FEDERAL AVIATION AGENCY
FLIGHT STANDARDS SERVICE
Washington 25, D. C.

September 29, 1961

CIVIL AIR REGULATIONS DRAFT RELEASE NO. 61-21

SUBJECT: Radio Equipment for Operations Under VFR Over Routes Not Navigated by Pilotage or for Operations Under IFR or Over-the-Top

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The Flight Standards Service of the Federal Aviation Agency has under consideration an amendment to Parts 40, 41, and 42 of the Civil Air Regulations to revise radio navigational equipment requirements for IFR operations. 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 Flight Standards Service desires that all persons who will be affected by the requirements of this proposal be fully informed as to its effect upon them and is therefore circulating copies in order to afford interested persons ample opportunity to submit comments as they may desire.

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. However, you may be assured that all comment will be given careful consideration.

It should be noted that comments should be submitted in duplicate to the Docket Section of the Federal Aviation Agency, and in order to insure consideration must be received on or before December 7, 1961.

Director
Flight Standards Service

1071b

FEDERAL AVIATION AGENCY

FLIGHT STANDARDS SERVICE

[14 CFR Parts 40, 41, 42]

[Regulatory Docket No. 912; Draft Release No. 61-21]

NOTICE OF PROPOSED RULE MAKING

Radio Equipment for Operations Under VFR Over Routes Not Navigated by Pilotage or for Operations Under IFR or Over-the-top

Pursuant to the authority delegated to me by the Administrator (14 CFR 405.27), notice is hereby given that the Federal Aviation Agency has under consideration a proposal to amend Parts 40, 41, and 42 of the Civil Air Regulations as hereinafter set forth.

Interested persons may participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should be submitted in duplicate to the Docket Section of the Federal Aviation Agency, Room C-226, 1711 New York Avenue, N.W., Washington 25, D.C. All communications received on or before December 7, 1961, will be considered by the Administrator before taking action on the proposed rule. The proposal 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 when the prescribed date for return of comments has expired.

Section 40.232 sets forth the minimum navigational equipment required for air carrier flights operating under VFR over routes not navigated by pilotage, or operating under IFR or over-the-top. Paragraph (a) of that section contains the basic requirement that air carrier airplanes on such flights shall be equipped with dual means of receiving radio navigational signals from all primary en route and approach navigational facilities intended to be used. The advent of VOR airways in the United States created a situation wherein the LF/MF airways system coexisted with the growing VOR airways system. During the early stages of transition from LF/MF to VOR airways, both VOR and LF/MF receivers were therefore necessary and most air carrier airplanes were so equipped.

In particular operations, where VOR and LF/MF routes were approximately parallel and in close proximity, it was feasible to allow the scheduled air carriers to predicate their operations on a combination of VOR and LF/MF aids in meeting the air carrier requirement for two independent means of receiving radio navigational signals. Accordingly, paragraph (c) of § 40.232 was adopted to provide that during this period of transition a scheduled air carrier flight could operate IFR with one VOR and one LF/MF navigational receiver, provided that the ground facilities were so located and the airplane so fueled that in case of failure of any one receiver the airplane could proceed to a suitable alternate airport where ground radio navigational facilities existed which could be received by the remaining equipment.

During the intervening years, as low frequency en route aids were decommissioned and LF/MF routes diminished, VOR airways and routes increased until, at present, VOR ground aids generally constitute the primary means of en route navigation in the United States, and LF/MF routes are of relatively lesser importance. The situation today is therefore the reverse of that which existed at the time § 40.232(c) was adopted.

In view of the present coverage and the extensive use of VOR navigational ground aids, the transition period referred to in paragraph (c) of § 40.232 is about over. Further, the increase in air traffic and the resultant need for additional fixes for reporting and holding has resulted in the designation of numerous intersections of two VOR radials as fixes for such purposes. Virtually all IFR operations involve the use of such fixes for navigation and holding, particularly in the larger terminal areas. As satisfactory identification of VOR intersections requires the use of two VOR receivers when flying large or fast airplanes, it is considered essential that all air carrier airplanes operating IFR be equipped with two VOR receivers. Accordingly, it is proposed to delete § 40.232(c) and the related material in §40.232-1.

Since this proposal would require all air carrier flights navigating by means of VOR aids to be equipped with two VOR receivers, it appears feasible to permit those which also operate on low frequency route segments to be equipped with only one low frequency range or ADF receiver. It is therefore proposed to amend § 40.232(b) by expanding the authority contained therein with regard to routes based on automatic direction finding equipment to include route operation based on low frequency radio ranges. Similar amendments are proposed to the radio equipment requirements of Parts 41 and 42.

In consideration of the foregoing, it is proposed to amend Parts 40, 41, and 42 of the Civil Air Regulations as follows:

1. By amending § 40.232(b) of Part 40 to read as follows:

40.232 *Radio equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over-the-top.* * * *

(b) In the case of operation over routes on which navigation is based on low frequency radio ranges or automatic direction finding, only one low frequency radio range receiver or ADF receiver need be installed: *Provided*, That the airplane is equipped with two VOR receivers, and VOR navigational aids are so located and the airplane is so fueled that, in the case of failure of the low frequency radio range receiver or ADF receiver, the flight may proceed safely to a suitable airport by means of VOR aids and complete an instrument letdown by use of the remaining airplane radio system.

2. By deleting § 40.232(c) and the related §40.232–1.

3. By promulgating amendments to Parts 41 and 42 of the Civil Air Regulations similar to those proposed herein.

These amendments are proposed under the authority of sections 313(a), 601, 604, 605 of the Federal Aviation Act of 1958 (72 Stat. 752, 775, 778, 49 U.S.C. 1354(a), 1421, 1424, 1425).

Director,
Flight Standards Service

Issued in Washington, D.C., on September 29, 1961.

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