RC Soaring Digest
P.O. Box 269
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POSTMASTER: ADDRESS CORRECTION REQUESTED

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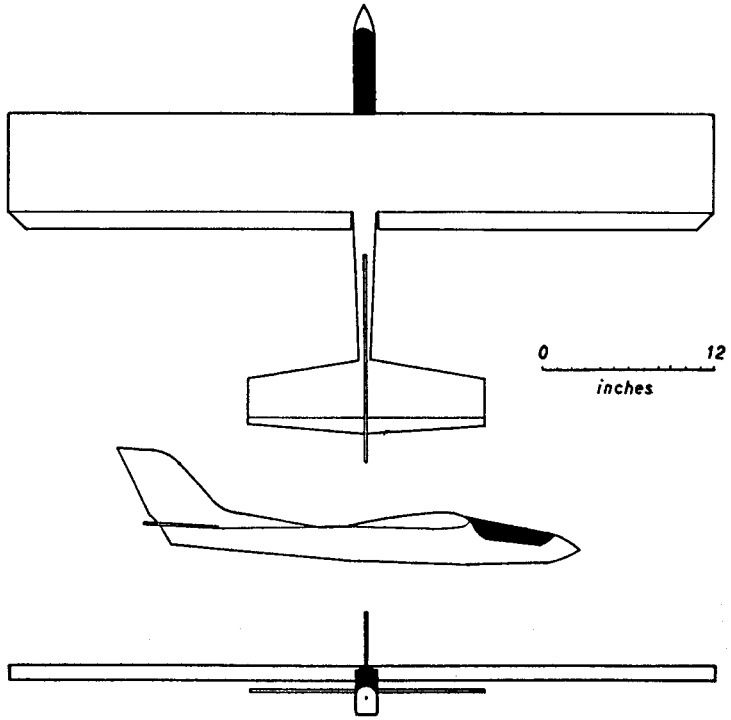
R/C Soaring DIGEST

VOL 2 No. 1 JANUARY 1985



SPAN	48¼"
LENGTH	31½"
WING AREA	384 SQ. IN.
WEIGHT	22 OZ.
WING LOADING	8.2 OZ/SQ.FT.

CONSTRUCTION: FOAM WING BALSA SHEETED, BALSA & ARPLY FUSE AND TAIL.

Wizard

AEROBATIC SLOPE GLIDER
By
BOB COOK

Hi Start

JANUARY IS A TIME FOR NEW BEGINNINGS, FOR A STATE-OF-THE-UNION ADDRESS, FOR A FORWARD LOOK AT THE FUTURE. FIRST, LET'S TALK FOR A MINUTE ABOUT RC SOARING DIGEST. AS PROMISED, WE HAVE ENLARGED THE TYPEFACE TO MAKE IT EASIER TO READ. THE NEW COVER LOGO LOOKS A LOT BETTER TO ME THAN THE OLD ONE...AND I HOPE YOU LIKE IT, TOO. ALSO, AS PROMISED, THERE ARE MORE PAGES. SO THE JANUARY ISSUE PROPERLY REFLECTS SOME OF THE LOOKED-FOR IMPROVEMENTS IN RCSD, BUT BY NO MEANS ALL OF THEM...FOR THERE WILL BE MORE TO COME IN FUTURE ISSUES.

THE NEW (OR IMPROVED) LOGO AND THE PAGE-HEADING GRAPHICS ARE THE WORK OF ROBERT RONDEAU, MY GRAPHICS AND ART DIRECTOR. THROUGH BOB'S SUGGESTIONS AND CONTINUING WORK, YOU'LL SEE A BETTER-LOOKING NEWSLETTER. BOB IS A PROFESSIONAL ARTIST AND GRAPHIC DESIGN PERSON WHO HAS HIS OWN BUSINESS, AND I'M VERY PLEASED TO BE ABLE TO INTRODUCE HIM TO YOU IN THIS EDITORIAL. BEYOND THAT,BOB IS AN RC SAILPLANE PILOT WHO ENJOYS FLYING HIS 2-METER ONE DESIGN FROM SMALL AND TREE-LINED FIELDS IN RUGGED EASTERN VERMONT NEAR HIS HOME IN BRATTLEBORO. HE PARTICULARLY LOOKS FORWARD TO THE COMING SEASON WHEN HE'LL BE ABLE TO ENJOY THE MANY NEW ENGLAND CONTESTS SCHEDULED FOR 1985. I HAVE A FEELING THAT HE'S GOING TO WANT ME TO GO ALONG...SOMETHING I HAVE BEEN THREATENING TO DO FOR THE LAST SEVERAL YEARS. IF ALL GOES WELL, I'LL HAVE A NEW DODGSON SARATOGA WINDSONG TO FLY IN '85, PLUS A TWO-METER SHIP BASED ON BRUCE ABELL'S FIBERGLASS FUSELAGE AND A PAIR OF OBECHI-COVERED FOAM WINGS FROM DICK EDMONDS IN ENGLAND. THE AIRFOIL WILL BE AN EPPLER 392. I'VE BEEN PROMISED A SET OF WINGS FOR A FLYING WING SAILPLANE THAT LOOKS VERY MUCH LIKE THE HORTEN IV - AND I'M REALLY LOOKING FORWARD TO GETTING THAT IN THE AIR TO SEE HOW IT PERFORMS. THE EXCITING PART OF THIS IS THAT IT WILL BE A 1/4-SIZE FLYING TEST VEHICLE FOR THE FULL-SIZE WING BEING BUILT BY A FRIEND IN TEXAS...MORE ABOUT WHICH IN MONTHS TO COME. FINALLY, I WANT TO BUILD A HAND-LAUNCHED RC SAILPLANE FOR FUN FLYING IN '85. I HAVE PUT A DESIGN TO PAPER, AND HAVE SELECTED THE NEW MICHAEL SELIG S3010 AIRFOIL WHICH WAS SPECIFICALLY DESIGNED FOR RC HAND-LAUNCH GLIDERS WITH SMALL WING CHORDS, OPERATING AT LOW REYNOLDS NUMBERS. YOU'LL BE THE FIRST TO KNOW HOW IT WORKS OUT!

THERE IS A GREAT DEAL OF MOVEMENT IN RC SOARING THESE DAYS, PARTICULARLY IN THE AREA OF NEW DESIGNS AND COMPUTER-AIDED DESIGNS. MUCH SOFTWARE WILL BE AVAILABLE TO HELP YOU PLOT AND PLAN YOUR NEW DESIGNS, AND EVEN 'TEST FLY' THEM ON PAPER TO OBTAIN PERFORMANCE PARAMETERS.

JIM TYRIE, MY FRIEND OVER IN BEDFORD, N.H. BROUGHT A NEW TWO-METER DESIGN FOR ME TO LOOK AT THE OTHER DAY. IT LOOKS RIGHT, 'FEELS' RIGHT, AND INCORPORATES A MIKE BAME 'THICK' AIRFOIL AS WELL AS A BRAND-NEW TYRIE-DESIGNED WING HOLD-DOWN SYSTEM...THE SIMPLEST, STRONGEST, AND BEST I'VE EVER SEEN.

ALL OF THESE THINGS MEAN INTEREST, EXCITEMENT, AND ACHIEVEMENT...SO HANG IN THERE WITH ME AND WE'LL GO PLACES THIS YEAR - TOGETHER!

HAPPY SOARING

THE COVER THIS MONTH... WIZARD BY BOB COOK

BOB COOK IS A SLOPE SOARING ENTHUSIAST FROM DOVER, NEW JERSEY, AND HE'S BEEN WORKING ON AN INEXPENSIVE, RUGGED, SIMPLE, AND FUN SLOPE SHIP THAT CAN BE USED AS AN AILERON TRAINER, AN OUT-AND-OUT SLOPE MACHINE, OR ANYTHING IN BETWEEN. HIS SUCCESS IN ACHIEVEING THAT GOAL MEANS THAT WE WILL ALL BENEFIT. HOPEFULLY, THE PLANS AND A CONSTRUCTION ARTICLE WILL SOON APPEAR IN A NATIONAL MODEL MAGAZINE.

MEANWHILE, BOB HAS GIVEN US A PREVIEW OF THE REAL THING...AND IT'S A REALLY PLAIN-VANILLA LOOKING BIRD. BUT, PRETTY IS AS PRETTY DOES, AND YOU CAN TELL MORE BY READING WHAT BOB SAYS.

"I HAVE DRAWN UP A QUICK THREE-VIEW FOR YOUR POSSIBLE USE IN RC SOARING DIGEST, AND I HOPE THAT IT IS OF A SUITABLE SIZE AND CONTAINS ENOUGH DETAIL FOR YOUR PURPOSES. I HAVE ALSO INCLUDED A PHOTO OF SOME OF THE PROTOTYPE WIZARDS (AND A SET OF PLANS IN A MAILING TUBE, AS WELL).

"I KNOW THAT A LOT OF GLIDER GUYS ARE PURISTS AND WOULDN'T GO NEAR A POWER PLANE, BUT I FIND THE MOTOR PLANES HELP MY GLIDER FLYING. I FLY A SMALL, FAST .10-POWERED PLANE WHICH I USE TO WORK OUT THE AEROBATIC MANEUVERS TO BE USED LATER WITH MY SLOPE GLIDERS. THE SLOPE PLANES HANDLE VERY MUCH LIKE A POWERED PLANE IN MANY RESPECTS, AND THIS EXPERIENCE QUICKENS THE REFLEXES!

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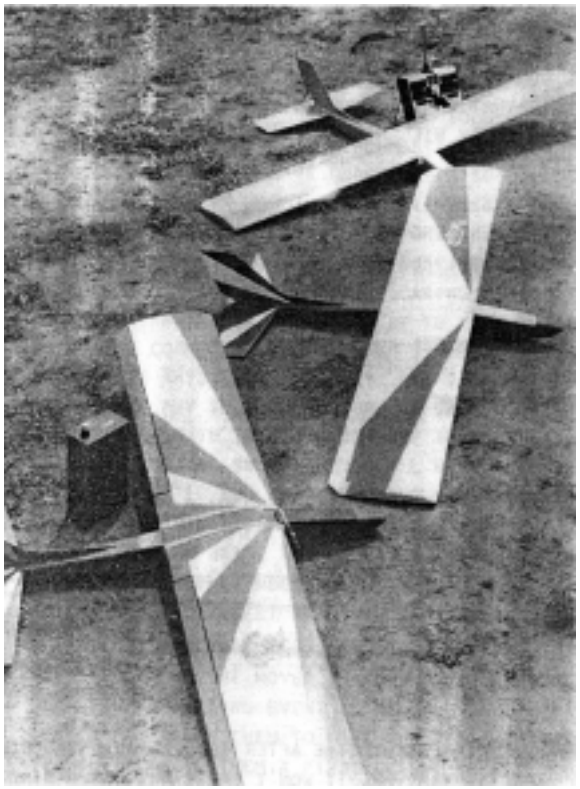


"WIZARDS" SHOW SIMPLE, YET CLEAN, LINES. NEAT!

Wing Tips ...Jeff Troy's Spoiler Return System.....You need it!

"Simple" -- "No Weights" -- "Effective" --"Works Every Time"

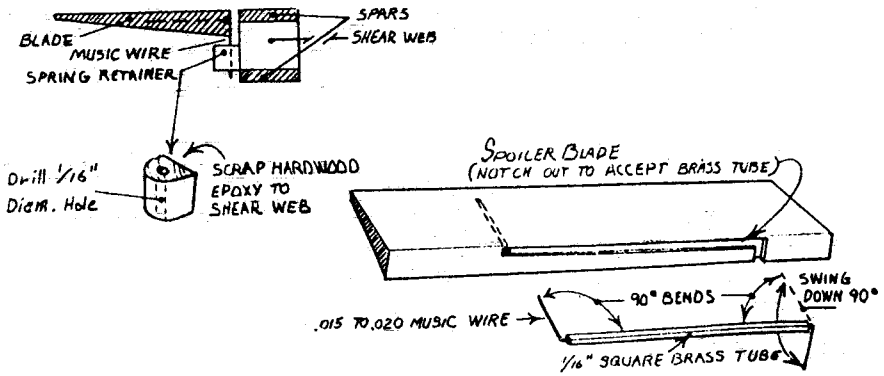
1. Cut and fit spoiler blade first. Then, cut a piece of 1/16" square brass tubing about 3" long. Take a piece of .015" or .020" music wire and cut that to 4" long. Make a 90-degree bend at one end of the wire (1" from the end) and insert the wire into the tube. Make another bend of the same kind in the other end of the wire, trapping the tube between the bends. Note that the 90-degree bends are in the same plane...the wire will be 'U'-shaped.

2. Hold this assembly to the leading edge face of the spoiler blade and mark its length along the face. Cut a long notch into the blade to hold the tube, and drill a hole into the blade at one end of the notch to accept the wire. Then, notch the blade at the other end below the tube notch so that the wire may move freely forward on that end.

3. Coat the notch and the hole with ACC (Super Jet) and insert the assembly into the spoiler notch. As you put it in, take the end opposite the hole and swing it down 90 degrees so that when everything is in place the free end protrudes from the bottom of the blade and is under tension.

4. Make a small block from scrap hardwood and drill a 1/16" diameter hole down through it. Coat the hole with ACC and, when dry, drill it again. Place the blade in position on the wing and mark the shear web (on the spar face) where the music wire locates. Glue the block in that position so that when the blade is finally installed, the block will retain the wire and allow the wire to pass freely through it as the blade is raised and lowered.

5. When the wing is done, install the blade in the usual manner. Make sure that the bent end of the wire is not longer than the wing is deep, or it will protrude through the covering.



This system works flawlessly time after time, and if you don't use wire of too large a diameter, it won't cause any servo bind or stall. The cost is about 65¢ and the time involved is about 15 minutes. TRy it!"

Nats News - 1985

Jeff Troy, Valley Forge Signal Seekers, has been named by Don Chancey, NSS President, to serve as Event Director at the 1985 Nats in Westover, Mass...event director of soaring events, that is.

Jeff wrote a letter to all of us, and gave me permission to quote from it, so I will. Here's Jeff:

"...ONLY ONE PERSON is ultimately responsible for the failure or success of a meet - the Contest Director. NO ONE ELSE IS TO BLAME; not AMA, not NSS, not even the 'unknown Nats worker.'

"...The contest starts some months before the meet, and by the time of the big event it should be so well organized that it runs itself. Workers you don't know cannot be counted on in your planning. When I plan a meet I have a winchmaster boss I know and TRUST. If a meet is scheduled and he is committed to help, he will either be on the spot when arranged, or call from the HOSPITAL BED!!! That's the ONLY kind of help a C.D. can count on.

"If the retrievers don't work, to H--- with them! When properly and knowledgeably operated, they are the fastest, surest, and safest way to retrieve lines at a major meet. (Referring to the DSC winch and retriever systems used at the Reno Nats). I wonder if anyone who tried to use tham at Reno ever had any experience on the gear? If they did, WHY did they allow AMA to OK a site where they (or anything else) could not possibly work well? Was the C.D. present at the AMA Executive Meeting? If he was, how could he allow such a site to even get past the suggestion stage?

"Help from AMA? Sure. I'll need their help, too, but not in the capacity of KEY workers. I'll supply a winchmaster for each winch. AMA can supply other operators to work under their guidance. MY men will TEACH them by SHOWING them how to PROPERLY operate DSC gear. I have good and experienced people in each important position ALREADY committed to making the 1985 Nationals Soaring Events the best yet! I have strong support from the Eastern Soaring League. ESL pitches in by volunteering and then showing up to keep the promise.

"In regards to the comments from the AMA (RCSD -November '84) about holding a separate Nats: ESL is great; NSS is great; BUT AMA is the Nats, and nothing any splinter group can do will change that. The Nats is the only meet with the mood to make it feel national. We are all AMA members and, as such, should all work together with AMA to see that their meet is well run. Obviously, they are in some need of enlightenment in this regard, but instead of fighting them by running 'our own' soaring Nats, why not grab 'em by the scruff of the neck and TELL them what they need to know?

"Soaring is the single largest event in Nats history and, as such, it rerresents the single largest source of revenue in Nats history. Our event should not be moved to a GROSS site to allow a smaller and non-self-supporting event to use the GOOD site! AS C.D. for '85, I will NOT ALLOW them to make the mistakes they have made in the past. I will give them a first-class, properly-organized well-run contest they can be proud of! If the meet doesn't come off there will be only ONE PERSON to blame - me. That's a promise!"

BIG CALIFORNIA MEET PLANNED FOR JUNE 22-23, 1985.....
..... THE WESTERN UNITED STATES R/C SOARING CHAMPIONSHIPS.

KEVIN WEBB AND RICH HANSEN WILL BE CO-CONTEST DIRECTORS OF THIS MEET TO BE HELD AT THE MERWIN RANCH IN SACRAMENTO...ON 80 ACRES OF DICHONDRA - A SPECIAL GRASS-LIKE PLANT ESPECIALLY GOOD FOR LANDING. THERE WILL BE A $500 FIRST PLACE CASH PRIZE, AND CASH AWARDS UP TO 20TH PLACE. THE PROPOSED FORMAT WILL CONSIST OF 9 OR MORE ROUNDS OF 7-MINUTE DURATION, MAN-ON-MAN (NORMALIZED); A 20-POINT IN-OR-OUT LANDING IN A 25-FOOT DIAMETER CIRCLE. ENTRY FEE IS $35 (EARLY) OR $40 AFTER MAY 1, 1985. ENTRIES WILL BE LIMITED TO 9 PER FREQUENCY, AND NO 72.320 MHz WILL BE ALLOWED (DUE TO LOCAL INTERFERENCE). THIS ANNOUNCEMENT IS TO ADVISE ALL CLUBS SO THAT THEIR MEMBERS CAN PLAN FOR THIS GREAT EVENT. WRITE TO: KEVIN WEBB, 335 SHOCKLEY ROAD, AUBURN, CA 95603; TEL. NO. (916) 823-9458.....OR RICH HANSEN, 3901 SPRING OAK DRIVE, MODESTO, CA 95355; TEL. NO. (209) 522-5390.

IN HIS LETTER TO ME, KEVIN SAID: "...THE LOCATION IS...FIRST SITE OF THE 1980 F3B WORLD CHAMPIONSHIPS IN SACRAMENTO, CA. WITH THE OPENNESS WE CAN HAVE SIX WINCHES 40-FEET APART, AND UP TO 12 LANDING CIRCLES. EIGHTEEN FREQUENCIES (NOT INCLUDING 53 MHz) WILL BE ALLOWED. PLEASE SEND ME A LIST OF CLUBS AND PEOPLE TO CONTACT, AND I'LL SEND EACH OF THEM A CONTEST FLYER. HOPE RCSD IS GOING OKAY, I REALLY DIG IT!"

WELL, KEVIN, I'VE DONE BETTER THAN THAT: ALL OF THE RCSD SUBSCRIBERS WILL SEE YOUR ANNOUNCEMENT. OKAY? GOOD LUCK - I'D SURE LIKE TO BE ABLE TO COME OUT THERE MYSELF.

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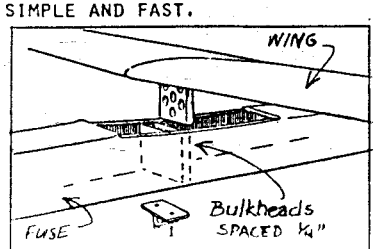
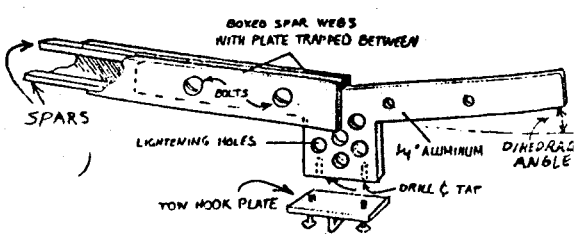
Wing Tips

JIM TYRIE (SEE THIS MONTH'S HI START) HAS DEVELOPED A NEW WING HOLD-DOWN SYSTEM THAT IS ADAPTABLE TO ANY SAILPLANE. IT IS NEAT, SIMPLE, AND RUGGED...AND PROBABLY DOES NOT REQUIRE ANY OTHER PIN, BOLT OR HOLD DOWN DEVICE FOR THE WING. BASICALLY, IT IS A PIECE OF 1/4" ALUMINUM PLATE SHAPED TO FIT THE WING SPARS AND FUSELAGE. THE PLATE IS DRILLED FOR LIGHTNESS, AND IS DRILLED AND TAPPED AT THE BOTTOM EDGE TO RECEIVE SCREWS WHICH GO THROUGH A REINFORCEMENT ON THE BOTTOM OF THE FUSELAGE, AND ALSO THROUGH THE TOW-HOOK PLATE. THE TOWING LOADS ARE THUS TRANSFERRED DIRECTLY TO THE ALUMINUM PLATE WHICH IS INTEGRAL WITH THE WING AFTER ASSEMBLY. THE PLATE SLIDES INTO A SLOT IN THE FUSELAGE, AND THE WING BOTTOM SURFACE SEATS ON A SHAPED WING-ROOT RECEIVER ON THE FUSELAGE SIDES IN CUSTOMARY FASHION. AFTER SEATING, THE PLATE IS HELD IN PLACE BY MEANS OF SCREWS THAT PASS THROUGH THE TOW-HOOK PLATE, THE FUSELAGE BOTTOM, AND INTO THE TAPPED HOLES IN THE PLATE. AS YOU CAN SEE, NO DRAG-SPAR PINS OR FITTINGS ARE NEEDED. MERELY PLACE THE WING IN POSITION AND FASTEN THE SCREWS... SIMPLE AND FAST.





IRATE READER RESPONDS - TECHNIKLE TOPIX.....

ONE IRATE READER WROTE: "DEAR JIM, I WOULD LIKE TO COMMENT ON DON BROGGINI'S ARTICLE IN THE SEPTEMBER RCSD. PURE RUBBISH! DECALAGE HAS TO DO WITH SPEED, NOT STABILITY." (NAME WITHELD BY RCSD).

WELL, I ANSWERED THAT LETTER MYSELF, WITH WHAT LITTLE I KNOW ABOUT THE SUBJECT, BUT THINK THAT YOU READERS CAN PROBABLY OFFER YOUR OWN COMMENTS AND OPINIONS ON THE SUBJECT. MAYBE DON WOULD LIKE TO ANSWER THAT OBJECTION IN RCSD, TOO. HOW ABOUT IT? ANY TAKERS? THE MORE, THE MERRIER, I SAY. A LITTLE CONTROVERSY NEVER HURT ANYONE. WRITE!

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OUR GOOD FRIEND AND SUBSCRIBER TO RCSD, DAVE FRASER, HAD SOME COMMENTS ABOUT THE TONGUE-IN-CHEEK ARTICLE ABOUT THE WAY TO FIND THE BEST LIFT, THE BEST RESTAURANTS, AND THE BEST WIVES (NOVEMBER RCSD): "IN THE ARTICLE, THE AUTHOR FORGOT SEVERAL THINGS. WHILE THERE IS NO QUESTION THAT THE METHOD PRESENTED IS STATISTICALLY CORRECT, HE FAILED TO CONSIDER THAT WITH EVERY SECOND A SAILPLANE FLIES, THE CHANCE OF FINDING A USEABLE THERMAL DIMINISHES, FOR THE SIMPLE REASON THAT THERMALS ARE BIGGER AND STRONGER THE HIGHER YOU GO. THEREFORE, FLYING THROUGH LIFT TO FIND BETTER LIFT HAS THIS PENALTY ASSOCIATED WITH IT, AND THAT HURTS. IT IS ALSO TRUE THAT THE PRESENCE OF ONE THERMAL FREQUENTLY TENDS TO SUPPRESS OTHER THERMALS IN ITS VICINITY. IN OTHER WORDS, THE CHANCES OF FINDING A BETTER THERMAL ARE NOT TIME-INVARIANT AND NOT INDEPENDENT, AS THE STATISTICS PRESENTED ASSUMES. WHEN YOU INCLUDE THESE FACTS, THE STATISTICAL ARGUMENT IS MEANINGLESS. A 'THERMAL IN THE HAND IS WORTH TWO IN THE BUSH.'

"THE OTHER PROBLEM AREA IS IN THE ARTICLE ABOUT FINDING THE BEST LOCATION FOR THE C.G. FIRST, THE PLACE ON THE WING TO MEASURE FROM IS NOT THE LEADING EDGE, BUT ITS (THE WING'S) AERODYNAMIC CENTER. THIS IS TYPICALLY ABOUT 25% BACK FROM THE LEADING EDGE OF A STRAIGHT WING. THE DIFFERENCE WITH LONG TAIL ARMS IS NOT THAT GREAT, OF COURSE, BUT WHY NOT BE ACCURATE? SECOND, 'NEUTRAL STABILITY' IS ILLUSTRATED IN THE GRAPH BY TRAJECTORY 2, NOT 4, ALTHOUGH THE LATTER IS USUALLY THE BEST CHOICE FOR THE STATED REASONS. MAYBE IT'S A MISPRINT FOR 'NATURAL' STABILITY? ALTHOUGH ANY TRAJECTORY THAT CURVES UP HAS NATURAL STABILITY. THERE ARE A FEW OTHER PROBLEMS IN THE PIECE, BUT THAT'S NOT THE POINT.

"AS I SAID, WHAT CAN BE DONE TO IMPROVE THE ACCURACY AND QUALITY OF THE ARTICLES THAT A DIGEST PRINTS? IS A READER COLUMN APPROPRIATE? THE READER'S DIGEST SAYS 'NO' BECAUSE IT ONLY REPRINTS, AND THE PLACE FOR REBUTTAL IS IN THE ORIGINAL PUBLICATION. THAT MAY MAKE SENSE IF THE ORIGINAL PUBLICATION HAD SUCH A COLUMN AND IF THE EDITOR OF THE DIGEST INCLUDED THE LETTERS THAT SHOWED UP THERE.

"MAYBE THERE IS SOME POSSIBILITY OF HAVING THE ARTICLES REVIEWED BY 'EXPERTS' (HOW I HATE THE TERM!), OR AT LEAST BY SOMEONE, ANYONE, ELSE WHO WOULD HAVE A REASONABLE LIKELIHOOD OF FINDING MISTAKES, AND PUBLISHING THEIR COMMENTS WITH THE ARTICLE. CLEARLY, THERE ARE MANY ARTICLES THAT DON'T NEED COMMENT, BUT...THERE ARE THOSE THAT DO. REGARDS, DAVID FRASER". THANKS, DAVE, FOR YOUR ANALYTICAL AND WELCOME LETTER. YOU ARE CORRECT. ANY OTHER IDES FROM READERS ABOUT THIS?

JIG TABLE

From the talented pen of Coulter Watt, member of the Long Island Silent Fliers. The table is simple, strong, and flat. We need it.

"A good building table that is level is crucial to building accurate wings, but what about your fuselage? Is it true and square, or does your plane fly straight with 'only a little' rudder trim?

"After building a Sagitta that flew to the left, and a Camano that flew to the right, it was time to get serious about my building board, so I built a board incorporating a fuselage jig. The board is 24" x 60" so you can build both wings at the same time. It's made of 3/4" plywood mounted on a 2"x2" frame around the edges and a 2"x2" cross member in the center. Sure it's heavy, but with a pair of foam wings weighted while the epoxy cures, I have 100 lbs. on the board anyway!

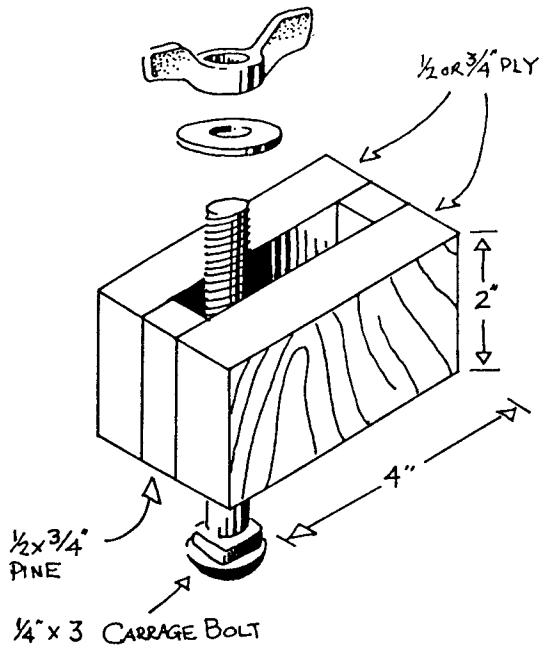
"You'll note in the drawing the 'glide floor leveler.' I installed six of these on the supporting frame, one on each corner and two in the center - each 30" down the length of opposite sides. The center ones prevent the board from sagging when you put weight on it, and the corner levelers are to level the table itself.

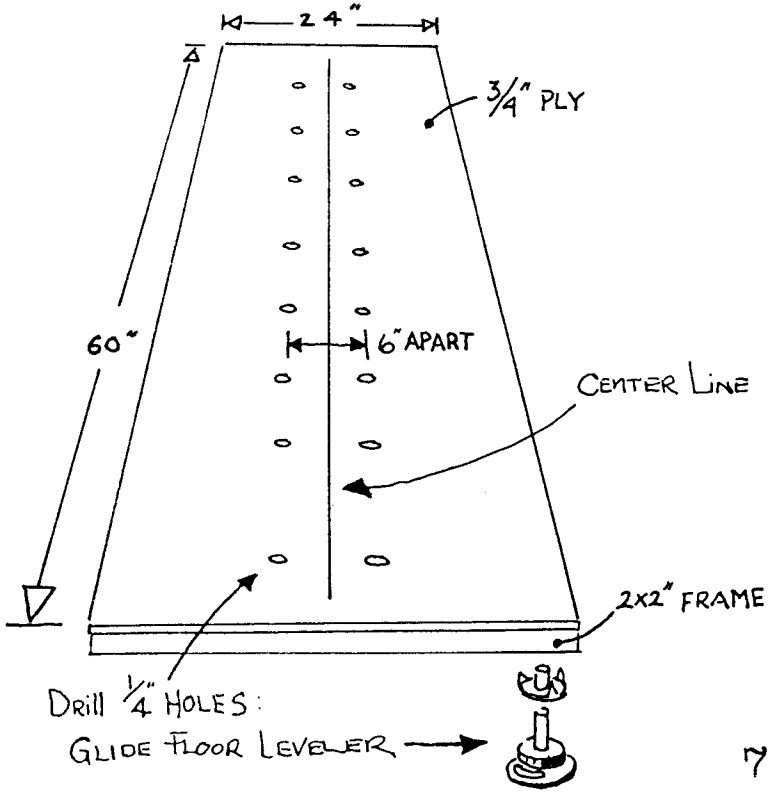
"Put a center line down the length of the table, and when you build a fuselage mark each bulkhead with a center line. NOw you can align everything to the center line and get a straight fuselage. The jigs will hold everything straight and true until the glue sets.

JIG BLOCKS

"The jig blocks were made by gluing 1/2" x 3/4" pine spacers between 2" x 4" blocks of 3/4" plywood. I did this by making two 2" x 24" x 4" sections, which I stripped on the 24" side to square the edges, and then cut into 2" sections. All was done on a table saw. The jig blocks are 6" high at one end, and I use these for the fin. There are eight jig block stations on my table (more than enough) six inches apart and spaced at six-inch intervals down the length of the board. Carriage bolts, large washers, and wing nuts complete the system. Drill the holes with a 5/16" bit to give good clearance for the 1/4" diameter bolts. When you put the bolts in for the first time, insert them from the bottom and drive the square heads into the wood with a hammer so that they will not turn. That's it - very sure and very effective.

"You'll now be able to jig your entire fuselage. The board is a pleasure to build on, and I don't have to worry about twisted and crooked fuselages any more. Each jig station can adjust from fully closed to five inches apart...more than enough for almost any size fuselage you might care to build."





AIR MAIL - LETTERS FROM READERS.....

George Gillburg, 1704 Hodges Avenue, Bakersfield, CA 93304 sent in some pix of the latest fad taking place in England - slope soaring of scale jet aircraft. They call it RCSS over there: RC Slope Scale. One of the outstanding proponents of this type of soaring is a chap named Mick Galvin, and he has a really beautiful Macchi MB-339 - an Italian jet trainer - scale slope soarer (See pix). Let's hear what George has to say.

"The chap on the right in the picture is Mick Galvin, designer of the Macchi MB-339 models in the photo. Don't they look nice? Mick's address is 4 Wellington Road, Horsham, Sussex, England.

"By the way, if you do much scratch building, write for a price list from Hobby Woods, P.O. Box 48, Linden, CA 95236. Three of us here have ordered, and have been very happy with the prices and with the quality of the wood. I've also enclosed a picture of a stand I use for transporting my Windsong in the car. Barely visible on the top of the blocks are the grooves in which the wing rods ride during transit. The stand is simple to make and holds the fuselage upright on the way to the field in the car - so it doesn't roll around. Vern Oldershaw (designer and builder of full-size sailplanes) originated this stand.

"I just received a kit of the GNOME hand-launch RC sailplane by Midway Models. On first impressions it's a nice little kit. Excellent wood, and the parts are nicely machined. The wing spars look a bit small (1/8" sq. spruce) even for a hand launch, but I guess we will see when I get it in the air.

Regarding the Olympia...Jim Ealy, P.O. Box 129, Pottstown, PA 19464, offers a plan for the English version of the Olympia - the EoN Olympia 2B. Specs include 118" span, 930 sq. in. wing area, modified Gottingen 12% airfoil, and 5 - 6 pound weight. The plans cost $20, and I've ordered a set. I'll let you know what I think after I have seen them. Mention Jim's business (Archaeopteryx Avion Associates) because a lot of people probably don't know he exists. Think lift! George Gillburg." Thanks, Geroge, for writing, and... .... Just the other day I read of an AAA Olympia built from the plans in England. There are a few minor changes required to make the ship an exact scale model, but it looks very, very real, and is supposed to fly very, very well. The Olympia was featured on the cover of RCSD a few issues ago, and - although designed in the late 1930s by Hans Jacobs for use in the 1940 Olympics (never held due to the onset of WWII) it was redesigned and built to later standards in England. Many were built by Elliott's of Newbury, and some still exist today in England and Australia. Although I never had the pleasure of flying one, I have been told that they were beautifully harmonized on the controls, and were very quiet in the air. A number of record distance flights have been made with the Olympia in years past, and a good scale model would be both a delight and a fine ship to own and fly.

More Letters...

Don Typond wrote about some things that he noticed in the trimming article, and wondered about: "...I can't believe that if you hold a model in a shallow dive by means of forward stick, that it will continue to dive - or even steepen its dive - when you release the stick. Why should it? A 'down' elevator increases the incidence of the tail, causing it to lift. Why does returning the elvator to neutral increase the lift still further? And what has c.g. position to do with it? The one factor that might play a part, and that isn't mentioned, is tail airfoil. A lifting tail could be powerful enough to tuck the nose down as speed increases, but a tail with a symmetrical airfoil, especially if set at a negative angle relative to the wing, shouldn't exert an upward force with neutral elevator,should it? I notice that a Nordic A-2 is given as an example in the graph, and Nordics usually have undercambered tail airfoils. Most 'modern gas freeflights' have lifting tail 'foils also, usually flat-bottomed. HLGs most often have flat-plate tail airfoils and zero-zero incidence arrangements. Looks to me as if the chart compares apples, oranges, pears, and Kiwi fruit. Is there something I don't understand here?

"If you're a book freak...and I know you are...may I recommend Zenith Aviation Books as a good mail-order source. I've bought many books from them, and have found them to be prompt and courteous. My most recent purchase was a few of those beautiful books by Crown Publishers, each on a different WW-2 aircraft. The NASM bookstore has them for $15.95 per, but Zenith (and others) have been selling them for $6.95, a real steal. I ordered them via the toll-free number last Thursday, and they arrived UPS today, exactly one week later. That's nice service."

You're right, Don - very nice service from Zenith. Anyone care to comment or answer Don's questions about the 'lifting' tail vs. the behavior explained in the recent article?

Don also remarks: "Have you tried Dick Remington's (Model Products Co.) De-Hinge hinges? Boy, are they ever great! Almost gapless, a cinch to install, and so easy to remove the control surface for painting, covering, repairs, etc."

Nope, I haven't tried 'em, Don, but I will...and I'll bet a lot of our readers will try them, too. Speaking of which, would you all please tell the dealers or manufacturers that you saw their products mentioned in RCSD. If they ask you what RCSD is, tell them! It will help us a lot.

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Bruce Abell, my Australian contributor, has written about the F3B team that will represent Australia in the World RC Championships to be held there this April: Richard Tapp, Mike O'Reilly, and Phil Bird. Richard and Mike are from South Australia, and Phil is from Sydney, New South Wales.

Still more mail... this time WINGERONS is the subject...Enjoy! Bob Mackey of Philadelphia sends us some of his comments and thoughts about wing-steering sailplanes, and about a new German sailplane - SPACER - that uses this method for pitch, bank and yaw control.

"I was thoroughly impressed with the kit. You open the box and remove the contents, slide the wings in the fuselage tubes, elevator halves in the appropriate tubes, epoxy the rudder to the Robart-type pin hinges, put the rudder linkage through the rudder horn, put the wing retainer pins in place, and that is it...other than installation of radio, towhook and canopy/speed brake. The finish on all the surfaces is a very high quality luster, and reflections of straight lines in the wing surface run true from root to tip without imperfections. We all dream about something like this but actually seldom accomplish it from the builder's point of view.

"I am trying to make a wingeron ship with a Jerry Slates glass fuselage and foam cores and a two-channel radio (Sanwa). Believe me, it does not take long to get in over your head with the details - like thick vs, thin airfoil, location of the wingeron pivot in percent of chord, method of joining the wings to allow for dihedral, and optimal taper of the wings.

"After reading his article in the December Model Builder, 'Wingeron Control System' by Ken Stuhr, I contacted him. He kits and sells wingeron sailplanes 'Xingu' and'Xingu 100'. I enclose some of his literature for your possible interest. Since he is the only wingeron supplier in the U.S. at the moment, maybe you could mention him in RCSD, and attract soke attention to his business and to wingerons in general.

(Note: the wingeron system is one in which the wing itself pivots to create the turning and climb/dive motions of the aircraft. It is very quick and very low-drag operation...being efficient and 'clean.')

"I plan to use one of those high-speed, high-torque servos for the wingeron mechanism and the speed brake...

"It is interesting to note that the SPACER incorporates a music-wire rod in the wing spar which inserts into a tightly fitting tube in the fuselage - itself encased in epoxy halfway through the fuselage. This provides the wingeron pivot and the wing dihedral. On the other hand, 'Xingu' uses a straight tube through the fuselage and tubes in the wings which are angled to provide the dihedral. SPACER does not use differential wingeron throw, while 'Xingu' does (up to 40%). A quick sketch of this setup shows that the root and tip airfoils pivot about the same center on the SPACER, while the tip airfoil of 'Xingu' sweeps out a cone arc by virtue of the dihedral distance. Obviously, the straight-through wing rod joiner method has been used on a number of planes with success (according to Ken's article in MB). Either this arc-sweep doesn't matter, orKen would realize a dramatic change in flight performance if he would switch to the joiner rod on center of pivot method like in the SPACER. I am wrestling with this question as it would be far simpler to use a straight wing rod in my Jerry Slates fuselage. Do you have an opinion on this?"

Honestly, Bob, I wish I could answer your question based on experience, but that's impossible. Any theoretical answer I might give would be just that...and not supported by either knowledge or experience. So, I defer to our readers - some of whom might have flown wingeron-controlled aircraft. How about it readers?

Now, to give some details of the 'Xingu' and Xingu 100.' They are kitted by Victor Stuhr Sailplanes, 1932 First Avenue, Suite 502, Seattle, Washington 98101, and are available from that source. The basic 'Xingu' is a two-meter sailplane, while the'Xingu 100' is a98-inch span Standard Class sailplane with excellent performance in both dead air and at speed. 'Xica' is a new hot-blooded slope machine for pilots who want aerobatics and speed capability. On all three aircraft, the wings are interchangeable...so you can have one radio and one fuselage/tail group, but several sets of wings depending upon the kind of flying you want to do. No change in trim weight is required (according to the manufacturer) when changing from one wing to another. These sailplanes are available in quantity discount: 10% per unit in groups of 1 or 2 units; 15% per unit in groups of 3 - 5 units; and 25% per unit in lots of more than six units.

A simple manual decoupling of the rudder is possible for special aerobatics, although ordinarily rudder and wingeron movements are automatically coupled. The stabilizer is all-flying. Control 'feel' is identical with that of an aileron-equipped sailplane. Adverse yaw has been minimized by differential wingeron throw (more up on one wing than down on the other). The wings are balsa over foam cores, utilizing a tapered spruce spar cap. Carbon fiber is also included for those who might wish to use 'competition-type' launches. The hollow dowel is of tempered steel, and serves as a wing pivot and rotation axle, while handling bending loads easily. It also prevents wracking fore-and-aft movements on landing. An Eppler 193 section is used. Film covering is recommended. The wings are light and clean because all of the control mechanism is in the fuselage. Root loaded ballast tubes, holding up to 42 ounces of lead, can be included. A single quick-disconnect fitting holds each wing in place.

The slope version 'Xica' (pronounced SHEEKA) has a span of 68".

The fuselage is a 4-ply, pressure-laminated, seamless epoxy-glass-foam sandwich molding...weighing about 7 ounces with integral fin. The hatch is precut, and all mounting holes are pre-drilled. The price list I have indicates the 'Xingu' sells for $159.50 plus shipping, and the wing kit only is $50.

The 'Xingu 100' provides a lower wing loading, averaging 7.5 oz. per square foot, enhancing its weak thermal capability and ease of control compared to the 'hot' 2-meter version, or the slope version, 'Xica.' This 100 version sells for $174.95, while the wing kit sells for $65.00. Shipping is extra.

Tell Ken, when you call or write, that RCSD mentioned this new kit.

SIMPLE JIG HOLDS FUSELAGE

A PAIR OF MALCHI MB-339 SCALE SLOPERS

PHOTOS: BOB CHAMPINE'S RED BIRDS I & II
DETAILED DESCRIPTION APPEARED IN DECEMBER'S RC SOARING DIGEST. DUE TO PRINTING ERROR, PHOTOS IN THAT ISSUE DID NOT TURN OUT WELL. THEY ARE PRESENTED AGAIN FOR YOUR INTEREST.