

# The Seminole Flyer

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A chartered member of the  
Academy of Model  
Aeronautics  
AMA Charter #216, 1969-2011



"The Seminole Flyer" is a publication of the Seminole Radio Control Club of Tallahassee, Florida **November 2012**

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## INDEX

- From the Editor
  - Chief Copilot Report
  - Chief Treasurer Report
  - Chief Scribe Report
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## From the Editor...

Well, it's November 1<sup>st</sup>, 2012 – Hmmmmm, divide by 4 – that reminds me that this is a Presidential election year! Actually, I don't need the reminder as I live this world every day – it's fun and I have the pleasure of working with some really terrific folks around the State that work really hard to ensure your vote counts – please take advantage of the opportunity to voice your opinion in a way that matters and vote by November 2. Ok, off soapbox!

Given the activity of the voting season, I've think I've flown once in the past 4 months. So, I'm very reliant on folks filling me in on club activity. Send your news my way and I believe my ability to get the newsletter back on track will improve beginning next month. In the meantime, please find enclosed items for the upcoming meeting as well as some useful input from copilot, Jeff Owens.

REMINDER: Meeting is November 1 and is being held at Hayes Computer – located behind Ruby Tuesday off Capital Circle NE.

Fred

## **Chief Copilot- Jeff Owens**

Last month I was testing some new maneuver sequences for Senior Pattern Association competition and I decided to use my Compensator which I hadn't flown for a while. The Compensator is the plane I used for the 2009-2011 contest seasons, while this year I used my new Dirty Birdy. I was shocked at how much harder certain maneuvers were with the Compensator than with the Dirty Birdy. Could I really have put over three hundred flights on a plane that required so much work to get through the maneuvers? Compared to the Dirty Birdy it flew like a truck. Something was seriously amiss here.

This is my backhanded way of introducing the subject of trimming. A properly trimmed plane can be a joy to fly while one that is out of trim can be a beast. So, what is trimming and why is it important? Consider the forces

acting on your plane – thrust, drag, lift, and gravity. If these are all balanced, then the plane will fly straight and level at a constant speed. Now, relatively few planes fly like this for very long. We put them through maneuvers of one kind or another (some intentional, some not), we vary the speed for landing or takeoff, etc. The goal is to have a plane that is stable and well behaved in all these flight regimes.

Before starting a trimming process it is vital to insure that there are no warps in the flight surfaces, the wings and tail are aligned properly, and the engine thrust angles (left, right, up, and down) are set properly. The primary adjustment that most pilots will have to make involves balance. The location of the center of gravity (CG) has a profound effect on how the plane flies. If a plane is too nose heavy, then it likely will require a lot of up trim on the elevator, and one may run out of elevator authority when trying to flare for the landing while at low throttle. Also, a nose heavy plane will tend to dive when rolled inverted, since the up trim is now down trim! By contrast, a tail heavy plane will tend to be unstable and, in extreme cases, will be unflyable. The reason involves the interaction of the wing and horizontal stabilizer. A stable plane will have the center of lift of the wing behind the center of gravity of the plane. In this configuration the plane would tend to dive without something else acting. The stabilizer actually generates lift in the *downward* direction to counteract that. Now imagine that the plane noses up: the lift on the wing increases and now the stabilizer, being at a positive angle of attack, generates lift in the *upward* direction. Both actions tend to level the plane. The reverse occurs when the nose is lowered. So, one has a plane that will return to level flight if its flight path is disrupted. Now, image a severely tail heavy plane with the wing's center of lift *ahead* of the center of gravity. To fly in level flight, both the wing and the stabilizer must generate positive lift. If the plane noses up the wing will increase its lift tending to make the nose rise even further. The stab, having less area, will not be able to counteract this and the nose may rise enough to cause a stall and, perhaps, the plane will enter a spin. It will not return to level flight on its own. Thus, we do not want a tail heavy plane.

How one chooses to balance the plane will depend on the type of flying being done. For mostly level flight with a few turns one may want a forward CG (slightly nose heavy) for smooth stable flight. For aerobatics, one would want inverted flight to require rather little down elevator, so a more rearward CG would be preferred – but not so far back as to make the plane unstable. The location of the CG is probably the one adjustment other than control throws that most pilots will make, especially with an ARF where only the battery location is adjustable.

There are other adjustments to check, however. Is the plane laterally balanced? That is, is there a heavy wing? Check this by supporting the plane by one propeller blade and the bottom of the rudder. Does it tend to drop a wing? If so, you'll have to fly with some aileron trim and this will vary in its effectiveness with airspeed. That means that if it is trimmed for high speed flight it will be out of trim for landing! Also, the trim will work the wrong way if you roll inverted. So, place some weight on the tip of the light wing – it won't take much and it can improve the flight characteristics of the plane.

Does the plane tend to climb when you go to full power and dive when you throttle back? All planes will do this to some extent, but if the actions are extreme, you may want to add some down thrust. A shim behind the top of the engine mount will do this.

Does the plane tend to pull left or right in a vertical climb under full power? Then you may need some right or left thrust. Again, a shim behind the engine mount can fix this.

There are more adjustments that can be made for specialized types of planes. Wing dihedral, wing incidence, and stab incidence are all important, but their effects are subtle and go beyond what most sport flyers will make.

So, what was wrong with the Compensator? It turns out that I had been flying it slightly nose heavy. That meant that it pitched downward when rolled inverted – not a lot, but definitely more than the Dirty Birdy. That meant that it required more elevator input during three horizontal rolls and that it tended to deviate slightly on vertical rolls in a Top Hat or Figure M. Subtle effects, yet noticeable once one has flown a plane that is correctly balance. I also discovered a slight mismatch between incidence of the wing halves, which may explain an asymmetry between how it spins to the left or right. And I found that the vertical fin was misaligned, effectively giving some left rudder. That helps explain the asymmetrical spin behavior and the fact that the plane pulled left in a vertical climb. I had countered that with right thrust and some right rudder mixed to full throttle. So, I was mixing out some undesired flight behavior that was caused by underlying misalignments. No wonder my scores went up with the Dirty Birdy! Now, the DB was built in a jig – it is an ARF. The designers got it right and it is a very straight airplane. My goal is

to have my new Deception, which is in the covering stage, be as straight as the DB. Then I can start the trimming process with a straight airframe.

[Club Calendar](#)- The schedule reflects current Club events planned for the year to date. Check monthly for additions and deletions at the meetings and in the newsletter. For regional, sanctioned AMA events, see your AMA magazine or visit the AMA website section "Calendars".

## **Chief Treasurer- Bill Ashbaker**

**Seminole RC Club**  
Financial Statement for  
September 29 through October 26, 2012

# Chief Scribe- Chris Bailey

## Meeting Minutes Seminole Radio Control Club

October 4, 2012

### Call to Order

President Jim Ogorek called the meeting to order.

### Secretary's and Treasurer's Reports

The August 2, 2012 meeting minutes were accepted. Note: the September meeting was cancelled due to inclement weather, thus no minutes were recorded. The treasurer's report for September was read by Jim and accepted by the membership.

### Old Business

Jim updated members on his efforts to establish a new club meeting location for the winter months and requested member feedback and suggestions. Members discussed the following options: revise the meeting schedule from Thursday at 7:00 p.m. to Saturday afternoon and hold the meetings at the airfield; solicit local restaurants that have meeting space available for various clubs. Jim noted that he was in contact with the manager of the Beef O' Brady's located in the same shopping plaza as HobbyTown USA, and is working with him to determine available times as the first Thursday of the month was already booked by another club.

### New Business

Jim announced that Frank, owner of HobbyTown USA, would like to speak at the November or December club meeting about his recent visits with hobby product manufacturers in China and provide a product review on new items coming on the market.

Jim provided members with an update on the scheduled running meets for October and November. November currently has three scheduled meets: 3<sup>rd</sup>, 8<sup>th</sup> & 9<sup>th</sup>, and 17<sup>th</sup>.

Member discussed the need to replace the club's picnic tables, currently in a state of disrepair, with new, more durable composite picnic tables. Joe offered to research available options and pricing, then present them to club officers for consideration.

Jim spoke about his concern with the club's visibility within the community and his desire for it to be a more proactive organization. The next community event is SouthWood Stock on March 2<sup>nd</sup>. Volunteers are necessary to conduct flight demonstrations at the event, as well as other local events where the club can promote its existence and contributions to the local community.

### Adjournment

The meeting was adjourned at 7:19 PM.

# Seminole Radio Control Club Tallahassee, FL

AMA Charter #216, 1969-2010

## SRCC Officers

<b>President</b>	Jim Ogorek
<b>Vice President</b>	Jeff Owens
<b>Secretary</b>	Chris Bailey
<b>Newsletter Editor</b>	Fred Schmidt
<b>Treasurer</b>	Bill Ashbaker
<b>Field Safety Officer</b>	Dave Sellers

## Field Hours

<b>Electrics/ Sailplanes</b>	9:00 am till 9:00 pm.
<b>Gassers and Nitro</b>	12 Noon till Dusk.
<b>Electric Service</b>	8:30 am- 9:15 p,m

## Training Notes

To schedule a training time contact Mike Atkinson.

## Flight Instructors

### ***Primary/Advanced Flight Instructors***

Mike Atkinson	926-4692
Geoff Lawrence	942-9807
Jim Ogorek	766-2477
Chris Bailey	322-4047

### ***Primary/Advanced Helicopter Flight Instructor***

John Hall	893-6457
Chris Bailey	322-4047

### ***Ground School/Airworthiness Inst. (Fixed Wing)***

Jeff Owens	894-2504
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### ***Hobby Town Flight Demonstrator***

Frank Bastos	671-2030
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## Club Meeting Location and Time

**November- March:** The regular club meetings are held on the first Thursday of each month at **7:00 PM** at **HobbyTown** on Thomasville Road. The Club offers food and drinks for a small charge at 6:30.

**April- October:** The regular club meetings are held on the first Thursday of each month at **7:00 PM** at the Flying Field. The Club offers food and drinks for a small charge at 6:30.

**Newsletter Submissions-** Submissions are requested to be in M.S. Word format or via e-mail text. Photos should be in .jpg or .tif format. We will, however, accept anything to make it easier for those who wish to contribute. Submissions are due no later than the 28th of the month. Send your submissions to Fred Schmidt. [schmidtfjs@gmail.com](mailto:schmidtfjs@gmail.com)

SRCC thanks Graybar Electric in Tallahassee for its assistance in helping to upgrade our flying facility.

