THE SCATTER

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President: Craig Cusick
Editor: Bill Hartill, 7513 Sausalito Ave. Canoga Park, Calif.
Subscriptions: Dick Gildersleeve, 7626 Kyle St. Tujunga, Calif.

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The time is 6:20 PM, Dec. 24. What better time is there to start another Scatter issue? Many a max and many a down-wind chase have been chalked up since last we affronted your sensibilites with a Scatter. Your respite has ended.

What better time than now to reflect on what has happened in this year of 1968. The struggle of man's spirit against social systems and repressive governments that want to drag the individual back to thedark ages is not ordinarily the subject of Scatter editorials. On this occasion we make an exception.

Thirty years ago Hitler's tanks rumbled into Prague. This year once again tanks, planes and troops occupied Czechoslovakia, this time from the Soviet Union. In each case the agressor charged the Czechs with a threat to their security. In Hitler's case the invasion was a grab of teritory, goods and booty. A convulsive move by a "modernday" Ghengis Khan. The USSR invaded Czechoslovakia with 700,000 men, 7,000 tanks and 1,000 planes to re-establish censorship of the press. How clearly, how sadly, it demonstrates that Communism is just another oppressive political system. It is not just a socialistic economic system, it is the subjugation of the mind.

That there are brave men in Czechoslovakia, Hungary, Poland, Rumania, Albania, Yugoslavia, China and the USSR, there is no doubt. It is the firm NO to Communism that comes from their

muzzled lips that so attests. For example consider the courage of Major General Pyotr G. Grigorenko delivering a eulogy at the funeral rites of Aleksei Y. Kosterin (a Russian writer who had been expelled from the Party). Gigorenko said that "a person, in Kosterins estimation, is a thinking being. Therefore nature has given him a striving for knowledge, that is, the need to critically evaluate reality, drawing ones own conclusions and freely stating one's convictions and opinions. For this Kosterin was terribly hated by those who believe that people exist to create a backdrop for 'leaders' to applaud and shout 'hurrah' for them, to believe in them blindly, to pray for them, to endure without murmur all scorn of themselves and to quack with pleasure when their trough is poured with more and richer fodder than into the other troughs."

With much harrassment and prodding from Party attendants the lights were turned off and the mourners left, to be swallowed up once again by the "damned machine" of Soviet totalitarianism.

The contacts that we have had with Czech free flight modellers have all been on a very friendly, warm basis. For example here is re-printed from Northern Area News the reaction of some of the British team to their brief glimpse of the Czechs.

> "A word about Czechoslovakia. The countryside is very attractive but the cities, towns and villages have a drabness about them that comes through an attitude of complaining. The people seem to go about their daily tasks without a smile and one gets the impression that they had the 'stuffing' knocked out of them. No bright lights illuminate shop windows, no gay colours anywhere, no advertisings, paint peeling off structures. Beautiful buildings lapsing into a state of decay. Low quality food and badly prepared at that. Bad roadway conditions. In a nutshell - nothing to attract tourists. On the credit side they brew excellent beer, the ordinary people are obviously hard working, very honest, sincere and polite. They could not do enough to make us welcome both in the cities and rural districts. By general consent the attractiveness of the Czech females has to be seen to be appreciated. They have more than everything - in the right places, do not wear make-up, wear plain clothes, predominantly jeans, sandals, jumpers etc."

Some of the British contingent stayed on after the '67 World Championship and attended a local meet at Uhersky Brod. There were 60 entered in Nordic A2, 3 in Wakefield and 9 in FAI power. Comments were:

> " The organizers provided motor cycle retrievers for us only but there was no problem with everyone ploughing across the sugar-beet as if it wasn't there.

Chris's (to put it politely) well worn model caused a lot of interest as did all our gliders. Their designs were much less rugged with internal spars, and only a few had timers. Joe Savini used his number 2 and was climbing consistently higher than the Czechs. One or two were using MVVS diesels but runs were not consistent and airframes were resonating. Wakefield standard was low (only 3 entries) but this was due to the lack of rubber, not airframe design. All seemed to be using internal thrust races and some very nice machined dural noseblocks were to be seen.

Prizes were excellent, being of the briefcase, electric razor type for the Czechs and tremendous dolls in National dress for the British winners- plus engraved half litre glasses. Then to our surprise <u>all</u> the British were given dolls,glasses, photographs of the village and local aircraft industry as souveniers. This included Chris and Joe again. Even Joes girl (a non-competitor) got a prize. A very nice ending to an excellent contest.

The final results sheet of the '67 W.C. contained the following salutation:

> "All has been said and done-so the Free Flight World Championship in Czechoslovakia is terminated. We have wished good trophies to all of you, who came; but only the best modellers could win the titles of World Champions. Best Congratulations to the new World Champions and to individuals and teams on following places too. Good wishes to all of them in the future, not only in aeromodelling, but also in private life. It is possible that small obstacles have occurred, perhaps some people were satisfied more, the others less. We tried to do our best - to satisfy all your wishes and to explain all the misunderstandings. We hope there was a minimum of them. If you have been satisfied in Czechoslovakia, we will be pleased to meet you here for the second time. We would like to greet you again not only like competitors, but like tourists and travellers too, because there were few possibilities to acknowledge beauties of our country during the Championship. Therefore - even though we say goodbye to you, we cordially say at the same time - till we see again."

Certainly we thank the Czech people for their friendliness and good wishes and wish them hope and success in casting off their subjagators and building their own private lives. Perhaps then we can get on with a <u>true</u> World Championship in which political fall-out will not knock-out worthy

contenders such as happened to the Israelis in '67.

Our editorial comment is that we think the FAI should so arrange its schedule of competition and the accrediting of member countries so as to exclude those who choose to impose political restraints on other members. Perhaps this is too much to hope for in today's cynical age but we don't intend to have our head in the sand.

John Blount - Berks. England

John writes to ask about the overseas mailing costs and subscription charges for "Scatter". We have one charge, it is $2.00 for 12 issues and it includes postage to any particular corner of the earth that you happen to be in. No additional postal fees are asked by us.

The only other charge we make to you is that all subscribers must contribute material. It can be of whatever form you feel is appropriate. A newsy letter, a new free flight design, contest results, photographs, gossip etc. are all acceptable. Now for John:

> "I am a member of the Croyden Club over here, which is almost exclusively free flight - in fact I'm this year's Chairman - and am interested specifically in Wakefield and A2. The issue I have in hand includes the Patterson Wakefield. Curiously enough, my present Wakefield has almost the same port wing variable incidence setting which Patterson uses, but with a different mechanism. As far as I know, no one else uses this system over here, but a lot of people have been curious. Odd, also that the same system should be developed independently. Mine was Carl Hermes inspired - maybe Pattersons too?"

As a matter of fact Patterson's wing incidence changer was first developed by Jim on an FAI Power ship. It was a beautiful piece of construction but got sprung in a prang or two before it could be fully trimmed out. No doubt Jim was influenced by Hermes and also Hank Coles early efforts. Jim flew against Hermes at the team selection semi finals at Seattle in 1965. Carl's ship had the auto wing mechanism but it wasn't working too well at the time. I guess Jim vowed that he could do it better.

Well John, let us know how you make out with your ship.

Alar, Mk I, III & IV by Bob Norton, Bakersfield, Calif.

Bob sends us drawings and information on a series of A-2 Nordics. Bob is reticent about claiming anything revolutionary for his designs but still his observations are interesting.

Alar Mk I

This glider was built in 1961. It was three ounces overweight at 17⅔ ounces. Still air performance was around 2:15 — 2:25. The model performed very well under turbulent conditions. In windy turbulent air, it seemed to take advantage of any ground lift, and often did 60 - 90 seconds at less than 75 feet. Tow was easy to control and it could be led in either direction.

The weaknesses noted were the failure of the balsa spars in the tips on a cartwheel landing. The fuselage construction was quite strong, but was also heavy because of the spruce longerons and the thick, rather hard balsa sides. The wire dowel and rubber band wing fixing tended to come apart in a hard landing. This necessitated removing the wing and re-banding it — an annoying inconvenience. It was felt that still air time could be improved by a general cleaning up of the design.

Alar Mk III

The second model of this series had three major changes: a re-worked fuselage construction, elliptical wing tips, and dural tongue wing fixing. The more complex fuselage was used because of its strength and lighter weight. The elliptical tips were partly for looks and partly for aerodynamic considerations.

Still air average was 2:20 - 2:30. The same desirable turbulent air characteristics were retained. One of the two Mk III's built had the habit of dropping the inside wing on turn. All of the usual measures were taken to work this out but the characteristic persisted. The model never did spin out of a thermal, so the dropped wing was tolerated.

It was felt that still air time could be improved by using a thinner airfoil and higher aspect ratio, the primary question was whether all-weather performance could be retained.

Alar Mk IV

The changes involved in this model were: thinner airfoil,

higher aspect ratio, and a drooped nose on the fuselage. The airfoil used was the B6556c, which is similar to the B8556b except for thickness. Adding area below the datum in front of the wing (drooped nose) was tried to help stabilize the turn.

Still air time was improved to the 2:40 range (with careful trimming) This model was not too tolerant of wind and turbulence. In winds of 20 MPH and higher, the glider settled rapidly as if under elevated. This was attributed to separation of the thinner airfoil with a rather sharp nose radius.

This model had a characteristic that made it valuable for contest work. When it encountered lift on tow, it would wheel into its glide turn. This helped ease the problem of thermal detection, as it was a positive indication of lift. Unfortunately, this characteristic did not provide the breath to run another hundred yards to find lift.

It was felt that an airfoil that was more tolerant of turbulence, such as a B6356b or the Hacklinger section used by Lindner would help solve the primary fault of this design. The construction methods and proportions were felt to be adequate.

Sergio Montes - Santiago, Chile

Sergio visited us here in California last year. We were quite impressed with this enthusiast from South America. The more we meet people like Sergio and the more information we receive, such as the following letter, the more we vow to find some way to meet and fly with them in a true Championship of America.

"In first place I must ask you to forgive my incivility for not having answered before your most generous letter. After the Summer holidays the problems of the organization of the 6th South American Championship were so pressing that I had to forget that I had a family, job and so on. I only marvel that I wasn't sacked! The Championships went very smoothly, thanks to a lot of help from the Chilean Airforces. We had 6 countries battling for top positions in the recognized FAI events, except Scale and Combat. As a country, Chile went so-so, earning mostly second places without individual winners but without disgraceful performances either. Top event was (What did you expect?) Wakefield. It was won by an Argentinian, Ernesto Colombo with the only perfect score of the Championships. The standard

of the flying was quite good. The weather was absolutely perfect, being soggily calm, quite coldand smooth. The chances of catching a thermal were very small and to the last round there was very hot competition. In the last round a lot of people including one S. Montes were downdrafted, so there was quite a reshuffle of top places. Eventually I managed a 5th place after being in third position up to the fourth round. The Argentinians won on a team basis, with very similar models. All of them had 14 strand motors, and went for high climb with fast discharge. The winner put a many as 490 turns in his last flight. With a fabulous rate of climb. I can tell you for sure that nothing I saw at Taft could compare with Colombo's standard. Props. were extremely thin, mounted on double ballbearings and used cardan shafts to secure a very smooth discharge.

Power was not so good. Eventually the only outstanding flyer was the winner, Walter Nuttini from Brazil. He had a very, very interesting model. Wing planform was MantaRay type with variable taper and a span of 220 cm. Airfoil a turbulated Conover. Silk covered in Brazil National colours. A rather long fuse with a smallish stab with variable incidence and auto-rudder. Engine a very well contrived G15 that went 19.5000 on a reworked Grish Nylon 8x4. The blasted thing climbed in a very sedate right spiral not too steep, but so deceiving. Actually he was by far the highest climber, though I reckon that he was still below your standard or Van Nest's.

Second place man, Mauricio Zito from Argentine, had a slightly modded Viking with yet another G15, but he was very badly trimmed for the conditions. It is better not to speak of the following places. In any case there was another conspicuous failure for the highly touted Taltos, that Hungarian model that took our modellers by storm in 1964, following articles in Aeromodeller and American Modeller. I will give my biased opinion against such a thin airfoil used in a power plane. The glide characteristics were changing from flight to flight on the three Taltos that were particapating. The fact that Seelig had the same airfoil, but a sheeted wing, may indicate that flow over a conventionally built wing using that thin Benedek is not optimal.

If you remember a letter that I sent to Frank Zaic concerning a calculation of the probable flight time for A2 gliders, I am prepared to eat it! Two of the Chilean planes were doing a consistent 190 seconds of 50 m. with absolutely no assistance from weather conditions. We don't have dew thermals either, as our flying site is extremely dry. One of the planes used the same Eppler airfoil that I mentioned to you in connection with a calm weather Wakefield. The other was

rather similar, but with less span. (None of these planes were mine, of course). They are not all weather planes, but they took advantage of our particular flying weather to the limit. Even to use steel towing lines. They do not strech under the 2 kg. test, so you can use 50m. instead of 47 with nylon. Dacron seems too heavy to tow in calm weather, but is OK for a slight wiin wind. Do you know that strictly speaking Dacron lines are not allowed by FAI regulations? They should be monofilament, though I doubt that this regulation has ever been enforced. It would mean the ruin of Mr. Rubbah.

Eventually, on the last round, a very consistent flying Argentinian won. The first mentioned ship was not stable enough for the conditions of the last round. You need two planes of different characteristics. All in all, an unforgetable experience, which I wish we could repeat with an American team present. Next one in Lima, Peru in 1970.

This year I am concentrating on Power, with diesel engines (you may call me a defender of lost causes) The lost Saturn was found, and a Neptunus(Saturn with HTL) is being completed, this for a Webra Mach II. This variation on your (Cusicks) excellent design will be an interesting experiment. Will it turn left, or won't it? In fact I must give you my warmest thanks for your offer of engines."

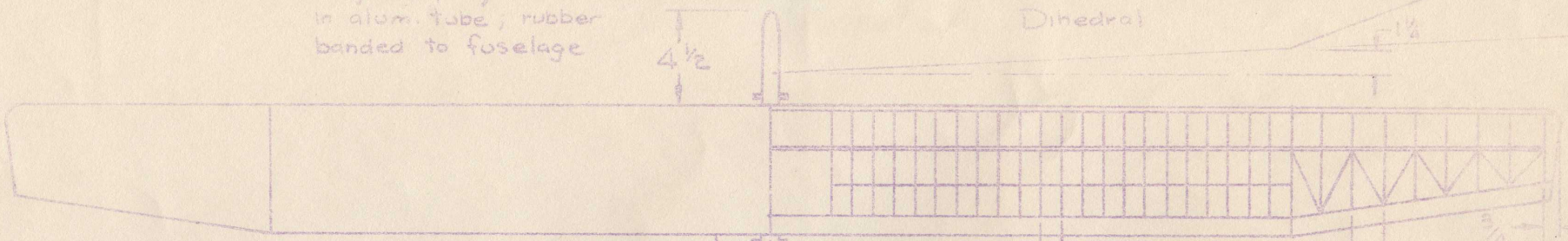
Old News Department

The 1969 Free Flight World Championships will be held at Wiener - Neustadt, Austria. Three models will be allowed. (Due to the 7 round rules?) More news on this next month.

Next Month

Details on how to build Hartill's Auto-Stab mechanism for FAI Power plus news on engines, pipes and the 4th annual FAI Desert Challenge to be held January 18 & 19 at Blythe, California

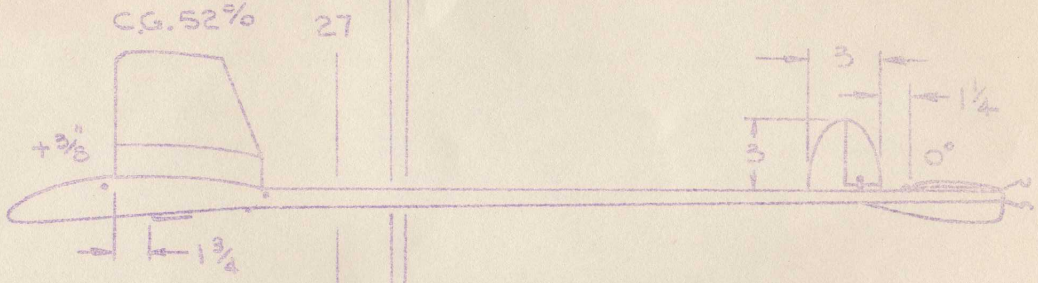
Wings 2 pc., wires in alum. tube; rubber banded to fuselage

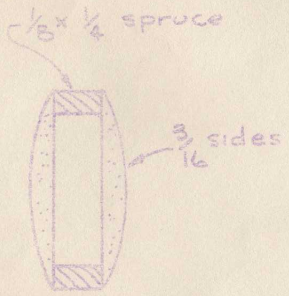


AREAS

WING (PROJ.)	431	sq in
STAB.	80	
	511	sq in

Weight 17 1/2 oz.





FUSELAGE CROSS SECTION

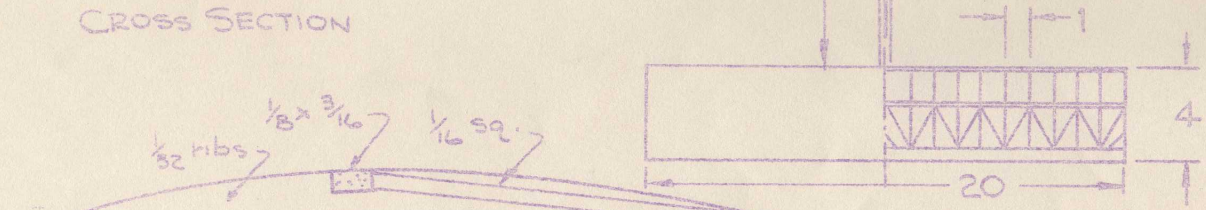
ALAR Mk I

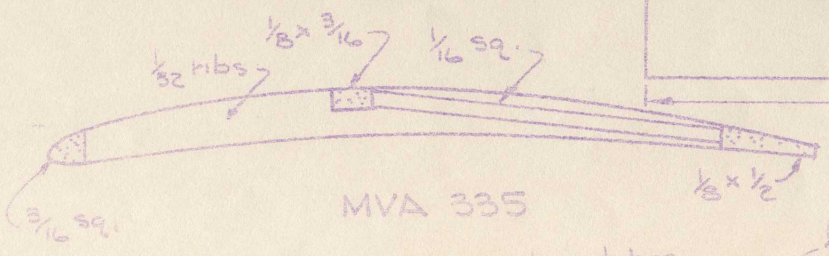
A/2 NORDIC

by Bob Norton

Bakersfield, Calif.

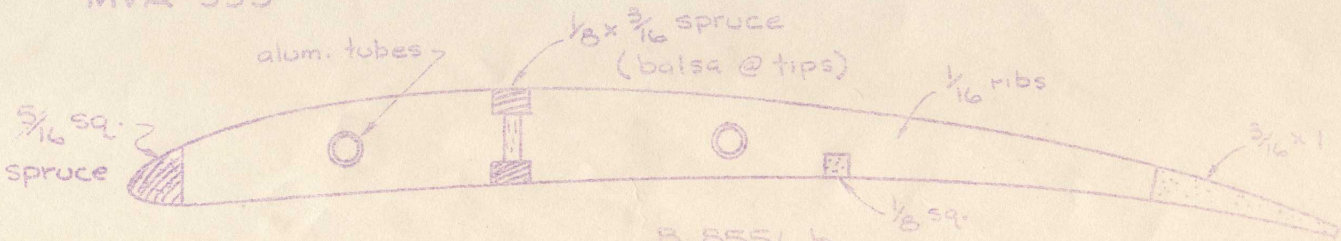
SCALE 1/8" = 1"





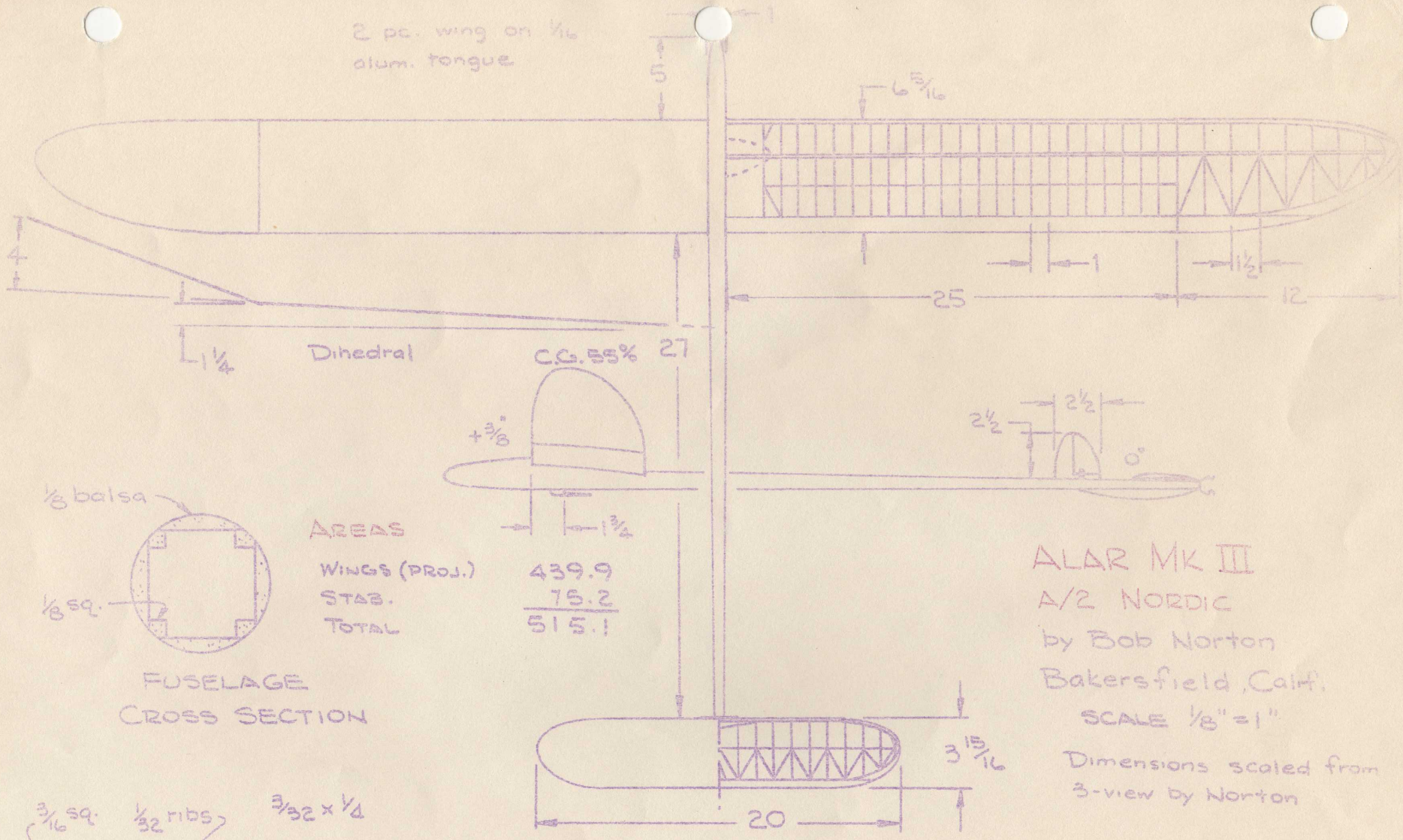
MVA 335

Dimensions scaled from 3-view by Norton



B 8556 b

Cusick - Nov. '67



ALAR MK III

A/2 NORDIC

by Bob Norton

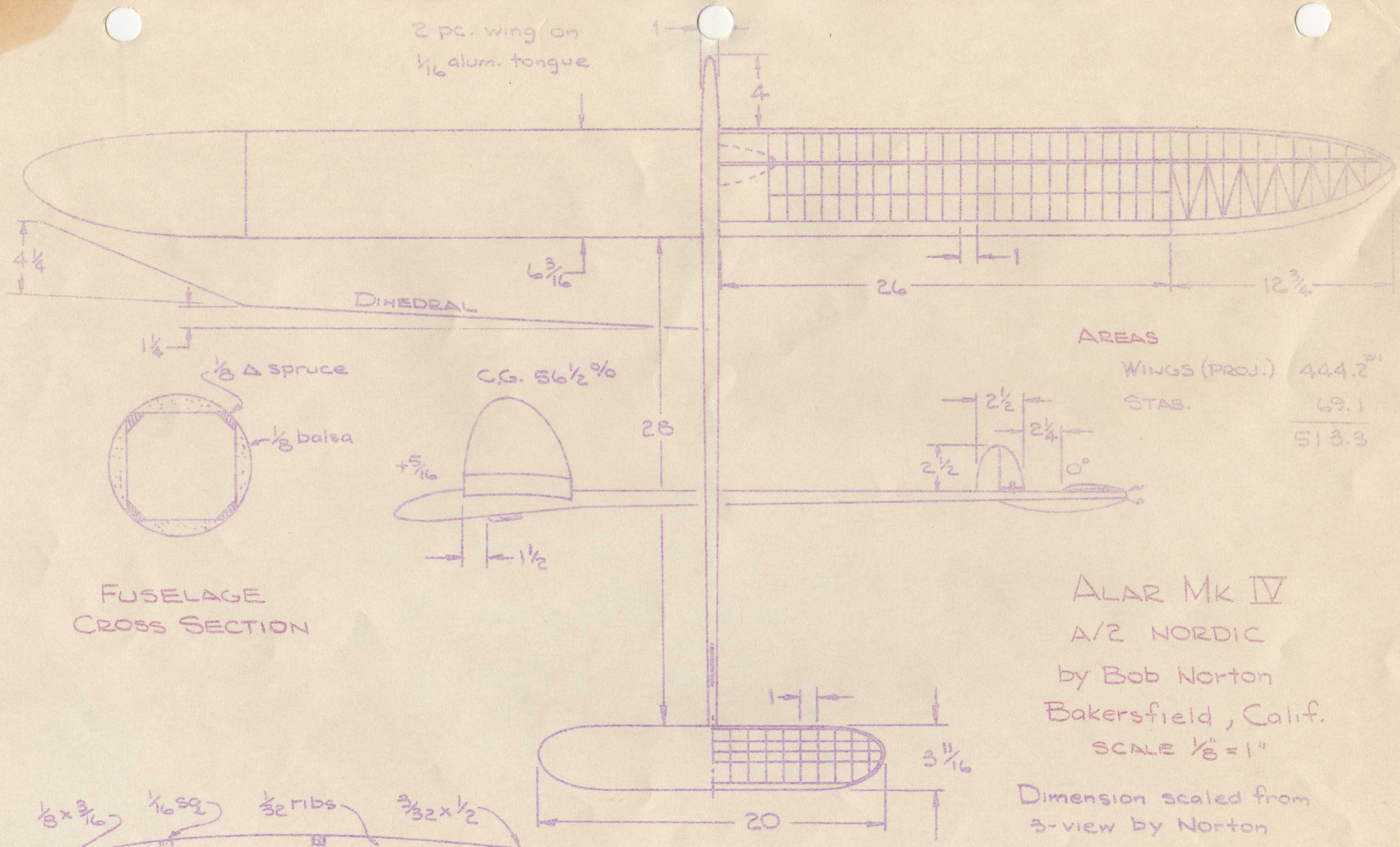
Bakersfield, Calif.

SCALE 1/8" = 1"

Dimensions scaled from 3-view by Norton

B 8556 b

Cusick - Nov. '67



FUSELAGE
CROSS SECTION

AREAS

WINGS (PROJ.)	444.2 in²
STAB.	69.1
	513.3

ALAR MK IV

A/2 NORDIC

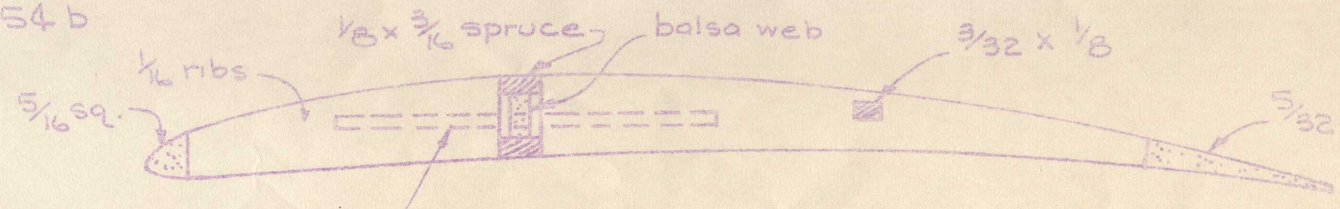
by Bob Norton

Bakersfield, Calif.

SCALE 1/8" = 1"

Dimension scaled from
3-view by Norton

B 6554 b



B 6556 c

CUSICK Nov. '67