

THRUST LINE

SKY STREAKERS R/C CLUB NEWSLETTER NEW GLOUCESTER, MAINE
SEPTEMBER 2002 EDITION

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*The deadline for
submissions is the first day
of each month.*

FROM THE PRESIDENT

I hope everyone is doing well. I have been very busy with my new house. It seems there aren't enough hours in a day to get everything done that needs doing. I am hoping to get an occupancy permit this week and officially move in. In the middle of all this I am looking at finishing an electric glider for someone. It's only an ARF but you know how those can be. There is still lots of messing around with it to get it set up properly. Partly because it has been sitting around for years in the guys garage. I have already found out there are some missing parts. Luckily, they are not critical to the plane's ability to fly. You don't know anyone that starts a project and it takes forever to finish until finally, someone else does it, do you? I didn't think so ☺. Anyway, the batteries are coming around with some cycling. One is doing much better than the other and I suspect maybe a bad cell in the pack. I checked out the instructions but to my dismay they were in a foreign language. Oh Vell?

The New Gloucester Memorial School finally got back to me about the cost of meetings this year. They want 28 bucks an hour for non-profit activities and even more for regular businesses. At approximately 60 dollars a month, it would take 9 members' dues to cover the meeting costs. If we are going to pay for a meeting place, I think we should find a much better one with more to offer than the school. The school was supposed to fax me an application anyway to get it in, but it never showed up on the fax machine. Just as well, I have arranged to hold the meeting at Bruce Morse's business anyway. Please find the directions in this newsletter.

If anyone has earned their wings and have not received them, please come to the next Meeting to get them. You worked hard for them, so wear them with pride.

See you at the next meeting at Maine Air Power September 12, 2002 at 7:30 p.m. That's Thursday night.

By Nelson Frost

The September 2002 Regular Monthly Meeting of the Sky Streakers R/C Club will be held Thursday September 12th at Maine Air Power, Inc. at 3100 Hotel Road, Auburn Maine at 7:30 p.m. Directions to the meeting site are listed below.

Directions to Maine Air Power, Inc.

From New Gloucester continue North on Rt 122 to Hotel Road (just south of Exit 12 of the Maine Turnpike.) Turn left onto Hotel Road. You may also arrive via Kittyhawk to Hotel Road, .75 miles from the junction of said roads. Maine Air Power is located at 3100 Hotel Road .25 miles from the junction of Rt 122 and Hotel Road. The building is green and beige in color and the entrance is inside the gate. (Thanks, Bruce!)

August Meeting Notes

The August meeting of the Sky Streakers R/C club was held on Wednesday, August 7th at the club's flying field on Bald Hill Road, New Gloucester at 5:00 p.m.

A rather heated discussion was held regarding the possible extending of the runway. There is a real problem occurring with pilots flying over the homes bordering the bog end of the property and one possible solution presented is to extend the field on the end to the right of the tarred runway (when standing at the pilot stations.) The steps that would be involved were talked over along with the cost of doing the project. There will be more discussion regarding this matter at future meetings.

There was no **OLD BUSINESS** to discuss.

For **NEW BUSINESS**, the date of September 21st was approved for a Club Picnic & Fun Fly. (*Update: due to unfortunate circumstances, the Marins will be unable to follow through with their plans for this day and are now looking at holding the event during the Spring of 2003. Stay tuned.*)

Club Treasurer, **Dave Edwards** has provided the following figures for the month of July 2002.

As of July 31st:

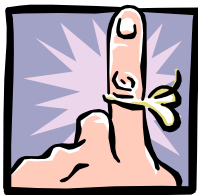
Receipts -	\$ 0.0
Expenses -	\$2,049.46

Assets:

Checking -	\$ 16.94
Reserve -	\$6,400.94

At the time of the meeting, the location of the September meeting was still up in the air pending the decision of the school department regarding the fees that MIGHT be charged for the use of the facilities.

*submitted by Rosalie Marin
Secretary*



DON'T FORGET!
September 14th and 15th - IMAC Contest
The CD for this event is **Tom Chabot**.

Almost Ready to Fly

by Durell Leister Sr.

Not so long ago many people predicted that by the turn of the century Americans would be enjoying a shorter workweek. These people with vision saw most of us spending huge amounts of time fishing, golfing, boating, and flying our miniature aircraft.

Unfortunately, these wise people did not also see run-away inflation, downsizing, and a host of other pressures that play upon the typical American.

Do you know anyone who absolutely loves golfing, but has not golfed in years? Or how many members of our own club continue to pay membership dues, but you rarely see them at our club functions? As you well know, club participation used to be a condition of membership especially during our club's E-fly days.

Usually newcomers are attracted to our hobby because they are fascinated with airplanes and flying and believe that this would be a way to explore this interest. They will visit the local hobby shop, take a look at all the options, and then decide how much money they can afford to spend and the amount of time necessary to build a model and then learn to fly it. Some will actually go and purchase a kit, start construction, and then eventually give it up. Others will pursue the Almost Ready to Fly (ARF) route, learn to fly, but then never advance to the next level. We will probably all be amazed at the percentage of kits purchased compared to percentage completed. Maybe half?

As you can see, the time-old tradition of building our own masterpiece piece by piece is gradually ending. Voila! Enter the next phase of our hobby ... buy and fly. The already built or ARF aircraft is steadily taking over the industry, from the many different size trainers up to the increasingly popular large-scale aircraft.

It appears that many of us faced with time constraints are turning to these ARF and ARC (Almost Ready to Cover) model aircraft. Also, some of us are using companies who will build your dream aircraft ready to fly. When you think about the cost or value of your time it becomes a real bargain to pay someone else to do the building for you. Industries that perform services for people are the fastest growing part of American society.

When you think about it, is it really worth a few bucks to change your own engine oil in your automobile? Can you afford to spend a few hundreds of hours to build a model? Maybe or maybe not. Of course, there will always be builders, but I think there will be fewer and fewer in the future.

Are we breeding an elite group of modelers who can afford to spend almost any amount of money for the aircraft they want? You know as well as I do that most modelers do not get into RC until they are adults. Of course the most evident question, "Where are the kids?"

I can see no apparent danger in the buy/build saga and that is its effect on the hobby industry. There will be fewer tools, less accessories and gadgets, and of course there will be that loss

of personal pride that only comes when you experience the thrill of seeing a box of balsa become a flying miniature aircraft.

I for one have become bitten by the ARF bug. It is hard not to with the number, price and quality of ARF kits available today. With less time spent building you have more time to devote to other things in life and of course more time to spend flying! I still love the feeling I get from building that special aircraft from that box of balsa and seeing it fly and thinking, "I built that with my own two hands." But for sure, things are a changing. To build or to ARF ... that is the question.

*From The KRC Downwind Approach
Keystone Radio Control Club
Durell Leister Sr., editor
Harfield, PA
via AMA National Newsletter*



Scratch Building

Back when I first got into this hobby, kits were available in many styles and shapes for a reasonable price. For \$100 you could get the top of the line pattern airplane with a fiberglass fuselage and foam wings with all the wood to build it. Of course back then \$100 was a lot of money, but not out of reach for the average guy. Today, kit prices have skyrocketed to ridiculous levels. A Carden 36% aircraft kit will set you back a little over \$1000. A Bob Violett jet kit with retracts will cost you about \$2,200! Even an entry-level trainer now runs over \$100.

How can you beat the high cost of kits? Scratch build, that's how. It's really not that difficult to do, even though it may seem like it to someone who has trouble with building a kit. Actually, scratch-built models are easier to build than some of the kits out there. I'm going to use Miles Reed's plans as an example but the same logical flow applies to other scratch-built designs that are on the market today.

First, pick up a set of plans for an airplane that interests you. Then look them over and read the instructions that the designer sends with them. Get an idea of the construction flow and what special hardware will be required during construction. The Reed Extra 260 plans contain, in addition to the actual plans, a page of pattern plates, and instructions on how to proceed. While many scratch builders cut out all the parts at once, I prefer to pick an assembly, say the fuselage, and cut out the parts that will be required for that assembly.

Here is one of those areas that precision in your work is of the utmost importance. The parts must match the templates exactly! There is no room for error here. If the parts don't fit

the template then they won't fit the airplane either. So be precise. After cutting out all the parts, follow the instructions and build any small sub-assemblies such as fuselage sides, multi-part formers, doublers, etc.

Now you are ready to start building. Either build on the plans or at very least draw a straight line down the center of your drawing board. This line will be the centerline of your fuselage. Keeping the aircraft plumb to the centerline is critical for a good flying aircraft. Framing up the fuselage isn't much different, once the parts are cut out, then building a kit. In fact, that's what you are doing! You just cut out the kit. Make sure all the formers are aligned with the plans and follow the instructions and soon your airplane will begin to take shape.

The wings present a bit more work because you will have to cut out the ribs and, except in the case of a straight wing, each rib will be different from the others. Always make the ribs for both halves of the wing at the same time. This way you can be sure that both wings are the same.

Another thing, always mark the ribs so that the same side is up on both wings. Do this even if you are building a symmetrical airfoil wing. Slight variations in your ribs can really mess up a project if the ribs are not marked and put in the same orientation. Again, at this point, scratch building is little different from building a kit. Just remember, if the parts don't fit, you have no one to blame but yourself.

Scratch building will definitely make you a better modeler, and save you a lot of money at the same time. Just remember, use good quality wood, be precise when cutting out the parts, and follow the designer's building sequence. Oh, one last thing, don't hesitate to call the designer if something stumps you. Usually they are happy to assist you in creating your masterpiece.

*from the newsletter of the RC Eagles
Kent Shore, editor
North Canton, OH
via AMA National Newsletter*

Hints & Tips

Wax Paper

A wad of crumpled wax paper comes in handy when covering your model. When your iron starts to get sticky from the glue, or the colors start to transfer, clean the iron with the wax paper and then wipe the excess wax off with a clean rag. The slick surface will make the job a lot easier.

Stud Threads

You know those threaded metal studs you get with your Ny-Rods? If you use a small electrical wire nut screwed onto one end of the stud, you'll find it a lot easier to screw the other end into the inner pushrod of the Ny-Rod. Saves the stud threads, too.

Need a Bench?

Need an extra bench, yet don't have the space for a permanent one? How about an ironing board? It folds, has a padded top (if you choose), is adjustable for height and you can even sit down while covering or when working on some up-close need. Best of all, you can fold it up and put it away.

Thinning Epoxy

When using epoxy for finishing purposes it can be thinned, but no more than 15% to 20%, with isopropyl alcohol which is 90% to 99% pure alcohol. Rubbing alcohol contains only 70% isopropyl and the remaining 30% is water which can become trapped in the cured epoxy.

Denatured alcohol (ethanol with an additive to make it undrinkable) has also been used to thin epoxy. Acetone will thin epoxy but will sometimes change the curing characteristics. Also, epoxy thinned with acetone can have an adverse effect on white foam.

Epoxies can be colored with the various tinting compounds designed for acrylic and latex paints, which are available at many hardware stores. Or you can use hobby paints that are alcohol (acrylic) based. Colored finish cure, thinned with isopropyl alcohol, has actually been applied with a spray gun to form a beautiful finish on several models. Of course, the immediate clean up of the spray equipment is extremely important.

*From The Tail Spinner
Longmont Aircraft Modelers Association
Dave Long, editor
Longmont, CO*

Airplane Cleaning Solution

For those of you who like to keep a clean bird, try a few drops of this in your spray cleaner bottle. It's called Kodak Photo Flo (put out by Kodak). It's a super wetting agent and works like magic, even a little in the bucket when washing the car. It comes in a 4-ounce size bottle. Buy it at any photo supply shop.

Colored Canopies

Rit Cloth Dye, available in most supermarkets, fabric stores, or drug stores, will tint the clear plastic quite well. Mix up the dye in lukewarm water in a container large enough to immerse the entire canopy. Dip the canopy for a period of one minute or so, until you get the feel of how fast the dye is "taking." Rinse in cool water and dry off. If it is not dark enough, dip it again. You can even be tricky about the tint by making a fixture to hold only a certain part of the canopy in the dye. The effects you get are only limited by your imagination.

Applying Trim Schemes

When applying MonoKote® trim, first remove the backing and spray the sticky side with Windex. This allows the trim to be

easily positioned on the aircraft before it permanently adheres to the surface. Be sure to remove the trapped air bubbles by rubbing them from the center to the outer edge using a paper towel.

*From the newsletter of the Duluth/Superior RC Club
Ed Johnson, editor
Superior WI
via AMA National Newsletter*



Ain't That the Truth!

Once you're over the hill, you pick up speed.

Whatever hits the fan will not be evenly distributed.

Everyone has a photographic memory. Some just don't have film.

Dogs have owners. Cats have staff.

If you're too open minded, your brains will fall out.

If you look like your passport picture, you probably need the trip.

Bills travel through the mail at twice the speed of checks.

A balanced diet is a cookie in each hand.

Middle age is when broadness of the mind and narrowness of the waist change places.

Opportunities always look bigger going than coming.

Junk is something you've kept for years and throw away three weeks before you need it.

Experience is a wonderful thing. It enables you to recognize a mistake when you make it again.

By the time you can make both ends meet, they move the ends.

Men are from Earth. Women are from Earth. Deal with it.

I know God won't give me more than I can handle. I just wish He didn't trust me so much.

If it weren't for stress, I'd have no energy at all.

via Internet www.gcfl.net

Electric Happenings

by John Williams

We have all heard that Electric models are too heavy, underpowered, and don't fly long enough. Where it was the truth in the beginning, it is a long way from factual today. We fly Electric models today from the speed of a slow walk to 187 mph. You can launch a model vertically and have it out of sight in seven seconds. Today, you can hover a fully acrobatic model and do a 10-minute flight routine with an inexpensive, \$15. "canned" motor with ferrite magnets.

I was in Toledo many years ago when Bob Boucher of AstroFlight put on the first public demonstration of an Electric model. It was aloft about 30 seconds before arcing in the motor caused radio interference and it crashed in the parking lot. Incidentally, at the same show, Deiter Schulter from Germany demonstrated the first helicopter. It flew a short while, then also crashed, and beat itself to death with the rotors.

Three areas are responsible for these big improvements to Electric flight. The first area is vastly improved motors. All original motors had ferrite magnets. Many inexpensive motors still do. Then cobalt magnets and adjustable timing arrived. Today the brushless motors are reaching new levels of efficiency, as well as the lower price level. Today's motors range from \$8 to \$175.

Second, a very large improvement has been made in Nicads, our generally accepted energy source, or fuel. A few years back the largest sub C cell was rated at 1200 milliamp hours. Today the same cell is 2400. The newer cells are capable of much higher current outputs than in the past. Think of it as a 55-gallon drum filled with water. Put a pencil-size hole in the bottom and water comes out slowly over a period of time. Cut a foot diameter hole in the bottom and the water empties rapidly for a short period of time. We have cells that do both, depending on the application. Nickel Metal Hydride cells are now coming on fast, especially in the low current draw models. They weigh about two-thirds as much as the Nicad.

The third area is that of design. Because we have no vibration problems, and no fuel soaking problems, our models can be designed significantly lighter to compensate for our heavier energy source. Rarely is any plywood or spruce used in all but the largest models. A little light ply serves for firewalls and wing attachment areas.

Two important subcategories under design are propellers and materials. The first propeller designed specifically for electric was the Windsor wooden prop for Electrics only. It was thinner, lighter, and better shaped for Electric. Now APC has gotten into Electric-only props in a very big way, and they are the best for our purposes so far.

The other subcategory is materials. Foam of various types has been used to lighten structures, to make very light ready to fly park flyers, and in some cases, make almost indestructible models. Carbon fiber for spars and strengthening material has helped as well.

In another column I will go into some recommended models, with pictures and the whys. My favorite model that goes from a light thermal soarer to a wildly acrobatic model solely by pushing the stick forward. It is highly prefabricated, inexpensive, absolutely indestructible, uses an \$8 motor, and I know one person in SRQ who learned to fly on one.

*from SRQ Flightline
Sarasota RC Squadron
George Jenkins, editor
Sarasota, FL*

Via AMA National Newsletter



Scary Flight

A plane was taking off from Kennedy. As it reached a comfortable cruising altitude, the captain made an announcement over the intercom, "Ladies and Gentlemen, this is your captain speaking. Welcome to flight number 293, non-stop from New York to Los Angeles. The weather ahead is good and therefore we should have a smooth flight. Now sit back and relax- OH MY!"

Silence.

Then the captain came back on the intercom and said, "Ladies and Gentlemen, I am so sorry if I scared you earlier, but while I was talking the flight attendant brought me a cup of coffee and spilled the hot coffee in my lap. You should see the front of my pants!"

A passenger in Coach said, "That's nothing. He should see the back of mine!"

F-15 vs. C-130

A couple of F-15's are escorting a C-130 Hercules, and their pilots are chatting with the pilot of the transport to pass the time. Talk comes around to the relative merits of their respective aircraft.

The fighter pilots contend that their airplanes were better because of their superior speed, maneuverability, weaponry, and so forth, and pointed out the Hercules deficiencies in these areas.

After talking for a while, the C-130 pilot says, "Oh yeah? Well I can do a few things in this old girl that you'd only dream about."

Naturally the fighter pilots challenge him to demonstrate.

"Just watch," comes the quick retort.

And so they watch. But all they see is that C-130 continue to fly straight and level...

After several minutes the Hercules pilot comes back on the air, "There! How was that?"

The fighter pilots reply, "What are you talking about? What did you do?"

And the Hercules pilot replies, "Well, I just got up, stretched my legs, and got a cup of coffee."

via Internet www.qcfl.net



Dick Dumais July 2002 IMAA Fly-In

Do Model Airplanes Talk?

by David Beach

We all become accustomed to listening to model aircraft. Typically we focus on the most audible component, the engine. Is the engine running well and fuel mix okay? We listen for the right sounds in reaction to throttle up from idle. We listen to make sure the engine doesn't sag in response to the pinch test or holding the nose up. These are the obvious ways in which our flying models "talk" to us and indicate their airworthiness.

But model aircraft can tell you a lot more about their condition if you pay close attention. At the field the other day I overheard a pilot say, "It sounds like my fuel tank is foaming." In that case the airplane was attempting to say, "You did not set your timer and I'm about to run out of fuel." A minute or so later the airplane ran out of fuel and a successful deadstick landing was the result. With a little more pilot awareness a powered landing would have been possible.

Unusual noises are often a precursor to something that is about to go wrong. Paying attention to what your airplane is telling you can mean the difference between landing with a

loose muffler and losing a muffler in the woods. It can mean the difference between slowing down an airplane experiencing surface flutter and having control failure. Unusual model aircraft noises have a variety of sources but your first reaction to an unusual noise should probably be slowdown, land, and inspect.

I have an airplane that gives feedback that is not audible, but it's talking to me nonetheless. With a fuel tank that's well ahead of the center of gravity (CG). Once the fuel level starts to get low, this airplane gradually gets light in the nose and starts to climb from what started out as level flight trim. I don't need to look at a timer or listen for changes in engine noise to know that it's time to land.

Have you ever attempted to fly with your antenna down or a low receiver battery? It's not uncommon to get a short "glitch" and have temporary loss of control before all is lost. If you recognize that your airplane is attempting to tell you something, it can make all the difference.

Learning to pay attention to what your airplane is trying to tell you it is not always easy. Through personal experience I've learned a new signal to look for that might have saved two different airplanes, and I'd like to share it with you.

Any sudden change in flight trim means something is wrong!

Twice in the past year, I have retrimmed airplanes in flight and kept flying when I might have had the opportunity to avoid an in flight failure. Just because adding three clicks of down-trim makes the airplane fly straight and level again doesn't mean you should keep flying; it means land now if you can.

Is a control horn coming loose? Has a control rod bend become fatigued and gotten soft? Has the engine mount shifted and changed the thrust line? Has the battery moved in the fuselage and changed the CG? Has a wing bolt mount failed and changed the trim? When an unusual change to flight characteristics occur, it is our job as pilots to understand why and properly assess the impact of that change. Get this done safely on the ground.

Staying in touch with what your aircraft is trying to tell you can make a big difference. It can make the hobby more rewarding, and can make you a safer pilot. Do model airplanes talk? Only if you pay attention and listen very closely.

from Eagles News
Souther New Hampshire Flying Eagles RC Club
David Beach, editor
Merrimack, NH
via AMA National Newsletter

Did you know... (or care)

The average number of people airborne over the U.S. any given hour: 61,000.

It is impossible to lick your elbow.

Coca-Cola was originally green.

The state with the highest percentage of people who walk to work: Alaska.