Springfield Radio Control Flying Club

AIRMAIL

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AMA CHARTER CLUB 394 DECEMBER 2006 VOLUME 18 NUMBER 12

NEXT MEETING

Christmas Party To Be Held At Golden Corral Located At The Primrose Center December 14 At 6:30 PM

Field Frequency Analysis

The preliminary frequency scanning has rendered results confirming the interference signals displayed on the frequency chart on the bulletin board at the field:

6db signal between ch13 and ch14 (72.062Mhz) ch14 is 72.07Mhz
7db signal between ch14 and ch15 (72.082Mhz) ch15 is 72.09Mhz (intermittent signal)
9db signal between ch44 and ch45 (72.682Mhz) ch45 is 72.69Mhz (almost constant signal)
2db signal between ch54 and ch55 (72.888Mhz) ch55 is 72.89Mhz (intermittent signal)

exception: no signal was observed near ch29 or ch30 as the field chart shows

All observations so far have been near the center pilot station.

Barry

Springfield RC Club Minutes for December 2006. Don Bordwell, Secretary

Springfield RC Club Minutes of the November 2, 2006 Meeting

The meeting was called to order at 7:00 PM by President Doug. There were 27 members present and one guest. The minutes were read and amended to include an announcement of the year ending holiday banquet to be at 6:30 on December 14, 2006 at the Golden Corral in the Primrose Center. The minutes were passed as amended. The treasurer's report was read. Also a 2 year report was discussed. It was moved by Ray Niles that a CD held at Wells Fargo should be cashed and the money ($1103) held in the checking account until next year. Total assets with no debt amounted to $7,672.57. The motion passed and the treasurer's report was accepted.

Old business: It was mentioned that Harold Carrols equipment was on tables and after the meeting if members wanted to look it over, it would be appreciated. The dinner charge for the holiday banquet would include a 15% gratuity as in the past. A discussion of the web site was made and Kevin Bane volunteered to be the webmaster. A temporary page was to be found at http://srcc.hobbylodge.com. A review of membership dues was made by Doug Bennett. This review will be presented at the January, 2007 meeting.

New business: A slate of officers and board members was presented to the members present. It included: President- Barry Harper, Vice president- Mark Copeland, Secretary- Ray Niles, Treasurer- Russ Rhodes, Board members Justin Heath, James White, OD Fine and Sparky Wessels. Two board members were eligible for a second year, Ray Ward and Ralph Todd. OD Fine withdrew his nomination. As there are five board members possible, the slate was then accepted and passed by the members present. The new officers and board members will be presented at the Christmas Banquet on December 14, 2006

The passing of Ronnie Wissbaum was noted. Ron was an active member for a very long time in the club. A floral arrangement was sent to the funeral home on behalf of the club.

New members, Cal Adams, Chad Bray, and Kevin Bain were acknowledged. Cal has been a member for this year, and Chad and Kevin were new for this month.

It was pointed out that changes will be made on membership forms to reflect the new officers.

Barry Harper, recipient of the Top Gun Award for 2006, suggested that a new electee may be needed.

Ron Hyde wanted to get orders for new hats ($6), jackets ($27), sweat shirts ($15) and sweat shirts with hoods ($20). These items would come with the club logos.

The meeting was adjourned at 7:46 PM.

Members who were present included Doug Bennett, Russ Rhodes, David Campbell accompanied by Lanora Campbell, Jerry Kutz, Barry Harper, Tim Hankins, Gary Weaver, Kevin Bain, Cal Adams, Chad Bray, Charles Bane, Hunter Bane, OD Fine, Ray Niles, Charles Genrich, Dan Curtis, Mike Howard, Justin Heath, Ralph Todd, Ron Hyde, Ron Schanda, Nancy Schanda, Jeff Schmidt, James White, Bob Pace, George Ashley, Gary Kellog. Sorry for any omitted attendee not mentioned.

Russ Rhodes would like to know if you plan on attending the Christmas Banquet. If you would contact him by email (rgr592f@missouristate.edu), mail (2172 S. Forrest Heights, Springfield, Missouri, 65809, or phone (417-889-8655).

Just a reminder, a brief survey on the AMA membership verification site reveals several members have not yet renewed their AMA membership for 2007. A 2007 AMA membership is required to fly at our field Jan 1 and beyond.

THE STALL And Angle of Attack

Stall, spin, crash!

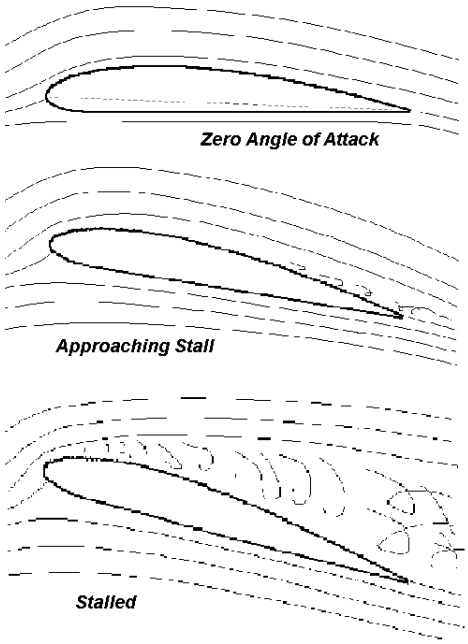
All too often thats how our lovingly crafted aircraft die. Our aircraft all have to be operated with certain limits - the flying ``envelope'' of any particular aircraft design. A machine can only structurally stand so hard a landing, only so many Gs loading, and go no more than a certain speed before coming apart. And aerodynamically, the plane can only go so slow and stay airborne; ...and this is the limit that seems to cause us the most difficulty.

Actually, strictly speaking, a stall is NOT directly tied to airspeed. Loosely defined, a stall occurs when the angle of attack of the planes wing exceeds the point where the airflow can follow the wings contour; the organized airflow breaks down, sharply reducing lift (see diagram). Essentially, airflow just can't ``hack the turn'' at the leading edge of the wing. As long as we don't yank back on the stick, forcing a stalling angle of attack, we can still ``fly'' VERY slowly without stalling - over the top of a loop, for instance. And we all know that a plane can also be stalled at very high speeds - any snap maneuver involves a stall.

But folks will advertise the stalling SPEED of an aircraft; when they do so, certain conditions must be specified or implied: 1) straight and level flight 2) the weight of the plane (``at max gross'') 3) Atmospheric conditions (``sea level, standard day'') 4) power on or off 5) high lift devices (flaps up or down). -All these conditions affect the actual airspeed at which the plane will reach the stalling angle of attack.

Now, getting to the plane itself, what determines the stalling angle of attack? Mostly, the type of airfoil used on the wing, and the shape (planform) of the wing.

To recap these points: Once your plane is built, the wing shape and airfoil determine the stalling angle of attack; this is pretty much FIXED. The conditions you are flying with, and how you fly the plane, determine the SPEED at which a stall will occur.



Let's take an example; the Nifty Fifty, a .40-.50 size trainer. With 500 square inches of wing, an N-60 airfoil, and an aspect ratio of 6, at 5 pounds this plane will stall at about 20 mph. Adding a 3 pound brick to the plane, the stall speed goes up to 26 mph. That may not seem too bad, but if we were landing in a 14 mph wind, the ground speed (the speed we SEE) is DOUBLED with the brick!! But in BOTH cases, the stall angle of attack is the same, at 10 degrees. Back at 5 pounds again, we enter a steady 60 degree bank turn; the stall speed in this case will be 30 mph, but STILL 10 degrees angle of attack. And if we were to pull 5 ``Gs'' coming out of a loop, the stall speed would be 46 mph!! Note that all these figures would be a bit higher at high altitude, or on a very hot day. Also, be aware that a plane stalls at a bit higher speed with power off than power on.

It follows, then, that to avoid stalling your plane, don't pay so much attention to the SPEED of the plane - its hard to judge anyway - keep your eye on the ATTITUDE of the plane with respect to its flight path. That attitude (how high the nose is) will tell you whether or not you're close to the stall, pretty much regardless of any other conditions, other than flaps or other move-

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Ski Flying Day Dec 2

The day began around 11am with two fliers arriving to a pristine field. About an inch or so of snow covered an underlying ice sheet. The low winter sun was lighting up the ice laden trees to the south. It was very quiet, the temperature was about 32 degrees with now wind. It actually felt warm. Shortly, Sparky showed up, followed by Bryan Scott and his wife, then Mark Copeland. Charles and Hunter Bane showed up but with only cameras to film the event. One could take off anywhere and land just about the same. Bryan had a ski malfunction (screw loose) on his first flight. A few tie wraps fixed that. Sparky had an engine mount issue at first. Then when he took off, one of the skis twisted toward the wind making the Funstar uncontrollable; it met an unfortunate end. Mark had a flame out and had to land in the weeds, splitting the fuse of his Sonic, but it is repairable. But, he was able to borrow another Sonic and continue flying. Charles and Hunter got some stick time on a Tiger 60. They are both now convinced ski flying is really fun. About 4pm or so, the end of a perfect ski flying day came to an end. The day seemed so short.

Berry

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able high lift devices.

Let's look at one other item - stick travel. For most fairly stable aircraft, the amount you move the stick (and thus the elevator) determines the angle of attack the plane flies at. If you can get a violent stall with less than full back stick, you may want to consider using less elevator travel. Most trainer plans give you an elevator throw figure that doesn't ALLOW a stall in any normal flight situation - this is also worthy of consideration, depending on your skill level and what you want your plane to do.

Above all, spend some time flying your plane close to, and into the stall. Most planes, other than pattern and racing craft, recover from a stall very nicely with some power and easing the back stick. Get used to the signs of impending stall; get used to recovery. Get used to the ATTITUDE at which this all occurs. Exploring the low-speed area of your planes performance characteristics will make you a far better, safer pilot! ...Clay

2007 Club Membership Cards will be available at the Christmas Party. Please have the required membership filled out and your 2007 dues check ready if you wish to avoid the January dues renewal rush. Proof of 2007 AMA membership is required for club membership renewal.