



Diagram No. 2.

release the sailplane, formate, and get several shots before the sailplane has lost 500 feet.

The final stage of the tow should be made on a heading approximately 120 degrees to the desired formation course. Immediately upon release, the sailplane, at A-1, turns to the desired heading. The airplane, at B-1, follows suit. The reason for turning more than 90 degrees is to put the airplane slightly behind the sailplane on the parallel course. If the plane comes out a bit ahead upon completion of the turn, it may never be able to slow down enough for the sailplane to catch up. However, should the plane get ahead, it should turn out a bit and then back in by "S-turning" rather than trying a 360-degree turn that will result only in a tail chase and lost altitude.

For airplane formations, the sailplane should be flown considerably above normal cruising speed. Some airplanes can slow down to 45-50 mph, but their controllability in this range is marginal. Sixty mph is a good formation speed. The airplane should slow down by assuming a high-angle-of-attack condition under high power rather than by throttling back and gliding. While its gliding speed may approach that of the sailplane, its rate of sink will be much greater and the sailplane will have to use spoilers and again waste altitude.

When both pilots are experienced in formation flying, both can participate in the jockeying-for-position process, but in general it is best to have the sailplane pilot hold a straight course and let the powerplane pilot use his power advantage

to do all the maneuvering. If the tow-rope is still attached, the airplane pilot should keep it in mind and never cut in ahead of the sailplane.

Good action shots can often be made without actually forming. The camera plane can hold a random course above a circling sailplane. A greater variety of angles is available this way because of the non-parallel headings. Of necessity, close-in technical studies and mug shots are made with the subject in level flight, but more distant action and atmosphere shots can be livened up by having the subject engage in sharp maneuvers. The airplane can follow the sailplane in circling flight but must stay on the outside of the circle because of its higher speed and wider turning radius. If the airplane is a high wing type, it should be even with or above the subject, and if a low wing type, even with it or below to give the photographer camera angles that are unimpaired by aircraft structure. Sometimes wing struts or other parts of the camera plane add to the atmosphere of the final picture, but in most cases they are highly undesirable.

One very important thing to remember about formation flying — it is a violation of civil air regulations to fly formation with another aircraft without prior agreement. DO NOT wander around the sky in a powerplane seeking targets of opportunity among the local sailplanes. Plan the flight ahead of time to cover one sailplane, or several in established sequence, so that each

sailplane pilot will know that he is to be approached by the camera ship and will be on the lookout for it.

Next month: more pointers with illustrative examples.

\$200 PHOTO CONTEST

An anonymous SSA member has contributed \$200 to the Society for the purpose of conducting a contest for photos of sailplanes in flight. The prize money will be awarded as follows: \$100, \$50, \$25 and five awards of \$5 each. The contest will run until October 1, 1961. Any person may enter in the contest any photo of a sailplane in flight not previously submitted or used in *Soaring* magazine or a soaring calendar. If the entrant did not take the photograph, he must submit a release from the photographer. All entries must be 8" x 10" black and white glossy prints and become the property of SSA. None will be returned.

Entries will be judged by four members of the SSA Publications Committee, Dr. Harner Selvidge, Anna Saudek, Lloyd Licher and Harold Hutchinson. Weight in judging will be given to sailplanes currently flying in order to promote modern, up-to-date soaring.

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