

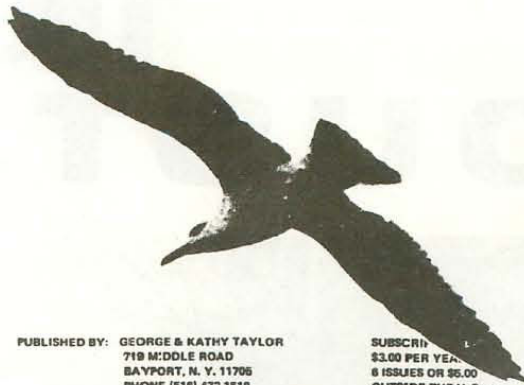
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THE DUST RAG



THE OFFICIAL JOURNAL OF THE DUSTER SAILPLANE ASSOCIATION

DECEMBER 1976



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OUTSIDE THE U. S. . . .

FROM THE EDITORS

There's no anticlimax like finishing your ship in the dead of winter when all you can do is stand there and look at it. As you builders outside the U.S. must know, we've been having a very severe winter in the States. Here on Long Island we're accustomed to a dusting of an inch or two that washes away in the rain as the wind swings around from the south but there's been too much snow on the airport to fly for over a month. It wasn't a total loss though. I had the opportunity to check out in a plane equipped with skis this winter. I guess all you power pilots in Canada have plenty of experience with that. Kathy and I have been tinkering around with the radio, which finally arrived, and the seat upholstery and the 'chute in the meantime. I guess you might say we're super ready to go at this point. I painted my ship pure white like Bruce Dyson did. It's a real beauty but a bit of a lead sled at 475 lbs. We'll let you know how she fares with all that weight. Too much paint, varnish and resin I guess.

The demise of Adrian Gray's Duster received some mention in *Soaring* and the *New Zealand Gliding Kiwi*. He says that he got out of the cockpit very quickly which made me wonder how long it would take me to do it. So Kathy and I conducted a little "fire drill". At the signal, I popped the latch and climbed out with 'chute on back. You have to extract your legs from between the control panel and the fuselage sides without kicking the radio. A heavy

winter coat wasn't much help either. I was a little disturbed to find that my best time was 11 seconds in a 1G environment. I hope all of you resist the convenience of climbing out of the cockpit the easy way leaving the 'chute on the seat. It's not an advisable practice since you ought to become accustomed to its weight and you might climb out without it in a true emergency by force of habit.

All of you by now must have noticed the change in the Duster ads in *Soaring*. John Sinclair has taken over the sale of the Duster plans for Hank Thor (*See John's ad*). They are now \$80.00 a set to cover increased printing costs. I had considered constructing a second ship for myself now that Kathy has one so I wrote and asked what the commission would be. The cost is \$72.00, using your original plan set, for the re-use of Hank's invention. I would like very much to build another one. The job ought to go quickly since all the tools and jigs are still around and it should require only slight reference to the plans.

We recently received a letter from Scott Thomas and apparently he's in for another stretch of sea duty and he has decided to part with his ship for lack of time to complete a few minor details on the re-work from his last incident. So here's the pitch: Duster N3ST (ser. # 17) dual range electric vario with audio, averager and speed ring, IVSI, clock, compass, semi enclosed trailer and new compound curve tinted canopy. As is \$3500. Needs minor sanding and painting. If interested, call 804 420-7423. □

PROGRESS REPORTS

No spars, no wings, no go! I'm still waiting on spars- maybe in '77! Fuselage and center section ready for open inspection. Ailerons, rudder, stabilizer and air brakes inspected and closed. I have mounted center wing section on fuselage and am in process of fitting cockpit hatch or at least as far as I can go 'til it comes out of the basement at which time I'll mount center wing section permanently and complete hatch. I was glad to hear you're near the end of the road on yours. Bruce Dyson's ship sure looks good in the air! Wonder if anyone would have plans for a trailer?

Charles M. Burpee
Bloomington, Illinois

No. 193 proceeds slowly- an hour at a time! Now have 2½ years in it. The fuselage is almost done, then the wings and finish and ready to fly. I also have to get a trailer in order to get it out of the garage. Your Dust Rag is great and I like that idea of the dipole antenna in the fin.

Howard S. Way
Napa, Calif.

No action out of plan number 92 yet. Moved back to mainland U.S.A. this summer, visited Oshkosh (no Dusters and very few sailplanes), bought a house near my new military assignment in the D.C. area. House even has a Duster-sized basement. Come the first heavy rain, however, and we started taking water. So, beginning tomorrow, 15 Dec., the basement is being waterproofed. (But there goes my nest egg again.) (Sigh) Maybe next year. Seasons best to you and fellow Duster fans everywhere.

Gerald Frazier
Springfield, VA

Duster No. 229 has dive brakes, ailerons and rear spars signed off. The wing is nearly ready for cover. All metal parts are cut, welded and treated. I have probably the only complete kit purchased and the material is good quality. I have better results with FPL16 epoxy rather than Aerolite. A local glider school has me licensed and flying a Blanik until the Duster is ready.

Ernest Miner
Cape Girardeau, MO

Our Duster (No.250) stands as follows; Airbrakes, ailerons, rudder and elevator closed and horizontal and vertical stabilizers ready to close (awaiting completion of the fuselage and wing center section nearly ready to close.) The bottom skin on right wing and left skin is on board now. The fuselage is yet to go. We expect completion in 12 to 15 months from now.

We've placed 1" thick foam horizontally between the ribs both top and bottom in the "D" tube section of the wing to prevent sagging. We also placed two ¾" vertical ribs in each rib bay aft of the main spar. Very little weight increase.

W. A. Bomball
Deatur, Ill.

The tail feathers are ready to skin and the fuselage bulkheads are nearing completion. We will be starting the fuselage jig in Joel's garage soon. Meanwhile, the centersection is ready for its attach fittings and is sprawling in the front room of my tiny apartment. The best I can do for a finish date is to say that if we keep going at this pace, we will someday finish. Even though week by week, not much progress is evident on the whole ship, finishing the smaller components is very satisfying.

Bob Fingerle
Joel Gregowski
Fremont, CA

I will be very pleased if you can send me your leading edge template because I am at the stage of carving the wings leading edge.

I didn't work on the Duster last summer but I will work hard during the winter to have it ready for the next spring. Fuselage is completed and fiberglassed, also the tail, controls are installed, wings are finished except the leading edge. Jobs to do- canopy, fiberglass the wings, painting and the last 5 percent of other little things. By the way, if someone has a good suggestion on how to make a canopy like Bruce Dyson's Duster it would be interesting to publish his method. Soon I will send you some pictures of some fiberglass accessories I made for the Duster like tail dolly, fuselage cradle, horizontal stabilizer support for transport. Also I have a jig for drilling the wing spar to offer to somebody interested. Just write to me.

Gilles Boily
1619 Boul. Père Lelière
Québec 8
Prov. de Québec, Canada
G1M-1P3.

PROGRESS continued....

I'm not very far along with my first assembly- the fuselage kit- but neither is DSK. After four years I'm still missing the wheel, control yoke, and other parts. I wrote the old management a couple of times but got only excuses, which I accepted because I wasn't desperate yet. I hoped when the new management took over I'd get the remainder of the kit, but now I'm kind of apathetic about the whole thing. I get the feeling that the kits being completed are mostly in southern California. It's hard to twist somebody's arm from 2000 miles away. I'll send you an annual fuselage report.

Martin Schreiber
Baton Rouge, LA.

Have the tail feathers and most of the fuselage done. Starting on the Center Section and outer panels, landing gear in place, still need some hardware here and there. Ribs for outer panels almost ready to glue. I have the same problem as D. Mattis. The fumes get to me in a short time. Looks like I'll have to find a painter when I'm ready for one. I work with rubber gloves while gluing. Hope you finish yours shortly.

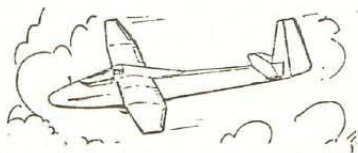
Phil Rose
Anaheim, CA.

Duster S/N 186, N26364 is still in the same shape as in my last communication. The fuselage, tail, and control surfaces are closed. The wing center-section is ready for covering, all wing ribs are complete, but still no spars, wing skins or plastics. A personal visit to DSK yielded most missing hardware. But there is still no estimate as to when the remaining items will be shipped.

Ted Leshner
Atwater, CA

No. 273 has the ribs and bulkheads ready, tail section spars in the works now. Ready to start gluing. The fuselage and wing jig is the next project. I am very pleased with DSK's Woodworkers kit. Excellent workmanship. I think that is the only way to go unless one has lots of time.

Rudy Steinhauser
Seattle, WA



No. 291 is being built from a DSK Woodworkers kit which arrived in early fall. The ribs and bulkheads are being laid out on plywood. I hope to be all ready for assembly of large components after our Michigan winter passes. Right now I am thinking of beginning with the fuselage.

Perhaps the Dust Rag should alert people that DSK no longer draws ribs and bulkheads on the ply and no longer drills the outer panel main spars (though they will supply the jig on loan). DSK sees these as improvements based on experience, I don't quarrel with this, but people should be made aware of the changes.

The DUST RAG is a great periodic morale booster and security blanket.

Bill Meyer
Flint, Mich.

I have plan No. 293. I have begun to work on the fuselage first. I have constructed my jig and marked it off and have my bulkhead bearers all nailed in place. I have cut out all my bulkheads from $\frac{3}{4}$ " ply Douglas fir. I am now going to purchase the remainder of the fuselage (wood only) kit. I need clamps for holding the wood while gluing.

Ralph W. Isaacs
Los Angeles, CA.

The woodwork on the fuselage is complete. The horizontal stabilizer and elevator are partially complete and are awaiting FAA sign-off. I am working on hardware now and will continue with the woodwork when the weather warms up. I hope to complete the ship in time for the Sierra Wave Camp in the spring of '78. Two other active builders in the Bay area offer encouragement, tips and help. Thanks for the Dust Rag. Keep it up.

Doug Bell
San Jose, CA.

The summer weather kept me flying rather than building. But I still managed to complete the drag brakes, ailerons, and wing from the spar rearwards. Today I will start the front half of the wing. I'd like to be putting on the bottom skins in about a month. As you may recall I started in February with a kit purchased from another "would be" builder. I haven't started on the fuselage yet. Perhaps because it will be so easy to daydream in. I also have a reamer and machined pin set for anyone who wants it. (\$15) Keep the news coming.

John Malick
Portland, OR

I have the dive brakes, ailerons and elevator ready for the FAA. Have center ribs on both wings including both drag spars. Starting to build up the center section so I can mate the drag spar on all three, then I will go back and build up the left and right wings with bottom skins, then do the same with the center section. Hopefully, I'll be ready to start the fuselage in the spring. I have a woodworkers kit with everything here so I have no hardware fabrication to slow me up. Hope to have my ship ready by the next soaring season, December of '77 at latest. Keep those Dust Rags coming.

Hal Porter # 11
San Jose, CA

PLAN HOLDER LIST

200 through 304

- 200 Allen Chen 13826 N.E. 12th St No. 202, Bellevue, WA 98005.
201 Wayne Cardin Rte 5, Riceville Rd, Athens, TN 37303
202 Paul Block 1303 Sunset Dr., Vista, CA 92083
203 Ronald Taylor, 20 Northcott Ave, Singleton Hts 2330, N.S.W., Australia
N.S.W., Australia.
204 Eric Newsome 5051 Chestnut Ave., Pierrefonds,
Québec, Canada.
205 J.L. Gross, 9 Dareed St., Thorneside, 4158 Qld, Australia
206 George Peter, 6300 SW 93rd Place, Miami, FL 33143
207 David Dooley, 1226 Curtis, Laramie, Wyo. 82070
208 John Shields, 810 Brookfield, Reno, Nev 89503
209 Sergio A. Felice, Sao Paulo, Brazil.
210 Joseph Wilson, 18 Ambrose Lane, Hampton, VA 23663.
211 Alfred M. Lorenz, Box 110, Palmdale, CA 93550.
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214 Alex Serwatowski, 20531 Clement Rd., Northville, Mich. 48167
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218 Mario Fiocca, Box 1804 Maracaibo, Venezuela.
219 Michael Hutnick, Jr., 328 Broad St., Nescopeck, PA 18635.
220 D. Clarke, Aviation Development Control, Ltd.,
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221 Ricardo Hausen, Ministerio da Aeronautica,
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São Paulo, Brazil, Posta Restante- CTA



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223 Robert Lutz, 18033 Burbank Blvd., Encino, CA 91316
224 Alex Taylor, Box 42, Mossburn, Southland, New Zealand
225 Donald J. Heath, 32N. 479 Oak Ave., Arbor Vista, Grays Lake, Ill. 60030
226 Paul Liebenberg, 14875 Sky Lane, Los Gatos, CA 95030.
227 Harold Schaffner, 519 Perine St. Elmira, NY 14904.
228 Thomas Wiatrak, 4636 Persimmon Lane, Brunswick, OH 44212.
229 Ernest Miner, Rte. 2, Box 535, Cape Girardeau, MO 63701.
230 Richard Pedersen, Lower St. Mary's, R.R. 2, Fredericton, N.B. Canada E3B-4X3
231 Paul F. Diehm, 1288 Boulevard, West Hartford, Conn 06119.
232 Ed Wosner, 229 Marion St., Winnipeg, Manitoba, Canada R2H-OT5
233 K.F. Hoffman, A-1 Rentals Co., 16119 S.E Stark St. Portland, OR 97233
234 Robert Hyam, 379 Castonguay, Asbestos, P.Q., Canada J1T-2X3
235 Andrew J. Stauble, 132 Worcester Rd., Hollis, NH 03049.
236 Peter W. Ritchie, Box 59, Krugersdorp 1740,
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237 Ellis Gibbons, D.O., 384 Church St., Parramatta 2150
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238 Herbert D. Binder, 409 Wallace Ave., Louisville, KY 40207
239 Alois Langasek, 1644 Prospect Terrace, Davenport, IA 52803.
240 David E. Joy, 329 Crane, Ames, IA 50010
241 Robert R. Hurley, Western Elec. Co., Inc.
c/o CNFJ N-3 Div.
Box 12, FPO Seattle, WA 98762.
242 Lee K. Herman, 1214 Birch Lane, Cody, Wyoming 82414.
243 George Allen, 111 Elk Ave., Smyrna, TN 37167.
244 Thomas F. Kenly, 1628 Cherry Hill Road No.
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245 Mathis E. Kurtz, Box 279, Hewitt, NJ 07421
246 Gerald E. Curry, 313 Lemarc, Fremont, CA 94538
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249 J. J. van Giels, Hadlow, Timaru 4RD, New Zealand
250 James Bomball, 1650 N. Maple, Decatur, Ill. 62526.
251 Philip Rose, 1718-B Oak Knoll Dr., Anaheim, CA 92807.
252 G. H Farley, 34 Green Lane, Northgate,
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253 Harold Youngren, 2192 Mass. Ave., Cambridge, Mass 02140
254 Angus J. Campbell, 20 Lily Pond Lane, Katonah, NY 10536
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256 Oakford C. Green, 997 Patterson Rd., Santa Maria, CA 93454
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259 John Magley, 12060 Francesca Dr., Grand Blanc, MI 48439.
260 Steven Eddy, 8033½ Mariposa Ave. Citrus Heights, CA 95610
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- 262 James Merritt, 3127 Jolly Rd., Norristown, PA 19403
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266 Tom Keegan, 1463 41st Ave., Vero Beach, FL 32960
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269 Albert B. Truesdell, 4843 S. Cedar Trail, Stevensville, MI 49127
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275 James Woodhouse, 1300 State St., San Diego, CA 92101
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284 James B. Flemming, Box 231, Alamo, CA 94507
285 John D. Malick, 2362 S. W. Cactus Dr., Portland, OR 97205
286 Werner Brugger, 4844 Briggs Ave., La Crescenta, CA 91214
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288 Dickie D. Stephens, 9712 Hightide Dr., Huntington Beach, CA 92646
289 Marvin A. Sass, 21411 Baldwin Lane, California City, CA 93505
290 K. P. Grehl, 2 Hamburg 65, Heublink 4, West Germany
291 William Meyer, 2314 Gold Ave., Flint MI 48503
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293 Ralph Isaacs, 5231 Veronica St., Los Angeles CA 90008
294 Duane Hunn, 8569 Gardena Rd., Lakeside CA 92040
295 William J. Webster, 46 Gail Ave., Albany NY 12205
296 Jeff Morris, 4876 Norris, Fremont, CA 94536
297 D. Ratcliffe, "Salamis", Jacobstow, Bude,
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298 Carlos Alberto Lorenzo, Ave. Julio A. Roca 250,
6300 Santa Rosa, La Pampa, Argentina
299 Peter Osborne, Salford House, Welford, Northhamtonshire, NN6- 7HT, England
300 Platon Courouvacalis, 54 Karavia St., Athens, T. T. 906, Greece
301 Martin Slater, No. 8-2051 Bridletown Circle, Agincourt,
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302 Dean Aldinger, 6850 Red Maple Way, Citrus Heights, CA 95610
303 Tom Duncan, P O Box 38 Orangevale, CA 95662
304 James Wood, 25825 Dodd Blvd., Lakeville, Minn. 55044

LETTERS TO THE EDITOR

At last my Duster is flying. 16 months spare time and long nights. We have flown about 20 hours to date. The Duster is very pleasant to fly, much like a K6 with no bad habits. Mine weighs 441 lbs. empty with the fiberglass and micro-ballon treatment. All my flying comparisons have been done against a K6E and they seem to be of the same performance. The day we did comparisons the air was rough with strong hill lift. We made several runs into the valleys with very pleasing performance.

My Duster is the only one flying in New Zealand. I will send you a photo later after some more testing against other machines. There seems little written about the performance of the Duster but if good care is taken in accurate building, especially the wings they are capable of very good performance. My Duster stalls at 32 - 34 knots, very mushy with no wing drop and yet it still has aileron control. The dive brakes are not as good as a K6's but are about the same as the spoilers on a Blanik. My advice to other builders is to micro-balloon the wings. To get a very good looking Duster you must do the wings as the hollows between the ribs really show up when painted. I had a problem the first time we weighed it.

The C.G. was too rearward so I shifted the battery (7 lbs.) from the equipment bay behind the seat to just in front of the instrument panel.

Alex Taylor
Southland, New Zealand.

Best of the new year to you and your family. Hope by now you have your ship flying. Ours are all on their trailers and wrapped up for the winter. Can hardly wait for spring.

Glad you like the photos. Sure you can keep them if you wish. We will try and get a shot of them flying together this spring.

One big hint I'd like to pass on is taping the aileron along the hinge line. We found on both ships that one wing seemed to have more lift than the other. After running a tape along the hinge line we found the problem completely remedied and a far better feeling ship to fly. Be sure to tape all the hinge lines- rudder- elevator and ailerons to keep the airflow as it should be.

We will keep you informed on the Kamloops bunch. Keep up the good work on the Dust Rag.

Don Lurkins
627 Alberni St.
Kamloops, B. C., Canada

I am glad to get another Dust Rag. It would appear that some of our Dusters are getting "sorted out". Scott Thomas' troubles are similar to John Sinclair's. John pranged his Duster at the Region II Championships last summer at Yreka, Calif. The damage put him out of the contest but wasn't too severe. The fin was broken loose from the fuselage and the skin broken through the elevator pin hand hole. John talked of re-inforcing the whole area upon rebuilding, which I intend doing on mine. He said that was his third ground loop in over 125 hours of flying time, so he was about due for some visible damage.

Last summer I met and talked at length with Hank Thor. It seems Hank was touring the northwest, looking for a motel to buy and was on his way home when he spotted a winch from the highway and came to a screeching halt. Imagine my surprise when I found Hank at our little soaring site when I arrived. We talked much of the Duster and the new design-the Elan. Among the more noteworthy items on the Duster were that the brake drum should be turned and the shoes arc-ground for improved braking. Hank also has drawings of a fully enclosed aileron pushrod modification that is quite sanitary in appearance. A Canadian came up with the idea and he has endorsed it.

I am not satisfied with the appearance of the original canopy, and don't especially like the looks of Bob Walters' canopy either. At the suggestion of my good friend Dean Gradwell whom I helped build his Cherokee, he convinced me to order a Schweizer 1-26E canopy, as he would be ordering a "B" model canopy at the same time. I believe it will adapt nicely with a minimum of grief. The cost is about \$100.00 delivered on the West Coast. It will greatly increase the looks of the Duster and will meet the cockpit side rails without stress or strain. This canopy is quite long and will afford excellent visibility.

I have done much flying on the G.I. Bill this last summer and nothing on my Duster. I have the metal work finished except for heat treating. I have my instruments and most of the materials. Also have the bulkheads and ribs cut out. After this season's hunting and fishing are done, I will be forced to build the spar bench and have at it in earnest. At the rate I'm going it will take a couple of years to finish unless I get with it.

Daniel Rouhier
Medford, Ore.

LETTERS continued.....

It's a hell of a note when a person has to send a post card to get an answer from a Duster builder. Sorry.

Well I did rebuild the Duster. I flew it and then modified it again this last winter. I installed spoilers. They are five inches wide by six feet long. They are hinged at the drag spar. They use the torque tube arrangement. The spoilers are very effective. In fact the rate of descent is so good that you need to back off on landing or you will kiss the ground pretty good. A lot better than flaps. The spoilers are even with the skin surface. I did take pictures of the construction process. Hope to be able to give you some soon for the paper. The modification is simple and very effective. The control is very good. Stall with full spoilers on is damn near impossible- full back stick- relieve back stick- full stall developed. Don't ask me why, but it does it on my ship.

Oh by the way, I sold the ship also. The person who bought it is Stuart Title- Medford, Oregon. He'll be contacting you for your paper. He's a real ace. George, I still want the paper. Who knows, I may build another one. Ole Hank must be nervous over some of my modifications. But so far all have been good. The ship has over forty hours on it. The "N-number" is N3847. P.S. You'll love your ship.

Ken Gooch
Klamath Falls, OR.

Congrats on being so far along. You must have made a decision on fiberglass weight! What did you decide? (I used it but the ship turned out heavy- Ed.) I note with dispair the letter from Leshner- almost exactly my plight. There must be other letters you've not published.

I have skinned the fuselage (tail feathers all done and closed over a year ago, dive brakes ditto) except for nose on top. Center section parts all done- am waiting til I turn fuselage right side up and then I'll assemble the center section right in place on bulkheads so all measurements will be set. How about an update on plan-holders from 200 up? There's another Michigander, I know. Mattis' letter is scary; where can we find more precise info on the matter? Does Mattis smoke?

Jim Crump N277JC
Ann Arbor, Michigan.

The Duster is in storage while I build a VARI-EZE. I've been overseas for the past 2 years so I have only about 100 hours on the Duster. After I finish the new plane I'll be flying the Duster again. The news letter looks great.

Bob Walters
La Jolla, CA.

I am very optimistic because of a project that I will establish. This will be a Sailplane Camp. I found a kind of dry lake near Guadalajara, Jal. and I think this will be ideal for this activity. I will let you know when this is functioning so you can come over and fly as my guests.

This year hasn't been good for the sailplaners from Toluca, because the Piper tug had two accidents and therefore they have had few flights.

How have you been with the Duster?

Ignacio Casillas # 133
Mexico City, Mexico.

Your October issue just read and can't tell you how much we enjoyed it. Thanks for the pictures and the copy. We see that our friend Elmer Zook got into the act too.

Have had a busy fall since our trip east, did manage to pick up my trailer on the way back. Progress has been slow, family, work and other things are keeping me from the bird. All the plywood is now complete and awaiting sanding and filling etc. before fiberglass. The garage is not heated so I suspect I won't make much progress until spring.

Bob Schaefer
Downers Grove, Ill.

COVER PHOTO

Note the densely distributed, yet perfectly balanced, relationship between the expressive line and the organic whole- how unity of surface is achieved by overtly lyrical variations of scale, texture, and color, giving three-dimensional form a spontaneous, plastically graphic definition.

These words are, of course, tongue-in-cheek remarks about my ship. Several years ago this caption appeared under a cartoon in the New Yorker Magazine.

THE EDITOR

Tom Prothro and I competed at El Mirage in Region 12's All Sportsman Class Contest. Look for an article in Soaring on this very successful event. Conditions were quite strong and I averaged 143 miles each day. I ended up 22nd out of 33. Not too good, but it was a moral victory to beat two PIK-20's and a Cirrus.

While I was in the L. A. area I dropped in on DSK. I was quite impressed with their business-like approach. The metal work looks great. I hate to say it, but Old Norm did some pretty shoddy things before he sold the business. The new owners have spent months just straightening out things and now seem to be on pretty firm ground. Give them your support. We need them as much as they need us.

I am finishing up my second Duster and have just turned 400 hours flying time on my first ship. I thought it would be appropriate for me to list some things I have learned (most of them the hard way).

RUDDER FLUTTER

Hank Thor is recommending static balance of the rudder and elevator.

This is a good approach, however it has not been flight tested. If you have completed your tail feathers it will be a lot of work to go back and balance the surfaces. Another problem is weight and balance. If you put 5 lbs. of lead way back in the tail it is going to drastically affect your C.G.. The pilot I am building the second Duster for only weighs 135 lbs.. We are looking at 40 to 50 lbs. of lead in the seat without static balance in the tail feathers.

Another approach is to lower the smooth air red line. 115 mph will provide a good safe margin of error. I never intend to fly faster than that. I am going to restrict the new ship to 115 mph. This restriction will be placed in the log book and marked on the airspeed indicator.

CABIN VENTILATION

The ram air must be directed onto the canopy to prevent fogging under cool, damp conditions. By directing it onto the canopy. It will also strike the pilot's face for his comfort.

DIVE BRAKES

The skin on top of the wing just forward of the dive brakes is not supported and will buckle and bow with temperature and humidity changes. I glued a beveled $\frac{3}{8}$ " strip of spruce to hold the skin in place.

I used $\frac{1}{4}$ " fiberglass tubes as rudder cable exit guides. The tubes run about 6" forward to protect the cables in the elevator attach area. These tubes can be obtained at an R/C model shop (push rods). I also recommend small skin doublers on the inside of the skin in the cable exit area and a half moon doubler around the inspection hole.

TAIL SKID

Any side loads on the tail skid will tend to crack the keel in this area. I recommend a $\frac{3}{4}$ " plywood mounting block to prevent this. Also be very careful in ground handling not to put side loads on the skid.

I recommend a total of 4 layers of 60 oz. cloth on the nose. The one from DSK is too flimsy. Line boys like to shove gliders by the nose and you're going to need strength in the nose for those off-field, soft-field landings.

AILERON AND WHEEL FAIRINGS

I finally broke down and made molds for these fairings. Some of the builders have asked me to make fairings for them and I will make a set for about \$30.

Hank Thor has asked me to take over the sale of Duster plans. The address will be changed in the Soaring ad, but for now it is:

John Sinclair
Rt 2, Box 36-S
Placerville, CA 95667
(916) 622-4991.

BUILDING TIPS

Before you skin the fuselage or even before you remove the fuselage from the jig, it would be a good idea to install the long seat-belt attach rods. Tightening of the bolts is easier and even pressure can be assured at each face of the bulkhead. This method also prevents a shift load on the skins if the nuts are tightened first.

Before applying both the top and bottom skins to the wings, insert a long tapering baton between the leading edge caps. Then as you apply staples to secure the skins for gluing, the inner faces of the caps will escape the inward splintering of the grain.

Block the outer ends of the dive-brake torque tubes to prevent outward shifting and you will have an easier time of drilling the hardware after final assembly. That is to say glue something to the internal structure permanently to prevent outward spreading.

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- The Sinclair family has taken over the sale of Duster plans. After several requests, I finally made molds for some custom fiberglass components including a turtle deck for Al Nelson's formed canopy. The turtle deck maintains a cross section equal to that which occurs at $\frac{1}{4}$ chord point.

Al gave his plug to Aircraft Windshield Co., 3842 Catalina St., Los Alamitos, CA 90720. They provide an outstanding canopy at a reasonable price. I paid \$83.00 including postage.

Turtle Deck	\$50.00
Pointed Nose	\$40.00
Wheel Fairing	\$20.00
Aileron Fairing (each)	\$5.00

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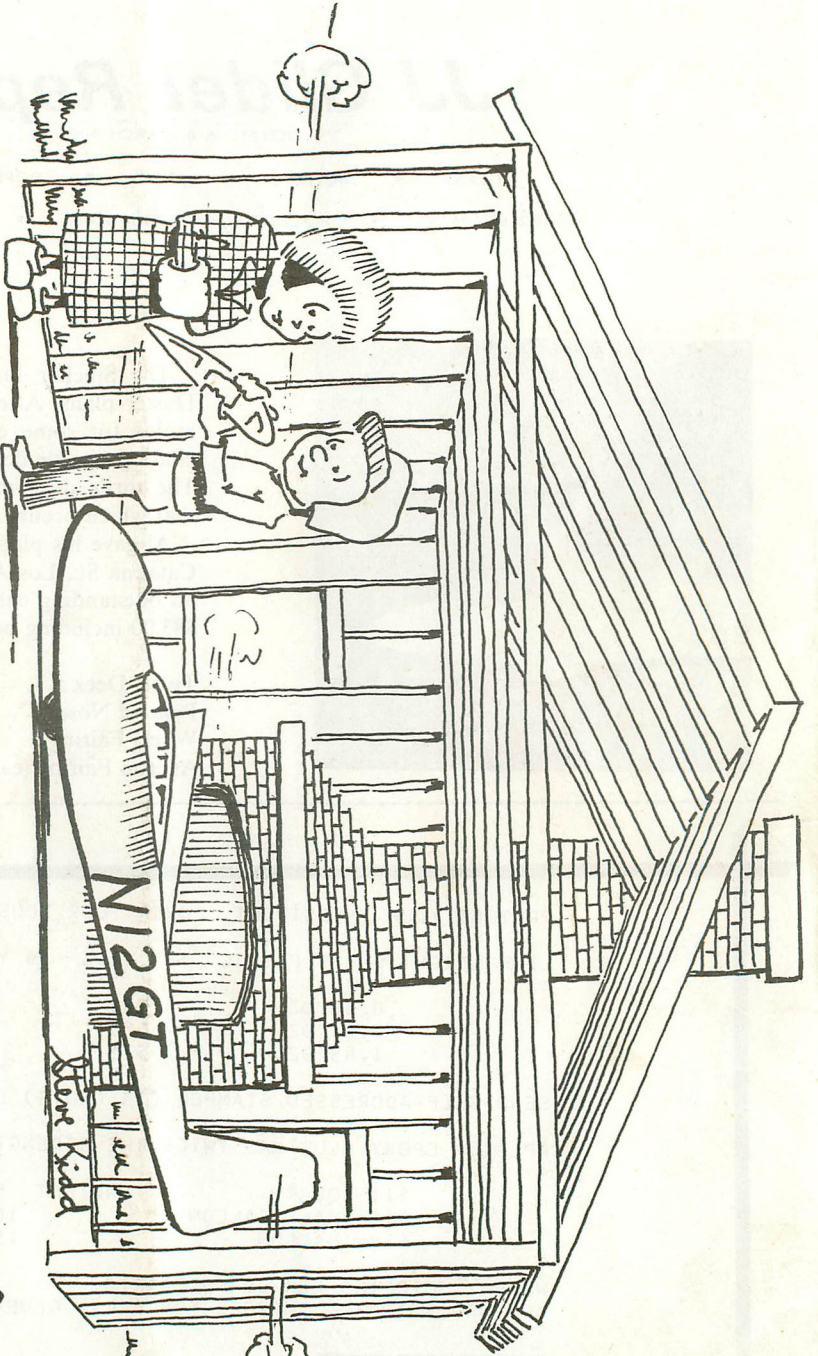
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