

Federal Aviation Agency

ADVISORY CIRCULAR

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AIRCRAFT

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SUBJECT : SUGGESTED EQUIPMENT FOR GLIDERS OPERATING UNDER IFR

1. **PURPOSE.** This circular provides guidance to glider operators on how to equip their gliders for operation under instrument flight rules (IFR), including flight through clouds.
2. **BACKGROUND.** In recent months, glider operators and manufacturers have shown much interest in flight under IFR (specifically, in flight through clouds) and in the equipment that might make such flight safe and feasible. Part 91, which governs glider operations, does contain flight rules that directly or indirectly require equipment of various sorts for all aircraft (which includes gliders) operated under IFR in specified airspace. Under § 91.125, for example, aircraft operated under IFR in controlled airspace are equipped with a communications receiver-transmitter, a navigation receiver, a sweep-second clock or watch, and an altimeter, to enable the pilot to comply with the requirement that he maintain a continuous watch on the appropriate communications frequency and that he report, among other things, the time and altitude of passing specified points in the airspace. Similarly, under § 91.97, aircraft operated in a positive control area (in which IFR operation is mandatory) are additionally equipped with coded radar beacon transponders. However, Part 91 does not prescribe for gliders (as it does in § 91.33 for powered civil aircraft) the basic flight instruments that assist in maintaining controlled flight under IFR conditions. The Agency has been asked for guidance in this area.
3. **GUIDANCE.**
 - a. **Flight instruments.** The basic flight instruments suggested for operation of gliders under IFR are listed below. Certain of these instruments may already have been installed in the glider to meet type certification requirements.

- (1) An airspeed indicator, to maintain airspeeds within safe operational limits.
- (2) A sensitive altimeter, to assist in pitch control.
- (3) A gyroscopic rate-of-turn indicator, and a slip-skid indicator, for maintaining control.
- (4) A magnetic direction indicator, to facilitate directional control.

b. Avoiding icing conditions. Glider pilots are cautioned to avoid areas where icing might occur. An accumulation of ice can increase the stalling speed or restrict control surface movement; icing of the pitot head or the static pressure source may produce erroneous airspeed or altimeter indications; and unless clear-vision panels or openable windows are provided, frost or ice forming on windshields may hazardously reduce visibility.

4. RELATION TO FAA'S BASIC GLIDER CRITERIA HANDBOOK, 1962 REVISION. The guidance material in para 3. of this circular supersedes similar material in Chapter 4 of FAA's Basic Glider Criteria Handbook, 1962 Revision.


George S. Moore
Director
Flight Standards Service