

Training

EDITOR'S NOTE: Reprints of this article will be included in the pamphlet described on the next page.

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The following summary of the methods used in glider training is written for the average person who is unfamiliar with gliding and soaring. It should not be considered as a text to be used for self instruction. The Soaring Society is anxious to see as many pilots as possible engaged in active flying, but it will do everything in its power to discourage student activity that is not properly supervised.

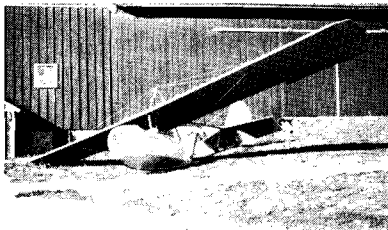
The average person is usually very much surprised to discover that 90% of the students trained in gliders have learned in single place ships. He is even more amazed to learn of the remarkable safety records which have been made with such methods. The largest glider club in the country has trained over 600 students in single place gliders since 1928 without a single injury. Most of the larger clubs can boast of similar records.

The reason that single place instruction has been used so extensively is that of expense. Most clubs are continually short of funds and few have been willing to spend the extra money required for a two-place ship.

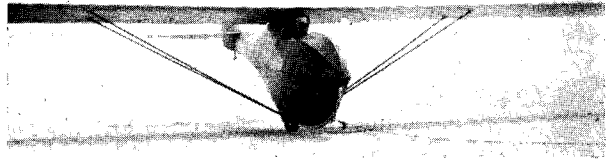
The method used is as follows: The landing gear of the average glider consists of a single wheel or skid. Therefore, while the ship is in motion on the ground, the controls must all be operated as they are in flight to keep it level. The student, after proper instruction, is towed across a flat field, in the glider, at a speed which will allow the controls to operate, but will not permit the craft to take off. He attempts to balance the ship on the wheel, and to follow a straight course. The towing is done by an automobile, or sometimes by a winch.

After five to ten of these "ground tows," the student is ready to take off. He has previously been towed at increasingly high speeds, and has been cautioned to make no rapid movements of the controls under any circumstances. He is now told to take off at the signal from the instructor, fly a level course at a height of about three feet, and land at another signal. If he is an average student, he will make several extended bounces to an altitude of about six inches, and will vow and declare that he was not an inch under ten feet.

It is at this point in the training program that the instructor must have the skill to land a student who insists on staying up. If the glider is ten feet in the air, and climbing, when the tow car reaches the end of the field, a week or two in the repair shop is practically certain to result, and several loose teeth will not be surprising.



Nacelled Primary or Secondary Glider.



Bowlus Utility Taking Off.

Usually the instructor will make the first few landings, as described, but the student will soon learn to put the ship into a glide, hold the proper speed, and level out as he reaches the ground. During this time, the tow line remains attached to the glider, so that the speed can still be controlled by the instructor.

The landing is much simpler than that of an airplane. It is only necessary to fly down to the ground and level off. When the ship once touches the ground, the stick is pushed slightly forward to prevent an inadvertent take off, and the landing is complete. A glider will not ground loop, or nose over.

After several landings have been made in free flight, (tow line released), instruction commences on turns. During the landing practice, the altitude of the flights has gradually been increased to about 50 feet, so that the student becomes used to judging distances. He now ascends to about 75 feet, drops the tow line, and attempts a very wide 90° turn. He is instructed to bank the wings and use as little rudder as possible. He turns until he is at an altitude of about 25 feet, and then levels out into a straight flight until he lands. These low altitudes are necessary so that he will not fly out of the field. Students are exceptionally careful at this time and practically never get into trouble. It is not until they become experienced pilots that they become careless enough to damage the ship.

The instructor must show considerable wisdom and knowledge in order to prevent the student from doing too many new things at once, and becoming flustered. The principle on which this type of instruction is based is that the process of learning is so gradual that the student is at no time in danger of losing control. It is now that the danger of too rapid progress is greatest.

When he has had sufficient opportunity to judge distances and altitude during a turn, the length of the tow line is increased, and either a 180° or a 360° turn is attempted, depending on the size and surroundings of the field. He is cautioned not to go outside its boundaries on any account. He spends the next ten or fifteen flights perfecting his turns and learning how to judge distances and approaches for precision landings. It will not be uncommon for him to miss the mark by a quarter of a mile during the first stages of landing practice, but he will rapidly improve. As he progresses, he will learn to side slip and fish tail, and will eventually be able to land within 25 or 30 feet of a predetermined mark.

He will now feel fairly secure in the glider, but if he is wise, he will continue to make every flight an opportunity to practice and improve his technique. Only after about 200 flights will he be classed as a really proficient pilot.