

VALLEY FLYERS

NEWSLETTER

FEBRUARY 1976



Photo by Stecker

MODEL OF THE MONTH Dick Sporny, a newish Valley Flyer won it all with his new, unflown Sig Kougar. Dick's fine finish which is almost the same as Claude McCullough put on the original was the outstanding feature that cemented his win. The Kougar has a K&B 40 front rotor. Sig touts the 550 sq in wing with washed out tips as enabling the Kougar to be slowed down to a walk for the landing approach, yet the airplane can do the AMA pattern or even a lomcevak!

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BOB OWENS

ASS'T SECRETARY: [REDACTED]

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VICE PRES: [REDACTED]

GARY McPIKE

TREASURER: [REDACTED]

TOM SWIFT

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JOHN ELGIN

ASS'T. TREAS: [REDACTED]

SCOTT JOHNSON

Chuck Cunningham's column, CUNNINGHAM ON R/C, in the February '76 issue of RC Modeler contains an item on R/C cross-country (X-C) that I just can not allow to go unchallenged.

Credit for this fun-type X-C racing event was given to Doris and Bob Rich for their fantastic coast-to-coast flight of Liberty Belle. The Riches achievement speaks well for the advanced planning and for the execution of those plans. Our Club had the privilege of hearing their first-hand account of the flight at our November meeting. Several questions were asked about radio frequency control during the flight. We were advised that their frequency was considered TOP SECRET. Clubs along the route of the flight were advised, with the help of AMA, about the time the flight would transit their area. Clubs were requested to shut down ALL flying for the period the Belle would be in their area. ALL transmitters were to be off, too.

Cunningham neglected to acknowledge the problem of frequency control in his column encouraging X-C events. Pity the poor ole boy out for a Sunday morning R/C flight anywhere along the route that has not been scouted. I have no sympathy for the X-C pilot for getting shot down, but it is not fair to the innocent boy who went out of his way to avoid the crowd. Does one club have the right to sweep potential destruction across any state, even if it is BIG?

Unfortunately, R/C X-C is not a new event. Glider pilots in our area have already discovered the the fun of establishing X-C distance records in the Mojave Desert. Strong lift and predictable westerly winds make this an ideal site for record attempts. The problem here is that the flights originate in Palmdale, transit several towns coming within radio range, then terminate in the area of El Mirage Dry Lake. Great?....Not so! How about those R/C power pilots who have been using that dry lake for several years?

This strikes home for I have had 3 planes shot down at the Basin which is open to the public. That makes frequency control almost impossible. So on occasion I drive more than 100 miles to a dry lake in the Mojave Desert to avoid the crowd, the delays, and the interference at the Basin. There is nothing to prevent an X-C group flight from wiping me out. For that matter the same could happen at the Basin.

It is urgently requested that columnists, editors, and Contest Directors discourage ALL X-C flying that has not been thoroughly publicised and coordinated in advance. If all this fails, at least let's name this event "SUICIDE X-C".

Checking with Art Williams on the new Formula I model of his Estrellita which Laird and I are finishing, I was advised that a real show is in store for those planning to attend the Feb. 27 meeting SILVER AGE OF AIR RACING at Van Nuys National Guard. Here are the attendees:

Racing No.	Plane Name	Type	Designer	Pilot
3	Lil Toni	Cosmic Wind	Irv Culver	Tony LeVier Bob Downey John P Jones
4	Minnow	Cosmic Wind	Irv Culver	"Fish" Salmon
5	Ballerina	Cosmic Wind	Irv Culver	Bob Downey
6	Miss Cosmic Wind	"	Irv Culver	"Fish" Salmom
9	Mammy	Midget Mustang	Long	Kip Mone
16	Shoestring	Kreimendahl	Special	Downey, Jones
31	La Lollita	Bill Statler	Special	Jim Kistler
34	Estrellita	Art Williams	Special	Kip Mone
39	PFTTT	Rod Nimmo	Special	
87	P.A.R. Pusher	Owl	Special	George Owl
94	Jinny	Foss	Special	Bill Statler
				Art Beckington
				Al Foss

Bob Downey

EDITOR'S PAGE

BE SURE TO COME TO THE FEBRUARY 10th MEETING AT 8:00 P.M.
LARRY RENGER or his associate from COX will "show and tell" the newest in Cox developments such as their new engines and other goodies.

I haven't had any want ads come in even though they are printed free for members. The last I heard, Dick Kolodziej (986-5420) still wants to sell his Proline. Purchasing a used Proline makes more sense now that they are back in production. I don't know what their policies are about repair, however. If anyone has an RS engine mount that they can't use, please contact me to see if it will fit the \$15 Dara I bought to play with. I'm told it has an Indian curse on it so I have my part Cherokee wife mumbling incantations and waving the checkbook over it.

Laird Owens lost a Quickie 500 because a newcomer turned on in the pits. The newcomer was being instructed by a club member! REMEMBER, the instruction of a rookie should include ground, as well as flight procedures!

For those of you who haven't gotten the word, thanks to Len Katz, THE JOHN IS COMING to the air field. While on this subject, the board is looking for plumbers and ditch diggers to install a sprinkler system for the GRASS once the water for the john is in.

For those of you with sharp eyes, you must have noticed that neither the 1/2A nor Formula 500 flyers include much in the way of the rules that will be flown at our contests. The reason is that, as far as we can determine, there are no standard rules for either. The 1/2A fliers seem to be able to fly any rules, but Formula 500 is a mess. The Birds are experimenting with furnishing props, and if it works, we may do it also. However, I feel that even though our "Quickie vote" has been interpreted to apply only to last year, that the V/F's general opinion is that Formula 500 shouldn't be a "what's up front" "cubic money" type affair. Since lots of guys have their airplanes set up for schnerle ported engine, at this point there is no use banning them from our race. I proposed that schnerle engines run at least 10 inch diameter props to even things up a little. My proposal flew like a lead balloon. I don't think furnishing props is workable because an unknown number must be purchased and balanced, and no one seems to be able to agree what props should be used, it being recognized that a prop-engine combination can be a critical arrangement when it comes to power output and engine life. Any "stock" engine rule seems to be a joke when it comes to enforcement. At least K&B 500 fuel seems to be standard!

In my not-so-humble opinion, it looks like the club race concept Glen originally had is gone and soon the 500 rules will be: 1) use K&B 500 fuel or one of similar nitro content; 2) any .40 engine; 3) 500 sq. inches of wing; and 4) a fuselage that started as a box. In short, formula one where you race ugly airplanes and don't have the hazard of mixing high nitro fuel.

Greg Clark

***** FOR SALE ***** FOR SALE ***** FOR SALE *****

1972 Proline Competition 6 Radio Control System. Mode 2 on Green/White. 4 PLS-11 servos (3 have new motors). New Xmtr battery. Not flown since factory overhaul.
\$225 Dick 986-5420

THE REVISED AND COORDINATED CONTEST SCHEDULE which does not include the QCRC monthly 1/4 Midget races or the Vaca Valley 1/2 A races is as follows:

Date	Event	Sponser	Place
15 Feb	1/2 A Pylon	Valley Flyers	Sepulveda B.
29 Feb	Formula 1	Pomona Valley MAC	Cucamonga
7 Mar	1/4 Midget	R/C Bees	Yorba Linda
14 Mar	Formula 500	Valley Flyers	Sepulveda B.
21 Mar	1/2 A Pylon	C.Flying Circus	Camarillo
27-28 Mar	Formula 1	Birds	Sepulveda B.
10-11 Apr	Pattern	Birds	Sepulveda B.
24-25 Apr	Formula 1	Valley Flyers	Sepulveda B.

Charles Lindbergh was the 67th man to make a non-stop flight over the Atlantic. (He was preceded by two in an airplane, 31 in a dirigible, and 33 in a German zeppelin.)

OVERHEARD IN A LOCAL HOBBY SHOP

Modeler #1 "Why does Carl Goldberg sell three wing skids to a package?"

Hans' wife "I have no idea."

Modeler #2 "Must be for tri-planes"

Reprinted from the Santa Barbara RCM **UPDATE**

WHITCOMB WINGLETS

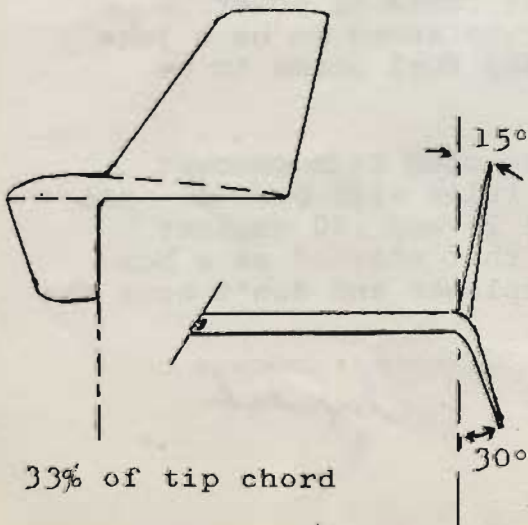
WHITCOMB WINGLETS

UPPER SURFACE CAMBERED OUTWARD

LOWER SURFACE CAMBERED INWARD

Winglets are optimized to unwind tip vortex to the greatest extent possible. This reduces induced drag, resulting in a 6% fuel savings. The local incidence of the surfaces are inclined to produce forward thrust which offsets the parasite drag of the vertical fins. This is possible due to the high amount of lateral flow near a wing tip.

NO EFFECT ON CRUISE SPEED.
INCREASE RATE-OF-CLIMB AT LOW SPEEDS.
ADD DIRECTIONAL STABILITY.



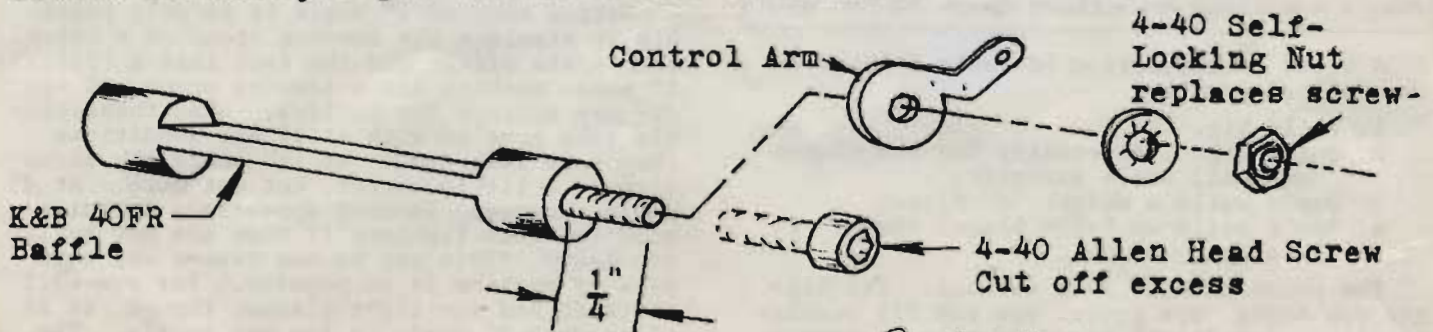
If you arn't building this month, you might try this one.

Tom Cone (C) lost his last airplane in a Limbo contest. Joe Bridi (B) has 3 times more engines than C has radios and if B had 5 times more engines, he could power all of Tom Akins' (A) airplanes and 1/4 of his. B has twice as many airplanes as A would have engines if A had 1/4 dozen less engines than he has. If C had as many radios as B does, C would have 4 times the number of radios he has now and a radio for each of his engines. A, B and C have exactly the number of engines they would need if they had twin engine airplanes with a radio for each. If they had 1/2 again more engines, they would have an engine for each plane they do have. If B tried to fly only his own equiptment, he would be short one engine from being able to fly 1/2 of his airplanes. Assuming 1/2 the airplanes are biplanes and none are gliders or multi-engined, how many airplanes, engines, and radios do Tom, Joe and Tom have?

I am donating a dollar\$ worth of raffle tickets to the first person who shows me the correct solution at the February meeting!

Blay Finck

Vibration on my KB4OFR engines have resulted in the loss of several sets of exhaust baffles, links, springs, lockwashers, and screws. The simple modification below has completely solved the problem. An Allen head screw (4-40 size) is screwed full depth into the baffle until it bottoms out. Then tighten with an Allen wrench. Cut off with a Dremel tool or file and dress the end threads smooth with a file. Re-assemble into the engine using a self-locking (all metal) 4-40 nut in place of the screw. A good time to perform this modification is when you get the new parts to replace the ones you lost!



Bob Owens

A woman suing for divorce was seeking alimony on the grounds that her husband was an inveterate R/C flyer while she was an ideal wife. "Some ideal wife!" snorted the husband to the judge. "I hocked the kitchen stove to buy a Liberator kit and she didn't miss it for nine days!"

SCALE SPEED - HOW SLOW? BY DON TOEPEL

Have you ever seen a 300 mph Nieuport 17 or Fokker Triplane. Most modelers have because scalewise, that's the speed the planes seem to be going. The model may be a 2" scale job traveling at only 50 mph but the overall effect is totally unrealistic. This not only takes the joy out of a good scale model but often has a disastrous effect on contest scores. To quote the AMA rule book, "When judging scale aircraft in flight particular attention should be paid to realistic speed and performance." Many judges really take these words to heart. Even Ralph Brooke, to name one, would be hard pressed to give an 8 for a maneuver with a 300 mph WWI airplane.

WHAT CONSTITUTES SCALE SPEED AND WHAT DESIGN AND FLYING APPROACHES ARE REQUIRED TO ACHIEVE IT ARE APPROACHED HERE.

To start with, we must consider how the eye judges speed. We are all acquainted with how a 747 seems to float on approach but we know it is flying the better part of 200 mph. Yet a BD-5 at similar speed seems to be zipping along. The reason for this is that we judge speed subjectively by how long it takes an object to travel its own length. This leads to the obvious rule that THE FLIGHT SPEED SHOULD FOLLOW THE SCALE OF THE AIRPLANE. Thus, a 1" scale model would fly 1/12 the speed of the original, a 2" model at 1/6 the speed, etc.

TYPE	PROTOTYPE	ORIG. MPH	SCALE MPH			
			1"	1½"	2"	3"
An-tique	Wright A Flyer	40	3.3	5.0	6.7	10.0
WWI	Nieuport 21	93	7.8	11.6	15.5	23.3
30's	P26A	230	19.2	28.8	38.3	57.5
WWII	P40B	340	28.3	42.5	56.7	85.0
	P51D:					
	Top Speed	437	36.4	54.6	72.8	109.3
	Cruise	362	30.1	45.3	60.3	90.5
	Landing	100	8.3	12.5	16.7	25.0
Jet	F-104G	1550	129.3	198.3	258.0	387.5

Table I - Realistic Scale Flight Speeds for Var. Models

A brief consideration of Table I leads to the following rules:

1. Build big.
2. Build light, especially for old timers or small scale aircraft.
3. Don't build a Wright "A" Flyer.
4. Don't build an F-104 bigger than ½"-1" scale.

The point of Rule 1 is obvious. The bigger you build, the faster you can fly realistically. And flight speed is nice to have. Scale appearance is improved because the bigger machine with its higher scale speed isn't so affected by headwinds and tailwinds. Consider our typical 2" Nieuport 17 in a typical 10 mph Seattle breeze. Upwind, you might fly it at 25.5 mph airspeed and get a groundspeed of 15.5 mph (Scale: 93 mph). Downwind, however, you would be going 35.5 mph (Scale: 284 mph). Even if you throttle back to near stall (say 15 mph) you would be going downwind at 25 mph (Scale: 200 mph) and a gust of only 5 mph would certainly drop the plane out

of the air like a rock. By comparison, a 3" scale model would have a 25 mph speed for scale appearance. Upwind flight at 25 mph in a 10 mph wind would be easy. Given a low throttle airspeed of 25 mph downwind, the resultant groundspeed of 35 mph (Scale: 135 mph) is still high but still within reason. Such an airplane may seem large (80" span) but 1/4 scale WWI airplanes fly beautifully. Anyone who has seen the 1/4 scale Fokker Triplane at the SRAC field can so testify. In any event, 2" scale would seem to be as small as is desirable for WWI scale models. The larger jobs, such as the Proctor Nieuport 17 are a lot nicer. By the same considerations, it can be seen that 2" scale is reasonable for some WWII aircraft.

Now for the second point: BUILD IT LIGHT. Table II shows the stall speed and equivalent scale speed for a wide range of wing loadings and a maximum lift coefficient of 1.0.

WING LOADING	STALL SPEED (MPH)	EQUIVALENT SCALE SPEED (MPH)			
		1"	1½"	2"	3"
8	13.98	168	112	84	56
10	15.63	188	125	94	63
12	17.12	205	137	103	68
14	18.50	222	148	111	74
16	19.77	237	158	119	79
18	20.97	252	168	126	84
20	22.11	265	177	133	88
22	23.19	278	185	139	93
24	24.22	291	194	145	97
26	25.21	302	202	151	101
28	26.16	314	209	157	105
30	27.08	325	217	162	108

TABLE II - WING LOADING STALL SPEEDS FOR SCALE ACFT.

Notice that at 1" scale it is only possible to simulate the landing speed of a brick. Both scale effect and the fact that a typical 1" scale machine has a loading around 30 oz/ft² are against the builder. When these little jobs come in with still air conditions they look like toys. At 1½" scale the situation is a little better, but not much. At 2" scale, however, landing appearance is quite good for WWII fighters if they are not built too heavy. (This may be one reason why this type of machine is so popular.) For pre-WWII aircraft and for light planes, though, it is clear that 3" scale is the way to fly. The Fokker Dr-I mentioned earlier has a wing loading between 10 and 12 oz/ft² and as a result can fly and land at speeds which are beautifully realistic.

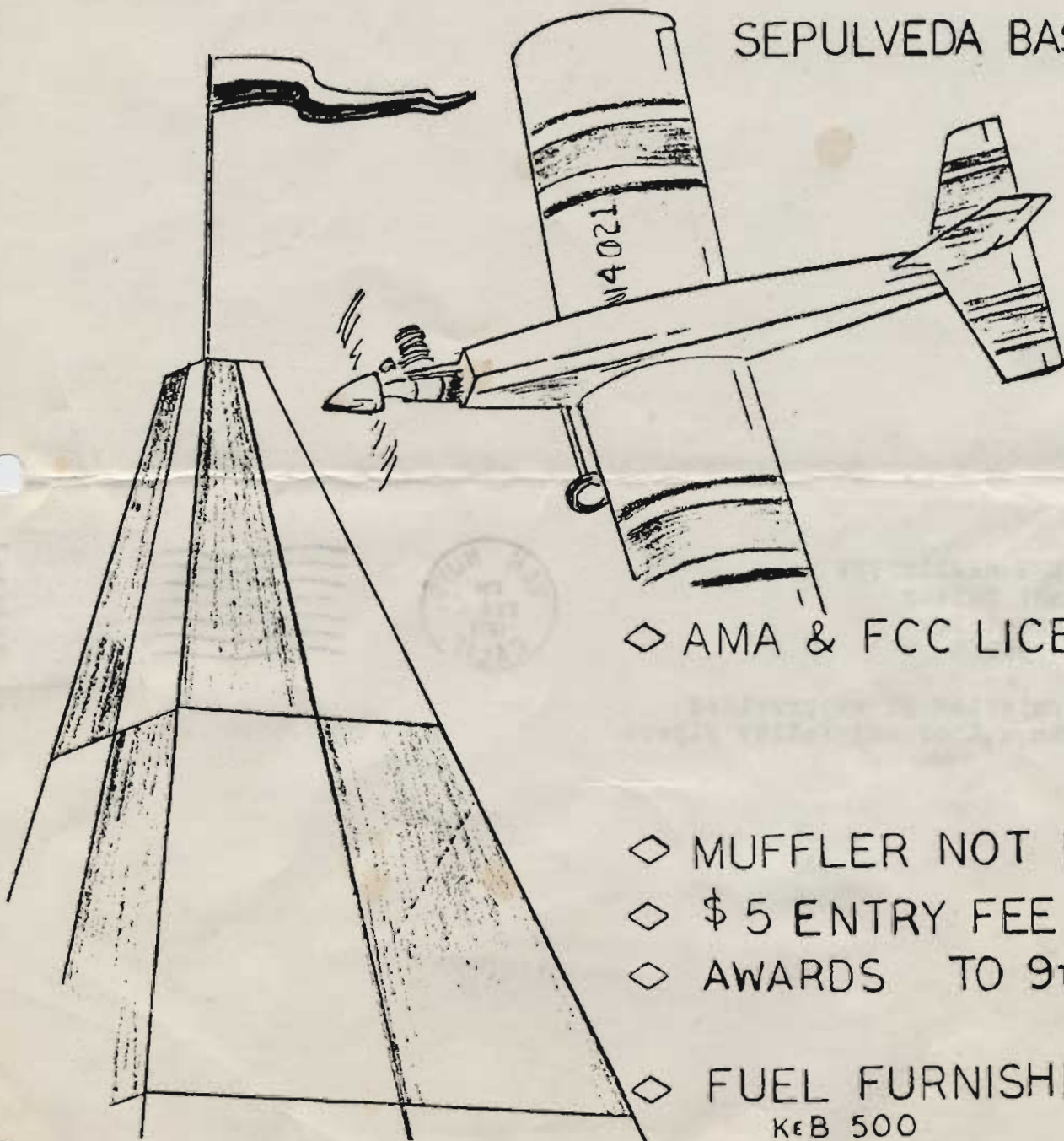
To summarize, flight appearance and construction considerations are what make the larger scale model look so good in the air. With so many magnificent construction jobs being done today we may yet see quite a movement towards large machines like Walt Moucha's JN-4 to gain an advance in flight realism.

VALLEY FLYERS

FORMULA 500 PYLON RACE

SUNDAY, 14 MAR 1976 8:00 AM

SEPULVEDA BASIN



◇ AMA & FCC LICENSE

◇ MUFFLER NOT REQ'D

◇ \$ 5 ENTRY FEE

◇ AWARDS TO 9TH PLACE

◇ FUEL FURNISHED

KEB 500

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