



The Seminole Flyer

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

February 2006

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It's Float Fly Time again. See upcoming events.

Letter from the Editor- Stephen Warmath

This month's serving offers up more Club discussions on safety, crashes and the aftermath. Find a plane in the boondocks that's not yours? Do the right thing and return it to its rightful owner. See **Chief Pilot Report**. **Jeff Owens** has sent in a tip on putting the pieces back together after the crash. **Sam Varn** shares his adventures at the Hong Kong Toy Fair with Frank Bastos (Hobby Town). We asked Sam to update the Treasurer's Report before he left. The "**For Sale**" list is added to the newsletter this month. The **Beginner's Brief** will just scratch the surface of "**Radios**". There is so much information about radios, it is a daunting task to cover everything. A primer on "**Dual Rates, The Good, the Bad and The Ugly**" is included. In addition to posting local, upcoming events, some regional coverage is also included. If you know of any regional events that would be of interest, let me know. This month's video link has several clips of flying aircraft using the wireless video camera. "**Flight of The Super Cub**" is particularly impressive because the inside camera pans left and right. Check it out- http://www.rcdon.com/html/aircraft_videos.html

Chief Pilot- Mike Atkinson

What a welcomed surprise! January has turned out to be a terrific month for flying. Usually, we have several days of freezing weather, coupled with high winds. Mike Kinsey had previously donated a large tarpaulin for use as a wind barrier at the northwest corner of the pavilion. Fortunately, we haven't had to use it this year.....yet.

With the great weather, we've had a rather large attendance at the field lately. We've had an opportunity to meet several new members. Hobbytown USA is helping out quite a bit by referring all the new purchases to

the club for flight instruction and membership. Jay, John, and Gordie are doing a great job with flight instruction on the new helicopter pilots. I've noticed quite a few new members hovering at the field. The students from the Leon High School Aerospace club have been out on a couple of occasions and are progressing nicely. Geoff and I have been working with them. Mike Kinsey has also volunteered to help out with the training. A couple of the students are almost ready to solo, even though they've only had a few flights.

Apalachee Parkway Regional Park Update: The park planning committee will be scheduling a community meeting sometime in February. The club officers will be putting together an information packet related to the hobby and deciding on a spokesperson for the meeting. I'm also planning to assemble a field development committee of experienced modelers to assist the architectural firm when planning enters the next phase.

O.K., enough with the pleasantries. Recent events have forced me to address the issue of plane retrieval after a crash at the field. Each of us has had, or certainly will have, the misfortune of crashing a plane. As the saying goes, if you haven't crashed, give it time...you will. Hopefully, the damage will be minimal and you'll be able to find your aircraft and associated equipment. However, if you don't find your aircraft, it's still your aircraft. If you have a flat tire on the interstate and no spare tire, you may be forced to leave your car on the side of the road. Nonetheless, if you came back and your car was either stripped or missing, I'm sure you'd be filing a police report. The same holds true for the aircraft we unfortunately must leave in the woods from time to time. There are numerous planes unaccounted for in those woods. Please remember, they have owners. Just because you find one of them, you still have a moral responsibility to inquire about the ownership and return ALL the equipment to its rightful owner. If the owner is inclined to offer a reward, it's your decision to accept it or not. But, just because you do the right thing by returning equipment to its rightful owner, you are not entitled to any monetary compensation.

That leads to my final point. The issue of safety at the field was brought up at our last club meeting. That does not only include in and around the flight line. As we go through the woods on a retrieval mission, there are numerous hazards out there. One of which, would be the climbing of trees. As an owner of an aircraft stuck in a tree, there is very little anyone can, or should, do to keep you from climbing that tree for retrieval. However, if you are not willing (or able) to retrieve the plane yourself, you should keep some things in mind. If you ask an individual to get your plane for you, you are entering into a contractual relationship as far as the law is concerned. If that individual then goes and gets hurt, possibly falling from the tree, you then become liable for damages incurred. You may be the best, or hire the best attorney in the world, but at the very least, your life would be miserable for several months to possibly even years as a result. Therefore, the officers of the club strongly advise that ONLY licensed and insured individuals be hired to do plane retrieval from trees. I'm sure you've worked long and hard to get where you are. I'd hate to see it all be lost, paying for someone else's future medical bills.

Until next month,

Chief Copilot- Geoff Lawrence

Upcoming Events:

Saturday, February 4. Float Fly at the Rockin K Flyin Club in Jefferson County. See Mike Kinsey or me for directions if you haven't been. 10am until. Anything gas or electric that flies off water.

Saturday, February 25. Military Fly In at our field. 12pm until. Any military or civilian aircraft with military markings from any era gas or electric.

Friday and Saturday, March 3 and 4. Swap Meet at Perry Georgia. Start saving now.

Regional Events

Festival of Giants

FL

2/01/06-2/04/06 - Deland, FL (C) Festival of Giants. Site: Deland Airfield. Thomas Beckman CD, 104 Sycamore Lane Lake Helen FL 32744 PH:386-238-0700 email: brutusit@worldshare.net. Registration fee in advance \$20 on site

registration \$10 per day. Registration includes one meal a day and pilots raffle. Aircraft limited to not less than 60 inches for biplanes and not less than 80 inches for monoplanes. On filed camping ok no hookups. Ducted fans type jets meeting the 80 inch rule are allowed. Turbines will not be allowed. No person under the age of 10 will be allowed on the flight line. AMA and field rules will apply. There will be an altitude limitation, unknown at this time. For additional information Call Tom Beckman or visit the club website at www.delandrcclub.com. This is a Giant aircraft site with a 1000 ft concrete and an 400 ft grass runway. Sponsor: DELAND GOLDEN HAWKS RC CLUB

Pensacola Aerotow 2006

FL

2/03/06-2/05/06 - Pensacola, FL (C) Pensacola Aerotow 2006. Site: Coastal Airport. Ruston Rood CD, 3506 Arizona Drive Pensacola FL 32504 PH:850-432-3743 email: rcrood@aol.com. Sponsor: NORTHWEST FLORIDA MODELERS INC.

CRCS 2nd Annual Heli Fun Fly

FL

2/17/06-2/19/06 - Port Charlotte, FL (C) CRCS 2nd Annual Heli Fun Fly. Site: Hudson Field. Steven Leonard CD, 24540 Harborview Rd D4 port Charlotte FL 33980 PH:941-623-9390 email: sleonard51@gmail.com. CRCS is pleased to announce its 2nd Annual Heli Fun Fly. Stop by and bring a friend for food, friends, and flying. Free T-shirt with pre-registration (see website for details). \$25 landing fee covers all 3 days. Vendors and tailgate sales welcome. Must have proof of valid AMA to fly. Sponsor: CRCS

Wings Over Venice

FL

2/17/06-2/19/06 - Venice, FL (C-Restricted to IMAA) Wings Over Venice. Site: Venice Field. Jack Butler CD, 211 nature Way North Port FL 34287 PH:941-423-7037 email: jacknbutler@aol.com. I-75 Exit 195 East to first road (GP Station on left) Go left (north) and keeping on the right until you reach Flying Field (in the landfill) about 5 miles. Pay attention to speed limits. Sponsor: RC FLIERS OF VENICE

4th St Valentine Day Massacre

GA

2/18/06 - Loganville, GA (C) 4th St Valentine Day Massacre. Site: Club Field. Don Pruitt CD, 4054 Pinewood Ter Lilburn GA 30047 PH:770-921-7596 email: dppruitt@earthlink.net. 8 rounds of SSC combat. Trophies 1st to 3rd. \$20 entry fee and free lunch to competitors. Primitive camping, no hookups. Pilots meeting at 9am, first round at 9:30. Sponsor: HILL TOP FLYERS

15th Annual IMAA Big Bird Fly In

FL

2/26/06-2/27/06 - Port St Lucie, FL (C-Restricted to IMAA) 15th Annual IMAA Big Bird Fly In. Site: Midway Field. Ken Bridges CD, 9639 Fairwood Court Port St Lucie FL 34986 PH:772-201-5509 email: docbridges2@aol.com. From I-95 exit 126 go East 1/5 miles to Torino turn South 1 mile to Blunton turn West go .5 miles field is on North side. Sponsor: SUN DANCERS

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.

Cash -

CD -

Checking -

Savings -

Total funds -

In January we collected dues from five new members and had another member renew after a one year hiatus. Please welcome returning member Stephen Strickland and new members Trey Godwin, John Thompson, Pat Murray and James Dispennette.

The financial activity in January was minimal. The dues collected (mentioned above) came to \$230 and our expenses of \$111.80 included our port-a-potty rental and payment for our Member of the Year award.

Some of you know that I recently took a trip to China with Frank Bastos of HobbyTown. Frank is quite the worldly traveler and I am not. I was a walking pharmacy, prepared for every possible vile food or water

encounter that might come along. Fortunately, I never took a pill or had the slightest problem. Hong Kong is very "westernized" and I was able to eat steak or beef every day. Frank on the other hand, has a much more adventurous stomach and ate some things that...well, I'm not really sure what they were. But he seemed to enjoy them and never had a bad experience.

While there, we visited the Hong Kong toy fair where I saw more RC Cars than you can imagine. Didn't see a whole lot of airplanes but there were some there. Very interesting in one regard, but if you've ever been to an industry trade show, this was pretty much like any you'd see. Frank and the crew from HobbyTown were invited to visit a factory that makes RC cars and I was able to tag along. If I recall correctly, we were told that this factory has 2000 workers working in two twelve hours shifts, seven days a week. They also make a variety of items so RC cars aren't the only thing that keeps them busy. They were a little slow this time of year but assured us that they would be humming along in the summer as they got ready for the Christmas season. The factory was clean (as clean as a factory can be, I guess) and I didn't see any children chained to workbenches or anything like that. The workers live at the factory in three large, five-story dormitories. I've attached a couple of photos for everyone to see the RC production assembly line. It was just like Ford or GM...except a lot smaller. People worked on or assembled a component, then it was placed on the conveyor belt in front of them and went down to the next station. Very interesting. Everyone I spoke with was friendly and very polite. Our factory representative had grown up in the US so his English very good. That helped a lot! I'm sure Frank has lots more details he can share. Stop by HobbyTown and ask him about his trip to China when you get a chance.



RC Car assembly line; note the conveyor belt in front of the workers



Final packaging; Frank makes sure they're doing it right!



Frank and the HobbyTown boys enjoy a freshly prepared Chinese lunch



I know what it is...do you? Frank ate it but I didn't!

Chief Scribe- Steve Warmath Business Meeting Minutes 1/05/06

The meeting was called to order at approximately 7:35 pm, January 5, 2006.

Visitor/ New member introductions- New Member in December- Scott Moody introduced himself. Another heli flyer. Visitors in attendance included: Jim Hamilton, Dave Suban, Trey Godwin, and Pat Murray

The Treasurer's Report- Sam summarized our current asset allocations for January. Members requesting specific information regarding assets may contact Sam Varn. The Treasurer's report was accepted.

Old Business- Mike Atkinson reported that after discussion with the officers it was decided that Don Coon and his Aerospace Club would be allowed to use the field with Dan as a member and each student carrying insurance through AMA would be considered a guest.

It was noted that **Jay Leudecke was SRCC 2005 Club Member of the Year.**

Mike noted that the Perry GAMA Show was coming up in March. The Club has six tables. For those interested, they can log into the GAMA website and view the table layouts and see where SRCC will be set up. Hobby Town will also have 6 tables. Frank Bastos indicated he might not need all of this space.

Jeff Owens announced that the December "Airfest" planning meeting was cancelled and would be rescheduled. The dates for the event are May 20th and 21st.

Mike reported there was no update on the selection committee. The issue was to go before the County Commissioners in January. Mike did mention that the survey of desired activities was going to be done again because the old survey was a couple of years old and that only county residents will be eligible for the survey. Frank mentioned that he would have some hard copies of the survey in the store for anyone wanting to fill one out. Park Flyers will be steered toward the Club and will not be allowed to fly at County Parks due to some recent incidents at the Micossukee Greenway park.

New Business- Sam Varn reported that maintaining the Club roster includes verifying AMA status at the beginning of the year. He encouraged the members present to check the AMA status sheet to verify it was accurate and to renew if you have not done so to date. **No AMA, No Fly.**

Theo Titus wanted to mention an incident at the field during the fall open house where a young kid was in pavilion/ pit areas and Theo commented to the parent about safety. The parent seemed to take offense to the remark. Theo asked for a clarification of Club Rules regarding the fence line in that the pavilion was the separation between spectators and Club members. Gordie Meade, Safety Officer said that Theo was correct and had done the right thing. It was difficult for people who don't know our rules to comply. The main problem with our field is that it is too small. Our field does not meet AMA guidelines. The pavillion is too close to the field. Future public events should have better control and use signage or "flags" to help communicate restricted areas. Part of the problem during hot months, spectators use the pavilion to get out of the hot sun. Gordie mentioned that when we move, we will want to set it up to meet AMA design guidelines. We are somewhat "Grand fathered" with our field and the rules have changed over the years.

Mike stated that the members need to set an example. Kids running around in the pit area are a safety violation. No one under 8 years old is allowed on the flight line unless a pilot. One contributing problem is that the pavilion is in the way and too close to the pits and flight line. The big concern is, of course, avoiding injury that might affect our Club insurance. Mike will be reviewing the AMA guidelines and discuss this more in the future. Gordie said trying to balance participation and safety was difficult because space was a problem. Mike reported that Jeff Lawrence, as Vice President, was the Club's event coordinator and could develop guidelines for future events. The issuance of "Member" and "Guest badges was mentioned. The Club would be forwarding to the County the AMA guidelines for field layout at the new site.

Appointments- **Gordie Meade** will continue his role as **Safety Officer.**

John Hall was appointed as the **Field Marshall**

Mike suggested that the appointees form committees to assist with issues of safety and field utilization.

Upcoming Events- Jeff Lawrence wanted to go ahead and look at a six month schedule of events and get member input on dates and types of events desired. There was much discussion on this and a tentative schedule through May was established. The official schedule will be posted in the future. Of immediate note is another **Float Fly** was scheduled for **February 4th**.

The December **“eat and meet”** at the field was mentioned as something that would be nice to resume. Also Frank suggested that possible regular club meetings **“eat and meet”** at the church could be a good thing. It was decided to try the first Thursday **“eat & meet”** at the April 6th meeting. The time would be backed up to 7:00 vs. our standard 7:30 start time.

Theo Titus inquired about the “Quickie” flying events that didn’t seem to develop. Frank said the big problem was getting the wing blanks from SIG. Plus, .15 engines were hard to find.

Flight Instruction- Mike said as training coordinator, he wanted to revamp the Flight Instructor system in how we do instruction. He mentioned possibly setting up a Level 1 (basic flight) and a Level II (Take-offs and landings) class of instructors. Volunteers are welcome. Gordie Meade was to be added to the list of instructors. Mike said we needed weekend instructors. Keys to the container box will need to be available to instructors for access to the trainers.

Theo Titus mentioned that he was looking for a volunteer to speak at his upcoming amateur radio club meeting. The presentation was to be on electric RC helicopters. Geoff Lawrence said his son would be interested in helping since he was in the club and just acquired a “Blade CP” helicopter. The Club meets at the Publix training room at Ocala and W. Tennessee St.

The Club decided to purchase Bob Burke’s propane heater for the upcoming winter months.

The Club’s “For Sale” list had been updated and was to be e-mailed to the membership and included on the web site and in the Newsletter. Steve indicated the newsletter posting would expire each month and that anyone who wanted to continue a post would have to resubmit it each month. It was decided that the Newsletter will be published to the web site in both .doc and .pdf format.

With no further business, the meeting was adjourned at approximately 8:45.

Glow Plug Failure- Why do they Fail?? *by Clay Ramskill*

The "ignition system" in our engines is the glow plug. The other vital ingredient, compression, actually determines the ignition timing, so it can't be totally ignored. But usually its the plug that gives us the problems.

Why DO glow plugs fail? There are four likely probabilities, five if you count old age. Yes, old age! The plugs operate by using a catalytic (chemical) reaction with the alcohol in our fuel to maintain their heat; as the plug gets "old", it gets more and more covered up with combustion byproducts (carbon, etc.) which hinders the whole process. Of the other four, LEAN RUNS is probably the most prevalent - not so much that the engine was running lean, as it was HOT. Too much heat, and the element fries and shatters, or even melts.

TOO MUCH BATTERY power is another failure mode - very related to the above paragraph. Your battery should heat the plug to a nice bright orange or red orange color; if the plug glows white hot, it just isn't going to last. It's bad enough that we subject a tiny little element glowing hot, to the pressures of combustion. But if we add more VIBRATION to the situation, we get trouble. Unbalanced props, loose engine mounts, etc. may all add up to plug failure, especially in combination with too much heat.

Another plug failure mode is from FOULING. The element is very small, and located down in a well. It doesn't take much trash flying around in your combustion chamber to foul (and ruin) the plug! Aside from the obvious dirt coming through the intake or with the fuel, the fouling can come from metallic sources, usually a result of

bearings coming unglued, or from excess carbon deposits in the engine. If the combustion chamber is full of caked-on carbon, pieces of that can, and do, come adrift and end up fouling the plug!

A quality plug run in a sport engine should last for dozens of flights. If they don't, it's probably not the fault of the plugs - it's time to look elsewhere for the source of the REAL problem!

Safety Notes- Safety is not just about fingers in props, tripping, fires, cuts and abrasions, field rules, but it is also about putting up an airworthy aircraft. Nothing is as frightening as watching an out of control aircraft in close proximity. This month's safety primer is on the big three causes of aircraft that go astray.

The Three Deadly Sins of RC Flying- taken From AMA Insider Newsletter.

by Jeff Procise

In the three years that I've belonged to the Knox County Radio Control club, Knoxville, Tennessee, I've witnessed my share of crashes and even thrilled my buddies with a few of my own. One thing that amazes me about this hobby is how often we crash. On any given weekend, one or two members will probably lose a airplane. What's even more amazing is that the vast majority of these crashes are entirely preventable.

Most crashes are caused by simple errors that we make before the airplane leaves the ground. Eliminate these errors and you'll have a far better chance of bringing the model home in one piece. Here are the three most common mistakes that lead to crashes and simple steps for avoiding them.

Wrong Model Number

Programmable radios make the sport more fun and arguably safer, too. One of the primary benefits of a programmable radio is that it can store settings for several models. With the click of a button, you can call up the settings for your favorite model, complete with trim settings, end-point adjustments, servo directions, dual rates, exponentials, and more.

But programmable radios have a dark side. If you fail to select the right model number before takeoff, you may find yourself flying with reversed ailerons, a reversed elevator, improper trims or throws, or other ailments. Rare is the airplane that lands safely when the radio is set to the wrong model number.

The solution is twofold. One, remember to check the model number the moment you switch on your transmitter and make sure it matches the airplane you're about to fly. Two, always check the movement of the control surfaces before flying. Even if you forget to check the model number, you'll almost always catch the error if you check the control surfaces before every flight.

Having a radio set to the wrong model number is the most common cause of reversed servos, but it's not the only cause. Occasionally we simply forget to program in the servo directions before flying a new airplane. Again—make it a habit to check the control surfaces before every flight and you'll head disasters off before they happen. Before flying a new airplane for the first time, get a second pair of eyes to go over it with you. If the ailerons are reversed and you overlooked it once, you'll probably miss it again.

Improperly Located Center of Gravity

There's an old saying in this hobby that says "A nose-heavy airplane flies poorly; a tail-heavy airplane flies once." Most beginners fail to appreciate how big a role balance plays in the performance of an airplane. Balance is important in full-scale airplanes, but it's even more important in RC aircraft, where an inch or so can make the difference between a model that flies well and one that's unmanageable in the air.

Most construction manuals specify where the model's center of gravity (CG) should be located, and a model shouldn't be considered complete until you've ensured that the CG is at or near the recommended location. If necessary, you can add a few ounces of lead to the nose or tail to achieve the recommended CG. Often adding lead isn't necessary; you can achieve the desired CG by moving the receiver battery backward or forward.

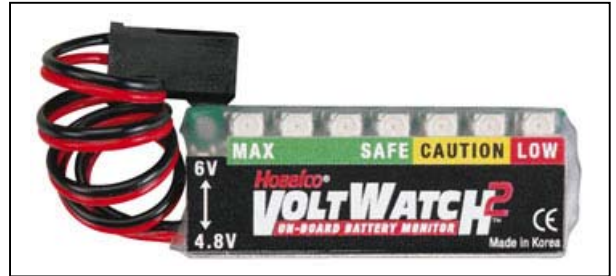
Be certain to check the airplane's CG before flying it for the first time. I usually mark the location of the manufacturer's recommended CG with short pieces of trim tape. That way I can check the CG even if I don't remember precisely where it's supposed to be. Assuming your aircraft's fuel tank is on or in front of the CG be sure to check the CG with the tank empty. Finally, if your airplane has retracts that fold backward (like the F4U Corsair) check the CG with the wheels up.

Deploying the gear prior to landing will move the CG forward, but it's better to be nose-heavy during landing than tail-heavy during flight.

Inadequately Charged Batteries

If you crave excitement, try flying your favorite airplane without charging the receiver battery. To double the fun, don't charge the transmitter, either. Then you can take bets on which will fail first. Joking aside, charge those batteries before flying, and check them at the field if you're not sure whether they're charged.

Most transmitters have built-in voltage meters; I don't fly if the voltage is less than 10 volts—just to be safe. You can check receiver batteries with an inexpensive voltmeter (which should be part of every flight box), or you can install an onboard voltage indicator like the **Hobbico VoltWatch**. Remember—low batteries lead to dead airplanes. This is one case where an ounce of prevention is worth a pound of cure.



Field Notes- John Hall- Field Marshall

Please do not dispose of destroyed aircraft debris (fixed or rotary) in or around the field garbage cans. The large, sharp-edged debris takes up too much trash can space and will often puncture the bag, or worse, when it is removed for transport to the landfill. Leaving a pile of wreckage next to the trash cans for somebody else to collect and dispose of is, if you think about it, not very considerate. So, when (not if) the inevitable happens to you, please take the wreckage with you when you leave for disposal at home or at the nearby landfill drop site.

Also, compacting gallon fuel jugs before placing them in the garbage can would be helpful.

Thanks for your cooperation.

Don't Trash that Crash- Jeff Owens

Ok, it has happened to all of us – or it will. Our pride and joy had a meeting with Mother Earth under less than ideal circumstances - perhaps the infamous 1-point landing, i.e., straight in, or some other equally ignominious ending. The immediate reactions range from anger to frustration to resignation, usually in that order. This is then followed by the search pieces and the trip to the trashcan. Get rid of the reminders and move on to the next project!

But hold on! Don't throw those pieces away just yet. There may still be some life left in the carcass. Let me give you three examples of crashed models, which went on to lead useful lives after a seemingly insurmountable meeting with terra firma.

Case 1 involves a Falcon 56 built in 1972 – my second model and the first with ailerons. On its second flight the aileron linkages disconnected due to a faulty installation and the model crashed in a hay field while



executing a series of perfect axial rolls. The wing and tail surfaces survived unscathed, but the fuselage was a complete washout. I put the pieces in the car and stopped by the hobby shop on the way home to buy enough supplies to build a new fuselage (yes, this was the day of full-size plans in a kit.) I saved a few formers and hardwood pieces, scratched some new sides, top, and bottom pieces, and within a day had a new fuselage framed up. I then covered it in silk(!), doped it, and spray painted the color coats (this was before Monokote) and installed the engine and radio. The repaired model flew successfully the following weekend(!) and lived to fly many successful flights thereafter.

Case 2 involves a low wing fun-fly plane of my own design. I had flown it in many club contests and it did the jobs it was designed to do. However, there was a hidden design flaw concerning how the wing was held on. If the hold down bolts were tightened too far (you know – an extra turn for safe measure) then too much stress was put on the hold down plate. After several years, the plate pulled out – during an outside loop! Al Weir had just crashed his plane on the previous flight when his wing hold down failed and we named the maneuver the Weir Spear – for the trajectory of the wingless fuselage. Then on the next flight my wings pulled out. Second doesn't count, so the resulting flight path renamed nameless, but the result was the same. The Club field was on the east side of the current landfill and we were flying over soybean fields, which provide a soft landing site. I picked up the pieces and inventoried the damage. Actually, there was very little. I reinstalled the wing hold down plate – with proper reinforcing – and repaired some minor damage. The plane flew again the next day and I have it still.

Case 3 involves my son's QB15 – a high wing rudder-elevator-throttle trainer. He had flown it well during his training and was working on his landings. This particular day as he took off, the plane rolled to the left and I gently yelled 'give it right – the other right!' as the plane rolled left into the ground. Pieces flew everywhere and we rather dejectedly went over and picked up the pieces. The key here is that we picked up everything. All the pieces went into a corner of the garage and sat there for a year or so. But one day, he and I picked through the remains and we realized that the fuselage and tail surfaces were fine and the wing looked like a jigsaw puzzle. We laid out the parts and soon saw that all the little pieces we had picked up could be put back into their original places with very few gaps. A bit of CA and we had a wing! Adding some Monokote resulted in a wing that was as good as the original. Total time invested – about 5 or 6 hours. The plane was back together and it flew many, many flights thereafter. In fact, I still have it.

So, what is the point here? Do not make hasty decisions at the field after a crash. Some absolutely terrible wrecks can be rebuilt with a small fraction of the original labor that was invested in the construction of the model. I know that today's ARF's can lead one into thinking that they can not be rebuilt, but often they can – if you retain all the pieces after the crash. Keep those plans around for reference and never give up. There is a great deal of satisfaction to be gained by making a crashed airplane fly again.

Beginners Briefing- Radios

Article from Tower Hobbies "easyrc.com"

Radios: The Heart of R/C Modeling

The radio control (R/C) system is the heart of our hobby. This magic box can turn a lifeless pile of balsa into a graceful soarer, a flashy acrobat or a snarling 150-mph pylon racer. Which radio is right for you? Read on as we lead you through the maze of features and technical jargon that make up the modern R/C system. Once you understand what all those buttons on the transmitter do, it will be easier for you to decide which radio and features meet your needs.



R/C Radio Systems Features

Control Channels

The first thing you need to decide is how much you want your model to do. For each control function, you need one channel of control. The usual uses for control channels are:

Control Channel Usage

- 1 Control Channel*.....Rudder
- 2 Control Channels*...Rudder or aileron, elevator.
Cars/Boats.....Throttle, steering.
- 3 Control Channels....Rudder or aileron, elevator, throttle.
- 4 Control Channels....Rudder, aileron, elevator, throttle.
- 5 Control Channels....Rudder, aileron, elevator, throttle, flaps
or retracts.
- 6 Control Channels....Rudder, aileron, elevator, throttle, flaps
or retracts.

** When a powered model does not have a throttle, it flies at full throttle until it runs out of fuel. The model is then glided-in for a landing.*

When you have more than 6 control channels, you can add such features as bomb drops, dive brakes, parachute drops, sliding canopies or other operating parts to your model. The most common number of control channels used on a powered aircraft model is 4. Sailplanes, cars, and boats usually use 2 channels. Four-channel control gives you full acrobatic capability and will enable you to fly most airplane models.

Radio Modulation

AM: Stands for Amplitude Modulation which transmits by a variation in the amplitude of signals, it is subject to interference more than FM.

FM: Stands for Frequency Modulation which transmits signals by variations in frequency, reduces the risk of "glitches" due to signal interference.

PCM: Stands for Pulse Code Modulation uses binary code to digitize the signal, providing the most accurate signal possible.

Servos

A servo contains an electric motor and is the "muscle" that moves the rudder, elevator, or other control surfaces. For each channel of control, you need a servo. Most 4 or more control channel radios come with 2-4 servos. There is a wide variety of servo types depending upon their intended use. If your 4-channel radio only comes with 3 servos and you wish to fly a "full-house" airplane (one that has 4 controllable features) you'll want to purchase one additional servo.



Radio Receivers(Rx)

The radio unit in an airplane or vehicle which receives the transmitter signal and relays the control to the servos. This is somewhat similar to the radio you may have in your family automobile, except the radio receiver in the airplane perceives commands from the transmitter, while the radio in your car perceives music from the radio station.



Fail Safe(FS)

This feature automatically returns a servo or servos to neutral or a preset position in case of a malfunction or interference.

Dual Rates

A dual rate switch on the transmitter can reduce the amount of servo travel. This makes the controls less sensitive. The aileron and elevator control channels are the most common channels with this feature, although some radios will also have a rudder dual rate switch. Select low rate, and an over responsive model can be made easier to control. Since beginners tend to over-control the model, low rate can also tame their models.

NiCd Batteries

This attractive feature enables your radio to be recharged before each session. Although NiCd (Nickel-Cadmium) batteries make the radio system more expensive, they are well-worth the investment. Most 2-channel control radios and some 3-channel control radios require dry cell batteries. Most 4-channel (or more) radios include full NiCds.

NiMH Batteries

Developed to meet the requirement for increasingly higher levels of energy demanded, Nickel-Metal Hydride batteries can offer up to three times the capacity of the same size standard Nickel Cadmium batteries. Unlike NiCd batteries, NiMH batteries do not use heavy metals that may have toxic effects. Due to their increased capacity and energy density features, users can expect a longer time between charges with and longer running time.

Frequency(Channel Number)

Like all radio equipment, an R/C system broadcasts its signal at a specific wave rate and this is known as its "frequency". Just as commercial radio stations that you listen to each operate on their own frequency, so do R/C transmitters. There are several different frequencies to choose from and these are now referred to in the R/C industry by "Channel Number". This channel number is easily confused with the number of control channels used in the model but the two are quite different - the channel number that your transmitter broadcasts on (e.g., channel 56 or channel 80) refers to its frequency, not the number of model features it can control. If there was only one R/C frequency or channel number available, only one person in any given area could operate their model - just as if there were only one TV channel, you would only be able to choose one show to watch! By having a number of different channels available, many models can fly, race or skim along the water at the same time. (See [Ordering Radios](#) for more information on the available channel numbers.)

Trainer System

This effective method of training allows two transmitters to be connected by means of a trainer cord. The instructor can pass control over to the student's transmitter so that he can fly. If the student gets into trouble, the instructor can regain control instantly.

Servo Reversing

This feature allows you to reverse servo rotation. If a channel operates opposite of its intended direction, a simple flick of a switch corrects the problem.

Adjustable Travel Volume(End Point Adjustments)

ATV allows you to preset the maximum travel of a servo to either side from its neutral position. Such settings help tailor control action to suit your flying or driving style.

Exponential Rate(Adjustable Rate Control)

This feature smoothes responses between stick or wheel and the controlling servo movement.

Direct Servo Control(DSC)

This feature permits you to check servo operation without broadcasting a radio signal. A cable connects the transmitter to the receiver. Direct servo control is very useful for on-the-ground control checks.

Mixing(Coupling)

Two control channels can be coupled together so that they move together when only one control channel is activated. Many 1/4 scale models require a combination of aileron and rudder to turn. Mixing does this electronically at the transmitter. V-tailed models, where the two halves of the V-tail must move not only together but independently, are another use of control mixing.

Programmable or Computer Radios

These high-tech radios are not inexpensive but allow a full set of programmable transmitter features like multiple plane memory, preprogrammed maneuvers (rolls, loops, etc. at the touch of one button) and much more.

Choosing Your First Radio System

Now that you understand what all the features on a modern radio system are, which radio is right for you? The answer depends upon your present use, future use and of course, your budget. Analyze your needs carefully and then select the radio that best meets those needs. Choose the tab above or click the name below for the radio system that best describes your interest.

[Air Radio Systems](#) if you want to fly an Airplane, Sailplane or Helicopter.

[Surface Radio Systems](#) if you want to run a Car, Truck or Boat.

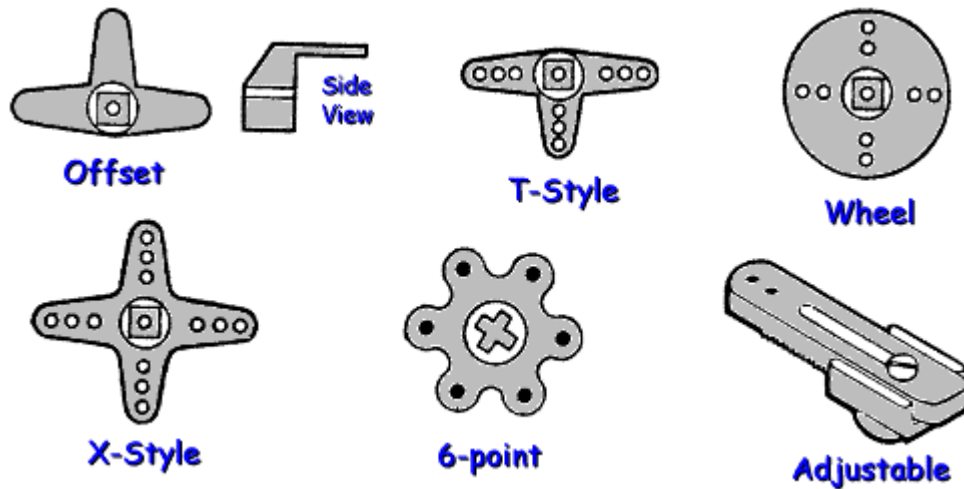
Helpful Accessories

In addition to the features available in R/C systems, many manufacturers make optional accessories that will expand your capabilities. Because similar accessories by the various manufacturers do similar tasks, here are defined some of the more complex items:

Battery Eliminator Circuitry (BEC): A circuit that eliminates the need for a receiver battery, usually in R/C cars.

Electronic Speed Control: Electronic speed controls replace the mechanical speed control and servo providing enhanced power efficiency and precision. In addition, they are lighter which improves the performance of some electric models.

Frequency Modules: A frequency module plugs into the transmitter and enables you to change the channel number your radio broadcasts on. Some new frequency modules also allow you to now dial in the frequency virtually eliminating the frustration of not being able to fly if someone else is also on your frequency.



Servo Arms: Connect the servo to either a pushrod or cable. Adjustable servo arms are available for some radios which can be made shorter or longer.

Servo Gear Sets: Servo gears can be damaged in a crash and the loss of just a few teeth can render the servo useless. A replacement gear set lets you fix the servo yourself. It's very handy to have extra gear sets!

Servo Case Sets: A cracked or broken servo case can let dirt, water or fuel into the sensitive electronics of the servo.

Servo Connectors/Adapters: Most manufacturers offer servo plugs that are compatible with their radio systems. This allows you to adapt other brands of servos to your radio system or repair damaged plugs.

Servo Extension Cable: (Aileron Extension): These cables simply increase the distance between a servo and the receiver. Note: Very long servo leads may cause radio interference. Chokes or radio noise traps may be required.

Y-Harness: Two servos can be plugged into one channel with a Y-harness. The two servos will then operate simultaneously. It is most often used in areas where the strength of one servo is not adequate.

Servo Trays: Servos can be mounted in a tray which provides for easy installation and good vibration protection. Many different styles are available to fit various installations. If all your models are outfitted for the same servo tray, transferring components between models is easy.

Trainer Cord: Required to connect the two transmitters with trainer systems. Note: Be sure to check your instructions for proper connection and for compatibility with other radio systems.

DUAL RATES - the Good, Bad, and Ugly by Clay Ramskill

Usually found on radios with 6 or more channels, dual rates allow you, with a flip of a handy switch, to change how much servo response you get from a movement of your control stick. There is a switch for each channel involved, and an adjustment for each, which allows you to "dial in" how much less response you'll get with the dual rate "on".

Dual rate use is fairly simple - with the dual rate "off" you get normal response; that is, full servo rotation with full stick deflection. Turning dual rate "on", you get only a certain percentage of the servo rotation you would normally have had at any stick deflection. That percentage is what you control with the adjustment on the transmitter. This is a nice capability - your plane can be set to be wildly responsive for aerobatics, yet with dual rates on, you can still fly very smoothly, for landing, for instance. Pattern fliers use this a lot.

THE GOOD. You could set your plane up such that with dual rate on, the elevator travel isn't enough to stall the plane, allowing smooth, stall-free flight. Turning the rate back up then would allow such maneuvers as snaps and spins. Some folks use dual rates for landing only, to stop over controlling at slow speeds. Dual rate

capability is super for test flying a new plane, when you're unsure of just how responsive the plane will be. The possibilities are near endless.

THE BAD. The radios with dual rates cost extra bucks. You have more switches to twiddle with, and to check before flight. And in dual rate, you're not using all your servo travel - they will not be as accurate as they are using full travel, nor as powerful.

THE UGLY. The problem is, that you get used to having a certain response from your plane, and expect that response all the time. With dual rates in use, you must remember whether you're "in" or "out" at all times so you know what responses your plane is capable of. A BUNCH of planes have been crashed that way; the pilot wondering why his plane wouldn't pull out of a loop like it normally did! Or on dual rates, the plane couldn't respond quick enough to overcome some turbulence on landing.

The Bottom Line. If you have dual rates and use them, you've got to know at all times where those little switches are set. If you don't use them, set them such that if the switch is turned on, you still have 100% travel; that way, it doesn't matter where the switch is. NEVER set the rate such that the plane is unflyable or only marginally controllable with dual rate "on". You all know how Murphy's Law works, right?

For Sale

T-Shirts For Sale:

Seminole RC Club t-shirts are available for purchase. We have a variety of sizes available. White pocket t-shirts are only \$10, while gray and tan pocket t-shirts are \$11. I have 2 XL gray shirts with a collar. These are \$15. The ordering of the shirts is a benefit for club members. We have priced the shirts low, where we are essentially at a break-even point. So, we need to sell all of the shirts real soon. Shirts will be available at the club meetings and all club sponsored events.

World Models Miss America P-51 .46 size – With Retracts - Very Fast plane - Airframe and Retracts included - \$75 Willing to leave servos (6) in plane, including retract servo, for additional \$75

Contact: Mike Atkinson nexnbax1@comcast.net or 656-2200

Cedar Hobbies Trainer Plane with Megatech .46 – Ready to fly, including 4 channel radio. Plane has 2 test flights only.

Airframe Only - \$80 Motor - add \$70 Radio – add \$100 Complete Package - \$200

Contact: Mike Atkinson nexnbax1@comcast.net or 656-2200

FlyingThingz Witch Wilga (www.flyingthingz.com) Ready to fly, less receiver. Complete with VMAX .46

Airframe, motor, servos (3) - \$150

Contact: Mike Atkinson nexnbax1@comcast.net or 656-2200

O.S 46AX motor with several APC props (about 4 gal. fuel through it) \$90

Contact: Tristan Seely 877-2134 JamesDuck@Comcast.net

Carl Goldberg 2 meter Gentle Lady sailplane with highstart and two 600mah rx battery's. \$100

Contact: Tristan Seely JamesDuck@Comcast.net or 877-2134

Seminole Radio Control Club

Tallahassee, FL

AMA Charter #216, 1969-2006

SRCC Officers

President – Mike Atkinson
Vice President – Geoff Lawrence
Secretary/ Newsletter Editor – Steve Warmath
Treasurer - Sam Varn
Field Marshall – John Hall
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 (Coordinator) 926-4692 (H)
Ed Budzyna Jeff Owens Bob Burke
Geoff Lawrence John Clark

Club Meeting Location and Time

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 23rd of the month. Send your submissions to ssw@nettally.com or by phone, Steve at 509-0672.

Editor's note: Please contact the editor for any reporting contribution assistance and for reporting formatting problems, errors, omissions or corrections. The views expressed in the newsletter are of those of the specific authors and do not represent a majority consensus of the club membership unless voted upon at a club meeting. **For Sale** items will be cleared from the newsletter every month. If you wish your ad to keep running, it must be resubmitted prior to the 23rd deadline.

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