



TAILWINDS TAILS

AVTI Newsletter

VOLUME 35, NUMBER 5

MAY 2010

AVTI SCHEDULE OF MEETINGS AND EVENTS

<i>MAY 2010</i>	
29 (11:00pm)	Board of Directors' Meeting (at the field)
<i>JUN 2010</i>	
3 (7:30pm)	Monthly Meeting at Fox Airfield Lobby
12 (8:00am)	Float Fly/Barbecue at Lake Elizabeth
<i>JUL 2010</i>	
1 (7:30pm)	Monthly Meeting at Fox Airfield Lobby
3 (8:00am)	T-28 Races AVTI Field)
<i>AUG 2010</i>	
5 (7:30pm)	Monthly Meeting at Fox Airfield Lobby

MODEL OF THE MONTH



Dick S with Dual Ace with twin .48 4-strokes

MOM ALSO-RAN



Bob K ready to hand-launch his Mosquito Bites Cub Tri Pacer with O.S. 46AX

Check out other clubs' events by visiting the following websites:

www.deserthawksrc.com; www.cvrcoaring.com
www.vccomets.com; www.sbrcm.org.

Remember to check the bulletin board at the field for an up-to-date calendar of events.

Member's contributions are welcome.

EDITOR'S NOTE:

Since the Editor will be in Europe during the month of July, no July Newsletter will be published, but rather the July Newsletter will be combined with the August Newsletter.

Antelope Valley Tailwinds Inc.

AMA Charter #114

P.O. Box 302, Lancaster, CA 93584

A.V.T.I. Roster of Current Officers (2008-2009)

- President:** Tony Frackowiak; 256-1147;
frackowiak@sbcglobal.net
- Vice-President:** Douglas Killebrew; 400-5636;
dougskillebrew@att.net
- Treasurer:** Joe Dagata; 943-8881;
joeandpatty1@earthlink.net
- Secretary:** Jean Greear; 944-3881;
mjgreear@aol.com
- Board Members:** Jerry Budd; 943-4970;
jbudd@roadrunner.com
- Preston Knepper; 886-0272;
tecknepp@aol.com
- Sean Hennessy; 406-2183;
seanhennessy1971@hotmail.com
- Field Marshal:** Preston Knepper; 886-0272;
tecknepp@aol.com
- Safety Officer:** Timothy Williams; 618-7040;
timmw1@hotmail.com
- WebMaster:** Roger Counts; 945-4639;
roger_counts@roadrunner.com
- Newsletter Editor:** Roger Counts; 945-4639;
roger_counts@roadrunner.com
- Flight Instructors:**
- Peter Carbin; 723-4830
- Daniel Garrabrant; 945-3789

* Membership Meeting *

June 3, 2010

Thursday
7:30 p.m.

Fox Airfield Lobby
4555 West Avenue G
Lancaster, CA 93534
Visitors and guests are welcome.

* Board of Directors Meeting *

May 29, 2010

Saturday
11:00am
At the AVTI Airpark

A.V.T.I. Airpark
47500 Challenger Way (10th Street East)
between Avenues F and G
Lancaster, CA 93535

FIELD STATISTICS

Latitude: N 34° 44' 44"

Longitude W 118° 6' 32"

Elevation: 2326'

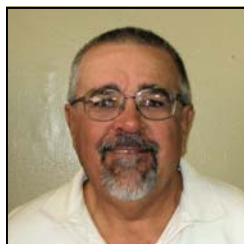
Tailwinds Tails is a monthly newsletter of the Antelope Valley Tailwinds Inc., R/C Model Aircraft Club.

Visit our web page at www.avti.org.

Send submissions for the ***Tailwinds Tails*** by the 10th of each month to the Newsletter Editor, c/o A.V.Tailwinds Inc., P.O. Box 302, Lancaster, CA 93584 or by email to

roger_counts@roadrunner.com

President's Message



(Not available)

Tony Frackowiak

Vice-President's Message



Hello

I want to start off my extending a big thank you to Tim Williams for a job well done running our indoor event on May 2nd at the fairgrounds. The event was very well planned, well staffed, and

extremely well executed. I would also like to thank all of the people who had a hand in helping Tim make this event happen. It was truly a team effort from the idea to the completion of the event.

Thousands of people showed up at the fairgrounds to shop the flea market and we captured several hundred every hour that came through in waves of 20 or more to sit down and rest for 15 or 20 minutes and watch the electrics fly around. We handed out flyers, business cards, answered questions about our club, and talked to people about model airplanes in general. We even had about 20 planes in our static display outside the entrance to our event and 2 flight simulators inside for anyone who wanted to take a crack at flying themselves.

Overall we had a great showing for the club and have already been asked to participate again in the future. Thanks again to everyone who made this event possible.

Douglas Killebrew

Treasurer's Report



Checking Account Balance is \$3,150.21.

AVTI Flying Field Facility Reserve Fund in Savings Account is \$12,061.25.

Financial Assets Total \$15,211.46.

The 2009 - 2010 Membership Total 81 (24 new members).

I am now accepting AVTI membership dues for 2010-2011. The dues have been reduced for the 2010-2011 year. Open is \$75, Senior is \$50, and Junior is \$25.

The AVTI membership year 2009-2010 dues are due on May 31. The notice will be in the May newsletter. The time period for collecting dues is May 1 through May 31. A grace period of 30 days is allowed to avoid a \$10 late fee.

AVTI is accepting donations to keep the weather station online. The cost of replacing the stolen solar panels is about \$400. We have collected \$126 currently and will continue to accept donations and the 50/50 raffle proceeds through June in hopes we can reach that goal. Please understand the present method of keeping the batteries charged is covered by a few individual members who are willing to pay for the gas to run a generator several hours each week.

Thanks

Joe Dagata



Tony F with his E-Flite Ultra Micro 4-Site

Secretary's Report

(Minutes for May 6, 2010)



Meeting was called to order at 7:34 by Tony F. A motion was made and seconded to accept the minutes as printed in the newsletter.

Treasurer report was given by Joe D. 24 members present.

Welcome new members Shawn Grizzard and Brian Escoto.

Newsletter:

If you have anything you would like to be in the newsletter mail it or e-mail it to Roger Counts by the 10th of each month.

Old Business:

The weather station and camera was vandalized on Tuesday evening. The sheriff's office was called but the heli and patrol cars were a couple of minutes too late to catch them. It was brought up that members should not be the first ones on the scene, let the deputies handle it.

The indoor fly during the flea market was a huge success. Thank you to all the members who helped it to be a successful event and hopefully we will get more appearances at other events as well.

The rest of the safety fencing was replaced so we should be good for another 3 years. Thanks to those who helped.

There will be a float fly on June 12th at Lake Elizabeth with Noah G. at the helm barbecuing. If you plan on attending please let one of the officers know so we can make sure we have enough food.

To help in recovering the cost of the stolen charging equipment the club will be taking donations. Also, the clubs portion of the 50/50 drawing will be donated to the cause. \$123 was collected at the meeting.

New Business:

Nominations for the office of president and secretary are up for elections next month. Tony F. has said he would run for president again and Don C. said he

would run for Secretary.

Schedule of events:

Float Fly June 12th at Lake Elizabeth

A race for T-28 or any of the Park Zone military planes July 3rd

The next board meeting will be held at the field on May 8th at 11:00 am

Model of the month:

Tony F. had one of the E-Flite Ultra Micro 4-Site, also he had a proto-type of the new JR 11X transmitter.

Dick S. showed off his 71" Dual Ace powered with two 48 four stroke engines.

Bob K. brought in a Mosquito Bites Cub Tri Pacer with a 46 AX engine.

Pete C. also brought in his E-Flite Ultra Micro 4-Site.

Raffle Drawings:

Attendance : Mac.

50/50 (\$23 with \$13 of it donated back to the club) Don C.

Model of the Month: Dick S.

Meeting was adjourned at 8:34

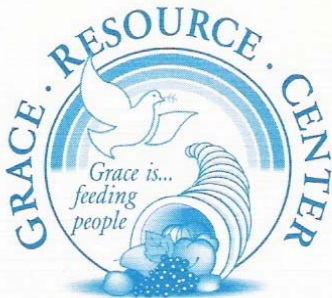
Jean Greear



Pete C shows his E-Flite Ultra Micro 4-Site

~~~~ *Special Thanks* ~~~~~

Our Thanks to the following businesses that made generous donations to A.V.T.I. Please support them when you can.



[www.graceresources.org](http://www.graceresources.org)

**STEVE BAKER**  
Executive Director

45134 N. Sierra Hwy.  
Lancaster, CA 93534  
(661) 940-5272  
(661) 940-5274 Fax

## Support Your Local Hobby Shops

Smith Brothers Hobbies  
1223 West Avenue I  
Lancaster, CA 93534  
Phone: 661-942-6984

Dr. J's Helicopters and JR Radios  
Mon.-Fri. 8 a.m. to 5 p.m.  
Phone: 661-949-3586, ext. 205  
Ask for Doug.  
Distributor for Horizon Hobbies

## *A Very Special Thanks*

**Waste Management Company**  
**600 East Avenue F**  
**Lancaster, CA 93535**



### **REMINDER**

A current AMA membership is a requirement for membership in A.V.T.I. Please make sure your AMA membership is current.



### **What's the weather at the field?**

Don't forget you can view the weather at the field through the A.V.T.I. web-site ([www.avti.org](http://www.avti.org)) or at [www.wunderground.com/US/CA/Lancaster.html](http://www.wunderground.com/US/CA/Lancaster.html)

## **FOR SALE**

### **Stinger 50**

by Gohbee Aviation. Engine is an O.S. Max SX-50 heli . Includes 2 Futaba S9202 servos, 1 Futaba S9254 servo, 1 Futaba S3003 servo with a GY-401 gyro, 1 Futaba S9402 servo, 2 sets of carbon fiber blades, 1 set of wooden blades, an extra canopy and extra parts. Also includes 2 gallons of 30% heli fuel. Does not include receiver or battery. All for \$650 OBO. Contact Ron Gray, 661-944-1002.



### **EDITOR'S NOTE**

Any member may advertise for sale items in this newsletter free of charge. The advertisement will only be placed in one edition, so if the item has not sold and you wish to continue advertising, please advise the newsletter editor.

## A Lesson in How to Crash

I recently destroyed a very nice aerobatic 49-inch Yak. Not really a great thing to do, but it happened and I hope by telling my story I can save at least one other pilot from doing the same.

I had just finished putting some very detailed cockpit work in a very nice Cermak 49-inch Yak 54 so I could enter it in to the 2010 Spring Fling Scale contest. I had earlier increased the power to 4S and had to beef up the motor mount with added carbon fiber along the top and sides to hold the now nearly 1,000 watts it could develop, so I was confident it would perform very nicely.

In full-scale aviation, we always say it takes two or three problems to make a crash, as we are trained to recover from one problem at a time. I think this story bears that axiom out. It took three distinct errors on the pilot's part to create an unrecoverable situation.

It started with my desire to fly one afternoon after I had just finished the above modifications and checked the balance and control throws in my shop. Because of all the things needing to be done, it got later and later in the day before I got out to the field. By the time I got settled in and ready for takeoff the sun was very low on the horizon, but the wind had calmed down a lot (error one).

I did my preflight and noticed that I had a little extra throw in the surfaces, but that's okay, I wanted to be sure I could recover from any attitude I got into during the trim flight (error two).

I took off and climbed out to the west, noticing I needed to adjust the elevator a little for smooth, level flight. While doing this, I let the airplane get a long ways downwind to the east (error three). As I started to turn toward me to come back to the center of the field, I over rotated due to the larger-than-needed throws of the ailerons, and due to the low sun angle I lost orientation of how far I'd banked and in my attempt to recover I must have thought I was inverted and zigged when I should have zagged.

End result was a near full-power dive into the ground instead of pulling up smartly.

So how could I have avoided this unnecessary loss of a very nice and near new airplane?

- 1 Don't get in a hurry to go do a flight. If it's 3:30 p.m. when you leave for the field in the winter, it will be dark in only 1.5-2 hours.
- 2 A headwind is a good thing, dead calm requires more roll out and longer takeoffs.
- 3 Larger surface throws are inherently bad for control. Use small, reasonable throws and check that the surfaces are in line with the wing or tail fixed surface for easier flight control.
- 4 Keep your situational awareness! Don't let one aspect of flying (ex. trimming) get in the way of overall flight path control. If you get too far away with an "active" model, you'll have more problems keeping it under control.

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## How a Model Jet Engine Works

A true **model jet engine** adds the ultimate touch of realism to an RC jet, and commercially produced units for radio control use are now widely available. Turbine rc jet flying has become a big thing in recent years and there are some spectacular models around, but this aspect of the hobby is **not** for the novice! Endless hours of flying experience and an impressive budget are needed to actively participate in flying models with real gas turbines.

Even the smaller model jet engines can cost upwards of a thousand dollars - and that's on top of the cost of the jet itself, radio gear and all the other bits needed. So it's serious business indeed, but ultimately has to be one of the most rewarding ways of enjoying rc flying... *if you can afford it!*

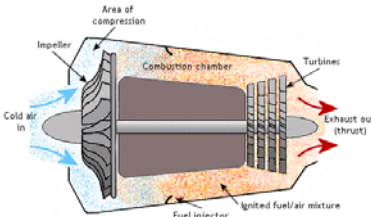
Model gas turbines are also used in larger scale helicopters, but from a personal point of view I don't find these too realistic because of the sound - RC helicopters running on a turbine sound more like jets than helicopters (*again, just a personal opinion!*).

Shown right is a *JetCat* model turbine, one of the more popular commercially produced model jet engines readily available. JetCat USA are at the forefront of this remarkable technology and offer some excellent turbine units. Pre model jet engines, RC jets have always lacked the authenticity of having a true gas turbine until recent years; previously jets needed to be powered by either gas or electric motors with a propeller (*thus spoiling the look of the aircraft*) or noisy ducted fan and 'pulse jets' (*which are more rocket motors than anything else*). But now they can be powered by a fully functional and realistic looking jet turbine, thanks to manufacturers like JetCat!



A model jet engine design can vary from one manufacturer to another, but they all work on the same basic principle. The most common type nowadays is the **centrifugal flow** turbine, as opposed to the lengthier axial flow turbine. The big difference between centrifugal and axial flow turbines is in the stage of compression. In a centrifugal flow unit, air entering the turbine is thrown *outwards* as it passes over the spinning **impeller**. The air hits against the inside of the can and so is compressed greatly before passing into the combustion chamber. This intense compression increases the pressure and hence temperature of the air, making it more effective when it mixes with the fuel. The fuel, which is nearly always kerosene (*Jet A1*), is introduced into the combustion chamber as a very fine mist, and so mixes easily with the now highly compressed air. This fuel/air mixture is then ignited by a small glow plug, much the same as the one found on a 2 or 4 stroke model airplane engine. As the fuel/air mixture ignites and explodes within the chamber, the coned shape of the chamber forces it rearwards towards the turbines.

The turbines accelerate the velocity of the passing gases and increase the pressure of them too. The gases (exhaust) finally get squeezed through the narrowing jet pipe at the very rear of the engine, exiting at great speed and pressure, thus generating the high levels of thrust. The turbines are connected to the front impeller by way of a main shaft, so that they power the impeller as they spin. The drawing below shows the basic principle of a centrifugal flow model jet engine:



Model jet engines need to be started with **compressed air** to initially power-up the turbine. This can be supplied from a diver's oxygen tank or a similar source. Only when the compressor has reached the necessary revolutions per minute (RPM) can the fuel be introduced into the chamber and the engine operate normally.