

Newsletter of the Jet Pilot's Organization

# *Contrails*

Fall 2015

Volume 27, Issue 3



Ronnie Dean's *Ultra-Flash* climbs out after a slow pass through his own smoke at the Greater Southwest Jet Rally in Waco, TX

## President's Report

Bob Klenke



It's been a busy summer. Work, family, and of course jet fly-ins have kept me hopping - well, at least as much as I can hop. The JPO has been moving forward as well, although much of it has been behind the scenes until now.

In May, with the help of the event organizers, we were successful in having Bob Brown, Dave Mathewson, and Jay Marsh from the AMA attend the First in Flight (FIF) Jet Rally in Wilson, NC and I think that they really enjoyed seeing the variety and amount of jet activity at FIF. Of course, the hosts, Larry Lewis and Robert Vess, always put on a great, people-friendly show.

While they were there, I had the opportunity to have several in-depth discussions with them about the JPO and our relationship with the AMA. They were very helpful, supportive, and offered some great ideas. As I've said before, I think that our (the turbine community) relationship with the AMA is critical to maintaining our ability to participate in this great hobby and their attendance at FIF was a terrific opportunity to strengthen that relationship. Hopefully, they will consider putting it on their schedules for next May - of course, it's already on mine!

One of the areas of assistance that the folks at AMA identified that they can help us with, is communications with the turbine community. We recently took advantage of that help with an email blast to all AMA turbine waiver holders, (at least the ones that get AMA emails), about the recent turbine thrust rules changes and the JPO survey. We have been working on the rules changes since late in 2014 and they were approved by the AMA - EC in July. These rule changes, while they might appear to be minor, are important to make sure that the rules keep up with changes in technology. See Keith's article in this issue for more details on those rules changes.

Hopefully you all received that email blast from the AMA and are therefore aware of the survey of the turbine community we are currently conducting. Hopefully you've also responded! As of this writing, we have received 213 responses. That may not seem like much, but it's over 10% of the total turbine community which is actually a pretty good rate of participation - especially since we don't really know how many turbine waiver holders actually keep up with the email addresses that they provide to the AMA.

In addition, almost 48% of the respondents are not

currently members of the JPO. This shows that we have been successful in obtaining the opinions of the entire community, not just the JPO membership. It also shows that we have some work to do in increasing the percentage of the waiver holders who are members of the JPO!

We will keep the survey open for another month or two, so if you have not yet responded, please do so. The survey is located at: [www.surveymonkey.com/r/jpo\\_survey\\_2015](http://www.surveymonkey.com/r/jpo_survey_2015). While you are at it, make sure that your turbine buddies have also responded! Once the survey is closed, we'll analyze the data and post the results. Stay tuned for that information.

Ultimately the goal of the survey is to help guide the direction of the JPO in the next few years. One thing that has immediately become clear in the survey results is that the JPO website is in serious need of updating! That's the next task to undertake and that effort will be starting soon. As we're doing it, we have to keep in mind what the primary objectives of the organization are - which the survey will help us outline. It's clear though that one of the main functions that everyone wants is a clean, modern implementation of online membership renewal and payment. That, along with Officer and District VP information, organizational documents such as rules and bylaws, and *Contrails* archives will be top priority for the new site starting out. After that, we can start thinking about new content that might be useful to the community.

I hope you've gotten a lot of great jet flying in this summer. Louie and I have made our usual rounds and have seen a lot of you out there. In the past, I've always wanted to make it to Super Jet South, but since it's in the middle of the fall semester, it hasn't been possible. Well, this year, the UCI Road (Bike) Race Championships are in Richmond and with 400,000 spectators expected in town that week, the university has decided to move fall break to that week. Lucky for me, that's Super Jet South week! Louie and I are scrambling to get everything ready and packed and we're heading out of Dodge (or RVA in this case) on Sunday. I hope I get to see lots of you down there!

Bob

*ed's note:*

I did not receive the emailed survey from AMA, so a quick phone call showed that their system had bumped me when "their" provider attempted to talk to my provider (Comcast) and Comcast didn't like something, therefore bouncing the emails, and I was removed from the "active" e-address list. So, if you did not get the emails, please give AMA a call to get your account corrected.

Greg

## Vice President's Report

Jim McEwen



Greetings, it is now mid - September and I have recently returned from my model - centric European vacation. I was in Sweden for a couple of days and had the honor of visiting the Swedish Air Force's Ronneby Airbase. Not only did I finally get to see the full-scale JAS-39 *Gripen* with my own two eyes (envision a large smiley face emmoticon here) and take photos/measurements to support the on-going build of my model - I not only got to watch it fly, but I even got to sit in one. Many thanks to the Swedish Armed Forces and the Swedish Diplomatic Services for approving my visit; it was truly the experience of a lifetime!



Sitting in a full-scale JAS-39C (I have got to get me one of these!)

The following day, I took a 2-1/2 hour drive through the Swedish countryside to meet up with Niclas Robertsson and fly his scratch-built 1/6th scale Gripen. This model is just the right size; small enough to move around without the need for a support crew and large enough to easily see in the air. I need, I want, I gotta have....



Niclas Robertsson and his 1/6 scale Gripen (And one of these too!)

It was quite the enjoyable afternoon hanging out with our jet modeling brothers at their local field, which is a municipal airport that they share with full-scale traffic and even parachutists. I asked, and apparently everybody plays well in the same sandbox together. We need a bit more of that on this side of "the pond" (see later in this article for FAA & drones).

The next stop was Leutkirch, Germany (about 90 minutes from Munich) for the 11th Jet World Masters. To cut to the chase, Jet Team USA placed 6th which was quite disappointing (down from 4th place at Meiringen in 2013) especially as we fielded a particularly strong team with each pilot having flown in previous JWM competitions.



Jet Team USA 2015

Jim McEwen (Manager), David Ribbe, Rod Snyder, Chad Miller (caller), Jason Bauer, Andy Andrews, Scott Harris.  
**MANY THANKS TO OUR SPONSORS**

The overall results of the JWM can be found at a variety of sites, including the [www.dutchjetteam.nl](http://www.dutchjetteam.nl) (click JWM 2015 Germany) where you find many photos as well as my daily blog. As such, I won't get into the overall results of the event, but will dig down into some of the details.

The static results were quite interesting, especially when compared to the scores of the previous JWM.

Pilot	2013 Static	2015 Static	Change
David Ribbe	2537.0	2397.0	-140
Scott Harris	2479.0	2460-45=2415	-19
Jason Bauer	2332.5	2407.5	+75

Jason Bauer had added a variety of scale details to his F-15 *Eagle* and his score improved from 2013. Scott Harris' F-86 remained largely unchanged from its previous JWM appearance and the two scores were similar though he unfortunately was docked 45 points for having his documentation out of order (the 2015 rules called for a specific order to the pages). However, the 140 point drop in static score by David Ribbe (historically the team's strongest competitor) came as quite a shock as David had made a variety of improvements to his model since 2013. While he finished 6th in 2013, the reduced static result was

unrecoverable and David was 14th of 36 in the 20 Kg class while Scott finished 21st and Andy Andrews was 24th. In the 13.5 Kg class, Jason finished 12th of 23 and Rod was 14th.

The outline judging results seemed appropriate. The controversy seemed to be at the second table where the models are judged for color accuracy/complexity, markings accuracy & complexity, surface texture & complexity, and scale detail accuracy & complexity.

There is no published document which details how the points are awarded at the second table. After the judging, we discovered quite to our shock, that color complexity was being scored based on the number of colors with major colors receiving one point each and minor colors (trim or markings) receiving 0.5 points. Some teams seemed to know these criteria beforehand and had chosen their model paint schemes accordingly. The documentation for the Swiss team's *Hunters* proclaimed the use of four main colors and 21 minor colors which easily results in 10 points. Per these criteria, the US team's MiG-15's with a natural aluminum finish and a couple of trim or markings colors were at a major disadvantage. What made it all the more painful was learning that a seminar had been given to the Swiss team by the Chief Static Judge who is, yep, Swiss. There apparently are some benefits from living in Europe.

At one point during the event, one of our team members was asked why the US Team bothers to attend the JWM when we have no hope of winning. Wow! I'm not sure that I agree with the "no hope" part, but we clearly are at a disadvantage as we do not seem to receive information that some "nearby" European teams receive.

The event outcome is also influenced by the model selection. The Top 10 finishers for the 20 Kg class include Vitaly's scratch built YAK-130, three Skygate L-39's, two Tomahawk *Hunters*, an Airworld F-104, a big *Hawk*, and a ScaleJets F-16. These are all large planes (barely making it under the 44 pound weigh limit by an ounce or so) and are not exactly the models you typically see at US events. We tend to fly smaller and faster planes and these are simply non-competitive at the JWM. A much more common plane at US events is the BVM F-86 and I think that it is pretty safe to say that Scott Harris' *Sabre* is an excellent example and he flies it very well (after all, he did win the US ScaleMasters with it). Yet, he was 21st at the JWM.

If you want to be competitive at the JWM, you'll need to select a model & paint scheme chosen based on the JWM criteria. This will probably set you back about \$20K+ or so by the time you are done. Then you have to get yourself and the plane to the event. Compared to the Europeans, we in the US are also at a major disadvantage as the cost of attending the event is at least \$8200 per pilot (airfare \$2000 + Hotel \$1500 + Meals \$800 + Registration \$400 + Shipping \$3500 or more). This buys you four flights (one practice plus three competition rounds). It's pretty hard to justify that expense, especially if you come in from 15th to 25th place.

Needless to say, the US Team is taking a hard look at whether they will choose to compete in the future. Other countries, such as Thailand, are doing so as well. Unfortunately, I would not be surprised if the JWM devolves into essentially the European championships.

Drones - For those who might not have seen it, on Aug. 12th, the FAA released a report entitled "Pilot Reports of Close Calls with Drones Soars in 2015." The report states that, as of August 9th, there have been more than 650 reports this year, compared to 238 total in 2014. The obvious implications are that drones are operating too close to full-scale aircraft, are therefore endangering lives, and this activity is increasing dramatically. Additionally, the report claims that firefighters in the west had to ground their flight operations for safety reasons when unmanned aircraft were spotted in the immediate vicinity. The FAA states they will continue to work "closely with industry partners to educate unmanned aircraft users about where they can operate within the rules." The FAA also "encourages the public to report unauthorized drone operations to local law enforcement and to help discourage this dangerous, illegal activity."

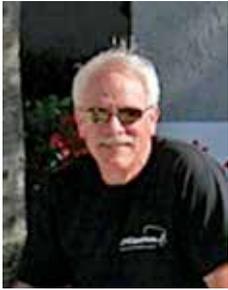
The "information," as presented, was hugely misleading. Fortunately, the AMA looked into the report and the data. There are 764 reports in total with the vast majority being "sightings" without any safety issue whatsoever. Only 27 reports had some explicit notation of near mid-air collision (this is still far too many) and in only 10 of the reports did the full-scale pilot take evasive action.

The records include "something that resembled a dog," a model rocket, a "large vulture," two crashed government-authorized military drones, a UFO, silver balloons, a mini-blimp, and a half-dozen sightings at altitudes between 19,000 feet and 51,000 feet. Obviously, the FAA is using their new Drone Identification Chart which is shown below.

Drone Identification Chart - FAA Official Use



Cont'd on Page 5



AMA Liaison

Keith Sievers

### Thrust Guidelines

The AMA has recently approved an increase in the single-engine thrust limit from 45 to 50 pounds. The proposal was originally submitted by the JPO to the AMA Safety Committee based on a number of factors.

Most importantly, many manufacturers are now producing engines which operate in the 45 to 50 pound range that have been safely operated around the world for some time. The increase in thrust limit will legitimize the operation of these engines.

Utilizing these engines in an aircraft under the 55 pound limit currently requires pilots/builders to limit the maximum thrust by limiting the maximum RPM of the engine in order to remain in compliance with the present rule. This is difficult, if not impossible to do, as many manufacturers do not publish thrust vs. RPM data for their turbines. It is also difficult for Contest Directors to determine compliance with this rule at events.

Modifying the existing rule as proposed, would simplify compliance with the rule, ie a jet turbine-powered aircraft weighing 55 pounds or under wet, must use a 200-class turbine or below. If manufacturers produce larger turbines (some already do), aircraft that utilize them must weigh more than 55 pounds wet, and be certified under the LTMA program.

While simplifying compliance and enforcement of the maximum thrust limitation for 55 pound aircraft, increasing the thrust limit to 50 pounds for single-engine aircraft under 55 pounds will not adversely affect safety and the maximum speed limit of 200 MPH is still enforced. A 55 pound aircraft

with a 50 pound thrust engine is still under the 1-to-1 thrust ratio. An increase in thrust of 5 pounds will, in fact, make aircraft at or near the maximum 55 pound weight easier to handle during takeoff and go-arounds.

### Pulse Jet Regulations

While the pulse jet community is a small part of the jet hobby, the pulse jet community approached the JPO asking for our support in updating woefully out-of-date regulations in this area. A subcommittee was formed, consisting of manufacturers and members of the pulse jet community, who drafted a complete update to the regulations. These new regulations were also recently approved by the Safety and Executive Committees at the AMA.

### LMA Regulations

The JPO is now a part of a larger effort to review the existing LMA regulations. While it is unlikely there will be significant change to the content of the regs, they have grown over time and need reorganization, clarification and in some cases, simplification. Stay tuned for more information as this project moves forward. If any of you are LMA Inspectors and would like to participate in this effort, please contact me at [pilot114@mac.com](mailto:pilot114@mac.com).

### Drones

While drones are not part of the JPO community, I would encourage all jet pilots to support the AMA in their fight to protect this segment of the hobby. Over the years, the AMA has stood by our side to support our ability to operate turbine-model aircraft. It is a good time for us to pay this support forward by staying informed and responding to the AMA calls for action in this important area. Any and all unreasonable efforts to overregulate or limit operations of any segment of the model hobby by the FAA should be of great concern to all of us.

Keith

## Vice President's Report (cont'd)

The AMA released "A Closer Look at the FAA's Drone Data" which refuted the report and concluded that the "FAA could have done a better job presenting their data in a more factually accurate manner. By using misleading language in its press release, releasing only preliminary reports and not critically analyzing those reports, the FAA's report only served, at best, to paint a cloudy and less than accurate picture and raises concerns that simply may not be realistic." Fortunately, the AMA version got some traction, and was picked up in *USA Today*.

My congratulations and thanks to the AMA for their efforts. The FAA's obvious and less-than-hidden agenda is most troubling.

Jim

District I Report

Brian Lloyd



Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

Greetings! It has been one heck of a season, in spite of losing a couple of events this year - most notably Hamburg, PA with the tragic loss of their field for turbine use. Their event in October was always outstanding and their hospitality was superb. Besides missing the event, I miss the friendships I made in the land of tall corn, but NOT the tall corn! I still have some that I pulled from the intakes of my *Ultraflash* - I have saved it as a reminder to pull up BEFORE the corn, and as a reminder of the great friends I made in PA.

On to happier subjects! The season started with an event at Plum Island, MA. It was a low-key event right on the seacoast - with plenty to do for both the pilots and their significant others (beaches and shopping for those not yet enamored with the world of turbines). The event saw an increase in attendance this year with over 30 registered pilots, and Plum Island has been a Godsend for us in the New England area. The airport has welcomed us with open arms and we enjoy multiple events here throughout the season. At this event, we started a new tradition - all the guys brought MEAT. We sparked up our grills and had plenty to go around for everyone. There was not a vegetable in sight - much to the dismay of the women. I tried to tell them that ketchup is a vegetable, but I don't think they fell for it. I have a feeling that next year there will be salad involved!.

Next, we found ourselves in Frankfort, NY where Art Arro and crew hosted another spectacular event!

will lose these events. Besides fantastic flying in a wide-open venue, Art, and his wife Barb, hosted an historic Erie Canal Dinner Cruise. We had the boat to ourselves on a beautiful summer evening, going through the locks and learning the history of the area. We all appreciate Art and Barb's hard work with organizing this social event!



Sadly, although the weather was perfect and Art's group was welcoming, the event was poorly attended. The club lost money and the event is now in jeopardy (WHERE WERE YOU GUYS?). If we don't attend these events, we



My wife and I were in the middle of a three week/4000

## District I Report (cont'd)

Brian Lloyd

mile motorcycle trip and managed to sneak our jets onboard Domenic Mirabello's trailer as stowaways. I wish I had a photo of his face as he opened his trailer, saw all my jets, and then saw us pull up on the motorcycle - it was priceless - though it might have gone over better if I hadn't taken out a couple of his jets to make room for mine...Thank you, Art and Barbara for a fantastic weekend, and I challenge all of you to reach out to Art and see if we can save this event!

Once I paid off my rent and transportation charges to Domenic (a big man-hug), we headed to Gardner, MA for the 10th Annual New England Jet Rally - hosted by Jeff Lindz and Karen. The event is always a fantastic time and this year was no disappointment. We would like to welcome new turbine waiver holder Corey Halligan - as he was able to obtain his waiver at this event. Welcome Corey!



One of the highlights of the event was the Saturday night dinner at the field. There was live music, a catered meal, a balloon burst challenge for the foam planes, and lots of night flying. Unfortunately, this year my wife and I had to leave early due to a family wedding - word has now gone out to my family that all weddings must be cleared by the jet event calendar as these indiscretions will no longer be tolerated! I did hear through the grapevine that the balloon burst was a bust (pun intended) without the previous year's reigning champion (ME!). I have not ruled out the possibility that Jeff paid my nephew to get married that night to get me away from the event so others would have a chance at the balloons. But I'll be back next year! Thank you, Jeff and Karen for another fantastic event - as always it was well attended and impeccably run - and a GREAT BIG THANK YOU for all that you do in the jet world.

September normally brings us to the Maine Jet Rally, Ray LaBonte's baby. As many of you know, the last couple of

years Ray has put this event over the top - by making it a massive R/C-palooza with all types of radio-control venues - jets, helicopters and cars. To say this was a huge undertaking by Ray and crew is an understatement, and I want to thank Ray for giving back to the hobby in such a generous way. Unfortunately, there was no room in Ray's calendar to take on this event in 2015. But all was not lost - Plum Island to the rescue! It was hosted by the New England Flyers - a low-key event that filled in the dates and was open to all types of R/C flying. The event was well attended and we got 2½ days of perfect flying weather as a little bit of rain on Sunday forced everyone to pack up a little early. Thank you to the New England Flyers for saving our September event, and once again - thank you Ray for some fantastic jet rallies. Hopefully in the future we will be back in Maine, burning some Jet-A!



Our season is going to wrap up shortly, and it should come as no surprise to anyone reading this - with two October events at Plum Island. Also, Janet and I have to get prepared for the 4th Annual "Jet Together," hosted at our house on December 5th. This is an end-of-the-year, non-flying event - just a time for all of us to get together and celebrate another successful year. Janet is just hearing about this event now, as I am dictating and she is typing. The look on her face is the same one that Domenic had when he opened the trailer in Frankfort. If any of you find yourself in the New England area, the party starts at 3:00. Good food, good friends, good camaraderie - shoot me an

## District I Report (cont'd)

Brian Lloyd

email and I will surprise Janet with the total number the day before the event.

Changing gears, we have some exciting news! Anyone who knows me knows that I have been campaigning with an old, beat up Boomerang *Sprint*. Try as I might to destroy that airplane (snap rolls, high G turns, high speed dives, and the famous loop-to-land in 30mph crosswinds), the plane has remained intact.



I've always considered the Boomerang line to be one of the most venerable out there and last year, many were saddened by the news that Patricia was retiring and the jet would no longer be imported into the US. Fortunately, a local flyer, Larry Roper, has stepped acquired the US distribution for Boomerang Jets. He flew to China and straightened out any and all quality control issues, and by the time you read this article he should be fully stocked. I know Larry quite well - he is a stand-up guy and I know he will do Boomerang proud.

His new website is: [www.boomerang-r/c-jets.com](http://www.boomerang-r/c-jets.com). His email is [boomerangrcjets@gmail.com](mailto:boomerangrcjets@gmail.com) and his cell phone is 781-254-6351. Thanks Larry, for bringing Boomerang back!

With the cooler weather coming, it will soon be time to crawl back into the basement and get the fleet back in order

for next year! I hope you all had as great a season as I have had so far. If you have any questions or concerns, send me an email at [brianxx2@yahoo.com](mailto:brianxx2@yahoo.com).

Happy Flying!

Brian

#### From the Co-Pilot's seat - Janet Bell

With the dreaded approach of a long New England winter, it is time to say a temporary goodbye to the friendships of the jet season ... and hello to the sounds of our men retreating to the basements and garages for the cold months ahead. There, they will spend their winter attempting to mend the many bumps, scrapes and bruises that their aircraft acquired over the summer. Not many planes survive the season with no damage, and those that do will need maintenance anyway - though I do believe that MY husband really just wants some "alone time" with his jets.

We will hear them often on the telephone as they confer with each other on the best way to solve a problem, or discuss which type of glue to use - or maybe they are touching base just because they miss the camaraderie of the jet season. Whatever the reason, it is good that they keep in touch with each other during these dark days. The relationships our men all seem to have with UPS and Fed Ex will blossom over the winter months, as deliveries are made on a near-daily basis and I actually had a Fed Ex delivery man hand me a package and an apology in the same breath. Also, don't let them fool you into believing that the smaller the package, the less expensive the item. We are all intelligent women and know not to fall for that one!

One thing we can do as their significant others - we can remember to feed them, bring them coffee on occasion and remind them about their basic hygiene. I have returned from business trips in the past to find my husband still in the basement, covered in dust and glue and in the same clothes I had left him in four days prior ... not really a pleasant sight! It is important that they see daylight on occasion - even if it is cold and snowy outside. Perhaps we can lure them out of their hibernation and gently prod them into doing their chores around the house by saying yes - the snow blower does remind us of the sound of a turbine engine....

I just found out about the December "Jet Together" - last year we had 53 people in our humble home. I can only imagine what Brian has in store for me this year, as our five years of marriage has been a continuous adventure! In any event, we would love to have anyone who wishes to come, and I will fill you all in on the party in the next issue!

Janet

## District III Report

Mark McCracken



Ohio  
Pennsylvania  
West Virginia

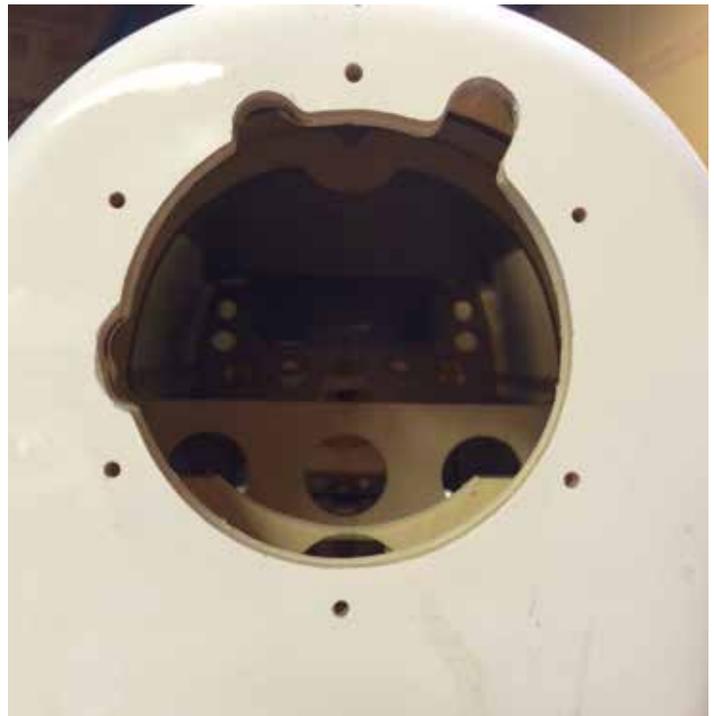
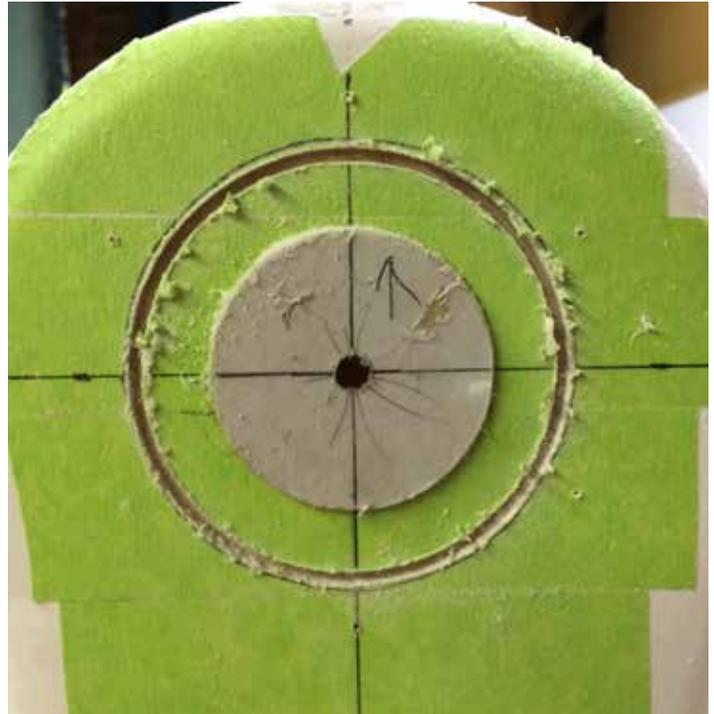
A good friend of mine is working on a new project in a low budget airplane, a T-6 *Texan II*. It is a WREN turbo-prop conversion, and I thought I would share this with you. Below are the steps he has taken to make this a great project.

### WREN MW44 turboprop conversion of the ESM T-6 *Texan II* kit.

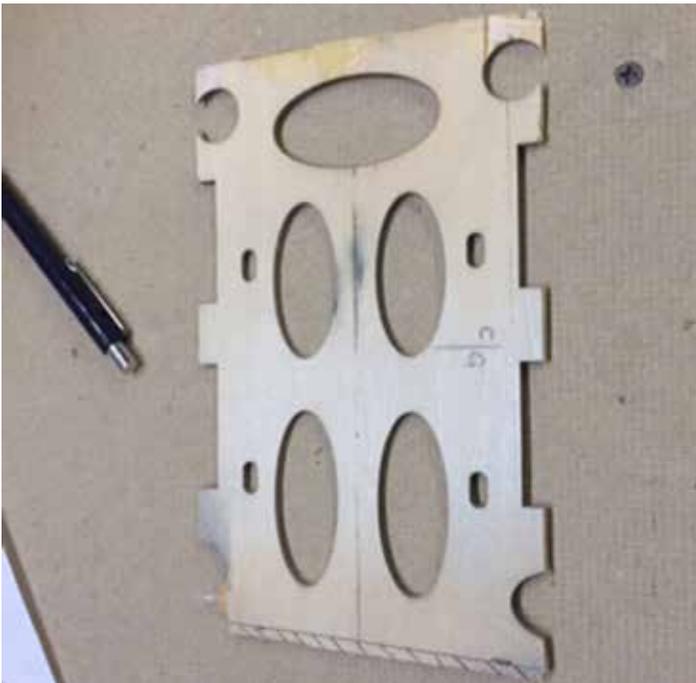
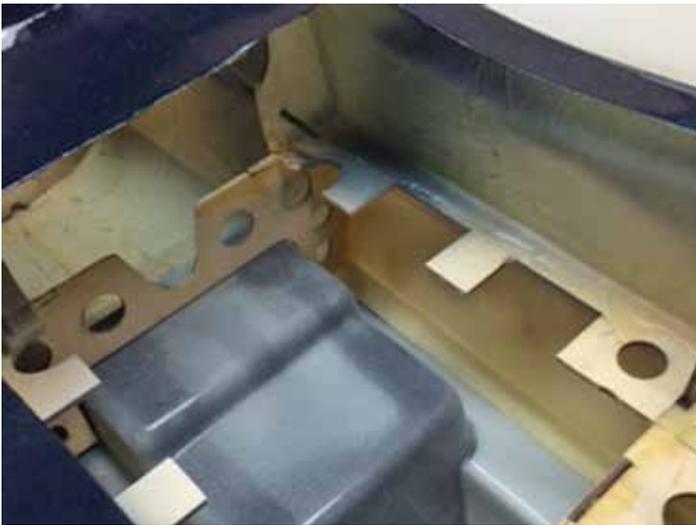
By: Kerry J. Sterner

After a brief search for a suitable airframe for my WREN MW44 Turbo-prop unit, I discovered the subject *Texan II* kit. A review of the specifications indicated that it was a near perfect match-up requiring minimal modifications to accept the WREN unit. Here is the list and brief detail of the modifications performed to complete the transformation.

**The Firewall:** The first and most time consuming task is to properly locate the “true thrust line” on the firewall. Once that was completed, I developed a CAD mounting ring template and taped it to the firewall as a drill pattern. Using the appropriate hole saw, I opened up the firewall and drilled the numerous mounting and clearance holes per the template and installed the blind “T” nuts on the back side of the firewall.

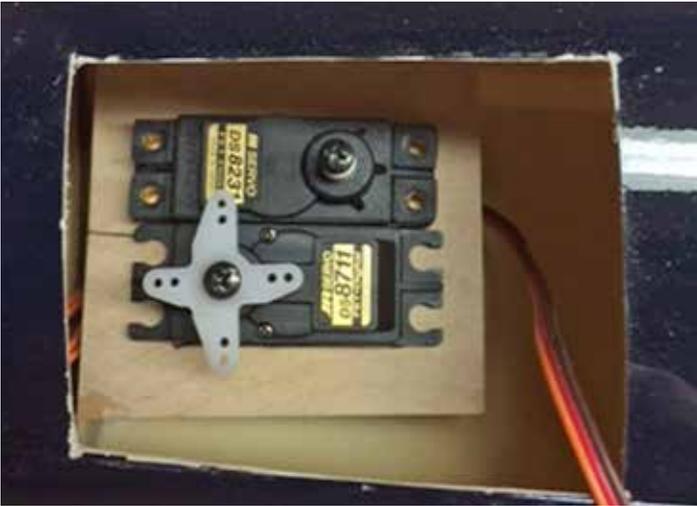


**The Fuel Tank:** This task is easily accomplished with a Zona saw and fabrication of a few new parts. The task is to “raise” the existing fuel tank mounting platform to accept the DuBro 60 oz. fuel tank while not interfering with the top of the wing. This was done by removing the portion of the tank platform as shown. This requires the fabrication of two new side walls and a bit of clearancing of the bulkhead at the front of the wing saddle.



Relocation of the Elevator & Rudder Servos: Since the weight of the MW44 was a bit greater than the 30cc Gas engine that this kit is designed for, I decided to move some weight aft while gaining the advantage of minimal pushrod lengths for the elevator and rudder and having the bonus of eliminating the kit supplied "Pull-Pull" rudder cable system and replace it with an internal (hidden) 4-40 pushrod system. I located a new cutout in the rear of the fuselage, fabricated a new servo tray to mount the subject servos and installed it in this area with Hysol epoxy. A "tiller"-type Rudder horn was fabricated that extended down into the fuselage to mate up with the rudder servo using a 4-40 pushrod. The elevator connection was made with a short 4-40 pushrod as well.





**The Cowl:** The one-piece cowl (as supplied) cannot be fitted over the MW44, and thus requires that it is cut in half producing a Top and Bottom. The cowl is then fitted with .032-inch thick tabs made from G10 fiberglass and attached to the lower cowl so that it can be bolted back together over the engine.



**The Scale Spinner:** There is an Aluminum spinner available for this kit but it is not scale in shape. I found that the Turn-Turn "Ultimate" spinner fills that requirement and the curvatures of the cowl very well.

**The Landing Gear:** A brief note on this subject is in order as a review of MANY threads on RCU led me to look at alternate landing gear rather than that which is available for this kit by the manufacturer. I found that Sierra Giant Scale offers a gear set and that was what I chose to use, and also converted them to electric actuation using the new XICOY conversion actuators.

For the balance of the kit build, follow all instructions. NOTE of caution, IT IS ALWAYS wise to completely check your airframe for good workmanship and material as received, and make appropriate corrections (if needed) during assembly. It is everyone's responsibility to ensure airframe integrity and safety in the operation of same.

In conclusion, a great airframe for a great price (< \$600 delivered to your door) and I'm looking forward to putting the first of many flights on this design in the next month or so. This is a very stable platform by design and should yield excellent flight results. More feedback will be provided as test flights proceed.

A detailed CAD-generated retrofit instruction package to perform this conversion is available and includes all templates and instructions w/ photos. I can be contacted at [scaledesigner@verizon.net](mailto:scaledesigner@verizon.net) for more details.

Mark



District IV Report

Ron Stahl



Delaware  
District of Columbia  
Maryland  
North Carolina  
Virginia

I hope this finds all of you well and having a great summer of flying your planes. We had two events within several weeks in district four this year. The "First in Flight" event in Wilson, NC has grown into a major east coast destination event bringing pilots and their families to the area for the Memorial Day holiday. Robert Vess and Larry Lewis are the major players of the event, but also have a great support staff taking care of the registration, pit area, hanger duties, and runway traffic. We had over two thousand flights in the five days, with just a few hours of rain on Thursday for a break in the action. Flying started each day with, of course, the pilots meeting at 9:00am and then flying went on until 7:00pm each day. The Saturday evening banquet was well attended and a lot of prizes were given out from all of the sponsors, along with awards for many categories.



JPO Top Gun Winner: Mark from NY, with his *Diamond*.

There is also the Virginia jets event, a week or so later and I was not able to attend this year due to work conflicts. The location looks like a great place to fly as well, and I will be attending next year.



Now that we have caught up on the only two events in our district, we have to look forward as to the growth and continued safety of our SIG. We have a great safety record and the thousands of flights that occurred without a major incident is a statement to our acting responsibly as pilots. The AMA president and our district VP were both at the First in Flight event and met with Bob Klenke and discussed what our future holds, and then took the time to address the pilots at the Saturday evening dinner. We have a bright future according to the AMA, regarding any intervention from the FAA, but of course that could change in the future. We need to stay the course of safety and responsible flying to continue to enjoy our hobby without intervention from the FAA. So during the coming winter months check those batteries, replace worn linkages, clean or replace the fuel filters and line, and leak check every air system.

See you soon at an event!

Ron Stahl



## District VIII Report



Arkansas  
Louisiana  
New Mexico  
Oklahoma  
Texas

Howdy from District VIII where we are fully into flying season! I'm sorry I missed last column - I had several small work trips, and it wiped out my being able to attend Mississippi Afterburner and the Mount Pleasant jet flies.... I'm trying to make up for it now by getting a bunch of weekend flying in, before the next work trip appears. There are several more jet events in our district before the end of the year, so please try to attend some! I'd also like to point out that the yearly Shreveport Jets event will be held at an airport this year - awesome!

**My MiG-21 finally flew!**

I was struggling to get the Fei Bao MiG-21 ready for the Southwest jet fly and came up a bit short, but I did manage to get it into the air! I'm having a bit of a nose gear extension problem that I'm working through (a case where the nose gear will cycle all day long on the ground, but will not come down during flight) but I'm happy my redesigned bypass and Jet Central *Cheetah* turbine worked well, and I'm glad I had no issues with the flitemetal and receiver reception. It's not like this is the first time this has been done, but this was the first fully flitemetaled model for me. It's not the easiest model to see, but I knew that going into the project - I'm confident when I get used to the model orientation in flight, and after I get a few stores hanging below the wing, it will be less of an issue.



This model uses a bypass, but does not use a full inlet duct like most of the Fei Bao MiG-21 builders have done - the inlet duct is broken into portions from the nose of the model to the bypass. To keep the bypass from collapsing, I made a fiberglass bellmouth which is installed just ahead of the bypass. I'm not sure if there is a measurable performance improvement, although if it were a ducted-fan or edf

## Ron Schwarzkopf

installation, I'm sure it would help significantly as centrifugal compressors are a bit more tolerant of nonuniform flow than axial fans or compressors. So, now I look forward to getting a few successful flights on it, then adding a bit more detail, along with adding some under-wing stores!

**Hotter Than Hell Jet Rally**

I finally was able to schedule a trip to Bomber Field (June 19-20) to make this Houston-area jet fly, and I had fun! Robert Bernal and the Bomber Field Club did a great job of running the event.



The event lured a bit under 40 fliers - the chance for rough weather reduced the turnout a bit due to rain a few days prior to the event start. The weather was good until late Saturday, when flying was interrupted for a downpour, but flying continued afterward. A high point for me was watching several of the local *KingCat* fliers take to the air for some impromptu "formation" flights - it looked like a lot of fun! Several of the latest "plug-n-play" BVM F-16s showed up and also put in nice performances. The club is hosting another jet event in early November, and I'll try to make that

District VIII Report (cont'd)

Ron Schwarzkopf

one - it should be a great time in Texas with the cooler temps!



Southwest Jet Fly

I'm writing this column just a few days after this Waco event, and once again we had a lot of fun. Several fliers showed up almost a week early to begin the event, making the long, boring drive from Arizona!



Showing up at the event was a still-under-construction B-58 *Hustler*, from Butch Sickels and his *Hustler* crew. Flitemetal is underway on this project - which will be quite a beast when finished! Current plan is for four KingTech K-60s for power. Yes, four of them!



A closeup of the number one nacelle on the B-58, with KingTech K-60 installed.

This event drew just under 50 pilots, and we were fed well as usual, from loads of donated Rosati's Pizzas, to barbeque, watermelon to cool things down a bit, and a shrimp fest. Many flights were made during the week, despite some crosswind we were experiencing. I even had the opportunity to demonstrate how to knock off a main landing gear strut during one of those crosswind landings! Thanks go out to Larry Garrett, Bob Covish, and the rest of the HOTMAC crew for running another enjoyable event! We are so lucky to have several jet friendly clubs in Texas! Thanks also to Paul Bloxham at the event for taking some nice high resolution pics with his camera. Enjoy the following photos!

Happy Flying!

Ron S.



Paul Bloxham's little Wren-44 powered L-39 taxiing after another flight.

## District VIII Report (cont'd)

Ron Schwarzkopf



Barry Raborn's huge Tomahawk *Hawk* settling in for a perfect landing.



Robert Bernal's A-10 on display for spectators, before takeoff time.



Scott Marr landing on the mains with his *Shockwave*.



Scott Marr making a show pass with his *Shockwave*.



Robert Bernal's A-10 fully loaded, keeping enemy tanks away from HOTMAC Field.



An Avanti, Bobcat, and a Russian Rafale being prepped for flight under the tent.

District X Report

David Reynolds



Arizona  
California  
Guam  
Hawaii  
Nevada  
Utah

I doubt any person in this hobby that has looked at 3D printing hasn't thought of the possibilities of printing their own fan. Jose M. Liebanes of Madrid, Spain took those thoughts to conclusion and shared the end result with the world on Ezone.

The end result is a scale GE GENx-1B fan that is a work of art. Jose's fan is 100mm with 18 blades and 24 stators. There is a secondary 24mm fan for motor cooling. Power is provided by a 1400Kv motor running on 3S or 4S with a target output of just over a pound of thrust. If all that scale detail was not enough, it has working thrust reversers also.

The fan itself is made up of individually printed blades that are then glued together using thinner. In order to smooth the parts, Jose uses acrylic thinner. Bonding time using this method is around 15 minutes with a full cure in about 25 hours. Some destructive testing was done and future versions may be fibreglassed for more strength.

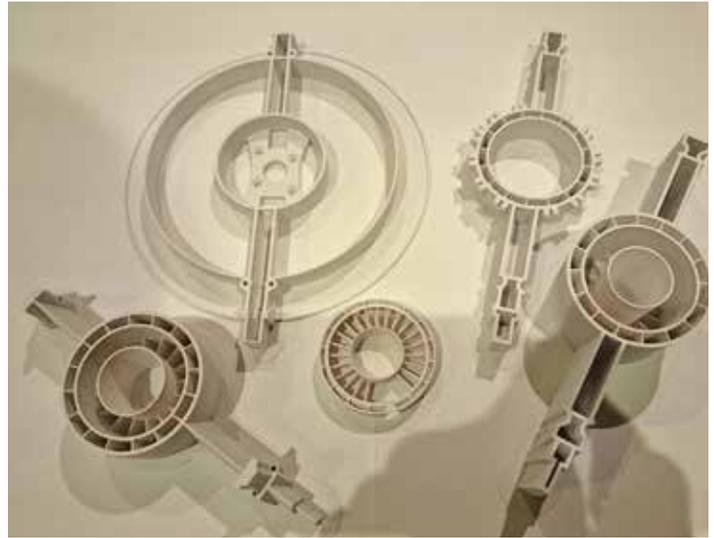
While this unit has not been flown, it is not the first fan that Jose has created. The prototype for his masterpiece flew onboard a converted HobbyKing *Bixler*. The video can be found on YouTube by searching for *Bixler Custom 3D Printed edf*. Video of the GE fan can be found by searching *GE GENx-1B sD Printed B787 Jet Engine*. Both videos can also be found on the JPO District 10 Facebook page.

Not shown is the over eight months of CAD work that it took before any parts could even be printed. Currently, Jose is working on drawing up a simpler unit without the thrust reversers and hopefully more power.

Jose is wary of selling kits of his fan due to time constraints and liability issues but he has made the rotor available for those that want to print one out for static display. The files can be found at: <http://www.youmagine.com/designs/jet-engine-fan>.

That is all I have for this go around. Hopefully I will see some of you at the Arizona Jet Rally. If not, keep the low passes where they belong and please enjoy the photos of Jose's hard work.

Dave



Motor mount parts.



Translating cowl parts.



The OGV.



Assembled GE GEEx with reversers acitve.



The Cascades (side thrust reverser) assembly.

Jose's prootype fan on his *Bixler glider* (right).





**District XI Report**

**Bob Brusa**

Alaska  
Idaho  
Montana  
Oregon  
Washington

attended - those would be great too.

We have some log books available if anyone needs one, or has filled up their old one; they are \$6 each. We have some JPO Tee shirts left - size large only - and they are \$10. The tee shirt runs a little on the big side, so if you wear an XL, the large may fit. Prices include shipping. Let Carol and I know and we will send them to you.

Our big event of the year, and the largest jet meet in the Pacific Northwest - Jets Over Whidbey - celebrated its 25th year of this event. Unfortunately, a big wind storm blew in early Saturday and there was no flying that day. The weather reports stated that there were winds up to 71mph. Some flying was done on Friday and Sunday, and while there was wind both days, it wasn't too bad. Temperatures were in the 60's which is unusually low for August, and due to the weather forecast for the weekend, pilot attendance was a little lower than normal.

I have not done any flying this year as I have been working on my full-scale Van's RV12 and it should be finished this month, so I hope to be back flying my R/C jets next year. If anyone is interested in a Boomerang *Torus*, I have one for sale. Give me a call for more info about it.

Bob

My term as the District XI VP expires at the end of this year, and like I stated in the last issue of *Contrails*, I am looking for someone interested in replacing me. I will continue to assist Carol in her role as JPO Secretary/Treasurer, as it can be very time consuming and it's nice to have two people working together and sharing responsibilities.

The district position does not require a lot of work - just four articles a year for *Contrails*. There are a few conference calls each year with the entire group to keep everybody updated on the latest events and discuss any issues or concerns. Give me a call if you are interested and we can discuss it in further detail.

If you would like to submit an article to *Contrails*, please contact me. Technical articles are especially welcome. Also, if you have expertise in a particular area, or a hot tip to share, please let us know. Perhaps you'd like to post some pictures of your latest project, or photos of an event you

**Treasurer's Report**

April - August 2015

Beginning Balance as of April 1, 2015		\$3,578.17
Income		
Dues - Cash/Check	\$362.00	
Dues - PayPal	\$1,389.37	
Trophies for JOW	\$68.40	
Total Income		\$1,819.77
Expenses		
Trophies	\$604.40	
Postage	\$50.48	
Bank Service Fee	\$6.00	
Contrails	\$650.15	
Stamps	\$24.50	
Canadian Exchange Fee	\$13.27	
Post Card Renewal	\$159.14	
Total Expenses		\$1,507.94
Ending Balance as of Aug, 31, 2015		\$3,890.00

*Respectfully submitted by Carol Brusa*



## Canada District Report

Jeff Daly

Hi folks. Thanks to all the Canadians for joining JPO ... thanks again for your support!

A lot has been happening for me on the jet scene this year. I finally completed my Skymaster F-4 so I could start the flight test phase and getting a feel for the airplane. I took it to "First in Flight" at Wilson, NC in May, then again at Jets Over Iroquois, Wingham Jets, and then New England Jets. I've learned lots about it, and will share my experience later in this report.

Additionally, I'll provide a report on Jets Over Iroquois and Wingham Jets. Both were incredibly successful and the weather was outstanding.

### Jets Over Iroquois

Iroquois, Ontario, 3-5 July 2015

This rally was an inaugural event in the town of Iroquois, located an hour's drive south of Ottawa. For interest sake, Iroquois was partially flooded by the creation of the St. Lawrence Seaway in 1958. However, the town was simply relocated to higher ground in the same area. What's unique with the airport facility, is that it has a 25-ft wide runway and the downwind circuit is over the St. Lawrence Seaway. Despite the narrow runway, nearly all pilots learned to improve their landing approaches, and found that a gyro on the nose wheel steering helps considerably for take-offs. I found most humorous, as the Air Boss for the event, the need to remind the pilots not to fly over the huge freighter ships on the seaway! Only in Iroquois.

CD Ken Park, did an excellent job organizing the event, and did an even better job as the announcer to entertain the spectators. There were 31 pilots from Ontario, Québec, and from the US with over 50 jet aircraft. Jeff Lynds from CT showcased his scale CompARF *Snowbird* that really inspired the crowd and earned himself coverage in the local newspaper. Thanks for coming Jeff! Other impressive flying was by pilots from Québec who I hadn't seen in a long time. Martin Lefebvre demonstrated his impressive scratch-built A-10 and de Havilland *Vampire*. Marcel Lahaie also returned from the grave to be part of the event.

As part of the organizing committee, we have ideas to improve several things associated with the flying and start-up areas. I believe there are plans for an event next year or the year after, so it will be even better. Enjoy the photos taken by Larry Ingram and Luce Simard.



Jeff Daly's Skymaster F-4E.



Jeff Lynds' CT-114 Canadair Snowbird.



Unique background only at Iroquois!





**Wingham Jet Rally  
Wingham, Ontario, 24-26 July 2015**

Another successful Wingham Jet Rally (WJR) just finished! Blair Howkins pulled it off again with help from his family, folks from the Guelph Gremlins Model Club, Sky Harbor Model Club, and from 15 other volunteers. Sixty-three registered pilots who came from Quebec, Ontario, New Jersey, Illinois, and Michigan set a record this year. Thirty campers/RVs were on site as well as over 200 parked spectator cars.

- The deserving award winners for the WJR were:
- Best Sport Jet - Peter Ayache with his Aviation Design *Diamond*.
  - Best Military Jet - Jorge Escalona with his Tomahawk Design L-39.
  - Best Civilian Jet - Rich Muller with his Blanik Glider.
  - Best Electric Jet - Ken Park for his commitment to electric jets.
  - Wing Jet Club Top Gun - Sandro Novelli with his Skymaster F-14.
  - Pilot's Choice Award - Kim Foster and his Tomahawk Design *Matrix*.
  - JPO Top Gun Award - Blair Howkins for his outstanding modeling and continued dedication to the WJR.

A big thank you also goes to Ali Machinchy for his untiring help to the other pilots both for test flying and tuning their jets. Ali truly has an unlimited amount of energy that we all much appreciated. Thanks also to Ali for being the unbiased judge for the inaugural Wingham Jet Club Smackdown Aerobatic Challenge.

The Wingham Jet Club Smackdown Aerobatic Challenge was designed for fun and for any jet aircraft. It was a low-stress event and manoeuvres were carried out on the upwind pass without interfering with normal flying. There was no time limit and only one round of competition. A pilot

just had to let the judge know at any time during the event they were ready to fly the manoeuvres. The selected manoeuvres were relatively simple: Takeoff, Immelmann Turn, 2-Point Roll, 3-Consecutive Inside Loops, Slow Roll, Humpty Bump with 1/2 roll option and Landing. Judging was based on precision, smoothness, positioning, and size of the manoeuvres relative to the manoeuvring area and other manoeuvres in the flight. Thanks to the eight participants for giving it a try. One point to note was how unobtrusive it was to normal flying, and no complaints except from the disgruntled second placer. Ali also provided valuable written feedback to each pilot to improve themselves for next time.

- Of the eight entrants, these were the top three:
- 1st place: Bryan Millar, Boomerang *Nano*
  - 2nd place: Tim Reddeman, BVM *KingCat*
  - 3rd place: Tim Koop Sr, BTE *Reaction 54*

As so much fun was had, we will likely continue the Smackdown Challenge next year. Enjoy the amazing photos by Ken Park.



**1st Place In the Smackdown Challenge, Bryan Millar (holding TX) and his Nano. Photo by Ken Park.**



Peter Ayache with his Aviation Design *Diamond*.



Ali Machinchi critiques a competitor in The Smackdown.





**SKYMASTER F-4 Build (final update)**

I was successful in being able to ready the jet for the First in Flight event in North Carolina. Busier than expected at the event, I completed the maiden flight and right away I became aware of the tendency for the F-4E to pitch-up at low airspeeds with high throttle settings. I found the CofG setting at 225 mm to be pretty good, but did notice the aircraft tended to roll over in tighter turns. With Dreamworks at the event, and all the hype about 3-axis gyros, I installed a Powerbox 3e gyro prior to the 2nd flight. The bad rolling tendency was now gone, and the jet was rock solid from take-off to landing. I was very happy with the landings, which it does so well with a little power. All systems worked very well, except for the main gear valve which did not retract the main landing gear in time before the aerodynamic forces kept them out, due to the strut doors canted into the wind. I ended up replacing the Robart valve that I was using with a high flow Jet Model Products valve, which increased the retract speed and cured the problem. I had no problems with the GBR CAT tank and the Jet Central *Mammoth*, which made a unique howling sound through the bifurcated tail pipe that the spectators much enjoyed.

I continued to put more flights on the jet at the Iroquois Jet rally and the Wingham Jet Rally, and brought the 3e gyro up to 40% in rate mode. At the New England jet rally, I ran into problems with an in-flight, righthand H-stab failure, which ended in a horrific impact into the runway followed by a fire. The airframe was 100% destroyed and the engine suffered

damage with all electronics burned up in the fire. Skymaster is currently assessing the H-stab construction, and has yet to advise of the problem. However, in the meantime, Skymaster, standing behind their product, has committed to replace the airframe and all other Skymaster components at no cost. I am disappointed, but accept that accidents happen, and anticipate Skymaster will promptly resolve this issue with their F-4. I am just glad that no one was hurt.



Jeff Daly's Skymaster F-4E. May it RIP. Photo by Ken Park.

Anyway, enjoy the rest of your flying season and fly safe!

Cheers, Jeff

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**Membership/Renewal Application**

Please add/renew my JPO membership!

Name: \_\_\_\_\_ AMA Number\*: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

\*AMA membership is required for U.S. Residents. JPO Annual Membership Fee is \$25.

Send with check or money order made out to: "The Jet Pilot's Organization" to:

Carol Brusa, JPO Secretary/Treasurer, 7433 McCormick Woods Dr, SW, Port Orchard, WA 98367



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**Ken parks caught this beautiful Canadair F-86 landing at  
Jets over Wingham in Ontario, Canada.**