

The Ham merhead

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... and more

ONE LUCKY PERSON CAN FLY
THE SU29 WITH HANS!!
DETAILS INSIDE!!

The Pitts Stop, by Steve Pennypacker
IAC Chapter 35 President



Pitts Stop, April 2003

If you have email, this month's column is probably old news. For the rest of you, even though this is past history, it's a big enough issue of general interest that I thought you might be interested in what's been going on.

"Before" (condensed from an email I sent to our members on March 4):

We are at risk of losing the airport at Orange for our contests.

Many of you are aware that we have had varying degrees of difficulty with the skydiving club at Orange over at least the last 4 years. The problem has escalated this year and there is the potential to lose the airport permanently, including this year. Although we have alternative locations that we expect will work for us without even having to reschedule, this would be a big setback for the chapter.

In 2000, we had to reschedule the contest because Jumptown had made some commitments that ultimately took precedence over the contest. 2001 went pretty smoothly, but in 2002 Jumptown resisted moving off the field as they have had to do each year for our contest. This is written into their lease. They have grown a lot, and relocating their operations for the weekend is getting more expensive and logistically difficult. I spent hours, days and weeks with some of our key members and with Jumptown's leader, trying to come up with some sort of solution that would work for everyone.

This year, Jumptown is negotiating with the airport for a long term lease in much larger facilities. Big bucks for the airport. Orange is in rough economic shape, so this is a big issue for everyone involved. Jumptown is

using this as leverage to get the airport to change their contract, which would shut us out of using the airport. In early January, the airport committed to hosting our contest. On February 20, the airport rescinded that commitment, making this the 3rd time in 4 years that we've had to deal with major skydiving issues.

So we've been scrambling to come up with a proposal that would not only be acceptable to the jumpers, but would actually benefit both them and the airport financially. The goal was to present the airport with a solution that would be so good they couldn't refuse it. I've had lots of terrific help from a lot of you- Steve T, Jim, Hans, Wes, Michael, Charles, Neville, Sheldon, IAC HQ, EAA HQ, the IAC chapter presidents, one of the airport tenants, and so on. We've worked with everyone we can think of on all sides of the issue, with the notable exception of Jumptown who we are not in a position to get input from.

Past precedent with skydivers vs. acro throughout the country is not in our favor.

While the jumpers' arguments are entirely inwardly focused on how much money they lose when they have to relocate (despite this being built into their contract with the airport), our proposal focuses on the economic benefits *to the airport and to the town*. Basically it calls for us to still hold our contest, Jumptown to continue to relocate, we help Jumptown generate additional revenue through an annual event that we would hold with them, and we make ORE our "home", to include some unspecified leases (hangar, classroom, etc) and usage fees that all flow directly to the airport, in exchange for the right to use the airport for practice, training camps, and the like when it doesn't interfere with jumping.

Our proposals have been the only ones that are win-win for everyone involved. The others are all win-lose, which I simply don't believe is necessary or appropriate. The airport, the jumpers, and us are all very small communities, and if we disappeared, the world wouldn't notice. We need to support each other, not fight each other. We've also included a detailed financial analysis, and frankly the results happily

surprised me- we're contributing more to the town than I would have expected, and a lot more than Jumptown would even attempt to take credit for themselves.

I sent the proposal to the airport with a decision deadline of March 6, beyond which we would relocate on our own initiative. This was necessary for several reasons, including that the contest planning is currently paralyzed and needs to get unblocked. It also serves a secondary purpose of removing ourselves from being used as a bargaining chip by either Jumptown or the airport in their negotiations. A possible risk is that by establishing a deadline, we could be forcing ourselves out if the airport isn't ready to make a commitment. My response is that we've been at Orange since at least 1994, and this issue has been going on for at least 4 years. If the airport doesn't already know whether they want us there, they never will, and we can't go through this situation every year.

There's a lot more going on "behind the scenes", but I've tried to keep this letter focused on the facts, leaving out the interpretations, motivations, political garbage, and everything not fact-based.

Next steps:

By Thursday, we will know whether our contest will be at Orange or at Springfield, which has generously offered the airport for both of our contests this year. I don't know what our chances are. When we look back on it from the future, it will all look obvious. We don't intend to lose, but we're far from in control of the local politics. The good news is that we have built up very good relationships with many of the influential people at the airport. If we win, it will be for a lot of the right reasons. If we lose, it won't be for lack of trying.

After (the night of the airport commission's decision):

We won.

The Airport Commission met tonight and voted 4-1 in favor of having the contest at Orange. I would be happier with 5-0, but I think we will settle for this vote.

There are essentially no strings attached. The only requests that they have made are along the lines of community relations- letting the town know when we are coming and making a real effort to let spectators know what is going on and answering their questions. We can pretty easily do these but we are going to need some volunteers during the contest to explain what's going on.

It's not yet clear whether they voted on just this year or as a longer term issue. For now, I don't think we will have a problem at least for the next few years and maybe much longer than that.

There are some other things we'd still like to do at Orange, like practice days and training camps. I hope to start to feel them out about these tomorrow. If the airport is open to these sorts of things (and I suspect they will be), we will be starting from a much stronger position than we were when they were part of a deal to keep us on the field. Thank you to everyone who helped out on this- and there are a lot of you.

And now on to today:

The airport commission was pretty burned out after this whole process, which was a difficult and contentious issue for them. They never did discuss our proposal to expand our use of the airport, or what to do about future years. These will be on their agenda for a future meeting now that the urgent issue is resolved. Although we'd ideally like to get this started immediately so we can use it for the 2003 contest season, we're going to get the best results if we show some restraint and let the commission take these up on their own schedule. I'm very optimistic about holding the contest there into the future, and I think we've got a good shot at the other things we want to do, if we continue to keep the airport's interests in mind.

The one thing that is certain is that we will not go through this debate again next year.

-Steve

The Dues and Don'ts of Club Membership

Annual dues are due!

NOTE: if your name and address appear in RED on your mailing label – *we have not received your 2003 dues. PLEASE send in your dues.* For those of you on the e-mail list, we will catch up to you too....

Chapter 35 survives by this revenue, without it we cannot hold contests, practice sessions or pay the HH editor his outlandish salary. **Please send your dues payments to Sheldon Apself (not to the HH Editor - because I'll keep it!!), with your current mailing address, email address, home & work phones, & IAC/EAA numbers.** \$25 gets you the color email version of the HH plus all member benefits, \$35 gets you a hand-carried paper snail-mail version too. Sending in your dues now helps us avoid additional mailing costs. Thanks for your cooperation and your membership.

Aerobatic Airplane Fly-in

We will be having an "Aerobatic Airplane" Fly in at Nashua Airport Sponsored by Aerial Advantage Aviation and Chapter 35 on the 26th of April with the 27th as a rain date. Any Airplane that is certified to do any type of aerobatics is welcome. From RV's to T6's, Pitts Specials to Clipped wing cubs and anything in between. There will be Food and Raffles. This is just a general fun gathering of good people and cool airplanes to kick off the good flying weather of spring, summer and fall. Any Questions Please call Rob Holland at 603-598-3180 or e-mail at robertholland@hotmail.com

I hope to see everyone there. Rob

The Su29 by Steve Till

Hans Bok's Sukoi 29 is a big, smooth, beautiful, and distinctly Russian industrial machine. It has a lot of titanium and fancy composites in its structure. It has a huge immensely powerful and indestructible M-14P radial engine and it has its quirky bits, like the fuel gauges (or lack of them), its wind-up clock with the battery leads, and the paired right side up, up-side down G-meters.

I was talking with my wife trying to explain why the Sukoi was a great aerobatic airplane. I said, "It has this big engine and the structure of the plane is very strong. You know on the Decathlon the control surfaces on the wing go halfway from the wingtip to the fuselage? Well on the Sukoi the ailerons go from the wing tip to the wing root and they are big. The elevator and the rudder are big too. You have these big control surfaces which are connected to the stick by push-pull tubes which are very tight so that any little movement of the stick means these big surfaces move and so does the plane." Hans said the same thing in a different way. He said, "The Sukoi is a hard plane to learn to fly well."

Hans spoke about flying with Nikolay Timofeev. He said that Nikolay he would do a quarter roll and then stop the plane at exactly ninety (not ninety one) degrees and the whole plane would go "bang," and then he would do it again and the plane would go "bang!" But Hans could not make the plane go "bang!" because it came from putting the stick in just the right place at just the right time. Hans said that the stick was "not really that tall" but my distinct impression from sitting in the cockpit was that this big responsive lever shot way up from between my knees and trying to put the top of that lever in the right place would definitely take some doing. The stick forces are quite light, especially in the roll, making this even more difficult. Gerry Molidar wrote an article for Sport Aerobatics about the Sukoi and he commented that the stick stayed light even as the G-forces increased. It is not hard or uncomfortable to pull 10 G's in this plane.

It is not that the Sukoi is a difficult aircraft to fly or land. According to Hans it lands easily and is not hard to control on rollout. Gerry even suggested that a pilot with no tail wheel time could successfully land the Sukoi.

What the Sukoi 29 is, is a large highly evolved piece of industrial aerobatic machinery. The wings have a pair of carbon fiber spars with a number of "w" shaped ribs. The Kevlar and Nomex wing skins are attached to the spars and ribs with screws, which are just visible on the wing skin. The fuselage from the engine back to just behind the cockpit is of welded stainless steel tubing. Behind the cockpit the fuselage is constructed of a sandwich of composite skins with a honeycomb core. This makes the Sukoi 29 almost as light as the single seat 26, which

carries the stainless tubing back to the empennage.

The full span ailerons are half the chord of the wing at the tip and are very light and well balanced. They and the elevator are attached to the stick with push pull tubes. The rudder is attached by a closed loop cable system, which ties the pedals to each other as well as to the rudder. The result of well-balanced control surfaces and a control system which minimizes slack are light and positive controls.

Because the Russian teams practiced near their airfields they didn't worry about fuel quantity. The Sukoi has two fifty-two gallon fuel tanks, one in each wing, and a fuselage header tank of seventeen gallons, it has no fuel gauges. What it has is a light for each of its three tanks that lights up when the tank goes below seven liters or about nine minutes at economy cruise. Hans relates being on final with all three lights on and Nikolay in the front seat musing about whether the engine was missing or out of fuel!

Because the Russians didn't have a G meter that went "negative" enough so they put two G-meters in the Sukoi one right side up one upside down. Further the Sukoi has a wind up clock/stopwatch with two-battery leads-for a heater.

The engineering, both quirky and ingenuous are the result of some highly experienced technicians and a well-equipped workshop at the Sukoi Design Bureau. The combination of talent and materials which put this aircraft together no longer exist. This particular answer to the question of how to build a high performance aerobatic aircraft will never be answered in exactly the same way.

Steve



Hans and his son, Kris with the Su29 at Orange last year.

Editor's Comments:

I recall a Japanese proverb that says:
Suki-not-Yaki

Because of my devotion to putting out the Hammerhead month after month, Hans took me for a ride in his beautiful Sukhoi (anybody want to take the editor's job now?). When Steve talks about Nikolay being able to roll with a "bang", he's right. But Hans can do it too. In fact, while Hans was demonstrating the roll rate to me, there was a "bang" each time he rolled to point. All of which resulted from my helmet hitting the canopy with significant force, *and I was in tight*. The pre-flight strap-in reminded me of the scene in Apollo 13 when the flight engineer stands on the astronauts' shoulders when they get buckled in, Hans can really pull those straps tight! Without the stick in your own hands, the roll rate is just too fast to anticipate and it is almost impossible to keep your head still (unless you just keep your neck flexed through out the whole flight - which as you are flying between plus 8 and minus 6 G's, as we did, is not a very good idea). Even as a Russian aircraft rider (Yak 55), I was blown-away with the Suk. Its flying characteristics do not resemble the Yak 55's in any way (with the exception of fuel and oil consumption, and that funny right-rudder hammerhead thing!). The stick is twitchy as compared to tractor I fly. My first full roll could only be described by a numerical series reminding me of my calculus days (i.e.: $1 \frac{1}{8} - \frac{1}{4} + \frac{3}{16} - \frac{1}{8} + \frac{1}{16} \dots$) you get the picture. It is remarkably easy to stall at any speed, so much in fact that Hans was paranoid that I'd Snap-out of each maneuver I flew (thankfully I disappointed him, but I really had to pay attention to control forces). The best part of the flight for me was the experience of significant negative G's. We flew my first outside loops and I am happy to say my scalars stayed white (didn't pop any blood vessels), so Advanced here I come! Hans also demonstrated for me (*can you say* - sadistically subjected me to) a half-Snap to inverted. What fun (my ass), plus 5G's immediately followed by -3G's within half a second. Talk about rolling with a bang, this maneuver not only went off with a bang, but also a long series of pops as my vertebrae responded to the changing inertia of that big useless lump at the end of my spine.

So, now do you want a ride in the Su29?
Take over the HH editor's job and I'll get you one,
Dave

Calendar of Events

April 26

10am-3pm Acro Fly-In at Nashua
Details: Rob Holland
(603) 598-3180

May 10

Orange warm-up: Practice session, Crawford Research and Performance (C.R.A.P.) Center, Plymouth Airport

May 15 -18

Orange Contest

Details:

<http://acro.harvard.edu/IAC35/2003XContestXannouncement.htm>

May 30 - June 1

Maytown Contest

June 20-22

Warrenton, VA Contest

June 25 - July 4

World Aerobatic Championships, Lakeland, FL

July 29 - August 4 - Oshkosh

August 8-10

Green Mountain Aerobatic Contest, Springfield, VT
Friday practice, Sat/Sun competition.

August 29-31

Aerobatics Canada contest-Gatineau (near Ottawa), Quebec

November

Wright Experience @ PYM
Acro details TBA

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Chapter 35 mailing list signup (highly
recommended):

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DETAILS FOR THE ORANGE CONTEST

The entire airport has been paved and repaved.
We finally have a hard commitment from the airport to host the contest again.
It's rained and snowed on us the last 3 years, so this year just HAS to be better.

Oh, did I mention the whole friggin' county has been repaved? Runways, taxiways, ramp, hangar entrances. Everything. All the way to the furthest hangars out back. No more tire-eating fissures. No more Mr. Universe style aircraft pulls through the soft dirt. Maybe the ice and snow will even be gone by then.

So, there's no more excuses left, so it's finally time to announce the 2003 New England Aerobatic Contest.

The contest will be held May 16-18 at Orange Municipal Airport, Orange, Massachusetts. Sponsored by IAC Chapter 35, the New England Aerobatic Club. The box will be open beginning Thursday the 15th at 0900 for anyone looking to practice and register early.

This is a 5-category, power-only contest.

We expect that Danny Adams from Aviat will be back to keep the planes safely in the air and keep us all smiling with his infectious good cheer.

Details below. We hope to see you there!

Steve Pennypacker
Contest Director

PREREGISTRATION (even if you're not sure if you'll be there)

Please do preregister, even if you might not show up. It helps us tremendously.

To preregister online, visit http://acro.harvard.edu/ACRO/pre_reg_contest.html.

For registration by snail-mail, contact:

Rob Petit, rjpetit@attbi.com, or (781) 646-5038, or
Steve Pennypacker, steve@pennypacker.org or (508) 429-1171

Be sure to include your name, home mailing address, daytime and evening telephone numbers with your request.

If you do, we will:

- Greatly appreciate it.
- Put your name at the top of the Aviat tech inspection list.
- Be able to run the contest more efficiently, meaning more flying time for you, the pilots.

Please don't send any payment until you show up at the contest.

We used to try to incent people to preregister by giving them hangar priority. That doesn't work. If we artificially constrain the way we pack the hangars, we are going to end up with fewer planes indoors and that is counterproductive. As we've done in the past, we will do everything we can to make sure everyone gets indoors at night. There's more news on this under the HANGARS section below.

PLANNED SCHEDULE

Thursday, May 15

0900 - 1900 Registration; box open for practice (optional for any competitor)
1900 Food on the field, TBD

Friday, May 16

0900 - 1200 Registration; box open for practice (also optional)
1200 Pilot's briefing -- Intermediate, Advanced & Unlimited
1300 - 1830 Contest flying -- Intermediate, Advanced & Unlimited
1900 Food on the field, TBD

Saturday, May 17

0700 sharp Pilots' briefing -- all categories
0800 Registration
0830 - 1830 Contest flying -- all categories
1900 Banquet

Sunday, May 18

0900 Pilots' briefing
1000 - 1500 Contest flying -- all categories
1530 Awards ceremony

HANGARS * NOTE THIS POLICY HAS CHANGED SINCE YOU LAST SAW THIS *****

As planes are getting larger and larger, hangar space is getting tighter. Last year there were a few airplanes left outside on Saturday night (the only night we are likely to overflow). Here's what we're doing about it this year.

First, we may be able to scrounge up a few extra spots at Orange. We're working on that now. Second, we're actively looking for additional space at some nearby airports that are convenient to both the airport and the hotels and banquet.

If it looks like space will be tight, we will give some number of pilots the option of leaving their planes outdoors or moving them to alternate locations for the night. There are many variables that need to be considered in deciding which pilots will stay in the hangars at Orange and which will not. Examples are whether there are still Unknowns to fly and which categories are flying first on Sunday. Therefore, the contest jury will make this decision on Saturday. Before we announce the list, we will ask for volunteers to give up their hangar spot on the field. Any volunteer who wants to fly to another airport for the night will need to be approved by the jury. We ask for your support and understanding if we aren't able to get you in the hangar. We will also pay your hangar fee for that night, and we'll make sure everyone gets ground transportation. The briefing isn't until 9:00 on Sunday, so there's ample time to get to Orange on time. If you're held up due to weather, you won't be penalized in any way.

TRANSPORTATION

We'll provide transportation to & from any of the hotels above. If you fly in, you won't need a car. But if you want the additional flexibility, here are a couple places that have been willing to leave a rental for you at the airport:

Athol Ford (978) 249-3531
Enterprise (413) 774-5092

HOTELS

This year we have not been able to block off discounted hotel rooms, so you're on your own for reservations. The rate info here is a few years out of date but should give a decent indication of prices.

Colonial Bed and Breakfast, in Gardner. They were great about cancellations with the rainout in 2000, so probably deserve to be rewarded (expect a 48-hour cancellation policy). About \$95 with breakfast, \$90.00 without. (978) 630-2500. 20 minutes east of the airport on Rte. 2.

Wachusett Village Inn, in Westminster (where the banquet is). Very nice hotel, and they clearly want our business. May get discounted rates in the \$100-\$120 range. (978) 874-2000.

Super 8 Motel in Gardner, Mass. Their cancellation policies took a turn for the worse a couple years back, so inquire if that's a concern to you. (978) 630-2888. Standard room rate is \$75 for 1 or 2 people.

Executive Inn, Orange, Mass. Improved from previous incarnation as the Bald Eagle. (978) 544-8864.

Quabbin Gateway Motel, Orange, Mass. (978) 544-2986

BANQUET

7:00 Saturday evening at The Old Mill restaurant in Westminster, Mass. What can I say. These guys are the greatest. Terrific place and everyone walks away happy and very well fed.

AWARDS

In addition to awards for the top 3 pilots in each category, we will award:

- * Jack Nolan Memorial Trophy (Best First-Time Sportsman Award)
 - * Chapter Team Trophy
 - * Pitts Trophy (Highest placing Pitts/Eagle driver)
 - * American Champion Award (Highest placing 7- or 8- Series pilot)
 - * Grass Roots Achievement Award
 - * Most Creative Freestyle Award (but only if it wasn't meant to be)
 - * ... and a few others
-

FEES

Contest registration	
Primar	\$56
Sportsman	66
Intermediate	76
Advanced	81
Unlimited	86
Hangar, per night	\$16
Saturday evening banquet:	\$36 per person

WHAT TO BRING

For the aircraft:

Airframe and engine logs; airworthiness certificate; registration certificate; operating limitations; current weight and balance data, in-pack chute (<120 days) & pack card; proof of insurance (\$1 million minimum), tiedowns if you anticipate leaving your airplane outdoors.

For the pilot:

Pilot and medical certificates; IAC membership card; FAI license (Unlimited competitors only); 7 copies each of free style forms A, B and C, signed and dated by a current IAC judge (it is your responsibility to ensure your Free is legal for 2003); cash.

Photocopies of documents are permissible for IAC contest registration; however, FAA requirements may differ.

HOW TO GET THERE

By air: NY Sectional, Gardner (GDM) VORTAC 292 degree radial, 10.3NM. 42.34.04N, 72.17.28W. VOR and NDB approaches.

Runways 14-32: 4998'x150'; 1-19: 5000'x75'. Field elevation 555'MSL. Orange Unicom 122.8. Runway 1-19 will be closed during practice and contest flying. Expected NOTAMS: fly right traffic for runway 32, left traffic for runway 14. **Caution:** The aerobatic box is southwest and parallel to runway 32 and immediately over runways 1-19. Do not overfly the airport. No touch and goes.

By car:

From Boston: I-90 West to Rte. 128 (I-95) North to Rte. 2 West. Continue below.

From anywhere: U.S. Route 2 to exit 16 (U.S. Route 202, Amherst-Belchertown exit). Go left off the exit. Travel 1 mile North and turn left onto Partridgeville Rd. Travel ½ mile West; find the airport on your left.

CONTACT INFORMATION:

Registrar: Rob Petit, 319 Lake St., Arlington MA, 02474, (H) 781-646-5038, (W) 781-398-8804, rijpetit@attbi.com.

Chief Judge: Jim Ward

Contest Director: Steve Pennypacker, H: (508) 429-1171, W: (617) 428-4444, Steve@pennypacker.org

Volunteer Coordinator: Ann Salcedo, AnnSalcedoRN@aol.com.

Orange Municipal Airport manager: Len Bedaw, W: (978) 544-8189