Federal Aviation Agency

Washington, D.C.

Civil Aeronautics Manual 40

Scheduled Interstate Air Carrier Certification and Operation Rules

Supplement No. 4, CAM 40 dated Sept. 15, 1959 **June 1, 1961**

SUBJECT: Revisions to CAM 40.

This supplement is issued to incorporate in CAM 40 Civil Air Regulations Amendment 40–29 and Special Civil Air Regulations Nos. SR–425C and SR–446.

Amendment 40–29 concerns landing minimums for pilots with less than 100 hours as pilot in command in a particular type of airplane.

Special regulation SR–425C concerns provisional certification and operation of aircraft. It was issued on May 31, 1961, to become effective on June 6, 1961, and supersedes Special Civil Air Regulation No. SR–425B.

Special regulation SR–446 concerns the use of portable frequency modulation (FM) type radio receivers on aircraft during flight. It was issued on May 4, 1961, to become effective on May 25, 1961.

New or revised material is enclosed in black brackets on the pages submitted with this supplement, except Special Civil Air Regulations Nos. SR–425C and SR–446, which are new, and the pages in the addendum containing the preambles of amendments.

Remove the following pages:	*Insert the following new pages:*
IX and X	IX and X
77 and 78	77 through 78–1
185 through 190–4	185 through 190–3
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P–29 and P–30	P–29 through P–31

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Bureau of Flight Standards.

Attachments.

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(b) *Runway visibility.* Whenever the latest weather report furnished by the U.S. Weather Bureau or a source approved by the Weather Bureau, including an aural report from the control tower, contains a visibility value specified as runway visibility for a particular runway of an airport, such visibility will control for take-offs and landings on that runway.[9]

(Published in 23 F.R. 5235, July 10, 1958, effective Aug. 15, 1958.)

40.406 *Take-off and landing weather minimums; IFR.*

(a) Except as provided in paragraphs (c) and (d) of this section, irrespective of any clearance which may be obtained from air traffic control, no airplane shall take off or land under IFR when the ceiling or ground visibility reported by the U.S. Weather Bureau or by a source approved by the Weather Bureau is less than the minimum approved for the airport when used as a regular airport.

(b) Except as provided in paragraphs (c) and (d) of this section, no instrument approach procedure shall be executed when the latest weather report prepared by the U.S. Weather Bureau or by a source approved by the Weather Bureau indicates the ceiling or visibility is less than the landing minimum approved for the airport when used as a regular airport.

(c) An instrument approach procedure may be executed when the weather report prepared by the U.S. Weather Bureau or by a source approved by the Weather Bureau indicates that the ceiling or visibility is less than approved minimum for landing, if the airport is served by ILS and PAR in operative condition and both are used by the pilot, and thereafter a landing may be made, if weather conditions equal to or better than the prescribed minimums are found to exist by the pilot in command upon reaching the authorized landing minimum altitude.

(d) If an instrument approach procedure is initiated when the current report prepared by the U.S. Weather Bureau or by a source approved by the Weather Bureau indicates that the prescribed ceiling and visibility minimums exist and a later weather report indicating below minimum conditions is received after the airplane (1) is on an ILS final approach and has passed the outer marker, or (2) is on a final approach using a radio range station or comparable facility and has passed the appropriate facility and has reached the authorized landing minimum altitude, or (3) is on GCA final approach and has been turned over to the final approach controller, such ILS, Range, or GCA approach may be continued and a landing may be made in the event weather conditions equal to or better than the prescribed minimums for the airport are found to exist by the pilot in command of the flight upon reaching the authorized landing minimum altitude.

[(e) The ceiling and visibility landing minimums prescribed in the air carrier's operations specifications for regular, provisional, or refueling airports shall be increased by 100 feet ceiling and ½ mile visibility whenever the pilot in command has not served 100 hours as pilot in command in air carrier or commercial operations in the particular type of airplane being operated by him. The ceiling and visibility minimums need not be increased above those applicable to the airport when used as an alternate airport. The sliding scale, when authorized in the air carrier's operations specifications, shall not be applied until the pilot in command has served 100 hours as pilot in command in air carrier or commercial operations in the particular type of airplane being operated by him.

[(Amendment 40-29, published in 26 F.R. 3460, Apr. 22, 1961, effective May 23, 1961.)]

40.406-1 *IFR takeoff and landing, and instrument approach procedure, weather minimums (FAA interpretations which apply to sec. 40.406).*

[9] Information respecting the official runway visibility observations reported by the control tower operator may be obtained from the Office of the U.S. Weather Bureau for the airport concerned. Such office maintains a continuous graph recording of the runway visibility shown on the visibility meter in the control tower.

(a) *General.* The ceiling and visibility contained in the main body of the latest weather report furnished by the U.S. Weather Bureau or a source approved by the Weather Bureau will control for instrument approach procedures and landings and takeoffs for all runways of an airport, except as provided in paragraph (b) of this section.

(b) *Runway visibility.* Whenever the latest weather report furnished by the U.S. Weather Bureau or a source approved by the Weather Bureau, including an aural report from the control tower, contains a visibility value specified as runway visibility for a particular runway of an airport, such visibility will control for straight-in instrument approaches, landings, and takeoffs for that runway.[9]

(Published in 23 F.R. 5235, July 10, 1958, effective Aug. 15, 1958.)

40.406–2 *Ceiling and visibility minimums—IFR (FAA policies which apply to sec. 40.406).*

(a) *General.* The policies set forth in this section will be used by the Federal Aviation Agency in authorizing the ceiling and visibility minimums contained in the operations specifications issued to scheduled air carriers. Specific deviations from these policies may be approved in instances where FAA and industry respresentatives concur that the safety of the operation would not be prejudiced.

(1) *Military airports.* When an air carrier is authorized to use a military airport, the ceiling and visibility minimums approved for takeoff and landing at that airport will not be less than those agreed upon by the military authorities having jurisdiction over the airport.

(b) *Takeoff minimums.*

(1) *Regular, refueling, and provisional airports.*

(i) *General; all aircraft.* In approving takeoff minimums for scheduled air carriers, consideration will be given to the following factors:

(*a*) Obstructions and terrain in the vicinity of the airport.

(*b*) Effective length of each runway to be used by the air carrier.

(*c*) The performance characteristics of each type aircraft to be used by the air carrier at the airport.

(*d*) IFR departure procedures in use at the airport.

(*e*) Runway lighting facilities and runway pavement marking available at the airport.

(*f*) Radio navigation facilities serving the airport.

(ii) *Two-engine aircraft.* The lowest takeoff minimums for two-engine aircraft normally will be 300–1. However, minimums as low as 200–½ may be approved in accordance with certain specific conditions and limitations prescribed in the air carrier's operations specifications.

(iii) *Four-engine aircraft.* The lowest takeoff minimums for four-engine aircraft will normally be 200–½. However, takeoff minimums as low as 200–¼ may be approved in accordance with certain specific conditions and limitations prescribed in the air carrier's operations specifications.

(2) *Alternate airports.* Takeoff minimums for both two- and four-engine aircraft may be approved as low as 300–1 when the air carrier is authorized to use a particular airport as an alternate airport only. When an airport is used as an alternate airport and such airport is also authorized in the air carrier's operations specifications as a regular, refueling, or provisional airport, the takeoff minimums shown on the applicable Form FAA–511 may be used: *Provided*, That the pilot in command is currently qualified into the airport in accordance with the applicable Civil Air Regulations, otherwise, takeoff minimums of 300–1 or the takeoff minimums shown on the Form FAA–511, whichever are greater, will be applicable.

(c) *Landing minimums, regular, refueling, or provisional airports.*

(1) *Circling approach.* When it is necessary to circle an airport to effect a landing, higher landing minimums are required for aircraft with higher maneuvering, approach, and landing speeds than are required for slower type aircraft. The stall speed at maximum certificated landing weight with full flaps, land-

[9] For footnote, see page 77.

ing gear extended and power-off will be used to differentiate between the two types of aircraft. Circling approach minimums are normally the same for all instrument approach procedures without regard to the type of radio navigational facility used to conduct the instrument approach, and will be established in accordance with the following:

(i) *Aircraft with stall speed in excess of 75 m.p.h.* The minimum ceiling will be (*a*) at least 500 feet above the established elevation of the airport, (*b*) not less than 300 feet above all obstructions within a radius of 2 miles from the airport boundary and (*c*) 300 feet above all obstructions within a distance of 2 miles on each side of the final approach course from the radio facility to the airport. The minimum visibility that will be authorized for such aircraft will normally be 1½ miles. However, a minimum visibility of not less than 1 mile may be authorized by application of the sliding scale authorized in the air carrier's operations specifications. A minimum visibility of 1 mile may also be authorized for those two-engine aircraft having a stall speed in excess of 75 m.p.h., which can be safely maneuvered within a radius of not more than ½ mile.

(ii) *Aircraft with stall speed of 75 m.p.h. or less.* Such aircraft will normally be

SPECIAL CIVIL AIR REGULATION NO. 425C

Effective: June 6, 1961
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(26 F.R. 4990)

Provisional Certification and Operation of Aircraft

Special Civil Air Regulation No. SR–425A was adopted on July 22, 1958, to provide for provisional certification of turbine-powered transport category airplanes in order to permit certain air carriers and manufacturers to conduct crew training, service testing, and simulated air carrier operations prior to introduction of the airplanes into commercial service. The objective of this regulation was to provide a means whereby the air carriers and manufacturers could obtain as much experience as possible with turbine-powered airplanes which, although safe for flight, had not been approved for the issuance of a type certificate.

Special Civil Air Regulation No. SR–425B, which superseded SR–425A, was adopted on April 7, 1960, to extend the application of the regulation to: (1) piston-engine transport category aircraft, including rotorcraft; and (2) personal and executive type aircraft, including rotorcraft, irrespective of powerplant type. In addition, this regulation permitted operations such as sales demonstrations and market surveys with aircraft having a provisional type and airworthiness certificate.

To accomplish this, SR–425B provided for, among other things, the issuance of two classes of provisional type and airworthiness certificates. Class I provisional and airworthiness certificates could be issued for all types of aircraft for operation by the aircraft manufacturer. Class II provisional type and airworthiness certificates could be issued only for transport category aircraft, but these aircraft could be operated by either the aircraft manufacturer or a certificated air carrier. In general, the requirements for the issuance of Class I provisional certificates were less stringent, and the operating limitations less confining, than those for the issuance of Class II provisional certificates.

Under the provisions of SR–425B, however, eligibility to apply for Class I provisional certificates was limited to aircraft manufacturers. A recommendation that this eligibility be extended to include engine manufacturers had been evaluated by the Agency prior to the adoption of SR–425B, but rule making action on such extension was deferred until additional experience with provisional certification could be acquired.

Experience accumulated since the adoption of SR–425B has indicated that it would be practicable for engine manufacturers, who have altered a type certificated aircraft by installing type certificated engines of their own manufacture in place of the original engines, to show compliance with the currently effective requirements for issuance of Class I provisional type and provisional airworthiness certificates; and that compliance with these requirements will insure safe operation of provisionally certificated aircraft by such engine manufacturers. Further, the Agency

believes that operations conducted by engine manufacturers under the terms of Class I provisional certificates, for the purpose of sales demonstrations, market surveys, and other similar activities related to the sale of their engines, would contribute to the promotion and development of civil aeronautics in the United States.

SR–425B is therefore being superseded by SR–425C to permit certain engine manufacturers to apply for Class I provisional type and provisional airworthiness certificates if they have applied for the issuance of a supplemental type certificate.

Since this is a superseding regulation which relieves restrictions and imposes no additional burden on any person, notice and public procedures hereon are unnecessary, and this regulation may be made effective on less than 30 days' notice.

In consideration of the foregoing, the following Special Civil Air Regulation is adopted to become effective June 6, 1961:

GENERAL

1. *Applicability.* Contrary provisions of the Civil Air Regulations notwithstanding, provisional type and airworthiness certificates, amendments to provisional type certificates, and provisional amendments to type certificates, will be issued as prescribed in this regulation to a manufacturer or an air carrier. As used in this regulation, a manufacturer shall mean only a manufacturer who is a citizen of the United States; and the term air carrier shall not include an air taxi operator.

2. *Eligibility.*

(a) A manufacturer of aircraft manufactured by him within the United States may apply for Class I or Class II provisional type and provisional airworthiness certificates, for amendments to provisional type certificates held by him, and for provisional amendments to type certificates held by him.

(b) An air carrier holding an air carrier operating certificate authorizing him to conduct operations under Parts 40, 41, 42, or 46 of the Civil Air Regulations may apply for Class II provisional airworthiness certificates for transport category aircraft which meet the conditions of either subparagraphs (1) or (2) of this paragraph.

(1) The aircraft has a currently valid Class II provisional type certificate or an amendment thereto;

(2) The aircraft has a currently valid provisional amendment to a type certificate which was preceded by a corresponding Class II provisional type certificate.

(c) An engine manufacturer who has altered a type certificated aircraft by installing different type certificated engines, manufactured by him within the United States, in place of the original engines, may apply for Class I provisional type and provisional airworthiness certificates for such aircraft, and for amendments to Class I provisional type certificates held by him, if the basic aircraft, before alteration was type certificated in the normal, utility, acrobatic, or transport category.

3. *Application.*

(a) *General.* Applications for provisional type and airworthiness certificates, for amendments to provisional type certificates, and for

provisional amendments to type certificates, shall be submitted to the Chief, Flight Standards Division, FAA, of the Regional Office in which the manufacturer or air carrier is located and shall be accompanied by the pertinent information specified in this regulation.

4. *Duration.* Unless sooner surrendered, superseded, revoked, or otherwise terminated, certificates and amendments thereto, shall have periods of duration in accordance with paragraphs (a) through (f) of this section.

(a) A Class I provisional type certificate shall remain in effect for 24 months after the date of its issuance or until the date of issuance of the corresponding type or supplemental type certificate, whichever occurs first.

(b) A Class I provisional type certificate shall expire immediately upon issuance of a Class II provisional type certificate for aircraft of the same type design.

(c) A Class II provisional type certificate shall remain in effect for 6 months after the date of its issuance or 60 days after the date of issuance of the corresponding type certificate, whichever occurs first.

(d) An amendment to a Class I or a Class II provisional type certificate shall remain in effect for the duration of the corresponding provisional type certificate.

(e) A provisional amendment to a type certificate shall remain in effect for 6 months after its approval or until the amendment to the type certificate is approved, whichever occurs first.

(f) Provisional airworthiness certificates shall remain in effect for the duration of the corresponding provisional type certificate, amendment to a provisional type certificate, or a provisional amendment to the type certificate.

5. *Transferability of certificates.* Certificates issued pursuant to this regulation are not transferable except that a Class II provisional airworthiness certificate may be transferred to an air carrier eligible to apply for such certificate under section 2 of this regulation.

6. *Display of certificates and markings.* A provisional airworthiness certificate shall be prominently displayed in the aircraft for which it is issued. The words "Provisional Airworthiness" shall be painted in letters not less than 2 inches high on the exterior of such aircraft adjacent to each entrance to the cabin and cockpit of the aircraft.

REQUIREMENTS FOR ISSUANCE

7. *Class I provisional type certificates.* A Class I provisional type certificate and amendments thereto will be issued for a particular type design when the eligible aircraft or engine manufacturer shows compliance with the provisions of paragraphs (a) through (f) of this section, and an authorized representative of the Administrator finds, on the basis of information submitted to him by the manufacturer in compliance with the provisions of this section and of other relevant information, that there is no feature, characteristic, or condition which would render the aircraft unsafe when operated in accordance with the limitations established in paragraph (d) of this section and in section 13 of this regulation.

(a) The manufacturer has applied for the issuance of a type or supplemental type certificate for the aircraft.

(b) The manufacturer certifies that the aircraft has met the provisions of subparagraphs (1) through (3) of this paragraph.

(1) The aircraft has been designed and constructed in accordance with the airworthiness requirements applicable to the issuance of the type or supplemental type certificate for the aircraft;

(2) The aircraft substantially complies with the applicable flight characteristics requirements for the type or supplemental type certificate;

(3) The aircraft can be operated safely under the appropriate operating limitations specified in this regulation.

(c) The manufacturer has submitted a report showing that the aircraft had been flown in all maneuvers necessary to show compliance with the flight requirements for the issuance of the type or supplemental type certificate and to establish that the aircraft can be operated safely in accordance with the limitations specified in this regulation.

(d) The manufacturer has established limitations with respect to weights, speeds, flight maneuvers, loading, operation of controls and equipment, and all other relevant factors. The limitations shall include all the limitations required for the issuance of a type or supplemental type certificate for the aircraft: *Provided,* That, where such limitations have not been established, appropriate restrictions on the operation of the aircraft shall be established.

(e) The manufacturer has established an inspection and maintenance program for the continued airworthiness of the aircraft.

(f) A prototype aircraft has been flown by the manufacturer for at least 50 hours pursuant to the authority of an experimental certificate issued under Part 1 of the Civil Air Regulations or under the auspices of a United States military service: *Provided,* That the number of flight hours may be reduced by the authorized representative of the Administrator in the case of an amendment to a provisional type certificate.

8. *Class I provisional airworthiness certificates.* Except as provided in section 12 of this regulation, a Class I provisional airworthiness certificate will be issued for an aircraft, for which a Class I provisional type certificate is in effect, when the eligible aircraft or engine manufacturer shows compliance with the provisions of paragraphs (a) through (d) of this section, and an authorized representative of the Administrator finds that there is no feature, characteristic, or condition of the aircraft which would render the aircraft unsafe when operated in accordance with the limitations established in sections 7(d) and 13 of this regulation.

(a) The manufacturer is the holder of the provisional type certificate for the aircraft.

(b) The manufacturer submits a statement that the aircraft conforms to the type design corresponding with the provisional type certificate and has been found by him to be in safe operating condition under the applicable limitations.

(c) The aircraft has been flown at least 5 hours by the manufacturer.

(d) The aircraft has been supplied with a provisional aircraft flight manual or other document and appropriate placards containing the limitations required by sections 7(d) and 13 of this regulation.

9. *Class II provisional type certificates.* A Class II provisional type certificate and amendments thereto will be issued for a particular transport category type design when the manufacturer of the aircraft shows compliance with the provisions of paragraphs (a) through (h) of this section, and an authorized representative of the Administrator finds, on the basis of information submitted to him by the manufacturer in compliance with the provisions of this section and of other relevant information, that there is no feature, characteristic, or condition which would render the aircraft unsafe when operated in accordance with the limitations established in paragraph (f) of this section and in sections 13 and 14 of this regulation.

(a) The manufacturer has applied for the issuance of a transport category type certificate for the aircraft.

(b) The manufacturer holds a type certificate and a currently effective production certificate for at least one other aircraft in the same transport category as the subject aircraft.

(c) The Agency's official flight test program with respect to the issuance of a type certificate for the aircraft is in progress.

(d) The manufacturer certifies that the aircraft has met the provisions of subparagraphs (1) through (3) of this paragraph.

(1) The aircraft has been designed and constructed in accordance with the airworthiness requirements applicable to the issuance of the type certificate for the aircraft;

(2) The aircraft substantially complies with the applicable flight characteristics requirements for the type certificate;

(3) The aircraft can be operated safely under the appropriate operating limitations specified in this regulation.

(e) The manufacturer has submitted a report showing that the aircraft had been flown in all maneuvers necessary to show compliance with the flight requirements for the issuance of the type certificate and to establish that the aircraft can be operated safely in accordance with the limitations specified in this regulation.

(f) The manufacturer has prepared a provisional aircraft flight manual which includes limitations with respect to weights, speeds, flight maneuvers, loading, operation of controls and equipment, and all other relevant factors. The limitations shall include all the limitations required for the issuance of a type certificate for the aircraft: *Provided,* That, where such limitations have not been established, the provisional flight manual shall contain appropriate restrictions on the operation of the aircraft.

(g) The manufacturer has established an inspection and maintenance program for the continued airworthiness of the aircraft.

(h) A prototype aircraft has been flown by the manufacturer for at least 100 hours pursuant to the authority of either an experimental certificate issued under Part 1 of the Civil Air Regulations or a Class I provisional airworthiness certificate: *Provided,* That the number of flight hours may be reduced by the authorized representative of the Administrator in the case of an amendment to a provisional type certificate.

10. *Class II provisional airworthiness certificates.* Except as provided in section 12 of this regulation, a Class II provisional airworthiness certificate will be issued for an aircraft, for which a Class II provisional type certificate is in effect, when the applicant shows compliance with the provisions of paragraphs (a) through (e) of this section, and an authorized representative of the Administrator finds that there is no feature, characteristic, or condition of the aircraft which would render the aircraft unsafe when operated in accordance with the limitations established in sections 9(f), 13, and 14 of this regulation.

(a) The applicant submits evidence that a Class II provisional type certificate for the aircraft has been issued to the manufacturer.

(b) The applicant submits a statement by the manufacturer that the aircraft has been manufactured under a quality control system adequate to insure that the aircraft conforms to the type design corresponding with the provisional type certificate.

(c) The applicant submits a statement that the aircraft has been found by him to be in a safe operating condition under the applicable limitations.

(d) The applicant submits a statement that the aircraft has been flown at least 5 hours by the manufacturer.

(e) The aircraft has been supplied with a provisional aircraft flight manual containing the limitations required by sections 9(f), 13, and 14 of this regulation.

11. *Provisional amendments to type certificate.* A provisional amendment to a type certificate will be approved when the manufacturer of the type certificated aircraft shows compliance with the provisions of paragraphs (a) through (g) of this section, and an authorized representative of the Administrator finds, on the basis of information submitted to him by the manufacturer in compliance with the provisions of this section and of other relevant information, that there is no feature, characteristic, or condition which would render the aircraft unsafe when operated in accordance with the limitations established in paragraph (e) of this section, and section 13 and, if applicable, section 14 of this regulation.

(a) The manufacturer has applied for an amendment to the type certificate.

(b) The Agency's official flight test program with respect to the amendment of the type certificate is in progress.

(c) The manufacturer certifies that the aircraft has met the provisions of subparagraphs (1) through (3) of this paragraph.

(1) The modification involved in the amendment to the type certificate has been designed and constructed in accordance with the airworthiness requirements applicable to the issuance of the type certificate for the aircraft;

(2) The aircraft substantially complies with the applicable flight characteristics requirements for the type certificate;

(3) The aircraft can be operated safely under the appropriate operating limitations specified in this regulation.

(d) The manufacturer has submitted a report showing that the aircraft incorporating the modifications involved had been flown in all maneuvers necessary to show compliance with the flight require-

ments applicable to these modifications and to establish that the aircraft can be operated safely in accordance with the limitations specified in this regulation.

(e) The manufacturer has established, in a provisional aircraft flight manual or other document and appropriate placards, limitations with respect to weights, speeds, flight maneuvers, loading, operation of controls and equipment, and all other relevant factors. The limitations shall include all the limitations required for the issuance of a type certificate for the aircraft: *Provided,* That, where such limitations have not been established, appropriate restrictions on the operation of the aircraft shall be established.

(f) The manufacturer has established an inspection and maintenance program for the continued airworthiness of the aircraft.

(g) An aircraft modified in accordance with the corresponding amendment to the type certificate has been flown by the manufacturer for the number of hours found necessary by the authorized representative of the Administrator, such flights having been conducted pursuant to the authority of an experimental certificate issued under Part 1 of the Civil Air Regulations.

12. *Provisional airworthiness certificates corresponding with provisional amendment to type certificate.* A Class I or a Class II provisional airworthiness certificate, as specified in section 2 of this regulation, will be issued for an aircraft, for which a provisional amendment to the type certificate has been issued, when the applicant shows compliance with the provisions of paragraphs (a) through (e) of this section, and an authorized representative of the Administrator finds that there is no feature, characteristic, or condition of the aircraft, as modified in accordance with the provisionally amended type certificate, which would render the aircraft unsafe when operated in accordance with the limitations established in sections 11(e) and 13 and, if applicable, section 14 of this regulation.

(a) The applicant submits evidence that approval has been obtained for the relevant provisional amendment to the type certificate for the aircraft.

(b) The applicant submits evidence that the modification to the aircraft was accomplished under a quality control system adequate to insure that the modification conforms to the provisionally amended type certificate.

(c) The applicant submits a statement that the aircraft has been found by him to be in a safe operating condition under the applicable limitations.

(d) The applicant submits a statement that the aircraft has been flown at least 5 hours by the manufacturer.

(e) The aircraft has been supplied with a provisional aircraft flight manual or other document and appropriate placards containing the limitations required by sections 11(e) and 13 and, if applicable, section 14 of this regulation.

OPERATING LIMITATIONS

13. *Operation of provisionally certificated aircraft.* An aircraft for which a provisional airworthiness certificate has been issued shall

be operated only by a person eligible to apply for a provisional airworthiness certificate in accordance with section 2 of this regulation. Operations shall be in compliance with paragraphs (a) through (j) of this section.

(a) The aircraft shall not be operated in air transportation unless so authorized in a particular case by the Director, Bureau of Flight Standards.

(b) Operations shall be restricted to the United States, its Territories and possessions.

(c) The aircraft shall be limited to the types of operations listed in subparagraphs (1) through (7) of this paragraph.

(1) Flights conducted by the aircraft or engine manufacturer in direct conjunction with the type or supplemental type certification of the aircraft;

(2) Training of flight crews, including simulated air carrier operations;

(3) Demonstration flights conducted by the manufacturer for prospective purchasers;

(4) Market surveys by the manufacturer;

(5) Flight checking of instruments, accessories, and equipment, the functioning of which does not adversely affect the basic airworthiness of the aircraft;

(6) Service testing of the aircraft;

(7) Such additional operations as may be specifically authorized by the authorized representative of the Administrator.

(d) All operations shall be conducted within the prescribed limitations displayed in the aircraft or set forth in the provisional aircraft flight manual or other document containing the limitations for the safe operation of the aircraft: *Provided,* That operations conducted in direct conjunction with the type or supplemental type certification of the aircraft shall be subject to the experimental aircraft limitations of section 1.74 of Part 1 of the Civil Air Regulations, and all "flight tests" as defined in section 60.60 of the Civil Air Regulations shall be conducted in accordance with the requirements of section 60.24 of that part.

(e) The operator shall establish procedures for the use and guidance of flight and ground personnel in the conduct of operations under this section. Specific procedures shall be established for operations from and into airports where the runways require takeoffs or approaches over populated areas. All procedures shall be approved by an authorized representative of the Administrator. All operations shall be conducted in accordance with such approved procedures.

(f) The operator shall insure that each flight crewmember is properly certificated and possesses adequate knowledge of, and familiarity with, the aircraft and the procedures to be used by him.

(g) The aircraft shall be maintained in accordance with applicable Civil Air Regulations, with the inspection and maintenance program established in accordance with this regulation, and with any special inspections and maintenance conditions prescribed by an authorized representative of the Administrator.

(h) No aircraft shall be operated under authority of a provisional airworthiness certificate if the manufacturer or the authorized

representative of the Administrator determines that a change in design, construction, or operation is necessary to insure safe operation, until such change is made and approved by the authorized representative of the Administrator. Section 1.24 of Part 1 of the Civil Air Regulations shall be applicable to operations under this section.

(i) Only those persons who have a bona fide interest in the operations permitted under this section or who are specifically authorized by both the manufacturer and the authorized representative of the Administrator may be carried in provisionally certificated aircraft: *Provided,* That they have been advised by the operator of the provisional certification status of the aircraft.

(j) The authorized representative of the Administrator may prescribe such additional limitations or procedures as he finds necessary. This shall include limitations on the number of persons who may be carried aboard the aircraft.

14. *Additional limitations to operations by air carriers.* In addition to the limitations in section 13 of this regulation, operations by air carriers shall be subject to the provisions of paragraphs (a) through (d) of this section.

(a) In addition to crewmembers, the aircraft may carry only those persons who are listed in section 40.356(c) of Part 40 of the Civil Air Regulations or who are specifically authorized by both the air carrier and the authorized representative of the Administrator.

(b) The air carrier shall maintain current records for each flight crewmember. These records shall include such information as is necessary to show that each flight crewmember is properly trained and qualified to perform his assigned duties.

(c) The appropriate instructor, supervisor, or check airman shall certify to the proficiency of each flight crewmember and such certification shall become a part of the flight crewmember's record.

(d) A log of all flights conducted under this regulation, and accurate and complete records of inspections made and maintenance accomplished, shall be kept by the air carrier and made available to the manufacturer and to an authorized representative of the Administrator.

15. *Other operations.* The Director, Bureau of Flight Standards, may credit toward the aircraft proving test requirements of the applicable air carrier regulations such operations conducted pursuant to this special regulation as he finds have met the applicable aircraft proving test requirements: *Provided,* That he also finds that there is no significant difference between the provisionally certificated aircraft and the aircraft for which application is made for operation pursuant to an air carrier operating certificate.

CERTIFICATES ISSUED UNDER SR–425A AND SR–425B

16. *Duration.* Currently valid provisional type and airworthiness certificates issued in accordance with Special Civil Air Regulations Nos. SR–425A and SR–425B shall remain in effect for the durations and under the conditions prescribed in those regulations.

This special regulation supersedes Special Civil Air Regulation No. SR–425B and shall terminate on June 30, 1963, unless sooner superseded, rescinded, or otherwise terminated.

SPECIAL CIVIL AIR REGULATION NO. SR-446

Effective: May 25, 1961
Adopted: May 4, 1961
Published: May 10, 1961
(26 F.R. 4011)

Use of Portable Frequency Modulation (FM) Type Radio Receivers on Aircraft During Flight

In the latter part of 1958, the former Civil Aeronautics Administration received reports that certain portable electronic devices operated by passengers aboard aircraft were causing interference to aircraft communications and navigational systems. The reports received were very limited in number and not conclusive enough to warrant regulatory action at that time. However, since these reports indicated that such interference was possible, the CAA published a notice to airmen (NOTAM) in the Airman's Guide warning airmen and operators of this possibility.

Since 1958, various agencies, both government and industry, have conducted studies of this problem. Recently, during tests conducted by the Federal Aviation Agency's Bureau of Research and Development, it was found that radio receivers having local oscillators operating within or near the VHF omnirange (VOR) frequency band (108 to 118 mc.) cause interference which adversely affects the operation of an aircraft's VOR navigational system. Various types of portable radio receivers (i.e., radio receivers capable of being carried aboard an aircraft by a passenger) were used in these tests to determine which would produce interference to the VOR equipment. It was determined that the portable frequency modulation (FM) radio receiver is the only type radio receiver, which is commonly used by the general public, that would create this unwanted interference. Therefore, I find that immediate regulatory action is necessary in order to provide adequately for safety in air commerce.

The rule adopted herein will prohibit the operation of portable FM radio receivers during flight on all aircraft operated by an air carrier or commercial operator. It also prohibits the operation of portable FM radio receivers on all other VOR-equipped civil aircraft of the U.S. while such VOR equipment is being used for navigational purposes. The added restriction in the case of aircraft operated by an air carrier or commercial operator is necessary since most of these aircraft are equipped with VOR navigational equipment and it would be difficult, if not impossible, for a passenger to know when the pilot in command was depending upon this equipment for navigational purposes.

It is realized that not all portable FM radio receivers utilize a local oscillator which will create interference with the airborne VOR equipment. However, it would not be feasible to expect the general public,

airline personnel, or air crewmembers to distinguish which portable FM radio receiver will cause this interference. Accordingly, the provisions of this rule will apply to all portable FM radio receivers.

Since this Special Civil Air Regulation is of an emergency nature, I find that compliance with the notice and public procedure provisions of the Administrative Procedure Act would be impractical, and that good cause exists for making this regulation effective on less than 30 days' notice.

In consideration of the foregoing, the following Special Civil Air Regulation is hereby adopted to become effective on May 25, 1961:

No person shall operate, nor shall any operator or pilot in command of an aircraft permit the operation of, a portable frequency modulation (FM) radio receiver on the following civil aircraft of the United States while such aircraft are engaged in flight in air commerce: (a) aircraft operated by an air carrier or commercial operator; and (b) any other aircraft equipped with VHF omnirange (VOR) navigational equipment while such VOR equipment is being used for navigational purposes.

This Special Civil Air Regulation shall remain in effect for one year unless sooner superseded or rescinded by the Federal Aviation Agency.

quick-donning concept. Upon consideration of these factors, we believe it is no longer necessary to require the oxygen mask to be worn on the person of flight crewmembers. However, above flight level 250 we consider it necessary to require that the oxygen masks, when not being used, be kept at all times in a condition for ready use, and so located as to be within the immediate reach at all times of the flight crewmembers while at their duty stations.

This final rule requires that, when operating above flight level 250, each flight crewmember be provided with an oxygen mask so designed that it is capable of being rapidly placed on the face from its ready position, properly secured, sealed, and supplying oxygen upon demand. The mask must also be so designed that upon completion of the donning action it does not prevent the flight crewmember from being able immediately to communicate with other crewmembers over the airplane intercommunication system. If flight crewmembers are provided with oxygen masks which meet these standards, the regulation requires one pilot at the controls of the airplane to wear and use an oxygen mask at all times while operating above flight level 250. However, as stated in the proviso to the rule, if each flight crewmember on flight deck duty is provided with a quick-donning type of oxygen mask, the one pilot at the controls of the airplane need not wear and use an oxygen mask while at or below flight level 350.

Upon consideration of comments received, the criteria proposed for the quick-donning type of oxygen mask have been changed to specify a donning time of 5 seconds. The proposal to require a demonstration that the mask is capable of being donned without disturbing headphones has been deleted. However, the Agency considers it necessary to require, as criteria for the quick-donning type of oxygen mask, a demonstration: (1) that the mask is capable of being placed on the face from its ready position, properly secured, sealed, and supplying oxygen upon demand with one hand and within 5 seconds; (2) that the donning of the mask can be accomplished without disturbing eye glasses and without delaying the flight crewmember from proceeding with his assigned emergency duties; and (3) that upon completion of the donning action, the oxygen mask does not prevent the flight crewmember from being able immediately to communicate with other crewmembers over the airplane intercommunication system.

The Agency has concluded that if all flight crewmembers are provided with an oxygen mask which qualifies as a quick-donning type of mask, they will be sufficiently equipped for protection against the dangers of hypoxia to justify not requiring one pilot at the controls to wear and use an oxygen mask while operating at or below flight level 350. Above that flight level, however, the time element becomes more critical and in the interest of safety we consider it necessary to require one pilot at the controls to wear and use an oxygen mask at all times.

The Agency believes that the initial and recurrent instructional training given flight crewmembers should include actual training and practice in the donning of the oxygen mask. If masks of the quick-donning type are provided by the air carrier, it should require each flight crewmember to demonstrate his ability to properly don the mask from its ready position, with one hand and within 5 seconds, and proceed with his emergency duties without delay. Such training and practice are equally as important to personal safety as the quick-donning characteristics of the mask which have been demonstrated by the air carrier.

Presently, the maximum certificated ceiling for transport category airplanes used in air carrier operations is 42,000 feet. If higher ceilings are authorized in the future for airplanes used in air carrier operations, the Agency will undertake to evaluate the present rules in light of such operations and, if necessary, prescribe additional oxygen equipment and operational procedures to insure the protection of all occupants of the airplane.

With regard to the proposal for pressure chamber indoctrination for each flight crewmember, after fully considering all comments received and all factors involved, we have concluded that such a requirement should not be adopted. We believe that the trainee experiencing hypoxia does not benefit from the experience as much as the persons who are objectively observing the occurrence; nor is he apt to recall what took place while under the effects of hypoxia. Flight crewmembers participating in the air carriers' approved training programs, which include films, lectures, and studies of all phases of the subject of high-altitude operations, will be equally well indoctrinated with the dangers attendant upon hypoxia and the need for compliance with the techniques and emergency procedures involved in the event of a rapid decompression.

Therefore, in lieu of experiencing the actual low pressure chamber indoctrination, we are requiring all flight crewmembers, as a part of their approved emergency training, to receive initial and recurrent instruction by means of lectures and films covering at least respiration, hypoxia, duration of consciousness at altitude when supplemental oxygen is not supplied, gas expansion, gas bubble formation, physical phenomena and incidents of decompression, and actual training and practice in the donning of the oxygen mask and operation of the oxygen equipment.

In lieu of the required films, the air carrier may use any other equivalent means of visual presentation which meets with the approval of a representative of the Administrator. One such means would be participation by flight crewmembers in actually observing other people undergoing high-altitude training in a low pressure chamber.

The rule also provides that each flight crewmember, prior to each flight, shall personally preflight his oxygen equipment to insure that the oxygen mask is functioning, fitted properly, and connected to appropriate supply terminals, and that the oxygen supply and pressure is adequate for use. Additionally, the rule requires that whenever it is necessary for one pilot to leave his station at the controls when operating above flight level 250, the remaining pilot shall don and use his oxygen mask until the other pilot has returned to his duty station.

Oxygen masks classified as quick-donning masks under the regulation in force prior to the effective date of this amendment will be considered as satisfactorily meeting the requirements prescribed by this amendment for quick-donning masks without further demonstration.

Interested persons have been afforded an opportunity to participate in the making of this amendment and due consideration has been given to all relevant matter presented. The Air Line Pilots Association (ALPA) requested that an industry-wide meeting be scheduled to review the subject of oxygen masks if the amendment adopted herein substantially differs from the intent of the proposals recommended by ALPA. Prior to publication of Draft Release 60–15, a conference was held by the Agency at which the ALPA and other representatives of the industry were afforded an opportunity to express their views and recommendations for the development of rules governing oxygen masks and their use. These views and recommendations were thoroughly considered in the preparation of proposals contained in Draft Release 60–15. In addition, interested persons also have been given an opportunity to submit written comments in response to Draft Release 60–15. All of the views and recommendations submitted in the conference and in response to the draft release have been carefully considered and evaluated in the preparation of this final rule. Moreover, as a result of this evaluation, many of these recommendations have been incorporated in the final rule. Accordingly, I find that additional rule making proceedings, as requested by the ALPA, are unnecessary for informed administrative action; and that this amendment should be adopted without further delay.

Amendment revised paragraph (c) of section 40.203–T and added a new paragraph (c) to section 40.286

Amendment 40–29

IFR Landing Minimums for Pilots With Less Than 100 Hours as Pilot in Command in a Particular Type of Airplane	Adopted: Apr. 17, 1961 Effective: May 23, 1961 Published: Apr. 22, 1961 (26 F.R. 3460)

The Federal Aviation Agency published as a notice of proposed rule making (25 F.R. 3554) and circulated as Civil Air Regulations Draft Release No. 60–7 on April 18, 1960, a proposal to amend Parts 40, 41, and 42 of the Civil Air Regulations to require that higher landing minimums be made applicable to all pilots in command who have not served 100 hours as pilot in command in air carrier operations in a particular type of airplane.

Standard operating limitations, presently contained in the operations specifications of all air carriers subject to Part 40, require that ceiling and visibility minimums for IFR landings be increased by 100 feet ceiling and ½ mile visibility for those pilots who have not served 100 hours as pilot in command in air carrier operations in a particular type of

airplane. As this requirement is applicable to all scheduled interstate air carriers and commercial operators subject to Part 40 of the Civil Air Regulations, it is appropriate that it be included in the Civil Air Regulations rather than in the air carriers' operations specifications.

These limitations, which are presently contained in the operations specifications, permit a pilot in command to operate at the lower IFR landing minimums prior to obtaining the required 100 hours experience if a company check pilot certifies that he is qualified to do so. Investigation of the practice among air carriers has revealed wide variations in making the determination that a pilot is qualified for the lower landing minimums prior to his attaining 100 hours as pilot in command in a particular type of airplane. This has resulted in pilots being certified to operate at the lower landing minimums after having attained, in some instances, only a small fraction of the required 100 hours.

While the air carriers, in commenting on Draft Release 60–7, expressed their belief that the limitations presently contained in the operations specifications are basically sound, the majority of all comments received in response to the draft release indicated concurrence with adoption of a regulation requiring higher IFR landing minimums for pilots who have not acquired a specified amount of experience as pilot in command in a particular type of airplane in air carrier operations. In addition, the majority of comment suggested that in no case should this requirement be subject to reduction at the discretion of a company check pilot.

There were also suggestions made that certain other factors, such as the pilot's previous experience, his overall proficiency, his knowledge of the particular airport, and the number of approaches and landings made in the new type of airplane, should be recognized and substituted for a portion of the required 100 hours. While these suggestions have merit, it is believed that the factors to be considered could become so numerous, and difficult to assess in terms of an equivalent number of flight hours, as to diminish the effectiveness of the rule.

The safe execution of an instrument approach to the lowest minimums requires the highest degree of pilot familiarity with the airplane, its controls, instruments, and performance characteristics. One hundred hours of experience in a new type of airplane as pilot in command in air carrier or commercial operations is necessary in order to achieve this degree of familiarity so essential to safe operations at the lowest landing minimums.

The Federal Aviation Agency therefore believes that, in the interest of safety, all pilots in command should use IFR landing ceiling and visibility weather minimums 100 feet higher and ½ mile greater than regularly approved minimums, until they have obtained 100 hours of air carrier or commercial operator pilot in command experience in a particular type of airplane.

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

Amendment added new paragraph (e) to section 40.406.
