

CROSS COUNTRY *Soaring*

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translated by Walter Setz

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During the past two years in which I have flown more than two thousand miles cross-country, I have made the observation that we have much to learn. We should not assume that our soaring craft have reached perfection, but should continue to improve them. Just so we must persistently practice to improve our soaring technique.

The first step is to achieve, by constant practice, the ability to fly a sailplane as if it and you were one. When you are so accustomed to flying it that you are not conscious of moving the controls but instinctively act as if the wings were your own, then you can spiral steeply and smoothly. A second requirement is to have a complete set of good instruments. Most important of these is a modern, quick-acting variometer.

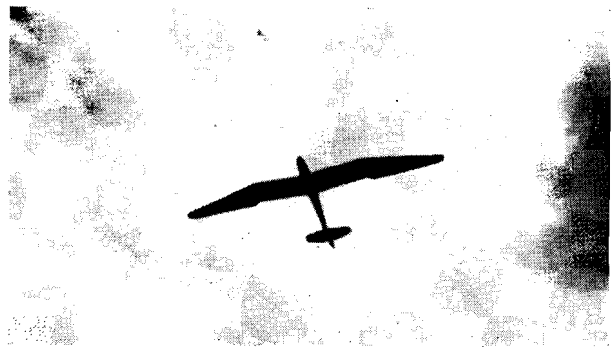
It is important also to be properly clothed, to sit comfortably, and to carry along some nourishment. A sun shade to protect your head is also useful. All this is to keep you as comfortable throughout the flight, as the longer you can remain comfortable and rested, the longer you can maintain your piloting efficiency.

When these requirements are filled, then comes the question, "Should I fly so that I can cover the greatest possible distance or so that I can reach my goal?" The answer sounds simple: "I must first fly as fast as possible and, second, be careful not to become 'stranded' ". How can one fly faster? The main thing is to gain altitude quickly. It is not enough merely to climb; more important—the strongest thermals must be found. Probably this is not easy at first. One must also observe closely where the good thermals were, after leaving them, so that it is possible to get back to them if necessary. This is usually not easy to do after flying a distance away from them.

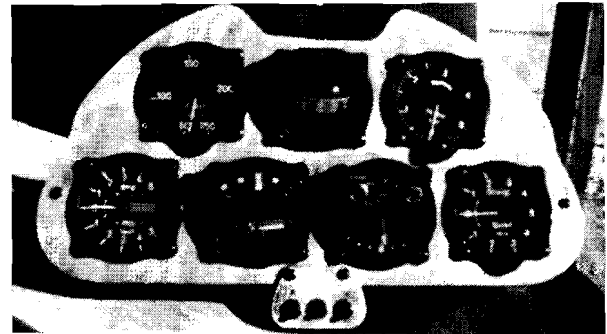
In spite of the risk of losing out, when flying in good thermals at mid-day, I am not content with 5 ft./sec. climb, but try to find thermals that will take me up at least 7 to 10 ft./sec. In these, necessary altitude can be gained before the thermals weaken. However, if you want to get along rapidly, it is better to straighten out than hang on for an additional 200 to 300 feet. The longer you spiral in weak thermals, the greater the loss of time.

Toward evening, when thermals are dying out, it often pays to take advantage of every inch of climb. However, in most cases, where you have worked to a good altitude, it is seldom worthwhile to circle for an additional hundred feet or so when the rising currents are weak. Looking around takes time and you can readily judge by noticing the weather and the terrain, if there is a risk in flying straight ahead.

In straight away flying, you should observe whether potential cloud streets are forming, even if the clouds



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Above—The Minimoa gains altitude
Below—Minimoa instrument board.

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have not yet appeared. Otherwise, it is possible that you may be flying parallel to a street and missing it entirely. A zig-zag course should be followed to pick up thermals. More often than the novice pilot realizes, thermals can be detected by observation. Birds of prey, butterflies, and even swallows and forming clouds, are reliable indicators. Caution should be exercised with large clouds. Occasionally, just at the moment of reaching a cloud, it breaks up and the resulting down draft is far from helpful.

In cloud flying, the value of instrument flying experience is, of course, extremely useful. This type of soaring, with very large and strong updrafts, unquestionably goes hand in hand with high performance distance flying. Above all else, you must know the limits of your sailplane. For instance, cloud flying with a "Buzzard" without spoilers is inadvisable. On the other hand, I have flown for an hour above the cloud base with a Minimoa so that I could enter an adjoining higher cloud in search of stronger upcurrents. When the rate of climb decreased or the temperature approached freezing (I had no electrical turn indicator), I would straighten out and take up my course again.

On entering a cloud, the mistake is often made of starting to spiral too soon. This is due to the impression that the center has been reached, whereas, in reality, the ship is still in the border area. On reaching the strong updraft in the center, it is not advisable for inexperienced pilots to spiral steeply immediately. This is apt to result in a dangerous position of dive from which it is hard to recover before excessive speed has been built up. Also, the area of strong lift in a large cloud is apt to be much bigger than you think.

As the flight continues and you drop lower, the danger of making a premature landing is of importance. Very cautious flying should now be done. The thermals at hand must suffice even if another sailplane or bird can be seen climbing nearby. In looking for a landing spot,

(Continued on Page 11)