

THERMAL FLYING IN COMPANY

by HAROLD DREW

The Vultures soaring club of Detroit issues to all active flying members a handbook entitled "Operating Practices." This handbook contains a number of codes defining our operating procedures. The subjects covered include launching techniques, landing approaches and the like. Some of the information contained in this handbook relates specifically to our operation at Big Beaver airport; some of it is of general application. Throughout the handbook very strong emphasis is placed on safety.

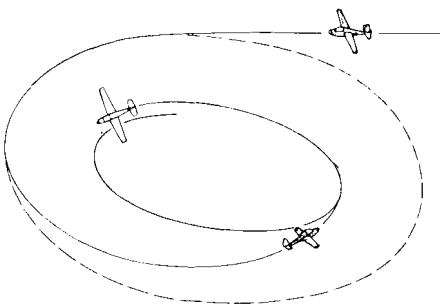
Until recently, our handbook did not contain a section on the important subject of thermal flying in company. We have realized for some time that we have a growing need for a code covering this subject because our membership has increased rapidly, our launching techniques have improved, we have more efficient ships and our members are steadily developing their ability to pick up thermals from a winch launch. It is not uncommon for us to have three ships working the same thermal, and most summer weekends we find ourselves in the company of another ship in the same thermal. The fatal collision at Bishop during the Nationals finally determined us to take action before and not after a similar incident at Big Beaver.

Preliminary inquiries failed to reveal the existence of a recognized code, at least in this country. Everyone is aware of a certain rather vague unwritten law on the subject but this seems to go little further than to suggest that it is impolite to bump a fellow man out of a thermal which he has discovered and within which he has established himself. Also most people seem to agree that it is best to adopt the same direction of spiral as that established by the firstcomer. (This is analogous to the railroad practice of refraining from operating express trains in both directions simultaneously on the same section of single track line.)

The Vultures' executive committee felt that we needed something more than these simple unwritten conventions and it was decided to add an

appropriate section to our handbook. The writer was commissioned to draft proposals for discussion by the committee. We were fortunate in having Dr. Harner Selvidge's assistance with the final redrafting, and he was able to contribute valuable suggestions. The new section of our handbook reads as follows:

"Flying in company with other sailplanes in the same thermal requires considerable skill, and great alertness in order to avoid risk of collision. Novices are cautioned to refrain from joining other ships in thermals. They should not in any circumstances attempt to climb past another ship in the same thermal. However, since they may themselves be joined by other ships, they must be thoroughly acquainted with the rules for avoiding collision when working thermals in company.



1. The first pilot to begin working a thermal has *temporary* right of way and it is the duty and responsibility of a newcomer to keep clear until he has established himself safely in the thermal as described in 2, 3, 4, 5 and 6 below. (This is common courtesy. Also, the newcomer is always aware of the presence of the first comer. The first comer may not always observe the approach of the second comer.)

2. A newcomer always adopts the same direction of spiral as that adopted by the first comer.

3. No pilot will in any circumstances reverse the direction of his spiral when flying in company.

4. When entering a thermal at an altitude within 200 feet above or below another ship, the newcomer

comes in tangential to a circle concentric with but larger in diameter than the spiral adopted by the first comer. He turns into this concentric circle and then gradually tightens his turn so that, as he closes in behind the first comer, they are disposed at the opposite sides of the thermal. (This gives the first comer ample opportunity to observe the arrival of the second comer.)

5. This mutual relationship is maintained so long as the difference in altitude of the two ships is less than 200 feet. (The accurate maintenance of this relationship is particularly important when one ship is climbing past another.)

6. A newcomer within 200 feet vertically above or below another ship will not adopt a spiral eccentric to that of the first comer. (If the spirals of ships flying in company become eccentric, a risk of head on collision develops.)

7. When two or more ships are safely established in a thermal, the first comers lose their right of way and each pilot becomes responsible for keeping clear of those above him. The highest pilot may at his discretion gradually shift the axis of his spiral, but this must not be done abruptly if there is a ship within 200 feet below him. (The lower of the two ships is the better placed to observe the path flown by the other. Also, the lower ship can keep clear by diving if necessary. The upper ship seldom has sufficient speed to keep clear by zooming.)

8. The topmost pilot must vacate the thermal as soon as he is within 500 feet of cloudbase. (F.A.A. regulations prohibit flying within 500 feet of cloudbase.)

9. Pilots working thermals in company are warned that they can afford only an occasional glance at their instruments and that they should maintain a sharp lookout for other ships over the full sectors of vision available to them. This involves frequent head movements. Any pilot unable to maintain such a lookout by reason of fatigue or for any other reason, should immediately vacate the thermal, since he will have become a menace to his companions."

The foregoing code of behavior is specifically designed for club flying at Big Beaver. Whether it is applicable to other places and in other circumstances is another matter. However, it may be that the publication of our code will at least