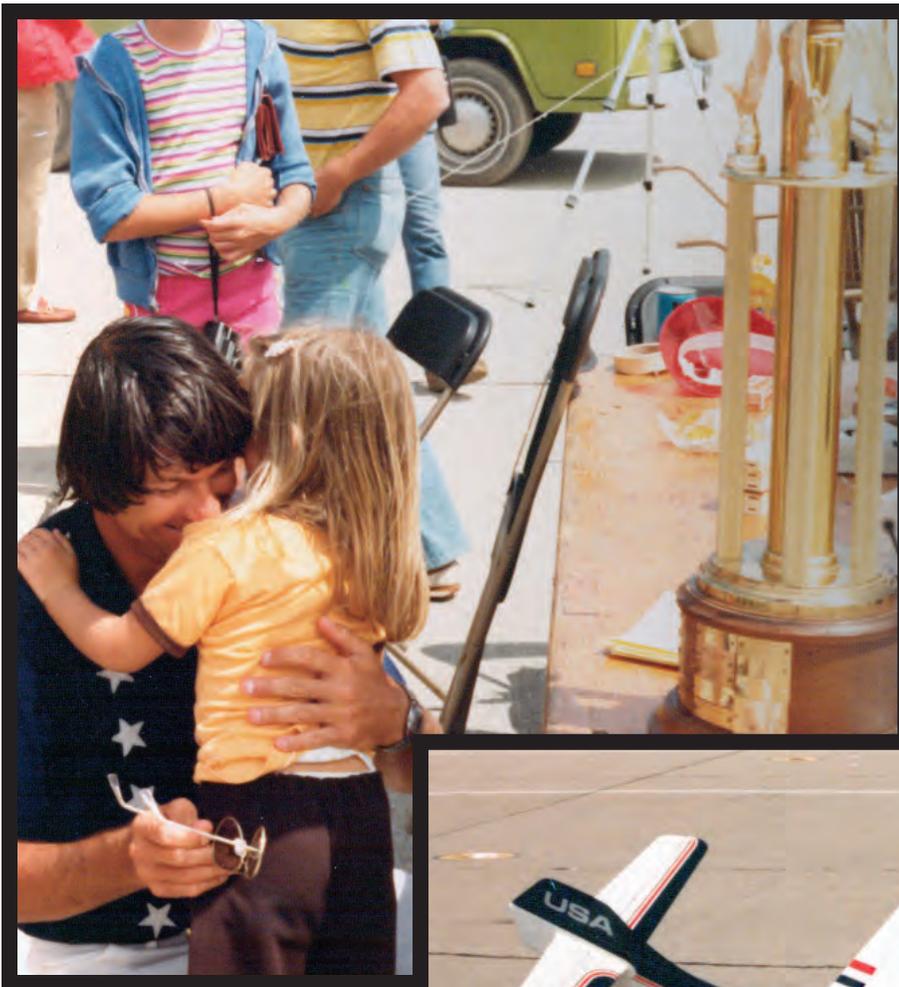
Well those days were over. I came to Ohio for one purpose, to win the Nats and have my name forever etched on the Jim Walker Trophy. I was not a “trophy collector” but my name on this one would solidify my place in the history of our event. I had done all the “Good Stunt Guy” stuff.

I had won two World Championships and some other “big time contests.” I had two construction articles published and traveled to many foreign lands to fly my models. I was without a doubt the most “subsidized” person competing in Stunt and my Stiletto had been kitted. The Stiletto and I were fixtures in the various magazines and I would be lying to say that meant nothing, but I would never be satisfied until my name was on the Nats winners list and on that Trophy.

Since 1975 I had only been concerned about the perception of my flying accuracy compared with Werwage, Hunt, Gieseke, Schaffer, Simons,



Phil Granderson and Les watch Bob Hunt’s last finals flight at the 1980 Nats. Bob was the last one with a shot to beat Les, but in the end the Stiletto-man won his first Nats.



Above: It just doesn't get any better than this: Les's four-year-old daughter, Diane, gives her dad a congratulatory hug after his 1980 Nats win.

Right: After coming close several times, Les finally won the Jim Walker trophy in 1980. At this point in time, Les had completed the Grand Slam in Stunt by winning the 1979 Team Trials, the 1980 World Championships, and the 1980 United States Nationals.



flown by Bob Baron during "Top Twenty" day at the 1996 Nats. I was a judge that year and still remember that flight. He won that Nats and deserved it.

At the 1996 Nats PAMPA banquet, after his win, knowing he was fighting a terminal illness, I pulled him into a hallway and tried to convey to him several of my personal thoughts. These were private words and will always remain that way, but I would like to think I made some small impression on his view of the Stunt world and the personalities that live in it.

Back to Wilmington, Ohio and the '80 Nats ...

It was a typical Ohio contest with plenty of wind and cold rain. Once again Lanny Shorts had put together a very distinguished panel of judges: Zimmer, Laws, Lorio, Adamisin, McClellan, Fitzgerald, Delano, Reinhard, and Gieseke.

Qualifications went well for me and at the end of "Top Twenty" day I was in second place thirteen points behind Bob Hunt. Ted

and Fancher. Bob Baron was also in the top group but I never thought too much about his opinions. Baron was convinced I was winning because of "The Shirt and my shiny paint jobs" and made no effort to hide his feelings. I had no problem with his thoughts simply because I had been placing well at the contests and I respected his skill, if not his attitude. I have seen Baron absolutely dominate a contest and I have also watched him struggle with flights. He seemed to have difficulty recognizing the flights that weren't his best. To him they were all good or, at least, better than the scores he received.

The best single flight, of anyone, I have ever witnessed was

Fancher, Bill Werwage, and Bob Baron were all very close behind and we headed into the finals on Saturday. Those scores don't carry over but they do let you know if it's time to panic. I felt pretty good about my chances until the flight order was drawn.

It was time to panic. This is the reason why I don't play the "Lottery." I was assigned 1-1-2 flight order for the three rounds. That's a tough nut to crack, and to make matters worse, Hunt's flight order was 3-7-7 which gave him the coveted last flight in the final round.

During morning practice Ted had, once again, a control failure and totally killed another Tation. He quickly returned to the fray with a profile Tationette, but it was apparent, barring something freaky, he would end up in fifth. I still think Ted sacrificed some of his planes back then so everyone could enjoy the reliable adjustable control systems you now have. Thanks Ted?

Remember the part about me being a lucky guy. At the end of the first two rounds, even after flying first in each one, I was leading the field. Hunt and Baron were tied for second, Werwage was five points behind them in third, and Fancher was solidly in fifth.

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*Remember the part about me being  
a lucky guy.*

---

In the third and final round my flight went down by nine points and all I could do was wait and watch Billy and then Bobby. I was positive the scoring would balloon at some point, either with Billy in the middle of the order or with Bobby at the end.

Lucky me, lucky me. The scores stayed low and I had finally won a Nats. Once again the Stiletto 660, with Stan's K&B engine, had done the job for me. Thanks again Stan.

Nancy and Diane being there was icing on the cake. I even had the station wagon with which to haul the glorious "Walker Trophy" back to Miami.

Billy was still "The Man." I had developed a profound respect for the abilities of Bob Hunt, the determination of Ted Fancher, and nothing much changed my opinion of Bob Baron. He had the flying skills but something was missing. But right then, at that moment, I had it all and didn't care about anyone else or what they thought. That night Hunt and Werwage went on a "bender" and whined all night. *(Les, that was a deep philosophical discussion, just like the one you and Bill had on the trip out of Poland. —Ed.)*

This was not a clean win for me and the normal grumbling would start sometime during the banquet and last until the '81 Nats. Sometimes there is a "down side" to winning. The crying and complaining are just another phase of the event. Smelling like castor oil and biting fingernails are other phases; it's a long list!

Any one of the three of us could have won that contest, it just happened to be "my turn" and that was fine with me.

#### **Success has rewards**

The Walker Trophy, now with my name added to it, was quite handsome sitting in our living room next to the Steve Wooley Cup. At this moment I had hit a "homer" and tagged all the bases by winning the Team Selection, The World Championships, and the Nats. For a "Stunt Fighter" it gets no better than that!

By Fall I had the interest of the people at K&B. We discussed the feasibility of producing a K&B 40 Stunt engine based on Stan Powell's work. This seemed to be a good time period for this project since they had recently acquired machinery from Cox, the undisputed "master of close tolerances." Bill Wisniewski was given the go ahead to supply us with whatever was needed for our program. This arrangement made it possible to have nine

crankcases cast with the transfer ports just the way Stan wanted them. No more J.B. Weld.

Most of the other parts were being made by various "vendors," so the only "donated stuff" was from K&B and it was very much appreciated. All things aside, this arrangement seemed to simply be one group of "hobby guys" helping another. Thank You and Rest In Peace Mr. Wisniewski.

I had one more contest in 1980. The King Orange in Jacksonville. The KOI always has two unknowns, the weather and who may show up. Jacksonville is way North of the Tropics, so late December in North Florida can experience some very uncomfortable weather.

This time it was a very much improved Frank McMillan and a bunch of really cold rain. I did have an advantage though over the other guys. I lived in the Tropics so I was able to get in a bit of practice before heading to Jacksonville.

This time I made the trip to Jacksonville in my Mercedes 280L sedan. I never bought it for contest traveling but it made the one day, ten hour round trip a bit more enjoyable. Placing first in the contest made the day totally enjoyable and now I had the Al Lewis Perpetual Trophy to place along side the others in our living room. At the end of 1980 I found my "Stunt life" to be quite good.

Early in 1981 I took another mini vacation from Stunt. Nancy, Diane, and I actually went on a family vacation. We took in Disney World, Silver Springs, stuff like that. It really wasn't my thing but they enjoyed it and I was on my best behavior. My relaxation came from tinkering with the Mercedes and my motorcycles.

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*At the beginning of 1981 it never occurred to  
me that #12 would be the last of my Stilettos  
or a model of any other kind from me.*

---

I had no desire to build a new Stunt ship for 1981. I was confident that with a bit more refinement the 660/K&B package could be competitive for at least one more year. I did start thinking about how the next Stiletto would be built and what it would look like. At the beginning of 1981 it never occurred to me that #12 would be the last of my Stilettos or a model of any other kind from me.

As Spring approached I started to plan my agenda for the flying season. At least I wasn't faced with competing at the team selection since I had already opted to attend the '82 Worlds as a defending Champion.

I decided to compete only at the Nats in Texas and then be a judge at the team selection contest in Dayton Ohio.

#### **Modelsport**

You may have noticed the word "Modelsport" lettered on some of my Stilettos built after 1974. Since I worked in the model plane industry I felt it was important to separate the "assets and liabilities" of my Stiletto program from the other finances in my household.

Modelsport was not a company, corporation, or a tax shelter. I merely used it to keep track of the funds that came and went so if

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*Any one of the three of us could have won that contest, it just happened to be "my turn"  
and that was fine with me.*

---



Here are the Top Five fliers at the 1981 Sequin, Texas, Nats. From left to right: Ted Fancher (2<sup>nd</sup> place), Kirk Mullinnix (5<sup>th</sup> place), Bill Werwage (1<sup>st</sup> place, National Champion), Wynn Paul (4<sup>th</sup> place), and Les McDonald (3<sup>rd</sup> place). This would be Les's last appearance at a Nats...

something did come up there would be some sort of "paper trail." As you all know it takes real money to compete in Stunt. I did get a lot of free stuff and several companies helped me cover many travel expenses. I had generous help from Satellite City, K&B, and many well known individuals in the hobby industry.

Back then the AMA covered the major costs for the team members and the FAI fund donations from PAMPA really helped. I needed financial assistance, not only with the foreign travel, but with my team trials and Nats efforts as well. I cannot begin to thank these people enough. I did some things on my own also. I did some custom building for a few RC people and back in the early 1970s manufactured a line of aluminum servo horns for the RC car racers. I even sold a few Stiletto Tee shirts to tourists who visited Orange Blossom Hobbies. I also had some modest profits from the *Model Aviation* and *Model Airplane News* articles. Those were the "assets."

The "liabilities" were many and you all are familiar with the costs associated with entering, lodging, and traveling to and from the contests. The contests I attended were not mere two-hundred mile drives, nor short two-night-stays at a Red Roof Inn. Most of the time I shared these traveling costs with Dave, Vince, Stan, Remel, and/or others. I always picked up my fair share of these costs. Modelsport made it possible for a "hobby shop guy" to miss a lot of work and do all this building, flying, and traveling. The books and figures from "Modelsport" are long gone but in the end, after I quit in 1984, I remember the final number on the balance sheet was around negative \$3500.00. Actually that's not bad considering the places I had been able to travel and what I had achieved.

#### Stiletto?

During the construction of the first Stiletto, back in 1970, I

had no idea of what name I would use for my new ship. At some point I came across an article in *American Aircraft Modeler* that featured a little 1/2A racer and it was called the "Stiletto." Very neat and sleek the plane and the name caught my eye. Richard LaConte, the designer and author of the Stiletto 1/2A racer had also made the letter "T" in the name Stiletto into a menacing dagger, but that was beyond my graphics skills, so I simply checked my inventory of Letraset "Microgamma Bold Extended" transfer lettering and rubbed the word Stiletto on the left wing. By adding some sort of prefix like NX or NC plus a dash to my five digit AMA number symmetry was assured.

I do need to take a moment and say I'm sorry to Mr. LaConte for stealing the Stiletto name. In 1970 I honestly never thought it would be carried on any further. In fact I will now offer to share all Stiletto profits with him equally. If any of you folks reading this know where to reach Mr. Richard LaConte, please advise him he owes me \$1750.

Not really, but I would like to apologize for the plagiarism. (*How do you think I feel about stealing the name Genesis from Moses, Les? —Ed.*)

#### The 1981 Nats

Dave Hemstrought and I headed for Seguin, Texas, in Nancy's little "Butterscotch" colored Datsun 510. I have no idea why I selected this vehicle from my growing "motorpool" to make that trip, but I do recall it being good on mpg and bad on oil consumption; two quarts of oil per tank of gas if I remember correctly. This was the sister to "His," the one with the bad valves. Obviously "Hers" had bad rings.

After the endless drive we headed out to make our first practice flights. Things went horribly wrong from the beginning. On his very first practice flight Dave had a line break on his

classically shaped black and white beauty. Black and white splinters covered the runway so it was immediately obvious Mr. Hemstrought was not going to participate in "Appearance Judging."

Dave placed what was left of his Nats effort in the trunk of "Hers" and spent the rest of the week helping me.

A few new faces near the top group made this Nats a bit more of a challenge for me. David Fitzgerald was now in with the "grownups." Jim Casale had improved by a wide margin and Paul Walker seemed to have a much better airplane program. Kirk Mullinnix came out of nowhere and Dennis Adamisin had the skill to be there. With the usual bunch of Fancher, Gieseke, Werwage, and Wynn to deal with the talent was deeper than ever. Bob Hunt had gone into semi-retirement and opted to judge at this Nats. Gene Schaffer and Al Rabe seemed to be gone from the Stunt scene.

Right from the outset it was obvious my success with the smaller figures was being adopted by some other fliers, primarily Billy and Ted. They even seemed to improve on what I had been doing. Remember my comment about "faster rats?" Now we're back to shapes, bottoms, and intersections.

Qualifications had no surprises other than the fact the "top group" had added four or five very competent fliers. Kirk Mullinnix prevailed from this bunch and made the Finals.

The Finals had me leading Round One with Wynn in second place, Kirk in third, Billy in fourth, and Ted in fifth. Kirk and I dropped substantially in Round Two and Billy went into the lead with Ted right behind, and Wynn only a few points short. Billy did a "Burner" in round three and Fancher came close. In the end Billy had won, Ted placed second, less than seven points behind.

I, Wynn, and Kirk completed the top five in that order. After Round One Werwage and Fancher simply had the rest of us covered.

Just behind Kirk the new order was forming. Jim Casale, David Fitzgerald, and Paul Walker were all in the top ten. Along with Ted Fancher, this bunch, with Orestes Hernandez, would start dominating the Stunt event in America right up into 2009. Brett Buck and Bob Baron were the only guys able to put a ripple into their very remarkable results.

At the time this meant nothing to me. I simply needed a new Stiletto that I could fly more accurately. I had a World Championship to defend and the old 660 had passed its expiration date. In fact by the Spring of 1981 I knew exactly what Stiletto #12 would look like and how it would be built. The drawings were done and I had even cut out some of the parts. Now I needed to get home and start building.

Dave and I headed back East with me never realizing this was to be my last "Nationals."

Speeding along in a smoking "Hers," somewhere on the Interstate in Louisiana, we whizzed by a county Sheriff with a brand new radar gun. Busted again! But, maybe not ... Dave shouted "Pull over, stop on the shoulder, pop open the hood, and look at the engine, *now!*"

I did as he commanded and within 15 seconds the Sheriff went speeding by. We sat there for about five minutes and then proceeded on our way. Within two miles we spotted our Sheriff and saw he had pulled over some poor soul in a "Butterscotch" colored Toyota and was writing the guy a ticket. Dave may be a good, Christian family man but he was also very adept at eluding the police. *SN*

*the big assortment of engines, mufflers, spinner, props, spare parts*

# MNT International

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## STALKER ENGINES



STALKER 76RE

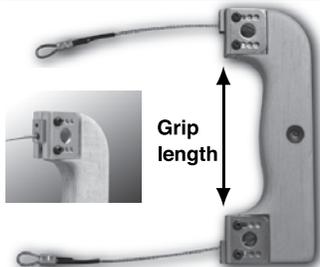


**Stalker Engines**  
40SE,40RE,46SE,46RE,  
51RE,61RE,61LT-EX  
61LT-LS,66RE,  
76SE,76RE,81RE

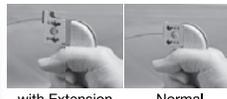
## CARBON MATERIALS



## MNT HANDLES



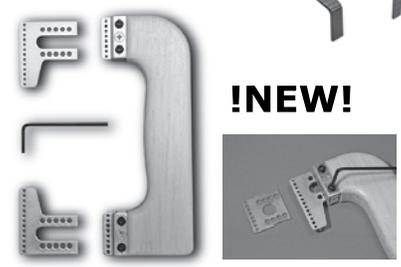
Grip length



Extension bracket for type A (Option)



**MNT Handle Type B**  
Grip length 85 mm  
For Compact Stunt model.  
Adjustable Control-Line Handle  
Up & Down Space, Reach, Neutral adjust



**MNT Handle Type C**  
Grip length 85(C-85) or 90(C-90) mm  
Adjustable Control-Line Handle  
Up & Down Space, Reach, Neutral adjust,  
with Extension Bracket (Long & Short)

**MNT Handle Type A**  
Grip length 80(A-80),85(A-85),  
90(A-90),100(C-100) mm  
Adjustable Control-Line Handle  
Up & Down Space, Reach, Neutral adjust



Spare wire (Option)

# Robin's View Productions

## BOB HUNT'S LOST-FOAM WING BUILDING SYSTEM

In 1968 Bob Hunt began experimenting with foam wing cutting, eventually becoming one of the world's most acknowledged and accomplished experts at the art. He liked the inherent and easy-to-achieve accuracy that a properly cut and covered foam wing virtually assures.

Bob has developed a wing building system that takes advantage of the accuracy of the foam cradle pieces, which are just as accurate negative airfoil shapes as the foam cores are positive airfoil shapes. He has devised a system in which the foam wing blanks are marked for desired rib positions for a built-up wing, prior to being cut into a wing shape.



Once the core is cut, the rib positions are marked accurately onto it and labeled, and they are also marked and labeled in the lower cradle section. The core is then cut up into extremely accurate rib stations to be used as templates for generating equally accurate balsa ribs. An absolutely perfect built-up representation of the original foam core shape can then be assembled in the lower cradle half, which is at this point a form-fitting building fixture.

Bob first tried this process in 1993, and the very first wing built in the system was absolutely accurate in every respect. That wing was

built for Bob's Tucker Special, which went on to win the Vintage Stunt Championships. Its wing was light, strong and true!

Since that time, Bob has been constantly developing and improving his Lost-Foam Wing Building System, incorporating many unique innovations and ever more accuracy-ensuring techniques. Its success is evident by the large number of top aerobatic champions who have chosen Lost-Foam as their preferred wing building method. Included on that list are Bill Werwage, the 2004 World Champion, and David Fitzgerald, the current World Champion.

The Lost-Foam Wing Building System has many advantages over any other type of built-up wing fixture system. The ribs that are generated from the cut-up foam core templates are accurate to within a few thousandths of an inch, and they fit perfectly into the lower foam fixture to yield a perfectly shaped wing. No other system keys on and trues the outside shape of the wing as it is being built! Foam leading edge molds—which are exact replicas of the front of the wing shape—are used to generate hyper-accurate leading edge shells that have a perfectly shaped leading edge radius. Improperly shaped leading edges are a major cause of poor model performance. The Lost-Foam system solves that problem completely!

Lost-Foam Wing Building Systems are available for any straight taper or constant chord wing, and either straight or Warren Truss rib schemes can be ordered.

RVP offers a two-DVD set that takes you through every aspect of

the Lost-Foam process For those of you who have your own foam cutting equipment, the DVD program covers all aspects of making your own Lost-Foam fixture components. For those who do not have foam cutting equipment, the DVD program offers a complete step-by-step narrated video tutorial on making a perfect Lost-Foam wing with fixtures purchased from Robin's View Productions.

Bob Hunt's Lost-Foam Wing Building System DVD set (two DVDs totaling 207 minutes) is available from Robin's View Productions, PO Box 68, Stockertown PA 18083. Phone: (610) 746-0106 or e-mail Bob at [robinhunt@rcn.com](mailto:robinhunt@rcn.com). The two-DVD set is list priced at \$39.95, but is available for a limited time to PAMPA members for \$24.95, plus \$5.00 postage and handling (US only).

Start building better, lighter, stronger, and much more accurate wings today! This system and these techniques are, according to Bob, his most significant modeling contribution to date.

Bob also offers a custom building service for Lost-Foam wings. Please contact Bob at RVP for pricing and delivery times and terms. Bob has built more than 250 Lost-Foam wings to date!

Robin's View Productions  
PO Box 68  
Stockertown PA 18083  
(610) 746-0106  
[robinhunt@rcn.com](mailto:robinhunt@rcn.com)



**Our motto:**

**RELENTLESS INNOVATION!**

I'm just sayin' ...

Alright!! This chapter is gonna be about all those little bitty things that can make you crazy trying to get constant engine runs. Since this is only about internal combustion engines (real engines, not Tesla terrors), do not attempt any of the following on an engine that you cannot hear when it is running.

We are going to begin with the engine itself and work our way back to the rear of the fuel tank.

The engine is the heartbeat of any model, so if you use a junk engine, be assured you will get junk runs. So many times I have seen this scenario and tried to help. Those that say the high price of a good engine is why some try to run junk are incorrect. There are many very good engines on the market at extremely reasonable prices. So there is no excuse not to use them.

Some of what I mention may sound very basic. But, we must have solid components or we will never get the steady, consistent runs we are working toward.

Starting from the front, *always, always* use a balanced prop! Everyone should have a good prop balancer in the shop.

Next is the engine. Get hold of a decent used or new engine and muffler. Again, it is not worth the time and effort trying to make junk run.

Fuel tanks! Ahh, the mysteries we hear about fuel tanks are many and most of them are not based on fact, but just someone's idea of what does or does not work. We'll dispel these points later.

Generally, one should use the hottest glow plug available. Our engines tend to run on the cool side because most of us run them on the left or fat side of the torque curve. Other than piped set-ups, which usually run open or non-idle bar plugs, always use the hottest idle plug you can. I have tried many plugs and the most reliable one I have found is the Sig 003 plug.

At last, we made it to the magic potion: The fuel. Top quality fuel is a must! There will be more later about the whys and percentages of ingredients.

Now that we know what is needed let's go about making it run.

If you are starting with a new engine, always break it in following the manufacturer's instructions. They actually *do* know what they're talking about. When using a used engine, be sure it's clean and will hold good compression. It goes without saying to always use a new glow plug. I'm just saying ...

The following takes place between 8 a.m. and 9 a.m.:

We arrive at the flying field all set with our brand new heavy duty 24 volt hot-rod world beater, with a donut and coffee from Dunkin's. Once past the "oohs and aahs," we make it to the circle for your maiden flight. Always a thrill!

Since we have already run the engine in the plane the day before (you did, didn't you?) we know it will start easily and impress all that are watching. Adjusting the needle for the correct fuel flow, in this case around 8100-8200 RPM, we launch the craft.

The engine runs in a steady 4 stroke mode with just an ever so slight break at the tops of the maneuvers. Did I mention we are using a closed fuel system on muffler pressure? I am a firm believer in muffler pressure as it makes the engine see a

constant fuel head pressure which ensures a steady run.

None of the above would have worked with inferior fuel. By that I mean old, contaminated, or low quality fuel. Do not go cheap on fuel. If and when you find a good fuel you like, keep using it.

Speaking of fuel, let's talk about the complete fuel system which includes the venturi, spray bar and needle valve, fuel line and filter, and fuel tank. Bottom line here is to have absolutely no leaks in the system. I chased a leak in my Formula S for a week until I checked the pressure fitting on the muffler header. It was tight when cold, but as soon as the engine warmed up it got loose just enough to cause a pressure fluctuation later in the flight. After tightening, the engine ran just like it was supposed to.

Alright, OK, here we go with what I believe (or not) about fuel tanks. Using a little bit of theory, a lot of input from certain individuals that know what they're talking about and a lot of actually doing what I am saying, here is how it is. All fuel tanks have two things in common and that is they all provide a constant flow of fuel to the engine and they *must not* have any leaks.

The vertical height of the tank (which is really the height of the fuel head) relative to the spray bar is critical to an even engine run. This is especially true in getting the same type run on insides and outsides. Once the tank height is set to get the maneuvers exactly the same, everything else falls into place. Also, you should try and get the rear of the tank as close to the outside of the fuselage as possible as this helps in getting cleaner cut-offs.

As for tank configurations, I prefer clunk tanks as they are readily available, easy to assemble, and weigh half of what a metal tank does. I also use metal clunk tanks when a plastic one will not fit a particular application.

A clunk tank works by having the pick-up line follow the fuel as it moves around in the tank. Plumbing a clunk tank is extremely simple and totally reliable so long as you ensure that there are no leaks.

One should always use a clunk that has some weight to it because a light one, say just a piece of brass tubing, will not overcome the inherent stiffness of the fuel line. Be sure to use the most flexible fuel line you can buy. The tubing that comes with the PYLON brand or SULLIVAN brand tanks works well.

Follow the directions that come with the tanks with one exception. Get a second clunk and plumb it so that when it goes three quarters of the way back, stopping just short of the pick-up clunk. It moves just like the pick-up does, yet it is independent of it. This will be your pressure or "Uni-flow" clunk. Connect it to the pressure fitting on the muffler and you're done.

The last part of the fuel delivery system is setting the tank height relative to the engine. I cannot stress enough how important this is to getting steady, even, and repeatable runs.

When building your model, be sure to mount the tank in such a way that you can easily shim it up or down using <sup>1</sup>/<sub>64</sub> plywood shims. Do not omit this trimming item! If you do, then just go ahead and make the plane a "wall hanger," 'cause you will never get it to run correctly or acceptably.

I'm just sayin' ... *SN*

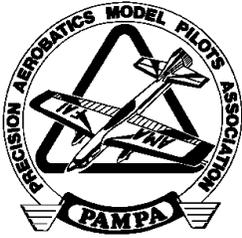
# In 1962 ...

- Do you remember a television like this, with state-of-the-art rabbit ears for better reception?
- The United States embargo against Cuba is announced.
- The *Sunday Times* becomes the first paper to print a color supplement.
- Project Mercury: While aboard Friendship 7, John Glenn becomes the first American to orbit the Earth, three times in 4 hours, 55 minutes.
- Ash Wednesday Storm: A snow storm batters the Mid-Atlantic.
- In Los Angeles, California, the first MLB game is played at Dodger Stadium.
- A Cuban military tribunal convicts 1,179 Bay of Pigs attackers.
- Adolf Eichmann is hanged in Israel.
- Engel v. Vitale: The United States Supreme Court rules that mandatory prayers in public schools are unconstitutional.
- John F. Kennedy delivers his famous "Ich bin ein Berliner" speech.
- The first Wal-Mart store opens for business in Rogers, Arkansas.
- The Rolling Stones make their debut at London's Marquee Club, Number 165 Oxford Street, opening for Long John Baldry.
- Nuclear testing: The "Small Boy" test shot Little Feller I becomes the last atmospheric test detonation at the Nevada Test Site.
- Marilyn Monroe accidentally overdoses on a mix of sedatives and Champagne a few hours before midnight.
- Beatles drummer Pete Best is fired and replaced by Ringo Starr.
- Rachel Carson's book *Silent Spring* is released,



- giving rise to the modern environmentalist movement.
- Johnny Carson takes over as permanent host of NBC's *Tonight Show*, a post he would hold for 30 years.
- The infamous Columbus Day Storm strikes the U.S. Pacific Northwest with wind gusts up to 170 mph (270 km/h); 46 are killed, 11 billion board feet (26 million m<sup>3</sup>) of timber is blown down, with \$230 million U.S. in damages.
- Cuban Missile Crisis begins.
- Soviet Union leader Nikita Khrushchev announces that he has ordered the removal of Soviet missile bases in Cuba. In a secret deal between Kennedy and Khrushchev Kennedy agrees to the withdrawal of U.S. missiles from Turkey. The fact that this deal is not made public makes it look like the Soviets have backed down.
- An unexpected storm buries Maine under five feet of snow, forcing the *Bangor Daily News* to miss a publication date for the first and only time in history.

... and this young man couldn't put his plane down long enough to watch Ed Sullivan. Send your guesses to Bob Hunt at [robinhunt@rcn.com](mailto:robinhunt@rcn.com). *SN*



# PAMPA Products Price List

Prices Effective January 2008

<b>FAI RULES:</b> F2B Current Year .....	\$ 2.00
<b>AMA RULES:</b> CLPA Current Year .....	2.00
CLPA 1951-52 (Old Time Stunt) .....	2.00
<b>PAMPA RULES:</b> Bylaws .....	.25
Old Time Stunt .....	1.00
Classic Stunt .....	.25
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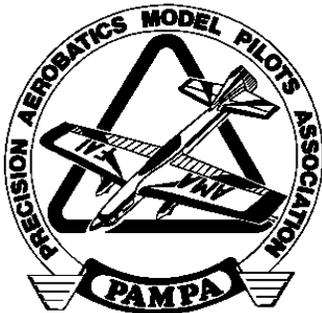
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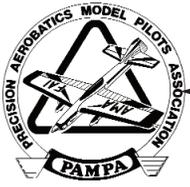
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# PAMPA News & Reports

## Secretary/Treasurer's Report

By Dave Gardner



We're now well in to the new year. Working with our new Membership Chairman, Noel Drindak, the transition of the two offices has been very smooth—and hopefully transparent to the membership. Thanks very

much for timely renewals by 830 of our members, including 22 new ones!

Please note that the *membership* function has been separated from the Secretary-Treasurer position, but this office still has both those functions, just not members!

The interaction with PAMPA Products is also coming along well. I believe that most transactions are happening quickly and satisfactorily.

And on top of it all, *we get letters!* As S-T, folks seem committed to write to me. They're not actually writing me as much as to PAMPA, so this is for all of you! The letters kinda fall into two general categories: One is Builder of the Model rulings, feelings and discussions. The other one is about folks returning to the hobby/sport after many years of Stunt abstinence. (This is a practice that we don't promote! Safe Stunt, perhaps, but that deal of abstinence can do terrible things to your mind!)

Back on topic, the "retreads" are astounded at what has transpired since they left active Stunt modeling. They're asking about having information published for *their* level of proficiency, i.e., Old Novices! These folks are looking for information—"How To" articles, covering topics a lot of us think everyone knows already. We may, but the "new guys" don't!

A brief sojourn to the land of BOM; Yes, we voted unofficially on this a couple of years ago, with many comments. In general, most of the voters were *for* the BOM rules—and down on ARFs and their derivatives.

In reality, the BOM rules are primarily enforced at the Nats level, because—for the most part—they are the only place the full AMA rulebook events are flown. Almost all other contests use PAMPA skill level categories, not to be considered "official rule book events," but subject to the general CL Rules, including BOM.

Appearance points are given for these events, except for the Beginner classification, and the Profile event flown in many parts of the country. The only downside to "pretty points" is that the judging can be far more subjective than pattern judging. It *is*

only 20 points max, but the first 3 places have sometimes had a closer spread than the range of the appearance points.

In general, at PAMPA event contests, appearance points are *not* given if you didn't build the airplane—including ARFs and OPAs (Other People's Airplanes). It's as simple as that! *This* interpretation of the BOM has worked for some time now, and seems to be the accepted procedure. You may not like ARFs, and they usually need some work, but they may provide entry level fliers with a working plane!

Back to the "newbies." Some wonder why we, PAMPA, are not all things to all (CL) people, e.g., speed, racing, carrier, etc. They imply that we are a limiting group and that we should support *all* CL activities, not just Stunt! (This has a familiar ring to it, but it's from a general source!) To that, we've stated many times that we are the SIG (Special Interest Group) for Precision Aerobatics, hence the name.

It was *intended* to be exclusive, to provide a common ground for *our* activities. The other CL groups have their SIGs as well, to provide input for their activity and manage those events at the Nats. Our "exclusivity" has provided us with growth and strength for our events, but it is not to exclude others with other interests. We have the strength and organization because of our specific interest, and it's hard enough to manage the Stunt fliers, let alone the rest! We have the AMA to provide the broad CL base!

Those "retreads" with Stunt interests are suggesting articles on "Getting Back into Stunt," for a typical topic. This should include possible airplane selection, engines, props, fuels, trimming, and building techniques.

Usually, any time someone suggests that "someone" should do this or that, I suggest that they volunteer for it! This doesn't always go over very well, but in the case of the returnees, they are the ones looking for the information and don't have the knowledge to tell others—that's why they're asking!

In general, we (PAMPA and *Stunt News*) put out a lot of articles on a lot of those very topics. They're not necessarily put out in an organized manner, in the sense a "Beginners Guide to Stunt."

This really represents a heckuva project, folks, but worthwhile doing. The RC folks continually have "How-To" articles in their mags (yes, I read them, too!) with several books on how to get started in RC.

Good examples recently have been several articles describing how to *correctly* put together the PT-19 profile from Horizon, with photos and details. It's too bad these articles don't get "face time" with the new folks, but with all the modeling publications out there now, it can lead to more confusion than education.

The big "But" is getting someone, or some group, to do this. The biggest part of such a project is gathering and organizing articles already written, not the subject matter.

I don't have a solution to this, but it's solid food for thought, if CL Stunt is to survive beyond our current generations. Think about this—and bring your ideas to your District officers to give the Executive Committee something to work with!

Tight lines! **SN**



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Massachusetts, New Hampshire,  
Rhode Island, Vermont

# District I

By Dave Cook

I am writing one more column to help out the new District I director, Will Moore. Will is recovering from some medical problems and is expected to be back soon.

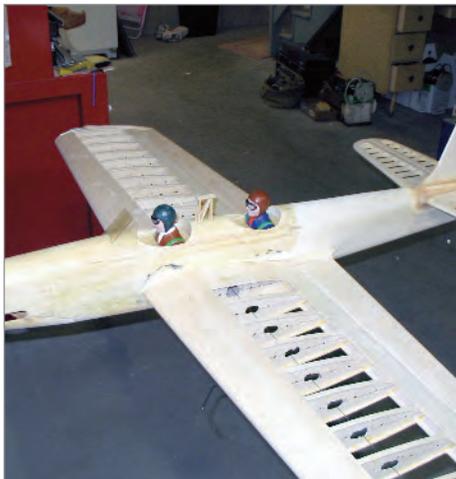
As I write this we are deep into a cold and windy New England winter with outdoor flying close to impossible. Anybody that thinks they can fly at 15 degrees with a sustained 30 mph wind gusting over 40 mph needs their sanity checked. This weather has been like this for a couple of weeks. This is "warm stove" building and tall story time.

I class builders in categories: The first group is made up of those who just enjoy the sport and turn out hacked up clunkers and lead sleds just to get in the air.

The next are those who turn out serviceable well constructed airplanes with fairly good performance and average to super paint jobs. Then there are those who turn out lightweight marvels of design that perform in the air with average to super finish paint jobs.

They generally build the ship themselves taking pride in super finishing and combine it all with light weight performance—there are top builders in District I. Some of these include Bill Saurez, Dave Midgley, Dan Fish, plus two whose latest projects are shown here—Dick Carville and Guerry Byers.

Dick Carville has a modified Dave Hemstrought designed PT-19 nearing completion. It looks like another beautiful airplane from Dick. It has a ST 46 up front for motivation.



Dick Carville's PT-19 in bare bones.



Dick Carville's PT-19 in color ready for clear.



Dick Carville's PT-19 detail view.



Dick Carville's PT-19 more detail.

Guerry Byers has a couple of ships in the finishing stage—a replacement for his very successful Steve Buso designed Cascade that ran out of altitude or, what would be politically correct for a crash, maybe ground limited. In short a line broke. He also has a Green Box Nobler ready for paint.

The original Cascade was a beautiful airplane and if I know Guerry the replacement will be another outstanding ship. The replacement was modified from a basic Vector kit and is being pulled by an O.S. 40 FP.



Guerry Byers' Cascade replacement ready for paint.



Guerry Byers' Green Box Nobler.



Guerry Byers' Green Box Nobler view 2.

One of the things I point out for your info is the AMA current statements of purpose. I include it below for you to study. Read it and if you would like to add to it or change it, get involved and contact your District I VP.

## AMA Vision

We, the members of the Academy of Model Aeronautics, are the pathway to the future of aeromodeling and are committed to making modeling the foremost

sport/hobby in the world. This vision is accomplished through:

- Affiliation with its valued associates, the modeling industry and governments.
- A process of continuous improvement.
- A commitment to leadership, quality, education and scientific/technical

development.

- A safe, secure, enjoyable modeling environment.

#### AMA Mission

The Academy of Model Aeronautics is a world-class association of modelers organized for the purpose of promotion,

development, education, advancement, and safeguarding of modeling activities. The Academy provides leadership, organization, competition, communication, protection, representation, recognition, education and scientific/technical development to modelers. *SN*

## District II

By Windy Urtnowski

New Jersey, New York

As 2010 starts here in District II the cold winter has minimized my time at the flying field, but I've taken the indoor time to work on my Big Job. If all goes as planned I'll have it at VSC in March ... but as always happens, life sometimes gets in the way, and we'll have to wait and see. My building schedule is usually based on finishing a ship in June for the Brodak Fly-In, so this year I've really had a time squeeze. I'm still going to give it my best shot, though.

At the last meet of the year we had special guests from Spain visit us. They came to our house and we had a great time. José Javier Rodriguez and Susana Del Pozo Rubio have since become great friends through modeling. José has a Cardinal (it's hard not to like his choice of models!) and he is quite a good photographer. We've exchanged many emails and photos and he's promised to get me video and photos from contests in Spain, a great addition to my involvement in documenting Stunt modeling.

Billy Sargent and I have tried many times to fly on the frozen lake he lives on. He's had great flying days with his

stooge, but every time I get to his house it's either snowed or blown 30 MPH ... But I'm not giving up. We even made dedicated shoes with ice spikes to fly off ice with. Talk about having your own flying field, how about your own frozen lake to fly off? If the weather cooperates by deadline, I'll have photos of these adventures—if not, they'll be in the following issue.

Rich Giacobone brought his completely restored 1962 Pontiac over to my house for show and tell recently. What a trunk! You could put my B-26 in there with room to spare! Who needs a minivan? Congratulations on a magnificently restored car! Rich is building a new secret ship. I've only seen the motor mounts, and the rest is secret so far.

During this frigid weather Richard Oliver and Bill Rutherford call regularly to tell me they're at the flying field and its "Stunt Heaven" weather. Ryan Young is our FAI Junior Team representative this cycle, and I'm wishing him all the best along with Derek, Billy, David, and Orestes.

Buddy Weider is almost done with his latest ship an electric version of his good

flying Ryan's Eagle. Buddy has done very well in local meets and, of course, won Classic at the Nats and at Brodak's in 2009. He now has an even better and more well-rounded air force for 2010 and beyond.

Kent Tysor has finished his beautiful new building shop. I know he really put his heart and soul into this project, and now he'll be building in comfort and style ... as well as heat and air conditioning.

My Big Job uses Tom Morris's take-apart hardware. In the course of building the Big Job and videotaping the build I took all the parts dealing with the take-apart features and put them on one dedicated DVD you can get directly from Tom. Some of the things get tricky, and I think this would be a good investment if you're using this hardware for the first time.

Contact Tom at the address in his ad in this magazine. I've had good luck so far, but there are a few alignment things I think this DVD will help explain and insure success with your build.

The year 2010 promises to be a banner one for Stunt. I hope we'll see you at the field. *SN*

## District III

By Patrick Rowan

Ohio, Pennsylvania, West Virginia

It's full winter here in NE Ohio as I am writing this column.

I have some bad news to report. The Akron Circle Burners club is no longer as of 12-16-09. The club disbanded after several problems with one of the members that tore up the paved circle; too bad, as the club had a nice flying field and 35 great members.

I was a member and flew at this nice field many times. It will be missed.

Now for some good news: The Dayton, Ohio Buzzin Buzzards club held their Stunt contest in early October. The District III flyers that took home awards were Rob Young, John Gladfielder, Dick Hodge, and Dave Heinzman. For complete stats, check out the results section.

Till next time fly Stunt. *SN*

Right: Alan Buck from Danville, PA, 2 test Stunters and his Staris PA plane. Photos taken Nov. 2009 by Alan Buck.





Alan's Staris PA plane. Buck photo.



Alan's test plane built by the Barrys. Buck photo.



Alan's Katana. One of his test planes. Buck photo.



Ken Armish from Selinsgrove, PA, Intrepid PA 65 piped. Buck photo.



Another view of Ken's nice Intrepid. Buck photo.



Ken starting his PA 65 with Alan holding. uck photo.



Ken tacking his PA 65. Buck photo.



Dave Johnson's XP-40Q profile being worked on at Roger Strickler's shop near Akron, OH. Dave Johnson photo.



P-86 Saber being worked on by Gary Tultz at Strickler's shop. Johnson photo.



Roger Strickler talking Stunt with his P-39 on work table. Johnson photo.



Roger's P-39 with various tools. Johnson photo.

Delaware, District of Columbia,  
Maryland, North Carolina,  
Virginia

## District IV

By Steve Fitton

Happy spring everybody! I hope it's finally warming up, because as I'm writing this, it's been awfully cold for a very long time! Usually the central and coastal regions of District IV enjoy a flying season that lasts all the way past New Years, but this time hard winter

came in early December and we are enjoying an old fashioned Northern style building season instead of sneaking off to fly.

In fact, judging from the pictures I received from William Davis, even those die hard Carolina guys that attended the

Charlotte New Years fun fly seem to have spent more time around the campfire in Watt Moore's back yard, and more weenies seem to have been roasted than flights put up!

So, if you have a building season, it helps to have a shop, and Kent Tysor has

been busy putting together a brand new shop down in North Carolina.

Kent doesn't mess around when he sets his mind to something, and when he's finished he's going to have one of the nicest shops around.

If everybody in District IV didn't live so far apart, he might even find people showing up to eat pizza and check out the latest projects!



Kent Tysor's new shop is just an empty shell right now, but before too long it will be humming with power tools cutting out new planes. Add a couch and a TV, and there might be no reason to ever leave! Recent information indicates that a Strega will be taking shape by the time you see this article.

Something else you can do with building season is have a New Year's Day fun fly. After Clayton Berry got the district into the idea of one a couple of years back, it seems to have a life of its own.

This year's version was held at Watt Moore's house just over in South Carolina, and, from the look of William Davis's pictures, the cold weather kept the pilots mostly huddled around the fire and roasting hot dogs.



A motley crew if you ever saw one, as Eddy Ruane, James Duckworth, Alex Givan, Larry Fulwider, Watt Moore, and David Smith enjoy the great outdoors at a weenie roast disguised as a Control Line outing, New Years Day 2010. William Davis pic.



Some flying did in fact take place, as here David Smith brings his P-40 ARF out to the flying circle at Watt's house. William Davis pic.



Larry Fulwider breaks in an FP 40 between hot dogs at the fun fly. William Davis pic.



Eddy Ruane puts in a flight at the Metrolina New Years event. William Davis pic.

Moving on from weenies and back to shops, Williamsburg resident and District III émigré Phil Spillman is putting together one heck of a shop at his new home. Word on the street is that he might even actually build an airplane now!



Take a look at this sneak peak at his shop he sent me: For a guy who never builds a plane, Phil Spillman has an amazing collection in his new shop. You'd never know he has amassed such an aerial arsenal from the tired old heaps he brings to the field. Our District IV project is to encourage Phil to take some of these planes out for a ride now and then!

I got some stuff from Northern Virginia's Scott Richlen recently that needs to be shared. Looking over the material Scott has posted to the forums and magazines, it's evident that you'd be hard pressed to find any club that does more to get Control Line Stunt out in front of the masses.

Their latest effort was to make a fantastic display for their local public library; a place I must admit it never occurred to me to have anything regarding Stunt be displayed. Check out this picture of their display:



Dave Reyes's Knight and Scott Richlen's Silver Lancer occupy a display case at the Fairfax library. An innovative way to show off some great workmanship and get the word out about Stunt to the local community!



John Murphy holds while John Lindberg fires up his Pathfinder at the NVCL flying site.

To wrap things up, I'll cover a little bit about the antics of some District IV people who traveled down to Florida for the 2010 King Orange International in January. Despite the alarming weather forecasts, William Davis, Larry Fulwider, Jimmy Welch, Artie Jessup, and myself braved the long road trip to head down to the contest. The X-47 flyers put on a very efficiently run contest that allowed everybody to get their flight in before wind, rain, or both put an end to flying each day, and Friday's glorious weather made for an awesome time for practice and all around goofing off.

Either this issue or the next should have the full contest report from the X-47 club,

but some district highlights included William Davis winning Advanced and finishing second in Profile Stunt, Artie Jessup coming in fourth in Advanced in his very first outing in that class, and Jimmy Welch taking the win in Intermediate with his T-Rex ARF Stunter.

Your intrepid District IV representative had a pretty good contest as well, managing to win Nostalgia 30 on Saturday, finishing 2<sup>nd</sup> to Georgia's Derek Barry in Expert on Sunday, and edging Derek in a duel of high wind survival flights for the KOI perpetual trophy. Thus the KOI trophy gets to take a vacation from its Harlem, Georgia home it has had the last three years and pay a visit to Virginia. And, after the wind we endured in the afternoon at the KOI, there is at least one FAI Team member who will travel to Hungary with some recent flights in some really nasty air!

Next year's KOI will be in historic St. Augustine, Florida, which means if we have weather issues, at least we can hit the town and make a mini vacation out of it! Mark your calendars now and take a winter road trip. *SN*



Artie Jessup launches Larry Fulwider's Tutor at the KOI. Williams Davis pic.



Alan Buck and Jimmy Welch watch Watt Moore burn in a practice flight.



Alan Buck launches Gene Martine's Staris during Friday practice for the King Orange.



Metrolina club member Watt Moore hard at work during practice.

Alabama, Florida, Georgia, Mississippi, Puerto Rico, South Carolina, Tennessee

# District V

By Eric Viglione

Welcome to 2010! All I want to know is where the heck is my Jetson's flying car? I was certain one would be in my garage by now ... Hopefully I get this submitted in time and without alienating our good editor right off the bat.

The King Orange is set for Jan. 15-17, only leaving me 3 days to squeeze in coverage including gathering pictures from others than myself to meet the January 20<sup>th</sup> deadline.

In the meantime, there are some other local activities to note, not least of which transpired is Phil Coopy's Lake Wales Florida Fly-In. This is not a contest, but an annual gathering of fliers from around the area.

Memorable moments include Robert Willis's marathon 1/2A flights, heaven forbid he ever fills that tank all the way. His Brodak warbird LaGG3 was an awesome profile, done up in a great dope finish. Flew as good as it looked too.

The Smith brothers had their original design Tracers in good form, and grandson Sam is improving at an exponential rate.

Roger Vizoli had his Baby Pathfinder there. Unfortunately its lines went slack in

an overhead due to gust of wind ... It was a good enough plane that he's contemplating a rebuild or a new model, so we should get to see one again someday.

Once again, Phil's club put on a great spread and opened up yet another circle to fly on. We were all saddened to learn they may soon be losing this facility.

Here are some photos from the Fly-In.



Bill Heher: "The TeeDee in my 25+ year old Cox Super Chipmunk came to life. It only made 1 flight—but it will fly again."



Robert Willis with his exceptionally good-looking and -flying Brodak LaGG3 from a kit. All dope buffed finish.



The LaGG3 bottom is as good as the top, complete with airbrushed gear door cut-away illusion.



Both environmentalists and ECL advocates alike will be glad to know that the cows seemed unfazed by Dave's ECL Super Clown.

**In other news,** Brian Keifer returns to Stunt. Brian wants to join our local Ellenton, Florida MCRC club and hopes to fly regularly with us as he regains his air-legs. From what I see, he hasn't lost anything. Brian quickly built a Banshee to practice with, and is currently toiling away on a full boogie Stunter to hopefully be done in time to debut at the 2010 Nats. Welcome back Brian!



Brian seen with his Banshee.

### KOI Report

As I write this section I'm just back from the 2010 KOI. Congrats to the winners, and hats off to everyone else who made a great showing in less than ideal

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conditions. The X-47's club did their usual bang up job, with nice amenities and a place to hide from the elements indoors.

It's a big event, and I don't have room in my column to cover the whole thing, but full scores should be in this issue elsewhere.

Friday was practice day; reports say it was a nice day. I rolled in just in time to get in two flights, my second flight being almost too dark out to see my plane near 5-foot bottoms against the grey backdrop of asphalt.

Saturday was, well, no other way to put it other than wet! But, the good news is that the rain was pretty light and spotty. All the events got flown and scored in a reasonable amount of time with flyable winds. Hats off to the contest management, they did their usual stellar job of getting things done efficiently.



Phil Coopy splashes down. Martine Photo.

Old Time saw Bob Zambelli take first, with Ken Cerney on his heels by one point, followed by Gene Martine in third place.



It was nice to have a couple youths duking it out in Basic, good job Zack and Nick Strickland! They both won some giveaways courtesy Joe Petty, owner of the new flying site we'll be using next KOI,

and a fellow X-47 club member, who donated 4 kits: two for Basic by Blackhawk, a Brodak Mustang for Nostalgia 30, and a Sig Twister for Profile.

Speaking of donations and hard work, more notables are: Bill Hodges secretary and assistant CD donated an All American kit for Old Time. Sam's Stuff & Hobbies donated 6 gift certificates. John and Buzz Brodak donated a Brodak 40 engine and an ARF Oriental.

Don Theibalt lined up the donations from S&S hobbies and Brodaks, and Tom Weedman lined up all the judges for the event and prayed the weather forecast was wrong. Well Tom, sometimes like the old Rolling Stones song says, "you get what you need." We got just enough good weather to git-r-done. In some ways, I thought Saturday's weather was pretty good. We didn't freeze to death, and the clouds kept the sun out of our eyes. We just had to contend with a few showers here and there.

Nostalgia 30 was run for the first time at KOI this year, and had 12 entries. Steve Fitton took first with his impressive Nakke DS 50 combo, followed by Bob Dixon with his Fox .35-powered red Nobler. Third place went to Gene Martine and his great looking Aero Tiger .36-powered Mackey Lark. I didn't look specifically to see if any newly eligible planes were entered, but I did see Alan Buck's Twister on the flight line.

Profile was also flown on Saturday, and was won by Ken Cerney, William Davis took second, and in third place was Rolland Keezler.

Sunday I woke in my Day's Inn room to turn on the Weather Channel and hear, "It will be breezy today in Starke with winds from 20 to 30 miles per hour." I laughed so loud I think my neighbor in the next room heard me. It wasn't that I thought it was truly funny, but more like an "I just knew it would happen!" kind of maniacal laugh. Just great I thought, here goes nuthin!

I drove up to see Derek Barry as the lone flier burning in some practice flights with his dad Dale watching. It was 7:15AM, and the wind was blowing 5-10mph already. Not a good sign.

Contest management made a good call when they decided to get the show on the road quickly. This allowed most everyone to get their first round flights in before it got too nasty. On Sunday with Beginner, Intermediate, Advanced and Expert, along with the Fly-Off for the perpetual trophy being flown, there was a lot of flying to get done.

Since it was my first time out on the Expert circle, and I was also helping launch friends, I was quite busy and didn't get to see much of what went on the other circles Sunday, though I did get a jarring wake up call a few times with some

unfortunate crashes you couldn't help but hear go "whump" from the other circle. My condolences go out to those pilots who lost their planes. Been there, done that!

I'd like to take a moment to highlight some of the PAMPA skill classes from the top 3 in each event, while you can see the whole list in the contest section also.

Intermediate saw "Wild Thing" Jimmy Welch win with his new T-Rex, ST51 combo. Wish I had a boom box handy with Wild Thing to play when he picked up his plaque. You just have to meet Jimmy to understand that. Second went to David Shad, and in third place was Phil Coopy.



**Jimmy Welch, first Intermediate award.**



**David Shad with second place Intermediate award.**

Advanced was flown on the same circle and won by William Davis, Curtis Shipp second, with Don Ogren third.

Expert was flown on the other circle with Bill Rich and Les McDonald judging.

The first round went off pretty much without a hitch for most everyone, except one flier who had to take an attempt for a line foul and dropped back three spots.

Everyone moved up a spot and it was business as usual for the first round.



**Ken Cerney's O.S. FS52 Trivial Pursuit goes over the top. Martine photo.**

We got through quickly and most wanted to keep flying before the really nasty stuff hit, and it was too early for lunch. It was a nice thought anyways, but the rough stuff was blowing into the area already. I drew sixth on the flight order for round two and it was howling pretty good by the time I got up. Randy Smith had a hand held meter and clocked 20mph ground air speed at around 5 feet, and I'd swear it was at least 10mph faster above 45 degrees!

With the surrounding tree line and buildings, it's also silly turbulent, making a deadly combo. Many pilots passed round two as you will see in the full results.

I thought I might get a break and took my flight. I made it to the square loops and waived off to the judges. There was no way to improve my first round score in this stuff. My lines were creaking and groaning so loud in the loops I was certain the plane would be lost if I kept pushing forward with the pattern. Even level flight was a chore at that point, with the turbulence showing me views of parts of my plane that no one should ever have to see in level flight!

The Fly-Off for the perpetual trophy is a highlighted tradition of the KOI with the top three Expert fliers competing. This year, Derek Barry won Expert with his Dreadnaught PA 65, Steve Fitton was second with his Time Machine DS 60, and Bob Dixon third with Crystal O.S. FS52.

Bob passed on the Fly-Off, leaving Derek, last year's winner of the Fly-Off and Steve to duke it out in the wind. I was honored to be asked to judge, as the format requires two more judges.

Derek went up first in the same if not worse winds as my flight, but through heroic effort and no small amount of skill, he danced around that circle and somehow got the plane down in one piece. It was an awesome show of determination like I've never seen. Not only did he complete the pattern, but it was still very recognizable, not just your average survival flight.

Steve got a moderate break in the winds. It was still turbulent, and wasn't stuff your average Joe-Bellcrank would want to fly in.



**Look at the early departure and bow in Steve's lines. Hope this prints well enough to see in publication. Martine photo.**

Steve proceeded to put up what would be called a very respectable flight under any conditions, winning the Fly-Off for his first time. Congrats to everyone, you should all be proud! I for one won't soon forget this KOI.



**Gene Martine's Staris in the groove on Friday's practice session. Fitton photo.**



**Curtis Shipp poses with the SV22 with PA 65 and pipe bought from Gary Hajek. Martine photo.**



**World-class judges Bill Rich and Les McDonald at work judging. Note the puddles. Fitton photo.**



Larry Fulwider starts OTS flight with Phil Coopy holding. Martine photo.



Wesley Dick's Stuka. Wes appears to have found a sure fire way to keep his plane from blowing away.



John Brodak presents raffled Brodak 40 engine. Martine photo.



Our intrepid photographer Gene Martine finds himself on the other side of the lens.



Last year's winner of the perpetual trophy and this year's pose together after the Fly-Off.

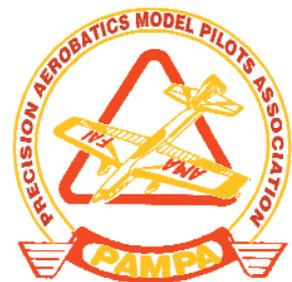


Fellow rep. for District IV, Steve Fitton, invades Florida to capture KOI Perpetual Trophy.

I would like to make sure to thank those who contributed info and pictures like Phil Coopy, Tom Weedman, Gene Martine, and Steve Fitton, to name a few.

Please keep the info and pictures coming. This is your District, let's keep it interesting.

That's it for this issue. My apologies to poor Bob and Liz who are probably trying to figure out how to squeeze all this stuff in. Till next time, See ya on the circle! *SN*



# District VI

By Allen Brickhaus

Illinois, Indiana, Kentucky, Missouri

This month we cover District VI contests or District VI people traveling. The Peoria Wyreflyers continue their event at Mt. Joy Airport near Davenport Iowa. Fliers still flock to Buder Park for the Lafayette Esquadrielle Broken Arrow venue in southwest St. Louis. I was invited to a Control Line fly in at an airport just west of Vincennes, Indiana, plus Charlie Reeves and I journeyed to the Huntersville, North Carolina, Metrolina contest last October.

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All in all, the months of September and October were a busy time at the end of the flying season. *SN*

Right: The Davenport Municipal Airport was the scene for the annual Peoria Wyreflyers' Heart of Illinois contest. High water in Peoria has kept them off the regular site for years now. The site has been under high water for about two months prior to contest time. Mt. Joy offers a great grass site for the event.





Michael Schmitt is assisting Iowa flyer Crist Rigotti during Old Time Stunt at the Heart of Illinois contest. Wow, a nitro engine and a wooden prop in Crist's hands is equally as dangerous on the score board as his electric stuff. Crist improves with each event.



This time Bill Calkins of Sugar Grove, Illinois, assists William Smith with his profile Cardinal launch at the Peoria Wyreflyers event at Mt. Joy Airport.



Your columnist brings out his published Miss Dara semiscale profile for the Broken Arrow contest at Buder Park. Ed Mason of Florida has his B-17 in the air for an official flight on Saturday of this yearly two day event.



Traveling buddies and great friends are Michael Schmitt and Dennis Vander Kuur. Here Mike preps for Expert at the Heart of Illinois event at Davenport. The Encore 40 is powered by an O.S. Max 46LA. The model is half of the story of the Encore Twins article as published in *Flying Models* last year.



Dennis Vander Kuur preps his PA .65 piped engine in his first Legacy model at the Davenport Municipal Airport for a flight in Expert.



Allen's traveling partner Marshall Busby talks it up with Tom Weedman at the Clanton Alabama, Central Alabama Stunt Squadron contest in October of 2009. Marshall became a hard working judge as well as a competitor at the Peach Country contest.



Larry Lindberg of Galva, Illinois, holds Robert Johnson's really neat little .25 powered Be Bop Delux at the Peoria Wyreflyers' contest at the Davenport area.



Larry Fruits of Plymouth, Indiana, gets his Jim Silhavy Magician ready to fly at the Lafayette Esquadrille St. Louis based club Broken Arrow contest in late September.



I received an invite to fly at an Illinois airport just west of Vincennes, Indiana, with a bunch of very nice modelers. The group to my left arm is: Ken Wilson of Evansville, Frank Roales (District VI Indiana AVP), Tom Calvert, Roy Stewart, and Pete Peterson. I had a great time with these guys on a cold October 11 of 2009.



William Smith of the Rockford area holds Aaron Nottingham's SV model, which Aaron is powering with an ST .51.



Frank Roales, one of our District VI AVPs, launches Tom Calvert's Top Flite ARF Nobler October 11 near Vincennes, Indiana.



Lloyd "Pete" Peterson built and flew this Jack Sheeks P-26 Stunt model with electric for motivation. I saw it fly and enjoyed the throttle response on this two line Control Line model.



While at the Huntersville contest, Charlie Reeves and I were able to view Watt Moore's rendition of Bill Skipper's AKRO-BAT OTS Stunt model. Watt and I are working on an article for a future publication on this early inverted model.



Allen traveled to Dexter, Missouri, to help Steve Moore with a combined Fly In. Steve's last competition was Classic at the Nats in 2008, as his work schedule keeps him humming along at a jack-rabbit's pace.



Charlie Reeves assists Tom Luper with his Victory model powered by an ST .60 while OTS was happening on Saturday at the Metrolina Control Line contest held in the Charlotte, North Carolina, area.



Former Paducah Aero Modeler President Mike Jennings, now a resident of Knoxville, Tennessee, brings a Jim Silhavy Magician for a trimming session to the McCracken County Model Air Park.



Here Charlie Reeves and Allen display their classic models at the Huntersville contest. Charlie has his Bill Werwage Super Ares and Allen has his Louis van den Hout Olympus.



Charlie Reeves helps Mike Jennings adjust his elevators prior to the first flight of Mike's Magician.



Tom Hampshire peruses a pertinent point while putting Charlie Reeves in place at the Huntersville venue last October. Charlie's new Big Job looks even better than his first rendition and flies equally well. Charlie took first in OTS with the first contest of the new Big Job.

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# District VII

By John Paris

Iowa, Michigan, Minnesota,  
Wisconsin

Looking out my window this morning there is snow on the ground, some light fog, and frost in the trees. What is my plan for this afternoon? Head out to Broome Park, meet up with some fellow fliers, and get some flights in.

We may not fly as much in the winter months, but we still get out there and fly. One of the favorite days to fly in the winter time has to be New Year's Day. As I found over on Stunt Hangar in a post about Bill Simons, flying in the winter time is not a new thing. I don't think that I have ever seen a contest in the snow, though.



A shot of the fliers from the February 1964 GSCB Snowbird Meet.

Here in Michigan we were blessed with temperatures in the 20s with only moderate winds. Two groups in Michigan flew. In Lansing, the Lansing Area Flying Aces (LAFA) held their annual NYD Fun Fly and in Flint we had another running of the "Event for the Insane."



The Lansing crew that was up to the challenge.



The snow doesn't lie when you bounce.



Clearing the field for takeoff.



I know it is not CL, but it does show the early conditions on NYD.



My son Michael, probably wondering what is wrong with me.



Frank Carlisle and me getting ready to be "Insane."



Frank showing his stuff with the Slob.

I heard that in Minneapolis they were in the single digits but they had a good turn out as usual. Below is the information that Steve Scott sent along with some photos.

"There is something magical about a clear winter night in these northern latitudes. A rare New Year's Eve blue moon was casting distinct shadows on the snowy landscape and an eerie silence permeated the suburban landscape of suburban Fridley, Minnesota—which would be harshly interrupted a only few hours later by the din of small two stroke internal combustion engines complaining about being asked to run at 10,000 RPM in the frigid arctic air. The combined aromas of hot chocolate, chili, nitromethane and starter fluid can only mean one thing on New Year's Day ...

"The concept of staging a 'Freeze Fly' on New Year's Day was crafted some 18 years ago by long time Minneapolis Piston Poppers members Jeff Lange and Bob Cheney as a means to encourage fellow club members to strive for the coveted AMA All Season patch which requires

flying activity in each of the 12 calendar months. The bitter cold traditionally doesn't hit until mid-to-late January so an early January flight, combined with a late February date would get the members through the harshest portion of winter. This event is, oddly, the highest attended club function of the entire year.

"This year's function was no exception, with 20 hardy souls gathered at our Fridley flying site where the highest daytime temperature would not climb past 5° above. We started the day with an official temperature of -2°. The following day was projected to dip down to -15°. So much for 'beating' the harshest weather of January ... With the adverse weather conditions, no one brings their 'A' equipment. As cantankerous as a Fox is to start on a normal flying day, just imagine how much starter fluid is needed to coax one to fire in below zero temps.



Keith Sandberg plowing with the Arctic Cat.



Essential equipment for winter flying—Wayne Wiley's Old Fokker and Keith Sandberg's ATV.

"The goal is for everyone to put up at least one flight. With a flight, each flier's name gets put into a drawing where they are called out in random fashion at the conclusion of the flying activities and get to choose a prize from the assorted prizes. This year we were fortunate to receive a generous donation of merchandise from our friends at SS Hobbies.

"Another unique 'feature' of this event is witnessing the creative talents of Norm Andersen. Norm is a professional artist and each year shows up to our Freeze Fly with a winter/holiday-themed flying contraption. In years past we've seen a

flying snow shovel, a hockey stick, a large candy cane, a set of red flannel long-johns and a Christmas wreath.

"All-in-all, a very unique and enjoyable effort put forth by those who live in a region where a harsh winter is not only tolerated but celebrated.

—Happy New Year, Steve Scott

"P.S. On a sad note, we learned of the passing of one of our hobby's true ambassadors shortly after our Freeze Fly. Kelvin Heath was a regular participant at most of the Minneapolis Piston Poppers events. He and his son Ryan would also travel to the Sig meet and participated in the Oshkosh CL Fly-in. There was no greater enthusiast for our hobby and his love of sport flying was unmatched. Kelvin was a true gentleman and will be greatly missed."



Return of Norm Andersen's flying hockey stick.



Minneapolis Piston Poppers and friends for their annual Freeze Fly, 2010.



Mike Moyan holds Keith Sandberg's PT-19.

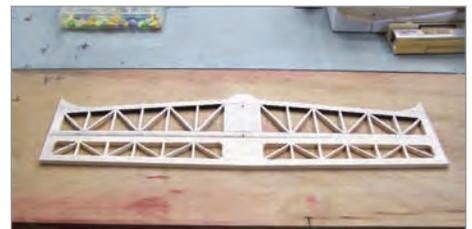


Mike Moyan assists his granddaughter, Maria.

I had a "run in" with Kelvin a few years back when I caught his son Ryan "eyeballing" my daughter Grace. We had some loud words at the field in the pits all in good fun in an effort to embarrass the kids. I certainly hope that things are smoothing out for his remaining family.

With the cooler weather, the desire to practice is generally replaced with the desire to make next year's world beater or to bring things back up to standard for the coming year. Crist Rigotti sent some pictures of one of his current projects. The details from Crist:

"Here are some photos of my winter project. It is a Big Job OTS plane. It'll be electric powered. I'll use a Scorpion 3020-16 motor, a CC Phoenix 45 ESC, a JMP2 timer, and a 4S 2400mAh battery. I'm shooting for a circle ready weight of 46 ounces. I'm using the Lost-Foam wing method of building the wing. It'll be Ultracoat on the wings, stab, and elevator and Sig dope on the rest; my usual way of finishing a plane."



The wing for the Big Job.



The tail for the Big Job.



Wing detail.

Rich Kacmarsky is also working on a restoration project of a Green Box Nobler that was scored off of our favorite auction website.



Green Box Nobler getting a refresh for next year.

By the time that this magazine makes it to our members, flying season will almost be upon us. I put out a request prior to writing to see if I could include some District VII contests in this issue. Gene O'Keefe, the newest member of the Circlemasters Flying Club of Milwaukee, came back with the date for their annual

event as being 6 June, 2010. I hope to have a better list for next issue. As usual, you can check the listings in *Stunt News*, *Control Line World*, *Model Aviation* magazines as well as Stunt Hangar and Stuka Stunt's forums to keep up with what is happening where. Crist Rigotti has kept a list of various contests for the upcoming year on his site as well. Hopefully he will update his list as well.

If there is anything that you would like to share with the rest of the District VII members, please do not hesitate to contact me. One little safety/health item while I am thinking of it. Wear some type of mask when you are sanding or use a good vented sanding table. As a friend once told me, "When you can't breathe, nothing else really matters." *SN*

## District VIII

By Don Hutchinson

Arkansas, Louisiana, New Mexico, Oklahoma, Texas

2010! It's a brand new year and time for another exciting District VIII episode of yep, you guessed it. The Saga of the Plains! Er, planes. As we do every New Year's Day, we gathered at the Garland flying site to kick the New Year off with a laid back flying session.

It started out coooold and a few of the more hardy types were getting in flights but as the day wore on the temp climbed to where we were flying in shirtsleeves by noon. There was almost no wind so it was quite pleasant and we had a good turnout.

Being that my garage shop is like a meat locker, I didn't prep anything to bring out and had to settle for a flight on Bill Wilson's Forster .29/Yak 9 profile. The last time I flew a Forster powered model was about 1946.

More on this later! We had the both normal and not so normal models out flying so I will touch on a few of the more notable items.

Let's start with David Ek's rotary winged aircraft. Dave has much time in the real helis as well as the \$1.19 and C-130 so his knowledge of heli aerodynamics is pretty good. First he flew his V-22 style twin rotor Thrasher and it did remarkably well.

Several flights ending up with a basic autorotate to touchdown so that was a good start. This one sported a Fox 50 up front, built from 1-inch-thick foam with a hardwood outline on the perimeter and weighs in at 6 pounds.

His other "Ceiling Fan" special was another story. Propulsion this time was 2 ST .51s in push-pull configuration.

Unfortunately, the model came in at about 12 pounds. Did get into the air after about three laps taxiing but appears to need a few mods. Dave says "Next time!"

Fortunately we had great photo coverage by David Russum so here's the blow by blow account!



Dave Ek's V22 motors along very nicely.



The dreaded ceiling fan Maybe if we tape a quarter to one blade.



This is not looking etc.

Bill Wilson took a less adventurous path to getting in the air on January 1, flying his beautiful Hunter 8. This model is a continuation of a long line of (interesting name for Stunt models) Hunters which have served him well in competition.



Dave Ek holding as Bill Wilson tunes the engine.

A master finisher, Bill designs and builds all his own models, usually with new and unique materials and processes.

The Hunter 8 is done with a fiberglass and carbon fiber molded fuselage and a hogged out foam wing with polyspan covering. This is one fine flying airplane.



**A beautiful airplane and a beautiful day!**

On to Stephen Jeansonne's rotary winged wonder. This one had the rotor linked through the bellcrank to control the angle of the rotor along with the elevator. The engine was about a 40 size. Novel thinking, but it needs a bit of research to accomplish the basic goal of an aircraft, flight. Well, remember, this is a "fun fly" so we had that incentive to make the model choppers fly. Not a stellar day in the rotary wing dept. but as they used to say at Indy, "We'll be back next year."



**Well even Igor Sikorski also had to start somewhere.**



**I think it needs a bit more tip weight.**

**Way back in '46** a friend built a Berkeley P-51 with a rear rotor Forster .29 on spark ignition. He said would you like to fly it so I said yes. Back then all we did was take off and fly around in level flight. Which I was doing nicely and then the down line parted! The model assumed a slightly more nose up attitude and continued around in level flight! I have no idea how heavy it was but the owner came out and took it and waited until the fuel ran out. Yessiree, them old sparkys really had the ponies!

**It has been cold down here** in Texas so there's not a lot of stuff happening. Yeah, I know you guys from Minnesota laugh at us. Story goes that with a severe cold front headed in, a local weatherman up there advised "all you owners of brass monkeys better get 'em inside." Once again here's a plea for column material from the rest of the district. Cut and paste would be a great help

but anything newsworthy will do. If you want some incentive to send me some good stuff, this bit of doggerel ought to do it! I'll quit it when ya'll start helping me out!

There once was a group from Seattle  
Who's PA's developed a rattle,  
They sent them to Randy  
Who fixed them just dandy  
And now they win every Stunt battle!

**Now let us get serious.** I'm a 78 year old geezer and not sure I can give you the kind of representation you deserve. I no longer attend the Nats and the annual PAMPA meeting and cranking out these columns gets more difficult with time. Is there anybody in District VIII that would consider becoming the District rep? The annual election is coming up and the search for candidates is upon us. *SN*



**Why we aren't flying much in Texas right now. This is the front of my home!**

# District IX

By Carl Shoup

Colorado, Kansas, Nebraska,  
North Dakota, South Dakota,  
Wyoming

**H**ello. It is snowing again so I am going to show some photos from the 2009 Special Needs Air Show that a local company puts on for the local special needs and handicapped school age children. We use a modified Flite Streak trainer with a racing shutoff so we can get as many flights in the time that they have, which is between 2 to 3 hours. This year my normal starter had to work late so Steven Dias stepped up and did all of the starting, refueling, and catching of the airplane. Together with help from the Montrose Model Aircraft Association members Steven Dias, Don Dubie, Cliff

Hays, Jim Ferguson, Andrew Weaver, and Grand Junction PAMPA member Nick Bullick, we were able to get 71 children in the circle and in the air.





**I received two letters** from John “Doc” Holliday and some photos. Here’s John’s first letter:

“Hope you are not snowed in too deep. Since before Christmas we have had about a foot of snow here. It has not gotten warm enough to melt any of it either. I can’t use the shop right now as it got too cold, so I am building in the bedroom like when I was a teenager (actually as a kid when I first started this maddening hobby).”

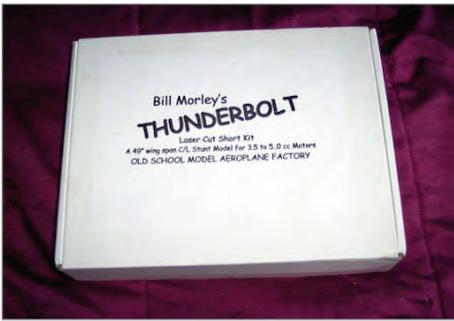
“Hope the photo came thru of the plane I want to get started on. Right now I’m working on a shrunken Sneeker and a Perky. This one is a short kit I got from England on the ‘bay.’”



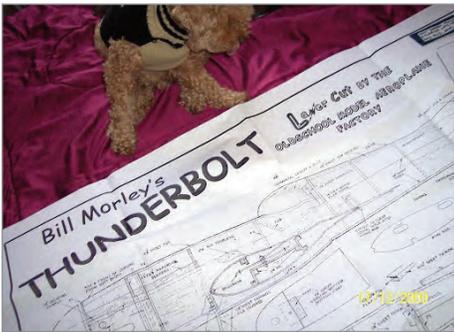
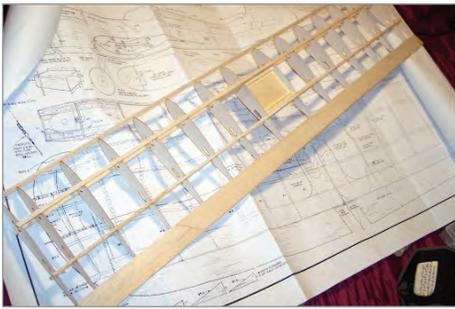
And now, here’s John’s second letter:

“Hi Carl, hope all is well. Here is what I am working on in the bedroom since the temps got so cold the kids couldn’t sleep in the tent. Is in some pictures earlier and don’t know if they got thru or not. These are of the ‘Thunderbolt’ by Bill Morley. It is a British design that qualifies it for Classic. They are of the wing and stab only right now as I haven’t started the fuselage yet. Hope they come thru.” *SN*





Sandy has given her approval of the stab/elevator.



Doc Holliday's Sneaker.

# District X

By Dave Fitzgerald

Arizona, California, Guam, Hawaii, Nevada, Utah

I've been working quite a bit with Robin Sizemore these last few days. He has done some outstanding work on the plans for the Thunder Gazer. They are just about ready and Eric Rule should have them available at VSC.

I think the plan is to have two sheets; one for the fuselage and tail details, then a wing sheet. That way if all you want to do is the wing, you can just get the one sheet. If you are looking for someone to do some CAD drawing,

I highly recommend Robin; he does a very nice job.

I'm still thinking about Richard Walbridge's new Spitfire. I first saw it at Golden State last October. I got some more pictures and information from Rich about his new plane. Here's Rich:



Rich and his new Spitfire.



Rich in the Playground?

“Dave, I would like to contribute more to *SN* but I feel that my credibility isn't there because there are so few people who know me on a national level. I guess I should start attending the Nats more often! Most of what I've learned has been from a few select people that are well established in the event that I feel that whatever I would write would be second hand regurgitation. Perhaps I'm being self-defeating about this.

“Ok, so some stats on the plane. It is a slightly modified '96 Urtnowski Spitfire design, and is my first completely take-apart plane with a one piece wing. Here are the rest of the stats:

“Engine: RO-Jett BSE RE 65 (with Brett Buck spigot spray-bar setup)

“Prop: Brian Eather 12.5 x 3.75 3 blade CF prop

“Spinner: Tru-Turn 2 1/4 inch diameter aluminum

“Pipe: Custom Windy bent 'Strega' pipe

“Tank: Custom Windy CF 6 ounce tank  
“Fuel: PowerMaster 10/18 + 5 ounces of Klotz

“Plane Weight: 70 ounces

“Finish: Dope and Silkspan. All Brodak colors, custom mixed my own interpretation of 'Photorecon Blue,' Brodak 'Crystal Clear' clear coat with a hand-buffed finish. All British insignias and stripes are painted on. Small decal printing and vinyl mask cutting: Courtesy of my friend Phil Juarez

“This is what I remember right off the top of my head.”



Nice job on that Blue. Normally a blue plane is very hard to see in flight, but I bet this one jumps out! I don't know if you can see, but he has sectional charts behind the seat. Won't do much good back there.



Nice Unobtainium carbon prop.



Hero shot.

Well, Thanks Rich. If anyone has seen your work or flying, there is no doubt that you will be a national force to be reckoned with. Your stuff is as nice as anyone's at the Nats, no worries.

**Next up is an update** on the continuing saga of the Woodland flying field here in Northern CA. I'm turning this over to Frank and Doug Barton for this report:

“Ok guys the Woodland City Council has extended our current lease for another year to Nov 30<sup>th</sup> 2010 with clean up time after that. The vote was 4 votes in favor and 1 vote against. There will be some further subtle negotiations before the terms are finalized but that will be worked out. We had a couple people on the council in our corner tonight when we pushed for 2 years. But they agreed with the staff recommendations on 1 year. Now that a decision has been made we will need to get everything back in gear to get the field reversed and opened back up for the 2010 flying season. Stay tuned to both the newsletter and the members blog for more information. Also please make sure you try to attend meetings whenever possible so that this information can filter out.

“The contest calendar will be coming out on the website and the newsletter. As a club we all need to make a big push to make this year count both as an organization and financially. I encourage everyone to get involved as best you can.”

Our thanks go out to Forrest and Doug. I know it's been a grind for years. Hopefully we'll get some kind of closure by the next century.

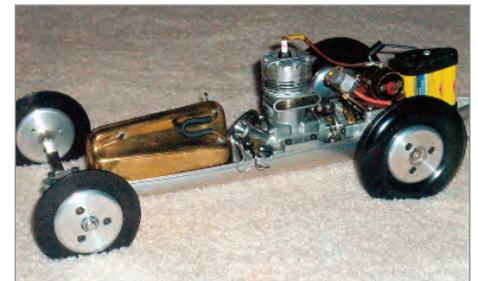


1950 All American with the builder.

**I'm going to steal** some of Mike Keville's thunder. A good friend of mine sent me this picture a couple of months ago. Can anyone tell who this is? I won't keep you in suspense too long; the answer will be at the end of the article.



Another view of the same All American.



Now, this is what the builder has been doing lately. Nice workmanship on the tank.



I've never done cars like this, looks pretty spiffy.



I think the caption was, Dooling Arrow Car, 1948 design. This was built in 2009.



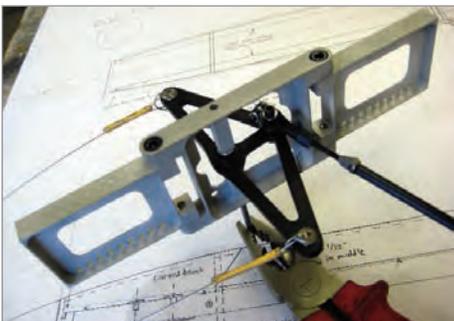
And the pair together.



This is a new version of the 1950 All American.

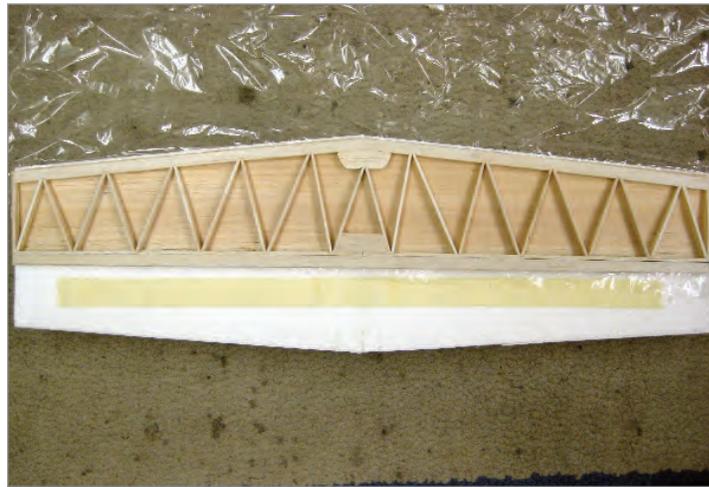


I get regular reports from Gunter Wagner in Germany. He and Monica are skiing instead of flying. Imagine that.



Dallas Hanna Bellcrank and wing attach point assembly.

I have an early picture of the new Thunder Gazer under construction. Pretty basic right now. I'm still in the forever mode of making parts. Someday, I'll have enough parts to start putting things together. I have to think through each part before I build. I start by asking myself, does this need changing from the last plane? If not, should I build it the same or re-engineer the part? Most of the time I can just keep going without re-designing, but the new take apart method will take some pondering.



This is half of the stab sheeted. You can clearly see the balsa blocks in the center section that will host 1/4-inch vertical dowels. These dowels will have a hole drilled in the center for a 2-56 screw that will bolt to the fuselage. Just a little work to go till the tail is finished, but the hardest parts on the tail are done.

Lastly, I have a note from Fred Anderson about Whittier Narrows flying field in the LA area, and the county's reply. Ok all, here's the scoop. I think we've we won this one! Here's the note Fred received:

"Subject: RE: Whittier Narrows Master development plan.

"Date: Tue, 22 Dec 2009 07:56:21 - 0800

"Steve, I am sorry I missed your call yesterday.

"I want you to know that having your written comments as well as members commenting, and I have come up with a solution that leaves the airfield and rifle range in the same spot, moving the soccer fields across Rosemead to the festival area. I still need to talk at length with LA County Parks before we do the next iteration of the plan.

"I am hoping to speak with County Parks today, at least before the year is out—the holidays make these types of meetings and conversations a bit more challenging. Then there needs to be an additional meeting with the 'steering committee' of the plan to vet it again. This

should be accomplished in the next three weeks or so.

"I think to sum it up, the comments about the WN Tether Car Field, Air Field and Rifle Range by their members have brought your historic and unique uses to the forefront. You were able to accomplish what I wasn't—get the serious attention of the planner. So I thank you very much.

"The next steps are:

"1. To get the draft plan narrative, that includes the changes, make edits and get it appropriately reviewed.

"2. Set the public meeting to review and comment on the plan, which will have revisions from the previous draft.

"I am hoping to hold this meeting before the end of January. You will be notified when the plan is available and the date and time of the meeting, and the plan will be up on the WN Visioning website as well as the WCA website. I would greatly appreciate all of

your comments on this as well.

"Happy Holidays.

"Jane Beesley

"Director of Special Projects and Interpretation

"Consultant to

"Rivers & Mountains Conservancy

"100 N Old San Gabriel Canyon Road

"Azusa, CA 91702

"626-815-1019 ext 109

Flying sites continue to be a problem. It still makes me wonder what happened to the promised AMA West Coast flying site, you know, the one AMA promised to build so the California membership would approve building the Muncie site, yeah that one. Maybe we can get there by supporting the Woodland Davis modelers and see what additional help the AMA is willing to give.

Ok, now that you've all waited, the builder of the All American and the Dooling Arrow cars is, Gary McClellan. Many time National competitor, father to Dan, Jim, and Cathy, head Nats judge, and many time World Champ judge. *SN*

# Alaska, Idaho, Montana, Oregon, Washington

# District XI

By Bruce Hunt

With winter soft upon us, the Northwest is having its usual gray wet days with intermittent sunshine. Usually the intermittent sunshine is on weekdays between 11:30 and 12:15 on a day forecasted to be cloudy and windy with scattered showers. In spite of the bad forecasts, the NW clubs schedule a series of fun-fly events starting in January.

Because the probability is high that the weather will be unflyable, each event has a backup local eatery identified to gather participating fliers. This way everyone is guaranteed an enjoyable outing without rain running down the back of your neck.

The first fun-fly of the year was held over New Years by the Northwest Fireballs in Portland, Oregon. As chance would have it the day turned out better than could be expected and the resulting attendance was excellent with 13 fliers making flights.

The rest of the fun-fly season will have events scheduled in Roseburg, Salem, and Eugene. In the mean time, it's building season. Already news is spreading that Randy Powell has a new creation about to be unveiled and Keith Varley has brand new Continental and Jamison Special ready for next season's competition.

As always you can get an excellent report on everything going on in the Northwest by checking out the news on the website: <http://flyinglines.org>. *SN*



Lots of fliers turned out for the Jan. 2 day of flying at the East Delta Park flying circles in Portland, Ore. Standing: Left to right, Jerry Eichten, Don Curry, Dave Royer, Geoff Christianson, Jim Harper, Ron Anderson, Mark Hansen, Terrance, Mike Hazel, Bill Lee, Doug Powers, Gary Harris. Seated: Leo Mehl, Richard Entwistle, Jim Cameron, Scott Riese.



Richard Entwistle signals the photographer that he's ready to fly at the Portland fun-fly.



Randy Powell has given his latest a name that would make any horse racing fan excited, *Something Drastic*. I would have suggested "*Something Dramatic*" would be more descriptive.



Joe Dill poses with his newly finished Chipmunk. Another example of excellent workmanship, we look forward to seeing this model at the NW Regionals.



Keith Varley's Continental will be new for the 2010 season. This looks like a beautiful model all done up in Keith's signature egg shell blue with darker blue accents. Dan



Keith Varley has made a very pretty Jamison Special for Old Time competition.



Covey has made a profile version of the '52 Nobler. Using an original built-up fuselage with an ARF Nobler wing, Dan affectionately calls this a BARF Nobler.



Russell Shaffer recently finished this Boxcar Chief.

# Contests and Results

## 2010 KING ORANGE RESULTS

### Old Time Stunt

Judges: William Davis and Doug Taffinder

1-Bob Zambelli	Viking	OK super 60 Ignition	Dope + Silk
2-Ken Cerney	Viking	OS LA 46	Sig Dope
3-Gene Martine	All American	Fox 35	Sig Dope
4-Roy Trantham	Humongous	Double Star 54	Film
5-Owen Richards	Humongous	ST-51	Ultra Coat
6-Bob Witney	Jamison	ST-46	Glass Kote
7-Dennis Toth	Ringmaster	OS 20	Film
8-Watt Moore	Jamison	OS 40	Dope+ Monocote
9-Dave Roundtree	Jamison	FOX 35	Monocote
10-Ed Cook	Super Clown	Electric	Monocote
11-Richard Antoszewski	Humongous	OS 40	Rustolelm
12-Larry Fulwider	Smoothie	OS FP 35	Brodak Dope
	Film		

### N-30 STUNT

Judges: LES Mc DONALD and BILL RICH

1-Steve Fitten	Nakke	DS 50	Film + lustercoat
2- Bob Dixon	Nobler	Fox 35	Film
3- Gene Martine	Lark	Aero 36	SIG Dope
4-Roy Trantham	Shark	Double Star 54	Film
5-Bob Zambelli	Nobler	Fox 35	Dope Silkspan
6-Wes Dick	Stills Stuka	Webra 32	Tissue+ Dope
7-Don Sopka	Nobler	OS FP 40	Monocoat
8-Curtis Shipp	Cavalier	Aero 36	Dope
9-Alan Buck	Twister	OS LA 40	Dope
10-Larry Fulwider	Nobler	Brodak 40	Monocote
11-Artie Jessup	Squaw	Fox 35	Silkspan+dope
12-Bob Whitney	Flite Streak	OS 20	Monocote

### PROFILE STUNT

JUDGES: LYNN WEEDMAN and DALE MILLER

1-Ken Cerney	Banshee	Saito 40	Ultracote
2-William Davis	Teosawki	OS LA 46	Monocote
3-Rollin Kesssler	Primary Force	Brodak 40	Film
4-Artie Jessup	Cardinal	DS-50	Film
5-Dennis Toth	Tutor II	AXI 2826-10	Film
6-Alan Buck	Twister	OS LA 46	Dope
7-Phill Coopy	Gee Bee Sportster	OS LA 46	Monocote+Dope
8-Larry Fulwider	Tutor II	OS LA 46	Monocote
9-Don Sopka	Tutor II	OS LA 46	Monocote
10-Roy Trantham	Old Dog	DS 50	Film
11-Roger Greene	Pathfinder	OS FP 40	Film
12-Bob Whitney	Flite Streak	OS 20	Monocote
13-Jim Welch	Dreadnaught	OS LA 46	Film
14-Watt Moore	P-40	OS 40	Monocote
15-Curtis Shipp	Cavalier	Aero 36	Dope

**BASIC STUNT****JUDGES: WILLIAM DAVIS and DOUG TAFFINDER**

1-Zack Strickland	Twister	OS FP 35	Monocote
2-Nick Strickland	Shoestring	OS FP 20	Monocote+dope

**BEGINNER STUNT****JUDGES: Les Mcdonald and Bill Rich**

1-Fred Margarido	Oriental	OS LA 46	Film
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**INTERMEDIATE STUNT****JUDGES: LYNN WEEDMAN and BOB ZAMBELLI**

1-Jim Welch	T-rex	ST-51	Monocote
2-David Shad	Nobler	Fox 35	Monocote
3- Phill Coopy	Vector 40	OS LA46	Monocote+ Dope
4-Philip Bayly	SV-22	ST 60	Dope
5-Richard Antoszewski	TLAR	OS LA 46	Monocote + Rustoleum
6-Larry Fulwider	Tutor II	OS LA 46	Monocote
7- Samuel Niebel	Nobler	Brodak 40	Monocote
8- Don Sopka	Tutor II	OS LA 46	Monocote

**ADVANCED STUNT****JUDGES: LYNN WEEDMAN and BOB ZAMBELLI**

1-William Davis	Dancer	ST-60	Dope
2- Curtis Shipp	SV-22	PA-65	Brodak Dope
3-Don Ogren	Cardinal	OS FP-40	Ultracote+ Paint
4-Artie Jessup	Cardnial	DS -50	Monocote
5-Roger Greene	Pathfinder	OS FP-40	Film
6-Dennis Toth	Tutor II	AXI 2826-10	Film
7-Rollin Kessler	Primary Force	Brodak-40	Film

**EXPERT STUNT****JUDGES: LES McDONALD and BILL RICH**

1-Dereck Barry	Dreadnought	PA-65	Brodak Dope
2-Steve Fitton	Time Machine	DS-60	Lustercoat+ Film
3-Bob Dixon	Crystal	OS-52	Brodak Dope
4-Eric Viglione	Starfire	PA-61	Silkspan+Klasskote
5-Wayne Smith	Tracer	PA-61	Brodak Dope
6-Ken Cerney	Trivial Pursuit	OS-56	Sig Dope
7-Wess Dick	Velvet	PA-65	Tissue+ Dope
8-Bob Whitney	Vector 40	OS-40	Film

**FLY OFF FOR PERPETUAL TROPHY****JUDGES: LES McDONALD-BILL RICH-TOM WEEDMAN and ERIC VIGLIONE**

1-Steve Fitton  
2-Derek Barry  
3-Bob Dixon

**PILOTS' CHOICE AWARD WINNER - DEREK BARRY****HIGH POINT AWARD WINNER - KEN CERNEY****BRODAK 40 RAFFLE WINNER - ROGER VIZIOLI****BRODAK ARF SMOTHIE RAFFLE WINNER - MIKE GRIFFIN****THANKS TOM WEEDMAN AND X-47 FLYERS**



**PRESENTING**  
**THE BOB PALMER**  
**MEMORIAL 2010**  
**APRIL 24th & 25th 2010**

AMA SANCTION #10-214

**SCHEDULE OF EVENTS**

**SATURDAY**

Old Time Stunt  
 Classic Aerobatics  
 1cc/Leprechaun  
 Profile (2 classes)

**SUNDAY**

Beginner  
 Intermediate  
 Advanced  
 Expert

**SPECIAL TROPHIES**

Palmer  
 Championship  
 Spirit of '52  
 Spirit of '69  
 Leprechaun  
 Classic Concours  
 PAMPA Concours

Pilot's meeting 7:30 First flights 8:00

Aircraft are to be weighed at registration. Current AMA pull test rules will apply  
**Pilots raffle: 1 ticket per entrant, extra ticket for pre-registering!**

Site Location: Whittier Narrows Regional Park, S. El Monte CA  
 at the intersection of the 60 Freeway and Rosemead Blvd.  
 Go to: [www.KOTRC.org](http://www.KOTRC.org) for further information

**EARLY REGISTRATION REQUESTED!**

Entry fees: Pre-registered - \$15 for 1st event, \$10 for 2nd and \$5 for any more.  
 First event registration rises to \$20 at the contest. Refunds given for no show.

EVENT 1.....	EVENT 4.....	Send checks payable to: Knights of the Round Circle PO Box 6115 Anaheim, CA 92806 Phone#.....
EVENT 2.....	EVENT 5.....	
EVENT 3.....	Total: \$.....	

NAME: ..... AMA # .....

ADDRESS: ..... CITY: .....

STATE: ..... ZIP: ..... E-address.....

For additional information, contact CD Joel Chesler 626-964-4801 [joelandiane@verizon.net](mailto:joelandiane@verizon.net)

Diane and Joel will host a BBQ/Pizza party Sunday evening. Details at the contest!

The 39th annual...



# Control-Line Northwest Regionals

Eugene, Oregon

May 28-29-30, 2010

## Championship Control-Line flying competition

With **35 events**, the Northwest Regionals provides the largest selection of CL competition events and awards available in a single contest in North America.

### You can compete in these great championship events:

- AEROBATICS — 4 PAMPA classes, Old-Time Stunt, Classic stunt and two classes of Profile Stunt!
- COMBAT — 1/2-A (high-performance), 80-mph and Vintage Diesel!
- NAVY CARRIER — Profile, Class I, Class II, .15 and Nostalgia (Profile and Class I-II)!
- RACING — Mouse I, NW Sport, NW Super Sport, NW Clown. Trophies for best junior-senior entry in NWSR, Mouse I and Clown!
- SCALE — AMA Designer, AMA Sport Scale and Profile Scale!
- SPEED — 1/2-A, 1/2-A Proto, A, B, D, FAI, Jet, Formula 40, .21 sport, .21 Proto, NW Sport Jet, F2D Proto!

### Enjoy the Regionals at Eugene Airport!

Smooth paved surface ... Ample parking ... Camping and RV space ... Rest rooms  
Food concessions ... Restaurant at airport terminal ... Motels a short drive away  
TROPHIES ... MERCHANDISE PRIZES ... EVENT CHAMPIONSHIP TROPHIES

*Follow the signs to Eugene Airport: Take the Belt Line Road West exit from Interstate 5 (Exit 195). Take Belt Line to the Highway 99 North exit. Go north on Highway 99, turn left on Airport Road. Stay on Airport Road all the way to the flying site, on the right side of the road across from the airport terminal.*

### For your convenience: Advance registration!

Sign up early and purchase your T-shirts and sweatshirts in advance.

**Discount for all early entry and shirt sales!** Write for entry package:  
John Thompson, 2456 Quince St., Eugene, OR 97404; JohnT4051@aol.com

**Regionals host hotel:** Courtyard by Marriott, near the Interstate 5/Belt Line Road interchange. Call 541-726-2121 and mention the "Northwest Regionals" to get a special room rate of \$79. **Reserve rooms by May 14.**

### FOR INFORMATION, CONTACT:

Contest Director Mike Hazel, P.O. Box 126, Mehama, OR 97384  
E-mail [zzclspeed@aol.com](mailto:zzclspeed@aol.com), telephone 503-859-2905

The Northwest Regionals are brought to you in part by  
**Eugene Toy & Hobby**, 541-344-2117, [www.eugenetoyandhobby.com](http://www.eugenetoyandhobby.com)  
For more information and late updates, visit [flyinglines.org](http://flyinglines.org)

# 2010 AMA Control Line Aerobatics National Championships

## July 12 - 17, 2010

### CL Stunt Schedule

#### Monday, July 12

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circles
8:00 a.m.	Beginner & Intermediate Stunt Registration*	Grass Circles
8:30 a.m.	Beginner & Intermediate Stunt Pilots Meeting*	Grass Circles
9:00 a.m.	Beginner & Intermediate Stunt Event*	Grass Circles
11:00 noon	Old Time and Classic Stunt Registration*	Grass Circles
12:00 noon	Jr/Sr/Open/Advanced entries close	Nats Headquarters
2:30 p.m.	Open/Advanced Models Presented for Appearance Judging	180 Building
3:00 p.m.	Pilots meeting	180 Building
4:30 p.m.	Concours Voting	180 Building

#### Tuesday, July 13

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circles
8:00 a.m.	Old Time & Classic Stunt Events Pilots Meeting*	Grass Circles
8:30 a.m.	Old Time & Classic Stunt Events*	Grass Circles
7:00 a.m.	Judges Seminar Phase (Flight)	L-Pad Circle 4
6:00 p.m.	Judges Seminar Review (Rules review)	TBD

#### Wednesday, July 14

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circles
8:00 a.m.	Open/Advanced Qualifications Rounds 1 & 2	L-Pad

#### Thursday, July 15

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circles
8:00 a.m.	Open/Advanced Qualifications Rounds 3 & 4	L-Pad

#### Friday, July 16

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circles
8:00 a.m.	Open Top 20	L-Pad
8:00 a.m.	Advanced Finals	L-Pad

#### Saturday, July 17

7:00 a.m.	Control Line Precision Aerobatics Practice	L-Pad, Grass Circle
7:30 a.m.	Jr/Sr processing and Appearance Judging	L-Pad
8:00 a.m.	Jr/Sr Finals	L-Pad
8:00 a.m.	Open Finals	L-Pad Circle of choice
12:00 noon.	Walker Cup Fly-off	L-Pad Circle of choice
6:00 p.m.	PAMPA Reception	Location TBD
7:00 p.m.	PAMPA Banquet	Location TBD

#### \*Unofficial Event

If you are flying only unofficial events, you still must register with Nats headquarters and pay a small site use fee.

By Bob Lampione

# The Appearance Point



## Specifications:

**Model name:** United VI (PatternMaster Aerodynamics)

**Designers:** Bob Lampione/Big Jim Greenaway

**Construction type:** Tom Morris Millennium wing, balsa, plywood and carbon fiber gear and wheel pants

**Wingspan:** 63 inches

**Length:** 46 inches

**Moment Arms:** Nose moment 11 inches, tail moment 18.25 inches

**Weight Dry:** 76 ounces

**Power Package:** PA 75RE and Randy Smith-designed pipe; 7½-ounce tank by Brodak

**Propeller:** Bolly 3-blade 13½ x 4½

**Finish:** The finish is a hodgepodge of various products. It starts out with Randolph's nitrate dope then carbon fiber Vail put on with nitrate. The primer was from automotive primer spray cans. The color paint is a special mixed PPG lacquer Metallic Green and PPG Purple and Chrome Yellow. The black is Brodak and the final coats of clear are Certified Clear and Dupont thinner. So much for "you can't mix different products."

**Line length:** Tom Morris 66-foot braided lines eyelet to eyelet.

## United VI

**T**he design or look of the United has been my go-to airplane since 1968 and the 35-40 size airplane is now a Brodak kit. I personally like that "classic look" and don't change often at all. Oh, excuse me, I did build one that looked like an F86D Sabre Jet and that one won the Nats for me in 1969. Both airplanes used an identical wing and tail design with a change in cockpit and gear.

When I came back into the hobby in 1991 the same look of the United grew into the 60 size and has evolved now into a PA75RE-size United. This airplane is outstanding and a real point-and-shoot machine, as they say. Right from the first flight it was outstanding.

Jose Modesto was helping me trim out the United VI and he flew it and paid me a wonderful compliment. When he landed the United and we talked about his reaction he said, "Bob, this airplane is very 'special.'" Not quite understanding his remark I asked him, "What do



you mean by special?" He said it just goes wherever you point it and it does it with smoothness and grace and I have to say that I got the same impression.

The rest is now up to me to work into this new "beauty." I've built three Uniteds since I've retreaded myself back into this wonderful sport/hobby that we guys love, each with different aerodynamics.

The very first wing and tail were a recommendation from Jimmy Cassale who helped me quite a bit and I used his "China Doll" wing that was done by Scott Smith. The next was Randy's SV aerodynamics and that one evolved into this one and I love it.

Well, that's about the story and I'll see you all at the flying field in the upcoming season. I'm looking forward to Brodaks and the Nats this year.

Cheers, Bob. *SN*





