AEROGUIDANCE SOCIETY AREA AVIONICS MONTHLY REPORT

"The Connector"

Academy of Model Aeronautics Chartered Club

OFFICIAL NEWSLETTER

– Our Thirtieth Year

ENDWELL, NEW YORK

Volume 18 Issue IV April 1985

Our PREZ sez : Happy Easter!

A few points of business and interest for this month:

First off, thanks to everyone involved in making the annual party such a success. Those of you who could not make it, mark your calendars early next year as you missed a great evening. I enjoyed the chance to hear about some of the "exploits" of our founding fathers, as well as the chance to review the activities of the last year (to say nothing of the food, drinks and dancing!). You missed a great party.

Folks, this is a remarkable club, with not only a long history of achievemant, but also a diverse group of current modelers engaged in a huge variety of activities. Now, on to some business:

PROJECT NIGHT IS APRIL 9th. Categories are:

Sport - Sport scale - Novice - technical achievemant - most popular of show.

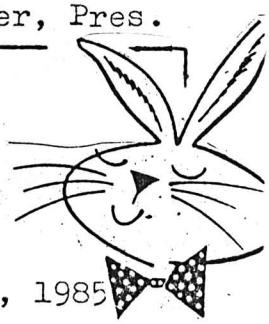
To get full points for sport scale, you must provide a 3-view of your project as well as some type of color documentation. This does not mean that you need an elaborate, 32-page hard bound book! Just bring a few pictures. Keep it simple.

Some words on the flying field:

The lock combination has been changed. Call Grover Ellis for the new one. Up until now, the paved portion of the road has remained in excellent shape. The field is very rough and is not officially opened. However, it is available for use if we follow these guidelines as suggested by the board:

First, do NOT drive up the last unpaved section to the parking area. (It is knee deep in mud). Also, if you find that the paved section is at all soft, and therefore susceptable to forming ruts, please do not attempt to go up the hill. Fly at Moore Park instead. Let's use our common sense and maintain our valuable road in good shape..... GOOD FLYING! Ron Gauthier, Pres.

YOU'LL REALLY PUT IT ALL TOGETHER WITH



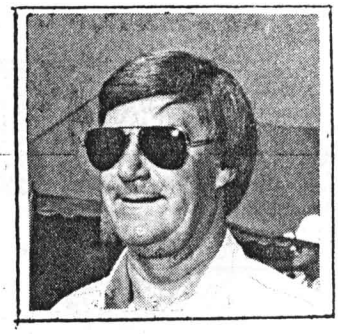
BOB NOLL'S GROUND SCHOOL 6:30PM NYSEG APRIL 9th, 1985

ONE HOUR PRIOR TO the

ANNUAL AGS PROJECT NIGHT, NYSEG CAFFETERIA 7:30 PM

editorial

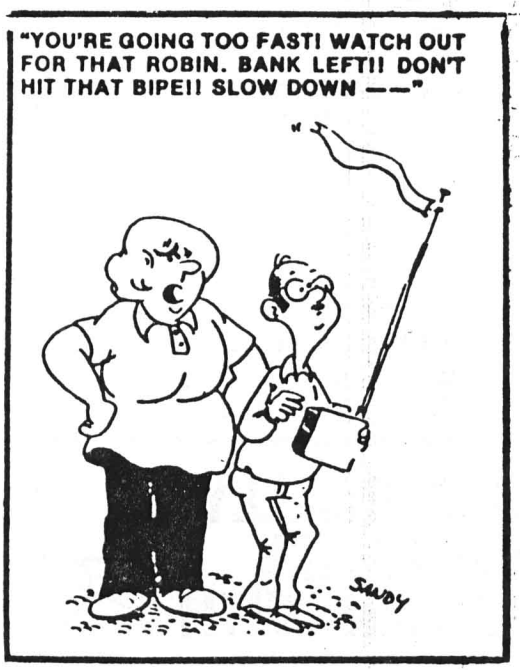
By Don Godfrey



April showers bring spring flowers, .. showers also bring other things! A muddy road up to the flying field, so be careful not to take any chances by entering the club field before the mud dissappears and the sun drys the field enough to fly from.

A good clue would be to look at your back yard, test your soil under the trees for "spong-ee-ness" and that will tell you excatly how the AGS club road and field will be. No sense in going to the field until the field chairman lets everyone know when the it's time to use the field for the season. The second clue will be when everyone is asked to to turn out for a field work party to get the field ready to use. It wont be long troops!

Spring also brings those usual chores around the house. This needs painting, that needs repair, and your wife is already on your back about not getting some of it done a YEAR ago. If you do your "honey-do's" early this year, she wont show up at the club field and bug the daylights out of you!



I'd like to share with you a letter received from a former AGS members wife. The letter is from Sharon Grodevant, Ron's wife, and I am sure that you will enjoy its contents:

March 7th, 85

Dear AGS,

Ron and I have enjoyed the CONNECTOR for many years, even more so the last three years after moving to State College, Pa. Your technical articles are interesting to Ron but we both especially enjoy reading about the members and activities, keeping our "home ground" familiar. It's great seeing the club grow as it has and certainly the envy of many ithers throughout the country, all due to your professionalism and dedication. A very terrific club and we miss it!

Now I must tell you something that Ron wont write and boast about,..but I will. He has always maintened that most R/C enthusiasts are really frustrated pilots. Not universally true, of course, but certainly in his case. Mortgages and babies (an old story?) seemed to thwart this ambition until too many gray hairs convinced him... "it is NOW or never!".

So he finally earned his private pilot's license last December, came home with his certificate looking like a kid with a straight "A" report card! Well, now what? Renting aircraft is expensive and inconvenient,...MUST own one, right? Trouble is, he found an aircraft in Denver and must get it home. So, with a license 1½ weeks old and 2/3 of the country to cross alone, HE DID IT!!

continued.....

I LOVE PRAISE ! SO, TELL ME WHAT IS WRONG !

Editor's Comments..

It took almost two full days in his little Cessna 150, 5 re-fueling stops, several periods of unwelcome excitement which I wont bore you with here.

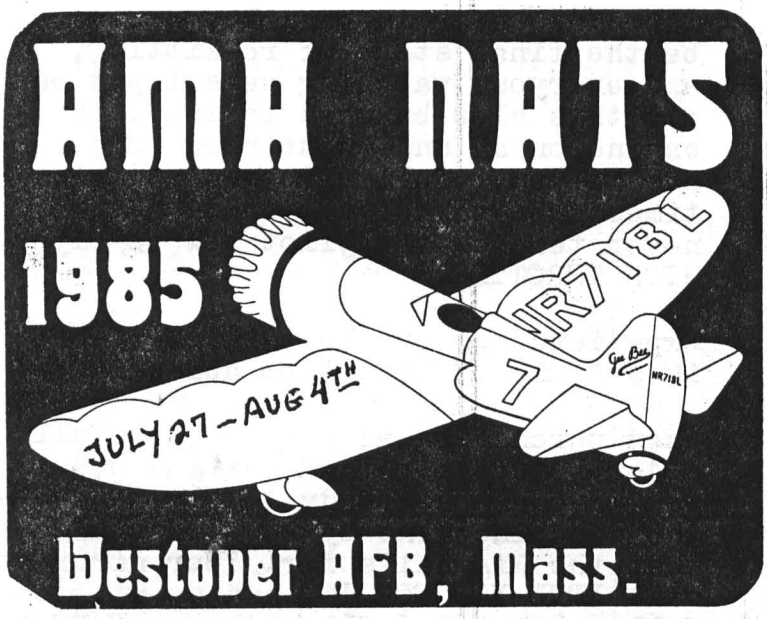
His flight instructor, a commercial pilot, kept me appraised of progress during the flight. (lots of friends in flight service). He also said it was alright I O.D'd on tums!

I have to admit that all of us are enjoying the plane, a really NEW adventure. Also, I must tell you that Ron's R/C equipment is only temporarily dusty, but still intact. Ron watches the sky everytime we are near an R/C field. Only wish we had an organization like the AGS here! You can be so proud of the advantages you have created in your club!

We miss the fun, and we miss you all!

Sharon Grodevant
14 S. Barkway Lane
State College, Pa.
16801

(Ed note: Sharon, all of us miss the two of you VERY much. You people gave the AGS club a sparkle that we will always remember)



plane TALK:

On occasion I have noticed a few minor problems on show 'n tell models being brought in to club meetings. I'd like to discuss one of them that I have seen and I'll begin by talking about wings:

Did you ever notice how funny a wing looks when you sand a sheeted area of a built-up wing? If you candle the wing (hold it up in such a way that the light bounces off of it to let you see the high and low spots) you can see flat spots where the ribs are positioned and little or no effect of your sanding inbetween the ribs where you REALLY NEEDED IT!

The reason for this is that the sheeting is SUPPORTED by the ribs rather rigidly and between them there is no support at all. When you sand with a block, the ribbed areas simply are pressed down by the pressure of the block.

<u>The TRICK is a simple one.</u> Sand the sheeting BEFORE you put it in place on your aircraft!

A fully sheeted wing is easy. Just assemble your sheeting, sa d it, and glue it on. Cap stripped wings are a bit tougher. You must assemble just the sheeted areas, like leading edges and center sections, but fit the caps afterwards. Cap stripping is almost always done over supported areas such as spars or ribs.

<u>Here's what to do</u>: Cut and fit each piece of sheeting as if it were to be glued on to the airframe. Instead, glue them to each other on your FLAT workbench over waxed paper (I use thi cyanocrylates for this and assemble the sheets upside down). Do not use

NEXT meeting.... Tuesday, April 9th - ANNUAL PROJECT NITE 7:30!

plane TALK ... continued

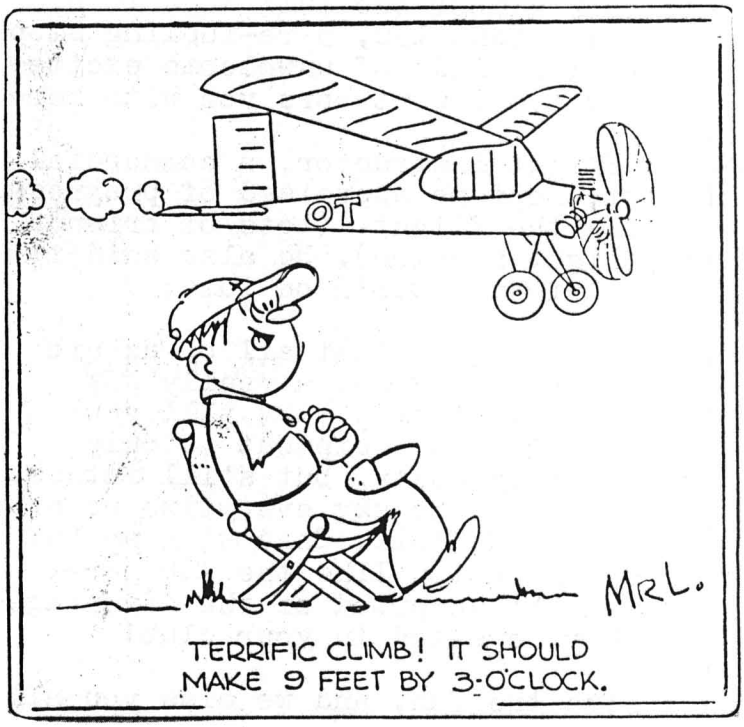
freezer wrap or Saran as the Cyanoacrylates seem to stick to these items fairly well.

When you have the assembly completed, trial fit it to the wing. If all is okay, CONGRATULATE YOURSELF! The rest is easy.

I start with #100 sandpaper on an 11" T-bar sander. Next, I use #180, the 280, then I switch to a foam-backed block with #320 or #400. Then I go to a finishing paper, the #600. When you're done (gasp!), just glue it on the wing, add those annoying cap strips and blend in the leading and trailing edges. You are now ready to cover.

Any of the final blending that I just mentioned will probably be over a supported area and should offer NO problem whatsoever. When you are finally finished sanding, a light vacuming and a touch with a tack rag to remove any small surface dust should leave you with a ready-to-win-the contest type finish base. A good covering job is only as good as the base that you have prepared for the covering and final stage.

Try it.....it works! Don Godfrey.



UNDERPOWERED R/C AIRCRAFT CAN BE DANGEROUS! Let me tell you why:

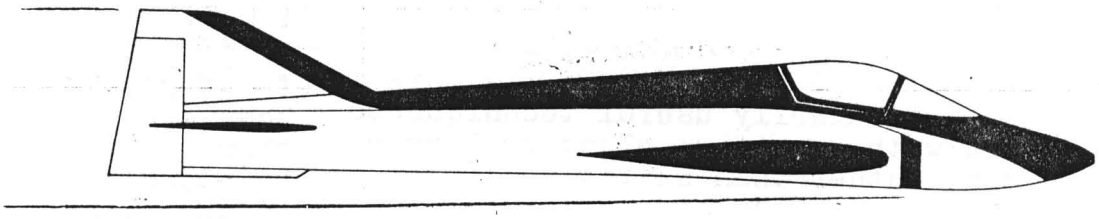
First of all, an underpowered model takes much too long to get off the ground, climb out is terrible. An impatient pilot will tend to give the elevator too much "up" command and invariably the model will stall or snap in at ANY altitude.

Loops are near impossible, rolls can be the final stage of re-kitting, and everyone watching gets impatient for this slow buzzard to land. The engine on an undernourished model has to run...full throttle at all times from takeoff to landing and never teaches the pilot how to fly WITH THROTTLE.

Experience is our best teacher. Here is a "rule of thumb" to abide by:

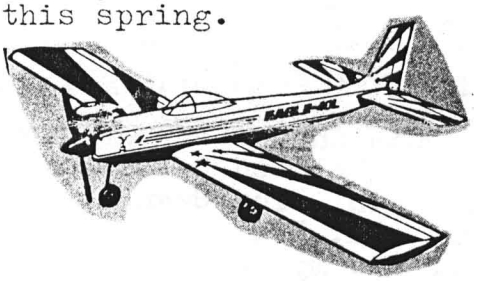
When purchasing an engine (hopefully a 4-stroker) for that certain model you have almost ready to fly, increase the discplacement by 20%-30% than what the Mfg calls for. Your aircraft will LOVE YOU FOR IT, and so will the fellows that you fly with. D.G.

EASTER comes on Sunday, April 7th. Be a Bunny to your Honey.....



Action Area .... by Bob Noll

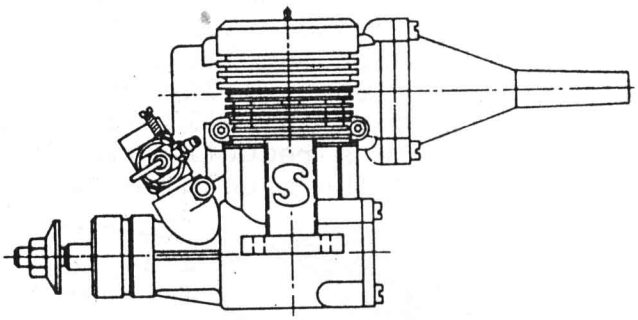
It wont be long now until we can begin to enjoy our flying field for another season. Activity has been increasing each week at Moore Park in Vestal and several new planes have taken to the skys, including the new Kaos of Jim McKeown. Jim called me last week to let me know just how pleased he is with its performance and how great it is to fly a pattern machine that does exactly and only what you ask of it. I hope everyone with a new bird has equal success and that the long winter evenings in your workshop pay high dividends at the field this spring.



This month, I would like to discuss some of the basics regarding engine carburator and throttle adjustments. We spent some time on this subject at the ground school last month and I thought I would make a list of important items so that you can CUT THE LIST out of the"Connector" and keep it in your field box. Here goes:

* NEVER run your engine lean. Your engine needs adequate lubrication which is included in the fuel mixture. Therefore, the more fuel, the more lubrication and vice-versa.

* If you close or screw in the needle valve, you reduce the fuel-to-air ratio and thereby LEAN out the fuel mixture. To RICHEN the mixture, open or screw out the needle valve which increases the fuel to air ratio.



* Here are several ways to tell if your carburator is set correctly which is to say that the engine is running slightly on the RICH side:

1. BY SOUND - Listen to the engine when it is in full throttle and open the needle valve until the engine is running in a 4-cycle mode which has a characteristic rough sound and has an excess of fuel coming out of the muffler.

   Then close the needle slowly and LISTEN to the sound. It will change from the rough sound to a smooth sound and the RPM will increase. When the engine is running on a solid 2-cycle, STOP closing the needle and open it back up about a ¼ turn or until the engine is just breaking back occasionally into a 4-cycle.

2. NOSE UP METHOD - When you think the needle is set correctly, pick the plane up and point the nose to the sky. The needle is set correctly if the engine goes to a solid 2-cycle (smooth sound) and the RPM increases slightly. If the engine slows down, it is not getting enough fuel because it is set too lean.

(Continued.....)

Our tomorrow depends on what we do today.

Action Area .... by BOB NOLL continued...

3. PINCH THE FUEL LINE METHOD - This is a particularily useful technique to use with a pattern plane or larger size rather than having to lift it nose high. It also works great when the "sound method" is difficult as in the case of tuned-piped engines. With the engine running at full throttle, pinch the fuel tubing briefly and listen for a slight increase in RPM. The RPM of a properly set engine will increase slighty while a reduction in RPM will occur if the needle is set too lean.

* Here's how to tell if your low speed carburator adjsutments are set correctly:

1. Be sure the high speed needle is set correctly. DON'T CHANGE IT!

2. Reduce the throttle until the minimum RPM is attained.

3. Wait and listen to the engine. If the engine dies, the throttle is closed too far or the idle mixture is too lean. You will have to use a little trial and error to get the correct throttle opening and the correct idle needle adjustment.

4. If the engine continues to run at low speed for about 30 seconds, proceed to open the throttle quickly. If the entine spits and quits, the idle mixture is too rich and you should lean out the idel mixture by gently closing the idel needle.

5. Continue to check the idle and make adjustments until a reliable low speed is achieved, one that will continue for at least one minute and will provide a smooth transition to high speed when the throttle is opened.

* If your carburator does not have a seperate idel needle, then you control the idle mixture by adjusting the air bleed screw in the front of the carburator. Open the air bleed hole by turning out the screw to lean out the idle mixture and close the hole to richen the mixture. This type of carburator will take more careful adjustment and the transition from low to high speed is usually not as good.

If you need help, give me a call, 754-5279. Of course, there are other factors that affect reliabl engine performance such as fuel with the correct nitro content, Size (Dia. & pitch) of the prop, tank position, tank pressure and glow plug. We'll talk about these at the next ground school.

Annual AGS Pattern Contest....

Our 30th annual Pattern Contest will be held on Sat & Sun, June 29th-30th, Blue Swan Airport, Sayre, Pa. I am the contest director and my assistant CD's are Jim McKeown, Terry Terrenoire. Roy Wiedman is the Contest manager and is responsible for everything other than the competition aspects of the event. Don Godfrey is prize chairman and has the prize format already correlated.

Roy and I will be staffing our committees during April and we'll need your help. Attendance at this contest gives us all the opportunity to see, talk to and learn from many expert pattern flyers. Its a chance to gain a tremendous amount of knowledge that can help us become better builders and flyers.

SET THIS WEEKEND ASIDE AND BE THERE

PS: Maybe Ron Grodevant will fly up to our contest in his new "toy". Ron, bring a sleeping bag, stay overnight in my trailer upper bunk!

Easter's in the air... hope it's wonderful for you!

A Gripping Experience.

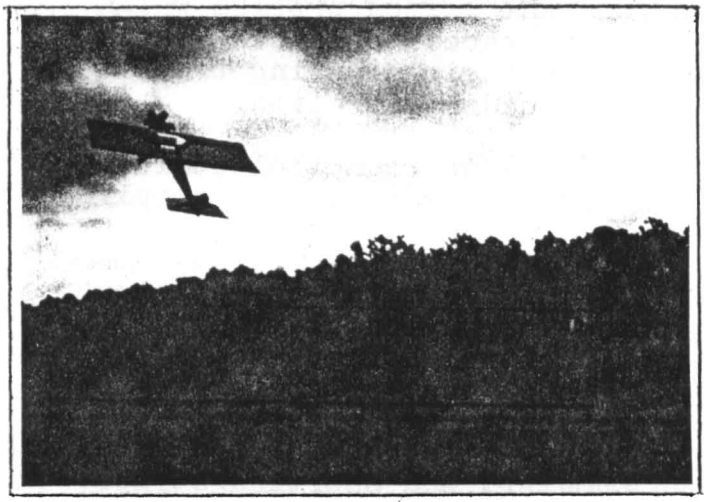
... a true story regarding FANTASTIC PERFORMANCE

By Dick Allen during his visit to R/C World last year.

Breakthrough (noun). A major advance in solving a problem. (Webster)

While at R/C World in Florida last Thanksgiving, I witnessed a real breakthrough in propellor-driven aircraft performance. It was the controlled, hovering flight of an R/C airplane, similar in many characteristics to that of a Helicopter - while retaining spectacular aerobatic capability.

I just received the rest of the photos which I had taken of this plane, so I thought it would be a good time to put into print some of the description I gave verbally at the December AGS meeting. Hopefully, the photos, in color will reproduce adequately. (Ed note: Color photos do not reproduce very well without velox screening)



The plane is a highly modified 40-sized "stick" powered by a hot .60. Its appearance is conventional except for the two horizontal and two vertical canards half way between the prop and wing.

Each canard is about 2½ X 4" in size. The horizontal canards are mechanically coupled to the elevator. The verticals are coupled to both rudder and aileron servos.

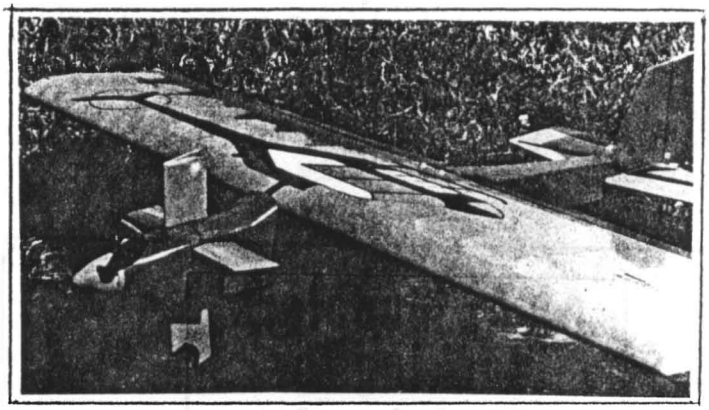
Rhett and his helicopter airplane. Note controllable vanes behind prop.

Thus, the canards, positioned in the maximum slipstream, provide pitch, yaw and roll control whether the plane is moving or not!

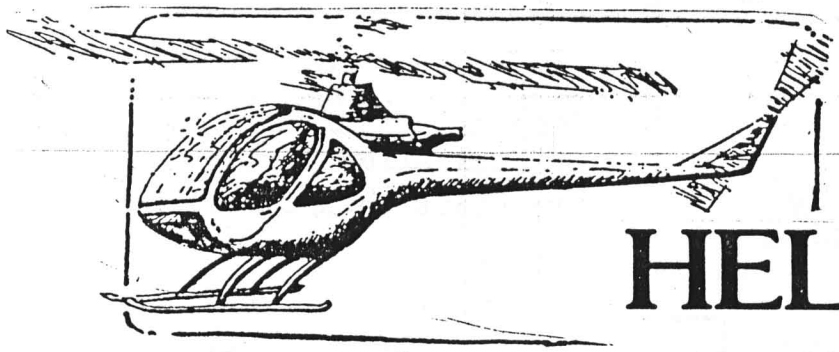
Hovering is accomplished at about 1/3 throttle, with spectacular vertical acceleration from the hover. The plane was a very light 5½ lbs. and had a wing area of about 600 sq. inches.

On a windy day, the flyer consistantly hovered it to his side, REACHED OUT AND GRABBED IT OUT OF THE AIR!...than hand launched it(!) into conventional flight.

It really won the "best-of-show" award (with some formidable competition) and literally stopped the show whenever it was flown.



Note: Builder/flyer of the "canard-stick" is Rhett Radford. Complete R/C World Thanksgiving event coverage in RCM, page 12, April '85



BILL UNDERKOFLER....

Talks about

those amazing

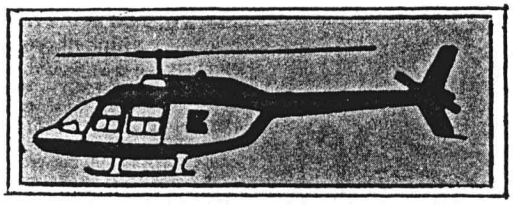
HELICOPTERS

(ROTOR WING THINGS)

As I write this, it's the first day of spring, and I'm hoping for some comfortable flying weather. I've done a bit of flying this past month, but it's been cold and not really fun with hands freezing on the sticks.

Some recent experiences have pointed up the special radio problems of Helicopters. Helis are definetly harder on radios than planes because of the higher level of vibration.

Over the past few weeks I had been noting (but ignoring) a neutral trim drift on the pitch axis servo in my Cricket. This finally developed into a twitch and jump condition and I had to investigate. The servo pot element was completely worn through! The other three servos were nearly as bad, and obviously were also approaching failure.



In a Helicopter, the servos are connected almost directly to the rotating head, and get a shock and a kick with each turn of the blades. This means that the servo pot wiper, instead of sitting quietly on the pot element, is constantly rubbing and wears more rapidly....so be smart and check your servos more frequently than you do for airplanes.

Another type of radio problem common in Helis is glitches caused by metal friction electrical NOISE. Early radios were very sensitive to this. For example; a metal clevis vibrating on the engine carburator control arm could drive a 1960 vintage radio crazy. In those days we had to make radio installations very carefully and insulate or electrically bond all linkage connections. Fortunately, modern radios are less touchy and most people are not aware of the potential problem.

In Helis, the problem is definetly there because of the many rotating and rubbing metal parts. I had a persistant glitch problem which was finally traced to landing skids loose in their mounting brackets, rubbing under vibration.

Some ideas to reduce electrical noise problems (good for airplanes too):

1. Minimize metal-to-metal rub spots - use nylon clevises against metal control horns, etc.
2. Check that all metal-to-metal frame joints are tight, clean, and grounded. It's helpful to probe with an Ohmeter. Add shorting strips across high resistance joints.
3. Keep the antenna as far away from the frame as possible. Many glitch problems have been solved by letting the antenna dangle from the nose rather than running it back to the tail past the engine and drive train.

Until next month - Keep 'em .....
Whirling. Bill Underkofler

AMA: Modelers Working for Modelers!

"I ain't got it" proves the craft was capable of flying at one time or another.

By the People for the people.

The 30th AGS Anniversary dinner-dance was a smashing success! Nearly 100 people attended this event to honor the original founders of the AGS and they were comprised of members, guests, former members, and friends. 3/23/85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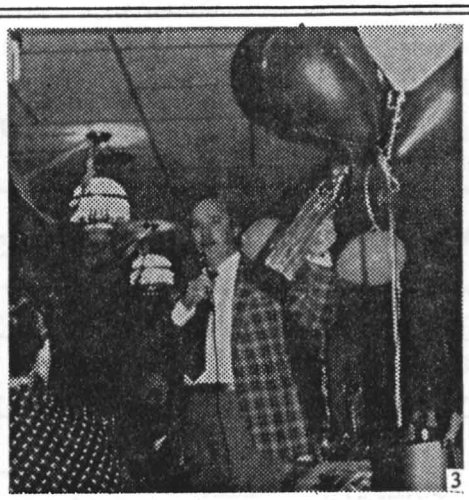
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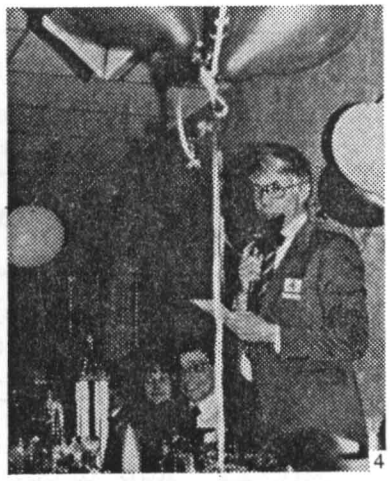
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A VERY CAPTIVATING CLUB PARTY

1. Ron Gauthier, AGS Pres. squeezing a trophy instead of good wife Ingrid!
2. Bill Sebesta, AGS past Pres. giving one of his "famous" speeches.
3. Bob Noll describing and awarding the perpetual Pattern trophy to C. Engler.
4. Bill Underkofler, masterful MC, keeping everyone in stitches and glitches.
5. Original AGS founders looking much like a Police lock-up line-up, from L to R: Dick "Triple A" Allen, Ralph "Body English" Jackson, and none other than George "All Heart" Brooks. (George donated the door prizes)
6. Would you believe, AGS place mats? Yup, Grover and Darlene Ellis made the place mats with artistry from Bill Tomsa. Made great souvenirs.
7. The House of Yu banquet room was literally packed! The festive decorations were created and installed by (you guessed it) Grover and Darlene Ellis.

MANY THANKS TO ALL FOR ATTENDING! Don Godfrey, chairman


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Believe in What You are Doing, Be Active !

TOMSA

UPCOMING EVENTS & ACTIVITIES

1985 APRIL 1985

Apr 9 - AGS Meeting, Project Nite

* Apr 28 Miller Memorial Criterion Pattern meet, Warminster, Pa

1985 MAY 1985

May 4 - Opening of AGS field also early breakfast.

* May 5 - 2nd Annual 4-stroke uncontest (RC) Westport, Conn.

May 11 AGS Cross Country - IBM Owego to Barnaby's, Nichol's for Breakfast.

* May 19 Northern Conn. RC Club Early summer soaring meet, Ellington, Conn.

* May 26 LVRC Scooter II Race - Sport Pylon Cl I. Myerstown, Pa.

1985 JUNE 1985

* June 2 - Central Conn. RC Pylon Racing championships - FAI Pylon Racing & sport - Pylon Class 1, Farmington, Conn.

* June 8-9 Tri-State Soaring Society Thermal Soaring-Soaring Stand. Class & 2 Meter Class

* June 15-16 US Scale Masters Eastcoast regional, Valley Forge, Pa. (Excellent event)

* June 15-16 1st Annual LVRCS 4-stroke rally, Quackerstown, Pa.

* June 22-23 TCWS Giants Scale Fun Fly, Hamburg, Pennsylvania

* June 23 - LVRC Scooter II Race (Pylon) Myerstown, Pa.

June 29-30 30th Annual AGS Pattern meet, Sayre, Pa.

June 29-30 Rhinebeck Classic Meet, Rhinebeck, NY

1985 JULY 1985

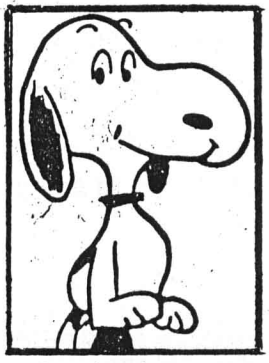
July 6-7 S.T.A.R.S. Rally for Giant Scale, Olean, NY

July 27-Aug 4 - AMA Nats, Westover Air Force Base, Mass.

1985 SEPTEMBER 1985

2nd Annual AGS Float Fly (Date TBA)

Snoopy to tie the knot



Adjust your seat belts, Peanuts fans: The title of the next CBS special, due Wednesday, March 20, is *Snoopy's Getting Married, Charlie Brown.* In it, the beloved beagle falls in love with a poodle. A wedding date is set, Snoopy's brother, Spike, is invited and Schroeder hosts a bachelor party.

(Ed note: I wonder if she will let him fly! Add one more seat to your cockpits, troops!)

ATTENTION AGS MEMBERS:

If you know of an event being held that we have NOT listed that our club could enjoy, call 625-2551.

* Indicates listing taken from MODEL AVIATION.....
"Calendar of Events"

Odds and ends

For Sale.. .. 2-meter Craft-Air "Freedom" slope soarer glider as pictured to the right ——→ As you can see, the asking price of $25.00 is just about HALF price from a discount house "sale price". Hurry on this bargain! Call Jerry Skrekoski (607) 625-4103 evenings.

For Sale.. .. The BRAND NEW... NEVER USED OS FSR-61 ABC engine.. a VERY HOT item. For $100.00 you get a Macs tuned pipe (used) and a NEW Perry oscillating pump. Call Chris Engler (607) 625-2033 Hurry! (Ed: I own one, they are GREAT!)

For Sale.. .. All WOOD "Brushfire" 60-size pattern plane, ready to cover! Call Chris engler. He does great work!

For Sale.. .. Antic Bi-plane by Lou Proctor, New, less engine, ready to fly and built by a pro in Lodi, NJ. Call Rich Lucas (201) 845-9589 $200!!

ANNUAL Project Night

Tuesday-APRIL 9, 7:30pm

New York State Electric and Gas

AWARDS TO BE GIVEN FOR THE FOLLOWING:

1. Best technical achievement
2. Best sport model
3. Best scale model
4. Most popular model
5. Best novice

ENJOYMENT PLUS AWARDS TO THIRD PLACE - BRING YOUR PROJECT! SEE A LOT!

FOR FURTHER INFORMATION, CALL: Don Godfrey (607) 724-0115 anytime

Support your Newsletter. Contribute Something

POSTMASTER: Dated Material -
Prompt delivery requested.

AGS Aero Guidance Society, Inc.
Post Office Box 39
Vestal, New York 13850-0039

BRING YOUR "P & J" to the ever-popular AEROGUIDANCE SOCIETY, INC.

ANNUAL Project Night

Tuesday-APRIL 9, at 7:30pm

New York State Electric and Gas Bldg., Old Vestal Road, Johnson City, New York.

Airplanes (All sizes) - Cars - Boats - Interesting Projects - Prizes too!