DON'T BUILD A PRIMARY

by PETER M. BOWERS

Every so often the Editor of SOARING or the author, who has developed the reputation of being sort of an expert in the field of antique airplanes and gliders, receive letters asking where plans for primary gliders can be obtained. This situation results from the fact that most of the older books on gliding (Are there any new ones?) describe the classic method of learning to fly in gliders—start on a primary, move on to secondaries, and end up in sailplanes. The appearance of numerous photos of primaries in action in current German and Japanese aviation magazines convey the impression that this is still the accepted way of doing things.

It is, but only to a limited degree, even in those countries. As far as the United States is concerned, the primary has been a dead duck since before World War II, and the SSA even took action to officially condemn it as a training device as far back as 1939. The purpose of this article is to clarify the position of the primary today and at the same time to cut down on the correspondence for all concerned.

Actually, the introduction of the primary glider was the worst thing that ever happened to American gliding. A few pilots with happy memories of the things may disagree with me, but many more will support my arguments. This was not the glider's fault. It was a great success in Europe, where it had been developed, but it was a menace to life and limb in this country. Why?

Murray Wick of Tigard, Oregon, taking off in a Northrop Primary.

Photo: Peter M. Bowers

The main reason can be traced to the fundamental differences in the basic economies and in the training methods of Europe and America. In Europe, where the basic unit of personal transportation was and still is the bicycle, ownership of personal aircraft was almost nil. Flying was available to the average citizen only through the numerous glider clubs. Operation of these organizations was very systematic, and discipline and training methods were almost military in their application. New members served long terms of apprenticeship, setting up and launching gliders, retrieving, and repairing them. Only when they knew all phases of the operation were they allowed to get at the controls of a primary.

As a flying machine, the primary was a very inefficient device. It was not intended to be a sporting glider, but was put to use only during a relatively short stage of the student's career. The semi-military discipline of the training program was the student's best protection. If he did just what he was told to do; starting with straight-ahead ground slides and working up to short glides down a hillside and gentle S-turns, he could hardly get into trouble. The system took care of him, but he was kicked out of the group in a hurry if he disobeyed orders or cut a few unauthorized capers on his own. The success of the primary as a training machine was due primarily to the fact that the operation was tightly organized and controlled in such a way that the student and the glider were both kept well within the range of their respective capabilities.

Compare this to the typical "Hurry Up" American way of doing things. In a country where many high school kids had their own cars and a comparatively high degree of mechanical skill and experience, the long term of apprenticeship in a European-type club was not only distasteful, it was entirely unnecessary according to their way of thinking. Primaries could be built from magazine plans or could be bought in kit form for around $100.00. Finished ships were available from about a dozen manufacturers for between $350 and $500. Why bother with clubs and a long apprenticeship when it was so easy to own a ship of your own?

True, some clubs were formed, with varying degrees of success, but the majority of these suffered from the same deficiency that was the undoing of many of the individuals; the lack of method, discipline, and competent supervision during both the building and the flying stages. Methods of construction and flight instruction used in the heyday of American primary operations would horrify any present-day mechanic or instructor. "Apple Box Construction" and "Back Yard Instruction" were not derogatory terms at the time—they were practically standard nomenclature.

The typical attitude was to finish the ship and start flying it. The magazines and the manufacturers were partly responsible for this in that they publicized the product as so simple to fly that one hardly needed lessons. Many tried this method and a few