

ALPA also recommended that the agency specify minimum standards for the balloon payload cut-down, destruct, and radar reflective devices. To the extent practicable, this was done in the proposal. However, balloon operators and manufacturers have the necessary expertise for developing specific systems and devices so that the selection of the particular types of payload release systems, destruct methods, and radar reflective devices to meet the performance standards prescribed in this rule has been left to the determination of the manufacturers or operators.

Professor R. Brown recommended that the proposal be amended to require balloon payloads to be equipped with a radar reflecting device so that the payload be tracked during its descent. Some benefit might be derived from that requirement and the matter may be considered for adoption in a subsequent proposal. However, as stated in Notice 66-43, there have been several instances recently where the flight of unmanned free balloons could not be terminated as planned, and these balloons became derelicts and drifted over large sections of the country presenting possible hazards to air navigation. Because of this, it is necessary that § 101.35(a) should be revised immediately to include the additional equipment requirements proposed in Notice No. 66-43.

The word "completely" relating to independent destruct and payload cut-down systems was included in subparagraphs (1) and (2) of the notice to emphasize the requirement that each system, device, or combination, in addition to having a separate operation, should have separate power sources, activators or similar components to function in the event of a total failure of the corresponding unit. It has, however, been omitted from the rule as being surplusage.

In consideration of the foregoing, § 101.35(a) of the Federal Aviation Regulations is amended, effective April 28, 1967, to read as follows:

§ 101.35 Equipment and marking requirements.

(a) No person may operate an unmanned free balloon unless—

(1) It is equipped with at least two payload cut-down systems or devices that operate independently of each other;

(2) At least two methods, systems, devices, or combinations thereof, that function independently of each other, are employed for terminating the flight of the balloon envelope; and

(3) The balloon envelope is equipped with a radar reflective device(s) or material that will present an echo to surface radar operating in the 200 MHz to 2700 MHz frequency range.

The operator shall activate the appropriate devices required by subparagraphs (1) and (2) of this paragraph when weather conditions are less than those prescribed for operation under this subpart, or if a malfunction or any other reason makes the further operation haz-

ardous to other air traffic or to persons and property on the surface.

(Secs. 307, 313(a), Federal Aviation Act of 1958; 49 U.S.C. 1348, 1354)

Issued in Washington, D.C., on March 22, 1967.

D. D. THOMAS,
Acting Administrator.

[F.R. Doc. 67-3356; Filed, Mar. 28, 1967; 8:45 a.m.]

[Docket No. 7789; Amdt. No. 101-2]

**PART 101—MOORED BALLOONS,
KITES, UNMANNED ROCKETS, AND
UNMANNED FREE BALLOONS**

**Unmanned Free Balloon Equipment
Requirements**

The purpose of this amendment is to alter the equipment requirements for the operation of unmanned free balloons.

The agency published a notice of proposed rule making in the FEDERAL REGISTER on December 8, 1966 (31 F.R. 15490), circulated as Notice No. 66-43 which proposed dual and independent systems for releasing the payload and for terminating the flight of the balloon envelope, and a radar reflective capability on the balloon envelope. The response to this Notice indicated a general endorsement of the proposal.

In commenting on the proposal, the Air Line Pilots Association (ALPA) recommended that a clearance by air traffic control be required for free balloon flight and also suggested that the balloons be colored a high visibility orange or yellow and be a minimum size of 50 feet in diameter unless carrying no more than a few ounces of weight.

A clearance for a balloon flight, as may be issued to other types of aircraft, is not practicable because unmanned free balloons cannot be controlled sufficiently to respond to clearances and instructions. In view of the other operating limitations specified in the part, additional control is not considered to be necessary.

The nature of most scientific experiments that utilize high altitude balloons would preclude the use of designated colors on the balloon envelope because problems involving heat absorption, light reflection, and other phenomena would be created, thereby interfering with the experiments being conducted.

With regard to the suggested minimum balloon size requirement, the size of the balloon is dependent, to a large extent, upon the nature of the experiment being conducted, and the altitude to which the payload must be carried. Limiting the size of unmanned balloons may unnecessarily restrict experiments utilizing balloons.