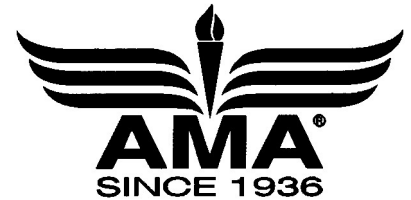


The Seminole Flyer



Charter member of the Academy
of Model Aeronautics since 1969

AMA Charter Club 216



June 2014 Issue

Firecracker Fly-in Saturday the 5th of July

Come out to the field Saturday, July 5th for hamburgers, hot dogs and fun for all. The Flying will start at 9:00 am and continue until the thumbs give out.

Club T-shirts are still available for \$15.00. Hamburger and hot dog combo meals will be \$5.00.



Leon County to Prohibit RC Flight in Tallahassee Greenways

The county is taking steps to prohibit radio control airplanes, helicopters and multi-rotors in the county's greenways. As usual, some folks have abused the privileges of our hobby. These are not Seminole Radio Control Club members, but their actions impact us in several ways.

The immediate reason for the county's action involve people recklessly buzzing horseback riders at the Alford Greenway. This is hazardous on several levels, especially for the horses and riders. The horses can be spooked and the horses and riders could be struck by aircraft.

The county talked to us about our willingness to accept new members. Obviously, we are happy to accept any responsible individuals who are AMA members and pay club dues.

A potential outcome is that some individuals may attempt to fly at our field without AMA or club membership. If you do not recognize individuals who are attempting to fly at the field, here is our recommended approach:

1. Approach the individuals and politely introduce yourself.
2. Ask whether the individuals are new club members and AMA members. We will list all current club and AMA members on the white box in our pavilion for your reference. You can ask to see their club and AMA ID cards.
3. If the individuals are not club or AMA members, politely explained that, even though our field is on county land, we lease exclusive rights and it is not a public facility. Further explain we welcome new members and there is a supply of membership applications in the white box in the pavilion.
4. If the individuals are current AMA members, invite them to fly as your guest.
5. If the individuals are not club or AMA members and you are willing, invite them to fly under your supervision. However, this requires that you stay with them while they fly and be their spotter, assure that they observe all safety requirements and be ready to take over their transmitter if there is a problem.

6. If the individuals are belligerent, do not confront them further. Call the Sheriff's office and ask that they send a deputy to remove them from our leased property. The sheriff's office number is 922-3300. Our field address is 7550 Apalachee Parkway, behind the recreational fields.

Remember that we can only ask individuals to leave our runway and pavilion areas. And, the sheriff's office will not remove non-member flyers from adjacent county property unless the county prohibits RC activity in county parks as well as the greenways. We can notify the sheriff's office if someone is engaging in hazardous activity. Unfortunately, this means someone could walk over to the runners parking area across from our field and fly from there.

We will keep you up to date on these issues.

Club Meeting News

Randy Yarborough, Secretary

Call to order

The meeting was called to order at 7:05 p.m. by President Mike Levine.

Visitors were Michael and his wife.

First item reviewed was the current 2014 Club Calendar.

Club Calendar

It was agreed that the club will hold a July 5th Firecracker Fly-in event. Remaining club T-shirts and grill food will be for sale.

The club Flying for a Cure charity fundraiser will be held on October 4, 2014. It was decided that the fly-in will be an AMA sanctioned event with an ad in *Model Aviation* magazine if an AMA contest director is available to supervise. Over \$500.00 worth of RC merchandise donated by A Main Hobbies will be auctioned.

Secretary's Report - Randy Yarborough

May 2014 SRCC meeting minutes distributed in the club newsletter by Randy Yarborough were approved.

Treasurer's Report - Bill Ashbaker

Bill Ashbaker read the current treasures report.

Currently we have 87 members on the roster

Recent expenses were related to the annual Warbird Fly-in.

Using food leftover from the warbird event for the Firecracker Fly-in will further offset food expenses.

The treasurer's report was approved.

Safety Officer Report - Jim Ogorek

No safety violations at SRCC Field.

Be aware that Leon County greenways may soon be non-flying areas.

Training Officer Report - Geoff Lawrence

Civil Air Patrol cadets' training session June 21, 2014, 9:00 am to 1:00 pm.

Field Marshal Report - Gordie Meade

Field is in premium condition.

THANKS, Gordy and Tristan, for a great job keeping the field in perfect shape.

If you smoke, please discard the BUTTS in the appropriate location.

Old Business

Proposed bylaws changes were distributed to all members for review prior to the May official club meeting and discussed in the May meeting.

By-laws changes were voted on and approved.

New Business

Although the Leon County lease for our flying field has been renewed, we have not received a final copy. Jim Ogorek, our designated liaison with the county will get a copy for our records.

It was agreed that we will try to have an entertainment/education program at each club meeting to make them more interesting and to improve attendance.

Next meeting

July 17, 2014 at Beef O Brady's, 1800 Thomasville Road, 7:00 pm in meeting room.

Adjournment

It was moved, approved and the meeting was adjourned by Mike Levine at 7:25 pm.

Future Club Meetings Will Include Entertainment and Educational Programs

Club officers are working on new ways to make our club experience more enjoyable and useful. One idea is to take the opportunity of our club meeting gatherings to have a little fun and to help new members with RC technical issues. We had a glimpse at our June club meeting. Jeff Owens took VHS tapes of mid-80s television interviews with club members and transferred them to DVDs. We were able to view the interviews on Beef O'Brady's large screen TVs. I have never seen so much hair! Dress and hair styles have changed. It was interesting to see the changes in our club and equipment. Thanks Jeff.

Our July meeting program will feature an attorney who attended the California small unmanned aircraft system conference in California. That is the conference that generated so much notoriety over Tallahassee's "drone incident." He has become our local expert on unmanned aircraft law.

This is a MUST ATTEND meeting for all of our FPV and autonomous enthusiasts!

New Members

We have two new members. Please welcome Jay Wiggins and Gene Densmore when you get the chance. Gene is actually a new old member. Gene was one of the original members when the club first formed. He is interesting to talk with about the "old days." He is trying to get up to speed on the changes in technology over the past few years. I told him we are all ready to help.

CAP Cadets Complete Training

Local Civil Air Patrol (CAP) cadets completed their radio control flight training last week with assistance from Geoff Lawrence, Dan Ouellet, Matt Hendrix and others. The cadets want to get their full scale pilot's licenses eventually. Learning aerodynamics and aircraft control at the miniature level is a great start. The cadets are very enthusiastic and a great group of young people.





The A Main Hobbies' Pro Heli Team put on a show for club members last Wednesday, June 18th. In spite of a short notice of the event due to a communication mix-up, about fifteen club members attended. Attendees were able to enter a raffle for some very nice prizes. A WCTV news camera man was there and caught some exciting videos that were aired on television later that day. Although, some of our own Tristan Seely's flying was attributed to the demo team in the news coverage.

The team offered expert tips to heli pilots and interesting anecdotes about their travels across the USA. They also gave us \$555.00 worth of merchandise we will auction during our Flying for a Cure charity event in October. Items included a micro quad copter, transmitter case, battery charger and more.



most advanced 3D aerobatics. McGrath is known for his smooth style and for being an ambassador for our sport, helping hundreds of pilots with their helis. Jones got his nickname because he builds birds that are over the top, known for being beasts in the air complemented with his throw caution to the wind flying style. He is a favorite amongst spectators. LeBlanc is the team's young gun, but don't let his youth fool you. This kid's skills are amazing. Search online for his infamous flights over water!

The **A Main Hobbies' Pro Heli Team** is on the road from May through August visiting over 75 RC flying fields across the country and several of the hottest fun-flies. World-class pilots Greggor McGrath, Tim "The Beast" Jones and Devin LeBlanc are putting on amazing flight demonstrations, showing off their skills while pulling the

While visiting local flying fields, the team provides technical support to pilots, helps with heli set-ups and gives instruction for improving flying capabilities. Not only does the team rip up the sky, but they also have free swag for those that attend.

Around the Field . . .

Our 2014 Memorial Day Weekend Warbird Event:



Watch where you step!



Special guests



Big Bird!



Workin' hard



T-Shirts for sale



Old Warbird

Around the Field is a monthly collection of member items and activities. Feel free to email photos and comments for publication to SeminoleRadioControlClub@gmail.com



The **ST-Model DG-1000** is a 2 meter scale rendition of the DG-1000 sailplane. It features easy assembly, high aspect ratio airfoils, and a **Retractable Motor System**! It even has enough power to allow it to rise off the ground from a grass runway!

First Impression

This model looks good, both close-up and in the air! The molding is of good quality. The foam is mostly smooth. There are just a few visible molding marks on the underside of the wings, wing tips and horizontal stabilizer.

It flies well under power, with the RMS fully extended. It becomes a good sailplane when the RMS is retracted. It has a broad speed envelope. This allows it to thermal in light lift, yet speed up for good penetration in moderate turbulence.

The ST-Model, Sheng Teng Electric R/C Model Plane Co., Ltd., located in Jiaxing, China, was established in 2000 to produce R/C airplanes made from EPP foam material, which are “convenient” for consumers. This means that

their models are affordable, easy to assemble, and have excellent flight performance.

The DG-1000 is no exception. It meets all these corporate goals. Overall, it is fun to fly, and I am having a good time with it!

Unboxing and Assembly

The model arrived packaged in a box that seemed somewhat light. It is adequate to ensure a safe journey, since after unpacking, all the parts looked good. There was no visible damage, warping or dents, on any of the components. This model requires very little assembly to get it in the air. The servos, servo covers, linkage rods, and control horns are already in place, having been assembled at the factory. The RMS is installed and setup to function out-of the box, using a sequencing board.

The package includes a basic decal sheet, which can be applied in just a few minutes. All that remains to be done to complete the assembly, is to attach the linkage rod to the elevator and bolt-on the horizontal stabilizer with a single screw. Then just mount the wings, install and bind the receiver, and adjust the

control surfaces.

The nose compartment is tight. There is just enough room for a small receiver between the servo and battery compartments. Plus, to help stow the antenna, ST-Model thoughtfully molded in a small plastic tube, in the bottom at that location. One of my Spektrum AR600 receivers fits nicely in this area.



My 1300 mAh 3-cell LiPo battery fits perfectly in the molded battery

space. I just had to replace the ESC connector provided by the factory with an EC3 connector to match the ones on my battery.

This setup worked just right. The aircraft balanced perfectly on the recommended “Centers” of Gravity: 53mm behind the leading edge of the wing with the RMS stowed, and 46mm with the RMS fully deployed. There is no need to add any weights.

Since there is so little to do, the aircraft can be ready to fly in just a few minutes, unless you would like to customize it.

Custom Paint Job

To make the DG-1000 more visible, I painted the underside of the wings and the horizontal stabilizer “flat black”. Then I painted the wingtips, rudder and horizontal stabilizer tips “red”.

The black bottom really stands out! It helps me to see the model much further out! So far, I have flown it over ½ mile away, possibly as far as ¾ mile distant, without losing sight of it.

As to the “red” on the tips and rudder, I just think it makes the model look cool!



Should you decide to paint yours, note that ST-Model uses “very efficient” mold release compound in its manufacturing process. To give the paint a fighting chance to hold, I found that it helped to first sand the areas to

be painted with 400 grit sandpaper, then clean them with denatured alcohol.

RMS Sequencing Board

To better understand how the RMS worked, I read the manual several times.

The principle involved with the RMS is mechanically similar to how a retractable landing gear operates. However, there is a little more going on than that, since in addition to the folding arm, there is a motor and a propeller to account for. To make things simple, ST-

Model wires in a sequencing board, which allows the use of a simple 4-channel radio transmitter to operate the RMS from just the throttle stick.

Unfortunately, this did not work in my case. I ended up removing the board and configuring a custom programming mix.

Custom Programming

The problem I encountered using the included sequencing board, is that try as I may, I could not get it to power up normally. It kept showing a rapidly blinking light. According to the instructions, this indicates “not enough current to power up”. The manual suggests to use the throttle trim to in-



crease the current to the board.

However, the throttle must also be below its 24% travel setting, or the ESC will not arm. This combination just would not work with my setup.

Therefore, I decided to remove the sequencing board from the model, and create my own custom mix to control the RMS in the DX8 transmitter, using the gear switch.

The first thing I did, was assign the throttle cut-off function to the gear switch, so that when I select retract, the throttle will be completely “off”. This is done to prevent accidentally powering the motor when the mechanism is stowed. Then I programmed in a two second delay on the RMS (gear) servo, to slow down the deployment and retraction of the mechanism.

The way I use the system to deploy the RMS is by selecting “gear up” on the gear switch to extend it, then count 3 seconds to make sure that the RMS is fully extended, and then power up using the throttle normally. To retract the unit, I do the opposite. I make sure that power is “off” using the throttle, count 3 seconds to allow the motor/propeller to slow down, then select gear retract with the switch.

The two second RMS servo delay not only provides a smooth deployment, but also proved helpful one time as I accidentally hit the gear retract switch while the throttle was in the “full open” 100% posi-



tion. The RMS unit stowed normally without any incidents. Still, just to make sure, I prefer to manually count 3 seconds between using the switch and the throttle.

For the following two mixes involving the use of the motor, I was not sure of the required settings and used my best guesses:

Considering that the propeller trust line is “way above” the centerline of the model, I expected a noticeable nose down tendency, whenever applying power. Therefore, I configured a 23% up elevator mix, to the throttle movement. This looked to be just about the right elevator deflection when applying power!

The propeller is otherwise functioning in a conventional manner. This means that I expected conventional p-factor and torque – a left yawing tendency with the application of power. To compensate, I dialed in a 25% right rudder mix, to the throttle movement. This mix should be most beneficial when climbing at full power.

Since I like the radio to do as much of the work as it can, I configured some additional mixes. To help control the landing approach, I configured the wing with dual aileron servos and setup spoilerons on the 3 position flap switch. The 1st position is programmed for normal ailerons, the mid-position is set for 35% up on both ailerons, and the 3rd position is set at 75% up. To minimize abrupt changes

when deploying the spoilers, I programmed it in a slower 2 second servo speed. To assist with coordinated turns, I set up a 55% aileron to rudder mix.

The manual only suggests maximum control surfaces

deflections. It does not recommend any dual rates, or exponential settings. To archive a smother flight, I configured dual rates, and dialed in a lot of exponential. The full rates is set to 100% travel on all servos, with 40% exponential. The low rates is cut down to 80% on the ailerons, elevator, and the rudder with the same 40% exponential.

Maiden Flight

The DG-1000's maiden flight was on Sunday, April 6, 2014, at the Seminole Radio Control Club facility in Tallahassee, Florida. The weather was in the mid-70s, clear sky, with variable wind at 8~15 KTs from the South.

Just for fun, I decided to try to have the DG-1000 rise from the ground in a conventional manner. Therefore, instead of hand tossing it, I placed the model in the center of the grass runway, facing into the wind and deployed the RMS. I slowly added power, and at about half throttle, the model begin to slide forward.

I had good rudder authority so I continued adding power, and the model gently lifted off a few inches above the runway, all on its own. It accelerated nicely while in ground effect, as I continued adding power to full throttle, and maintained its height and direction, all without my intervention.

I commanded a slight nose up. The model transitioned easily to a

healthy climb attitude, which it maintained hands off after just 1 click of down trim!

So much for best guesses with the mixes – Sometime when the planets align just right, you get lucky! ;-)

I decided to fly one full circuit to see how the DG-1000 felt under power with the RMS fully deployed.

I turned left crosswind and leveled at a couple hundred feet above the runway.

The DG-1000 maintained level flight with about ½ throttle, so I proceeded to turn downwind while keeping the throttle at the ½ position.

Once established on downwind, the model flew hand off without any further trim.

I turned the model on a close base and reduced power to about ¼ throttle to begin the decent. Immediately, the DG-1000 nosed down and begin to lose altitude quickly.

Note to self: This RMS system is a “GOOD SPEED BRAKE”!

I added a little power to stretch the glide and turned on short final.

This worked well for a short approach!

I flared the model at about a foot off the runway and proceeded to make a normal touch-and-go.

Just add power to go back up! Not something I am used to in a glider.

This time, I climbed the model straight out to a comfortable altitude to test the RMS retraction. I leveled it at about 500 FT and cut the power. After counting 3 seconds, I selected the gear retract switch.

The RMS retracted normally with mild indication of the process. Visually, this was a slight altitude loss as the motor powered off and the “air brake” took hold. This was quickly followed by an increase in speed and the model leveling out on its own as the RMS finished stowing itself. Overall, the model



1000 need to come down quickly, just deploy the RMS at partial power. That works better!

I elected to make a normal glider landing approach. I used the first notch of spoilers on base, and went to full

spoilers on final. It worked well enough. The approach was predictable, and the model touched down 30 feet or so in front of me in a good 3-point attitude.

Altogether, my timer showed that I used about 3 minutes of power for the maiden flight. Total fly time was approximately 20 minutes. According to my charger, it put 650 milliamp back in to recharge the battery pack.

Therefore, the 1300 milliamp battery should safely supply about 4 minutes of "full" power – Enough for about 4 one minute climbs to 500 FT.

With a little luck finding thermals, it should be very easy to stay up 20~30 minutes per flight, possibly much longer.

Additional Flights

I flew the DG-1000 twice more that day. Both flight lasted over 30 minutes each. I encountered good lift and was able to perform mild aerobatics using only momentum. The wings have noticeable flex under load but seem to hold up well.

Interestingly, neither flight required any additional trim

changes.

Test Model Specifications

Wingspan: 2010mm (79.1")
 Length: 970mm (38.2")
 Weight: 750g (36.5 oz.) w/ Battery
 Battery: Turnigy 1300 mAh 3 Cell 20~30C LiPo
 Receiver: Spektrum AR600
 6-channels Full
 Range
 Transmitter: Spektrum DX8
 Sequencing: Custom
 mix on DX8
 CG: 53mm (2.1") behind leading edge of wing when RMS is completely folded and 46mm behind the leading edge when the RMS is fully deployed.

Sources

ST-Model DG-1000 PnP – <http://www3.towerhobbies.com/cgi-bin/wti0001p?&I=LXYYS4&P=ML>

Distributor: Tower Hobbies - <http://www.towerhobbies.com/>

Manufacturer: Sheng Teng Electric R/C Model Plane Company, Ltd. - <http://www.sheng-teng.com/>

Conclusion

The **ST-Model DG-1000** sailplane is a model that should be in any aficionados' hangar. It is simple to setup and a joy to fly! The RMS really makes it stand out at the field! Best of all, it is on sale today at Tower Hobbies for only \$124.00!



responded nicely to the transition.

It was easy to tell that the RMS was retracted - The model automatically settled in to a good glide and became more responsive.

Shortly thereafter, I noticed the right wing lifting slightly, possibly indicating lift on that side. I immediately turned 90 degrees to the right, and the model started rising in light lift. I established a tighter right turn to get it closer to the core of the thermal, while pulling a little on the elevator to keep the fuselage level. I was immediately rewarded with the model rising faster.

This thing does glide well!

Some additional minutes of flying to get comfortable with the DG-1000, showed me that it can slow down and turn fairly tight, without any bad tendencies, such as tip stalling. However, it prefers moving along at a good clip. This model has a lot of penetration for its size, and will retain a decent amount of energy, if you let it.

It is defiantly more of a sailplane than a glider!

While still high, I tested the spoilerons to find out what to expect before coming in for the next landing. They behaved as expected, without any unwanted characteristics or tendencies, or require any trim changes. It is good to know that the spoilerons work well. However, should the DG-

Classified Ads

Anyone in the club who wants to sell or buy RC equipment, send an email to seminoleradiocontrolclub@gmail.com with a very short description. We prefer a one or two line description: what it is, condition, price, who to contact and email or phone.

For Sale

Airplanes

Precision Aerobatics Addiction X, 50 inch wingspan, very good condition, \$350, Robin Driscoll,
850-597-2424 , robin.marcy@gmail.com

Powerplants

SAITO FA-82a 4-Stroke Nitro Engine with extras, new in box, \$490, Bill Ashbaker, bill.ashbaker@comcast.net

Electrical Accessories

Thunder Power LiPo Charger Model TP-1010C, like new, \$40, Bill Ashbaker, bill.ashbaker@comcast.net

Field Equipment

Hobbico Ultra-Tote Plywood Kit, new in box, \$12, Bill Ashbaker, bill.ahbaker@comcast.net

Seminole Radio Control Club

Tallahassee, Florida

SRCC Officers

| | |
|-----------------------------|--|
| President | Mike Levine southwoodmike@yahoo.com |
| Vice President | Jeff Owens jfolso@comcast.net |
| Secretary | Randy Yarborough rdyarborough@gmail.com |
| Treasurer | Bill Ashbaker bill.ashbaker@comcast.net |
| Field Safety Officer | Jim Ogorek jim.ogorek@yahoo.com |
| Field Marshal | Gordie Meade lmeade@fsu.edu |
| Training Coordinator | Geoff Lawrence k4nkc@comcast.net |

Flight Training

Primary flight training is available by appointment on Saturdays from 10:00 am until 2:00 pm when the weather is nice and not too breezy. Contact the Training Coordinator or one of the instructors to make an appointment:

Geoff Lawrence 850-591-6879

Mike Levine 860-922-4050

Jeff Owens 850-644-4765

Bill Ashbaker 850-656-5932

Randy Yarborough 850-523-0020

Jim Ogorek 850-766-2477

Matthew Hendrix 954-488-2738

Field Hours

Electrics/Sailplanes 9:00 AM till 9:00 PM

Gassers/Nitros 12 Noon till Dusk

Electric Service 8:30 AM till 9:15 PM

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

We welcome and encourage items for publishing in *The Seminole Flyer*. Please submit your suggestions to SeminoleRadioControlClub@gmail.com in Word format. Thank You.

www.seminolerc.com