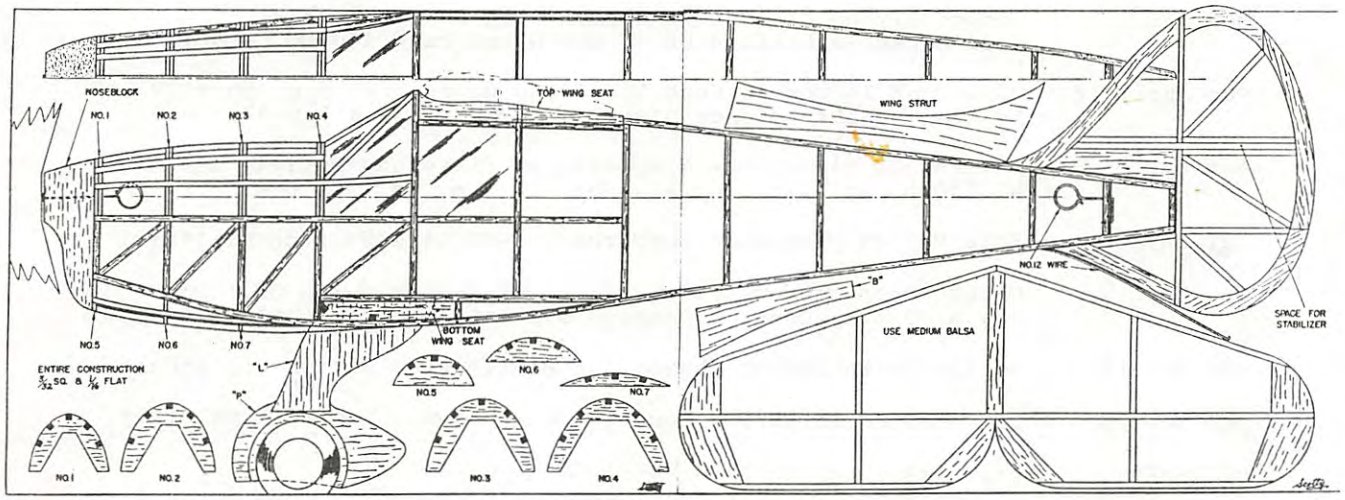
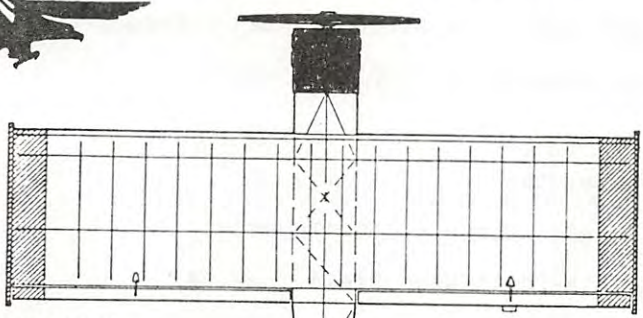
CROSSWINDS 96

"Sesqui-Scot"

By "Scotty" Mayors

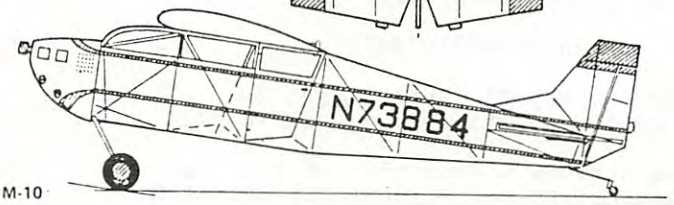


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RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OHIO 44124

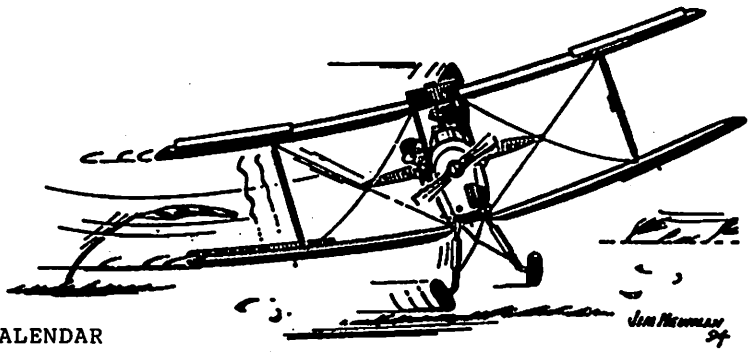


Color scheme:
All white, red trim shown shaded. Wheel hubcaps red.

1 ½ 0 1 2 3 4 5 6
Scale: Feet



Lacey M-10



CROSSWINDS AERO CALENDAR

SUNDAYS	Indoor Flying at Andrews School noon to 5. Check with Doc. Hacker 216-486-4990 or Don Slusarczyk 440-918-0290
Sun April 16	Cleveland Indoor at Kent St. field house 8;00 a.m. to 4:00. 14 Events plus Science Olympiad. CD Mike Zand 216-524-3480.
Sun May 5-7	Air Racing Historians Symposium at Cleveland Holiday Inn W. 150th. Fri p.m. social, Sat. 10 a.m. to late p.m.
Sat May 6	Erie FAC at Prangmore Aerodrome, I-90 Exie 5N,rton Millfair.
Sun May 7	Cloudbusters Indoor Fling, Flint MI Indoor Swing Golf Dome 8 a.m.-8 p.m. Court & Genesee off I-69. G. Lewis 810-329-6833.
Sat May 13	Empire State Indoor Champs. at Bills' R.C. Wilson Fieldhouse.
Sun May 28	CFFS FAC FF at Lorain County C.C. 10 a.m.- 5 p.m. Russ Brown.
5/31-6/4	USIC Indoor at Johnson City, TN
Sat Jun 3	Erie FAC Contest at Prangmore Field, Erie,PA.
Sun Jun 11	CFFS FAC at L.C.C.C. CD Jim Hyka 216-481-6525.
Sat Jun 17	Dayton,OH McCook Sqdn at WPAFB. Std. events plus electric No.Cal. For gate list, call Frank Scott at 937-335-3057.
Jun 22-25	Nat'l Waco Club Fly-In at Mt. Vernon, OH Wynkoop Field.
July 7- 9	Taylorcraft Fly-In at Barber Field Alliance, OH.
July 20-23	FAC Nat's Geneseo,NY. Entry in Flying Aces Club News.
July 26-8/1	EAA Fly-In at Oshkosh,WI. Speed and Air Race Planes theme.
Sun July 30	CFFS FAC at LCCC. Gordon Roberts CD at 216-749-4817.
Sat Aug 5	Erie FAC at Prangmore.
Aug 12-13	NOFFA FF Contest at Muncie, IN.
Sun Aug 13	CFFS FAC FF at LCCC. CD Peter Zbasnik 216-476-4824.
Aug 25-27	Waco Historical Society Fly-In at Waco Field,Troy,OH.
Sat Sept 2	Erie FAC at Prangmore.
Sept 2- 3	COFF FF at Muncie, IN. Rubber Power events.
Sun Sept 10	CFFS FAC at LCCC. CD Russ Brown 216-382-4821 & Lundy Goesling.
Sun Oct 1	CFFS FAC at LCCC. CD Jim Hyka 216-481-6525 & Lundy Goesling.
Sat Oct 7	Erie FAC at Prangmore.
Sun Nov	CFFS Indoor Contest at Andrews School. CD Larry Mzik.
Sat Dec 2	CFFS Annual Club Dinner. D. Norman 216-631-7887.

Flint, MI FAC FF dates are probable for Apr 30, May 21, Jun 25, Aug 20, Sept 24, Oct 15, Oct , and Nov 12. Confirm to Dave Livesay 810-232-0354.

Sat July 8 CELEBRATION OF FLIGHT Indoor Airshow & Exibition at Int. Ag.- Center 5600 McKinley Pkwy Hamburg,NY Dan Flintjer716-826-7420.

MAKING YOUR LACEY MORE COMPETITIVE

Don't get me wrong - the Lacey is a wonderfully - flying and reasonably competitive peanut scale model as assembled straight from the Peck Polymers kit. It is built in very large numbers because it is such a good flier despite its lack of dihedral and generally boxy (ugly) appearance. I would imagine that most FAC fliers have built at least one and probably more, because they have an uncanny knack for picking up any stray lift and disappearing for good! I have not kept count, but I have built (and lost) at least a dozen over the years. It is pretty boring to keep on making the same old model from the same old plan, so I have of late been trying to refine the plan, put in more detail (to get a few more scale points) and thus make the building more interesting and challenging each time.
Aeromodeller magazine* recently published a wonderful article by Andy Sephton on the Lacey. I have drawn extensively on this resource. Andy has really researched this subject and has color photos to show how it **really** is. "Aeromodeller", available from "Wise Owl Publications", has been published since 1938. It covers free flight models extensively, no radio control models, and includes many good articles and advertisements pertaining to Flying Aces interests.
The kit plan is quite incorrect at the front end. I'm sure that Butch Hadland, the designer, did this deliberately to make the model easier to assemble for beginners. There are not many pictures of the Lacey, but what there are show clearly that there are a lot of little details waiting to be added. Why would we want to go to all this trouble to make amendments to the plan and add details not shown on it?

It is simply to be more competitive. Let me explain. As I see it, the main reason to enter contests is to win. At any FAC contest there will be several examples of the Lacey entered in the high wing peanut (Experimental) event. Any of these, and lots of other candidate models too, are capable of getting a 2 minute "max." given a little assistance from "HUNG". The contest, therefore, resolves itself into a contest for scale points between the "maxers". Whoever has the most scale points wins. Even half a point can mean the difference between winning and losing. We must therefore get as many scale points as possible.
A page of photos is included in this issue of "Crosswinds". Study them carefully.
Here are a few notes to show what should be done:

1. The underside of the nose section is curved and nicely streamlined compared to the flat bent sheet shown on the plan. This curved cowling is **not** "bellied" out, but is inclined upwards towards the prop. and air intakes at quite a steep angle.

2. The actuating rods or cables are visible. Ailerons (top and bottom), rudder (both sides) and the elevator (both sides). I do not see an upper elevator cable and conclude that the elevator has solid rather than cable actuators.

3. The thin, red pin stripes on the wing tips, fin and stabilizer are not there in the photographs, so these should be omitted.

4. The top of the engine cowling should be anti-glare black rather than the quite sexy red curves on white. A photo of Andy Sephton and his Lacey in a recent "Aeromodeller" shows this quite clearly, as well as the other detail discussed above.

5. The engine cylinders, such as they are, should be staggered. The port (left) cylinders are a little ahead of those on the starboard side. Behind each bank of cylinders is a vent for the cooling air.

6. The wheel hubs are red.

7. The landing gear legs emerge horizontally from the fuselage and then bend back towards the axles. No big deal, just a couple more bends but, if done, it will look right to the scale judge.

8. There are 5 bolt heads visible holding on each wing tip plate.

9. Photos of the Lacey suggest that there are two stringers each side, extending from the rear edge of the door to just in front of the stabilizer. One is just above the registration and the other is perhaps two inches above the lower edge of the registration on the full size plane. These may be made of very thin balsa or bass.

The payoff for all this effort will be a few more scale points. How many will depend on how jaundiced the judge is on contest day and how amenable he is to being shown, in your documentation, that there is a wealth of details on even such a plain machine as a Lacey. The jackpot, of course, is the 5 point jump between "most of it" and "all of it" in the scale points. We might never get this, but it is there (like the proverbial carrot) urging us on to do better. The full 62-1/2 scale points may well be unattainable by anyone, but if we can score in the "most of it" region (21-25 points) then we can end up with 53-57 total points. Clearly we need as many points as we can obtain, to give us the best chance of winning. Putting in all the details is not difficult, but is tedious, so put in what you feel you should do to satisfy yourself.

I seem to have filled up the plan with a lot of notes, so I'm going to add some more in the text to complete the story.

Absolutely the most important modification is in the engine compartment. It has to be built separately and then mated to the rest of the fuselage. This is because we need to grind away some of the block to reduce weight. I suppose that you could use a foam block, but it could be classed as a structure and so would be frowned upon! One thing I could not explain on the plan is the exhaust stubs. They are very obvious in the "Air Progress" picture. I use 3/32" dia. aluminum tubing, chamfered off at the end. Each piece is only 1/4" long. Poke holes in the cowl in line with the front of the cylinder heads and cautiously enlarge them until your aluminum stubs will just go in. A touch of cyanoacrylate will hold them in place. The same picture shows how the landing gear is bent (better than my words!).
The dark structural member in the front side window is visible in several pictures. The interior "Air Progress" photo shows it clearly, as well as the well known V-struts, and the Jim Lloyd picture in "Aeromodeller" (issue 764, p. 17) is a clincher! I do not think that this is adhered to the window, otherwise it would have been painted white. The same Lloyd photo shows the vent plate (originally this was covered by a fairing). It consists of 45 drilled holes, arranged 9 vertically by 5 horizontally.

The tail group should be built of light wood and covered with Ganpi tissue up to the "next- to-end rib", then red tissue for the outer panels. The bracing wire for the tail assembly is thin nylon fishing line (2 lb.). I have put dots on the fin and stabilizer to show where it goes. Pierce these locations with a pin, thread the nylon through and tie and dot with CA a t the back of the fuselage (it also helps to secure the tail skid). You will notice that I have added a little structure to the fin. This strengthens and stiffens it greatly and prevents the tissue from distorting it when shrunk. Make sure that the fin is vertical and stab. is horizontal by moving them on the nylon. When correct, add little drops of CA to secure the nylon in the various holes. Finally, run a black marking pen along the nylon to make it visible to the scale judge. Careful - don't touch the tissue with the pen.

Covering the wing is a chore. My method is as follows: Cut a piece of Ganpi (grain spanwise) just a little longer than the white part of the wing and about 1" wider than the chord. Flatten out on your building board - you can use little tabs of sticky tape to hold it down if you want. Now apply "UHU" glue stick to the LE, TE, rib bottoms and bottom spar. Hold the wing just above the tissue and get the position just so, then lay the wing on top of the tissue and press gently. Trim the tissue at the LE and TE to give about 3/32"overlap and pick up the assembly. You can do some gentle smoothing before applying a little UHU to the top of the TE and to the front of the LE. Smooth down the tissue over the LE and TE, using just a little saliva on a finger to help smooth down and adhere the tissue securely. The red tips are done similarly, leaving a little to fold down over the end rib and as before. Don't distort the rib! The top of the wing is done similarly, but is a bit more persnickety - but then you have just had some practice. Proceed as before, but don't use sticky tape to hold the tissue to your work surface. Lower the TE onto the tissue, then gently roll the wing over the tissue to the LE. Gently pull and adhere the tissue to the LE and the TE as before. Same technique with the red tips. The end plates are covered on the outer facets only, leaving

about 3/16" excess all around. This excess is snipped to form little flaps, which can then be bent over and stuck to the inner face. A little saliva on your finger will help with this job. Great stuff, saliva! When all is dry, glue the end plates to the wing. This is most easily done on a jig, which consists of 3 pieces of 1/8" sheet, 3" wide by 4-1/2" long; one in the middle of the wing and the other two at each wing tip (just inboard on the end ribs). Apply balsa cement to the end plates where they will contact the end ribs and adhere them with the bottom of the end plates touching the baseboard. Make sure the plates are vertical. This procedure gives 1/8" below the rib bottom and ensures that both plates are accurately in line. Allow to dry. Run a fillet of thinned balsa cement around the tip plate/end junction and put back on the jig to dry. Water spray the wing tissue and pin down to the jig until dry. Same procedure with a very thin coat of 50/50 dope/thinner. This will give a perfectly "straight" wing. If you want to put in a little warp to aid trimming, then a small sliver of 1/32" sheet under the starboard LE and the same size under the port TE will encourage a safe, flat turn to the right under power. It's up to you.

A final note on the registration letters/numbers. The notes on the plan tell you what to do using your black decal sheet from the Peck kit to make several sets of red ones on one sheet of DAF-8. This material consists of a backing sheet plus the thin active stuff that has a contact glue underneath. You have to be in perfect alignment between the red trim stripes when you put it down on your pre-doped fuselage. I cut the strip of insignia very close to the top and bottom of the letters/numbers, and close to the ends. Block up the fuselage so that you can work easily on one side. Peel off the backing, holding the insignia with two tweezers, at the front and rear. Align it so it is in the correct position and then lower it onto the tissue, remove the tweezers and gently smooth down. Get it right the first time. There is **no** second time as the glue is very tenacious. When all this is done you can put on the push rods and housings with small spots of CA and trim off the excess bristles. Note that there are no aileron push rod fairings on the **bottom** of the wing, but all other control cables/rods have fairings where they exit the airframe.
The trim tabs are cut from a 3" x 5" file card.
All this should give you a model which will look authentic, get more scale points and which will fly well. Mine has done almost 2 minutes in absolutely dead air. It weighs 14.1 grams with motor. Not light, but it is a big model.

*Aeromodeller issue #764 dated June-July, 1999 published the Plan and Text; Issue #767 dated October, 1999 included a letter to the Editor.

Gordon Roberts - CFFS, Flying Aces Stork Squadron

CRUNCHING NUMBERS OR LANDINGS

Gordon's flight proven C.G. at 1" behind the wing leading edge figures (by thrashing of arms and legs calculations) to be good for stall recovery. Calculations for the C.G. indicate it may fly well at 37 % wing chord, at 1.34 inches from leading edge. This will give faster climbs, but risk fast dives if too far back, and the dread " Early Stall" strikes in bouncy air. A C.G. at 1.25" or 34.5% M.A.C. might be a good point to ballance this M-10.

Russ Brown - CFFS Flying Aces Stork Squadron at Blue Fox Base.

SPORT FLYING 1971 on era M-10 photos show the white with red tip bands, fuselage stripes, N 73884, wheel hubs, and prop tips. The upper fuselage stripe meets the cowl corner centered at the cowl split behind the rear cylinder head. The foreward point is about mid cylinder head. This top stripe may continue to a cowl top point chevron as shown by Butch & Peck.

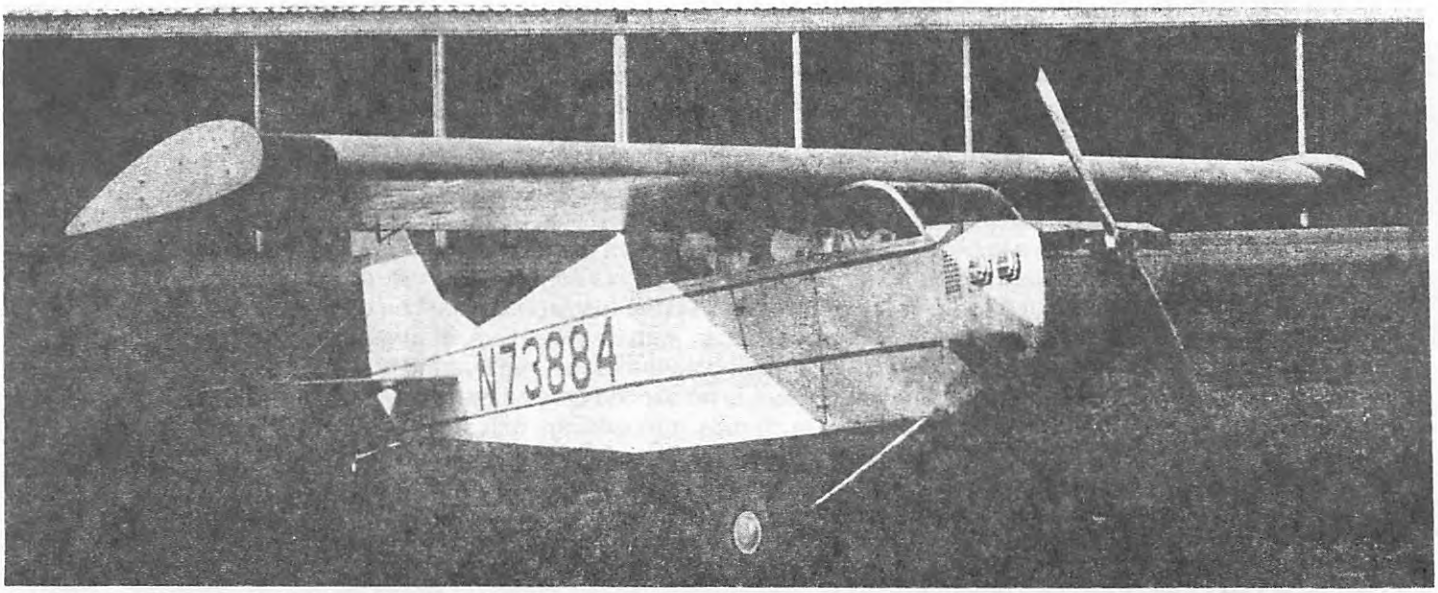
A later re-paint of white and red is indicated by addition and removal of band edge stripes, and by the Jim Lloyd photo in AEROMODELLER showing left side top stripe flare end now starts farther back. The front tip is at the the cowl seam behind the left rear head. The cowl top is black in the photo from front.

CROSSWINDS readers with the dreaded RED X at issue renewal code No. 96 or lower can avoid the chop to address label by sending $ 12 or more to Russ Brown at 4909 N. Sedgewick, Lyndhurst,OH 44124. Thank you.

CRUNCHING NUMBERS OR LANDINGS

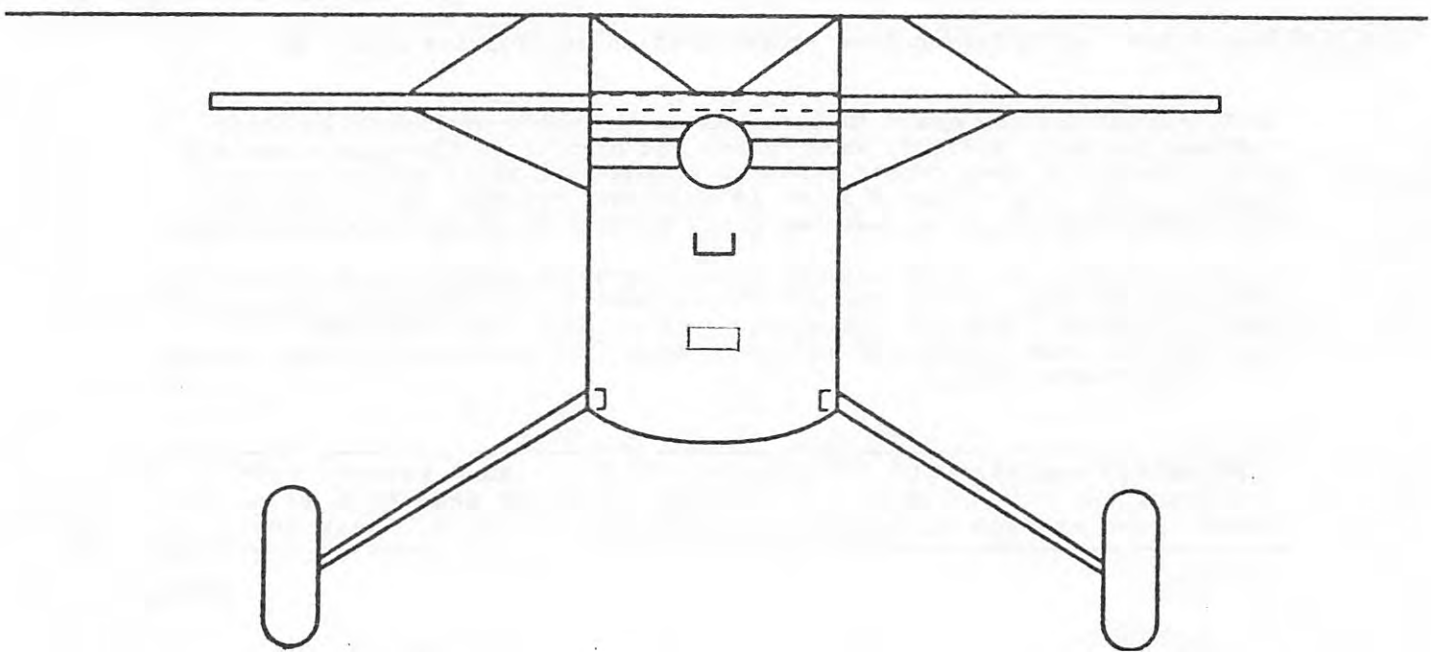
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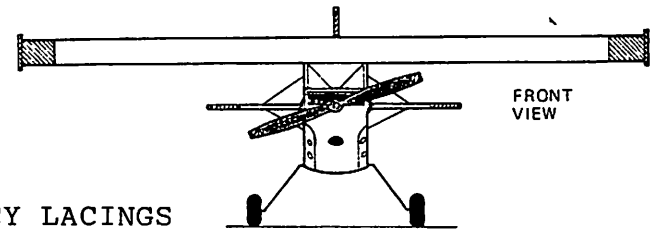


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CROSSWINDS
Russ Brown
4909 N. Sedgewick
Lyndhurst, OH 44124



FLAT HATIN' ON LACY LACINGS

This issue balances small Old Timer simplicity with the full detail points extrapolation of the Lacy M-10. But this will not be the last word,as Lacy owner Alan Spratford is working on it to improve looks and function. Kinda like Ford would throw explosive in Fords and get Mercurys. The precious tip plates have blown off as Wittman extended tips, and the longer wing will not pivot past the tail fin. The blast shock waves can be expected to rock even Butch past the high pearly gates.

Lacy lacings by FAC Ace Summa Cum Laude Gordon Roberts and "oberdere" (WW I song) Aeromodeller researcher Andy Shepton detail Lacy M-10 lore. Color and trim may represent any of atleast four periods of tip plate wing form.

1. Joe Lacy introduced the M-10 at the 1962 EAA Fly-In in all over aluminum base coat with red tip bands and N 73884 fuselage number. The prop was alum. with red tips, and black rear face. Wheel hubs were aluminum. A color photo in EAA SPORT AVIATION Oct. 1962, pg. 4 front view confirms the aluminum and red color. Photos in AIR PROGRESS February-March 1963 reveal marking and external detail. The cockpit dash view shows the mount ends for the two left or port side horizontal antenna mounted behind the 45 degree frame tube. EXPERIMENTAL is painted below side windows in front of the left door, and behind the right door. Joe Lacy was Manager of Aviation for Sinclair Refining in Tulas, OK.

2. A SPORT FLYING article by Andre Anastasion after some nine years flying (July 1971 plus) has M-10 photos showing the familiar white with red bands and N 73884. Fuselage side stripes are on, without tip band edge stripes. Wheel hubs are dark, like the red trim. The top fuselage stripes may join as a chevron point on the cowl top, but no photo views are shown. Joe Lacy then moved to Irving Texas as corporate pilot for Richfield Oil.

3. Three view markings hand colored red on white by Joe Lacy show the side view fuselage bands and red N 73884 with tip bands and extra stripes on the wing and tail surfaces. Joe did not mark the cowl top chevron band connection on the three view, leaving the cowl top all white. Probably an omission. He changed the address to Newhall, California, and continued to sell plans.

4. Jim Lloyd acquired the M-10, and kindly sent Andy Septhon color photos for the AEROMODELLER No. 764, June-July 1999 issue. Now, the red tip trim is without any edge stripes. The prop spinner is red, but the wheel covers are off, showing aluminum hubs. Engine heads are aluminum. The cowl top is anti-glare black, and the prop blades are black. Twin horizontal antenna are not visible on the white side, and may not be located there. We hope to learn a bit more from owner Alan Spratford after this issue hits the Federal Bureau of Pony Express.

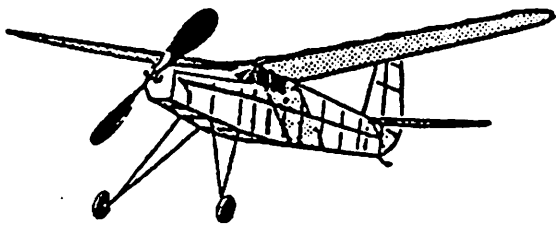
Tracking the M-10 for CRUD (CROSSWINDS Research Under Development) can be an ongoing project as extensive modifications are underway by Alan Spratford. Wittman form wingtips will extend the Lacy wing and obsolete the rotatable wing feature. Longer wings will make a subject more suited for larger than Peanut Scale events.

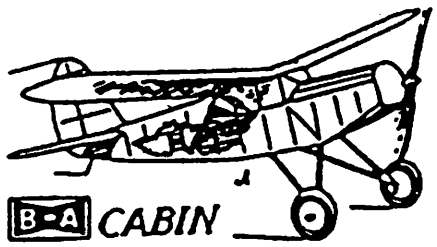
HEY KID! YA WANNA BUILD A MODEL AIRPLANE by Bill Warner in MODEL BUILDER December 1988 is devoted to construction and flying the Lacy M-10.

FLAT HATIN' ON LACY LACINGS CONTINUED

Lacy's twin M-10 C,N 187 LH with a pair of VW engines hung off the nose was built by Joe Lacy with Bob Huggins in Tulsa, OK. This twin was painted the same white with red tip bands and fuselage stripes. Band edge stripes were on the tail bands only. A small white tip on red pitot tube was at the nose of the right tip plate inside face. A good color photo is shown in SPORT AVIATION November 1968, pg. 18. The twin VW engines provided less performance than the single Continental, and were replaced with a single engine. Later the Lacy wing was replaced with a Cessna wing, of little intrest to Lacy fans. While some 1100 Lacy M-10 plans were sold, only the two built by Joe have been registered to date. A model Lacy M-10 in an attractive orange color with black trim and a whale of a tale doccumentation was checked out and found to be builders choice or imagination at best. The registration number was never issued to a Lacy type.

Optional model construction views for the slightly longer nose and rudder of the AEROMODELLER 3-view by Andy Shepton are on a seprate page. Otherwise, the fuselage is the same as the trusty Butch Hadland and Peck Polymers plan.





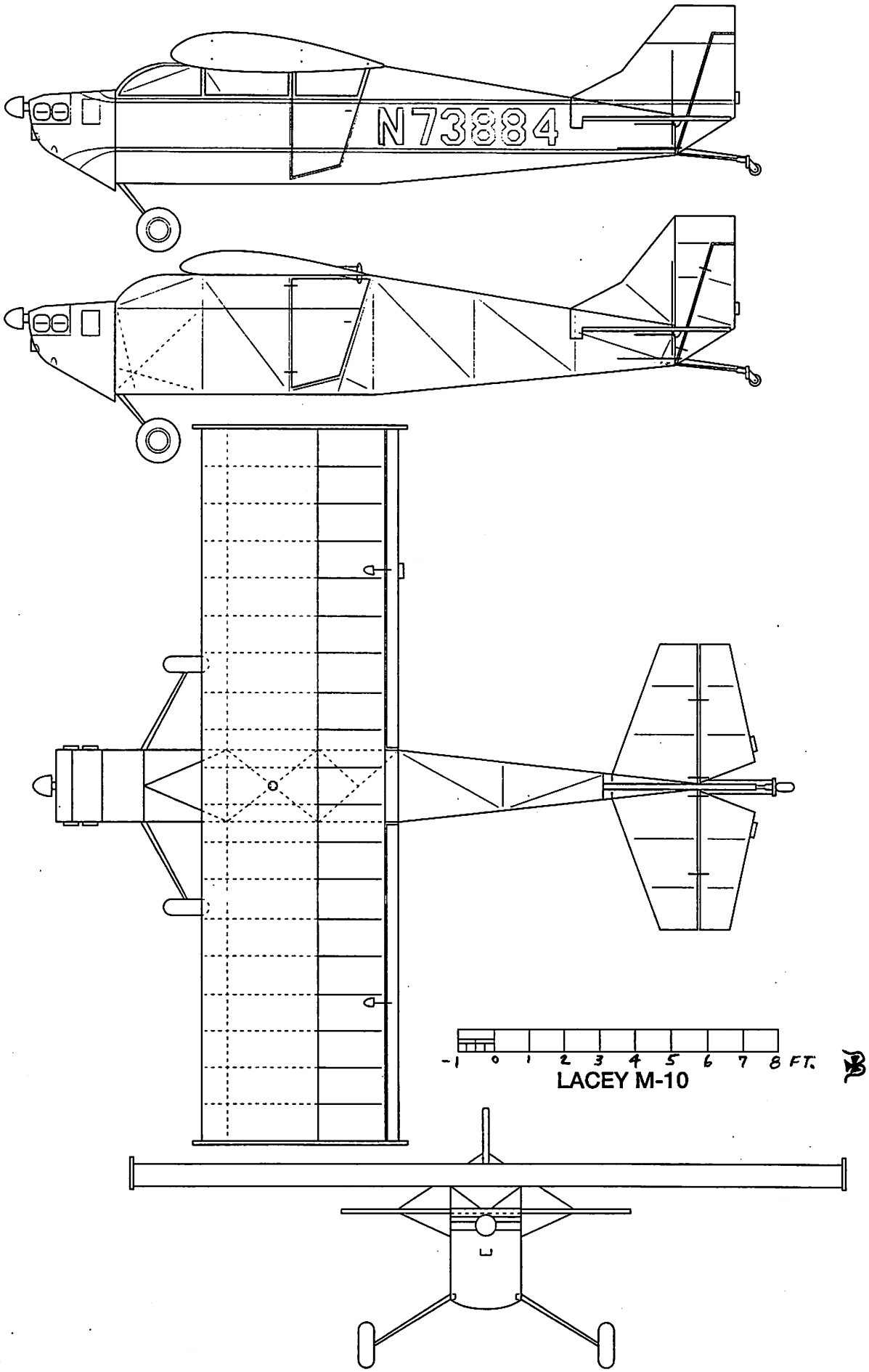
FLAT HATIN' ON TWO BIT OLD TIMERS

FAC GHQ boot drop orders for a "two bit" 25 inch max wingspan FAC old timer rubber duration event appeals for small field flying without scale point fuss. And another great excuse to review all the pre 1946 model magazines in the Blue Fox Base archive! This collection has holes big enough to fly a jumbo through, so the " tip of the iceberg" tabulation of available plans is open for R & D of inspired additions. Early favorites will be the FLYING ACES MOTH from Peck Polymers (619) 448-1818 and the big B A Cabin Skokie Jimmie Allen kit from Easy Built Models. Check with Penn Valley Hoby Center at (215) 855-1268 for kit packages of three or more. The constant wing chord Skokie has more wing area than most taper wing Old Timer under 25 inch wing models. Other pre 1946 Easy Built models include FF4 Miss Canada Jr, FF5 Jr. Commercial, and FF30 Baby Commercial. Call Dave Niezielski of Easy Built at phone (814) 474-9110 to order.

Scientific offered many 25 inch span kits, with several kitted by Jack Fike still available as Scale Flight kits from Penn Valley Hobby Center.

The 25 inch Scientific Bantam plan is just out up North at Cirrus Aviation for only $ 4.00 post paid. A low price source like Hans must be encouraged by orders 'Nes Paw? He just might do more. Canada needs U.S. dollars since Easy Built Models jumped the border to Erie, PA. Haw-aw-w-w-w-w.

The magazine plans list was typed up by a computer literate volunteer with an outrageous $ 100 price for plans. This may not be computer error, but a test of how high to go to top the big John house out West. The plan list here can go for $ 25, and another $ 25 for the back issue CROSSWINDS Index. Haw-aw-w. Speaking of high prices reminds us of the Count Pizzanna " credit" to the Indoor Model Supply for " All worlds high prices". Indoor Model Supply has the Don Ross book INDOOR FLYING MODELS with Lacy M-10 3-view and colors at $ 22. plus $ 5 postage. A catalog is $ 2.00 from Box 2020,Florence,OR 97439.


N73884
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LACEY M-10

10



By BILL WARNER

Illustrations by JIM KAMAN

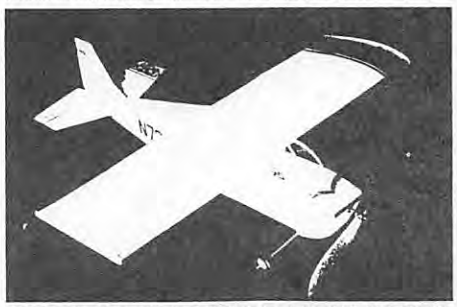
PART FOURTEEN

• Well, gang, it's been a long way from the Sleek Streek to where we are today! During the past thirteen episodes we have covered a few ways to build and fly basic models. I'd like to conclude this beginner's series with an introduction to what I regard the ultimate in modeling; namely, free flight scale. These models look like real airplanes. There are even contests for scale models where the model is judged to see how closely it resembles its full-size counterpart. Judges check to see if things are made to right scaled-down size, if there are the right number of ribs in the wing, if the colors and markings are correct, and what kind of a job you did making it look as real as possible.

One of the problems with free flight scale is that the model has to fly when you get done with judging. Very often, modelers put so much work into making them look realistic that they are too heavy to fly well! Then there are the guys who do as little fancy stuff as possible and are only interested in how long they stay up. I think that beginners should try for the ones that fly well to start with and work their way towards the highly complicated ones later. Problem is, when a kid sees a beautiful picture on a kit box in a store, he or she just has to build that one! Last week, one of my students brought in a rubber-powered Taylorcraft model he had built from a kit by a big manufacturer. It was so heavy, due to the lousy construction the manufacturer had designed and the super-heavy balsa (I think it was either balsa or oak) that it did not stand a snowball's chance. It took a hunk of modeling clay the size of a golf ball on the nose to balance the heavy tail end and get the CG about 30 percent of chord (forward of the midpoint of the wing, that is). It also took about ten degrees of downthrust to keep it from stalling under power. Believe me, it took plenty of rubber to move all that weight fast enough through the air to keep it up, too! About all we could manage was about a five-second flight on a model that, if built properly and out of good wood, could have turned a minute easily. It was not the fault of the kid who built it. He had done a very nice job.

So, what is the moral of the story? Choose what you are going to build carefully. As you probably already have Peck's catalog, I'd like to recommend the following models in order of the easiest to the most difficult: easiest is the Lacey M-10, then Nesmith Cougar, followed by the Clipped-Wing Cub, and finally the Andreasson BA4-B biplane. Guess what? The easiest ones fly best! The Lacey has probably won more contest places both indoors and outdoors than any other scale model in history. That's because its designed like a model airplane! The Nesmith Cougar is a great design, too, and I once tuned one on an over-20-minute flight in a thermal! The Clipped Wing Cub is more delicate than the two we just mentioned, and makes a lovely little plane that will fly very nicely, especially indoors in a gym. The Andreasson biplane is a cutie, and, though heavier, it is a realistic and stable flyer, even though it will have to strain to make 45-second flights.

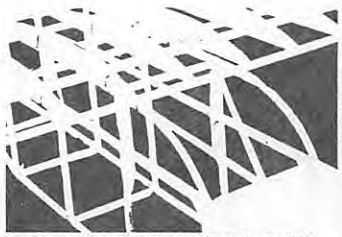
What makes for a good scale model? Hard to say. Most guys make 'em because they like the looks of the particular model. Others choose a certain one because it's what is winning all the contests. The Lacey is a good choice because it fits into the "Peanut" category of competition; that is, it has a wing span of under 13 inches. The Lacey has a lot of wing area to carry its weight. We can say it has a favorable "wing loading" as compared to, say, a modern jet airplane. It is also a "slab-sider," which means that is has flat sides and is easy to build like a box without a lot of fancy structure inside. The stab and rudder on the original plane were large enough to do a good job, whereas many models have to have at least the stab enlarged to get a good, stable flight. The landing gear is about as uncomplicated as landing gear gets, and the wing has no dihedral, which makes it very easy to build. Besides that, it just sits on top of the fuselage! Joe Lacey, the designer of the full-size homebuilt aircraft, should get a medal for this marvel of simplicity. It may not be as gorgeous as a Stinson Reliant or a Waco, but for a good solid design of a flying machine, it rates a "ten."



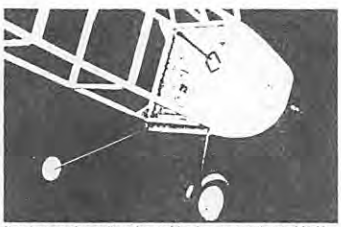
The Lacey, a Peanut version of a popular, good-flying homebuilt model. Built from a kit, this month's column takes us step-by-step through the construction of this delightful model.

OPENING THE KIT

Be careful not to lose the thin strip of basswood needed for the laminated windshield frames. Find it right away and tape it to the box so you won't lose it. Next, decide whether or not you want to use the 1/20-inch square sticks included in the kit. You can substitute 1/16-inch square if you want, making sure they have enough stiffness to do the job of holding the ends of the model apart when the motor is wound tight! Notice that there are some longer sticks in the kit which are a little heavier. These are the 1/16-inch square sticks used for the wing. Even if you decide to go with the kit 1/20-inch stick design, I strongly urge you to use at least one other length of 1/16-inch as an additional spar under the wing. The advantages of 1/16-inch are better-looking (they brown less) and stronger (assuming you have tested them for strength and not used "punky" wood, which may even be weaker than the smaller 1/20-inch). The disadvantage is that they will add weight behind the wing in the tail area, which will then require nose weight to balance it out. If you add an extra gram in the tail department, you will have to add two more in the nose (shorter) to balance out that extra gram, which gives you *three*, not one, extra grams of weight penalty for that extra strength. Still, until you are in the "expert" builder stage, I'd advise you to go with 1/16-inch on the fuselage as I did.



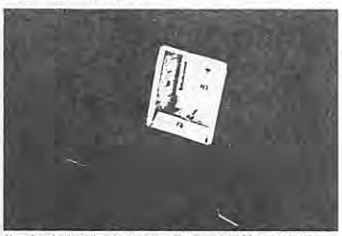
Wing sits nicely on top of the fuselage making attachment a cinch. Note position of rounded sticks forming Vee in windshield area.



Nose box attaches easily to front of fuselage, even at the windshield where it overhangs a bit at the bottom and sides. Numbers on nose parts will not show; they're inside!



Snug fit of nose block is very important. Keep working on it until it removes easily, but does not fall out on its own.



Nose box built with a little ledge on lower edge of front opening to accommodate nose plug.

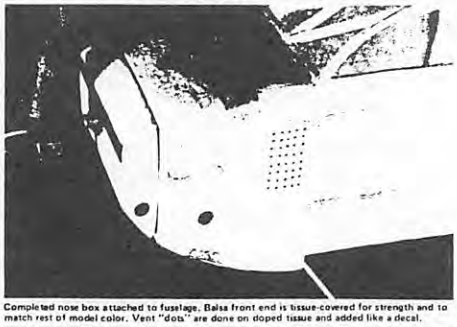
BUILDING THE FUSELAGE

Follow the same procedure as the FAC Moth. When you have the two sides of the fuselage done, "box" your fuselage over the plan top view with the long, flat area where the wing will go pinned to the plan. This means you will be building the fuselage upside down. On any plan you always want to find the longest flat area on the fuselage and put that section flat on the plan when boxing-up. Make sure you use building triangles along the sides to keep things square. Notice that the front end of the fuselage is made separately and added later. This nose "box" has the wire landing gear assembly glued into it at the correct angle and the nose block (removable) fitted into it. It could be added after the model is covered if you wish to make covering a bit easier.

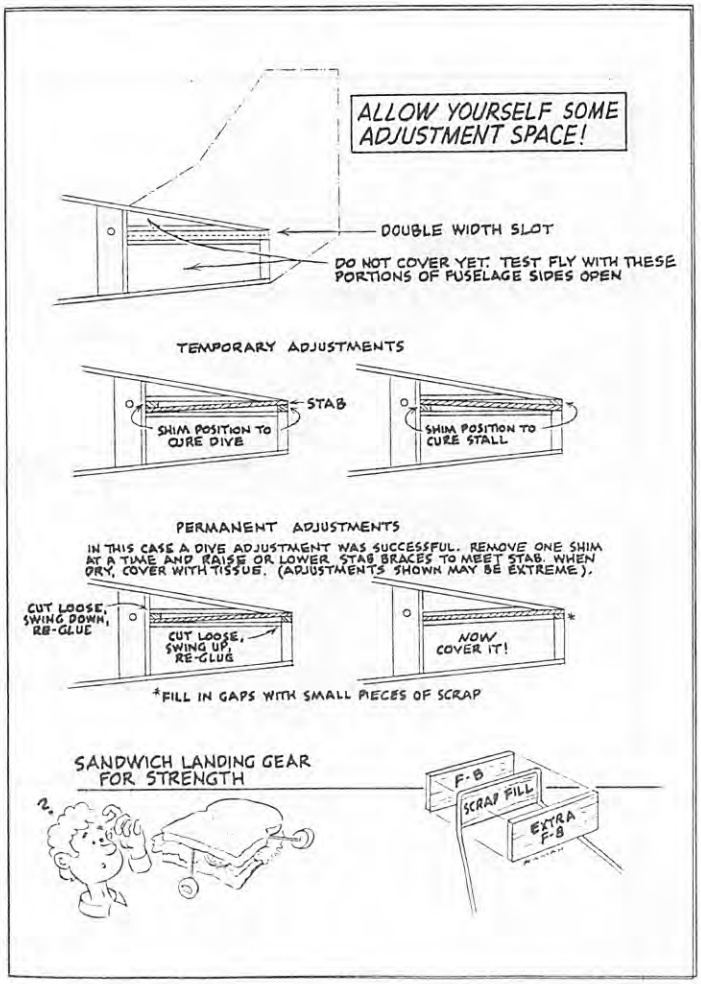
Before you start the fuselage sides, it might help to leave the part where the horizontal stabilizer goes (the slot shown with a lot of little 45-degree lines in it) about double the width shown. This will leave you some room to change the angle of the stab if needed when doing flight trim. I prefer to leave the tissue off that area at the rear of the model until the stab is set just right and glued in. Then I cut the sticks on each side of the stab slot loose and reglue them snug against the stab. Then you can cover the rest of the fuselage and have a neat job!

The tailwheel wire can have a round loop bent into the end around a nail or with round-nose pliers and some scrap balsa glued in to represent the tail wheel itself. On a couple of the Laceys I have made, they needed this area "leaded in" for tail weight to balance the nose!

The toughest part of the fuselage is the windshield frames, which are laminated from two thicknesses of basswood strip. You set them aside earlier so as not to lose them.



Completed nose box attached to fuselage. Balsa front end is tissue-covered for strength and to match rest of model color. Vent "dots" are done on doped tissue and added like a decal.



remember? Make a form to bend the strips around with the same curve as the side view of the windshield. You can use tracing paper to get the curve, glue it to a sheet of 1/8-inch scrap balsa or cardboard, and cut it out. It should be the *inside* curve to allow for the thickness of your part which you are forming around the outside of it.

Rub some soap or wax on the form where it contacts the wood you are bending to keep it from sticking. The bass strip should be cut into four equal lengths, two for each side. Normally, wood to be laminated is soaked in ammonia to make it more supple, but you will not need to do this unless you want the practice. Using white glue, coat one side of a strip and join another to it to make a "double-thick," two-part stick. While the glue is still wet, tape one end to your bending form with Scotch or electrician's vinyl tape. Apply a little end pull as you bend it around your form and tape the other end down. I usually use my thumb to keep the part pushed tightly against the form at the point where it contacts the form, using a sliding motion from one end to the other to prevent the strip from buckling upward as it bends. When it is dry, trim to the size shown on the plan and glue in place on each side as you build it flat on the plan.

In the windshield area there are two little rounded sticks that form a "vee," the point of which is right in the center of the fuselage where the front end "box" glues on. Look at the top view and you will see what I mean. The designer had a hard time showing you how to do this area so you would not goof up and glue these sticks flat with the sides. I have seen many kids do just that, so be careful.

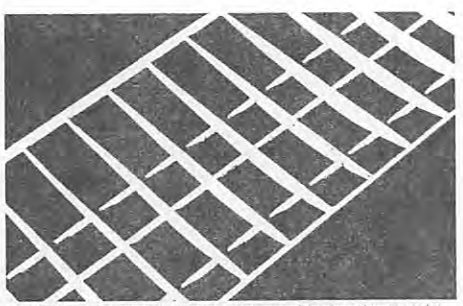
Another place it is easy to mess up is where it looks like the vertical fin and rudder assembly is made right on the side when you build it flat. It isn't. It is a separate part that gets covered before it gets glued on right in the center of the finished fuselage.

TO HINGE OR NOT TO HINGE

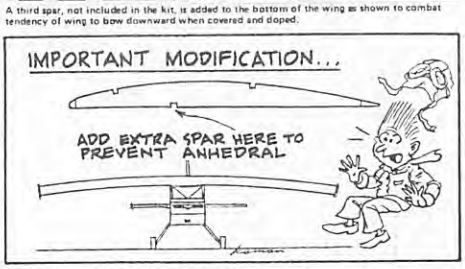
On full-sized aircraft, the rudder is movable, so are the ailerons and the elevator. Trying to be "scale," many kids make those parts separate or cut them loose and then try to make them movable by attaching them with floppy tape, tissue paper, or bendable wire, which always bends when you just slightly bump it. All of these are poor ways to do the job, as any movement on these surfaces which you do not plan and which does not stay where you put it will get you into trouble when it is flying time. You will never get two flights alike and your model will be constantly out of trim. If you must make movable surfaces, use a metal "hinge" that does not bend easily. Thin bits of aluminum will work, but you must make them at least 1/8 inch wide so they will offer some resistance to bending. I usually also use a drop of glue every now and then to keep the surface from moving. It does not take much movement to make a world of difference. I often use music wire, which is almost impossible to bend and springs back to its original position if bumped.

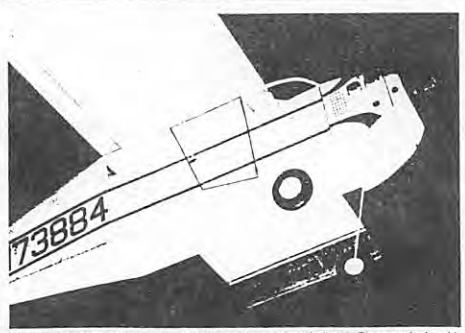
THE WING

This is a piece of cake! No dihedral to put in, all ribs the same size: what more could anyone ask for? The Lacey is one of the few models that you can build with no dihedral and get away with it. The deep, flat-sided fuselage seems to help stabilize the flight. It's not quite as easy to adjust, but its record of contest wins when flown by junior modelers proves that it is not all that difficult!



A third spar, not included in the kit, is added to the bottom of the wing as shown to combat tendency of wing to bow downward when covered and doped.





View under right side shows door and aileron markings done in India ink. They can also be added with thin strips of black tissue or chart tape.

The bracing sticks which go from wingtip to wingtip on top of the wing are called spars, and there is likely to be a problem with them. Wings tend to bend away from spars on top or bottom if there are no spars on the opposite side of the wing to oppose them. It has to do with the pulling-up power of the covering. There is an Aeronca "K" floatplane kit that has been on the market for years which is notorious for having its wingtips bow upward. Guess where the two spars are? You guessed it; both on the bottom. Guess what happens to the Lacey wing with both spars on top? That's right; the tips bend downward into what is known as "anhedral." You could fight this by pre-shrinking your tissue and doping it while it's still on the shrinking frame. I prefer to oppose the top spars with an extra one under the wing splitting the space between the top spar positions. All it takes is filing in an extra series of notches with your notcher while you have the ribs stacked doing the top notches.

TIP PLATES

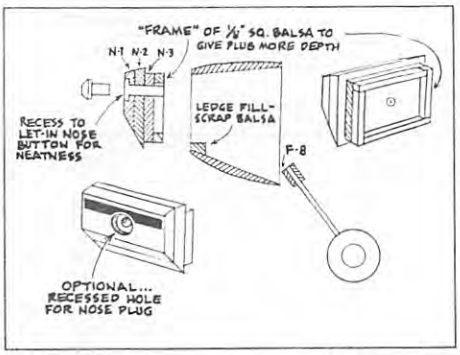
Another feature of the Lacey is the "tip plates," which glue to the ends of the wings after the wings are covered and the red tissue trim has been added. They are there for a very good reason, namely to prevent the high pressure present under a wing flying at an angle of attack while merrily getting lift from sneaking around the wingtip toward the low pressure area on top of the wing. When this air does get around the wingtip, the front-to-back airflow shows it rearward at an angle, setting up a whirlpool or "vortex" effect which gives you a lot of drag. When you put tip plates on the ends of the wing, you help stop this from causing such a big problem, and it actually gives you the effect of having a bigger wing than you really have!

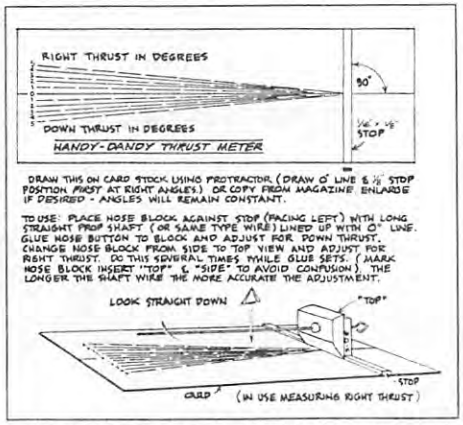
THE NOSE ASSEMBLY

The nose "box" built of four pieces of balsa, is fairly simple to put together, but there are some tricks. One trick is to make a little "ledge" along the lower edge of the opening on the inside, filing it flat with a nail file sanding board after it's dry. This gives the plug-in nose block something better to hold on to than the sharp up-sloping edge which would wear down after a few nose-plug removals and reinsertions.

When you make the nose block that plugs into the box, the "plug" which slips in could be made a little longer to keep it from falling out if you have to add any thrust adjustment shims later on. I use a "frame" of 1/8-inch square balsa added on the rear of the plug. This helps hold any modeling clay ballast I may have to add to the nose for balance later, too. In any case, make sure that the nose block is snug so that it does not fall out and that it is removable for winding without too much strain. Glue a thickness of paper on a side, sand some oil, or whatever, but pay attention to this bit so life will be easier on the flying field. A nose block that won't keep your thrust angle correct in the air or that keeps falling out when the power runs down is no fun.

The landing gear is plugged and glued into the nose box with a rearward rake which makes it almost impossible for it to pop out. If you want to really make sure it is solid, sandwich it before you glue it in by "filling" the center portion with balsa the same thickness as the wire and then adding a piece of 1/32-inch balsa on each side.





Getting the nose button glued in at the correct downthrust and sidethrust angles shown on the plan can be more easily done if you draw the needed angles on a background and hold the nose block with the newly glued-but-not-yet-dry nose button in its hole in front of it. Use the prop shaft in the nose button to help line it up in each direction (downthrust and right thrust) before it dries. By the way, a nice touch is to "let in" the nose button a little in, making a shallow hole with a sharpened piece of aluminum tubing or the end of a pencil with the eraser removed and picking out the balsa with the point of your modeling knife so the nose button sets with its nose just even with the front of the nose block.

COVERING

You can cover the fuselage and the nose box separately, sticking on the tissue with thinned out (60-40) white glue. If you use the supplied 1/20-inch balsa, maybe you would like to use pin-shrunk tissue on the fuselage as well as on the tail parts. Giving the tissue a coat of 50/50 nitrate dope (half thinner) while still on the shrinking frame is a good idea. Some guys even draw on their striping and lettering while the tissue is on the frame, as it's easier to work with using the part of the plan with the original art work underneath so it shows through. If you use India ink for any of this, spray a coat of clear dope or lacquer, like Testor's Dull-Cote, over it to make sure moisture does not ever make it run.

If you are going first-class, you may want to use Japanese tissue instead of the domestic tissue in the kit to cover with. It gives a nicer and lighter job. The Peck domestic black tissue, however, is superior to black Japanese tissue if you cut out your letters and door/aileron striping from it because it does not fade.

Doing the red trim is not too difficult, just dope through it with thinned nitrate dope. Cutting the curved parts of the trim is easy if you draw the stripe on tracing paper. Tape it down to cardboard with a couple of layers of red tissue under it (grain the long ways) and cut through the lot carefully with a new blade. The lower trim stripe ends at the bottom of the fuselage. Holes on the front end can be painted on (faked) with flat black enamel that comes in those little bottles for painting plastic models. It is also good for doing tires.

You can cut the lettering out of black tissue if you have a lot of patience, or you can use the little "press-apply" decal that comes in the kit. This must be cut closely and applied with great care, barely touching the center only until it is exactly where you want it. Once stuck down it will take your tissue off if you try to pull it up. Work it down with the edge of a bit of sheet balsa used like a squeegee from the center outward once it is in place. Get all the bubbles out. Also, remember that a fingerprint on the back side of the decal will be forever a part of your model. Spray the finished job lightly a couple of times with Testor's Dull-Cote to kill the shine or it will look bad. Some types of hair spray might do the same thing, but don't experiment on your model. Try it on something else first.

CONTEST FLYING

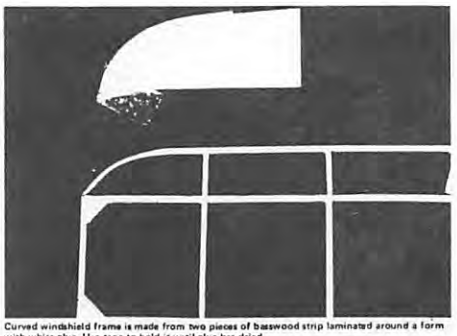
Flying a model in a contest is not much different than flying it out in a field all by yourself. The main difference is that you will be nervous and make dumb mistakes, that's all. Never go to a contest with a new, untrimmed model like all of the rest of us do. Know your plane and how it flies. Still, if you need help getting it to fly, what better place to get help than at a meeting of expert modelers! Nine out of ten will be flattered if you ask questions and will probably offer more help than you can use!

Many contests require that you belong to the AMA (Academy of Model Aeronautics), and you should be aware of this before going. It is mainly for insurance purposes, and unfortunately a kid with a half-ounce rubber model pays the same fee as one with a five-pound R/C model that travels at 100 mph. It's also a good idea to ask what the rules are at the beginning of the contest so there will not be any hard feelings or misunderstandings later on. There are several different sets of rules used today in the US and the world, in the Peanut Scale event, and about the only thing they have in common is that they all require flight and "static realism" points both to be added up to give you your contest place. Don't be afraid to fly just because you are not the best flier there. You might be surprised! Even a blind sow can pick up a few acorns.

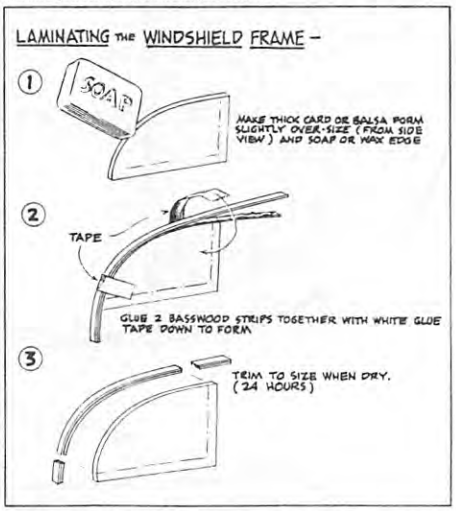
SCALE PRESENTATION

One of the things that you will need at most contests will be some proof that there was, indeed, a full-sized airplane like it and that you did a reasonable job in imitating it. As peanut contests are usually fairly laid-back events, the judges will often accept the plan from which the model was built. A three-view drawing of the original plane uncluttered, incidentally, in your Peck Lacey

Continued on page 73



Curved windshield frame is made from two pieces of basswood strip laminated around a form with white glue. Use tape to hold it until glue has dried.



Hey Kid. . . . . *Continued from page 48*

kit—don't lose it!) is better, and a three-view with photos is best. Putting what you have in a folder is a good way to present it, and plastic page protectors sold at any stationery store make it look professional.

Sometimes, however, your scale presentation can be too good. The Lacey, for instance, in real life has the lower edges of the nose box curved under and the exhausts come down through the curve. The model has them taked on a flat side. A good photo would lose you points, unless, of course, you got your documentation together before building the model. In this case, you'd have the only one of the six Laceys there that was correct, and you'd score over the others! Be sure and point out in writing anything that you did differently from the way it is shown on the plan or three-view. If you noticed that the Lacey photo shows no little extra stripe near the wingtip and the plan shows one, you'd better put a note on the drawing telling the judge why you left it off. Also, some planes, where there were several made, have minor differences. A photo of the plane you made is always the best way to go. By the way, expect judges to tell you what you did wrong! If you can't stand a little criticism, better stay out of contests! Personally, if I left off the tail-side door outline in India ink and the judge tells me, you can bet I'll have it next time! A great way to really improve your modeling is to help judge. That way you get a close look at all the models, including your own!

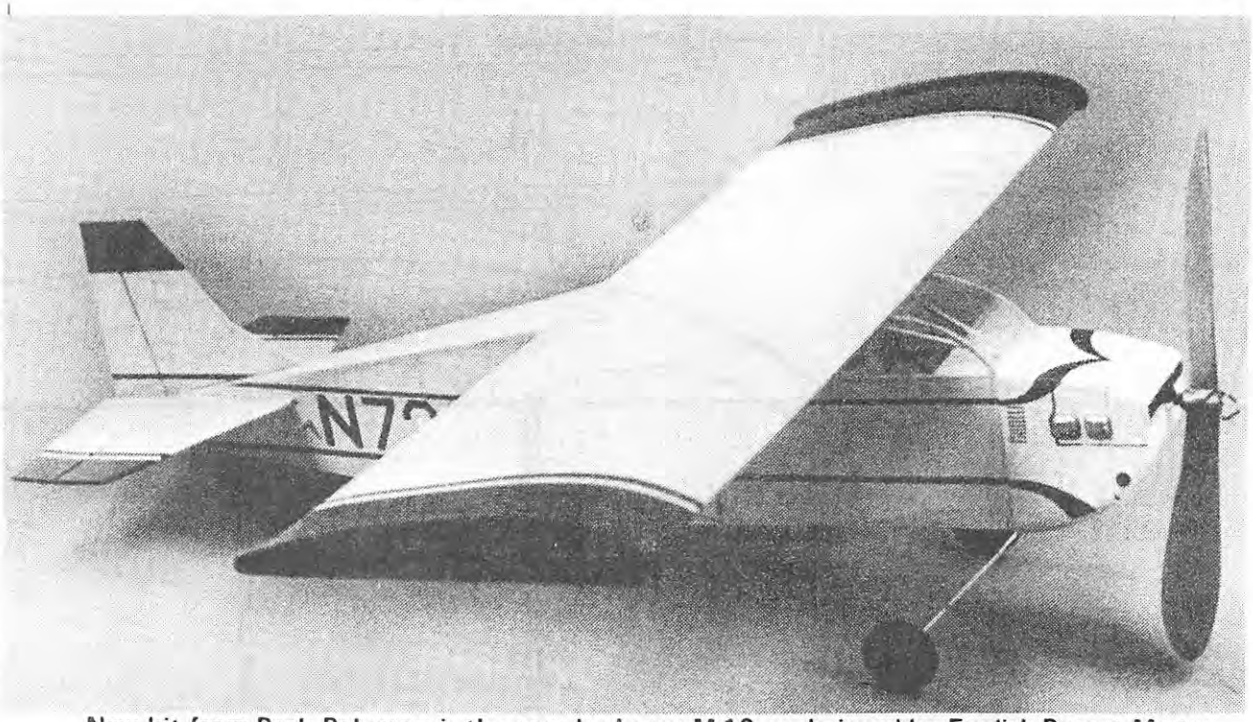
FLYING SCALE

Even the fanciest model has to fly to be competitive. Often the guy who does the nicest model can't get it to fly right, and I have seen many a trophy go home to the guy with a mediocre model which did a mediocre flight. A Lacey, built correctly should nudge a minute indoors with no sweat and do several minutes in thermals outdoors. Poorly built Laceys are still impressive fliers if you take the warps out of the wings and tail, balance it as shown on the plan, don't overpower it on test flights, and follow the chart which we gave you for flight trimming in the May, 1988 issue of *Model Builder*. By the way, if you are just joining us, I suggest you write in for the thirteen episodes of this "get us started" se-

ries. They can be reproduced for school or club use as long as credit is given to *Model Builder*.

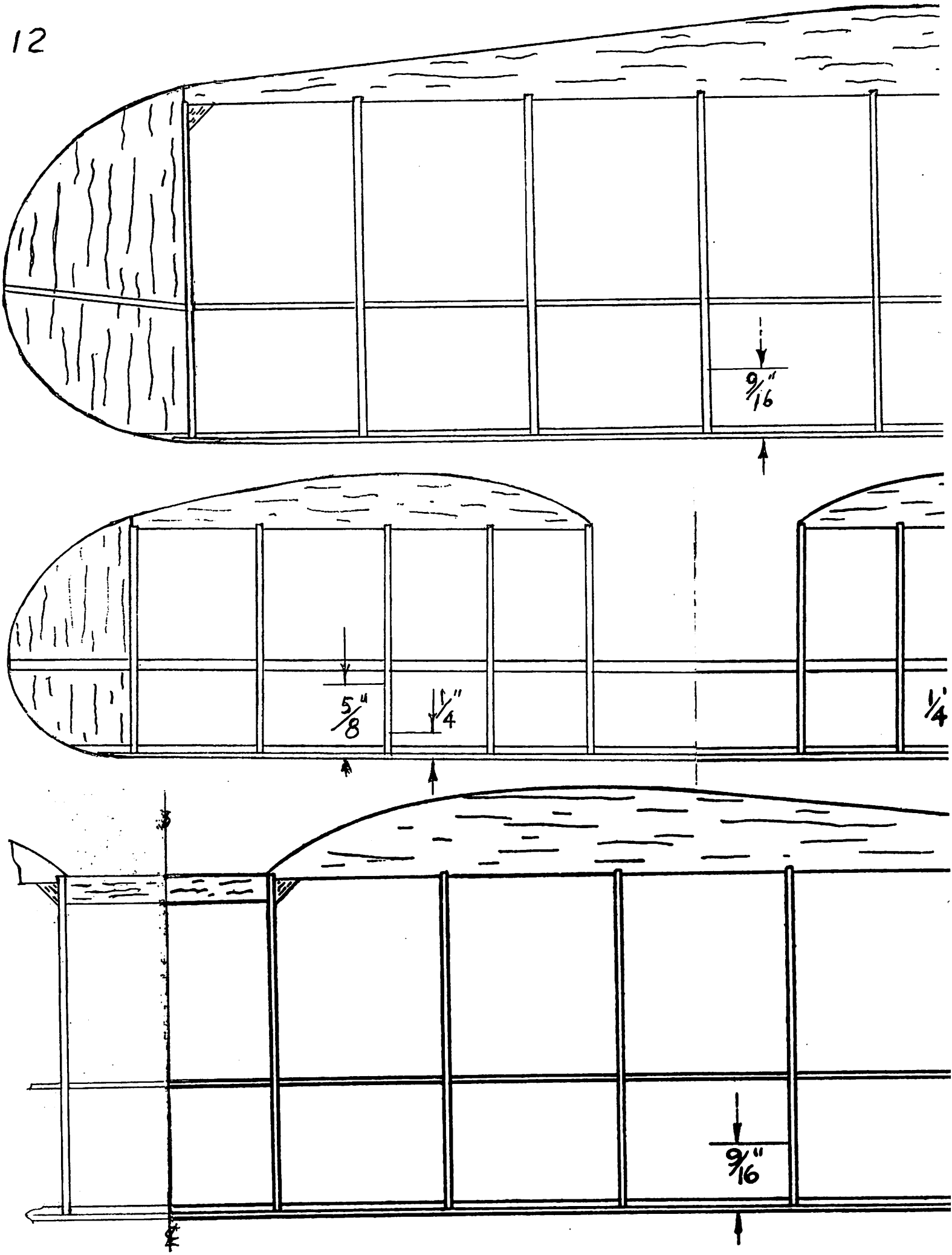
I would like to thank Bill Northrop for the opportunity to do this series with you, Jim Kaman for all the fantastic art work he has contributed, Peck-Polymers for their great cooperation, the Flying Aces Club for their part in keeping *real* modeling alive, all the selfish modelers living and dead who have helped me and who have hopefully gained some measure of immortality as you carry their ideas on, and especially thanks to you for staying with us and for all those wonderful letters and words of support!

Watch for an announcement next month concerning a postal prowl meet for the Flying Aces Moth that you can enter! Fun for all who have built the FAC Moth along with us these past few months. See ya' in the funny papers.



New kit from Peck-Polymers is the popular Lacey M-10, as designed by English Peanut Master, Butch Hadland. Not a beauty, but a real contest winner.

MODEL BUILDER 3/81 introduces the Butch Hadland designed Peck Polymer kit with red band edge stripes on wing and stab. The Chevron point on white cowl top is at the center of front cyl.


9/16"
5/8"
1/4"
1/4
9/16"

Lacey M-10

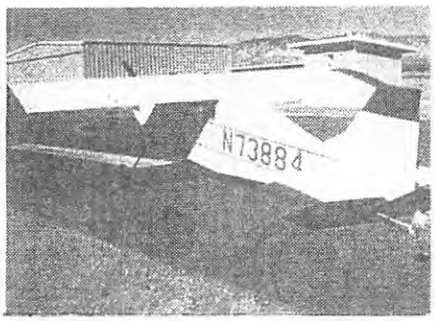
Drawn and described by Andy Septhon...

Authors note: I would like to dedicate this article to the memory of Butch Hadland. As well as introducing me to and helping me with the construction of my first Lacey, he gave me a tremendous amount of advice and support in my other indoor modelling endeavours. Andy Septhon

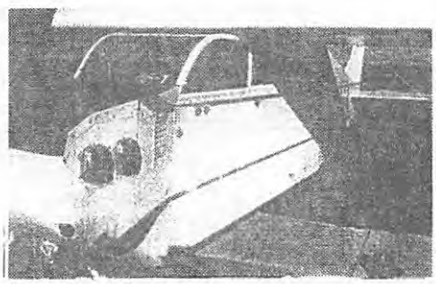
A MODEL START

Love it or hate it, it has to be admitted that Joe Lacey's homebuilt is probably the best prototype ever for a successful free flight flying scale model. Many plans have appeared world wide, based on Joe's publicity 3-view, and at least two kits are currently on the market (15" peanut and 20" rubber). My own introduction to the machine dates back to a demonstration of a pistachio version (7" wing span) by the late Butch Hadland at a RAFMAA meeting in 1985. I was enthralled by its performance: the flight was slow and stable, it lasted in excess of 90 seconds and the sight of Butch as he grinned: "It'll be alright when it's trimmed" will remain a treasured memory - I had to have one.

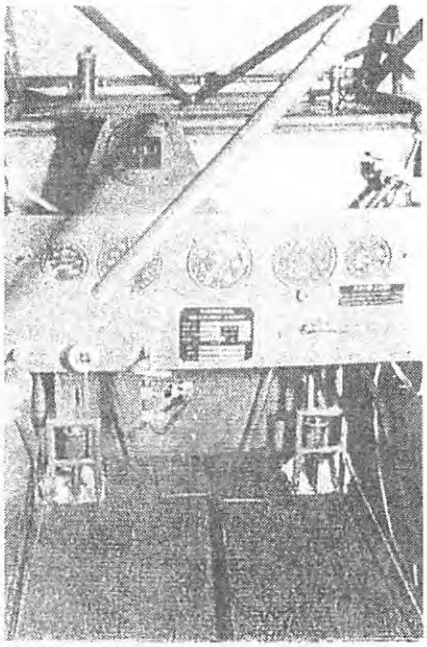
Butch gave me a set of plans for his pistachio machine and advised me of his peanut version, issued as a free plan with December 1976 Aeromodeller. I found a three view and colour detail in Ron William's book (now unavailable, but the content has been repeated in Lew Gitlow's new tome: Indoor Flying Models) and discovered photographs in Sport Flying magazine and Jane's All the World's Aircraft. Unfortunately, the sources didn't match and a ten year trail began, to try to discover base data for an accurate model. Joe Lacey, subsequent owners of the machine Jim Lloyd and Al Spratford, and the EAA have all helped on the way. I would like to express my extreme gratitude for their generosity in sending data, plans, sketches, ideas, comments and photographs, without which, my models would have stalled at the first hurdle and this article would not have been possible.



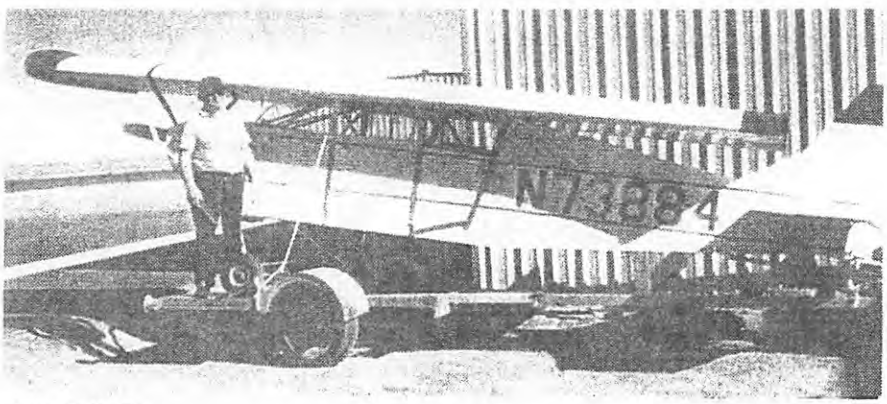
(Photo: Jim Lloyd)



(Photo: Jim Lloyd)



(Photo: Air Progress 02/83)



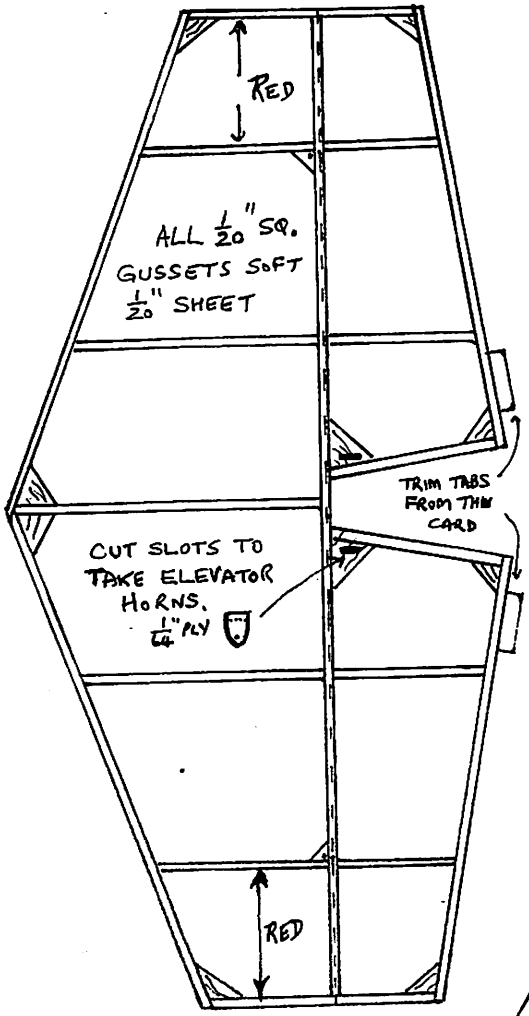
(Photo: Jim Lloyd)

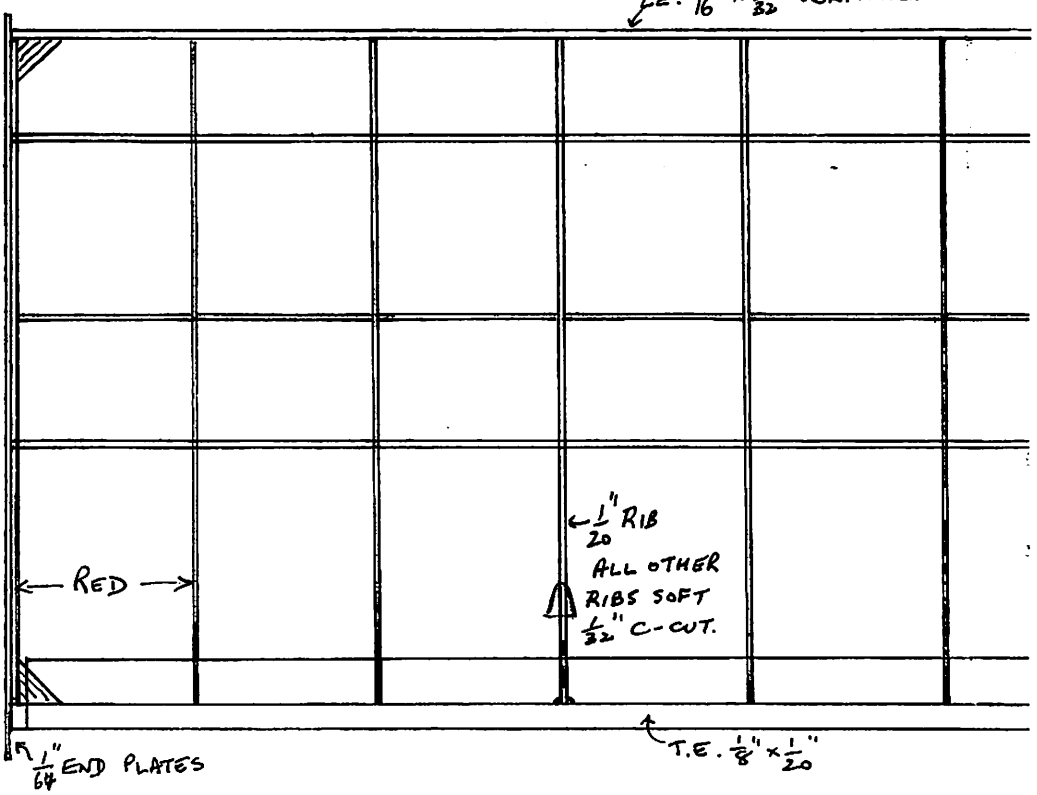
A common theme from all the sources, except Joe, of course, was the criticism of the angular shape. Both recent owners and the reviewer in 'Sport Flying' have suggested methods of introducing curves to smooth the angles. Jim started the process by rounding the tailplane leading edge, Al has rounded the fuselage with wooden longerons and in 1993 was modifying the wing to give Whittman tips and aluminium ailerons. He's also changing the engine to a Lycoming 0.290G, as Jim retained the Rolls Royce C.90. So, the Lacey as we modellers know it is no longer with us and the only data available is that which exists now. This article summarises what I've found so far and provides the best 3-view I could produce with it.

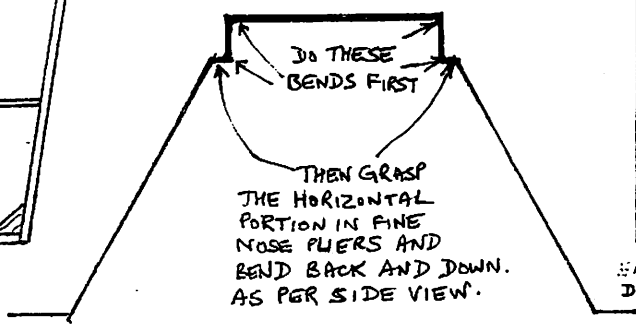
DESCRIPTION

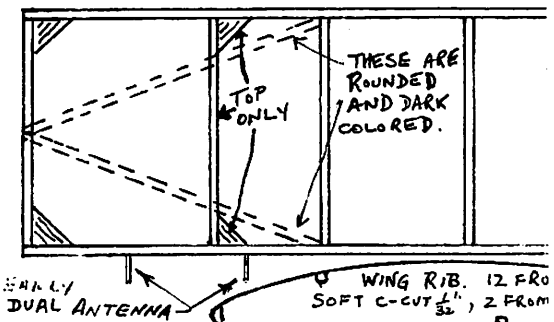
Design commenced on the Lacey M-10 in 1958, with first flight on 6 July 1962. It was conceived as a homebuilt with simple construction, low weight, good cruise speed and distance, good safety, car-towable, easily parked at home and a cabin that doubled as sleeping accommodation. In all this Joe achieved a fair compromise. It took him only 400 hours to construct the machine and the list of parts provided with the plans is indeed sparse - if there ain't much in it, it ain't going to take too long to construct and it ain't going to weigh too much! It is reported that it flew between 40 mph nose up and 150 mph nose down, with a 5 gallon per hour cruise at 115 mph. The wing has been tested to an equivalent of 9 'G' and if one of the four wing retaining bolts fails, the combination is good for 4 'G'. The wing may be removed and swung to lie along the fuselage roof for towing purposes - a job that can be achieved by one man in 20 minutes. The parking space required in this configuration is only 23 feet by 8 feet by 6.75 feet high. Finally, the tail can be supported on a trestle and the seat cushions rearranged to give a horizontal sleeping cabin of 24 inches by 7 feet.

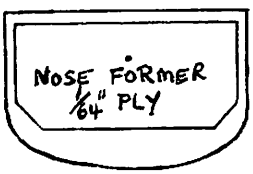
Joe sold over 1100 copies of the plans, but only one other machine was built, and that was by Joe himself. Joe assumed that the Rolls-Royce Continental engine of the original was too expensive for prospective builders and the design was modified to accommodate relatively cheaper, twin-VW engines. The performance fell as much as the fuel consumption increased and

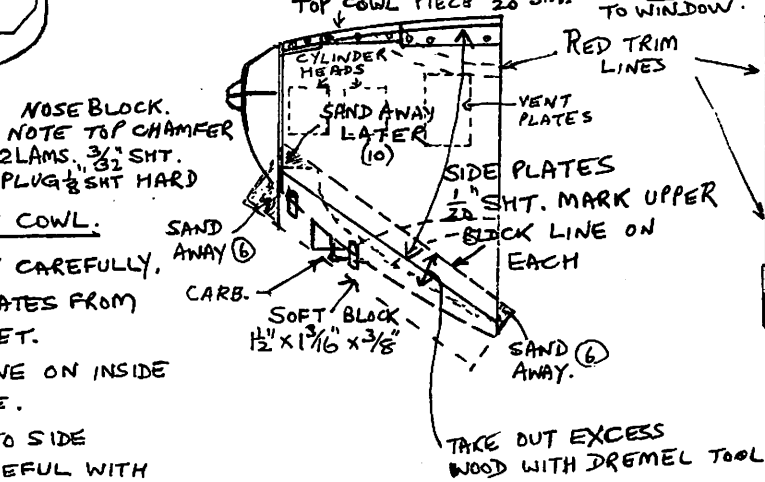


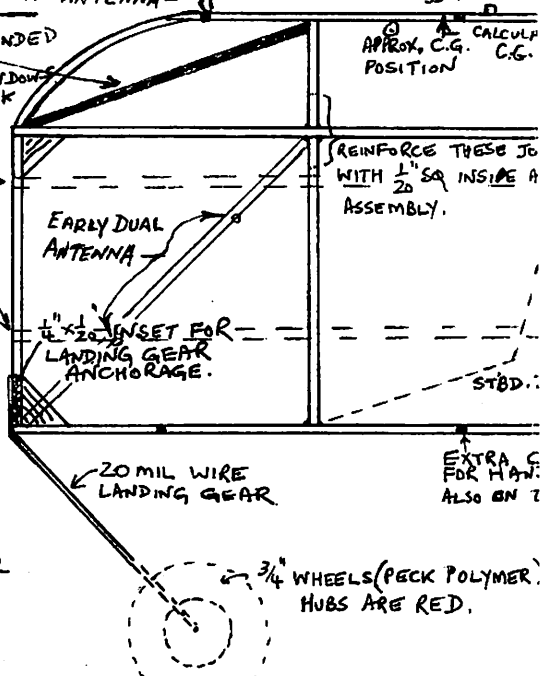






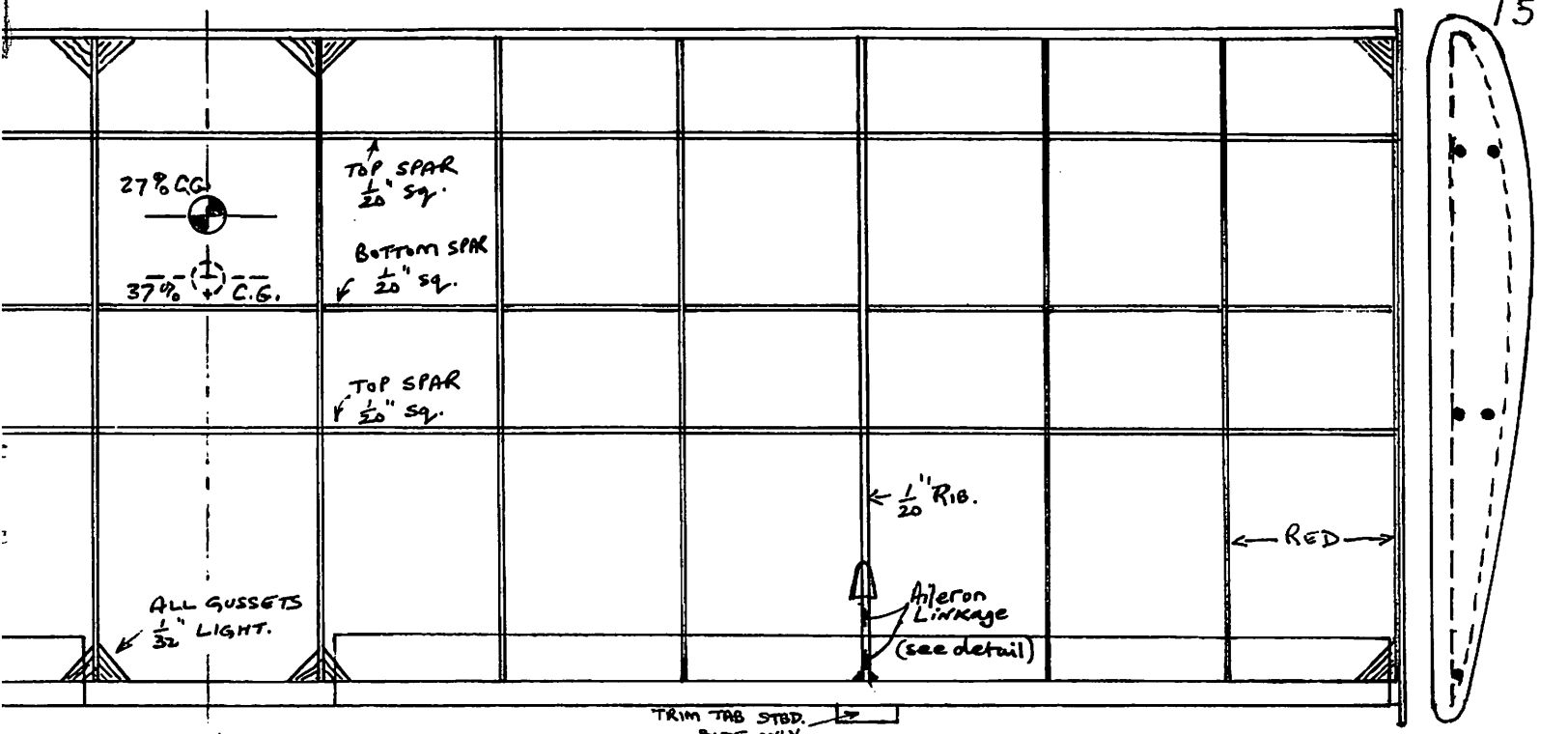






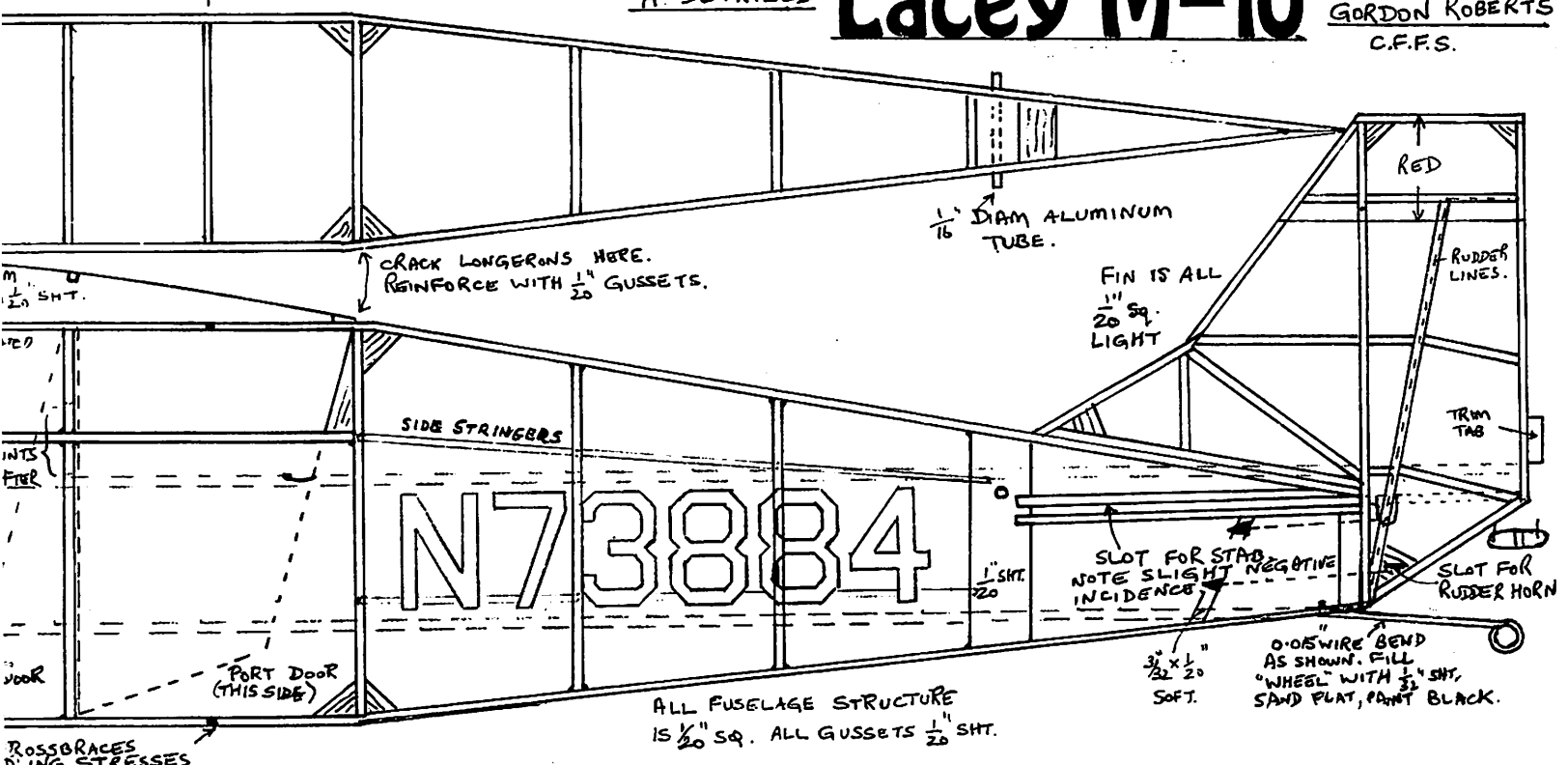
STEPS TO MAKE COWL.

1. CUT SOFT BLOCK CAREFULLY.
2. CUT OUT SIDE PLATES FROM MEDIUM 1/20" SHEET.
3. MARK BLOCK LINE ON INSIDE OF EACH PLATE.
4. GLUE BLOCK TO SIDE PLATES. BE CAREFUL WITH ALIGNMENT. REAR OF PLATES MUST BE ALIGNED TO MATE WITH REAR FUSELAGE.
5. GLUE ON TOP COWL PIECE (GRAIN ACROSS COWL)
6. SAND AWAY FRONT AND REAR OF BLOCK AS SHOWN.
7. GLUE ON NOSE FORMER (1/64" PLY).
8. CARVE AND SAND BOTTOM OF COWL TO SHAPE. SIDE PLATES WILL MELD INTO SHAPE FINALLY.
9. WHEN SATISFIED WITH EXTERNAL SHAPE, GRIND AWAY SOME WOOD INTERNALLY WITH DREMEL TOOL, LEAVE MORE WOOD AT NOSE.
10. WITH NAIL FILE TAKE OUT STEP FOR NOSEBLOCK TO FIT IN.
11. MAKE NOSEBLOCK TO FIT. DONT FORGET CHAMFER AT TOP.
12. GLUE FIRMLY TO REST OF FUSELAGE. IT SHOULD FIT!
13. GLUE ON CYLINDER HEADS AND VENTS. DONT FORGET CYLINDERS ARE OFFSET. PORT SIDE ONES A LITTLE AHE OF THE STARBOARD ONES.

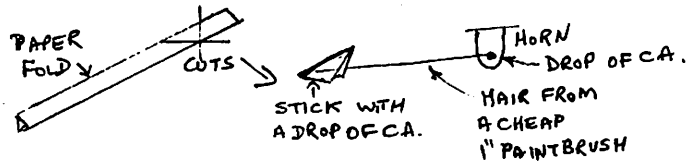


A DETAILED Lacey M-10

BY GORDON ROBERTS C.F.F.S.

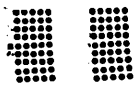


MAKING CONTROL CABLE FAIRINGS, TOP ONLY



PROPELLER 6" DIAM.

CUT FROM STANDARD BLANK 1" x 5/8". 1/16" UNDERCAMBER.
FIT YOUR FAVOURITE FREEWHEEL.
PROP. SHAFT 0.032" DIAM.
TRY A 20" LOOP OF 3/32" TAN II.



VENT PLATES. 45 HOLES EA.
CYLINDER HEADS ARE 1/16" SHT., SANDED AND PAINTED BLACK.

REGISTRATION LETTERS/NUMBERS

THESE ARE RED, NOT BLACK. THIS IS WHAT TO DO. BUY A PACK OF CHARTPAK DAF-8 SHEETS. GO TO KINKOS WITH YOUR BLACK REGISTRATION. MAKE 4 COPIES IN BLACK. CUT THESE OUT AND STICK ONTO ANOTHER SHEET OF PAPER, SO YOU HAVE 4 SETS OF BLACK MARKINGS ON ONE SHEET. ASK KINKOS TO PRINT THIS SHEET IN RED INSTEAD OF BLACK ON ONE OF YOUR SHEETS OF DAF-8. HEY PRESTO — YOU HAVE 4 SETS OF RED! GO TO IT!



(Photo: Air Progress 02/83)

this aircraft, N187LH, has now been modified to single engine configuration (with an 0290D engine) and has been fitted with Cessna 120 wings. (A future article will provide drawings and photographs of this machine).

CONSTRUCTION

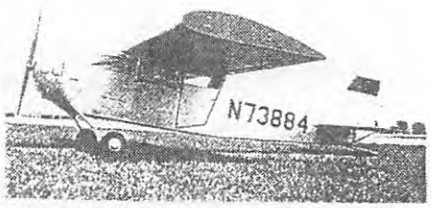
The wing is constructed round two wooden spars, each comprising of two pine beams of about 2" by 1" cross section, joined by a vertical 1/16" plywood web. The trailing edge is a routed pine beam of 1.5" by 1.44" maximum cross section. The leading edge is sheet metal covered only, there is no bracing apart from the ribs. The remainder of the wing is 1/16" plywood sheet back to the rear spar and the whole is fabric covered. The aileron leading edge is 1" by 1.125" pine, two 5" by 1/16" plywood sheets complete the structure. The wing section is a modified U.S.A-35-B, which appears to be very close to Clark Y when plotted at 1:12 scale. The wing is fixed to the fuselage by four 7/16" bolts which connect plates screwed to the wing spars with tubes welded to the fuselage upper longeron over the cabin. The wing mounting points form a square. When the bolts are released the wing may be jacked up above the fuselage, using an integral jacking point in the centre of the wing. Following a 90 degree rotation and lowering of the wing, the mounting plates form a convenient location for a steel cable restraint that passes through the mounting plates and under the fuselage to secure the wing in the towing position.

The tailplane, elevators, fin and rudder are constructed from welded steel tube of between 0.5" and 0.75" diameter. The whole is fabric covered. When fitted to the fuselage, the tailplane and fin are interbraced with steel tube struts. Course adjustment of the tailplane incidence for trimming is available by shimming the front mounting bolts with washers.

The tandem two seat fuselage is constructed of welded steel tube of between 0.5" and 0.825" diameter arranged conventionally as longerons, uprights and crosspieces. Doors are provided on each side of the fuselage for entry and egress, the right door being one panel forward of the left. The structure is diagonally braced on the surface and internally by welded steel tube. The main undercarriage leg is made from 1.25" carpenters steel to spec. 5-317 and tempered to 190,000 - 200,000 #/sq.in. after machining and bending. The tailwheel leg is constructed from similar stock of 0.75". The mainwheel struts are bent to an angle of 133 degrees at a radius of 3.5" giving an angle when fitted to the fuselage of 60 degrees to the horizontal fuselage datum, and 46 degrees to the vertical datum. The tailwheel strut exits the fuselage at 5 degrees to the horizontal datum. A 1/16" plywood hatch fairs the rear fuselage sides above the tailplane to give access to the tail and fin mounts and the flying controls. The sides of the first fuselage bay are covered with what appears to be a removable aluminium hatch, and apart from Perspex glazing, the rest of the fuselage is fabric covered. The engine is mounted on 0.625" welded steel tube struts and cowled with sheet aluminium. The front upper front part of the cowl is removable to give access to the engine for day-to-day maintenance.

A 20 gallon fuel tank is located behind the engine bulkhead, with a further tank under the top surface of the rear fuselage, about half way between the wing trailing edge and the tailplane leading edge. Total fuel capacity is 45 (I assume US) gallons.

The rudder pedals are conventional, and from the front cockpit only provide control for the toe-operated brakes. Tailwheel steering is via springs from the rudder control horn. The ailerons and elevators are connected to a control column mounted in the wing centre section. To facilitate wing rotation, the control column exits the wing underside near to the fuselage side at an angle of about thirty degrees to the vertical. Tail trim is by spring feel and is adjusted by a lever located on the port fuselage wall. Ground-adjustable 4" trim tabs are fitted to each flying surface.



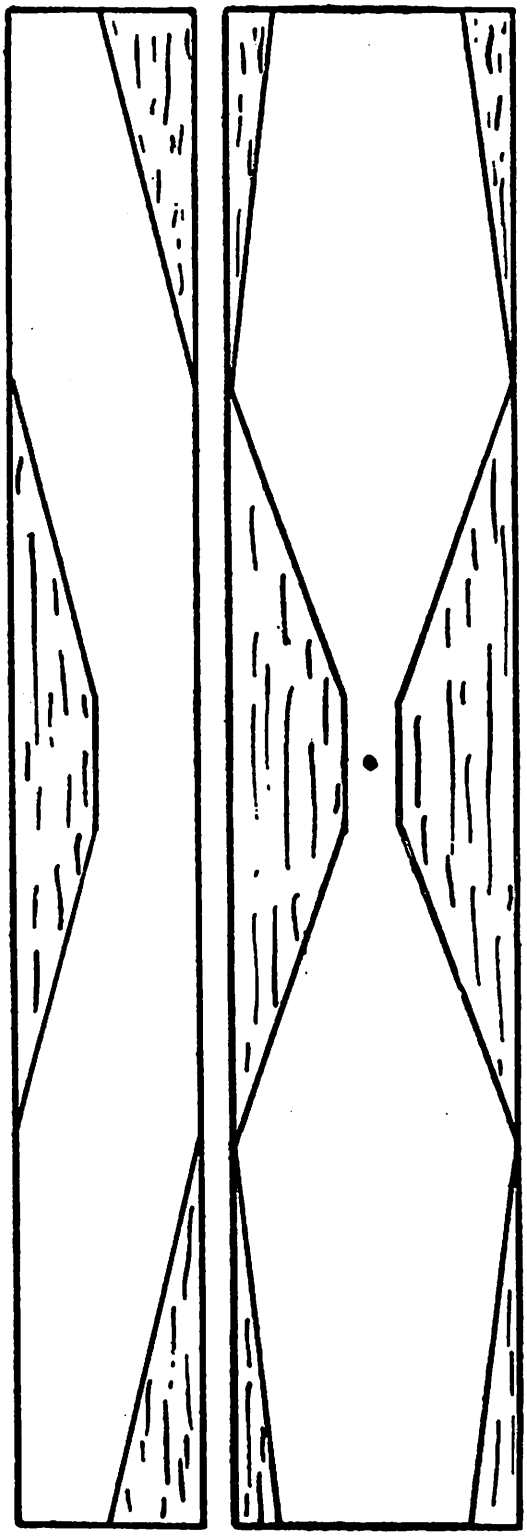
(Photo: Collect Air)

COLOURING

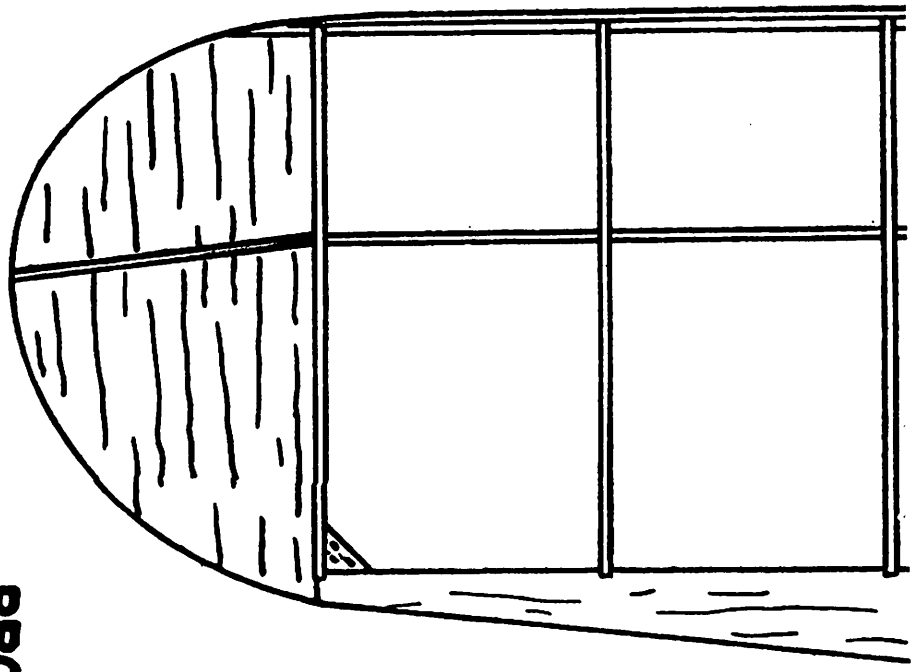
For its first year, the aircraft was doped silver with red 'N' letters, wing and empennage tips. The area above the cowl, in front of the cabin, was black and the propeller was silver front, black back and red tips. At some time the silver dope was overpainted white and red stripes appeared on the fuselage side, the red tips and letters remained. During the same period, the hatches at the rear sides of the engine cowling were removed to expose a plate with a rectangular array of holes (9 vertical and 5 horizontal) which appear to be an outlet for engine cooling air. In its final guise, the propeller was painted black and a red spinner added, the black area in front of the cabin remained. *AM*

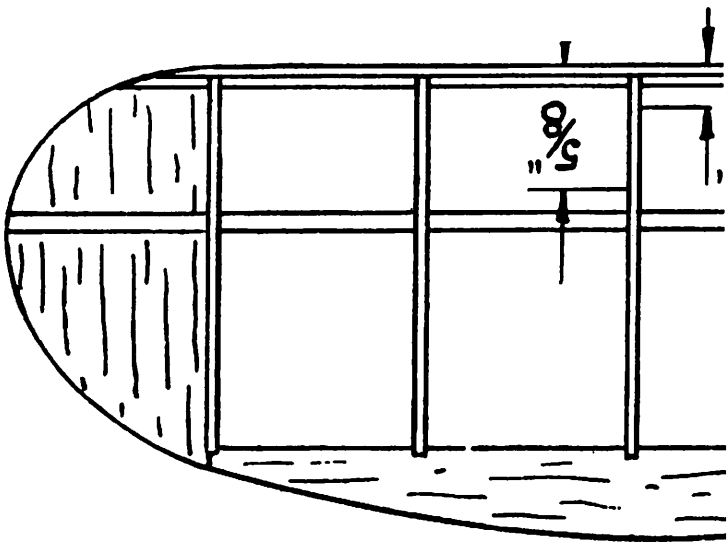
TECHNICAL DATA

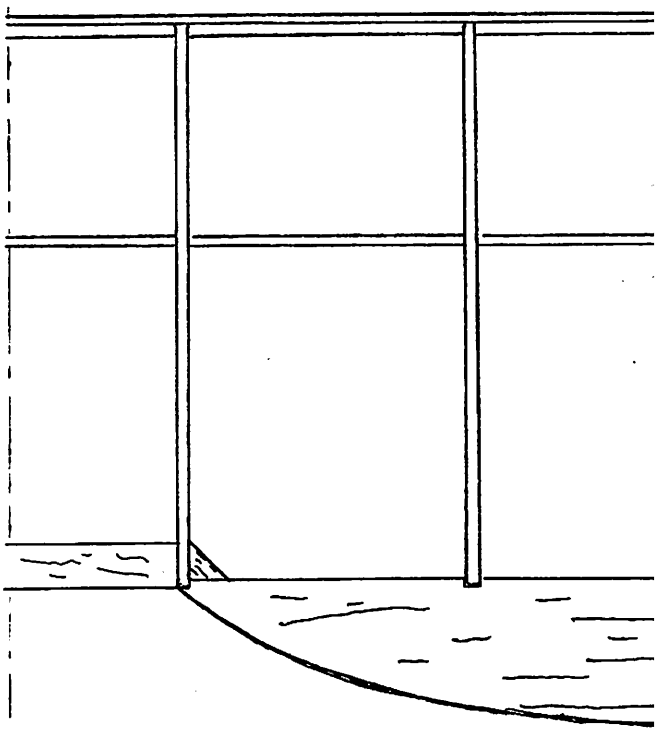
Span:	20 feet (6.10m)
Length:	20.75 feet (6.31m)
Height:	5.7 feet (1.74m) - wings normal 6.75 feet (2.06m) - wings in towing position
Wing chord:	5.5 feet ~~(1.98m)~~ 5.5' (167.64)
C of G range:	6.5 inches (0.165m)
Empty weight:	638 pounds (290kg)
Maximum weight:	1018 pounds (462kg)
Landing speed:	55 mph
Cruise speed:	115 mph

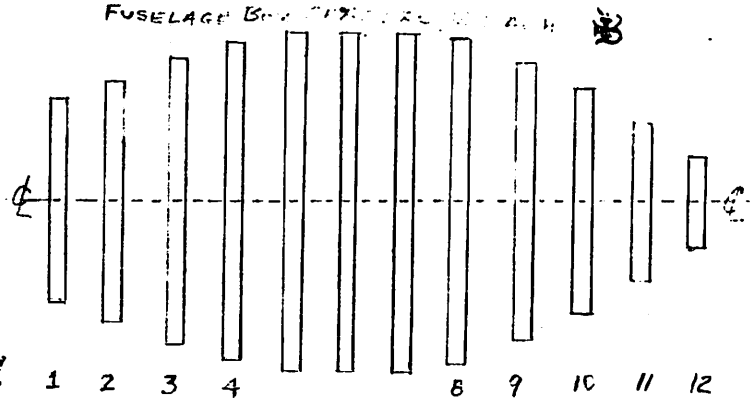


PROP BLOCK









21

Up to 25" Wingspan Endurance Models

Model	Span		Source	Number	Price	12/99
Peck Polymer Kits:						
F.A. Moth (O.T. Rubber)	24		Peck	PP031	11.85	
Pacific Ace	20		Peck	RN-SH004	12.95	
Black Bullet	20		Peck	RN-SH003	12.95	
Easy Built Kits:						
Skokie	24	Jimmie Allen	EZ Built	FF-12*	12.00	
Dart	24		EZ Built	EB-11	14.00	
Jr. Commercial	25		EZ Built	FF-5 *	10.00	
Miss Canada Jr.	25		EZ Built	FF-4	10.00	
Baby Commercial	24		EZ Built	FF30*	10.00	
Freshman	18		EZ Built	FF-86	8.00	
Baby Flea	24		EZ Built	FF-14	11.00	
Red Flash	15		EZ Built	FF-46	8.00	
Add $5.00 for shipping and handling.						
* recommended by the new owner of Easy Built Models - Dave Niezielski						
Penn Valley Hobby Center Kits:						
Blackhawk Jr.	24		Peerless	3120	18.95	
Jr. Endurance	18		Peerless	3145	14.50	
Bantam	25		Scientific	3205	18.95	
Fury	25		Scientific	3220	18.95	
Lightning	25		Scientific	3230	18.95	
Little Rebel - Endurance	25		Scientific	3235	18.95	
Major	25		Scientific	3240	18.95	
Ranger	25		Scientific	3243	18.95	
Raven	25		Scientific	3245	18.95	
Skyscraper - Endurance	25		Scientific	3250	18.95	
Windsor	25		Sciettific	3260	18.95	
Wizard	25		Scientific	3265	18.95	
Phantom Flash	16		Comet	1220 #A-1	9.95	
Swift	21		Megow	PVHC 2280	14.95	
Flying Cloud Jr.	25		Berkeley	OT208	13.04	
Hawklet (1940)	16	Cabin	Best by Test Model Co. - 11x17 rolled plan. - Edward Schlosser P.O. Box 412 Ridgefield, N.J. 07657-1418		$3.95 + $1.75 shipping	
The following are plans reproduced on Diazo process (blue or black line):						
Air Youth Fuselage Model	25		Comet Proj #4	AYA-4	4.50 Allen Hunt	
Bantam	25		Scientific	SC102 $4.00 Cirrus Av.	5.50 Allen Hunt	
Dipper (1932)	25		Comet	CS324	4.50 Allen Hunt	
Thunderbolt	24		Jimmie Allen	CS366	4.50 Allen Hunt	
F.A Kaydet	20		Limber	CS294	4.50 Allen Hunt	
F.A. Moth	24			CS196	4.50 Allen Hunt	
Major	25		Scientific	CS115	5.50 Allen Hunt	
Ranger X	25		Scientific	SC121	5.50 AllenHunt	
Royal (1944)	25		Scientific	SC122	5.50 Allen Hunt	
Sky Ranger (1938)	20			CS240	4.50 Allen Hunt	
Valkyrie (1937) X	24		Comet	SC126 (CS 278)	5.50 Allen Hunt	
Windsor	25		Scientific	CS276	5.50 Allen Hunt	
Flying Yankee (1939)	20			SC111	5.50 Allen Hunt	
Blue Phantom (1941)	24			SC104	5.50 Allen Hunt	
Skipper	24			CS290	5.50 Allen Hunt	
Achilles (revised)	24		SAMS	G801	£11.50 Sterling	
Pacific Ace	20	Kit	FAI Model Supply	$13.75 + $5.00 Shipping less than $50 order + 10% > $50 order		
Black Bullet	20	Kit	FAI Model Supply	$13.75 + $5.00 Shipping less than $50 order + 10% > $50 order		
Flying Aces Moth	24	Kit	FAI Model Supply	$11.85 + $5.00 Shipping less than $50 order + 10% > $50 order		
Erie Times	24	Plan	Lin Reichel @ Erie Flying Aces GHQ		$3.00	
Jimmie Allen Plans and Laser Cut Parts:				Bob Holman P.O. Box 741 San Bernardino, CA , 92402		
Blue Flash (1933)	24	Prop 10"		Plan $8.00, Parts $12.00 + $4.00 postage		
Thunderbolt (1934)	24	Prop 10"		Plan $8.00, Parts $15,00 + $4.00 postage		

Flying Aces Magazine Source: (From the Russ Brown Archives)
If you really have to have one of these send Russ Brown $100.00 for each copy.

Sesqui-Scot 3/43	23	Scotty Mayors - Staggerwing biplane	
G-Whiz 7/43	13-1/8"	L.Bucalo	Parasol Class A Cabin, diamond fuse., wire mount, twin fin.
Single Pusher 7/43	9	W.R.Nielson	Canard; Tubular fuse.
Sky-Gull 7/43	12-5/8	Dick Hill	All sheet, gull wing profile
Explorer 2/41	23	Dom. Antonelli	Outdoor Commercial parasol stick
Swifty 1/41	22	Albert Lewis	All sheet, pylon, tube fuse, twin fins
Thermal Chaser 10/40	22	Gil Shurman	Midwing cabin
Mosquite Sportster 6/40	18	Ernest Copeland	Sheet tube fuselage
Baby Sportster 9/39	21	Sid Struhl	Parasol c/cockpit
Parlor Fly 10/37	12	Alger Orthof	
F.A.. ROG Dart 2/37	24	Sheet box fuse, single covered wing, sheet wing & tail	

Mickey Mouse Flying Airplane 16-1/2		Ideal A.R.F. .75 or .100 c/2 Rub. Motors	

Air Trails Source: (From the Russ Brown Archives)
(See above note regarding copies of plans.)

Zephyr 11/36	24-1/2	Bill Barnes	Air Trails Outdoor or Indoor Cabin
Commando 1943 Annual	19-1/2	Louis Garami	all sheet wood
Cadet 1943 Annual	15-1/4	Louis Garami	all sheet wood, solid stick fuselage
Snuffy /1944	16	Dick Obarski	Box/triangle fuselage, twin fins. Republished by Hangar Pilot #286 as a Pistacio
Spunky 9/45	18-1/4	Louis Garami	Sheet fuselage and tail
Indoor Autogyro 4/44	12 (15" dia. rotor)	Ralph Brown	Mic. Covered mid stick rotor
Duplex 1/45	18	H.A. Thomas	Monoplane or Bipe, sheet fuse and fin

Allen Hunt: Box 726, Dunbar WV 25064-0726 Min order $5.00 prepaid Add 25% for S.&H. (15% if over $50) no C.O.D. (X = NO PRINTWOOD PATTERNS)

Peck Polymers: P.O. Box 710399 Santee CA 920720-0399 Phone (619) 448-1818

SAMS The Chapel. Buntingford, Herts.. SG9 OQJ, England (Catalog $8.00 U.S. in 1998)

Easy Built Models 1851 Dutch Rd. Fairview PA 16415 phone (814) 474-9110

Bob Holman Box 741 San Bernardino CA 92402 - Information on kits and plans O.T. Rubber models.

Penn Valley Hobby Center 837 W. Main St. Lansdale PA 19446 (215) 855-1268 or 368-0770

Edward Schlosser P.O. Box 412 Ridgefield NJ 07657 **Unheard of** '34-'39 Rubber powered models. Send $2 for descriptive sheets.

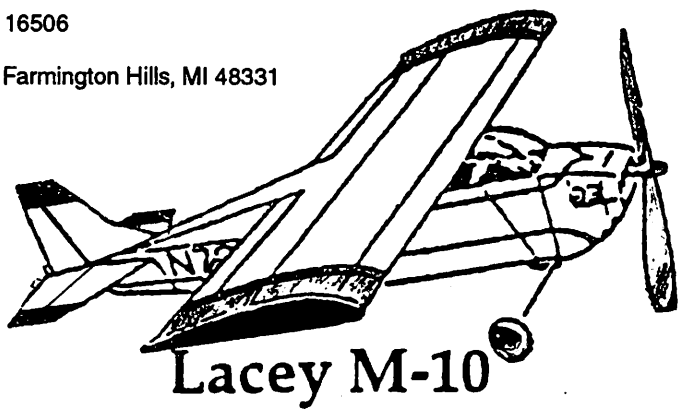
Jim O'Reilly's Model Plans 4760 N. Battin, Wichita KS 67220 (316)744-0856. $2 Illustrated catalog (34 O.T. plans CAD drawings).

Cirrus Aviation Ltd. P.O. Box 7093, Depot 4 Victoria, BC V9B4Z2 Canada Catalog $2. Plans - O.T. rubber.

R/N kits: FAI Model Supply P.O. Box 366 Sayre PA 18840-0366 catalog $2. (570)882-9873 Phone or FAX.

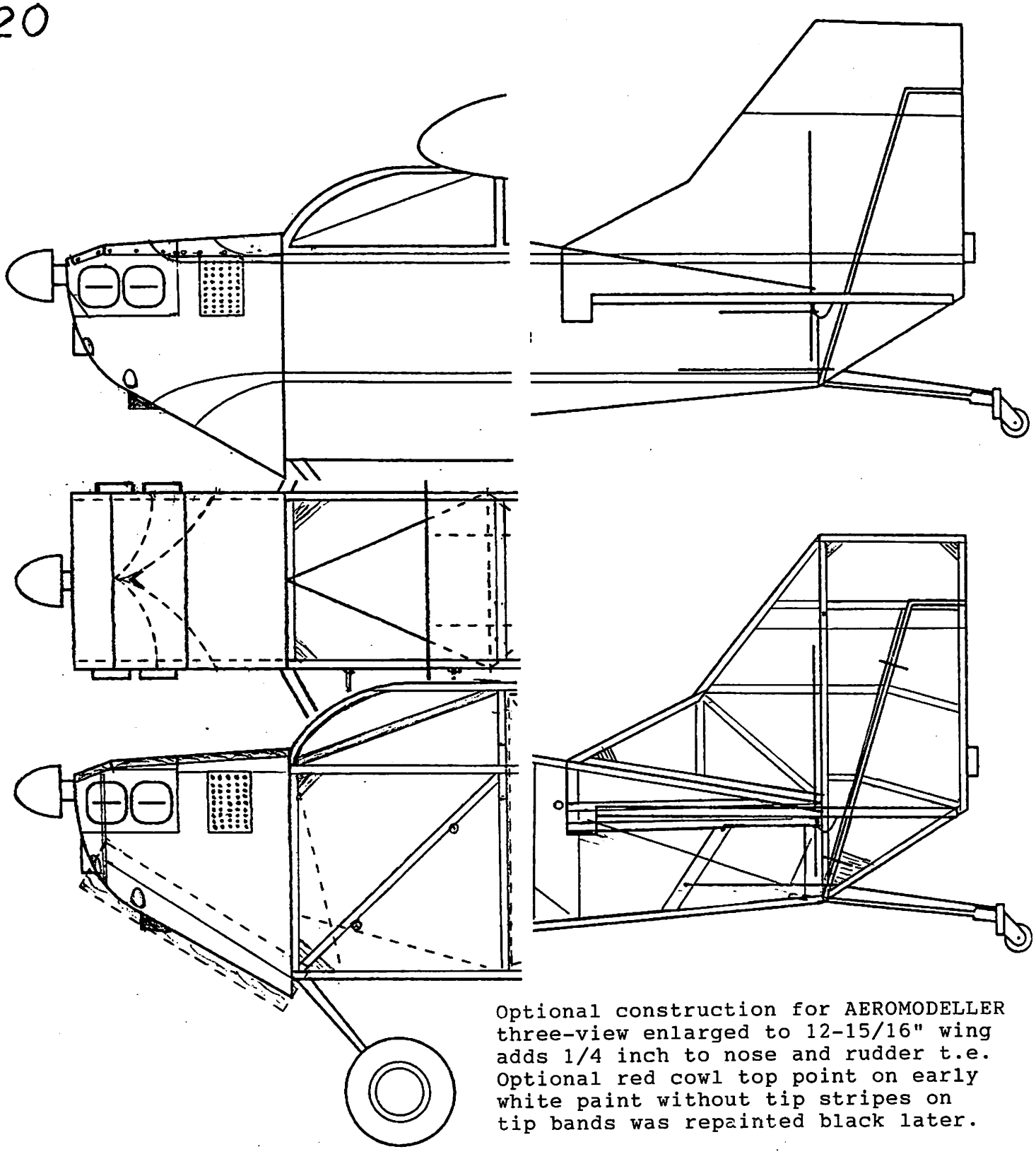
FAC GHQ - Lin Reichel 3301 Cindy Lane Erie, PA. 16506

Campbell Model Supply Company: 37742 Carson Farmington Hills, MI 48331

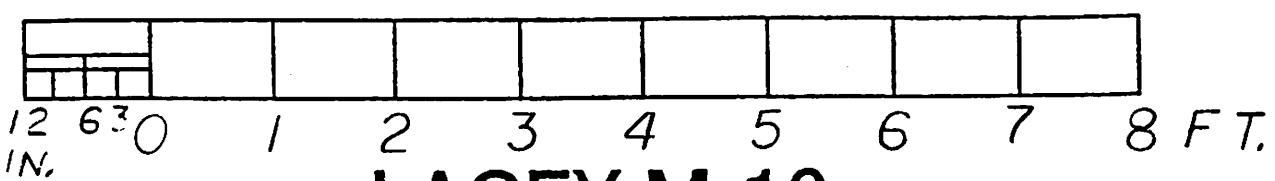


CROSSWINDS AERO CALENDAR CONTINUEI

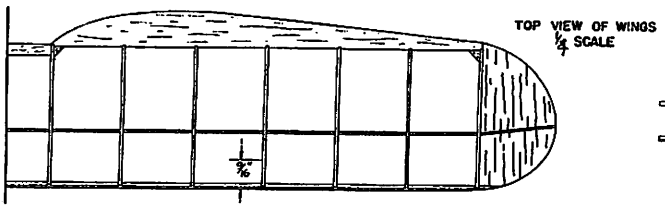
Wednesdays	SAM 39 Old Timer Flying Gas, Elect., or Rubber FF or R/C at Shelby, OH Airport, Rt. 96 and Schroeder's Farm 2 week cycle. at Airport: May 3, June 7, July 5, Aug 2 and Sept 6. at Farm Rt. 61, 3 mi S. of 224 on 5/17, 6/4, 7/19,8/23,9/20. June 17-18 at Sturgis,MI; June 21-22 at Ft. Wayne,IN. August 16-17 at La Salle,MI.
Oct 8-13	SAM Champs at Pensacola,FL.
July 20-21	FUNK Fly-In at Coffeyville,KS. BYO FUNK or drive. Drat! #@$%¢&*# Same dates as FAC NAT'S at Geneseo,NY. The draft for Genny draws East of Miss Issippi ' Nes Paw? See youall there at judges bench and on the clock. If I get there first, I'll chalk a blue cross. If you get there first, you rub it out. Haw-aw-w-w-w-w! FUNK hat will be there too.

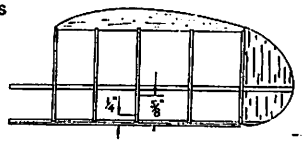


Optional construction for AEROMODELLER three-view enlarged to 12-15/16" wing adds 1/4 inch to nose and rudder t.e. Optional red cowl top point on early white paint without tip stripes on tip bands was repainted black later.



LACEY M-10







CROSSWINDS
Russ Brown
4909 N. Sedgewick
Lyndhurst, OH 44124

FLAT HATIN' ON THE "SESQUI-SCOT"

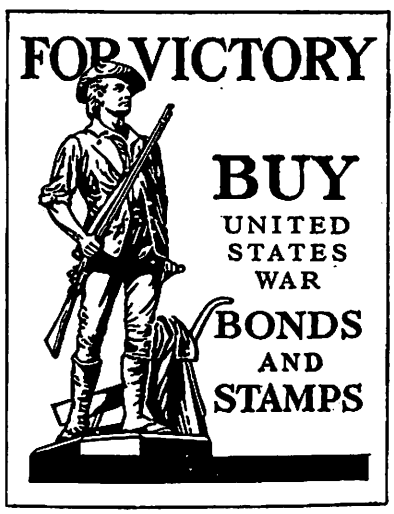
CROSSWINDS breaks into the 25" max Old Timers with the charismatic 23 inch wingspan "Sesqui-Scot" by Scotty Mayors in the good book FLYING ACES March, 1943. This baby Beech negative staggered biplane has two wings with enough curves to look twice. Eat your heart out Lacy pilot! The undercamber ribs serve to remind us our world is not flat.

Use light plan thickness wood at the trailing edges of both wings. You may fancy turning the Red Baron loose to hole out the flap parts, or allow the dreaded hoop chewing termites to munch balsa doughnuts. Scotty adjusted the wings trailing edge flaps for flying trim. Uniform flap angles with built in washout at tip and root ends can be pre set by gluing on the trailing edges with the wings inverted, nose up high to a flat t.e. The lower wing rigging might be set at plus 1/2 to 3/4 degree or .010 to .013 inches per inch of chord to allow for down wash from the top wing. Add wood at the fuselage rear to mount a tail motor tube in place of the hook. Increase the stab. slot thickness about 1/16" if you want to adjust the stab trim. Or build in a pop up stab dethermalizer and adjust that for glide trim. If you don't want to notch the fin, a pop up wing D/T could be made with the wing struts not glued to the top wing. This might fly good, as well as look good with good FAI Tan rubber. A stab outer ends pivot D/T like Jack McGillivray did on the dH. Sea Hornet twin engine model will look best.

Scotty's favorite bundle of No. 12 music wire gage is .029 inch diameter.

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11. Catapult Glider
12. W. W. I Dogfight
13. W.W. II Combat
14. ***And introducing Electric No-Cal ***

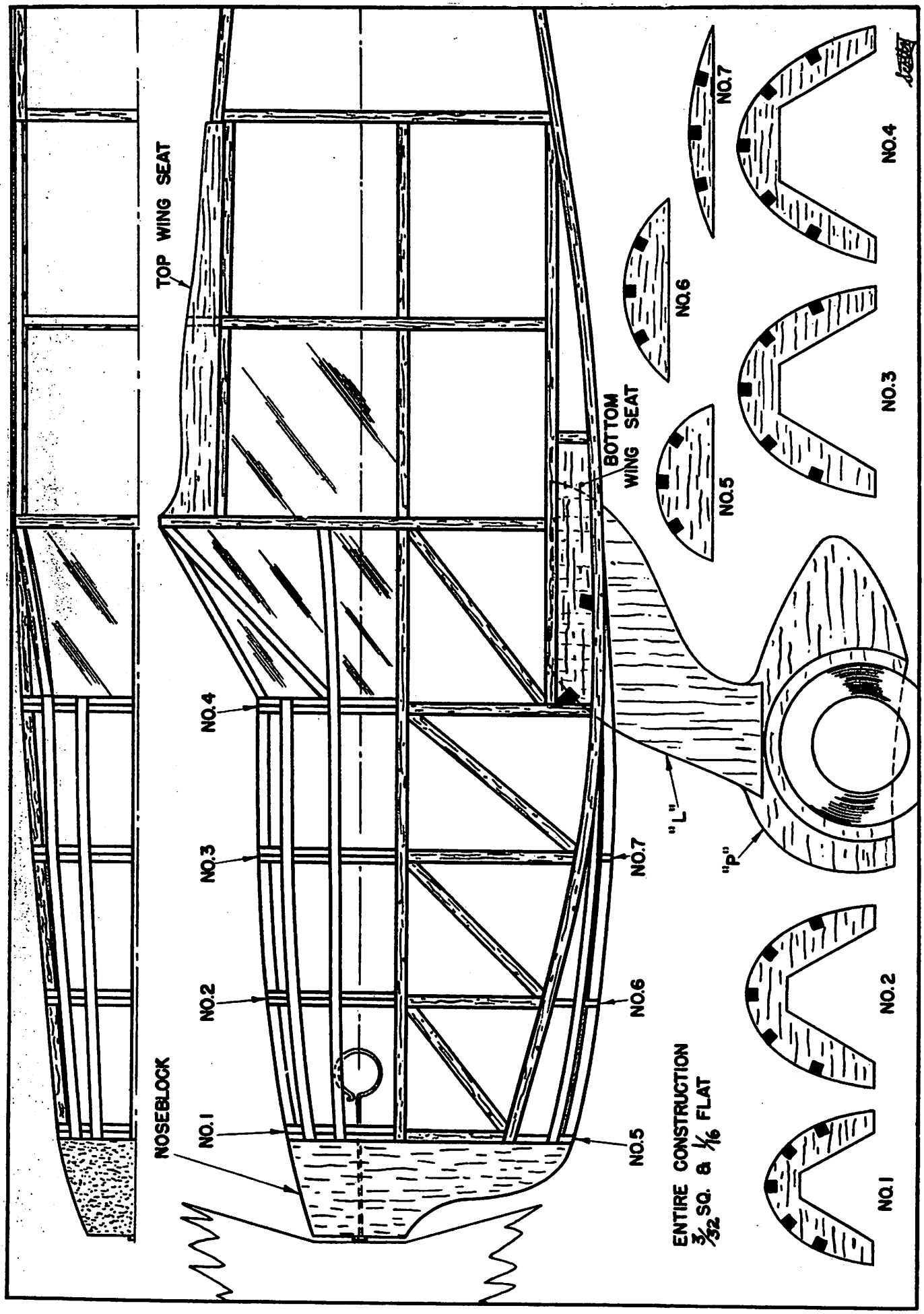


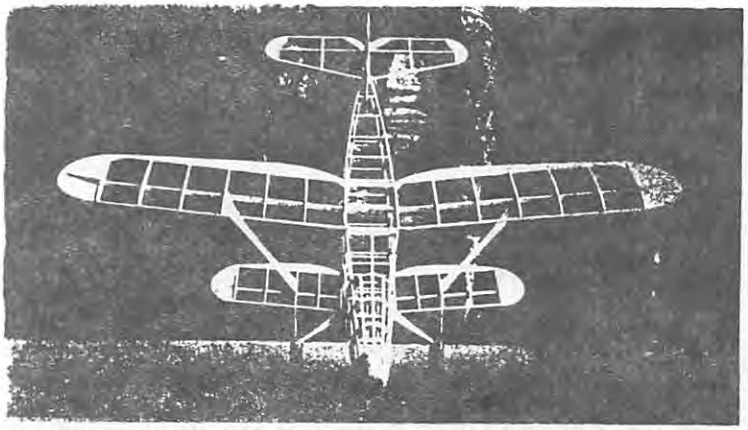
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Entry Fee $10.00 for one or all events. Juniors free. A.M.A. license required. Contestants please register with the C.D. by 1 June so you can gain admittance to the field.

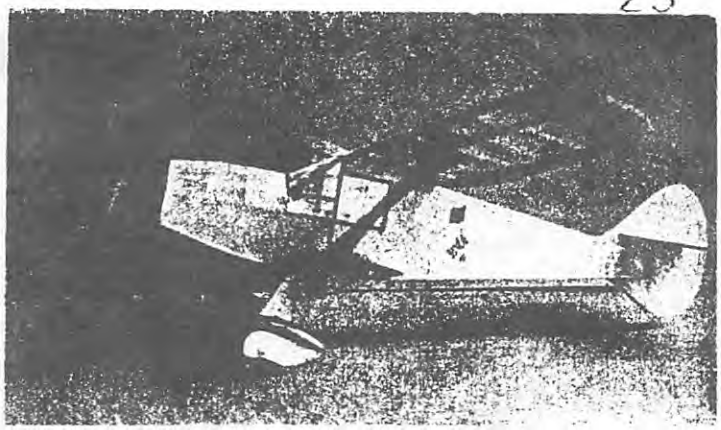
C.D. Frank Scott
6633 LeFevre Rd
Casstown Ohio
45312

"SESQUI-SCOT" CONSTRUCTION PLANS—Plate 1





Simple and rugged construction is the keynote of the "Sesqui-Scot."



Featuring Beechcraft characteristics, the craft is an able flyer.

Fly the "Sesqui-Scot"

By "Scotty" Mayors

GRACEFUL OF LINE, trim of setting, and unique in arrangement, the Sesqui-Scot is presented for this month's model project. Few models, and probably fewer actual airplanes, have been built using the negative staggered sesqui-plane line up, so you are assured of having an unusual flying model with dependable performance. The wing structure is light, yet strong, allowing a minimum of external bracing. The bottom stub wing carries the landing gear quite compactly. It is also far enough below the top wing to nullify the bad effects of "biplane interference."

Simplicity is the keynote. Each part of the model has been designed to fit its component part, so that alignment of all surfaces is a fairly easy matter. With the exception of the nose block and prop, 1/16" flat and 3/32" square wood has been used throughout.

Fuselage and Wings

THE FUSELAGE is built in the orthodox manner, using 3/32" sq. longerons, uprights, and crosspieces, as shown by the speckled appearance of the wood in the side and top view. Two identical sides are built and joined by lower and upper cross braces to form a box-like structure.

Cut the formers from 1/16" flat. Notch as shown by black spaces. Formers Number 1 through 4 are made doubly strong by using two pieces of 1/16" flat cross grained. Glue the formers on to the box-like structure as noted, chacking their alignment carefully. Glue on the stringers, fitting them in notches provided.

A seat for the bottom wing is provided by cutting from 1/16" flat, 2 pieces as noted. Notch, then glue in position. The seat for the top wing is cut in the same manner. A brace, cut from the same stock, is glued between the two pieces. To form the windshield, glue 3/32" sq. pieces from the top of the upright at the front of the top wing seat to former Number 4.

Two pieces of 1/16" flat cross-grained are fitted between the next to the last upright to form the rear hook plug. Apply glue around this plug and the members to which it is attached. The rear hook is now formed from Number 12 wire and imbedded in the plug. Here, again, a generous application of glue is made. Sand the structure lightly with fine sandpaper.

Little need be said about the tail surfaces as they are built as shown, from 3/32" sq. and 1/16" flat. Note the direction of the grain. Sandpaper the leading and trailing edges of both rudder and stabilizer to a half rounded cross section. Remove rough spots on the wood which might interfere with the covering. A tail skid of Number 12 wire is cemented to the rudder.

The landing gear may now be constructed. Cut 2 pieces marked "L" from 1/16" flat and 4 pieces marked "P" from 1/16" flat. Remove the center from two of the pieces marked "P". Now glue a cut out piece "P" to a solid piece "P" one left and one right. The side view shows this assembly as a right-handed member, so be guided by this. After the glue has joined these pieces, cut away the wood on the cut out piece "P" to allow insertion of the landing gear leg "L". Glue this piece in position so that it is flush with the inner wall of each of the half pants, as they might be called. Then sand the unit to a smooth contour, and put aside for final assembly.

Fourteen ribs for the top wing are cut and notched from 1/16" flat. For the same material, cut two trailing edge pieces, notched to allow insertion of the ribs. As the trailing edge is shown in full size, it is possible to use this as a guide for rib spacing by marking the spar, which is 1/16" by 3/16", and the leading edge, which is 3/32" sq., in a similar manner. Construct the top wing in one piece, then crack the spar and leading edge at the center section ribs to form the dihedral angle. The tips are cut from 1/16" flat.

The bottom wing is built in two panels. Use the trailing edge as a guide in the same fashion as was done with the top wing. The spar is 3/32" sq., as is the leading edge. Allow the spar and leading edge on each panel to project about 15/16" beyond the root rib to permit easy alignment in the wing seat, and be sure to make a left and right panel. The tips, in two pieces are cut from 1/16" flat.

Sandpaper the leading edge to follow the shape of the ribs in smooth contour. The trailing edges and tips may be sanded to a thin edge. The entire wing structure is gone over lightly with fine sandpaper to remove rough spots.

A block ¾" by 1¼" by 2¼" is used to carve the nose to shape. It resembles the nose of an in-line inverted engine, and should be smoothly sanded to conform to the contour of the front of the fuselage. A hole is drilled through the block and an eyelet or washer, or a piece of tubing is glued or inserted to form a bearing for the prop shaft. In order that the nose block stay fastened to the fuselage, a plug built up of 3/32" sq. balsa is cut and fitted to conform to the dimensions of the rectangular opening between formers 1 and 5.

Covering and Assembly

A PROPELLER is carved from a block measuring 8" by 1½" by 1". Cup the blades slightly, round off the corners and dope heavily, sanding between each coat of dope. About 3 coats of dope will suffice. A proven free-wheeling device should be incorporated.

Covering the model is the next procedure. The original is covered using the following scheme: Wings and stabilizer, yellow tissue, fuselage, rudder and struts, light blue tissue, noseblock, pants and cabin outline, red dope.

Large panels of paper are doped to the fuselage, using banana oil or heavy dope as an adhesive. Tail surfaces and wings are covered in a similar manner. To preserve the curvature of the bottom of the top wing, it is advisable to dope the paper to each rib and spar. Spray with water to tighten the paper. Then apply two coats of thin dope. Cover the cabin with cellophane.

The wing struts are cut from 1/16" flat and sanded smooth, after which they are covered with blue tissue.

(Continued on page 77)

21

SESQUI-SCOT

(Continued from page 49)

The landing gear legs are also covered with blue tissue, as are the braces marked "B," which are cut from 1/16" flat.

Assembly is simple. Glue the rudder to the rear of the fuselage, removing the tissue where necessary, so that wood is glued to wood. The stabilizer is glued in the rudder in the space provided. Check the alignment carefully.

The top wing is glued to the wing seat provided. Incidence is automatically set, due to the wing seat.

Glue the left, right, and bottom wing panels in the seat provided. The dihedral angle of 11/16" can be set by propping the tips up with blocks or books, or by using the wing strut as a spacer. When correctly aligned, there should be a small gap between the root rib and the fuselage at the leading edge. This may be covered or left as is. Final alignment of the wings is accomplished by glueing the wing struts in place. On the one-half scale view of the wings will be found the points of attachment of the struts with the pertinent dimensions.

The landing gear is glued to the bottom of the third rib of the bottom wing, ¼" from the leading edge. Glue the braces marked "B" to the bottom of the landing gear leg "L" where it joins the pant piece "P" and to the edge of the fuselage just at the front of the bottom wing seat. Now run a length of Number 12 wire through the pant, then through a 1¼" wheel; bend at right angles until it meets the brace "B", run it up brace, through the bottom of the fuselage and down the opposite side in the same manner. An abundance of glue at all points of contact with the wood is advisable.

A shaft of Number 12 wire is run through the prop, then through the noseblock, and bent in a circle to take the rubber strands. Connect 6 strands of ⅛" rubber between this shaft and the rear hook, allowing for a small amount of slack. Two extra strands may have to be used, depending upon the finished weight of your model. Three or 4 washers will prevent friction.

Glide the Sesqui-Scot before flying under power. It has quite a long glide and should land tail high. Short power flights should be tried before a long flight. The model should climb steadily and float nicely after the power is exhausted.

Control of turning can be acquired by working slightly the trailing edges of the top wing. Movement about the lateral axes (stalling and diving), can be cured by a wee bit downthrust and sidethrust. Do not use weights of any kind. The original flew well with little adjustment, and as the prop run exceeds 30 seconds (winder-wound) assurance of nice flights are yours.

BILL OF MATERIALS

10 strips 3/32" sq. by 36" balsa
3 sheets 1/16" by 2" by 36" balsa
1 block ¾" by 1¼" by 2¼" balsa
1 block 1" by 1½" by 8" balsa
1 pair 1¼" diameter hardwood wheels
Number 12 wire, eyelets, washers, cellophane, colored tissue, glue, dope and rubber.

END

The Twin-Bug Lacey M-10C

By George E. Goodhead, Jr., EAA 3603
P.O. Box 15852, Tulsa, Okla.

THE FIRST twin-engine Volkswagen-powered aircraft in the world, plus a swivel wing and sleeping space for two people, has been combined into a single airplane by Joseph Lacey and R. G. Huggins, both of Tulsa, Okla.

Construction of the "Twin Bug", as it is known around Tulsa, started in November of 1967. The ship was completed and first flown on May 29, 1968, six months and five days from start to finish.

After building the single-engine Lacey M-10, powered with the Continental C-90 and which has attended the annual EAA Convention for several years, Joe had received over 1,200 letters from interested builders all over the world in regard to his design. From these letters, he learned that many could not afford the powerplant which alone cost around a thousand dollars.

It was then that Joe and Bob Huggins got together and decided to build the twin-engine version of the M-10. Knowing that one Volkswagen engine would not do the job, they thought that possibly two of them could. They still wanted an airplane that could be towed behind a car, stored in a garage, light in weight, inexpensive to build, and capable of sleeping two. The sleeping arrangement was decided upon originally, due to the fact that Joe likes to attend the annual Convention each year at Rockford. Since accomodations at Rockford become overtaxed, many of the pilots choose to sleep on the ground next to their airplanes. Joe doesn't like to sleep on the ground, hence the "flying camper" aspect of the M-10C.

The "Twin Bug" has dual overhead control sticks, as were in the first ship. It has an empty weight of 740 lbs. against a gross of 1,140 lbs. The wing span is 20 ft., and overall length is exactly the same. Cruising at 100 mph, it will burn off fuel for both engines at the rate of seven gallons per hour.

The engines were converted by R. G. Huggins, who has since retired from Volkswagen development work.

For towing, four bolts are removed where the wing fastens to the fuselage. A jack is placed inside, the wing is raised four inches, and then the wing is swiveled to a position parallel with the fuselage and let down.



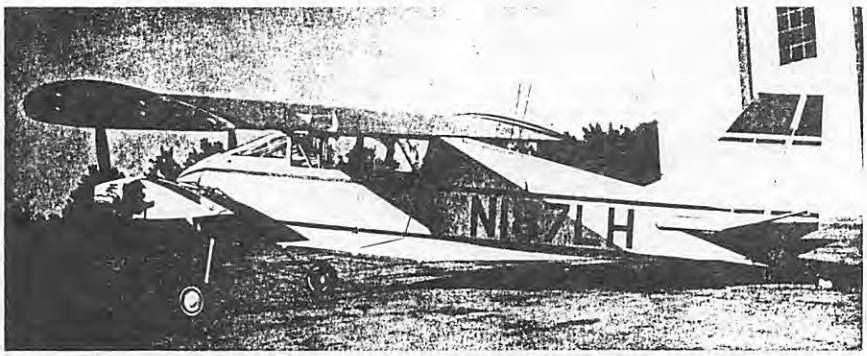
(George Goodhead, Jr. Photo)

The "Twin Bug" even has a bug-like appearance when viewed from the front. The full cantilever wing employs full span ailerons and tip plates.

The instruments are the standard flight display, including a $1.00 hardware store compass, and tachometer, oil and manifold pressure gauges for each engine. The 19 gal. fuel supply is checked by watching transparent fuel lines. Both fuel tanks are made from fiberglas, and the wood propellers were carved by Ray Hegy of Marfa, Texas.

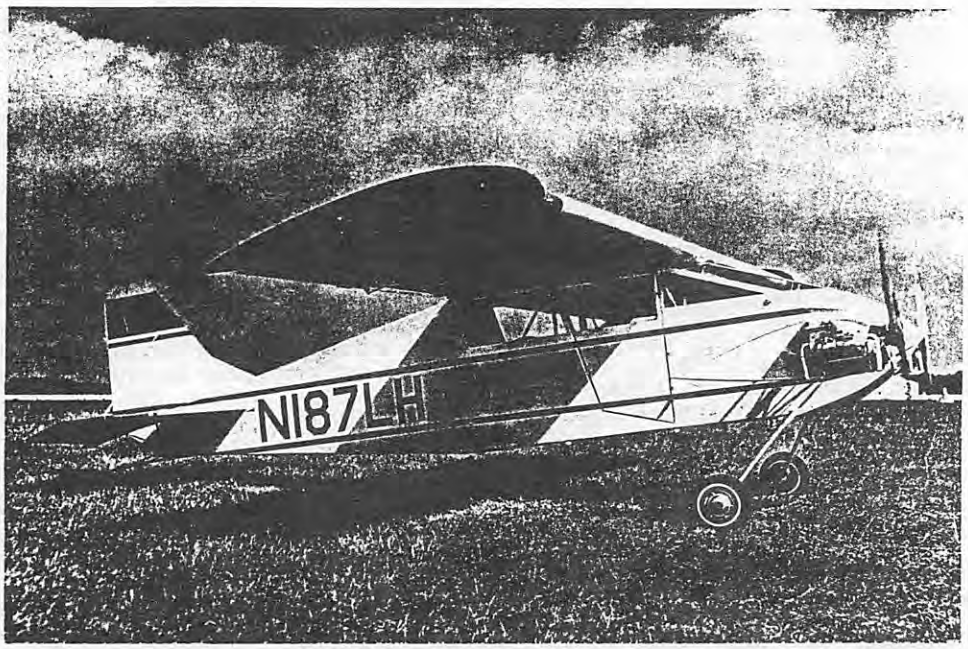
The only problem that turned up in the flight testing was the overheating of one engine. In checking, it was found that one of the air-cooled auto engines had more cooling surface than the other. This overheating problem was soon solved with some minor modifications.

The "Twin Bug" has proved to be a success. Additional details on the design are available from Joseph Lacey, 7720 E. 25th Place, Tulsa, Okla.

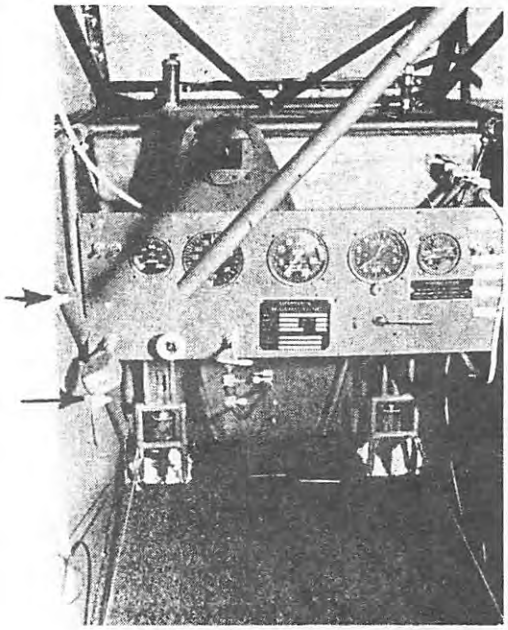


(George Goodhead, Jr. Photo)

The rear seat is accessible through a door on the left side; the front seat through a door on the right.



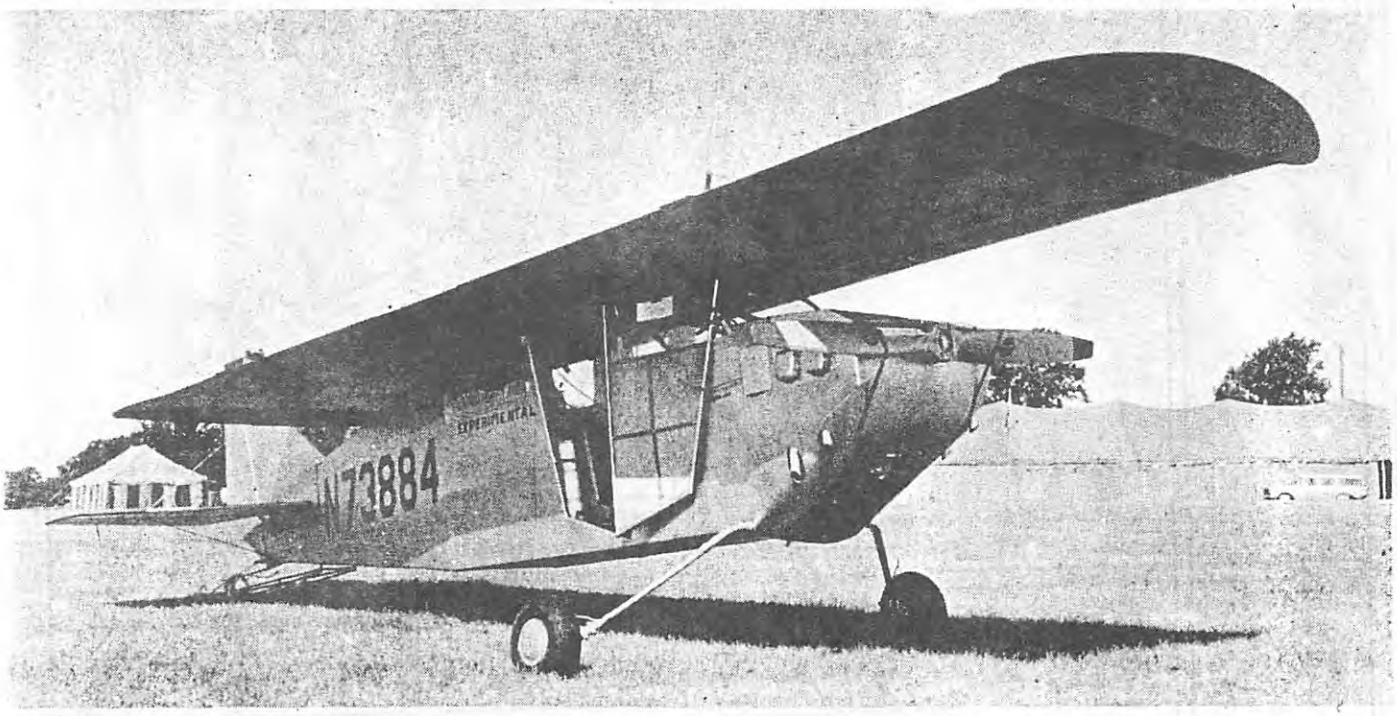
Lacey M-10C "Twin Bug" (Jim McDonnell Photo)



Horizontal antennae are mounted behind left 45° frame tube.



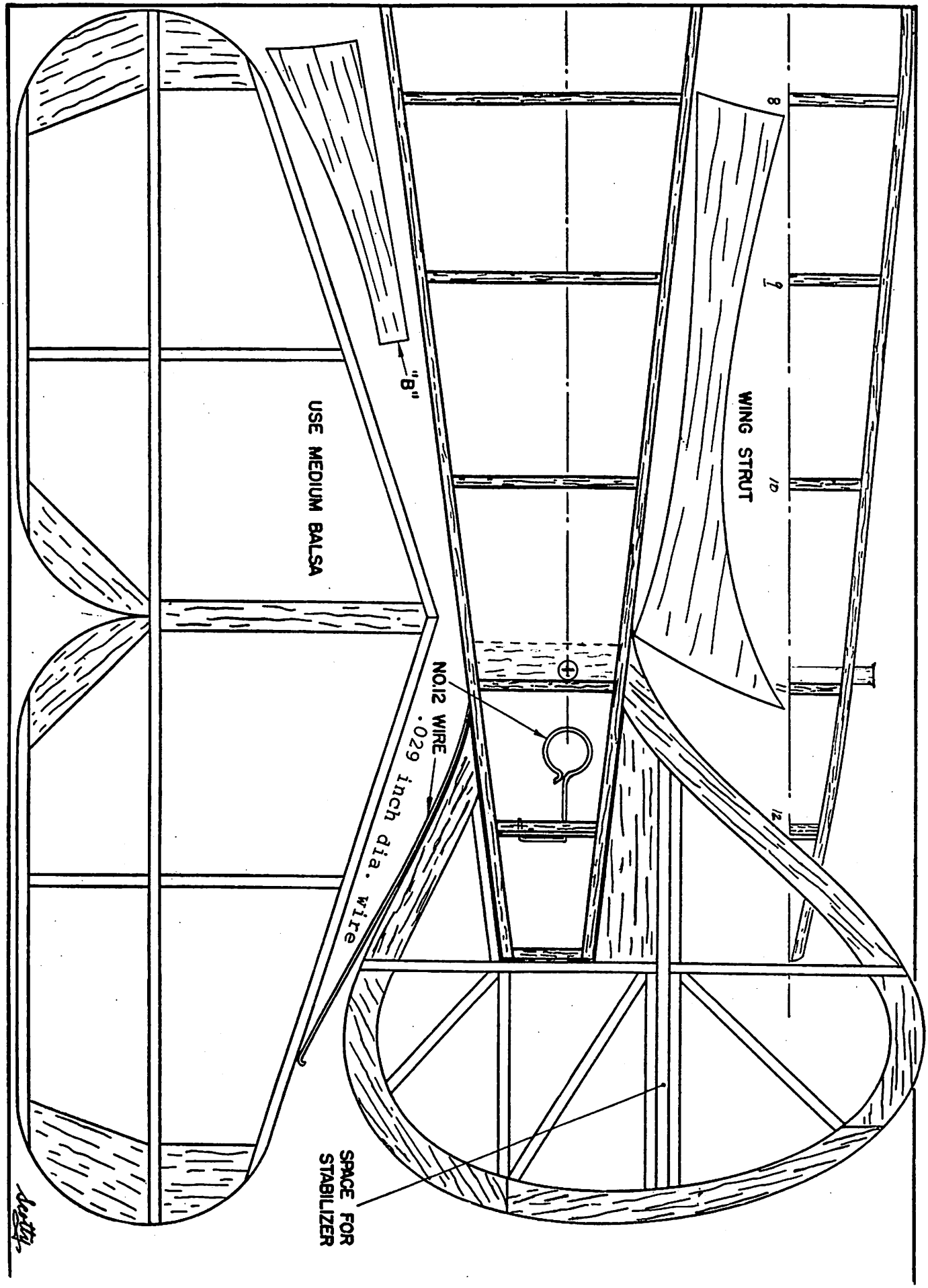
N73884: Lacey M-10 took a Consolation Prize in the Design Competition. Built by Joseph Lacey, 46, Manager of Aviation, Sinclair Refining, Tulsa, Okla., this tandem 2-seater is original design. Portability is made possible by pivoting the wing upon a center point in the cockpit, a 1-man operation requiring about 20-minutes. Wing is all-wood; fuselage and tail fabric covered steel tube. Cantilever wing has 66-in chord and full span ailerons. Gear is Lacey-designed full cantilever using individual solid steel legs. Engine 95-hp Continental C-90, empty weight 618-lb; gross weight 1,018-lb; cruise speed 115-mph; landing speed 55-mph; climb 1,000-ft/min plus. Design started 1958; first flight July 6, 1962. Joe reports ship is horizontally and laterally stable; will not stall power-off Base paint coat is aluminum, with number and tip bands in red.

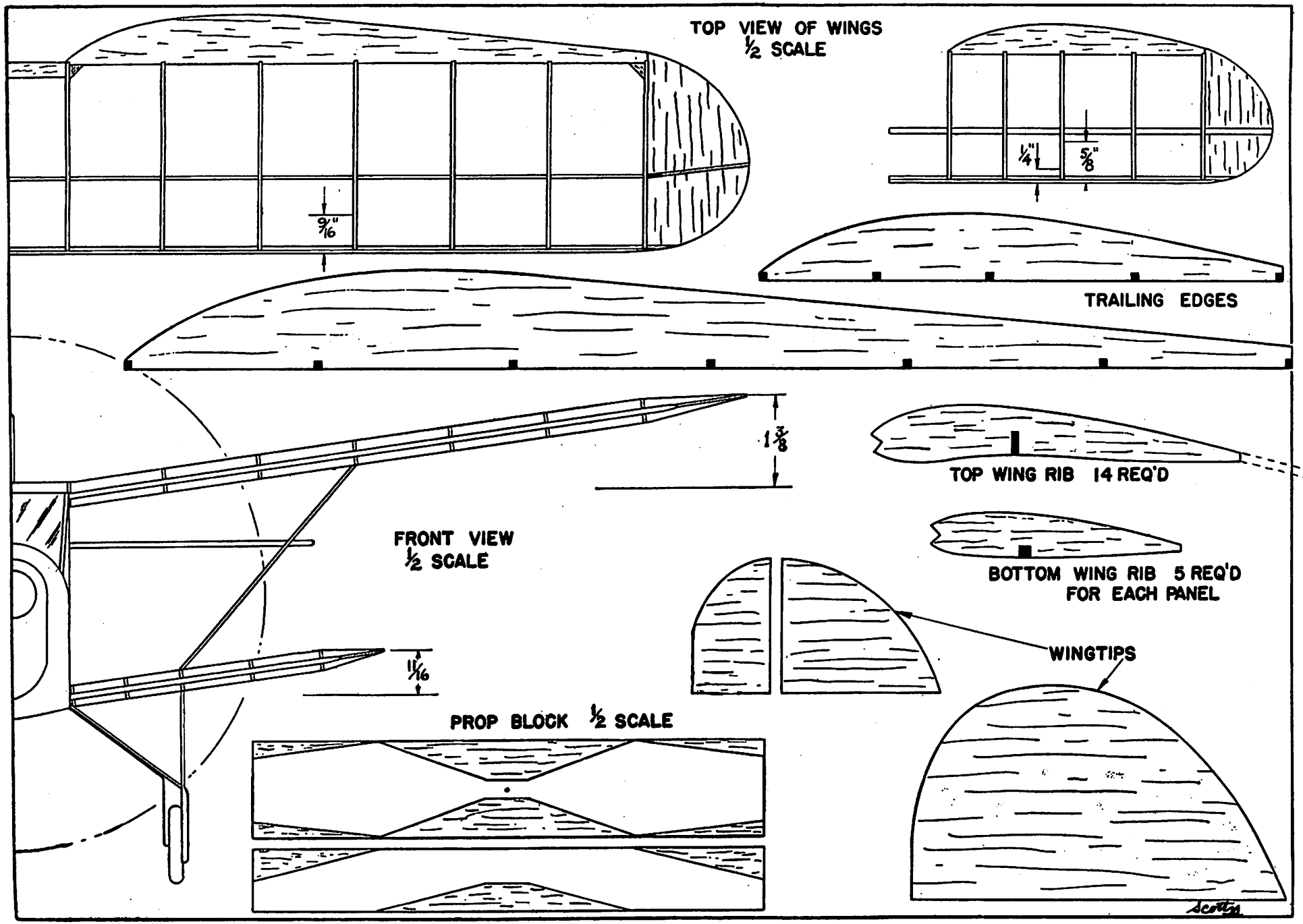






"SESQUI-SCOT" CONSTRUCTION PLANS–Plate 2





"SESQUI-SCOT" CONSTRUCTION PLANS—PLATE 3

CFFS CONTEST EVENTS AT LORAIN COUNTY COMMUNITY COLLEGE ABBE RD. RT 301 S.

1. FAC PEANUT SCALE, FULL PTS.
2. HI-WING CABIN PEANUT EXP.
3. HI-WING CABIN PEANUT PRODUCTION
4. DIME & HI-FLIER RUB. SCALE
5. COMET & GOLDEN AGE RUBBER SCALE
6. FAC RUBBER SCALE
7. FAC JUMBO RUBBER SCALE
8. PIONEER THRU 1914 RUBBER SCALE
9. NO. CAL. PROFILE SCALE
10. FAC CO2 & ELECT. POWER SCALE
11. O.T. REPLICA CO2 & ELECT. PREC*
12. EMBRYO ENDURANCE (J)(S)(O)
13. JR. FUSELAGE RUBBER (J)
14. JR. STICK RUBBER (J)
15. H.L. GLIDER (J)(S)(O)*POT $1
16. HAND CAT. G. 6" STICK * $1 POT.
17L. FAC O.T. RUB. 36"OR 150 SQ" MAX*
17S. FAC O.T. RUB. 25" MAX * $1 POT.
18. FAC O.T. STICK 36" MAX. * $1 POT.
19. JIMMIE ALLEN * $1 POT PRIZE
20. WW I PEANUT BIPE MASS L. AT 11:00
21. WW I FAC BIPE DOGFIGHT AT 11:30
22. WW II NO. CAL. ONE M. L. AT 12:00
23. FUNK & WACO ONE MASS L. AT 12:30
24. BENDIX PRE WW II RACE ML AT 1:00
25. GREVE RACE INLINES M.L. AT 1:30
26. THOMPSON TROPHY RACE M.L. AT 2:00
27. GOODYEAR & F1 PEANUT 1ML AT 3:00
28. WW II PEANUT COMBAT M.L. AT 3:30
29. WW II FAC COMBAT MASS L. AT 4:00

COMET & GOLDEN AGE AND DIME SCALE MUST HAVE ALL PLAN DETAILS. BRING PLANS.
BRING OLD TIMER RUBBER PLANS FOR CONSTRUCTION VERIFICATION.
MR. MULLIGAN AND PAGE RACER MAY FLY IN THOMPSON AND GREVE MASS LAUNCH RACES.
* POT PRIZE ENTRY OF $1 PER EVENT. ALL PICK A PLAN PRIZE.

SUNDAY MAY 28 10AM-5PM CFFS AT L.C.C.C. ELYRIA, OHIO I-90 EXIT 148 TO ABBE RD. CHECK HOAG ROAD OR UPWIND. CD RUSS BROWN 1-216-382-4821.

SUNDAY JUNE 11 CFFS AT L.C.C.C. 10AM-5PM CD JIM HYKA PH 216-481-6525.

SUNDAY JULY 30 CFFS AT L.C.C.C 10AM-5PM CD GORDON ROBERTS 216-749-4817.

SUNDAY AUG 13 CFFS AT L.C.C.C. 10AM-5PM CD PETER ZBASNIK 216-476-4824.

SUNDAY SEPT 10 CFFS AT L.C.C.C. 10AM-5PM CD RUSS BROWN & LUNDY GOESLING.

SUNDAY OCT 1 CFFS AT L.C.C.C. 10AM-5PM CD JIM HYKA & LUNDY GOESLING.

INDOOR CONTEST ACTION IS APRIL 16 AT KENT STATE CD MIKE ZAND 216-524-3480.
A MID-NOV INDOOR IS TO BE AT ANDREWS SCHOOL AT KIRTLAND RD. & RT.20 WILLOUGHBY.
TEST FLYING IS MOST SUNDAYS AFTER NOON. DOC HACKER 216-486-4990 OR LARRY LOUCKA 440-944-2034, OR DON SLUSARCZYK AT 1-440-918-0290.

ERIE FAC SATURDAY DATES AT PRANGMORE FIELD ARE MAY 6, JUNE 3, AUG 5, SEPT 2, AND OCT 7. RT. 90 EXIT 5 NORTH TO MILLFAIR RD. RIGHT TO PAST VIC PERES HANGAR.
THE FAC NAT'S IS JULY 20-23 AT GENESEO, NY. SEE FAC CLUB NEWS.

