

CW

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Flying the most efficient machines in history: A guide

by Howard Banks

In just a few seconds the glider is airborne, following the tow plane as it takes off. After less than five minutes on tow, you are 2,000 feet above the ground, and the instructor warns that there may be a noise as he pulls the yellow release knob. It goes *pop* and the rope snakes away behind the tow plane. Then the glider starts a gentle bank and there is a rising beep-beep sound. "You are now going up in a thermal," announces the instructor. The beep-beep is a signal from what's called a variometer, an instrument that measures how fast you are going up, or down, through the air. Up, obviously, is better. Before long, you can see that the houses are getting smaller and that the trucks on I-40 look like tinker toys.

Welcome to the world of gliding — or more technically, soaring. And welcome too to one of the treasures of soaring, just 40 minutes or so from downtown Albuquerque and an hour from Santa Fe: Moriarty airport,

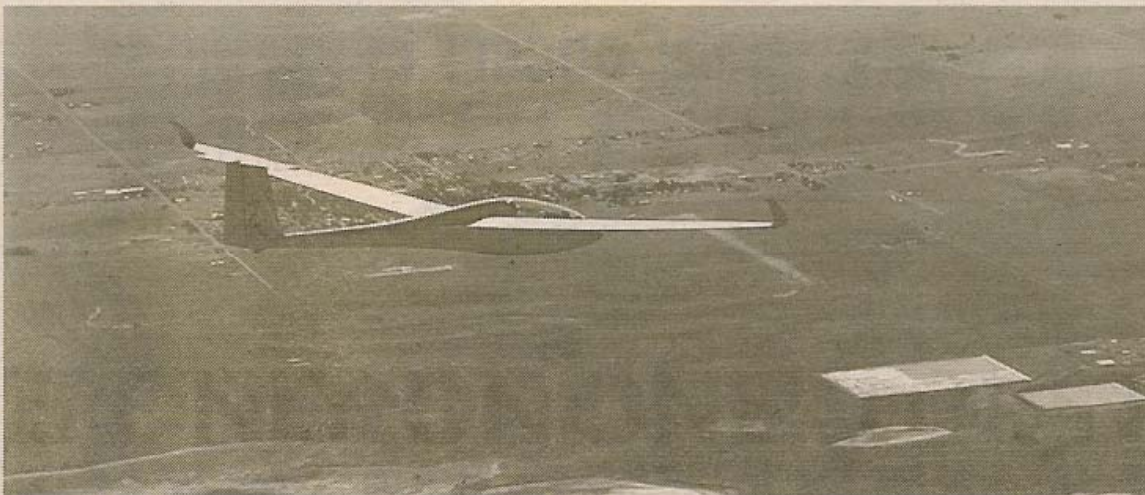
where a combination of the high desert weather and the plateau of the Estancia valley produces one of the best areas in the world for "lift," columns of air called thermals going up fast enough to waft the glider up high. Where the airfield at ground level is all scrubby weeds and sand, from the air it transforms, with the Sandia and Manzano range to the east, the Sangre de Cristos to the north, and the Jemez in the distance to the northwest.

Look up most spring and summer days around here and if you see those puffy cumulus clouds, white against a clear blue sky and produced by powerful thermals, you can be sure that there are gliders silently rushing across the New Mexico skies.

Soaring flight in a glider is the same process in essence as the one that birds — eagles, buzzards, cranes, which you will get to fly with if you take up gliding seriously — learned millions of years ago. Humanity has only gotten to imitate the birds reasonably successfully in the last 50 years.

Modern gliders are the most efficient flying machines in history. They are sleek and, in the competition machines that are common at Moriarty, the pilot's seat reclines way

GLIDING continued on page 12



The combination of high desert weather and the plateau of the Estancia valley produces one of the best areas in the world for "lift," columns of air that waft the glider up high. photos courtesy of Howard Banks

back to reduce the size of the fuselage which cuts aerodynamic drag. They are made of composites, carbon or kevlar fibers in a plastic matrix, so their surface is smooth and the shape of their long wings tailored to improve performance. And unlike hang gliders or ultralights, they are "proper" aircraft, licenced by the FAA and inspected at set intervals by a licensed engineer. The pilots are licenced by the FAA too. The cliché is that the most dangerous thing about gliding is driving to the airport.

The performance of modern gliders is staggering when you think that it's achieved with just a four or five minute tow and then is dependent on the pilot finding and using rising air. Most of the higher-performance ships, as pilots call their gliders, can fly in still air at least 45 miles from a height 6,000 feet above the ground. And that is a very modest altitude for the top of the lift at Moriarty — where it is common to get close to the legal limit of 18,000 feet above sea level that applies most of the time to general aviation aircraft. (Yes, these gliders carry oxygen, they also are equipped with an aviation radio, flight computers, and GPS to monitor and log their flight path.)

The world record distance flight, made by German Klaus Ohlmann along the South American Andes chain, is just over 1,400 miles completed in

one day. The U.S. speed record for flying around a triangular course of just under 200 miles is 95 mph — not bad for no engine. Soaring pilots flying out of Moriarty this year have already made 22 flights over 200 miles including six over 320 miles.

There are two gliding operations at Moriarty: one commercial, the other a large soaring club. The commercial Sundance Aviation, is open daily except for major holidays, according to its owner Rick Kohler. You have three types of rides to try at Sundance. A shorter flight that lasts up to 20 minutes costs \$60. Longer flights last up to 40 minutes for \$90 and up to an hour for \$115. (These prices may change a bit because of fluctuations in fuel costs.) It is essential to phone ahead for reservations to get plane and instructor lined up.

And what if you get hooked? Then you will want to learn to fly yourself and here you can take lessons with Kohler and his expert instructors. The costs are modest in comparison to learning to fly a power plane. An hour's instruction flight costs around \$110 (this includes the instructor, aircraft, and the tow).

A typically competent student who has normal coordination spends \$1,200 to \$1,500 to get to fly solo. Age is no barrier. You can solo a glider at 14 (against 16 for a power plane). At the other end of the spectrum, the region's FAA examiner for gliders, Al Santilli, is in his mid-80s, and still regarded with awe as the most precise pilot on the field who also flies his own glider most weekends. His pilot's license was signed by Orville Wright. Yes, that one.

After going solo, an event pilots often remember with greater vividness than their first sex, the sky is the limit. First step is to pass the FAA flight test requirements and become a licensed pilot. By this time, you will be flying in a single seater that is almost up to the performance of the flat-out competition machines.

For committed glider pilots there is the Albuquerque Soaring Club. It has about 100

members, most of whom fly regularly, and between them own upwards of 40 high-performance ships based at Moriarty. The club operates mostly on weekends, but also has expeditions when members take their gliders to other airfields such as Taos and Durango. The club's top pilots also regularly fly in gliding contests — week-long affairs where these gliders are raced against each other, with the scores being calculated to high precision using GPS.

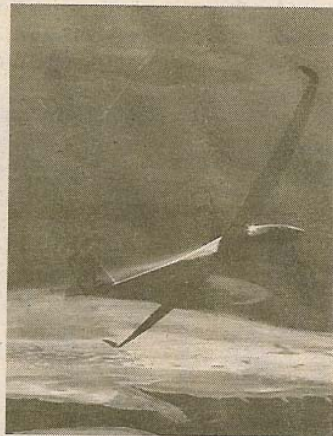
If you want to go further, well hold your breath. Top-of-the-line

machines are more or less made by hand, mostly in Germany and Eastern Europe. The basic airframe costs up to \$75,000. You'll pay a whole lot more for the open class gliders with wings stretching 75 feet or more. All those instruments and computers will add at least \$7,000. And the trailer that houses these gliders (the wings and tail are taken off pretty much after every flight) costs \$10,000. Annual insurance for this kind of package approaches \$2,000. Buying the last generation machines, still high-performance, cuts these costs roughly in half.

Just one small warning. If gliding gets you, it is addictive. The garden? That paint job on the house? If the clouds look good, forget it! **CW**

Resources:

The Soaring Society of America: ssa.org
On-line Gliding Magazine:
glidingmagazine.com
Sundance Aviation/Rick Kohler: 832-2222;
Soarsundance.com
Albuquerque Soaring Club: abqsoaring.org
Kathy Taylor, president, 672-0152.



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