

By BENNETT ROGERS

THE AS-K 14 vs THE SF-27M

I think it would be hard to dispute that the Schleicher AS-K 14 and the Scheibe SF-27M are anything but the two best soaring motorgliders presently active in the U.S. I haven't flown the Fournier SFS-31 (which uses the same 15-meter wing as the SF-27M), but the specs would indicate that its gliding performance is just a shade short of the other two single-seaters currently being imported. In fairness to the SFS-31, however, it should be noted that its practicality as a *powered airplane* has to be infinitely superior to either the Schleicher or Scheibe and that consequently many buyers may consider it a better all-around value. But if all you care about is what happens with the engine off, your choice, for the moment at least, seems to boil down to either the '14 or the '27M.

Just last January, after attending the First Annual Soaring Convention in Dallas, Bill Mouton made it possible for me to continue on to the gulf port of New Orleans and fly his Scheibe SF-27M, which I did on three separate days. There was a touch of irony here, because Bill has the exact same ship that I once had on order and which I canceled in favor of a Schleicher AS-K 14 after delivery of the Scheibe was indefinitely delayed at one point. Being next in line on the waiting list, Bill ultimately got "my" bird. Naturally, I was eager to compare what I had missed with what I got.

Bill has described his SF-27M in both *Motorgliding* and *Soaring*, so I assume that most readers are familiar with his sleek pride and joy. But to jog any rusty memories, the Scheibe is the model that folds its engine and prop in and out of the fuselage behind the cockpit — while the AS-K 14 has a fixed engine conventionally located in the nose, its prop feathering during soaring flight. Both use the 26-hp, 2-cycle Hirth engine, and both are derivatives of motorless models whose gliding performance was representative of the best Standard Class sailplanes during the pre-fiberglass era.

It's hard to imagine anyone operating out of any wilder "gliderports" than Bill does. He started out at one of the FAA's busiest general-aviation terminals, New Orleans Lakefront Airport, a sprawling mass of endless hard-surfaced runways that jut well out into mammoth Lake Pontchartrain. Recently he moved in a little closer to home to tiny Westwego Airport — essentially a seaplane base (complete with "No Fishing" signs). It's a trifle kinky off the ground, too. Cumulus cloud bases are sometimes as low as 1000 feet (3500 on a booming day), and when you look down, invariably you're either staring at the homes and office buildings of a great metropolitan area or at something wet — like a swamp or a lake or an ocean. Stick with Bill Mouton long enough and you'll be convinced that motor-

gliders make soaring possible *anyplace*.

Fittingly enough, with all the float planes at Westwego Airport, when the SF-27M gives birth to its engine, it takes on a silhouette somewhat akin to that of the Colonial Skimmer amphibian. But with the powerplant tucked back away in its womb, the SF-27M is outwardly indistinguishable from the silent majority of pure sailplanes. And this, combined with the fact that the Scheibe retains a tow-hook, gives the machine one of its principal advantages over the AS-K 14; for, if the engine is down for repairs or if you just want to do some soaring as a purist, you can still tow off in all the conventionally inconvenient manners.

The gleaming exterior craftsmanship of both ships is identically good, but the cockpit interior of the SF-27M is considerably more plush and comfortable (particularly for tall pilots). But where the Schleicher has a convenient hinged canopy, the SF-27M has a unit that has to be completely removed from the fuselage. Not only does this subject the canopy glass to more likelihood of being scratched, dropped, stepped on, or run over, but it normally requires outside help to get the awkward thing on and off (unless the pilot has done a lot of practicing and is willing to bet his strength and balance against the not-inconsiderable cost and delay of obtaining a new canopy).

The difficulty of getting in and out of the ship unassisted is further magnified by the fact that the '27M — like the AS-K 14 — deserves membership in the aviation hall of fame for inept ground-taxiing aircraft. Even with the steerable tailwheel that Bill has cleverly added, if you want to — or, more likely, *have* to — make a really abrupt change of direction unaided on the ground, about the only thing you can do is nimbly leap from the cockpit (more happily done if the canopy is removed first), pick up the tail, point things in the new direction, vault back inside, and then somehow get your glass lid back in place. Since there is no parking brake, whether you do all this with the engine running or not says something about your overall life style and general philosophic acceptance of fate's various rewards. Replacing the canopy alone while the man in the control tower is filling your radio with kindly directives is likely to be the ultimate test of whether your underarm deodorant truly keeps you dry.

The basic purpose of motorgliding, of course, is to obtain independence of operation, and a single design feature like this can defeat the whole idea. Fortunately, Bill is a structural engineer of some repute and is now designing his own modification to beat the problem. But most individuals aren't qualified to do the things that are logically the manufacturer's re-

sponsibility. One gets the feeling that in Europe most soaring and motorgliding is done from large, wide-open, grassy fields with plenty of helpful club members just begging to be of assistance. Well, that's not quite the way it is over here. We've got a lot more concrete than grass, and there are days when you're the only person at the airport or within miles of wherever you happen to be. If the Europeans want to sell us motorgliders in really appreciable numbers — and I sincerely hope that they do — the designers and builders are going to have to keep in mind the image of a typical middle-aged pilot, *all by himself*, operating freely out of anything from a deserted cow pasture to a frantically congested maze of crisscrossing runways, taxi strips, and parking ramps. A man who — being old enough to afford the purchase price of a powered sailplane — is no longer young enough to consider carrying it around on his back.

To fill the gas tank on the AS-K 14, all you have to do is open the canopy. But on the '27M you have to take off a fairing that covers the juncture of the wingspars. However, this is more than compensated for by having the engine so easily available for inspection and maintenance (where on the '14 you have to remove a two-piece cowling). Incidentally, the precision manner in which the engine pops in and out of the fuselage, with

clamshell doors instantly sealing the opening, is most impressive. Far more of a conversation piece than my feathering prop.

The very tall landing gear necessary to give the AS-K's prop adequate ground clearance would be expected to produce a fair amount of drag, and consequently it's been made retractable. But even with the gear completely in the up-position, about half the wheel is still hanging outside in the breeze. Schleicher maintains that this is to minimize the damage of an inadvertent gear-up landing, but it probably has more to do with the fact that the '14 was developed from a fixed-gear ship (the Ka-6), and there just wasn't room to get the whole wheel inside the fuselage. So the drag penalty is probably about the same as for the Scheibe's well-faired non-retractable arrangement, which is to say pretty minimal. But on the Scheibe you don't have to do all that muscle flexing with your left arm and you don't have to worry about forgetting to lower the wheel every time you land. However, the underside of the '14 is less susceptible to ground damage during a rough-field landing, and I suspect the ship may touch down a little slower because the tall gear allows the wing to assume a higher angle of attack.

The wheel brake on the SF-27M is actuated by holding the dive-brake handle to its rearward-most position,



VICKIE CLARKE

The start of Bennett Rogers' very first takeoff in the AS-K 14

while the '14 has a T-bar between the rudder pedals. I prefer the latter arrangement, because there are times when you want full dive brakes without accidentally locking up the wheel at the same time. Also it's nice to be able to apply your wheel brake while pulling on the starter handle with both hands. But there are occasions when I find it hard to get my heels on the bar and still keep my toes on the rudders. In general I think the best solution is a squeeze-grip affair on the control stick with a parking lock of some kind.

The starting drill for firing up the little Hirth four-banger is mostly the same for both ships, although the process is immeasurably enhanced with the SF-27M if you remember to take the engine out of hiding first. In both cases you yank like hell on a little handle connected to a cable that pulls out a foot or two toward the pilot as it turns the motor over. Just like starting a lawnmower. Because each pull is roughly the muscular equivalent of one sloppy push-up, I use an extension cord (The Feeble Flier's Friend) that runs from the starter handle out the rear of the AS-K's cockpit and which allows my football-linebacker crew chief, George Green, to stand behind the wing and do all the work. This lets me conserve my strength for such taxing labors as adjusting the choke and throttle arms after a cylinder or two shows signs of coming to life. And, of course, this helps keep George in shape—especially when I've forgotten to turn on the ignition switch. I have my doubts as to whether the FFF would be a

suitable accessory for the '27M, because I fear either the rope or the crew chief would come within the arc of the prop. Though you can always find a substitute crew chief, getting a new propeller from Germany takes weeks.

Making a competent takeoff requires very little skill in the AS-K 14, and even less in the SF-27M. In Bill's ship you just hold the stick back against the rear stop and forget about pitch adjustments until the ship breaks ground. This entirely neutralizes any rotational pitching effect caused while adding power through the engine's elevated thrust line. And with Bill's steerable tailwheel firmly plastered to the ground by the up elevator resulting from the rear stick position, the rudder pedals will drive you wherever you want to go.

(Steerable tailwheels are another one of those absolute basic necessities that I feel no motorglider should come without, the word "without" unfortunately describing the original condition of both the Scheibe and the Schleicher; as an added insult, the tailskid on my ship wore out in something like a dozen paved-runway landings and takeoffs, another reminder to our German friends that—in a country where even the football and baseball fields are covered with Astro-turf and its chemical cousins—grass is only for smoking.)

Aileron control at the start of the takeoff run is of little consequence, thanks to Bill's custom "flamingo-leg" outriggers at each wing tip. (Outriggers—like steerable tailwheels—also

need to be standard equipment if motorglider pilots are to have aspirations of taxiing other than as the crow flies; so far, outriggers are *de rigueur* only on the multiplace models and the Fournier line of single-seaters.) About the only way to foul up the takeoff on the SF-27M is to forget to put the dive brakes back in after using the wheel brake to taxi or to hold the ship for an engine run-up.

Once the machine is airborne, you relax the stick pressure momentarily and allow your airspeed to build to 55 mph, at which point you have to come back on the stick again to maintain this speed and to keep the engine from over-revving. As you pull the nose up to remain at 55 mph, the ship rears up from the runway in spectacular fashion, particularly in a wind-gradient situation where the velocity is increasing with height. The effect is not all that noticeable in the cockpit, but it's quite dramatic for spectators on the ground. When I watched Bill's first takeoff, I thought that perhaps his horizontal tail had jammed in the up position. The ship was heading directly away from us with the nose flaring ever higher, the planform of the wing increasingly revealing itself, and suddenly it occurred to me that I was about to see one of the great low-altitude loops of all time. Either that—or a granddaddy whipstall, with the imminent arrival of ground zero leaving poor Bill Mouton sufficiently fragmented to warrant placing a repair call to all the king's horses and all the king's men. Plus a separate call to Mrs. Mouton to subtly suggest she

check the condition of the black numbers in her wardrobe. All of which was just too painful to contemplate, since it meant that I wouldn't get to fly the ship. However, as Bill's mount gradually assumed a less rakish attitude, it soon became evident that nothing was amiss, and my heart and Adam's apple began to disengage.

I'd tell you what an AS-K 14 takeoff looks like, except I've never ever seen one from the outside. But, until proven otherwise, I figure it's best to go under the assumption that every one of them is an act of such consummate artistry and grace that the very gods themselves are moved to give me a quick, "Right on, baby." (Occasionally, while wallowing through a series of PIO's after having lost my muscle momentum midway through the gear-raising cycle, it has come to mind that perhaps this is not precisely what they are saying.)

I think it is safe to comment, however, that motorglider takeoffs are generally easier to accomplish than aero-tows, particularly in turbulent air, because the pilot does not have to fly formation with another aircraft (the towplane). If you're a bit sloppy, there's no immediate frame of reference to reveal the fact.

Under power, the SF-27M and the AS-K 14 are just about impossible to tell apart, except that the Scheibe requires a surprising amount of right rudder in order to keep the yaw string and ball centered. Both are acceptable in terms of noise, vibration, and climb rate (about 400 fpm). And both are slow and awkward for powered cross-country work. The problem is that before you can reach a decent cruising speed, the rev-counter goes merrily past its redline. So you wind up dolphining along at about 70 or 80 mph in a series of powered climbs and unpowered glides.

The 55-pound Hirth engine seems to have two shortcomings. First, the casing that carries the reduction gear for decreasing the crankshaft revolutions to the turning speed of the prop invariably leaks a bit of its lubricant. I haven't talked to any Hirth-engined motorglider owner who doesn't have to wipe at least a few traces of gearcase oil off the pristine surfaces of his bird after each flight. You don't have to be a purist to wince at this sort of



WILLIAM J. MOUTON, JR.

Reaching down for the engine-starter handle in preparation for the author's first flight in the SF-27M.

thing. Schleicher even put out a bulletin advising all owners to check the oil level in the casing before each flight (a 20-minute job on the '14, no sweat on the '27M).

Secondly, the fuel pump supplied on the Hirth seems only marginally adequate for the task of supplying proper fuel pressure to the four diaphragm carburetors. Those of us who have experienced rough-running engines—that includes both Bill and me—have normally been able to cure matters by substituting a more powerful pump. This problem may be more acute on the high-mounted engine of the Scheibe where gravity is working against the direction of gas flow.

(Interestingly, it was Hirth that manufactured the engines for all those mean-looking Heinkel He-111 bombers that flew unsuccessful out-and-returns for the Luftwaffe during the Battle of Britain. At the time, it was widely supposed that these ill-fated bombers had fallen victim to RAF fighters. But we motorglider owners know that the real culprit was gasoline starvation. This fact was subsequently confirmed when Winston Churchill made his famous statement: "Never have so many owed so much to no fuel."—As luck would have it, Sir Winston choked on his cigar just as he uttered the last two words, and most people misunderstood them.)

To give the little Hirth its just due, however, I must confess I've only heard of one case where an engine actually stopped running in flight (the usual symptom being that there is a gremlin playing with your throttle). And it should be emphasized that

changing to a more effective fuel pump is remarkably simple and inexpensive. So simple and inexpensive that one might wonder why the factory...

While the engine is shock-mounted in the AS-K 14, on the '27M it isn't. Nonetheless, the pylon to which the little Hirth is attached seems to damp out vibration well before it can disturb the fellow riding up front (though Bill does go around tightening up screws on the engine itself after each flight). But when you kill the ignition switch, the pylon seems to fall into phase with the dying cylinder explosions, and for a few seconds the whole ship shakes like a hunk of Jello getting a vibrator massage.

With the engine stopped, transitioning into the soaring configuration is more easily done in the '14. All you have to do is give one quick twist of a T-handle to feather the prop and you've gone from dirty to clean. Incidentally, the prop is almost unnoticeable from inside the cockpit, and you will quickly forget that it's even there. The same, however, cannot be said for the people in passing light aircraft; there's something about an unmoving propeller on a single-engine airplane that arouses a certain amount of outside interest.

In the Scheibe you have to throw a lever on the left side of the cockpit to unlock the pylon; then you stare into a little mirror while carefully tugging at the starter cable in order to line up the prop vertically with the pylon; and finally you lower the whole works into the fuselage by making three-and-a-half rapid turns with a

crank on the right side of the cockpit (being sure to test that the entire affair actually locks itself home). You want to think about what you're doing in a fairly deliberate manner; carelessly dropping the pylon with the prop askew (or, heaven forbid, still running!) is apt to lead to an unsavory design modification.

Normally (or is it *hopefully?*), the motorglider pilot is circling in lift — perhaps with other ships — at the time he shuts down his powerplant. With the AS-K 14, the potential for misplacing the thermal, or otherwise fouling up, is clearly less than for a folding-engine design.

And so there you are sailing along on a whisper . . . caught up in the magic, the hushed beauty of it all. Sure, pilots are always talking up the quiet, vibrationless raptures of motorless flight. But if all you fly is a conventional sailplane, it's only human to start taking these precious wonders for granted. In a motorglider, however, you always have this vivid contrast to remind you of how sensuous and godlike soaring flight really is: One moment you're chitty-chitty-bang-banging ahead, and then suddenly you've passed into another dimension, swooshing onward in sunlit silence with a renewed appreciation of one of man's age-old dreams.

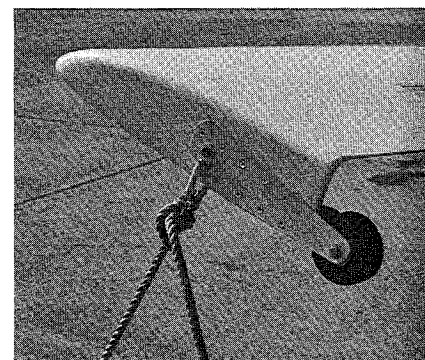
It's with their engines off that both craft really come into their own, because you quickly realize that they are genuine sailplanes with a purebred soaring heritage. Each has obviously inherited its best qualities from the

motorless side of the family. There is absolutely no sensation of being aboard a small airplane that has just suffered major mischief in the engine compartment.

The thing I noticed first about the SF-27M was how sensitive the rudder pedals seemed. Even after flying the ship on three different occasions, the yaw string was still wagging its disapproval at me whenever I tried to roll rapidly into or out of a turn. I just didn't have that feeling of being immediately at home — as I had during my first flight in the AS-K 14. It should be noted, however, that I have no high-performance fiberglass experience, and my impressions should be treated with at least gentle skepticism. Nonetheless, the feeling that filtered through my ham-fisted hands and feet was that — though the SF-27M claims a slightly lower minimum sink rate (138 fpm to 148 fpm) — the '14 may actually have a slight edge in climb, especially in thermals where the pilot has to constantly maneuver to center the cores. Anything descended from a Ka-6 is certainly going to be no bad thing while working elusive lift.

Both ships stall at roughly the same speed. The '27M goes cleanly without much fuss, while the '14 does enough trembling and mushing to warn even the most insensitive lout.

It's at the high-speed end of the polar that the Scheibe shines. You don't have to conduct a Bickle-type test program to know that in straight flight an SF-27M is going to outrun any AS-K 14 ever built. Push the Schleich-



RAY ELSMORE

Ray Elsmore, whose AS-K 14 appeared in color for the month of March in the SSA calendar, has added his own custom wingtip wheels. Ray's ship is now exploring soaring conditions in Alaska (where they have 22-hour days of sunlight during the summer).

er over to 100 mph and you find you're having to urge it on by leaning on the stick with some degree of authority; the wind roar outside the bubble canopy becomes a junior Niagara; and while your dive angle doesn't quite put a Stuka to shame, the altimeter unwinds itself with discouraging vigor.

At the same speed, the SF-27M just sits there comfortably smiling to itself. The factory claims that at a sink rate of 360 fpm their motorized marvel is honking along at 95 mph, which exceeds the manufacturers' claims for such stalwarts as the SHK, Standard Libelle, and LS-1, and which is 16 mph (20 percent) more than what Schleicher says the AS-K 14 does. Also, the SF-27M's advertised maximum glide ratio of 34 to one is 17 percent more than the AS-K 14's max of 29 to one (actually, it encourages me to think of it as being 58 to *two*), all this coming at a wing loading of 6.4 lbs. per sq. ft. for the Scheibe and 5.8 for its rival from Poppenhausen.

Okay, we're all adults and none of us believes in Santa Claus, the Easter Bunny, or factory performance figures. But even if Scheibe is exaggerating more than Schleicher is, I find it hard to believe that an AS-K 14 flown in the inevitable motorgliding contests to come will be able to beat an SF-27M exercised to its full potential. Which is just fine for the egos of all us AS-K owners, because any time we triumph over an SF-27M it will obviously be our own doing as super pilots; while defeat will clearly be the plane's fault. Heads we win, tails everyone else loses.

The large Schempp-Hirth dive



WILLIAM J. MOUTON, JR.

brakes that scissor in and out of both the upper and lower surfaces of the SF-27M wing are immensely more powerful than the AS-K 14's simple top-surface spoilers (which are basically the same type of rotating panels used on early 1-26's, complete to the use of a handle on a pull-out cable instead of a lever-arm control). Indeed, the Scheibe's brakes are so decidedly effective that you have to be careful as to how you deploy them close to the ground, assuming you want to avoid landing heavily enough that the landing gear becomes a permanently-fused extension of your tailbone. Bill closes the brakes all the way shortly before touching down and then pops them right back on again for the rollout. But for short-field landings, I imagine most owners will want to experiment to find out how much approach speed will support how much brake.

While the '14 can't make as steep a landing approach, its spoilers are nonetheless adequate. The ops manual recommends that the ship be landed two-point — that is, with the wheel and tailskid touching down simultaneously. The height of the landing gear gives Schleicher's pet the kind of taildragger attitude certain to elicit romantic overtures from every randy Piper Cub in sight. Making a proper flare-out is no big problem, however. If you pull back too far on the stick, you start ballooning away from the ground and must obviously release some pressure; and if you don't get the stick back far enough, you simply skip gently and controllably back into the air for a

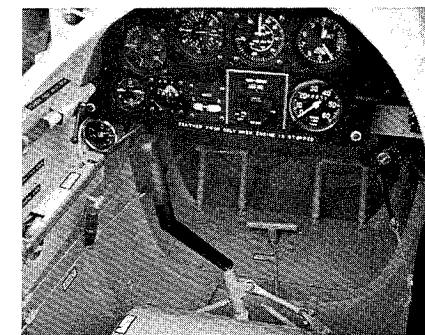
low and graceful bounce or two (at least they *feel* low and graceful).

The only real drama I had with Bill's beautiful bird came right after my first landing. I had touched down just about dusk and — there being no taxiways — had cleared the runway by coasting off 10 or 15 feet into the grassy, snake-infested zone between the paved strip and the channel used by the seaplanes. Unknown to me, it had been raining for the past week, and the sailplane's wheel eventually became hopelessly mired in the slop just off the edge of the runway. With this, the sun retracted itself into the western horizon, the runway lights winked on, and ten trillion mosquitoes began organizing a local blood-bank withdrawal program.

Feeling that landing aircraft constituted a substantial hazard to the safety of the sailplane, we parked Bill's Porsche in front of it with the lights on while we tried to round up some additional muscle . . . leaving a suitably agitated light twin circling the airport for more than half an hour, wondering just why the hell automobile headlights were dashing around on the field's only runway.

Just about the time we finally had the glider back in its hangar, two police cars screamed onto the airport with their dome lights flashing the urgent nature of their mission. Paying no attention to us, they tore off in unison down the now-empty runway in angry pursuit of whatever evil-doers might be causing all the trouble.

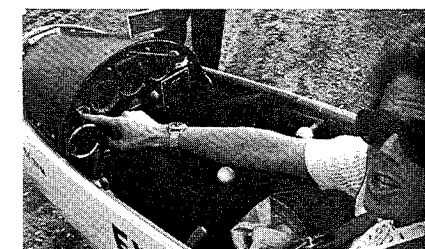
Critics of society are always exploring the fact that when it comes



BENNETT ROGERS

The AS-K 14 cockpit: At the extreme right of the instrument panel (in the white space) is the ignition switch. Faintly visible just above it is the dark T-handle for feathering the prop, and just below the switch is the starter-cord handle. The choke and throttle arms extend upward from the console at the far left of the cockpit, and the dark verticle handle just forward operates the spoilers. The small arm pointing down from above the spoiler handle shuts off the fuel. The only engine instrument is a tachometer (lower right corner of the panel). The end of the black landing-gear handle is just visible to the left of the seat, and the wheel brake is operated by the heel bar between the rudder pedals.

CONTACT! Writer Rogers exercises his primary typing finger on the SF-27M's ignition switch. Directly beneath are the small choke and throttle levers. The white ball-shaped knob appearing just above Bennett's elbow is on the handle that cranks the engine in and out of the fuselage. The mirror on top of the instrument panel is for centering the prop before retracting the engine. And the long handle coming out the top of the panel is the canopy release.



WILLIAM J. MOUTON, JR.

to voluntarily aiding law enforcement, bystanders never want to get involved any more. But when you happen to be the guilty party, I figure that avoiding involvement is not so much a symbol of the impersonal quality of modern life as it is *sound advice*. As a result, I pointed out to Bill that since we were through flying for the day, we might as well go on home . . . while the fuzz was still down at the far end of the runway. But Bill insisted that we at least finish putting the sailplane away; and while I was debating whether the better part of valor might not be to cut out alone on foot, the hangar suddenly began erupting with badges, uniforms, and southern-accented questions. Somehow, however, Bill got the

The author switching fuel pumps on his AS-K 14



RICHARD S. DRURY

minions of the law off on the subject of a plane that had cracked up that afternoon, and they quickly lost interest in us in their eagerness to go out and ogle — er, investigate — the wreckage. As it turned out, we escaped with nothing more than a lecture the next day from the airport manager (who seemed rather embarrassed about the whole thing when he realized we were actually taking his chewing-out to heart).

Of course, landings of any kind can normally be avoided in a powered sailplane by merely restarting the motor (in which case, however, the pilot loses credit for his flight under the FAI rules). By the time I'm down to 500 feet above the ground, my usual procedure in the AS-K 14 is to have established some sort of pattern or approach to a suitable landing site. If the field I'm lining up is too small for a subsequent takeoff, or if the landing surface begins to look uninviting, and especially if the distance for my flight isn't going to be long enough that I care whether it's officially certifiable, I'll expect to have the engine going within the next 15 seconds — at a cost of less than 100 feet of altitude.

In the '14, aerial relights are simplicity itself: Assuming you've reset the choke and throttle to their start positions after turning off the engine, all you do is untwist the prop control, click the ignition *ein*, and begin yanking on the starter handle (the third pull is usually the charm). However, if there ever is a problem with bringing the Hirth to life, I'm all set to continue on in and land.

On the other hand, with the SF-27M, you've got to get the engine out, making sure that it really is in the proper upright position and locked in place, before you turn the switch on and begin pulling on the starter. I presume an SF-27M pilot will want to leave himself a bit more of an altitude cushion than what might satisfy a '14 pilot, because not only does the starting process take slightly more of his time and concentration, but the emerging prop and powerplant immediately degrade the glide angle and sink rate in a noticeable fashion. And, if the engine should fail to restart, the pilot will have to decide whether or not he needs to get rid of his extra drag by tucking away his engine again.

Any pilot encountering last-second lift about the same moment he's reaching for the ignition switch will undoubtedly find it less pressure-packed to attempt a low-altitude save if he's flying the '14.

Furthermore, the AS-K 14 seems not only to have a quicker restart capability but also a more reliable one than the SF-27M in its as-delivered condition. Whenever a '14 is sailing about engine-off, outside air continues to flow through the front cowl opening and across the cylinders of the engine (which, of course, is one reason why the ship doesn't glide as well as its competitor). As a result, the Schleicher pilot can rely on the knowledge that he is trying to fire up a cold motor. The Scheibe pilot, though, may not be entirely certain just how much his engine has been able to cool down while totally encapsulated within the fuselage. When it comes to happiness, better you should have a warm puppy than a warm 2-cycle engine in need of starting.

Additionally, Scheibe has had to mount the Hirth on its side in order to keep the engine installation narrow enough to fit the width of the fuselage. Consequently, there has been speculation that when the motor is shut down, the unburned gas-oil mixture in the bottom cylinders collects on the spark plugs; and then when the gas evaporates, the remaining oil may tend to foul the plugs.

To all this, I can only say that the modifications and procedures Bill has developed in answer to these problems seem to have given his ship as fool-proof a restart capability as my own (perhaps more so, because I've had occasional instances where my prop has shown signs of not wanting to unfather). I feel any SF-27M owner with Bill Mouton's phone number and address can make a thoroughly practical proposition out of his craft without prohibitive effort. And I think all of us should be eternally grateful that someone with Bill's know-how got the first Scheibe. Instead of me.

Perhaps some consideration should also be given to the general safety and crash-worthiness of front-engined gliders as opposed to rear-engined ones. If a powered sailplane is going to run headlong at speed into a brick wall or the side of a mountain, I don't think there's much question but

that a pilot would prefer to have that 55-pound hunk of metal ahead of him, rather than have it come bowling through from behind. But in our garden-variety prangs, where the laws of inertia are not so vindictive, an expensive and fragile item like the prop is best off protected within the fuselage when not in use (especially when you're pushing the ship in or out of the trailer).

Finally, there's the largely unamusing question of how much it will cost you to buy either the Scheibe (from Graham Thomson Ltd.) or the Schleicher (Rudy Mozer). The price on both models has gone up more than 50 percent during the past three years, with the SF-27M now DM33,500 (about \$10,395 as this is written) and the AS-K 14 DM28,950 (\$8980). And for crating, shipping, duty, radio, oxygen, and instruments, you can well spend another \$3000. If you're hopeful of buying a used ship, you have a better chance of finding an AS-K 14 since they presently outnumber the SF-27M's fifteen to three in this country.

In summary, the SF-27M offers more performance, more comfort, and alternative methods of launching; in return it requires greater amounts of money, maintenance, and piloting skills. Neither craft is 100-percent perfect, but both make soaring — particularly *cross-country* soaring — pleasantly feasible for enthusiasts who do not have ready access to such basic necessities as launching facilities and ground retrieval systems or who do not wish to subject their aircraft to the inevitable hazards of off-airport landings. Judging from how seldom you ever see a used motorglider of any kind offered for sale, you might almost suspect that someone considers motorgliders a Good Thing — that someone being the people who own and fly them.

★ *For additional details concerning Bennett Rogers' trip to Dallas and New Orleans, and for all the latest developments in powered sailplanes (including efforts to organize the first U.S. Motorglider Championships), readers are invited to subscribe to SSA's fine monthly publication, MOTORGLIDING, edited by Jack Park and available from SSA for \$5/yr. (\$6 foreign).—Ed.*