

Newsletter of the Jet Pilot's Organization

Contrails

Summer 2014

Volume 26, Issue 3



Joe Letourneau captured an A10
Warthog coming over the trees at
Wingham Jets.

Vice President's Report

Jim McEwen



Greetings! I'd like to begin this first column with a heartfelt thank you to Lance Campbell, the previous VP, for all his hard work over the last several years and for his ongoing commitment to the JPO and to our hobby. I've had the good fortune to work with Lance on multiple occasions, primarily with the Jet World Masters where Lance was the CD at Dayton in 2011 and was the US Team Manager in 2013 in Switzerland. In addition to being an outstanding jet modeler, as evidenced by his scratch-built SR-71, Lance is a fine gentleman and friend. I was saddened to hear of him stepping down from the Vice President's position, but certainly understand the time demands of a young family and careers.

It is a tremendous honor to have been appointed by the JPO board to succeed Lance as your VP. This is a time of great change in modeling, particularly in light of the current FAA and AMA situations, and I hope to make a contribution in service of jet modelers across the country.

Here's a little bit about me: I started building and flying models as a child growing up in Canada. My first jet was a K&B 7.5cc Turbax-powered F-20 *Tigershark* in the late 80s. I made the switch to turbines in the mid-90s and, shortly thereafter, moved to the US where the flying season is a considerably greater portion of the year. Most recently, I've focused on scale-jet competition.

OK, on with the column.... First of all, I'd like to comment on the FAA's June 23 release of the Interpretation of the Special Rule for Model Aircraft. This elaborates on how the FAA views model aircraft, operational limitations, and the FAA's enforcement authority. If you haven't read this rule and the AMA's guide to understanding the ruling, please do so as links are provided at the bottom of this column.

The interpretation raises several areas of concern. Previously we'd been required to notify the airport to fly model aircraft within three miles of the airport. Per this interpretation, approval of the airport is now needed to operate model aircraft within five statute miles of an airport. No definition of "airport" is given, so potentially the owner of a rarely-used grass strip could shut down a club. A variety of other limitations are included, including altitude, FPV operation, and manufacturer's reps performing demo or test flights, to name a few. In my opinion, the position the FAA has taken (as evidenced by this interpretation) can have a devastating effect on the hobby. The AMA regards this FAA ruling as "an attempt to circumvent the protection Congress provided for aeromodeling in the FAA Modernization and Reform Act of 2012."

The rulemaking process includes the opportunity for public comment so that the FAA can address concerns raised and make changes to the ruling and the deadline for the public to comment on the FAA document has been extended to Sept 23, 2014. Please take this opportunity to provide feedback.

Secondly, as I write this, we are nearing the end of July and the flying season is well underway. It can get unbearably hot here in Phoenix, so I usually attend several events elsewhere in the country. I had the privilege of competing at Top Gun back in May, Jets Over the Heartland in July, and will be attending Route 66 Jets and the Scalemasters Championships in September.

Frank Tiano does an absolutely tremendous job organizing Top Gun and the quality of the planes and pilots is outstanding. Alas, Mother Nature didn't cooperate this year with rainy days and limited flying, but Top Gun is a social event as well, and it was great to see old friends and make some new friends. The event is absolutely first class in every way. The layout and crowd control plan provides plenty of visibility for the spectators with the opportunity to talk with the pilots, yet keeps the models secure and everyone safe. We were all invited over to Frank's shop one rainy morning and I got some great ideas for installing a paint booth in my shop.



The awesome shop of Frank Tiano.

One of the things that really impressed me was how willing everyone was to help. As a relative newcomer to scale-jet competition, this was my first Top Gun, and I appreciate all the advice and encouragement I received from judges and competitors alike, and I look forward to putting that advice to good use next year. Jets did very well at the event, and several members of the US Jet World Masters 2015 team finished at the top of their classes - particularly David Ribbe who won the prestigious *Mr. Top Gun* title.

Vice President's Report (cont'd)

Jim McEwen



Below are a few pictures from the event of planes that caught my eye. Many thanks to David Hart and Carl I. Layden for the use of their photos here. These guys have talent; they even made my *Rafale* look good (not an easy task).



F-84F built by Phil Noel and flown by Rei Gonzalez. Great presence in the air.



Greg Tracey's F-84 *Thunderjet* at dusk.



Gustavo Campana's *Mirage* with colorful tiger eye scheme.



Mr. Top Gun - Dave Ribbe's scratch-built MiG-15.



Dustin Buescher's F-104 departing for another mission.



My *Rafale* in mid-sequence on a dirty pass.

Vice President's Report (cont'd)

Jim McEwen

This was my first year attending Jets Over the Heartland in Winamac, IN. The facility is gorgeous with grassy areas around the runway, and the pits and spectator area very well maintained; it feels like flying at a major league ballpark with a runway. CD-extraordinaire Tim Redelman really rolled out the red carpet and put on an extremely laid back event with plenty of opportunity for flying, which goes on until about 9pm daily. I saw some pretty spectacular flying of *Sabres*, *Huns*, *Hawks*, a wide assortment of sport jets, and even powered Blanik glider flights by the Mike McConville (twin edf) and Tim Redelman (turbine). Dustin Buescher put in a phenomenal flight with his "bind-n-fly" BVM F-16 that pretty much schooled us all on crosswind landings from either direction. Another highlight for me was a formation flight with Scott Harris and our BVM *Rafales*.

40-50 pilots flew to the event in their full-scale planes and landed at a small airport a couple of miles away from the field. District VI rep: Dave "Goose" Brawley and I were treated to a ride in a gorgeous Cirrus; thanks Chris! If you are looking to attend a great low-stress, high-fun, week-long event at a great facility, put JOH on your list for next year!



Some of the lovely ladies of Horizon Hobby: Noel Huhn, Sherry Saddler, Kim Payne, and the Janet McConville.



CD-extraordinaire Tim Redelman strikes a selfie.



Dustin's F-16 in the foreground and the manicured field in the background.



Comp-ARF *Flash* with a unique and cool paint scheme.

Ron Ballard (Wren Turbines USA) did a phenomenal job with the man-grill and I had the snow cone machine churning out adult beverages which made for some very pleasant evenings of camaraderie. There was plenty of room for on-site camping with many RVs in attendance from as far away as Arizona and California, while a few of the

As I mentioned earlier, the flying season is half over, so now might be a good time to perform some preventative maintenance on your jet to keep everything in top condition and working well. Throughout the years I've heard some great tips in the pits from pilots who never seem to have any problems, and not surprisingly, routine maintenance plays a big part of this. They flush out fuel filters (which tend to get gummed up), inspect their air systems for leaks, and clean/lubricate the retract units, brakes, and quick disconnects. They check for loose items, including control surfaces and they cycle their batteries in order to compare cell voltages to see how their packs are holding up or if they may have a potential problem. Flameouts, gear or brake failures, or dud batteries can ruin an otherwise great day of flying. However, most importantly, remember to have fun with this great hobby.

Regards,
Jim

District I Report

Brian Lloyd



Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

Greetings from New England! As your new District I representative, I thought I would start off with a little history about myself. I have been involved in the hobby since the age of 14 and have flown all types of radio-controlled aircraft including helicopters, propeller airplanes (gas and electric) and of course, jets. I have traveled to jet meets all over the east coast, from Maine to North Carolina. My wonderful wife accompanies me on most trips and she tolerates both the hobby and my antics. You can expect to hear Janet's views of the hobby often in the upcoming articles as she tries to recruit more women to attend the meets.

Here in District I it has been a relatively slow start to the season. It is August and we have only had one jet event so far - at Plum Island Airport in Newburyport, MA. Plum Island was a successful event despite a poor weather report. Friday found a few of us hearty souls huddled under our tents, safe from the torrential rain, however, the weather cleared for a beautiful day of flying on Saturday. Despite a breezy Sunday, the flying continued with gusto. The event attracted over 20 registered pilots for this low-key event at a fantastic location in the beautiful coastal town of Newburyport - we hope to see more of you there next year.

In July we traveled to Highland Jets at Frankfort Highland Airport in Utica, NY where our up and coming ace, Jason Plumer, showed up with a P-60 powered *Starfire*. With only 6-8 flights on the jet, Jason is doing a fantastic job! I was able to resurrect a friend's *BobCat* and had a successful weekend, powering it with a King Tech K-80 and a Demon Cortex gyro.



The subject of this article is going to be the up and coming trend of gyros in jet aircraft. My research into gyros narrowed it down to two choices: the Demon Cortex or the JR-370A. Initially, I purchased two JR-370A's with the intent of installing them in my Yellow Aircraft F-22. Dustin Boucher

of BVM fame has some fantastic videos of the installation and programming of this gyro. Anyone considering an installation should reference these videos.

Further research confirmed that these gyros were not the best choice for the F-22, as the aircraft utilizes elevons along with the ailerons. The 370A would not allow me to use elevons in the gyro feature, so I decided to go with the Demon Cortex gyro. This is a fantastic unit - it has five inputs, is easy to program and allowed me to use elevons, ailerons, elevator, rudder and nose-wheel control. Installation was so straightforward that, even including programming, the total install only took 90 minutes.

Prior to installation of the gyro, when utilizing vectored thrust to perform a tight loop the plane would always drop a wing resulting in a sloppy/unsafe exit. Initial flights with the gyro showed an incredible improvement in its performance. Utilizing 20% gyro gain for high speed flight, the aircraft felt much more stable, and while using 44% for vectored thrust flight, I was able to do much tighter loops with a much cleaner exit and much less tendency to drop a wing. Likewise, landing and takeoff utilizing 50% gyro gain gave me a rock-solid feel. Another benefit to the gyro was when transitioning between flight modes, (i.e. takeoff mode with half-flap, flight-mode or landing-mode with full-flap), the transition between modes was nearly seamless with no tendency for the jet to porpoise. I am continuing to fly and refine the gyro configurations in the jet and will update you in future articles.

I have since assisted others in installing the Demon Cortex in their aircraft. Although often seamless, we have run into a few hiccups along the way. The biggest issue was in an aircraft that I was unaware had amplified servo extensions - and it simply would not work. Once we replaced the extensions, installation went smoothly.

Anyone considering the 370A utilizing CROW feature will have to purchase a gyro for each aileron. Also. if you want to control roll and yaw while utilizing CROW, you will have to purchase an additional gyro for a total of three.

I consider it a great honor to have been selected as District I representative, and look forward to meeting all of you at future events. I can be reached via e-mail at brianxx2@yahoo.com at any time. If you see us at an event, come and say "HI" - we are easy to find - just look for the tent with Rastafarian Banana (if it peaks your interest, I will tell you how the banana came to live in my jet trailer)!

Now, my wife, Janet has a few words for the woman in your life:

Jet-Wife Survival Tips

Having been married to an "aviation enthusiast" for over four years now, I have developed some "jet-wife" survival skills – not the least of which is learning the terminology. Now, it is not important at all to understand what any of this means, because if your husband is anything like mine he will not even notice that you don't know what you are talking about. By learning a few key words, you can appear to be interested in nearly any conversation!

My husband talks about his hobby, A LOT. Every day, I hear about issues he has while working on his jets. His friends call day and night with "jet emergencies" and they all brainstorm to find the solutions and Brian tells me all of these stories as well. Over the years I have learned the lingo, and I can now interject with certain terms (having no idea what anything means) – "Wow, maybe a little more elevator could fix the problem," or "sounds like it could be the aileron!" While Brian most certainly knows that my knowledge is false and that my interest is limited, it works for us ... and that is what is important!

Blue skies.

Brian





District II Report

Len McIntosh

New Jersey
New York
Europe

Highland Jets Report

By Art Arro, CD

The Mohawk Valley RC Modelers (aka: MV Firebirds) hosted the 2014 Highland Jets event July 18-20 at the Frankfort-Highland Airport in Central NY (CNY). This was the second edition of an AMA-sanctioned jet event held at the airport, which also serves as the club's home field. The event objective was to provide a superb venue to showcase model jets to fellow club members and the spectator public alike.

Eighteen pilots from five northeastern states attended the event, flying 28 scale- and sport-jets powered by both turbines and edf. These types were flown during all three days of the event, with 19 turbine sport-jets being the predominant type followed by 5 scale turbine-powered and 4 edfs. Several outstanding scale-jets flew, including 2 F4 *Phantoms* (Skymaster), an F15C *Eagle*, (Yellow Aircraft), an F-16 *Falcon* (Skymaster) and a CT-114 *Tutor* (C-ARF). The *Tutor* featured scale-lights and smoke, which were used effectively by Jeff Lynds during his scale flight routines. Sport jets included several BVM *BobCats*, *KingCats*, and *Bandits*; *Boomerangs*, Yellow Aircraft *Starfire*, C-ARF *Flash/Ultra Flash*, BTE/PST *Reactions*, TBM *Shokjet* and an original design *Jet Blast*. An e-conversion of the Byron F-16 and several *Habu*-32s comprised the edf contingent. Quite a variety of model jets were flown at the event.

The weather conditions were "delightful" all three days with 70-degree temperatures, light breezes and mostly

sunny skies with only a brief sprinkle dampening things for awhile around noon on Sunday.

The three flight stations were in continual use for 20 hours of open jet flying during the event. Overnight secure model storage was offered at the airport and was appreciated by the pilots.

The MV Firebirds host club treated the pilots to a Pizza Party at the airport site Friday evening complemented by antipasto salad, dessert and wine washdowns. A Saturday night dinner party was held at a nearby BBQ restaurant with many attendees.

The proposed scale-jet flight judging trial was voted down at the first pilots' meeting, and the JPO Top Gun award was determined by a Pilot's Choice Ballot. The winner was Jeff Lynds, from Columbia, CT with his immaculate CT-114 *Tutor* in the Canadian Snowbirds scheme and his Yellow F-15 *Eagle*. The F-15 was built from a kit, not an arf, and Jeff flew both jets very realistically multiple times during the event.

Many members from local R/C clubs as well as the general public attended as spectators and marveled at the discipline and precision of the jet flying at Highland Jets, including coverage on a local TV news broadcast.

We achieved our objective in demonstrating model jets to the spectator public and providing a venue for safe jet flying in CNY.

Over a dozen hobby vendors donated gift certificates and merchandise to the event which were distributed directly to the pilots at the time of registration. This was most appreciated and added to the success of the event. We sincerely thank all of the donors.

Art

Treasurer's Report

Beginning Balance as of Apr 1, 2014	\$3,515.56
Income	
Dues - Cash/Check	\$848.40
Dues - PayPal	\$838.70
Tee shirt sales	\$ 21.06
Total Income	\$1,708.16
Expenses	
Dues refund	\$12.50 (Overpayment)
Envelopes	\$9.17
Stamps	\$14.70
Postage	\$73.66
Conrails	\$695.11
Post Card reminders	\$138.68
Total Expenses	\$943.82
Ending Balance as of Jun 30, 2014	\$4,279.90

Respectfully submitted: Carol Brusa, Treasurer.



District III Report

Mark McCracken

Ohio
Pennsylvania
West Virginia

Power! I need more Power! Seems we are all looking for power. We borrow it, lend it, we use it, we need it. And what do we need the power for? Chargers, lights, tools, fans and anything else we need electricity for.

I will share my little adventure about my search for the right power inverter that will fit my needs, as well as most everyone else's.

Yes, I will agree, Honda is tops in the field of power inverters, with Yamaha holding a close second. As my search continued, I was a little set back at the cost of a new Honda or Yamaha, as it was a little out of my reach and just could not see spending the money, not that I am a cheapskate or anything, but I knew there had to be another option! I do have a Craftsman 5000 generator, but with the stock mufflers, it is too loud to use at the field, never mind a jet rally!

Over a period of 6 months, I must have looked at 12-15 different power inverters and generators. Some were from friends, as well as job sites and at the last jet rally I went to.

Generac, Hyundai, Honeywell, Powerhouse and ETQ were some of the popular brands I researched and found they worked fine, but the "quiet" level was not close to the Honda or Yamaha I was hoping for.

I then checked all the big-box stores to research what might be available, although I stayed away from Amazon and Ebay. I avoided them as I was not able to get a first hand look and check them out personally. Lowes had them as well as Sears and Home Depot.

After I was satisfied with my research, I headed to Home Depot and purchased a Ryobi 2200 gasoline-powered Digital Inverter Generator. I headed for the garden section where they were stored, placed one in my cart and I checked out. After 20 minutes and \$599.00 plus tax, I was on my way home.

After I opened my shop, I placed the generator box on my work table and proceeded to open it. Although the box was beat up a bit, (it came that way from Home Depot), everything was packed nicely and there was not a single scratch. I read through the directions **first** and it was very easy to get started.

First, I had to add the oil that was supplied with the generator to the crankcase, then I filled the fuel tank with regular gas from my gas can. I followed the starting directions, and after about eight pulls I got nervous, as it did not start - however, after only two more pulls, to my immense relief, it started. I assume it took that many pulls as the carb was dry.

Since the first start, it does start on the first or second pull every time. Slide the lever to the choke position and pull, once it starts, slide the lever to run. It really is that easy.

When it started, I let it run for a few seconds and then switched the slider control from the choke to the run position. I was surprised at how quiet it was! Is it as quiet as a Honda? NO ... but very close. Standing right next to it, you can have a normal conversation and not have to talk over it. If you leave the Ryobi generator by your trailer like most of us do, you will not hear her run.

Now for the "CONS." I only have about 2 hours run time on it and no CONS as of yet.

As for the "PROS," there are many. First, it is easy to start. Next, you can pull out a handle and transport it on the rear wheels with ease, and two handles on top make for an easy lift or carry. It has dual 110V outlets, and here is a great feature: a Dean's Connector for 12-volt use so we can plug our chargers in and use them. It is parallel-kit-capable and has a two-position switch for idle.

I found with the two-position switch you need to have it on high idle to run our 12V chargers while charging our LiPo batteries.

Here is a link I have found that will give you the price comparison of about 75 different generators and power inverters: <http://tinyurl.com/p2ufeh3>

The bottom line here is that if you want to save a few dollars on a new inverter, look into the Ryobi Digital Power Inverter at \$599.00. Here is another option - two days after I purchased mine, I was back in the garden section of Home Depot and I noticed off to the side two display models at \$299.00 each, which I had missed on my first visit. Although they had a few scratches, they had little to no time on them. If you would like to see it run, see me at a jet rally and come use it.

See you at the field!

Mark

District V Report

Danny Diaz



Alabama
Florida
Georgia
Mississippi
Puerto Rico
South Carolina
Tennessee
US Virgin Islands

Hello fellow jet pilots!

This is my first article and am excited about having joined JPO! The organization will be going through a lot of changes and I am excited about the possibilities!

A few of you already know me, but for those who don't, I am Danny "Skunkwerkz" Diaz, and I have been flying R/C since I was a child. Building for my dad and brother was my introduction to the hobby, as they were not happy about putting together kits. I loved building and eventually flying.

I have an almost 3 year old little boy and another on the way! I am a commercial helicopter pilot and my wife is a refractive surgeon (Lasik). We just relocated permanently to Ft. Myers, FL where we plan to raise our family and become part of the practice she has joined!

I have run through the whole gamut of R/C but have concentrated on flying large 3D planes and jets for the last 10 years. I started flying jets with the crew from Markham Park and pride myself in saying that I learned to fly jets with friends like Pablo Fernandez, Boli Muentes, and the late Johny Hernandez to verbally "Gong" me when I screwed up a landing!



I have recently joined JR Americas - "Team JR," and have also joined Chief Aircraft as their Jet Tech as they are in the process of adding to their expansive product line, jets and their related components. Chief Aircraft and their amazing crew, including Owner Dana Blix and son Bret are going to

stock a large inventory of Skymaster products as well as several other jet manufacturers. They look to further increase their jet side of the hobby by creating knowledge and availability, not only for experienced pilots, but to new and upcoming jet pilots as well.



Dana Blix and myself discussing start up procedures!

Being the District V VP is exciting because our district offers some of the most amazing events, and is the home to many tremendous pilots and great businesses that make our side of the hobby what it is today. As I mentioned before, District V hosts some of the best events nationwide and will be a blast to cover for the year. Some of these events are Florida Jets, Top Gun, the new Red Flag hosted by Frank Tiano and the massive Joe Nall.

While attending Joe Nall, I could not help but notice that the presence of R/C jets grows every year. This year a couple of Tomahawk L-39s flown by Team Horizon's pilots put on a great and spectacular show for the crowd. Also, team Red Bull put on an awesome show with their MB-339s!



A few other pilots were demonstrating their jet abilities, like Steven Hoyt, who wowed the 3D Line by hovering his J10 over the pond, and I was able to fly both my F18 and *Viperjet* at Joe Nall. There were several *Futuras* there, with one being flown by my friend and fellow Team JR Pilot Matt Balazs (I hope I spelled that right Matt!). We are looking to continue to increase the presence of jets at the event.



The next event I attended was Kentucky Jets. Now I will not delve too much into detail as it is not my district but I had an awesome time! Being that it is the largest R/C jet event in the country, there was a TON of action! I have included a couple pictures, below.



I had a blast at JOK, and then to top it off, I was proud to win the "Kramer Award of Excellence" for my Skymaster ViperJet. I wish to thank Mr. Kramer and the awesome Lewis Patton for an amazing event!

In following articles, I plan to show some builds from the "Skunkwerkz" shop, add some tips and tricks on paint and finishing, and most of all, coverage of the greatest shows in District V! Also, please keep an eye out for new events sponsored by JPO. Aerobic-type events are being planned as soon as next year, where pilots may register to fly their jets in IMAAC/FAI-type aerobatics, while being judged and graded by experienced pilots. It's going to be exciting!

Have fun flying, guys!

Danny



District VIII Report

Ron Schwarzkopf

Arkansas
Louisiana
New Mexico
Oklahoma
Texas

Hello again from District VIII. I have finally gotten my shop to, at a minimum, "working status," so I can now get back to building and maintaining my little jet squadron. I have also gotten back to flying a little bit outside of the usual jet events for practice - which is really what I've needed lately. I hope you've been able to burn some Jet-A. If not, I hope you've been working on *the* airplane that needs finishing!

MiG-21 Project

I've finally gotten back to working on my Fei Bao MiG-21 kit - it had been tucked away in a corner during a house move, and I had no time to even look at it until now. The Flite Metal is all on, though I'm not sure what the best method is for attaching this material - if one should sand smooth the surface first, then attach to model, or sand after attached ... so I decided to sand afterward, thinking this way any thickness deviations in the adhesive will be levelled after the metal is down. Others claim working the metal surface first before attaching allows the metal foil to become more flexible.... Ah, choices!



Well, it's too late for me to experiment now! I'm currently working all the fastener/rivet rows. It is fun but gets a bit tedious after a while. I think the main thing is to get comfortable, try to do panels symmetrically (ie, LH upper-wing panel, then RH upper-wing panel, etc), and stop before your eyes start bugging out! I'm using various diameter brass and aluminum tubes that have been "sunk" into small wooden dowels to make holding them easier. The Flite Metal takes the impression from the brass tubing very nicely, and later one can highlight them with various weathering methods. I hope I can keep the momentum up on this model, as I am back to having fun on it.

Mid-May was time to head east to Gus Hudson's event in Mt Pleasant, TX with about 25 pilots attending over the three-day event. The field had been rained on a day or two before the event, but I heard that club members had worked hard to dry out the runway and drain the standing water from the pit areas before the event - thanks! Gus had also arranged for some pretty nice raffle prizes from KingTech turbines - including a K-80. I had fun, (though I didn't win the turbine!) but hope to be there again next year.



David Elizondo taxis his T38 as he gets buzzed by a Hawk.



A pair of Me262s soak up the sun.



David Elizondo came to burn both kerosene and electrons.

I always like looking at projects people have started on their own, and at this event a couple attendees brought the start of a fuselage plug for an A-6 *Intruder*. This project is being worked by Elmer Harris and Ray Thompson in the DFW area. I think their main push is to design it around an electric ducted-fan system, but I'm sure a turbine version could be addressed. Since the plug has made it outside to the light of day, that can only mean they're serious on completing it. Best of luck to them - we'll be waiting to see it in final form!



"Hotter 'n Hell" Jet Fly
Houston, TX

There is no better place to fly model jets in hot and humid June, than at Bomber Field in the Houston area. CD Bob Brubaker convinced several flyers this was true, and as a result about 38 flyers showed up to see if he was right! Unfortunately, I had a work-related trip conflict, and could not make the event, but Jimmy Smith provided pics for this event. Thanks to the Bomber Field club for bringing these events to our District VIII calendar - I hope to make their next event later this year.



A Boomerang *Sprint* does a nice flyby.



Quentin Hinds *Ultra Flash* settles in for a landing.



Scott Shannon painted his *BobCat* as an Angry Bird!

Future Jet Events

October 3-5: T-38 Jet Rally, Lubbock TX, John Johnson CD

October 16-18: Jetoberfest 2014, Houston TX, Bob Brubaker CD

Happy Landings!

Ron



District IX Report

Mike Warren

Colorado
Kansas
Nebraska
North Dakota
South Dakota
Wyoming

Hi guys, meet your new District IX rep. My good friend, Greg Moore, encouraged me (at Novocain needle point) to volunteer for the spot. I certainly look forward to promoting the JPO and the R/C jet aspect of our hobby.

As I write this, it is the 3rd week of July with Greg's deadline fast approaching. Our Colorado hot weather is now here, which brings me to the main thought of my musings for this article: performance in hot weather with high-density altitude conditions. Those of us living in places where our flying fields are often a mile or more above sea level have to consider, not just the impact on the flight characteristics of our models, but the performance reductions of our chosen power systems, whether kero-burning turbine or electric ducted-fan. I will not consider nitro ducted-fans here, that is a REALLY retro niche activity, especially up in Denver!

If you bring a model from sea-level up to Denver, it can seem to have become an under-powered dog, but looks like it is moving smokin' fast on final approach. By the same token, a model optimized for Colorado, Albuquerque, Salt Lake City, Bozeman, Missoula and the like can essentially be overpowered if we attend an event at lower altitude locations. In Colorado, we can expect approximately an 18% to 20% reduction in thrust/power compared to setups tested and proven at sea-level. So the choice of which turbine or edf for our jet model is sometimes not as straightforward as simply following the manufacturer's recommendation for power systems.

To me, turbine guys seem to have fewer issues here because of the ease of simply choosing a larger thrust engine to begin with, which compensates for the conditions, since there is nothing like cubic inches under the hood! If the manufacturer calls for a 100 - 120N engine you just drop in a similar case-sized 140 and you are done. When/if you take the model to lower altitude events, it can be as easy as merely letting the turbine learn the ambient conditions and then using throttle management.

Electric ducted-fans are not quite as straightforward because there is very little (or no) manufacturer data available for guys that fly edf at higher altitudes. How does one recover that 18% to 20% so that his model has power and performance equal to the same model at sea level? The quick and dirty answer(s) is to: a) add a cell or two to the battery count, b) get a higher kV motor, or c) both. Once

you get the watts and Amps back to advertised numbers (you DO have a watt meter right?), then you are in business. There are online calculators to get one in the ballpark for choices of battery or motor, and you can usually contact the manufacturer or rep to ask their advice as well.

Now if you have gone with a "plug & play" system from a major manufacturer, you may need to consider an entire system upgrade and possibly a higher cell count than the "standard battery" - providing that your esc is up to it, but it can be done.

For edf enthusiasts the real fun starts if you take your model from Denver to Mesa, Waco, Muncie, or say BITW where all of a sudden you wind up with way more power than you had at home. So what's the problem you ask ... well, if you were near the max limits of your setup at home, how about over Amping, over temping, cooking the motor or esc, & puffing the batteries? Yikes!

The solution is to use a wattmeter or clamp type Amp-meter to test your setup before you fly; and then, if necessary, expect to use judicious throttle management, a throttle limit switch, or lower your battery's cell count. As usual with partial throttle, you need to plan for the esc to run hotter, especially if you are near the limits because the typical esc generates lots of waste heat at partial throttle settings, which is why good cooling is essential.

I just thought of one more point for the electric flyers; not all watt meters are good for very high Amps. Most hobby wattmeters are advertised as accurate up to only 85 Amps or so (entirely sufficient for foamie edfs) and often come with only 12ga wire, while the typical 12s LiPo system on a high-power edf can easily pull 110-120 Amps or more. Even the data logging escs on the market aren't accurate enough all the time, so this is where a high Amp wattmeter or a good clamp-type Amp-meter is invaluable. When you have invested in something like a full-on BVM E-Bandit, it is no time to go cheap on a watt/Amp meter!

Speaking of Amps and volts; There are "those that have and those that will" when it comes to goofing and either shorting a battery or becoming part of the circuit when connecting batteries. Especially when you get into higher power 10s, 12s, or 14s systems, a mistake can really ruin your day with vaporized connectors and, usually 3rd degree burns - I know Fortunately the industry-accepted max of 14s LiPo, which is less than 60 volts won't kill you. Just as when prepping your turbine for flight and startup, ask for (require) uninterrupted concentration when you are dealing with your high-power edf battery management.

As a closing I will mention that I was able to attend the "EDF Jet Jam" at AMA in Muncie this last May. While there was not a huge turnout of large high-power edf jets, it was

District IX Report (cont'd)

Mike Warren

a great event, and once the winds settled down, there was good flying to be had. A couple of BVM *Bandits*, a BVM *Electra*, my old BVM *Maverick* upgraded with a Schübeler DS-77HST, a BVM F-86 and Mig-15, two Airworld Me-262s, a Byron F-16 and even an edf-modified CARF *Flash* rounded out the larger models. I don't have a picture, but the *Flash* with a Schübeler "DS-77HST" 120mm fan flown by Colton Clark of GA had every bit the show performance of Rico Menke's BVM *E-Bandit*, though a bit slower, and limited in flight times due to its smallish capacity 5000mAh batteries. Who would have thought?

Enjoy the photos and see you on the flight line!

Mike



Mike's Airworld Me 262 (rear) formates on his flight lead in a nice tight formation.



A pair of E-Bandits were present in Muncie.



Rico Menke came from Austria to show the fantastic flight qualities of his BVM E-Bandit.



Chris True came from Maryland with his BVM F-86.



Mike poses with his many years-old *Maverick*.



Dan Eaton caught Mike's Airworld Me-262 just as it rotates.



District X Report

David Reynolds

Arizona
California
Guam
Hawaii
Nevada
Utah

Buying a used jet.

We've all seen them hanging out at every jet rally; used jets sitting off in some corner of the pits with a for sale sign taped to them. Some are turnkey, some are still virgins in a box, and others are somewhere inbetween. It is easy to be sucked in to the idea of a bargain, but take a moment to think about it before hitting the ATM.

Buying a used kit seems straight forward since nothing has been done to it so you can make sure it's done right, right? Hang on a moment - how sure are you that nothing has been done yet? Did the previous owner glue in the formers; and if so how much and what kind of glue did he use? How about documentation? A lot of kits have manuals available on-line, but not all of them, and searching for the balance point for jet "X" online can be frustrating. Also, don't forget to make sure nothing is missing!

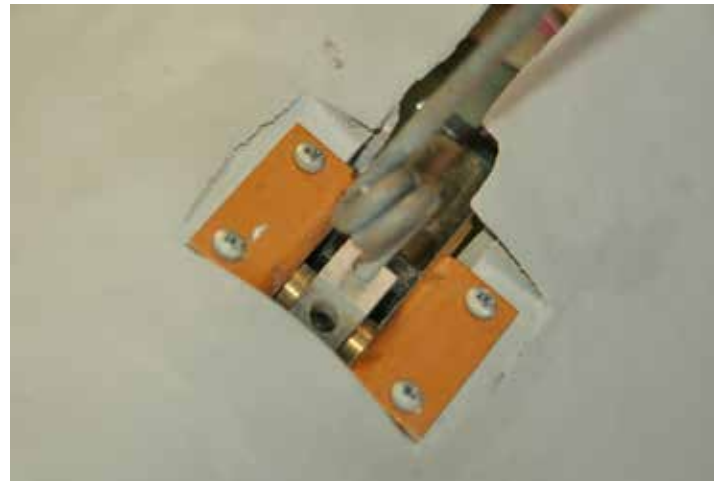


A used jet can give you some interesting questions, such as what is this threaded rod for?

When buying a completed airframe it helps to have a check list of things to go over, like below.

Basic airframe.

What is the overall condition? Do you see any cracks or any other indicators of high stress? An area of mismatched paint could be from a repair. If the repair was done properly you are good to go, but it may be a deal breaker. Lots of hanger rash could be an indicator of a hard life without much maintenance. Has any fuel leaked and soaked into the airframe?



These cracks are not an issue but others might be.

Landing gear.

Landing gear are most likely the most abused component on any aircraft as even the best of us miss an approach from time to time, so how do the mounts look? Grab a hold of each leg and give it a wiggle and a twist. A lot of slop is going to be a maintenance problem and that gear could possibly hang up when you need the gear to come down and if you can twist the gear be ready from some interesting take-off attempts. How is the steering gear? If it uses a pull-pull cable system how much slack is in the cables and how easy will it be to adjust it? If the jet in question has landing gear doors, be sure to check the operation of the doors and make sure they don't hang up. If it uses a pneumatic system take the time to air it up and let it sit to check for leaks.



Steering gear can be a constant headache.

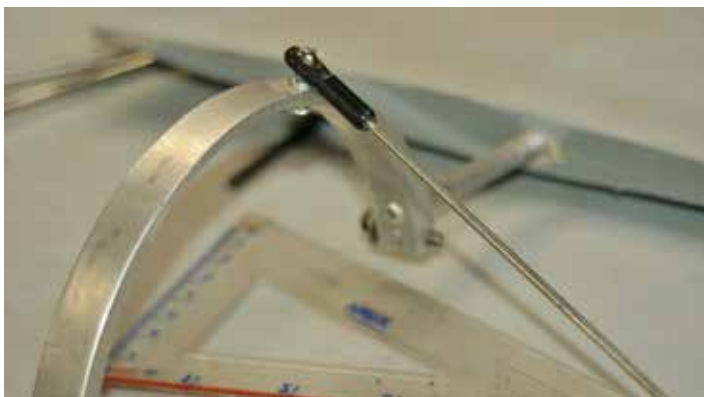
Controls.

Don't be too shy to test the obvious and check how much slop is in a control linkage and give each surface a tug to see if the hinges are secure. Are the pushrods and servos up to the job? There was a time when a 2-56 pushrod was perfectly acceptable, not so much today. If the system uses

District X Report (cont'd)

David Reynolds

ball links, take a moment to check their condition and range-of-motion as ball links can only go so far before they come apart.



This may look good and it is a 4-40 rod, but it was adjusted about 1/4 inch too short, throwing off the geometry.

Gently move each surface through its range of motion checking for damaged gears on the servo. Be extra careful with this! Better yet, power up the radio and check the servos, but don't just give it a wiggle-wiggle and call it a day. Move each control slowly and methodically, listening for any clicking that may indicate broken gears or sticking points. If you can, take a look at how the servos are attached to the airframe. The best servo in the world does no good if it is held in with bubble gum.



Even with the bend in the push rod, this servo doesn't look bad, until you wiggle it and the entire base moves due to the glue joint failing.

Interior.

Taking a look at how everything is laid out inside a jet can tell you a lot about how it was maintained. A meticulously laid-out control system shows a person's attention to detail and a craftsman that takes the time to tie wiring down and make a clean installation is more likely to keep on top of maintenance. Another advantage to a clean installation is that it also makes it easier to see when something needs

attention. If the wiring looks like a rat's nest, it is going to be harder to repair.



How the wiring is routed can be an issue. This wire was routed in a way that pinched it against the hatch pushing the hatch out and possibly creating a failure in the future.

None of these issues is necessarily a deal breaker and it is ultimately up to you to decide if a used jet is worth the asking price. Just be careful, take your time, check your emotions at the door and check everything over - both inside and out - and it is possible that a used jet will give many enjoyable flights.



The only way you can check the fit and security of formers and elevator mounts is to actually grab them and wiggle. I wonder if this is how a proctologist feels?

If you have any tips of your own, (evaluating a used turbine for example), please send them to me and I will share them on the JPO District X Facebook page, and in the next issue of *Contrails*.

Until next time, keep the low passes where they belong.

Dave

District XI Report

Bob Brusa



Alaska
Idaho
Montana
Oregon
Washington

This past May, Princeton, BC held its spring event in Princeton, Canada, and it was a great event. Princeton holds two events a year, one in the spring and one in the fall. I have two pictures, one of Paul Dries with his turbo-prop *Tucano* (below) and one of Sal Schenato and his T33 (at right). Both are beautiful flying aircraft.



We welcome another new turbine waiver pilot to the fold - Dave Davis from the greater Portland, OR area. We hope to see him at JOW.

The big event for the year in the Pacific Northwest is Jets



Over Whidbey (JOW) held from August 22-24 on Whidbey Island, WA and this year will be the 24th year for this event. Go to jetsoverwhidbey.com to find out more info on this event.

Princeton Jets (fall edition) in Princeton, BC, Canada, is always a fun event. It will be held from September 18-21 and is a four-day event. There is always a Friday night BBQ that is fun for all.

If there is anyone who has not yet renewed their dues for 2014, I would urge you to do so. Dues are still \$25, and can be paid via the JPO website (www.jetpilots.org) or to Carol by check. You'll find her address inside the back cover. Also, any new members you may be able to recruit will receive a free JPO T-shirt while the supply lasts. Dues for new members during the 3rd quarter are only \$12.50.

Hope to see many of you at JOW and Princeton!

Bob

Canada District Report (cont'd)

Jeff Daly





Canada District Report

Jeff Daly

Hello Canada! What a change in weather this year! I participated at both Kentucky and Wingham Jets and the weather was A+. I also stopped in to see some electric jet action at Fan-Fair in Ottawa, which was another top-notch event with good weather. I also squeezed in a scale competition as a participant and started a new job...busy, but fun!

For this edition, I have a couple of event reports. One is on the Fan-Fair event at Ottawa and the other is Wingham jets at Wingham, Ontario; one of Canada's largest events. I do not have a technical report this time, but for the next issue I plan to show how you can calculate the turning Gs that your aircraft experiences, from a GPS download. More to follow on that after I get more flight data from my *Super Bandit*. Thanks, too, for renewing your JPO membership for 2014!

FAN-FAIR 2014, Rideau Flyers, Ottawa by Ken Park, CD

For the last few years the Rideau Flyers of Ottawa has been hosting the biggest bad-to-the-bone electric ducted-fan (edf) jet event sanctioned by MAAC. This year's event was blessed with wonderful weather and great people who were having the times of their lives. We had 19 registered pilots who traveled in from Montreal, and as far south as the Greater Toronto Area; and this year the pilots got a real treat with the arrival from Ohio of award winning AMA and Top Gun Champ Terry Nitsch, who was representing E-Jets International and BVM jets. Terry put on many amazing demonstration flights with his very big (1:5.8 scale) EVF-12S, 68-inch wingspan, BVM MIG 15. The MIG featured speed brakes and functional drop-tanks and Terry put the plane through his competition routine doing all the manoeuvres he would do for the judges. Like most big jet events, when you have a true star on hand, you will see the guest tirelessly helping the novice guys getting things adjusted, making great suggestions on your flying skills, and/or how your radio could be better tweaked so your model flies better.

FAN-FAIR had something for everyone. We started off by featuring a Mass-Foamy-Launch, with 6-8 of the smaller foam jets swirling about all at the same time like a bunch of angry bees which is always a favourite with the many spectators. Additionally, the lunch time foamy fun-fly games made it interesting with a climb-&-glide, spot-landing and limbo-contest which had many cheering from the sidelines. John Weeks won this contest and had first crack at the sponsorship prize table for his efforts. The club is blessed with a 380-foot-long paved runway and it was noted that jet

jocks almost always land long. To encourage the pilots to try harder, a new white line was drawn at the 60-foot mark, and the pilot who managed to land just short of this mark would win the *Past Presidents Cup* provided by Lou MacDonald. JC Terrettaz was up for the challenge and won the cup. With the help of Team Great Hobbies we had 3 prizes: "*The Pilots Choice Award*" - won by Terry Nitsch for his BVM MIG 15; "*The Need for Speed Award*" - won by Michel Levictoire; and "*The Hardest Landing Award*" - won by Mohammed Sheikh. The awards were laser etched with both the FAN-FAIR and Team Great Hobbies logos, and we filled the mugs with Jelly-Beans because that is the politically correct thing to do.

This event was technically just a one-day event but since so many traveled from afar, we encouraged the pilots to arrive on Friday - the setup, fly, practice and get-any-testing-done day. Friday evening was also used to socialize with a meet & greet at a local restaurant called the "Twisted Lizard" in Ottawa. The post-event meal was held at a nice English Pub called "The Swan on the Rideau" that was only five minutes drive from the field, which worked well for a bunch of tired, sunburnt pilots and family members. The pilots were also encouraged to drop by for that last flight on Sunday before they hit the road for the long ride back home.

Guys of special note who helped make this event a success were Colin Geisel of North Star Laser and Vinyl Cutters, who provided us with a great logo banner and stickers that went down well with all the pilots. John Dutkoski of "Models by John"...who has for many years been our biggest sponsor, but he was sadly missed this year at our field. However, John didn't disappoint us and sent us boxes of goodies for the prize table. Both these guys went the extra mile helping us pull this event together. Thanks! I also want to thank all the members of my club, the Rideau Flyers, who helped and hosted FAN-FAIR.

What does my current situation hold for me concerning a turbine? Well, edf jets are working just fine! I simply will not be buying a turbine anytime soon, as it's not done very much locally and pilots still can't just show up at any MAAC-sanctioned event to fly a turbine. So there will always be a need for FAN-FAIR! If this sounds like fun, please join us next year for FAN-FAIR 2015.

Thanks go to our sponsors: Colin Guisel of North Star Laser and Vinyl Cutters in Angus, Ont; Fred Zufelt of Fred Z Dynamic Hobbies in Ottawa, Ont; Dave Rees from Team Great Hobbies in Ottawa, Ont; Hobby 2000 in Gatineau, Que; Shubuler Fans from Germany; Terry Nitsch representing E-Jets International from Ohio, USA as well as BVM Jets in Florida, USA.

Larry Ingram has provided us with a large number of photos from the event - and are posted on the next page; please enjoy them!

Ken

Canada District Report (cont'd)

Jeff Daly



Canada District Report (cont'd)

Jeff Daly

Wingham Jets; Wingham, Ontario by Jeff Daly

From July 25-27, I attended the 6th annual Wingham Jets at Wingham, Ontario which is located approximately two hours north-west of Toronto. The facility is superb with a 4000 x 75 foot runway with a large taxi ramp for the pilots to set up on. On-site RV camping, hangar storage, FBO access, jet fuel, and the local pub well-rounded out the amenities for the event. The event CD and organizer was Blair Howkins, who did a great job with the help of his family and the local members of the Wingham Jet Club. Fifty-six pilots were in attendance with 150 jets. Once again, we were pleased that Ali Machinchy from England could attend, who, without hesitation, rung-out numerous jets and answered many questions.

The event was laid back with lots of new (and big) jets, plus many new pilots out this year. There really were some nice jets and fantastic piloting! The weather was fantastic with tornadic winds keeping to the south, near Toronto. A noon-time show on Saturday for the spectators was most enjoyable; Ali demo'd Chuck Storrie's turbine glider, a Tomahawk *Viperjet*, a hot-rod *Flash*, and Doug Boyle's Skymaster A-10. I much enjoyed the flight by Sandro Novelli and his Skymaster "Playboy" F-14, especially the low passes with the wings swept back. Ali also took out a bunch of noseweight in Mike Block's Skymaster F-4 and rung it out with a very scale flight performance.

Overall, 25 cases of kerosene were sold, not to mention that Tamara sold 500 hamburgers and 200 hot dogs! Needless to say, a great time was had by all.

Saturday night, a banquet was held with catered food that was included in the pilot registration, and the JPO Top Gun trophy was awarded to Ted Antonopoulos. Other award winners were Sandro Novelli for Best Military jet (Skymaster F-14), Blair Howkins for Best Civilian jet (Tomahawk *Viperjet*), Jean-Claude Terrettaz for Best Electric jet (BVM *Electra*), Jeff Daly for Pilot's Choice (BVM *Super Bandit*), RC Pete, aka Peter Harasiewicz, for Best Sport jet (Tomahawk *Futura*) and the Wingham Jets Top Gun award went to Ali Machinchy for his amazing shock-and-awe flying all weekend.

Blair Howkins, event CD, would like to thank all the volunteers for making Wingham Jets 2014 a success and to all the participants for coming and adding to the flying, socializing, and good camaraderie, and in particular thanks to Ali Machinchy for his tireless heart and soul effort put into flying & providing expert advice. Thanks also go to the sponsors who were very generous: Horizon Hobby, Altecure RC, Atwork Office Furniture, Hobby Hobby, Big Boys with Cool Toys, Great Hobbies, Jet North, JPO, MAAC, Skyharbour RC Modellers, and Canadian Tire.

I highly recommend this event next year for all in central Canada, the northeast and northcentral US! Please note it in your calendars for next year.

I have several groups of photos - the first being by me:



Sandro Novelli poses with his winner for Best Military jet, a Skymaster F14 Tomcat.



Blair Howkins took the honors for Best Civilian jet with his Tomahawk Models *Viperjet*.



Jeff Daly took home the Pilot's Choice Award with his BVM *Super Bandit*. (Joe Letourneau photo).



RC Pete, AKA: Peter Harasiewicz, poses with his plane, and the award for Best Sport jet with his Tommahawk *Futura*.

Canada District Report (cont'd)

Jeff Daly



Here are some more photos (below) from Wingham Jets 2014 courtesy of Joe Letourneau.





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James Smith caught Bob Brubaker's *KingCat* smoking out the mosquitos at the "Hotter 'n Hell" Jet Fly at Bomber Field in Houston, TX.