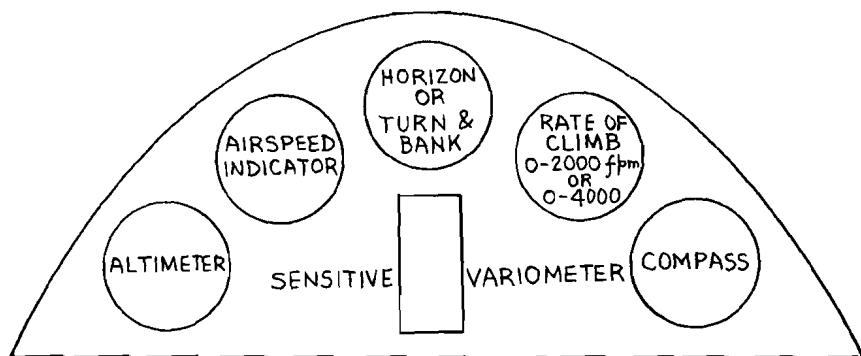


SELECTION AND LAYOUT OF SAILPLANE INSTRUMENTS

by ROBERT B. SMITH



The selection and layout of instruments for sailplanes is a matter of individual choice and financial limitations. This article is intended as a guideline for the many new pilots getting started with their own sailplanes for I am sure they will later improve on the quality and form their own opinions as to the layout they prefer.

The illustration shows a basic instrument group which should be adequate for the beginner, and after he is proficient with these and his sailplane, he may think of more and better ones.

The altimeter may be either of the standard or the sensitive type. The standard type is available for \$10.00, the sensitive type is much better but is about three times as expensive. Except for cross-country and competition flying, the old standard altimeter is acceptable and the money saved may be used for better instruments in the airspeed and variometer class. The altimeter you select should have sufficient altitude range for the area in which you expect to fly. Usually the 35,000-ft. will be adequate.

The airspeed indicator is a required instrument for nearly all sailplanes, and seldom do you see one without it. However, many are too sluggish and tell you what your airspeed was, not is. The helicopter airspeeds are excellent but expensive.

The Getabery ASI is an excellent instrument in the moderate price range, well marked and available in this country. It is better not to try to buy the least expensive airspeed indicator, the more expensive ones are the better buy in the long run.

The artificial horizon or the electric turn and bank are expensive and probably would not be of much help except for pilots with previous flying experience. The surplus vacuum turn and bank is available for much less and the instrument may be used for the ball-bank portion to indicate slip to the center of the canopy on the outside or tied to a short wire mast in front of the canopy.

The compass is of use in cross-country flying, but will not help to keep the sailplane in the air.

The most important instruments are the variometers, as they indicate that which keeps the sailplane in the air. They must be used with a good airspeed indicator, as a change in airspeed will indicate lift or sink in smooth air unless a "total energy"

unit is used. When first getting started in the soaring game, it will be better to practice accurate flying with the airspeed indicator rather than to rely on a total energy device to remove "stick-thermals" which you build in.

First we need a real sensitive variometer for the weak conditions. A pellet-type or the low-range dial-type are good, however the pellet-type is more susceptible to dust or moisture. On the other hand, they are less expensive than the dial-type.

Secondly, we need a variometer of at least the 0 to 2000 feet per minute range. This is necessary as on good thermal or wave lift days the low-range variometer will be off the scale and becomes of little use. The low-range variometer is usually off scale when on tow, and you will have to use the larger scale instrument to indicate any lift over and above that which the tow plane is giving you. The "Memphis," by Aircraft Indicators Co., is one of the best, but is expensive and is about as plentiful as "hen's teeth." There are several 0 to 2000 ft./min. rate of climbs of foreign manufacture that are available thru the classified section of *Soaring* or from Schweizer Dealers. Although not as sensitive as the "Memphis," neither are they as expensive, and they will be adequate.

Some of the sources of instruments are classified ads in the back of *Soaring* magazine, Schweizer Dealers, *Trade-A-Plane* ads, and the "Getabery" airspeed is available from G.E. Tabery, 4906 Gren St., Houston 21, Texas.

Before you spend much money on instruments for your sailplane, discuss the matter with some of our top competitive pilots, they may be able to give you some excellent help in getting your money's worth.

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