

AC NO: 60-10

DATE: 5/16/74



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

### SUBJECT:

#### RECOMMENDED SAFETY PARAMETERS FOR OPERATION OF HANG GLIDERS

1. PURPOSE. Since the sport of "hang gliding" or "sky sailing" has become popular, numerous questions have arisen as to the FAA position on the regulation and operation of these vehicles. The purpose of this Advisory Circular is to suggest safety parameters for the operation of "hang gliders" and to present the current FAA intent with respect to the regulation and operation of those vehicles.
2. DEFINITION. For purposes of this Advisory Circular, "hang glider" means an unpowered, single place vehicle whose launch and landing capability depends entirely on the legs of the occupant and whose ability to remain in flight is generated by natural air currents only.
3. BACKGROUND. There has been a recent revival of popular interest in the almost forgotten art of powerless flight. This is now being accomplished by very light vehicles that are self-launched and unpowered. The sport is referred to as "hang gliding" or "sky sailing." New materials, modern construction techniques, improved knowledge of stability and control requirements, and imaginative configurations have all been applied. Coupled with low cost and an aviation adventure that has attracted both young and old, this increasingly popular sport is expected to grow dramatically in the near future. The revival of early Lilienthal days is being conducted primarily in open unpopulated areas where favorable wind conditions exist and terrain features provide an acceptable glide ratio clearance. The glide ratio of most of these vehicles is 4 to 1 or less. In a few instances, a higher glide ratio has been obtained through a hard wing construction; however, they still retain the feature of being self-launched and landed. Several corporations have been formed to manufacture these craft, along with a manufacturer's association that intends to provide minimum materials criteria to ensure safe construction. Numerous clubs have been formed, and many more may be formed in the future, which will provide safety guidance through both operational control and educational media.

4. REGULATORY INFORMATION. The FAA is interested in this activity, but at this time does not have sufficient data and information with respect to "hang glider" design and operational capabilities to make any determination as to the need for new specific action. It is the FAA's intent to observe the growth and safety status of this activity as it progresses and to continually assess the need for FAA involvement. The following, however, are certain regulatory areas of which "hang glider" operators should take cognizance:
- a. Federal Aviation Regulations, Part 101. Part 101 specifies rules applicable to kite operations. Those rules are applicable to any vehicle intended to be flown at the end of a rope, having as its only means of support the force of the wind moving past its surfaces, and that is not capable of sustained flight when released from its tether. No person should operate a "hang glider" at the end of a surface towline without first becoming fully familiar with Part 101.
  - b. Federal Aviation Regulations, Sections 91.17 and 91.18. Section 91.17 provides rules applicable to the towing by an aircraft of gliders as that term is defined in FAR Part 1. Section 91.18(a) provides, in part, that no pilot of a civil aircraft may tow anything with that aircraft (other than under §91.17) except in accordance with the terms of a certificate of waiver issued by the Administrator.
5. SAFETY SUGGESTIONS. The following guidelines are suggested for the use of all participants in "hang gliding," manufacturers of "hang gliders" and operating clubs:
- a. Suggestions relating to operation of the vehicle:
    - (1) Limit altitude to 500 feet above the general terrain. It must be remembered, however, that there are certain aircraft operations conducted below 500 feet above the terrain and "hang glider" operators should be alert to this.
    - (2) Do not fly them within controlled airspace, specifically a control zone, airport traffic area, or within five miles of the boundary of an uncontrolled airport unless authorized by airport authorities.
    - (3) Do not fly them within any prohibited or restricted area without prior permission from the controlling or using agency, as appropriate.
    - (4) Do not fly them within 100 feet horizontally of, or at any altitude over, buildings, populated places, or assemblages of persons.

- (5) Remain clear of clouds.
- (6) Questions regarding operations in conflict with the above recommended safety parameters should be discussed with the nearest FAA district office.

b. Suggestions to manufacturers and clubs:

- (1) Develop criteria for materials and construction techniques. (It is recommended that aircraft quality hardware and materials be utilized in construction as appropriate.)
- (2) Ensure that adequate quality control procedures are utilized during manufacture of the vehicle.
- (3) Pay particular attention to ensure that a good training program is established. (The United States Hang Glider Association can be helpful in this area.) Students should be taught early to recognize their individual limitations as well as the limitations of the "hang glider."
- (4) Provide adequate instructions in "do-it-yourself" kits so that proper hardware is utilized and good construction techniques are employed.
- (5) Coordinate with local municipalities and property owners for recognized flying sites.
- (6) Establish strong safety programs and distribute safety related materials to clubs, associations, and operators of "hang gliders."
- (7) Develop close coordination with the Federal Aviation Administration.
- (8) Operators of "hang gliders" should be encouraged to wear protective clothing, including a helmet.

6. CONCLUSION. The Federal Aviation Administration is willing to devote time and effort, within reason, to assist manufacturers and clubs during this developmental period. District Offices are encouraged to work with manufacturers and clubs so that the sport is conducted in a safe manner. Safety related materials developed by clubs and manufacturers' associations will be disseminated to all Regions as it is developed. Appropriate material coming to the attention of field offices should be forwarded to Headquarters as well as related safety information developed by local FAA personnel. The "hang glider" community should, on the other hand, make a vigorous effort to develop safety criteria and instructions usable in the manufacture and operation of "hang gliders."

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7. DISTRIBUTION. This Advisory Circular should be given the widest distribution possible by district offices to ensure that all persons interested in this activity are aware of the information contained in this document.

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