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 **December 2011**

INDEX

Letter from the Editor- Fred Schmidt

Please remember that meetings are now held at the Hobby Town store. There is quite a menu of meal goodies in store for this coming meeting. Please plan to attend and enjoy the food and company of the other members. A few other reminders…

- It's time to renew your AMA membership
- It's time to renew your club membership (remember we paid a partial year to create an alignment of memberships (club and AMA).

Fred

Chief Copilot- Jeff Owens

Last month I wrote about an experiment I am planning to conduct using an OS 61 SF-P pumped long-stroke 2-cycle engine in place of the OS 91 FS Surpass II 4-cycle engine I am currently using. The long-stroke 2-cycle engines evolved at a time when more torque and less rpm were needed in order to produce adequate vertical performance while reducing the overall airspeed. The key is that a long-stroke engine can turn a higher pitch prop since it is able to produce more torque at a given rpm. Why is that? A long-stroke engine is one where the stroke (the amount the piston moves up and down) is longer than the cylinder bore (the diameter of the piston). The longer stroke improves the mechanical advantage of the connecting rod as it moves through a cycle – think of it as being a longer lever being used to turn the prop. Since writing about this last month I've picked up two more 61 Sfs on Ebay – quite a bit of fun, actually.

There was one drawback to my proposed experiment. It required building a new plane rather than completing the Deception that is now nearly ready to Monokote. The Deception is set up for the 91 4-stroke, so I didn't think of it as a candidate for the experiment. But over this past weekend I discovered a truly surprising feature shared by these two engines. They have the same mounting hole dimensions! Not only that, the distance from the mounting holes to the thrust washer is the same on each engine. I had to make a small modification in the cowl to clear the carburetor on the 2-stroke, but otherwise either engine can be mounted using the same mount, spinner, etc. Now I can swap one engine out for the other and see which works best on this particular airframe! I do love a good experiment.

One other feature which I plan to investigate is the tank location. Currently I use a 12 oz. tank mounted in the nose behind the firewall as is common practice. But this fuel load amounts to about 9 oz. of weight. Over the course of a flight that gives a sizable shift in the center of gravity. I can tell the difference in how the plane flies from the beginning to the end of the flight. The CG location is actually a compromise and is about right in the middle of the flight. Both the 91 and the 61 are pumped engines. It slowly dawned on me that I can put the tank in the center of the fuselage – on the CG – and there won't be any CG shift as the fuel burns off. This will also lessen the need for tail weight, so the plane can go on a diet. I'm looking forward to my new experiments in 4-stroke versus 2-stroke and the effects of a central tank placement!

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 Scribe- Chris Bailey

Call to order: 6:58 p.m.

Announcements:

Thank you to Dave and Frank for preparing the meal

Guest: Don - new member, Dave Busey – returning member.

Administrative:

Minutes from October 2011 meeting: Moved and Seconded

Treasurer's report: Moved and Seconded

Old Business:
Toys for tots - little response, may cancel event or work with another charity organization, such as the United Way: Jim will contact

Possible swap meet for Dec. 3rd or warbird fly-in

Killearn Lakes event: not participating due to limited flying area

Tallahassee Museum - Scheduled for January: update will be available at the Dec. meeting

New Business:

Officer Elections: all officers are willing to stay in their current positions for 2012.

Newsletter editor: Officers will prepare a basic newsletter with officer reports and minutes.

Bob: Concerns about the runners parking in club's parking area and leaving items in pavilion area during their runs. Officers will discuss the issue and report on how to possibly address the situation.

Motion to adjourn at: 7:23p.m.

Chief Treasurer- Bill Ashbaker

Seminole RC Club

Financial Statement for October 29 through November 27, 2011

Accounts

Premier Bank Checking
Premier Bank Money Market Savings
PayPal

Cash on Hand

Total Available Funds at End of Month

Income	**Expenses**
Dues/New Memberships	Mower: Maintenance
Activity Sales	Field: Improvements
Meeting: Food Reimbursement	Field: Maintenance
Contributions/Donations	Field: Lease
Interest: Savings	Publications
	Donations
	Fees: AMA
	Fees: State of Florida
	Fees: Bank
	Meeting: Food & Refreshments
	Insurance: Mower
	Miscellaneous
	Utilities: Electric
Total Income	**Total Expenses**

Net Cash Flow

We have two new members, Don Ruggiero and Travis Harrison. Please welcome Don and Travis to the club at your first opportunity. Also, Don is a student pilot. So, help him out when you can.

We purchased materials to fix our tables at the field in November.

We enjoyed a great meal at our last monthly meeting thanks to Dave Humphries. Quite an improvement over hot dogs and chips. However, good meals come at a cost. We paid substantially more for food in November. Although the cost was accompanied by a record collection for food at the meeting, we did not cover the initial cost of the expanded menu. However, Dave assures us that we will be back on track this month.

THE ARMSAFE® SYSTEM

PATENT PENDING

Introduction

Schumacher Products LLC has developed this *patent pending* **ArmSafe®** System.
This system was developed to have all the features RC modelers want:
1. High Current Rating
2. Small Size
3. Proven Connector Reliability
4. Easy to Install
5. Easy to Use.

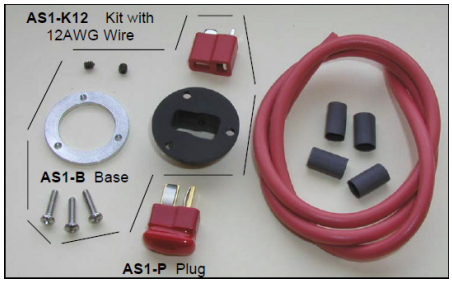
When this system is correctly installed and correctly used it can help improve the safety of electric RC models. The system provides the user with more control of WHEN they energize and WHEN they deenergize their RC models. The ArmSafe® Arming System uses genuine Deans® Ultra Plugs® Pat# 5,533,915. The ArmSafe® System comes in the following configurations. Note that the Kits include everything needed for one complete arming system: AS1-B Base, AS1-P Plug, 18" of High Flex Silicone Wire, and shrink tubing.

Part No. $ Description

AS1-B $6.99 ArmSafe®
Arming Base

AS1-P $6.99 ArmSafe®
Arming Plug

AS1-K14 $13.99 ArmSafe®
Arming Kit
14AWG wire.



AS1-K12 $14.49 ArmSafe®
Arming Kit
12AWG wire.

AS1-K10 $15.49 ArmSafe®
Arming Kit
10AWG wire

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Safety

It is CRITICAL to fully understand that no product can guarantee your safety with RC models. ArmSafe® is just a tool to help modelers reduce, not eliminate, the risk of propeller strikes when working with electric RC models. ArmSafe® ONLY helps modeler have better control of WHEN they energize and WHEN they de-energize their models. The arming plug should ONLY be inserted into a properly installed ArmSafe® base, nothing else!!

ArmSafe® will NOT keep you safe if you decide to energize your model before ALL is safe. For example if you energize your model when it is sitting on a bench UNSECURED, or if you energize your model when people or personal property are in dangers way. The person in charge of the RC model must handle and operate the model carefully at all times. The person in charge of the RC model is 100% responsible for the safety of themselves and other people, as well as responsible for any personal property. The person in charge of the RC model must use their judgment and safe operating practices to ensure the safety of themselves and others.

Specifications

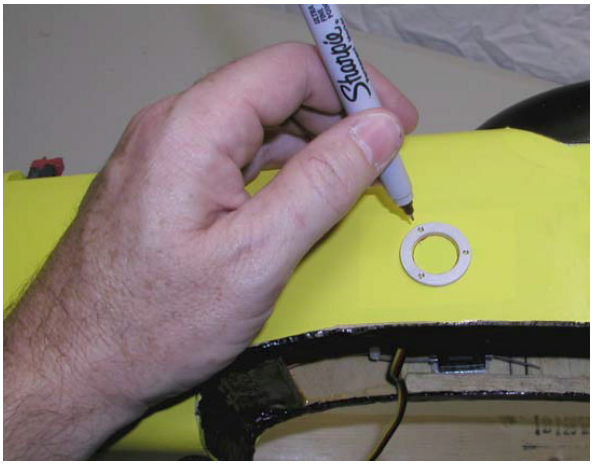
Schumacher Products LLC is providing these amperage limits as a guide to help size ArmSafe® for RC models. But this is just a guide, you must test all installations at FULL load conditions to make sure that the wire and connectors do not get hot. These amperage guides are rated with 10mph x 80degF air flow for eight minutes, with burst ratings for 5 seconds provided the average current (including the bursts) does not exceed the Max Continuous amperage rating.

Wire AWG	Max Continuous	Max Burst
14	50 Amps	75 Amps
12	80 Amps	120 Amps
10	100 Amps	150 Amps

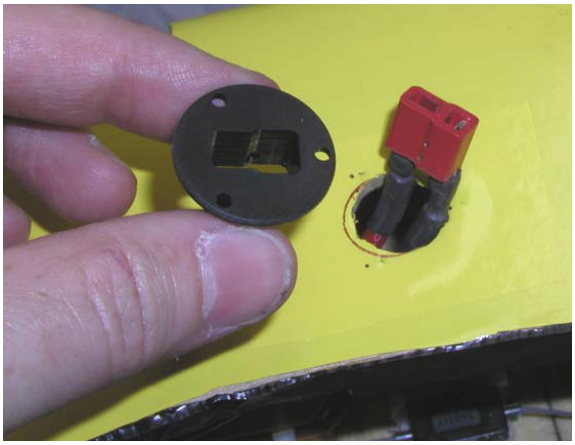
Many factors will affect the amperage carrying capacity of wire, connectors, and wire harness assemblies such as; wire lengths, air temperature, amount of air movement, quality of the solder joints, wire quality, connector quality, and how long the current flows through the wire.

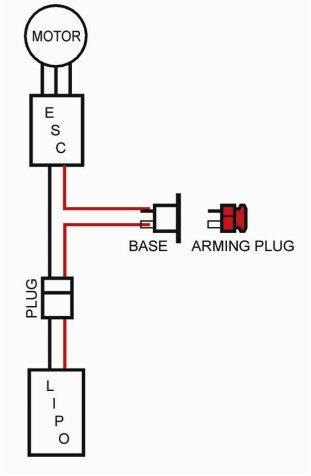
Installation

1. Open your ArmSafe® Kit, it contains:
   1 Female Ultra Plug®, 1 Black Base, 1 Aluminum Nut-Ring, 3 Pan Head Screws 2-56 x 1/2, 2 Sharp Point 4-40 x 3/16 Set Screws, 18" of High Flex Silicone Wire, Shrink Tubing, and 1 Arming Plug.

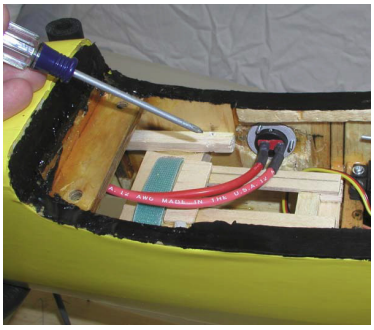


2. Select the location to install the ArmSafe®Base in your RC model. The ideal location would be close to the battery & ESC to reduce the wiring length. If this is not possible, be sure to use large enough wire to carry the amperage without having the wires get hot during operation. The location should also be chosen for safe and easy access to the model when it is on the ground and ready to operate. This will allow the user to safely connect and disconnect the arming plug from behind the propeller.
3. Use the Nut Ring as a template for marking the hole location, and trace out the inner diameter and the three screw locations, as shown to the right. Cut out the circle and the three holes and test fit the base.
4. The next step is to solder the female Deans® Ultra Plug® into the red wire that that goes from the ESC to the battery connector, as per the wiring drawing below-right. Use the wire in the kit to extend the length of the red wire as needed to make the female plug reach the cutout location, as shown below-left.





5. The three 2-56 x 1/2 long pan head screws are thread forming screws. Use these screws to form the threads in the 3 small holes in the Aluminum Nut-Washer. This is done by installing the screws into the holes and then removing the screws.
6. Put the Nut-Ring over the female plug and onto the wires. Feed the female plug through the hole in the fuselage, with the Nut-Ring on the inside of the fuselage.
7. Slide the Black Base over the female plug, and then use the two set screws to secure the female plug into the Black Base. **DO NOT over tighten the set screws, just tighten them lightly until the female connector is secure.** The two set screws are sharp pointed and they hold the plug great. After lightly tightening the set screws, test the holding power of the set screws by pushing hard on the female plug to insure that the plug is secure.



8. Insert the Black Base into the hole in the fuselage. Use the three 2-56 x ½ long pan head screws to secure the Black Base to the Nut-Ring, as shown to the right.
9. This completes the installation.

User Guide for ArmSafe®

Below is a user guide for the ArmSafe® system. This is just a guide; it is NOT a 100% guaranteed safe operating procedure. RC models are dangerous by their very nature, and it is the responsibility of the person in charge of the RC model to insure the safety of themselves, other people, and any personal property.

1. Make sure you are FULLY knowledgeable with general RC safety; this is a MUST before proceeding.
2. Perform a preflight check on the model to insure all components are installed properly, and the model is safe to operate. Perform a range check on the model as per your Tx/Rx manufacture's recommendations. If you are not qualified to do these preflight checks; DO NOT proceed!!! You NEED to get the help and training of an experienced RC modeler.
3. Make SURE the ArmSafe® Arming Plug (and the LiPo battery) is removed from the model.
4. SECURE the RC model so that it can NOT move, even under full throttle.
5. Turn ON your transmitter, and select the correct model. AGAIN, make SURE the ArmSafe® Arming Plug is removed from the model. ALWAYS handle the model from a safe location behind the propeller, and handle the model as if it were always energized and could start at any moment.

6. Make sure EVERYONE is at a safe location behind your (or your club's) safe flight line, and install the LiPo battery into the model. Even with the Arming Plug removed, ALWAYS handle the RC model from a safe location behind the propeller, and handle the model as if it were always energized and could start at any moment. Move the model to the safe flight line location.
7. SECURE the model so that it can NOT move, even under full throttle. When ALL is safe and you are prepared (and qualified) to operate the RC model, install the ArmSafe® plug into the ArmeSafe® base in the model, this will energize the model. Test all of the control surfaces and test the throttle to insure everything is working correctly.
8. Operate the RC model in a safe manor, and always be aware that you are 100% responsible for the safety of yourself, other people, and any personal property.
9. After landing the RC model remove the Arming Plug as soon as possible to de-energize the model. ALWAYS handle the RC model from a safe location behind the propeller.
10. Then remove the LiPo battery as soon as possible, and ALWAYS handling the RC model from a safe location behind the propeller.

Seminole Radio Control Club
Tallahassee, FL
AMA Charter #216, 1969-2010

SRCC Officers

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

Field Hours

Electrics/ Sailplanes	9:00 am till 9:00 pm.
Gassers and Nitro	12 Noon till Dusk.
Electric Service	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

Hobby Town Flight Demonstrator

Frank Bastos	671-2030

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

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