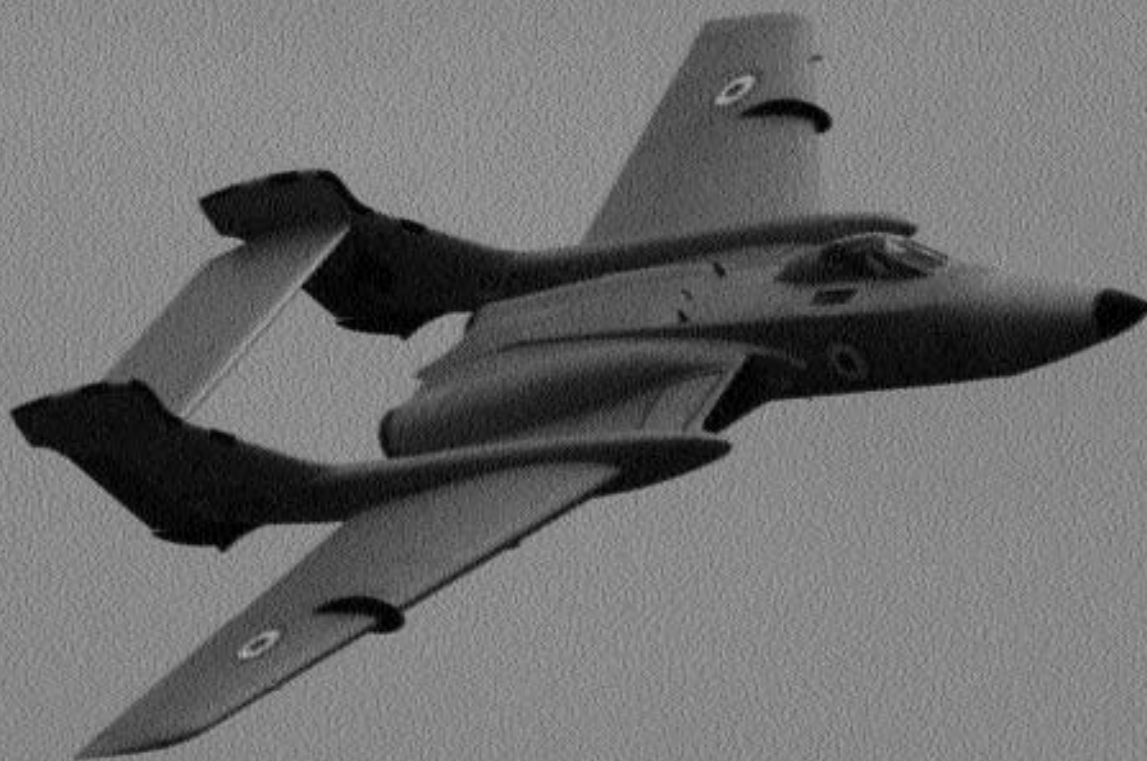


Newsletter of the Jet Pilot's Organization

Contrails

Spring 2005

Volume 17, Issue 2



Florida Jets, 2005
Toledo EXPO 2005

Sam Snyder's *Sea Vixen* "kit bash" of a KingCat
caught by Pat Fernandez on a low fly-by

TREASURY REPORT

Beginning Balance \$5,638.95

Income:

Membership	125x\$25.00	\$3,125.00
Memberships	1x\$35.00	\$35.00
Memberships	1x\$50.00	\$50.00
Memberships	1x\$45.00	\$45.00
Pay-Pal	40x\$23.97	\$958.80

January Expenses

Bank Charge	\$18.00
Membership Cards	\$190.52
Sub-Total	\$208.52

February Expenses

Bank Charge	\$18.00
Stamps	\$37.00
Contrails	\$700.00
Renewal Postcards	\$115.57
Sub-Total	\$870.57

March Expenses

Bank Charge	\$18.00
Web-Site Renewal	\$89.55
Stamps	\$37.00
Sub-Total	\$144.55

Total Expenses \$1,223.64

Balance as of April 1st. 2005

\$8,629.11



Welcome to the Spring issue!

Hopefully, you will find better photo quality with this issue. I've been working hard to figure out the bugs!

Not surprisingly, due to the time of the year, this is a smaller issue. However, we have event coverage from the Toledo EXPO 2005, and a timely article on dealing with our empty PowerMax cans...before we really begin to empty them!

As we get into the flying season, please take **LOTS** of photos, and submit them either through your district reps, or directly to me....let's fill the white spaces!

Our next issue's deadline will be July 1, 2005.

Safe Flying!

Greg

President's Report

Steven Ellzey

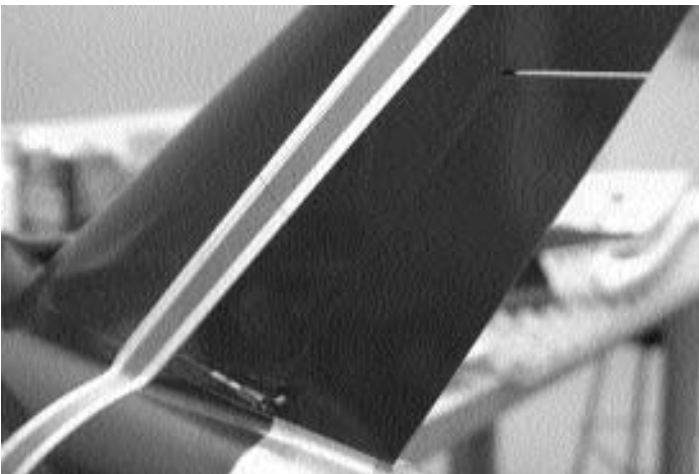
**Turbines in the Experimental Class?**

As has been mentioned over the last year, we are working on a proposal to get turbine powered models into the AMA experimental class. For now this looks to be the most realistic way to get to the 55 dry condition that some are looking for. Such an approach does have quite a few limitations, but hopefully we can find a way to let some of you follow your modeling aspirations. We should have a draft of the proposed regulations to the AMA in the next few months and we will see how it goes from there.

Scale Hinging

I have used this approach to hinging on a couple of different models, and if done right, it looks a lot better than the normal hinging method.

If you look at the two photos below, you can see the type of hinging that I am discussing, which is normally referred to as "scale hinging," (of course in this example it was applied to a sport model).



While it is hard to see in the photos, nothing is rubbing, and the back edge of the fin stays a constant distance from the rudder. This is achieved by making the leading edge of the rudder a circle and placing the center of the hinge rotation at the center of the circle.



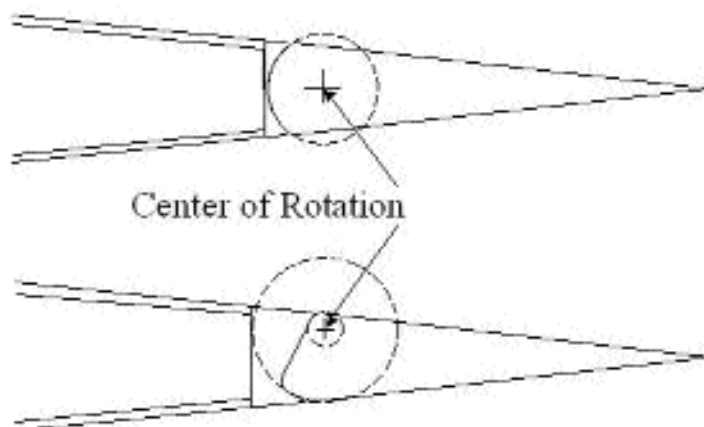
In order to construct a surface like this, we need to figure out what size of circle we are going to use. If the control surface has constant chord and constant thickness, life is a bit easier. If the hinge line is not swept, like the control surfaces on an A-10, then life gets even easier. So let's start with the easiest version, basically a Hershey bar for a control surface.

We want the circle that will define the leading edge of the control surface to be just a bit larger than the thickness of the control surface. If you look at the top drawing of the first sketch on the next page you should be able to see what I am describing.

Just how much bigger the circle is, than the surface is thick, is a trade-off. If you make the circle as small as possible, such that it is tangent to the surface of the control surface, you will have very little room for error. Otherwise, you have to increase the gap between the control surface and the mounting surface, possibly reducing the control surface deflection, and also reducing the distance that the hinge line extends back.

On the other hand, as you make the circle larger, the distance that the hinge line extends back increases, and the control surface does not look quite as sleek. Typically, I just take a circle template and use whatever circle is just slightly larger than the thickness of the control surface.

Once you have arrived at the desired circle size, make a couple of 1/4" ply circles that size, and tack glue them to the ends of the control surface. Then use a long sanding bar to sand the leading edge down to the ply templates.



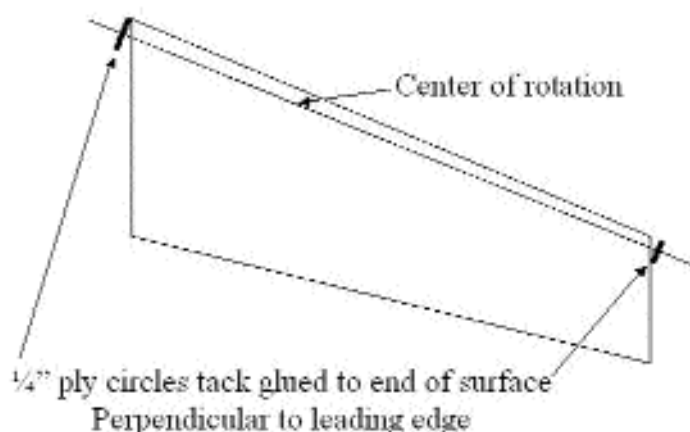
The hinges must be long and stiff, like the Robart hinge points or the BVM carbon fiber hinges, and the hinge line itself has to be set down to the center of the circle. I will mark this depth on the hinge so that I can be sure I have put it into the correct depth, and then always glue the hinge into the control surface first.

Now let's jump to the hard case, a tapered and swept control surface, like the photos above. We now need to arrive at a circle size for each end. Again, I use a circle template and find a circle just a bit larger than the surface thickness for each end, and as before, make a ply template for each end. Now when we tack glue the ply template to the end of the control surface, we have to attach them so that they are perpendicular to the hinge line, or to the leading edge (a bit easier and close enough). If you just attach the template flat to the end, when you sand the leading edge down to the template, you will have made an ellipse, which will not work very well.

In the first sketch I have also shown a cross section of a scale hinge where the hinge line is not in the center of the surface, such as the aileron on an F-100. In this case, you have to come up with two circles for each end of the control surface and join them together.

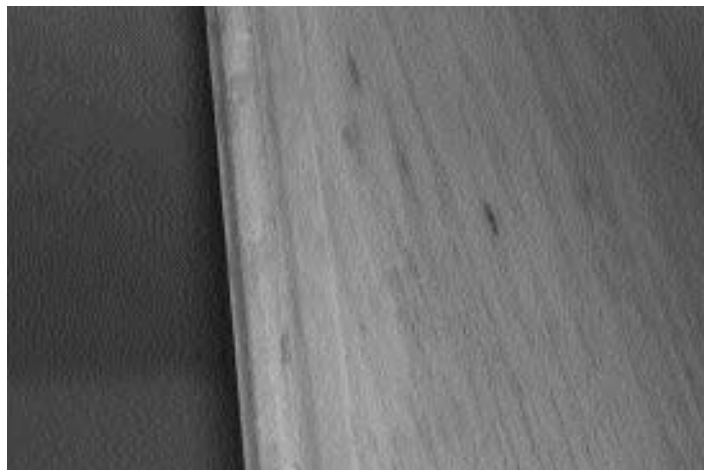
Once you have the leading edge shaped correctly and the hinges set to the correct depth, we will need to create the cove that the leading edge will set into.

Some of the modern hollow-molded surfaces may already have the cove formed for you. If so, you will just need to sharpen the skin from the inside so as to



form a thin edge at the back. If the surface that the control surface attaches to has a squared-off back end, we will need to build a thin extension to the back of the skin. This extension will need to extend back to just a bit short of where the circle meets the outer surface of the control surface. I make these parts from 0.015" thick fiberglass sheet.

For a balsa-sheeted wing, I sand a recess into the skin and glue the fiberglass sheet into the recess, as in the photo below.



For a molded wing that has a fiberglass skin, as in the first photos, the piece must be carefully fitted and glued in place such that it is butt-glued to the back of the surface.

Once I have the piece cut to the proper shape, I cut a piece of 3/32" balsa sheet that is about 3" wide and just a bit shorter than the control surface. I then put a

President's Report (cont'd)

Steven Ellzey

piece of carpet tape (double-sided sticky tape) on the piece of balsa, covering an entire side. The fiberglass piece is then set on the tape such that the piece is centered on the balsa sheet, with its ends extending a little bit past the ends of the balsa sheet.

Use a couple of small pieces of balsa and carpet tape to hold the control surface in place on the back side, then apply a small bead of slow-cure epoxy to the back edge of the surface that the fiberglass piece is to be glued to, and another small bead to the fiberglass piece where it contacts the surface. When the fiberglass piece attached to the sheet of balsa is put in place the two beads of epoxy should flow together to form a strong joint. Since the ends were left visible, they can be used to line the part up as it is put into place, and the balsa sheet with the carpet tape on it will span across the gap and hold the control surface in alignment with the fiberglass piece. Next remove the balsa sheet and carpet tape used on the back side to hold the surface temporarily in place, and then repeat the process. Once the epoxy has cured, peel the balsa and carpet tape off, and you should be left with a clean hinge line.

Steven

Key" tool. I visited the Coleman website but was still unable to locate the "Green Key" tool. Finally, I called Coleman and spoke with a consumer service representative. The representative was able to locate the "Green Key" (A Coleman product) and sent two of them to me at no charge. Their number is 1-800-835-3278. I can't guarantee they will send you one at no charge, but it may be worth the free call.

Bob Beran



Although the "Green Key" basically functions like a can opener, it is much smaller and is designed to nicely fit on the lip of the Powermax container.

Proper Disposal of Powermax Fuel Containers

Many jet modelers, utilizing turbine engines for power, use Coleman Powermax propane/butane fuel for their initial start sequence. Once the container becomes empty, the question of safe and proper disposal may come to mind. If punctured to relieve residual propane/pressure, the container may actually be recycled. The container has verbiage that warns against the use of certain instruments (screwdriver, etc.) to puncture the container. Instead, a tool referred to as a "Green Key" is the preferred tool. I visited several locations that sell Powermax fuel, but none of the locations carried or had ever heard of a "Green



The small puncture created by the Green Key is seen at the 7-O'clock position.



Vice President's Report

Keith Sievers

Risk Management Initiative Basic Data:

This year, the official data tracked 1208 pilots logging an estimated 7950 flights.

As with 2003, the presented data relied heavily on the reports received from the CDs or the Airbosses that covered some of the events. More time was spent getting details this year, and it is believed that the 2004 data has better information than did the 2003 data. That stated, the data is not perfect. There is a certain amount of subjectivity in the reports, and when reviewing the details, others may have different perspectives.

Because there was a significantly higher percentage of "unknown" crashes last year, and this year's data had more categories, comparisons of cause of loss from year to year aren't particularly valid.

Attendance:

A comparison of attendance for events where data was available in both 2003 and 2004 showed participation was down about 8 percent. It looked like many of the smaller events grew somewhat, but some of the larger events reported fewer registrations. Florida Jets, Michigan, Florida International, Greater Southwest and Mississippi all reported fewer pilots. Superman held ground. Heartland and Liberty were two of the larger meets that grew. The escalating cost of automotive fuel, and therefore the increased cost to attend an event, may have contributed to the reduction.

Frequency of Loss:

Overall, the frequency of loss was very similar from year to year. In 2004, there was 1 loss per 132 flights. The comparative figure for 2003 was 1 incident per 120 flights, though this number was driven somewhat by 5 overrun losses at Dixie due to a shortened runway. If these losses were removed, the frequency would have been virtually equal. This consistency year

over year would suggest that the data has a fair amount of credibility.

Cause of Loss:

As might be guessed, just over 50% of all losses were related to pilot error. Just over half of these losses were botched landings. While there were several accidents caused by planes stalling on approach, the majority of landing incidents appear to be related to failure to slow the aircraft sufficiently for landing. This was the leading cause of all accidents this year, representing 11 of 66 losses.

Next to landing problems, disorientation represented 7 different accidents listed as pilot error. This is the category of loss that was dominated by new pilots. Five new pilots were involved in crashes, and 4 of these 5 succumbed to disorientation. Flying at dusk or with the sun in the eyes was also a contributing factor in several of the disorientation losses. CG problems and incorrect radio settings rounded out the pilot error category.

Battery/radio problems represented about 25% of losses this year. Unfortunately, the cause of most of these incidents will never be known. Nine of the 14 losses in this category are characterized by engine shutdown in flight with some initial loss of control (LOC). In some cases, control was regained but the aircraft was not recovered successfully. In other cases, the LOC was total. Of the remaining electrical problems, several batteries were confirmed defective, a transmitter failed, and there was one report of a switch failure.

Interestingly enough, 13 of the 14 radio incidents occurred at different events.

Structural problems represented the next most frequent cause of loss at 16%. There really was no consistent pattern here. Wings folded, booms cracked, stabs and hatches departed airframes, flaps failed. No particular aircraft kit was immune, and none were really repetitive. All in all, to have only 9 structural problems in almost 8000 flights is pretty amazing, and is a testament to the structural integrity of the airplane kits and the building skills in the jet community.

Vice President's Report (cont'd)

Keith Sievers

Engine failures without any reported LOC represented 12% of losses. In most of these reports, pilots were unable to reach the runway, or damaged the airplane if they did during the unanticipated landing. Bearing failure was an obvious cause in some instances, while the remainder were likely related to air bubbles or other transient problems.

There were 2 mid-airs and a number of unknown events that rounded out the remainder of the data.

There was absolutely no hint of a speed-related incident in any of the statistics.

Fires:

There were 6 reported fires this year, though 1 occurred on the set-up day and not during the sanctioned event.

One of the fires reported involved an engine seizure/LOC. The actual fire was very brief, and as soon as the ECU detected the failure, it shut off the fuel, which appears to have extinguished the fire immediately. There was no post-crash fire, and the signs of pre-crash fire damage could only be detected by inspection of the airframe.

All remaining fires involved planes hitting the ground at high speed or some catastrophic event. All of these fires either self-extinguished or were reported to be pilot-controlled.

Pilot Experience:

As mentioned earlier, new pilots were not involved in many crashes. The comments received from CDs this year were also absent any concerns about newer pilots. This was quite different than in '03, where this dominated safety concerns. It is believed that buddy-boxing has had a significant positive impact, and deserves some of the credit for the success of newer waiver-holders. This is reinforced by the fact that 4 out of the 5 incidents involving newer pilots were caused by disorientation.

Aircraft Durability:

As can be deduced from the cause of loss statistics, the age of the airframe really had no strong correlation to losses. A roughly even number of crashes involved new, intermediate, and experienced airframes.

Conclusions:

1) Slow flight and landing practice would benefit the turbine community safety record, particularly for those folks flying at home fields with very long runways.

2) More diligence is required in the maintenance of batteries and radio equipment. Batteries should be cycled regularly to keep an eye on capacity. Crystals and modules do fatigue with age. With the forward compatibility that radio systems offer for these parts, it does make sense to encourage frequent range checks as a preventative measure.

3) Newer pilots should be encouraged to avoid disorientation by keeping their aircraft closer in, controlling speed, and avoiding flight in adverse lighting conditions.

4) Pilots should keep an eye on fuel systems, engine temps and pump voltages after every flight to look for abnormalities that would suggest air leaks, impending bearing failure, or clogged filters.

5) Fires remain relatively uncommon, but still result primarily from high-speed ground impact with the engine running. At the beginning of every flight, repetitive thought should be given to pulling the trim in the event of a catastrophic event. Data also shows that fires can be successfully controlled with water-based fire equipment. It is not certain how often the regulations are followed in this area at home fields, but it is important.

6) Some aircraft do recover from transient fail-safe events. Don't stop flying the aircraft, even if it seems non-responsive.

7) Fail-safe programming remains important in preventing fires. There were 14 incidents recorded where the pilot reported total LOC due to radio or battery problems. In most cases, the incident report confirmed that the engine shut down. None of these crashes resulted in a fire.

Keith



District I Report

Ray Davis

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

"Greetings from District II"

Ugh....whadda winter....good only for building and repairing...and then only if you could pay your heat bill! I've been trying to remember one of the reasons I came to beautiful 'ol Cape Cod thirty years ago...that of mild winters with virtually no lasting snow cover.....flying/golf/whatever, right through the winter. Tables seemed to have turned on us.....and if this is global warning it ain't working!

As mentioned in the Winter *Contrails*, I've had a pretty busy rebuild season, so I haven't minded much, but most you guys in District I and II must be wishing the likes of this winter will never be seen again.

Nevertheless, between building sessions, I've been exercising my thumbs most evenings, and now must have 100 R/C flights on my F-16 since early December. I've always been a wannabee real jetjock...well, now I'm a wannabee R/C guy, too....'cause without even leaving the comfort of home I can fly til my heart's content!

After seeing how fast some of my local Club buddies have improved their piloting skills...and having one of the summer kids I 'taught,' solo on his first trainer flight, well, it finally hit me: the R/C simulator. Amazing realism, flight physics, and feel...it makes you think you're truly at your favorite site on a sunny day....more skilled, confident and relaxed than ever. I hope I don't get a rude awakening on that first '05 'real' R/C jet flight, but I'm betting this thing makes all the difference in the world. Every spring I have to learn all over again....well, not this year!

There are basically three R/C Sims to choose from and I did some homework before I decided. All are amazingly sophisticated - not games at all - but true simulators that closely mirror the real R/C experience; 2D and a limited field of view the major difference.

I ended up with Aerofly Pro Deluxe made by Ikarus, a German company, and sold by OMP. (At the end are three screen shots...which are actually of high quality, though likely will not reproduce so well here.)

Lesser known and newer, MRC's Reflex XTR has even better graphics - they are stunning, even the grass sways in the breeze - but with lesser product support and initially not the jets I was looking for. Supposedly, it is also the best helicopter Sim.

G3 has been bug-ridden, but that is said to be fast being fixed, though the rap is also that the flight physics are unrealistic and the add-ons are extra. G2 - G3's predecessor - still has as good a helicopter simulation as any, but is otherwise crude by comparison.)

AFPD reportedly has by far the best 3D simulation right out of the box. It's got tons of free model and scenery downloads, the best support, and needs less computer oomph than G3 or XTR.

Most AFPD planes and helicopters seem initially much too easy to fly, i.e., until they are tweaked and tuned in the edit menu. Ya gotta know what you want...more weight, less drag, more high AOA lift, add some wind and turbulence...now you're dialing in. A trial and error process; I even went into the Tmd files (which AFPD allows) to adjust the dirty drag on the mains. Took some effort, but now the AFPD T-Bird 16 very, very closely emulates my AMT 180SP-powered Spider Jet 16; though the process would have been much easier if AFPD simply allowed scaling their default Sim model.

Regardless, I'm blown away every time I get on the sticks with how involving and life-like it seems, how much on your game you have to be to achieve a smooth flight and good landing. It still shocks when I whack those hedges on a low pass at Sparlingfield....love that auto reset!

My mind's eye and memory says this Sim is both damn realistic and an excellent training tool....at least as best I can recall from flying last October....keeping in mind that first 'real' R/C flight come April might be an eye-opener. But I truly believe this spring I'll be doing the neat stuff I was hesitant and unpracticed with

District I Report (cont'd)

Ray Davis

before...as I've done them now so many times in AFPD....and with the same familiar Tx in my hands.

You'll need a powerful computer to get the most out of a Sim, as you wanna keep the frame-rates above 60-70/sec for smoothness. And with smoke on, if that's your thing, it really eats up the computer power. A fast P4 with 512M RAM is important, but the video card is what makes all the difference.

An ATI 256M Radeon 9800 cost me almost as much as the Sim (all three are under \$190) but well worth it, and it should handle next-generation Sims, as well.

Ya probably can't go wrong with any of the 3, the choice will depend somewhat on your particular interest.....though I think I would give XTR a closer look next time around. Also check out 'Flight Sims' on the RCU Forums. There's a wealth of info there. (My F-16 edits are listed under the R/C Flight Simulator Software forum; go to the Ikarus Aero Fly Support forum at the top, then into 'The Edited 16' thread.)

Capitol Jets:

Hats off to CDs Frank Alvarez and Art Arro for their efforts - and deep pockets - as they are absolutely committed to make this new event a great success. To be held July 15-17 just outside Albany, NY, this one is central to 3 Districts and our good friends in Canada, as well. Tom Puma, CD of the Green Mountain Jet Rally (now cancelled for '05), Ray Labonte and Antony Parchment, CDs of the Maine Jet Rally...and few others...know of the work involved in bringing one of these off in your neck of the woods. And, since it is for us, for our enjoyment, and provides a great site to fly when others are being lost, it's my hope there is truly an extra effort made to attend this one.

Further, CJ will be sponsored by the JPO and the prestigious JPO Pilots Choice Trophy will be awarded. It's a shame Tom's GMJR lost its support at Middlebury Airport; that event was the longest-running District I jet rally. But now, perhaps, Tom can finally relax and fly mid-July, as Frank and Art have stepped up to fill that date and the void created in losing GMJR. If you make just one...make this one in '05....well, ya gotta make the MJR, too....no excuses!

Ray



**AFPD's opening screen with the '16 already selected.
Any transmitter can be used.**



**AFPD's '16...though with many hidden edits to allow it
to fly like an R/C model.**



**AFPD's demanding Sparlingfield site....Similar to my
club field!**



District II Report

Art Arro

New Jersey
New York
Europe

Greetings, everyone. We are at beginning of our flying season here in the northeast, where the winter has been relatively mild, except for record busting snowfall in March. I'm looking forward to flying R/C jets this season.

Our year commenced with several hobby/trade shows and forums that maintained our interest during the long winter months. The first local event was the *Model Aircraft Forum* held on January 29 in Syracuse, NY, where I traditionally hosted an exhibit booth to dispense information on jet-powered model aircraft. Reference books, AMA turbine-related documents, videos and the JPO *Contrails* newsletter are available for perusal by the attendees. This year, JPO member Frank Alvarez brought his turbine-powered Avonds F-15 Eagle to the forum and answered many questions on the model. I demonstrated an FTE T-500 turbine in the Ramada Inn parking lot and also responded to numerous inquiries about model-turbine technology. I was assisted in the demo by fellow JPO member, Doug Ives, who braved 22 F temperatures to get this turbine running. Many of our newsletters and brochures were picked up, and Richard Brook renewed his 2005 membership while there. I thank these individuals for supporting JPO at this forum.

The next event was the *WRAM Trade Show* held in Westchester, NY from February 25-27. Frank Alvarez elected to drive part of the way down for a Saturday tour. I met him early in the morning and we made a day of it. The show was packed with exhibitors and attendees, but we managed to see most of the jet stuff, and our local northeast jet crowd held an impromptu meeting in the stands during the noon hour. This was a welcome relief to get away from the crowds and catch up on everyone's winter projects.

Frank revealed the beginnings of a new District 2 jet event called **Capitol Jets** which we've been working on for a couple of years and it has finally paid off. The venue will be the Schenectady County Airport located in Glensville, NY within the capital region of New York.

We've been granted access to a 160 x 3000 inactive runway and support from an on-site air museum. The location is easily accessible from all quadrants by major highways. The date has been set for mid-July and both Frank and I are working hard to make this happen, hosting this jet event ourselves with little or no club support. Volunteers are most welcome to handle the myriad of tasks that are required to put this on. Contact me directly if you wish to help. Further information will be available on the Jet Vents section of the JPO website and at <https://www.capitoljets.com>.

I'm still coordinating exchanges between JPO and the AMA, and keeping a clear channel open between both organizations. Most recently, AMA has asked us to look at allowing heavy jet models with a wet (fueled) weight of greater than 55 pounds. A Heavy Jet Committee has been formed to investigate guidelines for accomplishing this, and we plan to provide draft guidelines to the AMA Safety Committee in May for review, and a final presentation to the AMA Executive Council meeting in June. I feel that we have made significant progress in our relationship with the AMA, and will continue my role as long as necessary.

Districtwise, the first jet event scheduled is the **Big Apple Jet Rally** at Floyd Bennett Field, Brooklyn, NY on June 25-26. This event has been moved from the traditional late September date in hopes of better weather. JPO is donating their Top Gun award and there are also manufacturers' donations to be distributed. Check the JPO website for additional information on the Big Apple Jet Rally. The second event is **Capitol Jets** which was discussed previously and the dates are July 15-17 at the Schenectady County Airport.

Neighboring districts are also providing multiple opportunities to participate in jet events in the northeast. The **Mid-Atlantic Jet Rally**, **Bay of Quinte Jet Rally**, **Liberty Bell Jet Rally**, and **Maine Jet Rally** are all good events to choose from and attend. Check the Jet Vent listing on our website for more information on these events.

I look forward to seeing many of you at these events during this coming season. Fly safe!

Art

District II Report (cont'd)

Art Arro



The JPO exhibit table at the Model Aircraft Forum provided information on model jets to the attendees. Frank Alvarez of Clifton Park, NY explains some of the inner workings of his F-15 Eagle scale-jet to several interested attendees.



Mark Cunningham from Lincoln Park, NJ entered this Jet Hangar Hobbies Kfir C-2 in the Static Competition of the WRAM Show. This jet is powered by a SimJet 1200 and weighs in at 13 lbs. A very nice scale-jet model.



Frank Alvarez won 2nd Place in the Static Competition with his Avonds F-15 at the Model Aircraft Forum. His Eagle is powered by a SimJet 3000 turbine and logged about 15 flights last season.



Dick Sarpolus from Shewsbury, NJ designed and built this Discovery turbine trainer which appeared as a plan/construction article in a recent *Model Airplane News*. This turbine trainer was displayed at the WRAM show and is powered by a FTE T-500 turbine. Looks like a well-designed entry-level jet.



Terry Nitch from Grove City, OH took 1st Place in the Best Jet Category in Toledo with his BVM KingCat.



Terry Nitch's KingCat was flawlessly finished in the Red Bull color scheme and powered by an AMT AT-400 Auto-start turbine.

Toledo EXPO 2005

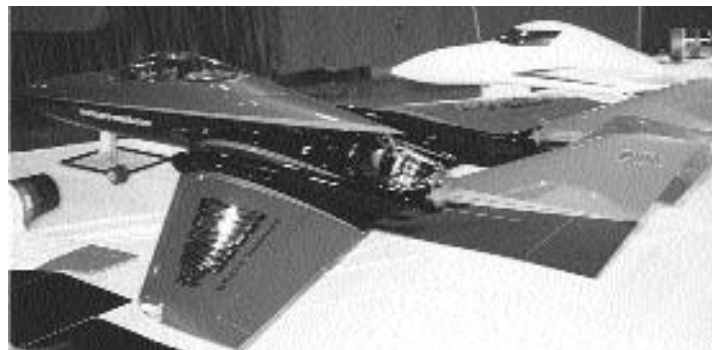
The 51st Annual Toledo EXPO was held from April 1-3 at the Seagate Centre in downtown Toledo, Ohio. This expo is a mega trade show/convention/auction/swap shop/and static competition for all R/C modeling. Two hundred nineteen exhibitors filled 372 booths on a single floor. Technical symposium sessions were held in adjoining conference rooms. Topics were on R/C electric modeling, pylon racing, sport aerobatics, computer radio setup, film-covering, and composite materials. Second floor hallways were devoted to a huge swap shop area with hundreds of tables, and the Saturday night auction of R/C models filled an entire ballroom with buyers and sellers. There were 18 categories of static competition, plus awards for Best Finish, Best Monokote, Best of Show and the Directors Achievement Award. Complete R/C systems and other valuable prizes were awarded each category. A single model club, the Toledo Weak Signals, has hosted this gala event for over a half century.

Jets play only a minor role in the Expo with a single static category for Best Jet and a relatively small number of jet exhibitors. These included Bruce Tharpe Engineering, Century Jet Models, Jet Hangar Hobbies, Planes Plus, Inc, Robart Mfg. and Yellow Aircraft International Inc. Jet Model Products bowed out about 5 years ago and was followed by BVM in 2003. Evidently, these jet suppliers feel that their marketing efforts could be better spent elsewhere. Consequently, there were not many new jet products to report on at the show. Century displayed their huge F/A-18 Hornet and Jet Hangar Hobbies had their full line of Wren turbines and some of their jet kits at the show. Robart exhibited an F-8 Crusader trainer jet along with their Fun Sonic turbine. The turbine was on a show special price of \$1995. Yellow had a new BAE Hawk composite jet for turbine power plus many of their accessories. Planes Plus also had several jet accessories on sale at the show.

There were only 4 entries in the Best Jet static competition, and the place winners are shown in the accompanying photos. Best Jet at Toledo is primarily judged by finish and craftsmanship criteria, a well-detailed and weathered scale jet will seldom place above a glossy-finished sport jet, even if it is an ARF.

Jets are discouraged from entering military and non-military sport-scale categories and are specifically barred from the aerobatic category since they used to sweep these categories in the past. The continued hosting of the Best Jet static competition depends on the number of entries and the sponsorship by a manufacturer, in this case BVM. I toured the Swap Shop only once and did not see many jet-related items or turbines for sale. I did make several purchases of hobby items, mostly tools, which were not available in my local hobby shop, and I also purchased a number of raffle tickets to support the USA Jet World Masters Team for their competition in Hungary this summer.

The Toledo EXPO continues to pique my R/C modeling interests and helps kick start the completion of my winter building projects. I have attended more than half of all the shows, and it serves to renew many old acquaintances. The 2006 edition of the Toledo EXPO is scheduled for April 7-9 and I hope to see you there.



Jerry Caudle of Metropolis, IL placed 2nd in the Best Jet Category with his version of a BVM KingCat. A detailed cockpit, and DuPont Hot Hues paint with metallic highlights really set off this jet.



Gerry Kerr of Westernville, OH placed 3rd with the only ducted-fan entered. BVM Maverick with a BVM 96/Viojett propulsion system.



District V Report

Gordon Dickens

Alabama
Florida
Georgia
Mississippi
Puerto Rico
South Carolina
Tennessee

2005 Florida Jets

The 2005 Florida Jets event was held at the Lakeland Linder Regional Airport in Lakeland, Florida from March 3-6. The event was an outstanding success with hundreds of flights and thousands of spectators. Although rain interrupted flying on Thursday afternoon, the weather turned out great for the rest of the weekend with sunny skies and afternoon temperatures in the 70s.



Bryce Watson, Best Military Award Winner, lines up his landing.

Florida Jets 2005 Award Winners

<u>Pilot</u>	<u>Aircraft</u>	<u>Award</u>
Craig Gottschang	BVM F-4	Best Military Performance
Bob Violet	SkyBlazer	Best Military Pre 1960
Bryce Watson	F-5	Best Military
Favio Trento	BVM Bandit	Best Sport Performance
Vernon Kramer	BVM KingCat	Best Sport Jet
Joe Castilano	BVM KingCat	Best Sport Jet (runner-up)
Jack Diaz	Rafale	Best Multi-Engine Performance
Sam Snyder	Sea Vixen	Best Craftsmanship
Ted Goodwin	EDF F-16	Best Ducted Fan
Jerry Caudle	BVM King Kat	Critics Choice
Gerry Keller	F-104	Critics Choice (Runner up)
Rene' Alvarez	L-39	Special Recognition Award
Jorje' Escalone	Canadian F-18	Best Graphics
Rick Brouard	Lizard King Kat	Holy Crap Award
Johnny Hernandez		Hot Stick Award

Florida Jets Photographs

The following photographs were taken by Mike Pascoe, Hicks Milner, Jeff Holsinger and Gordon Dickens.



Craig Gottschang's Rafale on short final.



Bob Violet's F-100 looks for the center line after logging another sortie.



Mike Pascoe's KingCat on a "smoking" pass down low at show center.



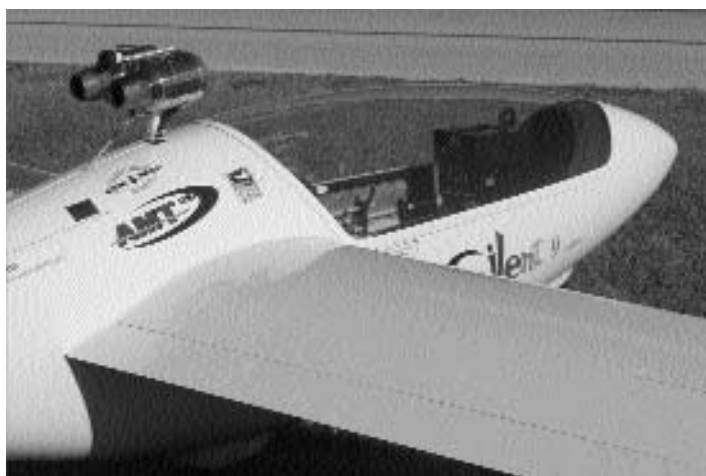
The glider on a fast flyby.



BVM MiG-15 about to land.



Hicks Lanier and his son show off their BVM KingCat.



This full scale glider is powered by two AMT Olympus Model Turbines.



The Georgia Jets Gang
Left to right are: Ryan McCaulley, Paul McCaulley, James Moody, Mike Pascoe, Gordon Dickens, Joe Rafalowski and Craig Gottschang.



District VI Report

Roger Shipley

Illinois
Indiana
Kentucky
Missouri

District VI Events

The District VI scheduled events have been confirmed as follows:

Bardstown Jets (Bardstown, KY) June 3-5

This will be the second year for this event and first on the calendar for our Illini R/C Team.

Jets Over the Heartland (Winamac, IN) June 23-26

Windy City Jets (St. Charles, IL - 20 miles west of O'Hare International Airport) July 15-17

This is a new one, and will become very popular as it is near Chicago and a new dedicated-R/C Field. The Windy City R/C grounds are shown in the three photographs on this page. For more information, go to their website www.windycityjets.com.

Missouri Valley (Tecumseh, NE) August 5-7

Sister Event

Ozark Mountain Jets (Sullivan, MO near St Louis) September 8-11

Home of World Jet Master Qualifier and potential location for the 2007 WJM.

Superman (Metropolis, IL.) Sept. 27-October 2



The **USA Jet World Masters Team** has been finalized with the following members:

David Ribbe	MiG-15
Sung Kim	F9F Panther
Rod Snyder	F-100 Super Saber
Dustin Buescher	F-86 Saber
Bryce Watson	F-14 Tomcat
Scott Harris	F-86 Saber

Team Manager	Steve Collins Steve.Collins@DCMA.mil
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Asst Team Manager	Tommy Yates teyates@chgroup.org
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Team Secretary	Mark Dawson mdawson@ozarkmountainjets.com
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The US Jet World Masters Team

We have four Sponsors for the Team Shirts and Jackets:

AMT/USA	Gold
Bob Violett Models	Silver
Repair Technologies Int'l	Bronze
R/C Jets Forums	Bronze

There are four Sponsor positions left so please get your bid in ASAP!



The Jet World Masters Team shirts and jackets shown off at Toledo.

Our cash contributors so far are:

FTE Enterprises
Tommy Yates
Tom Poznich
Sally Jo Schatz
Greg Anixter
MTA Inc.
Robert Klenke

Our product contributors so far:

RT Models
LGM Graphics
Spring Air Retracts
Jersey Modeler Smoke System
Sung Kim 6 NIB Prop Engines
John Ligons NIB XL70RFS Engine

RCU has established a thread where you can buy raffle tickets for these donated products.

R/C Jet.net has established a PayPal, credit card or cash site to accept contributions until July 15. Their latest tally is \$950 and they have reserved a Bronze Sponsorship.

As of April 5, the team has raised around \$12,000, including \$2,000 from our Toledo Raffle.

All proceeds will go to the six World Jet Masters Team Members. Please make your checks out to: "Ozark Mountain Jets/WJM" and mail to Steve Collins, World Jet Masters, 1031 Wedgewood Drive, St. Charles, MO 63303

CU on the flight line
Roger



District VII Report

Art Gajewski

Iowa
Michigan
Minnesota
Wisconsin

Gear Collapse

Greetings! A new flying season has just begun here in the northern part of the country. Already I have witnessed several occurrences of a most annoying problem that plagues most any plane equipped with retracts - THE DREADED GEAR COLLAPSE! It's an annoying issue because it often results in cosmetic damage to the underside of the plane, in addition to forcing the pilot to walk to retrieve the plane. In this article I'll offer some hints on protecting the bottom of the wingtips in the unfortunate event of a gear collapse. Please read-on. If you have any questions, please e-mail me and I'll try to answer them.

Background

Gear collapse, on take-off or landing, is especially disheartening on a brand-new plane. It invariably results in damage to the paint, fiberglass and often balsa or foam structure. Well, there are simple things you can do to lessen the effects!

wingtip Scuffing Prevention

First and foremost, you should take every possible precaution to ensure that the retracts are 100% reliable and that the axles, tires and rims are securely retained on the strut. Having said that, an occasional retract failure is to be expected. That's why incorporating wingtip anti-scuffing measures is important.

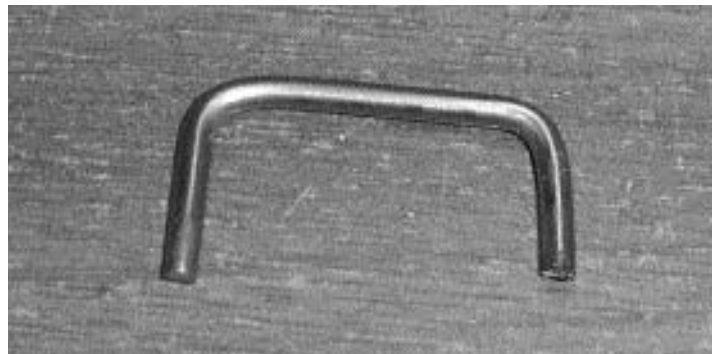
As I see it, there are three common methods used to minimize the effects of wingtip scuffing

The simplest method is to use a common plastic wingtip skid, available from Great Planes and Carl Goldberg, an example of which is shown in the following photo. These are handy little replaceable devices that are easy to install and they are very effective. The drawbacks to them are that they need replacement and they are visible to the real discerning observer. Installation consists of using the template that comes with the wingtip skid package and drilling



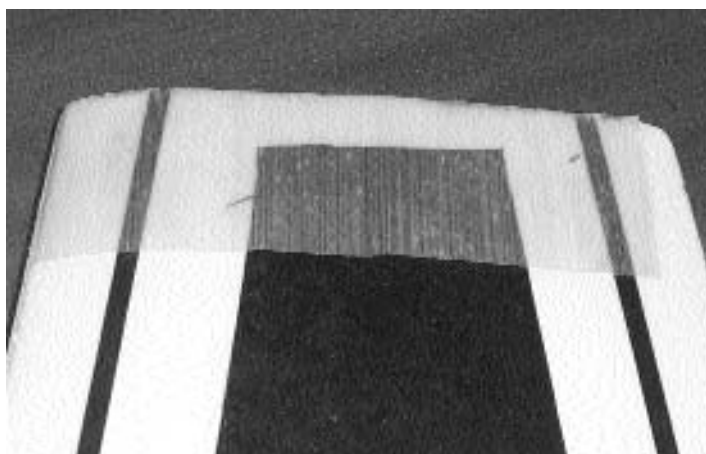
two 1/8" diameter holes about 3/8" of an inch deep in the wingtip. I use a dab of Goop to keep them in place and yet allow replacement when they are worn.

A second method is to bend a 2" piece of 3/32" music wire or the unthreaded portion of a 4-40 rod, into the shape of a staple, as shown below.



Drill two holes in the underside of the wingtip to accommodate the legs of the music wire staple. Provide a groove in the wing, between these two holes, that will allow the staple to sit nearly flush with the wing. When you are happy with the fit of the metal staple, use some Goop to keep it in place. These anti-scuff staples are more durable than the plastic commercial ones described above. They are not visible to the most discerning observer and are very effective in preventing scuffing. The drawback is that the replacement pieces must match the size of the worn pieces to fit in the same holes and slot. This may take some practice to make two the same.

The third method is to use Kevlarâ to provide an anti-scuff wingtip surface. Kevlarâ is abrasion and cut resistant. There are three choices here, too. First use Kevlarâ tissue of veil, which is about 0.002" thick, under the finish layer of fiberglass when you are glassing the plane. The veil will provide some abrasion resistance, but because it's thin, it will eventually wear through. A second choice is to use unidirectional Kevlarâ fabric, which is about 0.005" thick, under the finish layer of fiberglass when you are glassing the plane.



Note that the Kevlarâ is bonded to the foam core along with carbon fiber fabric and laminate stiffeners. You could apply the Kevlarâ to the balsa sheeting just under the finish layer of glass cloth. The unidirectional Kevlarâ fabric will provide better abrasion resistance than the veil, but is slightly more difficult to finish around without ending up with a localized bump. The third alternative is to use a piece of Kevlarâ fabric, which can be from 0.004" to 0.010" thick, depending on the weight of the cloth. Once again, this Kevlarâ fabric will provide better abrasion resistance than the veil but is slightly more difficult to finish around without ending up with a localized bump. The drawback to using Kevlarâ is that after awhile and a number of scuffing incidents, it will fray and "fuzz-up." The way to fix that, is to apply a light coat of epoxy over the fuzz to smooth it out. If you intend to use Kevlarâ, apply it with epoxy or CA. It doesn't like polyester resin.

Until next time, I wish you many safe landings and if you have a wingtip scuff, I hope it's minimal!

Art

Upcoming Jet Events May 2005

Dixie Jet Rally

St. George, UT

May 13,14,15

CD: Dan Johnson

435-673-0246

7th Annual Okefenokee R/C Jet Rally

(Jets over the Swamp)

Waycross, GA

May 14,15

CD: Allen Smith

912 285-8022

14th Annual Mississippi Afterburner

Raymond, MS

May 19,20,21,22

CD: Dennis Lott

601-856-3377

601-924-6949

CD: Vernon Montgomery

601-924-8443

Mid Atlantic Fan Fly

Chesapeake, VA

May 28,29

CD: Frank Rega

757-479-4905

June 2005

Bardstown Jet Rally

Bardstown, KY

June 3,4,5

CD: Frank Tiano

www.FrankTiano.com

D/FW Jet Rodeo

Dallas, TX

June 3,4,5

CD: Greg Pulcini

gpulcini@aol.com

972-690-5863

Gold Coast Jet/Fan Fly

Sacramento, CA

June 11,12

CD: Mark LaCoste

916-774-0304

Idaho Jet Rally

Cascade ID

June 10,11,12

CD: Al Culver

208-482-3356

continued on page 19, column 2...



District VIII Report

Mark Osborn

Arkansas
Louisiana
New Mexico
Oklahoma
Texas

Hello to everyone in District VIII. I am pleased to announce I have had no rallies to attend, my jet is still winterized and my thumbs have been successfully amputated. Sounds like the new GEICO commercials right? Just kidding.

OK, down to business. Several rallies are coming soon and I want to encourage everyone to attend as many as possible. The clubs need our support and we need to fly often. This will keep us sharp and comfortable in front of a crowd, resulting in less accidents and more spectacular performances. As we have all heard, this can greatly improve our relationship with the AMA.

On April 29, 30 and May 1 the Austin gang hosted the **Central Texas Jet Rally**. Pat Fernandez and his crew did a great job hosting this 16th annual event and making all of us feel welcome. Next is the **D/FW Jet Rodeo** on June 3-5 hosted by the North Dallas R/C Club. Greg and his crew will be looking for many pilots to participate.

July 15,16,17 will offer the **West TX JETFX Rally**. As the CD for this event, I can assure you that it will be as good as last year and a bit better. The Odessa Propbuster club will offer its facility as it is ideal for jets. Don't be fooled thinking its too hot, just ask the folks from last year! Lubbock will host the **T38 Rally** at Reese Center on August 17-21. As always, Mike and John will provide a great event and look forward to seeing all of us there. I will be bringing the land yacht again for alternate entertainment. Don't worry Bob Price, I've installed seat belts!!! Closing the year for District VII will be the **Greater Southwest Fan Fly** on September 9,10,11 in Waco. As usual, this will be a fun event as Max and his crew have proven in the past.

In conclusion, I look forward to seeing everyone, and wish a THUMBS UP to all.

Mark Osborn

Upcoming Jet Events.

from page 18, column 2...

Bay of Quinte Jet Rally

Belleville, Ontario, Canada

June 11,12

Contact: Dale Summers boqac@reach.net

Jets over the Heartland

Winamac IN

June 23,24,25,26

CD: Tim Redelman 574 946-3757

Big Apple Jet Rally

Brooklyn, NY

June 25,26

Contact: Vinny Caratozzolo 917-519-7893
vcarat@yahoo.com
or Mike Casey 646-387-5917
Twinstar1@aol.com

July 2005

Louisiana Jet Rally

Shreveport, LA

July 9,10

Contact: Kevin East 318 549-2545
Tom Robertson 318 741-5501

Windy City Jet Rally

St. Charles, IL

July 15,16,17

CD: Jeff Anderson 630-803-8940

West TX JETFX Rally

Odessa, TX

July 15,16,17

CD: Mark Osborne 432-580-8828
432-559-6395

CAPITOL JETS

Glenville, NY

July 15,16,17

CD: Art Arro 315-865-4990

August 2005

Liberty Bell Jet Rally

Lebanon, PA

August 5,6,7

CD: Mike Leshner 717-272-2616

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