

Wine Country Flier



Next meeting: 15 November, 7:30 P.m.
Veterans Memorial Bldg. (Northwest Room) Across from Fairgrounds

Get there early for your free door prize raffle ticket!

www.wcflyers.com

Promoting Model Aviation in Sonoma County

2005 Club Officers:

President:	Guy Nicholas	(707) 544-2141	Guy@Gui-Soft.com
Vice President:	Brody Carlson	(707) 545-8272	brody@connectionsit.com
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Newsletter and Website

Newsletter Team:

Guy Nicholas, Phil Leech, Larry Miller, Sid Maxwell, Red Jensen

Website:

Patrick O'Halloran



Presidents Report

Guy Nicholas

Greetings all, and welcome to the eleventh issue of the 2005 series of newsletters. I would like to start with a bit of official business. As you should all be aware, we had nominations for officers for the upcoming year. Along with new officers we will need a few new board members as well. Let me take a moment and tell you what the officers and directors are all about. According to our by-laws we are required to have a board of directors made up of ten members, consisting of the five elected officers and five additional directors that are to be chosen by the President. As I seem to be the only person nominated for the office of President, we will have to assume I will be the one elected to that position. Therefore, the job of choosing the five additional board members falls upon me. If you are interested in becoming a member of the board of directors, you need to express that interest to me. Now before you all start volunteering, let me take another brief moment to describe what we do. Once a month we meet to discuss things like, whom will host an upcoming event, what to do about noise complaints from our neighbors, to what are we going to do about our shed being constantly broken into. The meetings usually last about an hour and a half to two hours. We can also get assigned miscellaneous follow up items to do between the meetings. The board members serve an important role and the position should not be taken lightly! All that said, I encourage anyone interested to get in touch with me and let me know. Guy@Gui-Soft.com or (707) 544-2141

Ok, enough of that...don't forget the end of year party is fast approaching, get your tickets now while the gettin' is still good.

Burn Baby, Burn!

By Guy Nicholas

A while back a member of the club learned how not to charge his LiPo batteries. It was

an expensive lesson that cost him his garage and everything in it. He was lucky, it could just have easily been his house...or worse. More recently, another member happened to be walking through his garage when he noticed the 2000-ish Mah LiPo pack he was charging was hissing and swollen up. He grabbed it and threw it onto the driveway. About fifteen seconds later it burst into a blazing two foot ball of flames. He threw water on it, at which point the burning LiPo's laughed and continued burning. Being on the driveway and not in his garage nothing but the batteries burned, but as with our earlier victim, this too could have been much worse. What if he hadn't been walking by at that very moment?

LiPo batteries are very powerful and a very cool technology, but as we have heard before, "with great power comes great responsibility". Here are a few tips to help you charge safely:

- Be absolutely sure that the Lithium Polymer charger settings are correct for the battery pack being charged – both voltage and current settings
- Care should be taken to charge on a fireproof surface, such as brick.
- Do not charge batteries near flammable items or liquids
- Keep a dry fire extinguisher nearby - or a large bucket of dry sand, which is a cheap and effective extinguisher.
- Do not charge inside an automobile, especially while driving
- Batteries should NEVER be left unattended while charging

Color Theory for Models: Choosing the Right Color

by Dr. Robert Suding
from www.ultimatecharger.com

All RC fliers have gotten that "I can't tell which way it's going" feeling when learning to fly RC. Several simple color trimming steps can help you fly your airplane better, whether you are a beginner or top dog in Pattern.

Most airplanes, especially ARFs, are covered or painted to look good in the store. But in the air it's a different story. The situation is very simple—if you can't see it, you can't fly it.

To successfully fly an RC aircraft, the pilot must have good orientation and distance perception. The eyes estimate aircraft orientation based on the perceived position of the model's outer edges, and the relationship of these outer edges to the edges of any discernible trim markings on the airplane's wings or fuselage. Distance perception, in turn, depends on a combination of one's perception of the aircraft's outside edges and its estimated orientation.

After you have located your airplane and estimated how far away it is, you must immediately recognize several attitude orientations:

- Is it flying toward me or away from me?
- Is it upright or inverted?
- Are the wings flat, vertical, or tipped?
- Is it flying horizontal, upward, or downward?
- Is it flying parallel to the runway or vectored?
- Is it flying perfectly vertical or skewed sideways or fore/aft?

The following suggestions will help you with distance and attitude perception. Visual acuity and contrast perception diminish with age, but by using correct color concepts, even senior fliers will find that visual orientation of their aircraft can be consistently and reliably achieved.

Solid-Colored Aircraft

RC airplanes are flown in all kinds of weather and background conditions. A solid-colored aircraft will sooner or later fly into a condition where it blends into the background. This will result in a complete loss of location and orientation since no edges can be perceived. The absolute worst, in my opinion, is a silver Mustang in a

heavily overcast sky. Yellow Cubs are tough to see when back lit by the sun. I had a dark green airplane that would disappear when I landed with a background of green trees. Red Stiks and dark blue airplanes go invisible in late evening and storm conditions. A solid-colored airplane is easier to cover, but it won't do you any favors up in the sky.

Wing and Horizontal Stabilizer Shades

The top of the wing and horizontal stabilizer is normally lit by sunlight. The bottom of the wing and horizontal stabilizer is shadowed. Coloring the top lighter and the bottom darker keeps this same relationship even in changing lighting conditions.

ARFs are classic blunders in coloring. Either they have identical top and bottom wing colors, or they put some token color on the top of the wings and leave them white underneath. They look good in the store, but don't help the beginner at all.

I always recommend that beginners cover the bottom of the wing and the bottom of the horizontal stabilizer with dark-blue contact paper before flight.

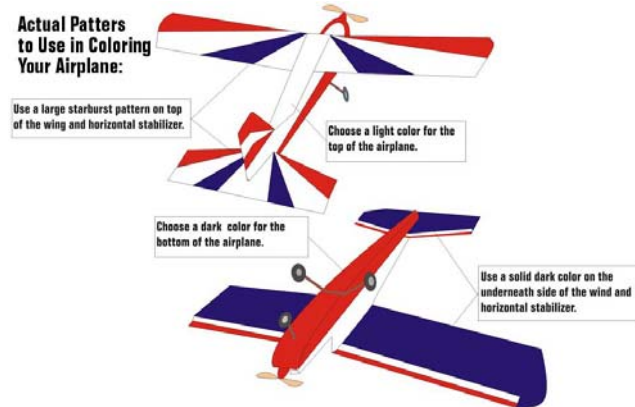
When flying at a distance of 500 feet or more (depending on the size of the model and lighting conditions) you can't see colors, because the cones of your eyes that perceive color are 2,000 times less sensitive than the rods, which perceive illumination.

In these circumstances, your gray-scale vision (your perception of lightness and darkness in a black-and-white image) provides your orientation and depth perception, not color. Any series of adjacent colors on your aircraft that are intended to facilitate orientation should therefore be gray-scale opposites. For example, a series of bands consisting of red, yellow, blue, and then white is desirable. Don't assume a series of "color opposites" such as red, green, blue and black will be effective. These all have the same dark gray-scale

shade and will show an equal tendency to disappear in a deep blue or heavily overcast sky.

If you use the wrong series of color bands, you won't know how far away your aircraft is, and you won't even know which way it's heading to bring it back. Also, don't rely on intricate patterns. They blend together to form edgeless fuzz approximately 100 feet away. You can test potential color schemes for gray-scale perceptibility by video taping and playing back alternative color schemes on a black-and-white television or on a color television with the color control turned down.

Actual Patterns to Use



The best color scheme for beginners that I have found is a combination of large starburst patterns on top of the wing and horizontal stabilizer, and a solid dark color underneath the wing and horizontal stabilizer.

Beginners consistently become perceptually disorientated when flying at a distance, especially when the airplane flies at a 45° angle away or toward the pilot, since the aircraft silhouette is identical. With the starburst pattern, all the beginner has to do is slightly roll the wings towards him, and the starburst pattern becomes an arrowhead, pointing in or out, the direction of flight.

Start by covering the bottom of the wing and horizontal stabilizer with any dark color. The exact color could be black, deep red, dark blue, or green, it doesn't matter; they will be the same gray-scale color at a distance. Then put a 2-inch strip of some light color

along the leading edge of the bottom. Do the same for the bottom of the horizontal stabilizer, and make the light strip roughly 1 inch wide.

The base color of the top of the wing must be a very light color such as white, yellow, or some other very light color. The starburst pattern starts out at the center of the wing, from 3/8 inch under the wing's leading edge to roughly 1 inch back from the leading edge at the top. Then it is a large "pie slice" to the wing tip, where it extends from 3/8 inch under the wing leading edge to the trailing edge on the top. A second pie slice of a different dark color extends from the center of the wing to points one third and two thirds out on the wing. Both sides of the wing are colored like this as is the top of the horizontal stabilizer.

Landing Considerations

Landing requires keeping your wings flat and knowing where you are in the landing approach. You are generally close to the airplane during the later stages of the landing approach, so your color perception is improved, but the wings will be edge-on to your line of sight. The leading edges should be very prominent against any background such as blue sky, white clouds, dark overcast, distant mountains, or green trees. All of these items have spectral lines toward the higher frequency blue or green region, so a very simple solution would be to have a low frequency color such as red or orange on your wing and horizontal stabilizer leading edge.

At the field where I fly in Colorado, ARFs with blue wing edges are almost invisible when a low approach from the West dips the airplane visually below the mountains, resulting in very klutzy landings by beginners.

The leading edge red or orange pie slice is wrapped around the leading edge so that it has the maximum area of visibility when edge on. The 2-inch strip of white on the bottom of the wing near the leading edge will

become visible during the landing flare, aiding in precision landings.

I prefer a white background on the top of the wing and horizontal stabilizer, with a bright red leading edge pie slice and a metallic blue inner pie slice on trainer airplanes. The same metallic blue under the wing looks nice, but any dark color works fine

Fuselage and Rudder Coloring

The same coloring rules apply to the fuselage. Keep the top of the fuselage light, and the bottom dark.

The sides of the fuselage should aid you in flying horizontal passes. A solid color fuselage is very difficult to keep straight and level because all of the aircraft reference lines are curved. Light blue-and-white fuselages (a favorite ARF color scheme) blend in with the sky and clouds too well, and will become invisible under some lighting conditions.

Draw a line along the thrust line of your aircraft, roughly splitting the top and bottom of the sides in half. Make the top half of your fuselage sides a light color. Make the bottom half a dark color, usually one of the wing pie slice colors.

Analyze how you fly. Beginners and experts, who fly inverted much of the time, should make the fuselage line color demarcation exactly follow the thrust line. Beginners fly airplanes with lifting, flat-bottom wings, so the aircraft fuselage side flies a straight line.

The expert flies an airplane with symmetrical wings, so he flies at a slightly raised altitude to maintain level flight, whether upright or inverted. Therefore he should also have the fuselage line color demarcation exactly following the thrust line. When doing a horizontal pass, he should maintain an equal rising thrust line sight picture whether upright or inverted.

The interesting situation is the beginning aerobatic pilot. His routines do not include

horizontal, inverted passes, but his maneuvers do include many horizontal flight components. He will usually be flying an aircraft with symmetrical airfoil wings, so the aircraft will be moving through the air with a slight upward orientation. He should offset the fuselage side color demarcation upward at the tail of the aircraft by roughly an inch. Now he can practice his horizontal passes by keeping the fuselage side lines parallel with flat ground.

The vertical stabilizer and rudder should have very wide horizontal bands of color. Make the top of the horizontal stabilizer the same color as the wing tips. Then put a light-colored band, and below this a dark-colored band, usually the same color as the inner pie slice on the top of the wing. The base color of the vertical stabilizer and rudder should be the same light color of the wing.

Another variant for the vertical stabilizer and rudder that works well on trainers with very big tails—such as the Kadet series—is a starburst pattern on the top of the wing. This aids the beginner in determining the direction of travel when flying at a distance. The tail's starburst pattern becomes an arrowhead pointing out the direction of flight.

Looping

Consider what the usual looping problem always is for the beginning aerobatic pilot. The pilot does not begin the loop with his wings flat. He usually corkscrews in or out. Proper coloring of his low-wing or mid-wing airplane can be a major help.

Make the wing tips stand out. I usually make the outer 2 inches of each wing and 1 inch of each horizontal stabilizer the same bright red that I color the leading edge. If you follow my advice above on the wing bottom and the fuselage sides, the wing tip can be visually correctly placed for a perfect loop. If the wing tip is too high, resulting in a corkscrew out, the pilot will see the dark wing bottom. If the wing tip is too low, resulting in a corkscrew in, the pilot will find that the wing tip blends too well with the bottom of fuselage side. The correct sight

picture will be the wingtip cleanly placed against the upper lightly colored fuselage side. Look at the International Miniature Acrobatic Club or Pattern airplane pictures in RC magazines. They always have a dark color on the top half of the fuselage side into which the wing tip blends, causing looping problems.

Geometric Shapes

Humans can recognize different geometric shapes 1/10 of a second faster than colors. I use this phenomenon to help me with the vertical rolls performed in advanced aerobatics. Instead of a solid dark color on the bottom of my wing and horizontal stabilizer, I put four large circles on the bottom of the wings and two large circles on the bottom of the horizontal stabilizer. The noticeably faster recognition of the round shape verses the line shape aids me in nailing the vertical rolls.

A number of people at my field have copied my bottom circles without knowing the reason why I use them. The solid colored bottom is preferred unless you are doing vertical rolls.

Sunglasses

Several years ago I flew with some expensive Serengetti Driver sunglasses. These had a red tint to them, I guess to cut down on the ultraviolet region. I lost visual perception on a solid dark blue airplane during a landing approach and crashed.

Fortunately they were stolen at a hobby store a week later, and I got some RayBan aviator sunglasses with a blue-gray tint. What a difference!

Red is at the low frequency part of the visual spectrum, and blue is at the high frequency part of the spectrum. Red or yellow-tinted sunglasses reduce all colors to high-contrast shades of gray, making your aircraft in the air appear completely different from the appearance of your aircraft at home or in the pits. Gray, light blue, or light green tinted sunglasses make the airplane in the air look

just like the airplane in the pits, and because your vision is extended into the high frequency part of the visible spectrum, you will have twice the visual perception range!

Final Thoughts

- Evaluate color schemes for visibility first, beauty second. Dark-colored airplanes are more difficult to see in overcast skies and in the evening.
- Scale airplanes are a special problem. Warbirds were colored to avoid detection, just the opposite of RC airplanes. Avoid flying scale-colored airplanes until you are a very experienced flier.
- Avoid dark colors on the fuselage where your battery and receiver are located. The heat buildup can result in loss of battery capacity and premature radio failure.
- Don't fly when someone with a airplane identical to yours is already flying. ARFs and yellow Cubs are particularly susceptible to this problem. Several years ago two fliers were flying with identical ARFs. When one of the models landed, both modelers went out to get the airplane. Much to the entertainment of the folks in the pits, one modeler discovered that his airplane had crashed out in the field five minutes previously because he had lost track of which airplane was his, and he was "flying" the wrong one.

WCF Board Meeting

11/01/05
By Larry Miller

-The meeting was called to order at 7:00 pm by Board Chairman Guy Nicholas.

-Other members present were Larry Miller, Brian Blackburn, Steve Cole, Phil Leech, and John Reade.

-Phil reported on his plans for the Christmas party.

-Brian reported that the winner of the AT-6 ride from our raffle, Tom Palmer, enjoyed his flight with Will Whiteside last month.

-Several members are looking into obtaining a secure steel storage shed for use at the field. Since we are a nonprofit organization, we may be able to get a great deal, like maybe free.

-Steve has been talking to tree trimmer Jeff Kowell about topping some of the trees to the north of the runway. They look like only bushes from the flight line but they are indeed trees that are forty or fifty feet high growing on the down side of the hill.

-We held a discussion on the slate of nominees for officers for next year. At the next general meeting an election will be held to determine who will be running the day to day business of the club.

-The subject of next years PCAM air show was brought up by Steve. Larry and Phil will be meeting with the show director in the near future at one of the air show planning meetings to see if we can be a regular part of the show instead of being only a fill in program as in the past.

-There being no more business, the meeting was adjourned at 8:00 pm.

Respectfully submitted,
Larry Miller, Sec.

WCF General Meeting

10/18/05
By Larry Miller

-The meeting was called to order at 7:30 pm by Vice President Brody Carlson. President Guy Nicholas was unable to attend this month.

-We had 24 members in attendance.

-The free door prize drawing was held with one of the Galindo twins winning the gallon of fuel. (I'm not sure which one it was as they both look exactly alike.)

-Treasurer Brian Blackburn gave his monthly financial report and stated that we have 111 members as of this date. He also reminded us that it is time to send out notices for next years dues.

-The secretary's report was approved as printed in this month's newsletter.

-Sid Maxwell brought us up to date on his quest for a new flying field. He has a number of potential sites that he is looking into.

-Phil philled us in on the plans for the upcoming Christmas party.

-Sid reminded everyone of the float fly coming up next Saturday. Food and drinks will once again be available.

-The nominations for next years club officers are as follows:

President-----Guy Nicholas

Vice President-----Brody Carlson

Secretary-----Larry Miller

Treasurer-----Brian Blackburn

Board members-----Steve Cole, Mike Cracchiolo, Phil Leech, Sid

Maxwell, Kurt Hiner, and John Reade, who will also serve as Field

Marshal and Safety Officer.

-Safety officer John Reade gave a talk on prop safety.

-Mike Cracchiolo gave us a rundown on the prizes he picked out for this months raffle. A great selection I might add.

-The raffle was next up on the agenda. And the first ticket drawn belonged to Kurt Hiner who took home a real nice Hangar 9 P-47 ARF. Merle McGregor had the next ticket pulled and he picked the Flatana electric airplane. Brian Blackburn was the winner of an airplane stand and Julio Alvarez got a fuel container/fuel pump combo. Brody won a Goldberg tailwheel and Des Shapiro got a Groove Tool. There were more winners too numerous to list. There were two sets of hinges up for the offering this month and Sid managed to get one set but I missed who got the other.

-There being no more business, the meeting was adjourned at 8:30 pm and everyone retired to the parking lot to watch Rob fly an electric biplane.

Respectfully submitted,
Larry Miller, Sec.

LEECH TO GREECE

By Sid Maxwell

Our buddy Phil Leech is off to Greece with his lovely wife Ann. He left last Wednesday and will be gone for two weeks. He told me he wanted to visit Greece for as long as he could remember. Maybe he will find some RC pilots over there.

Sid Maxwell

ROCKETS FOR SALE

Gil DeLagnes has a bunch of rockets for sale including:

15 Rockets
180 Motors
2 Launch Pads

Tools, Igniters, all kinds of extra parts

This is \$485.00 worth of rocket gear for the sacrifice price of \$185.00!

Call Gil in Windsor at 837-9496.

Power Starter Kit.

Two brand new seven cell 3000Mah battery packs with a rubber mount to hold them to your starter. It is basically this setup seen here:

http://www.ronlund.com/Merchant2/merchant.mvc?Screen=CTGY&Store_Code=heli&Category_Code=Starter

This setup gives both portability and extra power for those hard to start engines.

A steal at \$40!

Call Guy at (707) 544-2141