

MOTORGLIDING

FEB.-MAR. 1976
50 CENTS



BEST OF BOTH WORLDS.

ENGINE:

SPORTAVIA-LIMBACH SL 1700 E
68 hp AT 3,600 RPM

SPAN:

55.9 FT.

LENGTH:

25.3 FT.

EMPTY WT.:

1,012 LBS.

T.O. WEIGHT:

1,500 LBS. LBS.



THE SPORTAVIA

RF-5B

Sperber

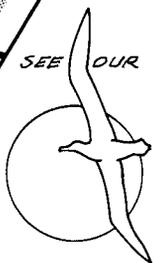
4 GAL/HR FUEL CONSUMPTION
250 ST. MI. RANGE @ CRUISE
43 MPH. STALL SPEED
143 MPH. MAX DIVE
100 MPH. CRUISE
9.8 FT/SEC CLIMB
18,000 FT CEILING

GLIDE PERFORMANCE

2.5 FT/SEC. SINK SPEED (1 PLACE)
3.1 FT/SEC. SINK SPEED (2 PLACE)
26:1 BEST L/D

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MOTORGLIDING

Donald P. Monroe, Editor

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Cover: Tasso Proppe and John Chalmers' SFS-31, by Don Monroe

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A TOTALLY INDEPENDENT AS-K 14
or "the flying pastries over Helsinki"

by J. Tervamäki

If you were an AS-K 14 owner in the U.S. you may have learned to understand what were Mr. Kaiser's aims in designing this beautiful motorglider. He surely had those green, grassy German glider fields in his mind with some helpers and a wingman always available for takeoff. He probably never imagined that some day a strange fellow in Finland would want to fly it from a busy international airport with paved runways or at least he has not seen Finnish glider fields which mostly have very rough gravel runways including bigger-than-fist-size stones. In both of the latter circumstances the tailskid and dragging wingtips of the AS-K 14 are not very practical to operate especially if there are no helpers and wingmen available whatsoever. Even worse in the case of my AS-K 14, OH-440, which I have to pull out alone from the back row of a hangar having only 25 feet of floor space available between the wall and two unmovable helicopters, which looks impossible for a motorglider of 47-foot span. So, when I bought the AS-K 14 from Germany, everything appeared to be against my serious intention to operate a motorglider from Malmi airport in Helsinki, the busiest general aviation airport in Finland, situated about eight miles from the center of the city and only five miles from Helsinki international airport. However, after some redesign of the AS-K 14 landing means and the addition of new ground handling equipment my soaring trips from Malmi proved to be a great success.

The first thing to do was to make the aircraft taxiable on paved runways. This necessitated the replacement of the standard tailskid with a steerable tailwheel and the addition of outrigger wheels under the wings. To design a steerable tailwheel arrangement which produces a minimum of drag increase requires imagination. I didn't want to make any holes in the fuselage or to add extra cables or pulleys to the rudder pedal system. I avoided them by strengthening the rudder itself from the lower hinge to the bottom end and by placing there a stainless steel steering spring which lies in the already turbulent wake of the tail wheel. The whole arrangement is hardly bigger than the original tail spring and skid. The steering system can be locked

to the rudder and unlocked in about a few seconds, the purpose of which becomes clear later on.

The outrigger wheels were at first a problem. Originally I had planned to design and build retractable outriggers but soon realized that it would mean losing the complete 1974 soaring season in stripping, recovering and painting the wings. Therefore, I ended up with a "ground retractable" outrigger system where the outriggers "move manually from the wings into the cockpit behind the pilot's seat". This decision made the installation job much easier but, of course, requires a bit more time in use.

In the installation I removed only about 5 x 5 inches of fabric from the wings near the outer end of the airbrakes and laminated tubular fiberglass seats for the outriggers into a strong corner formed by the wing spar, one rib and the airbrake hinge support. The first test flight was not a success. The fiberglass outriggers broke and flew off because of flutter at high speed. It then became clear to me why Egon Scheibe is using nylon rods in his *Falkes*. Of course, the nylon rod is strong, very flexible and offers a lot of damping effect against flutter vibrations. After some experiment, one-inch diameter nylon rods proved to work well also in the AS-K 14. In the OH-440 they can be quickly installed and removed by means of wing nuts on the upper surface of the wings. The empty outrigger holes can be covered by aerodynamic fiberglass pieces leaving the performance of the machine unaffected.

Last summer, 70-80 percent of my flights were with the outriggers removed and covers on. The procedure for this method is simply to taxi the aircraft into takeoff position (with parachute and safety harness unstrapped), stop there and remove the outriggers placing them behind the seat back-rest, strap into the parachute and jump into the aircraft for takeoff with the wingtip dragging on the ground for a few feet. The reverse, of course, is required after landing to taxi the aircraft back to hangar. It sounds impractical but is a pretty easy task requiring only about two to three minutes. However, I always request the tower to clear me on to a crossing runway rather than the one in use to make these operations without panic.

To complete the system I designed a trolley to pull out the machine sideways from the hangar in a space of 25 feet instead of the 47 feet required by the air-

craft span. The trolley consists of a fork-shaped steel tube structure with full swiveling wheels in all four corners. One pair of the wheels can be locked for easier steering. The airplane is lifted onto the trolley by means of a steel tube lever which, at the same time it is lifting, rotates the landing gear wheel so as to force the aircraft to climb onto the U-shaped trolley platform. Now, by unlocking the tailwheel from the rudder the aircraft is ready to be moved sideways. It is, by the way, a much easier job to do without help than trying to push or pull the AS-K 14 from the propeller or tailcone. The AS-K 14 wingtip is an excellent handle to pull the machine and steer it in tight places.

Now, after the equipment has been described, it might be interesting to know what's the difference compared to a standard AS-K 14 or pure glider operations.

First of all it has made it possible for me to fly the OH-440 from Malmi airport, four miles from my home, where the traffic is much too heavy for both normal glider towing and standard AS-K 14 operations as well. (If the weather is good, one may see five Pipers, Yankees, Cessnas and others waiting for takeoff, two on final and five others on the circuit). This saves me about 80 miles of driving to the nearest glider field and back each day I want to fly. The same applies to all maintenance and care the aircraft needs between the flights. At weekends this is not a very big saving in time (in gasoline, yes) but the real difference becomes clear in what I could define as "lunch soaring" or "soaring lunch" whichever sounds better in American English. This is something my purist soaring fellows cannot accomplish at all here in Helsinki (How about in U.S.?). Here it goes:

It's a beautiful summer morning.
7:50 a.m. I am driving to my job staring at the sky. Looks like promising soaring weather today.

At 8:05, sitting at my desk I cannot resist calling the Helsinki airport meteorology service. A soft, sexy girl's voice expects good lift with 8000 foot cloudbase, south wind less than 10 knots. Thanks! I can hardly concentrate on my work now. Fortunately the boss seems to be in a cheery mood. Once in a while I have to take a look at the sky. Be careful now, everybody here knows your hobby and can spoil your plan if you are too much at the window. You may soon be called to an "important" meeting, make some long range

planning, etc.

At 10:30 the first tiny signs of the coming cumulus weather are popping out on the horizon. My tension increases. At 11:30, when lunch time begins the cumulus is already enormous. People start moving to our company dining room. "Hi," I say to the operator girl, "have to go to the city, will come back in three hours." Jumping into my car I drive to Malmi airport, rush to the terminal coffee shop and buy a pair of pastries and a pot of juice in a plastic bag. At 11:40 I open the hangar doors, remove the wing covers and lift the 440 on to the trolley. At 11:45 the 440 is outside and I am inside strapping the shoulder harness. Switching the radio to Malmi TWR frequency, I request taxi clearance, local flight, two hours.

Malmi TWR: 440 cleared into position runway 33 (this is one of the two short runways no one else uses but me, there are altogether four runways at Malmi airport which means eight takeoff and landing directions).

At 11:50, OH-440 is in the air with the gear in and the nose pointing to the nearest cumulus. At 800 feet I hit the lift, pulling the throttle to idle. Engine shut down and propeller feathering at 1500 ft switching the radio at the same time to 119.9 Mhz for Helsinki Approach Control.

OH-440: Helsinki APP, this is 440 climbing power off at 1500 feet two miles east of Malmi. Request clearance to climb up to cloudbase.

APP: 440, stand by.

Silence, I know they are looking at the radar and checking the overall situation in Helsinki control area with TWR and ACC people.

APP: OK 440, you are cleared to climb to 8000 feet. Remain on this frequency and report reaching FL 80.

440: Roger.

About 15 minutes later I am just about reaching FL 80 when the APP voice interrupts me...

APP: 440, what is your present position and altitude?

440: 5 miles east of Malmi at 7500 feet.

APP: could you maintain 7500 feet for awhile?

440: I am climbing in a good thermal, will maintain 7500 feet.

A few minutes later I can see a Finnair DC-9 on final for Helsinki, 5000 feet below me, some miles away. So, this was the reason. Now I can finally open my lunch

bag.

Up there in the silence with mouth full of pastry and juice I can see at least 100 miles every direction in the clear polar air. Big ships are visible in Helsinki harbors and many small motor- and sailboats are drawing their streaks in Helsinki archipelago. Looking a bit further to the south I can see over the Gulf of Finland to the Estonian coast where some trails of smoke are visible, perhaps from the industry of Tallin city. To the North there are those endless Finnish forests and lakes.

After finishing my astronaut-style lunch I decided to fly a short round trip to the nearby town of Porvoo further east on the coast. Stick forward and the airstream starts to whistle around the canopy. The airspeed indicator needle moves to 150 km/h and the electric variometer needle drops down to 2-3 m/s sink, the audio giving a low murmur. Near Porvoo town above Neste oil refinery (which is something like Finnish Texaco) there seems to be a good thermal judging from the towering cumulus. My altitude drops down to 3000 feet until I reach it but the lift is again very good. Perhaps the many oil-cracking fires are helping the sun to produce this 900-fpm boomer. So, I am making good use of the wasted fossile energy. But the APP again interrupts my philosophical thought....

APP: 440, advise your position and altitude?

440: Three miles north of HEKA NDB at 3000 feet.

APP: Confirm your altitude again and transmit for identification.

440: Climbing at 3100 feet (and pressing the button to transmit for radar).

APP: Maintain 3000 feet now.

440: Will maintain 3000 feet.

Suddenly another voice enters 119.9. English is spoken with a strong Russian accent. Aeroflot captain reports entering Helsinki airspace on his way from Moscow. APP advises him to maintain 6000 feet when passing HEKA NDB and soon I can see a big Tupolev jet flying by 3000 feet above (APP uses several frequencies but they wanted it this way to keep my attention on the other traffic above). After seeing the Tupolev on final for Helsinki international I request again clearance to 9000 feet and receive it immediately. Near the cloud base still steeply banking in the lift I suddenly find myself flying formation with three buzzards. This is the same place I have seen one hawk several times earlier this summer but never three at the same

time. Perhaps both parents and one child were enjoying the spirits of soaring while earlier in the spring only the father buzzard had the privilege of doing it but the mother had to sit on the eggs. Anyway the sight was fascinating, reminding me of Jack Lambie's flight with a condor.

This summer was a very good bird-watchers summer, anyway for me. I remember just a few weeks earlier when I was lucky to fly with two migrating cranes in the same thermal for several rounds. The sight was so fantastic I couldn't resist reporting APP: 440 here, there is some crossing VFR traffic here, two cranes on course straight over your airfield at FL 40. A quick answer from the APP was: "Beware that you are not shot down as a duck!", which was a justified warning because a few days earlier Helsinki newspapers had discouraging headlines: "First victims of the hunting season, stupid hunters shoot down several cranes, very rare stork and other protected birds as ducks". Wonder whether they can distinguish my AS-K from a duck.

Looking at my watch I realized that the time was 1:30 p.m. and I was still sitting there at 9000 feet while the boys were working hard down there in the city. Better go back. Taking the microphone I request clearance to leave 9000 feet for a final glide to Malmi airport runway 27.

APP: Cleared to leave 9000 feet for visual approach to Malmi, contact Malmi tower on 118.9.

After a long glide to the west I reach Malmi airport but still have 3000 feet altitude to spare. Why not waste it by making a flyby over the company. Down there I can see my boss' big red Datsun being driven away. Very good! Now I am safe from any uncomfortable questions when returning. I pull the gear and brakes out and side slip onto RWY 27. On the ground I restart the engine and taxi back to the hangar. There is no time to draw the wing covers on, just close the hangar doors and back to the job.

The above story gives an idea how cooperative the Helsinki approach control has been in allowing me to soar mixed with incoming and departing IFR traffic. Sure, I shall bring them a bottle of whisky as a Christmas present, plus this issue of *Motorgliding*. Another question is, how many motorgliders they would tolerate soaring around there near the control zone at the same time. Probably not too many and therefore I prefer not to make too much noise about my success. Someone else may

discover how handy a machine the motor-glider really is.

My weekend flying with the OH-440 should not be mixed with the above description. Usually I try to escape the Helsinki control zone as far and as fast as possible. Only then I can switch my Dittel radio to the glider frequencies 122.5 and 123.5 to chat a bit with the purists about the right method to launch sailplanes. Last summer was a very good soaring summer in Finland and so there were many opportunities for long distance flights. Hans-Werner Grosse, for example (you sure know him without introduction), flew a new world record here last July, a 1000-km triangle, with his AS-W 17. I did not perform as well but anyway got 65 hours in my log book of which 53 hours were soaring. Three times I flew a 220-km (137-mile) round trip Malmi-Kymi-Malmi which seems to be some kind of a "shear line" where humid sea winds mix with dry inland air forming a soarable cloud street along the coast when elsewhere hardly any clouds are visible. The best of these flights took place July 5 requiring 4 hours 10 minutes of flying time of which only 4 minutes were engine time for takeoff. Less than 2 pounds of gasoline was used from the tank. This is my answer to many sailplane pilots who often ask how can I carry enough fuel for such a long flight!

On my weekend flights I have visited most of the southern Finland glider fields like Kiikala, Nummela, Vesivehmaa and Rääskälä. The last mentioned one will be the place of the World Gliding Championships in 1976. It is a pity the SLS pilots will not have their own championships in Rääskälä at the same time. It would be nice to meet from both sides of the Atlantic. You would find Finland a beautiful country for soaring. For example, the visibility here is very seldom as poor as it usually is in central Europe or as it was in Oshkosh, Wisconsin during the first week of August when I visited the EAA Fly-In there. In Finland the polar winds and large forests clean up the air regularly.

Talking about Oshkosh, there were two very interesting SLS projects, one flyable with a retractable propeller drive and one nearly completed with a folding prop and very low empty weight, only 120 pounds. I think *Motorgliding* should write about their progress. (The author is referring to Oldershaw's O-3, which has flown, and Haig's American Eaglet—Ed.)

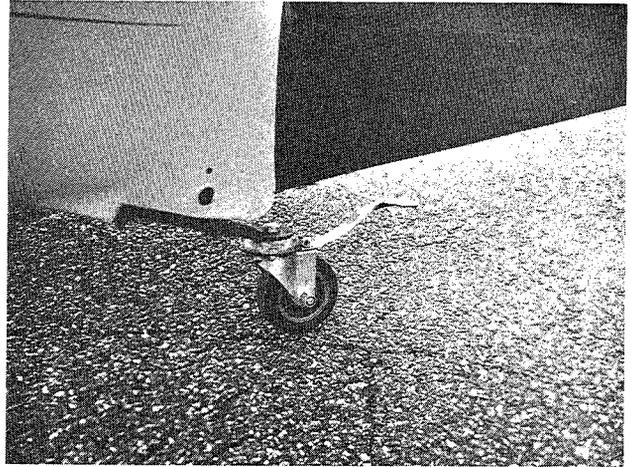


Figure 1. The procedure to make an AS-K 14 taxiable starts by designing and installing a steerable tail wheel....

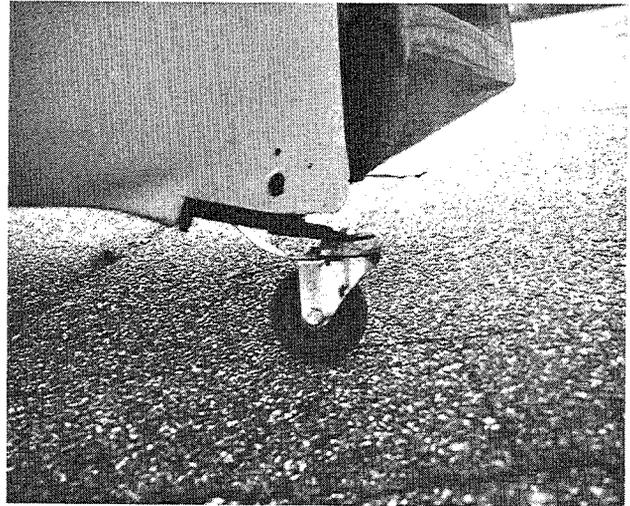


Figure 2. ...which can be unlocked for full swivel when necessary (see figure 8 for reason)

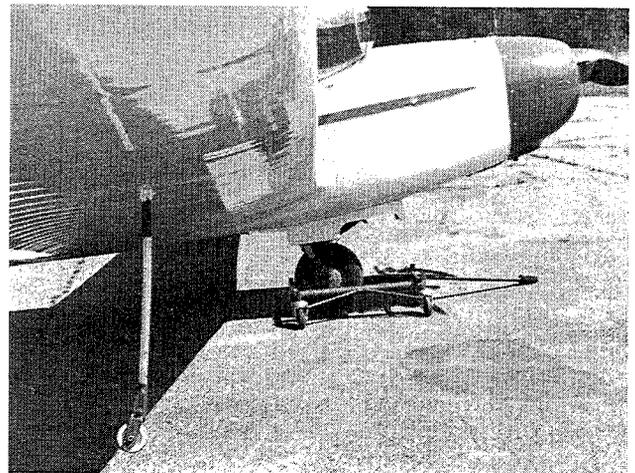


Figure 3. We also need nylon outriggers with wheels for balance which can be easily removed and the open holes...



Figure 4. ...covered by an aerodynamic plastic piece for performance flights.



Figure 5. And the completed job can be seen here ready for taxiing.



Figure 6. If the hangar space is limited, e.g. too narrow, a sideways moving trolley like this will help. Here the lifting lever is ready to be pushed down and...

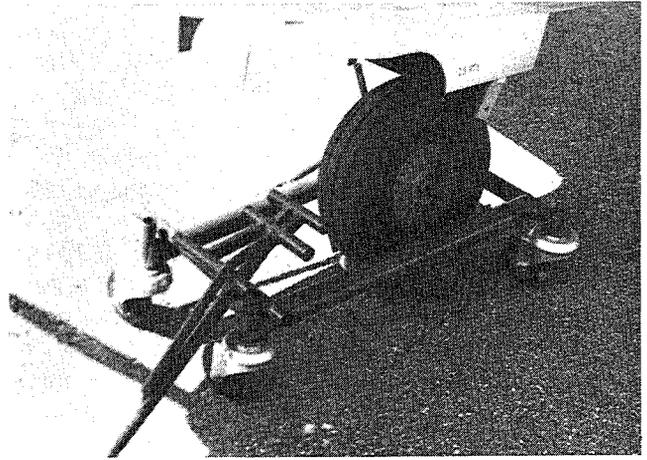


Figure 7. ...up she goes. Now, just unlock the tail wheel for full swivel as in figure 2 and the aircraft is ready to move in and out from tight places.

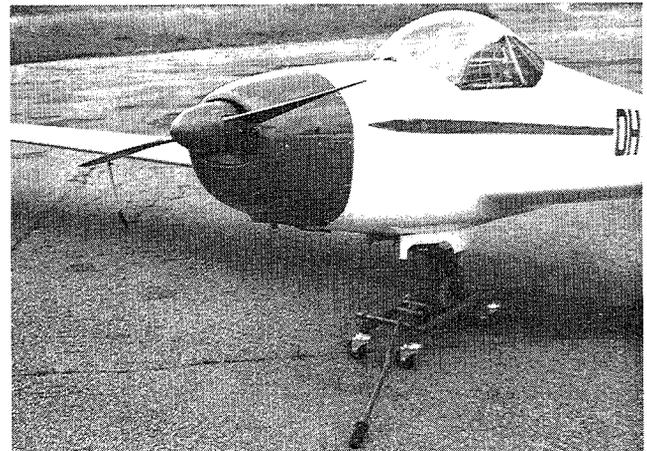


Figure 8. The lifting lever is a loose item but can be seen here still in pushed down position.



Figure 9. The author climbing on board for take off from Kiikala glider field. The outriggers have been removed but tail wheel, of course, is there.

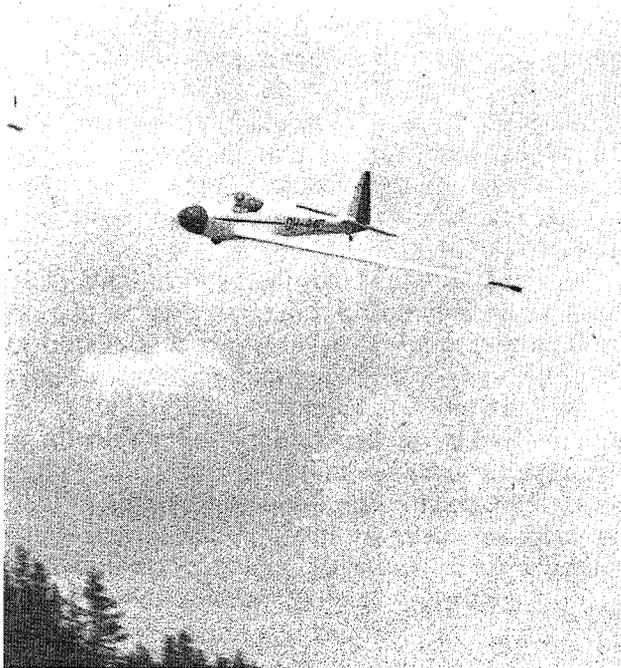


Figure 10. A low pass for the cameraman.

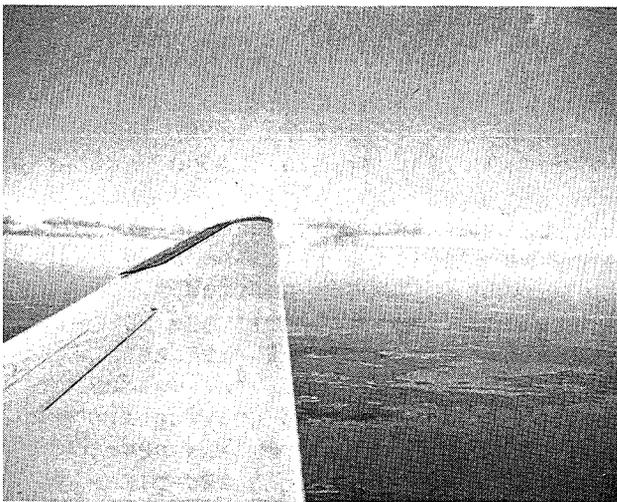
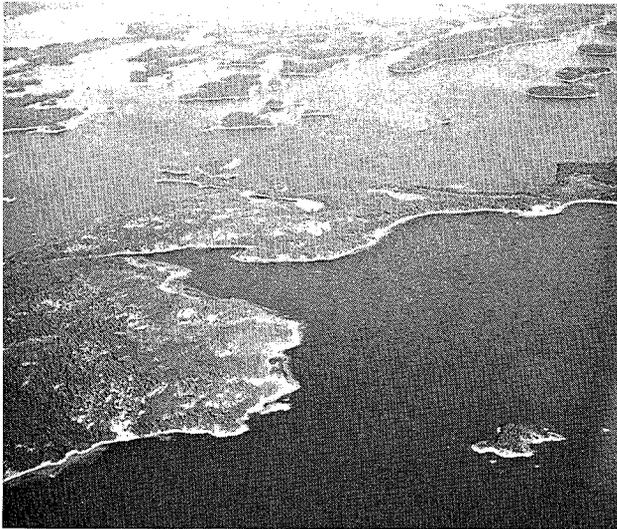


Figure 11 and 12. Two views from OH-440 cockpit 8000 ft above the coast of Gulf of Finland on the way from Malmi to Kymi glider field. Beautiful archipelago, isn't it.



Figure 13. A photo of the turnpoint Kymi glider field from 8000 ft.



Figure 14. A place to visit for the glider pilot. Hyvinkää glider field 2 miles from the center of the town.

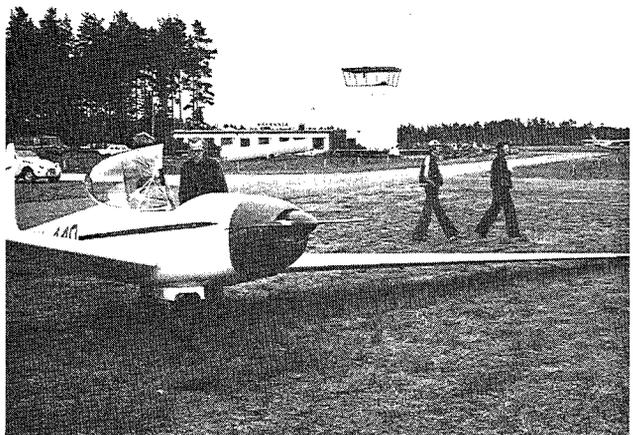


Figure 15. OH-440 visiting Räyskälä glider field, the place of 1976 world gliding championships.

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

Here & There - Something for Everyone....

It appears there are quite a few APS meets in Germany every year. The German *Adler* (August 1975) carried an account of such an event at Klippeneck last June 20th which was sponsored for the third year. It looks to be quite different from the usual soaring meet—it resembled a sports car rally or perhaps a fox hunt. In addition, the participants had to complete a questionnaire full of theoretical problems.

Because of poor weather only 18 of 30 participants showed up. After a rainy takeoff the weather improved markedly and the summer sun came out in all its splendor.

The total length of the course was 143 miles—supposedly a two-hour flight.

After the task was completed (apparently there was a lot of engine time) an old-fashioned "summer feast" took place in the hangar. There was plenty of draft beer and bratwurst, and a 60-piece band from a nearby town contributed to the happy and friendly atmosphere. What a way to enjoy life—those German pilots certainly know the right combinations.

• The same issue of *Adler* states that the FAI approved the world record goal flight of 330 miles by Kurt Heimann on May 5, 1975 in a SF-27M.

• The students did it again! Throughout the history of soaring and APSs students made worthwhile contributions to new developments. This time, according to German *Aero* (5/8/74) the student soaring group of vocational schools in Lippe area at Detmold installed an auxiliary engine, Lloyd LS-440, into the right wing of their K-8b sailplane.

It is a pusher type installation. The propeller rotates in a slot close to the trailing edge. Similar installations have been seen before (see May 1974 *Motor-gliding*).

• The stringent noise regulations enforced in European countries are responsible for remarkable ingenuity in new muffler developments. The German *Aero-Kurier* (August 1975) took notice of such a new successful design by Leo Meeder. Although he developed the new muffler for his prewar powered aircraft, the Klemm KL 35 (105-hp Hirth engine), the basic design could be used on any other four-cycle engine. His muffler design lowered the noise level by 10 dB(A) to 60.5 dB(A)—a marked achievement, considering the

official limit of 70 dB(A)!

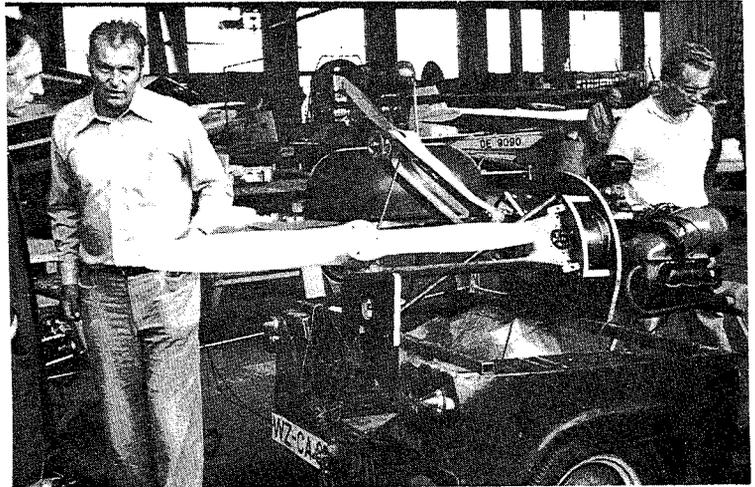
His design consists of a large volume muffler to which all four-cylinder exhausts are connected. The exhaust gases expand in the large muffler and then enter the perforated tubes connected to conical diffusers exhausting to the free air. The noise level of this installation is noticeably below the railroad and automotive noise.

• A retractable propeller is one solution to aerodynamic improvement of an auxiliary-powered sailplane. It is really nothing new—although design variations are possible.

But—how about two(!) retractable propellers? Yes, someone did it.

The German *Aerokurier* August 1975 has a short description of this new development by W. Knechtel and R. Goetz.

It was developed for a VW 1800 engine (68 hp). Each propeller is driven by a timing belt and the reduction ratio is 3/5. The total weight of engine with battery and starter, and the two propellers is 176 pounds. The drive with propellers weighs 81.4 pounds; designer Knechtel thinks a reduction to 55 pounds is possible. The illustration shows general features of this unusual design.



• 8,000-km flight in an auxiliary-powered sailplane! In Europe the two-place APSs are used not only for training and soaring but also as a means of transportation, serving as a light powered aircraft. The German *Luftsport* carried a lengthy, two-part article in April and May 1975 issues of such a flight with considerable amount of engine time. The wanderlust of Helmut Birkner was the driving force of this planned flight from his hometown of Hamburg (W. Germany). A two-place Scheibe *Falke* was used. In order to increase the range an auxiliary tank of 10.6 gallons from an Opel *Kadett* was installed on the right seat. Other equipment required for overwater flights was also included.

The flight began on December 3, 1974 from Hamburg-Boberg. Because of poor weather conditions over Germany the flight was under power until Lyon (southeast France) was reached. In addition, the initial flight plan had to be revised on a daily basis.

From then on conditions improved and the flight continued under cruising or partial power; whenever possible, advantage was taken of thermals and other lift. Daily hops of up to 435 miles were made in this manner. By the time Casablanca (North Africa) was reached the radio gave up. All attempts on several airports en route produced no results. While making a planned "detour" to Canary Islands where Christmas was spent with his wife, he also met there a few German soaring pilots who came to explore the local soaring conditions. One of them was able to repair the radio.

From Canary Islands the flight continued along the coast of Africa past Dakar to Bathurst (Gambia)—the destination.

This 4960-mile long flight was carried out in 64 flying hours without any aircraft problems. Although many boundaries were crossed no difficulties were experienced.

The illustration shows the course of this long flight.



Zeichnung: Wolfgang Frost

LETTERS

Editor:

Motorgliding: The world's finest motorglider magazine in all of Los Angeles, California.

Swedish Reindeer Stage Coach Operators here, and *Motorgliding* Aug.-Sept. 1975 has just arrived - after being absent for several months - and before that - coming half a year or more late.

So—page 11 notification of bimonthly publication is damn good news—it should help us all cater to capacity and inflow of material according to our combined strength.

American Eaglet should be something for *Motorgliding* to take an interest in—to present to readers—and encourage in every way—original design—and perhaps a simplified—less efficient—and far cheaper version—built the old way of wood and plain fabric. Open towed gliders of 30-40 years ago did fly—with a streamlined body of ribs and fabric—and a gocart engine to push—glide should be improved quite a bit—while costs still kept at a moderate level. It will not perform like *Eaglet*—but could be a suitable first time project for a beginner. Page 12, *Dragonfly*—could be a good starter for general configuration—perhaps with one central wheel—sailplane style—and inverted V-tail with small wheel giving support in starting. It can here also be said that *there are* bigger and more powerful gocart engines than the 12-14 hp mills most often talked about.

One plane—that is *not* a glider—but still can provide a lot of fun—and cheap transportation—is the Hovey WD II Ultra Light—(120 pounds). It takes off and lands in 250 feet on any road or flat surface—can be transported on a car roof rack—material including brand new McCulloch engine—about 700 dollars—building time less than half of average home project.

R. V. Hovey Avion, Box 1074, Saugus, California 91350 helps with drawings and license to build.

Engine off, it has a glide between a Rogallo and a *Quicksilver* glider. By adding a longer wing, and a slightly bigger engine, performance can be considerably improved. Info—one U.S. greenback.

EAA Wizard Bob Cook in Seattle is building an ingenious *Super-Flybike* with his friend Herb—which *Motorgliding* maga-

zine should do well to prate about to its readers—it has a 10-hp B&S engine—glide of 1:15, 28-ft span and 55-mph cruise. New 180 lbs—load (wing) 3.8 lbs/sq ft.

Info for *American Eaglet* can be had for \$3.00, AmEagle Corp. 841 Winslow Court, Muskegon, Michigan 49441.

Bengt Nilsson
Umea, Sweden

Editor:

This is a picture of Karl Striedieck taken at Ridge Soaring Inc. airport, almost in his own backyard. That is not his AS-W 17 you see, but an AS-K 14. He has now been checked out in a motorglider! I loaned him my ship for a short flight and as always, once a glider pilot has a motorglider under him, it takes awhile to get one's ship back again. It is worth it to see their pleasure in flying these nimble little sailplanes.

There are many areas to be explored for wave soaring and new ridges and routes to test. There is no better way and often the only way is with a motorglider. The obvious areas are in use, the new discoveries need motorgliders.

Walter T. Buhl
Ann Arbor, Michigan



Editor:

The only thing I have to report is: Mort Larson, a member of the local Association of Southern Californian Gliding Clubs has spent two-years, I believe, build-

ing a replica of the 1910 French *Demoiselle*. We test hopped it last week, and, after resulting improvements, are trying to get used to its flying characteristics, which are very much different from John Chalmers' SFS-31 *Milan*.

We are planning on taking the *Milan* to "Lake Riverside" (between Aguanga and Anza on California Highway 71). There are rumors that this is an ideal place for all kinds of lift, and the AGCSC is looking for something redundant to Elsinore in case it gets too crowded there. A motorglider would be the ideal vehicle to explore the area, except that it misses the narrow thermals that could be easily flown by 2-33's. Anyway, I will try to set up some recording system for evaluation, which is probably much too much for the information available. One should have corresponding weather information to compare the flights with, and a statistical history of weather developments in that specific area which most likely does not exist at all.

What information does the SSA have on the *American Eaglet* motorglider? Doug Lamont mailed me (through Bob West) their information sheet—but the entire thing is hard to believe. The weight and performance data seem to be theoretical figures only, and computed by an optimist, at that. Did anybody see it fly? Could the SSA talk these guys into demonstrating it in Southern California? That would be the area of concentrated interest anyway. If anybody wants to build one, I volunteer my help, *after* I have seen it fly and have flown it myself. (See *March 1976 Soaring, February 1976 Sport Aviation, and Postflight Notes, this issue—Ed.*)

My present ideal of a motorglider is a scaled-down single-seater version of the Rutan *VariEze* canard, using their technology to build the wing, change aileron control to main wing rather than the canard span, and an engine in the 30 to 35 hp range (see my story on the Rotax), that should come out to be a very soarable machine.

How far is Stan Hall with his *Vector*? that is another candidate for motor installation, the engine behind the seat, a propeller shaft in an angle to one side of the fuselage with a bearing on a tripod that could be made retractable (for the perfectionists).

Tasso Proppe
Lemon Grove, California

Editor:

I was pleased to notice the concern expressed in articles and in the Letters to the Editor in recent copies of *Motor-gliding* that "something" should be done to terminate our isolation and merge with *Soaring*.

Nothing is more timely and important for the sport of soaring. As Mr. S. du Pont indicated in his letter (October-November 1975 *Motorgliding*), I too tried in vain to get the things rolling in the same direction. It appears the inertia of the SSA is comparable to FAA's....

During my correspondence with Mr. Bernald S. Smith, SSA Chairman, Publications Board, he asked for my suggestions and comments in his letter of August 8, 1974. I spent some time analyzing this situation and submitted a very detailed plan in my lengthy reply of August 17, 1974.

In view of the *Motorgliding* irregularity—being at this time behind about one year—my proposal contained two parts:

- 1) immediate steps to be undertaken to bring *Motorgliding* publication on time (e.g., bimonthly for the time being, etc.)
- 2) near future plans: to merge *Motor-gliding*, as well as the dying *Technican Soaring* into *Soaring*, and also include when available, articles on man-powered aircraft and its technology. This would require a 14-page addition, in a somewhat smaller type, to the then 64 pages of *Soaring*. The dues would have to be increased by a small amount to cover the costs of paper and postage. However, the benefits would be far reaching and beneficial to the SSA and the magnificent sport of soaring. It certainly would make *Soaring* the best soaring magazine in the world. Some other foreign aviation magazines did the same—covering all aviation (unlike ours leaving out soaring), notably the Swiss *Aero-Revue* and the German *Aerokurier*.

While I received a prompt and somewhat sympathetic reply from Mr. Smith, I was not able to meet with him at the following MIT/SSA/AIAA meeting in Boston, as he suggested. However, I did see him at the FAA/SSA yearly meeting at Harris Hill last May; he appeared to be in a hurry and

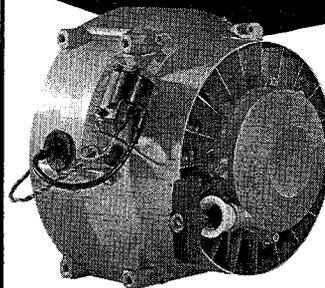
rather indisposed—since I am no longer an SSA member I shouldn't make any suggestions....

The next day I was able to discuss these matters with Mr. S. Francis, SSA Vice-President. They appeared rather new to him and no commitments were received. I also included them in a follow-up letter to him later on. It appears again, suggestions from "outsiders" are not welcome—regardless of their merits.

Those readers who are interested in this long overdue improvement should contact their SSA directors, also write to the top SSA officers and request appropriate action at the next directors' meeting. Some appear to be purists, but then there was a battle during years past about having a canopy, a wheel instead of a skid, flaps, etc., so do not give up! Act now; soaring with an auxiliary engine has been here for over 50 years and the future of soaring is in auxiliary-powered sailplanes; make *Soaring* the best magazine as previously suggested.

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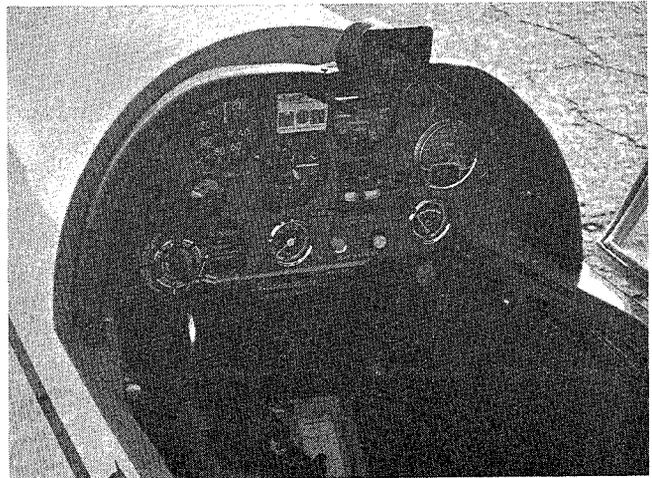
POSTFLIGHT NOTES

The *American Eaglet* referred to by Tasso Proppe, J. Tervamaki, and Bengt Nilsson is a project of Larry Haig and his company, AmEagle Corporation. An article by Haig appeared in the June 1975 *Sport Aviation*. Subsequent articles have appeared in March 1976 *Soaring* and February 1976 *Sport Aviation*. The aircraft is an extremely light, very small pod-and-boom motorglider, with pusher propeller and inverted V-tail. The prototype was flight-tested on auto tow in October 1975 and by aero tow in November 1975. As a result of design changes, Haig, in November, reported that revised specs are as follows; span, 36 feet; wing area, 72 square feet; empty weight, 150 to 160 pounds; gross weight, 360 pounds. He predicts a rate of climb of 380 feet per minute, max L/D of 24, and 3.1 feet per second minimum sink.

The ship has been designed to FAR 23 with a positive limit load factor of 4.4, negative limit load factor of 2.3, with a 30 foot-per-second gust load and a factor of safety of 1.5. Haig reports a V_{never} exceed of 127 mph, V_{cruise} of 92 mph, $V_{maneuvering}$ of 80 mph, V_{stall} of 35 mph, V_{max} powered of 110 mph, V_{best} L/D of 60 mph, and V_{min} sink of 45 mph. For further information, see the articles mentioned above or write the company, AmEagle Corp., 841 Winslow Court, Muskegon, Michigan 49441.

We apologize for the extremely late publication of this issue of *Motorgliding*. We shall strive to do better. Upcoming are Tasso Proppe's observations of the 1975 Burg Feuerstein meeting, a report by Per Weishaupt, chairman of the CIVV motorgliding sub-committee, an article by M. A. Zimmerman on a tailless motorglider project, a description of V. A. Budachs' experiences on checking out and delivering a *Falke*, a fun-type article on an RF-5 by Doug Terman, an article on the state of the art by Bob Tawse, Tasso Proppe's "Eulogy of the Crow," and of course, S. O. Jenko's "Foreign Scene."

So shortage of material is not an *immediate* problem. We do however, urge those of you who are participating in a motorgliding activity to consider submitting an article.



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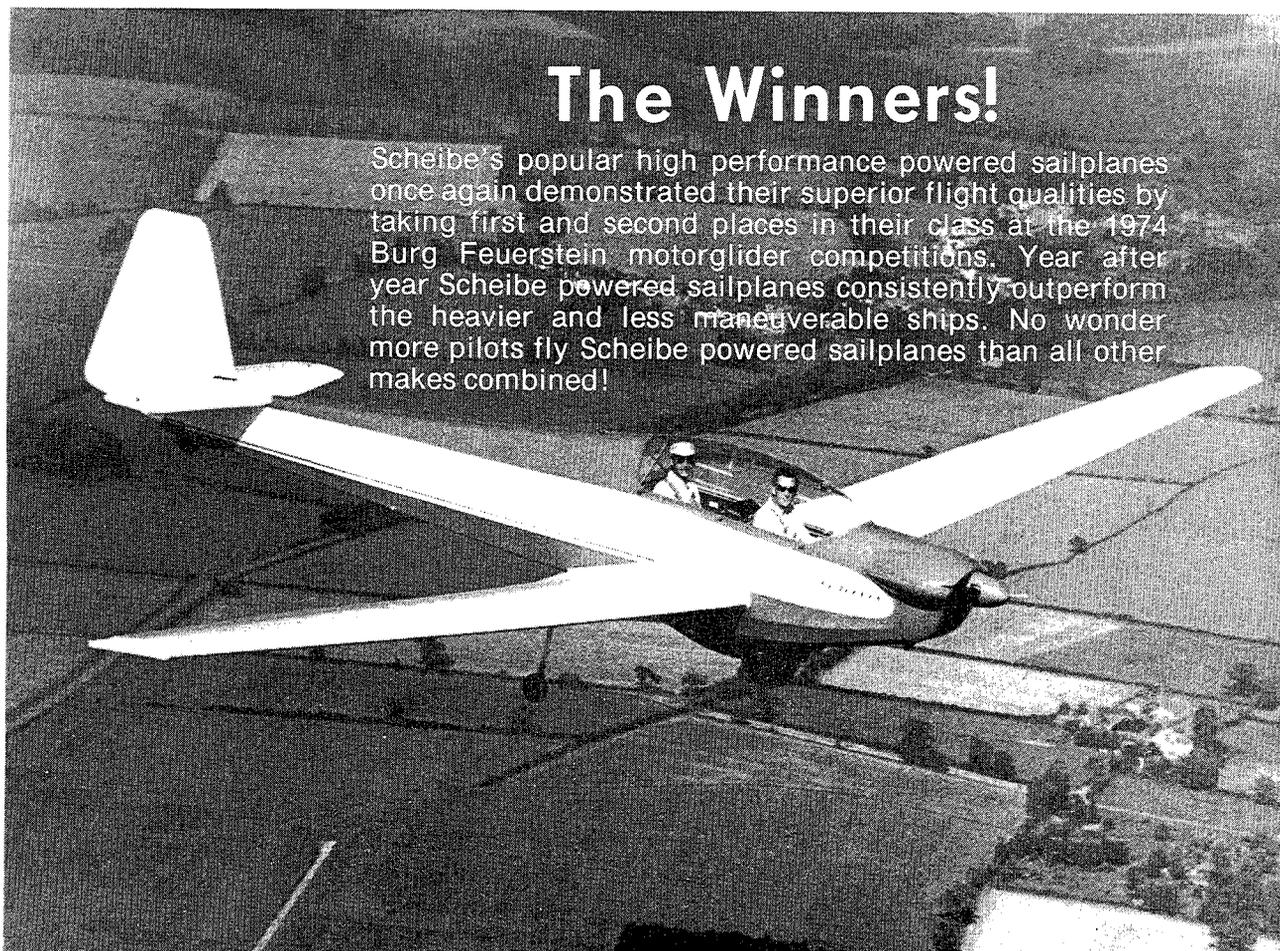
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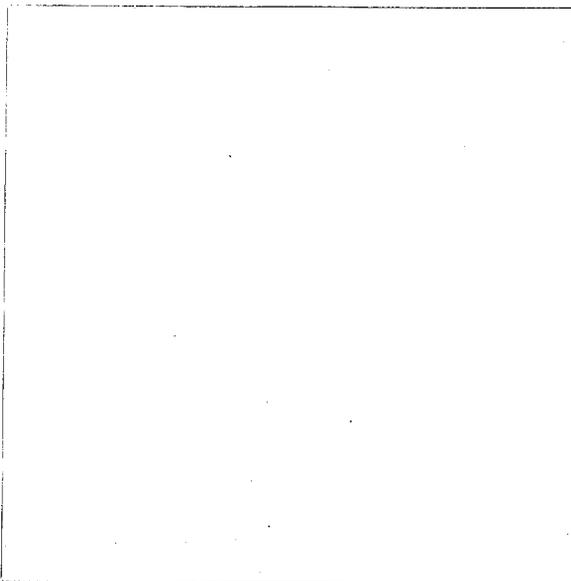
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