



SMOKE SIGNALS



We have all recently witnessed the "Miracle of the Mine" in October of this year, the incredible rescue of the miners trapped underground in Chile for over two months. In years past these poor souls would have been given up for lost but the combined efforts of the Chilean Government and NASA gave us, the trapped miners and the world hope and an incredible miracle.

We are now deep into the Holiday season and a season of miracles. Last month we gave Thanks for our families and all that has been provided to us. This month we give Thanks again, but not for our material well being, this month we celebrate our Spiritual wellness. We will spend these Holy Holidays with the ones we love and we should cherish the fact that we are the lucky and blessed ones.

We are not only blessed by the love of our families but by our friends and our country. We should not forget the brave men and women of our armed forces at this time and be thankful for all their sacrifices.

We should also give thanks for the fact that we have the means to enjoy this wonderful hobby and all that it brings to our lives. That our love of RC Flying brings us all together and that our camaraderie is the marvelous by-product of the special Club we belong to.

From my family to yours, a Blessed, Joyous and Peaceful Holiday Season and a Happy New Year!

Dennis Osik



THE MEROKE RC CLUB - EST. 1963

When I attended my first Meroke meeting this past year I was struck by the fact that when the meeting was called to order the first item on the agenda was the "Pledge of Allegiance". I since have learned that the members of our club not only have a strong sense of family and community but great pride of being Americans. That pride was demonstrated this year when the Cedar Creek Aerodrome was renamed and dedicated to the memory of Major Raoul Lufbery the flying ace and hero in WWI.

This is the time of year that our thoughts should not only be of our loved ones here at home but of the heroes that keep our shores safe, the brave men and women of our armed forces. It is with this in mind that I submit to you this page.

A HOLIDAY MESSAGE FROM THE COMBINED JOINT TASK FORCE-82, REGIONAL COMMAND-EAST COMMANDING GENERAL

Written by Bagram Media Center Saturday, 19 December 2009 01:42 - Last Updated Saturday, 19 December 2009 01:47

Soldiers, Sailors, Airmen, Marines, Coast Guardsmen, Coalition, Civilian and Afghan partners of CJTF-82 and RC-E:

The holiday season is about family and faith, hope and the goodness of humanity. It is a time of forgiveness and generosity, of celebration and reflection. The holidays are also about tradition - the unique ways in which we connect with family and friends to share in the spirit of the season.

Since General George Washington crossed the Delaware on December 25th, 1776, turning the tide of the war and rallying our fledgling Nation, our military holiday traditions have been founded on selfless service and unfailing perseverance. So that our loved ones can celebrate the season according to their beliefs, we stand guard in remote outposts. So that our friends may gather and share in each other's company without fear, we bear months of separation. So that the people of Afghanistan may someday know the promise of peace, we tend to our wounded and honor the fallen.

As I travel the battlespace, I've witnessed other traditions - bounties from home being shared throughout the unit; the ingenuity and creativity of troops to make a B-hut festive; and the unique camaraderie that comes from spending the holidays deployed together. Most importantly, I have seen with incredible pride your continued professionalism and dedication to duty no matter the day, no matter the discomforts and no matter the difficulty.

While sacrifice is certainly a military tradition, so are victory, honor and perseverance. These are your true gifts to our Nation and each other.

May God continue to bless you, your loved ones, and those we are sent to protect with health, happiness, and prosperity, and may He bring joy to us all this holiday season.

Happy Holidays.

All the Way!

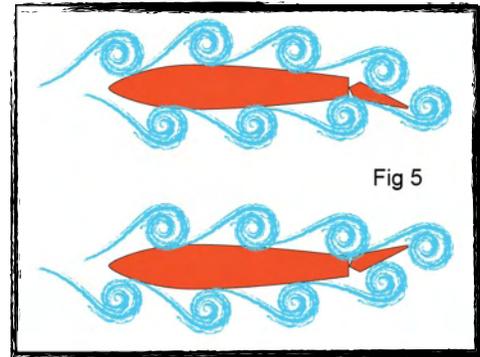
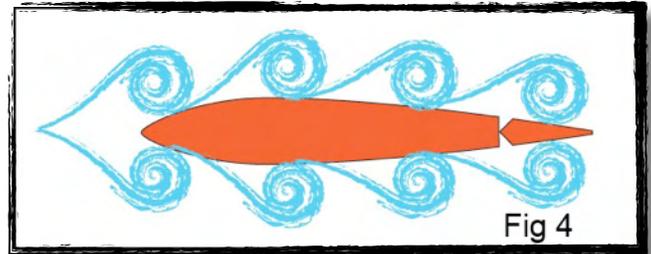
Curtis M. Scaparrotti Major General, US Army Commanding

FLUTTER

Excerpts from RC Universe

Why does this happen?

Air moves over the wing, several vortices will develop in the airflow - a series of high and low pressure areas. If they put pressure on both sides equally, the pressures will cancel each other out (Fig 4). However: IF the vortices on top and bottom are out of sync, and IF they hit the surface with a harmonic resonance (the frequency at which the aileron wants to vibrate), the surface will try to flutter (Fig 5).



So how do you prevent it?

There are three ways to prevent flutter:

1. Design the control surface so that it will only flutter at a speed you will never attain. For example, if the aileron on your 40-size Piper Cub will flutter at 120mph, you'll never have to worry about it.
2. Add dampers (shock absorbers) to the surface to keep it from moving freely.
3. Mechanically hold the surface steady.

Looking at each one separately:

1. In most cases, we did not design the plane, so that option is out.
2. Adding dampers just isn't feasible on most models (not to mention the fact that hindering the surface's movement is the last thing many people want).
3. So our only real option is: Hold the surface securely!

Now imagine you're driving down the highway, the aileron is fluttering in the breeze, and you reach out and grab it - It stopped, didn't it? You were able to stop it because (unless you didn't eat your Wheaties that morning) you're a lot stronger than the force which is creating the flutter. Plus, you probably grabbed the trailing edge of the aileron (where you have a mechanical advantage). Your servo will be linked to a control horn on the forward edge of the aileron where it has much less of a mechanical advantage, so the servo and all of the linkages will need to be strong and tight. No slop allowed here!

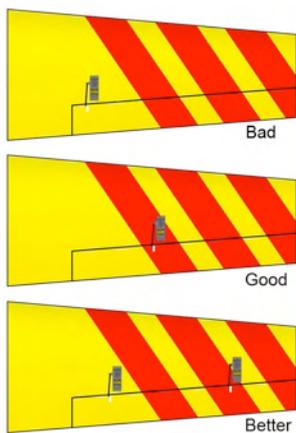
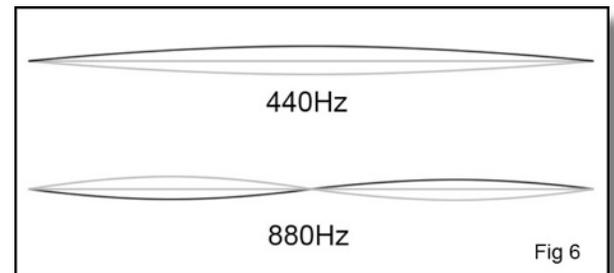


Why no slop? I have heard people say, "Well, there's only a little slop, so even if it flutters, it won't flutter much." - WRONG! To demonstrate this incorrect line of thinking, imagine you have a 6-foot long, steel pole buried 2ft into the ground and you want to remove the pole. It will only move it a little bit, so you begin to wiggle it. The more you wiggle it, the more the ground will soften and it won't be long until it will move so much that you are able to pull it out. The same thing can happen with flutter. That little bit of movement can put more and more pressure on a weak pushrod until the pushrod starts to flex. On the next cycle, the pushrod will flex more and so on until the flutter completely destroys the components. And the most unfortunate thing is that this can all take place in a matter of seconds!

Not all vibration is the same

Something else to consider is that just because you're holding one area of the aileron tightly, that doesn't mean it can flutter in another area. Remember, EVERYTHING will vibrate at some frequency. Of course, in most cases, securely holding an aileron's control horn is usually enough to keep it from vibrating at reasonable speeds, but the larger the surface, the greater the chance of this happening.

This brings us to the next area of vibration. Let's go back to the guitar string analogy: If you pluck an "A" string, it will vibrate at 440Hz. If you hold the string down at the 12th fret (which is the middle) it will vibrate one octave higher or 880Hz. However, if you place your finger lightly on the string at the 12th fret, and simultaneously pluck the string and release your finger, the string will emit a lovely "Ping" sound (any guitarist can tell you that this is even called a "Harmonic" note). What is happening is that you have caused the string to vibrate not from end to end, but from end, to center, to end (fig 6).



Through the same principle, an aileron can be held firmly at one end while the other end is developing flutter. It's sort of like when you hold a ruler against a desk and smack it. One end of the ruler is held firmly while the other end is vibrating.

This is why your control horn should not be all the way to one side or directly centered on the aileron. This is also why many large-scale planes use two servos (spaced apart from each other) on each aileron instead of one very powerful one - They can now hold and control the aileron at two points instead of just one.



So, what steps can you take to avoid having your plane shake itself to death?

This, like many things will vary from one model to the next, but generally, the bigger the plane/control surface, and the faster it will fly, the more strength you will need. In all cases, a first priority is hinges. All hinges should be secure (including the torque rod if one is being used). For most 40 to 60-size planes, 2-56 pushrods are usually adequate, but if the pushrods are unsupported (as in the case of an aileron servo mounted in a wing) for more than 5 or 6 inches, you may want to consider stepping up to 4-40 rods. Now, if that were a 40 to 60-size high-performance or 3D plane, you might want to go right to 4-40 rods. Larger planes usually require at least 4-40 pushrods. Many people go so far as to use titanium or carbon fiber tubing, and of course, the bigger the surface, the stronger your servo should be.

But I want to emphasize that there is **no given rule**. It is entirely possible to have a plane that breaks every rule - sloppy hinges, loose linkages, servos with play in them, etc. and never experienced flutter. How is this possible? The answer is simple: because that plane has never flown in or through the envelope where flutter would occur on that particular model.

I once wrote a review of a large-scale plane where the manufacturer recommended standard servos and supplied 2-56 pushrods. Had I bought this plane for myself, I probably would have beefed things up a bit, but since it was a review, I wanted to assemble it as per the instructions (my philosophy here is that it's better that I have a failure with a review plane than you have one with yours). I got many flights on that plane over the next few seasons with no issues whatsoever. Why not? Because the plane was not prone to flutter. Through its aerodynamic qualities, be it by design or just dumb luck, the plane had no flutter issues anywhere in its flight envelope. Of course, it could be that if it were able to go 20mph faster, it may have turned into a pile of sticks (Something to think about if you're one of those people who like to over-power your planes!)

The bottom line here is, don't go crazy. There's no need to put carbon fiber pushrods or high-torque servos on your 40-size sport plane. Just try to keep all of your linkages tight, use servos and pushrods that are up to the task, and when in doubt, make it a little stronger. The wider the control surface is, the more of a mechanical advantage it has so the more important strong servos, heavy-duty pushrods and tight linkages become.

Remember: Flutter is not something that is GOING to happen; it is something that CAN happen IF all of the conditions are right AND your equipment is not strong enough to overcome it.



How can I tell if my plane has flutter?

There are only two ways to detect flutter: The lucky way and the unlucky way. If you are lucky, you will hear a low-pitch vibration (similar to a baseball card in a bicycle spoke) coming from your plane, **SLOW DOWN** immediately, land the plane and inspect all control surfaces. Check the covering too, as a piece of loose covering can produce a similar sound.

If you are unlucky, you will know you have flutter when you see one of your wings explode, or have a stab fly off in mid-air.

Finally, let's touch on the "gap" myth.

I can't close this article without commenting on one of the biggest myths surrounding the flutter issue - The gap!

In recent years people have come to the misunderstanding that having a gap between the wing and aileron (or stab and elevator, etc) will cause flutter... **It-will-not.**

Hopefully, now that you understand what **DOES** cause flutter you can see that having a gap may (or may not) change the speed at which flutter occurs, but it is not and never will be a **CAUSE**. In fact, some large-scale 3D pilots are now intentionally **leaving** a gap because it creates a really cool whistling sound when they do a snap roll (Hey, whatever blows your skirt up).

There was a time when I always sealed my gaps - even though they were minor. As time went by, I dropped the practice due to the fact that it was time consuming and I found no noticeable difference. Sealing does very little if the gap is small, but if the gap is excessive, sealing it can greatly improve a surface's effectiveness. So it's never a bad idea - Just don't assume that it's going to prevent Flutter!

Pattern and other precision airplanes can also benefit from sealing the gap much the same way that an Olympic swimmer benefits from shaving off all of his body hair - when the competition is that tough, every little bit helps. But sealing a narrow gap on a sport model would have about the same affect as shaving off your body hair to take a dip in the lake. (Take **THAT** mental image home with you tonight!)

So if you **WANT** to seal your gap, go right ahead, but learn to do it properly (You can cause more problems by sealing it incorrectly than if you had just left it alone to begin with).

Hopefully now you have a better understanding of what causes flutter and how you can prevent it. For some really dramatic videos, I suggest you do a YouTube search for "flutter". It's amazing how much damage it can do!

SPLINED SERVO ARMS

by Nelson Ramos

Not all modelers know why a four and a six servo arm spline are supplied and its' usefulness. Next time look carefully at the arm and you'll notice numbers on each arm. Next question is why the numbers on each arm?

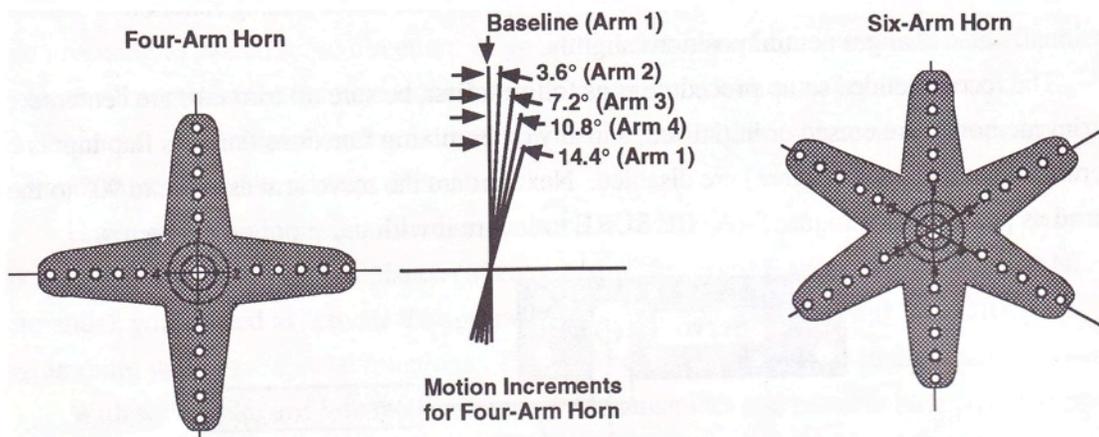
On a four-servo horn each arm number will start on a different degree. Number one arm is straight up, call this point 0 degree, number 2 arm will travel 3.6 degree from the 0 point, number 3 arm travels 7.2 degree, number 4 arm travels 10.8 and if you continue to move the number one arm further it will travels to 14.4 degree from the zero point.

These are the travel degrees for a six-spline horn.

- ARM 1 – 0 degree
- ARM 2 - 2.4 degree (C W)
- ARM 3 - 4.8 degree (either direction)
- ARM 4 - 7.2 degree (CW)
- ARM 5 - 4.8 degree (CCW)
- ARM 6 - 2.4 degree (CCW)

Why is this information useful?

The above information lets you set up the wing servo at a right angle (90 degree) to the aileron. Sometimes the servos can't be installed at a right angle to the wing or the servos inside the fuselage aren't parallel to the elevator, rudder, throttle, and flaps. Knowing the degrees will make setting up the linkage from servo to the travel surface easier.



After the mechanical adjustment is completed and you still need a little more degree on the servo spline, then this is the time when you turn to the sub-trim on the computer transmitter and make increment adjustments.

VERY IMPORTANT - Before you start first turn on the transmitter and move the trim lever to neutral or central, making sure the servo is center.

**MARK
KLEIN**

SHOW & TELL

RON BERG

"...It's a **JEMCO** kit by Jim



Meister it's out in the seventies...it's foam wings, built up fuselage, it is scale, it's built to scale outlines...one thing that I did have a problem is that they cut the canopy scale, and the lines on the canopy, (laugh) well sure here I am I followed and I cut it right on the line that goes right on to the top of the wood there's no overlap so how do you put this sucker on? Ed Wiemann gave me a product called...

Formula 5-6-0 it's like a copy of the old **56**, the **Canopy 56, rc 56** it happens to work a lot better...because you wick it in



you don't put it on and then put the canopy on top, you put the canopy first and then you wick the edges you put it along the

edge, you can wipe it with you finger...and it dries clear and it's on tight...it really worked."



"...The cowl was really mangled so I reinforced it a little bit on the inside with glass cloth, on the outside I did whatever I could. I filled it in with **Bondo** and I sanded it down and more **Bondo** and more sanding and I tried to get it as smooth as possible. And I rebuilt the entire cowl...

...I had an opportunity to put in a heavy battery pack so I have a 6 volt 5 cell and its a heavy one it's a sub c so it weighs a good amount but I needed it for balance..."





THE MEROKE RC CLUB - EST. 1963

A CONVERSATION WITH CHARLIE LANDO

Charlie Lando was born January 22nd quite a few years ago in Brooklyn, NY, the first of three boys. As a teenager, he started building rubber powered models – that seldom flew well – and graduated to old style, ignition powered models that also had problems. At high school during WWII, he also built solid models that were to be used to help observers/spotters identify various allied and enemy aircraft. His first RC model was the old *Rudder Bug*.

officer – until joining NY Tel in 1971. He finished his career as an Information Technology manager and retired from what is now Verizon 16 years ago. Responsibilities with the Merokes include service as Recording Secretary and with the Building and Education Committees. He also chaired the Committee that succeeded in having Nassau County officially name the Aerodrome at Cedar Creek in honor of Major Raoul Lufbery on December 21, 2008.



Charlie has built several planes from scratch, several from kits and assembled several ARFs. His greatest satisfaction comes when what were sketches on a piece of paper (He sketched his contra-rotating prop, rubber powered X-100 during a boring HS class!) progress to full scale plans and ultimately take to the air.



Charlie lives in Wantagh with his wife Nancy. They share 14 grandchildren and 4 great-grands.

He graduated from Pratt Institute as a Chemical Engineer in 1951 and worked in that field – with time out for service with the USAF as an atomic weapons

Question - HOW DID YOU GET IN OUR HOBBY?

Answer - I first started to build model airplanes as a teenager. My first engine was a Rogers RMC2 that was supposed to power a *Miss Tiny*. I was never able to start the engine at the field, so *Miss Tiny* never flew. The first plane that I built & actually flew was the SIG *Fazer*, many years later.

Question - HOW DID YOU BECOME A MEROKE?

Answer - I first noticed model planes in the air while riding my bicycle to & from Jones Beach for exercise in 1997. Being nosey, I followed my nose one day and discovered the flying field at Lufbery Aerodrome. I drove to the field any number of times thereafter just to watch what was going on. I told my wife, Nancy, about this and how much fun it seemed to be. Then, knowing my interest in flying, she surprised me with an ARF trainer and the rest of what I needed to start again for Christmas, 1999. Little did she know what she was getting me/us into!!

When she purchased the gift, she was given a card that listed the Merokes and contact numbers for the instructors. The rest is history.

Question - WHERE DID YOU LEARN TO FLY?

Answer - I learned to fly Aeronca Champs from a dirt patch near Akron, Ohio in 1952. I learned to fly RC models at Lufbery Aerodrome in 2000, first under the instruction of Joe DiPrima, then by several other Merokes. Great teachers, all!!! Thanks, guys!!

Question - ONE THING ABOUT YOU THAT WOULD SURPRISE US?

Answer - I'm a member of our church choir, sing bass and every now-and-then have a solo.



ELECTION RESULTS

Congratulations to our newly elected Executive Committee and Board of Directors. We should all be grateful for their willingness to serve the Meroke RC Club. I for one applaud and thank them.

PRESIDENT
TED EVANGELATOS

VICE PRESIDENT
CHARLIE LANDO

TREASURER
NICK GUIFFRE

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DAVE BELL

CORRESPONDING SECRETARY
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BOARD MEMBER
MIKE HAGENS

BOARD MEMBER
TONY POLLIO

BOARD MEMBER
NELSON RAMOS

BOARD MEMBER
ED WIEMANN

SUGGESTION BOX

Send all suggestions to:
newsletter@meroke.com

Calendar

December 2, 2010

Club Meeting Canceled

December 3, 2010

Annual Awards Dinner

Asian Buffet - 7:00 pm

276 West Old Country
Road, Hicksville, NY
11801

December 16, 2010

Club Meeting

BIRTHDAYS

DEC 2 Alan Hammer

DEC 2 Ray Maramara

DEC 6 Abramson Ellis

DEC 11 Robin Smith

DEC 12 Edward Charles

DEC 12 Chris Mantzaris

DEC 21 Nelson Ramos

DEC 22 Bill Streb

DEC 26 Irving Kreutel

DEC 30 Tony Pollio