

# The Seminole Flyer

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"The Seminole Flyer" is a publication of the Seminole Radio Control Club of Tallahassee, Florida

**NOVEMBER 2006**

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Fall Fly-In- John Halls scale Hughes 500 gunship

## Letter from the Editor- Stephen Warmath

This month..... Holy Cow Batman, it's **November** already.....we feature the Fall Fly-In Photo Gallery and some informative articles on **Flaperons**, **Windy Weather Planes** and **Setting Mixture Controls**. This month we have a couple of interesting video links. One, I'll call "Virtual Pilot", gives new meaning to "birds eye view"....amazing what people are playing with.  
[http://hubertheller.googlepages.com/rc\\_airplane\\_fpv](http://hubertheller.googlepages.com/rc_airplane_fpv) The second, sent in by Sam Varn is an indoor electric ballet to music.  
<http://video.yahoo.com/video/play?vid=bee2a33b43f5b4de61cb0fdb4983394.872669&cache=1> With winter building months ahead of us, please share with us any new projects you are building or tips that can be included in the newsletter. See my short Review of Hangar 9's new Pulse XT sport plane. Our Tech watch this month includes the new DX7 Radio system from Spectrum RC now for big planes too. Also, the VeraTec Aero is one strange aircraft with a very interesting application. It's like the flying wing of Helicopters. A reminder, the **November Club meeting** is back at Grace Lutheran Church on Miccosukee at 7:30 pm. Dig In, and enjoy.

Happy Holidays- Steve

## Fall Fly-In October 14, 2006 Photos by Steve Warmath

### Frank Bastos, Contest Director- HobbyTown USA

It was a near perfect day for the Fly-in. We had a wide variety of aircraft and pilots from the local area as well as some from Columbus, GA. Gordie was the Safety Officer and conducted a pilot's meeting to make sure everything ran smoothly and safely. Frequency control was well managed and registration went smoothly. Many raffle tickets were sold as well. Raffles were conducted about every 30 minutes. One give away, a "Firebird", was won by Mike Atkinson, which he donated back to the event. He suggested a "mini-raffle" for those present 12 years old and under. The kids were thrilled to have a free opportunity to win something. There were other great raffle items donated by Great Planes, Horizon Hobbies and Hobbico. Planes, Fuel, coffee mugs, a Radio and other great stuff were given away to the lucky ticket holders. The skies were busy all day with many types of aircraft flying at the same time. The spotters were busy making sure there were no close calls in the air.

Everyone seemed to have a great time and the event made a good profit for the Club. Keep an eye out for future Fly-Ins, there will be more to come. Thanks to everyone who supported the event. Thanks also to Joe Satterwhite for his grilling skills and to Brad Sharp, Steve Warmath, Gordie Meade and Geoff Lawrence for their logistical support.



## **Chief Pilot- Mike Atkinson**

The weather has really gotten nice over the past few weeks and the flying is fantastic! We've recently signed up several new members. It's a great time of the year to learn to fly. If you can help out with the instructing, let one of the officers know.

Our 1st annual Fall fly-in, sponsored by Hobbytown USA, was a great success. Frank Bastos did a perfect job as contest director, with many visitors from Columbus, as well as our surrounding areas. I'm told the club made in excess of \$600 after deducting expenses. The donations from Horizon Hobby and Great Planes/Hobbico were well received in our raffles. If you missed it, don't worry. We're planning one for the Spring, as well as another one next fall.

We are in the process of scheduling another float fly-in, hopefully before the end of the year. There will be discussion at the meeting this week. Right now, we're going to see if we can coordinate a December club meeting and float fly-in and handle both events the same day. That will pretty much depend on Francis Surovec's schedule around that time.

November 17th, a few of our members are going to represent the club and Hobbytown USA in an air show at Medart elementary school, in Crawfordville. It's part of their "project learning tree" program and we're calling it the Seminole RC Club/Hobbytown USA flight demonstration team. John Hall, Bill Atkinson, and I were able to fly for these kids last year and it was a great success. This year, they've asked me to coordinate 2 consecutive 45-minute air shows for the children. Right now, we're planning the flying lawnmower, Frank's flying formula 1 race car, Helicopter aerobatic demonstration, and a good old fashioned limbo competition. If you'd like to come out to the school, let me know and I'll get you directions.

We still need volunteers for the elections next month. Geoff and I won't be returning, so we need a new president and vice-president. It's time for those who are able to step up and help the club.

I received an invitation to reserve tables at the upcoming swap meet in Perry, Georgia, for the first weekend in March. I went ahead and reserved 4 tables (the same as last year), pending approval from the club. We'll need to discuss this at an upcoming meeting.

That's all for this month.....

- Michael Atkinson

## **Chief Copilot- Geoff Lawrence**

### **Upcoming Club Events**

**November 2, 2006- Club Meeting at Grace Lutheran Church. 7:30 pm.**

### **Upcoming AMA Regional Events**

#### **13th Annual Florida Int'l Jet Rally**

FL  
11/02/06-11/05/06 - Lake Wales, FL (C) 13th Annual Florida Int'l Jet Rally. Site: Lake Wales Airport. John Burdin CD, PO Box 5335 Lakeland FL 33807 PH:863-648-9933 email: [jwburdin@tampabay.rr.com](mailto:jwburdin@tampabay.rr.com). The finest in RC Jets. Great flying site, great weather, great fun and a good time. 4000' of silky smooth runway and no runway lights. All we do is fly. "The Pilots Jet Rally". Visit [www.floridajetflyers.com](http://www.floridajetflyers.com). Sponsor: FLA JET FLYERS INC

#### **Autogyro and Electrics**

FL  
11/3/06-11/5/06 - Lakeland, FL (C) Autogyro & Electrics. Site: Sun N Fun. James Mahoney CD, 4798 S Florida Ave #318 Lakeland FL 33813 PH:863-510-0712 email: [jrmahoney36@aol.com](mailto:jrmahoney36@aol.com). Pilot's prizes. \$5 landing fee. Dry camping. Lots of other activities going on for the 1200 + scouts that will be there earning there aviation merit badges.

## **SAM 46**

FL  
11/04/06-11/05/06 - Palm Bay, FL (A) SAM 46 for Cat III 101, 102, 103, 101C, 102-103C, 120, 124, 128, 140, 142, 150, 151, 152, 152(JSO). Site: Palm Bay Field. Robert Schuettler CD, PO Box 38 Lorida FL 33857 PH:863-655-3242 email: [loridabob@wmconnect.com](mailto:loridabob@wmconnect.com). Sponsor: FL MODELERS ASSOC

## **OTOW RC Fly In**

FL  
11/04/06 - Ocala, FL (C) OTOW RC Fly In. Site: Club Field. Charles Frederick CD, 9739 S W 99th Ave Ocala FL 34481 PH:352-237-2434 email: [cq7c@atlantic.net](mailto:cq7c@atlantic.net). Sponsor: ON TOP OF THE WORLD FLYERS

## **Southeastern Electric Aircraft Rally**

FL  
11/04/06-11/05/06 - Viera, FL (C) Southeastern Electric Aircraft Rally. Site: Viera RC Park. Gerald Armstrong CD, 443 Consolata Ave NW Palm Bay FL 32907 PH:321-727-8199 email: [garm@cfl.rr.com](mailto:garm@cfl.rr.com). Contact Gary Wright PH:321-639-6165 email: [gwright@cfl.rr.com](mailto:gwright@cfl.rr.com). Directions: Turn west on Wickham Rd at exit 191 off I95 and follow the signs. Landing fee \$10 per day or \$15 for the weekend, registration 8am, fly 9am till dusk. RV parking but no hookups 600x100' grass runway, daily pilots raffle, vendors welcome, discounts at local hotels. Club website [www.irks.org](http://www.irks.org). Sponsor: INDIAN RIVER KONTROL SOCIETY

## **Seventh Annual Scale Fly In**

AL  
11/4/06 - Fort Rucker, AL (C) Seventh Annual Scale Fly In. Site: Hunt Stage Field. Brian Arsenault CD, 302 Natchez Rd Enterprise AL 36330 PH:334-393-1642 email: [packrat13@ala.net](mailto:packrat13@ala.net). All sizes, all types military, sport and civil scale, all must be flyable. \$15 landing fee. Pilots choice plaques for best military & civil. AMA required. Tail gate swap welcome. Food on site. Field is a military training field /paved runways. Approx 9 miles north of Dothan AL west ¼ mile on AL 18. Competitor radio raffle to a registered pilot. Sponsor: WGRC

## **Rebel Rally 2006**

FL  
11/10/06-11/12/06 - Starke, FL (AAA) Rebel Rally 2006 for 323, 324, 325, 326, 328, 330(JSO). Site: Fair Grounds. Dale Miller CD, 9380 Joloru Dr Jacksonville FL 32210 PH:904-371-4995 email: [provector1@aol.com](mailto:provector1@aol.com). Field open for practice Friday at noon. Old Time Stunt, Classic Stunt. Sponsor: FLYING REBELS

## **Big Bird Fly In**

FL  
11/11/06-11/12/06 - Lake Wales, FL (C) Big Bird Fly In. Site: George Breen Field. John Greskowitz CD, 433 Canal Drive Lake Wales FL 33859 PH:863-638-2335 email: [motorwitz@comcasst.net](mailto:motorwitz@comcasst.net). 80 inch monoplane, 60 inch biplane. \$10 landing fee. Spend a weekend in beautiful Lake Wales flying Giant Scale. 600 ft grass runway. Great food and drinks available on site. Primitive RV camping allowed. Tailgate sales encouraged. Aircraft safety inspections. Have fun and make new friends. Sponsor: RIDGE BARNSTORMERS OF LAKE WALES

## **Salute to Veterans Warbird Fly In**

FL  
11/11/06 - Ocala, FL (C) Salute to Veterans Warbird Fly In. Site: Club Field. Dominick DiDomenico CD, 9071 SE 180th Ave Ocklawaha FL 32179 PH:352-288-4455 email: [dom3157@aol.com](mailto:dom3157@aol.com). Join us for Warbirds only flying. 48x600 paved runway 150 x 900 grass. Campers welcome/ no hookups. Food and beverages from cookshack by our "Fly Girls". Sponsor: OCALA FLYING MODEL CLUB

## **IRCC Helicopter Spectacular**

FL  
11/11/06-11/12/06 - Mulberry, FL (C) IRCC Helicopter Spectacular. Site: Club Field. David DeWitt CD, 1810 Staunton Ave Lakeland FL 33803 PH:863-838-4459 email: [benz425@aol.com](mailto:benz425@aol.com). Sponsor: IMPERIAL RC CLUB

## **2nd Annual Electric Fly In**

FL

11/12/06 - Apopka, FL (C) 2nd Annual Electric Fly In. Site: Club Field. Wallace Zober CD, 2273 Bent Oak Dr Apopka FL 32712 PH:407-880-1298. Sponsor: REMOTE CONTROL ASSOCIATION OF CENTRAL FL

**Corvin Miller Memorial RC Scale Classic**

FL  
11/18/06-11/19/06 - Sarasota, FL (AA) Corvin Miller Memorial RC Scale Classic for 511, 512, 520, 522 (JSO). Site: Club Field. Jonathan Hay CD, 2252 Shadow Lakes Dr Sarasota FL 34240 PH:941-377-8676 email: [rcflyer@verizon.net](mailto:rcflyer@verizon.net). On site motor home parking - no hookups. Great food. Trophies to third place in each event. Sponsor: SARASOTA RC SQUADRON

**Tangerine Soaring Championships**

FL  
11/25/06-11/26/06 - Oviedo, FL (AA) Tangerine Soaring Championship for 442, 444, 460(JSO). Site: Red Ember Road. Rick Eckel CD, 696 Brown Bear Ct Winter Springs FL 32708 PH:407-733-6380 email: [raeckel@usa.net](mailto:raeckel@usa.net). Thermal Duration event. Two days for unlimited with the addition of 2 meter on Saturday and RES on Sunday. Events will be flown seeded Man-on-Man format. Please pre-register for frequency allocation. Sponsor: ORLANDO BUZZARDS

**Upcoming IMAA Regional Events**

**Chap. 368 - November 4th. Swap Meet - November 4, 2006**

1 day only Sarasota, Florida, SRQ field at Rothenbach Park, Bee Ridge Road & Bee Ridge Extension. Refreshments available, set up fee \$15.00, bring your own tables or work out of your vehicle. Gates open 7:30 AM, gates close at 2:00 PM, Hosted by Golden Eagle Squadron #368. **For info contact: Chuck Duke, 3588 Shamrock Dr. Venice, FL 34293, 941-493-7383**  
**E-mail: [cjsjduke@comcast.net](mailto:cjsjduke@comcast.net).**

**Chief Treasurer- Sam Varn**

*Editor's Note: The Treasurer's report is published for Members only. The public version of the Newsletter does not include this information.*

Our October had a little more activity than normal. We received dues from three members (two new and one late renewal). We also received funds from mug sales but the big jackpot came from the Fun Fly on Oct. 14 where we netted after expenses \$675.00! That's the biggest return on an event since I've been Treasurer. Great job by everyone involved!

As for expenses, we had to pay for the nifty new mugs, field maintenance, site insurance, Eat and Meet expenses for the last two meetings and the concession expenses for the Fun Fly. The balances are after all is said and done.

The hard core numbers are:

Cash - \$                      Checking - \$                      Savings - \$                      CD - \$

**Total funds - \$**

Sam

**Chief Scribe- Steve Warmath**

The October Club meeting was called to order at approximately 7:00 pm. Due to the advertised start of the FSU/ NC State football game at 7:45, the meeting was brief.

**Visitor/ New member Introductions-**

New Members Present- **Dan Callahan**

Guests- **Garrett Robert**

**The Treasurer's Report-** Sam noted there were no changes in the Treasurer's Report as published in the Newsletter. He read through them to the members. Motion to accept the report was made and passed.

#### **Old Business-**

- The Field was mowed and looked good.
- The Fall Fly-In is a week from Saturday. The Club has received permission for an early start at 10:00. There will be some people coming down from Columbus to do some demos. There will be door prizes to give away. Frank added that Horizon and Great Planes were donating some items. The areas will be roped off on Friday. He requested that even if members come out and don't plan to fly, pay the \$10.00 to help the Club. A six-channel radio will be raffled away to a registered pilot. Pilots may purchase extra tickets. The pilots meeting will be at 10:30 and then flying will commence. Gordie Meade will give the safety briefing.
- The We Wa Fly-In is Saturday. Go if you can.
- Elections are coming up for Club Officers. Mike said we needed to fill the positions of President and Vice-President. Nominations should be forwarded to Steve Warmath- Secretary.

#### **New Business-**

- The recovery gutters are pretty beat up and in need of replacement. They are about \$5.00 a piece and we will need foam insulation to glue the sections together. A motion was made and passed to purchase new gutter sections.
- Mike and Richard Wynn had been discussing making new member badges and frequency pins for the Club. It was desired to have credit card sized frequency pins so they would be easier to see and make it harder to accidentally forget to put them back in the cabinet. Steve had prepared the proposed artwork that Mike showed everyone. He hoped we could go ahead and get started making them. Two sets of frequency pins will be made. We will continue to use the existing board. There will also be printed 20 member badges with no names so new members can have a temporary badge until their named badge can be made. We were looking at magnetic clips instead of regular clips.
- Mike said the latest update on the landfill conversion was in his October Newsletter Brief. There is no scheduled meeting for October.
- Mike reminded everyone that this was the last regular Club meeting at the field and that we would be back at Grace Lutheran Church at 7:30 for the November meeting.

#### **Announcements-**

- Mike announced we had Club coffee mugs made with the new Logo for sale at \$6.00 each. Frank said he had some at HobbyTown for sale as well.

**With no additional business, the meeting was adjourned at approximately 7:20 pm.**

**Secretary Note-** As of the date of publication of the November Newsletter, the following Club Members are on the ballot for 2007 Club Officer elections in December.

#### **SRCC Officers**

President –

Vice President –

Secretary – Stephen Warmath (incumbent)

Treasurer - Sam Varn (incumbent)

## **FLAPERONS** By Clay Ramskill

One neat way to get some flaps on your plane is by the use of flaperons - a term implying use of ailerons as flaps. If you have a computer radio, or go to the trouble of a mechanical mixer, the rest is easy - after all, the ailerons would be there, anyway.

There are, however, some intrinsic problems associated with the use of flaperons; not insurmountable problems, but they must be addressed. The worst of the problems fall into two areas: 1) Adverse yaw while the 'flaps' are down, and 2) Pitch trim changes when lowering the 'flaps'. We'll address these separately.

**ADVERSE YAW.** With 'flaps' down, use of ailerons to bank the plane will produce a yaw, or turning action AWAY from the intended direction of turn. This is called adverse yaw, and makes turning with any sort of precision very difficult. With both ailerons down, any aileron deflection will cause more drag on the rising wing - the one on the outside of the intended turn. Note fig. 1; to roll to the right, the right flaperon is raised, decreasing drag on the right wing - and drag on the left wing is increased as that flaperon is dropped further. This imbalance of drag on the wings will try to yaw, or turn, the plane to the left, opposite our intended right turn.

Adverse yaw effects are worsened by a long wing (high aspect ratio), or by shorter tails and smaller fin/rudder areas.

Counteracting adverse yaw effects is easier said than done manually. All you have to do is feed in large amounts of rudder in the direction you wish to turn! A much better bet for most of us is to use mixing on the radio - what you need is to have aileron-to-rudder mix when the flaperons are down.

**PITCH TRIM.** As with any flaps, there will likely be a pitch trim change as flaperons are lowered.

The trim change can vary from negligible to violent, either up or down, depending on the plane. As a general rule, planes with long tails and large stabilizers, and high-aspect ratio wings, will tend to pitch up with flaps down. But aircraft with smaller stabs and shorter tails, and low aspect ratio wings, may very well pitch down.

Lowering flaps on a Seniorita, Telemaster, or most trainers, then, will cause the plane to pitch up. On a Hots, CAP, or many acrobatic craft, the pitch action may well be downward. And some 'in-between' planes will have very little reaction. These pitch trim effects are also dependent on your flying speed when lowering flaps/flaperons, and the power setting at the time.

Counteracting pitch trim effects could be done by manually resetting trim each time you lower or raise the flaperons, but this is NOT recommended. Again, the best solution is mixing - either mechanical, or through your radio. Unfortunately, very few radios other than computer types offer the required flap-to-elevator mix.

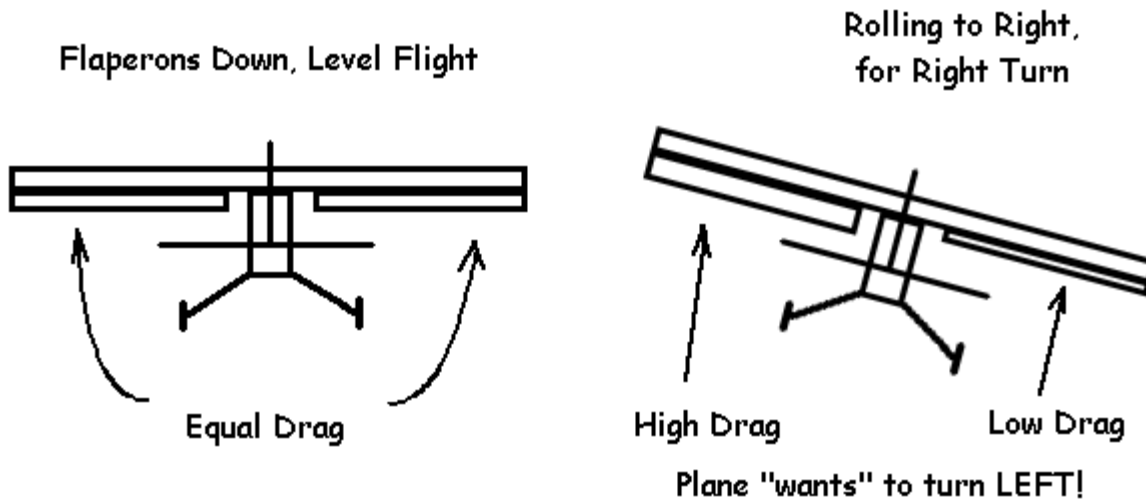
A few more notes:

1) Be sure to allow for the higher aileron deflections in the down direction. Ailerons must be configured to handle normal aileron deflection, PLUS any flap deflection.

2) Don't even THINK about using barndoor or outer panel ailerons as flaperons. Use only strip ailerons. This is because lowering flaperons effectively raises the angle of incidence. You do not want the outer part of your wing to have higher incidence or angle of attack than the inner portions - that leads to tip stalls, big time!

By all means, if you can cope with the yaw and trim considerations, go for it - flaperons can add a new dimension to your flying enjoyment!

## Flaperon Turns (looking from rear)



## WINDY WEATHER PLANES

All too often, on an otherwise nice, but windy day, folks just don't fly. Obviously, for a beginner, that's just common sense - but for someone who has some experience, the wind should just be another challenge to add some spice to their flying.

While its easy to see that experience level has a lot to do with how much wind is too much, it may not be quite as apparent that the type of plane you're flying also can have a great effect on your ability to handle winds. Let's go through a bunch of airplane design features and see which ones give us the best flying characteristics to handle winds and the resulting turbulence.

**Size:** In general, the larger the plane, everything else being equal, the better it will handle winds of all kinds; they just don't "flop around" as much!

**Dihedral:** The more dihedral in a planes wing, the more it is going to be affected by crosswind gusts; it is hard to keep the wings reasonably level, and therefore lineup to the runway is difficult in a crosswind situation.

**Wing Loading:** The higher the wing loading, the less a plane will be affected when hit with a gust.

**Aspect Ratio:** Lower aspect ratio (stubby) wings will be less bothered by gusts; there is less leverage for side forces to upset the plane, and the lower aspect ratio wing has a greater tolerance to changes in angle of attack caused by gusts.

**Power:** Pretty obvious - having the power to overcome the forces provided by the wind is a must. The same goes when you get into a sticky situation.

**Lateral Control:** Ailerons are very beneficial in a crosswind, in landing and takeoff phases. The ability to dip a wing into a crosswind without changing heading is essential, as is the ability to rudder the plane parallel to the runway heading while keeping wings level with aileron while landing.

**Landing Gear:** tri gear planes are easier to land and take off in a crosswind than tail draggers. The wider the spread on the main gear, the better.

**Maneuverability:** This one is a bit harder to quantify. You want a plane with stability, yet you do need good maneuverability to cope with gusts. So you want a plane that is stable, yet responsive.



**Wing Mounting:** Generally, a low wing plane will handle crosswinds better. This is because the CG of the plane is nearer, in a vertical sense, to the aerodynamic center of the wing. So the low wing plane is not as easily rolled by a side gust. And by mounting the main landing gear on that low wing, we can spread them out wider.

It's unfortunate that almost every item above is in direct opposition to the characteristics found in a lot of popular trainers, the main exception being the requirement for tricycle landing gear. But even with trainers, there are differences; compare a Seniorita with the Cadet Mk2. While the Seniorita may be a bit slower and a bit easier to fly, the Cadet, with its ailerons, higher wing loading, lower aspect ratio, and lower dihedral, is a far better plane flying in windy conditions.

Going a step further with the same kit manufacturer, their Cougar(.40)/Cobra(.60 size) kits embody ALL the right characteristics for windy flying.

And in closing, I offer Confucius' only known saying about R/C flying - "To learn to fly in wind, one must fly in wind!"

## **Setting Mixture Controls**

Many people have problems setting the mixture controls on their engines. My belief is that this is because they do not fundamentally understand how a carburetor works.

Model aircraft engine carburetors are actually very simply in their operation. This article will not discuss the inner workings of the carburetor. However, if you do not understand how a carburetor works, then please read [How to disassemble a Carburetor](#) and [How to assemble a carburetor](#). These two articles should help you understand what's inside and what the various parts do.

Once an engine is broken in and the carburetor is set properly you should not have to make radical changes unless something else that affects engine performance has changed. These things include changing fuel, propeller or exhaust system or drastically different climactic conditions.

After you start your engine run it at 1/4 to 1/2 throttle for about 30 seconds to warm it up. If the engine is new then you may have to make some coarse adjustments just to keep it running, but let the engine run for a bit before attempting to dial it in.

### **Setting the High-Speed Needle**

**Tip:** When tuning a conventional engine with the needle in the carb, you can turn the needle until the engine is at the setting you want. Some engines with remote needle valves take a second or two to react to changes in needle setting. Make small changes and then give the engine a chance to react before making additional adjustments.

Most carburetors are designed to have the high-speed needle set first and then the low-speed needle. After the engine is warm set the high speed needle to near peak RPM. Do not lean the engine to the point that it is screaming.

### **Set the high speed needle while holding the airplane straight up.**

In this position it is most difficult for the engine to draw fuel and this is the condition under which you want to check the high-speed needle. [Lean](#) the needle to peak RPM and then back it off a few clicks to richen the mixture slightly. If the engine is new and is not an [ABC engine](#) then back off the high-speed a few more clicks so it is almost breaking into a "4-cycle" setting.

This setting will give you good overall performance without leaning out too much in climbs.

If you are having problems with your idle setting that did not exist before, it is probably because you changed the high-speed setting since you last adjusted the idle or the engine wasn't fully broken in. Make sure the high-speed is right and the engine is broken in before attempting to set a good idle mixture.

### Testing the Idle Setting

There are a couple ways to check the idle mixture. The most popular and most accurate way is to use the **pinch test**. Pull the throttle back to idle. Pinch the fuel line and hold it.

- If the engine begins to **speed up** then the idle mixture is **too rich**.
- If the engine immediately **slows down** or tries to quit then it is **too lean**.
- If the engine slowly speeds up or slows down then the mixture is close to right.

When the idle is adjusted properly then when the fuel line is pinched the engine will run at the same rpm for several seconds and then begin to slow down. The engine should transition smoothly from idle to full throttle without burbling, loading up or dying.

### The Wrong Way to Check the Idle Setting

The way a lot of people check their idle setting is to reduce the throttle to idle and then immediately gun the engine. If it transitions ok then they think everything is set properly. The problem with this technique is that it does not allow the engine to idle long enough to reveal a problem.

If the idle is close to being properly set then you have to let the engine idle for several seconds to see if there is a problem. For example, if the idle is ever so slightly too rich, then it may take several seconds for the engine to load up with enough fuel at idle for it to be noticeable when the throttle is advanced.

If you really want to get the idle setting dialed in, then let the engine idle for 15 to 30 seconds and then advance the throttle. If it still transitions well, then the engine is set properly.

If the engine sputters and spits then the idle mixture is too rich. If it slows down then it is too lean.

Setting an engine is not difficult. It is just a matter of going through a set of procedures and being a little patient.

## Hangar 9 PULSE XT Steve Warmath

You know how Frank Bastos of HobbyTown likes to bring new toys to the field. You know he does it to drive us crazy. A few weeks back at an afternoon flying session, I saw Frank's H9 Pulse XT. He was getting ready to fly and I made the comment, I had thought about getting one because I liked it's sporty, classic, looks. A little later, I walked up to him while he was flying and he immediately handed me his transmitter and walked away. Pretty bold move, I thought. My attention was immediately drawn to how nice the plane tracked through the air. It was quick or slow, however you like it. Rolls were a little coupled due to the dihedral, but not too bad. It will snap quickly. It tracked really straight going vertical.

I liked this plane so much, I got one of my own that week.

**Construction-** There is nothing unusual about assembling this ARF other than some interesting features. The whole tail group thru-bolts to the fuselage. This is good for replacing broken tail feathers; I opted to epoxy everything in place as well. Another feature is the 2-part wing. It is joined with a carbon fiber tube. A dowel and wing bolt secures each wing half to the airframe. A nice feature if you are tight on storage or transport space. The wheel pants are well engineered and strong. The wide gear stance makes it stable on take-offs.

I opted to use an OS 46AX for power. Plenty of power and a very reliable engine. The plane also comes ready with the necessary parts for electric conversion. The recommended electric set up is an e-Flite 46 brushless outrunner motor, a Castle Creations Phoenix-60 ESC and two ThunderPower 7.4v, 4200 mAh

2S2P Lipo power packs. As an added feature, I mounted a "Voltwatch" LED Display in the cockpit so I can readily see the receiver battery status.

**Conclusion-** I recently flew it for the first time and was amazed at how quickly it wants to get airborne. It accelerates quickly and wants lift off by itself. Very little trim input was required. I didn't have to make any adjustments. This plane likes to slice through the air, so getting it to slow down for landing takes a little lead-time. Once it touches down, it sticks with no tendency to bounce off the runway. This will be one of my everyday flying machines. It's a nice sport flyer with no bad habits. It's "purty" too.



## DX7 7Ch DSM2 System w/AR7000 Rx & 4-DS821

### Servos

#### Overview

With the DX7 you'll be able to fly anything from micro electric helis, to big gas-powered IMAC planes without regard to frequencies and free from fear of interference. Calling this kind of thing "revolutionary" just doesn't cut it. It is nothing less than a quantum leap in RC technology that will change how you fly forever. Never again will the availability of a frequency pin dictate when you can take off. Never again will you have to ask, "What channel are you on?" Never again will your flying experience be interrupted by model-generated RF noise, interference from commercial broadcast towers, or anyone on another RC system.



## Key Features

- 20-Model memory
- Airplane and Heli software
- Switch assignment
- P-mixes
- Includes 4 powerful DS821 digital servos with high-tech resin gears
- 3-axis dual rate & expo
- 3-position flap (Airplane)
- 5-point throttle curve (Heli)
- 3 flight modes plus hold (Heli)
- Gyro programming (Heli)

CCPM, 2-servo 90°, 3-servo 90°, & 3-servo 120°



# VeraTech Aero's Phantom Sentinel

—Novel Flying Machine Planform

by Tom Atwood

It's not often that an entirely new flying machine concept is invented, and it's even rarer for a brand new idea to be given practical expression in a short period of time with tangible, real world benefits, yet that's what VeraTech Aero has accomplished. This patented aircraft design may seem faintly reminiscent of the free flight powered blade designs from decades ago—or you may see a kinship to the boomerang or

prehistoric battleaxe—but the Phantom Sentinel is fundamentally new. The first new flying machine design, arguably, in the better part of a century.

VeraTech Aero has developed a quiet and nearly invisible flying observation platform that can hover, close in over a target area without being detected.

VeraTech Aero notes that “the Phantom Series single blade rotorcraft has the ability to deliver close up, real time video intelligence within 75 feet of nearly any event and remain virtually undetectable to the human eye.”

This highly scaleable design will likely play an important role for the military, in the war against drugs and in other aerial surveillance applications.

The Phantom Sentinel has three arms; two are fuselage segments and one is an air foiled blade, the only lift-generating arm. As it spins faster, the craft self-stabilizes and the center-mounted observation camera spins about a balance point that is inside the camera’s actual rotational orbit. The camera orbits around this point in space to allow a 360° scan that is assembled into a panoramic view.



## FLIGHT PERFORMANCE

The Sentinel pierces the wind with ease given its low profile. The slightly different angles of attack of the two powered propellers mounted on two fuselage tips enable the pilot to control the attitude of the Sentinel in the pitch and roll axes. As with a helicopter blade, inputs are made 90° prior to the desired change.

The onboard camera uses technology akin to high speed bill-counting digital imaging. The imaging system can parse 360° of panorama into single images even at rotational speeds above 1,600 rpm. These images can be spliced together into a 360° panorama in real time, and segments or all of this can be viewed through virtual reality glasses. VeraTech notes that experiments with a second onboard camera pointing downward enables the viewer to see a “spherical panorama” or pie slices thereof.

The design has been successfully scaled up from two to ten feet. The four-pound Phantom Sentinel shown is powered by 2 to 4 1600mAh lithium polymer batteries and two brushless motors spinning any of a

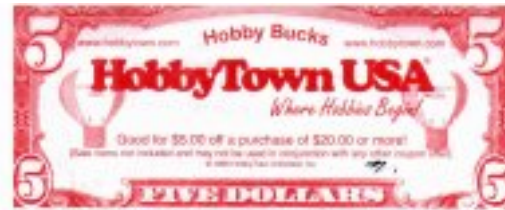


combination of props that are selected based upon payload and flight time requirements. It has a mission duration of 40 minutes (or longer while in a battery-efficient loitering hover mode) and can be launched by hand, from a canister or from an aircraft. The collapsible blade and fuse sections are made out of carbon fiber; antenna receiver areas are made out of fiberglass.

**JOIN FORCES** Dean Tangren of VeraTech Aero noted to *Fly RC* that VeraTech Aero is seeking technology partners to further develop the aircraft's maneuverability and flight performance. Interested parties should call Dean Tangren at (952) 941-0083.

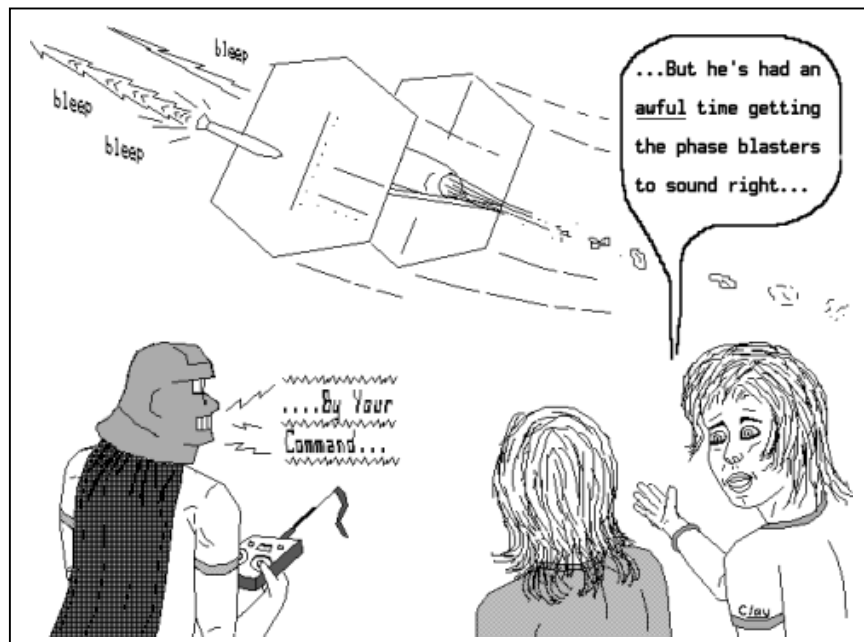
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# Seminole Radio Control Club Tallahassee, FL

AMA Charter #216, 1969-2006

## SRCC Officers

President – Mike Atkinson  
Vice President – Geoff Lawrence  
Secretary/ Newsletter Editor – Stephen Warmath  
Treasurer - Sam Varn  
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Field Safety Officer- Gordie Meade

## Field Hours

12 Noon till Dark- These hours apply to **all** aircraft, gas **and** electric.

## Training Notes

To schedule a training time contact Mike Atkinson.

## Flight Instructors

Mike Atkinson- Primary/ Advanced Flight Instructor (Coordinator)	926-4692
Geoff Lawrence- Primary/ Advanced Flight Instructor	942-9807
Mike Kinsey- Primary/ Advanced Flight Instructor	566-0144
John Hall- Primary/ Advanced Helicopter Flight Instructor	893-6457
Jay Leudecke- Primary/ Advanced Helicopter Flight Instructor	508-7135
Jeff Owens- Ground School/ Airworthiness Instructor (Fixed Wing)	894-2504
Steve Warmath- Ground School/ Airworthiness Instructor (Fixed Wing)	509-0672
Frank Bastos- Hobby Town Flight Demonstrator	671-2030
Don Coon- Leon High Aerospace Club Instructor	488-1971 x 2750

## Club Meeting Location and Time

**Please Note: Starting November 2, 2006, Club meetings are back at Grace Lutheran Church.**

The regular club meetings are held on the first Thursday of each month at 7:30 PM at the Grace Lutheran Church on Miccosukee Rd. Head out Miccosukee Rd., cross Capital Circle NE, and the entrance will be the first one on your right. Once you park, follow the sidewalk around the left side of the building and go down the hill. We meet in a room on the first level.

**Submissions-** Submissions are requested to be in M.S. Word format. Photos should be in .jpg or .tif format. Vector art accepted in Corel, Illustrator and AUTOCAD format. We will, however, accept anything to make it easier for those who wish to contribute. Submissions are due no later than the 23<sup>rd</sup> of the month. Send your submissions to [ssw@nettally.com](mailto:ssw@nettally.com) or by phone, Steve at 509-0672.

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