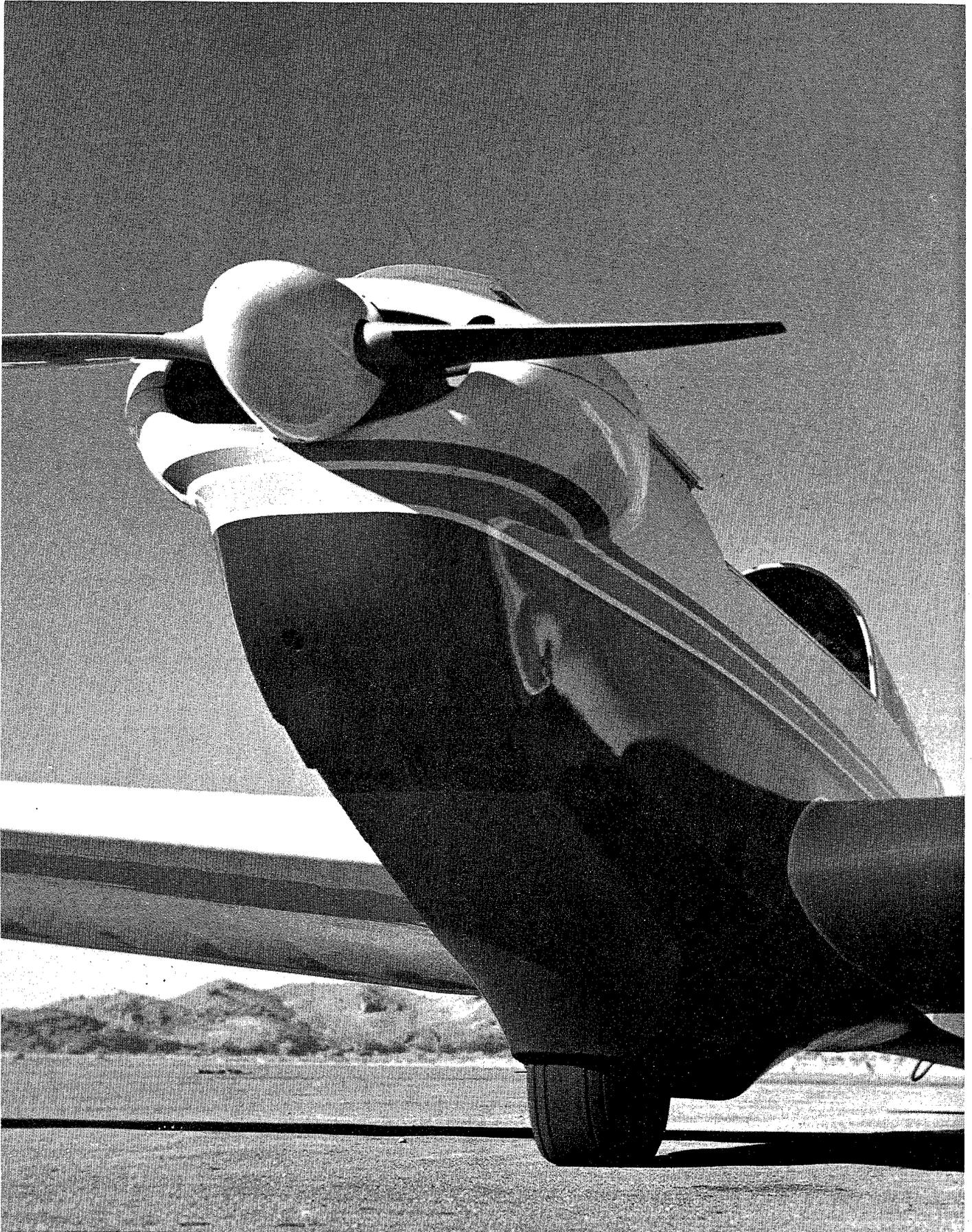


MOTORGLIDING

FEBRUARY-MARCH 1977
50 Cents





Scheibe SF-28A *Tandem Falke*, by George Uveges

MOTORGLIDING

Donald P. Monroe, Editor

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Cover: Scheibe SF-28A *Tandem Falke*, by George Uveges

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NORTHWEST FROM GUADELOUPE

by Douglas J. Terman

Guadeloupe has been a hell of paperwork. Simply to land and refuel and file has taken two hours.

First closing the flight plan. The aerodrome officer eyes me warily. He cannot find anything on file. He shrugs and closes out anyway. November 211 Delta Tango down at 1708 Zulu. Crazy American. I imitate the shrug to show that I, too, have elan.

Health and Immigration. I barely pass inspection. Dandruff under control? No imported fruit? I produce an apple core from my flight jacket. He takes it disdainfully in his gloved hand and drops it with some ceremony into a receptacle. Animals? Non, Monsieur Inspector. Not counting the 47-foot-wing-spanned gull which I have on the ramp.

Immigration is more imposing. Blue kewpie hat, epaulettes and a Universal Mark I Cop's face, full of suspicion and disbelief. How long am I staying? Where have I come from? Where am I going? What am I going in?

I talk about getting some gas. Essence. Petrol. His face registers understanding. Aircrew? Pilot? He flaps his arms a bit in imitation of a bird.

I raise one eyebrow and nod, throwing back the trailing end of my scarf and adjusting the oil-misted goggles. I slouch a bit, leaning against his desk. The pecking order has been established. He clears me in, stamping my passport and then clears me out, stamping again. It is said by some that in French countries, the production of paperwork is an artform.

I am next directed to the airport manager's office to fill in some paperwork. The form is in French, of course. I fill it in, guessing at the questions, slurring the answers in ink. There is a fee and I pay it, not knowing for what service I have paid. But does one ever, with taxes?

Back to the ramp and finally, the Shell truck arrives. He squirts in 14.7 liters. The process is lengthy as fuel must cross drain from the port to the starboard wing tank. He asks the inevitable question. Where is my towplane to assist my climb to altitude. I point to the 55-horse Limbach with the toothpick prop. He also shrugs.

Next the Met office. Their information is superb as they have satellite weather. There is talk about the Bermuda high, winds aloft and lapse rates. Even without an interpreter I get the gist. A good tailwind for the British Virgin Islands, 240 miles to the northwest. I file for 10.5 thousand, two and a quarter hours enroute. The dispatcher smiles. Am I going by balloon, perhaps?

Even taxiing out is a grind. At the intersection of the general ramp area and the taxiway system, there is a concrete drain system composed of chunks of the Maginot line with gunpoint for water drainage. Definitely not negotiable for the tailwheel or the outrigger wheels. So I taxi over the drain system with the main wheel and then shut down. Canopy open and around to the lifting handles on the fuselage. Grunt, and I swing the RF-5 through 180 degrees and roll her backwards onto the taxiway and then — grunt, swing her through 180 again. Back in, canopy closed and restart.

Ground control politely inquires about my intentions. Do I need assistance? In the background of his glass enclosed cage someone is laughing. Damn!

I taxi about fourteen miles and finally am given the active.

Time for a final cockpit check and Delta Tango and I start rolling. Really good wind down the runway; about twenty knots. We are airborne and climbing in a few hundred feet. They switch me to departure control who asks for a 1200 squawk. I tell them that I have negative squawker. They try a skin paint with their radar and negative skin paint. It would seem the plywood and fabric are very radar non-reflective. I submit this information without charge to Mr. Kelly Johnson of the Lockheed Skunk Works should they have a successor to the U-2 in design stages.

I kiss off departure control and switch to 122.8. The afternoon is well along and I will be landing about dark. But as I climb, the cockpit cools and Caribbean Sea before me is strewn with islands. Antigua to the north, and to the west, Montserrat; then Nevis and St. Kitts — Saint Eustatius and Saba beyond. The Limbach is purring along at 2900 rpm and everything green on the gauges. Pure bliss.

Miles flow beneath us; miles that I have traversed often under sail. Windy miles and wet miles but all the same,

great miles. And it occurs that Delta Tango is a sister to that old schooner; both molded to their environment; both using rather than resisting the forces they encounter.

Saint Barts slides beneath my nose. Probably the possessor of one of the hairiest airstrips in the world. Established procedure is to slide over the ridge and make a pass over the field to clear off the sheep. The sheep are quite used to this. Then a race-track pattern and carrier approach. Good brakes are recommended for you're landing downhill. A very high pucker factor, the strip at St. Barts. But the rum is cheap any time of the year.

The sun is sliding down the western sky, haloing the building cumulus of late afternoon. On the surface of the sea, black shadows trail the clouds as they move toward the west. The islands to the north are Saint Maarten and the outrigger rock of Ile Tintamarre. Beyond that, a smudge of grey green called Anguilla. I call up St. Maarten approach control and give them my time abeam as I turn more westerly for the British Virgins. Approach/departure control accords me the courtesy of recording my time and wishing me a good evening. Pan Am certainly gets no better treatment. Good evening, St. Maarten. And goodbye for awhile.

"Goodbye, Delta Tango, and good passage," he says. As if he knows that I hate to leave the islands.

We are flying almost due west now, sliding down toward the sun. The great long swells rolling in from the Atlantic pattern the sea below in liquid corrugations and the same wind which charms my airspeed into the three digit range coxcombs those swells below with ridges of white. We are high; much too high to work the cloudstreets below, but I enjoy their classic elegance just the same. They stretch as far as the eye can see out to the eastern horizon and continue, unbroken, to the limits of vision in the west.

Sunlight and shadow dapple the sea. Far to the north, a solitary tanker plods eastward for Africa and the Cape. His course is too far south to be otherwise. I make a note of his position and time for one of the necessities of solitary passaging is to know where the closest help may be.

I try to get an indication on the VOR of either St. Thomas or St. Croix.

STT stutters in the headphones but the flag says no soap. St. Croix is better and I set in the radial which passes through Beef Island, Tortola, British West Indies.

The sky is a good place to think, as is the sea. The routines become familiar, requiring less concentration and the mind wanders around, trying to fill in the gaps of consciousness. And I muse on the shortcomings of Delta Tango.

What *are* the shortcomings of Delta Tango as an aircraft and of motorgliders as a breed? On one end, we suffer the slings and arrows of the purists in their glass wombs with their diamond badges and their towlines firmly affixed to L-19s. (Not pure enough, they say). No less so, the contempt of the man that trucks through the blue with 280 horses grafted onto a marginally aerodynamic pterodactyl. (Not fast enough, they say).

But perhaps shortcomings is the wrong approach. Perhaps it is reality that aircraft such as the RF-5 are the future. And the key to it all is petroleum. The bulk carrier on its way to Africa is empty, having disgorged one quarter of a million tons of crude. But one day, some man in a white flowing robe, while sipping tea, will call his trusted advisor aside and say, "Abdul, the Americans are being naughty. Turn off the tap." And the oil will cease to flow. And the L-19s will cease to fly. And the Lear's and the Beeches and the Boeings will gather dust in dark hangars. But there will still seep through the cracks of privation, a small trickle of oil. Delta tango burns 2.7 per hour at cruise. Less than half of that at loiter-looking-for-thermal speeds. The manual says that she will feed on premium automotive fuel.

And perhaps with foxy determination and a bit of cribbing up on chemistry, she will drink alcohol. Even become addicted to it. Or hydrogen. Coal, if need be.

And perhaps one day I may request clearance from ATC for flight and they will reply, "Delta Tango is cleared to climb to and maintain any altitude in any direction. There is *no* other traffic." Grim thought, but one to be examined.

The VOR needle on St. Croix is starting to come off the peg and a smudge on the sea begins to materialize over the right exhaust stack. I pull the throttle back to the stop and roll over

on the right wingtip. An island mass forms slowly in the windshield...a solidified wave of green and grey in the sea. Hills and valleys. A scattering of buildings on a hillside and then the bay flashing beneath me as I drop the gear and make a call to the tower.

"Cleared to land," he says in the rich chocolate accent of the BVI. Throttle back to the stop with the

boost pump on. Gear safety pin in. A touch of spoiler to correct the glide path and we flare over the numbers. Stick slowly back and the tail wheel rolls for a nano-second before the main gear touches.

It is the rose tint of tropical twilight. But far above me in the growling cumulus, there is still sunlight.

FOREIGN SCENE

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

Bombardier-Rotax Engines

Suggestions were voiced occasionally in *Motorgliding* that the snowmobile engines manufactured by Bombardier-Rotax might be suitable for auxiliary-powered sailplanes. Our Foreign Scene articles mentioned at least two accounts of production auxiliary-powered sailplanes which at one time or currently have them. However, no technical articles were seen which would provide a description.

In order to explore this matter we wrote several months ago to this Austrian snowmobile engine manufacturer, requesting information on their Rotax 642 and Rotax 294 engines. A prompt reply with beautiful assembly (installation) drawings and specifications ended speculations and hopes.

Engine Type 642

Originally a snowmobile engine, the two-cycle, two-cylinder, in-line blower-cooled engine has now a dual ignition and as such is approved by the Austrian FAA for aircraft uses, including auxiliary-powered sailplanes. Total displacement is 635 cc; max. continuous (also takeoff) power is 38 hp at 5500 rpm; idle speed is approximately 1600 rpm. Dry weight with exhaust muffler is 90 lb (hand starter) or 99 lb with an electric starter (without the battery). The price is approximately \$1,000 fob factory for the engine with electric starter.

While the price is very high as compared to any other snowmobile engine of similar size and power it comes with a muffler and a Bing float type carburetor — ready for installation in an auxiliary-powered sailplane. However, the muffler is located along the side of the engine,

resulting in a total width (edge of the air filter — edge of muffler) of 23.6 inches — apparently unusable for any retractable installation. By rotating the engine 90° (cylinders in the horizontal plane) and using a diaphragm type carburetor instead of the Bing float type, the engine envelope narrows to about 15.5 inches. Additional disadvantage is the blower cooling instead of the free-air, not to mention also the high weight of the engine.

In view of the popularity of the auxiliary-powered sailplane in Europe one just cannot understand why the manufacturer did not provide the few and simple modifications needed for conversion into an engine suitable for auxiliary-powered sailplanes and light powered aircraft.

Engine Type 294, Model 73

This engine is a snowmobile engine (not certificated for aircraft use), having single ignition but otherwise similar to Type 642. Having a displacement of 294 cc it develops 25.8 hp at 7500 rpm (apparently a racing engine). Hand starter only. No weight was given — estimated at about 60 lb (engine only). Price was quoted at approximately \$380 fob Austria which includes the muffler.

So, it looks the search and waiting for suitable engine will continue while the auxiliary-powered sailplane (especially single-place) and the light powered aircraft development will be severely handicapped.

However, if any of the readers are interested in a sound business proposal to start manufacturing a line of two, possibly three snowmobile engines of proven design which, with minor modifications, could be also used in single- and two-place auxiliary-powered sailplanes (also light powered aircraft) — without spending and wasting millions of dollars (!)

— please let me know. There may be such a possibility available. The future for such engines is the brightest ever and the enterprise itself would be quite rewarding. But it requires some capital — not promoters!

Something For Everyone

• Speaking of engines, *Aerokurier* (10/76) describes in a short article the development of a new engine kit by three Germans, H. Kabisch, J. Reitz and M. Maethner. Currently it is a four-cycle, horizontally-opposed four-cylinder piston engine. It could be further developed into a six- or eight-cylinder engine.

With a 2.8-liter displacement it produces 70 hp at 2350 rpm. The weight is 144 lb. Fuel injection provides a stratified charge effect resulting in optimal emission, comparable to California requirements. The CDI is another feature.

With a Hoffmann 65" diameter propeller and a set of mufflers (intake and exhaust) a noise level of 56 dB(A) at 1,000 ft is expected — substantially below the present official requirements.

• The well known Scheibe Aircraft Co. celebrated recently 25 years of production, according to a lengthy article in

Aerokurier (3/77). It was founded in 1951 by the well-known designer of sailplanes, Dipl. Ing. Egon Scheibe. While he was instrumental in persuading the Allied Forces in 1951 to permit the resumption of soaring in Germany his engineering design work stretches way back — including auxiliary-powered sailplanes (see Foreign Scene 2/74) — to the early '30s. In addition to being a sailplane manufacturer (specifically trainers), Scheibe Aircraft Co. is also known for several models of two-place auxiliary-powered sailplanes. Some single-place auxiliary-powered sailplanes were also produced, the best known are the SF-27M and the SF-32 — all described in previous Foreign Scene articles.

While most of the sailplanes and APSs were of simple, conservative design, more than 2,000 of them were manufactured during the past 25 years. Hopefully his products will continue for years to provide enjoyment to soaring enthusiasts over the world — without or with the auxiliary-power.

• APSs performance evaluation by Dipl. Ing. H. Zacher is presented in an article in *Aerokurier* (5/77). The following table provides some of the more interesting and surprising (!) data:

| APS | Span (m) | Wing Area (sq. ft.) | Aspect Ratio | Wing Loading (psf) | L/D at | V (mph) |
|--------|-------------|------------------------|--------------|-----------------------|--------|------------|
| AK 1* | 14.85 | 152 | 15.5 | 6 | 30.5 | 61 |
| AS-K16 | 16 | 204 | 13.5 | 7.4 | 23.5 | 63 |
| KORA 1 | 18 | 209 | 16.7 | 7.3 | 27.5 | 57 |
| RF-5B | 17 | 204 | 15.25 | 7.3 | 24 | 60 |
| SF-28 | 16.3 | 197 | 14.5 | 6.5 | 23.5 | 56 |

*Single place, built by Karlsruhe College Soaring Group

• 2nd International Alpine Contest for *Tandem Falke* APSs took place in Gruyeres (also the home of an excellent cheese of the same name), Switzerland. The event was scheduled for May 27th to 30th to provide the unique experience of alpine soaring — with a two-place APS!

• The Austrian Aero-Club sponsored the 1st Austrian APS contest during June 12th to 19th at Schaerding-Suben (located in central Austria on the Austrian-German border between Passau and Salzburg) for single and two-place APSs.

• Burg Feuerstein is calling — You! The 1st European APSs contest is scheduled for next year, May 22nd to June 10th, according to a note in *Aerokurier* (5/77). It should be a great event; the sponsor is the Aero-Club of West Germany. (See more details elsewhere in this issue — Ed.)

In addition to flying activities the latest in the development and design of auxiliary-powered sailplanes is to be seen. So, try to get there, otherwise — just indulge in wishful thinking!

THE TUCSON FLIGHT

by Jack Lambie

The lock clicks, the doors rumble open as I push. Heavy steel; corrugations and beams. A delicate wood and fabric flying machine inside. Fueled, ready, a cover over its streamlined plastic canopy like a hooded Falcon. I unhook the battery charger and pull it into the sunshine. A flight to Tucson and the Soaring Convention. Another adventure. Fresh, unpredictable, the nature of flying is so. What experiences will this one bring?

Gas on, choke, four pulls of the hand starter, ignition on, choke off. A slow easy drag on the start lever and the quiet pthum-ptum-swish-swish-swish of the engine-prop begins. I settle back, my stocking feet nestle on the foam floor and rudder pedals. My brother Mark waves me off as he rolls the doors closed and his compatriots in the tower give me runway three for takeoff because I'm going east.

With ten gallons in the tank and five in the baggage compartment, plus sleeping bag, camera, and the usual odds and ends the little ship climbs slowly between the rows of Eucalyptus trees bordering Chino airport. Over Riverside, a shearline thermal is good for an easy two thousand feet gain. On into the mountains past Hemet, I aim straight to the side of the rocks, hit the lift, turn and slide along the edges, riding higher and higher. Off to the next ridge and let the wind push us up. Over the road, crossing into the Imperial Valley. Hey! A Cessna 210 is coming directly at us! A quick climbing turn and the mean looking machine drives under, never wavering from its steady climb.

Soaring up through the mountains brought 8000 feet so a pull on the fuel and in seconds the engine becomes quiet. I slow to 65 mph with the prop stopped in least drag, horizontal position. A glide across the Salton Sea carries us near the sand dunes. At 500 feet I turn on the ignition and fuel and the engine fires as usual at the first pull on the starter. Skimming over the big dunes is always fun. No people or obstructions out here. Past Yuma military base, I stay just south of the restricted area and low until well past, then circle in a smooth thermal to 6,000 feet at sunset. Puttering along at low power we

glide lower in the increasing dark and mark the highway to Gila Bend in the creeping points of headlight glow. Looking over the town of Gila Bend and into the blackness ahead the lights of the runway are suspended. Three hundred miles out, in three hours and time to put my spare five gallons of fuel in the tank.

The wheel clicks down and spoilers open, speed at 75, aim for the end of the runway in a curving approach. As the rate of turn in the runway lights appears to increase and flatten, it's time to ease the nose up and let the plane settle. It's not possible to tell exactly where the surface is, so I hold spoilers at one-quarter, until the wheel touches. I sensed that we had settled about ten feet below the level of the runway edge lights. I open the canopy and taxi to the hangars in the warm night air. Under a bright light, my five gallons of Texaco regular gurgle in. Clean the bugs off the leading edges and sort out the cockpit. The airport operator comes by and offers coffee in his lounge, then he takes off in a Cessna 150 with a student. The coffee is old but drinkable. The plane is still, its engine warm, ready to go, as I sit in the quiet, sipping the bitter drink. An orange light glows in the eastern sky and the edge of the moon appears over the mountains. In twenty minutes the mountains are outlined sharply in the moonlight. It is time to go.

In an airplane with no gyro instruments on the panel the moon sharply marking the mountains is comforting. It's probably too late to go to Tucson's Ryan Field for the gliding convention tonight, but the Antique Airmeet at Casa Grande should have a good crowd of plane lovers. The world seems quiet in the gray-white moonshine and the points of light below. The runway markers of Casa Grande airport appear and a sweep over the field shows rows of experimentals, antiques and biplanes in shades of gray and white. I unlatch the gearlock and lift the lever up and over putting the single wheel in a position to insure the propeller continues to turn after landing. Another float down the runway feeling for the unseen surface. Again, it seems we are six feet below the runway lights when the wheel lightly touches. I park the machine and search out a campfire for some airplane talk.

A couple of family groups are sharing a big blaze. "That you that just came in with the little white plane?"

Here have a beer. What kinda ship is that?" I briefly describe the motor-glider and ask about his plane. "Me and my friends here belong to the Taylorcraft Club and we flew them up here. Spent a lot of time gettin 'em ready for the show 'cause they're antiques you know."

"Isn't the banquet and prize giving meeting going on now?" I asked.

"Yeah, but that's too much money. I can feed me and my two kids for what that dinner would cost me."

I wondered why a person would spend the many hours and money building up an old plane, fly it to the meet and then save money by not going to the awards banquet. Perhaps the same conservative turn of mind that preserves an old airplane also objects to wasteful pomp and circumstance. I wandered in the moonlight among the painstakingly finished antique biplanes, yellow was white, and red was gray, chromed and polished parts returned and scattered the bright round moon. Another campfire.

"When I take off, I give 'er full power. You can't be too safe when you're flying."

"You can say that again," said another.

"Flying is one thing that you got to be careful. You can't take any chances." said a third. The conversation rambled on; the flyers becoming more dull and cliched as the beer drained from cans held in increasingly colder hands. The fire died and the cold desert air settled as the ground gave up its daytime heat.

I pulled the cushions from my cockpit, unstowed the sleeping bag and snuggled down next to the graceful glider. Teenaged twin female CAP cadets came over with a young pilot who was showing them around.

"This is a motorglider," he explained to the pretty girls in the baggy fatigue uniforms. "My dad showed me an article about them in a pilot's magazine that was terrific, that's how I know all about them. You can just about maneuver and soar with the engine off if you want." I peeked out with one eye feeling very smug and drifted off to a happy sleep.

At sparrows fart I was up to stroll through the rows of exciting and nostalgic planes. A perfect Boeing biplane won but a superbly restored Howard DGA was my favorite. It was big outside, hugely roomy inside. A he-man machine of the late Golden Age of Aviation. You'd

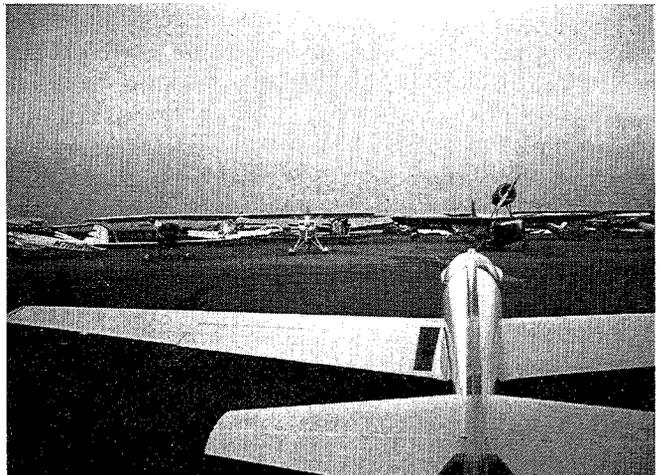
have to own an oil company to keep it in fuel but what a great machine.

The highly touted breakfast in one of the hangars was cold and greasy looking and the settings dismal so I passed it up, hopped in the Fournier, and briefly joined the morning flyby before heading south along the big freeway to Tucson.

Over Eloy, despite much circling over likely looking bunches of trees I didn't see the place where we were sleeping when the scorpion crawled into the sleeping bag on our around-the-world tandem trip two years before. Seeing the dramatic Pacheco Peak and soon after Marana Airpark brought back memories.

In the spring of 1975 the world was in a depression and as we rode by this Airpark on the tandem bicycle we saw the field crowded with shiny new airliners of all sizes. This day as I passed over I counted only 35 airliners, mostly older turboprops and jets, but including two widebody DC-10s. Times are better now. Only fifteen miles to go now and at AVRA Valley Airport an early thermal smartly bumped the ship and I shut off, climbed a few hundred feet and glided on to Ryan Field.

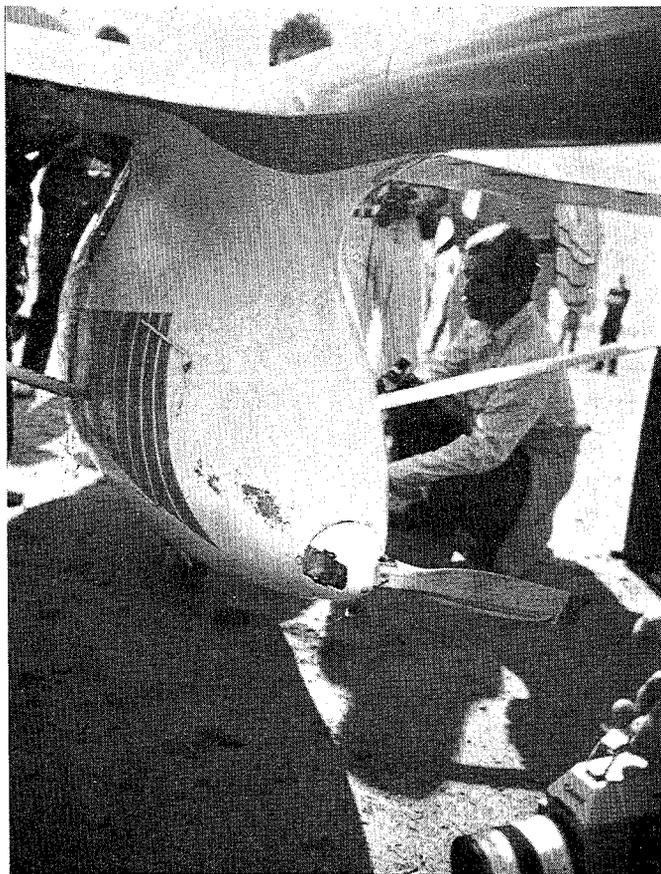
Calls on Unicom and 123.3 glider frequency were unanswered so I glided around in a right pattern as I had seen the big Ryson motorglider doing a couple of times on the glide in... Turning final I opened full spoilers and got the nose down. Just then a *Blanik* two seater sailplane was pushed on the precise place I had planned to land! Hmm, best to keep the spoilers open and touch quickly with firm braking. But the crowd around the glider spread back to take up even more space and it was now possible that I might bump someone even with a short stop. I reached for the ignition switch and



starter lever and closed the spoilers in a single quick motion. Just as I pulled up someone apparently decided, at long last, to check the pattern and in a frenzy the *Blanik* was swung and heaved off the runway. On again with the spoilers for a slightly long landing.

"We didn't hear you coming in." Was the embarrassed apology of the operations director. Ah, the complacency of a glider strip. They assume they are the only ones and a glider from afar is never considered. After this incident they will make it a habit for awhile I hope. This has happened to the quiet Fournier a few times before so I have invented a high visibility approach: Come in high on downwind and make a base very close to the end of the runway. Then use lots of spoilers and do S turns up the final tight turn. Planes on a long approach are sure to see you as well as those on the ground waiting for takeoff. Besides it's more fun.

The beautifully styled new *Zuni* was being test demonstrated by Einar Enevoldson on a busman's holiday. He is one of the pilots at Edwards Experimental Facility. This Standard Class ship, made in Albuquerque, N.M. seems to have picked the best features of all the others and put it into one machine.



That most uniquely small and light weight *Eaglet* powered glider threw its folding prop in half and was not able to complete a demonstration. The new Ryson motorglider seemed the star of the show. Its finish and performance were top class and everyone wanted to have a ride. The cost at perhaps \$35,000 seemed low for the quality. The small, light, and well-faired fixed gear was undoubtedly practical but it surely didn't look right on such a big clean airplane. Charlie Gyenes' turbo-charged RF-5B quietly buzzed off in the background showing its graceful lines and the new adjustable prop.

Taras Kiceniuck, Jr. and I sat on the ground eating sausage sandwiches watching a Pilatus B-4 standard class ship go through an aerobatic repertoire.

"Look at that inverted loop, and, --wow--that's a smooth slow roll."

"But Taras, once you've been to a few airshows that stuff becomes very cliched. I wish we could develop a good show for gliders to do."

"What do you mean?"

"Look, a sailplane can do many things besides trying to copy what a little biplane can do faster and far more easily. Would you like to see a gliding demonstration by a Pitts Special? It would be stupid."

We discussed what things a sailplane could do that would be a far better display of the pilot-sailplane ability. "How about coming over the crowd at 150 feet at high speed, then do a vertical turn which gradually becomes tighter as speed drops off until it is making the smallest tightest turn possible with flaps and everything out?"

"Right," Taras nodded. Gold badge pilot Connie Linke overheard and joined in.

"But don't people want something spectacular too?"

"O.K. Connie, How about a hightow and a two-turn circle with a two-turn spin entered at a precise point, recovery and continued circles with another two-turn spin at the same spot, continued circles and so on."

"You're right. That would be very pretty in a sailplane and very precise."

We were talking about all kinds of fantastic tricks when Bertha Ryan came by and I asked her to drive me to the gas station across the field for some gasoline. Bertha had scored and officiated

at contests for years and had flown her little 1-26 sailplane for even more years.

"That new *Zumi* looks beautiful, doesn't it, Jack: I'm about to get a high performance glider pretty soon. With the prices going up so much I can get one and fly it for years without depreciation."

"Good thinking, Bertha, besides you deserve a slick ship by now." We got five gallons of liquid thermals and drove back past an area covered with Douglas transports, DC-3 or C-47's if you like. I walked back to look through them after I fueled the motorglider.

Wings on some were missing, engines out, fabric control surfaces tattered. I picked my way to the cockpit of one and edged into the remains of the captain's seat. The wheel was warm in the desert sun. In the quiet of this corner of the airport it was possible to slip back to the days when it flew. The Burma jungles moved below the curving fuselage and a thick nylon line to a big troop glider reached back from the tail. I looked out the front and I could imagine a rotor cloud churning as we crossed the Hump with a full load and the wings flexed and groaned in turbulence. I thought of thousands of rivets the men and women put in to assemble the machine during the massive production of WWII and the places and adventures that had passed their wings. Now their silvery metal, still bright in the dry desert sun was bent in places, parts were gone, just the refuse of another era. So important in their time, so cared for and relied upon. Like old folks now with the children gone, retired, like all of us eventually.

I walked back across the dusty runway and prepared to go. A motorcyclist and his girlfriend watch my sleeping bag being stuffed in and the seat adjusted for comfort. As I cleaned the canopy he came over.

"Where are you going now?"

"No place, exactly. I guess I'll float on back toward California and stop when it gets dark".

"That sounds like a great way to go". He smiled with envy when I climbed in, pulled the start lever and taxied out to the runway.

I flew on a 260° course west which carried into an unmarked Indian reservation. This place is also the site of the old Luke Air Force Base and the restrictions on my map said I must stay be-

low 3000 ASL. That was fine with me. Each ridge and pile of rocky hills were attacked at the base with a quick turn into the north wind, a climb up the side in the lift and a speedy slide onto the floor of the valley. The Indian villages of Ail Nakya and Gu Achi passed below. Why would anyone live in such wilderness? It was so rough and isolated for mile after mile it seemed we were on a stony treadmill. Up over the rocky hills past the thousands of giant cacti and across barren valleys. What's that off to the left? It appears to be a huge hole through a mountain. Using the freedom of flight the Fournier seems to read my mind so quickly does it respond to my light touch, we head for the strange formation. It's a natural bridge. No roads lead to it and, as far as I can see, no signs of even a path. Nothing on my sectional map either. I pull out the road map. Nothing on there either?

The bridge was big enough to fly through. Should I? What if a cactus brushed a wing? Not very wise, I think. I took a picture and pulled up and around them tightly circled back, aiming for the center, I could see a mountain in the background framed by the natural bridge. It should be a good shot. Again at the last instant I pulled up and over. It was simply too isolated to fly through that hole in a mountain.

Back on course over the dry rocks and Organ Pipe Cactus, (Did I really discover a natural bridge?) I continued to check the maps. Maybe I was at exactly the right position. Air Force planes probably flew too high and ground travelers might be too low. I wonder. But onward.

Old Luke AFB number 7 and 8 with brush growing in runway cracks moved below and after passing a bombing target



the freeway to Yuma could finally be seen.

At another old airbase, Dateland, one of the antique biplanes sat, its bright orange wings reflecting the hot sun. I circled but could see a Cessna had landed and was taxiing over so I continued on.

Near evening the twists and turnings of the Colorado River reflected the red of the lowering sun. I always marvel at the science fiction fantasy of that beautiful river winding among deep shadows of sharp and colorful peaks. At 300 feet over the sand dunes north of Yuma the sky was deep red and the scene could have come from Viking. Pink everywhere, the sky, the sand, the cockpit. The wings shined pink as we skimmed an undulating path over the miles of giant dunes. I sat immersed in an artists' fantasy until the horizon's shadow darkened the ground.

Over Calpatria there were no runway lights and although a gas station was only a block away I thought that it might be difficult taking off in the total darkness of the farm country. I turned and flew 10 miles south on to Brawley and glided into its lighted airport with the last glow of red light on the horizon.

Like most airports now it was quiet and empty after sunset. I pulled the plane off the runway into the desert and walked a few yards to the road with my 5 gallon container. A farmer drove me to town for gas and back. I had planned to stay and nap until the moon rose but the driver was eager to see the machine fly. So what the heck. I take off and turn toward the city to give me an electric horizon and a quick pass, wiggle the wings' lights at my new friend and head for Indio. At full power climb, to insure a height ample to glide between airports, I noticed a flickering, blooming flash over the right wing. A valve

seemed to have become stuck during the climb. It was still climbing so I optioned to go high enough to make a long glide possible. Over the west shore of the Salton Sea halfway across at a mile up I slowed the engine to begin a gentle descent to Thermal Airport. A few lights glimmered in reflection from the shore onto the sea. Again I put myself in another time, another experience. A war-time fighter over opposition territory. It is difficult now sitting home recollecting these things to remember how utterly frightening that must have been. I was scared in a light motorglider with a reasonable glide distance and slow landing speed. When I pictured being in a P-47 dropping out of the sky at night, it was terrible. Thermal came in view but I decided to go on to the manicured and mown Bermuda Dunes Airport.

The moon was rising in giant, low-to-the-horizon, version as we quietly glided off the last thousand feet over Indio and opened the spoilers and wheel doors. That marvelous feeling of well-being is engulfing me as the ship is quietly floating for the end of the runway in the warm desert air. I hold off over the ground and gently touch. Not a soul about to see my wonderful landing. I drive along the grass back to the transient area parking, pull out the sleeping bag and snuggle down under the wing. Because of the trees and grass edging the field, it feels as if I'm sleeping in someone's front yard.

At morning I get a ride into town from a pilot of a turbo Commander to go to the local courthouse. I had gotten a ticket for riding the tandem bicycle on the freeway while going East on the Round-the-World bike trip and I wanted to settle it.



"You really enjoyed the trip? O.K. We'll dismiss the warrant for nonappearance and the ticket too if you go to traffic school." said the judge.

Back to Bermuda Dunes and I had the option of paying a landing fee or having the mains topped off. "O.K. Fill 'er up." At \$1.46 on the pump charge meter the laughing line boy couldn't get another drop in the yawning "main" and I took off for Chino.

The ground moves by, richly three-dimensional in the crisply invisible air. I sit separated from the air and the ground by a thin layer of plywood, fabric and paint organized into this device which allows one to become a being beyond any other on this planet.

Another flight, another adventure, another rich experience to expand my orientation to the human venture. Those who wonder so meaninglessly and unanswerably, "Why are we here and what is this all for?" are asking the wrong questions. We do better by simply immersing ourselves in the stupifying wonder of the world as it is in its everyday diversity

and by looking at it from different angles, such as from the air and from the ground. Why should it be this way and not that? It's hard to appreciate the whole incredible thing, but I think we've got to try. A delightful airplane helps.

After 47 minutes of circling in up-currents for altitude and shooting down along the freeway in the clearest weather that ever existed Chino is in sight.

"Chino Airport 1JL inbound at the trailer park 5 miles East." "One Jay Ell cleared for straight in approach runway 26 report over the wash."

"How as the trip?"

I recognize my brother Mark's voice.

"Nice, I'll be up for coffee and tell you about it."

I did my standard turning flitting drop to the runway and turned up the taxiway to my hangar. I pulled off the gas a few hundred feet away from the door and coasted in, opening the canopy for the last cooling little breeze. I sat for a few minutes smiling inside then reluctantly climbed out to open the doors and hangar the plane.

1ST EUROPEAN MOTORGLIDING CHAMPIONSHIPS — 1978

The SSA has received information from the German Aero Club on a European Motorgliding Championship, to be held at Burg Feuerstein from May 28 through June 10, 1978. Pilots from other continents are also welcome and the U.S. has been invited to enter our top pilots. Invitation and General Regulations, and Preliminary Rules are printed below. If interested, write SSA for more information.

Invitation and General Regulations

1. Purpose:

The purpose of the Championships is:

- 1.1 to stimulate the development of motorgliding by an international comparison of performance of pilots and motorgliders;
- 1.2 to promote the technical development and design of motorgliders;
- 1.3 to reinforce friendship amongst motorglider pilots of different nations.

2. Organizer:

- 2.1 Organizer of the event is the German Aero-Club e.V.
- 2.2 The gliding center "Fraenkische Fliegerschule Feuerstein e.V." has been appointed to carry out the event.

3. Dates and Place:

- 3.1 The event will take place between May 28 and June 11, 1978
 - 3.1.1 Practice week (not compulsory) May 22 to May 27
 - 3.1.2 Opening ceremony May 27, 20:00 hrs.
 - 3.1.3 Competition Flights May 28 to June 10
 - 3.1.4 Closing ceremony and prizegiving June 10, 20:00 hrs.
 - 3.1.5 Departure of participants June 11
- 3.2 The event will be held at the airfield "Feuerstein" near Nuremberg, Federal Republic of Germany 49° 47' 45" N; 11° 08' 06" E

4. Motorglider Classes:

- 4.1 Self-launching motorgliders will be

admitted only.

- 4.2 There will be 3 classes:
- 4.2.1 Class 1 (standard): Single-seaters with not more than 15 m span.
- 4.2.2 Class 2 (open): All other single-seaters not covered by class 1.
- 4.2.3 Class 3 (Two seaters): All two-place motorgliders. They must be flown with 2 persons on board.
- 4.3 Classes may be combined if less than 6 entries in one or the other class are made.

5. Competing Pilots

- 5.1 All competing pilots must be members of a national Aero-Club.
- 5.2 The change of a pilot during the championships is not allowed.
- 5.3 The pilots have to fulfill the following requirements:
 - 5.3.1 FAI sporting license
 - 5.3.2 FAI silver badge
 - 5.3.3 Motorglider license or equivalent permit.
- 5.4 There is no limitation as to the number of pilots entered by the NAcCs, but the organizer may limit the entries if they exceed the number of 50. In such a case the basis for limitation will be the chronological order of entries.

6. Rules:

The event will be carried out in compliance with the Sporting Code, Section 3, Class D. The English version is authoritative.

7. Competition Tasks:

- 7.1 All tasks will be speed tasks
- 7.2 The following tasks may be set:
 - 7.2.1 Straight goal flights
 - 7.2.2 Out-and-return flights
 - 7.2.3 Triangular flights
- 7.3 The tasks will be set at the daily briefings.

8. Competition Numbers:

All competitors are asked to send in the competition numbers of their motorgliders as early as possible (questionnaire, entry form or formless). In case of two or more competitors wanting the same number, it will be given to the first applicant.

9. International Jury:

- 9.1 All national teams shall designate one delegate as a member of the International Jury.
- 9.2 The chairman will be elected by open vote at the opening briefing.

10. Scoring:

- 10.1 All competition flights will be scored using the "Scoring System" attached to this invitation.
- 10.2 Winners and European Motorglider Champions will be the pilots gaining the highest amount of total points in their classes, taking together all competition days in the respective classes.
- 10.3 The pilots of German nationality scoring the highest number of points will be German Champions.

11. Entries:

- 11.1 Entry opening date: October 1, 1977
Entry closing date: March 31, 1978
- 11.2 Entries have to be made with the official entry forms, a copy of which is joined to this letter of invitation. Further entry forms can be obtained from the Deutscher Aero-Club (address see under 14).
- 11.3 For preliminary information please fill in the questionnaire (attached) and send it to the Deutscher Aero-Club (address see under 14) until August 31, 1977 at the latest.

12. Entry Fees:

- 12.1 The entry fee for one pilot including one motorglider and crew is 250. — DM. It covers all organization costs.
- 12.2 Payment of the entry fee has to be made together with the submission of the entry form but not later than March 31, 1978.
Bank account:
Deutscher Aero Club e.V.
Deutsche Bank, Frankfurt/Main
Konto Nr. 791-1241 BLZ 50070010
Please specify "Motorglider 1978" and name of pilot.
- 12.3 The entry fee will be forfeited if neither the pilot nominated nor a substitute takes part in the event.
- 12.4 All other costs as accommodation, food, fuel, etc. will have to be paid by the participants directly.

13. Accommodation and Food

13.1 Momentary costs for accommodation and food are:

13.1.1 Full board double room DM 26. -
/day/person
dormitory DM 23.-

13.1.2 Bed/breakfast double room DM
12.50
dormitory DM 10.-

13.2 There are nice and low-price hotels and restaurants in the vicinity of the airfield.

13.3 Camping facilities on the airfield (DM 3.-/day/caravan or tent)

13.4 Breakfast-lunch-dinner possible in the airfield restaurant

14. Correspondence:

Until March 31, 1978 please send all mail to
Deutscher Aero-Club e.V.
- Motorsegler -
Postfach 710 123
600 Frankfurt/Main 71

15. Special Rules:

The organizer will publish special rules in the "Regulations". They will be forwarded to the participants after their questionnaires have been received, but not later than Oct. 1, 1977.

16. Cancellation:

The event may be cancelled by the organizer due to force majeure or because the number of entries received is too small. In such a case the entry fee will be returned.

Deutscher Aero Club e.V.

Gunther Grav von Hardenberg
President

Fred Weinholtz
Chairman of the Gliding-Board

Preliminary Rules

1. Scoring Formula:

Daily points: $(1000 - (T_{pil} - T_{best}) - (TM \times 15)) f$, where

T_{pil} = Flying time of the competitor

T_{best} = Flying time of the fastest pilot

TM = Time of engine running between start line and finish line

f = 1 for $TM = 0$ minutes

f = $\frac{90 - TM}{100}$ for TM more than 0 minutes

2. Index List:

To guarantee a certain amount of equal chances within the classes, the official Index List of the German Aero-Club will be applied in each class. The expression $(T_{pil} - T_{best})$ is multiplied by the index factor of the motorglider in question. The Index List can be obtained from the Deutsche Aero-Club, but it will also be published in the final rules.

3. Further Rules:

3.1 The pilot must cross the start line not later than 30 minutes after his takeoff. He is allowed to cross the start line 3 times, but a new takeoff is required before each crossing. The organizer must specify takeoff periods.

3.2 The finish line must not be crossed under 200 m above ground.

3.3 A competition day is only valid if at least one pilot in the class has obtained at least 500 points.

3.4 Evidence of turning points will be from photographs according to Sporting Code Section 3, Class D, 2.7, 2.7.1 and 2.7.2a). Paragraph 2.7.2b) and chapter 6.A.1 are not applicable.

3.5 All motorgliders must carry a barograph registering the engine running time by transmitting the engine vibrations to the barogram.

3.6 Guests are invited to participate in the event irregularly, several of them may share one motorglider. They will, however, not be scored officially.

The final rules will be published in the "Regulations" (see Invitation 15). If there are any wishes or suggestions, please let us know before the 31st of August 1977.

/S/ Gerd Stolle
Championships Director

Motorgliding
c/o The Soaring
P.O. Box 66071
Los Angeles, Cal

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At Santa Monica, Calif.

TO *MOTORGLIDING* SUBSCRIBERS

A very sincere thank you is extended to all the subscribers of *Motorgliding*. You have uncomplainingly borne with our problems of not maintaining a regular production schedule.

I want to personally thank present editor Don Monroe who took over the unpaid editorship position to assist me and for which we are most grateful. Only for the last few issues has the editor position been 'paid' and that at a very low rate.

In any event, although I feel that *Motorgliding* is a natural, separate publication for SSA to publish (its over 1000 subscribers compare favorably to *Soaring's* distribution of 25 years ago), we are terminating publication effective with the next issue. While *Soaring* will not publish *all* the material that *Motorgliding* did, it will contain a growing amount of material on motorgliders. It is appropriate here to acknowledge our great appreciation to you *Motorgliding* authors, columnists and advertisers who have so unselfishly provided the necessary material without which there would be nothing. Please do keep sending material into SSA. Doug Lamont will exercise normal editorial prerogative in selecting material to use in *Soaring*.

All subscribers will receive a refund for the unexpired portion of their subscription. This will amount to as little as 42¢ for domestic subscribers with only one month left to over \$6.00 for longterm subscriptions. The average will be under \$2.00 to be refunded.

Should anyone for whatever reason not be satisfied with the procedure, please advise us immediately with a stamped self-addressed envelope and we shall attempt to accommodate.

Bernald S. Smith
Chairman
Publications Board

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MOTORGLIDER RECORD

FAI has approved the following world motorglider record: multiplace, gain of height, 3428 meters, by Dieter Mayr, pilot, of Germany, and Frank Adler, passenger, in a Schleicher AS-K 16, on March 22, 1977.