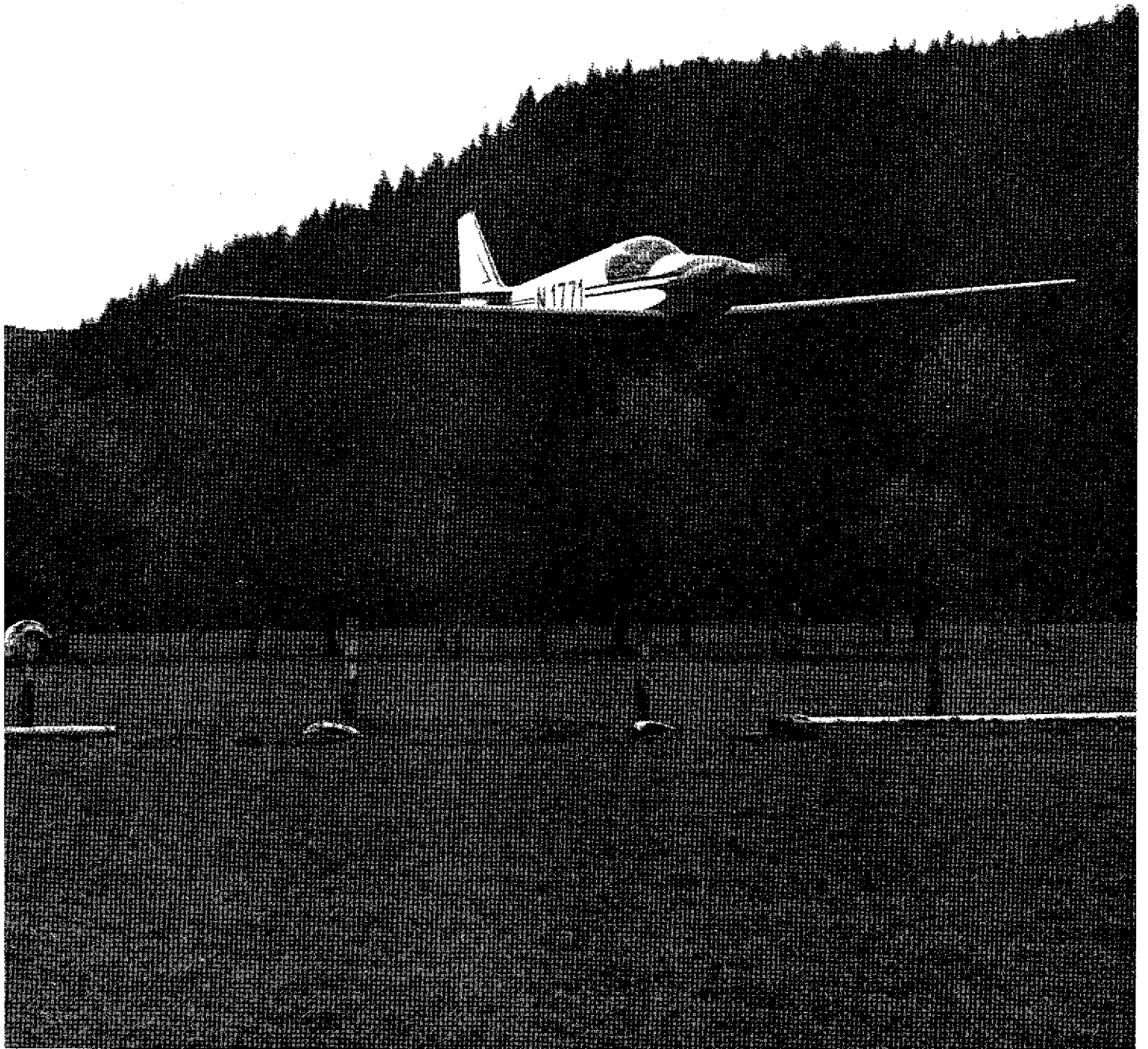


MOTORGLIDING

JULY 1974
50 CENTS



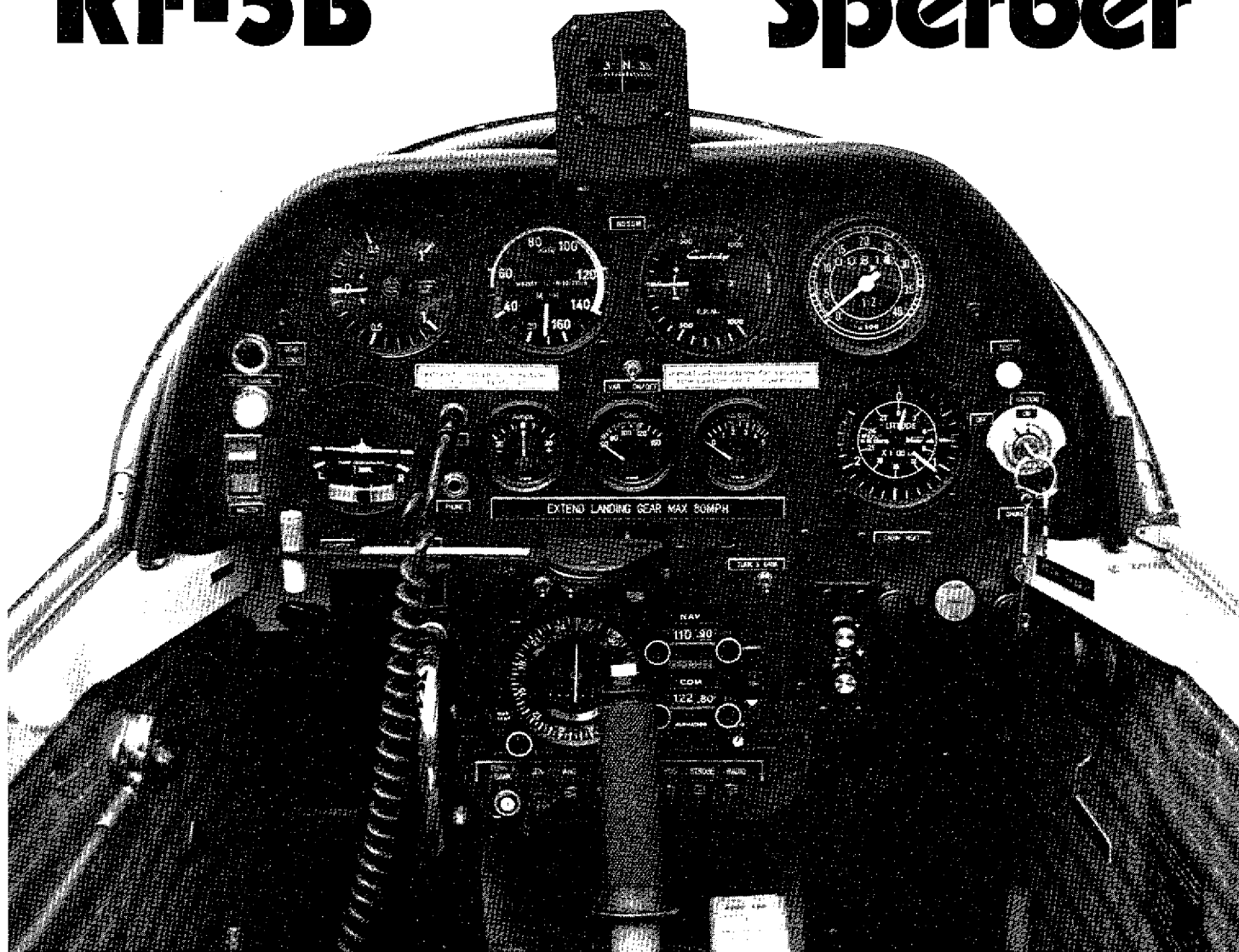
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MOTORGLIDING

Donald P. Monroe, Editor

Vol. 4, No. 7 Published by The Soaring Society of America, Inc.

July 1974

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Cover: RF-4D on approach, by Donald P. Monroe

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MOTORGLIDING ON HIWAY ONE

by Jack Lambie

There's four of us with Fournier's now. Charley Webber, the original, me, then Mike Bittner and just a couple months ago John Buckner got his magic machine. Watsonville is the first airshow of the season so we all decided to go in a four-plane gaggle. What is it like to go in such a mass of motorgliders along the varied scenery of California? Like a WWII raid, a national soaring contest or a flight of twittering birds. Well, it's a little of each, as we shall see.

Friday evening Charlie and I were lounging in front of his weathered little trailer at Flabob where he lives. Charley is a consulting mechanical engineer for the electronics industry and I was doing a streamlining job on a giant diesel semi-truck rig for Aerovironment on a NSF grant. As aerodynamic consultant on the project I was making the fairings and installing them here at the airport. Why here? Well, actually I'm an airport bum like Charley and this was a nice roomy pleasant place to work.

A faint humming and two graceful, long-winged, little planes, both glowing pink in the sunset circled over in tight formation and floated in to land. John and Mike! The four of us had dinner at the local Mexican restaurant enthusiastically planning the formation tactics designed to astound and delight any other pilots less favored in their choice of airplanes. After the warm companionship of identically excited and anticipating comrades we went back to the airport to do our last minute fussing. Taping fairings, cleaning canopies and tidying up the cockpits we prepared for the journey, because, "tomorrow, we fly."

In the cloudy and hazy morning weather of early Saturday we delayed for a couple hours until the day cleared and we buzzed into the sky climbing in the thermals over the hills and aimed for the Lilienthal Hang Glider Meet at Sylmar.

We motorglided northwest across the L.A. Basin trying to hold some semblance of a formation. It's harder than following a towplane in a glider but quite similar in technique. I didn't have a tran-

sceiver but was using one of those little "Sky Spy" fountain-pen-sized receivers to listen in. I heard Charley talking to my brother Mark who runs the tower at Chino as we flew by on our historic flight of motorgliders. John Bucker's home field is San Fernando Airport so naturally we all zoomed down the runway in a "low approach" tailchase and then pulled up to move over the hang glider meet.

A large crowd looked up from below at the colorful sails floating over the site. I quietly glided behind a pilot stretched out in his prone harness at least 1200 feet from the ground. A beautiful, startling sight from another plane. Only four years ago fourteen of us ran, leaped, and smashed down a gentle hill in the first meet. The cult of skyworshippers has increased many many times since. Another and another flung themselves from the mountain and glided away over the valley. One last circle and we moved off on our own special adventure.

Heading into the mountain wilderness north of Santa Paula and Ojai we found good lift under solid cumulus clouds. We vied with one another to find the strongest lift. At cloudbase we headed north one by one and, of course, were soon separated.

I just kept plugging along from cloud to cloud until at New Cuyama I chanced to see the gang well east of me. Radios are a help to getting together, I decided. I waited until they headed north again and then glided up behind and swished by leading them on down to the deck because this area is very clean and uninhabited. It is just right for legal low level flying and I wanted to go by Joe-Pete's ranch. This particular area and the ranch have a story behind it, of a bicycle trip, a broken landing gear, a pioneer rancher and his abandoned mansion and an unexpected rescue from the wheat field by a wildcat trucker. But later. Now we approached and circled the little ranch house, Joe-Pete and his wife Diane came out and we waved as we whirled around. Over the hills and along the ground we undulated in a single file until we got to the Soda Dry Lake where it is too dangerous to fly so low. You can't tell if you're 15 inches or 15 feet high because the surface is so featureless there is no easy height reference, except bits

of propeller blade flying off if you get too low.

As we gradually climbed higher some solid looking thermal columns appeared ahead and we were soon with engines off and climbing in an impromptu soaring contest.

I was circling carefully, concentrating on the variometer and I assumed everyone else was, when, what the, John came by slow rolling his Fournier, picking up speed at the end and whipping up into a loop. A golden eagle pulled up a couple hundred yards ahead of me, its pinions spread and tail fanned out and cupped down in soaring configuration. I stuffed the RF-4D into the thermal with him and wound quickly up to 8200 feet ASL cloudbase. The others were now far below still clowning around so I glided from cloud to cloud heading further north. Charley stayed with me awhile then he disappeared.

Near Parkfield a cold front sat with a hazy blue wash of rain and cloudbase way down at 5000 feet ASL. Then a faint call on my little radio's earplug, "Flight of three motorgliders landing at Paso Robles." Damn, that's 20 miles back. We best stay together, I thought, and glided back along the front. The lift was good and at the airport it was simple to hang under the clouds gaining 1000 feet per minute in the lift and then clapping on full spoilers for a run out to 3000 feet in the sunshine and then back under for another quick climb and 90 mph dive out of the lift. Far below I could see the wet runways and a gas truck beginning the fueling, about three gallons in each tank I would guess, but my friends were all inside out of the rain. Then at last the rain slackened and the little props began spinning to pull the ships back into the sky.

I had hoped to sneak up on them from behind and surprise them when the group set was well on its way again but they had seen me and were climbing up right into my thermal. We gaggled off to the Antique Show and made our formation fly-over and landing in simultaneous touchdown.

After a cursive look at the unique and flawlessly rebuilt and preserved of yesterdays flying we walked miles into town for a steak dinner. Another long walk back to the field for sleep snuggled down in our bags under the wings of our planes, each of us with his own like baby

birds with their mothers. In the morning we caught the special bus the organizers had arranged to take all the participants to the superb breakfast put on by the local club.

In the sun sprinkling through the trees we had bacon, eggs, pancakes, juice, toast and coffee at outdoor tables. Good conversations with old pilot friends and each other.

Back at the field we took turns sitting by our planes and wandering around the rows of varied and rare flying machines. My turn to stay by the planes:

"Did you build these yourselves?"

"No, they're made in West Germany at Sportavia, from a French design."

"What kind of engine you got in there?"

"Its a VW motor made in Germany but modified in France for aircraft use. We get about 28 hp out of the little 1192-cc mill at cruise speeds of 3200 rpm."

"How fast do they go?"

"They run at about 113 mph using around 3 gallons per hour or less."

"Does it glide very good?"

"They will fly alongside a 1-26 at 65 mph, but of course they have a higher sink in circling flight. We have soared quite a bit though."

"How much to buy one?"

"They cost about \$12,000 now, I think, at today's exchange rate."

"Did you build these yourselves?"

"No, they're made in West Germany from a French design with a German engine made in France, etc., etc., etc."

"Etc., etc., and so on?"

"So and so and etc. and etc...."

In the afternoon the pampered airplanes were readying to fly to their home bases and we squeezed into line for our turn. When Charley got the wave we all charged forward in a mass formation takeoff. Seconds after takeoff we were in a tight formation over Monterey bay, made easier by the smooth sea air, and a quarter hour later we swept over Carmel, Pebble Beach golf course and the 17-mile scenic drive area. We dropped down to skip over the sea along the rocky coast. The blue, glittering sea swelled and moved, splashing on the rocks that we curved and moved between or lifted over. We made steep banks to follow the coastline and stay just over the surfline.

Everything was moving, moving, the waves, the sparkling sun flecks, the horizon tilted and spun, the controls made controlled pushes and pulls to accelerate the machine in each direction and new planes necessary to stay in position and keep from hitting waves or rocks. Eventually we tired of the mad maneuvering, as delightful as it was, and pulled up a few hundred feet to run alongside the highway. Waving auto tourers and photographers at the turnout viewpoints enjoyed our four-plane flybys as we moved down the coastline in the good northwest tailwind. We climbed through Big Sur, swing around the restaurant at Nephenthe and curled in and out of the rocky headlands.

I moved in position to attempt getting a boost from the wind hitting the curving coastline and sure enough, good lift along the edge. By trying to hold my low altitude the speed picked up and when I reached 125 IAS I eased the throttle back until everything stabilized at about quarter power and 120 speed. But not for long. The shore curved a little too far east at one point and as I followed it around, feeling very smug, I was violently lifted out of the seat and banged against the canopy, the gear dropped out and this bump was immediately replaced with an equally strong negative shove. I slowed up, pulled up the gear and humbly moved out over the ocean with the others to fly in the smooth air.

Over Pismo we turned inland, made a flyby at Oceano Airport and headed directly for Santa Paula field. Cumulus were scattered over the mountains so all began soaring as we worked higher into the mountains northeast of Solvang, the "Danish" tourist town. After a couple thermals together Mike and John headed far south off course, while Charley and I headed directly on line for the famous Santa Paula airport over mountainous wilderness. Lift was good and clouds spaced enticingly so I shut off the VW and glided quietly from one lift to the next. Past Ojai we were still soaring, Charley with his engine just ticking over, and the pleasant view of green mountains and valleys, the quiet swish of wind as we were lifted higher was a nice relaxation from the previous motoring. Santa Paula looked glideable at last so we set sail about 12 miles out.

As we arrived over the field we could see Mike Bittner taking off after presumably refueling. John had obviously gone on home to San Fernando earlier. We had fooled around too long soaring and they had given up waiting. We may as well go on home too. I slanted down in a steep dive to spin the engine. I was too lazy to pull the starter. The engine was spinning but no fire in the cylinders. I slowed up and pushed the wheel down, full spoilers out, and landed at the airport. It turns out that if you make too steep a dive the fuel in the carburetor and fuel lines gets sucked into the gas tank because of the inability of the cap vent to quickly equalize pressures. The engine started fine once I was on the runway. We may as well visit now that we're here.

Mira Slovak's hanger was filled with his trophy collection, glider, Messerschmidt and, along one wall, the map of his trip from Europe to Santa Paula, Ca. in his Fournier. It is amazing what distances he got with carrying 36 gallons of fuel. At 40 mpg that would be almost 1500 mile range.

In one hangar war replicas of about 80% scale were being made by using a basic wood frame and gluing urethane foam blocks to it and shaping the foam to the particular aircraft they wanted and then covering the foam with resin and cloth. An accurate VW-powered FW 190 German fighter was almost ready for flying and production. I sat in it but didn't like the feeling of peeking out of a barrel. I guess I have mixed feelings about people making warplane replicas. It seems like some kind of glorification of the most terribly wrong uses to which airplanes have been put. Can't a flyer find some meaning in his aviating without pretending he is a flying killer. Well I guess some people must need that kind of ego trip. German fighters are especially popular. I guess then you can fly around feeling really bad and wicked harmlessly. Maybe it's a good harmless outlet. I don't think so. It fosters the idea perhaps that it might be really great to hop in a plane and shoot things up for some cause or another in the future. I think warplanes are fascinating as flying machines but can't they repress the urge to paint swastikas and camouflage paint all over them.

A pile of old aviation magazines on

a chair in the corner of the hangar caught my eye.

I shuffled through them. Over the years what many ways of flying have been done. Biplanes, canards, pushers, combinations of engines and many devices planned to increase lift, all sorts of wings and airfoils, moveable controls and wings and unique machines to do one particular job like highly specialized birds. Yes, flying is a very rich and opened activity with no limit except the imagination. But wait; whats this? September 1957 of *Flying Models* magazine. Could it be? A quick look and there it was, an article on the *Zogling* towline glider I had written. What memories. The warplane replica builder gave me the treasured copy. Many thanks.

Charley and I flew our motorgliders up in the sea breeze and turned to the hang glider meet to catch the last few flights of the Lilienthal contest slowly floating down the mountain. Then on to Riverside in the golden glow of late afternoon.

Charley's red and yellow flyer rolled off to Flabob with a wiggle of his wings and I glided the last five miles to Riverside Municipal Airport.

I had an agreement with the tower to circle north of the field until they gave me the green light, since I have no radio. The wheel dropped down at the push

of the lever and I circled around at pattern altitude. No green light and no traffic. I slowly let the ship glide lower each turn so the tower would see me.

I wasn't impatient. Finishing a long flight is something that always comes reluctantly. I savor the sweep of city and hills, setting sun, the swish of wind and quiet mutter of the slowed engine, and the gentle push of the seat from circling G forces. The most real and memorable part of the flight was certainly the soaring, I ruminated, as I concentrated on making the slowest, tightest, ball-centered turns I could. But, then, perhaps the warm feeling of racing over the countryside with good friends, dinners, talking, looking at things is just as fine. It's beautiful times that can produce such aerodynamic machines, good pilots to enjoy them and bring us together for our adventures. We're lucky.

Then the green light. I pull open the spoilers and dash for the edge of the runway. How nicely everything rolls around into position with a push of rudder and ailerons. The ground moves closely under, the wheels make rolling noises and the airplane is now an earth machine. I pull the fuel off as I taxi to the hangar and the engine stops. The ship coasts quietly down the gentle slope all the way to my hangar at the end of the row and stops at the doors.

FOREIGN SCENE

by S. O. Jenko, Dipl. Ing. ETH
AMTECH SERVICES

It appears that the two-place auxiliary-powered sailplanes in Europe have been very popular for some time because of their diverse utilization. The single-place auxiliary-powered sailplanes are rather few in numbers—but this may change if the present efforts to produce them are successful. The German *Aerokurier* had an interesting story about such a new design. The translation is presented here, the illustrations are from the French *Aviasport*.

Auxiliary-Powered Sailplane Scheibe SF-29

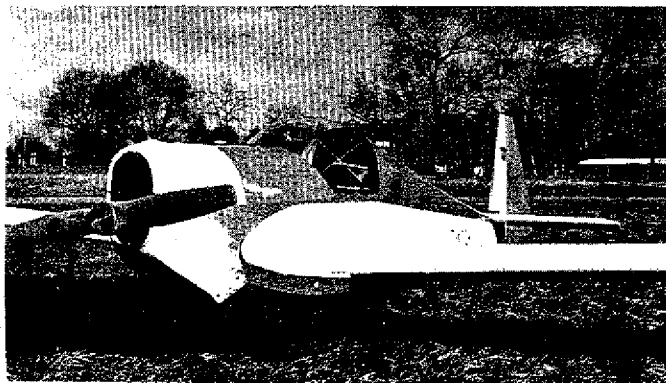
The auxiliary-powered sailplane Scheibe SF-29 made its first appearance

during the 1973 APS Contest at Burg Feuerstein*. This prototype was used primarily as a test bed for various power plants. The SF-29 is the result of many years of development work which began in 1957 with the *Motorspatz* (18 hp Zink Brandl AB-300 engine) of which some 50 were produced. Then came the two-place SF-25 and the single place SF-27M with retractable engine (first flight in 1967). At that time it was regarded as an ideal auxiliary-powered sailplane. However, the manual actuation of the erection-retraction mechanism caused some problems. Experience was required to fly the SF-27M and therefore was of limited use for soaring clubs consisting of novice and less experienced pilots. Thus only a few soaring groups or individuals with experience used it. These pilots achieved very good results; flying with power only 10 to 20 percent

of the total time, the rest being soaring flight. The total annual time was between 100 and 150 hours.

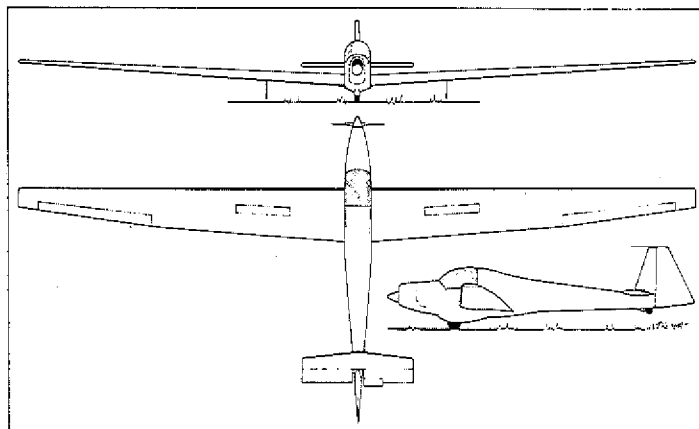
Aiming to create a single-place auxiliary-powered sailplane which would not overburden the pilot, and feature a dependable engine, the Scheibe Aircraft Company developed in 1969 with Sportavia-Putzer the SFS-31 *Milan*. It is a combination of a RF-4 fuselage and SF-27M wing panels. The engine was a 39-hp Rectimo engine (using VW and Porsch engine parts). The SFS-31 *Milan* had a retractable wheel and a glide ratio of close to 30. In spite of good performance there were few buyers. This combination as described and with some changes in the wing main fittings resulted in a rather heavy 660 pounds empty weight. Since a new design was expected, not everyone was happy with this crossbreed. Some of the complaints voiced were about the length of the fuselage and the tail size.

The experience gained was used to develop in 1973 the single-place auxiliary-powered sailplane Scheibe SF-29, having a fixed undercarriage and the engine in the fuselage nose. It has an empty weight of 572 pounds, i.e., 88 pounds less than the SFS-31 *Milan*. Even the takeoff weight is 110 pounds less, although the wing span and area are about the same. The SFS-29 prototype was used primarily as a test bed for various engine installations. The much-used Hirth F 10 engine (26 hp) developed in 1960 no longer satisfies the current requirements. At the beginning, a rotary engine of 20 to 22 hp was used. However, flight testing showed a more powerful engine was needed. A Hirth snowmobile 2-cycle inline engine 017 is being adopted for the use in the SF-29, limited to 30 hp for



SF-29

the present time*. The current work is concerned with the reduction of engine vibrations. The performance of the SF-29 is similar to the two-place auxiliary-powered sailplanes by Scheibe. No decision has been made regarding using this powerplant in the SF-29 production models; the engine certification would have to be carried out first.



SF-29

Technical Description

The SF-29 is a low-wing auxiliary-powered sailplane. The two wing panels and the tail are made of wood. The fuselage has the usual welded-steel tubing construction. The complete independence on the ground is provided by a non-retractable main wheel, steerable tail wheel and wing outriggers. The engine is muffled and is equipped with an electric starter. A feathering propeller for soaring flight is also included. A comfortable seat with a side-hinged canopy provides a splendid visibility. The foot pedals are adjustable; there is also a wheel brake. The flight path control is accomplished by spoilers.

The assembly and disassembly can be easily accomplished. The principal aim was to design an auxiliary-powered sailplane which would be easy to fly and thus be suitable for use by soaring clubs. This was accomplished by using Goettingen airfoils which are responsible for docile characteristics in the lower speed range.

The SF-29 still flies at 40 mph to 43 mph and according to the Scheibe's test pilot Gad its flying characteristics are very nice and similar to the two-place SF-28 (*Tandem Falke*) auxiliary-powered sailplanes.

* rated at 36 hp at 5500 rpm

Because of the airfoils used flying in rain presents no problems and no air-speed increase is necessary in the low speed range, a feature stressed by Scheibe. With the feathering propeller the glide ratio is about 28, assuring good soaring capabilities. The Scheibe Aircraft Co. hopes to keep the price within 30,000 DM (Approx. \$10,800).

The same issue of *Aerokurier* has an article on the further development of the two-place Scheibe SF-25 *Falke* auxiliary-powered sailplane. The translation follows.

Faster SF-25CS *Falke*

With the increased performance of *Tandem Falke* SF-28 the soaring pilots expressed their desire for improved performance of the two-place, side-by-side SF-25 *Falke*.

Many pilots prefer this seating arrangement. Scheibe improved the performance by following the same procedure as

in the *Tandem Falke*: adding a feathering propeller and making aerodynamic modifications. The result is the SF-25CS *Falke*. The fuselage shape was improved and the rear portion was redesigned. To the engine cooling air system an adjustable cowl flap was added which can be closed during soaring flight; the shape of the engine cowling was also substantially improved. Furthermore, the amount of engine cooling air can also be controlled which is of considerable importance during cold season flying.

The flight tests show that the side-by-side SF-25CS *Falke* approaches in performance the SF-28 *Tandem Falke*. The certification of the CS *Falke* is completed; thus in addition to the standard C *Falke* the CS *Falke* is now available. The price is 49000 DM (approx. \$17,600).

The number of B and C *Falke* models produced to the end of last year is about 500.

Technical Data of Scheibe's auxiliary-powered sailplanes

Model	SFS-31 <i>Milan</i>	SF-29	SF-28A	SF-25CS <i>Falke</i>
Number of seats	1	1	1 + 1	1 + 1
Wing span ft(m)	49.2(15)	49.2(15)	53.5(16.3)	50.3(15.3)
Wing area sq ft	129	134.3	197.2	187.7
Aspect ratio	18.6	18	14.5	13.8
Empty weight lb	660	572	880	858
Total load lb	286	242	418	418
Gross weight lb	946	814	1298	1276
Best glide ratio	...	28	26	25
Min. sink	ft/sec	2.46	2.96	3.12
	at	mph	43.5	43.5
Landing speed	mph	39.8	40.3	40.3
Power plant	Rectimo	Hirth	Limbach	
	4 AR 1200	017	SL1700EA1	SL1700EA
Power	hp	30	60	60
Max. airspeed	mph	112	112	112
Cruising speed	mph	100	100	100
Rate of climb	fpm	532	394	413
Range	miles	416	186	310
	hrs	4	2	4
Service ceiling	ft	19700	...	16400

THE CHICO SOARING ASSOCIATION'S T-61B

by Gordon Casamajor

The story of N61TB's journey from a small English village in Yorkshire to a small northern California soaring club covered many months of work, but it was worth it.

The beginning was an idea brought up at a club meeting last winter after the sale of the club's 2-22E to the San Diego University glider club. Why not try to buy a used motorglider? Inquiries to Pennsylvania regarding the only one advertised in the U.S. brought the news that it had been withdrawn from the market. The British *Sailplane & Gliding* magazine carried advertisements of a couple of old ones. Several letters brought one reply from Mr. R. E. Pears in Penecuik Scotland indicating that due to the energy crisis and the economic crisis, his club had elected to continue with the three year old *Falke* they had, but also told us of a prototype built by Slingsby Sailplanes in which they had installed an American Franklin engine. It had been advertised in August 1973 *Sailplane & Gliding*.

A phone call to Slingsbys revealed that they still had it and would sell it for 4000 pounds Sterling. Built in 1972 they had put some 32 hours on the engine and had found that the 60-hp Franklin had greater fuel consumption by nearly 50% than the VW Stamo engine usually fitted into the Scheibe airframe. With the extra weight of the starter, alternator, and battery, the payload was limited.

The Chico club decided in February to order the *Falke* and sent a letter of credit from the Chico branch of United California Bank for approximately \$10,000. Then the long wait. First Slingsby said they had trouble getting packing materials; coal miners went on strike and restricted their use of power; the railroad workers went on strike; the constant paperwork battle both with the FAA and the British CAA went on and on. FAA insisted on serial numbers of the airframe, engine, and propeller prior to registry. We later found out that this information was not needed by either GADO or the Oklahoma City facility.

The *Falke* was test flown on 24 April

and trailered back to the factory at Kirkbymoorside. There Slingsby ran it through the factory and re-newed all worn parts and gave it a paint job. The British registration numbers were painted out, and it was packed in a plywood box 25 ft. 6 in. by 5 ft. by 6 ft. Delivery to the docks at Liverpool was completed 18 June and scheduled to be put on the M/S *Margaret Johnson* bound for Oakland, California. Sometime between delivery to the dock and sailing time, the maintenance workers on the Liverpool docks went on strike. Even though the Johnson Line had a ship departing London every Friday, nothing moved into or off the Liverpool facility.

While in England during the first week of August on a vacation trip I called the agents in Liverpool to see if there was anything that could be done to get our motorglider on its way. I was told that the union would only meet with management on Thursdays to discuss their problems, and the agent had some 60 containers on the same dock waiting for passage.

Finally the strike was settled and our *Falke* was put aboard the M/S *Annie Johnson* and sailed from Liverpool 26 August arriving Oakland Sunday 15 September in a 40-foot-long container packed with other goods.

Chico club members borrowed a large flat-bed trailer and drove from Chico to Oakland in a small motor-home. Payment through the Chico Bank was done on a sight draft bill of lading basis that worked well once the papers arrived from England. Slingsby sent duplicate sets, one by air mail and one by sea mail. Both sets arrived in Chico after the *Annie Johnson* had come and gone and in the same delivery.

On advice of the Johnson Line agents in San Francisco, we hired a customs broker to fight the paperwork with customs. My son and I dropped the trailer off on the docks in Oakland and drove to the customs broker's office in San Francisco about noon. By 2:00 pm they managed to get us the customs clearance necessary to pick up our box.

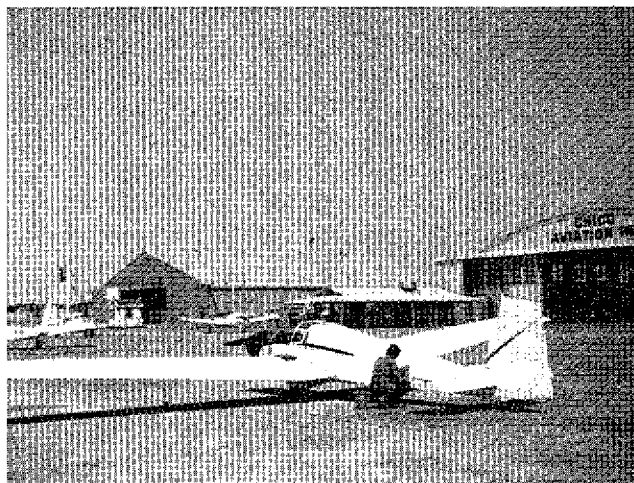
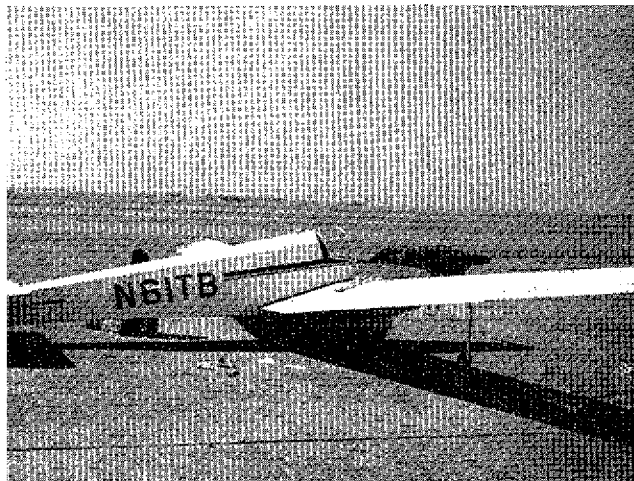
Driving back across the bay to the docks, we had the box on the trailer and were on our way home to Chico by 4:00 pm. The 2000-lb box just did fit the trailer

with tongue weight that was a bit light, but other than the bad crosswinds along Susuin Bay, the tow gave us very little trouble.

During the long waits for the *Falke* we had been able to get some things done with FAA. We requested and got our special numbers of N61TB. Slingsby had sent us the signed bill of sale, flight test reports, and cancellation of the British registration that is a requirement for imported aircraft. The log books for aircraft and engine were packed in the case with the *Falke*.

The great opening took place at Chico Municipal Airport on 19 September. Aero Union Corporation, a Chico-based air tanker firm who loaned us the flat-bed trailer also had a fork lift which we used to gently take the crate off the trailer.

The British packing was well done. One small gash in the right aileron, where the prop had moved, was the only damage.



Assembly proved to be interesting as there were no instructions with the shipment. The Chico club has had an AS-K 13 for three years and our familiarity with the German design for attachment of the wings enabled us to complete the assembly in less than one-half hour. There were some minor rust spots on the steel attach pins for the rear spar and front spar as well as the horizontal stabilizer pins. Steel wool cleaned those up nicely. The main wing pin has a substantial T-handle and it went home with one tap of a hammer. The push rods for the ailerons attached with PIP pins as do the spoiler cables. The pitot tube is in the left wing and attached just behind the main spar.

We filled the engine with $2\frac{1}{2}$ quarts of oil, installed the battery in a fully enclosed box just behind the wheel, and checked all the spark plugs. The "training wheels" drop into steel sockets on

each wing and are held with bolts and wing nuts. The wheels are supported by about one-inch-diameter nylon rods that allow flex in any direction.

Our first engine start was by hand propping as we discovered that the battery had one bad cell that would not hold a charge. Sitting in the box on the docks of Liverpool for two and one half months did the battery no good. The Franklin is a high compression engine that requires a full power charge in the battery to start on the ground. Starts in the air get an assist by increasing the airspeed, of course.

The FAA GAD Office from Sacramento was kind enough to get an inspector to Chico on Friday 20 September. After spending over an hour with the paperwork, the inspection took about 15 minutes.

The test flight went smoothly. We replaced the battery with a fresh new one and the start was normal. The steerable tailwheel works off the rudder much like the Piper tail-dragger system through two springs. One must allow ample room for all turns as there is only the one wheel to brake. The Franklin idles fast, about 1100 rpm. Below that it runs very rough. Mag checks are done at 2500 and 250 rpm drop is allowable. The bicycle-type hand brake is enough to hold during run-ups.

With 2750 rpm and the stick held back the *Falke* flies off at about 40 knots at Chico (elevation 253 feet and 98° F temperature). Holding about 50 knots seems to keep the cylinder head temperatures well below redline of 425. The oil temperature has not gone beyond 220 on any climbs so far.

At 50 knots solo, climb was a little better than 500 fpm. With two aboard and four gallons of gas, climb out at 50 was about 350 fpm. The 50-foot wing makes the *Falke* very stable in the air.

Stalls are very mild power on or off. Two feet of stall strips on the leading edge of the wings give good stall warning buffeting prior to the full stall. The control surfaces are large and do require considerable pressure on both rudder and stick for turns. With sufficient pressure though they are quite effective. In comparison pressures for pitch control seem quite light, but very effective. The trim tab control between the seats is very effective for hands-off flying.

Even at Chico with high temperatures the vent system of a small vent in front of the canopy plus a small window on the left side that can be left open in flight gives good air circulation. The canopy can be held open on the ground as it is hinged at the front. This helps.

Takeoff solo took about 400 feet and dual perhaps 650. Approach speed is 50 knots power off or on. The spoilers are less effective than the AS-K 13 system but do improve the sink rate, particularly at slow speeds. Landings are made tail down. The large balloon tire main wheel with but 20-lb pressure gives good shock absorbing effect. The seating to one side of center takes some getting used too, but as you get closer to the ground it is quite easy to correct for any drift. Slips with or without spoilers are very effective and I experienced no buffeting in slips.

After checking some of the club pilots out in the *Falke*, I have noticed that most prefer to fly with the stick in their right hand. I think that we shall have to put the students in the right hand seat so that they can get used to using the left hand for throttle, trim, spoilers and handbrake. This should make the transition to our AS-K 13 easier.

The British Gliding Association has been good enough to let us have copies of both their flight syllabus and flight manuals they have developed over the years of using the Scheibe *Falke* as the standard primary trainer. Les Arnold was in Chico giving private glider check rides the first Sunday we had the *Falke*. He also gave a commercial glider check ride to a Chico Soaring Association member in N61TB. Les demonstrated the usefulness of this trainer by doing three landings and a go-around under power on our 3000-foot long mat, on just one approach.

The Slingsby T-61 *Falke* with the Franklin engine is a sturdy simple machine that should greatly simplify our club's training. Although the Franklin burns more fuel than a VW Stamo engine, the 3.2 gallons per hour is an amount that we feel we can handle. The L/D of 20 solo and somewhat less dual even with the small fixed propeller is not high performance, but still a glider. After seeing the kinds of rough grass pasture the British and Germans were flying *Falkes* from this last summer, I feel that the

"training wheels" should give us very few problems operating as we do from paved runways. In fact, they should prevent severe ground loops. Once our new members master the patterns and approach, moving to the AS-K 13 will be a real step up.

LETTERS

Editor:

From April 1974 *Motorgliding*, page 14: "others must continue to communicate...."

Dear Sir. That's a fine idea, but the monkey-wrench acrobats don't have the sharp pencil of Donald Monroe and Ann Landers so they don't put thoughts in words.

Unless, that is, you offer to streamline and put the grammar right if they send in photos and specs.

Then a li'l competition could help—throwing out a challenge and wait for the response.

My idea is that we ought to go back in time and development. A few people can cough up \$20,000 for an imported N3998, but most can't, so they have to fly on the cheap and accepting what they get that way.

One guy in Paris, France has solved the problem by combining the Rogallo wing with a Volkswagen—towing up at 20 mph and releasing right over the city streets—which means he can step out the door and fly any old day, speedily and efficiently. And he can take his 747 on the ski lift and assemble at the top and fly down.

Last year in *Sport Aviation* we saw Wayne Ison of Elkhart, Indiana in his fresh air PDG-2. With this engine configuration towing up after a car is easier than with prop and engine up front, so why not encourage simple combinations with low power—streamlining enough for a 20:1 glide and cheapest possible material, covering then being old-type fabric and dope, except up front where plastic and glass-fibre usually lends itself to nice(r) curves.

Spectra seaplane of Merritt Island, Florida has the engine in the tail. Why not steal that idea and put a geared slow prop, or a fast direct drive shrouded fan there, with a pilot capsule up front, and a boom-type connection to the rear end. Such a plane can be towed up easily and can fly by its own power, once up, on a

cheap industrial engine of 10 - 15 hp. (*Spectra* has 300.)

Then you can send an industrial spy to James Bede and look see how he made that freewheel clutch in the BD-5. By the sound of it in a late *Flying* copy, it's a simple and ingenious affair of lathe wizardry.

Then you can encourage foreign readers—and native Yankees 'n Rebels—to report in what they read in their local Tinky Toy magazines. One of the hardest things in this life is to get a good idea to spread from one country to another.

Nimbus is a fine piece but we don't have to own one to get off the ground.

There have been successful designs aimed at superquiet planes. One design is the one with engine midships and a long overhead shaft to propeller up front. Why not encourage a design with four-stroke engines (motorcycle engines?) turning slow props? Then motorgliders can fly with "near" sailplane conditions. For this, two-strokes up front are prohibited, as we have bitter experience of here.

Motorgliders are very akin to EAA kites—eg, low-power flying. Why not beat the drum to EAAers in *Sport Aviation* or printing up a li'l come-on sheet and send out to all EAA chapters in *all* lands. You don't make too much noise as it is—so few find your door.

Bengt Nilsson
Umea, Sweden

Thanks for your letter. I will keep my pencil as sharp as I can—that's my job—Ed.

Editor:

You may be aware that I am one who favors "hairy stories" of near accidents that didn't quite happen as one of the best deterrents to accidents by pilots. In October 1973 the editor of *Motorgliding* did me the honor of printing my completely fictional account of an imaginary crash in a motorglider. The story was based upon the flights I had actually made over the desert east of Reno in my *Austria SH-1* sailplane during the Nationals in 1966. It was intended solely to point up the hazards of getting too low in a motorglider, too low so that should the engine balk, the pilot would

be in trouble. This would be worse in the motorglider than in the pure sailplane for reasons elaborated upon below.

But what I write about here is that I have received some feedback over the intervening months since this story was published (it was titled "Diamond Attempt by Motorglider") that suggests some people may have read it, and I wonder if indeed anyone has been saved by my gruesome tale. Portions of this feedback are of interest, one of the stories because it happened to the pilot just as I had told it, although it had happened before my story came out (I didn't know it then), and another experience had happened to the very pilot I had silently and secretly dedicated the story to. The first mentioned I have from a personal letter, and the second is from second hand (not third hand) information. These pilots I reserve the right to keep nameless, as also I do with my source. The letter was from abroad, and the pilot told me that he had crashed precisely as I had described it. The crash had nearly finished him, and even after months in

the hospital and many months out of it he had not yet fully recovered from it. The second hand report is worth telling about:

This pilot made a low save over bad terrain in his motorglider, one that had the engine not started would have had serious repercussions. But luckily it did start so nothing came of it. Except that the very next time the pilot tried to start his motor in the air, it didn't respond. The very next time! Close, don't you think? I'm told he thought so.

The lesson I tried to suggest by my original story is simply this: In a *sailplane* when the moment of truth arrives and you know it is time to go back to that last field you have kept in your mind and land, you have left a minimum altitude above it below which you decided not to go, and this altitude is now there for you to plan where you will put the sailplane; consider the obstructions that you are only now in a position to know about, both around the field and on the ground, consider the wavy terrain, the grade you did not see from above, the roughness of it, the softness of it, the hidden fence and so forth, and you are completely occupied planning how best to set up the final approach and negotiate the landing, the roll as short as you can make it, and conveniently near the road or farmhouse of whatever consideration you may make once you are sure of what is down there. But with the motorglider, you still have to have this altitude and this time to make decisions *after you have abandoned any further hope of a balky engine starting!* So you have to decide when to make an out-landing *higher* than you would in a sailplane. I assure you that after you have tried to hand start your engine and had to abandon it, you will be in a considerable state of mental and physical agitation, and will be much less in a position to make cool and safe decisions than you would have been had the problems of the balky engine not been present. Altitude is your only margin between success and possible trouble: so be darned well sure you have enough!

Steve du Pont
Fairfield, Connecticut

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POSTFLIGHT NOTES

Thanks to the letter-writing efforts of SSA Publications Board Chairman Bernald Smith, we had a brief flood of material for *Motorgliding* a few weeks ago, enabling us to publish this issue, just a month after the last one, and another one, to come out in April.

We appreciate your patience over the last several months, which have seen periods of six weeks to three months between issues. But the problem remains: a chronic shortage of material. To those of you who are *in* motorgliding, whether it be designing, building, flying, or whatever, please continue to share your experiences, ideas, problems, and successes with us. I, and I believe our readers, would particularly like to hear of any and all developments in powerplants, because this seems to be the area in which a breakthrough is required for motorgliding to really grow in this country. If you hesitate because you can't type, please don't let that stop you. As I promised my friend Mr. Nilsson, I'll try to keep my pencil sharp.

Steve du Pont was kind enough to send us a newspaper clipping about a research project which was conducted in the east involving an RF-5B *Sperber* in a study of hawk migration. Bill Welch, of Danbury, Connecticut, was the pilot, operating a ship on lease from Sport-Aviation, in Ohio.

Heublein, Inc. was underwriting the costs of the project. Heublein also sponsors the annual transcontinental sailplane race, the Smirnoff Sailplane Derby, and contributes to the U.S. soaring team.

This issue is the last one of the subscription for 418 subscribers. A renewal notice has been sent to each of those 418. If you're one, your prompt response will assure your receiving the next issue in our first mailing, which, as I said above, will be in April.

This year's Burg Feuerstein meeting will be held during September 6-13, according to a note from Hans Zacher. More details next month.

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