

Stunt News

Precision Aerobatics Model
Pilot's Association

January/February 2011 \$5.00



Reunion in Muncie!

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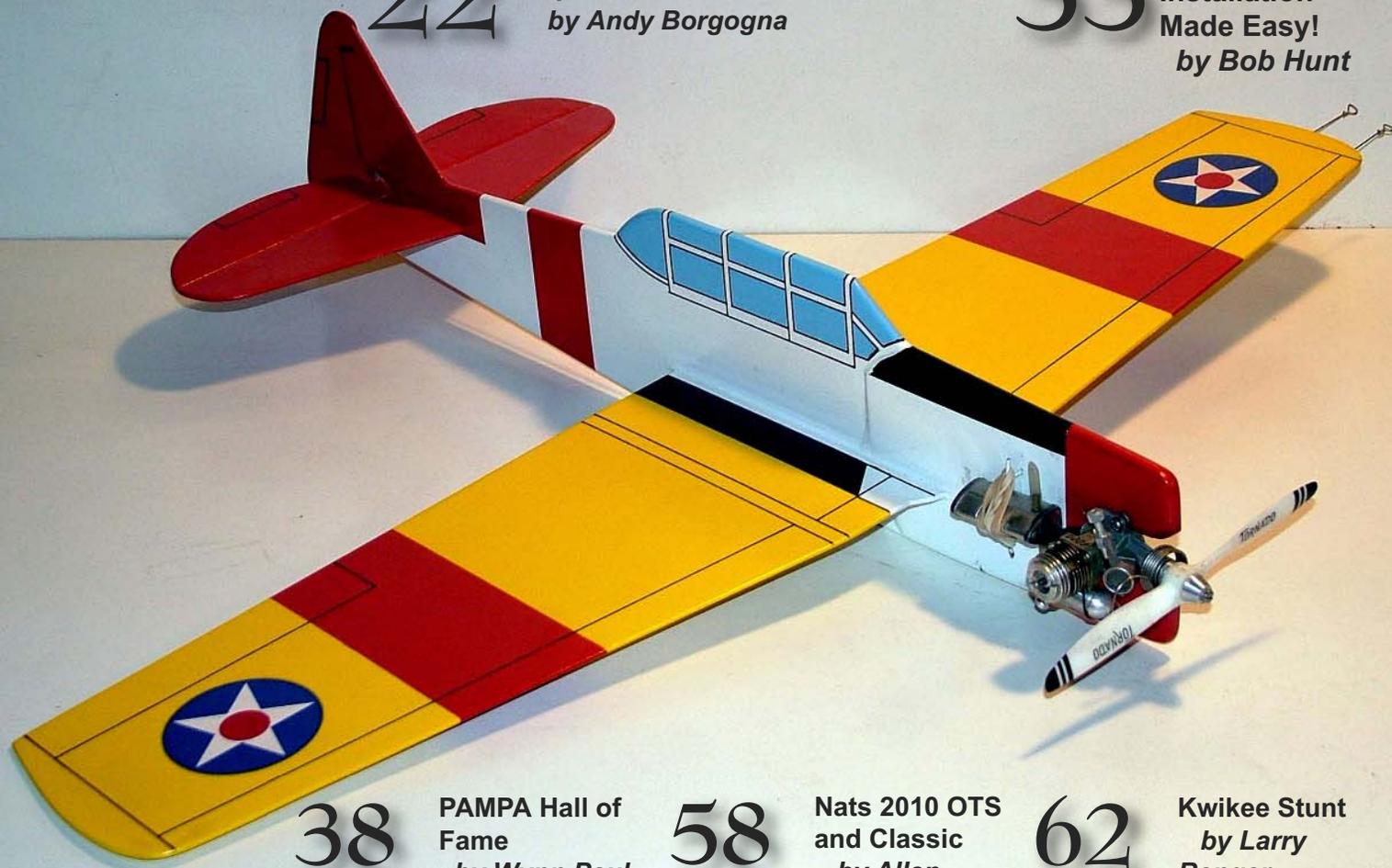
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On the cover: It was indeed a "Reunion in Muncie" for Jim Vornholt, Charles Mackey, and Don Ogren (L to R) as they pose here with two, twin-boom, championship-caliber designs by Charles. Jim is holding the original Carousel with which he won the Junior crown at the 1960 Nats. The model was completely rebuilt and refinished by Jim just for this reunion. Don Ogren reprised the model that won the 1958 Nats for Bob Randall. It is the Junkers Gobbleswantz, which, of course, is not actually a semiscale model of any particular full-scale airplane, but rather yet another great design exercise by master modeler, Charles Mackey. Don't miss the sagas of the Carousel and the Gobbleswantz in this issue. Photo by Phyllis Mackey.

Above: Dick Sarpolus has developed a formula for designing all sheet balsa designs for $1/2A$ power. They all fly very well and are capable of full-pattern performance. His model designs are a natural for use in the new Kwikee 1cc event that is described in an article by Larry Renger in this issue. As a bonus there is a side-bar article by Dick Sarpolus about his diminutive wonders. Photo by Dick Sarpolus.

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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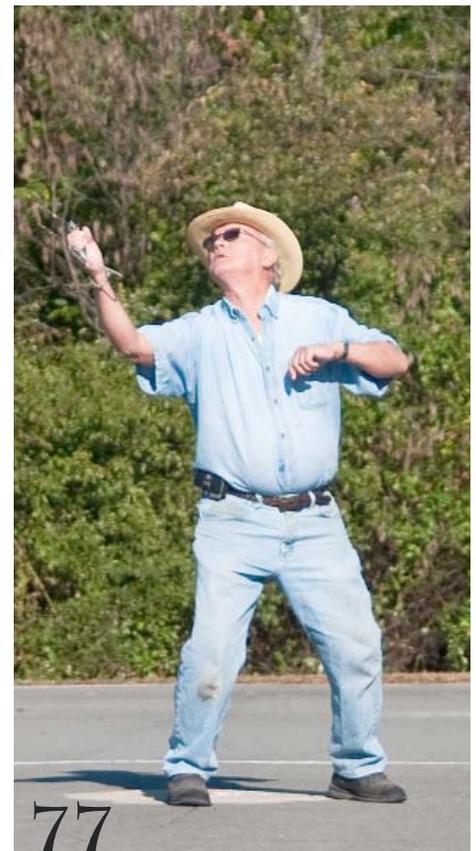
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President's Column

By Bill Rich

I want to congratulate Derek Barry on his coverage of the 2010 World Championships that appeared in the last issue of Stunt News. Derek did an outstanding job of covering the USA Team and our time spent at the Worlds. Dave Fitzgerald's coverage was very informative and shed additional light on some of the challenges we encountered. I would like to again thank PAMPA and the AMA for their support for the F2B Team.

Shortly after returning from Hungary I received an e-mail from Les McDonald indicating he had received a Thunder Gazer Kit and PA 75. It came from an unknown donor. This actually came from Dave Fitzgerald. I believe Dave was trying to entice Les to re-enter the Stunt Circle. After reading Les' outstanding "Stiletto Chronicles" series of articles about his "Stunt Journey," I doubted that he could be convinced to return to the circles. Les wrote to a number of people soliciting ideas for how to use this gift to benefit the FAI Team Fund. Les has actually decided how he is going to use this gift for the fund, but as of this writing he has not told anyone.

This got me thinking about an ongoing fundraiser for our F2B Team. I can now speak from experience; the help with funding from the AMA and PAMPA is greatly appreciated, but certainly does not cover all the expenses of the trip. Team members must contribute significantly to the cost of the trip. PAMPA needs an ongoing F2B fundraising effort to help reduce the cost to the individual team members. Before we can get started on an ongoing effort, we need to have someone step up and lead this endeavor. There are many opportunities that could be pursued.

One of the reasons I am pushing for the ability to pay dues and order PAMPA Products on our website is that the ability of a "Shopping Cart" addition to the site would also enable us to use the site to raise funds directly. I just renewed my AMA membership online. While doing this I had an opportunity to contribute to a couple of AMA funds. If we had this capability I wonder how many of our members would be willing to contribute to the F2B Fund if reminded at the time they were renewing their membership?

There are also many other opportunities to raise funds. I would hate to see a qualifying F2B Team member not attending the World Championships because of funding problems. What seems to be an underlying theme in a lot of these columns is the need for volunteers to support PAMPA. This is one project that needs to move forward. If you have any interest in this, please contact me or any member of the EC. If you want to make a contribution to Control Line Aerobatics, this is an excellent opportunity.

FAI Team Selection Committee Chairman, Wynn Paul, has decided to step down after many years of service. Wynn, you've done a great job and it has been appreciated by all of us who are interested and involved in FAI competition (*I'll heartily second that thought!* -Ed.). Wynn cites three main reasons for stepping down: 1. Being unable to attend the Nationals and Team Trials while serving as a caretaker in his family, he felt he had lost touch with the judging staffs and their performances. He had to rely solely on hearsay. He did not want to penalize the participants in any manner by making poor judge selections. 2. He wants to devote as much time as possible completing Stunt History-The Story of Model Aircraft Control Line Precision Aerobatics by 2013, the 40th anniversary of the founding of PAMPA. 3. He wants to spend more time with his wife, Helen.

Warren Tiahrt has also stepped down after serving for eight cycles (since 1995). Warren has done a terrific job as Event Director and assembled an outstanding staff for each event.

Thanks also to Judge Gary McClellan and to Head Tabulator Shareen Fancher. Both of these dedicated individuals have worked at many of the Team Trials that were directed by Warren Tiahrt.

Congratulations are in order to the new Chair of the TSC: James Randy Smith. We all recognize his vast knowledge of the personnel associated with the administration of the Nationals and the Team Trials. Randy will lead the committee in assembling an outstanding judging panel as well as perform in a most professional manner the duties of the F2B TSCC. Randy wants everyone to know he is looking for a new Event Director for this year's Team Trials. Please contact Randy if you have interest in this position.

Clarification of BOM at 2011 Nats

The BOM rule will be strictly enforced at the 2011 Nats. Kits/airplanes that have the flying surfaces covered when purchased/acquired do not qualify for BOM. Gel Coat or primered - painted airplanes, or solid hard-finished surfaces such as molded fiberglass or Carbon Fiber molded surfaces will not be allowed under BOM. Gel Coat is part of an actual type of finish of the flying surfaces, over the covering. On many planes it's the finish. Airplanes that are pre-painted with primer also represent a type of finish over the covering of the flying surfaces.

I am having a hard time understanding some of the posts I have seen regarding the enforcement of the AMA BOM rule at the Nats. When a Nats entrant signs the entry form he/she is signing a statement that he or she is in fact the Builder of the Model. As ED I am charged with enforcing the BOM rule. I am not accusing any of the past EDs of not correctly enforcing BOM.

The BOM rule is very clear, if the model's flying surfaces are covered in the kit, then these are in fact ARF and not ARC and therefore do not qualify under the current BOM rule. If you have purchased a commercially manufactured plane with pre-covered flying surfaces don't bring it to the Nats and try to compete in Junior Senior or Open. The very nature of molded construction causes the covering of the flying surfaces to occur. Examples would be the Yatsenko planes, Sharks, Classics, and others like the Blue Max and Extra 300.

There will be no "grandfathered planes;" just because they may have been allowed to compete in prior Nats; they will not be allowed to compete in 2011. Rather than trying to get around BOM by compromising your integrity, why not build an airplane



that meets the BOM requirement and compete on a level field with all the other Nats competitors?

It seems that each year, the line gets pushed further and further as to what is allowed under the rather nebulous "interpretation" that the AMA generated several years ago. The reason for that interpretation was valid at that time. There was a serious threat of multiple protests that could have had the effect of shutting down our whole Nats event that year. Nonetheless, the interpretation was made and was inserted in the rulebook and we have been saddled with that ever since, whether it is good, bad, or indifferent.

Basically, I think the AMA BOM requirements for our CLPA event are acceptable. The Nats EDs now have a problem with how far this ARF/ARC thing has gone. When a flier first appeared at the Nats with a Shark by Yatsenko, he had done his homework to document that his was a special kit that was especially set up by Yatsenko to qualify as a kit. It had come in pieces and he had assembled it. He had documentation to show the ED what he had started with and of his assembly.

The ED readily admits that he put more emphasis on the time required to assemble the "special kit" and neglected to apply the "covering" of flying surfaces part of the rule. The photos used to document the building clearly showed the surfaces were already covered when purchased. Nevertheless, his model qualified as a BOM. Unfortunately, there are now prebuilt airplanes available (Made in Russia, the Ukraine, or elsewhere) that their owners feel are acceptable because a previous model was acceptable, not knowing all the details that went into the decision.

So where do we go from here? The line has been pushed too

far. I do not think it is too late to redraw the line and push back to where we have some semblance of a BOM. There are those who argue that our CLPA event is a flying event. That is not entirely correct. I think it is best described as a model airplane event that means that the contestant builds and flies his model in competition. That has essentially been the case since the BOM requirement went into the rulebook in the late 1940s.

It will not be easy to put the "genie back in the bottle," but we must do so. To allow planes that are pre-built, covered, primed and/or painted is unfair to the vast majority of competitors who build their own models to qualify for BOM. It is entirely unacceptable for a few contestants to ignore the rule and compromise their integrity to gain an advantage.

The BOM rule depends on the individual's integrity. It's certainly difficult to enforce this rule, but it is not difficult to identify the commercially available molded airplanes that obviously don't qualify for BOM. I personally have flown many of these planes and actually own a Blue Max. I would love to be able to compete with this plane at the Nats but it doesn't qualify for BOM.

If you do not agree with the current BOM rule then you must take the proper steps to either revise or eliminate it. Don't try bending the rule to gain an advantage.

I want to be very clear on this point: I do not have any personal interest other than making sure we are following the BOM rule as defined. As 2011 Nats ED, my responsibility is to see that rules pertaining to the event are followed.

Till next time, fly stunt safely and enjoy your hobby. SN



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Level Laps

By Bob Hunt

The year 2011 begins with PAMPA in pretty good shape, both financially and also as an organization that is succeeding in promoting CL Stunt flying throughout the world. Our elected leadership deserves a great deal of the credit for that, but so, too, do the individual members who have helped out and contributed in myriad ways to stabilize and grow this fine special interest group. I'm certain that this spirit of involvement and cooperation will continue throughout this year and for many years yet to come. CL Stunt is healthy and it is growing. All PAMPA members can take pride in that.

It is also true that we have experienced devastating losses this past year. It is a sad fact of life that as we age we will continue to see many of our friends pass on. Let's resolve to carry on with their spirits in our hearts and take this great sport to ever greater heights of fun, technical achievement, competition excellence and genuine sportsmanship.

Let's also resolve to introduce as many new modelers to the joys of CL Stunt flying as we can. I keep using the term, "Each one, teach one." It may sound simple, but it absolutely works. We could double the size of our sport virtually overnight if each of us would commit to finding one new member and teach him or her all we know about modeling. We should then charge that person to teach one, or more, in his or her lifetime. *We* all know the joys of CL flight and that in large part it is a *visceral* thing. Only when potential new CL Fliers actually gets to *feel* the life of the model through the lines do they begin to "get it." Watching our activity is just not enough of a stimulus for most, but a hands-on experience usually does the trick! Find someone and teach him or her to build and fly!

My Excellent California Weekend

I received a phone call from Warren Walker in late October. It's always great to hear from Warren, but on this occasion he invited me to be the guest of the Knights of the Round Circle and attend the 2010 Charles Mackey Open contest. Moreover he wanted me to be among the honored dignitaries who would sit at the head table at the Saturday evening banquet where Larry Renger was to be inducted into the Model Aviation Hall of Fame (Some know this as the AMA Hall of Fame ...). In fact, Warren and Contest Director Eric Rule asked me to do the actual presentation of

the award to Larry. Well, to say that I was both highly honored and highly surprised to be asked to perform such a solemn duty would be a monumental understatement. I could not say no to this invitation. To top off this amazing request, I was also asked to be the house guest of Warren and Ramona at their incredible home in Alta Loma, California.

When my buddies (?) in Tucson, Arizona heard that I was going to be making the trek west, they offered to bring my Caprice with them to California so that I could participate in the contest as well (I leave my Caprice Classic model at Warren Tiaht's house so that I can fly out to VSC each year and not have to transport a model to fly at the contest. Yup, my Caprice lives better than I do!). Thanks go out to Warren and also to Keith Trostle for their kindness.

I arrived on the Thursday before the contest weekend and was met at the Ontario Airport by Larry Renger and Andy Borgogna and we made our way back to Warren's house with one short stop to pick up a couple of trays of Chinese food. It seems that Thursday night (*every* Thursday night ...) is a group building and binging night and it's always at Warren's digs. I soon found out why. Warren and Ramona just love to entertain people and Warren just loves to cook! On this particular Thursday evening the building session was replaced by a party for the building group and for all the visiting Stunt fliers who could make it.

Warren is a master sheet metal worker and he has built an amazing outdoor kitchen just outside the door that leads to his equally amazing shop. The kitchen is complete with a custom stainless steel sink, cabinets, counter tops and a custom made 7-foot tall, 8-foot long cooker that Warren designed. The cooker has a smoker unit attached and Warren told me that he can smoke up to *ten* turkeys at a time! Don't ask ...

Anyway the entire unit is most



impressive and it was built entirely by Warren at his shop. Believe me when I tell you that the workmanship and design of this unit is of the very highest quality. That would be impressive enough, but Warren repeated this whole thing on the huge main deck that is above the shop level of his home! In fact, there are a number of exquisite sheet metal appointments all around Warren and Ramona's home that make it a candidate for *Better Homes and Gardens*. No, really, this place is an absolute mansion and Warren and Ramona's warm hospitality made it all the more enjoyable to be there.

Warren introduced me to "Tri-Tip," a cut of beef that is very popular on the West Coast. He also introduced me to Smoked Chicken and various other delicacies. Apparently this is old hat to the building crew as they registered little surprise at the



Ramona and Warren Walker with their newest family member, Buttercup! They were the perfect hosts during my stay in California.

amount and quality of the food that was served that evening. I did not leave California hungry.

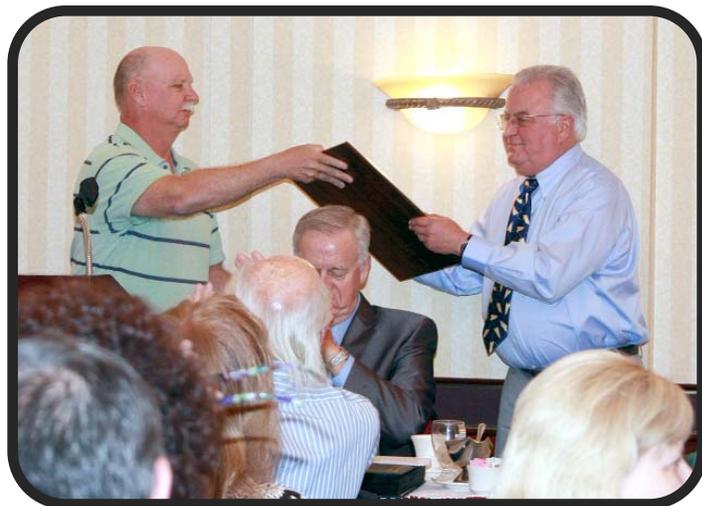
On Friday Warren took the day off and we went to the Whittier Narrows flying site for some practice flying. We met up with Warren and Keith and also a number of Warren's club mates and flew all day. For those who have never been to this fabled site, all I can say is you are missing out on one of the best and most picturesque sites in the world. What a treat it was for me to leave the cold Northeast and get a chance to fly in 75 to 80 degree weather in November for a few days. And, it's always a treat to fly my Caprice!

On Saturday morning the contest cranked up, and I won't steal Andy Borgogna's thunder by giving a report of that here. Andy did a fine job of that and it is included in this issue of *Stunt News*. I do, however want to extend my gratitude to Bob Whitely for an outstanding gesture of sportsmanship on his part. Bob, Keith, Warren and I all flew our Classic planes in competition on Sunday in the Expert class. I had been fortunate enough to sneak by Keith and Bob on Saturday to win the Classic portion of the meet. Since the Friday practice session I had been experiencing some tendency for my model to pick up speed as it went through the pattern. This was certainly not normal for the Caprice. The speed up problem got worse on my first Expert class flight on Sunday and I suspected that the fuel I was using might be the cause. To be certain, I went through all the normal checks. I found a bunch of debris in the fuel filter and thought that this must have been what caused the problem. I had but a very short amount of time before my final Expert flight, and I needed for it to be a good one; both Keith and Bob were ahead of me on the scoreboard at that time.

I went to the practice circle to take a flight and insure that I had solved the speed-up problem. Kirk Mullinex and Bob Whitely assisted me in getting that practice flight in at the eleventh hour. The engine seemed to be holding steady right up to the point when I did the Triangles, then it ran away big time! At this point I knew it was heat that was causing the problem and I knew that I'd run out of ideas. I pulled the nose apart one last time with the help of Stan Tyler and did one more check of the fuel system in hopes that I'd find something that I had missed before. I pulled the plastic tank out to check the rubber stopper, and as I was tightening the screw that holds the stopper in place I felt it strip! To make matters even worse I heard my name being called to report to the pits for a pull test; it was time to fly the last flight.

Stan and I fairly threw the nose of the Caprice back together, but there was little hope that anything would change for the better. As I was carrying the Caprice to the pull test area, Bob Whitely stopped me and suggested that I use a tank full of his fuel for the final flight. I had nothing to lose at that point and so I filled my syringe from his fuel bottle and got ready to fly. I set the needle and headed out to the handle. Everything went fine for the first few maneuvers, but I was approaching the point in the pattern where the model had been speeding up. Well, it didn't! It ran absolutely perfect throughout that flight and I scored enough points to capture the win. Without Bob's unselfish and sportsmanlike gesture I would not have won that meet. This is what this sport is all about; friends and sportsmen who think first of what is the right thing to do and of winning second. Thank you, Bob, you are just the best!

As much fun as the contest was, the Saturday evening banquet was even more enjoyable. We were there to pay tribute to one of the most unsung heroes in modeling and to induct that fine gentleman into the Model Aviation Hall of Fame. The KOTRC wanted this to be a memorable evening for Larry Renger and so they invited Hall of Famers Dale Kirm, Charles Mackey and some guy named Hunt to sit at the head table and welcome Larry into the fraternity. Each of the aforementioned HOF members spoke of Larry's many accomplishments. In case you are not aware, Larry, while not a champion CL flier, has contributed to the state of the art and sport in myriad ways. His background in aerospace engineering qualifies him as a genuine "Rocket Scientist" type, but he chose to use that expertise to make the world of model airplanes better for all of us. Larry has authored a long list of articles on model designs and modeling techniques (40 articles in all), and he also authored "The Small Scene," a column in *Model Builder* for five years. Larry also worked for the L.M. Cox Manufacturing Co., serving ultimately as Director of Engineering, and while there was instrumental in the development of the Bf-109 Super Stunter; the first full-pattern capable 1/2A RTF



Bob Hunt (L) presented Larry Renger with the Model Aviation Hall of Fame award. Congratulations on this well-deserved honor, Larry!

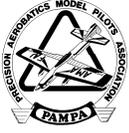
model. The Super Stunter actually could fly the entire AMA pattern quite well and it helped to successfully bring new modelers into the hobby. Larry has also been a pioneer of new modeling events and in this issue there is an article about the new Kwikiee Stunt 1cc event that Larry has nurtured. Larry also flies RC and FF and has developed designs for those disciplines as well. In fact, Larry has held five National Free Flight records. In addition, in the rocketry field, he developed both the front engine boost glider and the "Pop Pod" which are the dominant competition designs to this day. Again, it was a pleasure to be able to see this fine modeler and man get the recognition he so richly deserves.

The reason Larry was finally so honored is because someone nominated him to the Model Aviation Hall of Fame. That person was Warren Walker. Warren felt that Larry was due such honor and went about the process of finding out how to write and submit a nomination. There are many among us who also deserve this honor and it is contingent on all of us to identify those in our areas who we feel are so qualified and then do the necessary research to craft a nomination that will insure their induction.

I want to extend my thanks to all those who made my trip to California possible, but especially I want to thank Warren and Ramona Walker for their kindness, thoughtfulness and hospitality. I was made to feel like one of the family. I also want to take this opportunity to congratulate my old friend, Larry Renger for his induction into the Model Aviation Hall of Fame. It was long overdue, but now its official and he can enjoy that fact for many years to come.

Until next time, Fly Stunt! *SN*

—Bob Hunt



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Reunion in Muncie

For me it all began around the spring of 1960. The twin boom CL Stunt models have always been a novelty, and well known designer, Charles Mackey developed what may have been the very first competitive twin boom ship, the Gobbleswantz, in 1958. This plane was flown to first place in Open Stunt by Bob Randall at the 1958 Glenview Nationals, beating out such top competitors as George Aldrich and Rolland McDonald. Two years later Charles Mackey designed what I believe to be his best effort ever, the Carousel. Charles might not agree but that's how I see it.

During my first three years of flying control line Stunt I was able to slowly advance my flying ability with Charles Mackey designs such as the Lark, ME-109 and the twin boom Crusader. I was very impressed with the Crusader but when Charles designed the Carousel, I was sold. In my opinion it was the prettiest Stunt design of that era.

From the very first flight on the Carousel I knew I had a winner. The Carousel flew so well that it felt like an extension of my right arm. I'm sure this sounds crazy but I was so confident with this airplane that I would do reverse wingovers and pull out at ground level dragging the vertical fins across the ground.

When the engine quit, I would do inside loops and lazy eights as long as I had a slight breeze. This craziness was witnessed by hundreds of people at control line contests all over the Midwest back in 1960. Several times I played around too much after the pattern while wind-flying and exceeded the eight minute time limit.

After my trip to the King Orange Internationals with Bill and John Davis in December 1960 I decided to sell the Carousel to John's father Bill Davis. Mr. Davis owned a large collection of Stunt aircraft which were transferred on to John after Mr. Davis passed away. John maintained the classic collection, and even showcased it in a video program produced by Bob Hunt in the mid 1990s. In that program he shows each model and gives a short narrative about its history.

John was an excellent Junior Division Stunt pilot and was active in modeling right up to his untimely death from cancer in 2001. John's collection including my Carousel was sold off to various people. Legend has it that over the following years the Carousel was owned by Roger Wildman, Mike McHenry, Scott Condon and probably some other people I have no knowledge of, eventually ending up in the hands of David Gatewood.

Let's go back a few years

As I have written in a past *Stunt News* article (May/June 2009) I was always fascinated by all types of aircraft big and small. When I was a little boy, around 1950, if I heard an airplane fly over I would bolt out the back door and stand in the yard pointing and yelling airplane, airplane!

During the summer of 1975 I was working for the Indianapolis Police Department and flying RC model airplanes when one day out of the blue I thought, "Hey! I wonder if I could learn to fly the full-size stuff?" Not being the sharpest tack in the box I had my doubts.



Above: Jim suffers through posing with the KOI queen in 1960. This stunt-flying stuff is tough duty...

Right: Here's Jim ready to board the Indianapolis Police Department's Bell-47-G5 training helicopter.

So one bright and sunny day I grabbed my check book and headed for Indianapolis Metro Airport on the north side of Indy. There I was met by a friendly flight instructor who was more than willing to take my money. One year later I had my private fixed wing license and also an instrument rating, which made it legal for me to throw caution to the wind to go fly in the clouds. Well it was nice to have but I find it profoundly gratifying when I can see where I am going.

In September, 1977 the Indianapolis Police Department posted an opening for a Helicopter Observer and Pilot Trainee. The Observer looks for the bad guys and operates the radios and the spot light at night. We didn't have all the fancy gizmos the modern day police have.



Martin Luther King's birthday, when all of a sudden the Bat Phone rang (*Ring Ring*).

We received a direct call from the Palm Beach International Control Tower. The controller stated a small airplane had just departed the airport and was around three to four miles out

One year later I had a Commercial Rotorcraft License in my pocket flying the small Hughes-300-C patrol helicopters for the I.P.D. Soon I found myself in Hurst, Texas learning to fly the turbine Jet Ranger-B model and Long Ranger-III. Two years later I coughed up \$4,000 for 11 hours of flight training at Flight Safety International in Vero Beach Florida where I earned my Rotorcraft Instrument Rating.

I retired from the I.P.D in 1988 after twenty one years and took a job flying a Trauma Helicopter (Bell-412-SP) for the Palm Beach County Sheriff's Office. We worked as a crew of four consisting of Pilot, Co-Pilot, Registered Nurse and Flight Medic. This aircraft was equipped with an electric hoist capable of lifting 600 to 900 pounds, on board color weather radar, FLIR Infrared camera, the Garmin 530 double stack GPS and a 30,000,000 candle power Night Sun search light.

January 17, 1994 was a slow day with not much going on. I was working the day watch out of P.B.I.A, my partner is Bill Gannon (My name is Friday, *dun da dun dun*). It was the anniversary of

Right: This photo was taken off of a television screen during a news show that was reporting on the ocean rescue of downed private pilot, Jeff Kates by Jim Vornholt and his crew.



Below: Here we see Jim's Bell- 412-SP helicopter setting down at St. Mary's Trauma Center in West Palm Beach, Florida. They delivered the rescued pilot there and soon after he was released in fine condition!



(2004) I was living in North Palm Beach, Florida. Jack invited the wife and me to drive over for a visit, so we loaded up our two little Maltese doggies and headed for the west coast of Florida. After catching up on the last few years Jack said come out to my work shop I have something for you. I walked into the shop and there it was, my Carousel! I was speechless, I had no idea the Carousel still existed. It was battle worn and oil soaked, but it was still my Carousel. It was like meeting up with an old friend after 45 years.

I had never met David Gatewood but he had recently passed away and Jack was helping Mrs. Gatewood find buyers for his modeling collection when he spotted the Carousel. Jack told her he knew the

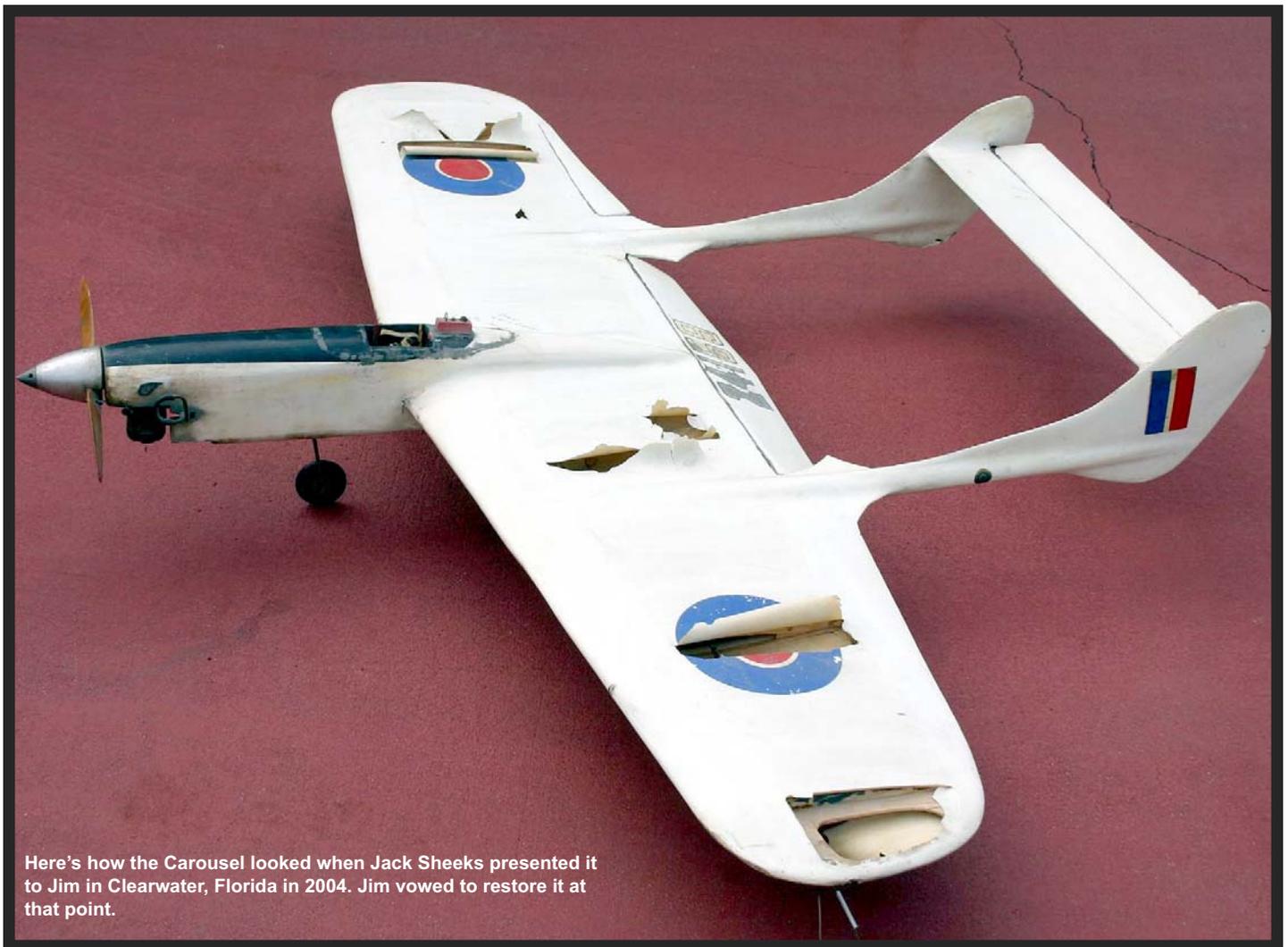
original owner and asked how much would she take for the Carousel. She was a very kind person and told Jack he could have the model if he would make sure I got the Carousel back. I left Clearwater the next day vowing to Jack that I would rebuild the Carousel to be better than new.

Flying Trauma for the Sheriff's Office was a great job but it required 12-hour shifts and what seemed like endless flight training, firearms training, self defense tactics and overtime, leaving very little time for honey-dos and lawn care. So the Carousel hung in the garage for a couple more years. Over a period of eighteen years living in Florida I had learned to deal with Hurricanes. On August 24, 1992, Hurricane Andrew made landfall around 05:00 AM as a Category-4 storm with winds of 175 MPH. Later that evening the crews of the Palm Beach County Sheriff's Office loaded the supplies in to the Trauma Hawk and headed south. The destruction we found was devastating.

From Ft. Lauderdale south to Key Largo was completely dark. Several attempts to land using the night sun search light were made impossible due to debris, wires and trees, leaving us no other choice but to return to base at Palm Beach International.

The Carousel comes home

My lifelong friend Jack Sheeks and his wife Shirley had a winter get away place in Clearwater, Florida, and at the time



Here's how the Carousel looked when Jack Sheeks presented it to Jim in Clearwater, Florida in 2004. Jim vowed to restore it at that point.

My next trip to that area left me in awe of the massive damage. Shopping centers were leveled, housing areas were flattened and it looked like a war zone. The following two weeks (along with taking our usual medical flights) were spent transporting doctors, medical supplies and U.S. Army personnel to the command post.

I was feeling pretty good about surviving numerous hurricanes all those years but then, in 2004 came Hurricane Frances and three weeks later a visit from a lady named Jeanne. Frances decided that my forty-foot palm tree would look much better if it was sitting in the middle of the cul-de-sac instead of my front yard and I really didn't need that \$6,000 swimming pool enclosure.

After all the repairs were complete and everything was back to normal and sitting where it was supposed to be, three weeks to the day later Hurricane Jeanne came along and repeated the same damage to the trees, shrubs and pool enclosure.

The construction business was booming in Florida that year. Then on October 22nd came Wilma; a Category-5 storm that packed 200 MPH winds. I decided it was time to get out of Dodge, so I put in my retirement papers, sold the house, packed up the wife, the dogs and all our worldly possessions and moved back to Indianapolis.

Living in Indianapolis

Now living in Indy, I took a job flying a BK-117 for Omni-Flight Helicopters working out of Methodist Hospital the same hospital where I was born in 1946.

I was talking with an old friend from the FAA who also was an avid RC flier. He gave me the scoop on the AMA property in Muncie and that the Nationals were now held there every year. I began to wonder what rock I had been living under. I was fifty miles away from the site of the AMA Nationals. So in July of 2008 I drove to Muncie on my day off and noticed that things had changed considerably in the last thirty five years. I went home and joined the AMA and PAMPA. I read the magazines and attempted to familiarize myself with control line Stunt of the day.

Now we flash forward to May, 2009 when I received a call from Wynn Paul who asked if I would help him out and judge FAI Stunt in September of that year.

I had not spoken with Wynn Paul since I judged Stunt at the Lake Charles Nationals in 1974. After the shock wore off I said yes, and then the light in my head went on. I called Paul Walker and offered my help in judging Stunt at the Nats, and then I found myself offering to judge Classic and Intermediate Stunt as well. It was a long hot sun burned week but I really enjoyed meeting new control line pilots and seeing some old friends.

I had not seen Bill Werwage since the 1972 Chicago Nationals. I think my biggest surprise was seeing Ron O'Toole, who was one of the St. Louis based pilots who made the Tucker Special famous. The last time I saw Ron I believe was at the 1962 Nationals. The one thing I noticed most about Ron and Billy was how much they had changed over the years while I still looked my same slim, youthful self.

I told Billy and Ron of my plan to rebuild the Carousel but it



The first thing to come off during the rebuilding process was the nose of the Carousel. There was lots of oils soakage apparent.

During the rebuild process a ladder fell on the ship and broke the outboard wing panel!

was going to be heavy and might possibly need to add a Jato assist pod on each boom. Billy said I should finish the Carousel and take it to Tucson, the Brodak Fly-In and Muncie and call it "The Lead Sled Tour." By that point I was slowly getting hooked and finding a new desire to re-build the Carousel.

Upon investigation I was surprised at how oil soaked the old girl was. First off came the nose. Next I cut into the center section to check the security of the bellcrank and its mount which appeared to be in good shape.

The stabilizer was broken away from where it attached to the inboard boom's vertical fin. The elevator flap and wing flap horns were loose and would move when control was applied. "Off with the control surfaces," I said: man I'm really getting in deep now! Oh, I almost forgot the best part of the story. While doing a spring cleaning of the work shop (garage) there was a slight mishap. My eight foot ladder fell on the Carousel removing about six inches of the outboard wing. (Thank God I still had a copy of the plans.) Not to worry; I overcame these setbacks.

Now with the project moving along at a blistering snail's pace, I decided to call my old friend Charles Mackey. I advised Charles of my plan to fly the Carousel at the Nationals in Muncie in 2010, which also would be the fiftieth anniversary of my win at the 1960 Dallas Nationals. Charles reminded me of the many events and ideas that led up to the development of the Carousel, going all the way back to the Gobbleswantz. These included such items as the weighted outboard trim tab.

By rekindling my friendship with Charles I realized that he is still working with children, trying to stir their interest in modeling of all types, just as he did with me 50 years ago. Even



though Charles is strictly an RC pilot these days and no longer flies control line, he still remembers how it all started.

Every year since 1998, Mr. Eric Rule has sponsored the Annual Charles Mackey Open, a contest that honors Charles' contributions to the world of model aviation. The 2010 Charles Mackey Open was held on November 13th & 14th in El Monte, California. (*Editor's Note: Coverage of that event appears elsewhere in this issue of Stunt News.*) During the phone conversation with Charles, I asked if he would come to Muncie and be with me for the anniversary flight. At first he said he couldn't make the long trip. I reminded him that since he had moved to California back in the sixties airlines were now flying into Indianapolis.

Somewhere along this time I received an e-mail from another old friend, Don Ogren, who had just completed a replica of another Charles Mackey National winner, the Gobbleswantz, which was modeled after the 1958 Open Nats Champion model



Above: Here the new nose, fuselage sides, and new stabilizer have been installed.



Left: This photo shows the new nose blocks in place and shaped.

Below: The completed rebuilt airframe was covered with a fresh coat of silkspan a several coats of clear dope.

that was flown by the late Bob Randall.

Then it hit me, if all goes well I will offer the Carousel to the AMA National Model Aviation Museum. After months of request for Charles' presence in Muncie he finally gave in and agreed to attend the big ceremony. Now, after fifty years, Charles and I will stand side by side and do our small part for model aviation by donating the Carousel to the AMA. After all, how many fifty-year-old Nationals winning models in like new condition are they ever offered?

Well, apparently quite a few. You talk about disappointment, I was told in an e-mail that the Museum is offered National winning models all the



Right: Next, Jim applied a coat of black primer and gave the ship a good, detailed sanding.

Below: This was the first photo taken of the Carousel after the final coat of paint and the roundels were applied.





Left: Jim's longtime friend, Bill Werwage, assists with the starting of the engine for the first flight of the rebuilt ship.

Below: The moment of truth! Bill Werwage launches the reborn Carousel at Muncie in 2010.





Jim handed the controls over to the designer of the Carousel, Charles Mackey. Is this neat or what?

time and that the Carousel did not make any significant technological advances in Stunt flying. I guess the 150 free flight ships and stick models that are hanging everywhere inside the museum all made some sort of technological advancements ... yeah right!

At this point Charles and Phyllis are on their way and there will be no Museum ceremony. Attempting to keep my chin up, I trudged onward with my plans to at least make my anniversary flight. Charles and his wife Phyllis arrived in Muncie on Tuesday morning July 13th. Don Ogren was there with his replica of the Charles Mackey twin-boom Gobbleswantz.

My next obstacle was time constraints. I had my house up for sale for quite some time at that point, and finally I had a buyer who wanted to close on June 18, 2010. This meant I had to be out by the 25th. Every piece of modeling equipment I owned was packed in boxes. This left very little time to prepare for my week of judging Stunt and no time to balance and weigh the Carousel.

Due to other commitments Charles and Phyllis could only stay until Wednesday evening of Nats week. I finished my judging duties at the Classic Stunt circle on Tuesday around 4:30 p.m. and was walking to my car when I spotted my old buddy Billy Werwage.

Pounding my chest with pride and a gleam in my eye I said, "Well, the Lead Sled Tour is on, but I only have an hour and a half to get this done because I must attend a pilots meeting at AMA Headquarters at 6:00 p.m."

Showing Billy my pride and joy he said, "How much does it weigh?" Well, Bob Brookins—AMA Life Member and Event Director for Classic, Intermediate and Old Time Stunt—said, "Hey, I have a scale."

Of course I'd have rather not known what it actually weighed, but I was happy that I had my credit card with me because when the scale read "tilt" I began to worry that I might have to replace it. The final verdict was 67 ounces without fuel! What, me worry? No way, I have the original Fox-35 up front, which, if I remember correctly, ran pretty well back in 1960.

Now, at this point Mr. Bill is having a heyday making one joke after another about my pride and joy. At this exact time a B-17 began to circle the AMA property, making several figure eights passes and staying around for about 6 or 7 minutes. Then he turned to the north. I assume he was heading to Oshkosh, Wisconsin for the EAA Fly-In.

As the B-17 flew away the area became quiet. Just then Billy says, "Well we all watched the B-17 fly, so now let's all go to the L-Pad and watch something *really heavy fly*," making reference, of course, to my Carousel.

When we arrived at the L-Pad I was so nervous my hands were shaking like a heroin addict who couldn't get a fix. An attempt to start the old Fox-35 resulted in a backfire and a loose prop and spinner. My hands were shaking so bad that I could not get the spinner back on the engine.

Billy, seeing my frustration, said, "Get out of the way and let me fix this thing for you."

Wow immediately I began to calm down. In just a few minutes he had the Carousel ready to head to the L-Pad and see what fate had in store for me and it.

I guess you would have needed to be there to feel the nostalgia. Here I am at the Nationals (not competing) 50 years later with my old friend Bill Werwage helping me ready the Carousel for flight just as he did at the Nationals in Dallas, Texas, way back in July 1960. Only this time he did not hop on a Greyhound Bus and leave (inside joke; you needed to be there ...).

Here is where I would like to thank Bob McDonald, Mike McHenry, Randy Smith and several others who gave up their spots in line to practice fly so I could make my historic flight. Or maybe they just didn't believe a Fox 35 could pull that much weight off the ground.

Adding to my euphoria, I asked

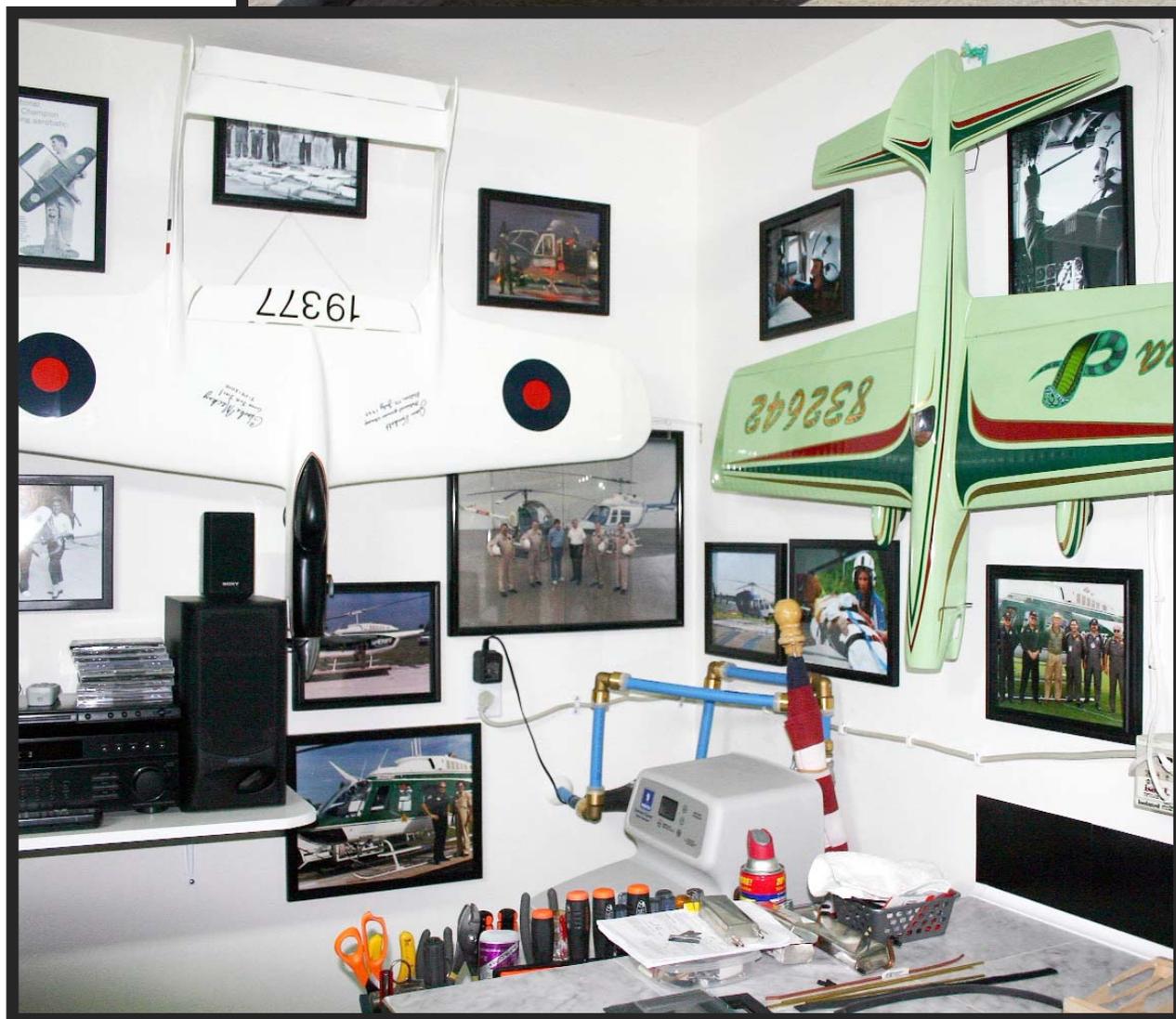
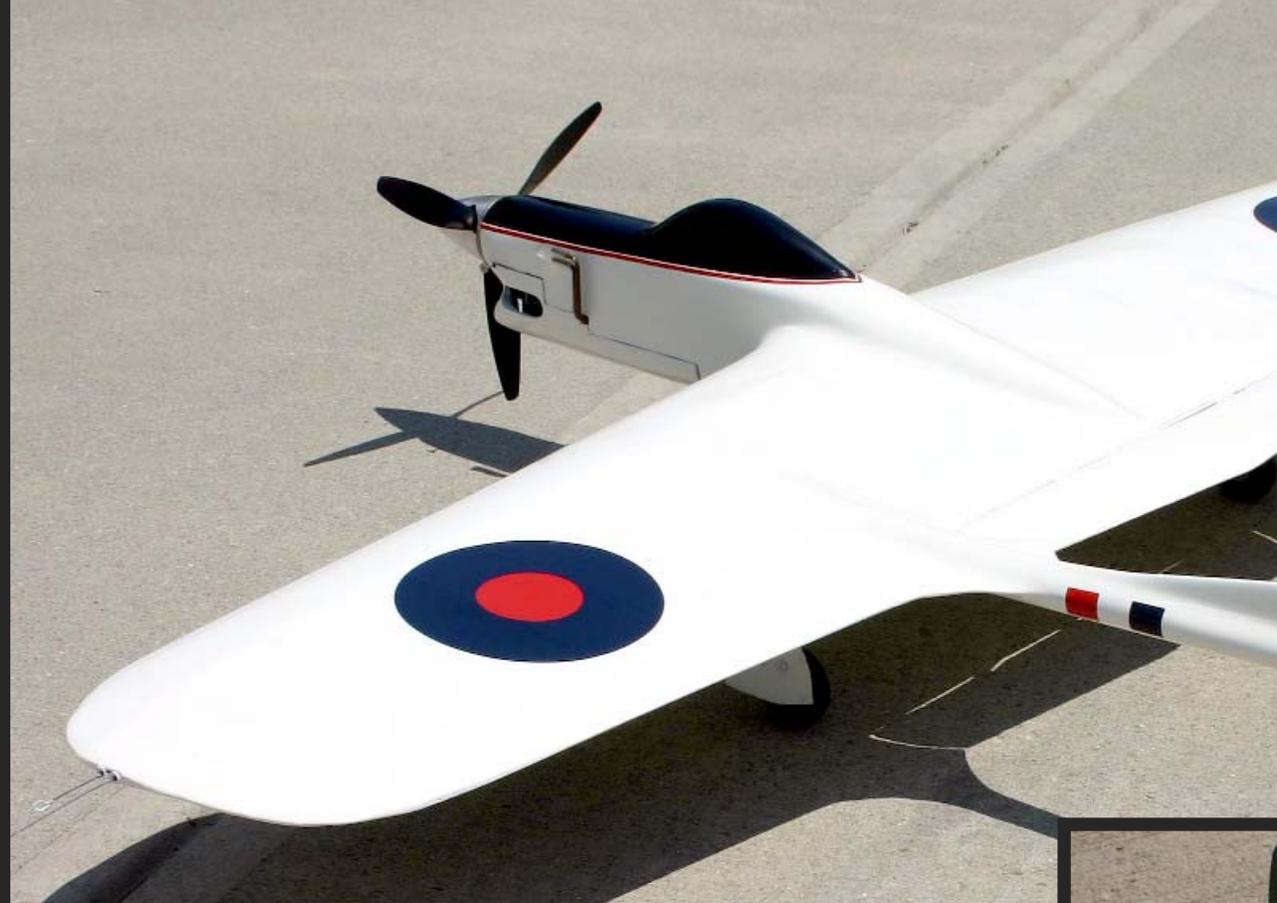


Charles Mackey poses with two of his designs. The ship closest to Charles is the Junkers Gobbleswantz that was built by Don Ogren (see the side bar at the end of this article for details on this plane), and the model in the foreground is the restored Carousel.

Right: The freshly restored Carousel sits on the tarmac at a Nats once again.

Below left: Here's the Carousel in its final resting place in Jim's office/shop, hanging next to his new Cobra.

Below right: As a final touch, both Charles and Jim signed the wing of the Carousel.





Charles, after I got the Carousel in the air, to come out and take over the control handle and fly out the rest of the remaining fuel and make the landing. Unfortunately for Charles, just after the take off the old Fox 35 belched, burped and got very sick. As I stated earlier, the model was never balanced and needed around three ounces of weight in the nose in order to balance properly. So with two strikes against Charles he had to be careful and was only able to make level flight. *But, hey, my dream came true; the Old Girl flew on her fiftieth anniversary!*

After Charles landed the Carousel I told Billy I felt like an expectant father and should be passing out cigars. To sum it all up, I believe a good time was had by all, some old friends were revisited and a little bit of history was made.

In closing I would like to thank Charles Mackey for all he has done for model aviation over the past 60 years and for making the long trip back to Indiana. I would like to thank Jack Sheeks for his thoughtfulness in acquiring the Carousel for me. Thanks also go out to Don Ogren, who assisted me with much needed moral support. And lastly I'd like to thank my old friend Bill Werwage; without his help the flight might not have happened. **SN**



By Don Ogren

The Demise of the first build,
first flight attempt. (Snagged
the stogie trip line.) 2/8/10



“Charles, you won’t believe what I have to tell you, (maybe you will).”



In the 1950s, in Indiana, a few of my modeling associates were Charles Mackey, Charles Linkliter, Bob Randall, and Jim Vornholt. Charles Mackey liked to design his own ships, and while the rest of us were building copies of Rolland McDonald’s Strathmore, Charles was coming up with his own planes. One of them was the Gobbleswanz.

Bob Randall flew that design at the 1958 Nationals and won! He had scored better than he had ever done before, and history was made that year. So, for more than fifty years, I have wanted to build a Gobbleswanz. Last year it happened, and I completed my plane in February, 2010.

Charles and I had communicated a bit, as he supported my endeavor, giving me construction information whenever I inquired.

The plane was finished and ready to fly, and the following is pretty much what the e-mail I sent to Charles conveyed after my test flight day.

Last Monday afternoon (for the record: 2/8/10), the weather was warm and the wind was light, so I took The “Bird” and Rosemary to the soccer field for the maiden flight of the Gobbleswanz. Being a tricycle gear arrangement, I had attached a loop of lead out stock to the front nose gear to attach to my stogie.

Rosemary could release for me, but with the stogie there, I favored the stogie, as Rosemary hasn’t pitted for me in years. What I didn’t realize was that the trip line from the stogie to the pilot in front of the inboard main gear and might cause a big



Bottom left: Jim Vornholt and Don Ogren with the Mackey-designed twin-boom models.

Above: Here's Don with his "successful" version of his Gobbleswantz (#2).

Right: The plane is very close to being a copy of the original, flown by Bob Randall in 1958. Bob's plane had a Fox .35, while this one has a Randy Smith tuned O.S. .40 FP.

Below: Don adjusts the needle valve prior to an official flight at the 2010 Nationals in Classic Stunt.



problem. I saw this before the release, but thought that the wheel would ride over the trip line.

You can guess what happened. The trip line was taut at the instant of release, and so was lifted from the ground. When I released the trip line from the nose gear, the inside (left) main gear hit the stooge line, pivoted the plane 90 degrees, toward me, now approaching takeoff speed.

I moved out of the way trying to figure out what to do, as the plane went toward the other side of the circle. But I held on to the handle (mistake #2) that resulted in breaking both lines somewhere. The plane did a 180, and headed back towards me to the other side of the circle, now doing about 50 mph but not airborne. It proceeded about 75 yards in a straight line toward the picnic pavilion and picnic tables. And that's where it stopped - not quite totaled. If I had had any positive incidence in the gear-wing set-up the plane probably would have gone airborne, but it stayed on the ground, taking a perfect straight line to its demise. End of story.

To have an accident like that left me more than a little dazed. I couldn't believe that I had let something like that happen, as it was entirely preventable. But there was no way the scenario could be played over.

The wing was totally destroyed while the fuselage pod is in pretty good shape. The tail pieces are in good shape as well. I've started building new booms, and start a new wing next week. The landing gear was not damaged. So, all is not lost, and I will rebuild. Experience is indeed the best teacher. Regards, Don.*SN*



The 2010 Charles Mackey Open

By Andy Borgogna



On November 13th and 14th of 2010 the Knights of the Round Circle held their annual Charles Mackey Open contest. The contest honors a man who dedicated himself to our hobby throughout his life. Charles designed many very famous Stunt models and also worked in the hobby industry for many years. Among Charles' notable designs are the Lark, Bluebird, Carousel (Winner of the 1960 Nats in the Junior division) and the Junkers Gobbleschwantz (Winner of the 1958 Nats in the Open division).

This year the club was honored with the attendance of Bob Hunt. Bob flew in from Pennsylvania on Thursday afternoon. He was picked up at the Ontario airport by new Model Aviation Hall of Famer, Larry Renger and club VP Andy Borgogna. From the airport it was a short ride to Warren Walker's magnificent home for dinner and lots of airplane talk.

The "Tucson Crew" showed up again this year lead by Bill Heyworth, Keith Trostle, Bob Whitely, Warren Tiaht and Rickii Pyatt. Every year members of the Cholla Choppers make the trek from Tucson, Arizona to Whittier Narrows, California. This team always takes home their share of awards, and then some! The Mackey and the Palmer contests just would not be the same without the "Tucson Crew." I would also like to thank Jim Rhoades who drove in from Salt Lake City, Utah. In addition, Burt Brokaw and Mark Smith made the trek from the Phoenix area.

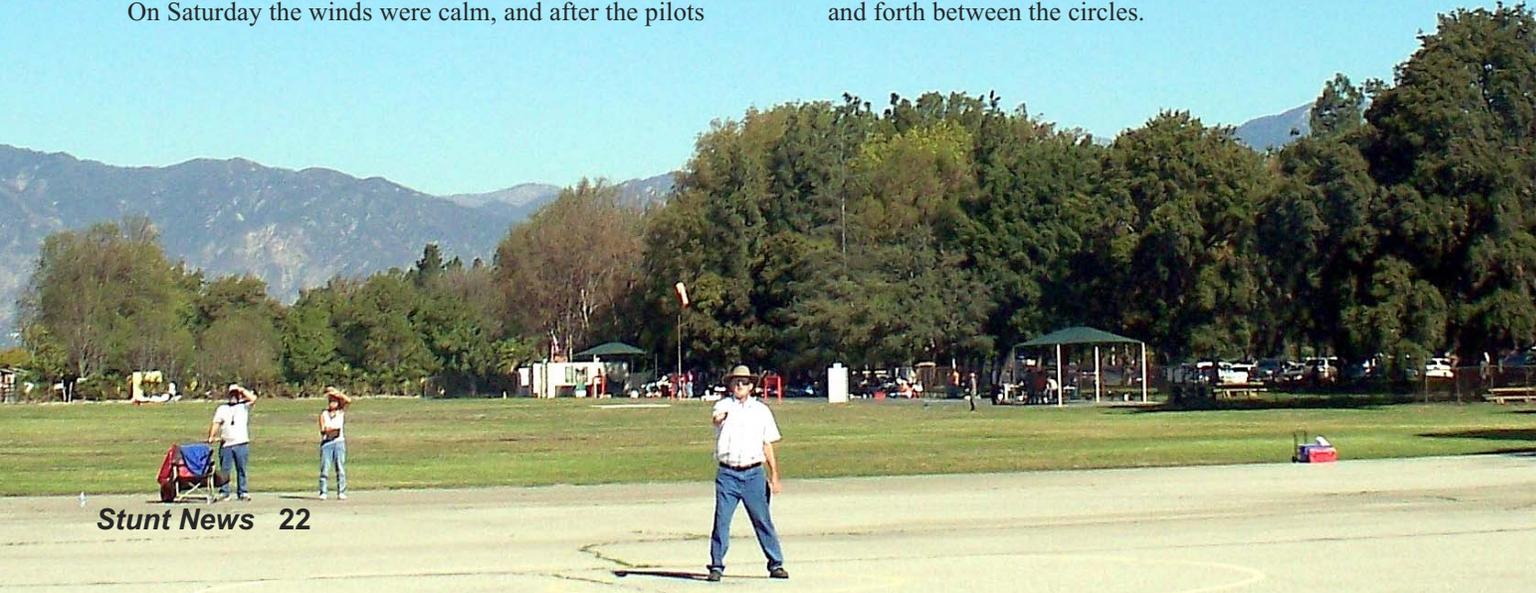
Friday was set aside for practice, but the weather this year was threatening. We had one of our "Santa Ana" wind events. The "Devil Winds" as they are known locally are a strong dry wind that blows in from the desert. The weather man said it would end Friday evening and for a change he was right.

On Saturday the winds were calm, and after the pilots

checked in, their planes were weighed and pull tested. The prerequisite pilot's meeting was held followed shortly with flying.

Rickii Pyatt and I were tasked with judging Classic Stunt. We had a strong line up of contestants. The Classic event was won by Bob Hunt, who flew his Caprice. Bob designed this model in 1967! Second place went to Keith Trostle. Keith flew his veteran, Al Rabe designed, Bearcat. Third place was captured by Bob Whitely. Bob flew his beautiful rendition of Jim Kostecky's Formula S.

Old Time was also flown on Saturday and it was won by Bob Whitely and his Humongous. Second place in OTS went to Burt Brokaw. Burt flew a Jameson Special. In third was Keith Trostle, who flew a Big Job. As you can see, there were a lot of pilots who were flying in multiple events and they were running back and forth between the circles.



Beginner and Profile Sport were also flown on Saturday, with Erik Duggie taking first and Joe Brownlee taking second in Beginner. Profile Sport was won by Fred Staley with Steve Holt taking second and Al Shorey finishing up in third. It won't be long before we see these fliers



Left: Keith Trostle's Bearcat is a veteran of many contests. Here he performs a Triangle with it on his way to taking second place in Classic at the 2010 Charles Mackey Open. Photo by Pete Soule.



Above: Charles and Phyllis Mackey preside over the contest that bears Charles' name. They seemed to be having fun! Photo by Mack Davis.

Above: Randy Cuberly signals the judge to start the clock for his first OTS flight with his Humongous as LeRoy Black holds. Photo by Mack Davis.

Below: The 1cc Kwieee event took an interesting turn... See text for details. Photo by Mack Davis.





competing in the more advanced classes. They continue to improve their pattern skills with each contest.

There was only one crash on Saturday; yep it was me! I lost my new Humongous while doing a very poor Vertical Eight in the Old Time event. It was the last flight of the day and after spending all day in the sun judging I probably should have taken a pass. Oh well ...



The Banquet

With the end of flying on Saturday we moved to a local hotel where the annual Charles Mackey Open banquet was held. This year's banquet had a special event on tap; Bob Hunt presented Larry Renger with his plaque to honor his induction into the Model Aviation Hall of Fame (Some like to call this the "AMA Hall of Fame"). Bob spoke of Larry's many accomplishments over the years and told a humorous story about the Cox Super Stunter event that Larry

Top: Stan Tyler holds his Caprice so that the Classic judges, Andy Borgogna (center) and Rickii Pyatt (at right) can look it over an award appearance points before his flight. Photo by Mack Davis.

Top right: Ray Firkins reprised Dick Mathis' Excelsior and flew it in Classic. Photo by Pete Soule.

Above: Dave Sabon flew this colorful Lew McFarland designed Shark 45 in Classic. Photo by Larry Renger.

Right: Burt Brokaw flew Ed Capitanelli's beautiful Jameson Special to a great second-place finish in OTS. Photo by Pete Soule.



Mackey Open Saturday, November 13, 2010

Thanks to the following workers and volunteers for a well-run event!

Registration: Mike Fox

Weigh In: John Wright

Score Keeping: Randy Haydon , Arianna Ebert

Score Runner: Tom Collier

PA System: Ray Ebert

Pit Boss: Warren Walker

Judges:

OTS: Bill Byles & Dennis Coleman

Classic: Rickii Pyatt & Andy Borgogna

Beginner: John Wright, & Frank Martin

Profile Sportsman: Frank Martin & Stan Tyler

Sunday, November 14, 2010:

Registration: Mike Fox

Weigh In: John Wright

Score Keeping: Sally Yee, Arianna Ebert

Runner: Tom Collier

PA System: Ray Ebert

Pit Bosses: Ray Ebert

Appearance Judging: Joel Chesler

Judges:

Intermediate & Profile Competitor:
Dennis Coleman & Antone Kephart

Advanced & 1 c.c.: Joel Chesler & Bill Byles

Expert: Rickii Pyatt & Larry Renger



Larry Renger poses proudly - along with his charming wife, Jeannette - with his Model Aviation Hall of Fame plaque. This was a popular, long overdue and well-deserved honor for Larry. Photo by Mack Davis.



Eric Rule presents Randy Heydon with the prestigious Doug Barton Award in recognition of his tireless work on behalf of the Knights of the Round Circle club and CL in general. Photo by Mack Davis.



Warren Walker starts the engine in his Classic Neptune while Bob Hunt holds. Warren and Antone Kephart had a personal (but good natured) battle going in this event. Photo by Mack Davis.



Tom Collier ran the scores all weekend. He is one half of the "Collier Stunt Team" that flew amazing duel-stunt routines in the mid 1960s. Photo by Mack Davis.



Here's the Jamison Special that Larry Renger flew in the OTS event. Photo by Larry Renger.



Above: Fred Staley gets ready to fly his Brodak P-40 in the Profile Sportsman event. No, that's not his real hair!

Right: Warren Tiaht holds for Bob Whitely as he preps his awesome, Jim Kostecky-designed Formula S for Classic competition. Photo by Mack Davis.

initiated at the 1974 Nats in Lake Charles, Louisiana.

A paper was placed at every banquet table that listed the many things Larry has accomplished in the hobby that earned him the "Hall of Fame" award. If ever a person deserved this recognition it is Larry Renger. Eric Rule then asked a few of us to speak to Larry's achievement. I presented Larry with the first—and most likely last—"2010 Friend of the Year Award." It honored Larry's achievement of downing three of my airplanes over the past year. Needless to say it was done with tongue firmly planted in cheek. Larry promised a place of honor for the award.

Other speakers included Warren Walker, who spearheaded the nomination

with the AMA. Charles Mackey who worked with Larry at Cox Manufacturing talked about how they worked together to get projects out the door there.

The legendary Dale Kim was also in attendance and he also worked with Charles at Cox MFG. Steve Holt worked with Larry shortly after his graduation from MIT and had some great things to say about the new Hall of Fame inductee.

Yes, Larry really was an MIT rocket scientist who decided that model airplanes were far more fun than rockets!

Each year someone in California is nominated and chosen to receive the Douglas Barton Award. This award honors those people who work to make our clubs and contests work smoothly and insure the fliers have fun.

In even-numbered years the Barton Award is presented to someone in Southern California. In odd numbered years it is awarded to someone in Northern California. Nominations are accepted from any PAMPA member residing in California

The 2010 Douglas Barton Award was presented to Randall (Randy) Heydon in recognition of his many years of service to CL modelers. In the last 20 years Randy has been a club President, VP and Treasurer. He has run registration and score keeping at every contest. He creates the large score sheets, is responsible for printing the judge's score cards, mails out the contest notices, receives and records the pre registered entries.

Without his efforts the Knights of the Round Circle could not run three major contests each year. In fact it is doubtful that the club could





LeRoy Black built this TA-152 from Keith Trostle plans. With this design Keith won the 1970 Nats in Open Stunt. LeRoy competed in the Classic Stunt event with this ship. Photo by Pete Soule.



Above: Sally Yee holds for Jim Lally as he prepares to fly his John Simpson-designed Cavalier in the Classic Stunt event.



Right: Tom Lay showed up with this adorable 1/2A rendition of Walt Williamson's Which-A-Way. It was unflown at the time of the photo. No one has more fun than Tom Lay! Photo by Mack Davis.



Warren Tiaht built this fine example of Gene Schaffer's Blackbird for Classic competition. Gene flew this design at the 1969 Nats in Willow Grove.

**Charles Mackey contest
Saturday Events**

Old Time	Round 1	Round 2	
Lee Roy Black	388	401.5	
Steve Holt	207	338.5	
John Wright	390.5	412	
Nick Lemak	356.5	Pass	
Andy Borgogna	360.5	264	
Randall Cuiberly	336.5	372	
Larry Renger	381.5	Pass	
Bob Whitely	474.5	459	First
Burt Brokaw	451.5	397.5	Second
Keith Trostle	412	437	
Stan Tyler	448.5	420.5	Third
Jim Rhoades	399.5	399.5	
Classic			
John Gudvangen	437.5	422	
Anton Kephart	541.5	529.5	
Bob Whitely	463	574	Third
Fred Staley	439.5	454	
Stan Tyler	552	541.5	
Dave Sabon	562	545.5	
Burt Brokaw	502.5	515	
Ray Firkins	562	560	
Nick Lemak	490	Pass	
Warren Walker	506	513	
Keith Trostle	574	565	Second
Lee Roy Black	538	535.5	
Bob Hunt	588	565	First
Warren Tiahrt	542	533	
Beginner			
Erik Duggie	229	262	First
Joe Brownlee	204	222	Second

function without Randy Heydon's efforts. He has now joined a very distinguished list of Barton Award recipients.

After a good night's sleep it was back to the flying field and more competition. On Sunday we flew four Stunt events: Expert, Advanced, Intermediate, and Profile Competitor. We also flew a fun event called 1cc.

The competition was hot in Expert with a group of great fliers. Bob Hunt took first, Keith Trostle took second and Bob Whitely took third, all flying their Classic ships!

Advanced saw local flier Marshall Palmer taking first flying

his original design Sirocco. Burt Brokaw placed second. Mark (The Fuel Man) Smith took third place. It is worth noting that Mark (You know, The *Fuel Man* ...) was flying an *electric powered* Chizler; and it flew very well. Intermediate was won by John Gudvangen with Fred Staley taking second and Al Shorey taking third. Finally Profile Competitor was won by John Wright, second going to young and talented Parish Jacoby, with Burt Brokaw taking third.

The 1cc event only had two participants, with Warren Walker taking first, and me taking second. When all the events had been

**Charles Mackey contest
Sunday Events**

Expert	Round 1	Round 2	Standings
Antone Kephart	486.5	355	
Stan Tyler	503	507	
Warren Walker	480.5	490	
John Wright	540	549	
Kirk Mullinaix	510.5	535.5	
Bob Hunt	552.5	562	First
Jim Rhodes	510	519.5	
Bob Whittlely	555.5	551	Third
Warren Tiaht	484.5	490.5	
Keith Trostle	522.5	557.5	Second
Randy Cuberly	459.5	483	
Advanced			
Jed Kusik	388.5	301.5	
Derek Moran	441	424	
Marshall Palmer	469.5	460	First
Kestas Duarvydis	428.5	446.5	
Parish Jacoby	416	409.5	
Jim Lally	439	444.5	
Mark Smith	403.5	463	Third
Burt Brokaw	468	457	Second
Inermediate			
Andy Borgogna	327.5	Pass	
Fred Staley	412.5	412	Second
John Gudvangen	427.5	Pass	First
Steve Holt	344.5	306.5	
Al Shorey	362.5	372.5	Third
Profile Comp.			
John Wright	469.5	469.5	First
Warren Walker	439	Pass	
Jed Kusik	161	338.5	
Parish Jacoby	467.5	437	Second
Burt Brokaw	440.5	437	Third

flown, the wind was starting to pick up. Larry Renger invited Bill Byles, Bob Hunt, Bob Whitley and Keith Trostle to take turns in a fly-off for third place in 1cc. This turned into an event unto itself with three of the four competitors being former National CL Stunt Champions. They had to fight the wind with a 1/2A plane that was powered by an engine that didn't always perform well. Also, unbeknownst to them, or to Larry, the ship had developed a split in the fuselage that made it do, well, weird things on outside maneuvers. They all fought through the problems to put in great flights.

Bob Hunt's flight was a sight to see. The engine was set too rich and it sagged. Bob whipped the plane up to speed, then flew a maneuver. He did this over and over until the entire pattern was completed. Needless to say Bob was tired after all the running. This flight should be on YouTube!

With the Charles Mackey Open under our belt the 2010 contest season is over for the Knights of the Round Circle. It's been a good year for our club; our three major contests, the Palmer, the Joust, and the Mackey were all well attended and most importantly we had fun. *SN*



Above: Contest Director, Eric Rule presents a trophy to Burt Brokaw. Eric and his crew did a great job in running this meet. Photo by Mack Davis.

Left: Here's one of our intrepid photographers, Mack Davis, about to launch Mark (You know, the Excalibur Fuel man...) Smith's electric-powered Classic Stunt Chizzler. Photo by Rickii Pyatt.

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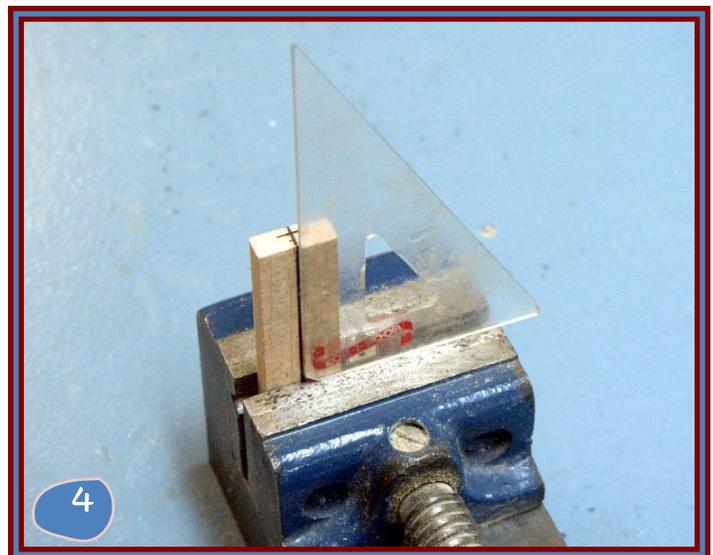
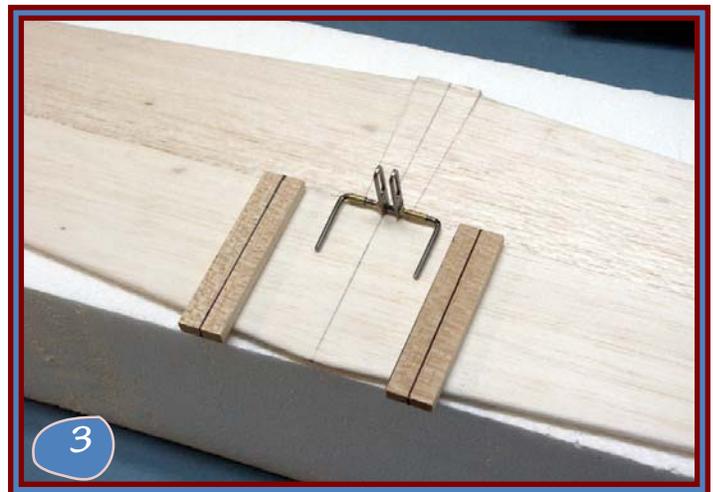
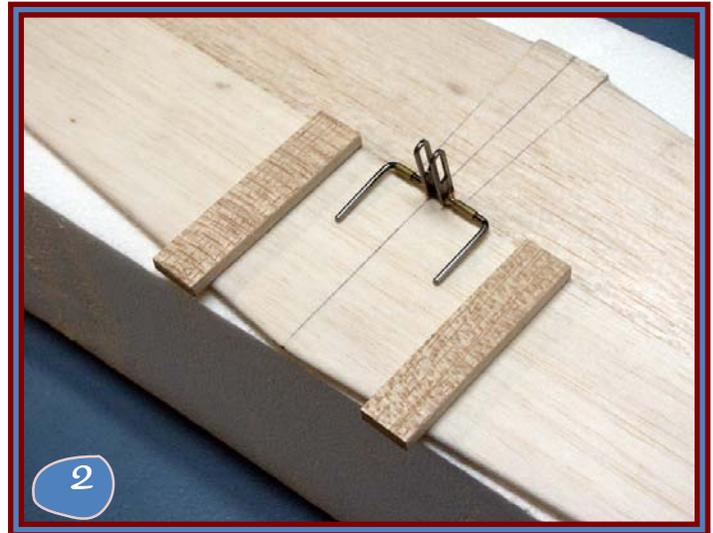
By Bob Hunt

One of the most frustrating jobs in modeling can be the installation of control horns in the flaps and elevators of a new Stunt model. Insuring that they are centered properly and are installed without any tendency to bind is imperative if the control system is going to respond properly to control inputs and last for a long time.

I have developed a method that makes this easy and repeatable, and I'd like to share it with you. I'll try to keep the words to a minimum (Yes, I can hear all of you who know me well laughing at this point ...) and rely on what I hope are clear, self-explanatory photos.

For this How-To I'm going to show the installation of a Tom Morris adjustable control horn in a Caprice stab and elevator assembly. This particular design calls for a sheet balsa stab and elevator assembly. I like to cut out the stabilizer and the elevators and then tack glue them together for shaping. I actually make the elevators out of one piece of balsa and separate them after the tail has been carved and sanded to shape.

The first photo (Photo 1) shows the stabilizer and elevator assembly tack glued together, fully shaped and ready for control horn installation. Note that the assembly is positioned upside down on the building board.



Cut two "Horn Drive" blanks from extremely hard $\frac{1}{4}$ -inch thick balsa (Photo 2). These pieces should be approximately $\frac{1}{8}$ -inch longer than the root face of the elevators and they should be 1-inch tall. If you cannot find any rock-hard balsa (15 to 20 Lb./Cu. Ft. stock) you can substitute $\frac{1}{4}$ -inch thick Basswood for these pieces.

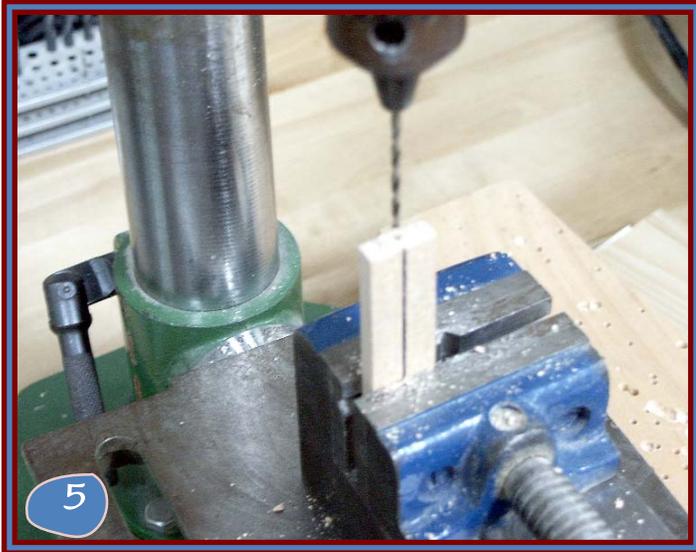
Once you have the Horn Drive blanks cut to the proper size, carefully scribe a centerline around the perimeter as shown in Photo 3.

Note that this centerline should be scribed on both long faces of the Horn Drive blanks and also on the front and back faces of the blanks.

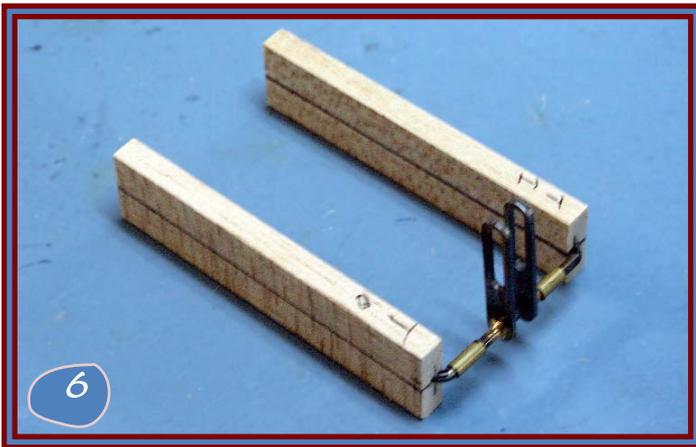
Put one of the Horn Drive blanks in a drill press vise and square the centerline on the blank to the top of the vise as shown in Photo 4.

Note that I have also made a pen mark on the end of the Horn Blank piece to indicate where I will drill into it. This mark should be $\frac{1}{8}$ -inch from the edge of the Horn Blank. Next, use a center punch or awl to make an indentation where the drill bit will enter the Horn Blank.

Using a drill bit that is the same diameter as the horn wire ($\frac{3}{32}$ in this case), drill down into the Horn Blank. Make this hole just a bit deeper than the length of the horn wires drive ends (Photo 5.)



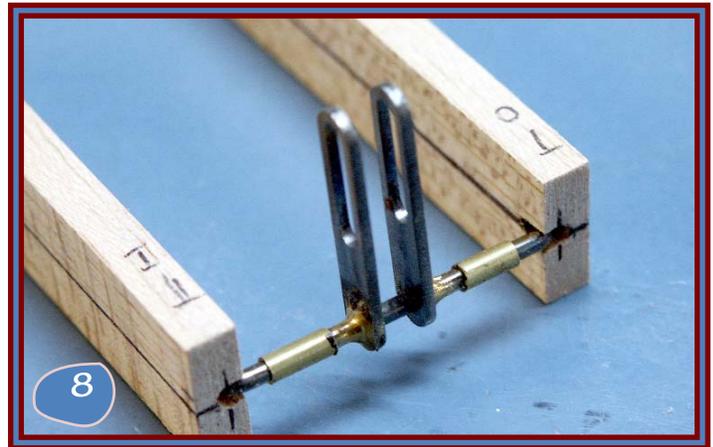
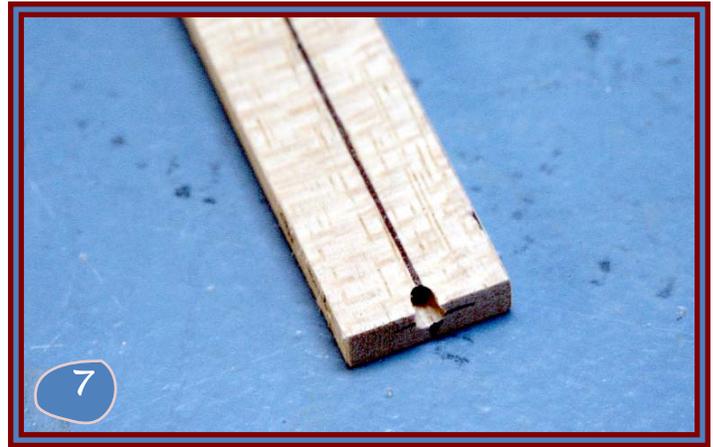
Once the hole has been drilled, repeat the squaring, drilling and inletting process on the other Horn Blank. Install the horn into the Horn Drive blanks as shown in Photo 6.



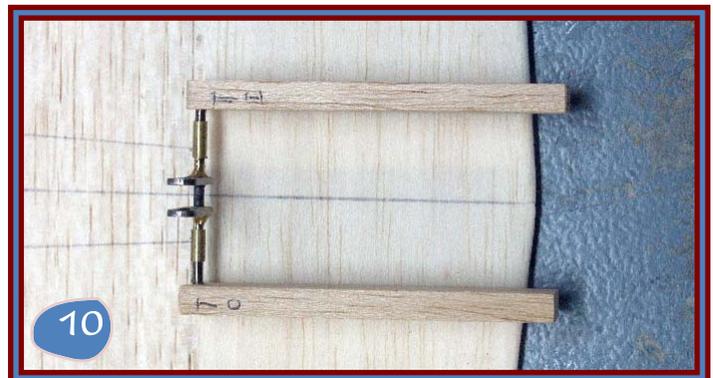
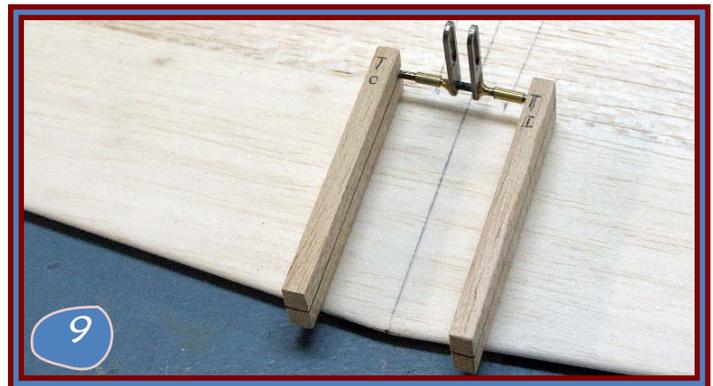
Check to ensure that the bottoms of both Horn Drive blanks sit squarely on the bench. If they don't, remove the blanks and bend the horn wires accordingly. Work carefully here and make as many adjustments as are necessary to ensure that both Horn Drive blanks are absolutely in line with each other and sit on the bench perfectly. Also measure across the assembly from the outer edge of one of the blanks to the outer edge of the opposite one. Do this at both the front and back of the assembly to ensure that it is square in all axis.

Once you are satisfied that the assembly is perfectly aligned in every respect, make a mark on the inside edge of each of the blanks to indicate which is the left one and which is the right one.

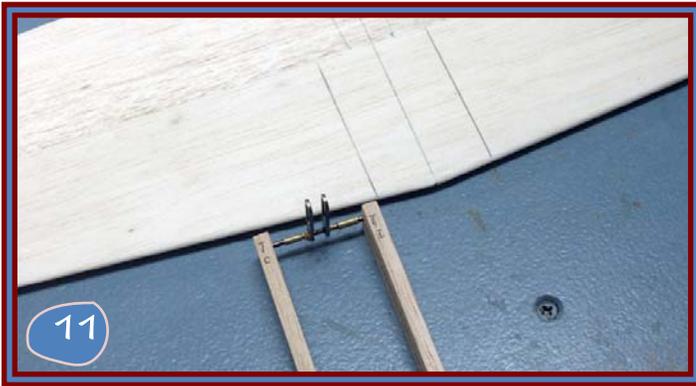
Remove the horn from the blanks and use a $\frac{1}{8}$ -inch diameter burr to inlet the front of the blanks to allow the horn wire to be flush with the front edge of the blanks when it is installed. See photos 7 and 8.



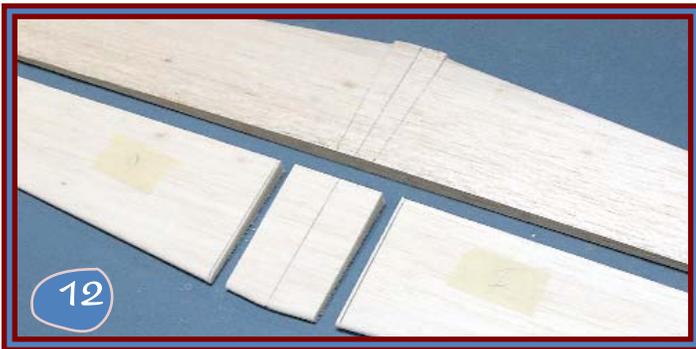
Set this assembly onto the bottom face of the elevators and align it perfectly so that the horn is positioned over the centerline of the stabilizer and elevator assembly as shown in Photos 9 and 10.



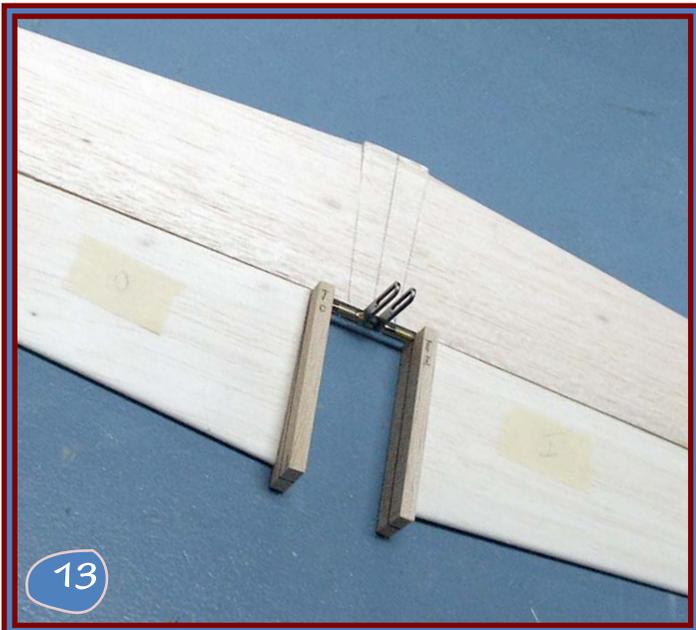
Once you have the assembly positioned perfectly, scribe pen lines along the outer edges of the Horn Blank onto the elevators and then lift the Horn Blank assembly off of the elevators as shown in Photo 11.



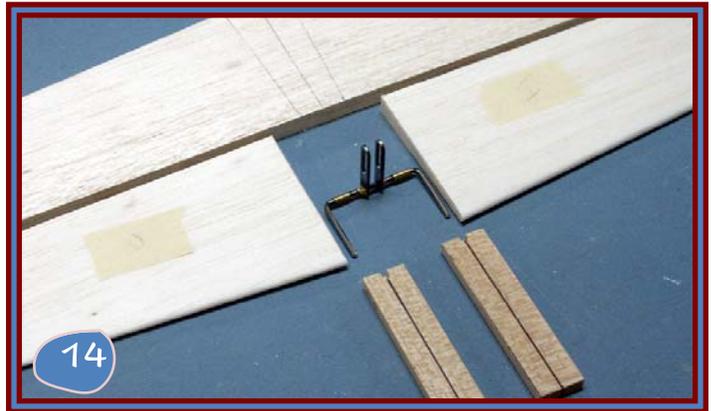
Next, separate the stabilizer from the elevator piece and saw the elevator halves apart just to the inside of the pen lines you made. See Photo 12. I use a Zona saw to perform this operation. Leaving them a bit oversize allows for precise fitting.



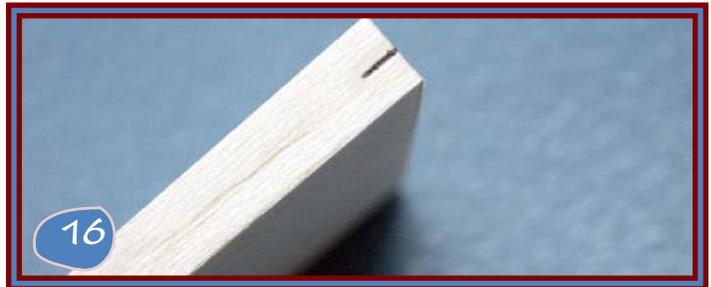
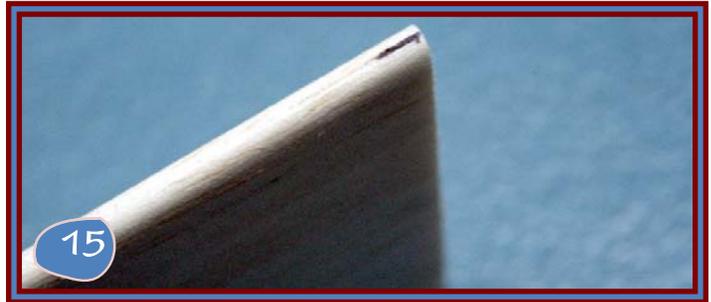
You will have to sand the root face of each elevator half to allow the horn assembly to fit perfectly flush with the elevators when the tips of the elevators are matching the tips of the stabilizer. Sand very carefully here and you will be rewarded with a set of elevators that perfectly match the stabilizer. See Photo 13.



When you are satisfied with the fit of the assembly between the elevators, remove the Horn Drive blanks from the horn drive wires. Again, be certain that you have them labeled properly for orientation. See Photo 14.



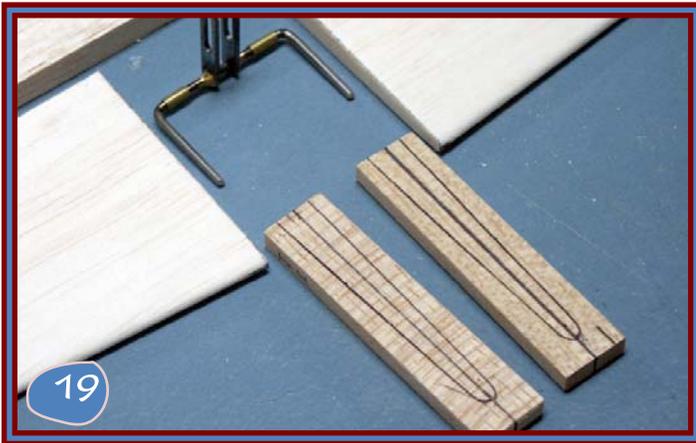
Carefully scribe a centerline on the front and rear face of each of the elevators. These lines should be exactly centered between the top and bottom of each elevator half. This is where the accuracy comes from in this system, so work carefully here! See Photos 15 and 16.



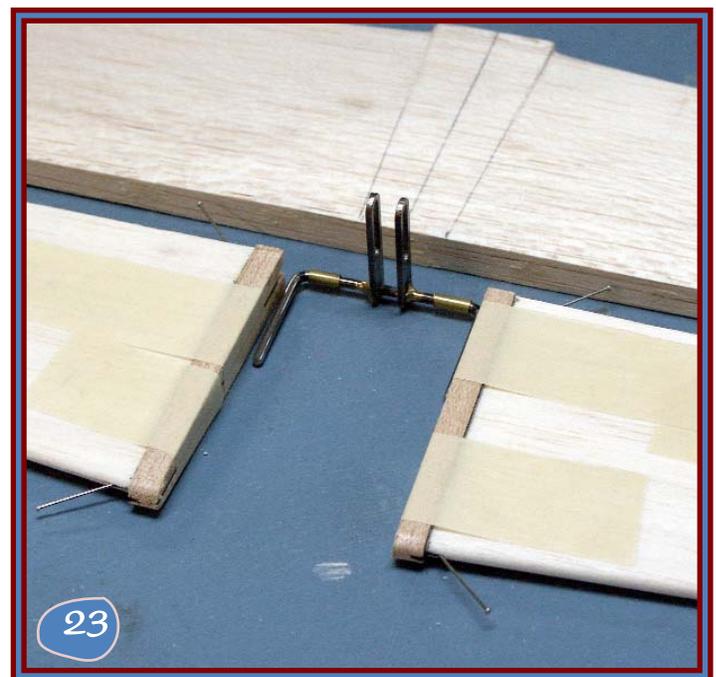
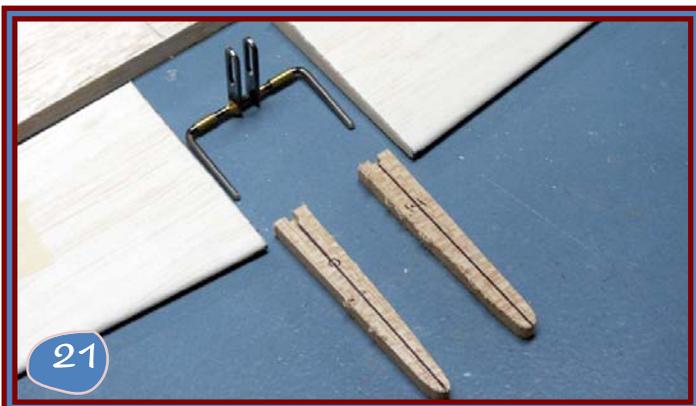
Next, position the elevator root face onto its corresponding Horn Blank piece and make sure the centerlines are lined up perfectly. Then scribe a pen line around the elevator and onto the Horn Blank as shown in Photos 17, 18, and 19.



Using Titebond Aliphatic resin, or an equivalent wood glue, apply a bead of glue to the face of one of the Horn Drive pieces and then position it in place and align it very carefully to the centerlines. Tape this piece in place and recheck the alignment. See Photos 22 and 23. Repeat the gluing process for the other Horn Drive piece and allow these pieces to dry thoroughly.



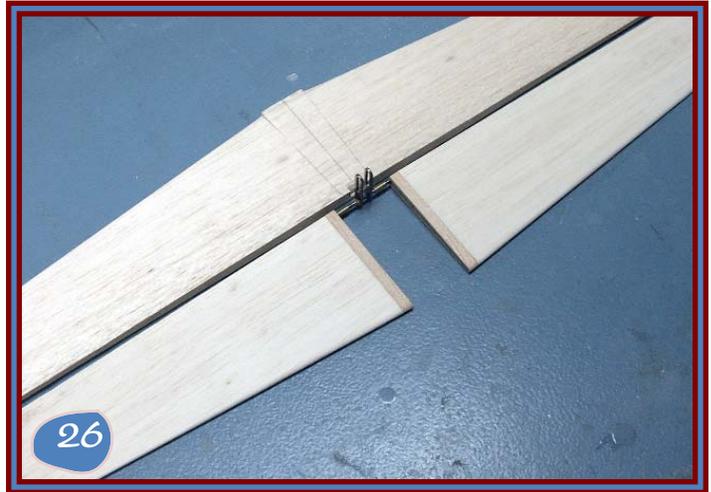
Use a scroll saw to cut out the Horn Drives, being careful to saw just outside the pen marks that you made on the faces of the Horn Drive blanks. See Photos 20 and 21.



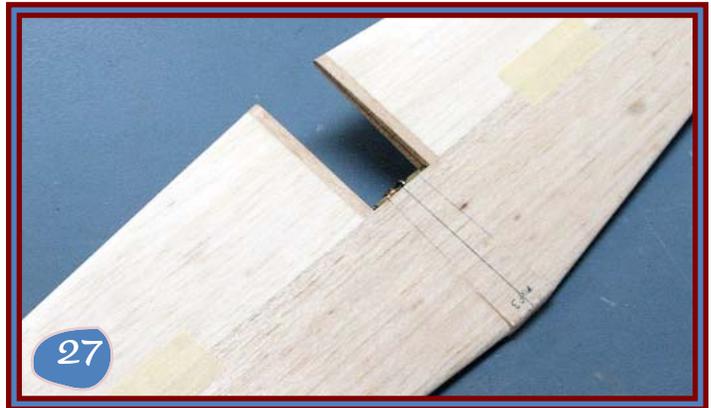
When the horn drive pieces have dried, block sand them to match the surface of the elevators on top and bottom. See Photo 24.



If you have performed all the steps properly, this is what your stabilizer and elevator assembly will look like. See Photos 26 and 27. It is now ready for hinging!



The rear face of the stabilizer will have to be inlet to clear the horn's vertical arms. See Photo 25.



Note that the hard balsa or Basswood Horn Drives allow you to tweak the horns during the trimming process without the fear of the horn wire breaking through the surface of the elevators or the flaps. To make this bending process even easier and less stressful I like to make Basswood pieces that fit perfectly around the individual horn drives and act like small clamps. This further insures that the horn wire will not break out of the horn drives while bending the horn wires. *SN*

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PAMPA Hall of Fame

by Wynn Paul



Johnny Clemens flew this plane in the 1947 Nationals. Johnny and Jim Walker wrote the rules for Stunt for the 1946 Nationals. Johnny later was elected as President of the AMA.

The following persons were voted into the PAMPA Control Line Precision Aerobatics Hall of Fame for 2010: John E. “Johnny” Clemens, Don Ferguson, John Lenderman, and Bill Zimmer. A more complete biography for each inductee can be found in the September/October 2010 issue of *Stunt News*.

John Clemens had a modeling career spanning from 1922 to 1991, and was a Hobby Shop operator in Dallas, Texas for 50 years (originally from Indiana, however), was AMA President (1971-1978), held every elected and appointed position within the AMA, served as Vice-President of the FAI committee for International Aeromodeling (the CIAM), served as head of the AMA’s annual delegation to FAI meetings, handled public relations for the Nats for over 30 years and traveled for Comet Models in the 1930s.

From the Precision Aerobatics perspective, John and Jim Walker drafted the first set of rules for the inclusion of “Control Line Stunt” in the Nationals for the first time in 1946. From a 1976 Nats interview by Wynn Paul. John stated that Jim Walker and he met in a hotel room in California in early 1946 to draw up a set of rules because at the time each portion of the country seemed to have a different set of guidelines. He placed third in Open in Control Line Stunt at the 1947 Nationals behind notables Robert Tucker and J. C. Yates. He placed 9th in Open Stunt at the 1948 Nationals.

John is credited by AMA as creating the Control Line Air Show Team. In 1974, *Stunt News* Editor, Wynn Paul asked AMA President John Clemens to visit the very first banquet of the fledging Precision Aerobatics Model Pilots Association in hot and humid Lake Charles, Louisiana. Never at a loss for words, Johnny delivered an inspiring talk at that banquet, handed out the awards and stayed for the entire evening. In the following years,

he championed the status of Special Interest Groups such as PAMPA.

John Clemens was elected to the Model Aviation Hall of Fame

in 1979, and to the National Free Flight Society Hall of Fame in 1989. At the time of his death in June, 1991, Johnny Clemens was still involved in modeling.

Don Ferguson won the Senior Division in the 1950 Nationals flying a Barnstormer, the design of his mentor Lou Andrews. Don's first Nationals experience was in 1949 when he finished 4th in the Junior Division. In 1951 Don returned to the Nationals and won the Senior Division again, still flying a Barnstormer, and this time he won the Walker Trophy, beating Lou Andrews, the Open winner. Don attended the Nationals in 1953 (4th in Senior) and in 1954 (4th in Open). While his career was relatively short, his significant accomplishment was winning the Walker Trophy in 1951. Don lives in California.

John Lenderman has been a Control Line and Free Flight flier and competitor



Above: Don Ferguson (R) with his mentor Lou Andrews at the 1951 Nats where Don won the Senior Division and the Walker Trophy.

Right: John Lenderman (R) with his Stuka at the 1952 Nats. That's Ralph Yount on the left who finished second to John in the Open Stunt Division.





Here's Bill Zimmer with his All American Senior at the 1983 Nationals in Chicopee, Massachusetts.

since the late 1940s. After World War II service, moved from Philadelphia to California and became active in the Western Associated Modelers. His first entry in the AMA National Championships in 1952 was quite successful, as he won the Open Division Stunt event, beating Bob Palmer and Ralph Yount in the process. He was flying a Don Still Stuka. In the 1955 Nationals John placed 4th. John was the 1956 Point Champion in Control Line for the WAM. He finished 3rd in the 1959 Nationals in Open Stunt. In 1963 he was the Grand National Champion and the Open Class National Champion at the Nationals, placing in nine events in Control Line and Free Flight. He represented the United States in the 1966 and 1968 World Free Flight Championships in the Wakefield event. John is currently living in Chatskanie, Oregon.

Bill Zimmer worked as a recorder for Art Adamisin at the 1979 Nationals and then served as a Judge from 1980 to 1992. He initiated the practice of a Judges' meeting on Monday evening to review the rules.

Stunt News 40

"Zim" judged at four FAI Team Trials and was the Chair of the FAI Team Selection Committee from 1986 to 1990. After the 1985 Team Trials, he brought about a change in the format to cut the field to 10 finalists on the finals day. He was a member of the committee that instituted the "Beginners' Pattern" for Stunt. Zim and Ed Robbert drafted the final version of the first "PAMPA CD and Contest Guide." He proposed the scoring of 1 through 10 with the "K" factor multiplier in the Old Time Stunt event, which was adopted.

Bill learned to fly with a Firebaby in the 1950s and flew in several Old Time events at the Nationals. He was a PAMPA Midwest Representative in the 1980s, was an AMA Associate Vice President for Region 6 for 18 years and a Contest Director for 21 years.

Bill used a unique clipboard at contests as on the back was a listing of every contest judged from 1977 to 2001—a total of 167 outings in sun, wind, rain, and even snow! Bill and Doris live in Varna, Illinois. *SN*

By Rudy Taube
imacone@aol.com

Power system selection “Rule of Thumb ...”



By far the most common question I receive is: “What size motor, ESC, and battery do I need to convert my wet-powered CLPA plane over to electric power?”

The second most common question is: “How hot can my system get, and how do I keep it cool?” I will try to address both of these questions in this column.



Above: Kenny Stevens' very colorful new SVE-22 electric model rests on the Byron Barker paint stand with many coats of clear to yet to be applied.



Left: Notice the cooling exit hole at the top of the white checks. This location is just above the battery and on both sides of the fuselage to draw air across the battery. The other rectangular opening is for the Max Products safety key.

Power system selection rules of thumb

These simple “Rules of Thumb” should give newcomers to E-CLPA the information they need to select the equipment needed to have a successful, competitive electric powered CLPA plane. These simple guidelines are all you need to know and should be very



Below left: This is an air injection hole to channel air directly into the Plettenburg 25-14 front cooling ports.

helpful for all those that just want to “go fly E-Stunt” and are not interested in all the science and fancy math that is behind everything.

Make your life easy: *When selecting your system components for E-CLPA you can use the mfg. recommendations for Electric RC 3D aircraft.* Almost all the mfg. (Hobby Lobby, AXI, Hacker, E-flite, etc.) web sites give us the 3D aircraft weight/power recommendations. We can use this ERC-3D recommendation for our E-CLPA planes. The power they use is a very close match to our E-CLPA mission. The following rules of thumb are based on *hundreds of thousands* of electric powered flights. They are very reliable numbers. They have been tweaked a little to fit our E-CLPA mission as closely as possible.

One of the most important numbers we can use in E-CLPA: Max watts available that the system can deliver at any moment! This is the plane’s “power loading.” *This means you need a system*



Left: The SVE-22 has a top load battery hatch with an air exit hole at the rear of the hatch.

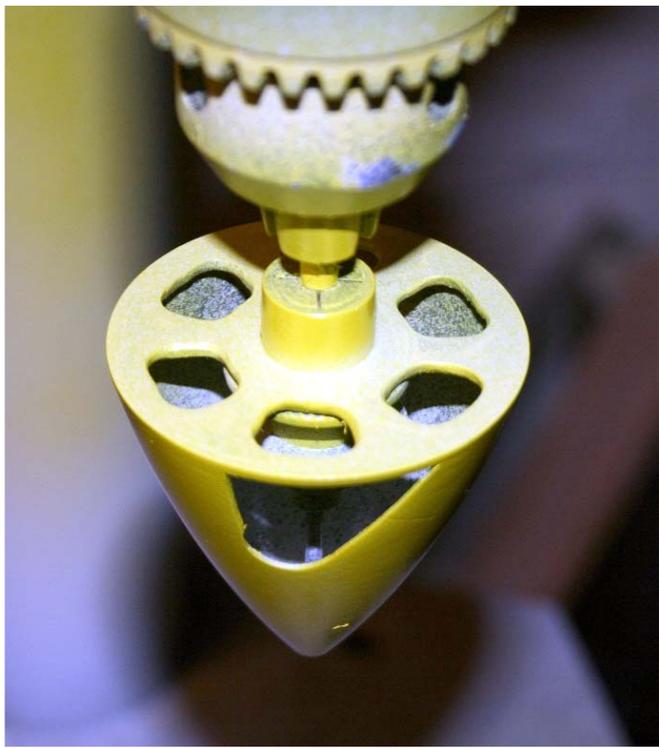
Below: Notice the vent holes in the battery floor so that air can exit past the ESC and the battery.

Below left: The spinner for the SVE-22 is a collet type, cut for both tractor and pusher props. Note the cooling holes cut in the back plate. The Plettenburg motor also has the optional rear mounted fan on the shaft.



for competitive CLPA that can deliver between 175 to 200 watts per pound of A/C (10.9 to 12.5 watts/oz.).

This number makes it very easy to select a system using just the published information from the mfg./distributors' web sites. Most of these sites give you the MAX amps the motor



can safely use. This is usually given as two numbers: Normal steady amps, and MAX momentary amps (usually <15 sec at a time). In computing our system we can use this momentary Max number because in E-CLPA we only need our *high* watts number

for very short bursts. For most of the motors we use in E-CLPA these numbers are in the 40 amp to 55 amp range.

The other published number is the recommended voltage range for the motor. In our case it is mostly 14.8V (a 4S battery). This gives us: 14.8 Volts x 55 Amps = 814 Watts. A 65 oz plane = 4 lb. 814 Watts / 4 lb. = 203 Watts / Pound (right where we want it for great performance).

I (and others, Dean Pappas, etc.) came up with this rule of thumb years ago to make it very easy for new E-CLPA fliers to select their components. This watts/pound number is already corrected for the fact that your system will have lower power available toward the end of the E-CLPA flight (reduced V, and amps, etc.), which is why we need to start out so high.

The other important *easy rule of thumb* is for battery mAh size. Which is approximately: *if you are using a 4S battery, then you need 60 mAh of battery capacity for each ounce of plane weight.* In our example: 55 oz plane x 60 mAh/oz = 3300 mAh size battery ... 70 oz plane x 60 mAh/oz = 4200 mAh size battery. If you are using a 5-S battery then you should plan on 48 mAh/oz when sizing the battery.

Since we are constrained in our battery size selection by what is available we sometimes have to compromise a little on the above battery rule of thumb.

Of course CLPA planes and pilots' styles vary and after you become an E-CLPA expert and begin work on your perfect "second" E plane and system then you may want to make minor adjustments to these numbers. But if you use them as you will



Above: Frank Imbriaco modified the Bob Hunt-designed RD-1 for electric power and installed a rear-mounted Horizon Hobbies' E-Flight Power 10 motor. Frank uses a Hyperion 2500 mAh 4S battery, a Phoenix Ice Lite 50 ESC, and the Will Hubin FM-9 Timer.

Right: Ron Heckler poses with his original Apache electric-powered profile design. It is scheduled to soon appear in *Model Aviation* as a construction feature.



have an excellent power system that will successfully and quickly get you into E-CLPA. Again, all the above rules of thumb are based on hundreds of thousands of electric flights and they have proven to be solid numbers at the highest levels of competition. They will certainly get a newcomer to E-CLPA in the ballpark, the correct row and even into seating very near the winner's circle.

That's all you really need to know to select a successful E-CLPA system. For more technical information the following may interest you.

More details for those who really like numbers

Dean Pappas is an engineer and one of the pioneers of E-CLPA systems. Dean is also the moderator of the very useful Electric section on Robert's excellent CL forum: "Stunt Hangar."

Dean's informative article that follows helps show those interested in the "back-story" how to get to these numbers. Dean gives us a lot of interesting and helpful E-CLPA data, and walks us through an example of a common size CLPA aircraft. Dean also touches on the motor KV and prop selection.

Take it away Dean:

"Okay, for starters, a Stunter consumes between 0.6 and 0.7 Watt-hours of energy per ounce of ready-to-fly weight to actually fly the schedule. The difference between the two figures is mostly



Ron's Apache features a Turnigy 4240-900 motor, a Phoenix 45 ESC, and a Will Hubin FM-7 Timer.

accounted for by airframe drag, differences in line length and also differences in power plant efficiency, which has a lot to do with prop and RPM choices.

“Anyway, let’s use the example of an “average” 55 ounce airplane on 65 feet of line. Assuming 0.65 W-h/oz I get 35.75 W-h. Now I’m going to make an assumption that we will be running a 4S battery. It could be a 5S ...

“Because the nominal battery voltage under load for a 4S pack is 14.4 Volts, we will divide Watt-hours by Volts to get Amp-hours consumed. I get 2.48 Amp-hours and I’ll round to 2.5.

“If we fly a 55 ounce ship with a 4S setup, we need a 3.3 Amp-hour battery. (3300 milli Amp-hour) This is lucky ’cause they are made in that size: otherwise we would have to look for the next size up. Why 3300? You should not use more than 75% of the battery capacity during a flight. Yes, some folks run 80% just to get by with the next smaller size battery, but they will suffer shorter battery life as a result, and hot weather operation may lead to unhealthy battery temps. If you use much less than 75% of the battery capacity, there is no downside other than that you are carrying around needless battery weight, but using only $\frac{2}{3}$ of capacity will lead to very good cycle life, so that you might lose them due to age first unless you fly a lot.

“Okay, so now we have a 55 ounce with a 3300 mAh battery using 2.5 Amp-hours of capacity in about 6 minutes. The average current will be 25 Amps or 2.5 A-h divided by the running time of one-tenth of an hour, or 6 minutes. Depending on your setup, the peak currents will be maybe 50% greater than the average or somewhere near 37 or 38 Amps. The minimum currents will be maybe half of that during dives.

“Now we pick a motor Kv and prop and RPM to get a sensible combination. The target running RPM is: $Rpm (target) =$

$0.75 \times Kv \times V$ (battery). Let’s assume I have a motor with a Kv of 920 RPM/Volt in my grubby paws. I get 9,900 RPM as a target RPM. You can safely go 10% lower and maybe 10% higher than this target figure in order to accommodate the available prop pitches, and desired lap times. Your actual running voltage (or equivalent throttle) will be maybe 6% to 10% higher than the 75% figure we used, because the motor resistance will “waste” something like 1 volt. The ESC’s RPM governor will “throttle” the voltage to the motor in order to maintain the desired RPM. If you want to use one of the available motor simulators to help predict performance, you simply need to take this throttling into account. Many of the simulators will accept fractional cell counts, so you could for example input 3.3 cells into one of the motor simulators you will get about the right results for a 4-S installation.

“So now we are running around 9900 RPM in flight, and for a sensible lap time an effective pitch of roughly 5- $\frac{1}{2}$ inches is needed. Unfortunately, the number stamped on the prop and the effective pitch are only neighbors ... not twins. You’ll need to experiment or lean on the prior experience of others. For example, if you add 5% to the RPM and run the fashionable 13 x 4- $\frac{1}{2}$ APC pusher that pulls like it has most of another inch of pitch in it, then you’ll be okay.

“How much diameter? Up until the point where diameter kills the turn, adding diameter adds power consumption in the climbs, and reduces it in the dives while only very slightly affecting the level lap power consumption. Remember that the battery voltage in a healthy setup in a climb near the end of the schedule can drop to 3.4 Volts per cell, (or 13.6V for a 4S) and this eats into that excess battery voltage that the RPM governor needs in order to goose the throttle and fight gravity. If you use more than 75% of

capacity, you may see even lower voltages.

“More to come in future issues of *Stunt News*.”

—Dean

Thanks Dean, we will all look forward to hearing more from you on the “numbers” behind our E-CLPA equipment.

Cooling our E-CLPA systems

I feel this is an important issue that seems to be greatly misunderstood by new E-CLPA builders/converters. I hope this information helps answer some of the many cooling questions raised by new E-CLPA pilots.

The good news is that there are many good solutions out there and it won't take too long to get this information disseminated among all E-CLPA modelers. As more E-CLPA planes are seen at flying fields throughout the world, the faster good installation and cooling ideas will spread. Hopefully we can speed up the process a little here in *Stunt News*. We also have thousands of successful Electric designs from the Electric RC world that can help give us some guidance.

Our cooling goal is to achieve safe operating temperatures. After talking with experts (Dean Pappas, Kim Doherty, etc.) and manufacturers, here are the temperature ranges we should be aiming for:

Motor: MIN = Zero Kelvin, or as cold as possible, MAX = < 130 f (over 150 f = trouble! At 200 f = smoke or shut down)

ESC: MIN = -10 f ... MAX = < 130 f (over 150 f = trouble)

Battery: MIN = 70 f ... MAX = < 130 f (Our batteries like it best between 90 f and 115 f). when cold WX flying, reduce cooling airflow to keep them warm. We'll have more on batteries in the next issue.

Temperature measuring

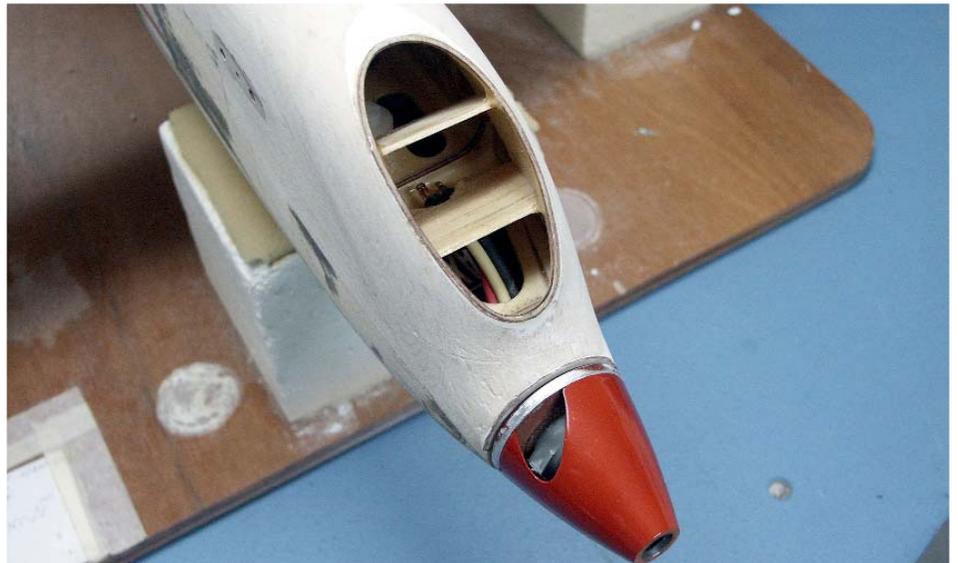
The easiest measuring devices are the fingers on our *non*-flying hand. Humans can hold something up to around 120 to 125 f before it feels too hot to be comfortable. Right after a flight, you should be able to painlessly touch your ESC, your motor, and your battery. If you can't, then you are pushing their limits, and more cooling may be needed. Also check with your LHS in the car section, they have simple, light, inexpensive “loop” type digital temp gauges that go around the equipment. Eagle Tree onboard test equipment is ideal. Also some ESCs monitor their own temps. A laser temp probe can also be used.

Our CL planes are designed for wet engine cooling, *not* E-CLPA cooling. One of our biggest problems is that traditional CL designs have only one cooling inlet that is for the single cylinder



Above: On this Cessna 180 we see an example of cowl flaps. This is an idea that we can adapt and use in our electric models.

Right: Note the “trifurcated” inlet on Bob Hunt's Genesis Extreme. The balsa flow splitters direct some air to the front of the motor, some to the battery and some to the area where the ESC and timer are mounted.

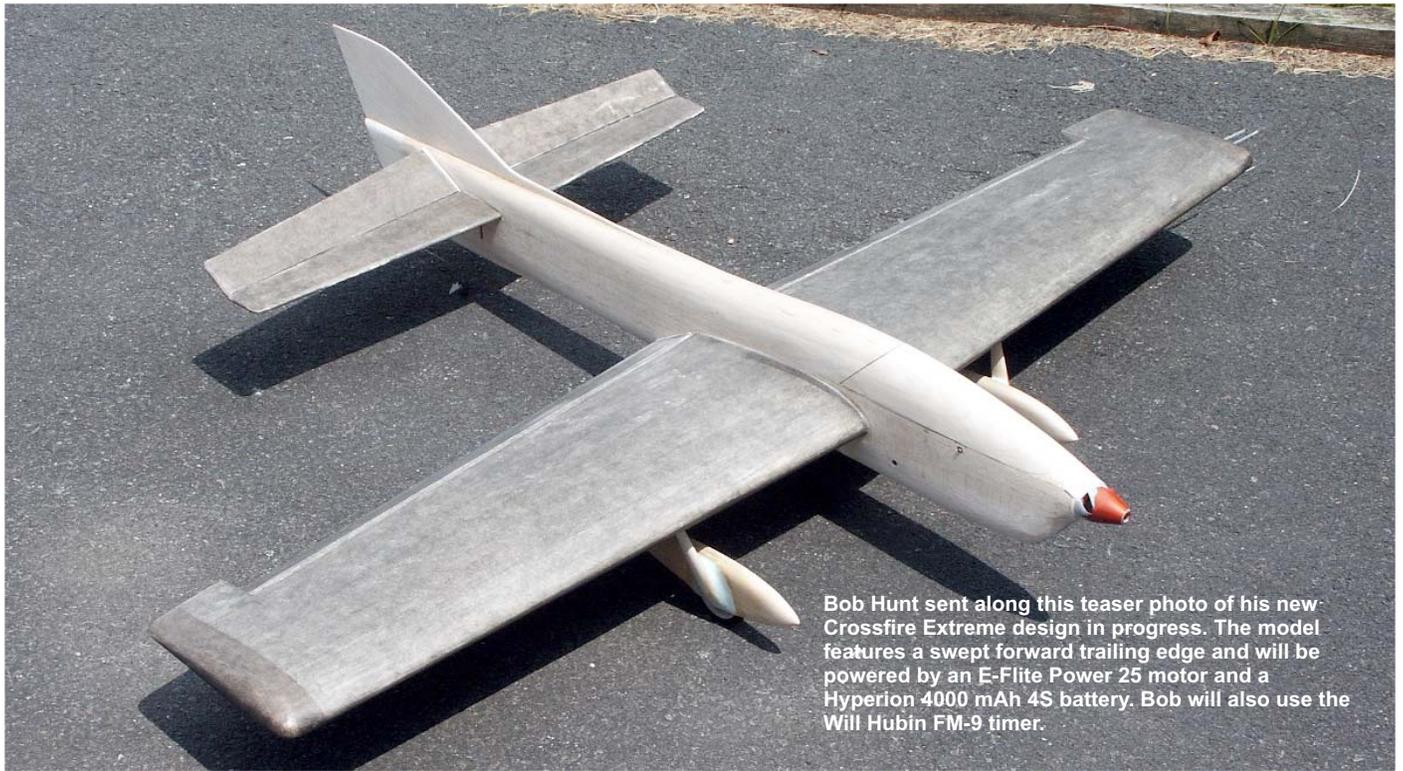


The other bit of good news is that it seems our E systems are pretty tough. I have seen many good E installs, but I have also seen some amazingly poor installs with everything just thrown into a small space with little air circulation. The poor systems still worked. Yes they got a little hot but they still flew great patterns. They will not last as long, and they are probably not running at MAX power and efficiency, but they still work OK. Our goal here is not to scare people or make them think that they have to have a “perfect” cooling install to get into E-CLPA.

You don't have to use the suggestions listed below to have a successful “OK” E-CLPA system. My only goal is to show that with a small amount of effort and some knowledge about cooling systems we can all have COOL systems that are efficient, powerful, and long lasting.

wet engine in the inverted position, with an air outlet in the bottom of the plane aft of the cylinder. And they almost always use a large spinner above this inlet. When converting our CL planes for E-CLPA we can quickly see that we need some changes to cool our three major parts, not just the one in front.

1. We need to horizontally split the air coming into the lower front intake with some simple baffles. The top 50% needs to be directed *up* to the motor intake holes and the bottom 50% needs to be directed *toward* the ESC, which is usually located below the battery near the bottom of the plane. The ideal is to have “unheated” air going to the ESC, *not* leftover “heated” air from the motor. This is one of the main reasons for ESC overheating; the ESC *deserves its own cool air*.



Bob Hunt sent along this teaser photo of his new Crossfire Extreme design in progress. The model features a swept forward trailing edge and will be powered by an E-Flite Power 25 motor and a Hyperion 4000 mAh 4S battery. Bob will also use the Will Hubin FM-9 timer.

2. Ideally we need a top, or side intake that brings the air into the battery area aft of the motor area. If at all possible, like the ESC, the battery deserves its own air, not hot leftovers.

3. With a little imagination and a look at WW II aircraft intakes, we should be able to make some nice looking intakes on our E-CLPA conversions. A big help is that we are always going over 50 mph and it does not take a large intake to bring in a lot of cooling air. About 1.5 sq. in. total front intake(s) should be enough if we have some simple baffles inside and adequate air exhaust exits.

4. Just try to imagine the airflow inside your plane. Air, like water, will always take the easiest way from inlet to exit. We need to make sure that the airflow is directed into the motor and not allowed to escape while bypassing it. The same goes for the ESC. Don't let the air ignore the ESC on its way toward the exit. The same holds true for the battery. Your baffles don't have to be fancy, just light and effective; curved if possible. They can be thin balsa or carved pieces of foam to force the air to go where it will do your system the most good.

5. There are many ways to add cooling inlets and outlets on our E-CLPA planes. Go here for some inexpensive, easily installed, light, inlet/exit scoops: www.hobby-obby.com/exit_cover_airscoop_2_1034_prd1.htm?pSearchQueryId=996462 or www.horizonhobby.com/Products/Default.aspx?ProdID=EFL4511.

Another choice is cutting a plastic spoon in half. These are the perfect size, aerodynamically clean, and look good on our planes. These are just a few possible solutions to cooling E-CLPA conversions. I'm sure your imagination can come up with many more.

Airflow outlets

Another common mistake is making it difficult for the hot air to exit freely. This lets heat build up inside the plane and defeats the effectiveness of the cool inlets we made in the steps above.

1. The general rule of thumb for wet (*a lot of heat*) systems

is *the exit area needs to be at least 2 times the size of the inlet*. We don't get that hot so our air does not expand that much, but we still must make sure that our exit is larger. The 2 to 1 won't hurt but 1.5 to 1 is a good target. If in doubt, you may want to err on the *large* size.

2. Try to have multiple exits. At least try to have the hot motor air exit on its own; try not to direct it over the battery and ESC on its way to a single exit. These motor air exits can be holes in the side of the motor area, or out the bottom rear of the motor area. Just be sure to force the air over the motor before it is allowed to exit.

3. If you have only one large main air exit on the bottom of the plane then you should try to have baffles separating the hot motor air so that it has its own sealed routing to the rear exit hole area. The same goes for the ESC and battery.

4. The battery can have the air enter the front/top behind the motor area then exit straight down to the rear bottom exit, or out the rear top if there are baffles inside to make sure the air is forced to flow around the battery on its way toward the exit.

5. If you look at many full-scale piston aircraft you will see that almost all of them have adjustable cowl flaps. These flaps at the leading edge of the air exit hole cause a low-pressure area to be created at the exit hole by deflecting the slipstream air, which *sucks* the air out of the plane. By doing this we can create an increase in the volume of air flowing over our E system. I think cowl flaps will be a big help to any of our E-CLPA planes. It will help in our cooling and if it is made adjustable it will allow us to control our temps inside the plane as outside temps change. Please see the photo of a full-scale cowl flap; it may give you some ideas.

The future of E-CLPA cooling

1. Within the next few years we will see more CL designs that are created specifically for the use of E power. This will allow us to have a built in cooling system that is integrated with the E power system from the beginning of the design. Phil

Granderson's beautiful purpose-built E ship that we saw in the last issue of *SN* is a good example of this. So is Kim Doherty's excellent FAI E powered ship. Paul Walker's latest great looking E design and Will Moore's beautiful round motor design also show us what can be done when you start with a clean piece of paper for E powered planes.

2. In ERC most of the aerobatic E planes are scale models of full size aerobatic planes that have *large* front cooling intakes on both sides of the spinner, plus another intake below the spinner. This is perfect for our E-CLPA planes because we can direct each inlet toward each of our three components.

3. Round motor cowl designs (Yak, Sukhoi, FW, etc.) are perfect for E-CLPA. The other scale feature we can use is cheek cowls like those used on the full-scale Formula 1 pylon racers, and like those used on some of Klaus's beautiful CL designs. These are good looking, and can be easily added to existing designs. These provide a perfect way to bring in cool air or exit the hot air. I am sure we will see more of these in the near future.

4. Our present very narrow, small fuselage CL designs reflect the past need to minimize drag back when our wet engines were very weak and they could not pull much drag up hill. Being from the late 1940s and early 1950s, they also reflect the influence of WW II fighters and the air races of the 1930s and late 1940s. Today we have virtually *unlimited* power with our E systems (and with modern wet systems like Randy's wonderful Piped PA engines). We can pull any fuselage size or shape up hill. So we can design planes that look like full scale, and planes that are E friendly.

I hope this article helps you keep your E systems cool and happy. I also hope it encourages some E-CLPA builders to send in their photos of their cooling designs/installs and also their ideas on cooling solutions so we can all benefit from their ideas in future issues of *Stunt News*.

Battery charging safety

In the next issue we will have a complete report on the latest battery chargers, and charging safety. In the meantime you may want to order a very useful safety item called a "LipoSack." You can order one from your LHS or Tower Hobbies. Make sure you order the new *Large* 13-inch x 18-inch LipoSack.

For our size E-CLPA batteries we need this larger version to be safe. The smaller sacks are made for smaller batteries than we use in E-CLPA. This is the best and safest brand on the market. Be wary of cheap substitutes; they are made of inferior materials and they don't work.

Here is the company's web site: liposack.com/charging.htm. This entire product is made here in the USA. Battery mishaps are extremely rare, but taking a few safety precautions is still the prudent thing to do. More on this next time.

Will Moore's awesome new E-CLPA plane

Will Moore, our first E-Stunt column writer and one of the pioneers of E-CLPA, has been working with Yuriy and Andrey Yatsenko to create an electric version of their beautiful Shark. Will sent them an entire power system that was pre-setup. He also gave instructions on how to make the E install.

They did an excellent install and test flew it before shipping it back to Will. After he paints his new plane Will promised me photos and a full write up in a future issue. If you have not seen one of these works of art, you are in for a real treat. It breaks apart and fits into a briefcase size custom made wooden box. With electric power this plane should be awesome!

Till next time... May the power of Tesla be with you! *SN*

An E-Editorial

I feel it is very important that we E-Stunt fliers get as much accurate information out there as we can during this transitional period in E-CLPA. Will Moore and others have done an outstanding job in introducing CL fliers to E-power and getting us over the bumps during its beginning. Now we have more than enough information about how to assemble near-perfect ECL systems. All we have to do now is get this information out as quickly as possible to all of our wet-powered friends.

At the risk of sounding naive, I think the conversion to ECL is moving much faster than I had thought it would. I originally thought that most CL fliers would be gone before E-power would become an accepted power source for CLPA. Now it looks like I underestimated the attractiveness of E-power for CL fliers. Or maybe I let the very conservative CL fliers in my area cloud my vision and prevent me from seeing the many open minded CL fliers here in the USA and throughout the world who would welcome E power.

As I mentioned before, it's obvious that the more ECL planes we get out there at our flying fields for more people to see how they work, and what equipment is needed, the faster will be the growth of ECL. We are now starting to see this happen.

It has taken about three years, but I think we are now turning the corner. My guess is that 2011 will mark the real beginning of acceptance of ECL and it will become increasingly difficult for the last of the E-power bashers to rationalize their position. I think we will see many contest victories with E-power in 2011. It may even happen at the Nats with two former World Champions, Paul Walker and Bob Hunt, along with Mike Palko, Buddy Wieder, and a few other top fliers all flying E-powered planes. This would certainly help accelerate the conversion to E-power. No matter what happens at the Nats, It looks like 2011 will be a banner year for ECL in the USA and throughout the world.

I would like to mention two of the people who have been very instrumental in bringing ECL to the world of CL over the past several years. The first is Bob Hunt. As the editor of this excellent newsletter, Bob has been very supportive of E-Stunt and has always enhanced this column. Bob's support, encouragement, and great photos have helped Will and me spread the word on E-power. Without Bob as editor I doubt that E-power would have been featured as much in *SN*. Control Line history will show that Bob has been a huge help to everyone flying CLPA. Bob and Liz Helms are doing outstanding work and are producing the best special interest magazine on the planet! To fully appreciate Bob and Liz's work, it needs to be seen in beautiful living color in the "online" version.

The other person is ECL pioneer Dean Pappas. Dean has been a huge help with his expert input and gentle hand as moderator of the very productive E forum on Stunt Hanger.com. His guidance and direction has proven invaluable in the cross pollination of ECL information throughout the world. Dean's research and engineering knowledge has been a big help to all of us. Without these two gentlemen, ECL would have moved at less than half the speed it has. I know that flying models is a small world in the scheme of things, but within that world these two have a lot to be proud of.

From all of us, thank you, Bob and Dean.

Till next time... May the power of Tesla be with you.

—Rudy Taube, imacone@aol.com

The Next Generation

By Matt Colan

Robby Hunt's Story



Robby Hunt poses along with his Europa stunt model at the appearance point judging venue at the 1991 Nats in Lawrenceville, Indiana. He won the Senior Nats crown that year.

Another “older” next generation flier, Robby Hunt has shared his life story of Stunt. For those of you who don’t know, Robby is the son of previous F2B World Champion, and current *Stunt News* editor, Bob Hunt, and he has had his fair share of success in the Stunt world. He won the Junior Nats crown in 1991 and four consecutive National Stunt Championships starting in 1992. Here is Robby’s story:

In the immortal words of Bill Cosby, “I started out as a child.” Of course this can be said for all of us; most likely in terms of our interest in aviation, as well as simply being little people. My earliest memory is one of those “frozen moments” in time that you can look back at and see it run in your mind like a video clip. Older readers can identify with this, but in their case the video will probably run in black and white, complete with projector sounds ... but I digress.

In my “video clip” I was only about two years old, and my dad and I were in the back yard of our house in Bound Brook, New Jersey. We had one of those old red plastic rockets that you would fill with water and pump up with air before launching it into the sky overhead. For us, this ended with the rocket on the roof (as I’m told). I can still remember the red house we lived in, the tree line behind the house, and, of course, just having the rocket in my hand. Looking back on it now, I can’t help but think, “Would this qualify as a fuel cell?” I think I will defer to Howard Rush for clarification on this. In any case, this earliest memory involved aviation.

Fast forward not too far, and my next “frozen moment” involves sitting in the middle of the circle while my dad was flying his 1980 Genesis model. I can still see it flying level laps

as well as a portion of a horizontal eight in another of those mental video clips. Shortly after, the police arrived, and that is how that memory ends. (Ironically, this was also my first encounter with foreshadowing, but that is another story ...) And there are others, such as jumping up and down on another Genesis; in fact the 1976 National Champion Genesis, after it was defeated by the reigning National Champion balloon bust pole. A true clash of the titans ...

I also remember watching as my dad and Bill Werwage loaded their airplane boxes in a truck and left for the 1980 World Championships. I’m sure you get the picture; all my memories involve some form of aviation. As I got older, I can remember hearing stories from the World Championships and all the names: Bill Werwage, Les McDonald, Bob Gieseke, and so on. To me, these people were quite literally like the Greek Gods and their tales were almost mythical to me. Actually, they still are! My dad often mentions that when he was a child he didn’t realize that not everyone in the world flew model airplanes. In that same sense, I thought that what these people were off doing in these far off lands was the most important thing. I just assumed that the whole country must be waiting for news of these “battles” overseas. It’s funny, but quite true.

As time went on, and my dad began to work for *Flying Models* magazine, I was again surrounded by aviation ... this time RC. Dad was a member of the Roxbury Model Airplane Club and the club field was located in Springdale, New Jersey—just a few miles from our home in Newton—and I ended up spending many days at both the magazine, and the field. Many of the people I met at both places became like a second family, and I still see and talk with many of them to this day. One person in particular that



Above: Here's Robby at his first Nats in 1990 with his RD-1. He placed second on this occasion, but he'd only been flying the pattern for a month! Larry Kruse photo.

Above left: It all started for Robby Hunt with this electric-powered tethered model at about age 3. Check that body English! Bob Hunt photo.

Left: Robby (R) watches his younger brother, Brian launch a rubber powered Free Flight model in a field that was just above the Carstens Publications offices, where their dad, Bob Hunt, worked as the Editor of *Flying Models* magazine. Bob Hunt photo.



stands out through all of this is Dean Pappas. I actually don't remember not knowing Dean. Since my brother and I were both little kids, Dean has been there ... often in the morning, sleeping on the couch. There are a good many people who refer to him by the nickname "Uncle Dino," but for me he really is my uncle ... as well as friend, second dad, sounding board, and general goof-off partner.

I attended the 1985 Nats as a caller for my dad who was flying RC pattern. For me, this was how my early days around model airplanes were. It was just this hobby/sport and all the people that all just kind of fit together. I never really thought about doing it myself, I was just happy to be there, and be around it. Again, it wasn't like I was choosing to do something ... it was simply the only way of life I knew. I grew up around it, and that was what was normal.

In 1987 I attended my first Stunt Nats along with my dad and Lou Wolgast; again just as a helper. Later that year, I was a score sheet runner at the Team Trials, and repeated this duty at the 1989 Trials. There was also a point in the early '90s that my grandfather, James Hunt, moved almost literally into our backyard (He bought the house right behind ours). I spent several summers working in his machine shop, helping to make pieces for bellcranks, stooges, etc. Are you sensing a theme?

Basically, I had been around this stuff forever, just never as a flier. Sure, there were several times growing up that my brother and I attempted to fly some of the old Cox 1/2A plastic airplanes, and we of course we would get dizzy and only make a few laps before it was enough. We were more involved with baseball and soccer, and never thought of model airplanes as something we might get involved in, especially not in a competitive manner.

This all changed for me in 1990, and quite by accident. Dad had written a review of the reissued Cox Super Chipmunk for *Flying Models*, and he had asked me to fly it around level to give

him the opportunity to take some flight shots from outside the circle. I did just that, and figured we were done. After it was on the ground, he asked me if I would like to try a loop. Again, not

thinking much of it, we flew another flight, and with his hand over mine, we performed some loops. Actually, it was kind of cool. I had never thought of myself as someone who might fly, so for me, this was big. It was also the start of something I never imagined.

On the ride home, we started talking about building a bigger profile that would be easier to fly, see, etc. All of this came out of nowhere. It wasn't like we had a conversation about if I would like to fly, or my asking him if he thought it was something I could do; we just started planning. The funny thing is, it all went downhill really fast for me flying-wise the next time we went out. The next time I tried to do a loop, I ended up putting it in the ground. For some reason, no matter what I did, or how much I thought about it, I would only hold in control for the loop for about half the maneuver, and then I would somehow level my hand, and the plane did exactly what you would expect, hit the ground. It was a block, and it lasted several flights. I actually got to the point that I hated the thought of trying, knowing what was inevitable. I would be at the handle, and my dad would be starting the .049, and in my head I kept saying "please don't start, please don't start." It's



Joe Perovich (L), Bob Hunt (Center) and Robby Hunt pose for the clicker in their motel room. Joe and Robby are extremely close friends. The year was 1993. Larry Scarinzi photo.

of his Great Grandfather. I'm okay with it now.

I continued to fly Intermediate for most of the year, and was booted up to Advanced by none other than Jimmy Casale following a September contest in Flushing Meadows, New York at which Jimmy was judging. To end that first year, we drove down to Winston Salem, North Carolina and I flew for the first time in Advanced—and it was still my first year!

I did go on to fly for five more years, before having to stop due to a nagging wrist/elbow problem. However, I am still hoping to fix this problem and make it back. In the mean time, I continue to be involved in whatever manner I can, be it coaching or helping my dad build wings. I have been around this for so long that I don't know what I would do without it, even in some small way ...

2010 flying season comes to a close

Now that it is December, it's safe to say that flying season has ended. During the contest season, I made the move up to expert at Bill Hummel's contest in Lee, Massachusetts. Conditions weren't ideal to be flying in a contest on that day with a good dose of rain. My Oriental Plus got through the rain with very little trouble, and the PA 40UL performed flawlessly. They are truly wonderful engines, and set up the way Randy Smith recommends, you will be very happy and enjoy beautiful motor runs!

Projects for 2011

Since about the middle of August, I've been constructing an RSM Trivial Pursuit kit that current Advanced Nats Champion, Eric Viglione sent me. Thanks again Eric! As of December 3rd, the wing is constructed, the fuselage is framed up, and all other major components except the rudder have been built. I'm going to be powering the Trivial Pursuit with a RO-Jett 76 on a pipe.

I've been talking with Michael Duffy with some frequency lately thanks to the social networking site of Facebook, and he's been telling me of his projects in the works. He's been working on a Chizler that is framed up, and sounds like it is almost ready for paint. Michael also got a Trivial Pursuit kit from RSM, and he

funny to think about now, but I have no idea why I kept at it and didn't just end it there and continue playing baseball.

After a few sessions, I got that figured out, and it was okay from then out. In fact, once we got the profile done and flying, everything happened pretty fast. I learned to fly the pattern in less than a week, completing an Hourglass and a Four Leaf Clover for the first time on my first full pattern. I started flying in May of 1990, and would fly in my first contest in June of that year. It was at this contest that I met the Philly Flyers, and my now life long close friend Joe Perovich. It was also Dan Banjock's first contest, and he won Intermediate, and I took second place.

Shortly after this contest, we completed my next and most important airplane, the RD-1. I ended up flying the RD-1 in Junior at the 1990 Nats, placing second to Derek Berry. It's funny, until just recently, I always looked back at my Nats record and could only focus on my lowly second place finish. I recently read Derek's article about how he got into flying, and could only smile when he talked about bringing home the first-place trophy, and the reaction

Three generations of Hunts. The year is 1991 and Robby had just won the Junior Stunt National Championships—his first of five straight Nats wins. Granddad, James A. Hunt (L) and Bob Hunt (R) seem to be happy about that!





Above: Robby learned to operate a lathe by working for his grandfather, James A. Hunt, making parts for model airplane applications. James A. Hunt photo.



Above right: Dan Banjock (L) and Robby flew in their first Stunt competitions on the same day at the Garden State Circle Burners contest in 1990. Dan took first in Intermediate with his Gieseke Nobler and Robby placed second flying his Hole Shot. James A. Hunt photo.



Right: Bob Gieseke and Robby have enjoyed a long friendship and here they pose with their models at the 1990 Nats in Lawrenceville. Bob Hunt photo.



Another buddy of Robby's is Bill Werwage and here they are displaying their Geo designs. Bill is holding his newest Geo XL and Robby is holding his Geo-Star. They had a sort of team color scheme thing going on that year! Bob Hunt photo.

plans to power it with a PA 75. We've mentioned that hopefully someday the two Trivial Pursuits could "duke" it out one day at a contest and see who comes out on top! Michael has also mentioned he's been working on a Caprice, and a Primary Force ARF he's converting to electric. Good luck Michael with all of those projects, and may they be light, rigid, and serve you a long time.

A Message from Windy

Some of you may know that Windy Urtnowski has been taping some of his old Stunt videos onto Flip video and sharing them through email. If anyone would like to see some clips of the old videos that Windy has taped onto the Flip videos, send Windy your email address, and he'll add you to the list of people who receive the videos.

Till next time, fly Stunt! *SN*

It's in the Details

By Matt Neumann

The purpose of a tip weight box is to make it easier to adjust the amount of tip weight in our airplanes. "That's simple," you say. Well, you are right. Even so, I will go through what I do to make my own boxes as well as try to describe a couple of other methods that intrigued me for adding adjustable weight to the outboard tip.

First up is my method. Start by making your wingtip in a normal fashion, as if it does not have a box. If you made it out of a solid block, hollow it out. If you made a built-up tip, you are done. Remember, since you are adding weight, if you made your wingtip from a hollowed-out block, you don't have to make things paper thin on this tip.



Here is a picture of my hollowed-out wingtip. Notice that the tip is not paper thin.

The next step is to cut out a hole in the wingtip the size of what your box is going to be. You can then attach the wingtip to the end of your wing panel. Having gotten this far, you can now do the final shaping of the tip. With a built-up tip, if you do not have sufficient room for the weight box in the tip itself, you can affix the box to the inside of the outboard rib.



My wingtip attached to the end of my outboard wing. I made the hole just big enough to fit the box as it is currently constructed.

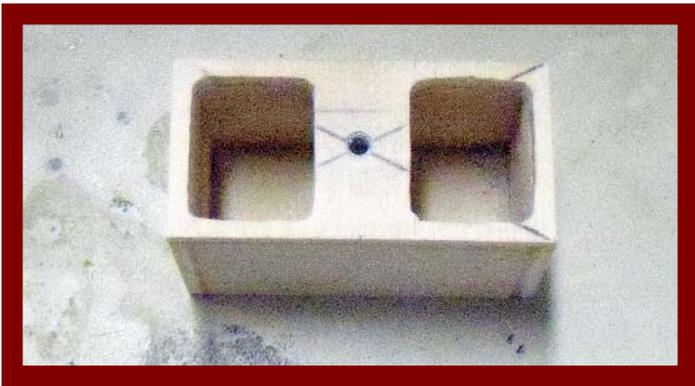
I like to make my boxes out of 1/8-inch Lite-Ply (Poplar plywood). Birch plywood would be okay but there is a point where you are going way overboard with strength. I don't like to make my boxes too heavy either. The object is to make the weight adjustable. If you make the box too heavy, you could suddenly be wishing to take out some weight and find you can't because the box is already empty. I did this many years ago on a profile plane I was building. I made the wing tip out of a really heavy block of wood figuring we needed weight out there anyway, only to find out that the tip was too heavy and leaving me to figure out how to lighten the load. Oops! (I hate that word, "oops," but it happens.)

I used to put a blind nut in the bottom of the box and attach the lid to the box with a long bolt extending through the box to the blind nut. I found it difficult, however, to hit the blind nut with the long bolt extending through the lid. I finally got wise and put the blind nut on a bar extending across the top and now it is much easier to get the lid on and off. To do this, I make a top piece that fits under the lid and put a blind nut in the center. I then cut out two holes, one on each side of the blind nut, to give access to the inside of the box for adding or subtracting weight. This top piece is then glued to the edges of the box all around. This gives greater strength to this attachment piece, rather than simply cutting a narrow piece to span the width of the box. It would be embarrassing if the attachment point broke loose and all your weight fell out.



This is a picture of the completed box and the top. In one picture you see the top of the top while in the other picture you can see the bottom of the top to show the location of the blind nut.

After this top piece is glued on, I then sand all the outside edges flush. This makes it easier to mount in the wingtip. I also then make the blank for the lid. This way I can sand the lid to the exact size of the box making it easier for a perfect fit later on. Make sure you put witness marks on the lid and box so you can see them later on. This way if there is any variance in width or length (that is, if you made a trapezoid instead of a rectangle), it will make it easier to match up when you take the lid on and off as you build your box.



Here you can see the main section of the box completed. It is at this point that I make the lid to perfectly match the size of the top of the box by bolting it to the top and sanding it to the same size as the box. Unfortunately I forgot to take a picture of this process. Just remember to add your witness marks to make it easier to tell which side goes where.

After everything is sanded flush, I put some $\frac{1}{16}$ -inch vertical grain sides on three sides of the box. I do not put the sides on the entire height of the box. I only put the sides on starting about $\frac{1}{4}$ inch to $\frac{1}{2}$ inch from the top. Anything more is unnecessary. This is to provide a wall when the box is recessed inside the wingtip. You do not want to mount the box flush with the edge of the wingtip. If you did, your lid would stick out away from the surface of the wingtip later on and make for a rather ugly picture. Recess the box at least $\frac{1}{8}$ inch down. A little more is better. The fourth side is made up of the wingtip rib itself which I always leave solid. No lightening holes for this rib. I want the extra strength to hold the box in place. This also gives a lot more surface area when you finally glue the box in place. Remember, this box may be carrying several ounces of weight. It would be embarrassing later on if the box fell out of your plane. You want to make sure your box is secure.



Here is the box with the three sides that have the balsa walls attached.

Now insert the box into the hole that you made in your wingtip earlier. As you may recall, I mentioned earlier to make the hole the size of the box not including the width of the walls you just put on. I did not want you to make the hole the size of the box, plus the width of the $\frac{1}{16}$ inch walls until now. To make a perfect fit, slip the box into the hole as far as it will go. That is until it stops because of the walls. Hold the box against the rib and now trace around the walls that you made earlier. Now you have a perfect outline of where to cut so you can get a really good, tight-fitting joint. Now glue the box into the wingtip to the

appropriate depth and make sure you get glue on the side where the box touches the end rib. This is where you will get most of your strength. Sand the walls flush.



Here is a picture of the box now installed into the wingtip. Make sure you securely glue it to the tip rib of the wing.

While I was making the box shown in the picture, I got a brainstorm, so this is where things got a little out of sequence. After I installed the box I added a couple of strips of $\frac{1}{32}$ inch plywood along the edges. This is to allow for a washer to be placed on the screw that will attach the lid to the box. After everything is painted, I will glue a washer to the bolt that holds the lid down. Then, when I unscrew the lid, the washer will push the lid up. If I don't do this, the bolt will come out, sometimes leaving a difficult time getting the lid off. The plywood is there to allow space for the washer under the lid. Without this space, the lid won't bolt down securely.



In these two pictures you can see where I added the $\frac{1}{32}$ inch plywood spacers along the two edges and how the lid fits snugly in its hole. Making the lid when I did paid off at this point with a very nice fitting lid. Trying to make and fit a lid from scratch at this point would be difficult to get a good fitting lid with a minimum of gap between the lid and the walls.

Once I make sure the lid fits well, I will cover it with a piece of balsa wood that is slightly thicker than the remaining depth that the box is recessed into the wingtip. As a last step, the balsa is then shaped to the contour of the wingtip.



Here is a picture of the completed lid that has been shaped to fit the contour of the wingtip. I like to bury the box deep enough so the bolt head will be flush with the lid, making for a very clean appearance.

This is an in-depth look at what I do to make a wingtip box. I have always used equal panel wings, in the past, and these wings need to have a little bit more weight than the asymmetrical wings. Since every plane is different, I cannot give you an exact dimension that would fit your needs. Just remember, it is far easier to add wadded up paper towel to hold the weight in the box than it is to want to add weight to a box that is too small and already full.

I have two other weight boxes that I have seen over the past couple of years that I would like to mention here as well. One is on Kenny Stevens' planes. He uses a similar box to the one I do except, instead of putting the lid on the bottom, his is on the end and is very narrow.



Kenny's plane with the lid on the box.

Above: These two pictures show the lid (sitting in the hinge line of his wing) and the open box. Notice the tab on the left side of the lid. This is what Kenny slides into a slot in his box to hold down the one side. The other side is held on with a 2-56 bolt.

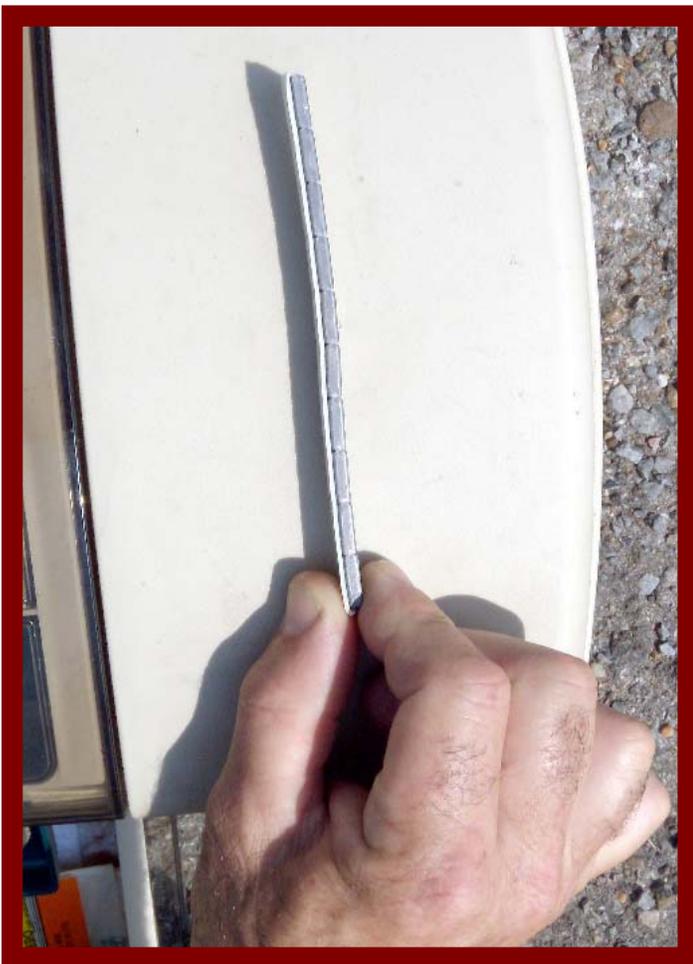
For weights, Kenny uses a strip of lead weight that has a sticky back foam tape on it. These are usually available in hobby shops. The tape is normally used to stick the weights on various parts of the plane for balance. That's okay, I guess, if you do not have a weight box

Kenny uses one small screw at one end of the hatch and makes the hatch with a small tab at the end opposite screw. To seal up the opening, he slides the tab into a slot at one end and secures the other with the screw.

and don't care about looks. However, in this case, he does not take the paper backing off the tape and leaves the tape on the weights. This, then, acts like a wedge and keeps the weight from bouncing and vibrating around inside the box.



This is a picture of Dave's wingtip without the smaller tube or weight. You can clearly see the tube that he anchored into the wingtip of his plane.



The smallest tube is a $\frac{1}{4}$ -inch inside diameter tube that is filled with various lengths of lead fishing weight. This weight comes in a $\frac{1}{4}$ -inch diameter roll. Dave cuts different lengths of lead from this roll and puts each in a different tube. He then marks each tube with its weight. When he wants to add or subtract weight, he just replaces the tube with a heavier or lighter weight tube depending upon what he needs.

Dave also solders a small handle onto each tube enabling him to grab it with a pair of long nose pliers and easily push it in or pull it out. The tube is tacked in with a little bit of plastic model glue. He puts the glue on the inner tube, slides it into the larger tube, and gives it a small twist. This holds it well enough that it won't come out while flying, yet is easy enough to break free should he want to change weights. Do not use instant glue or epoxy for this. You may never get the inside tube out of the larger tube.

Dave also mentioned that the "new and improved" way is to make it so the weight comes out the front of the wingtip. This, to me, is actually safer because the "forces that be" will want to shove the weight back into the wingtip instead of out and away from the plane. You could also then make a cap as such that would look like a pitot tube and incorporate that into the look of your plane.



Here are pictures of the top and sides of Kenny's weights. The box is made just wide enough so the weights fit snugly inside the slot so they do not rattle around. This method is really nice because you don't have to flip the plane over to get at the wingtip box.

Here you see the actual weight tube that he had in his plane at the time. He makes several of these in various weights. That way he can easily go up or down in weight just by changing tubes. Quick and easy.

The last method for this article is one that I saw in David Fitzgerald's plane. This one involves a pair of telescoping brass tubes. The largest tube is the diameter that just fits over a brass tube that is $\frac{1}{4}$ -inch inside diameter. This larger tube is permanently fixed to the wingtip.

So there you have it, three ways to make a wingtip box. All three ways have their good points so choose the one you want, or, if you have a better idea, send me pictures and a short description. It may end up in a future column.

Remember, it is in the details. *SN*



Louis in the sixties, proudly presenting his P-51 Stunter in Genk, Belgium. Despite the Ferrari logo on the rudder, it was probably driven by a Veco .45.

Lifetime Achievement Report: Louis van den Hout

Those readers having had the privilege to enjoy a boat ride on the canals of s'Hertogenbosch in the Netherlands during the last few years should have taken a second look at their tour guide.

The man steering the boat and explaining the tourist features of his hometown may well have had a hidden talent. Following a career as top class Stunt flier, airplane designer and Stunt judge, Louis van den Hout has served his community as a tourist guide for a long time. I had the opportunity to interview Louis, and here's what he had to say:

PG: What was the year and place of your birth?

LvdH: July 5th 1936, s'Hertogenbosch, Netherlands.

PG: What year did you start to fly control line?

LvdH: 1956.

PG: What are your other areas of interest and/or other Aeromodelling categories practiced?

LvdH: I love music. I play the trumpet, preferring old time jazz in particular.

PG: Which have been the outstanding F2B events in your career?

LvdH: Placing fifth at the 1968 World Championships and fourth at the 1972 World Championships in Helsinki, Finland.

PG: Which model has been your best F2B airplane so far and why?

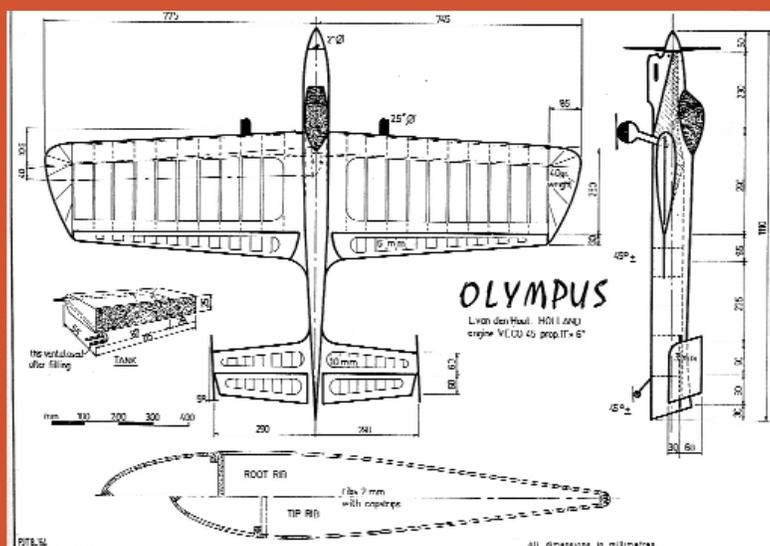
LvdH: The Olympus "because I could almost fly it with my eyes closed ...

PG: From your point of view, what are the essential inner values of building and flying CL Stunt models?

LvdH: One thing I do appreciate very much is the close relationship to the world of full-scale aviation. Both my son and my grandson are airline pilots.

PG: Your opus has been, and is, undoubtedly significant for the Control Line Stunt Community. What would be the message you would like to deliver to that community today?

LvdH: Try to enjoy the challenge offered by creating and building your own design airplanes. For me it was always very satisfactory competing successfully with my own airplanes. Looking back at a career as long as 54 years, what undoubtedly was very rewarding, too, is the great number of lasting friendships with people from all around the world, resulting from a simple thing such as going in circles.



The Olympus, as published in Aeromodeller, 1964. At that time we all had an Olympus or a derivate of it. The "must have" motor was the Veco .45. A real great power source, provided one lived long enough to complete the running-in procedure. I (Peter G.) do remember feeding the Veco .45 on my Bob Palmer Skyscraper with toothpaste to speed up running-in...



Although called the "Spider" in 1972 by Louis, this airplane does perhaps look a lot like a Lew McFarland Shark. As not unusual, even today, what is sometimes labelled as own design is occasionally a derivate of a proven original. Engine unknown and the silencer looks like it would be a homemade device.

If you want to know what CL Stunt can do to you, just imagine Louis and his dear wife Trudy, just after his retirement, riding their pretty and fast 1200cc BMW motorcycle all across Europe for many weeks in summer; judging one contest after the other, of course ...

Electric power control based on G-Force

When flying at the August 2010 MBZB-Cup contest in Untersiggenthal/ Switzerland, Wolfgang Nieuwkamp from Germany was able to successfully

demonstrate his g-force sensing power controller in an actual contest. It was very interesting to hear the quite substantial and rapid in-flight power modulation and it could very well be that Wolfgang has taken a major step towards the goal of having sufficient line tension at the lowest possible speed. While further work may be required, in particular in terms of communications with commercially available, ESCs and perhaps in terms of processing signals from further sensors, Wolfgang definitely deserves highest respects for his achievement.

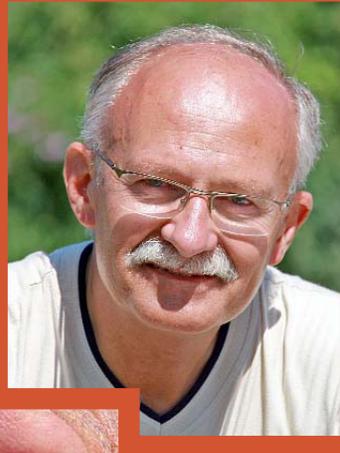
An Invitation to Contribute: Willing to share what he has found for the benefit of our common cause, Wolfgang hereby invites those wishing to contribute in the further development to contact him anytime.

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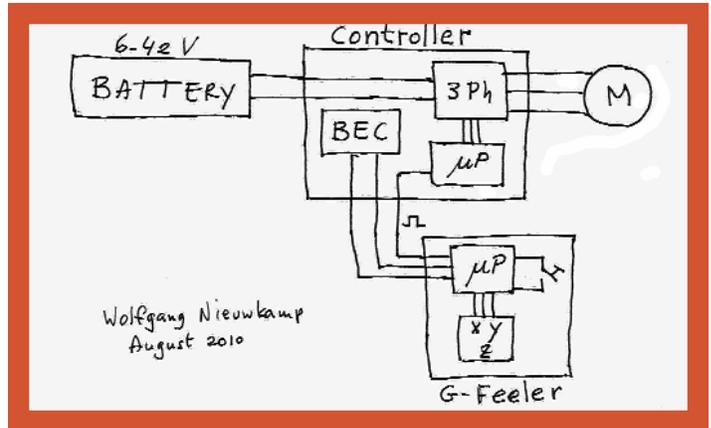
Photos by Claudia Kehnen. *SN*



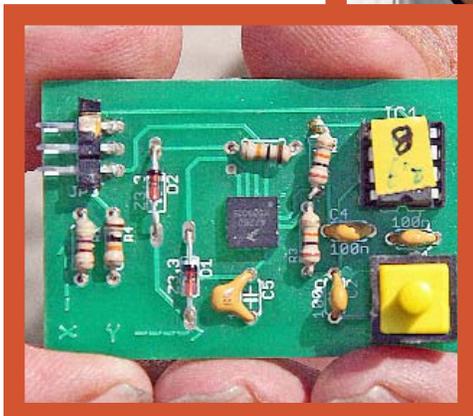
Above: Shot by Claudia Kehnen in August 2010 at the international open F2B competition in Untersiggenthal/ Switzerland, here is Louis waiting for the engine start signal to be given and ready to judge as critically as ever.



Right: Wolfgang Nieuwkamp.



Wolfgang Nieuwkamp is a highly innovative engineer, substantially contributing to our common cause. Supporting the development of electric Stunt may well be instrumental for the future of our sport and I would like to invite those wishing to join the ranks of urgently needed developers to contact Wolfgang anytime.



Left: Being equipped with a three-axis accelerometer, Wolfgang Nieuwkamp's G Feeler Controller must be properly oriented when installed in the airplane. It communicates with a commercial ESC and increases power when line tension diminishes.

The Nats: Old Time Stunt and Classic Stunt

By Allen Brickhaus with assistance from Michael Schmitt and Wynn Paul

Old Time Stunt

On Tuesday, July 13, 2010, the Old Time Stunt event was contested at the grassy area located just northwest of the "L" pad at the AMA Muncie site. That day 12 pilots vied for top honors at the unofficial Old Time Stunt Championship. The highest seven scoring competitors of the day were: Frank McMillan and his Big Job for first (297.0), John Wright and his Box Car Chief for second (290.5), third was James Lee from Topeka KS. James placed his Humongous in



Frank McMillan brings his new Big Job to the AMA Nats and takes his first OTS Championship at the Muncie event. Power for Frank is a rear exhaust Randy Smith PA .65 and a muffler.



Dale Josephson does not have as long of a drive as Frank McMillan or Bob Whitney, but still had a great time on the OTS site. Dale is from the Chicago area.



Michael Schmitt rebuilt a Crist Rigotti Jamison and is doing well with it in the mid-west contest circuit.



Bob Whitney travels to Muncie from the middle of Florida and works to ever improve his Jamison and an ST .46 in OTS.

the top three with a 289.5 score.

In fourth place was Dale Barry flying another Humongous with a 284.5 score. A tie was broken by their other flight when Windy Urtnowski took fifth with also a 284.5 score. Sixth went to Allen Brickhaus and his Humongous with a 282.5, and seventh went to Scott Condon with his see-through MonoKote covered



Steve Moon is our 2010 AMA Nats Classic Champion. Texas always brings in some great flyers.



Rex Abbott of the great northwest brought his nice little profile to Classic at the AMA 2010 Nats.



Dennis Vander Kurr has produced a very nice looking Oriental from his building shop in the Chicago area.

Stuntwagon. Also competing were John Paris, Michael Schmitt, Bob Whitney, Dale Josephson, and Michael Paris.

More pictures and accompanying information can be gleaned of the OTS event by going to AMA web site, then checking the link to the AMA 2010 Nats, and then finding *NatsNews*. The date of *NatsNews* to read is July 19, 2010.

Classic Stunt

July 13, 2010 also saw some very good Classic pilots gather for the unofficial Classic Nationals event. Twenty one pilots took to the grass circle near the "L" pad on that morning for the fly-off. The top award went to Steve Moon with a 506.0 score with his UHP G. Nobler in hand. Second went to Allen Goff with another UHP G. Nobler and a 495.0 score. Third was taken by Windy Urtnowski with his Big Job and a 489.0 number. Fourth was Allen Brickhaus with his Louis van den



Above: Michael Schmitt and I are working on publishing Bob Gialdini's Eclipse. Michael is doing very well with the Milwaukee based model.

Right: Allen Brickhaus's Louis van den Hou Olympus sneaks up in the grass to get ready for its flight in Classic at the 2010 AMA Nats.



Wesley Dick has a well trimmed 1959 Ares at his command for all Classic and Nostalgia 30 events in the Midwest.



John Paris has a very competitive Profile Oriental for both Profile and Classic events.



Hout Olympus with 485.5 points, fifth place was captured by Mike McHenry in a tie breaker situation and an equal score of 485.5, sixth was Don Ogren and his Charlie Mackey twin-boomer with a 474.5 score, and seventh rounded out the trophy count with Robert Harness and his Gladiator and a 466.5 number. The following pilots were also entered and finished in this order: Wesley Dick, Michael Schmitt, David Heinzman, Dennis Vander Kurr, John Leidle, Vince Bodde, Larry Robertson, James Mills, John Paris, Scott Condon, Roger Wildman, Rob Young, Dennis Moritz, and Rex Abbott. More pictures and accompanying information can be gleaned of the OTS event by going to the AMA web site, then checking the link to the AMA 2010 Nats, and then finding *NatsNews*. The date of *NatsNews* to view is July 19, 2010. **SN**

Scott Condon has an Ambroid kit-type Ares for Classic, and it is indeed a great-looking model.



James Mills and his ST .51-powered Shark, and he will replace the Shark with a Formula-S later this summer.



Larry Robertson of the Louisville, Kentucky, area brought this very slick looking Shark to the AMA 2010 Classic event.

Rob Young of Columbus, Ohio, brought this ST .46 powered Thunderbird to Muncie.

Scores and More ...

Monday of Nationals week was the day for Old Time and Classic Stunt competition. There were 12 entries in Old Time and 21 in Classic.

Continuing the trend for larger size Old Time airplanes, Frank McMillan flew his 54-inch-wingspan Big Job with a powerful P.A. .65 engine to first place besting 1989 and 1993 winner John Wright with his Box Car Chief (42-inch-span removable wing held on with rubber bands). Jim Lee (winner in 1988 and 2004) finished third flying his well-worn and patched up Humongous (54-inch-span) with an ignition Madewell .49 engine. Other large size Old Timers included some Jamison Specials, a Stuntwagon, and a Viking.

Former World Champion Bob Gieseke was beside himself with glee as copies of his renowned Gieseke Nobler were flown to first and second place in the Classic Stunt event at the 2010 Nationals. Steve Moon, Dallas, Texas, won the event with his Thunder Tiger .36-powered Gieseke Nobler while Allen Goff, Muncie, Indiana, was second using a Brodak .40 engine. Windy Urtnowski finished in third place with his version of the Big Job, powered by a RO Jett .76.

This report and the result list were compiled by Wynn Paul, who was not in attendance. Thanks to many entrants who supplied information and photographs.

Old Time Stunt Event (12 entrants)

1.	Frank McMillan	San Antonio, Texas	Big Job, PA .65	297.00
2.	John Wright	Long Beach, California	Box Car Chief, OS Max .35S	290.50
3.	Jim Lee	Topeka, Kansas	Humongous, Madewell .49	289.50
4.	Dale Barry	Harlem, Georgia	Jamison Special, Aero Tiger .36	284.50
5.	Windy Urtnowski	Rutherford, New Jersey	Big Job, RO Jett .76	284.50
6.	Allen Brickhaus	Golconda, Illinois	Humongous, ST .46	282.50
7.	Scott Condon	Marklesville, Indiana	Stuntwagon, Como .51	275.00
8.	John Paris	Clio, Michigan	Viking, Fox .36 (Combat Spc. Mk. V)	273.50
9.	Michael Schmitt	Grayslake, Illinois	Jameson Special, OS 40 FP	254.00
10.	Bob Whitney	Palm Bay, Florida	Jameson Special, ST .46	254.00
11.	Dale Josephson	Des Plains, Illinois	All-American Senior	202.50
12.	Michael Paris	Clio, Michigan	Flying Clown, Fox .15	188.00

Classic Stunt Event (21 entrants)

1.	Steve Moon	Dallas, Texas	Gieseke Nobler, TT .36	506.00
2.	Allen Goff	Muncie, Indiana	Gieseke Nobler, Brodak .40	495.00
3.	Windy Urtnowski	Rutherford, New Jersey	Big Job, RO Jett .76	489.00
4.	Allen Brickhaus	Golconda, Illinois	Olympus, PA .61	(477.00) 485.50
5.	Mike McHenry	Speedway, Indiana	A-7 Corsair II, A.T. 36	(463.50) 485.50
6.	Don Ogren	Spring Hill, Florida	Gobbleswantz, OS 40 FP	474.50
7.	Robert Harness Jr.	Rosamond, California	Gladiator (Dennis Schauer)	466.50
8.	Wesley Dick	Ft. Wayne, Indiana	Ares, Aero Tiger .36	(456.00) 464.50
9.	Michael Schmitt	Grayslake, Illinois	Eclipse (Gialdini), PA .65	(449.50) 464.50
10.	David Heinzman	North Olmstead, Ohio	Skylark II, D.S. .54	458.00
11.	Dennis Van der Kuur	Northbrook, Illinois	Oriental, Brodak .40	456.00
12.	John Leidle	Kirkland, Washington	Skylark II, Magnum .53	452.50
13.	Vince Bodde	Jackson, Mississippi	Oriental, Brodak .40	450.00
14.	Larry Robertson	Louisville, Kentucky	Shark 45 (McFarland)	449.50
15.	James Mills	Ozark, Missouri	Shark 45 (McFarland), ST .51	448.00
16.	John Paris	Clio, Michigan	Profile Oriental, Woolard Tower .40	445.00
17.	Roger Wildman	New Palestine, Indiana	Caprice, Aero Tiger .36	444.50
18.	Scott Condon	Markleville, Indiana	Ares, Magnum .36	444.50
19.	Rob Young	Columbus, Ohio	Thunderbird, ST .46	359.50
20.	Dennis Moritz	Philadelphia, PA	unknown	352.00
21.	Rex Abbott	Sequim, Washington	unknown	224.50

Kwikee Stunt—A



K

wikee Stunt is a new event the Knights of the Round Circle club is trying out in Southern California. We tend to be “So Serious” about Stunt, that it seemed a good idea to put some fun back in flying maneuvers.

The idea was to come up with models that could be thrown together in a weekend, and have an event that wouldn’t take all day to fly. The rules are included at the end of this article.

The thinking was that there are a variety of very simple kits such as the sheet-balsa wing planes from Blackhawk models and Sig’s little $\frac{1}{2}$ A Skyray that can be made to fly every maneuver in the PAMPA pattern. To keep certain elements of our club happy, the engine limit was set at .061 (1cc), the same as our usual small engine full Stunt event.

To keep the high-tech crowd from going too far, flaps and multiengines are ruled out.

Since the pattern can be flown in less than three minutes, and pit stops are allowed, it is possible to compete with very small, simple models powered by Cox reed engines. So far, the Skyray and the BHM Bristol Bullet have proven perfectly capable of being competitive.

Of course your author, being “Designman,” and all, had to do his own thing. That thing is the Kwikee SkyFire. Featuring a modest 220 square inch wing and AP Wasp .061 power, at 9- $\frac{3}{4}$ ounces, it will fly astoundingly good corners, but is smooth and stable. You can not tell that it doesn’t have an airfoil!

We had a “shoot-out” at the 2010 Mackey Contest where the model was flown by Bill Byles, Bob Hunt, Keith Trostle, and Bob Whitely. It was great fun to watch!

Join the fun and try this event at your club, and then let everyone know what you are doing and how it was received!*SN*

—Larry Renger

A Fun Fly Event



Kwikee Stunt Rules

This event is designed to be flown with the simplest of engine/aircraft configurations. It is intended for fun-fly contests. The flights are very short, and the judging is simple. The flight becomes a total performance rather than an assembly of maneuvers. Tutus and sequins are optional.

Aircraft:

- Flat plate airfoil only. Any design, any size. Kit or “homebrew” designs are OK.
- Power is any single engine .061 c.i. or smaller.
- Any propeller allowed.
- Any tank size allowed, but the pattern only takes just over 2 minutes so you might as well keep it small (about 1/2 ounce for a Tee Dee .051 or AP Wasp .061)

Fuel and lines:

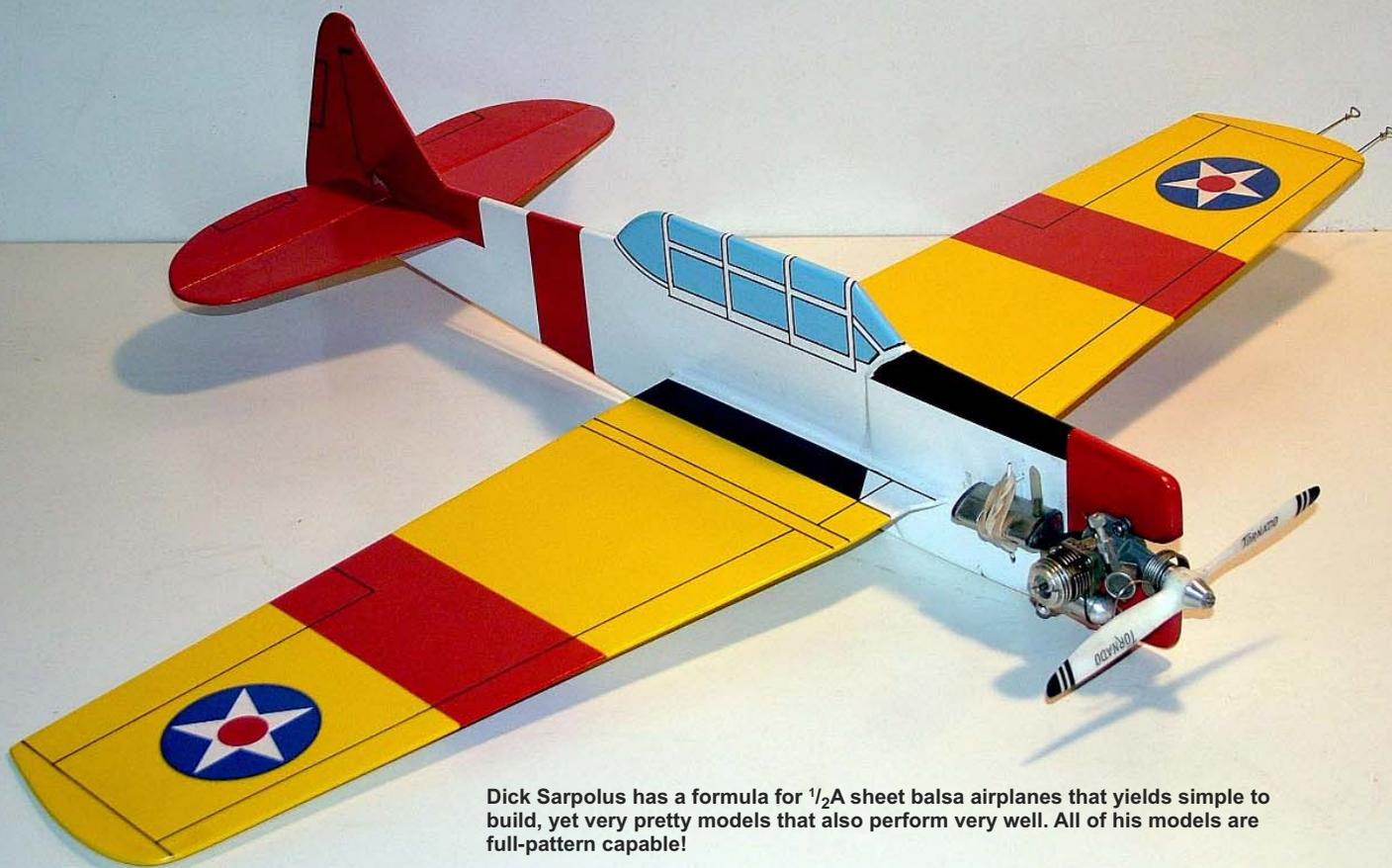
- Must meet a standard AMA pull test. No line length requirement. AMA line sizes required.
- Any fuel allowed.

Flight:

- The maneuvers are the same as the PAMPA pattern and in the same order. However, there are no intermediate laps, and only one repetition is required.
- Maximum flight time 5 minutes from start signal. Pilot may be at the handle when signaling to maximize available flight duration. (Not required to start or hold the model.)
- There will be 2 or 3 flights for each contestant at the CD’s discretion.

Judging:

- The flights will be judged as a whole, rather than individual scores for each maneuver. Scores will be from 1 to 10 for the entire performance.
- All contestants will judge all flights (except their own, of course). The scores of all the judges will be added and the highest total for one flight determines the victor. *SN*



Dick Sarpolus has a formula for 1/2A sheet balsa airplanes that yields simple to build, yet very pretty models that also perform very well. All of his models are full-pattern capable!

1/2A Sheet Balsa Flat-Plate Wing Models

The first hint I had that a 1/2A powered sheet balsa airplane with a flat-plate wing could actually fly through the whole Stunt pattern was when I saw Red Reinhardt fly his Snapper, back around 1951. (It was published in *MAN* 7/52.) With a Wasp .049, Red flew this all sheet balsa airplane and did everything with it that the larger 35-size airplanes were doing.

Fast forward 25 years, and around 1975 I had two sons to teach how to fly CL. So I built an all sheet balsa airplane, thinking of Red's Snapper, and it flew great. My two sons learned how to fly CL with no problems. Forward another 25 years, and my son Rick was building sheet balsa 1/2A airplanes with which to teach his son Matt how to fly CL.

This stuff works. And during those past 25 years I had gone on to design and build about three dozen more sheet balsa 1/2A CL jobs (all published in the model magazines) for my own flying fun. The engines got better; Wasp .049 to Cox Tee Dee

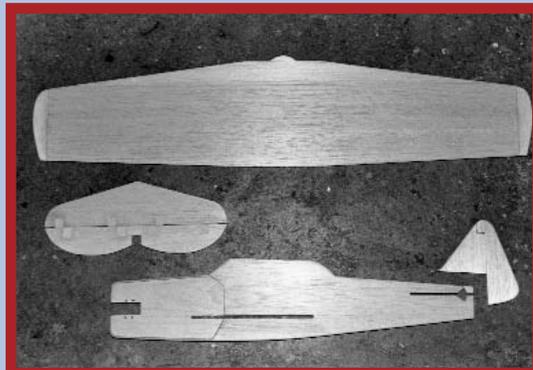
.049 to Norvel .061, and the fun was always there. For a minimum investment of time and money, the little airplanes could be flown through the whole Stunt pattern and provided a lot of CL fun. Not to be taken seriously by the CL community, these small 1/2A jobs were for flying-over-the-grass fun, doing all the stunting you could handle without worrying much about the inevitable crashing.

Now this Kwikiee Stunt stuff going on by Larry Renger and the guys in Southern California appears to be stirring up interest in semi-serious 1/2A flat-plate-wing Stunters as a competitive fun event. It is fun! Try it! The capability of these little airframes may surprise you and get you making more wood chips and sawdust, always good for the hobby. The only thing you will have to do to make these designs legal for use in Kwikiee Stunt is to add a simple bent wire landing gear. *SN*

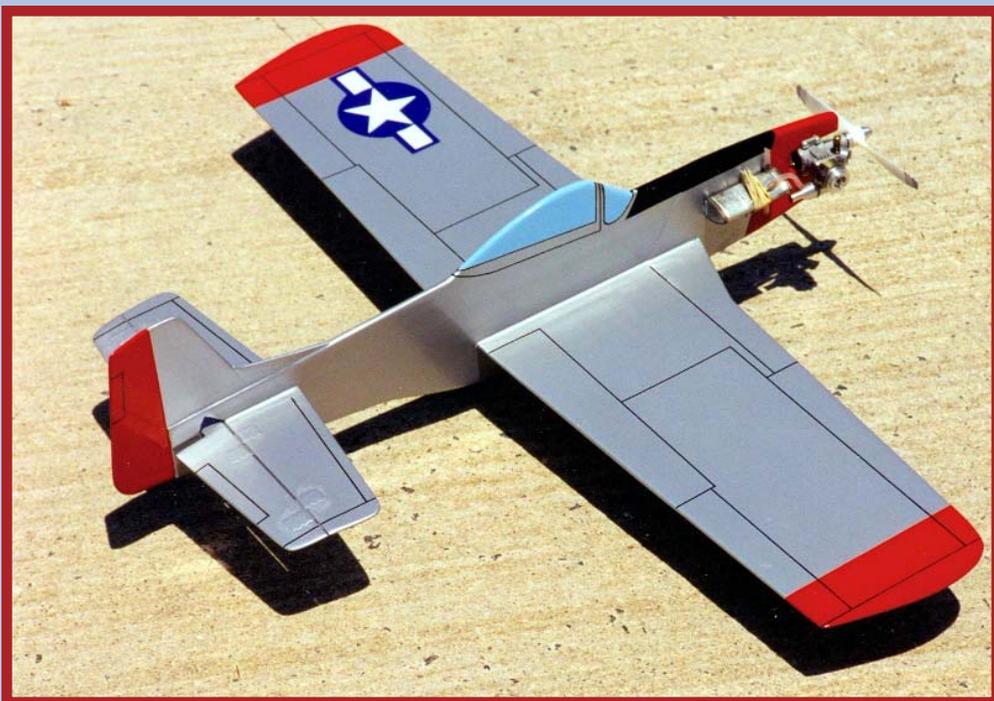
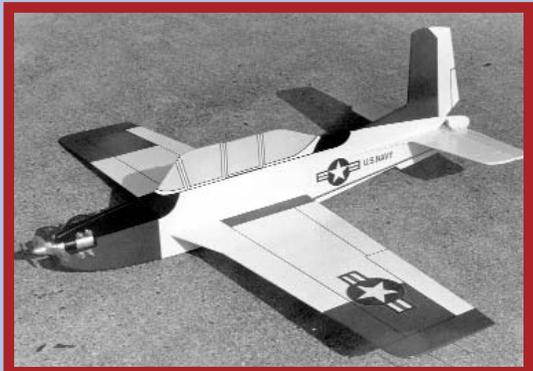
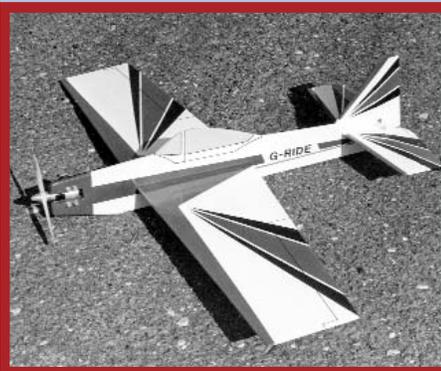
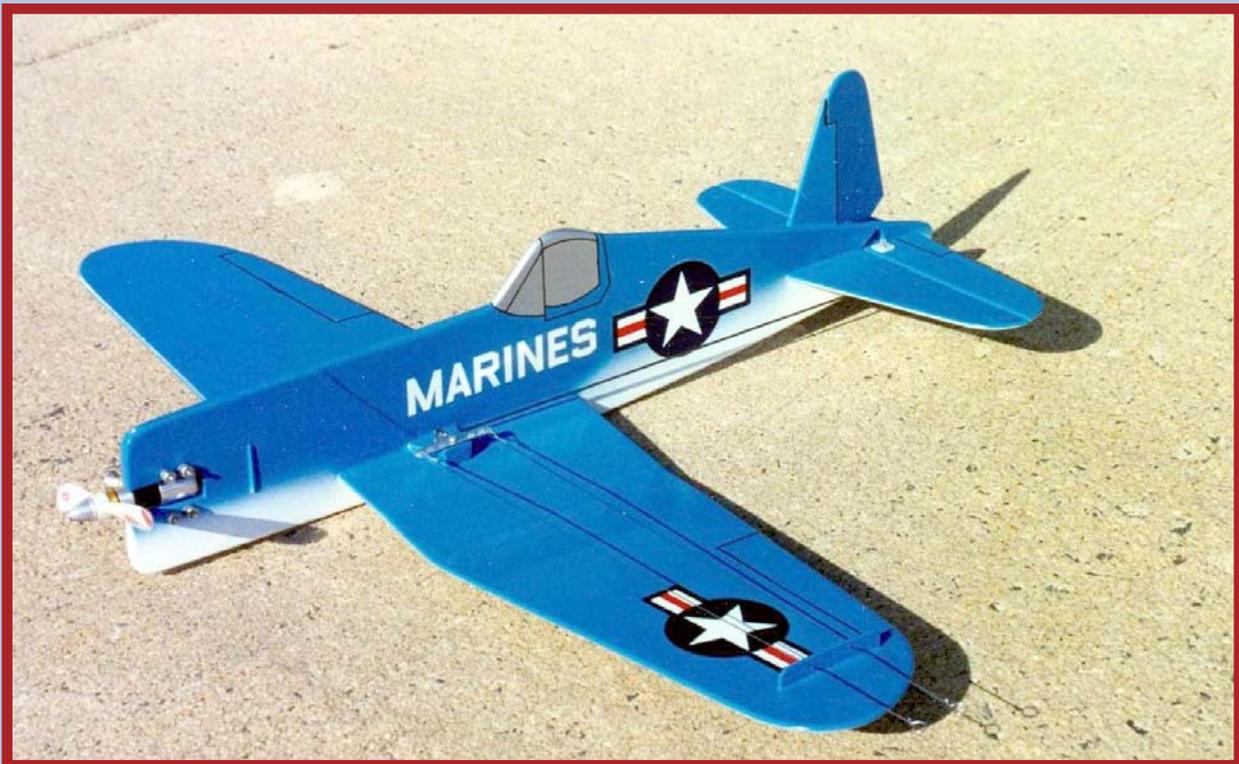
—Dick Sarpolus

Right: Here are all the balsa parts for Dick's AT-6 Texan. The finished model is shown in the photo at the top of the page. The article about this model appeared in the December 1992 issue of *Flying Models*.

Far right: Even swept-wing jet models look stunningly realistic and they also fly well. Here's Dick's F-86 Sabre Jet which appeared in the July, 1993 *Flying Models* magazine.



Right: This "bent-wing" Vought Corsair design is a surprisingly good flying example of Dick's all-sheet-balsa formula. It was featured in the March 1991 issue of *Flying Models*.



Above left: Dick's Avenger would be a good choice for CL aerobatics because of its large wing area. This one was published in the September, 1977 issue of *Model Aviation*.

Above center: This Stevens Akro design was featured in the February, 1984 issue of *Flying Models*. Aerobatic models offer a lot of options for colorful trim schemes.

Above right: The long nose moment of the Turbo version of the T-34 Mentor lends itself nicely to our purposes. Both the Turbo (C version) and standard versions were shown on the plans that appeared in the May, 1992 issue of *Flying Models*.

Left: Everybody loves the Mustang! This one was published as a feature in the January, 1999 issue of *Flying Models*. There are dozens of great trim schemes available for this one!

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.

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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. 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.

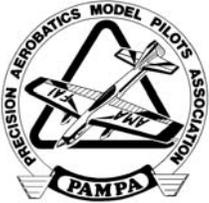
Bob also offers a custom building service for Lost-Foam wings. Please contact Bob at RVP for pricing and delivery times and terms. Bob has built more than 250 Lost-Foam wings to date!

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Please Note: Some items are now available only as a download from the PAMPA website. You can visit the website at www.control-line.org for these items and past issues of Stunt News. Download items may be available to PAMPA members only.

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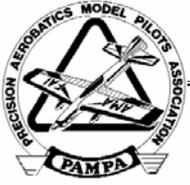
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PAMPA News & Reports

Vice President Report

By Matt Neumann



Hi everyone. I am writing this in the first part of November before my term of office begins, so I decided that in my first article I would tell you a little bit about me so you will be better acquainted with your new VP.

My actual paying job is selling parts for semi trucks which I have been doing for the past 15 years or so. I work at a Volvo/Mack dealership in Vincennes, Indiana where I also live. Should you ever be in the neighborhood and would like to drop in, please do so.

I have been interested in airplanes as long as I can remember. I started modeling at about age nine when my dad came home with a plastic model of a Corsair. At the time I was interested in the TV show called *Blacksheep Squadron*; I wanted a plane to play with while I watched. After that he got me a Zero so I would have something to “shoot” down. That got me interested in scale plastic modeling; which I still do today. I have quite a collection now of a couple hundred models, mostly $1/72$ scale, which are displayed in two large custom display cases in my home, with several hundred more kits waiting to be built (as well as another display case).

It was a short time after this that my dad got me interested in the flying models. He had been flying off and on, and as I got older my dad and I would go out flying together—he would fly his “big” 35 powered plane, and I would fly my “little” 20 powered ship. I really did not learn to fly the whole pattern until the mid ’80s

however. At that time I was just a sport flier. Then the Nats came to my home town in the late ’80s and I got my first real look at competition. It was at that point that I decided competing looked like fun!

After finishing college in 1991 I finally got to fly a bit more and decided to compete in a couple of local contests. My first competition plane was an overweight modified Sig Twister powered by an FP 35 turning a 12-6 prop. I still have that plane, by the way, hung up in my trophy room. I have been tempted a time or two to take it down, dust it off, and try it out just to see how far I have come in 20 years.

During my first year of competition in Intermediate class I did OK. I don’t think I ever won anything, but, with my Dad coaching, I continued to improve, and the following year I decided to move up to Advanced, and that’s where things started happening. In 1993 the Nats came back to Vincennes and that is where I got my first taste of actually competing in the Nats. For that Nats I wanted to have a better competition plane but which one? Dad has a set of original *Air Trails* plans of the Don Still Stuka. He has always liked that plane, and I had built one for the Old Time and Nostalgia (now called Classic) events. I then built a $1/2A$ version of it. So the next logical step was to make a larger version for the FP engine that I was using. All of these planes were painted black, as per the original Don Still paint scheme.

Here I was in my first Nats. I knew hardly anyone, and hardly anyone knew me. Both dad and I wore black outfits to match the plane with Stuka Stunt in white letters on the back and everyone looked at us like we were crazy. (They thought we would be hot in those outfits, but we really weren’t.) Since hardly anyone knew us at the time, someone who wanted to get my attention yelled out “Hey Mr. Stuka!” It was at that point that I adopted that as a nickname. My goal at that first Nats was to break into the top 20 in Advanced, which I did, actually making the middle of the pack in that group.

By the time the Nats came to Muncie in ’96, I had gotten good enough to be “kicked up” to Open class in local contests, and I felt that’s where I should be at the Nats as well. So I entered Open at the Nats for the first time flying an

updated version of the 1993 plane. Plans were drawn up for this plane and are now available from PAMPA products. I continued to fly updated versions of this design until the ’99 season where the first of the “big” Stukas appeared. This one was a 630 square inch design with a 53 sized engine in it.

The year 2000 saw the first of the piped planes with the all white plane. This served me well in 2001 when, at the end of the season, I finally made the top ten at the FAI trials. Unfortunately my celebration that year was cut short when the wing folded on the outside portion of the wingover during the last official flight. A bit of a downer for sure.

In 2002 I came back with a new version (much stronger center section in the wing) and made the top 20 in Open at the Nats for the first time. Ever since I have worked to climb the ladder, so to speak, and have been pleased to make the Top 5 in Open at the Nats the past two years; and all with some version of my trademark Stuka. I think at this point, people would faint if I flew something different.

Competition is only part of the story, however. It begins with building and flying, and I enjoy doing both. During the summer I will go out flying nearly every night that I am able. During the winter months you will find me at my work bench building. Two of my planes have now made the front row in appearance point judging at the Nats. As a result of what I have learned, I have taken on the writing of the “It’s in the Details” column in *Stunt News*. Well, there you have it; a short little history of my modeling career to date.

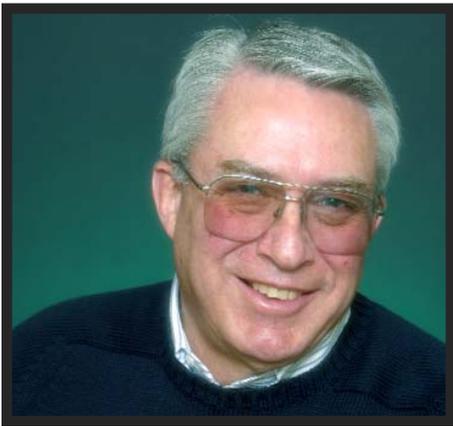
As PAMPA Vice President I welcome suggestions as to what PAMPA should be doing. Feel free to contact me with suggestions. My preferred method of communication is email. Remember, this is a volunteer job so I will respond as time permits. But I will respond. I just ask for a little patience should a response be delayed.

I look forward to fulfilling my duties as Vice President of our organization. As the old commercial once said, “Thank you for your support.” *SN*

—Matt

Secretary/Treasurer's Report

By Dave Gardner



A couple of quick notes: Several of you have tried to be helpful when renewing your memberships for 2011 by rerouting the pre-printed envelopes furnished in the membership mailing. You have marked out the given address (mine!) and written in Noel's address, presumably to make a more direct mailing. It was a good plan, but thwarted by the USPS, since the bar code at the bottom of the envelope is for my address—and the mail goes to the bar code, regardless of what is written!

Additionally, it really doesn't matter to whom the renewal is addressed or sent; either I have to collect the money and send the form to Noel, or he collects the form and sends the money to me. It's probably the least effective part of this split responsibility, but it's working!

We are getting well, financially! I don't have a year-end report for this issue of *Stunt News*, but please note that the Treasury has funds on hand, at the end of 2011, to cover all anticipated expenses for the coming year! This is due in part to all your efforts in getting your membership renewals in before the end of the year! We have also kept a sharp eye and pencil (or keyboard!) on our operational expenses and providing the membership with all the benefits you normally expect.

In addition, Gene Martine has done an excellent job with our advertising program, keeping that as a viable income stream. PAMPA Products, under Jim Snelson, has also become well organized and somewhat profitable.

That said, we still have a very few players making the show work, relative to our overall membership. Folks, we need your input and actions to keep PAMPA a going concern! Our organization may not be in need of resuscitation, but we all need

to help sustain it! We are a diminishing group, perhaps the last stronghold of our wonderful part of model aviation.

Age, most notably, has reduced our active ranks, and the gaps are not being filled from below, as it were. Each of us, with some small efforts, can be a source of strength for the whole organization... and beyond! The following is a commentary on the actions of one person.

In 1963, Edward Lorenz presented a hypothesis to the New York Academy of Science, which simply stated "The fluttering of a butterfly's wings in Brazil, amplified by atmospheric currents, could cause a tornado in Texas two weeks later." Lorenz and his ideas were literally laughed out of the conference.

Thirty years later, however, physics professors from around the world concluded that the "butterfly effect" was authentic, accurate and viable: it is now known among the science community as the "Law of Sensitive Dependence upon Initial Conditions." Science has shown the butterfly effect to engage with the first movement of any form of matter, including people!

Author Andy Andrews talks about a former Bowdoin Maine College professor appointed as a Union Colonel who played a major role at Gettysburg: Joshua Lawrence Chamberlain. Chamberlain held the last line for the high ground. With no ammunition, his decision on the final attack was to fix bayonets and lead a charge into more than 400 well-armed Confederate forces. Eighty unarmed Union soldiers took the 400 men prisoner. Historians concur that this particular battle decided who was to win the war. Historians also insist that if the South had won the war, today we would find ourselves in a fragmented continent much like Europe.

One man helped to shape what is today *one* great country!

Andrews readily correlates the butterfly effect to the individual. Simply stated, every single thing you or I do (or

do *not* do) matters. He raises several questions we can all reflect upon: Do I make a difference? When I act, move or do something, should the universe notice? In our daily lives, we should be conscious of the butterfly effect, because, as Andrews writes, "By your hand, thousands of lives may be altered, caught up again in a chain of events begun by you this day."

Collectively and individually, we all continue to make a difference.

Keep in mind that the position for the Secretary-Treasurer will be vacated at the end of 2011 because I took the position for one term (two years) more than three years ago. It's time for new and (hopefully) younger blood to handle this position.

Please note that I have no higher aspirations within PAMPA! I'm again putting out an early heads-up because it takes a bit of a transition time, with moving the money around, possibly a new bank setup, along with a new setup for managing credit cards. It just takes some deliberate planning ... a bit like a retirement move!

All you need is to be somewhat fiscally literate, with a good set of ethics, and a desire to "give back" to PAMPA and the hobby/sport for all the years of services and benefits it has given out. You don't have to be a "brain" or a financial whiz to manage it—just some attention to detail—and that's just what you do when you build your models, isn't it?

Have good air and tight lines!*SN*

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District I

By Will Moore

By the time you read this it will be mid-Winter in New England. Most of us ambitious sorts are building or dreaming about our next Stunt machine. I thought it would be a good time to highlight some of our New England Stunt Team members during these months. Dick Carville came to mind because I have been flying with Dick for several years now, and I did not know much about his hobby history and I am always curious about such things.

Dick and his wife Doris, live currently in Lowell, MA. So they live quite a distance from where I fly in Wrentham, MA, but he and his wife attend every contest in the area and a few outside New England. I know Dick goes to the Brodak Fly-In every year. He flies in "Expert" and is an exquisite builder. I consider Dick to be up there with the top builders—like one of the best. Every piece of artwork that has come off his bench, that I have seen, seems to be flawless. Dick builds the classic way; with silkspan and dope, either Randolph or Sig. He has a nicely appointed workshop in his basement, and he uses his garage as a painting area. Modest as he is, I was able to wrestle a few bits of his life out of him for this report and I want to share those bits with you. I hope I can remember most of what he said, and if I got it not quite right, I hope he will forgive me.

When he was in the eighth grade, Dick got his hands on a 1/2A Scientific kit, purchased from funds he collected from shoveling snow. That was about 1955. He powered the airplane with an OK Cub .049. A gentleman by the name of Mike Whitney helped him in these early years, and they flew 1/2A models for a few seasons. Dick said that the Wen-Mac Beechcraft was the best flying of the bunch. They moved on to Ringmasters and Sterling P-51 profiles (and who didn't fly dozens of those kitted airplanes back then?) using Fox Rocket engines running on Blue Blazer and Testors 39 fuels. Dick remembered purchasing an American Boy Scientific kit for \$1.00. Remember the prices back then?

When Dick got into high school, he learned to start engines and got good at it. The local hobby shop asked him to help them start engines as a little side job after school, and they would give him 50 cents for each engine he started for a customer.

That little assignment evolved into a job behind the counter at the hobby shop. They got a little model airplane club going, but there were no adults as yet participating. So that shows you the kind of affection Dick must have had for the hobby back then. They didn't fly the pattern yet. I don't think they knew what the pattern was. What they did do though was fly a sort of sport combat with modified Ringmasters, Missile Mist fuel and 8 x 8 props.

As a kid in high school, Dick joined the AMA in about 1959 and started to go to contests in Weymouth, MA and in 1961 went into the USAF for a few years as a crew chief on fighter aircraft. Dick serviced F-101 and F-102 fighters during that time. He got discharged in 1969. Then in 1972, he started up again in the hobby. You know, I hear that a lot from people that I talk to. They get into it, sidestep it for a while, because of life's activities, and then get back into it; like it's in the blood or something. They just can't stay away too long. And if they do stay out for years, they still seem to find their way back. It does get under your skin, somehow, and you jump back in. There is no denying it. And it seems, once you get the bug, you're done. It's over for you. It's there forever. There is just something about it. I can't put my finger on it, but we all know what it is, because we've all felt it. Everyone may feel it a little differently, for different reasons, but it's there. We seem to inherit a passion for this stuff.

Dick manifested Production Inventory Management skills and landed jobs associated with that field. That is how he has supported himself and his family through the years. He built a (here we go again) Ringmaster for his son, to teach him to fly, and that is when he bumped into a fellow by the name of Mitch Lilly. Now Mitch was a master builder of the highest order. He was fascinated with Bob Hunt's skills as a builder and designer and flier, and learned much from Mr. Hunt. And, as a consequence, Mitch was a huge influence on Dick's building skills. I once remember Dick telling me that if Mitch dinged a piece of balsa while using it on an airplane, he would set it aside and start over. The wood had to be perfect going on the model or it was not used. Dick considers Mitch to be the best builder in the New England area, ever, period. And

he felt honored to be able to learn from him.

While Dick was back to flying, he met Ray Duby, who showed him how to fly the Stunt pattern and they flew for awhile at the Yankee Flyers' club field in Merrimac, NH. Dick entered his first Stunt contest in about 1973 where he met Dave Cook, and between them—that is Dave, Dick and Mitch—they started up the New England Stunt Team (NEST). That is when Dick started to really build. He plied his building gifts first, on a scratch built Nobler. He flew that for a while. Then Dick saw Bob Whitley's Miss Kell on the cover of *Flying Models* magazine and scratch built that. From then on there was no stopping him.



Dick Carville and his Retro.

Dick's first "60" size model was an open cockpit design of his own, with his own airfoil. From that point on, he built very few "kit" airplanes as he preferred to design and build his own creations. With these masterpieces he entered every contest he could reach, every year. Dick placed second in the Canadian Nationals in 1982 with his original Retro design. Dick's first exposure to a National event in the USA was in about 1983/1985 (can't quite remember) at Westover AF base in MA. In those years, Dick always placed just short of the top 20 at the national level. That is saying something!

These days, he flies with the NEST boys and is also a member of the 107th RC flyers who have a control line pad at the field. Like some of us, Dick flies RC as well as control line. These different venues are both enjoyable, and I think he would agree, that there is something special about being connected to the

airplane and performing precise maneuvers in a controlled sphere, where the bottoms of most maneuvers are 4 to 6 feet off the ground, using an airplane you designed and build from the ground up.



Dick's Crusader.



Dick Carville's Black Magic.

At some point in his life, Dick owned a full-scale aircraft. He owned a Piper Cherokee and holds an aircraft mechanic's license, as well as an instrument rating. What is his favorite model airplane? His beloved Retro!

And, what does the future hold for Dick? Well he's messing about in electric and is currently converting one of his creations to electric for this coming contest year. I can't wait to see it. I know it will be



Dick with his Raven.

beautiful. And I know it will fly as well as it looks. So, guess what? You will have to excuse me now, as I need to do some serious practicing. I feel Dick Carville coming out of the sun. **SN**

District II

By Windy Urtnowski

No report this issue. **SN**

District III

By Patrick Rowan

New Jersey, New York

Ohio, Pennsylvania, West Virginia



Bob McDonald holding his Apogee. Bob took first place in Expert and Classic. Dave Evar photo.

In September the North Coast Controliners of Cleveland, Ohio put on another great contest. Contest Director Dave Heinzman and his crew did a nice job. Lots of work and so little pay.

If you have never been to the Cleveland contest do yourself a favor and attend next year. Much fun.

The photos are from that Cleveland meet.



Gary Tultz of Akron, OH getting ready for his judging duties at Cleveland.



Les Byrd holding his Saturn flown in Advanced. Dave Evar photo.



Patrick Rowan holding LA 40 powered Viking. Took first place in OTS. Dave Evar photo.



Bill Stewart holding his Pathfinder.



Rob Young from the Columbus, Ohio area is shown here holding his T-Bird II.



Ray Row of Norton, OH with his LA 46 powered Cardinal. Third place in Intermediate, third in ARF and third in OTS.



Bob Hudak holding his Stunter that took first place in Intermediate at Cleveland.



Bob McDonald getting ready for an official flight.



Eric Keller holding his ARF Pathfinder LA 46 powered. Eric took second place in Intermediate. Dave Evar photo.



Willis Swindel of Virginia holding his P-39. Willis was into twins, pushers and many unusual Stunt projects. Rest in Peace, Willis. John Tate photo.

Till next time fly Stunt. *SN*



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District IV

By Steve Fitton

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

Hello everybody, I hope you are having a nice winter out there, and have some fun projects on the building board for next season. You should be getting this issue right before the 2011 KOI in St. Augustine, Florida; do try to make it there if you can and let's support the new contest site and start the 2011 season in style!

I have two district contests to report on for this issue, and tons of great pictures to show you, so let's get started.

On September 25th, The NVCL club held their annual Stunt contest in Lorton, Virginia. About 20 pilots showed up to enjoy the wonderful warm autumn weather and light winds. Contest Director Dick Houser and the crew did a great job running this one-day contest, and we look forward to seeing this contest come around again next year.



Dick Houser gives his CD briefing as the NVCL contest gets underway.



Jimmy Welch gets the prop super tight on his ST-51 powered T-Rex before officials at the NVCL contest.



A view of the Northern Virginia contest pit area. Excellent turnout and great weather this year meant the pits were almost overflowing.



Al Reed's Patternmaster sits ready for flights to begin. Al would win Advanced in commanding fashion on this day.



John Murphy concentrates on his level laps.



John's Cardinal profile goes through its paces. John did a neat canopy layout on this model that makes it look like the long greenhouse on the Silver Lancer models.



Dave Reyes launches Frank Dobrydney's modified Sig Banshee on a flight in Intermediate.



Frank at the handle of his silver Banshee.



Artie Jessup's XP-40 breaks ground under the power of its ST-51



Dave Reyes puts up a flight in Advanced with his Excalibur.



Dave's Excalibur curves its way through the overhead maneuvers



John Lindberg's profile Pathfinder makes its way through the pattern.



John hard at work putting up a good pattern for his official flight. His efforts paid off with a third place position in Advanced.



Scott Richlen readies his RoJett 65 powered Cobra for Expert competition.



Scott shows that he knows where 5 feet is on his level laps! Scott would get a third place in Expert and Tim Staggs' electric Tsunami would garner second place honors.



The trophy winners celebrate another great Northern Virginia contest!

A month after Northern Virginia, fliers from all over the East coast converged on Huntersville, North Carolina for the annual Carolina Criterium contest. Once again, we were blessed with some of the best weather we have had in many a year at Huntersville, and turnout was very good and flying was non stop. It was good to welcome back District IV director emeritus Bill Little and his son, Aaron, from several years off. Aaron shook off the rust very quickly and would go on to bring his PA-40 powered Satona to a third place finish in Advanced. It was also a treat to see the entire Lee family come down for a visit to the Charlotte area, with Todd bringing his Fox 35 powered Eclipse Stunter to a third place in Nostalgia 30, and both Todd and Jim bringing in top ten finishes in a crowded OTS field as well.

The Metrolina club also erected a very thoughtful memorial to all the district persons lost this past year that was appreciated by all who were there. Thanks guys!



Aaron and Bill Little ready Aaron's Satona for some practice on Friday at Huntersville.



John Rakes' nice Vector rests in the pits. John uses a PA-40 on a header muffler for this plane.



Aaron Little puts his Satona through its paces.



The pits are very busy during Sunday action at the Huntersville contest.



Derek Barry used his World Championships take-apart Dreadnought XL for Expert at Huntersville. Coming off his trip to Hungary, both Derek and plane were in very sharp form and were a lot of fun to watch.



Terry McDowell on his way to a third place finish in OTS.



Brian Moore's very nicely done ST-51 powered Tony stands by for Nostalgia 30 duty.



Derek's daughter, Layla, puts the finishing touches on her most excellent pebble collection while she waits for Daddy to finish his flight!



Many thanks to Jeanna, who toiled all day long with tabulation. Behind her is the Metrolina Club's recognition of those District IV persons lost this year.



Some of Dan Banjock's "Aluminum Air Force" reflects the sun. Maybe he will get a few more of them flying soon ...



David Smith isn't afraid to be different, as he both plays with carrier models and biplanes. Here his Sig Ultimate goes through the pattern up on the Intermediate circle.



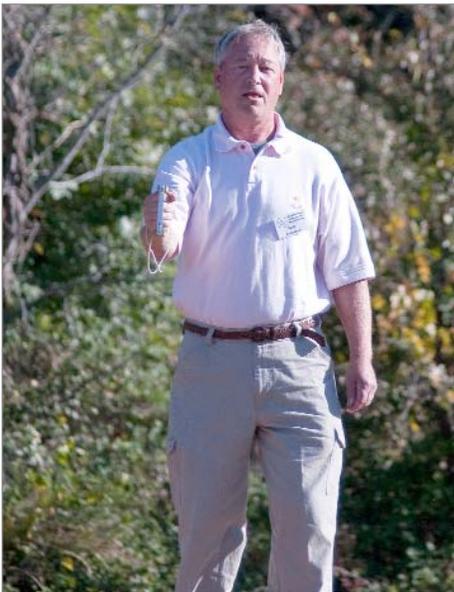
Phil Spillman corners Tom Dixon to discuss some motor tuning issues.



Dan Banjock's PA-75 powered Vista comes in for a landing during Expert on Sunday. Dan would edge Derek Barry by .3 points to win Expert. The .75 is a potent powerplant for this big model; your columnist got to fly this airplane this past summer and it is very, very good!



Ray Copeland's plane pitches into the outside part of the Overhead Eight.



Ray puts up a flight over on the Intermediate circle.



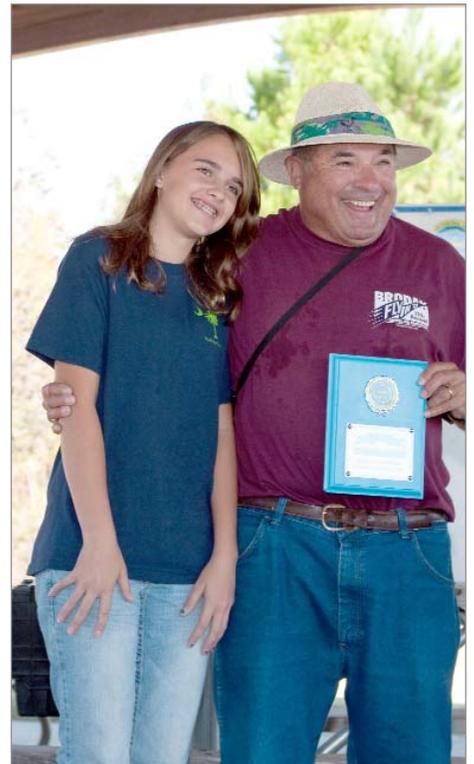
Expert judges Kent Tysor, John Rakes, and Terry McDowell watch as Tom Dixon's Cardinal passes by on an official.



John Tate signals for the start on the Advanced circle while Jim Lee's plane flies in the background.



Todd Lee is training his daughter to fly early! Look at the delighted smile on her face ...



One last parting shot, but anybody who goes to the southeast contests or Brodak's recognizes Watt Moore's charming granddaughter, Olivia. It seems that Miss Olivia is growing up, because here she is clearly as tall as Phil Spillman. By the May 2011 Huntersville, guys like Phil or Gene may be looking up to Olivia (!).

That will be all for this issue gang, good luck with building season and we will see everybody at the King Orange! *SN*

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

District V

By Eric Viglione

This column represents the completion of my first full year as your rep, and I hope you are happy with my work so far. I would like to thank those that have contributed to this column. But ... (and there's always a but isn't there?) ... I really would like to hear from more of you. I have a list of District V members, complete with phone numbers, e-mail addresses, etc. and I'm not afraid to use it. J

By the time you read this it will be full blown winter building season. It would be great to get some input from the district of what is currently on your benches

Speaking of contributing, thanks to District IV reps Steve Fitton and Derek Barry, we have some pictures from the fall Huntersville NC contest. A good many of

our District V members attend this contest, as have I in the past. It's a very well-run contest on a great field with great people hosting it.



Tom Dixon demonstrates level flight.



Tom Weedman concentrates on an official flight.



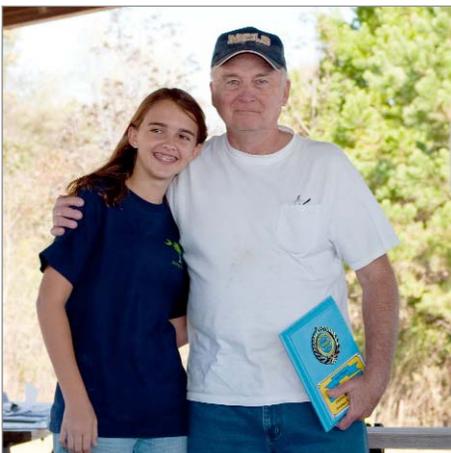
Derek Barry's World's Dreadnaught, cleaned up, touched up, and looking better than ever.



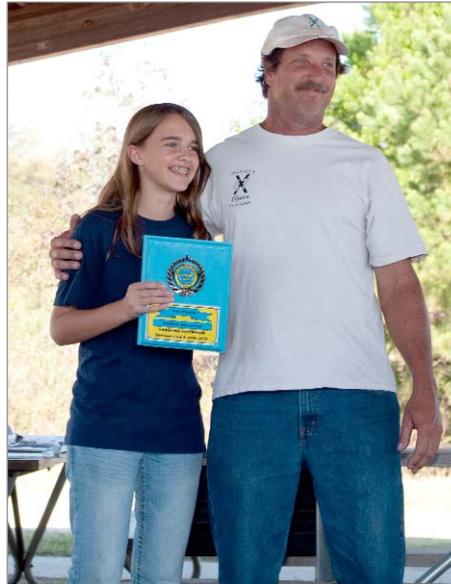
Gene Martine assumes the overhead eights stance.



John Simpson puts his Cavalier on the bottom deck.



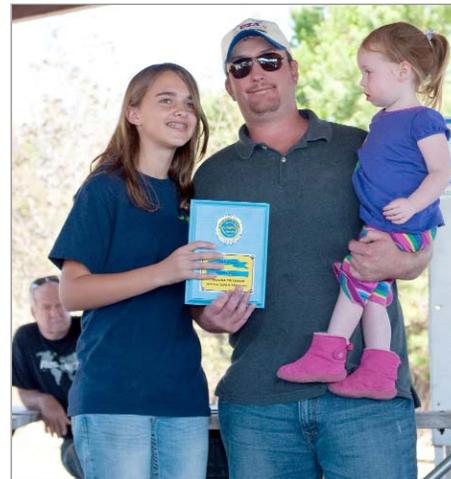
John Simpson receiving his award for first place in Classic.



Tom Weedman takes first in Advanced.



John Tate presents the Ringo perpetual trophy to Tom Weedman.



Derek and Layla receiving second-place Expert trophy.

The Tampa Bay Line Flyers and our host RC club MCRC put on annual Stunt Contest on November 7. I thought the turnout was going to be a disaster with the horrific winds and cold weather that blew

in Saturday, but thanks to some of our hardy fliers, we had a decent attendance after all and had a good time with minimal carnage.

Jim Smith was our CD this year, and he did a bang-up job. Here is Jim's report:

"November 7th, 2010 MCRC and TBLF CL Stunt Contest:

"Saturday, November 6, 2010 – I arrived at the field around 9:30 a.m. to find my friend Eric Viglione waiting there alone. Eric said one of our RC pilots had arrived earlier, but after sampling the chilly temperature and wind speeds, he decided to just pack up and head for home. Eric and I checked over the next day's flying surfaces and hoped for fairer weather the next day.

"Owen Richards arrived and so we all went to work moving a picnic table and hanging our scoreboard sign Owen had built for posting scores. It worked beautifully the next day. Thanks, Owen; thanks, Eric.

"We hung out talking modeling, as model aircraft pilots are wont to do. Since no one else had arrived and the prospects for any type of model flying activity that day were dim, we all decided to pack it in; it would be an early morning the next day.

November 7 arrived to a forecast about the same as Saturday but with slightly lower average winds, around 17 mph. Headed out from home around 6 a.m., quick stop for caffeine and off to the field. My brother Wayne and nephew Sam were already there getting stuff set up. Thanks, Wayne; thanks, Sam.

"Jim Silhavy is a very experienced Control Line Stunt judge and accomplished modeler. I really enjoyed my day judging alongside him, he provided some enjoyable conversation along with valuable judging advice and perspective. Thanks, Jim.

"Arrivals were a bit slow that day, but soon enough, here they started to come. Winds be danged, every day is a good day to fly! Some days are better served flying indoors and this day definitely had that look, but time to begin regardless.

"We started to register pilots to get everyone checked in with the appropriate AMA Safety Form, individual event registrations, score sheet completions, weighing of aircraft (plus or minus 17 mph :) performing appropriate pull tests on all aircraft lines for safety, pilots' meeting, the seeding of flight order, and of course the part my friend Ray Thompson enjoys the most: *collecting the cash*.

"Many thanks to Ray Thompson, master calculator Paul Sequira, Phil and Marty, Ward Duzer and the other club

members who helped get this thing off the ground, literally. Time to fire them up!

“Winds were brisk and temperature definitely chilly for our Florida participants. Thankfully, we only had one wind-related event the entire day: a beautiful 4-foot-height square corner followed immediately by what can best be described as a type of pancake maneuver, a healthy *meet the ground - now!* The gremlin that is turbulence bites again.

“Damage was relatively minor; it shall live to see another day. The aircraft stopped right in front of Jim Silhavy and me at our judging stations, still running. I knew how to work this electric aircraft, so I calmly got up from my chair and walked a couple feet to it and removed the safety-arming switch to disable all power. Safety-arming switches are valuable pieces of hardware for any of the larger electric motors—meaning the size that can cut you.

“The pilots did a masterful job under less-than-ideal conditions, and certainly it was a very fun day. We broke for lunch in the middle of Round 2 and everyone got to enjoy some of the fine food prepared by Bill and Cheryl Cryer, Dave Grenier, Laura Long, and the others who were helping at the other end of the field. Jim Holloway was there as well making sure everyone was having a good time. Thanks, everyone. I was really hungry and that burger was good.

“We started giving away goodies donated by a couple of our local hobby shops: Archies Hobby Shop in Pinellas and Charlies Hobbies in Tampa. Most everyone got to take home some little goody; please remember to support your local hobby shops.

“Lunch was good with much kibitzing. Round Two resumed. Winds were definitely stronger this round, but our pilots did a great job and there was no concern of aborting any of the events.

“As the events concluded, I am sure there was a large collective sigh of survival on the part of the pilots. A challenging day, but certainly it demonstrated the quality of pilots we had participating. I thank all who came and participated. The day was definitely a good time and it was great seeing friends again.”

Thanks Jim for that most thorough report!

I took some pictures, and handed Warren Wagner my camera while I went off to spend the day judging OTS and Beginner. Warren did a bang up job and can use my camera any time. Larry Minott of Lake Wales also contributed some great photo's here. Thanks, guys!



Jim Smith's e-power converted Tracer (Larry M. photo).



Ray Thompson enjoys meeting the pilots during sign-in.



A motley crew if there ever was. (L-R) Dave Rountree, Wayne Smith, Bob Whitney, Dave Hallas, and Fred Margarido (Larry M. photo).



Richard Fleming tames the wind in OTS (Larry M. photo).



Bob Whitney also masters the wind in OTS.



Bob Whitney's ST46 Jamison with patriotic scheme (Larry M. photo).



Ed Cook's Brodak Electric Super Clown.



Warren grabs an action shot of me putting up an official.



Sam Neibel's E-Trex in the pits.

This year we used the AMA medals with ribbons for awards, and had the medallions engraved on the back with the event and placing. This seemed to work well, and the contestants seemed to like them. They certainly take up less room in your home than plaques and trophies. When you win enough of them, you can pin them all on your flight jacket and look like a real ace! Hah!



Fred Margarido wins Beginner and a Sky Ray Kit.



Long time no see. Dave Hallas takes second in Beginner. This was probably Dave's only non-racing flights this season.



Sam mugs it up for his first-place Intermediate award.



Jim Catevenis took second place in Intermediate. (No more fast motorcycles Jim!)



Ed Cook appears happy about his win in OTS.



Bob Whitney takes second in OTS.



Richard Fleming brings home third in OTS.



Vigione somehow fooled the judges for a win in Open.



Wayne Smith takes second in Open.



Don Ogren took third in Open with his fine-flying classic GobbleShwantz (is that spelled right?).

That about sums it up for activity in District V this go-around. Next issue should just make the deadline for the King Orange coverage. I'm sure you all are looking forward to checking out the new KOI venue in St. Augustine as much as I am. I look forward to seeing you all there.

Till then, See ya in the circle! **SN**

This issue will cover the Western Kentucky/Southern Illinois Stunt Championships, the FCM event in Muncie, a few shots of the Treetown contest at the Aurora, Illinois, Airport, a few pictures from the Rockford IL contest and a single shot from the New Albany Skyliners. Thanks to Crist Rigotti and Fred Krueger for some shots I was not able to attain with my busy travel schedule. I do appreciate each and everyone's support of this column with your additional pictures.

This is being written on December 7 (Please remember Pearl Harbor) and my recollections of my father; Walter, at Pearl on that bright sunny day in Hawaii. Luckily he was aboard the battleship Nevada and it had steam in its boilers and was able to move away from battleship row and was beached on Hospital Point that Sunday in 1941. Dad transferred to the light cruiser St. Louis and spent the rest of WW II aboard her. Despite having the bow shot out with a torpedo and two Kamikaze strikes, the St. Louis made it home after VJ Day. I became a twinkle in my father's eye in the summer of 1946 and I was brought to the light of day in March of 1947.

The March and April issue will cover more of the Treetown contest in Aurora, the Memphis TN event and the New Albany Skyliners. My travel schedule will next include the Ice O Lated contest held at Buder Park in southwest St. Louis on Sunday February 27. Give Bob Arata a call for details at 1-636-391-0272. Yes, we have had snow on the circle but have flown on those weekends. Last year was basically a rain-out, but it is a nice way to open the season with friends you have not seen since October. Some Ice O Lated contest weekends have been very mild. Remember this is almost the first weekend of March. Most of us bunk at the Pear Tree Inn in Fenton, which is located just across from the old Chrysler plant along I-44 heading toward Six Flags and Springfield MO.

My personal goals are to get Bob Gialdini's 1965 Nats winning Eclipse published with the help of Michael Schmitt of Grayslake IL and CAD-man Watt Moore of Chester SC. We hope to get

the article submitted to *Model Aviation* by late December and then wait for the publication. I am finishing up a 10 year old Oriental which has a base coat on all the wood surfaces and see-through MonoKote green on the wings. With one of my L&J Fox 35s and all equipment aboard; except for fuel tubing and a filter, the model tops out at 37.5 ounces at this point in time. I am hoping to have it come in at 42 to 43 ounces ready to fly. Louis Rankin has cut some fine graphics to add to the model prior to my automotive clear coat.

Watt Moore and I are working on publishing the Bill Skipper AKRO-BAT, a 1947 model which had one ad in *Model Airplane News* and was advertised to be the first kit to have the ability to fly inverted. Flying inverted was one of the main reasons Bill Skipper won so many contests with the 400 square inch bird. We are working to submit the AKRO-BAT to *Flying Models* when the article is complete. The D0-335 1/2A twin profile scale model is on the list to be published in Control Line World and Floyd Layton is helping to CAD this one for me. Further down the line is the publication of Wim Cator's Plano. This Olympus-sized Stunter was designed and flew at the same time as the Olympus by Louis van den Hout and Bert Metkemeyer's Trianic. That should complete my personal goal of getting all three of those early 1960s Netherlands models published. *SN*



We had no Basic flight competitors at the Western Kentucky/Southern Illinois Stunt Championships in Paducah Kentucky this past August of 2010. Our Beginner winners were Ben Mills (left) and Bill Allen (right).



Our top three point-getters in Old Time Stunt at the WKSI were Michael Schmitt of Grayslake IL, Jim Lee of Topeka and Zuriel Armstrong from Little Rock.



The best Nostalgia 30 pilots at the WKSI were John Simpson of AL, Kenny Stevens of KY, and Michael Schmitt from IL.



Profile Stunt winners at the WKSI in August of 2010 were Jim Lee of Topeka KS, Kenny Stevens of Lexington KY, and Zuriel Armstrong of Little Rock AR.



Intermediate winners were Charles Fowler of IL, Rob Young of Columbus OH and Michael Stinson of Louisville KY.



Advanced winners at the WKSJ were Ronnie Thompson of AL, Jason Pearson of IL and Larry Fruits of Plymouth IN.



Michael Stinson of the Louisville KY area is helping Allen Burham at the New Albany Skyliners contest on the Clark County Airport this past summer.



Mike Eber takes in a practice flight with a modified and piped Sig Magnum at the FCM event last year.



Expert top "dawgs" were Kenny Stevens of Lexington, Matt Neumann of IN and Eric Taylor of IN.



Allen Goff preps his Petra 6 at the last practice day prior to the opening of the Fellowship of Christian Modelers Contest this past August of 2010.



Larry Fruits of Plymouth Indiana takes one of his some 550 flights on this Top Flite Tutor II model with an ST .51 for power. Larry is an ever improving pilot on the circles.



The Best OTS model was the Ringmaster by Zuriel Armstrong, the best Nostalgia 30 Stunter (the Eclipse) by Michael Schmitt and the PAMPA Pilot's Choice Award went to Mark Hughes' Macchi.



Frank Carlyle of Michigan brings his very nicely tissueed P-51B model to the FCM this past summer of 2010.



Howard Terrell of the Kansas City area (Kearney MO) met Bill Allen of DeKalb IL and has since exchanged informational emails to help each other to be better Stunt pilots.



Will Hinton thinks about another Panther jet-styled Stunter while assisting and practicing before the FCM event in August of 2010.



Wes Eakin of Hardinsburg KY assists Eric Taylor with a flight in Classic with Eric's Nakke Stunter. Eric powers his Nakke with a Randy Smith PA 40 UL.



Scott Condon holds for Mike McHenry, with Mike's dad's jet-styled Stunter from the 1960s.



Michael Stinson holds for Rob Young, who now flies this ST .46 powered Thunderbird at FCM.



Above: Fred Krueger assisted me with this shot from the Rockford IL contest. Jordan Segal is helping Bill Allen of DeKalb IL with an official flight.

Left: Fred Krueger took this Kodak moment of Crist Rigotti flying at the Rockford IL.



Kenny Stevens "nails" level flight with his Bob Hunt designed Caprice at the 2010 FCM contest in Muncie.



Crist Rigotti provides a picture of Allen and Jan Goff hosting the services on Sunday morning at the 2010 FCM.



Fred Krueger took this shot of dad and daughter team Scott and Venessa Pahlow at the Rockford IL event.



Mike McHenry returns the favor to Scott Condon, and Scott's Bill Werwege designed Ares at the FCM.



More shots of the congregation at the FCM services on Sunday morning at the "L" pad in Muncie.



John Paris preps his well-flying Brodak Profile Oriental at the Treetown contest in Aurora IL during the Labor Day weekend.



Dale Josephson preps his profile Smoothie at the Muncie FCM contest.



Here are some of the models to fly at the Saturday portion of the 2010 FCM contest.



Bill Allen, his wife Suzy, my wife Kathy and I dined at Al Capone's Hideaway restaurant along the Fox River near Batavia IL. If you dine there, bring plenty of cash. We had a wonderful meal, and it made up for all the dollar menu venues we entered the rest of the weekend.

District VII

By John Paris

Iowa, Michigan, Minnesota,
Wisconsin

I hope that all is going well for everyone in the New Year and that the projects you have started are moving along well. Work requirements have kept me from really working on much for the last couple of months so fortunately there has been some input from some of our district members on their current projects. First up is Crist Rigotti with some information about an enlarged version of his Resolve design.

Crist writes:

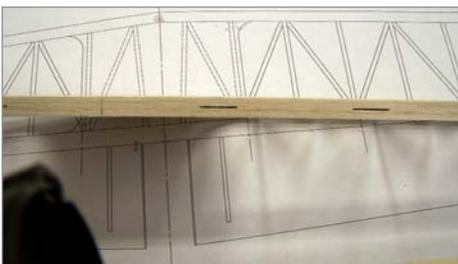
“My winter project is another electric profile. I enlarged my Resolve profile to 620 square inches. It’ll have a foam wing and a profile fuselage. I’m changing the side view too. It’ll have trike gear too. I’m planning on using a Scorpion SII-3026-710 motor and a 5S 3000mah battery. Here are some photos of it.”



The enlarged wing prior to sheeting.



Framing up the tail.



Using stacked wood results in perfect hinge slots.

Wayne Willey has a project going for a Brodak Zero. For those that know Wayne, he rarely leaves things as they were designed. Here is what he has to say about the changes that he made and his plans for this airplane:

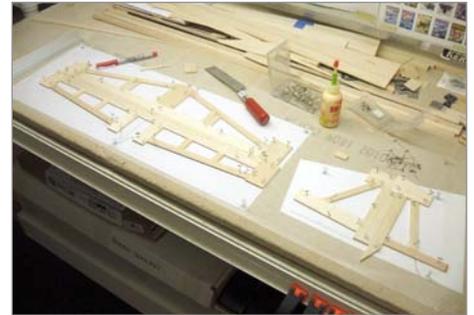
“I can’t seem to leave anything alone. I’m currently working on what I’ll still call a Brodak Zero that will have a Brodak .40 for power. I started out wanting to make it more scale-appearing in outline and detail, and maybe even step up the flying qualities a bit. As it’s coming along, I’m making enough modifications to it that by the time it’s finished the only Brodak kit parts left in it will be the ribs and some of the fuselage stock.

“I’ve added a 1/4 inch tall by 1/2 inch wide strip all along the top and bottom of the original fuse stock to make it taller overall for a closer to scale proportion. I feel this really helped stiffen it as well. Then I opened up a lot of it, added truss work, and sheeted it with 1/8 inch balsa for a built-up assembly. It is already a very rigid structure, but will still get carbon veil over the entire nose and engine area. The tail moment is now 1 inch longer than stock. I made new longer, unequal length, engine bearers with new 1/8 inch 5-ply doublers and a 1/2 inch balsa nose tripler. A height adjustable tank mount was also made from scratch and added.

“For the wing, I’ve switched to spruce spars and added main spar and TE shear webs across the entire span. I tossed aside the stock sheet wingtips and made completely new built-up tips with hollowed LE tip blocks. With all of that the overall span is now 51 inches where per the kit it was 48 inches. A six inch wide carbon veil was also added around the wing center section. With all controls, tip weight box, and leadout slider installed, the wing came out at 9.7 ounces sanded and ready to cover. Pushrods will be carbon fiber.

“All of the tail surfaces are now built-up, tapered and sheeted structures, with the new stab span being 2 inches longer overall. All of the tail surfaces are 1/8 inch structure sheeted with 1/16 inch balsa, and the elevators and rudder were taper sanded prior to sheeting. The rudder will now be adjustable for trim. The new flaps will be solid, tapered, and have 1/2 inch more chord across the entire span than stock.

“The finish will be all Brodak dope with plans of a Pearl Harbor era paint scheme and markings.”



The tail structure in the early stages.



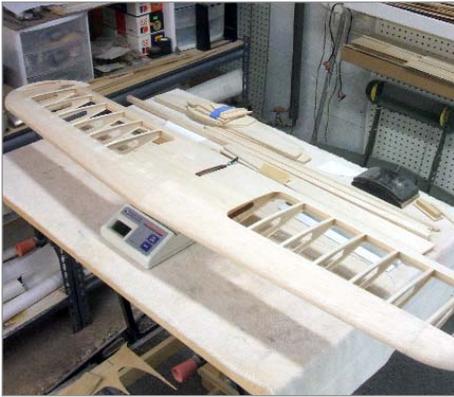
The finished tail.



Built up fuselage for this one.



The motivating end of the fuse.



The completed wing.



The wing and fuselage prepared for assembly.



Inboard tip detail.



The airplane fully framed up.

Wayne passed along also that one of the local club's officers, Jeff Welliver, had passed away early in November. Fellow club member Tony Kubers passed this along about Jeff:

"With regret, I pass on the news, that Jeff Welliver, a charter member of the

Minneapolis Piston Poppers, (for 50 years) died Wednesday, the 3rd of November.

"Jeff was a very active member, serving several times as club president, field marshal, safety officer, etc. and was the current vice-president.

"Jeff would freely express his love of modeling with all those around him, always ready to share his knowledge and give advice. Jeff was instrumental in working with the AMA and the PCA to help procure our flying field, and was always involved with club activities. "He will be missed ... "

I knew Jeff primarily from the trips to the Sig event in Iowa. We communicated back and forth via email on various topics over the last few years and I am glad to say that I had a chance to get to know him. While I don't know much about the cancer that he had, I do know that we do need to take care of ourselves by visiting the doctor on a regular basis and subjecting ourselves to the tests that they recommend. This will help us stick around so that we can enjoy each other's company for as long as possible.

As usual, please pass along any information that you have about the projects that you are working on or news of the people in our district. *SN*

Arkansas, Louisiana, New Mexico, Oklahoma, Texas

District VIII

By Don Hutchinson

Here we go again! I just realized the deadline is in two days; guess I better get something on paper quick. I will start off with what is happening here in the district. Last year's contest season is over—a lot of fun and flying to remember and it looks like this year will be even better.

A quick check of the District VIII Stunt contest schedule shows a chance to compete at least once each month from May through November; July being Nats week of course, so if you are a contest hound, District VIII is a pretty good place to be!

You can check the schedule by going to the DMAA web site at www.dmaa-1902.org. May involve a bit of traveling for you, but that is part of the fun in this game.

The two big perpetual trophies we award here are the PAMPA Stunt and the Profile Stunt trophies. Both awards are based on points accumulated throughout

the year at District VIII contests. Last year's winner of the PAMPA award was Dale Gleason. That makes it three in a row for him!

The Profile trophy was new last year and the first winner's name to go on this one is Dale Gleason! A real close second for the profile award was Joe Hildreth, by a mere two points! Congratulations, you worked for it and now you reap the rewards! P.S.: Be sure you polish them up before handing them over to the next winners!

Why do I always seem to go back in history in this column? Maybe cause I have seen lots of it! Most of us know that Oba St. Clair is credited with building the first control line model similar to what we fly today back in the late '30s. Other than that, most people have no idea if he stayed involved with the game.

Recently, I ran across an article that chronicles the fact that the Eugene (Oregon) Prop Spinners set a new world

record for sustained U-Control flight back in 1957. Part of the team that did this was Mr. Oba St. Clair.

My point here is that he surely was around to see some pretty airplanes fly the modern pattern. What a sense of accomplishment that had to be for him. The full story on the Prop Spinners flight was in Bill Netzeband's "Round and Round" column, *MAN*, July 1970.

See Spot run! If you see *any* odd looking spots on your skin, get to a dermatologist and have them checked. I had a couple that seemed pretty innocent but had a checkup and the doc sliced off a small sample for test. Shortly thereafter, a specialist removed two nice sized chunks of my anatomy!

The first samples did show melanoma; the second excavation removed it all. We spend a lot of time in the sun and so ya'll be really aware and careful about this.

Keep a close watch on yourself. Unchecked, it could get to be a really

January/February 2011 85

serious matter. After you read this, go find a mirror and take a good look all over your epidermis!

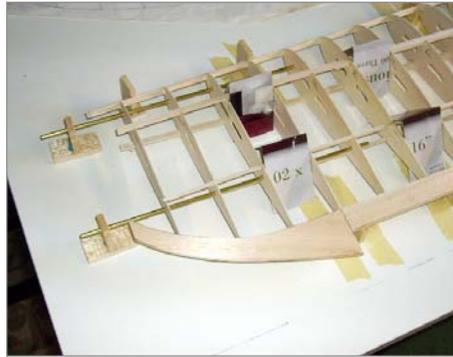
I went out to California last

September for the Golden State meet and flew my 1959 “T-Bird” in Classic. I got as far as inverted flight and I just watched the model get lower and lower each lap until it flew right into the ground. Not a cool move when Bart Klapinski is your launcher!

To atone for this lapse of good sense, I am building a new one. Anyone who has built “T-Birds” knows that getting the wingtips straight is a daunting task. Since I do my wings with simple leading and trailing edge balsa jigs, there was no problem on straight parts.

For the new Bird, I needed a way to keep those elliptical tips straight. The light went on and I said “rods!” I stacked up the last five ribs and drilled two holes in them. After getting the straight part of

the wing done, I inserted two $\frac{5}{32}$ -inch diameter brass tubes, the tip ribs using simple cardboard rib spacers and then the trailing edge pieces.



One method for building elliptical wingtips.

The photo showing how I did this tells the whole story. In reality, it would be a good idea to build the whole wing on rods; that way one could apply the LE

sheeting etc. while still on the rods and expect a nice straight wing when finished.

As you can see, you are dealing with a real Luddite here! Not much improvement from when we were kids. Back then, we built our Stunt model wings holding them in our hands! With that, I will close with the classic admonition for all pilots! Break ground and fly into the wind.” **SN**



This gorgeous trophy now resides at the Gleason spread.

District IX

By Carl Shoup

Colorado, Kansas, Nebraska, North Dakota, South Dakota, Wyoming

No report this issue. **SN**

District X

By Jim Hoffman

Arizona, California, Guam, Hawaii, Nevada, Utah

Happy New Year—my name is Jim Hoffman and I will be serving as the PAMPA District X Director. I'd like to thank Dave Fitzgerald for his service the past many years as our District X rep. It's not an easy job and the line of volunteers to succeed him was sparse. I will do my best to keep us all apprised of the activities, events, and news from around our district.

A few words of introduction are in order at this time. I have been flying Stunt in the Phoenix area for 30 years and currently live in Chandler, Arizona. My modeling story is pretty typical of so many of us. My father dabbled in control line and introduced me to it as a child; the hook was set permanently. I dabbled in control line throughout my childhood and even a little in college.

During my years in college at Ohio State I was fortunate enough to get friendly with Joe Reinhard. Joe has been a

close friend and mentor ever since.

Following the college experience, I moved to Arizona was able to put forth more time and effort and develop my Stunt skills. I soon began entering contests and got to know many other modelers in the southwest and southern California.

Along the way I met dozens of great people, some of whom have also become my lifelong best friends. Many of these friends were incredibly helpful in my modeling efforts as well. I fly all the Stunt events (AMA, OTS, and Classic) and have dabbled in carrier and scale; I even flew a little RC in the distant past.

I work as a project engineer in the aerospace industry and have been involved in the design, development, and certification of equipment for the environmental control systems and engines for a variety of airplanes, mostly business jets the past few years.

Interesting work, but it keeps me hopping. I've also worked on the development of a variety of airplanes, missiles and the International Space Station. My career and engineering training were certainly the result of my model plane passion as a youngster. Sound familiar?

I've been a PAMPA member since very near to its inception in the 1970s. My motivation for this tour of duty as the district rep is to simply try to give something back and contribute to the Stunt community.

I do need help to make this column interesting. I request that you *please* send me input for this column. Please send me any news, interesting Stunt stuff, photos of people and airplanes, social events, gossip, club news, etc.

Photos reproduce best if the file size is big (1-2 Megabit). You can email two or three at a time or put more on a CD. My contact info is at the end of the column.

On September 25th and 26th, 2010 the Cholla Choppers in Tucson hosted the Marschenke contest. The weather was nice except for some very serious wind on Sunday during the PAMPA Stunt events. We all flew one round and very few took their second round flights. I recall brave efforts from both Sean Cheung and Bob Whately. Bob flew a great second flight in the wind and was able to move into first. Rickii Pyatt has provided some photos.



Here's Rick Green and his El Diablo at the Marschenke Contest.



Peggy Capitennelli and Monica Iverson did the tabulating at the Marschenke Contest.



Steve Holt brought his Ringmaster to the Marschenke Contest.



Nick Lemak flew a Humongous in OTS in Tucson.



Rickii Pyatt at the other end of the lens at the Marschenke Contest.



Your new District X PAMPA Director dusts off his Impact at the Marschenke Contest.



Kirk Mullinix and his gorgeous Dreamer took on the wind at the Marschenke Contest.

The Golden State Stunt Championships (GSSC) were held October 23 and 24, 2010. A local group from Tucson made the road trip, as well as honorary Arizonian, Roy Trantham. I know the turn out and talent pool were excellent; unfortunately the weather Sunday was chilly and maybe a little wet. It was reported that Howard Rush did a fine job as CD and that the Saturday banquet/appearance judging session was most enjoyable. I am including some photos of the GSSC, thanks to Rickii Pyatt.



John Callentine dressed warm at the GSSC. Photo by Rickii Pyatt.



Warren Tiaht and his new Blackbird at the GSSC. Photo by Rickii Pyatt.



Sean Cheung flew his Lou Wolgast designed Fury at the GSSC. Photo by Rickii Pyatt.



Jerry Silver and his beautiful Bob Hunt-designed Caprice at the GSSC. Photo by Rickii Pyatt.



Jim Aron and Ted Fancher get ready for an OTS flight at the GSSC. Photo by Rickii Pyatt.



John Wright starts his OTS entry at the GSSC. Photo by Rickii Pyatt.



Phil Granderson brought his new "Elroy" electric ship to the GSSC. Photo by Rickii Pyatt.



Brett Buck selects a take-off spot at the GSSC. Photo by Rickii Pyatt.

The Whittier Narrows flying site was threatened last year with a possible park improvement that could jeopardize the current CL site. The local club, Knights of the Round Circle, has done a good job of staying in the loop and attending the hearings. They have worked to make allies of the nearby RC fliers and have strived to represent themselves in a professional manner in this public forum. Some recent email traffic indicates that a new master plan has just emerged and a public meeting was scheduled for the evening of November 16, 2010. I will update you in the next issue on the status at that time.

Woodland site

Doug Barton provided an update on the woodland site on November 11. Take it away Doug ...

"Good afternoon to all: On Oct. 27 we had 68 loads of AB gravel delivered to the new site, at about 23 tons per load. That was 13 trucks running all day from 7:00 AM to 3:30 PM. We directed the trucks for dumping and John Eaton ran the grader spreading the rock. This included the road in to the property, and the RC parking lot and the CL parking lot. Through the next week John completed the grading and several of the members helped with the water truck and rolling the rock.

"On Wed. the 3rd, we took delivery of our new 40-foot Conex and the moving of the existing Conex from the current field. We have the RC runway ready for

the petromat, and that is being delivered today, 12 rolls, 15 feet wide and 300 feet long. The club members have been forming metal stakes to hold the petromat down, about 6500 stakes. The existing flat top storage shed is ready for moving and should be done in the next week. The petromat is going to be laid this Saturday, and if anyone wants to help, it would be greatly appreciated. Work starts at 8:00 AM. The CL circles need some final finishing and rolling. The center circle will also get petromat.

"For those that do not know the new field is located on County Rd. 29, about 1.5 miles east of County Rd. 102. Rd 29 runs along the south side of the Willow Slough canal and is a gravel road. If coming from the bay area, take Hwy 113 north to Rd. 29, then east on 29 to Rd. 102. Turn left on 102, go 200 feet and right on to Rd. 29. Do not cross the bridge."

This past weekend I was given a preview of a new project from John Callentine. I took some photos of his Rabe Mustang all framed; power is a PA 61. John is doing his usual superb work and hopes to have it done in time for VSC. It has shock absorbing landing gear and carbon torque tube stiffened flaps. *SN*

Jim Hoffman, 2658 W. Montgomery Dr., Chandler AZ 85224; (480) 897-0630 Windswept4@cox.net.



Above: John Callentine and his Rabe Mustang.

Inset: Callentine's Mustang experiences its first exposure to daylight.

The following is excerpted from the Northwest's control line news source: flyinglines.org, which is maintained by the hard work and dedication of John Thompson of Eugene, Oregon.

"The 2010 Fall Follies ended the Northwest control-line aerobatics season on an upbeat note, with two packed-full days of stunt flying in perfect weather conditions. Saturday was sunny after a cloudy morning, breeze dropping away to almost nothing. Sunday was overcast but with pleasant temperature and again almost no wind.

"Turnout was good, with 28 contestants making 94 official flights over the two days. There were only two minor crashes and only five second-round passes in the two days. People were there to fly, and they did. The lineup of planes in the pits was impressive to the spectators who dropped by the field; a few potential new members were contacted by the host club, the Western Oregon Control-line Flyers.

"Highlights of the contest included the traditional Saturday night party at the home of Bruce and Kris Hunt, and the Sunday afternoon barbecue for participants hosted by Mike Hazel.

"A silent auction was held for a full-blown Old-Time Stunt package including a Walter Umland Galloping Comedian kit, Enya .30 engine, a custom Scott Riese Handle and all hardware including Tom Morris controls. Richard Entwistle took the package with a bid of \$200, which went to support the Northwest Regionals contest. The package was donated by Don McClave and Scott Riese.

"A live auction of two items benefited the WOLF club: Mark Scarborough took a set of Gypsy wing cores, plans and magazine articles for \$25, and an Argus kit was purchased for \$75 by Terrance Bardue. The Gypsy was donated by Jerry Eichten and the Argus by Gerald Schamp.

"In the flying, Paul Walker took the Expert Precision Aerobatics crown. Dave Royer topped Advanced, Geoff Christian took Intermediate, and Jim Harper won Beginner. In Saturday's events, Pete Peterson won Old-Time Stunt, Bruce Hunt topped Classic, Steve Helmick won Sportsman Profile and Scott Riese took the Expert profile crown.

"The Follies is also the place where

the annual Vintage Stunt Trophy race is settled. The trophy, sponsored by Don McClave, is awarded to the top scorer in the *Flying Lines* Northwest standings in combined Old-Time and Classic Stunt. For the fourth year, Bruce Hunt took the trophy, flying his Lark in Classic with excellent scores all season long. He also won the award in 2006, 2008, and 2009. Other winners have been Scott Riese (2005) and Pat Johnston (2007)."

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**



The flightline was very long for the well-attended Fall Follies at Salem Oregon.



Scott Riese and Don McClave judging during the Fall Follies. Good judging makes for better flying.



Pete Peterson's Jamison Special.



Pete Peterson's Jamison Special ready for a flight in Old Time.



The bright yellow of Pete Peterson's Jamison stands out against the blue sky during the Fall Follies' excellent flying conditions.



Leo Mehl's Vector 40 entry made a good showing for Leo at Salem.



Paul Walker, standing on right, and Howard Rush, seated, watch Steve Helmick's Vector 40 make an inverted pass.



Roy DeCamara's Jamison Special was easier on the ears than his ignition models of years past. As always, it is immaculately finished.



Steve Helmick fires up his Vector 40 with Pete Peterson holding.



Roy DeCamara puts in an Old Time flight. Bruce Hunt judges in the background.



Roy DeCamara's and Pete Peterson's Jamison Specials pass on the way into and out of the pit. Don McClave carries DeCamara's Jamison.



Greg Davis of Port Coquitlam, B.C. built this Stunt Master, powered by a K&B Torpedo .23.



Floyd Carter's Hurricane made an appearance at the Fall Follies.

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Contests ←

2011 AMA Control Line Aerobatics National Championships July 4 - 9, 2011

Friday, July 1-Sunday July 3

7:00 a.m. Control Line Precision Aerobatics Practice Grass 600 x 600 Only

Monday, July 4

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 5

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) AMA Board Room

Wednesday, July 6

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
5:00 p.m. PAMPA EC meeting AMA Board Room
6:00 p.m. PAMPA General meeting AMA Board Room

Thursday, July 7

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 8

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 9

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 AMA McCullough
7:00 p.m. PAMPA Banquet Education center
(by AMA Museum)

*Unofficial Event

If you are flying only unofficial events, you still must register with NATs headquarters and pay a site use fee, \$10.

KARL MARSCHINKE MEMORIAL CL CONTEST - SANCTION # 10-1769

HOST: CHOLLA CHOPPERS MAC, AMA#1989, Tucson, AZ

September 25-26, 2010

CLPA ED: Robin Sizemore
OLD TIME STUNT 25-Sep-10

	Rnd 1	Rnd 2
FLIER		
1 L. WOLGAST	293.5	<u>301.0</u>
2 R. WHITELY	<u>300.5</u>	299.5
3 J. HOFFMAN	<u>299.5</u>	287.5
4 B. BROKAW	<u>286.0</u>	263.5
5 R. SIZEMORE	217.5	<u>272.0</u>
6 M. DUFFY (Sr.)	269.5	<u>261.5</u>
7 G. ALLISON	260.0	<u>178.0</u>
8 R. GREEN	<u>248.0</u>	PASS
9 S. HOLT	124.0	<u>245.5</u>
10 N. LEMAK	<u>233.0</u>	230.5
11 L. CORBETT	<u>219.0</u>	119.5

Judges: Warren Tiaht, John Callentine

CLASSIC 25-Sep-10

	Rnd 1	Rnd 2
FLIER		
1 R. WHITELY	505.5	<u>505.5</u>
2 W. TIAHRT	<u>496.5</u>	449.0
3 J. CALLENTINE	<u>489.5</u>	488.0
4 R. SIZEMORE	467.0	<u>482.0</u>
5 S. CHUANG	460.0	<u>466.0</u>
6 G. ALLISON	440.5	<u>450.5</u>
7 B. BROKAW	<u>440.0</u>	PASS
8 M. DUFFY (Sr.)	448.5	<u>449.5</u>
9 R. GREEN	<u>438.0</u>	PASS
10 L. CORBETT	<u>400.0</u>	PASS
11 N. LEMAK	335.5	<u>379.0</u>

Judges: Rickii Pyatt, Lou Wolgast

COMMENTS:
 Best flight scores in bold.

Weather on Saturday, September 25,
 was hot , with moderate winds.

Sunday forecast was strong winds,
 increasing through the morning. The
 forecast was correct. Wind decided many
 to 'PASS' when called to fly.

INTERMEDIATE & ADVANCED 26-Sep-10

	Rnd 1	Rnd 2
FLIER		
1 G. ALLISON	<u>373.0</u>	PASS
2 M. SMITH	<u>344.5</u>	PASS
3 N. LEMAK	PASS	PASS
4 L. CORBETT	PASS	PASS
5 D. GATES	PASS	PASS
6 R. GREEN	PASS	PASS
(Intermediate)		
1 S. HOLT	168.5	Pass

Judges: Jack Comer, Lou Wolgast

EXPERT 26-Sep-10

	Rnd 1	Rnd 2
FLIER		
1 R. WHITELY	493.0	<u>527.5</u>
2 L. WOLGAST	<u>503.0</u>	PASS
3 K. MULLINIX	<u>500.0</u>	54.0
4 J. HOFFMAN	<u>487.0</u>	PASS
5 R. CUBERLY	<u>476.5</u>	PASS
6 S. CHUANG	447.0	<u>464.5</u>
7 R. SIZEMORE	<u>453.5</u>	PASS
8 M. DUFFY (Sr.)	<u>422.0</u>	PASS
9 J. CALLENTINE	<u>191.0</u>	PASS
10 W. TIAHRT	PASS	PASS

Judges: Ed Capitanelli, Rickii Pyatt

Tabulators:
 Monica Iverson, Peggy Capitanelli

Pull Tests:
 S. Holt, L. Corbett, R. Green, others

Score-sheet runners:
 M. Davis, R. Green, others

CD: Lou Crane, AMA23139

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Broken Arrow 23 Stunt and Scale Contest

September 25 & 26, 2010

St. Louis, Missouri

Sponsored by Lafayette Esquadrilla

The two-day contest enjoyed good Stunt weather with Saturday temps in the 70s and light winds. Sunday was in the 50s cloudy with a touch of rain. Classic, Nostalgia 30, Olde Time, Profile Stunt, Sport Scale, Profile Scale and 1/2A Twin Scale were flown on Saturday. Basic Flight and four PAMPA classes were flown on Sunday. Members of the sponsoring club crafted all awards.

Classic Stunt: Judges, John Garrett and Steve Smith

Keith Trostle	Rabe Bearcat	Jeft/Aldrich .50	561
Mike Schmitt	Eclipse	PA .65	521.5
Dan McEntee	Shark 45	ST .51	521

Nostalgia 30 Stunt: Judges, John Garrett and Steve Smith

James Mills	Formula S	Mag .36 (Barker)	508.5
Larry Lindburg	Juno	ST .46	412.5

Olde Time Stunt: Judges, Dan McEntee and Jim Thomerson

Allen Brickhaus	Adams Special	L & J Fox .35	309.5
Charles Reeves	Big Job	Fox 59 short	309.5
Keith Trostle	Big Job	D.S. .60	304
John Garrett	Barnstormer	L & J Fox .35	295.5
Crist Rigotti	Jamison Special	Scorpion 3020-890	287.5
Mike Schmitt	Jamison Special	OS FP .40	283.5

Continued on page 96

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* Area 660 Sq. In.	* Area 700 Sq. In.
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Olde Time Stunt continued

Robert Whitney	Jamison	S/T .46	267.5
Larry Lindburg	Barnstormer	Fox .35	216.5
Floyd Layton	Barnstormer	Fox .35	102.5

Profile Stunt: Judges, Bill Marvel and Bob Arata

John Garrett	Primary Force	OS .32	564.5
Dennis VanderKuur	Pathfinder (kit)	OS .40 LA	550.5
Dan McEntee	P-Force	OS FP .25	542
Allen Brickhaus	TEOSAWKI	OS .40 fp Barker	528.5
Larry Fruits	Tutor II	ST .51	527
Mike Schmitt	Pathfinder (kit)	OS LA .46	517.5
Crist Rigotti	Resolve	Scorpion 3020-890	511
Howard Terrell	Tutor II	ST .51	475

Basis Flight: Judges, Dan McEntee and Bob Arata

Ben Mills	Super Clown (arf)	OS .25 LA	124
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Beginner Stunt: Judges, Dan McEntee and Bob Arata

Bob Johnson	Hard Candy	OS LA .46	187.5
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Intermediate Stunt: Judges, Dan McEntee and Bob Arata

Brian Harris	Buccaneer	OS .40	433
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Advanced Stunt: Judges, Dan McEntee and Bob Arata

James Mills	Formula S	Mag .36 (Barker)	490
Steve Smith	Fancherized Twister	OS LA .40	470.5
Jason Pearson	Nobler	OS FP .40 (Dixon)	458
Howard Terrell	Tutor II	ST .51	456.5
Bob Whitney	Jamison	ST .46	423.5
Larry Fruits	SV 11.5	PA .65	dnf

Expert Stunt: Judges, Steve Smith and Bill Marvel

Keith Trostle	Bearcat	Jeff/Aldrich .50	540
Mark Hughes	MC 72	PA .65	525
John Garrett	P-Force	OS-.32	514.5
Dennis Vanderkuur	Legacy	PA .65	511.5
Mike Schmitt	Eclipse	PA .65	497
Dan McEntee	Score	Saito .56	495.5
Crist Rigotti	Resolve	Scorpion 3020-890	468
Larry Lindburg	Juno	ST .46	dnf

Special Awards:

“Spirit of ’52” to Charles Reeves for his Big Job
“Spirit of ’68/80” to James Mills for his Formula S
“Concours d’ elegance” to Mike Schmitt for his Eclipse
“Black Feather Award” for the worst crash to Ben Mills

Tabulator/Sign up: Randy Ross

Pull Test: “Pete” Peterson, Nick Angeli

Runners: Rich Raftery, Crist Rigotto, John Moll

Awards: Gus Voegel, Allen Brickhaus, John Moll, Lois Moll, Larry Wooldridge, & Bob Arata

Contest Director: Bob Arata

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Vintage Stunt Championships

REGISTRATION AND PAYMENT: VSC-XXIII (23) March 15 – 19, 2011 (Five Days)

Please complete ALL sections including AMA #, EMail Address, Banquet Choice, and Signature (required)

NAME: _____ AMA # _____

STREET: _____ CITY: _____ STATE: _____ Zip _____

EMAIL ADDRESS: _____ License Plate # and State: _____

Needed if you would like entry conformation

(Only if staying in park overnight)

FOR ANY AND ALL EVENTS: I hereby certify that I have read all information accompanying the entry form, and that the model(s) entered by me will be built by me (if required) and flown in compliance with the current Competition Regulations (both AMA and PAMPA), and will previously have been successfully flight tested and proved to be airworthy in accordance with the Official AMA Safety Code.

Signature: _____

EVENTS ENTERED:

OTS @ \$20.00 _____ (Tues. 15th – Wed. 16th)

IGN @ \$20.00 _____ (Tues. 15th – Wed. 16th)

CLS @ \$20.00 _____ (Thru. 17th – Sat. 19th)

ARF's. ARC's. Purchased, or Borrowed models are allowed in all event, but, models entered in Classic receive a zero (0) for appearance points. For details refer to the Cholla Chopper web site; www.ccmasonline.org (See Item #1)

BANQUET (Hickory Barbeque Brisket) _____ @ \$28.00 _____ (Sat Night the 20th)

BANQUET (Chicken Marsala) _____ @ \$28.00 _____ (Sat Night the 20th)

BANQUET (Vegetarian Entree) _____ @ \$28.00 _____ (Sat Night the 20th)

Entry Must be Received Not Later Than Friday March 4, 2011

Make Checks Payable to JIM HOFFMAN (EMail windswept4@cox.net)

Mail to: 2658 W. Montgomery Drive, Chandler, AZ 85224

(Cholla Chopper Web Site: www.ccmasonline.org)

1) VSC 23 Headquarters Hotel is the Riverpark Inn (520-239-2300) at 22nd street & I-10. Access is from the frontage road going South along I-10. I-10 is now open in both directions making it easier to get to the hotel. Mention Vintage Stunt when making your reservations. To get the room rate (\$68 plus 13% tax & \$2 bed charge per night) reservations must be made by February 15th, 2011. Rates change after two (2) people per room.

2) All contestants entering VSC are required to sign the entry form where indicated. A builder of the model rule, as it applies to VSC, is included in the current Competition Regulations for VSC and is posted on the Cholla Chopper Web Site. Please read it if you have not already done so. Pull Test for Old Time and Classic Stunt will be per the 2009 – 2010 rules for Control Line Precision Aerobatics. (10g pull test based on the weight of the model). Scoring for Classic will be per the 2007 – 2008 rules for Control Line Precision Aerobatics. This means pattern points will be included in the scoring.

3) During the two official flight days for Old Time and Old Time Ignition (March 15 & 16), the two unused grass circles will be reserved for Old Time and Old Time Ignition practicing until 10:00AM. No Classic practice flights will be permitted on these two circles (at the contest site) before 10:00AM these two days (Tuesday & Wednesday) unless the ignition stunt competition ends early. If ignition stunt ends early, that grass circle is open for practice to any and all competitors. The asphalt circle not used for Old Time competition (circle #1) is reserved for Classic practice both days of Old Time Competition until 10:00AM. After 10:00AM all the unused circles are open for practice to any and all competitors. The rules for Old Time Stunt are unchanged.

4) There will be three days of Classic competition at VSC 23; one round each day using all three asphalt circles. The two highest scores will be added together for the final score and placing. Classic Stunt official flights will start no later than 7:30AM each day (Thursday - Saturday; March 17 - 19) with the pilots meeting taking place at 7:00AM each day. Because of the early start the Classic flight order will be posted at the Riverpark Inn during appearance judging Wednesday March 16th.

5) The Dinner and Awards Banquet will take place Saturday night March 19th at the Riverpark Inn located at 350 S. Freeway (I-10 at 22nd Street). Cash Bar at 5:00PM; Dinner is scheduled for 6:30PM.

6) The Cholla Chopper web site is: www.ccmasonline.org. Additional important information is posted there and can be printed, downloaded, or both. You should visit the web site and carefully read all the information provided. Please go to the site and download a full copy of the VSC 23 Flyer. Call Robin Sizemore (520-749-4434), Lou Wolgast (520-749-1812), or Jim Hoffman (480-897-0630) if you do not have internet access.

7) If you plan to stay in Christopher Columbus Park over night, fill in the State and License Plate number of your RV, Camper, etc.; the State if different from the address. We need to know this information so that we can provide it to Tucson Parks and Rec. which will keep the authorities from knocking on your camper door at 11PM.

The Appearance Point

by Allen Brickhaus



StuntWagon

Specifications:

Designed by Hal deBolt
Wingspan: 58 inches
Wing area: 667 square inches
Length: 32.375 inches from spinner tip to aft end of rudder
Weight: 55 ounces
Power: ST .46 derivative
Propeller: Rev Up 12 X 5-inch Wide
Finish: Film and Rustoleum type paints. No dope was used.
Line length: 62 foot lines measured eyelet to eyelet

This StuntWagon is the fourth in a line of successful ventures in Old Time Stunt. StuntWagon number one was flown at the 1991 Nats in Lawrenceville, Illinois. It was most known for smiting the ground during the third outside loop during my second official OTS flight. I lost a great O.S. Max 58 as the head, upper fin area, the piston, rod and cylinder careened across the asphalt while being separated from the rest of the case as the model slammed into the ground. Seems the SIG nylon horn, over the metal wire, broke at the pushrod hole. I could not figure out why my loops were getting larger as I inputted more control. The autopsy revealed the problem. I will never use those horns again.

StuntWagon number two took the 1992 National Championship at Chicopee, Massachusetts, in Old Time Stunt. Number three was a great 43-ounce model which lawn-darted into the earth behind Charlie Reeves' house west of Paducah on a practice flight prior to the Nats. Because of that, I flew my older All American Senior in replacement in 1993. Number four was ready for the Muncie AMA Nats in Indiana and placed fourth. The last one (number 4) is the one I wanted to talk about concerning my finishing technique.



This shot was taken soon after the model was completed for the Nationals. The final product garnered a fourth-place finish in its first outing at the Nats.

The finishing technique has evolved over the years. This is a brief overview of my process. It uses no dope at all in its build up of finish from bare wood up to the final coats. The StuntWagon wood surfaces were taken to a final sanding of #1000 grit

sandpaper and carefully dusted off with a tack rag and a vacuum hose. When doing this, hold the end of the hose in your palm with the hose pointed down and the end of the hose still about a half an inch from touching the surface of the wood. Pull as much excess dust from the surface as possible.

I then covered the wing with white MonoKote. I have covered the full wing before but will concentrate on the way the StuntWagon #4 was finished. I covered the lower inboard wing and did some shrinking of the film. I then covered the top of the inboard wing and final-shrank both top and bottom panels. I followed suit with the outboard wing, covering the bottom first and the top last. Those panels should then be heat-gunned until the surface is smooth. No ironing down is done in this process except around the full perimeter of the film. I did the same for the stab and elevator sections and then set the elevator aside for a while.

The tank compartment was fuel-proofed with a slow-curing epoxy. The amount used was enough to keep the fresh fuel from entering the wood, but not so much that the final weight of the model was endangered. I then used Pacer Z-POXY finishing resin to give the wood surfaces a base coat.

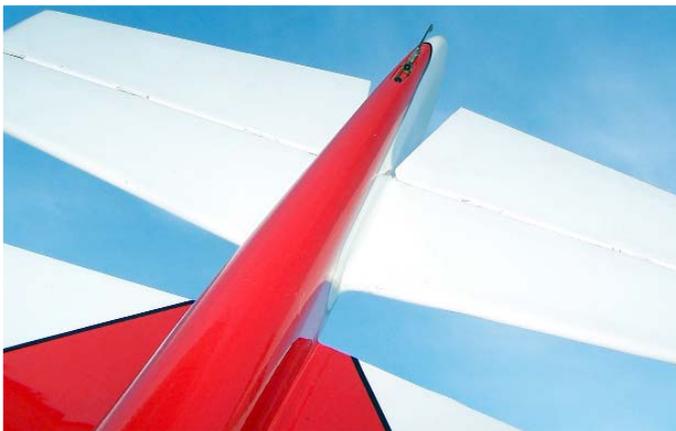
Thin the Z-POXY a little and brush it on. Let it soak in for a moment and then use a roll of toilet paper to remove the excess epoxy. The roll should be rolled over the wet surface so that the paper will not roll off the tube. As the paper is filled with epoxy, tear off the wetted areas and continue. Some would add 1/2 ounce

fiberglass cloth to the surface as they apply the Z-POXY, but in this case, I did not.

Once the coat of Z-POXY has cured, I sand the surface with #240 grit sandpaper used dry. I then re-sand with dry #400



The bottom shot shows the landing gear attachment to the same hole as shown on the plans. My landing gear is as on the plans but does not drop off as Hal wanted the gear to do on the original model.



The lower tail surfaces continue the Gee Bee look as the paint line extends from the fuselage to the wing, stab and tail area.



I really like the way the original Gee Bee red graced the white curvatures of the beautiful barrel-shaped body. I copied that on the StuntWagon.

sandpaper. Next I apply my fillet material. On this particular model, I used leather fillet material purchased from Walter Umland. I used the wider of the two types available for the wing to body joint, while saving the narrower one for the stab and fuselage joint. I used aliphatic glue (your choice) and pins to apply the larger fillet around the wing and body. I began on the bottom aft end of the fuselage and ran forward around the leading edge and finished at the aft upper end of the wing. When cured, I sanded the fillets, brushed a coat of Z-POXY over the leather fillets, and pulled off the excess epoxy and allowed the areas to cure. Then I masked off just outside all fillets and brushed on a coat of water-based spackling compound thinned with water to the consistency of a thick pancake batter. When that had dried, I sanded with succeeding finer and finer sandpaper until I was happy with the surface. I repeated this process one more time.

Now re-mask just outside of the last fillet masking and prepare to spray on a coat of white metal primer from Rustoleum, X-O-Rust, or X-Stop. All are fish-based paints found in local hardware stores. Fix any "dings" with Squadron Tools White Putty, which is available in hobby shops in the plastic car section. Sand to preference, and re-spray with the white metal primer. Now re-mask off just outboard of the last masking and apply your choice of colors from the three above mentioned paint products. *Do not* use their metallics or clears as they are not fuel proof. The regular paints suggested are fuel proof up to 25% nitro based fuels.

Once you are happy with the surface results of the primer/sanding venture, select the same products metal gloss paint and again re-mask just beyond the primered line. Shoot one medium coat of color and re-spray within 15 minutes. Any other time frame will have the paint crinkle or orange-peel. I like to remove the masking material almost immediately so the ends of the paint form a more rounded edge. You must be careful not to drop masking material into the fresh paint. If it is mounted on a paint stand, turn the model upside down to prevent any dust from falling into the fresh paint. It is easier to resolve that on the bottom rather than the top.

Painting on any film involves *never* masking back over the paint you have put on the material. Draw up a paint scheme on the wing and always use at least 1/4-inch fine line 3M tape between colors. The base color showing through makes the trim colors "pop" more than if they were laid side by side. The paint will stick for a long time, but any masking over the paint on a film surface will lift the original paint. The film surface does not have to be sanded prior to painting, but a clean surface will help bond the paint to the film.

Graphics can be applied with vinyl lettering, or numbers can be painted using masking stencils as provided by many sources in the hobby industry. Specially made decals or purchased ones can be added to the model in appropriate locations. If you are not going to add a clear coat, don't locate your graphics and decals in spots where raw fuel or hot exhaust will reach at any time.

Automotive two-part clear-coat paint can be applied to protect all the trim on your stunter. Gary Hajek encouraged me to use the DuPont Nason product number 496-00 clear coat and mixed 4 to 1 with the 483-78 activator/reducer. This activator/reducer is the medium temperature product. The gun of choice is a SATA gravity-fed unit with the model number JET-3000 RP Digital. Twenty-four to 26 pounds of air pressure was used in the booth with the heat on and the fans/filters working. One heavy coat was sprayed on the StuntWagon. **SN**

(See back cover for more pictures)



A specially-built ST 46 now nestles carefully in the nose of the Hal deBolt StuntWagon.



The lower fuselage photo explains the large hole I cut to get the heated exhaust air out of the main body during engine runs.

