

Newsletter of the Jet Pilot's Organization

CONTRAILS

Winter 2016

Volume 28, Issue 1



David Reynolds captured John Redman's BVM Rafale, afterburners engaged, on a twilight touch-and-go at the Arizona Jet Rally.

President's Report

Bob Klenke



As I write this, our "building season" is in full force. Winter storm Jonas (okay, whose bright idea was it to name winter storms - especially after boy bands?) has dumped six inches of snow on Central Virginia and is expected to continue for another day or more. Oh well, as soon as I finish this writing assignment and some work stuff, I can get back up to the shop.

Currently, I'm working on finishing up a 1/4 scale Me262. It's been a project between myself and another Richmond area jet flyer, Bob Neal (well, mainly a project for Bob thus far) for probably three years or so. We brought it out a few times last year in the ARF state to see if anyone was interested in taking it on to finish up, but no takers, so we decided to finish and fly it ourselves. It's really big, and that was a problem for me, as any of you who have seen my little trailer and 2002 Saturn *Vue* could imagine. However, this year saw my daughter graduate from the University of Michigan (go Blue!), and with the last truckload of tuition cash having been delivered to Ann Arbor, a new Chevy *Colorado* replaced the *Vue* (and none too soon as the *Vue* was really struggling of late).

The Me262 is still too big to fit into my trailer - nine feet of airplane vs. eight feet of trailer - but a few measurements showed that it will fit into the truck bed with the tailgate out and not stick out too far to interfere with the trailer. The radio system and air system are in and tested, and the remaining work involves getting the engines plumbed for fuel and the ECUs installed. Oh, and of course, there was the 30+ hours taken to get "Herman the German" painted and installed in the cockpit! I'm no artist, but I think he came out okay.



Of course the other news is the FAA's UAS registration rule and all of the conversations, debates, arguments and so on going on about possible new regulations like a 400' altitude limit, the shutdown in the DC SFRA, and potential effects on the future of the hobby. I wish I could say for sure where all this is going and that it won't have any real effects on us, but honestly, I can't be sure. I do think that ultimately we'll be okay, and one thing I did learn while talking to AMA President Bob Brown, Executive Director Dave Mathewson, and AMA District IV VP Jay Marsh at First in Flight last March, is that there are a lot of hard-working, dedicated people working for us and if it can be done, I'm sure that they will get it done. They are committed to "no modeler left behind" and supporting the jet community, and we in the JPO are committed to do all we can to assist them and hold them to that promise.

The JPO itself is moving forward, albeit somewhat slowly, but surely. We have completed the survey of the AMA turbine waiver holders, and had good participation from within and outside of the JPO, and we learned some useful things. We're moving forward on a few initiatives including a new website and the return of JPO t-shirts. Other things have a longer lead time and we'll be rolling them out, and possibly approaching you to help us with them in the future.

In the meantime, go flying if you're in a climate zone that enables it, and get to work in the shop if you're not. We'll see you guys out at the field!

For all of us, our membership year is January 1 through December 31. This means that unless you have already renewed your membership, it has expired!

PLEASE RENEW YOUR MEMBERSHIPS. Information on how to do so, is located on the last page. THANKS!

Bob



Vice President's Report

Jim McEwen

Greetings, eleven days ago on Jan 20th, 2016, I registered my ~~model airplanes~~ unmanned aircraft systems with the U.S. federal government.

Frankly, I can't decide which organization I hold in the most disdain, the FAA or the AMA.

The FAA website specifically refers to Sec 336 of Public Law 112-95 (the FAA Modernization and Reform Act of 2012) which prohibits the FAA from enacting rules or regulations on model aircraft flown strictly for hobby or recreational purposes. However, this law is apparently not preventing the FAA from creating new rules such as registering our model planes. Initially, I thought I'd hide behind my Canadian citizen/US permanent resident status (which meant I didn't have to register), but that loophole was closed at the last minute and the FAA threatened CRIMINAL sanctions for not registering, so I caved in.

Regarding the AMA, as far as I'm concerned, they got us into this mess in the first place. Bob Violett, for one, warned the AMA to distance model aircraft hobbyists from drones/ UASs as it would only lead to regulation of our hobby. Oh no, the AMA knew better, or thought they did. The AMA decided to try to leverage their CBO status and bring drone operators into their fold. If successful, this would result in a huge increase in the AMA's membership. The AMA was so busy counting the potential cash that they forgot their responsibility was to their current membership (model aircraft hobbyists) without predicting the potential negative results of this course of action.

Thanks to the AMA, model airplanes and drones are inextricably tied in the eyes of the FAA and model planes have been swept into the FAA's new (and arguably illegal) regulations.

Bob Violett was right and the AMA was wrong. Big surprise, not!

Along with many of you, I regularly receive emails from the AMA telling me how they are representing my interests. This fiasco with the FAA is inarguably the biggest issue to our hobby in, at least, this generation. The AMA emails reassure me that they are continuing to work directly with the FAA to find a solution. Despite the best efforts of the AMA to sit at the grownup's table, they appear to be having little to no effect. Remarkably, the AMA appears not to recognize that they are being ignored and continue their

mournful bleating to the FAA much like Oliver Twist saying "Please sir, can I have some more?" Come on AMA, it's time to put the effort into something else, like expediting the lawsuit. Maybe a judge can affect some change.

I attended the AMA show (the west coast version of the Toledo or WRAM show) a few weeks ago. Drones were certainly in the spotlight with many booths selling multi-copters. I had the opportunity after the show to talk to the sales manager from one of the drone companies with a booth at the show. I asked what, if any, awareness she had of the ongoing sUAS registration battle and what information do they provide to customers about responsible use of the product. Short answer: "None!" Indeed, she wasn't even aware of any regulation issues or legislation. Her job is to sell the multi-rotors as fast as she can once they are taken off the boat from China. Peachy!

Yet, somehow, the AMA was quite happy to proliferate the distribution of drones to the uninformed masses by \$elling a booth to this drone company. Hypocrisy in action.

Okay, off my soapbox and on to happier things.....

I took some time to check out the static display at the AMA show and was particularly impressed with Don Madison's B-24 *Liberator* (1/9 scale, 12-foot wingspan) that featured extensive scale weathering. It took 1st place in Scale: Military. Well done, Don, very nice. Another plane that caught my eye was Joe Greer's twin edf-powered F-14 *Tomcat* built from Depron and plywood. Joe Greer took 1st place in Scale: Jet. Additionally, there was a nifty R2D2 quad-copter with lighted "feet." It flew safely inside a net in the show hall.



Close-up of the B-24's forward turret showing the awesome weathering.

Vice President's Report (cont'd)

Jim McEwen

**Don Madison's B-24 Liberator.****Joe Greer's 40" long F-14 Tomcat. Nicely done!**

I attended the 27th annual Arizona Jet Rally this past November at Superstition Airpark (which is a Real Flight photo field - check it out if you have that simulator). Both electric and turbine-powered jets were well represented and a few in particular caught my eye. Brian O'Meara brought his Flite Metaled F-84 *Thunderjet* "Lil Darling" that was all decked out by master builder Henry Nguyen including full cockpit with opening canopy, lights, and speedbrakes.

**Brian O'Meara and "Lil Darling".**

Chris Wolfe and father, Larry, had several EDFs but Chris' foamy really impressed me.

**Chris Wolfe with his Freewing F-14 Tomcat.**

John Redman brought a BVM *Rafale* that had been freshly repainted and looked gorgeous. John put on some excellent flight demos and the howl of the twin exhausts sounded fantastic. Matt Carroll brought his P180-powered *Super Bandit*. Matt has extensively modified the airframe and flight surfaces to handle all that power (not your typical *Bandit*, for sure). Event CD George Kreyling managed to take time out from his duties to get a bit of fun in with his P60-powered *Bandit ARF*. George flies the model smoothly and precisely and is looking forward to the planned P100 upgrade so he can more fully explore the vertical.

**John Redman's Rafale in US markings.**

Vice President's Report (cont'd)

Jim McEwen



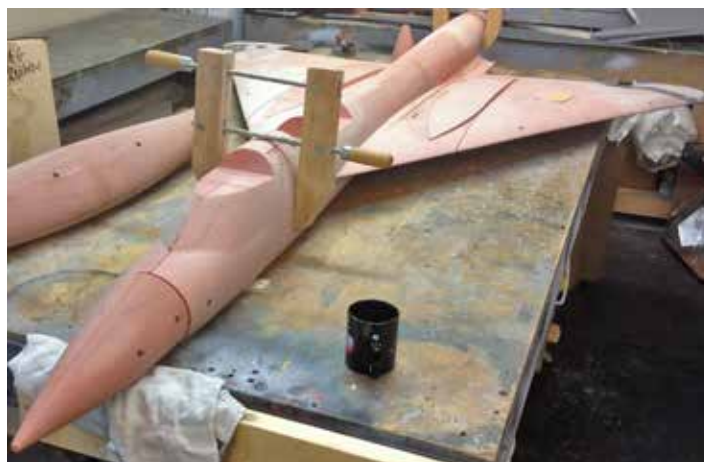
Matt Carroll with his *Super Bandit*.



Event CD George Kreyling with his *Bandit*.

The Christmas holidays gave me several days off work to drive down to the DFW area to visit my old friend Butch Sickels and pick up the plug for a new project; yep, it's a B-58 *Hustler* being built for competition at the Jet World Masters (though I can't tell you which year). With that in mind, the model is being tailored to the JWM rules and documentation needs. To ensure the outline and docs are perfect, a set of six views from a magazine in the Czech Republic, a commercial 3D CAD model from Canada, aircraft drawings from a Smithsonian drawing package, and a set of orthogonal photos were overlaid electronically and closely compared. The drawings, views, and photos matched perfectly, though the CAD model needed some rework. The plug was cut from Ren tooling board and safely made the journey to Phoenix. It will be quite a challenge to keep the 120" long, four Kingtech K-60-powered model under the 20kg dry limit, but I'm highly motivated as Vitaly Robertus (3x champion with his YAK-130) has wagered 100 bottles of Vodka that it can't be done. Never tell an engineer

that something is technically impossible!



While at the AMA show, I went in search for some high torque, high speed, high precision, high voltage servos that would fit into the thin *Hustler* wings. Thomas from MKS showed me their impressive product line. Check them out the next time you are in the market for servos.



Incidentally, I decided to take a year off of competition. I've got some work commitments conflicting with Top Gun and I can certainly use a bit of rest & recovery time after the grueling Airworld *Gripen* build, as well as preparing for the Jet World Masters in Germany. So this year I'm going to take it easy, attend a few jet rallies for fun (including Wingham Jets back in Canada), and will keep busy with projects such as redesigning the *Gripen* landing gear and molding the *Hustler*.

My heart goes out to any of you cabin-bound folks in snow country. We've got plenty of sunshine, warm temps, and jet events so jump on a plane and give yourself a much needed break. Next up is the Coachella Valley Jet Jam just outside of beautiful Palm Springs in early February and the Tucson Jet Rally in early March. I hope to see you there!

Jim



District I Report

Brian Lloyd

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Happy New Year! I am writing this from the dead of winter here in New England. Luckily, as of this writing, we don't have too much snow on the ground in northern Massachusetts - but with two solid months of winter left - who knows what winter will bring? We are already dreaming of springtime...

The New England Flyers hosted the last event of the season at Plum Island Airport in Newburyport, MA. There is a mutually beneficial agreement between the Flyers and the airport, as full-size aviation is relatively stagnant. Our annual dues and the income from the events provide a nice contribution to the monthly expenses of the airport and as a benefit, we have a fantastic place to fly!

At the event we had over 30 registered pilots, and despite the fall weather rolling in, we had four great days of flying. Saturday night brought a potluck dinner, followed by a huge bonfire where all the pilots reminisced about the past season. Unfortunately, the next morning everyone had to pack up and head home. The goodbyes are always sad, because we know that most of us won't see each other until the following spring. With the notable exception of the "Jet-Together" - you will get the details of that event from Janet's perspective.



Let's talk a little bit about the great cooperation and heroic efforts by New England Flyers to acquire and to keep our flying privileges at Plum Island Airport. The season started off with a jet crash, resulting in a significant fire. The airport manager witnessed the fire and became very hesitant to let the R/C jet guys continue flying there. The New England Flyers, led by Michael Fiorito, Larry Roper, and others on the executive board, stepped right up and opened communications with the airport manager. They discovered that his main concern with the fire was the relatively slow response from the flyers on scene in putting out the fire. His concerns were met by the R/C club purchasing a rescue vehicle, fully equipped with fire suppressing equipment, which now allows for a quick response to any incidents and minimizes the risk of a damaging fire. As a result, we were able to keep Plum Island as a primary venue, and club members even get to enjoy flying there a couple of days each week - currently Monday/Tuesday, but subject to change! Of course, the cold and snow always finds us back in our basements and garages getting ready for Spring.

This winter, the same club members are volunteering their time at the airport clearing out trees and brush - making it a better place for both full-size and R/C jets to fly. More importantly, this shows the airport managers how far we are willing to go to keep the good relationship we have developed. A great big thank you to all of those at Plum Island who have gone above and beyond so that we can all enjoy this venue. Let them be an example to those of you looking for flying sites or trying to keep your existing flying sites. Keep communication open and always be willing to lend a helping hand.

In the industry over the years, there have been game changers. Those of you who have been in the hobby long enough remember what a miracle "servo reversing" was when it was introduced. The next big thing was computerized



District I Report (cont'd)

Brian Lloyd

radios with infinite mixing. Eventually the basic gyro came along, finally making helicopters enjoyable and flyable. In my humble opinion, the latest game changer in the industry is the airplane electronic gyro. My personal experience has been with the Cortex gyro. I first utilized it in my F22 - it made such a big difference that I immediately installed it in my other two jets. Although the gyro doesn't fly the plane, it makes the plane fly much better. I became aware of their full potential during the last event at Plum Island. I had been flying my *UltraFlash* all weekend in relatively heavy winds. With the Cortex gyro, the plane flew smoothly and was predictable throughout the entire flight. That weekend, I test flew two other *UltraFlash* jets. When I took off with the first one, I didn't have the gyro turned on and the plane was bounced around significantly by the turbulence. I turned the gyro on while in flight and it was as if the wind and turbulence both disappeared. The remainder of the flight and landing were uneventful.

Later that day, I test flew another *UltraFlash*, which did not have a gyro installed. During the entire flight (up to and including the landing) the plane was barely controllable. It did have a successful landing, but it certainly took away 10 years from my life (10 years I did not want to give up!).

I then flew my *UltraFlash*, disengaged the gyro in flight, and it was bounced around terribly. Once I re-engaged, the flying smoothed out and became enjoyable. All of the big name flyers have been using gyros for years, but they are only now admitting to using this tool. Since we often travel distances and have a lot of money invested in these jets (more than we want our wives to know), I firmly believe these are a worthwhile investment. And - they allow us to fly more often because wind and turbulence are no longer big factors. My experience is limited to the Cortex gyro - it is a fantastic gyro at a great price, and is very easy to set up. There are other gyros - give your favorite a try - and I think you will be very pleased with the results.

From the Co-Pilots Seat: by Janet Bell

The 4th Annual Jet-Together was a huge success, with 47 pilots and their "Significant Others" meeting at the Bell-Lloyd home in Dracut, MA. We had six fewer people than last year, but still plenty of folks to more than fill our cozy 1930 home to the max! Thank you for everyone who contributed to this potluck dinner - the quantity and variety was amazing!

The men spent a great deal of time in the basement, doing "manly" things, I guess - or maybe we don't want to know. They have such a great time, and the women all get a chance to get to know each other better. I've noticed over the past few years that there are more and more women attending the jet events to show support for their husbands/boyfriends - which is great because as we all know, they

love to show off for us!

There was a suggestion from Jeff Lyndz that everyone bring "old time" photos of early flying days. A few people brought them and they were displayed on a board for all to see. I had to laugh when I saw the photos - when I first met Brian, I saw a photo of him standing at the runway with the radio in hand (facing away from the camera). All I could see was the antenna and the runway - I thought he was fishing, as the antenna looked like a fishing pole and the runway looked like a river. Of course, at the time I didn't even know there was such a thing as a radio-controlled airplane! I was pretty excited that I had met an "outdoorsy" guy who liked fishing, and hoped he also liked camping and hiking as well - since those are my favorite activities. I had visions of us throwing on our backpacks and hiking for weeks out in the wilderness. Hmmm..... I was pretty naive back then - as he enjoys none of the above. I've gotten him to camp once, and hike 3 times (he will tell you it was a billion times), and based on our experiences - let me just say that I am very glad that he is a great flyer!

Until next time, please enjoy the photos!

Janet



District IV Report

Ron Stahl



Delaware
District of Columbia
Maryland
North Carolina
Virginia

Hello District IV members!

As we are in the middle of the winter season now, I hope this finds all of you in good health. We have had some unfortunate changes around the DC area as all of you must know by now, and the requirement by the FAA to register ourselves if we own "drones." I'm not here to debate if we fly drones or not, but we do operate high-end, high-speed R/C planes in national airspace in a more than professional manner.

The jet community is the upper end of our hobby no matter what others think or say. We need to be as proactive with safety as we have been and keep that in the forefront,

and not forget we are just a pen stroke away from not having a hobby at all anymore, as the easiest thing for any government official to say is "no." The AMA is working hard whether you believe that or not, and I'm sure we all are hoping for a quick reversal of the 30-mile no fly zone in place affecting our district by the federal government.

Now with that out of the way I'm hoping to see all of you at one, or all of the three District IV events we have scheduled so far for this year. FIF will lead it off in May (from the 25-29), next is Virginia Jets (I'm sorry I don't have the dates yet), and lastly a new event at the New Garden airport September 8-10. Look for more information on our Facebook page (Jet Pilots Organization District Four) as I update it whenever I get important info for all of us.

Building and repairs should be underway by all of us by now, and I'm finishing up this short article late as I have spent the last week digging out of not only the 30" of snow I had, but also the eight to ten foot high drifts we had in our neighborhood ... and now the leaking roof.

Ron

District VIII Report (cont'd)

Ron Schwarzkopf



View of Cooling Fan showing access to battery.

One could make it much fancier. I'd like to install some sort of timer to shut it off automatically after 1 or 2 minutes (just for the heck of it), but haven't put forth the time to address that. So far, the fan works great! The four-inch diameter is a bit larger than my largest current tailpipe, so as it draws air out of the tailpipe, it is also evacuating the aft fuselage - good for keeping that fiberglass fuselage from overheating. There are also three-inch fans available, if one wants a more compact unit - and one could also use a correspondingly smaller battery than the 7 amp-hr battery I went with.

I will see about getting a PDF file added to the Knowledge Bank portion of the JPO website, in case anyone wants to make a similar device. It's a fun little project that you can modify as you see fit.

See you at a jet fly soon!

Ron S.

District VIII Report

Ron Schwarzkopf



Arkansas
Louisiana
New Mexico
Oklahoma
Texas

Howdy from District VIII. I'm getting antsy, because I haven't flown in a while; and that is not a good thing! We have a nice weather weekend coming up as I write this, but I have to go out-of-town for work, so I'll miss that opportunity. Hopefully, some of you readers will be able to get outside and make some jet flights.

Of course, our relatively short building season is not quite over yet, so if you miss the opportunity to fly, you still have time to finish that project you are currently working on, or perhaps get a repair finished before the flying season really begins! If you haven't flown in a while, make sure to check your batteries (need replacing?) and check those landing gear retracts (any leaks?). It's also a good time to clean the fuel filters, too. Let's see how much time we've got to get these tasks done before the events begin. Note: The ARCA club in Austin, TX is back on the schedule for holding a one day event - welcome back!

Upcoming events in District VIII

Mar 12: 1st Annual "Jet Lag" Turbine/EDF, Austin, TX,
Mike Gregory CD

Mar 31-Apr 2: Jets Over Houston, Bomber Field, TX,
Robert Bernal CD

May (TBD): Texas Jet Rally, Mt Pleasant, TX,
Gus Hudson CD

June 4-5: Fort Bend Jet Rally, Rosenberg, TX,
Ray Blair CD

A Few Words Regarding the AMA / FAA Subject

By now, we should all realize we are supposed to be "registered" with the FAA in order to fly our model airplanes. The AMA was attempting to work with the FAA to see if the AMA numbering scheme could be either integrated with the FAA plans or eliminated, but nothing was agreed upon before the FAA's advertised registration date of February 19. Registration is easy at www.faa.gov/uas/registration, although if you waited until the last minute like myself, it will cost you five bucks.

As I am a large model inspector, I've tried to do some research regarding the new rules from the FAA - we have several pilots in our district flying models that weigh in excess of the 55 lb limit. For models weighing above 55 pounds, there still remains the need for a safety inspection by an AMA inspector before first flight, which is to be

renewed yearly. Now, it appears there may be an FAA requirement to register the over 55 pound model aircraft (of any power type) as an Unmanned Aircraft (UA) - which requires submitting hardcopy paperwork to the FAA with a small fee (not accessed online), and a more detailed description of the UA. Fortunately, the FAA and AMA have agreed that these models will not require receiving an "N" number. The FAA is supposed to update their website in the near future, and I suspect we'll get notification from the AMA when this is finalized. This information is per the FAA website and per discussion with Ilona Maine from AMA. As I learn additional information, I will pass it on.

Cooling Off

I realized that using my Black and Decker blower to cool down the turbine in my MiG-21 model doesn't work particularly well, due to the short bellmouth-type inlet on the bypass (shown in the last *Contrails*), and not being able to get the blower nozzle to the bypass inlet. It seems an exhaust-type blower might work better, so I built one.

I've seen variations of these used by others - so I'm not breaking new ground here. I'm using a four-inch diameter inline blower (Atwood Turbo 4000) from Amazon.com, a 12 volt 7 amp-hr gel cell battery, a switch, and about a 4-inch length (measured compressed) or so of four-inch diameter dryer hose of flexible aluminum. I assembled a box made of plywood (3/16 ply mostly, with a 1/4 ply floor), and added charging jacks on the side. The box portion measures approximately 7.2"W x 5.2" H x 4.6" D. It made sense to put a nylon strap on it so it can be carried with one hand - plus, I had a bunch of nylon strap material laying around anyway.



View of Cooling Fan showing switch and charge jacks.

JPO Survey of AMA turbine waiver holders

Bob Klenke

This past fall we conducted a survey of AMA turbine waiver holders. The survey was posted on Survey Monkey and ran from September to December of 2015. The questions in the survey covered the JPO organization and its functions, the AMA turbine rules, the JPO *Contrails* magazine, and the JPO website.

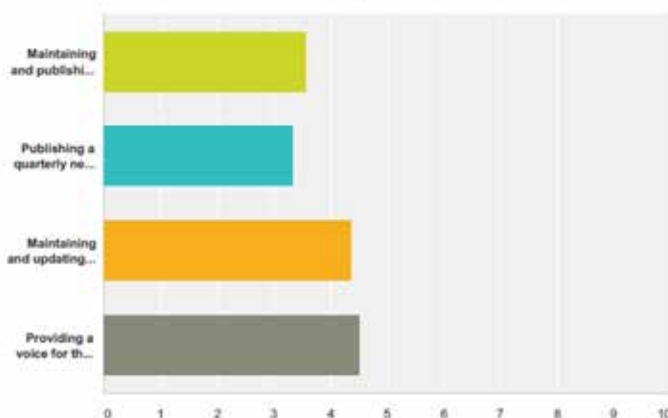
Ilona Main from the AMA helped us send an email to all AMA turbine waiver holders announcing the survey. According to Ilona, this email went out to 1,466 separate email addresses. Of those emails sent, 821 were opened, and we had a total of 219 responses to the survey. These numbers mean that we had a 26% response rate for those who opened the email, and a 15% response rate overall. That may not seem like a lot, but it's actually fairly high and is more than enough for the results to be an accurate representation of the entire group of turbine waiver holders. Overall 56% of the respondents were, or had been, JPO members, and 46% were not, meaning that we got a good picture of the opinions of the jet community outside of the JPO as well.

The first section of the survey covered the mission of the JPO. The respondents were asked to rank the list of missions as required (highest) to not important (lowest). The list of missions included: Maintaining and publishing material on techniques/tools/equipment for jet models (i.e., a "knowledge base"), Publishing a quarterly newsletter for the jet community (i.e., *Contrails*), Maintaining and updating the AMA turbine regulations, and Providing a voice for the jet community within the AMA.

The results (see figure below) show that the majority of the respondents placed the maintenance of the AMA turbine regulations and the AMA liaison functions in the most important required category. The other two missions, the knowledge base and *Contrails*, were placed in the lower very important category, with the knowledge base being placed slightly higher than *Contrails*.

Q2 Please rank the following JPO missions from not important (1) to required (5):

Answered: 219 Skipped: 2

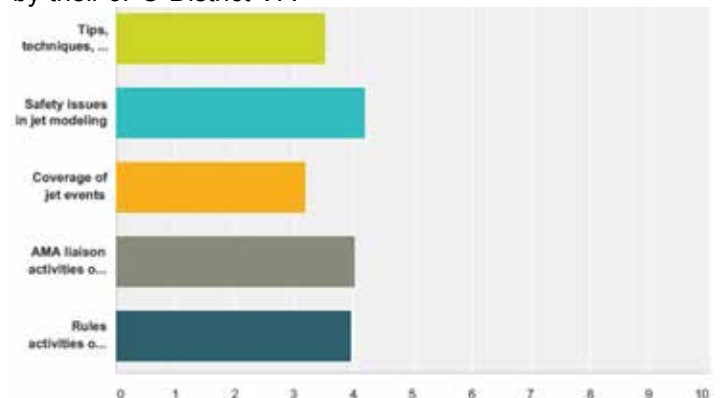


The second question in this section asked for comments on any new issues that the respondents thought that the JPO should address. The majority of respondents indicated that they did not have any at this time. Of those that did suggest new issues to be considered, several mentioned an "education program" for clubs to help turbine flyers convince their clubs to allow turbines (or not to ban them in the future).

The second section of the survey addressed the AMA's turbine rules. Over 80% of respondents indicated that they were very familiar (or more) with the turbine rules. Over 80% also felt that the turbine rules were being adequately kept up-to-date and 70% indicated that there were no rules that needed to be changed at this time. Those who answered yes to the question about the need for new rules were asked to comment on what rules they felt needed to be added or changed. Most of those who responded indicated that they were in favor of increased weight and thrust rules, but a significant portion of those responses talked about the 200-class engines that we did, in fact, just address with a thrust rules change. Several others mentioned the turbine waiver process and attempting to insure that all waiver candidates were competent flyers and operators before they earn their waivers.

The third section of the survey covered the JPO *Contrails* magazine. Almost 70% of the respondents indicated that they had read *Contrails* before. The respondents were asked to rank the list of topics for *Contrails* as required (highest) to not important (lowest). The list of topics included: Tips, techniques, and product reviews for jet modeling. Safety issues in jet modeling. Coverage of jet events. AMA liaison activities of the JPO, and Rules activities of the JPO.

The results (see figure below) show that the majority of the respondents placed safety issues as the most important topic to be covered in *Contrails* with the AMA-related liaison and rules activities of the JPO SIG as next most important topics. Finally, tips, techniques and product reviews for jet modeling scored slightly higher than jet event coverage. Most, almost 78%, were satisfied by the coverage of events by their JPO District VP.



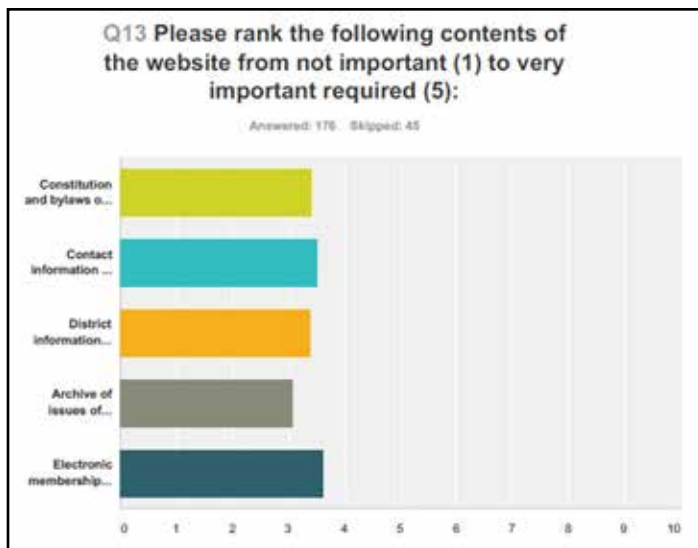
JPO Survey of AMA turbine waiver holders (cont'd)

Bob Klenke

Respondents were asked to comment on specific things they would like to see in *Contrails*. Several mentioned that event coverage could describe more about what aircraft were there and details about them. Product reviews, technical articles, and a "reader's projects" section were also suggested.

The final section of the survey concerned the JPO website. The first question in this section was how familiar the respondents were with the website. Over 57% said that they were not at all familiar or somewhat familiar with the website. Only 16% said that they were very familiar with the website and as expected, not a single respondent said that they use it every day.

Respondents were asked to rate the contents of the website, which included: Constitution and bylaws of the JPO. Contact information for the JPO officers and District VPs. District information posted by the District VP. Archives of issues of *Contrails*, and Electronic membership initiation/renewal and dues payment. As shown below, the largest percentage, 26%, said that the most important content of the website (i.e., rated it as required) was the electronic membership initiation/renewal capability. The contact information for JPO officers and the JPO constitution and bylaws were rated next most important. Information posted by the District VPs rated next to last in important and archives of *Contrails* was rated lowest.



Most written comments on the website mentioned its needing to be updated, and several requested a place for members to post information on jet happenings in their districts.

Conclusions

It appears clear from the responses to the survey that the jet community feels that the most important job for the JPO

is the maintenance of the AMA turbine rules and representing the jet community's interests to the AMA. This is the effort that we have been concentrating on in the past year, so this is good news. Still, there are clearly other tasks that we can work on. It's universally agreed that the JPO website needs modernization and we are working on that as well. We expect to roll out a new website in the next few months before the start of the new flying season.

It's also apparent from the survey that the membership is looking for additional "value added" from the JPO. This could be as simple as a more visible presence of the JPO Officers and District VPs at jet events, to the JPO helping its members evaluate new technologies and products with articles in *Contrails* or on the website in the knowledge base. We appreciate this feedback and are working on a few new initiatives in these areas. One thing to keep in mind though is that we are a volunteer organization and with that comes the reality that the pace of progress may be slower than we'd all like to see, and much of that progress may only be achieved by you saying "yes" when we approach you with a request to help out. Stay tuned...

Bob



District IX Report

Mike Warren



Colorado
Kansas
Nebraska
North Dakota
South Dakota
Wyoming

Greetings from District IX! A lot of the country, and all of Dist IX, are quite obviously in the throes of winter. As I write this, the Colorado weather people are in a tizzy over the incoming "Winter Storm," with anywhere between 6" to 24" of snow possible. Would it not be great to be a weather forecaster? Even if you are way off or flat wrong....you still keep your job!

Needless to say, I'm mostly busy with work, snow shoveling, and walking the dogsI do get occasional shop time to build/repair and time for reflection on the FAA intrusion into our hobby. I have, against my will, registered with the FAA and received my special number. I am happy that JPO has voiced their opinion/objection/suggestions to the powers at AMA and the FAA. Excellent job Bob Klenke.

Nothing to report from the District; and I'm just puttering along with my CGRC A-10, hoping to finally get it ready for maiden when the winter weather recedes. I also have a BVM *Bandit* in line for build if I can get my behind in gear.

My shop is only warmed by a wood stove so I'm on the primitive side of things when it is 5°F outside (ie: no painting, and epoxy cure has to be brought inside the house for the night).

I have sent pictures of the A-10 progress so far. Right now I'm working at getting all 11 weapons pylons installed and looking the part. Mostly happy that the gun came out looking as it should.

A plea: if any District IX readers/members have anything to submit for *Contrails*, please feel free to contact myself or Greg Moore!

Until the next issue,

Mike



The 30mm projectile, shown below, weighs approximately 1 pound, and has about 3200 or 3300 feet/sec muzzle velocity.

The case is aluminum to save weight over an equivalent brass or steel case. Total length is approximately 288mm.

Base diameter: 43mm

Case length: 172mm

Projectile length: 139mm

It is "The world's biggest varmint rifle!"





District X Report

Arizona
California
Guam
Hawaii
Nevada
Utah

David Reynolds

We just finished the Arizona Jet Rally. While somewhat on the breezy side, most of the wind was down the runway this year so it didn't slow the action down much. As usual, it was a good mix of aircraft all playing well with each other, although it was a bit of a more even split between EDFs and Turbines.

Other than the early morning, that was EDF only simply due to sound abatement, the Arizona Jet Rally set up an event where all aircraft can fly without much drama. Most of this happened through open communication between pilots. Basically, the larger EDFs that can keep up with the turbines take to the sky whenever they can. Smaller jets that may have to fly a shorter pattern due to speed or visibility, waited for a hole in the larger action and then took off. If a larger, faster jet pilot lined up to start and saw that lots of smaller jets were in the air, he waited a few minutes before starting.

It was rather elegant in its simplicity, and required little intervention from the event organizers. Everybody got a chance to fly and I didn't hear any complaints from the pilots. If anything, I think one thing we all looked forward to was the 70mm gaggle fly each day. I was too busy flying to count how many 70mm and smaller EDFs launched all at once, but it was a good number. *(ED. NOTE: it was about 20)*

The other thing I noticed this year in abundance were LED afterburners! What started out as a way EDF pilots could add some extra detail, has been embraced by turbines now. One of the particular standouts was John Redman's *Rafale* making passes in the waning hours Friday evening. It was quite a show.

If you want some good videos of the event, be sure to check out **The RC Geek** on YouTube.

That's all I have for this go around, keep the lines of communication open and keep the low passes where they belong.

Dave



Just a few of the edfs in attendance.



Clark Hans' scratch built DeHavilland Arrow attempts to answer the question of: "How low can you go?"



Having been a sponsor every one of the 27 years of the event, Larry Wolfe (R) with son Chris (L) pose with two of their Jet Hangar Hobbies jets. In the center is their long time friend, and noted English modeler, Ted Carroll who brings an international flavor to the event every other year.



Chris Wolfe's Freewing F-14 departs into the crosswind.



A close up of Brian O'Meara's gorgeous F84.



LiL Darling says, "Let's go flying!"





District XI Report

Bob Brusa

Alaska
Idaho
Montana
Oregon
Washington

The district position does not require a lot of work - just four articles a year for *Contrails* (if possible), and there are a few conference calls a 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.

My term as the District XI VP expired at the end of 2015. As 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. This will be my last article for *Contrails*.

It has been a pleasure serving as the Dist XI rep, and I thank everyone who has provided photos, articles, etc. the last few years for me to use.

Bob

Treasurer's Report

January 1 - December 31, 2015

Beginning Balance as of April 1, 2015 \$2,359.09

Income

Dues - Cash/Check	\$1,699.46	
Dues - PayPal	\$3,951.91	
Trophies for JOW	\$68.40	
Total Income		\$5,719.77

Expenses

Trophies	\$1,049.20	
Postage	\$161.54	
Bank Service Fee	\$18.00	
Contrails	\$2,313.53	
Stamps	\$88.20	
Canadian Exchange Fee	\$13.27	
Post Card Renewal	\$159.14	
Web Site	\$89.55	
Envelopes and Labels	\$29.46	
Banners	\$368.86	
Total Expenses		\$4,286.25

Ending Balance as of Aug, 31, 2015 \$3,792.61

Respectfully submitted by Carol Brusa

Account Reconciliation

Checking Account	\$3,702.66	
PayPal Account	\$89.95	
		\$3,792.61



Canada District Report

Jeff Daly

Hi folks. Winter and building season has set in here in Canada ... no doubt about it! Reflecting back over the last flying season, it was a good year of flying and seeing everyone again. I attended First in Flight, Jets over Iroquois, Wingham Jets and ThunderThrust at Chatham-Kent, all enjoyable.

If you haven't been tracking, there has been a decision by the FAA on the requirement for AMA members to register by February 19, 2016 under the UAS Registration Program to avoid federal enforcement and potential penalties. For Canadian pilots who wish to fly their models in the US, registration is also required, however, it is impossible to register online from Canada. So, attending an event in the US after February 19 may be a problem as registration after that date is unknown. The AMA continues to work with the FAA to find a solution. Considering the poor strength of the Canadian dollar these days, I don't think many of us plan to head to the US this year anyway. So, for jet events in Canada, here's an impressive list of what's going for 2016 as known today:

UPCOMING JET EVENTS in CANADA

3-5 June: Princeton Jets Spring Warm-up, Princeton, B.C.
 2 July: Ottawa Valley Jets over Iroquois, Ottawa, ON
 22-24 July: Wingham Jets, Wingham, ON
 5-7 August: Tofield Jet Fun Fly, Tofield, AB
 23-25 September: Princeton Jets Fall Event, Princeton, B.C.
 17-20 September: Thunderthrust over Chatham-Kent, Chatham, ON

In this edition of *Contrails*, I've provided a summary of the ThunderThrust over Chatham-Kent jet event from back in September, and Paul Dries from British Columbia provides a technical article on incorporating an SRS gyro in jets.

For the Canadian pilots out there, don't forget to renew your JPO membership for 2016! Your support is much appreciated.

3rd Annual ThunderThrust Over Chatham Kent Municipal Airport - September 2015

I attended the 3rd annual ThunderThrust jet event from September 17-20, 2015. This was the last scheduled jet event in Ontario for 2015, held at the Chatham-Kent airport. Over 25 pilots attended and brought with them over 50 jets. Event organizer Peter Douppnik pulled off another great event with the perfect runway and social events in the evenings. I was most impressed with Paul Sousa who flew

his *Der Jet Vampire* in the craziest wind storm that arrived after he took off. He patiently waited for the winds to ease up, but that didn't happen, so with impressive flying skills he safely brought the aircraft in without incident. He was rewarded with the JPO Top Gun trophy for his skill and bravery for flying when all other pilots did not. Peter also had a formal dinner and prize presentation at a restaurant on the Saturday night. Thanks Peter for another great event!

Here are some photos from the event, thanks to Ken Park.



Paul Sousa, JPO Top Gun recipient, prepares for flight with his *Der Jet Vampire*.



Peter Ayache's Aviation Design *Diamond* jet---what a rocket!



Ken Parks' electric Freewing *Super Scorpion*.

Canada District Report (cont'd)

Jeff Daly



Blair Howkins' mighty Tomahawk Hawk that had incredible presence in the air.



Some nose art on a real aircraft in the hangar.



Left to right: Mike Warner, Ted "Scooter" Antonopoulos, and Peter Doupnik having a great time.



Flightline shots at Chatham.





There are several options for gyros on the market, including the Bavarian Demon from Cortex, a new product called Aura 8 from Flex Innovations, plus the Powerbox iGyro product. I have purchased an iGyro SRS for the *Tucano* plus an iGyro 3e for an upcoming build on a CARF *Ultra Flash*. The Bavarian Demon gets a lot of good reviews on the forums and the Aura 8 has some powerful features especially considering its \$100 USD price tag.

Bavarian Demon and Aura 8 Gyros.

After reviewing the options, I decided to use the iGyro SRS from Powerbox Systems. The ability to integrate it into the S-bus system, its user programming features and overall performance reputation led me to select this unit. I decided to not use the GPS feature, as the lower top speed of the *Tucano* and my desire to maintain my KISS principle meant this would have to wait for later, until I determined if it was totally necessary.

iGyro SRS plugged in on bench with programming cable.

With the S-bus integration, the iGyro becomes a "node" on the bus plugging into the s-bus port with a male/male extension cable. The ailerons and elevators were already operated by s-bus servos, however, the rudder was not and was using two servos ganged together to meet the torque requirements. Since the iGyro has only one discrete rudder port, I purchased and installed a new single rudder servo with just over 600 In-oz of torque on 6.6v which should be adequate! Since the plane was already set up on S-Bus I was hoping I could just "plug in" to the network and assign channels for the control. While this does work for the input - it will not work for the servo ports, meaning I will have to do some re-wiring. I have a single lead going to the rear of the plane for the two elevators, as well as to the wings. In my case it means adding three extra servo leads as I'll have to run a second elevator lead and separate flap leads.

The SRS iGyro has an on-screen set-up feature which helps guide you thru the process, however, I did purchase the USB interface cable and intend to do the set up there. The tool allows you to do channel mapping, installation orientation, servo direction and other settings. I'll post some actual pictures once I get to that point.

For the next issue, I will have an update on the complete installation, set up and programming, including any issues I come across and how I resolved them. I'm a big believer in keeping things as simple as possible and in some ways the installation of a gyro goes against this principle. The feedback I am getting is the benefits seem to outweigh the potential drawbacks. I also like to draw on other's experience as much as possible, so I'm planning on tapping into some other modellers who have done a similar set up with the Futaba/iGyro combination.

Until next time!

Paul



SRS Gyro Integration Paul Dries, Canada JPO West Rep

As I have been wanting to jump on the gyro bandwagon, I thought that my CARF *Tucano* would be a great place to get started. The *Tucano* airframe is a really stable and reliable platform, however, due to its scale outline and features, it has some interesting coupling - especially where the rudder is involved. While mixes can take a lot of that coupling out, a gyro will help with the minor corrections and give the airframe that more "locked in" feel. After speaking with another *Tucano* pilot who installed a gyro and was really pleased and impressed with the results, I decided to go ahead and do mine. This will not be a "how to" article but more of a "follow me" as I work my way thru the integration and programming issues.

Officers and District Representatives

PRESIDENT

Bob Klenke
11620 Parsons Walk Ct.
Glen Allen, VA 23059
804-901-2666 (C)
rhklenke@gmail.com

VICE PRESIDENT

Jim McEwen
338 E. Larkspur Lane
Tempe, AZ, 85281
602-790-1695
ubereng1@gmail.com

SECRETARY/TREASURER

Carol Brusa
7433 McCormick Woods Dr, SW
Port Orchard, WA 98367
360-874-1517
carolbrusa@live.com

CONTRAILS EDITOR

Greg Moore
790 Royal Crown Lane
Colorado Springs, CO 80906
719-576-3781
jetflyr@comcast.net.

DISTRICT I

Brian Lloyd
184 Long Pond Drive
Dracut, MA 01826
978-979-5128
brianxx2@yahoo.com

DISTRICT II

Len McIntosh
51 Jesse Street
Freeport, NY 11520
516-623-1780 (H)
516-551-1819 (C)
mcintoshl@verizon.net

DISTRICT III

Mark McCracken
180 Blackman Street
Wilkes-Barre, PA 18702
570-825-0713 (H)
jpnepa@hotmail.com

DISTRICT IV

Ron Stahl
12 Bensmill Court
Reisterstown, Md. 21136
410-517-1178 (H)
410-733-3935 (C)
roncstahl@msn.com

DISTRICT V

Daniel Diaz
6470 Buckingham Rd.
Ft Myers, FL 33905
954-993-1337
District5Danny@aol.com

DISTRICT VI

DISTRICT VII

Fredrick "Doc" Gambino
530 Marywood Dr. NE
Grand Rapids, MI 49505-4149
616-363-7390 (H)
616-485-6628 (C)

DISTRICT VIII

Ron Schwarzkopf
10436 Rancho Viejo Way
Crowley, TX 76036
682-208-6455 (C)
ronschwarzkopf@sbcglobal.net

DISTRICT IX

Mike Warren
102 Private Drive
Redstone, CO 81623
970-963-7447 (H)
505-453-2182 (C)
mwarren777@gmail.com

DISTRICT X

David Reynolds
6234 E 31st St.
Tucson AZ 85711
520 790-1076
dsr100@dakotacom.net

DISTRICT XI

CANADA

Jeff Daly
457 Landswood Way
Stittsville, Ont.
K2SOA4
Canada
613-836-7330
dalyfamily4@bell.net

AMA Liaison

Keith Sievers
pilot114@aol.com

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



Greg Moore
790 Royal Crown Lane
Colorado Springs, CO 80906

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Ken Parks caught this *Flash* laying down a nice smoke trail at Thunder Thrust over Chatham.