

Stunt News

Precision Aerobatics Model
Pilot's Association

May/June 2013 \$5.00



VSC
XXV

Charlie
Reeves'
Humbler

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On the cover: Jim Hoffman gives us a look at his outstanding rendition of the famous Red Reinhardt-designed Galloping Comedian. It is powered by a Brodak 40 and weighs 34 ounces. It was finished with Randolph dope and has an automotive clear top coat. Jim built this model from a Walter Umland kit, which came complete with a gorgeous spun-aluminum cowl by Dan Banjock. Jim built the bellcrank and the tank. Jim was voted as the Keeper of the Flame at this year's VSC in recognition of not only his love for vintage model airplanes, but also for his outstanding service to the VSC community over many years. Photo by Allen Brickhaus.

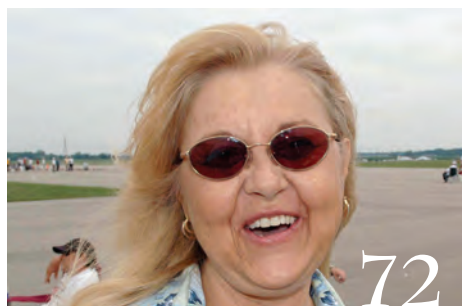
Inside cover: Confused? If you have ever attended a VSC you wouldn't be. There is a pest control company named Truly Nolan in Tucson, Arizona, and they place beautifully restored vintage cars all over town with their company name on them as clever, eye-catching advertising. This scene is one of the more-inventive Truly Nolan dioramas that we've seen. Tucson is a great town to visit. It has great food, beautiful museums, eclectic tourist attractions, majestic mountains, clear blue skies, a sense of humor (as seen above) and, of course, VSC! Brickhaus photo.

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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President's Column

by Don McClave

Vintage Stunt Contest Celebrates 25th Anniversary

In 1989, a PAMPA member named Mike Keville created a new event named the Vintage Stunt Contest (VSC) for models built in the 1960s and earlier. It took place in Los Angeles and fewer than 20 contestants participated.

However, in 1990 the event was moved to sunny Tucson and has become a much larger event with contestants often totaling up to 90 or more from the US and elsewhere. On the 25th Anniversary of VSC, contestants from Japan and England joined the US contestants (and in many cases their families) in late March for what has become a social event that is celebrated every March.

VSC attracts experienced pilots, as well as those who come to participate for fun and enjoy the weather, and this year was no exception. Pilots fly once before three sets of judges, on three different circles, on three different days. My attention was focused on the Classic event.

On day one of Classic Stunt, Paul Walker led over Bob McDonald by a very small margin with Bob Whitely in a group not too far behind. On day two, Bob McDonald pulled into first in aggregate score over Paul Walker and Bob Whitely moved closer. On day three, Paul posted an early 603 score and moved into a lead which stood up all day.

Bob Whitely put in an excellent flight that moved him into second place, and Bob McDonald put in a fine flight that held him in third place. Bob Whitely won the VSC title by one half point over 1976 Nats winner Bob Hunt last year, thus ending his string of five consecutive VSC wins. Bob McDonald has been a very close finisher in recent years and will no doubt win one of these days.

Bob Whitely won the 1978 national championship and Paul Walker has won ten national championships, including five in a row beginning in 1990, and a world championship in 1992. He also led the US team to the world championship in Bulgaria last August. Paul's VSC winner was a Skylark built from a Sterling Skylark kit with no parts substituted about 10 years ago. It was powered by a McCoy .40 which used a Top Flite 10/6 prop and fuel with 29% castor oil as coolant, an excellent representative of the early 1960s!

Successful as VSC has been over the years, the 2014 event will be even more interesting. In addition to the OTS and Classic events, a "Super 70's" event will be added for planes designed/built/flown in the 1970's. The intent is to attract pilots who are attracted by planes of this decade. Pilots will be able to enter either Classic or Super 70's in addition to OTS, but not both.

The 2013 VSC marked the end of the years that Lou Wolgast and Robin Sizemore have been administering VSC. In addition, Mike Keville is retiring. They are stepping aside as Jim Hoffman, who has been registering contestants for some time now, will be assuming the head role and is already recruiting assistants from the wonderful club in Tucson.



If you missed this year, be sure to put VSC on your agenda for 2014, because it will be even better.

Best to you all and I hope to see you at the US Nationals in July. *SN*

—Don

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In this issue we are presenting coverage of the 25th annual Vintage Stunt Championships. Think about that—a *quarter century* of celebrating the fantastic designs from CL Stunt's early days! I know for a fact that VSC founder, Mike Keville, had no thought that this contest/fly-in/celebration would extend past 1989, the year that it was first held at Whittier Narrows in California.

I wrote several reports about VSC for the pages of *Flying Models*, and I interviewed both Mike and JoAnn Keville to get some background on the idea behind the event. Mike may now deny that he said this to me, but his original thought was that he wanted to see some of the great designs of the past fly in competition, and be flown by the pilots that he had never had the chance to watch. He figured that if he couldn't go and see them fly, he'd lure them to where he was and watch them fly there! Hey, it worked!

Mike and JoAnn can be extremely proud of what this has become. It's now an institution, and even though Mike and JoAnn are no longer involved in the running of VSC, it will be forever credited to their inspiration and hard work.

For the past 11 years, Lou Wolgast and Robin Sizemore have been in charge of the contest directing duties at VSC, very ably assisted by the host club, the Cholla Choppers, and the Central Arizona Control Line Club that is based in Phoenix. In fact, when Mike and JoAnn moved to Arizona in 1990, the Cholla Choppers immediately embraced them and the idea of the VSC. It was a marriage made in heaven for those of us who have attended this amazing gathering over the years.

I've attended 22 of the 25 VSCs that have been held. I missed the first one in California because of a severe kidney stone attack the day I was scheduled to leave, and, unfortunately, this year's gathering, due to other obligations.

I fully plan on going back next year to judge, and perhaps I'll fly again there in the future. This contest/fun-fly has been a

Level Laps

by Bob Hunt

VSC, Sam, and The Joe Nall

huge part of my life for a lot of years, and I'm far the richer for it. I've met dozens of new friends there and always enjoy visiting with some of my old buddies who live there. I'm sure that many of you who have been long-time regulars at VSC feel the exact same way!

My congratulations and thanks go out to Mike and JoAnn Keville, Robin Sizemore, Lou Wolgast, and the entire VSC family which includes the Cholla Choppers and the Central Arizona Control Line Club.

Special thanks this year goes out to Jim Hoffman, who helped coordinate the coverage of the event, and to Steve Holt, who wrote this year's report and got it to me in time for it to be included in this issue of *Stunt News*. You Tucson and Phoenix guys (and gals) are just the very best!

Say Hello to Sam!

I've asked Samantha Hines to be our new "Next Generation" columnist. I met Sam and her dad a couple of years back and was totally impressed with their dedication to each other and to our hobby/sport. If you look up the word "bubbly" in the dictionary, don't be surprised if you see Sam's photo there beside it.

This is one enthusiastic young lady, and though she's only 13 years old, she is wise and accomplished beyond her years. Sam, her dad Steve, and her uncle, Kevin Hines, have become fixtures at the Nats and at many of the Central United States contests, and they have made friends with everyone they have met.

Please join me in welcoming Sam on board. I'm sure she will bring new life to this column.

Off to The Nall

Just after this issue of *Stunt News* is put to bed, I'll be leaving, along with Ken Armish, Tom Hampshire and Frank Imbracio, to attend the Joe Nall Fly-In in Woodruff, South Carolina.

Mark Weiss has been keeping us up to date on the preparations for, and the features of, this year's gathering at Pat Hartness's gorgeous Triple Tree facility. In case you missed those updates, the big news is that Pat and his good friend (and our good friend), Mr. Bob Shaw, recently announced that they would like to bring Control Line back to prominence.

They've made a great start by installing three world-class grass circles at Triple Tree for use during the Joe Nall, but also for use by area CL fliers to hold additional fly-ins and contests. The details on the availability and rules that will govern the use of these circles is not yet known, but it sure looks good for you Southeastern CL fliers!

Pat Hartness and Bob Shaw both flew CL in their youth and truly enjoy this sport. They are very high profile gentlemen, and

their endorsement of CL will hold a lot of weight in the modeling world. Truly, a new dawn of awareness of CL flying is on the horizon, and we need to embrace and support what Pat and Bob have started. We need to thank them, too!

Last year Mark Weiss put together a few of the Stevens Aero Ring Rats and used them as basic trainers at the Joe Nall Fly-In. He really wasn't prepared for the response to the CL activities by all in attendance and ended up training more than 200 pilots to fly CL or make a return to CL after a long absence. He was worn out after the week and realized that this year he'd need some more help and more airplanes.



Mark has assembled a few more Ring Rats for basic training duties at Joe Nall this year. I volunteered to make five slightly more advanced stunt trainers, and Tom Morris also joined in with a promise of five of his profile Cavaliers for the more proficient fliers to use.

I must admit that I bit off almost more than I could chew in promising five brand new trainers. And, if it were not for a great



crew of guys who came to the rescue early and often, I would not have made it. I'd like to thank my fantastic building crew of (in alphabetical order) Rich Giacobone, Tom Hampshire, Frank Imbriaco, Mark Weiss, and Buddy Wieder. I really owe these guys a steak dinner.

Mark reminded me to mention that we have received tremendous support from many manufacturers and organizations, including financial support from AMA District IV and District VI and also from AMA Headquarters. A complete listing of the supporters will be included in the next issue of *Stunt News*. Additionally, we'll have a report on the happenings at the Joe Nall (and I'll let you know if all of the trainers flew okay). *SN*

—Bob Hunt



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Paul Walker took a step into the past and brought this period-accurate Ed Southwick-designed Skylark to VSC and captured first place in Classic Stunt. It's powered by a McCoy .40 spinning a Top Flite 10 x 6 wooden prop!



VSC XXV

by Steve Holt

March 2013, marked the twenty-fifth consecutive VSC event held in Tucson, Arizona. VSC has been traditionally noted for exceptional models, flying, and camaraderie, and that tradition certainly continued in 2013. The weather, unlike that at VSC I, was nearly perfect for the entire five days, with mornings in the 50s and highs in the 70s and light winds. The quality of the airplanes and the flying was outstanding.

The first Vintage Stunt Championship was held at Whittier Narrows Park in South El Monte CA, in February 1989. Organizers Mike and JoAnn Keville had created an event where control line stunt pilots would compete, using designs from a much earlier era. For Old-Time Stunt, the models were all designed prior to December 31, 1952, and Classic required designs prior to December 31, 1969.

At VSC I, there were seventeen entries in OTS and nineteen in Classic, more than Mike and JoAnn had expected. The weather for that first event was cold and foggy with occasional drizzling rain. Winners were Ted Fancher in OTS with a Fox .35-powered All American Sr. and Bob Whitely in Classic with a Midwest Panther that was powered by an O.S. Max .35S.

Following VSC I, Mike and JoAnn moved to Mesa AZ, and visited Tucson to see if the site there was suitable for VSV II. Mike approved the site but was worried that no one would travel all the way to Tucson to compete. When asked if he ever thought VSC would still be around in twenty-five years, Mike replied, "Hell no! I wasn't sure we would get enough participation for a second year!"

VSC has always attracted pilots and spectators from around the world, as well as the far corners of the US. This year, Kaz Minato of Japan competed, and Ian Russell and his family from England also attended. This is in addition to the large draw from Texas, Ohio, Washington, Florida, Indiana, Alabama, and Utah.

The Texas contingent was so large that they needed to reserve two tables at the Saturday night awards banquet. It was especially nice to have John Miller in attendance. John was seriously injured in an electrical accident last year and has recovered enough to be able to attend VSC. He received a heartfelt welcome from all.

Old-Time Stunt

OTS and OTS Ignition are flown over the first two days of VSC. Some beautiful and unique OTS models appeared. Roy DeCamara built a beautiful Zilch-X that featured authentic period engine, wheels, spinner, and prop. As usual, Roy's model displayed a remarkable level of workmanship.

Jim Hoffman competed in OTS with a Brodak .40-powered Galloping Comedian. The Comedian was originally designed and campaigned by Red Reinhardt. Jim's Comedian was built from a Walter Umland kit and featured a spun aluminum cowl and a realistic cockpit and windscreen. Its red and white sunburst paint scheme was borrowed from the Goodyear F2G-2 Corsair Race 57, owned by Bob Odegaard and flown at the Reno air races.

Over the years, Jim Lee has brought unusual and/or obscure models to fly in OTS. Last year he flew a Hal deBolt-designed Wildcat. This year Jim brought a George Lieb-designed Triumphant which was published in *Air Trails* in 1949. Powered by a 4-bolt head Fox, the airplane also featured period correct prop, wheels, and spinner. Jim's exceptional modeling skills permitted the Triumphant to perform better than one might expect from this smallish design.

At VSC I, John Wright flew a McCoy-powered Barnstormer to third place. This year John flew the same Barnstormer to sixth place! It did not just hang on the wall for those 25 years, as it flew in fifteen VSCs and won first in OTS twice. Now, that is a real veteran airplane!

Although the Jameson Special was the most popular entry in OTS, the



Ted Fancher (L) chats with Jim Hoffman. Ted borrowed Jim's veteran, Claude McCullough-designed, Upstart and had a ball flying in the OTS event. Ted is a great supporter of VSC and this year he once again judged the Classic Stunt event.

highest placing for one was Pete Peterson in fourth. OTS was won by Lou Wolgast with his big Yates Madman 56. Lou's total score for two flights was 621.5. Keith Trostle finished second with his Big Job and a score of 615.5, and Bob Whitely was third with a Humongous and a score of 614.5. All three of the top OTS fliers used modified Double Star engines for power.

OTS Ignition

OTS Ignition was flown on a grass circle. There were seven entries, and of these, five made official flights. Jim Lee won with 266.5 points, followed by Glenn Allison with 255.5, and Joe Gilbert with 234.5. For some reason there seemed to be more problems getting the "sparkers" to run this year than in the recent past.

Glen Allison flew his beautiful Humongous that was seen in *Stunt News* last year. The plane's open-bay areas were covered with Thermal Span, and then the entire plane was covered with medium silkspan. The base yellow on the model is dye, and the balance of the paint is Brodak. Glen formed his own canopy from a soft drink bottle.

Classic Stunt

This year in Classic there were fifty-five entries, but seven scratched without an official flight, so there were forty-eight

competitors. Although the number of entries was down from recent years, the quality of the pilots and their airplanes remained very high.

Missing from the expected top competitors list was Bob Hunt. Also missing due to illness was Robin Sizemore who had attended every VSC until this year.

In Classic, the flying was spread out over three days with the pilots flying each day on a different circle and in front of different judges. The final score for each competitor was the total of the best two of three flights. With three days of consistent weather, there were very good scores posted throughout the contest.

Paul Walker posted the high score on day one at 582.5. On day two Bob McDonald raised the ante with a high score for the day of 591.5. Paul responded on day three with a high score for the contest of 603. When all the tabulating was complete, Paul was in first place with a total of 1185.5. Bob Whitely turned in the second highest score of the final day at 586.5, giving him a total of 1162, which just edged out Bob McDonald's 1161.5 to take second place.

Walker flew a kit-built Skylark powered by a McCoy Redhead .40. He flew without a muffler, and his model was almost as loud as those with ignition engines! Whitely flew his familiar Formula S, and McDonald flew his veteran USA 1.

By far the most unusual airplane flown in Classic was the Two



Above: Mike McHenry made his first visit to VSC this year and flew this outstanding rendition of the A7 Corsair 2 that was designed by his father, Robert. Scott Harness gives Mike a hand in getting the Aero Tiger .36 equipped model going. Mike's plane weighs 48 ounces and had a wingspan of 53 inches. Note the outstanding ink line detailing and scale markings.

Below: That's one colorful Barnstormer you have there, mister! Bob Parker seems well pleased with his version of Lew Andrew's legendary Barnstormer. Note the classic stitched canopy that is the most noted trademark of the Barnstormer design. Bob's checkerboard paint scheme accents the lines of the ship nicely.



Bits, Bob Harness Jr.'s recreation of Rick Loomis' original push/pull twin. Rick flew the original in the 1967 Nats, winning Senior Stunt. Due to the .65 cubic-inch engine limit at the time, Rick's was powered by a McCoy .35 in the front and a McCoy .29 in the back. Bob's model is quite large and employs "take-apart" construction.

Bob's version is electric-powered, making the starting of the two motors easy—one switch. The wing for this model was actually started by Rick Loomis before he passed away. The airplane is new and there is much trimming yet to do, but it already flies well enough to score 544.5 on its first official and 1088 total. It should be a real threat next year. The Harness family makes VSC a family affair with at least three generations in attendance and flying entries of both Bob Jr. and Scott Harness.

One very special part of VSC this year was the return of Gerry and Merry Phelps to competition. Health issues have prevented Gerry from competing since 2004. Gerry is back, as is his fabulous Patriot. The Patriot, which has been hanging on the wall since 2004, still looked good enough to win the Pilots' Choice Classic Concours award.

A number of unique and beautiful models appeared in Classic. Roy Firkins flew his beautiful Heinz 57. This model is powered by an Aero Tiger .36 and features an open cockpit with excellent cockpit detail. Ray also had terrific graphics, mimicking the ubiquitous ketchup label. This airplane was designed by Gordan Delaney and was stored at his home for the past few years.

Paul Walker's winning Skylark is notable in that it was absolutely 100% period-correct and could have emerged from a time machine. The model was built from the original Sterling kit; Paul said he used Ambroid glue during the construction phase. It is McCoy .40-powered with a period-correct spinner, wooden prop, wheels, and dope finish. (He did let on that he used modern silicone fuel tubing, though.)

Dave Riggs flew a new Trophy Trainer. Dave's airplane is beautifully built and finished, but not flashy. It is powered by an Aero Tiger .36. Dave received his personal best flight score of 515 on day three.

Joe Dill did not compete, but he did display his beautiful Harold Price-designed Crusader. This plane features a buffed dope finish, working retracts, detailed cockpit, and nice ink line work. First flight for the Crusader is planned for later this year.

Social Events

A huge part of the fun at VSC is the evening social events. This year, as in past years, everybody in attendance was invited to open houses at the nearby homes of Rickii Pyatt and Keith and Barbara Trostle. These get-togethers are always filled with conversation, food, laughter, and an opportunity to see old friends and make some new ones. There were more than 100 guests at each of the events. We extend many thanks to our hosts for their generosity and efforts to make these parties happen.

Special Awards

At the Saturday night awards banquet following the flying events, there was a group of special awards given. A full listing of these awards is included elsewhere in this article.

The Pachyderm Award is the only VSC special award that no one wants to win. Named after the elephant which is reputed to have a fantastic memory, this award is given



Right: Joe Dill brought along his outstanding replica of Harold Price's Crusader. Joe didn't fly the model in competition this year. It features the wing design that Harold Price developed for his Valkyrie series of stunt models in the late 1950s and early 1960s and has retractable landing gear.



Inset: Here's a closer look at one of the retract units in Joe Dill's Crusader. Joe is using the E-Flite 10 to 20-size electric retracts and works them with a Jomar sound sensor that was a present from Bob Whitley.

Jerry Phelps made his return to competition flying this year at VSC, and he brought along his world-class pit crew as well. Merry Phelps is Jerry's biggest rooster, his coach, and his very best friend—a delightful couple. Here they prepare Jerry's veteran Patriot, which is a faithful copy of the model that he flew as a member of the 1970 and '72 United States world F2B teams. How has it held up over the years? With it he won the Classic Concours award; does that answer the question?





Left: Bob Whitely prepares to start the Double Star 60 in his Ted Snow-designed Humongous while Jim Hoffman assists. Bob placed third this year in Old-Time Stunt, but, coupled with his second place finish in Classic, he once again captured the VSC Eagle award, signifying the top overall point getter at VSC.

Right: The Humongous has become one of the most popular models in OTS at VSC. Here Greg Elling warms up the engine in his rendition in the OTS pits prior to an official flight while Air Force Full Bird Colonel (retired) Frank McMillan holds.



Left: Two guys, four rudders... Pete Cunha (left) displays his very colorful, Bob Gialdini-designed Olympic and Allen Brickhaus does the same with his transparent version of the Louis Van Den Hout-designed Olympus. Beautiful ships with more than a little in common!

Here's another retired Air Force Full Bird Colonel. This time it's Keith Trostle checking his lines in the Classic pits. He once again flew his trusty Al Rabe-designed Bearcat. This model has competed in twelve VSCs, and it won the whole shooting match one year. Keith just can't seem to find it in his heart to retire this ship; we all think he's been "chizzled."





Here's the guy who started it all. Mike Keville (at right in photo) surveys what he created 25 years ago. Next to Mike is pull-tester extraordinaire, Bill Lee. Bill's passion is FAI Team Racing, but he donates his time each year to serve the VSC community. That's modeling spirit! Outstanding gentlemen both...

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Chris Brainard leans into a pull test prior to an OTS flight with his Jamison Special. Chris and his wife, Linda are ardent supporters of VSC and control line modeling. They both fly, and Linda (as she did this year) often judges at VSC.



Above: Jack Comer once again volunteered for pull testing chores. He also served as a judge this year for the Classic Stunt event.

Below: Just imagine how many numbers Elaine Brookins has added up over the years as a tabulator at VSC. She always has a smile and that infectious laugh. We all love the women of VSC!



Gaylord Elling seems confident as he "moves up" his OTS entry in the pit area prior to an official flight. Gaylord flew his trusty Wildman 60 again and placed a very competitive seventh in the OTS event. He'll win one before too long!



Peggy Capitainelli has sold a lot of VSC shirts over the years. She once again volunteered to "hawk the T's" at VSC XXV. Hey Peg, grab that buck!

to the contestant (or judge) who has a major lapse of memory.

Paul Walker, who normally flies electric power on his primary stunt ship, won the Pachyderm Award. He was seen attempting to start his McCoy .40 for an official flight without first attaching the battery for the glow plug.

A New Era

VSC XXV marked the end of ten-plus years of Robin Sizemore and Lou Wolgast serving as CD (contest director) and assistant CD. There is just no way that we can adequately thank them for their service.

They have turned that duty over to others. For VSC XXVI, Jim Hoffman has been named as CD; Leroy Black will serve as assistant CD. VSC will continue to be run by a committee made up of members of the Cholla Choppers Model Airplane Club of Tucson and the Central Arizona Control Line Club from Phoenix.

While most of next year's VSC will remain the same, one change, already approved, is the addition of Super 70s models to the event. The rules for Super 70s are posted on the Cholla Choppers website at CCMACOnline.org. *SN*

Awards

Keeper of the Flame:
Spirit of '46 (OT-Ignition):

Jim Hoffman
Dale Gleason, Wildman 60

Spirit of '52 (OTS):
Spirit of '64 (Classic):
OTS Best Appearing:

Roy DeCamara, Zilch-X
Mike McHenry, A-7
Gaylord Elling, Wildman 60

Most Unusual Entry:

Robert Harness, Jr., Two Bits (twin push-pull electric)

Pilots' Choice Concours (Classic):
Best I-Beamer:

Gerry Phelps, Patriot
Roger Wildman, California Beamer

Gialdini Sportsmanship Award:
Pachyderm Award:

Bill Zimmer
Paul Walker

Jack Sheeks Perpetual:

Bob Brookins

G.M.A. Memorial Award:

John Wright

Bob Palmer Memorial Award:

Richard Oliver

VSC Eagle Award:

Bob Whitely



Above: Jim Lee always finds the interesting OTS models to replicate. This year he had on display this outstanding rendition of the Brian Hewitt-designed Stunt King. Jim actually built this Fox 25 powered airplane in 1995 and flew it at VSC that year. Jim flew George Lieb-designed Triumphant in OTS this year at VSC.

Left: Roy DeCamara always produces gorgeous models, and this replica of the Jim Saftig-designed Zilch-X is no exception! It's powered by a K&B "Torpedo" 32 and is finished with Classic Aero and Sig dopes. The wing was covered with Polyspan first and then the entire plane was covered with medium grade silkspar.

Right: Rex Abbott marches to the beat of a different drummer when it comes to OTS airplane selection and interpretation. Here's his Bob Palmer-designed Mars that is fitted with a Saito .40 4-stroke engine with a simulated second cylinder. The model is finished with Silk, butyrate dope and tissue paper graphics.



Left: Perennial appearance point judges, Jim Beaman (L) and Ken Gulliford examine Warren Tiaht's Gene Schaffer-designed Blackbird. They have teamed up to do this chore for many years at VSC.



(L-R) Paul Walker, Joe Dill, Glen Dye and Pete Peterson take a break from their bull session to smile for the clicker. Notice how just about everyone at VSC has a permanent smile?



"Hey, pal this is a one-way pit area; let's get it turned around!" Jerry Phelps's Patriot gets an ear full from Jim Rhodes's Apterix. Note all the USA-1's and USA 1 look-alikes.



Above: Paul Walker looks well pleased with his period accurate Skylark. It's a gorgeous ship and Paul obviously flies it well; fast, but well...

VSC 25 OLD TIME RESULTS

Last Name	First Name	AMA NO	1stDay	2ndDay	RND #1	RND #2	SCORE	PLACE
Wolgast	Lou	7442	11	9	318.50	303.00	621.50	1
Trostle	Keith	3533	5	15	317.00	298.50	615.50	2
Whitely	Bob	68900	7	14	305.50	309.00	614.50	3
Peterson	Pete	449214	14	7	301.50	305.00	606.50	4
Hoffman	Jim	59362	8	12	307.00	297.00	604.00	5
Wright	John	13567	6	15	297.50	304.00	601.50	6
Elling	Gaylord	8164	6	14	308.50	292.50	601.00	7
Gilbert	Joe	771377	1	19	295.50	303.00	598.50	8
Minato	Kaz	217221	4	16	293.50	299.00	592.50	9
Reeves	Charlie	141	3	18	299.00	292.50	591.50	10
Fancher	Ted	1828	4	17	292.50	291.50	584.00	11
Cuberly	Randy	118227	18	2	296.00	288.00	584.00	12
Brickhaus	Allen	801	15	5	292.00	289.00	581.00	13
Allison	Glen	5715	8	13	290.00	289.00	579.00	14
Brainard	Chris	606049	9	11	280.50	296.50	577.00	15
Lee	Jim	50050	19	2	290.00	284.00	574.00	16
McHenry	Mike	548562	18	3	291.50	278.00	569.50	17
Trantham	Roy	606666	5	16	276.00	288.00	564.00	18
Brokaw	Burt	L206	3	17	276.50	277.00	553.50	19
Gleason	Dale	76272	11	10	272.50	280.50	553.00	20
Gulliford	Ken	930	9	12	278.50	269.50	548.00	21
Lemak	Nick	209256	17	4	283.00	260.50	543.50	22
DeCamara	Roy	26434	14	6	271.00	272.50	543.50	23
Elling	Gregg	777306	2	18	265.50	275.50	541.00	24
Corbett	Lew	759259	10	10	257.50	276.00	533.50	25
Capitanelli	Ed	77319	10	11	267.50	263.50	531.00	26
Holt	Steve	753562	19	1	265.50	260.50	526.00	27
Harness	Scott	763415	7	13	247.00	273.50	520.50	28
Parker	Bob	64383	20	1	198.00	259.50	457.50	29
Emmett	Bob	290	17	3	109.50	250.00	359.50	30
Abbott	Rex	19945	1	20	221.50	127.00	348.50	31
Brookins	Robert	7818	13	7	76.50	230.00	306.50	32
McClave	Don	52273	2	19	260.00	0.00	260.00	33

VSC 25 OLD TIME IGNITION RESULTS

Last Name	First Name	AMA NO	RND #1	RND #2	SCORE	PLACE
Lee	Jim	50050	160.50	266.50	266.50	1
Allison	Glen	5715	255.50	240.50	255.50	2
Gilbert	Joe	771377	234.50	0.00	234.50	3
Gleason	Dale	76272	231.50	223.00	231.50	4
Brookins	Robert	7818	141.50	211.50	211.50	5



Ray Firkins once again flew his gorgeous rendition of Gordan DeLaney's Heinz 57 design.



This PT-20 is virtually flawless in workmanship and finish and is the work of Mark Gerber.



Oh that Kaz! We're not sure just who posed for this pilot figure in Mr. Minato's pristine Humongous.

VSC 25 CLASSIC RESULTS

Last Name	First Name	AMA NO	1stDay	2ndDay	3rdDay	RND #1	RND #2	RND #3	SCORE	PLACE
Walker	Paul	30702	15	9	3	582.50	577.00	603.00	1185.50	1
Whitely	Bob	68900	10	4	16	566.00	575.50	586.50	1162.00	2
McDonald	Bob	61882	12	6	18	569.00	591.50	570.00	1161.50	3
Gilbert	Joe	771377	18	12	6	562.00	574.50	586.00	1160.50	4
McMillan	Frank	9080	17	11	5	572.50	565.00	587.50	1160.00	5
Oliver	Richard	95762	16	10	4	570.00	573.00	584.50	1157.50	6
Minato	Kaz	217221	5	18	12	549.50	566.50	588.50	1155.00	7
Delaney	Gordan	219000	8	2	14	577.00	572.00	569.50	1149.00	8
Trostle	Keith	3533	1	13	7	577.50	558.50	568.50	1146.00	9
Wolgast	Lou	7442	3	15	9	576.00	543.00	562.50	1138.50	10
Hoffman	Jim	59362	18	12	6	563.50	572.00	556.00	1135.50	11
Reeves	Charlie	141	19	13	7	520.00	564.50	569.00	1133.50	12
Callentine	John	720292	14	8	2	563.50	549.00	569.00	1132.50	13
Harris	Steven	22271	12	6	19	548.50	538.50	582.50	1131.00	14
Tiaht	Warren	1751	13	7	1	558.00	534.50	554.50	1112.50	15
Brickhaus	Allen	801	16	10	4	548.50	505.50	549.50	1098.00	16
Goff	Allen	3303	7	1	13	538.50	515.00	558.50	1097.00	17
Firkins	Ray	557055	18	12	6	543.50	526.50	552.50	1096.00	18
Black	LeRoy	5900	14	8	2	526.00	545.00	550.00	1095.00	19
Rhoades	Jim	31047	10	4	16	546.00	548.00	537.00	1094.00	20
Compton	Robert	492221	5	17	11	509.00	560.00	531.00	1091.00	21
Elling	Gaylord	8164	8	2	14	466.50	535.00	554.00	1089.00	22
Harness Jr.	Bob	28127	6	18	12	544.50	518.50	543.50	1088.00	23
Phelps	Jerry	8646	9	3	15	546.50	535.00	531.00	1081.50	24
Brainard	Chris	606049	12	6	18	541.00	518.00	538.50	1079.50	25
Gleason	Dale	76272	9	3	15	545.00	528.50	510.00	1073.50	26
McHenry	Mike	548562	13	7	1	545.00	523.00	514.00	1068.00	27
Simpson	John	5275	1	13	7	409.50	533.50	533.00	1066.50	28
Dick	Wesley	11334	15	9	3	536.50	518.50	512.50	1055.00	29
Wright	John	13567	4	16	10	505.00	521.00	526.00	1047.00	30
Harness	Scott	763415	14	8	2	527.00	519.50	505.00	1046.50	31



Above: Bob Compton produced this very nice version of the Dennis Schauer-designed Gladiator and flew it in Classic Stunt this year.



Above: Everyone was happy to see John Miller at VSC after his unfortunate accident. He brought along his fantastic Jack Sheeks-designed Stagger Wing Beach biplane. It's powered by a Thunder Tiger .42 engine.



The Classic Stunt pits are always busy at VSC. The contest runs extremely efficiently because everyone cooperates with the management.



Left: The Fellowship of Christian Modelers tent was always busy. There's lots of good talk and friendly spirit to be found in there. FCM has members from all forms of modeling.



Wesley Dick (R) listens as one of his all-time heroes, Don Still, reminisces about his impressive trophy collection.



No visit with Don Still would be complete without a flying session. Here Wes holds one of Don's legendary Stuka Stunt models while Don sets the needle. Oh, by the way, Don can still seriously fly!

Visiting a Legend

On our way home from VSC, Wesley Dick and I ventured to Beaumont, Texas, to visit Wes's old friend, Don Still. Now this is a gentleman I have not met, and he is a year 2000 inductee to the PAMPA Hall of Fame. I indeed wanted to visit with him, also.

We managed to get to Beaumont on the eve prior to our visit and settled into the local Howard Johnson, slept, and caught breakfast in the hotel before heading over to Don Still's Hobby Haven. Wes had arranged the visit to get to his store before it opened, so we caught up on hand shakes and immediately drove to the field where Don practices his control line model flying.

We actually found a good morning to fly, and I took advantage of that to get a few shots of Wes and Don with their respective Stuka models. Don told us that the winds during the days before our visit were horrific, but this day they subsided, allowing us to fly until around noon. I shook off a request to fly Don's Stuka, as I wanted to click my camera instead. I did not want to miss the opportunity to capture the moments with Wes and Don. There just could not be a better way to have capped off my birthday!

A day in the warm sunshine of Beaumont, Texas, with one well-known and good friend (Wes) and a new found pilot friend, Don Still, was a great present. We shared lunch at a Subway and then spent much of the afternoon engaged in a hangar-flying session at Don's Hobby Haven. I finally pried Wes from Don by mentioning how far we had to drive to get to our next hotel in Hammond, Louisiana. *SN*

—Allen Brickhaus



Don was inducted into the PAMPA Hall of Fame in the year 2000. A well-deserved membership!



Wes and Don pose with their Stuka Stunt models.



Don's place in CL Stunt history is assured. His hardware collection proves it!



This group of good friends got together for a commemorative photo at the appearance point venue. Clockwise from far left we see Allen Goff with his Gieseke Nobler, Roger Wildman with his Last Beamer, Mike McHenry with his version of his Dad's A-7 Corsair 2 design, Bob Harness with his electric version of Rick Loomis's Two-Bits twin, and Scott Harness with his Dennis Shauer-designed Gladiator. A very nice bunch of guys.



Yup, that's a USA-1 under that Kawasaki Tony paint scheme. Gordan DeLaney is well known for this colorful scheme, and it just seems to fit the famous Bill Werwage design.

Right: Tucson's own John Callentine is responsible for this magnificent version of the Al Rabe-designed P-51D Mustang. John is currently working on an electric powered version of Al's Sea Fury. It too will be magnificent.



Roy Trantham starts the Double Star 40 in his Dick Mathis-designed Chizler as fellow Floridian, Dennis Toth holds. Roy simply loves to fly.

"That's a pretty worn-out-looking plane you got there fella." John Wright has been hearing that for years, but he still continues to campaign this historic Barnstormer. Why historic? It flew in the very first VSC in 1989, and it's still flying competitively today!





Wes Dick has been flying this Bill Werwage-designed '62 Ares for the past few years at VSC. It is powered by an Aero Tiger .26 engine and has a dope finish.



Here's yet another Cavalier by its designer, John Simpson. John is known to all as the "Southern Gentleman" and he certainly lives up to his nickname! Nice plane, too!



LeRoy Black flew this Chipmunk in Classic competition this year. This is a very well-finished model that is powered by a Stalker .51. LeRoy is an avid supporter of VSC.



PAMPA President Don McClave had a rough VSC last year, getting his finger caught in a prop. He made a great recovery, however, and returned this year with this nifty, Aero Tiger .36 powered Thunderbird.



Gaylord Elling seems to be doing some Tai Chi exercises to relax before a competition flight. At least we hope that's the case... Send your caption suggestions for this photo to our editor and he'll run the best ones in his column in the next issue.



Frank McMillan has been flying this outstanding example of Jim Silhavy's Gypsy 46 for the past few years. He likes it so much that he's started on a new one! A PA .61 powers this beautiful foam-winged bird.



Long-time VSC participant, Burt Brokaw flew his Larry Scarinzi-designed Blue Angel in Classic this year. The original Blue Angel was designed and built in 1964 and is still in like-new condition in Larry's workshop!



Lou Wolgast (left) and Charlie Reeves look well pleased with their respective Classic Stunt birds. Lou is holding his original design Fury and Charlie displays his Humbler (Shark 45). Lou and Robin Sizemore are retiring from their long and successful stint as the Contest Directors of VSC. Let's all call write, or email them with our thanks for a job well done.

Spotlighting Sportsman, Bill Zimmer

Bill Zimmer was the 2013 recipient of the Gialdini Sportsmanship Award. Bill was one of the early PAMPA members, joining in September, 1973. He later served as the Midwest representative in the 1980s when there were just three directors (East, Midwest and West). He attended his first Nationals in 1979 as a recorder for stunt judge Art Adamisin.

Starting in 1980, Bill was a judge at the Nationals and continued this for twelve years. Zim (as he's known throughout the stunt world) initiated the practice of a judges' meeting on Monday evening to go over the rules rather than to try to review the rules and practice judging at the same time on Tuesday of Nationals week.

Zim judged at four FAI Team Trials ('81, '83, '85, and '87) and was the Chairman of the FAI Team Selection Committee, 1986-1990. After the 1985 Team Trials, Bill brought about a change in the format to cut the field to ten finalists on Sunday, which delighted the pilots and judges. Bill was an alternate judge for the 1984 World Championships held in the USA, and he was nominated as a USA judge for three World Championships but was unable to attend because of family health problems.

Bill judged at the Vintage Stunt Championships in Tucson in '91, '92, '93, and '97.

Zim was a member of the committee that instituted the "Beginner Pattern for Stunt." In the Old-Time Stunt event Bill proposed the scoring of 1 through 10 with a "K" factor multiplier, which was adopted. He was a member of the committee that replaced the upwind maneuver drawings with downwind drawings for the AMA pattern on the premise that the downwind figures are what the pilots and judges see. He also authored the rule that the maneuvers must be flown in sequence, and this was adopted.



Along with Ed Robbert, Zim drafted the final version of the first "PAMPA CD and Contest Guide," which was approved by the PAMPA Executive Council in 1986.

Bill competed in the Old-Time Stunt event at the Nationals from 1983 to 1993, finishing as high as fourth and in the top ten all but once. His plane of choice was a Fox .35-powered Barnstormer.

He served as the AMA Associate Vice President for District VI for eighteen years and was a Contest Director for twenty-one years. Bill used a most unique clipboard at contests, as on the back was a listing of every contest he judged from 1977 to 2001—a total of 167 outings in sun, wind, rain, and even snow! Health problems forced Bill's retirement from the judging circles after 2001.

Bill was elected to the PAMPA Hall of Fame for his service as a Nationals and Team Trials judge, as an administrator concerned with various rules interpretations, and for his establishment of the "Beginner Pattern for Stunt." *SN*

March 2013 VSC XXV JUDGES AND HELPERS

VSC Banquet Organizers:

Jim & Sharon Hoffman

OTS Ignition Event Director:

Warren Tiaht

OTS Ignition Judges:

John Callintine
Ed Capitanelli

OTS Judges:

Al Hiegar
Larry Lindburg
Leroy Black
Jim Renkar

Classic Judges:

Rickii Pyatt
Pete Peterson
Bill Byles
Ted Fancher
Jack Comer
Linda Brainard

Pit Bosses:

Linda Gleason
Bill Lee
Reuben MacBride
Warren Tiaht

Pull Test:

Lew Corbett
Bill Lee
Warren Tiaht
Rick Green
Bert Brokaw
Edi Oliver
Linda Gleason

Score Sheet Runners:

Brian Macphail
Lind Wolgast
Bob Emmett
Jenny Emmett
Meri Phelps

OTS, Classic, and OTS-IGN Tabulation:

Elaine Brookins
Shareen Fancher

Appearance Judges:

Jim Beaman
Ken Gulliford

Score Sheets/ Flight Order / Contest Forms, & Scoreboards:

Nick Lemak
Leroy Black
Robin Sizemore
Mark Smith

Sale of 'T' Shirts / Pins / Hats / etc.:

Peggy Capitanelli

Official Hugger:

Cassidy Delaney

Name Tags:

Barbara Trostle

Contest Director's:

Lou Wolgast CD
Robin Sizemore Assistant CD

Field Setup

Jim Hoffman
John Callentine
Rick Green
Jack Comer
Lew Corbett
Meri and Gerry Phelps

Airplane Data: Registration Check-In

Lila Lee

Airplane Weigh-In / Generator Repair / PA Trouble Shooting /Computer Tech

Mark Smith + AMA Check-in

Hotel Arrangements and MC:

Mike Keville

Setting Up Your Castle Creations Speed Control

Before I get into the heart of this month's column, I'm going to ask for your help by requesting that you send pictures of your e-planes and setups. I know my setups aren't the only way to do this, and other ways are just as good or maybe even better!

In this issue, I will show and explain how to set up a Castle Creations speed control to a Will Hubin timer and the settings that are commonly used. I will try my best to describe this in a simple manner.

I am more of a mechanic than an engineer, so I am pretty good at getting this to work, but I leave the "why it works" to the engineers.

I would also especially love to receive submissions from people who use the KR timer, as I would like to give that system equal coverage in a future article. From what I've read and heard about it, it definitely deserves a write-up, but I need help with that, as I've never used one. This is your column, not mine; I don't want to leave out a segment of the hobby.

For the purpose of this column I'm going to be setting up a brand new Phoenix 45 to an E-Flight Power 25 (870 KV version), and we will be using a 4-cell LiPo battery. These settings are just a guideline and are *not* set in stone at all!

This guideline can be used on any speed control in the Phoenix or Ice line of Castle controllers, starting with the Phoenix 10 and up. Setting up 3- or 5-cell power systems will only involve a few minor changes.

I think it will be easier to set up this system using a series of pictures and an explanation of each one. So the very first thing you need is the Castle Link itself, which is usually available from your favorite vendor that sells Castle products. Then you have to download the Castle Link software which can be found here: www.castlecreations.com/downloads.html and install it according to the instructions on the Castle website.

Okay, here we go.

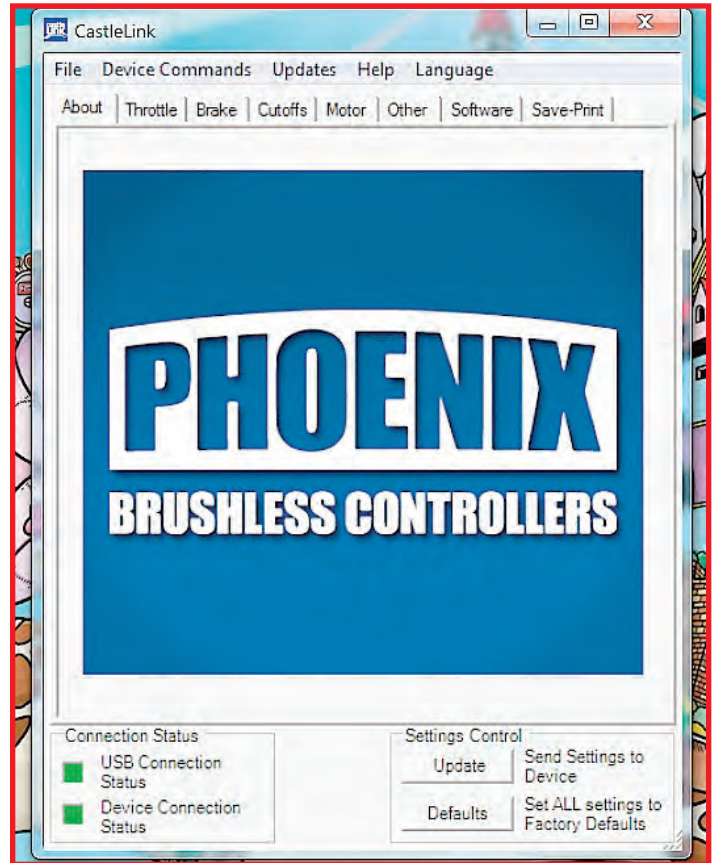


Photo 2: Here's a screenshot of how the software looks after it is loaded onto the computer. Once the link and speed control are hooked up, you should get the two little green lights on the bottom left if done correctly. The tabs for each individual setting run along the top.



Photo 1: This shows the Phoenix 45, Castle Link, Mini USB cable, and the commonly used E-Flight Power 25 motor (870 KV version).

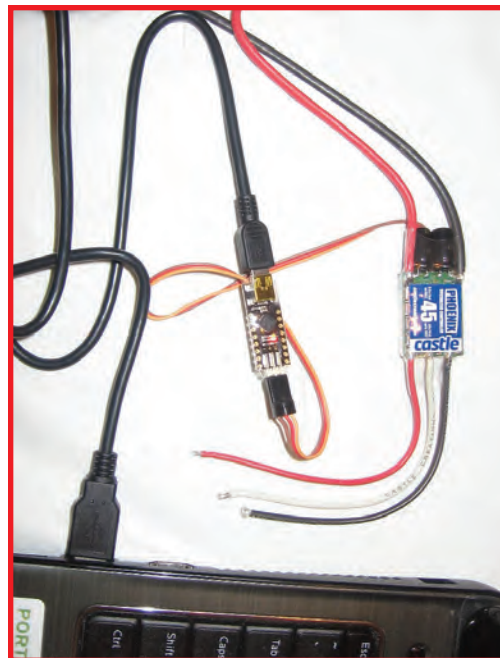


Photo 3: Here you can see the actual hook-up of the components into the USB port of a laptop. Make sure you orient the positive and negative from the speed control to the link correctly, as those marks may not be visible in my pictures. The Castle link has a red and green flashing light on one side. You will only see these lights if it is hooked up properly.

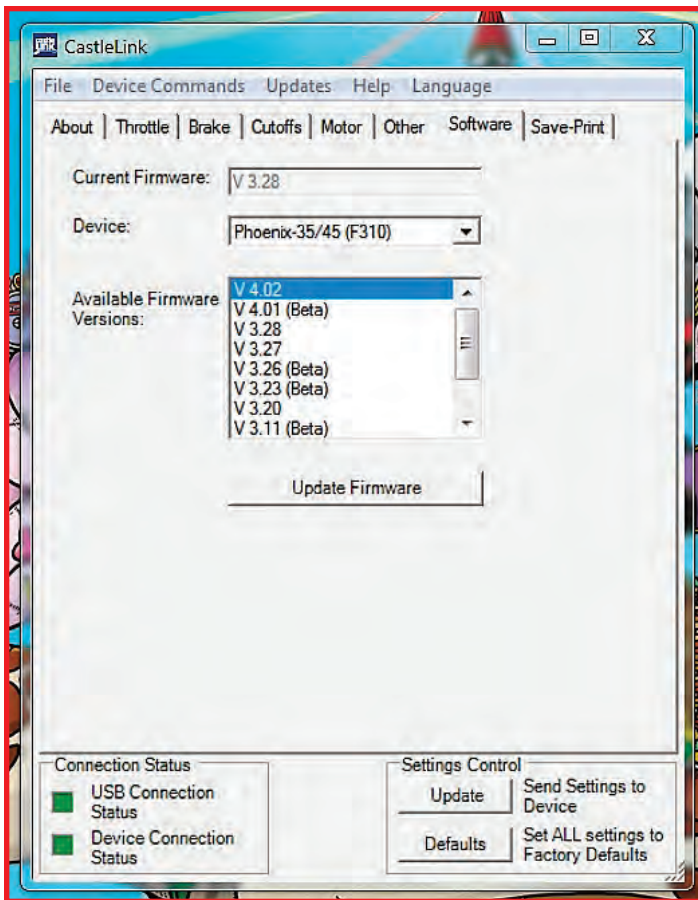


Photo 4: This photo shows the software tab. This particular Phoenix 45 came with version 3.28 firmware installed on it, which is fine. One must remember that when setting up a Hublin FM9 timer to any firmware version above 3.23, you have to use the "Phoenix New High" setting on the program box.

If you are using version 3.20 and below, you should use the "Phoenix High" setting when you set up your timer with the program box. I have always been happy with version 3.20 so I have stayed with it. As a result, I downgraded this timer to firmware version 3.20. This is done to insure that the RPM that is set at the program box matches the RPM at the prop. On a manual timer, such as the FM2A or FM7, we are setting the RPM with a tach so this is not as critical.

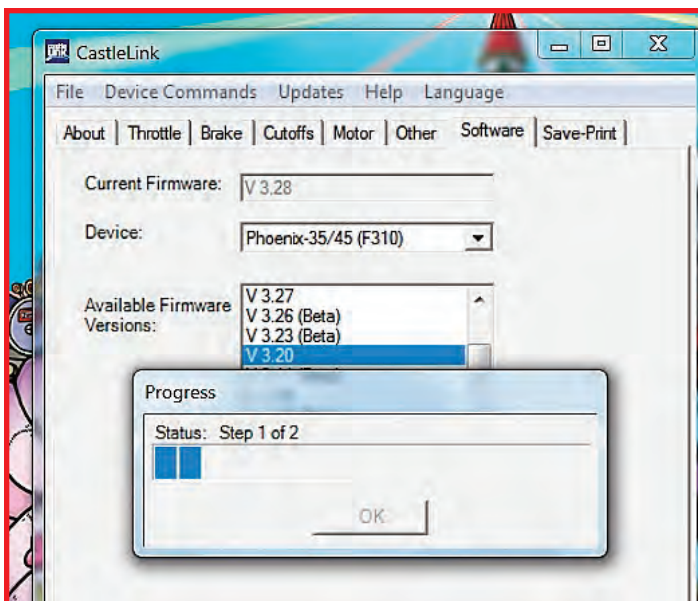


Photo 5: Here is a screenshot of the software being downgraded to firmware version 3.20.

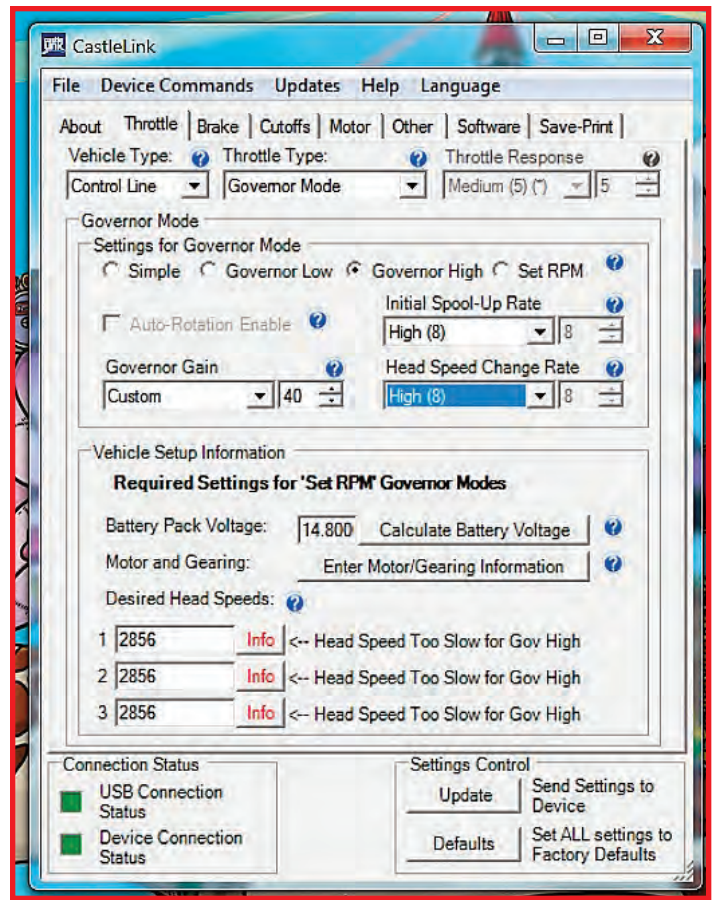


Photo 6: This photo shows the "Throttle Tab." On this page we can choose the "Vehicle Type" (control line in our case) and the "Throttle Type" (governor in our case) at the top. In the next section you must select the type of "Governor Mode." Since you are setting up to run a Power 25 motor, you may choose "Governor High."

Most outrunner motors that we use have 14 poles. I know that most popular brands are 14-pole motors, but it is always wise to check with the motor manufacturer if you are unsure. I usually start with a conservative setting of 40 for the "Governor Gain." This controls the power surge or increase under load (kind of a 4-2 effect for the IC fliers who are reading this). If this is set too low, the motor power may sag under load. If it's too high, you could get unwanted surging or oscillation.

Most people can go to the max of 50 without problems. The "Initial Spool-Up Rate" setting controls how fast the motor goes from zero RPM to desired RPM. I usually use anywhere from 5-8 as I don't like to load my motor and batteries very hard on start-up. The "Head Speed Change Rate" is basically how fast the motor responds to throttle correction by the governor. I have found that a setting of 8 works well for me. For all these settings to work properly, a good strong battery is a must!

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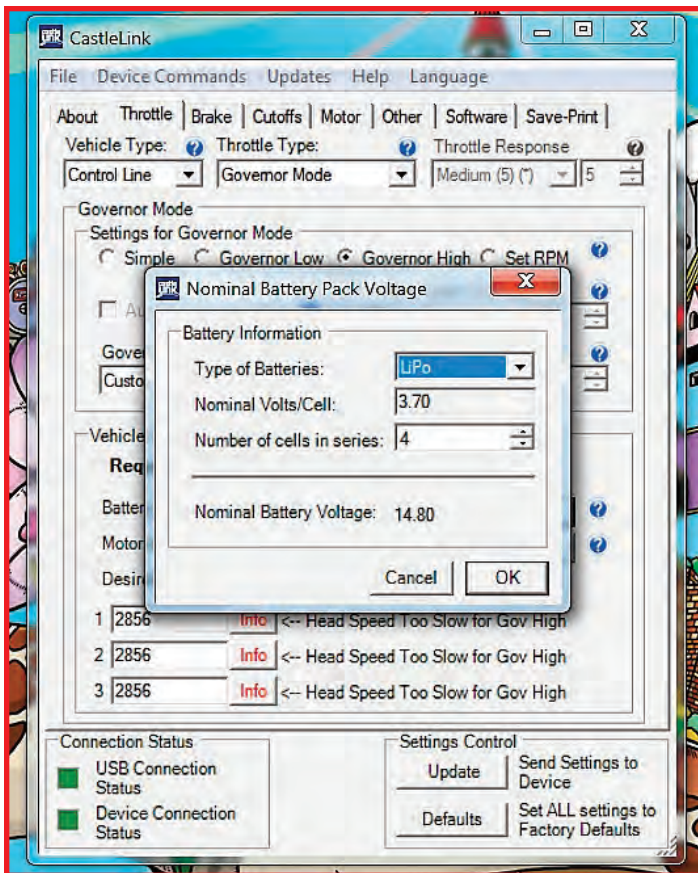


Photo 7: This shows the "Vehicle Set-up Information" section of the throttle page; we enter the battery information here, and then click "Ok."

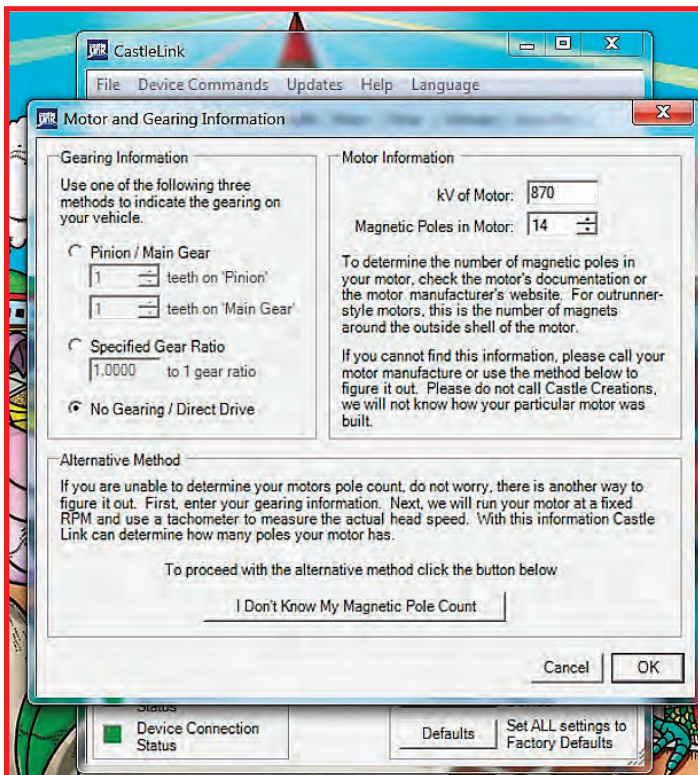
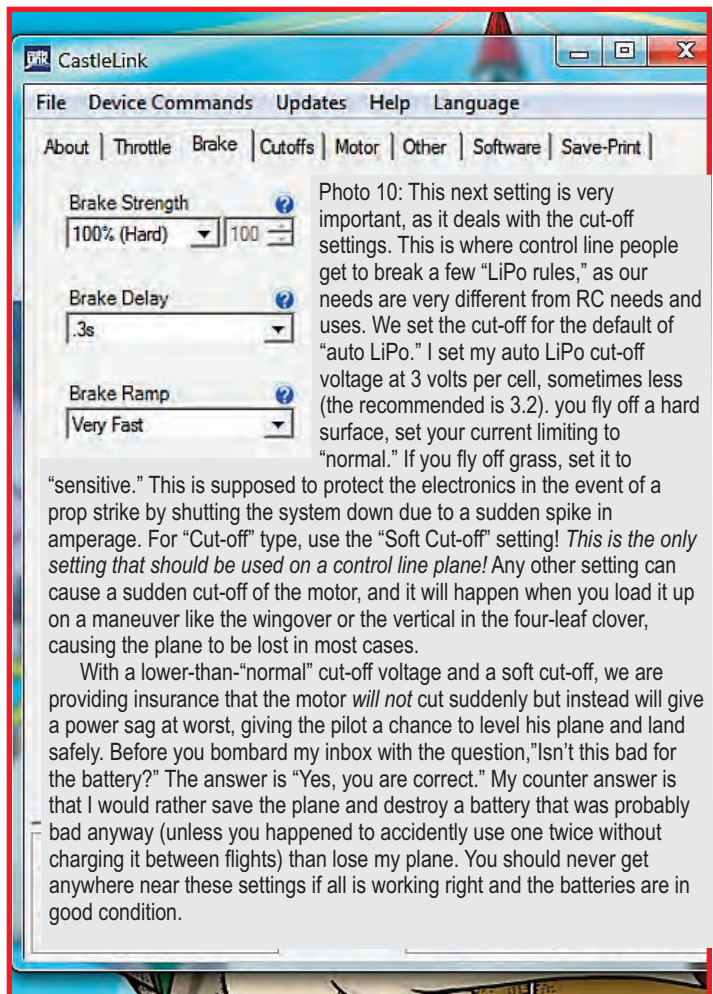
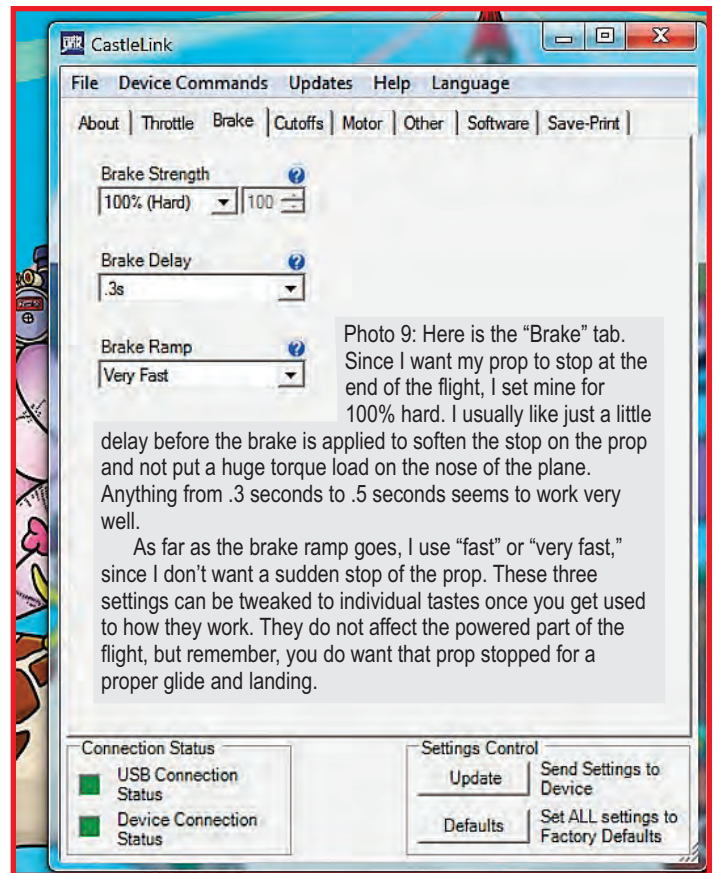


Photo 8: This photo shows the motor and gearing information page. Since outrunners are considered "Direct Drive," we choose that setting. Since I know that the Power 25 motor is 870 KV, that number goes in the motor box. Then we choose 14 poles for the "Pole" box. Then we click "Ok."



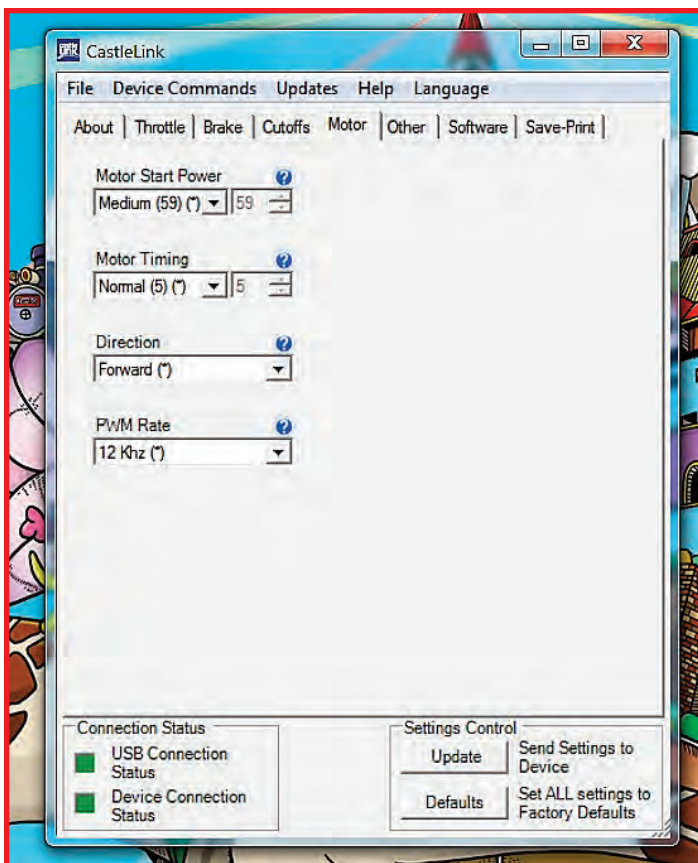


Photo 11: This photo shows the "Motor" tab. The first box shows the default of the "Motor Start Power." I usually just leave it at "Medium" (59). These settings control how much power is allowed into the motor to get it started for the first few revolutions from a dead stop. The second box is the "Motor Timing." I leave mine at the default of 5.

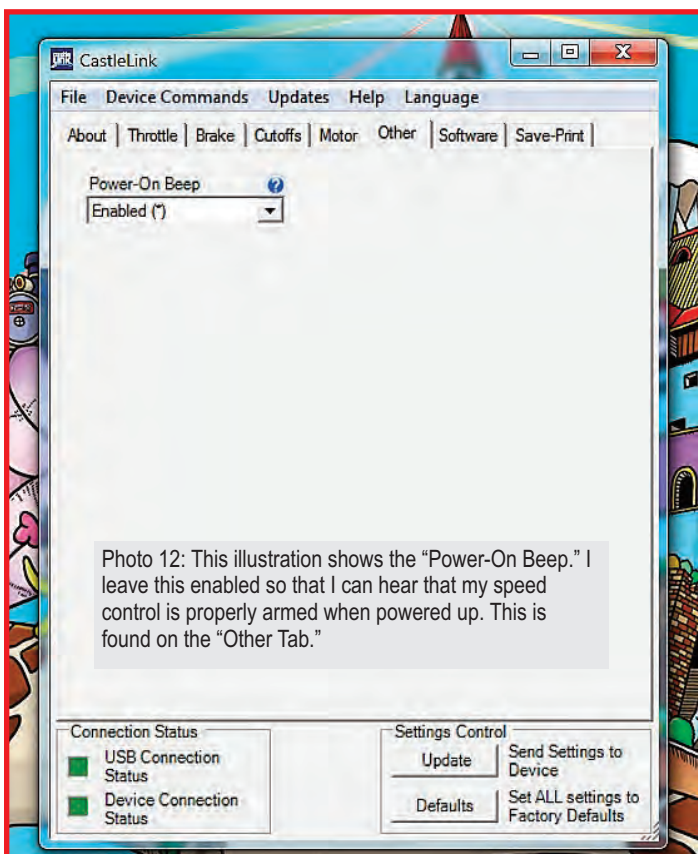


Photo 12: This illustration shows the "Power-On Beep." I leave this enabled so that I can hear that my speed control is properly armed when powered up. This is found on the "Other Tab."

(Screen shot left continued.) The higher the timing is, the more likely it is for your motor to run hot. Lower is supposed to be more efficient, but in our case I haven't seen a significant difference. The third box has to do with prop direction. Normally, to change prop direction we switch any two wires at the motor. If you have a set-up where getting at the wires is inconvenient, this is great, as you can change rotation direction from the speed controller.

The fourth and final box is the "PWM Rate." This setting changes the frequency with which the controller sends power pulses to the motor. With some motor types, the higher the frequency the more efficient the motor will run, but always at the expense of heat within the controller. If you decide to experiment with changes to PWM, use a wattmeter, tachometer, and temperature gun to determine how these changes affect your entire system. An increase in PWM will *always* increase the temperature of the speed controller; it may or may not decrease the temperature of the motor. I usually leave my setting at the default which is 12.

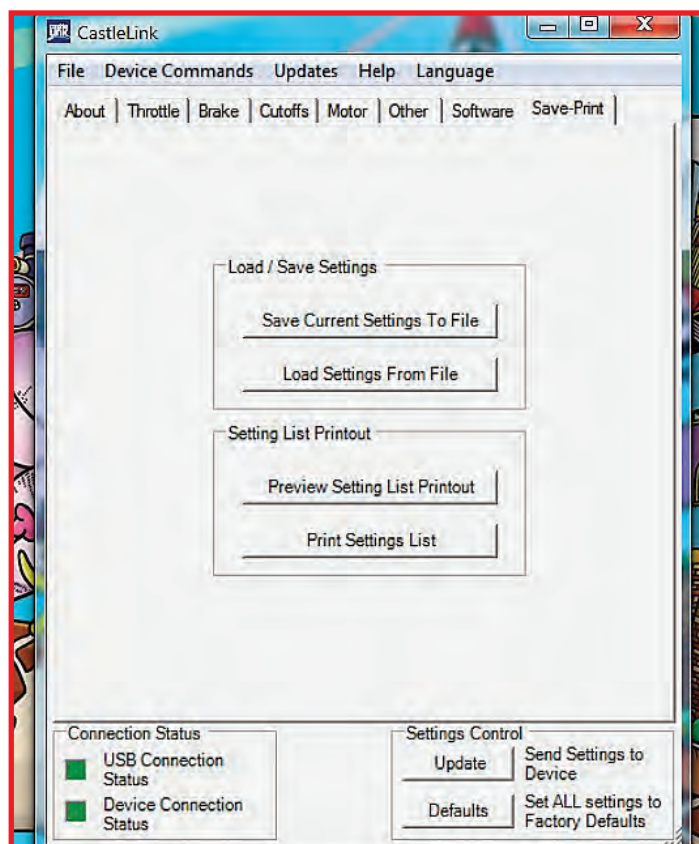


Photo 13: Here's the "Save-Print" tab. This is useful if you want to duplicate your settings to another speed control or just back them up in case you have to switch speed controls for any reason. This saves the settings to a file on your computer that you can upload to another speed control. The print tab allows you to print your setting if you want to save a hard copy.

To summarize, if you follow this guideline, and plug in the right information to your Castle speed controller, you should have good motor runs right from the start. Nothing more than minor tweaking should be needed if you use a different brand motor, and some of the tweaking will be for personal taste.

Keep in mind that this guideline is for setting up a Castle Creations speed control in "Governor Mode." I just want to note that in photo 6 there is a tab for "Set RPM." That is an optional governor setting where the speed control sets the RPM of the motor through the speed control instead of the timer.

The major drawback to this setting is that you need a laptop at the field if you want another RPM other than the three pre-set ones. Since most people do not bring a laptop to the field, I feel that the standard Governor Mode is the easiest way for the average person to set up their electric stunt plane.

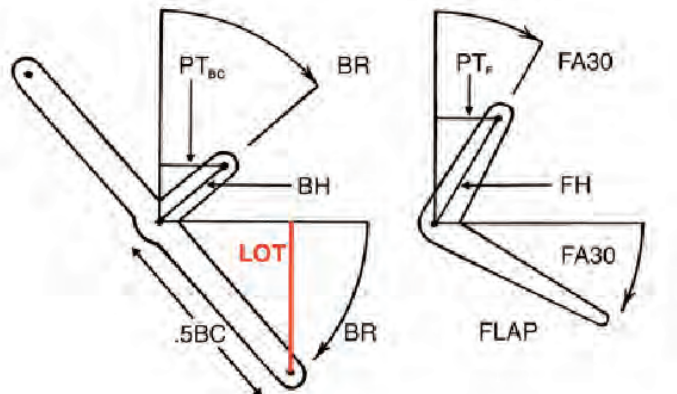
Have fun programming! *SN*

FLIGHT CONTROL SYSTEM THOUGHTS

by Hube Start
MAAC 1335

The flight control system in a control line airplane utilizes forces, angles, and lengths in a way that can be fairly accurately designed and modified to suit your personal flying style, and the abilities of both plane and pilot. The obvious need to maintain adequate control throughout the PA pattern can be largely insured by properly sizing these components.

The normal 3G level flight tension along the control lines is considerably reduced while overhead. When turning the upper right corner of the hourglass, for instance, the less pull you have to exert on the down line, the crisper the turn without compromising line tension. This article will explain the process of maximizing this ability through the use of one basic equation to integrate the various elements.



$$\frac{4LOT}{BC} = \frac{FH}{BH} = \frac{\sin BR}{\sin FA}$$

LOT	Lead-Out Travel
PT	Pushrod translation
BC	Bellcrank width
BR	Bellcrank rotation angle
BH	Bellcrank horn
FA	Flap angle
FH	Flap horn
FA30	Flap angle 30°

The LOT equation shown above gives the relationship between the six basic variables of the flight control system. It gives the fundamental geometric relationship only, and doesn't address other variables, such as bellcrank positioning, pushrod angles, etc., that others have documented over time. Lead-Out Travel (LOT) is the extent of motion of either leadout from neutral at a flap angle of 30°.

Control surfaces are often made to move much more than this, but 30° was chosen as a standard to compare LOT values between different setups. The equation has three elements, with any two used at a time to solve for the various values. The reference is to a flap angle, but if there are no flaps, use EA instead for elevator angle. Elevators are ignored in the calculations, since a 1:1

flap/elevator ratio is common and gives identical deflection. The 1:1 ratio, of course, is often later adjusted as part of flight trimming.

Modern PA designs with somewhat further aft CG's, longer tails, slightly smaller control surfaces,

and increased tail volumes are capable of performing the pattern with control surface deflections of 15 - 20° for rounds, and 20 - 25° for squares. With optimized layout and balance, this allows for designing and building in a structural maximum of around 30 - 35° of up or down control surface deflection. It can be seen from the use of the equation that these lower structural deflection maximums allow for higher values of LOT (mechanical advantage).

There have been articles in various media over the years to describe the "Netzeband Wall," and how it can be limiting to effective flight control. They showed how pulling on either line during flight to move the control surfaces against air loads can use up the available centrifugal force on one line only, leaving the other line slack.

They also indicate how, under certain conditions, a heavier airframe could outperform a lighter one, and how an increase in mechanical advantage against air loads could help keep the Netzeband Wall at bay. This article will re-visit the LOT concept published 20 years ago, and show as well how to approximate a starting point for line spacing at the handle.

Good mechanical advantage is obtained by using a smaller force acting over a greater distance to do the same work as a greater force acting over a shorter distance. For control line flying, this allows for the lines to move back and forth through a greater distance, with less force acting on each line, so that the centrifugal force available during maneuvers is shared more equally by each line.

Moving the flaps up or down to a reference angle of 30° should result in at least 1 to 1 3/4 inches of movement of either leadout from neutral where they exit the wingtip. This can be determined as well from the LOT equation when any three of the other variables are known.



Photos by Steve Fitton.

Mechanical advantage in operating the controls is directly related to LOT and is increased by these three items: a wider bellcrank (BC), a shorter bellcrank horn (BH), and a taller flap horn (FH). Think of the basic flight control system as consisting of this central group of three variables: BC, BH and FH. To maximize mechanical advantage is to essentially have the

bellcrank rotate as much as possible, and the control surfaces to deflect as little as possible.

The use of too high an LOT can sometimes pose a problem. This can be seen in the case of a 4-inch bellcrank using an LOT of 2 inches. As a result, the bellcrank must rotate fully 90° to move the flaps to only 30° . For a 4-inch bellcrank, a more

practical limit for LOT of about 1.8 inches provides a more workable bellcrank rotation angle of 80° , giving a fairly ample flap angle of 33° . Similarly, when using a 3-inch bellcrank, the practical limit of LOT drops to about 1.4 inches for the same angles of 80 and 33.

Note that the lengths of the horns that attach on each end of the flap to elevator pushrod have no effect on LOT. Keep them both the same length if using a 1:1 ratio, and as long as reasonably possible in order to reduce both pushrod load and bearing wear.

The 4-inch bellcrank is a special case, in that the FH/BH ratio always has the same numerical value as the desired LOT, simplifying the calculation. For example, if you choose to build in a particular LOT of 1.5 inches, and will be using a 4-inch bellcrank, then FH should be made $1\frac{1}{8}$ inches if BH is $\frac{3}{8}$ inch, or $\frac{3}{4}$ inch if BH is $\frac{1}{2}$ inch, or any other combination of different lengths you choose for this pair of horns. It is only the ratio of FH/BH that matters, and not their actual lengths.

The following shows one use of the LOT equation when analyzing the



control system. You may have a 4-inch bellcrank which is able to rotate 60° from neutral before encountering structure, and the BH happens to be $\frac{7}{8}$ inch. To have good mechanical advantage, you decide to build in an LOT of say 1.5 inches. With this data then, you'll be able to make the flap horn FH to the proper length. By



using the equation: $4LOT/BC = FH/BH$, $4 \times 1.5/4 = FH/(7/8)$, and FH solves for 1.3125 inches or $1\frac{5}{16}$ inches. Also from the equation, $FH/BH = \sin BR / \sin FA$. This shows that FA solves for an ample 35.3° from neutral.

By inserting different values for the six variables in the equation, you'll discover that different combinations can provide the same LOT. You may also find that a large bellcrank doesn't necessarily produce a higher LOT. For example, a 3-inch bellcrank with $BH = \frac{5}{8}$ inch and $FH = 1\frac{1}{8}$ inches yields an LOT of 1.35 inches. A 4-inch bellcrank, however, with $BH = .9$ inch and $FH = 1$ inch drops the LOT to 1.11 inches. This, however, is not to suggest that a 3-inch bellcrank is preferable, since in combination with a higher FH/BH ratio, the 4-inch bellcrank is more often a better choice.

Line spacing LS at the handle may also be pre-set before further adjustments are made to it during flight trimming. In this calculation, two approximations are made. One is the flap angle FA required for the square corner, and the other is the preferred handle angle HA that would comfortably give that angle. A square corner has been shown to require about 20° - 25° in a proper setup, say 23° for the calculation, and a handle angle of

Angle / sin		Angle / sin		Angle / sin	
30	.500	48	.743	66	.914
32	.530	50	.766	68	.927
34	.559	52	.788	70	.940
36	.588	54	.809	72	.951
38	.616	56	.829	74	.961
40	.643	58	.848	76	.970
42	.669	60	.866	78	.978
44	.695	62	.883	80	.985
46	.719	64	.899	82	.990

35° is fairly nominal. The equation then for line spacing is as follows: $LS = BC \times FH/BH \times \sin FA / \sin HA$. Inserting the data from the example above, $LS = 4 \times 1.31/.875 \times \sin 23 / \sin 35 = 4.1$ inches. In this case, a 4-inch handle makes a good starting point. Note that adjustments made at the handle have no effect on LOT. Closer handle line spacing simply reduces sensitivity and over-controlling by requiring the hand to turn through a greater angle for a given control surface deflection.

Finally, maintain a record of the LOT equation. Higher values of LOT, generally between 1 inch to 1.75 inches, will provide better mechanical advantage with less individual line pull for a given control surface deflection. You'll find that higher bellcrank angles of 70 or 80° are not generally required for optimum results. F

For example, a 4-inch bellcrank at only 60° rotation will easily get the flaps to 35° with a good LOT of 1.5 inches. Decide how much mechanical advantage you would like by first choosing a value for LOT, then use the equation to accurately lay out your control system to give you that result. *SN*

Extra items and derivations:

1. LOT Equation: $PT_{BC} = PT_F = BH \times \sin BR = FH \times \sin FA$
Since $\sin BR = LOT/.5BC$, and $\sin FA = .5$, then $FH/BH = LOT/.5BC/.5 = 4LOT/BC$

2. Line Spacing: since $LOT = .5BC \times \sin BR = .5LS \times \sin HA$, and $\sin BR = FH/BH \times \sin FA$
then **$LS = BC \times FH/BH \times \sin FA / \sin HA$** .

3. Airplane Velocity: from $V = 2\pi R/T$, **$V_{FPS} = 6.28R/T$** or **$V_{MPH} = 4.28R/T$**

4. Line Pull: since $V = 2\pi R/T$ and $m = W/32.2 \times 16$
then $F = mV^2/R = W4\pi^2 R^2 / (16 \times 32.2 \times T^2 R)$, **$F_{LBS} = .077WR/T^2$**

5. 3G Lap Time: **$T^2 = .4R$** Bill Netzeband pointed out the importance of 3G flight based on lap time T and radius R, where adequate centrifugal force at the handle should be 3 times the weight of the airplane. R = official line length + 2 ft. arm extension. Note that airplane weight is not a factor. Cf. SN Mar/Apr05 p.50

—Hube Start
MAAC 1335

May/June 2013 35

A CHAMPION'S

Part 6

In this segment of the series I interview Paul Walker, the designer of the unstoppable "Impact" series. Paul is considered one of the greatest stunt fliers of all time with a formidable record over a long period of time. He has achieved ultimate success, but here let's probe into what drives him forward year after year.

World Champion and 10-times US Nats winner: Paul Walker

PJ: How did you feel after your first Nats win, having come close on a few occasions prior to that win?

PW: I felt that I had finally achieved the first goal I had set for myself. That, of course, was a Nats win. However, it didn't go as I had originally envisioned. The plane that won was not intended to be used at the '84 Nats. That plane came in second in '83 and was a very good plane. I just didn't realize at the time how good it was. I just thought that everyone had a plane that flew like it did. It took me decades to get another plane to fly that well (but that's another story).

In '84 we flew in Reno, Nevada, at a 5,000-foot altitude. Everyone was very concerned about the thin air we would experience there. I had built another Bad News just for Reno. It had 725 square inches of wing area and weighed in at 43 ounces with an OS .40 FSR for power. This was to allow the use of .015 diameter lines, which, at 43 ounces, it demanded.

The plane flew exceptionally when the engine ran correctly. This was in the "good ol' days" of stunt when good-running engines were not common place. When it arrived in Reno, the .40 refused to cooperate. An O.S. .45 FSR ran great, but the combination with the .018 lines didn't fly well at all.

This was a time when I was working offsite (in California) for Boeing on the B-2 program. I was working many hours on that project and also didn't have a close flying site, not that it mattered. I was flying one, maybe two days a week getting ready. I had spent all my flying time on the new plane and was concerned that the old plane wouldn't do a corner there. After all, it was an obese 56 ounces at 700 square inches. Well, at that time I thought that was heavy! I had put all my eggs in the new plane basket.

Paul poses with the original Impact.

With it he finished third at the 1990 World Championships, and first at the Nats a week later. It was a take-apart model, and the fuselage and tail assembly was used with a new wing for at 1991 Nats. It finished first there as well! Photo by William Davis.



Paul Walker

S MOTIVATION

by P.J. Rowland



Here's Paul with the original Bad News as it appeared in the 1983 Nats. This was Paul's first Top-5 appearance. Photo from Paul Walker collection.

Right: One of Paul's more emotional moments came just after his win at the 1992 Nats. That was his fifth win, and here he is shown with Bob Gieseke who also had five Nats wins. Walker collection photo.

So, when the 43-ounce plane didn't work, I had to switch to the old one. To my surprise, it worked very well there. I added extra nitro each flight until I was at about 30%. More than that and it would flame out at the bottom of the hourglass.

The switch to the old plane occurred on appearance judging day, which in those days was the day before qualification flights began. About one hour before the appearance judging started, I was flying my last practice flight when one of the main gear wheels fell off. Don came to the handle with me and we discussed what to do.

It was decided that a "normal" landing as easy as possible would do the least damage. It touched down and skidded for a while before something grabbed and broke the gear mount. There was damage on the bottom, but virtually nothing on the top. Don and I raced to the motel to fix it prior to appearance judging. I was a bit upset, so Don did most of the work to repair it. Fortunately, the appearance judges that year didn't turn the planes over to look at the bottom, and I received a nice appearance score!

Things went well, and I made the finals. On my first finals flight the motor kept running and running. I had a watch, was constantly checking it,

and knew that it was going to be close. I kept whipping the plane in level flight as hard as I physically could for what seemed like an eternity. At the last possible moment I did a kill loop and it quit. At



... find something that is better ...



Left: Paul's World Championship win came in 1992 in Czechoslovakia. Here's the team that went with Paul that year and together they also won the Team Championship. Left to right in the photo is Bob Hunt, Bill Werwage, and Paul Walker. Ask Paul about the airplane box races... Photo from Bob Hunt collection.

Below: Don McClave (left) and Paul Walker wait in the processing area at the 1984 World Championships. Don is Paul's long-time coach and close friend. Hunt collection photo.



touchdown, I quickly fed in as much down as it could take to brake it. It stopped rolling at 7:59!

After the first round I had the lead! Things went well in the second round and the engine run was much shorter (7:50!). I maintained the lead after the second round. As the third round started, a strong "dust devil" came through and tipped over a porta-potty. The wind kept going and was at about 20 mph. It was fortunate that this occurred right at the start of the third round so that everyone had the same conditions.

Jimmy flew in that wind because he was behind, and his plane exploded in the round outsides. His day was over. I was up early in the round so I had to fly. I was doing quite well until the hourglass, where it flamed out after the fourth corner. With the wind, 30% nitro was too much. Now I had to wait, sweat, and hope that the wind would keep up. It did. No one else could put up a good score, and I had my first win.

It was quite an adventure that week getting to the finals, and another adventure on the finals day. So, in the end, I was very happy, but more so relieved that I was able to get through the problems of that week and finally win. I had achieved my first goal. I did feel very satisfied that I had the capability to reach that goal. However, I had done it with a few of the top fliers not there, and that presented another challenge

to me. I had to do it with them there!

In terms of gratification, this was not the highest plateau I reached. That was probably at the '87 Nats where the finals were in a 25-mph wind. I proved to everyone that I could fly in good conditions and bad conditions. And I really enjoyed flying in the finals there. It was the start of a number of wins where I knew early on that I was going to win, and there was nothing anyone else could do about it.

Cocky? I didn't feel that way, as it was simply a feeling I had inside that no one else knew about. This feeling showed up at the '91 and '92 Nats, and at the '92 World Champs. Then as soon as it came, it disappeared until many years later.

Strangely, that feeling was getting revived early on in practice at the '04 WCs in Muncie, until the hourglass of a practice flight when the plane exploded into many pieces. It was a killer Saito .72-powered Mustang. Oh well. The rest of



Left: Don launches 4-stroke powered Paul's P-51 Mustang at the 1984 World Championships. Hunt collection photo.

Paul Walker

Right: This Bad News was built for the 1986 World Champs. With it Paul finished third in Hungary, and first, in the wind, at the 1987 Nats. Walker collection photo.

the week was very long, as my back-up was not as good, and I knew it. The last time I felt this was at the '05 Nats. Strangely, I have never felt this and not won.

PJ: Was your ultimate goal a US Nats win? Do you recall the motivation toward trying to achieve it, and was it based around trying to get a better flying package, new designs, and evolutions?

PW: This is one of the toughest questions asked. I still feel the need to develop a plane that feels the way I imagine my dream plane does. Most everything to date has been some compromise in one manner or another.

There is always the issue of engine run with an IC engine. One always has to fiddle with the needle, and that leaves some less than optimal flights. The ability to trim a plane to exceptional levels always looms. Then there is the issue of internal strength to capture the moment and perform to the maximum level "on command."

To reach the top takes a significant effort to develop an aircraft that is capable in many different conditions, to be able to make it perform to the highest level, and then to do so when necessary. There are many quality pilots out there currently, but I suggest that there are only a select few who can do all three of these on any consistent basis. It is my quest to do these three things on a regular basis.



Above: Paul considers this Impact to be the best one he's built. With this model Paul that won the Nats and World Champs in 1992. Walker collection photo.



Left: This is Paul's original B-17. It is painted in the scheme of the "Knock Out Dropper." It finally flew at the 1995 Nats. Walker collection photo.

... find something that is better ...

Below: This Impact is the same one Paul used to win the 1991 Nats. It was repainted, and won again in 2005. Flying this ship Paul beat David Fitzgerald by a fraction of a point that year. Walker collection photo.



It wasn't long after David started attending the World Champs that the rivalry between David and Paul started. This photo was taken at the 1996 World Champs in Sweden, where Paul placed second and David third. This rivalry continues to this day! Walker collection photo.

However, in response to the first question, my ultimate goal was to win a World Championship. In my first three World Champs, I had two third-place finishes, so I knew I had the capability to eventually win. On my fourth World Champs, I broke through and won. My entire modeling focus to that time was to do whatever I needed to do to win. 1992 was a great year, as I won the Nats and the World Champs in the same year, only a month apart! That was the pinnacle of my modeling career.

PJ: Your Nats record is formidable, to say the least, and certainly you were close at the last two Nats. What ultimately drives you to continue year after year to put up solid flights, experiment with new technologies so prolifically, and continue to be a leader of technology?

PW: Sometimes I wonder that myself. What am I doing this for

again? This ties in with the motivation question. I could quit this event and move on to something like golf. But then I would be starting all over again and never be competitive. Unfortunately, that's not me; I live for the finals day at the Nats. It's the pressure, the competition, the emotional ups and downs, and competing against the best that I enjoy. Win or lose, I enjoy it (Okay, I enjoy it more when I win). However, I do know what it takes to get to the level necessary to "enjoy" that day.

In the end, what motivates me year after year is the quest to develop a package that will dominate the competition. It's not the fear of losing, but the enjoyment of winning that propels me!

PJ: You won the Worlds in 1992 and were superior to everyone with the Impact and tuned pipe setup. What caused you to move beyond that? Some would settle for that setup and continue to develop minute changes to that airframe, or copy it from year to year.

PW: The answer to that is very simple: to find something that is better. I started with the O.S. .40 FSR. While it could work reasonably well, consistency was not its strong suit. I used the O.S. .45 FSR with Dykes rings and chromed liners. It was much more consistent but still not the best. Then there was the ST .60. It worked, and I was able to win a Nats with one, but it was still not the optimal tool.

Then the tuned pipes came along and flying in various conditions became more consistent, which was good. The .40s went to .51s, then to .61s and .65s. All ran well but were inconsistent to some level. It's that darn bent wire sticking out the side that needs constant attention.

Then there were 4-strokes, and while they ran reasonable well, they too had their consistency issues. Now there are electric

Paul Walker

This is the bottom view of what was left of the fuselage of B-17 #1 after its accident. It was rebuilt. Ironically, this crash allowed Paul to continue his win streak to five Nats victories in a row. Hey, cheer up Paul, it all works out okay... Walker collection photo.

power systems, and they by far are more consistent than any IC counterpart. The point here is not to say what is better, but simply why I went down the path I did.

PJ: How did you feel after the Worlds win?

PW: I felt "on top of the world." I had finally achieved what I knew I could. I did such a performance that they could do

nothing else than give me the scores necessary. I won both the US Nats and the World Champs in a period of about a month. It doesn't get any better than that! It gave me a confidence in this hobby but also in my work career, as well. Things in my life changed as a result of this confidence in me, for the better.

PJ: Do you ever experience times when you can find no motivation?

PW: I usually build one plane a year. There has been one a year built for a long time, except for special instances. The year I put an addition onto my house, no plane was built that year. Part of that addition was my bigger shop.

Then there was the year we remodeled the kitchen, and my shop became our temporary kitchen. Again, I built no plane that year. While I was working, I found that building a plane reduced my stress level generated from work. It became a therapy for me. So, I don't remember a year that I didn't build a plane from that point on. Not every year developed a new design, but little things were changed on most planes built.

The biggest motivation problem came later in my time after my "perfect" flying site was lost. The nearest site then became an hour and a quarter away in good traffic. It was thus inaccessible during the work week due to traffic. It became very hard to go out every weekend to practice. With this reduced time, little to no trim experimentation could happen. I am very pleased with my competition record during this time, such as it was. I trust that will change now!

As discussed earlier, my motivation comes with trying to build better-flying planes. This involves design updates, construction methods, power application, and most importantly, finding a way that I can function better when flying. This includes physical



strength training (the B-17 got me started on that), finding ways to concentrate better, focus, and maintaining the "killer" mentality when competing. I enjoy working on these aspects.

PJ: Can you talk about your rivals?

PW: In the earlier years Jimmy Casale was my primary rival. In '78 we both finished in the Top 20 at the Nats but didn't know what the future was to hold. Jimmy reached the Top 5 before I did. We first met in the Top 5 in '83. From then on it was a battle between the two of us for the top spot.

Every year at the Nats, I had to check out Jimmy to see how he was doing, as I knew he was going to be my main competition. Jimmy also was a very intense pilot. This was brought to my attention at several of the World Champs we attended together. This led to some friction between us there, but in that regard we were both intense, and we had to understand that.

Jimmy had a stooge accident in '91 and injured his flying hand. He was never the same after that, and he retired from stunt in '92. There were many reasons for his retirement, and just like that, the rivalry was over.

There was another rival coming by this time. Mr. Fitzgerald had been improving and stepped in for Jimmy. Their results may be similar, but their approaches are way different.

Jimmy totally relied on constant practice with his current plane to be competitive. He managed to crash many planes in the process. I know of him crashing a plane into a "STOP" sign, and flying one into a chain link fence. I'm sure the New Jersey crowd can describe many more crashes that I don't know about. As long as he was in current practice, he was a tough customer.

David, on the other hand, has not flown into a stop sign or

... find something that is better ...

B-17 #2 was modeled after the Nine O Nine. It was flown at the 2000 World Champs, and drew lots of attention there. The 1986 World Champ Anatoly Kolesnikov saw it fly there and told Paul it was the highlight of his modeling career to see it fly that well at a World Champs. Paul feels that it was an honor to be recognized by someone of his capabilities and different background. Flying at a World Champs allows the interaction with modelers that one would not normally meet.



Paul Walker

fence (at least that he has told me!), and does a much better job of rationing his practice time to his stable fleet of planes. Stable is with respect to the number of planes that Jimmy went through. David has a more reliable power system and is usually on the top of his game. Dang him, he is a tough rival.

Where Jimmy and I had some less-than-pleasant moments, Dave and I have always gotten along well. That makes the competition a bit more fun and a little less stressful. I like that. I like the competition, and if I didn't have a tough competitor to compete against, it would become quite boring. The first B-17 was built as a result of the boredom of doing the same thing over and over (five Nats wins in a row).

Orestes has now come to the forefront and is a quality flier. There simply isn't a long history with our competitions. He is also a gentleman, and I enjoy competing against him, as well. I hope there are many more competitions to come with Orestes and David.

PJ: What were your highest and lowest moments?

PW: The highest moment is obvious. Winning the '92 World Champs is clearly on top. Not much beats that. The low spot was at the 2004 World Champs. I had arrived early and was practicing by myself for a few days. I had things going very well with my 62-ounce, Saito .72-powered Mustang in special colors.

On the final flight I got "that" feeling that I was the one to beat. It was just like the '92 WC's. Then, after the third corner of the hourglass in the flat part of the maneuver, the plane simply exploded. I never found the reason why.

There were too many small pieces. I lost everything including the only good .72 I had. I went from possibly winning to going to my backup, which was clearly not as capable without a good motor.

I toughed out the WCs, and then there was a week of the Nats to tolerate—another week knowing that your equipment was not up to par and others had their top equipment. That was the longest two weeks in my life, and one of the lowest points in my competition career. The next year, I managed to win the Nats with a fourteen-year-old plane! The ups, the downs, and then the ups of stunt!

PJ: How would you describe your dedication to stunt?

PW: It has been difficult to maintain my high level of dedication to the highest level of competition over these many years. There had been a lull from 2006 to 2010. However, I have been re-energized with the electric power system and retirement from Boeing. I have experimented with different designs for electric power and have now settled on a design for the future. I am building two of them this winter for the upcoming 2012 World Champs and Nats. See me there and check out my dedication!

Since this piece was initially written, the 2012 World Champs occurred, and I was able to finish fourth and lead the US Team to the gold medal. I was very dedicated to the team gold, and we achieved that goal.

Technology has changed and for the better. The top three at the World Champs all had more sophisticated power systems than I did, and they worked well. I was the champion of the "old technology!"

PJ: B-17 – New motivation?

PW: After I won the Worlds, I wanted something totally different to challenge me. I had always wanted to model a B-17, so why not for stunt? The basic layout of the B-17 is very close to what a stunt plane needs to be. Yes, the aspect ratio of the wing had to come down some, but most people that look at it don't even realize what was changed. I did testing on a smaller size plane to determine if the engines would work properly.

Once the motors were approved, the process of designing the monster was started. It is a take-apart so that it could be transported to places other than my shop! The joint at the middle was designed, built, and static tested before going in the plane. It is a carbon fiber splice with the pin holding the two wings together and also supporting the bellcrank.

The wing was "standard" construction and the first fuselage was strip planked.

There were two B-17s built, and they are still in existence. However, one day while practicing for the '93 Nat's, I had trouble starting the last engine (the most outboard one). I had a time limit that, if exceeded, I was to shut down the other three. That time limit came and went, but this being the last flight of the day, I kept going. It started within 10 seconds of the allotted time, so I proceeded.

Things went well until the overhead eights, when engines 1-3 all shut down together. Overhead, with only number four running, was totally unrecoverable. It rolled in and crashed like a shot down B-17. There was nothing left of the wing, and the fuselage was a mess. However, there was enough left of the fuse to rebuild.

It was rebuilt and flown at the '95 Nats. If that one flight had not happened due to the crash, I would never have had five Nats wins in a row, as without the B-17, I had to take the WCs Impact to the Nats. With virtually no flights on it since the WCs, by the end of Nats week I had it working fairly well, and won.

B-17 #1 was rebuilt and flown at the '95 Nats. It flew well, and I sure had more fun flying it than the same old Impact. B-17 number #1 was finished with a flat finish, much like the real planes. While it looked more realistic, I wanted to have a shiny one, done better.

... find something that is better ...

Another highlight for Paul was a Nats win and being awarded the Concours trophy at the 2002 Nats. Walker collection photo.

B-17 #2 was made with a central fuel bladder that sent fuel to all four engines. Each engine had a pressure regulator to keep the fuel head the same on all four. The fuselage was made from molded balsa instead of strip planking. The finish was glossy and the model had appropriate nose art of an exact full-scale B-17. (Side note: I have pictures of it up against the full-size B-17 that had the same paint job! How cool is that?)

The cowl was molded carbon fiber, as were the engine mounts, wing splice, and bladder tube. This plane flew better than the first and was ultimately used at the 2000 World Champs and 2001 US Nats. It came very close to making the Top 5 at the Nats, but my arm cramped in the Hourglass and I had issues with the last three maneuvers. I fell short by just a few points. Just as well, I would have been a physical wreck if I had to fly it one more day!

It was a fun project, and maybe some day an electric version might darken the sky once again! It will have to be lighter!

PJ: Have you contemplated a life without control line aerobatics?

PW: Yes, I have thought about this subject over the years. My conclusion is that this will never happen! What will happen is competitive flying at the Nats and Worlds will stop. When that will occur is a TBD at this time. However, I suspect I will continue to fly in local contests for a long time.



I might fly at the Nats just to see my friends there. This "obsession" is just too embedded in my brain to walk away from it totally. I enjoy stunt and have no plans to stop. too. *SN*

Paul Walker

by Samantha Hines

Next Generation



place in either event, but I was very close! I was off by three seconds in Foxberg. In Rat Race I got finished in fourth place. I did not have a very fast airplane but I believe that I put forth good effort.

I have just recently learned how to do “Lazy Eight,” squares and inverted flight. In 2010 I had a bad engine run when my Skyray was launched. My dad said, “Up, up, up, up, up.” So I put up into it. I almost hit my dad. I realized that I was inverted so I

Left: Samantha flew this new Oriental during her last outing in 2012. The Oriental is powered by a Brodak .40 engine and it is a plane she shares with her dad, Steve Hines. Photo by Steve Hines.:

Below: Samantha first flew in Beginner Stunt at the Nats in 2011. She placed third that year flying a Super Clown. Allen Brickhaus photo.

I’m taking over for Matt Colan as the new “Next Generation” columnist. So, let me tell you about myself. My name is Samantha Hines. I’m 12 turning 13. I started flying when I was 10 near the end of the year 2010, but I did not fly that much. I entered my first competition in 2011 at the Brodak Fly-In.

Now let’s get to the airplanes! My first plane was a Sterling Mustang. My dad, Steve Hines, bought it for five dollars. The person he bought it from told him that it wouldn’t fly. My dad redid the bellcrank and the leadouts, and added some tip weight.

My dad and Mike Sauer helped me fly it for the first time. Mike launched for me and my dad helped me actually fly the airplane. The first time I flew I was so dizzy. During the second flight my dad let go of my hand. Dang! I freaked out but he calmed me down by saying, “You’ve got it.” I never crashed it. When the flight ended and the plane was safe on the ground, I laid down on the grass and I could hear people cheering me on.

The first airplane that I crashed was a Flite Streak. I wasn’t wearing sunglasses during that flight, so when I looked at the sun I lost the plane and crashed. Talk about crying! Of course the jokester that my dad is he said, “There’s no cryin’ in control line flyin.” My Dad, let me tell ya’...

The first competition that I went to was the 2011 Brodak Fly-In. I placed second there in the Ladies and Youth event. I received a lot of support from John and Buzz Brodak, and the next year I took first place in that event. I won that with my Hole Shot.

In 2012 I also entered in Rat Racing 15 and Foxberg. Dan Banjock helped me with practicing the day of the races. I didn’t



flew the fuel out and landed inverted. When it was over I said to my dad, “It took me a second to learn how to fly it backwards.” And I still get made fun of for that.

Some other events that I like are Free Flight, Balloon Bust, Speed, and just regular stunt. Someday I want to fly Navy Carrier, and when I get taller I would like to fly Combat. I think that everything about control line is fun and it’s also fun to try new things. Simply put, I love control line flying!

The first airplane that I built by myself was a 1/2A Skyray. I learned how to loop with it. It didn’t want to do it very well, but I made it around. I did a wingover with it and I learned how to land with it.

Then it was time to move on to a bigger plane. That would be my Flite Streak. I took this airplane to Brodak’s and got 2nd. I



Left: In her second year at the Nats in Beginner Stunt Sam placed second! She flew her Bob Hunt-designed Hole Shot at that event. Sam won the Hole Shot as a prize at the Nats in 2011. Brickhaus photo.

crashed this plane trying to learn to do lazy eights. When we got home we ordered another Flite Streak. I took this one to the Nats in Indiana. During the third flight on the ship, the pushrod came out and the resulting crash broke the airplane in half.

David Fitzgerald gave me compliments on my flying... and some popsicle sticks to try to put it back together. But it was no use; Dad and I went back to the trailer and put an engine and tank on a Super Clown. Note: that was my dad's plane that we had never flown before. We finished working on that ship around 11 p.m. We got up early to get in a practice flight but could not. My first flight on

Right: Samantha and her dad really enjoy flying together and attending contests. Here they are together at the Akron meet in September, 2012 Sam placed second at that meet in Beginner Stunt flying her trusty Hole Shot. Photo by Serge Krauss.



this airplane was the first time the motor ran, and it ran too long; the flight went over in time. Then it was my dad's turn, and the engine quit on him.

On my second flight the engine quit on me as well. It stopped, but toward the end of the flight. So this time I did not go over on time. Overall I took 3rd place. This started a trend in which my dad started taking last place at contests...

The one good thing about the Nats that year was that I got my Hole Shot! We put an Enya 30 on it and new landing gear. Now this is when my flying really improved; it has been the best plane ever! For this year I'm building a Long Shot with a Brodak 40. I won a Bob Hunt wing as a prize at an FCM contest and with that I'm building an RD-1 which will be electric. I have two new planes for rat racing a Flite Streak for Foxberg and a Flying Clown/15 size.

Some acknowledgments are in order. Thanks go out to Buzz and John Brodak for their support and many more things; to Dan Banjock for helping me fly and always giving me something to laugh at; to Jeff Traxler for support and many more things; to Frank Carlisle also for support; to Mike Sauer for launching for me for the first time; to John D'Ottavio: for being such a good friend and for the JD Falcon that we are



Above: Samantha and her dad share some shade under Buddy Wieder's tent at the 2012 Nats. It was almost 100 degrees but it felt like a lot more! Brickhaus photo.



Above and Right: Samantha tries to stay warm while waiting for the engine in her plane to be started at the Akron meet. Her dad, Steve, and friend, Jeff Traxler pittet for her. Krauss photos.



going to fly this year at Brodak (and, yes Buddy Wieder, I know that you have JD Falcon number two. Gosh!); to Gary Lutz: for all your help and being a good friend; to all the guys from my hometown; and to Dick Imhoff and Joe Kresnak for all the planes and help. But most of all I want to thank my dad for *everything*!

Okay, well that's some of my story. Now it's time for me to start collecting and presenting other "next generation" flier's stories. If you are a young flier (or know of a young flier), please get in touch with me. I'll need lots of material to fill this column and I'm counting on your help.

See ya' in the circle. *SN*

—Sam

PAMPA VISITS THE WRAM SHOW

by Bob Hunt

I thought I'd do something a bit different for this issue and write short report on Control Line at the 45th Annual Westchester Radio AeroModelers (WRAM) Show. Short story: there wasn't any! That's typical these days at the larger trade and hobby consumer shows, and that's a sad thing.

One exception was the Brodak booth at the Toledo Show. Hopefully, John Brodak will consider coming to the WRAM Show next year. It might even be a good idea to have a PAMPA booth there and do a bit of indoor CL training and demo flying.

For those who are not aware of the WRAM Show, it is among the larger RC consumer shows and had been held until last year at the Westchester County Center in White Plains, New York. That venue is old and not ideally suited to hosting a modeling show, so a new venue was sought and found.

In 2012 the Westchester Radio Aero Modelers moved the WRAM Show to its new home at the Meadowlands Exposition Center in Secaucus, New Jersey. This new facility is modern and spacious, and it has room for indoor flying demonstrations of electric-powered models. Typically, the WRAM show is scheduled in late February, and this year it was held between the dates of February 22 through 24. Next year's dates are February 21 through 23.

Okay, so you might be wondering why I'm doing a report on a

show that essentially had no visible CL presence. Just like the relationship between swimming and diving, there is a connection between RC and CL.

In swimming and diving a lot of the same equipment is used by the respective participants, but they are totally different sports. The same holds true for CL and RC; most of the equipment available can be used for either sport. The airplanes that we fly don't know if they are free in the air, being controlled by a radio, or tethered to a pilot by lines.

There was actually a lot of interesting and new stuff at this year's WRAM Show for the CL enthusiast. Tom Hampshire and I drove up to Secaucus together, and upon entering the show, we met up almost instantly with two other CL enthusiasts, Don and Frank Imbriaco!

We decided to split up and each go our own way in search of the goodies on our want/need lists. If nothing else, the consumer shows are great for stocking up on the staples like CA and epoxy glue and knife blades. There are usually great bargains to be had on such stuff at the shows.

My first stop is always to see Jarvis Yeh at the MPI (Maxx Products International) booth. Being a devout electric flier now, visiting Jarvis's booth is sort of like Christmas morning when I was a kid; there are tons of goodies there to drool over. I typically

stock up on wire, shrink wrap, Ultra Deans connectors, and other staple electric items. Actually, MPI always has several booths at the RC consumer shows because it has so many neat bits and pieces to display in bins. It's usually very crowded at the MPI booth.

MPI is also noted for its selection of wheels. This year it introduced a new wheel that has a gorgeous machined aluminum hub and a thin profile tire that is perfect for models fitted with wheel pants.

This is a fairly high-end item and the wheels are priced accordingly. The 2 1/4-inch diameter wheels that I purchased cost around \$16.00 per pair, but they are certainly worth it! The package has these wheels listed as **57mm (2.25 inch) Ultra Light Weight Aluminum Wheel, w/Axle Inserts, 3, 3.5, 4mm. Part Number AW57**. They are available in 1/4-inch increments from 1.25- to 3.00-inch diameter.



Left to right: Don Imbriaco, Tom Hampshire, and Frank Imbriaco, along with Bob Hunt who is behind the camera, formed a CL quorum at the predominantly RC-oriented WRAM Show this past February.

The MPI website URL is www.maxxprod.com, and when you're at its website, type in "Wheels" in the search function for more information. While you're there, search around for the dozens of other items that we can use.

One other neat new thing at MPI was its line of arming switches for electric models, including a number of No-Spark arming devices. MPI has a huge number of preassembled pigtails and connector harnesses to fit almost any electric flight need. Again, take a look at its online catalog, but leave plenty of time for viewing and for writing down all the stuff you'll want to buy.

Right: Jarvis Yeh displays MPI's new line of Ultra Light wheels. These wheels feature exquisitely machined aluminum hubs and are available in a variety of sizes from 1.25 to 3.00 inches in diameter.

Below: The MPI booth takes up quite a lot of space! There are many neat electrical and hardware items there, and it's fun to examine the dozens of bins of goodies. Make this



Below: The new owners of the Excel Corporation are Mike Hammam (left) and his son, Hany. They keep our tools sharp by supplying new blades, gouges, and routers, as well as an extensive line of knife handles and self-healing cutting mats.



your first stop at the show, because their products are very popular and typically sell out quickly.

My next stop was the Excel booth to get my yearly supply of #26 Whittler's blades. There I met and spoke with the new owners of Excel, Mike and Hany Hammam. I asked them to pose for a photo, and afterwards they wanted to load up my bag with free stuff! Really nice guys.

I told them that just providing the service they do for the modeling community is more than enough. They still threw a few packages of free blades into my bag.

Excel handles a number of very useful cutting tools and a variety of self-healing cutting mats, as well as an extensive



Above: You can purchase nuts, bolts, washers, and many other hobby-related assembly parts from Micro Fasteners, or stock up at its booth at the show.



Right: National Balsa's booth was pleasantly busy. It appears that model building is once again on the rise, and lots of wood was sold at the show.

line of blades, routers, and gouges. Check out its line at www.excelhobbyblades.com.

Moving on up and down the aisles at the show, I eventually came to the Micro Fasteners' series of booths. Like MPI, Micro Fasteners' line is so extensive that it needs a lot of booth space to adequately display its wares. If you are tired of purchasing the required nuts, bolts, washers, and other assorted useful fasteners used in our hobby/sport in small, expensive quantities at local hobby shops, the Micro Fastener line is the answer. You can purchase fasteners in up to 100-piece-per-package quantities at very reasonable prices.

If you don't get the opportunity to attend a major show where Micro Fasteners has a display, order your fasteners from the company directly through its website at www.microfasteners.com. It also carries a number of other hobby-related items, such as blades and tools.

My next stop was at National Balsa to look over the wood selection it had on display. Interestingly, there was a lot of activity at this booth. It seems that scratch building is on the rise again in RC, and there were lots of bundles of wood being purchased.

I have purchased from National Balsa on several occasions and have generally been very pleased with the wood I've received. On its website (www.nationalbalsa.com) there are many products listed, including balsa, plywood (birch, poplar, and mahogany), spruce, basswood, rock-hard maple, and many other useful building materials and tools.

When I order from National Balsa, I specify the Aero Light Balsa option. For a premium the company will hand select nominally 4- to 6-pound density balsa (contest grade) for you.

When I've ordered the Aero Light balsa, I have received exceptionally good material. National Balsa also offers fasteners and tools, T-shirts, and even a few kits. (Perhaps we can get them to produce a few CL kits.)

One of my favorite stops at any hobby consumer show is the Tru-Turn booth. I've known the owner, Bob Obenberger, for many years, and he's always been supportive of the CL



Bob Obenberger, owner of Tru-Turn, displays just a few of the many CNC machined spinners that his company offers.

community. Bob is about as friendly a person as you will ever meet, and he's a Texan, so you will not get away from his booth without hearing several funny, but involved, tall stories. He's just a delight.

Of interest to us is his line of precision CNC machined spinners and adapters for both glow and electric. His new line of Turbo-Flow spinners is designed specifically for electric flight.



Here's the Flying Models' staff that brings you all those great CL articles and columns. Left to right are Editor, Frank Fanelli, Production Editor, Maureen Frazer, and regular contributor, Chris Susicke.

They are designed to allow air to enter the nose cone of the spinner and then be accelerated into the model's nose by an impeller backplate. That forced airflow cools the motor very efficiently. The Turbo Flow spinners are pricey but very much worth the cost! Oh, they look cool, too!

Tru-Turn spinners are available in a wide variety of sizes and shapes to suit almost any design you might be considering. Also new from Tru-Turn are spinners in a variety of anodized colors. Visit the Tru-Turn website, www.tru-turn.com, for more information.

I've saved the best for last. As many of you know, I was the Editor of *Flying Models* magazine for 17 years. I left there to start my own video production company in 1996. (Yeah, I learned the hard way that the old saying, "Don't quit your day job" is sage advice.) But the years I spent there were among the most enjoyable of my life.

A lot of what made that job fun was the staff I worked with there. Frank Fanelli came on board in the early 1980s as my Associate Editor, and he had genuine skills in the fields of writing and English. I received a lot of my real education from Frank during our years together at *FM* and was very pleased to be able to pass the reigns of that magazine to him when I resigned. We have kept in close touch over the years and are still best friends.

The stop at the *Flying Models* booth is always like a

homecoming for me. On duty at that booth was Frank (Editor), Maureen Frazer (Production Editor), and Chris Susicke (a former Associate Editor and regular contributor). I haven't known Chris for very long, but he seems to be a very dedicated and accomplished modeler. Maureen, on the other hand, is a long time buddy, just like Frank. If the truth was known, it is Maureen that makes *FM* work! She's a tough taskmaster, but she's also a great friend.

Flying Models continues to be the one commercial magazine that steadfastly supports CL in a big way with monthly columns and many construction and product review features. They also have the most extensive CL plans selection in the hobby. They support us and we should continue to support them. Please consider subscribing to *Flying Models* for the very best in CL reading. You can find *Flying Models* on the web at www.flying-models.com.

Consider attending the WRAM Show next year if you live on the East Coast. There are many other hobby consumer shows around the country, and each of them will have many attending manufacturers that will have items of interest to CL fliers and builders. You'll enjoy yourself!

'Til next time, Fly Stunt! **SN**

—Bob Hunt

Charlie Reeves' Humbler

I was blessed to meet Lew McFarland when I went to school at the University of Kentucky in 1957, and we remained good friends until he passed away in 2011. Lew had a unique way of naming his planes.

Bob Palmer designed his Smoothie, and when I met Lew he was flying a new plane that he had named the Ruffy. George Aldrich had designed his Nobler and Lew was drawing up his Humbler. Now I really liked that plane, so he agreed to let me trace his original plans from which I built my first Humbler.

Later, the Humbler was kitted by Jetco, but the owner of that company said a plane with a name like Humbler would never sell. That was when they changed the name to the Shark.

When I crashed my first Humbler, I bought a Jetco kit and built another one. Those first two Humblers were painted in a gray and white Navy color scheme, since they were being flown at the Navy Nats.



There were quite a few similar color schemes at the Nats in those days. My third one was painted in a desert camouflage color scheme with German markings, since I thought it looked like some of the experimental planes that Germany flew or had on the drawing board at the end of World War II.

With that plane I was able to beat Lew at the Nats in 1966 by .87 point, and I finished in second place. It was the only





These two photos (left and below) are of Charlie's third Humbler. He painted it in a German desert camouflage scheme because he thought it looked a lot like the experimental airplanes that were being developed at the end of World War two. Note the fuel fill and overflow tubes in the leading edge of the wing.



time I ever beat him.

Of course, Bob Gieseke beat me by more than eight points, which was to be expected. Inside the cockpit of my plane was painted the name, HUMBLER, and Bob was flying a little red Nobler.

I've included a couple of pictures of that earlier German Humbler, and in one you can see the fuel fill and overflow tubes in the leading edge of the wing root, which was similar to the way Dave Gierke had his in his All American Eagle. One picture also shows the flex-spout oil can with lever pump that I used for a fuel can in those days.

Now let's fast forward to 1972 when I was working in Memphis, Tennessee. It was there that I had the privilege of meeting Jim Lynch, who has remained a very dear friend since that time.

We were flying in Audubon Park at that time. Jim was



flying his Volunteer and I was flying my Humbler. I had my lines run out, hooked up my fuel can, and started pumping fuel. I pumped and pumped but to no avail.

Jim came over and asked what the problem was. I said that I couldn't get fuel into the tank. Now understand that Jim is a rather manly fellow, and he brought over one of the big blue fuel bulbs and pushed me aside

Charlie's new Humbler performs a dramatic wingover. Note the extreme control deflection!



Charlie built his new Humbler from an RSM Shark kit and powers it with a PA 51 side exhaust motor that is fitted with a muffler. The trike gear guarantees great takeoffs and landings.

saying, "Let me do it."

With two hands on the fuel bulb, he gave a mighty squeeze and in a few seconds got a stream of fuel out of the overflow tube. Well, I started the K&B .45, flew my flight, and landed on the far side of the circle from our takeoff spot.

"Just hold my handle, Jim, and I'll get the plane," I said, and went over to pick up the plane by the nose and walk it around the circle. Something caught my eye in the cockpit, and when I looked straight at it, I could see it was half full of fuel (and that was with the tail sticking straight up into the air!).

When I got back to the apartment, I cut the top off of the fuselage and there the problem was staring me right in the face: the fill and overflow lines were copper and

they stopped at the back of the tank compartment. They were connected to stub vents in the tank by the old, clear Tygon tubing that we used back then, and the fill line had shrunk back off of the tank.

Jim had squirted so much fuel in the nose of the plane that it had filled past the metal tank line and filled the tank. Of course, it had also filled the rest of the nose back to the middle of the cockpit. That was the end of that plane.

Now let's fast forward even more to 2010 where I've reincarnated that 1966 Humbler, building it from one of Eric Rule's RSM Shark (as it's now called) kits. It is as much like my original as I can make it (except for the PA .51 side exhaust engine that replaces the original K&B .45).

I don't fly it nearly as well as I did that original one, but I'm sure having fun with it.

Oh, and I will never let Jim Lynch put fuel in it! **SN**

—Charlie Reeves



Charlie built his new Humbler from an RSM Shark kit and powers it with a PA 51 side exhaust motor that is fitted with a muffler. The trike gear guarantees great takeoffs and landings.

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Putting It All Together

by Bob Hunt

In my last column, I wrote about shop staples, breaking them down into at least six categories: measuring, cutting, sanding, clamping, aligning, and finishing. In that column some basic and some advanced measuring tools were reviewed and explained.

This time I'll do the same for hand-held, manually operated cutting tools. We'll save the powered cutting tools for another column (Sorry Tim Taylor...).

Cutting tools

Before we get into the specific cutting tools that will make modeling life easier, let's examine just for a moment the nature of these tools. Cutting tools by definition are used to, well, cut things. If they are not sharp, they will not cut.

To produce professional-looking results, you must insure that whatever cutting tool you are using, it is as sharp as possible. I cannot stress this point (no pun intended...) enough; sandpaper, filler, and covering will not hide a poor construction job, and a huge part of construction is clean, accurate cutting.

The message here is to change blades early and often (just like using the *save* button on your computer when you are writing). As soon as a blade starts tearing or ripping instead of cutting, you have compromised the part you are making; change your blade before that happens!

Okay, I think we'd all agree that the number one cutting tool in our world is the ubiquitous X-Acto #1 knife handle, fitted with the equally common #11 blade. Perhaps as much as 80% to 90% of all model airplane-cutting chores are done by using this combination of handle and blade.

It is a good idea to purchase knife handles that have some sort of anti-roll device fitted. Nothing is more frustrating—and painful—than having a round knife handle roll off the edge of your table and land point down in the top of your foot! Don't ask me how I know this ...



The ubiquitous #11 blade mounted in a #1 knife handle is the most common cutting instrument in modeling. Here that combination is being used to trim the edge of a piece of balsa in preparation to make up a set of foam wing skins. Watch the fingers! Photo by Robby Hunt.

The blades that typically come with a hobby knife or knife set are made of less-than-ideal steel for longevity; search around on the Internet and find either high carbon-steel blades or, better yet, stainless-steel blades.

Also, don't buy a package of five blades and expect it to last through a building season. Buy in bulk. I purchase my #11 blades in 100-blade boxes. I'll typically go through four to six (or more) blades per building session. The instant I feel any hint of drag or feel the blade ripping instead of slicing, I change the blade! I cannot stress this enough. *Change your blades often.*

While the #11 hobby blade is useful and easily obtainable, there is a better choice, albeit at a higher cost. I like to use industrial grade, stainless steel #11 scalpel blades for most of the small-part cutting chores on my models. Not only are the blades thinner and less prone to spread and split the balsa, but they are also far sharper than a standard #11 hobby blade and enable the user to make more precise and controllable cuts.

Again, a search of the Internet will yield dozens of companies that sell scalpel blades. Typically, they sell them in small quantities at quite high prices.



Here are two #1 knife handles. Note that the red one has a hexagonal piece fitted to its base that prevents it from rolling off the workbench. It is suggested that you purchase #11 blades in boxes of 100 pieces to save money and to always have a sharp blade available. Photo by Bob Hunt.



An even better option for most model cutting chores is a #11 scalpel blade. You can mount them in a surgical knife handle or break the tang and mount them in either a #1 knife handle or in an Uber Skiver handle—if you are lucky enough to have one or two! Hunt photo.

I learned about the advantages of scalpel blades back when I first started working at Carstens Publications. We used to have to wax the paper on which the magazine's type was printed (Repro paper) and then cut it into columns and paste it down on the layout boards. Yes, this was before digital printing and even before we had computer layout!

I liked the blades so much that I took a few of them home with me each week (with the boss's full knowledge and consent) and used them in my modeling. I got hooked on them to the point where a normal #11 blade just would not do for most of my building chores.

We purchased those blades a thousand at a time. Scalpel blades have a rectangular hole in the shank that is designed to allow the blade to be mounted in a surgical-type handle, and the blades we purchased were slid onto metal bars that went through that opening. The bars were suspended in the box at each end to prevent the points from touching anything and dulling.

There were two bars of 500 blades each in a long box. At Carstens we simply broke the blades about halfway down the tang and then used them in a normal #1 knife handle. After we started using computer layout and digital printing, there was no need for those blades anymore.

I used up the last of them in the late 1980s and that was that. I did, however save and use one of those oblong boxes that the blades came in for tubing storage.

Just a few months ago I was cleaning my shop and was about to throw out that box. I saw a label on the box and remembered that this was the container in which those scalpel blades came. The company name was on the label. I was pretty sure that they were either not still in business or wouldn't still carry those blades, however, I was wrong on both counts.

I did an Internet search, found the company, and called it. The man at the other end said that he remembered supplying them to Carstens, and that he still had them in stock! I purchased a box of 1,000 blades for around \$170.00. Yes, that sounds expensive, but it was a bargain to me.

Perhaps you could find a couple of modeling buddies to go in on a box of them and split them up. Trust me, these blades are worth the price and the effort to get them. A thousand blades should last the average modeler several years.

The scalpel blades are available from Pincover Industrial Supply Company, 4730 Broadway, New York, 10040. The phone number is (212) 569-1010. Order #11 Industrial Contour Blades. Part number: 87-0111-0000.



If you are a really serious builder, consider purchasing #11 scalpel blades in 1,000 piece boxes. You will always have a sharp blade available! Get a few buddies together, buy a box, and then divvy up the blades equally. Hunt photo.

While the scalpel blade can be used in a normal #1 handle or a surgical type handle, I prefer to use an Uber Skiver handle. This handle has a hex shape barrel to prevent rolling and it is much smaller and lighter than a normal #1 knife handle.

I used to purchase these from *Model Builder Magazine* at the trade shows. Unfortunately, *Model Builder* went out of business, and I have not been able to find those handles elsewhere. (If anyone reading this knows of a source for the Uber Skiver handles, please let me know and I'll pass the information on to all PAMPA members through this column.)

Another blade that I find indispensable is the #26 Whittler's Blade. This blade is $\frac{7}{16}$ -inch wide and $2\frac{1}{4}$ -inches long (actual useable blade length) and fits into either #2 or #3 knife handles.

I prefer to use it with the thinner #2 handle, as it is more controllable in that handle. The Whittler's blade is great for carving blocks. It is very controllable due to the fact that it is quite stiff. With practice you will be able to carve balsa, and also extruded polystyrene foam (Styrofoam) for fuselage shell mold bucks, to exact shapes that require very little sanding afterwards. Both Excel and X-Acto carry a #26 blade.



Another very useful cutting tool is the #26 "Whittler's" blade, mounted in a #2 knife handle. This combination is useful when carving a balsa block or a foam block. Hunt photo.



The #26 "Whittler's" blade and a #2 knife handle is the perfect tool for carving wingtip blocks to shape. Be very careful when doing a draw cut as depicted here. Hunt photo.



The #26 blade is also very good for carving extruded polystyrene foam. This foam is typically used to make bucks for molded parts. Keep the blade sharp or it may rip the foam instead of slicing it! Hunt photo.

50 There are a number of other blades that are designed to fit the #1 and #2 knife handles, but I have not found too much use for them in my modeling. Perhaps *you* will.

Another group of cutting tools that is very useful is routers and gouges. Typically, these are used for hollowing out blocks in our world. They are designed to fit into the #3 knife handle and come in a variety of sizes and shapes—usually in sets.



The #3 knife handle is available with either a plastic grip or an aluminum grip. This type of handle accepts a wide variety of blades, gouges, and router bits.

You can find a very good selection of the X-Acto line of cutting tools at Michael's craft stores, Hobby Lobby stores, and your local hobby store (if you still have one in your vicinity). You'll probably also find Excel-brand cutting tools. Both Excel and X-Acto brand knife handles are fine for our purposes.



Years ago the lowly single-edge razor blade was the main cutting tool for most modelers. It is still a very useful tool for many model building operations. Buy them in boxes of 100 blades. Hunt photo.



Marking the length of, and cutting cap strips are jobs that are best done with a sharp, single-edge razor blade. A sharp blade will chop straight down through the cap strip and leave a clean edge. Hunt photo.

One other cutting tool that is very useful, and one that's readily available, is the common single-edge razor blade. You will find myriad uses for this seemingly simple cutting device. Single-edge razor blades are available in boxes of 100 at extremely reasonable prices.

Like anything else, however, the more expensive blades will usually also be better blades with sharper edges that last longer. Get a box of these and keep them handy to your work area.

Razor planes

I've owned probably a dozen different types and/or brands of razor planes over the years, and only one of them works the way I feel a plane should to cut balsa. That one is the Solingen Mini-Plane that used to be available from Hobby Lobby (not the chain store).

I just did an exhaustive search (really, I was truly exhausted after searching for about two hours on the Internet!), and I found out that this product has been discontinued from the Solingen line of cutlery. Too bad, as it was a fantastic tool.

Search the modeling forums to see if you can find and purchase one from a retiring modeler. It's not much good without a supply of Solingen blades; however, they were the *magic ingredient* in that tool.



A good razor plane is an indispensable modeling tool. Unfortunately there are not too many good ones available. The Solingen Mini-Plane shown here was one of the very best small planes. It was discontinued from production a short while back, but you might find one for sale on a forum or at a swap meet. Be sure to get the Solingen blades that go with it; they were the main reason for this plane's great performance. Hunt photo.



A razor plane is useful for carving trailing edges on wings and for shaping balsa blocks. Note the angle to the work at which the plane is being held. Hunt photo.



Another use for a razor plane is beveling the leading edges of elevators and flaps. These small planes are very controllable and make predictable cuts when you learn how to use them correctly. Hunt photo.

There are other razor planes available, but those that I've tried come up short for our use, in my opinion. Stanley makes a small plane, as does Master Airscrew, but they don't work very well for shaving balsa.

I did find one small plane during my search for the Solingen Mini-Plane that looks very promising. I found it on the Lee Valley & Veritas website. Here's the URL for that page: www.leevalley.com/en/wood/page.aspx?c=&cat=1,41182,41188,56750&p=56750.

This plane features a zinc-alloy body and has two primary blade positions: one for flush trimming and another for surface planing. There is a third blade position in the heel that is designed to allow smoothing of concave surfaces in thin material.

The blades are said to be very durable, even when used on abrasive materials. Five double-edged Rc60 blades are included, and additional blades are sold separately.

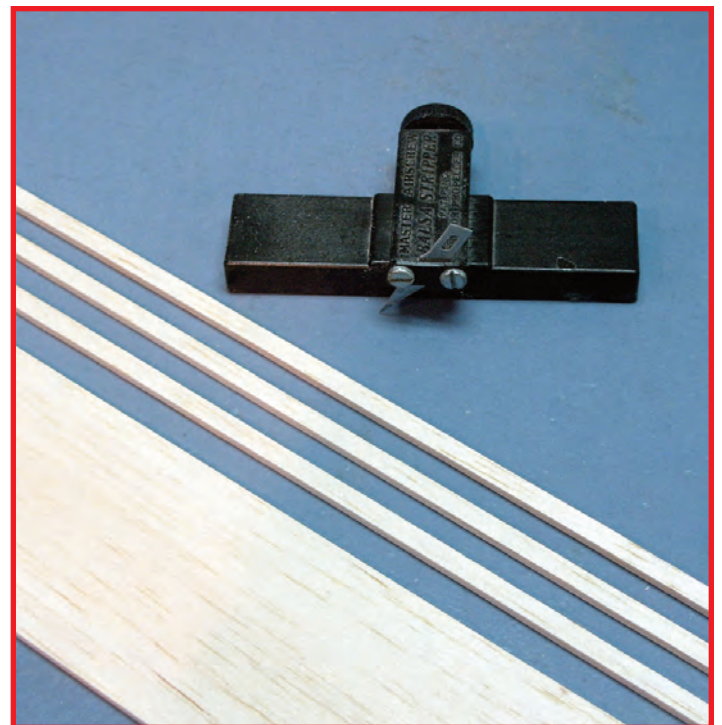
This plane is priced at \$22.90, and the replacement blades are priced at a reasonable \$2.50 for five blades. The only downside I can see is that this tool is a bit on the large side at five inches long and two inches wide, but it just may be the replacement for the Solingen that many of us are seeking. I intend to order one and I'll report on it here.

If any of you have found other good, small razor planes that fit our needs, please let me know and I'll pass on that information as well in this column.

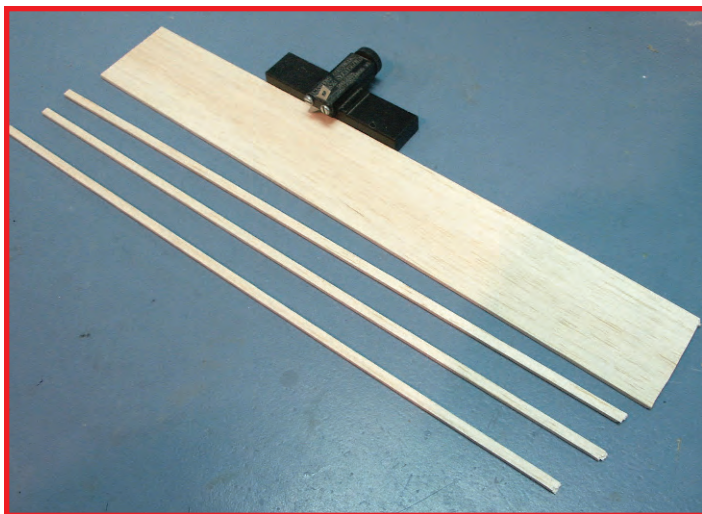
Balsa strippers

Unlike razor planes, there are a number of really good balsa strippers available. I've been using the Master Airscrew stripper for a number of years and have found it to be easy to use, durable, and accurate. It mounts a standard #11 blade and has a screw that allows you to quickly set the width of the desired cut.

These strippers are available from your local hobby store or from any one of the many large hobby discount companies online.



Sometimes you need to make a number of balsa strips and if they must be of a consistent width, a balsa stripper is the right tool for the job. Here's the Master Airscrew Balsa Stripper. It is inexpensive, easy to operate, and adjustable. Hunt photo.



Note that the Master Airscrew Balsa Stripper uses standard #11 blades. It has a screw adjuster that allows you to set the cut depth to whatever width you desire. Hunt photo.

An Internet search will reveal other, more sophisticated balsa strippers. One I found on *You Tube* is the Jones Balsa Stripper. It appears to be very adjustable and precise. Here's the URL for a video on how to use the Jones Balsa Stripper: www.youtube.com/watch?v=HKVdylcNJg4.

The McLeod balsa stripper appears to be very adaptable and will make much wider strips than the other strippers mentioned. Not sure where we would need that much width in our applications—and it's expensive at \$75.00—but here's the URL for Shorty's Basement that handles the McLeod stripper.

Again, a Web search will reveal that there are many strippers available, and there are even plans available from which to make your own stripper. I'll stick with my \$7.00 Master Airscrew unit. It works just great.

Saws

There are numerous model building saws available, but the most common, high-quality saws for modeling come from Zona. They have a wide variety of great saws to choose from, and they offer replacement blades for their saws. That's a nice feature.



A very popular and useful modeling tool is the Zona saw. Actually Zona has a large selection of modeling saws, knives, and other modeling tools. Hunt photo.

Visit the Zona website at www.zonatool.net/razor-saws.html and while you are there, search around a bit. Zona offers an extensive selection of very useful modeling tools, including a comprehensive line of knives and blades.

I have a selection of Zona saws and use them during almost every building session. They are indispensable in building precision models. Zona also carries a very nice miter box for use with their saws.



A hacksaw with a standard blade is very useful for cutting metal and wood that is too large or thick for a model saw to handle. The hacksaw frame at the top of the photo is fitted with a round carbide cutting rod. It goes through almost anything! Hunt photo.

For cutting larger items, a good quality hacksaw is a useful tool to have in the shop. You can purchase one of these at any home improvement store. Get a selection of different types of blades to use in your hacksaw frame. A really useful hacksaw blade is the round, carbide type. You'll find dozens of uses for this type of blade in your modeling, and also for those "honey-do's" around the house.

Clearly we have only touched on the most rudimentary cutting tools for modeling. As you search around the Internet websites mentioned, and others, you will find that there are literally thousands of choices available.

Purchase those cutting tools that make sense to you and fit your specific needs in modeling. You'll find that you will continue to find and buy new and interesting cutting tools on a regular basis. Hey, that's one of the most fun things about model building. Collecting tools!

Next time we'll tackle sanding tools. *SN*

—Bob Hunt

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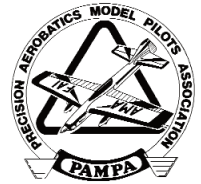
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PAMPA News & Reports



Vice President Report

by Matt Neumann

“There is room in the hobby for everyone.”

Choices, choices, choices. Windy Urtnowski had a saying, “There is room in the hobby for everyone.”

He was right, and I believe this is even truer now than when he first came up with the saying. Just think of it: we have more choices today of things to fit our own personal tastes than ever before.

We have more events now than ever before. At first it was just age-level classes. Then the PAMPA classes were created with Beginner, Intermediate, Advanced, and Expert. To these were added Old-Time and Classic. And now Nostalgia 30 or Super 70s events are becoming popular in certain areas.

These are opening up the possibility of showing off even more designs that were not “legal” in the other classes. This potentially presents the opportunity to bring in some people who felt that the classic designs were just too “old” for them, but fondly remember the planes of the ’70s.

The ’70s certainly had their share of differing designs from one end of the spectrum to the other. Just think, you could have a Stiletto or Genesis flying right next to a semiscale Sea Fury or Spitfire—designs that are at near opposite ends of the spectrum.

Today, fliers have many more choices for power plants. At the time Windy came up with the saying, I think the debate was just heating up as to whether tuned pipes were the way to go or whether one should stay with the larger muffled engines.

And, of course, there were some who still liked the good old Fox .35. Since then we have added 4-strokes and now electric power plants. There are carbon fiber props on one end, and wooden and APCs on the other. More and more choices...

Hardware has become better, too. Instead of the crummy hardware that came with the old kits, there are more and more choices out there for good hardware. It is hard to blame a poor-flying plane on lousy hardware these days.

If you get your hardware from a reputable source, you just can’t go wrong, because the newest pieces of hardware are almost foolproof.

Building materials are even changing. It used to be that if you had some balsa wood, a little plywood, and some maple for motor mounts, that was it, period. Cover your plane with silkspan and finish it with dope. Then along came Styrofoam, the “high tech” material when it first came out.

Now we have people making things out of composite material. And not just bits and pieces, but in some cases, entire airplanes! And not a single tree had to be cut down to build them. Also, they are finishing them with newfangled finishing materials, as well.

Ah, as I look back, I think of just how far we have come in just a short amount of time. The time between new innovations is shortening up.

I think of all the choices and realize that if there isn’t

anything that interests you in the events that are offered and the choices in designs and building materials, then you are just not interested in model planes.

A few years ago, I remember someone saying that we were in the good times. I have to disagree with that. Back then, we were in the “okay” times. Now we are in the good times, and the great times are yet to come.

Our choices for what we can do have grown so much in such a short amount of time that it can actually make your head swim. So if you have jumped into the water with the rest of us, make sure you carry a life preserver. You may need it.

With that said, I can’t wait to see what choices we will have that are just around the corner. *SN*

—Matt Neumann



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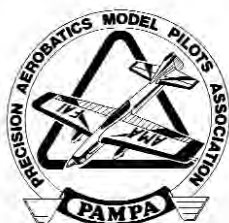
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District I

by Dave Cook

Connecticut, Maine, Massachusetts, New Hampshire,
Rhode Island, Vermont

The Builder of the Model rule saga continues: District I is dropping the current BOM (Builder of the Model) rule for this season. The rule is unenforceable in any format and ineffective in competition.

The Beginner, Intermediate, Advanced and Expert classes will have no appearance points and you can fly a borrowed, bought or stolen airplane.

In the Expert class only—for those who did build their model—we will have a separate Craftsmanship competition with a modified BOM Rule for models that fly in the competition. The in-the-air score will be taken from the Expert class flight and added to the appearance score to give the final placing in the Craftsmanship event. Awards will be given to three places.

Craftsmanship is a term that can be applied to every aspect of our sport—design through construction, finishing, setup and flying. I think that it a better term to use than Concourse, Beauty or Appearance. I think it better describes this hobby and its unique Builder of The Model Rule.

To be entered in the Craftsmanship competition, the flier must have contributed significantly to all aspects of the list. A three person contest management board will judge the models entered for score as well as decide if a model is eligible for the Craftsmanship event.

Each contestant, if rejected, will have a chance to present his/her case to the board. They will be guided by an outline of acceptable prefab components and outside help. In all cases the

committee's judgment is final and cannot be further protested.

The list

The model must fly a complete scored flight in the Expert class.

The flier must have done over 50% of the construction and assembly.

The flier must have done over 75% of the finishing, trim and detailing.

The devils advocate's words

As the rule stands now, we have an unfair event in that we have builders and non-builders flying for points in the air but the builders get an "appearance points" bonus added to his score.

Building a model yourself, just to add appearance points to your flying score could be unfair—especially in a flying event. All a poor guy wants to do is fly for score—and he has to compete against another flier that is given an extra 10 to 20 points coming in because he claims he built the model. I could do this too but I don't have the time, equipment, or maybe dishonesty.

The three-member screening board may be a good idea to challenge cheaters and this event may help to satisfy both builders and non-builders.

We will let you know how it turns out. **SN**

—Dave Cook

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Hi, all. I would like to continue with my ritual of featuring a District II personality. This column is dedicated to a really special and interesting guy and good friend by the name of Rich Giacobone.

Like so many of us, Rich had an infatuation with airplanes at a very early age. One day when Rich was twelve, he and his parents were going on a picnic to Pelham Bay Park in Bronx, New York. While walking to the picnic area, Rich came upon The U-Control field where some guys were taking turns flying their stunt ships. From that moment on Rich was mesmerized and “hooked.”

Rich started building Monogram Speedy-Built balsa model planes. For the next two years—probably like most of us—he built and crashed many airplanes but never got discouraged.

At the age of fourteen, while attending Manhattan Aviation High School, Rich met a classmate by the name of Gene Martine. Many of you probably know this colorful guy for his terrific building and flying skills and for his work as our PAMPA photographer. He and Gene became very close friends, and that friendship has continued to this very day. Both Rich and Gene graduated from Manhattan Aviation High School and were FAA licensed to work on full-size aircraft.

By the age of fifteen, Rich and Gene had progressed from flying .049-powered models on top of the garage roof next to Rich’s house to doing the complete pattern on the baseball field next to United Nations building on 1st Avenue. One day Rich was flying a Don Still designed Stuka at this site. A few distinguished looking gentlemen came there and stood around while Rich put his stunter through the pattern. One of the gentlemen asked Rich a few questions and they chatted for a short while. Rich later found out that the man he was talking to was Dag Hammarskjold, the United Nations Secretary General!

While flying at Pelham Bay Park, Rich and Gene met Frank McMillan. Like Gene, Frank became one of the top stunt fliers year in and year out at the Nats and one of the truly classiest guys in our hobby. The three flew together until Frank graduated college and enlisted in the Air Force. The “Three Amigos” have been close friends ever since.



Here’s Rich Giacobone with one of his “straight wing” Stukas. This one features a Warren Truss Lost-Foam wing, a RoJett .76 for power, and a Brodak dope finish. Photo by Buddy Wieder.

While attending Farleigh Dickinson University, Rich worked as a toolmaker and continued flying through this period. Around 1960, like with so many of us, girls and cars took over and model airplanes were put on the back burner. After thirty-six years of being away from the model airplane hobby, Rich built a Cardinal kit and was off and running again.

Rich’s love for the Stuka design has been a passion for many years, and he has produced some of the nicest Stuka stunt models around. His last Stuka featured an inverted gull wing and was powered by a Ro-Jet .90. Please check out the pictures I have taken of two of his beauties.



Rich gives us a look at the bottom of his straight wing Stuka, revealing the Smith/Werwage carbon fiber tuned pipe and the neat weathering detail that he applied. Wieder photo.



Here again the weathering detail is evident, as is the very neat canopy treatment. Note the scalelike exhaust stacks on the cowlings. Wieder photo.



This angle reveals the wheel pants and the cowling details, as well as the carbon fiber 3-blade Bolly prop. Wieder photo.



Here is the canopy on Rich's giant inverted gull-wing Stuka. Note the fantastic detailing in the cockpit. The canopy was molded for Rich by Dave Midgley. Wieder photo.



This Stuka has an inverted gull wing that was made from balsa covered foam. It has a wingspan of 67 inches. It is powered by a RoJett .90 engine. It nearly yanked Rich off of his feet! Weider photo.



Check out Rich's vanity license plate. He's a real fan of the Stuka! Wieder photo.

Rich's latest building project is a Bob Hunt-designed, electric-powered Caprice. After fighting coming over to the "electric light side" for a few years, Rich has finally decided it was time. Good luck, Rich. I know you're going to love the consistency of an electric stunt ship.

Over the years Rich has attended most of the local contests, including Brodaks, and he also tries to make the Nats as often as possible.

One of the great qualities Rich possesses is that he is always willing to judge at or run a contest. We all know how much time and energy that involves, and not everyone is willing to take on that task.

On a personal note, you know you're in trouble when, just after completing your official flight in Expert Classic Stunt at Brodaks, John D'Ottavio and Rich Giacabone come out to the middle of the circle and say to you, "That flight sucked." Oh, and by the way, that happened to me, and they were the judges! (P.S. My flight really did suck.)

X-Vector

Southern New Jersey fliers Ski Dombrovski and his son Josh have worked together to produce a modified ARC Vector that they have renamed the X-Vector. Actually, this ship is a combination of the ARC wing and tail assemblies and a fuselage that they made from a Vector kit. They made the fuselage a bit narrower than the standard kit unit and made molded balsa shells for it in place of the normal balsa blocks provided in the kit. A custom molded canopy was made to match the new lines of the fuselage top shell. They also designed a new rudder shape and installed an O.S. Max .35S for power.



Ski and Josh Dombrovski modified a Vector ARC to produce this very sleek X-Vector. An OS Max .35S provides the go power for this beauty! Photo by Ski Dombrovski.

Ski sent along a photo that shows a paint scheme that is very similar to Bob Hunt's 2012 Crossfire Extreme scheme. Ski mused that he and Bob must have some telepathy going, as he put this scheme on the X-Vector before having seen Bob's plane! Nice job, Ski and Josh!

No doubt many of you East Coast PAMPA members will remember Ski's fantastic Lace Maker design from the 1980s. It

was, by all accounts I've heard, one of the most beautiful models of all time.

It featured a pull-pull control system and an amazing wrap-around header and muffler assembly that fit perfectly and snugly inside the oval ring cowl.

Ski knows how to build and finish! **SN**

—Bud

Ohio, Pennsylvania, West Virginia

Greetings, District III PAMPA members. I'm your new District III Interim Director. I will be filling the spot vacated by Bob Hunt.

How could this have happened to me? Looking back at the sequence of events that took place in a very short period of time, I think I was set up by a very cunning and persuasive person! (*Darn Skippy!—Ed.*) If you should have an overabundance of ice cubes and you want to market them in the great state of Alaska, Mr. Hunt is your man! I agreed to do it; but, as Paul Harvey would say, "Now, for the rest of the story," because the next line was, "Oh, by the way, your first column is due in about twenty days." That is when the panic set in.

Scrambling to get some information, I sent an e-mail to all the members for whom I could get addresses. Within a few days I received copies of club newsletters from Dalton Hammett of the Bean Hill Flyers of Erie PA, and Serge Krauss of the North Coast Control Liners of Cleveland OH. Pat Rowan, a former PAMPA District III Director, also sent an e-mail offering his assistance. People such as these, the many others in District III, and all of PAMPA and control-line fliers in general are what makes our hobby so special!

So much for my thoughts. What are our members doing, you may ask? I received a nice e-mail with attached pictures from Dan Bregar. Dan is working on an electric version of a Pathfinder. The conversion will be powered by an Arrowind 2820/07 motor. The battery will be a 4S 3000 mAh Sky Lipo. The ESC Dan is using is a Castle Phoenix 45 with a Will Hubin FM-9 timer. Dan's test flights will start with a 11x5.5EP prop. Dan is shooting for a flying weight of 53 ounces.



Dan Bregar's Pathfinder conversion will be powered by an Arrowind 2820/07 motor.

District III

by Ken Armish

The Pathfinder is looking really nice, Dan. Can't wait to see how your combination flies. Hopefully, we'll all see it in action at Brodak's, or maybe even sooner.

From the airplane factory at Bob Hunt's house comes news of Dennis Baer's latest creation. Dennis is building a new modified Vector 40. The wing for Dennis's ship has one inch of span added to each wing panel, and the moment arms have been stretched to fly better with electric power. Dennis visits Bob's shop on a weekly basis and has his new model almost ready to assemble.

During his last visit to Bob's place, Dennis shaped the foam mold bucks for the molded balsa shells. Dennis and Bob have restyled the Vector aesthetics to produce a more jet-like ship. Dennis has named the new design Shangri la. Hey, Dennis, keep us abreast of the progress on this new ship.



Dennis Baer is busy shaping the fuselage shell molds for his modified Vector 40.

From the same factory come a couple of pictures of one of Bob Hunt's latest creations, which he calls the Rounder. A Rounder, by the way, is "an expert Poker player who travels from town to town seeking high stakes games." (Bob actually looked that up in a reference book!).

You know that old saying, "If it looks right, it will fly right." Well, in the case of the Rounder, this is going to be one terrific plane. Of course, it will be e-powered. As this plane progresses, I will have follow-up with the specifics. I am looking forward to having a set of plans for this beauty.



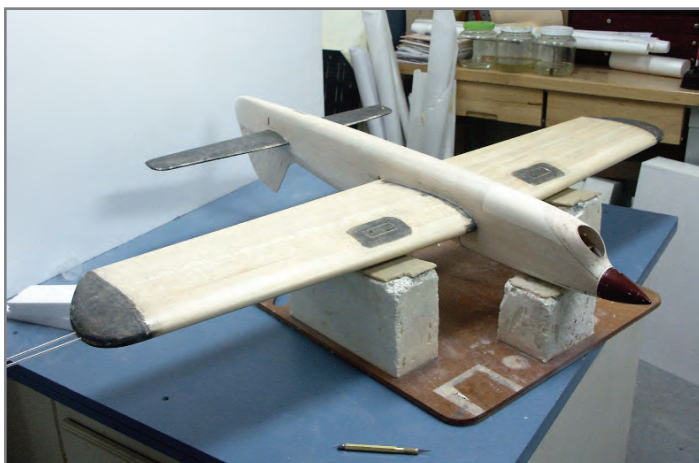
Alan Buck holds Bob Hunt's prototype Rounder in Bob's shop. This model features a "Reverse Composite" wing (a term made up by Bob...) and molded fuselage components.



Alan Buck's Buccaneer 746-P is almost ready for paint.



Here's another shot of Bob Hunt's new Rounder. It will be powered by an E-Flite Power 25 motor.



This photo of the bottom of Bob's Rounder shows the compound curved, molded fuselage bottom shell to good effect.

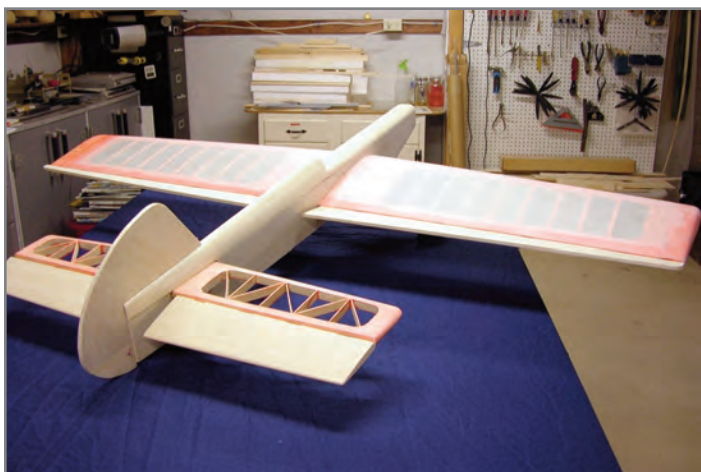
The second of Alan's projects is a Jim Silhavy-designed Gypsy 46. This one will be powered by one of Alan's PA-61s. This one shows a great deal of promise as to its weight. Both of Alan's planes are nearing the painting stage and should be ready for early spring testing.



Alan Buck's Gypsy 46 is on target to be a very light model... if he doesn't go wild with the paint! Nice looking ship, Alan!

As for yours truly, I am building my first electric-powered model. I have modified a Legacy 40 kit for electric power by installing a front mounting system along with a small change in the aesthetics of the model. I will be using an AXI 2826/10 Motor with a Castle Phoenix 45 controller, a Will Hubin FM-9 timer,

and Hyperion 4S 4000 mAh batteries. As I am a complete neophyte at electric, all of you electric gurus in District III will probably get really tired of my asking questions. I can be taught, but at my age my on-board computer works rather slowly!



Ken Armish modified this Legacy to accept electric power. He's going to use an AXI 2826/10 motor and a Phoenix 45 ESC. A Will Hubin FM-9 timer will sequence the flight.

Let's take a look at what is coming up as far as events go:

May 11-18 – Joe Nall Fly-In, Woodruff, South Carolina. If some of you are not aware of this event, it is the largest RC fly-in in the country. For the first time last May, fellow CL fliers put on demo flights and taught others to fly at this event. That will happen again this year and for many years to come.

Because this is such a large event, with even larger press

coverage, it is a great venue for control-liners to let the world know what we have known for years—how to stay in touch with your plane.

If you are able to go to this event, I am sure the organizers would appreciate any help you would offer. I hope to see some of you there.

June 11-15 – Brodak's Fly-in, Carmichaels PA. I will be helping Allen Brickhaus with the stunt events, as well as continuing my role as Junkyard Wars MC. I would like to encourage any of you who have not judged at a contest as yet to take advantage of the Judge Apprenticeship Program.

What is this, you ask? As an apprentice, you would be teamed with a pair of experienced judges and you would score each flight. Your score would not count toward the contestant's total score, but you will be able to see how your flight impressions compare to those of the event judges. If you have not judged before, it is actually a lot of fun, along with being very educational. Don't be intimidated; join us and we will share the limelight.

July 15-20 – Nationals, Muncie, Indiana. Let's all get out there and show the country that District III has some serious competitors. But, above all, let's have fun doing that!

Once again, I would like to thank all the people of District III for their responses to my plea for help. Flying season will probably will be here by the time this column reaches print, so I wish all of you light winds and 40-point maneuvers! **SN**

—Ken Armish
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Delaware, District of Columbia, Maryland, North Carolina, Virginia

This column is typically the hardest one of the year to write. By the time this issue hits your mailbox, the summer flying season will already be upon us and everybody will have their eye on Huntersville, Brodak's, and the Nats.

But as this issue is written, it's snowing (again), and not too many people have been flying since King Orange back in January.

It kind of sounds as though not too many people are building new models this winter, either. Personally, I blame "the Groundhog" for his fraudulent weather predictions that have grounded District IV members from flooding my email box with flight reports of new planes. The good news is that in just a few weeks it will warm up and we will be out flying again.

The Northern Virginia crew has still been plugging away with winter club building sessions. For those who saw the pictures earlier of Tim Stagg's visit to a club building session, Jack Rosemere provided some pictures of the finished product from Tim's MonoKote covering and trim clinic.

Anybody who has seen one of Tim's planes knows that the man can produce a fantastic finish using film, and it's great to see these skills being distributed among the club up there.

District IV

by Steve Fitton



This is a top view of the Brodak Cardinal that was the subject of a demonstration by Tim Stagg on covering with MonoKote. Jack Rosemere photo.



A bottom view of the Cardinal shows the checkerboards fully laid down. A photo in the previous District IV column showed Tim in the process of making this trim scheme for the MonoKote clinic. Jack Rosemere photo.

When Tim was doing the MonoKote class, he also did a clinic on the e-power systems of which he has such mastery. I wonder if we will see a flood of Northern Virginia electric-power models this year?

John Rakes of Lynchburg, Virginia, continues to finish up the Brodak United kit he is building. It should be done within a few weeks of this writing, and we will hopefully have some pictures of the finished product that was shown in bare wood in the last issue.

I had a nice chat with Carolina resident Tommy Luper just a few days ago. We discussed a semiscale project I may be working on in the future, and Tommy explained that he was currently working on bringing one of the TEOSAWKI's he had back up to flying condition. Most of you District IV types will know the plane I'm talking about—the one that added a more conventional looking fuselage and vertical fin to the basic Clayton Smith design. Tommy had gone from the basic LA .46 power setup to a ST .51 and has been delighted with the way the extra power improved the flying qualities of the plane.

Tommy added that he had also talked to Kent Tysor recently, but that Kent was not yet ready to come back out of his temporary retirement from stunt. Hopefully, Kent will return to stunt soon; everybody misses the epic stories, delivered in that perfect Carolina drawl, that Kent is famous for (“Did he stop? Heeeeeelllll no! He went for it!”). Kent is also missed because he was/is easily the sharpest builder and flier in the district.

While I generally refrain from boring the readers with anything I personally am doing in my shop, I do have a couple of things that might be of interest this go-around. One is on the issue of Vortex Generators (VG). Those of you who go on the online forums may have seen the increasing numbers of threads about them.

On one of the few non-lousy days this winter, Phil Spillman and I went out for a flying session where I tried VG's on my Dreadnought. The results were inconclusive, as the VGs seemed to have no detectable effect on how my plane flew. Subsequently, I have been informed by some that my VGs were not placed for optimum effect. There is also a general consensus that VGs have minimal effect on a light, good-flying airplane, due to the fact that VGs delay the flow separation of the air at high angles of attack, and the belief is that a light airplane will not see angles of attack high enough to have any flow separation.

This makes me think that the ideal test subject for VGs isn't a

Nats plane, but the most overweight, beat-up Ringmaster one can find! This may have to be my project to test later this summer. And if you, the reader, have something that doesn't fly well, trying VGs might be an interesting thing to do.

The VGs I used were made by Howard Rush on a 3-D printer. I used the trick of putting down a small piece of 3M clear tape like that which we use to seal hingelines in this case putting the tape right where I wanted the VG to go. (According to PJ Rowland, this location should be just *before* the high point of the wing and just outside the prop arc.) The VG is then attached to the piece of tape with a drop of medium CA and you are ready to fly. If you want to remove the VG or move it, just pull up the tape and it will pop right off. I think these devices are something that we will probably see more and more of in the future.



If you look closely at this picture of Paul Walker's Impact, you will see a pair of Howard Rush-made vortex generators on each wing, just at the trailing edge of the paint trim line. This is generally considered to be the right place to put them, although some are experimenting with many more VGs on each wing and VGs on the tail, as well. I'm using a picture of Walker's plane because my own installation was decreed to be invalid by virtue of having the VGs too far aft on the wing. It's also an excuse to run a cool picture from last year's Nats!

Another quick item of interest is the picture I have of my special tool for making instrument panels. I have fun trying to hand-paint instrument panels instead of just scaling and printing an image from the computer. Freehand painting of round dials and instruments is pretty much impossible, for me at least, without some sort of guide. I have found that the handy cartridge case, in this case with a 5.56mm opening, makes a perfect guide.



This picture illustrates the effect that the 5.56mm cartridge case mouth leaves when pressed against the wood panel. The outlines make painting instrument faces a snap. You can do the same effect with brass tubing of roughly 1/4 inch diameter or slightly smaller, but be sure the ends are smooth and without burrs.

I make a gentle impression in the soft balsa of the instrument panel with the case. This gives enough of a guide to allow me to easily paint round shapes, yet the impressions left by the case do not detract from the finished product as long as I don't really mash the case into the panel.



This is a picture of the finished product. When hand-painting instrument faces, quality detail brushes are a must. It's time for me to get some new brushes....

As Detective Columbo always used to say, "I've got just one more thing..." Many times in model magazines, the winter dead-time results in articles on either how to winterize your plane or how to do a major overhaul and inspection over the winter.

I don't know about you, but a winter overhaul has never ever appealed to me in any way. Firstly, around these parts you can have a great day to fly crop up suddenly in winter, out of the blue, so to speak. It's aggravating to miss that 70° day in February because your plane is all in pieces in the shop. The biggest reason for me is that I'm also just too lazy to ever want to tinker with my plane unless I absolutely have to. A final reason for me is the "if it ain't broke..." philosophy. Why take a chance?

Having written that, though, a few issues this winter have reminded me that a few simple checks need to be kept up with year round. Every plane is a bit different, and if you know yours as you should, then you know what to look after. A few weeks ago, during the vortex generator test session, I had a wheel pant come loose in flight.

Typically, I groused when it happened: "Five hundred flights on the airplane and the locking screw never comes loose 'til now!" It's something I used to check every few flights, but I got lazy and had not checked them in about the last 200 flights or so.

The other and more serious issue was that, in the weeks before the King Orange contest, I had had the pipe mounting strap, the one that holds the after part of the tuned pipe in place in the pipe tunnel, come loose during practice. It seemed that the simple expedience of tightening the zip tie and doing a quick measurement of the pipe system length at the field had sorted things out.

Being naturally dense, it took me a long time to figure out that things were not quite right after that, both with the performance of the plane in the warm afternoon air at King Orange when engine performance seemed subtly off, and the mysterious presence of oil all around the very back end of the pipe with none at the front end. Here again is where a quick inspection, really just an effort to keep track of the day-to-day

shape of one's plane, would have helped.

When I finally decided, just out of curiosity's sake, to measure the pipe length at home with the ruler "I always" use and not the tape measure I used at the field when the strap came loose, I discovered that the pipe was longer than it was supposed to be by about 1/4 inch, proof that the pipe had moved/leaked at the coupler during the rear strap incident. Beyond that, during the incident flight the pipe had enough slack at the rear mount for it to beat against the nylon mount to the fuselage, in this case with enough force to damage the pipe there and result in a leak. That's where the mystery oil was coming from. Repairs were made and the plane is back in service.

The point of all this rather long tale is just that being always vigilant about the few important "squawks" each plane has saves you not only from the tedium of a "winter overhaul," but also ensures readiness throughout the year and saves wasting contest trips because something dumb like a wheelpant decides to fall off on that smokin' official flight.



New and old planes in the author's shop. The "old" in the foreground was in for pipe repairs. Behind is a "new" Randy Smith-designed Dreadnought under construction. Powerplant for this one is still to be determined.

Finally, a couple of parting shots in the "just because it's cool looking" category. I have some pictures I took of Kaz Minato's and Matt Neumann's superbly finished planes at the Nats. Summer is coming. I will see all y'all out at the field! **SN**



Business end of Kaz Minato's fantastic 2012 Nats front row F-6F-3 Hellcat. It features a piped PA-75 for power.



Another front view, this time of Matt Neumann's JU-87 Stuka stunt model at last year's Nats. It's another PA-75-powered airplane.

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

District V

by Eric Viglione

“Time’s up! Pencils down! Turn in your work.”

Been a while since most of us heard those words, but I just heard them from our editor (*Hey, we are trying hard to put this newsletter/magazine back on time!—Ed.*).

There has not been much flying activity brought to my attention in District V since my last column, so this one will probably be a little thin.

Well, it’s also about that time in most of our shops—time to put our spray guns down and turn in our work for inspection. Let’s see what you have been up to this winter. Please send me some pics and share your work with District V.

Speaking of District V members’ sharing, I just got some great news, hot off the press, from Walter Umland:

“Although DMECO closed their doors many years ago, the FF, CL, and RC plans were all available from a Mr. Fran Ptasezkiewicz in N.Y. State. Last year (2012) I acquired the CL and FF side from Fran, and as of last month (2-2013) I am the owner of all the DMECO line, which includes the RC, FF, and CL designs.

“I have a lot of plans to go through, and I will have to locate someone who can scan 44-inch plans/sheets. If all goes well and there are enough people interested I would like to bring back the DMECO line, either as short kits, full kits, or just plans. Thank you.”

—Walter Umland

Thanks for informing us of that great news, Walter. If anyone wants to inquire about these kits and/or plans, please go to Walter’s website at www.builtrightflyright.com.

Sandy Contrata enjoying a happy moment at the 2005 Nationals. Gene Martine photo.



Sandy Contrata

I hate to end this column on such a somber note, but I received the following very sad news from Randy Smith on the 17th of March:

“It is with a very sad heart that I am writing to let you know that on Wednesday about midnight we lost Sandy Contrata. Curt had told me earlier that evening that she was put on a breathing machine.

“There will be (was) a memorial service for the life of Sandra

Contrata, at Wekiwa Springs State Park on Sunday at 11:00 AM. Address is 1800 Wekiwa Circle, Apopka, Florida 32712.

"For you who would like to send cards, Curt's address is Curt Contrata, 6783 NighwindCir., Orlando, FL 32818.

"Sandy asked that in lieu of flowers, a donation to an account for her granddaughter Danielle's future would be appreciated if you were so inclined to do so. The contributions for Danielle can be handled by mailing Curt a check to the above address made out to 'Danielle Tarr.' Curt can then deposit the monies into the special account.

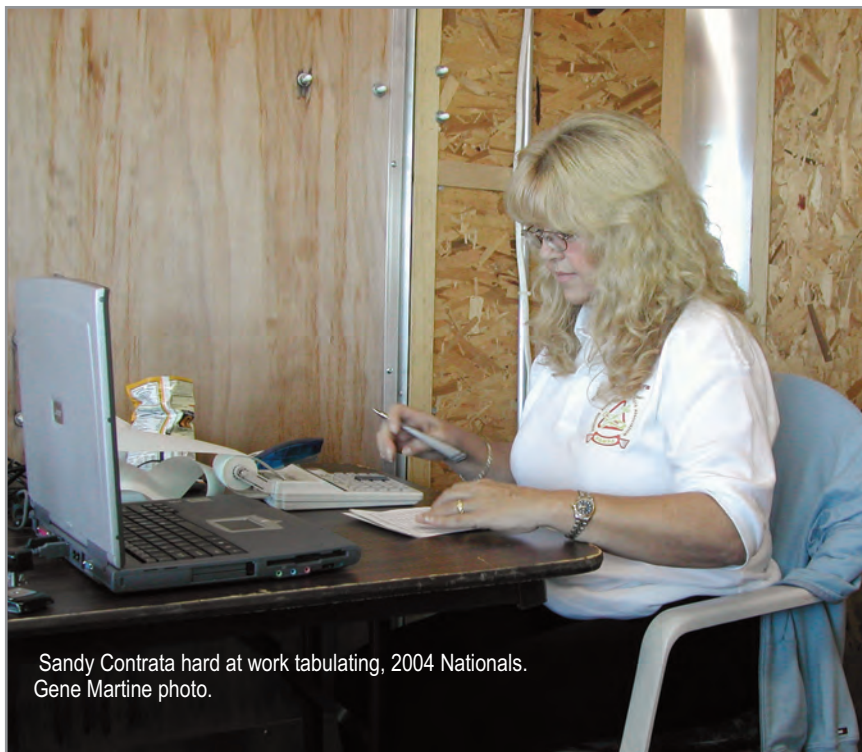
"Regards."

—Randy Smith

Words fail at times like these, but I and all of District V send our deepest condolences to Curt and the entire Contrata family. Sandy was an ever-present positive force, and her presence has been and will continue to be missed. Your extended family in stunt mourns with you.

Until next time, see ya' on the circle! **SN**

—Eric Viglione



Sandy Contrata hard at work tabulating, 2004 Nationals. Gene Martine photo.

Illinois, Indiana, Kentucky, Missouri

District VI

by Allen Brickhaus

This month, Vince Canzani has displayed an excellent trigger finger with his camera, and his candid shots are included in this edition of *Stunt News*. I met Vince and his flying friend, Bud Layne, at the New Albany Skyliners contest at the Clark County Airport on the Indiana side of the Ohio River by Louisville, Kentucky.

This month's column will cover activity at the New Albany Skyliners venue and a clinic sponsored by James Mills of Ozark, Missouri. The actual event happened at the Springfield, Missouri control line circle, located at 2750 West Bennett Street, 65802. The circle is next to Isabel's House and the local fire house. All shots taken by Vince Canzani will be indicated by a VC at the end of the caption. **SN**



This is the business end of Brian Harris' Tempest, which has an ST .51 for power. Although Brian had some time on the new plane, the winds were too tough for him to fly it at the clinic in Springfield, Missouri.



B: Brian's cockpit detail is so very nice. His rendition of his version of the Tempest is well executed and detailed.



Finally, we put the model and Brian together on the asphalt hard surface circle in the southwest portion of Springfield, Missouri.



Dan Bregar sent me this shot of him, his electric Magician and his Open Eagle's Nest perpetual trophy which he won at the 2012 Open Beginners' contest at the AMA Nats in Muncie.



Gerald Chaney, Steve Smith, and James Mills prepare his Legacy and PA .61 piped model for a flight at the clinic.



Brian Harris holds for James as James walks to the center of the circle for some clinic work.



Left: Vince Canzani caught Wes Eakin displaying his New Albany Skyliners shirt. Wes made the trek to the 2011 Vintage Stunt Championships in Tucson with me. (VC)



Right: Larry Robertson of the Louisville area and member of the New Albany Skyliners keeps warm at the October Skyliners' event. (VC)



Left: Allen Burham of the New Albany Skyliners took a bunch of shots to post on their website. Allen and his wife are from the Marble Hill, Missouri area in southeastern Missouri. (VC)

Right: Vince Canzani captured Allen Goff's Petra during maneuvers in Clark County, Indiana. (VC)



Below: Steve Drake of Bowling Green, Kentucky, takes first in Intermediate Profile at the Skyliners' venue. (VC)



Below: Steve Drake got his electric Top Flite ARF Nobler into the air and took first in Intermediate PAMPA also. (VC)

Right: Vince also found Allen Goff moving to get his model ready for a flight at the Clark County Airport venue. (VC)



Left: Andy Saunders and Wes Eakin take in the events at the Skyliners contest in October of 2012. (VC)



Right: Bud Layne and Allen Brickhaus bring their models to the pull testing area at the Clark County Airport in Indiana. (VC)



Above: Mike Stinson, president of the New Albany Skyliners, gets inverted on the New Albany circle. (VC)

Left: Curtis Shipp puts his Brodak ARF/Randy Smith Vector through its paces in New Albany. (VC)

Right: Allen's Frank Adams' Special took the pilots' award at the southern Indiana meet. (VC)

Below: Curtis Shipp, Bud Layne, and Steve Drake take it easy under the big tent. (VC)



Left: Byron Barker's newly finished Adams' Special.

Right: Allen's just finalized Madman with a Byron Barker TT .39 helicopter engine installed.



Below: Vince Canzani has a great camera and captures the movie version of The Memphis Belle on take-off at the Clark County Airport. (VC)



Right: Larry Fruits has probably his prettiest model to date and is displayed well by Vince Canzani's photo work. (VC)



Spectators and contest workers keep out of the bright sun at the New Albany contest. (VC)



Larry Robertson (l) and Byron Barker tabulate for the contest. (VC)



Left: Kenny Stevens dominates the top level scores at the Skyliners' event last October 2012. (VC)

Hello, everybody. It's time again for news from District VII. Mostly what I have for this installment are a few photos from our contest here in Westland, Michigan, at the Signal Seekers field, and I need to mention that by the time you see this, the 2013 Tour 'D Michigan will be getting under way.

The Tour 'D Michigan mentioned in previous District VII columns is a group of fun fly events used to encourage sport, beginner, and hopefully future stunt fliers in the area. The idea was started some time ago by John Paris, Frank Carlisle, and Vince Bodde. The dates and locations will be Lansing, May 4; Jackson, June 8; Flint, July 27; and Kalamazoo, September 14. If you would like to come out and participate or help out, there is a contact person, Rich Kacmarsky. His E-mail is CDRK3@comcast.net. I plan to be at the Jackson event.

Let's go on to photos and stuff. Following are a couple of pictures of my Perigee Profile. You may ask, "Why did Bob build a profile?" Well, here is the story.

For many years, a certain individual has been winning all the profile events around this area, so I decided enough is enough. I came up with what I thought would be a killer small airplane for a .35 to .40 engine. It has a Strathmoor root airfoil with the wing shortened one inch per panel, and it has 1/2-inch more leading edge sweep. The moments are more modern with a longer tail moment than the Strathmoor, and the engine, wing, and tail are all in line.

It works great. Unfortunately, the above mentioned person (John Paris) probably after hearing of my plan took a job in South Korea. I was disappointed. However, two years later he came to our contest when he had leave last August and I had my chance. I got him (but only by a little).



Bob McDonald's original design Perigee profile shares some heritage with his dad's Strathmoor line of stunters. Photo by Curt Nixon.



Bob's Perigee profile features an all in-line setup. Nixon photo.

It is my hope in the future to publish the Perigee. It is a little unique, as it is a profile with I-beam wing construction like that which I used to use when I was getting started. My dad, Roland McDonald, had a lot to do with that.

Let's move on to some other planes that showed up at our August contest. First, we have John Paris's Bout Time, which I think is a modified SV-11. Next is the Petra by Allen Goff, who hails from from Muncie, Indiana. This ship is his own design, and it is powered by a PA .75.

Also, there is Tom Polk's Stuntcraft Vector. Tom is from Farmington Hills, Michigan. It is a modified SV-22 powered with a PA .65.



John Paris campaigns this ship. He calls it Bout Time. Nixon photo.



Allen Goff's original design Petra is powered by a PA .75 engine. Nixon photo.

A note on Tom Polk's airplane: About a year prior to this photo, he and I were getting ready for the club's Father's Day open-to-the-public fun-fly (which includes about anything that

flies) when he suffered a control failure. This was one of those that cause the up and down parts to no longer function when trying to do the inverted pullout from the wing over.



Tom Polk's Stuntcraft Vector has a PA .65 in the nose. Nixon photo.

Fortunately, the spring of 2011 was very wet around here, so after the loud "thunk" I went over to look at the large blue lawn dart and discovered it to be almost completely intact.

I told the "very upset" Mr. Polk this, removed said lawn dart carefully, and replaced the divot.

Believe it or not, the only real damage was to the cowl, one loose motor mount, a couple of paint scratches on the nose, and dings on the wing from prop debris. Sometimes you just get lucky.



The next photo is a shot of Tom during his official flight at our contest, followed by shot of Tom helping John Paris ready for his official flight.

Left: Tom Polk flies his Stuntcraft Vector during an official flight. Nixon photo.



John Paris readying for his flight with some help from Tom Polk. Nixon photo.

Finally, we have a picture of me and my USA-1 just after take off on one of my flights in Classic.



Bob McDonald with USA-1 during official Classic flight. Nixon photo.

That's all I have for now. Fly stunt, and please send me material for the column. 'Till next issue ... **SN**

—Bob McDonald, My email: bobsp47@sbcglobal.net

Snail mail: Bob McDonald

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District VIII

by Doug Moon

Hello, District VIII. Once again the news of stunt is brought to you by PAMPA! Here in our district there are many projects coming to life as they get the final touches before their first flights. Clubs are gathering and talking about upcoming contests and things of that nature. Some areas are already opening up the 2013 contest circuit. Let's take a look at what has happened since the last report.

In February we had our first contest of the season. The Not Presidents' Day Presidents' Day contest was held at Hobby Park in Garland TX. Tom Niebuhr was the CD and has provided us with information about the event:

Not Presidents' Day Contest and Fun Fly

Presidents' Day is the third Monday of February. The Dallas Model Airplane Association traditionally holds the Presidents' Day Contest the weekend before. Many people pointed out the Daytona 500 was on the same weekend, so last year Mike Scott moved the contest date to the next weekend and called it the "Not Presidents' Day Contest." However, NASCAR moved the 500 to the same weekend! Therefore, the 2013 contest was moved back to the traditional weekend. We decided to keep the "Not" in the title. After all, Presidents' Day is really on Monday. Confused?



Bob and Don show off some OTS beauties. Bob is holding a Go Devil Jr. and Don is holding his recently finished Moitle.



Here's the Saturday group at the Not Presidents' Day Contest.



The Sunday group contemplated flying, but breakfast at Chubby's was a much better idea.



Don Cranfill and Jake Moon are with their OTS Stingers.

The weather is always a gamble this time of year. The weather forecast certainly held down participation. Old Time Stunt on Saturday, February 16, started with the temperature about 29 degrees with light winds. The day warmed up to the low 50s and we ended up with stunt paradise. Fun flying went on most of the day.

Old Time Stunt Results:

1) Mike Scott	313	Jamison Special	Aero Tigre .36
2) Don Cranfill	312	Stinger	Thunder Tiger .36
3) Dale Gleason	308.5	Wildman 60	Orwick .64
4) Tom Hamlet	275	Super Clown	LA .25

Judges: Don Hutchinson and Steve Jeansonne. Pit Boss: Steve Thorton.

Tabulation: Priscilla Scott and Sheila Cranfill. Food: George

Hamby, Linda Gleason, Sandra Lee, Sheila Cranfill, and Priscilla Scott.

Sunday the 17th, the Not Presidents' Day Contest ... was not! Classic stunt was scheduled, but the weatherman totally scared fliers away with a forecast of 70-degree temperatures with 20 to 30 mph winds. It was barely flyable until around 9:00 am, after which it was just too windy.

About 15 DMAA members were there to help, so we went to Chubby's restaurant for breakfast!

Thanks for all the help from the DMAA group.

—Tom Niebuhr, CD

Thank you, Tom, for the write-up! I attended the contest on Sunday hoping to see some Classic stunt action, but as Tom noted, the winds were just too high. I did get to talk with a bunch of the contestants on hand as they made plans for a great breakfast at Chubby's.

Don Hutchinson was there and had his beautifully finished Moitle. This is a really neat biplane designed by Francis Reynolds in 1944. Nothing says OTS more than that far forward gear placement. I am certain it will make for some fun landings.



Don Hutchinson displays his newly finished Moitle.



The Moitle is ready for action!

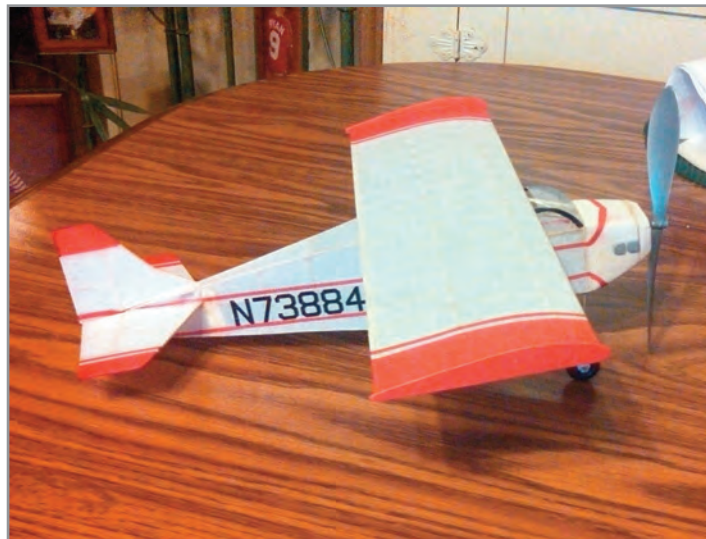
Don powers this plane with a Torpedo .32 using an electronic spark ignition unit. Don builds these ignition systems himself. Don also sent me a link to a really neat video many of you will enjoy. Please visit www.vimeo.com/56564601.

Mike Scott recently took part in an indoor free flight contest. He is quite an accomplished peanut scale builder and competitor. In fact, the whole Scott family is quite familiar with rubber-powered free flight. And they are no strangers to winning.

His son Jeff won the Nationals in outdoor rubber-powered free flight in his class at Vincennes IN. He also won outdoor and indoor in his class at the Lubbock Nationals. His daughter, Amy, used a Bostonian to win indoor rubber-powered free flight in her class at the Lubbock nationals, as well.



Here's Mike Scott's latest rubber-powered FF, the Bostonian.



Mike says his new FF model flies very well.

This was Mike's first attempt at indoor in twenty years. The rules stated you had to use a foam wing and tail section. This would be his first time using foam in this type of model. He chose to go with a time-tested design that has served the Scott family well, the Bostonian. His model weighed just fourteen grams!

With no practice flights prior to the contest, he was able to take fourth place in his class. Way to go, Mike! He has located a new supply of rubber on the Internet and said he will be ready to take it all next time.



Here's Jake Moon's new OTS Stinger.



As you can see in this photo, the Stinger is a fair-sized model. Jake seems happy with it!



This close up shows the Stinger's pilot, Eduard Khil, our Russian comrade.



A close-up of the nose reveals the neat cowl design on the Stinger.



Steve Moon's Snow White awaits its turn under the buffer.

Here we are today at the end of his high school career. In the fall he will be attending college and playing trumpet in the famous Mustang Marching Band. He is quite an accomplished musician. Congratulations, Jake. It's been great watching you grow up. We are all very proud of you!



Steve chose a very nice traditional paint scheme for his Snow White.

Steve Moon's Snow White has received its final coats of color clear. White, blue, and yellow, with typical classic markings, make for a great looking vintage stunt plane. Now the endless task of buffing begins. I don't envy that one bit.

Joe Gilbert sent me some photos of a recent club meeting of the Tulsa OK Gluedobbers. From the photos it appears they had good attendance for this one. We can see Joe holding his newly finished Ringmaster. I am certain this plane will dominate the OTS circles this season.

He was planning on a flight report, but the first day was just too windy to chance the new model. Joe just ran in the motor some and decided to put his Smoothie through the pattern a few times.



Joe Gilbert shows us his newly finished Ringmaster. Elwyn Aud photo.



Left: Joe Gilbert's Smoothie gets a workout on a cool winter day. Aud photo.

Below: Joe is dialing in the Smoothie for the upcoming competition season. Aud photo.

Below: Here Joe runs in the engine on his new Ringmaster. Aud photo.



Speaking of the Gluedobbers, many of you know that Bob Reeves has installed a Web camera that looks out over the flying circle. He has since installed a second camera that will look out over the circle from an adjacent view. Please

visit their website, www.tulsacl.com, where you can view the Web camera page from the link on the left hand side of the home page.



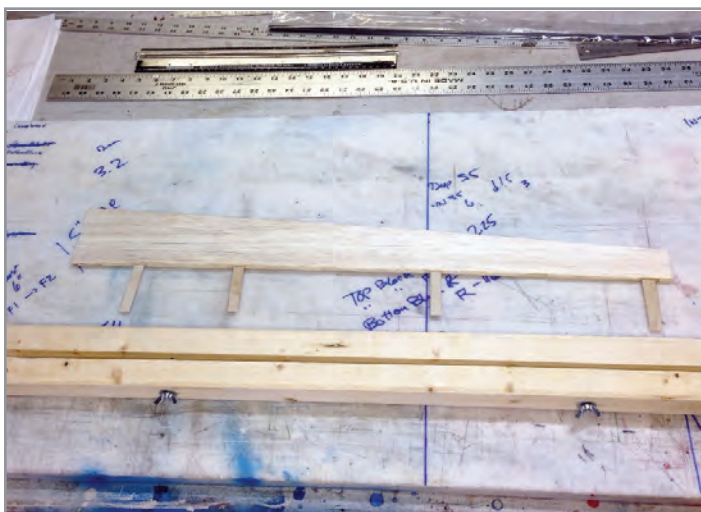
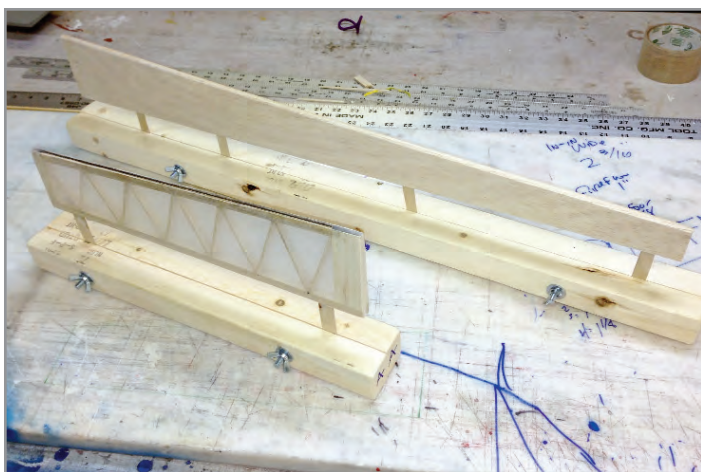
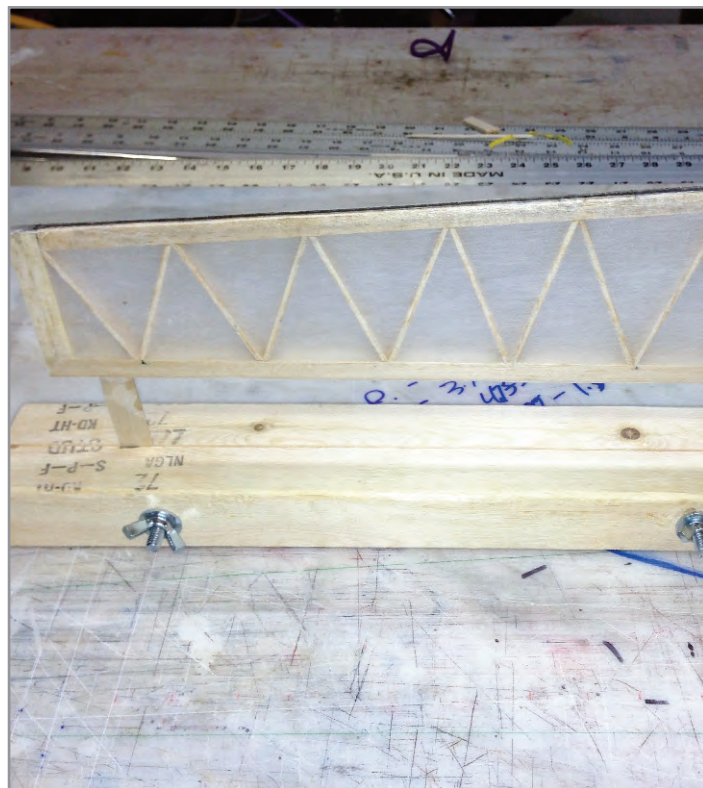
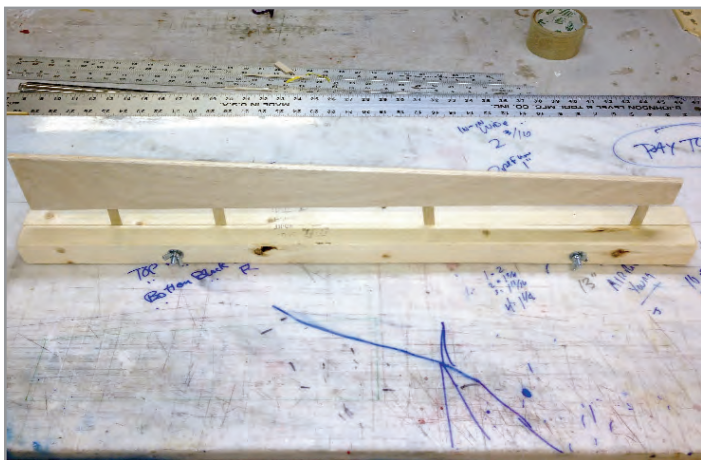
Tulsa, Oklahoma, Gluedobbers Control Line Club meeting. Aud photo.

I wanted to pass on a simple little shop tip and tool idea that has since made my recent build a much easier and more pleasant task. Not too long ago, in a conversation with Eric Viglione, I mentioned how it always makes me crazy when I first apply dope to one side of my flaps, and when it dries they look like a banana afterward. Then, after I apply a coat of dope to the other side, they come back to their normal shape.

He said I should use a flap fixture to keep them straight during

application and to protect them while I'm building the model. I have to admit I had seen these little jewels on the build threads by Derek Barry online.

During my builds I get so stuck in how I have always done it that I sometimes miss the simple things that are staring me right in the face. After a few looks at how Derek had fashioned his, I decided how I would build mine. So far these little fixtures have been great and I will never build again without them.



Doug explains a neat technique for making flap and elevator holding fixtures for painting. He originally saw an online forum post by Derek Barry that gave him the idea. It's simple and effective!

I bought two eight-foot-long 1 x 2s and ripped them on my table saw. I then had four eight-foot-long 1 x 1s. Working my way from one end, I crosscut two of them at 30 inches three times. Then I crosscut them at 18 inches two more times. Then I crosscut 6 inches two times.

I put the leftover wood in my wife's "stack" of craft wood in the garage. I cleaned up these strips on my bench belt sander. It took only a few minutes to get them nice and smooth.

Next I clamped two of the 30-inch-long pieces together and drilled 2¼-inch diameter holes through them. I ran some lag bolts through the holes and used wing nuts on the other side.

Then I cut some long pieces of 1/32-inch plywood that were the same width as the hinge slot and inserted four of them into four of the hinge slots in one of the flaps.

I loosened the wing nuts, slipped the extended pieces of 1/32-inch plywood into the slots, and then tightened the wing nuts. At that point I could stand the flap up on the bench in the 1 x 2 fixture.

I completed these steps for the rest of the pieces I cut. The fixture is much heavier than the part it is designed to hold and makes for a sturdy stand when applying color or clear dope. Of course, when spraying I will always make sure to hold the piece steady so it doesn't accidentally blow over or move.

I have these little fixtures for the flaps, elevators, and stab, and a couple of extra-small ones for anything else I can suspend in this manner. It was so simple and it took only a little bit of time to complete, not to mention that the total cost was about \$6.

Now I can easily stand these parts up for finishing and keep them safe during the build and finish. I wish I had done this about 20 years ago. Thanks to Eric and Derek for the idea.

That's all I have for this time. Please send me any pictures and information for anything happening in your area.

Thanks. **SN**

—Doug Moon

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

District IX

by Jack Pitcher

Beginnings: Overlooked in my rush to get something in the column for the March/April issue of *SN* was to make note that Carl Shoup has retired as our PAMPA District IX Representative. I'd like to take the opportunity now to express our thanks to Carl for serving us in that position over the past several years.

Thanks, Carl. We'll see you on the circle.

Front Range Flying Sites

As mentioned in my last column, I'm a relative newcomer to District IX and the northern Colorado area. I've made a few cross-country moves over the years, and after the stress and chaos of the move wears off, I've always found it interesting to search out the flying sites in my new area and meet the folks who fly there.

Mark Gerber and I are the only active stunt fliers in the immediate Fort Collins area, so far as we know. We don't have a regular flying site here. We live the life of stunt vagrants, sneaking in and out of local school grounds to get in a few flights now and then.

We mostly fly at a middle school in Fort Collins. Fortunately, it's well out on the north side of town and removed from any close residential areas. This site is the school's grass athletic field which works reasonably well until the grass gets too deep or when we're preempted by the local cricket club that has started using it lately.

We also use an athletic practice field at another local high school on occasion. We haven't flown there much. It's right in the middle of a residential area, so our policy there is to get in a few quick flights and not hang around too long. So far there have been no noise complaints.

Chris and Linda Brainard and Jerry Higgins do most of their flying at the Arvada Associated Modelers field on the west side of the Denver metro area. This circle is part of an RC club complex and is an interesting and unusual site. The surface consists of fine pea gravel with some sections of rubber matting for a take-off pad. Power-off landings on the gravel go quite well, actually. At an elevation of around 6,000 feet, it can be a challenge on a hot day. The scenery is great, though, with the foothills of the Rockies just a few miles to the west.

Last summer I had a chance to fly at a really stunning site in Denver. We held several flying sessions on a small remaining section of one of the old Stapleton Airport runways. It may be small by airport standards, but it's huge from a stunter's point of view.

It's probably a couple of hundred feet wide and at least three times as long. The site is located in an industrial area well removed from any commercial or residential buildings. So far as we know it's the only piece of Stapleton concrete remaining. Even though it's been in use without specific permission, several of the long time Denver stunt guys have been flying there for more than five years with no complaints or questions.

We've used it as a gathering point to try to pull together some of the stunt fliers scattered around the Front Range area. It was a treat to have a group of five or six to fly together.

We had the pleasure of having Russ Gritz join us for one of our sessions. Russ came up from Los Alamos on a business trip and was able to make it out to the circle and fly with us. We almost had enough fliers for a contest!



On "the runway" at Stapleton. Jerry Higgins is flying his Oriental; you can see it just off his right shoulder. Jack Pitcher photo.



Linda Brainard flying at the Arvada field. Note the fine gravel surface. The foothills of the Rockies are in the background. Jerry Higgins photo.



Chris Brainard launches Mark Gerber's Ryan. Note the runway's grooved surface; it makes for some interesting tire singing on the landing roll-out. Jerry Higgins photo.



Jerry Higgins looks for his Oriental somewhere overhead. Mark Gerber photo.



Jerry Higgins, left, and Russ Gritzo take a break between flights at the runway. Jack Pitcher photo.

The Rocky Mountain Aeromodelers is a control line club based in the Denver area. RMA is a multi-interest club encompassing all types of control line flying. They enjoy the use of several flying sites around the Denver area.

Maybe the most impressive is a laser-leveled concrete donut that RMA member Lynn Boss has built in his backyard. It's a great place to fly, and Lynn's well-equipped garage workshop is only steps away. Lynn hosts several invitational fly-ins there during the season. Good flying and good food. I try not to miss them.

RMA holds its main contest on Labor Day weekend at Front Range Airport east of Denver. This event is held on a large blacktop ramp on the east side of the airport. The ramp is large enough for four circles with two reserved for stunt. A variety of control line events are flown at this contest.

You can find details on the contest flyer posted on RMA's website at www.eicnetwork.com. You'll also find pictures there of the flying sites I've mentioned and more.

RMA Labor Day Weekend Contest

I received the following announcement from Jerry Higgins about this year's RMA contest. Jerry and Linda Brainard will be co-EDs for the stunt events.

The Rocky Mountain Aeromodelers will be sponsoring the Rocky Mountain Control Line Championships on August 31-September 1, 2013, at the Front Range Airport near Watkins, CO (east of Denver). The stunt portion of the contest will include OTS and Classic on Saturday and PAMPA classes and Profile (any size profile) on Sunday.

Appearance points will be awarded in Classic and PAMPA Advanced and Expert following Marvin Denny's "Modified appearance judging guide" that was published in *Control Line World* (page 81, Vol. 7, No. 1, January 2013). Stunt co-event directors are Jerry Higgins (jerry.higgins@comcast.net, 303-921-1782) and Linda Brainard.

The flying surface is smooth, flat asphalt, which is part of a remote parking apron on the east side of the airport. A practice circle is adjacent to the contest circle. A map to the site will be available in the near future.

We are attempting to upgrade the stunt events and make this a well-attended and competitive (but fun) contest worth driving a long distance to attend. Come join us for the contest and then stay afterward for a mountain vacation, or visit the Denver area museums, parks, and other attractions. Early September normally has low crowd volumes and mild weather."

Workbench

The project currently on my workbench is my first try at something electric-powered. It started life as an ARC Cardinal. I like a little softer aesthetic lines, so I cut off the fin and canopy and replaced them with something more to my liking. The wingtips were also rounded more at the leading edge.

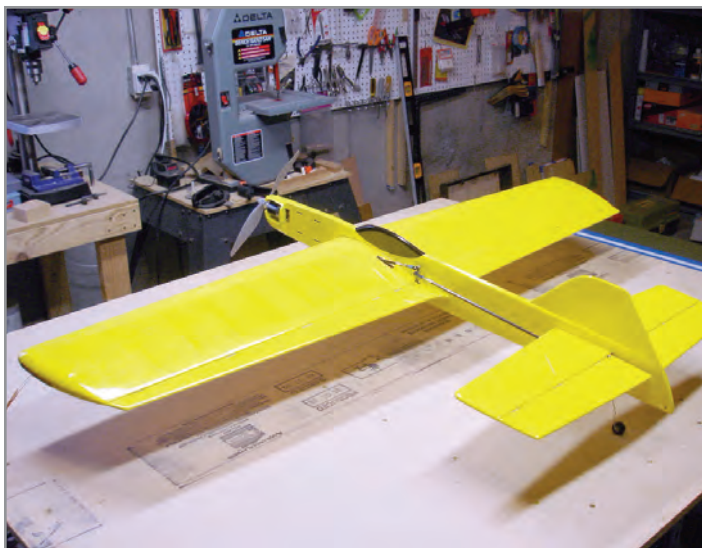
I used the supplied bellcrank but replaced the leadouts and installed a carbon push rod system. The supplied stab and elevators were warped and unusable. I couldn't find suitable replacement sheets in my balsa supply, so I built up a stab with 1/16-inch balsa sheets over a stick frame and cut out some new elevators from a couple of sheets I turned up in the scrap box. I've long been a fan of larger area, low aspect ratio stabs, so I built this one up that way. The wing, tail, and aft fuselage are MonoKote covered with Krylon rattle-can paint on the forward fuselage.

After puzzling over where to mount all the equipment, I finally cut off the inboard balsa cheek to free up more mounting space there. An E-Flite Power 25 is mounted with a KR timer to control it. I've currently mounted a Thunder Power 5S 2600 battery.

It seems quite nose-heavy to me, but a recent conversation with Mr. Hunt has convinced me that electric stunters like to fly with a more forward balance point than we're used to. It's about ready for some test flights, and our weather is beginning to moderate just in time.



Jack Pitcher's ARC Cardinal has been modified for electric power. It doesn't look much like a Cardinal anymore. Jack Pitcher photo.



Jack's modified Cardinal shows off its new tail. Jack Pitcher photo.

Spring Time

Flying weather is about to break in District IX. Take your camera with you to the flying field! Send me pictures and a paragraph about what you're doing out there. You can send me material at mjpitcher67@gmail.com. 'Til next time, let's fly! *SN*

—Jack

Right: Here's our new PAMPA District XI director, Jack Pitcher, with his Centennial.



District X

by Jim Hoffman

Trophy Trainer: David Riggs of Prescott, Arizona, recently completed a new Trophy Trainer from a Walter Umland "Partial Parts Kit." This model was designed by Tom Warden and is Classic legal. Dave's model is powered by an Aero Tiger .36 and has very low vibration due to a very smooth-running engine and perhaps aided to some extent by the design's use of fuselage triplers on the very narrow (3-inch) fuselage nose section. Dave's workmanship, paint, and general attention to detail will put this airplane in or near the front appearance point row at any contest.



Dave Riggs built this beautiful Tom Warden-designed Trophy Trainer from a Walter Umland "Partial Parts Kit."

The Trophy Trainer has tissue-covered wings and is finished in Brodak all-butyrate dope. The colors are automotive paint mixed in clear dope. The flying surface cloth hinges are very period-

Arizona, California, Guam, Hawaii,
Nevada, Utah

authentic; the controls are silky smooth, thanks to the cloth hinges and modern ball links. The plane features a clever tail weight tube behind the tail wheel strut, permitting the addition of tail weight without any cosmetic impact.

Al Culver's Foxy Special

Al Culver winters outside of Phoenix in Apache Junction, Arizona, and spends the summers in Idaho. He has been a regular attendee/winner at the 1/2A profile multi-engine event in October. His latest modeling effort is an older design called the Foxy Special. Al wished to create a nice looking and unique sport flying airplane. I can attest that he has certainly succeeded. It flew right off the bench, dead level, which is no small



That's a throttled Fox .59 in Al Culver's Foxy Special.

achievement for a biplane. It is a large plane and most impressive in the air.



Al Culver's open cockpit Foxy Special displays excellent craftsmanship and finish.

The Foxy Special has its roots in Michigan. The Livonia Rib Crackers was a control line show team seen in the Chicago/Michigan area during the '50s or '60s. They all flew Fox .59-powered Foxy Specials with throttle control using the J Roberts bellcrank and handle system. Al's Foxy was built from a set of plans produced by one of the members of Rib Crackers.



Al Culver holds the Foxy Special. As you can see, it's not a small model!

Al's model is a very accurate reproduction and is powered by a throttled and unmuffled Fox .59. He uses the same J Roberts throttle system. The fuselage is covered with fiberglass cloth using fiberglass resin and then finished with basecoat/clearcoat polyurethane. The wings and tail surfaces are covered with UltraCote film.

VSC 25th Anniversary

VSC is about to begin as I write this column. This will be the 25th anniversary of my favorite stunt contest in the southwest. The practice, competition, and social event calendar will be unchanged this year. We are looking forward to seeing old and new friends and enjoying our shared passion together for nearly a week in hopefully perfect weather. Next year,

2014, we are adding Super 70s competition to VSC.

When Super 70s is added in 2014, it will be run concurrently with Classic—same circles, same judges. The purpose of the event is to encourage the construction and flight of CLPA models from the 1970s. Models eligible for the Super 70s event must have been designed, built, or flown January 1, 1970, through December 31, 1979. Models designed, built, or flown prior to January 1, 1970, are not eligible. You can enter either one, but not both events. The rules are listed on the Cholla Choppers website: www.ccmaconline.org/ot_classic_rules.htm.

Southwest Regionals

The Southwest Regionals (SWR) has held the weekend of January 26 and 27 in Tucson. It was contested by the usual local suspects, as well as some Californians, including John Wright, Larry Renger, Brett Buck, and first SWR timer Mike Allurac.

We also had a new guy named Chip Hyde show up. Chip is relatively new to CL stunt but certainly not new to high-level competition in the RC arena; Chip has been the US Nats Champ in both pattern and pylon racing.

Chip made a fine showing in the Expert class with an electric profile Pathfinder and had a great time in this new showground. We all look forward to seeing him continue in CL stunt. I am sure the scores and placings appear elsewhere in the newsletter.



Randy Cuberly takes a break at the Southwest Regionals.



Mike Allurac launches for John Wright at the Southwest Regionals.



Larry Renger shows the intensity with which he competes at the Southwest Regionals.



Chip Hyde's Electric Shark Stud Finder at the Southwest Regionals.

Thank you to Warren Tiahrst for doing the "heavy lifting" and serving as CD at the SW Regionals. We flew OTS, Classic, Super 70s, and the regular PAMPA events. It was rained out on

Saturday, but we doubled up and ran all stunt events on Sunday. The Sunday weather cooperated with an overcast dry day with and nice air. *SN*

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District XI

by Mike Haverly

With the spring training of pro baseball starting and the upcoming college basketball tournaments, we are reminded of how fast our “building season” is disappearing and serious flying can resume. I know, for some of you NASCAR is a more important indicator, and for others the serious part of flying never ends.

Around these parts we have several “snowbirds” who don’t even have to leave town to attend the VSC. That trip won’t happen for me this year, but District XI will be well represented by Paul Walker, Don McClave, and Pete Peterson, along with the aforementioned part-time residents.

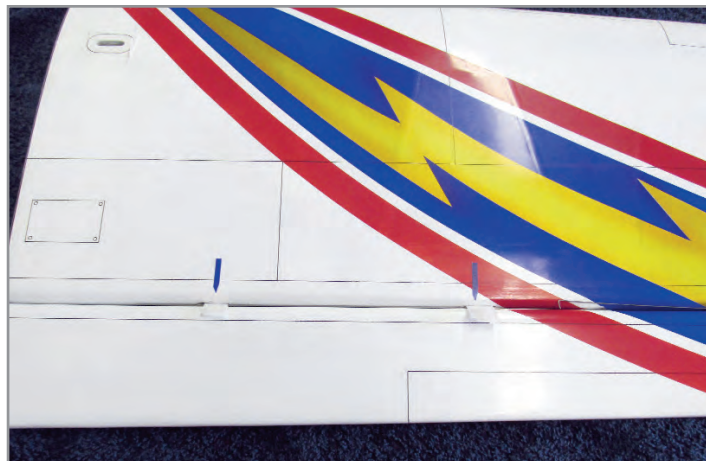
I’ve decided to spend some time going through last year’s model and make some past-due repairs and do some general maintenance. It’s a good thing I did! While cleaning and repairing dings, I had to remove the sealing tape on the control surfaces. (Really, it should be replaced from time to time anyway.) When I removed the tape from the outboard flap, I discovered that three hinges had come loose from the wing. It’s hard to say how long they have been that way, but it looked like an accident waiting to happen.

Repair in this case is simplified by the fact that all of my control surfaces are removable. I do removable surfaces a little differently than most. I use two wires on each wing going from the middle of each wing toward the tip. In my first effort at doing this a few years ago, I used the traditional method of one wire per wing starting at the wingtip and threading through each hinge. That’s fine, except if there is any misalignment it becomes difficult to thread a single piece of .031 diameter wire that is at least 25 inches long. Of course, perfect alignment cures that, but I find my method to be easier. Each wire is held in place by a small piece of tubing recessed into the trailing edge.

As it turns out, it looks as though I simply forgot to glue those three hinges during original assembly. No harm, no foul in this case because the sealing tape held. I glue hinges in with thin CA, using a method I learned a few years ago from John Miller.



The new hinges are drilled out, deburred, lubed, and ready for installation. Haverly photo.



Silkspan is folded over the hinge tabs and pushed into the existing slots. Haverly photo.



The offending hinges are identified with the blue marks. Photo by Mike Haverly.



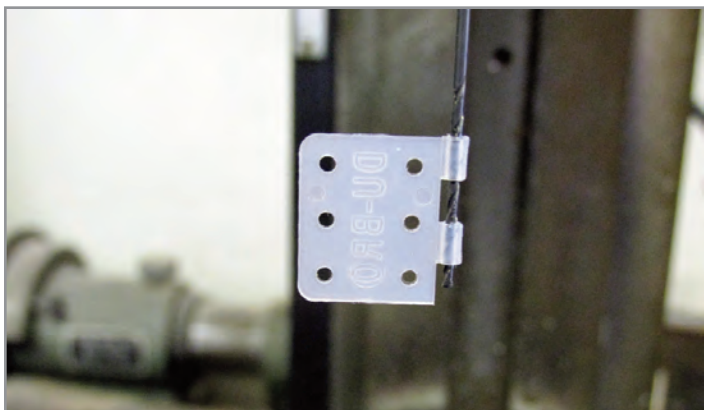
Thin CA has been applied. Be careful to use a small applicator and apply only a drop or two on the top and bottom. Be careful not to let the silkspan touch the finished surface. The silkspan at this point will be stiff and can be easily trimmed with a #11 blade. Haverly photo.



After trimming the excess silkspan from the hinge slot, inspect and repair any cosmetic damage. Try to pull it out! If you glued it correctly, you can't do it without damaging the wing. If you didn't glue it correctly, you can fix the problem the way I did, or find a better way! Haverly photo.



Here are the wires installed with the flaps removed for clarity. Haverly photo.



You don't have to enlarge the holes in the hinge barrels, but it sure makes installing the wire easier! Haverly photo.

First, the hinge tabs need to be roughed up with sandpaper to give the glue some "bite." Cut some pieces of heavy grade silkspan to the same width as the hinge tabs and about two inches long. Fold the silkspan over the tab and push it into the hinge slots of the trailing edge of the wing. You will have pieces of silkspan sticking up on top and the bottom of the wing.

Carefully apply a very small amount of thin CA to these pieces. The CA will quickly wick into and attach the hinges permanently to the wing. Try it on a practice piece. You'll find out that the hinge can't be removed without taking wood with it. Also, I should mention that it is a good idea to coat the barrel of the hinges with Vaseline or WD40. If the hinges are sticky, they can be freed up with CA debonder.

One other thing I do is drill out the hinges with a #60 (.040) drill and deburr all the edges after removing the existing pin. This may not be necessary, but it's worth a try on a practice piece. It makes the hinges very free even after the sealing tape is applied, and you will never notice the extra clearance in the fit. The photos included here should answer any questions about this process.

I know of a few new airplanes ready to make their presence known. Unfortunately, our first contest won't be until April. There will be plenty to write and talk about then.

Meanwhile, my youngest grandson has been busy. He came out to my shop with plans for a model that he had researched on the internet and wanted to build. Well, what could I say? It was the Hang Ten all-balsa, hand-launched glider designed by Jim Person. I helped him build it, and we are now learning how to trim it to fly correctly. He found out quickly that the models we build from scratch fly much better than the store-bought ones. (Weren't they about ten cents when we were kids?)



My grandson Colton working on the fuselage of his glider. He learned about airfoils, dihedral, and the importance of keeping things straight. Haverly photo.



We trimmed the plane so it breaks out and glides in a nice circle. Since Colton is only nine years old without much of an arm for throwing, we are going to convert it to rubber catapult launch. Haverly photo.

I see our kids spending a lot of time on electronic gadgets of one kind or another, and I sometimes wonder if they actually pay attention to other things going on around them. Well, yes they do! We have a lot of influence on young minds, good and bad. I consider myself fortunate to have this guy living with me and at least learning a little of what I might have to offer.

Contests start soon! Practice up and have fun flying stunt! **SN**

Contests

Stunt News Contest Calendar

For up-to-date listings see the PAMPA Web site: <http://www.control-line.org> . See also the AMA Web site: <http://modelaircraft.org/events/calendar.aspx>. Be sure to confirm with the CD before going to a contest. Please submit new listings and contest results to Howard Rush, hmrush@comcast.net. Submit contest ads to Gene Martine, gmflying@bellsouth.net .

Events marked with an asterisk use nonstandard rules. Contact CD for details.

2013 Contests:

May 4-5

Carolina Classic, Waymer Field, 15401 Holbrooks Rd., Huntersville, NC. Take exit 23 east from I-77, turn right on Old Statesville Rd., turn left on Holbrooks.
Saturday: Basic Flight*, Old Time, Nostalgia 30, Profile*
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)
CD: Everett Shoemaker, (252) 633-4128, evjoshoe@embarqmail.com

May 4-5

Texarkana Contest, Spring Lake Park, Mall Dr., ¼ mile S of I-30 frontage road, Texarkana, TX, N33.464935, W94.056541
Precision Aerobatics (Beginner, Intermediate, Advanced, Expert)
CD: John Gunn, 4501 Summerhill #150, Texarkana, TX 75503, (903) 306-0731 (day), TexasAntMan@Gmail.com

May 4-5

Spring Kickoff Contest, Big Creek State Park, Polk City, IA
Saturday: Old Time, Classic*, Profile*
Sunday: Precision Aerobatics (Beginner, Intermediate*, Advanced*, Expert*)
CD: Mike Anderson, mikeainia@windstream.net

May 18

May Stunt Meet,
Apollo 11 Model Field, Sepulveda Basin, Van Nuys, CA
Take Burbank Blvd. (just north of Hwy 101) exit west from I-405, turn right on Woodley Ave., turn left into Woodley Park parking area, drive slowly south beyond parking area to the field.
Classic, Profile Sportsman* (Beginner and Intermediate), Profile Competitor* (Advanced and Expert), 1cc Stunt*
CD: Stan Tyler, (526) 423-4634, Stan.tyler@verizon.net
<http://sites.google.com/site/valleycircleburners/>

May 18-19

Brotherhood of the Ring Ringmaster Roundup, Scobee Flying Park, Westheimer Pkwy and FM 1464, Houston, TX
Saturday: Old Time*, Classic*, Precision Aerobatics* (Beginner, Intermediate, Advanced, Expert)
Sunday: Team Stunt*
All events original S-1 Ringmasters only, loaners available
CD: David Gresens, 5302 Alamosa Ln, Spring, TX 77379, (281) 772-9053, dgresens@kleinisd.net
www.brotherhoodofthering.info

May 19

GSCB Profile Meet & Tailgate Swap Meet
George L Gaydos Field, Two Bridges Rd., Lincoln Park, NJ.
Profile* (Beginner, Intermediate, Advanced, Expert)
CD: Roy Ward, (973) 402-0925, team4ward@aol.com .
<http://www.gscb.us/>

May 24-26

Northwest Control Line Regionals
Mahlon Sweet Airport, Eugene, OR
Friday: Old Time
Saturday: Classic/Nostalgia 30, Profile *
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)
CD: Mike Hazel, P.O. Box 505, Lyons, OR 97358, (503) 871-1057, zzclspeed@aol.com
<http://flyinglines.org/13.reg.flyer.pdf>

May 25

Chicagoland Circle Cutters' Windy City Classic
Ned Brown Forest Preserve (Busse Woods), Golf Rd near Rte 53, Rolling Meadows, IL. Entrance is off Golf Rd. Turn into forest preserve, make the first left. Drive to the end and park.
Precision Aerobatics (Beginner, Intermediate, Advanced, Expert), Basic Flight*
CD: Michael Schmitt, 34431 N. Tangueray Dr., Grayslake, IL 60030, (847) 543-1216, Encore46@att.net

May 26

Top Class Annual, Family Park,
SW corner of SW 21st St. and SW Urish Rd., Topeka, KS
Old Time, Precision Aerobatics (Beginner Jr.-Sr., Beginner Open, Intermediate, Advanced, Expert), Basic Flight*
CD: Jim Lee, 827 SE 43rd St, Topeka, KS 66609, (785) 266-7714, jlee9@cox.net

June 2

GSCB June Stunt Meet Part One
George L Gaydos Field, Two Bridges Rd., Lincoln Park, NJ
Old Time I and II, Classic (Beginner, Intermediate, Adv., Expert)
CD: Ron Testa, (973) 493-7389, billiards98@aol.com
<http://www.gscb.us/>

June 2

Nats Warm-Up, club field behind Wegerzyn Gardens Metro Park,
1301 E. Siebenthaler Ave., Dayton, OH
Classic*, Profile*, ARF*, Precision Aerobatics (Beginner,
Intermediate*, Advanced*, Expert*)
CD: Bruce Reynolds, (513) 705-0660, reynolbw@cinci.rr.com
<http://buzzinbuzzards.weebly.com/>

June 9

Wisconsin Stunt and Scale Championship,
Wagner Park, N31 W27320 Green Road, Pewaukee, WI
Precision Aerobatics (Beginner Jr., Beginner Open, Intermediate,
Advanced, Expert)
CD: Peter Mick, (262) 377-6137, pmick82541@aol.com

June 15, 16

Dallas Area Summer Heat (DASH), Garland Hobby Park,
E. Northwest Highway and Garland Rd., Dallas, TX
Saturday: Old Time, Classic
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)
CD: Mike Scott, (214) 478-6263, Mikescott15@gmail.com
<http://www.dmaa-1902.org>

June 22-23

Stunt-A-Thon, Thun Field (Pierce County Airport),
Meridian Ave. E and 186th St, Puyallup, WA
Saturday: Old Time, Classic, Profile*
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)
CD: Dave Gardner, 15107 SE 145th PL, Renton, WA 98059,
(425) 235-5190, davegardner55@msn.com
<http://flyinglines.org/skyraiders.html>

June 23

NorCal Midsummer Stunt Fest, 44643 County Road 29, Davis, CA
(1.4 miles east of County Road 102)
Old Time, Stunt 25*, Precision Aerobatics (Beginner, Intermediate,
Advanced, Expert)
CDs: Walt Ghio, 1380 Elkhorn Drive, Stockton, CA 95209,
(209) 478-8225, flbwalt@comcast.net,
Pete Cunha, 6433 Shady Springs Way, Citrus Heights, CA 95621,
(916) 541-0593, laguna3@surewest.net
www.aeromaniacs.com

June 30

GSCB June Stunt Meet Part Two
George L Gaydos Field, Two Bridges Rd., Lincoln Park, NJ
Precision Aerobatics (Beginner, Intermediate*, Adv.*, Expert*)
CD: Ed Barry, (908) 359 0288, ekbarry@comcast.net .
<http://www.gscb.us/>

June 30

1/2A Fun Stunt Event, Rice Mill Road flying site, Richmond, B.C.
1/2A Stunt for models of military aircraft*
Contact: Bruce Duncan, a.b.duncan@shaw.ca

July 7

NEVRC CL Stunt Competition, NEVRC Field,
Kubie Dr., Sugarloaf, PA, N 41.01273, W 76.13457
Take exit 256 south from I-80, turn R on T-429 Pecora Rd.
Take Pecora Rd. for several miles, turn R on Red Rock Rd.,
pass over I-80, turn R on Kubie Dr.
Precision Aerobatics (Beginner, Intermediate, Advanced, Expert)
CD: Bernie Suhamski, (570) 574-6894, bernie@pa.metrocast.net
Contact: Jen Fedorick, (570) 956-5348, jenfedorick@yahoo.com
<http://nevrc.org>

July 14-20

AMA Nats, Muncie, IN See separate announcement.

July 20

Western Canada Stunt Championships,
Rice Mill Road flying site, Richmond, B.C.
Saturday: Old Time, Classic, Profile *
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)
CD: Keith Varley, kvarley3@gmail.com

July 27-28

57th Annual Red River Valley Championships
Treford Park, Fargo, ND
Park entrance is at Elm St. and 14th Ave. N.
Saturday: Classic, Precision Aerobatics (Beginner, Advanced)
preliminary rounds
Sunday: Classic, Precision Aerobatics (Beginner, Advanced) finals
CD: Paul Kegel, (701) 237-5814, paulsmo@aol.com

August 3-4

The Great American ARF-OFF, 44643 County Road 29, Davis, CA
(1.4 miles east of County Road 102)
Saturday: Stunt Clinic with the local hotshots
Sunday: The Great American ARF-OFF*
CD: Jim Aron, c/o Pacific Western Mortgage Group,
2354 Powell Street, Suite B, Emeryville, CA 94608,
(510) 654-2200, UncleJimby@aol.com
www.concentricbehavior.com

August 4

Precision Aerobatics, Mountainview Park, Middlesex, NJ
Precision Aerobatics (Beginner, Intermediate, Advanced, Expert)
CD: James Vigani, (908) 658-9604, jfv@vts3d.com

August 10-11

Prairie Fire Stunt Contest, Namao School, corner of Hwy 37 and Hwy 28, Namao, Alberta, <http://goo.gl/maps/ptTzz>

Saturday: Precision Aerobatics (Beginner, Int., Adv., Exp.)

Sunday: N30, Profile*

CD: Bruce Perry, 419 Klarvatten Lake Wynd,

Edmonton AB T5Z 3B9, (780) 478-0429, Bruce@magicbus.ca

August 10-11

Jim Coll Memorial Stunt Contest

6035 Shiloh Camp Road, 2 miles SW of Hurlock, MD

Saturday: Old Time (Intermediate, Advanced and Expert combined), Profile* (Beginner, Intermediate, Advanced, Expert)

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Tim Stagg, 410-310-9534, tstagg@goeaston.net

<http://www.esacclub.org/>

August 10-11

Dick Scobee Memorial, Auburn Municipal Airport,

16th St. NE and D St. NE, Auburn, WA

Saturday: Old Time*, Classic, Profile*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

Contact: Pete Ferguson, (206) 930-6221 pferg3@comcast.net

<http://flyinglines.org/skyraiders.html>

August 11

West Ohio Stunt Contest, club field behind Wegerzyn Gardens

Metro Park, 1301 E. Siebenthaler Ave., Dayton, OH

Classic*, Profile*, ARF*, Precision Aerobatics (Beginner, Intermediate*, Advanced*, Expert*)

CD: Bruce Reynolds, (513) 705-0660, reynolbw@cinci.rr.com

<http://buzzinbuzzards.weebly.com/>

August 17-18

Western Kentucky/Southern Illinois Stunt Championships

McCracken County Model Air Park, Paducah, KY: Take exit 3 off I-24 on the Kentucky side of the Ohio River. Turn east on Old Cairo Road and find Coleman Road off to the right (south) at about one mile. Travel south on Coleman Road three quarters of a mile

and turn left (east) on County Park Road. Go through the open, right, red gate and drive to the top of the hill.

Saturday: Beginner Precision Aerobatics, Basic Flight*, Profile*, Classic-Nostalgia*, Old Time

Sunday: Precision Aerobatics* (Intermediate, Advanced, Expert)

CD: Allen W. Brickhaus, PO Box 206, Golconda, IL 62938,

(618) 683-7611 (home), (618) 841-0089 (cell),

abkb801@shawneelink.com

August 17-18

High Desert Control Line Fiesta, George Maloof Air Park,

Albuquerque, NM, N35.149375745358, W106.73019732103

Take exit 154, Unser Boulevard, north from I-40, go five miles north, turn left on Molten Rock Rd. NW, turn left on 81st St. NW, turn right at Maloof Park.

Saturday: Precision Aerobatics (Beginner, Int., Advanced, Expert)

Saturday or Sunday (TBD): Old Time

Contact: Richard L. Perry, 427 Live Oak Lane NE,

Albuquerque, NM 87122, (505) 856-7008 or (505) 263-0763,

tailhooker@comcast.net

<http://www.nmccla.org>

August 24-25

Fellowship of Christian Modelers FCM at AMA

AMA, E. Memorial Drive, Muncie, IN

Saturday: Classic, Old Time, Profile *

Sunday: Precision Aerobatics (Beginner, Intermediate, Advanced, Expert, Masters*)

Contact: Allen Goff, 2100 N Carrolton Dr., Muncie, IN 47304,

(765) 759-7473, fc95@comcast.net

www.fcmodelers.com

August 24-25

Ted Goyet Memorial, 44643 County Road 29, Davis, CA

(1.4 miles east of County Road 102)

Saturday: Old Time, Classic, Profile* (Beginner and Intermediate, Advanced and Expert), Stunt 25*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CDs: Walt Ghio, 1380 Elkhorn Drive, Stockton, CA 95209,

(209) 478-8225, flbwalt@comcast.net,

Doug Barton, 160 Park Ave., Woodland, CA 95695,

(530) 662-6469, dbarton@woodlandaviation.com

August 31-September 1

Charles Ash Memorial Greater Southwestern Championships

Garland Hobby Park,

E. Northwest Highway and Garland Rd., Dallas, TX

Saturday: Old Time, Classic, Profile*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Tom Farmer, (972) 262-4772, tom.farmer@sbcglobal.net

<http://www.dmaa-1902.org>

August 31-September 1 (tentative)

US F2B Team Trials, AMA, E. Memorial Drive, Muncie, IN

Contact: Randy Smith, TSC Chairman, 980 Winnbrook Drive,

Dacula GA 30019, (678) 407-9376, Randyaero@msn.com

September 7-8

R. F. Stevenson Memorial Raider Roundup

Auburn Municipal Airport, 16th St. NE and D St. NE, Auburn, WA

Saturday: Old Time*, Classic, Profile*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

Contact: Howard Rush, (425) 746-5997, hmrush@comcast.net

<http://flyinglines.org/skyraiders.html>

September 15

Bergen County Control Line Flyers, GSCB Stunt Contest

288 Roosevelt Drive, Palisades Park, NJ

Take path by the river to south end of facility.

Precision Aerobatics (Beginner, Intermediate*, Adv. *, Expert*)

CD: Rich Giacobone, 438 Hillside Ave,

Palisades Park, NJ 07650-1314, (201) 947-9638

ED: Roy Ward, (973) 402-0925, team4ward@aol.com

<http://www.gscb.us/>

September 21-22

Broken Arrow 26 Stunt and Scale Contest

Buder Park, Valley Park, MO

Take exit 272 north from I-44, turn right at Meramec St.

Basic Flight (Junior and Senior)*, Profile*, Classic/Nostalgia 30*, Old Time,

Precision Aerobatics (Beginner, Intermediate, Advanced, Expert)

CD: Robert Arata, (636) 391-0272, srarata@att.net

September 21-22

Meet 'n Meat XV, 44643 County Road 29, Davis, CA

(1.4 miles east of County Road 102)

Saturday: Old Time, Classic

Sunday: Precision Aerobatics (Beginner, Intermediate, Advanced, Expert), Fox .15 Hurl*

CD: Jim Aron, c/o Pacific Western Mortgage Group,

2354 Powell Street, Suite B, Emeryville, CA 94608,

(510) 654-2200, UncleJimby@aol.com

www.concentricbehavior.com

September 28

NVCL Stunt Fest, Meadowood Special Recreation Management

Area, 10207 Old Colchester Rd. Lorton VA

Old Time, Precision Aerobatics (Beginner, Int., Adv., Exp.)

CD: Dick Houser (703) 489-5647, yvech8v@verizon.net,

www.nvcontrolline.com

September 28-29

Karl Marschinke Memorial

Christopher Columbus Park, 4600 N. Silverbell Rd, Tucson, AZ

Saturday: Old Time, Classic-Super70s*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Lou Crane, (520) 459-0546, loucrane@cox.net

www.ccmaconline.org

September 28-29

Oklahoma Control Line Championships

Reeves Field, Catoosa, OK. On the east side of Tulsa, take

Highway 412 2.9 miles east from I-44, turn left (north) at Admiral (26500 E). Turn left on access road (E Archer St.). Field is ¼ mile west on the right between buildings with red and green roofs.

Saturday: Old Time,* Classic/N30*, Profile*

Sunday: Precision Aerobatics (Beginner Junior,

Beginner Senior-Open, Intermediate*, Advanced*, Expert*)

CD: De Hill, 5811 So. Utica, Tulsa, OK 74105, (918) 743-4912,

dfhill@juno.com

Assistant CD: Lee Thiel, (918) 691-2717, fox4now@valornet.com

<http://www.tulsacl.com/>

October 5-6

Hi Johnson Memorial

Apollo 11 Model Field, Sepulveda Basin, Van Nuys, CA

Take Burbank Blvd. (just north of Hwy 101) exit west from I-405, turn right on Woodley Ave., turn left into Woodley Park parking area, drive slowly south beyond parking area to the field.

Saturday: 1cc Stunt*, Old Time, Profile Sportsman* (Beginner and Intermediate), Precision Aerobatics (Beginner, Intermediate)

Sunday: Profile Competitor* (Advanced and Expert), Classic,

Precision Aerobatics (Advanced, Expert)

CD: Bill Barber, (805) 241-0453, barcam@verizon.net

<http://sites.google.com/site/valleycircleburners/>

October 5-6

Fall Follies, Bill Riegel Model Airpark, Salem Airport, Salem, OR

Saturday: Old Time, Classic-Nostalgia 30*,

Profile* (Sportsman, Expert)

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Mike Hazel, P.O. Box 505, Lyons, OR 97358,

zzclspeed@aol.com

<http://www.flyinglines.org>

October 6

Jim Tichy Memorial Vintage Stunt Contest

John F. Kennedy Memorial Park, Napa CA

Old Time, Classic

CD: Jim Aron, c/o Pacific Western Mortgage Group,

2354 Powell Street, Suite B, Emeryville, CA 94608,

(510) 654-2200, UncleJimby@aol.com

www.concentricbehavior.com

October 13

GSCB Fall Air Show, 288 Roosevelt Drive, Palisades Park, NJ
Take path by the river to south end of facility.

Old Time I and II (flapped models only),

Classic* (Beginner, Intermediate, Advanced, Expert)

Precision Aerobatics (Beginner, Intermediate*, Adv.*, Expert*)

Old Time, Classic CD: Mike Cooper, (973) 770-0263,

mcooper@asco.com

Precision Aerobatics CD: Mike Ostella, (201) 704-7081,

mike.ostella@verizon.net

<http://www.gscb.us/>

October 19-20

Carolina Criterium,

Waymer Field, 15401 Holbrooks Rd., Huntersville, NC.

Take exit 23 east from I-77, turn right on Old Statesville Rd.,
turn left on Holbrooks.

Saturday: Basic Flight*, Old Time, Nostalgia 30*, Profile*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Everett Shoemaker, (252) 633-4128,

evjoshoe@embargo.com

October 19-20

Lee Lorio Memorial Control Line Stunt Championship,

Independence Park, 7500 Independence Blvd., Baton Rouge, LA

Circles are immediately east of Liberty Lagoon water park.

Saturday: Old Time, Classic/N30, War Bird*, Profile*

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Doug Patterson, (225) 629-0290 (home),

(225) 270-2181 (cell), jd3patterson@gmail.com

October 19-20 (tentative)

35th Annual Golden State Stunt Championships, Madera Airport,
Madera, CA, <http://g.co/maps/deq47>

Saturday: Old Time, Classic

Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

Contact: Brian Massey (559) 908-9431, bjmassey2@gmail.com

<http://www.californiacarclubs.com/GSSC.htm>

November 2-3

Southeast Stunt n Fun, MCRC Field, 7315 71st Ave E., Palmetto,
FL, N27.57962, W82.49150, <http://tinyurl.com/mrcrcmap>

Saturday: Beginner Precision Aerobatics, Old Time, Nostalgia 30*

Sunday: Precision Aerobatics* (Intermediate, Advanced, Expert)

CD: Wayne Smith, (813) 251-0575, kamwns@verizon.net

www.manateerc.com

November 2-3

South Arkansas Stunt Championships, Kenneth Makepeace Field,
Industrial Rd., El Dorado, AR, N33.208282102696,

W92.616339377099 . Take Hwy 63 east of El Dorado, turn right
on Industrial Rd. Field is ½ mile on right.

Saturday: Profile*, Old Time

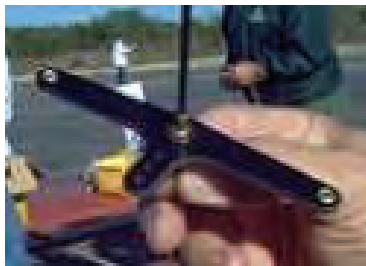
Sunday: Precision Aerobatics (Beginner, Intermediate, Adv., Exp.)

CD: Norman E. Faith, 157 West Lake Rd., El Dorado, AR 71730,

(870) 310-3525, circlepilot@suddenlink.net

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2013 AMA Control Line Aerobatics National Championships

July 14-20, 2013

Friday, July 12-Saturday July 13

7:00 a.m. Control Line Precision Aerobatics Practice

Grass 600 x 600 Only

Sunday, July 14

7:00 a.m. Control Line Precision Aerobatics Practice

Grass 600 x 600 Only

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

12:00 noon Old Time and Classic Stunt Registration*

Grass Circles

Monday, July 15

7:00 a.m. Control Line Precision Aerobatics Practice

L-Pad, Grass Circles

12:00 noon Jr/Sr/Open/Advanced/Expert entries close

Nats Headquarters

2:30 p.m. Open/Advanced/Expert 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 16

7:00 a.m. Control Line Precision Aerobatics Practice

L-Pad, Grass Circles

7:00 a.m. Judges Seminar Phase (Flight)

L-Pad Circle 4

8:00 a.m. Old Time & Classic Stunt Events Pilots Meeting*

Grass Circles

8:30 a.m. Old Time & Classic Stunt Events*

Grass Circles

6:00 p.m. Judges Seminar Review (Rules review)

AMA Board Room

Wednesday, July 17

7:00 a.m. Control Line Precision Aerobatics Practice

L-Pad, Grass Circles

8:00 a.m. Open/Advanced/Expert Qualifications Rounds 1 & 2 L-Pad

AMA Board Room

5:00 p.m. PAMPA EC meeting

AMA Board Room

6:00 p.m. PAMPA General meeting

Thursday, July 18

7:00 a.m. Control Line Precision Aerobatics Practice

L-Pad, Grass Circles

8:00 a.m. Open/Advanced/Expert Qualifications Rounds 3 & 4 L-Pad

Friday, July 19

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/Expert Finals

L-Pad

Saturday, July 20

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.

Thank you all for contacting the AMA over the scheduling fiasco caused by the AMA EC acting unilaterally. We will not be having the CL Nats over the 4th holiday week. A couple of notes:

Flying will only be allowed on the grass 600 x 600 field starting on Friday. The same R/C overflight and safety issue will prevent us from using the paved road. An alternate grass access will be necessary. The L-pad should be open by mid day on Sunday.

Beginner and Intermediate will be held on Sunday July 14th instead of Monday. Bob Brookins requested to try this and see if we can increase participation. Unfortunately, the grass area will also be used by combat, and carrier that morning, so space will be limited and only 1 grass circle will be available for practice until the L-pad opens up. The up side is that the normal 3 circles on grass area will be available for practice all of Monday.

Expert. Expert will be run concurrently with Advanced and Open on competition days Wed-Friday. I have no idea how many entries we might expect for Expert. Presumably this will mainly effect the number of Advanced entries more than Open. So, I will be limiting the number of Advanced trophies, and the number of Expert trophies will be determined by the AMA trophy policy, or number of entries.

My plan will be to run Advanced first, then Expert, then Open on Qualifying days. There will be only 10 finalists in Advanced, and at most 10 in Expert for Friday. They will be flown on one set of circles Friday. Open top 20 day will not be changed and will fly on the other two circles, at least for this year.

PAMPA has 25 rooms blocked at the Holliday Inn Express right off of McGalliard by Ball State. Be sure to mention the PAMPA and AMA rates for the Nats.

Holiday Inn Express

4201 West Bethel Ave.

Muncie, IN 47304

765-289-4678

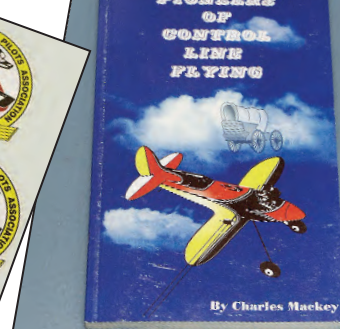
So far, I do not have an event director for Old Time and Classic. If you would like to volunteer your time to be the ED, please contact me, David Fitzgerald at DavidLFitzgerald@sbcglobal.net or phone, H: 707-259-0626, C: 707-332-9564 The danger here is that if I do not have an ED, the events will not be run.

I also need one Pit Boss. You get your own shirt with your name on it. However, if you want one, you'll have to provide your own bull horn.

Note from the CL Stunt Event Director, David Fitzgerald:

Brenda Schuette has informed me that due to a scheduling conflict, the grass practice area at the Nats will not be available for use on Friday, July 12, until the Free Flight event is over. That may not be until later in the day.

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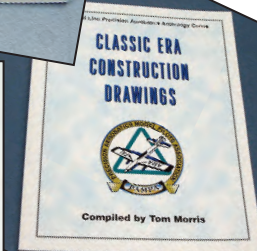
Pioneers of Control Line Flying by Charles Mackey \$12.00

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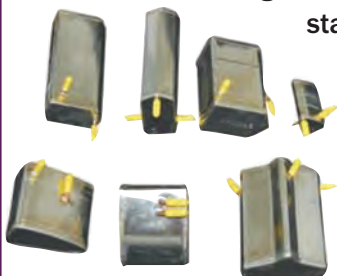


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