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FEDERAL AVIATION AGENCY  
AIR TRAFFIC SERVICE  
WASHINGTON 25, D. C.

MAY 31 1962

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 62 -26

SUBJECT: Amendment of Parts 48 and 60 of the Civil Air  
Regulations - Operation Rules for Rockets

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The Air Traffic Service of the Federal Aviation Agency has under consideration a proposal to amend Parts 48 and 60 of the Civil Air Regulations. Part 48, which now governs moored balloons and kites, would be amended to include operation rules for rockets. Concurrently, Part 60 would be amended to exclude rockets subject to Part 48. The reasons therefor are set forth in the explanatory statement of the attached proposal which is being published in the Federal Register as a Notice of Proposed Rule Making.

The Agency desires that all persons who will be affected by the requirements of the proposed regulation be fully informed as to its effect upon them and is, therefore, circulating copies in order to afford interested persons an opportunity to submit comments.

Because of the large number of comments which we anticipate receiving in response to this draft release, we will be unable to acknowledge receipt of each reply. You may be assured, however, that all comments will be given careful consideration.

All comments must be submitted in duplicate to the Docket Section, Federal Aviation Agency, Room C-226, 1711 New York Avenue, N. W., Washington 25, D. C. In order to insure consideration, comments must be received by the Agency prior to August 6, 1962.

*D. D. Thomas*

Director, Air Traffic Service

FEDERAL AVIATION AGENCY

AIR TRAFFIC SERVICE

/14 CFR Parts 48, 60/

/Reg. Docket No. 1234; Draft Release 62-26/

NOTICE OF PROPOSED RULE MAKING

Operation Rules for Rockets

Pursuant to the authority delegated to me by the Administrator (14 CFR 405), notice is hereby given that the Federal Aviation Agency (FAA) has under consideration a proposal to amend Parts 48 and 60 of the Civil Air Regulations as hereinafter set forth.

Interested persons may participate in the making of the proposed rules by submitting such written data, views or arguments as they may desire. Communications should be submitted in duplicate to the Docket Section, Federal Aviation Agency, Room C-226, 1711 New York Avenue, N. W., Washington 25, D. C. All communications received prior to August 6, 1962, will be considered by the Administrator before taking action upon the proposed rule. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available in the Docket Section for examination by interested persons at any time. Because of the large number of comments anticipated in response to this proposal, we will be unable to acknowledge receipt of each reply.

Part 48 now governs the operation of moored balloons and kites. The amendment to Part 48 proposed herein would incorporate regulations regarding the operation of rockets. Part 60 contains the Air Traffic Rules governing the operation of aircraft, including

rockets. The amendment to Part 60 proposed herein would exclude rockets subject to Part 48.

On February 25, 1961, in Draft Release No. 61-4 (26 F.R. 1666), the FAA proposed regulations pertaining to the operation of rockets and missiles. That proposal generated a great deal of interest, as evidenced by the large number of comments received. Rocket enthusiasts generally opposed the requirements advanced, while civil aviation interests endorsed the proposal. Satisfactory resolution of the many comments to the draft release would have resulted in a regulation substantially different from that originally proposed. The Agency, therefore, has developed the new proposed rule making contained herein, based on the valuable comments received.

In developing this proposal, the Agency has taken cognizance of the broad meaning which can be attached to the term "rocket." The earlier draft release spoke of "rockets and missiles" and made no differentiation between amateur rockets and model rockets. In this proposal, we consider the term "rocket" to include "missile" and have exempted model rocketry from regulation herein if certain conditions are met. Typically, model rockets are made of paper, wood, or fragile plastic, contain no substantial metal parts, and are powered by a pre-mixed propellant. Under these conditions, provided reasonable weights are not exceeded, no real hazard appears to exist and this proposal would not govern such operations.

Activity in the field of rocket operations is steadily increasing, especially experimental amateur rocketry. Amateur rocketry, unlike model rocketry, concerns itself with metallic

rockets which have a far greater thrust due to the use of more powerful homemade fuels; utilizes rocket systems which require extensive safety precautions and expert supervision; and requires a greater amount of land and airspace to contain the operations. The bulk of the amateur activity is carried on by youthful individuals, high school and college classes, local recreation department groups, and various rocket clubs. As these activities increase there is an increasing possibility of hazard to aircraft and to persons and property on the surface. Therefore, it has been determined that rules which will control the indiscriminate firing of rockets without unduly suppressing such activities are both necessary and reasonable. This proposal recognizes this need and contains regulatory measures regarding weather conditions, type of airspace, notification, and proximity of the operation to persons and airports.

The Agency recognizes that amateur rocketry has established a good safety record. No doubt this is due to the keen interest of the rocketeer and the realization of his legal and moral responsibilities. Also, many of the known rocket launchings have taken place in restricted areas under adult and military supervision. However, even there, elaborate safety precautions were taken, such as mobile fire equipment, protective type vehicles, heavily reinforced bunkers, and supervision by military ordnance experts.

These precautions emphasize the unpredictability and hazard of rocket operations. When launchings are confined to such approved areas and are properly supervised, the hazard to aircraft is greatly reduced; however, there is no assurance that rocket launchings will continue under such favorable conditions.

Members of this Agency have been present at several of the rocket meets held within restricted areas. They observed rockets ranging in sizes up to 11 feet long with diameters up to three inches. For the most part, these rockets were constructed of aluminum or steel tubing. They were powered by fuel mixtures such as zinc and sulphur or nitrate and sugar. In one instance the fuel alone weighed 31 pounds. The average weight was not ascertained, however, some amateur rockets have a gross weight of 65-75 pounds and are capable of reaching altitudes of over five miles. Since there are over 5,000 amateur rocket societies in the United States with over 40,000 members actively engaged in rocket activities, the potential hazard to aircraft created by amateur rocket operations is evident.

This proposal seeks to achieve two safety objectives. First, the possibility of hazard to aircraft would be minimized by prohibiting the operation of rockets within five miles of airports or within controlled airspace; and by charging the operator with the responsibility to operate the rocket in a manner that will not create a hazard to aircraft in flight. These provisions would restrict potentially hazardous objects from areas of concentrated air traffic and would make rocket operations more compatible with the activities of other airspace users. Second, protection to persons not associated with the operation would be provided by prescribing minimum separation standards between the rocket operation and such persons. This requirement would apply regardless of the location of the launching area.

"Controlled airspace" is a term referring to designated airspace of defined dimensions. It includes control zones, control

areas, transition areas, and the Continental Control Area. Controlled airspace is designated to contain the vast network of airways and the various areas of more concentrated air activity. The sizes and shapes of controlled airspace vary with the exception of the Continental Control Area. The latter consists of airspace of the 48 contiguous states and the District of Columbia at and above 14,500 feet mean sea level. Therefore, the proposed rule would allow rocket operations to be conducted up to 14,500 feet mean sea level if all other types of controlled airspace are avoided. In conjunction with this, however, the operator must assure that the rocket remains clear of clouds; that the cloud cover or obscuring phenomena in the area of operation does not cover more than five tenths of the sky; and that the horizontal visibility from the rocket is at least five miles during the entire operation. These limitations are specified so that the operator may visually scan the area and conduct his operation with due regard for the safety of aircraft.

The proposed regulation would require the operator of a rocket to give prior notice of the operation to the nearest FAA air traffic control facility. This information would be incorporated in a Notice to Airmen (NOTAM) informing airspace users of the existence and general location of the rocket operations, the duration of such activities, and the maximum altitude to which the rocket/s will be operated.

Section 60.1 of the Air Traffic Rules states in part, "the air traffic rules of this Part shall apply to aircraft operated anywhere in the United States. . . ." Since rockets are within the definition of aircraft, they are subject to all the provisions

contained therein. The scope of Part 60 would be amended so that rockets which are subject to the provisions of Part 48 would be excluded from the provisions of Part 60.

This proposal is subject to the FAA Recodification Program, recently announced in Draft Release No. 61-25 (26 F.R. 10698). The final rule, if adopted, may be in a recodified form, however, the recodification itself will not alter the substantive contents proposed herein.

In consideration of the foregoing, notice is hereby given that Parts 48 and 60 of the Civil Air Regulations are proposed to be amended as follows:

1. By amending Section 48.1 to read:

48.1 Applicability

This Part applies to the operation of moored balloons, kites and rockets in the United States.

NOTE: Radio transmitting equipment used in conjunction with operations under this Part must be licensed as required by the Federal Communications Commission, Washington 25, D. C.

2. By amending Section 48.3 by adding in proper alphabetical order the following new definitions:

48.3 Definitions

"Airport" means a defined area on land or water, including any buildings and installations, normally used for the take-off and landing of aircraft.

"Rocket" means an unmanned aircraft, whose flight in the air is derived from the thrust of ejected expanding gases generated in the engine from self-contained fuels or propellants and is not dependent on the intake of outside substance. It includes any part which becomes separated during the operation.

3. By amending Part 48 to include a new Subpart C to read:

#### SUBPART C - Rockets

##### 48.20 Applicability

This Subpart applies to the operation of rockets in the United States, except those exempted in Section 48.21. Operations conducted within restricted areas shall comply only with Section 48.22(7) and with such additional limitations as may be imposed by the using agency or controlling agency.

##### 48.21 Exempt Operations

This Subpart does not apply to the following:

1. Operations conducted under a written agreement reached by the operator with the Federal Aviation Agency.
2. Static testing activities in which the rocket is not operated in flight.
3. Pyrotechnics, such as firework displays, etc., conducted in accordance with local, county or state ordinances.
4. Model rocket activities, if --
  - (A) Conducted in a manner that does not create a hazard to aircraft, persons, or property;
  - (B) No more than four ounces of propellant is used; and



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- (C) The model rocket is made of paper, wood or breakable plastic, contains no substantial metal parts, and weighs no more than 16 ounces, including the propellant.

#### 48.22 Operational limitations

A rocket may not be operated:

1. In a manner that creates a collision hazard with aircraft;
2. In controlled airspace;
3. Within five miles of the boundary of any airport;
4. At altitudes where clouds or obscuring phenomena of more than five tenths coverage prevail;
5. Into any cloud;
6. Unless the horizontal visibility from the rocket is at least five miles during the entire operation;
7. Within 1500 feet of any persons not associated with the operation; or
8. During the hours of darkness.

#### 48.23 Notice requirements

A rocket may not be operated unless at least 24 hours, but not more than 48 hours, prior notice is given to the nearest FAA air traffic control facility. This notice shall include:

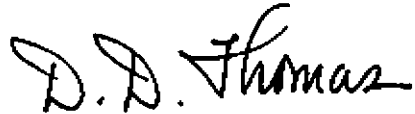
1. Name and address of the person in charge of the operation;
2. The number of rockets to be operated;
3. The maximum altitude to which the rocket will be operated;
4. The geographical location of the operation;
5. Date, time and duration of operation; and
6. Other pertinent information requested by air traffic control.

4. By amending Section 60.1 of Part 60 to include a new subsection,  
(c), to read:

60.1 Scope \* \* \*

(c) Rockets which are subject to the provisions of Part 48  
of this Title.

This Amendment is proposed under the authority of Section 307 of  
the Federal Aviation Act of 1958 (72 Stat. 749, 49 U. S. C. 1348).



Director, Air Traffic Service

Issued in Washington, D. C. on **MAY 31 1962**

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FEDERAL AVIATION AGENCY  
AIR TRAFFIC SERVICE  
WASHINGTON 25, D. C.

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 62-45

SUBJECT: Amendment of Parts 48 and 60 of the Civil Air Regulations -  
Operation Rules for Unmanned Free Balloons

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The Air Traffic Service of the Federal Aviation Agency has under consideration a proposal to amend Parts 48 and 60 of the Civil Air Regulations. Part 48, which now governs moored balloons and kites, would be amended to include operation rules for unmanned free balloons. Concurrently, Part 60 would be amended to exclude unmanned free balloons from its provisions. The reasons therefor are set forth in the explanatory statement of the attached proposal which is being published in the Federal Register as a Notice of Proposed Rule Making.

The Agency desires that all persons who will be affected by the requirements of the proposed regulation be fully informed as to its effect upon them and is, therefore, circulating copies in order to afford interested persons an opportunity to submit comments.

Because of the large number of comments which we anticipate receiving in response to this draft release, we will be unable to acknowledge receipt of each reply. You may be assured, however, that all comments will be given careful consideration.

All comments must be submitted in duplicate to the Docket Section, Federal Aviation Agency, Room A-103, 1711 New York Avenue, N. W., Washington 25, D. C. In order to insure consideration, comments must be received by the Agency prior to December 31, 1962.

*D. D. Thomas*  
Director, Air Traffic Service

# NOTICE OF PROPOSED RULE MAKING

As published in the Federal Register on  
November 1, 1962 ( 27 F. R. 10656 )

## FEDERAL AVIATION AGENCY

[ 14 CFR Parts 48, 60 ]

[Reg. Docket No. 1457; Draft Release 62-45]

### OPERATION RULES FOR UNMANNED FREE BALLOONS

#### Notice of Proposed Rule Making

Pursuant to the authority delegated to me by the Administrator (14 CFR Part 405), notice is hereby given that the Federal Aviation Agency (FAA) has under consideration a proposal to amend Parts 48 and 60 of the Civil Air Regulations as hereinafter set forth.

Interested persons may participate in the making of the proposed rules by submitting such written data, views, or arguments as they may desire. Communications should be submitted in duplicate to the Docket Section, Federal Aviation Agency, Room A-103, 1711 New York Avenue, NW., Washington 25, D.C. All communications received prior to December 31, 1962, will be considered by the Administrator before taking action upon the proposed rules. The proposals contained in this notice may be changed in the light of comments received. All comments submitted will be available in the Docket Section for examination by interested persons at any time. Because of the large number of comments anticipated in response to this proposal, we will be unable to acknowledge receipt of each reply.

Part 48 now governs the operation of moored balloons and kites. The amendment to Part 48 proposed herein would incorporate regulations regarding the operation of unmanned free balloons. Part 60 contains the Air Traffic Rules governing the operation of aircraft, including unmanned free balloons. The amendment to Part 60 proposed herein would exclude unmanned free balloons from Part 60.

On February 25, 1961, in Draft Release No. 61-4 (26 F.R. 1666), the FAA proposed regulations pertaining to the operation of unmanned free balloons. That proposal generated a great deal of interest, as evidenced by the number of comments received. Opposition in varying degree was expressed by many segments of the scientific community engaged in research utilizing balloons. The majority of these comments indicated that the proposal would have a serious effect on future scientific balloon operations. Civil aviation interests, on the other hand, generally endorsed the proposed regulations.

Satisfactory resolution of the many comments received would have resulted in final regulatory action substantially different from that proposed in the draft release. It was concluded that the significance of the proposal and the tenor of the comments made it desirable that the Agency obtain additional public opinion on the proposed regulations. Therefore, a public hearing, noted in 26 F.R. 10701, was convened on December 7, 1961, before a representative of the Administrator, to solicit comment which would aid in a satisfactory resolution. Valuable information gained at the hearing has been used by the Agency in developing the new proposed regulations.

This proposal, like the earlier draft release, is designed primarily to minimize the potential collision hazard to aircraft created by the release of unmanned free balloons. Activity in the field of unmanned free balloon operations has been steadily increasing, especially among the scientific communities of a great many of our colleges and universities. The increase in activities of this nature requires the promulgation of specific rules which will reasonably govern them without decreasing the usefulness of the balloon as an atmospheric research tool. The regulatory measures proposed would apply to the launching, tracking, and impact of the unmanned free balloon in addition to requirements regarding weather, equipment components and safety marking devices.

It was apparent from comments on the earlier draft release that some misunderstanding existed regarding the applicability of the proposal. Some persons apparently felt that operations would be prohibited if the payload exceeded four pounds. It must be pointed out that the Agency intent is not to prohibit operations. The applicability of the proposal merely defines which operations are subject to the requirements of the regulation and which operations are not.

The proposed regulations would require the balloon operator to obtain an authorization from air traffic control if the launch is to be made from within an airport traffic area or a control zone. This requirement is designed to ensure a greater degree of compatibility and safety in these areas of more concentrated air traffic. Launches from areas other than an airport traffic area or control zone do not require advance approval. Also, since the possibility of hazard to persons and property on the surface is greater until the balloon as-

sumes a normal climb configuration, during the initial 1,000 feet of ascent it would be restricted from operating over the congested area of a city, town or settlement or an open-air assembly of persons not associated with the balloon operation.

The proposal would establish a lighting requirement applicable to night operations below 60,000 feet. Night at the altitude of operation is used as the criterion since the higher the balloon ascends the shorter will be the nighttime period. The Air Almanac publishes information from which sunset, twilight, and sunrise may be determined. Weather minimums are also proposed herein and are designed to ensure that sufficient horizontal visibility and minimum cloud coverage prevail to permit recognition and avoidance of balloons.

Notification to appropriate FAA air traffic facilities will enable the Agency to provide information by Notice to Airmen (NOTAM) to airspace users to inform them of the existence and general location of the balloon. For this reason, a requirement for an accurate system of tracking the balloon and an expeditious method of passing track data is considered most necessary. Also, we propose to require certain safety and quick release termination equipment, such as time clock, barometric or radio controlled devices, capable of removing the balloon and its payload from the airspace in the event malfunction, unsuitable weather, or hazardous conditions arise.

Although the data sought by free balloons is generally obtained above 44,000 feet (standard pressure altitude), where airplane operations are limited, occasionally there are requirements for free balloons to operate at lower altitudes. The earlier draft release required unmanned free balloons to be operated above 44,000 feet, however, this requirement has been deleted from this proposal. This approach appears to be more realistic in view of the launching and tracking notification, marking, lighting and weather requirements which would be imposed on the balloon operator. These precautions would ensure that the balloon would be operated in a manner that would make it easily seen and avoided.

Section 60.1 of the Air Traffic Rules, states in part, "the Air Traffic Rules of this part shall apply to aircraft operated anywhere in the United States. \* \* \* Since unmanned free balloons are within

the definition of aircraft, they are subject to all the provisions contained therein. The scope of Part 60 would be amended to exclude unmanned free balloons from its provisions.

This proposal is subject to the FAA Recodification Program, announced in Draft Release No. 61-25 (26 F.R. 10698). The final rule, if adopted, may be in a recodified form, however, the recodification itself will not alter the substantive contents proposed herein.

In consideration of the foregoing, it is proposed that Parts 48 and 60 of the Civil Air Regulations be amended as follows:

1. By amending § 48.1 to read:

§ 48.1 Applicability.

This part applies to the operation of moored balloons, kites and unmanned free balloons in the United States.

NOTE: Radio transmitting equipment used in conjunction with operations under this part must be licensed as required by the Federal Communications Commission, Washington 25, D.C.

2. By amending Part 48 to include a new Subpart D to read:

Subpart D—Unmanned Free Balloons

§ 48.30 Applicability.

(a) This subpart applies to the operation of any unmanned free balloon which:

(1) Carries a payload package in excess of four pounds that has a size-weight ratio exceeding three ounces per square inch on any surface of such package;

(2) Carries a payload package in excess of six pounds;

(3) Carries a payload, consisting of more than one package, whose total weight is in excess of 12 pounds; or

(4) Uses a rope or other device for suspension of the payload that requires a force in excess of 50 pounds for separation of the suspended payload from the balloon.

(b) Operations conducted within restricted areas must comply only with § 48.31 (b) and (c) and with such additional limitation as may be imposed by the using agency or controlling agency.

§ 48.31 Operating limitation.

An unmanned free balloon may not be operated:

(a) In a control zone below 2,000 feet above the surface or in an airport traffic area unless authorized by air traffic control;

(b) During the first 1,000 feet of ascent, over a congested area of a city, town or settlement or an open-air assembly of persons not associated with the operation;

(c) At any altitude where clouds or obscuring phenomena of more than five tenths coverage prevail;

(d) At any altitude below 80,000 feet standard pressure altitude (SPA) where the horizontal visibility is less than five miles; or

(e) In such manner that impact of the balloon, or portion thereof including its payload, with the surface creates a hazard to persons or property not associated with the operation.

§ 48.32 Equipment and marking requirements.

Each person operating an unmanned free balloon:

(a) Shall provide a barometric, timed, radio-controlled, or similar termination device and shall provide for such device to activate if the weather conditions imposed by this subpart preclude further operations, or if malfunction or other reasons make further operation hazardous to other air traffic or to persons or property on the surface.

(b) Shall provide lighting on the balloon which is visible for at least five miles when the balloon is operated below 80,000 feet SPA at night, as corrected to the altitude of operation.

(c) Equipped with a trailing antenna, shall attach to the antenna, at no more than 50 foot intervals, colored pennants or streamers which are visible from at least one mile. They are not required, if the trailing antenna can be broken at any point by a force of 50 pounds or less.

§ 48.33 Notice requirements.

(a) *Prelaunch notice:* Except as provided in paragraph (b) of this section, the following shall be forwarded to the nearest FAA air traffic facility (Air Route Traffic Control Center, Airport Traffic Control Tower, Flight Service Station) at least six hours but not more than 24 hours prior to the launching of an unmanned free balloon:

- (1) Balloon identification;
- (2) Estimated date and time of launching, amended as necessary to remain within plus or minus 30 minutes;
- (3) Geographical location of launching site;

(4) Cruising altitude;

(5) Forecast trajectory and estimated time to cruising altitude or 44,000 feet SPA, whichever is lower;

(6) Length of balloon and payload, and length of trailing antenna, if used;

(7) Duration of flight; and

(8) Forecast time and location of impact with the surface of the earth.

(b) For solar or cosmic disturbance investigation operations involving a critical time element, the information in paragraph (a) of this section shall be forwarded at least 30 minutes but not more than 24 hours prior to the launching.

(c) *Cancellation notice:* If the operation is cancelled, the nearest FAA air traffic facility shall be notified immediately.

(d) *Launch notice:* The nearest FAA or military air traffic facility shall be notified immediately of the launch time.

§ 48.34 Balloon position reports.

Each person operating an unmanned free balloon shall:

(a) Monitor the course of the balloon and record its position at least every two hours and as further required by air traffic control.

(b) Forward to the nearest FAA air traffic facility the following balloon information two hours and one hour prior to the descent phase:

(1) Current geographical position;

(2) Altitude;

(3) If applicable, forecast time of penetration of 44,000 feet SPA in descent;

(4) Forecast trajectory for balance of flight; and

(5) Forecast time and location of impact with the surface of the earth.

(c) Notify the nearest FAA air traffic facility immediately if a position is not recorded for any two hour period of flight. Such notice shall include the last recorded position and any revision to the forecast trajectory. The nearest FAA air traffic facility shall be notified immediately when tracking is re-established.

(d) Notify the nearest FAA air traffic facility upon termination of the balloon operation.

3. By amending § 60.1 of Part 60 to include a new paragraph (c), to read:

§ 60.1 Scope.

- (c) Unmanned free balloons.

This amendment is proposed under the authority of section 307 of the Federal Aviation Act of 1958 (72 Stat. 749, 49 U.S.C. 1348).

Issued in Washington, D.C., on October 26, 1962.

D. D. THOMAS,  
Director, Air Traffic Service.

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UNITED STATES OF AMERICA  
FEDERAL AVIATION AGENCY  
WASHINGTON, D.C.

Civil Air Regulations Amendment 49-2  
Effective: December 21, 1961  
Issued: December 15, 1961

[Reg. Docket No. 1004; Amdt. 49-2; Supp. 4]

**PART 49—TRANSPORTATION OF EXPLOSIVES AND OTHER DANGEROUS ARTICLES**

**Special Authority for an Operation Including One or More Flights**

Regulations governing the air transportation of explosives were originally promulgated in 1942 and expanded to cover "other dangerous articles" in 1944. These rules have been revised several times since then to permit the carriage of additional articles as the experience gained showed that a greater variety and quantity of these materials could be transported with safety.

Section 49.2 presently authorizes deviations for a particular flight in an emergency situation, or when other forms of transportation are impractical. This requires an individual authorization for each flight and this has proved to be a cumbersome procedure for both the aircraft operators and the Administrator when the total amount of material cannot be carried on one flight. Repeated issuance for each flight can be so time-consuming that it can cause serious delays in an air carrier's operation and may create critical commercial and industrial shortages of material and economic loss to the user. Experience gained under these deviations over the years has proved that repeated individual flights have been operated under the same terms and conditions without adverse effect on safety and it now appears reasonable to apply the deviation to an overall operation rather than to a particular flight.

Adequate control over these operations is provided for in the authorization since each operation must be conducted under such terms, conditions, and limitations as are found necessary in the interest of safety in air commerce.

Since this amendment imposes no additional burden upon any person, notice and public procedure hereon are unnecessary, and it may be made effective on less than 30 days' notice.

In consideration of the foregoing, Part 49 of the Civil Air Regulations (14 CFR, Part 49, as amended) is hereby amended as follows, effective December 21, 1961:

1. By amending § 49.2(a) (1) to read as follows:

**§ 49.2 Special authority.**

(a) \* \* \*

(1) Authority to deviate from any of the provisions of this part for a particular operation, involving one or more flights, may be issued by an authorized representative of the Administrator subject to such terms, conditions, and limitations as he finds necessary in the interest of safety in air commerce.

2. By amending the introductory paragraph of § 49.2-1 to read as follows:

**§ 49.2-1 Authority to deviate from the provisions of this part (FAA policies which apply to § 49.2(a)).**

Authority to deviate from the provisions of Part 49 for a particular operation may be issued to cover the cases described in paragraph (a) or (b) of this section.

3. By amending § 49.2-2(d) to read as follows:

**§ 49.2-2 Conditions and limitations (FAA policies which apply to § 49.2).**

\* \* \* \* \*

(d) The authorization is limited to the particular operation and to the articles for which the authorization is requested, and it will specify the point or points of origin where the articles are to be placed aboard the aircraft and the point or points of destination where such articles are to be removed from the aircraft.

(Secs. 813(a), 601, 604, 902; 72 Stat. 752, 775, 778, 784; 49 U.S.C. 1354(a), 1421, 1424, 1472)

Issued in Washington, D.C., on December 15, 1961.

N. E. HALABY,  
Administrator.

[F.R. Doc. 61-12040; Filed, Dec. 20, 1961; 8:45 a.m.]

UNITED STATES OF AMERICA  
FEDERAL AVIATION AGENCY  
WASHINGTON, D.C.

Civil Air Regulations Amendment 49-3

Effective: July 9, 1962

Issued: May 31, 1962

[Reg. Docket No. 1049; Amdt. 49-3]

**PART 49—TRANSPORTATION OF EXPLOSIVES AND OTHER DANGEROUS MATERIALS**

**Transportation of Magnetized Materials**

A notice of proposed rule making was published in the FEDERAL REGISTER on February 6, 1962 (27 F.R. 1073), and circulated as Draft Release No. 62-3 dated January 29, 1962, which proposed to amend Part 49 of the Civil Air Regulations to provide for the transportation of magnetic materials.

The comments received were generally in favor of requiring that certain safeguards be taken in the shipment of magnets or magnetic material by air and reflected endorsement of the principles of the proposal. However, there was some concern noted relative to the possible obscuration of warning markers on the packages of magnetized material which might occur during the loading of this cargo. The comments also reflected concern over requiring that keeper bars only be installed on magnets "where possible," and indicated the need to have keeper bars installed on magnets at all times or a need for other means of protection to be provided to prevent the magnetic field from adversely affecting the magnetic compass.

In proposing this amendment, the Agency considered that explosives and other dangerous articles as defined by Part 49 of the Civil Air Regulations do not include magnetic materials. Air shipments of magnets and magnetic devices can adversely influence the accu-

racy of magnetic compasses unless they are properly packed and kept at a safe distance from the aircraft's compass. In order to safeguard the navigation of the aircraft, it is necessary to require the shippers of magnetic materials to mark clearly any packages containing magnetized materials and to install keeper bars on permanent magnets at all times or provide other protection to prevent the magnetic field from adversely affecting the magnetic compass.

There are a number of magnetic shield materials available which are being used as dust covers on some airborne weather radar units. These dust covers are sufficiently effective as magnetic shielding devices so that compass external compensating magnets are not required.

Interested persons have been afforded an opportunity to participate in the making of this regulation, and due consideration has been given to all relevant matter presented.

In consideration of the foregoing, Part 49 of the Civil Air Regulations (14 CFR Part 49, as amended) is hereby amended as follows, effective July 9, 1962:

**§ 49.1 [Amendment]**

1. By amending § 49.1(a) by adding between the words "articles" and "shall" the phrase ", or any other articles specifically regulated by the rules of this part,".

2. By adding a new § 49.16 to read as follows:

**§ 49.16 Packing and marking requirements for magnetized materials.**

No shipper shall offer magnetized materials for shipment by air unless:

(a) The outside of the package has been plainly marked "Magnetized Materials";

(b) Magnets or magnetized devices such as magnetrons and light meters have been packed so that the polarities of the individual units oppose one another; and

(c) Permanent magnets have keeper bars installed, or are shielded so as to prevent the magnetic field from affecting the magnetic compass.

3. By amending § 49.21 by adding a new paragraph (d) to read as follows:

**§ 49.21 Cargo location.**

(d) Magnetized materials shall not be loaded on the aircraft in the vicinity of the magnetic compasses or compass master units which are a part of the instrument equipment of the aircraft so as to affect their operation. If it is not possible to meet this requirement, a special aircraft swing and compass calibration shall be made. Care shall be taken so that warning markers are not obscured upon cargo loading.

NOTE: Magnetized material as used herein is that material which is magnetized to the extent that it might affect the magnetic compass and produce an erroneous compass reading.

(Secs. 313(a), 601, 604, 902; 72 Stat. 752, 775, 778, 784; 49 U.S.C. 1354, 1421, 1424, 1472)

Issued in Washington, D.C., on May 31, 1962.

N. E. HALABY,  
Administrator.

[F.R. Doc. 62-5537; Filed, June 6, 1962; 8:50 a.m.]

(As published in the Federal Register 27 F.R. 5393 7 June 7, 1962)