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FEDERAL AVIATION AGENCY
BUREAU OF FLIGHT STANDARDS
Washington 25, D. C.

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August 6, 1960

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CIVIL AIR REGULATIONS DRAFT RELEASE NO. 60-13

SUBJECT: Proposed Revision of Part 47 of the Civil Air Regulations "Certification and Operation Rules Governing the Carriage of Persons or Property for Compensation or Hire with Small Aircraft"

The Bureau of Flight Standards of the Federal Aviation Agency has under consideration a revision of Part 47 of the Civil Air Regulations. The reasons therefor are set forth in the explanatory statement of the attached proposal which was published today in the Federal Register as a notice of proposed rule making.

The Bureau of Flight Standards 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 must be submitted in duplicate to the Docket Section of the Federal Aviation Agency, and in order to insure consideration must be received by October 31, 1960.

B Putnam
Acting Director,
Bureau of Flight Standards

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As published in the Federal Register on August 6, 1960 (25 F.R. 7452)

FEDERAL AVIATION AGENCY

[14 CFR Part 47]

[Reg. Docket No. 471; Draft Release No. 60-13]

CERTIFICATION AND OPERATION RULES GOVERNING THE CARRIAGE OF PERSONS OR PROPERTY FOR COMPENSATION OR HIRE WITH SMALL AIRCRAFT

Notice of Proposed Rule Making

Pursuant to the authority delegated to me by the Administrator (§ 405.27, 24 F.R. 2196) notice is hereby given that the Federal Aviation Agency has under consideration a proposal to revise Part 47 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 of the Federal Aviation Agency, Room B-316, 1711 New York Avenue NW., Washington 25, D.C. All communications received by October 31, 1960, will be considered by the Administrator before taking action on the proposed rules. The proposals contained in this notice may be changed in the light of comments received. If the comments received indicate that further consideration of particular items is warranted, final rule making action on those items will be withheld for further study and coordination with industry. All comments submitted will be available for examination by interested persons in the Docket Section when the prescribed date for return of comments has expired.

Other unresolved items concerning operations within the scope of Part 47 are under consideration and may be submitted for public comment in later proposals.

Part 47 was adopted by the Civil Aeronautical Board on December 30, 1958, with an effective date of July 1, 1959 (24 F.R. 91). This new part prescribed certification and operation rules for air taxi operators required by Special Civil Air Regulation No. SR-395A to comply with the certification and operation rules of Part 42 of the Civil Air Regulations. It also prescribed operation rules for commercial operators using small aircraft (including helicopters) required by Part 45 to comply with the operating rules of Part 42.

By Amendments 47-1 (24 F.R. 5289) and 47-2 (24 F.R. 10192), the effective date of Part 47 was postponed by the Federal Aviation Agency until July 1, 1960, to permit a revision of the part to be prepared and published as a notice of proposed rule making. Effective July 1, 1960, Amendment 47-3 postponed the effective date of Part 47 indefinitely, since the time required to complete a rule making proceeding for the revised part, and allow a reasonable time for industry preparation for its implementation, could not be precisely determined.

The revision of Part 47 proposed in this notice contains numerous modifications in format and substance and is designed to eliminate the need for explanatory material. A cross-reference of section numbers in the present and proposed parts is included to simplify review of the proposed changes. The following significant changes have also been incorporated in its provisions:

1. *Applicability of proposed Part 47 (§ 47.1).* As revised, the scope of proposed Part 47 will extend to and govern operations conducted with small aircraft by air taxi operators, Alaskan air taxi operators, and persons engaging in the carriage in air commerce of persons or property for compensation or hire other than in the capacity of an air carrier. In addition, the revised part will apply to air carriers holding scheduled air carrier operating certificates issued under Part 40, 41, or 46 of the Civil Air Regulations in the conduct of charter trips or other special services with small aircraft. However, such an air carrier could elect to conduct such operations, between points it is authorized to serve by the terms of its scheduled air carrier operating certificate, in accordance with the provisions of Part 40, 41, or 46 as appropriate, in lieu of Part 47. Finally, the revised part will also apply to operations conducted with small aircraft by air carriers holding supplemental air carrier operating certificates issued under Part 42 of the Civil Air Regulations.

The amendment postponing the effective date of Part 47 indicated that its scope would be extended to include all operations with small aircraft conducted

by Alaskan air carriers. These air carriers are certificated under Part 41 of the Civil Air Regulations and, through its enabling provisions, are presently permitted to operate under the less restrictive operating rules of Part 42 of the Civil Air Regulations. We believe that, since these air carriers are conducting scheduled operations under the authority of certificates of public convenience and necessity, they should remain subject to the provisions of Part 41.

When Part 47 becomes effective, Alaskan air carriers will be permitted to conduct their scheduled operations with small aircraft under its operating provisions in lieu of those of Part 42, unless otherwise specified in their operations specifications.

NOTE: When Part 47 becomes effective, Parts 42 and 45 of the Civil Air Regulations will be amended to limit their applicability to large aircraft operations.

2. *Continuance of existing authority.* In accordance with § 47.11, persons holding a valid air carrier operating certificate authorizing operations with small aircraft under the provisions of Part 42 of the Civil Air Regulations, who apply prior to the effective date of revised Part 47 for operating authority required by § 47.10(a), would be permitted to continue operations in accordance with the authority held until final action is taken on the application.

Persons who do not hold an air carrier operating certificate and have been conducting commercial operations with small aircraft under the provisions of Part 45 of the Civil Air Regulations would be required to secure an operating certificate under Part 47 before engaging in such operations after the effective date of this part. Applications from such persons would be given priority handling in order to eliminate or minimize any interruption of their operations. To this end, it would be desirable for such applications to be filed at least 30 days in advance of the effective date of this part.

3. *Operating certificate and operations specifications required for commercial operators using small aircraft (§§ 47.10 through 47.18).* Commercial operators using small aircraft have, by the provisions of Part 45 of the Civil Air Regulations, been required to comply with the operating rules of Part 42 of the Civil Air Regulations. Part 47, as adopted December 30, 1958, would require such commercial operators to comply with its provisions, with the exception of those pertaining to certification and operations specifications. This revised Part 47 proposes to require persons who do not hold an air carrier operating certificate to obtain and hold a commercial operator certificate and operations specifications when engaging in the carriage of persons or property for compensation or hire in air commerce with small aircraft as a commercial operator. This requirement is necessary to provide for proper surveillance and control of such operations.

Under this proposed revision of Part 47, a person holding an air carrier operating certificate other than an Alaskan air taxi operating certificate would not be eligible for, or required to obtain, a commercial operator certificate to engage, other than as an air carrier, in the carriage of persons or property for compensation or hire in air commerce. Such a person would, however, be required to hold operations specifications authorizing operations under Part 47 and to comply with the other provisions of the part. A person holding an Alaskan air taxi operating certificate who conducts operations as a commercial operator with small aircraft which he is prohibited by the Economic Regulations of the Board from using in Alaskan air taxi operations would be required to obtain a commercial operator certificate for such operations. He would not be required to hold a commercial operator certificate for commercial operations with small aircraft in which he is authorized to conduct operations as an Alaskan air taxi operator.

4. *Additional aircraft instruments and radio equipment and pilot instrument rating required for VFR night and over-the-top operations (§§ 47.32, 47.33, 47.36, and 47.80).* A pilot engaging in VFR night operations may often unexpectedly encounter unpredicted adverse weather conditions which necessitate the use of instruments to safely pilot the aircraft out of the area. Moreover, during flights on dark nights over areas in which few, if any, ground reference lights are available, control of the aircraft is, to a great extent, dependent upon reference to instruments. Instrument flight may also become necessary in over-the-top operations due to such things as mechanical emergencies and weather conditions. Therefore, to provide an acceptable level of safety when passengers are carried in such operations, it is proposed to require that the aircraft be equipped with the instruments and radio equipment specified in Part 43 of the Civil Air Regulations for IFR flight and that the pilot hold a currently effective instrument rating. These requirements would not apply in VFR day over-the-top operations when the aircraft is operated at such an altitude or under such conditions that descent or continuation of the flight under VFR could be accomplished in case of failure of the engine of a single-engine aircraft or the critical engine of a multi-engine aircraft.

5. *More adequate radio communication and navigational equipment required for IFR operations with passengers (§ 47.36).* The volume of IFR traffic and the complexities of the modern air traffic control system are such that additional radio equipment is considered necessary to provide an acceptable level of safety for passengers carried in IFR operations. The dual communications and navigational receiving equipment proposed would also provide an additional safety factor.

6. *Limited IFR operations with passengers in single-engine aircraft or multiengine aircraft which are unable to meet the present IFR en route performance requirements are permitted (§ 47.53(c)).* IFR operations with passengers in single-engine aircraft or multiengine aircraft which are unable to meet the IFR en route performance requirements have long been controversial items. A principal objection to such operations is based on the contention that an acceptable level of safety would not be provided, due to the inherent hazard of engine failure.

The statistical reports of aircraft use and accidents in General Aviation operations indicate that the reliability record of modern aircraft engines used in small aircraft is excellent. These reports also show that the incidence of emergency landing accidents due to engine or propeller failure is very low with small aircraft and, in air taxi operations, is much lower than in General Aviation as a whole. It is believed that this difference can be attributed to higher maintenance and operational standards in air taxi and commercial operations.

We believe that, with appropriate limitations, IFR passenger operations with these aircraft could be safely conducted. It is also believed that the safety level of such operations would be at least equal to that of VFR night operations with such aircraft as permitted in Part 42 and in Part 47 as originally adopted. Therefore, it is proposed to permit IFR operations with passengers in single-engine aircraft and multiengine aircraft which are unable to meet the IFR en route performance requirements of §§ 42.82 and 47.31(a) of the Civil Air Regulations: *Provided*, That certain specified ceiling and visibility minimums exist along the entire routes (including departure and approach) flown under IFR. This ceiling and visibility "buffer" is intended as an additional safeguard by providing for VFR conditions beneath the overcast in case engine malfunctioning should necessitate an emergency landing or descent to a lower altitude.

7. *A ceiling and visibility "buffer" is required under certain conditions for VFR over-the-top operations with passengers (§ 47.53a).* For the same reason shown in item 6 above, we believe that safety requires an en route ceiling and visibility "buffer" beneath the overcast when single-engine aircraft, or multiengine aircraft which are unable to meet the en route performance requirements of § 47.53(b), are flown in VFR over-the-top operations with passengers. Therefore, it is proposed to require such "buffers" unless the aircraft is operated at such an altitude, or under such conditions, that descent or continuation of the flight under VFR could be accomplished in case of failure of the engine of a single-engine aircraft or the critical engine of a multiengine aircraft.

8. *Higher weather minimums and minimum flight altitude rules are prescribed for VFR operations with other than helicopters (§§47.60 and 47.61).* Present Part 47 provides that the weather minimums and minimum flight altitudes shown in Part 60 of the Civil Air Regulations shall apply. We believe that higher minimums are necessary to be consistent with the level of safety expected in air carrier and commercial operations. Accordingly, minimums which are essentially the same as those under which small aircraft operations are now carried on under Part 42 are proposed in this revision. However, in recogni-

tion of the fact that operations can be conducted safely in certain areas where relatively low ceilings and visibility exist, a provision has been included to permit operations with a ceiling of less than 1,000 feet when the visibility is two miles or more: *Provided*, That the minimum flight altitudes specified in this part and the clearance from clouds provisions of Part 60 of the Civil Air Regulations shall be adhered to at all times.

9. *More detailed provisions governing helicopter operations have been prescribed (§§47.60, 47.61, and 47.62).* In view of the increasing use of helicopters in air taxi and commercial operations, more explicit operating rules and minimums are believed necessary to provide a satisfactory level of safety in such operations. Therefore, it is proposed to establish visibility minimums, minimum flight altitude rules, a requirement that approach-departure paths where emergency landing areas are available be used, and a fuel supply requirement for operations with helicopters.

10. *Increase in recent flight experience requirements for pilots in command and provision for flight check in lieu thereof (§ 47.81).* The recent experience requirements prescribed by Parts 42 and 47 of the Civil Air Regulations for a pilot in command of small aircraft provide that within the preceding 90 days he shall have made at least 3 take-offs and landings in an aircraft of the same type on which he is to serve. Due to the more complex nature of multiengine aircraft and the importance of current proficiency in emergency procedures pertinent thereto, the present recent experience requirements appear inadequate for pilots of such aircraft. It is, therefore, proposed to include additional small multiengine aircraft recent experience requirements which pilots in command of such aircraft must meet when passengers are to be carried.

The period in which the overall recent experience of 20 hours is to be met has been established at 6 months in this proposal to avoid unduly restricting pilots in areas where multiengine operations are seasonal in nature. It is also proposed that when these additional recent experience requirements have not been met, the pilot shall demonstrate a satisfactory level of proficiency before serving as pilot in command on such aircraft.

11. *Only the instrument and equipment items in excess of those required by Part 43 of the Civil Air Regulations are listed.* Part 43 of the Civil Air Regulations prescribes the minimum instruments and equipment required for each category of operation with civil aircraft in the United States. Section 47.2 of this proposed part makes the requirements of Part 43 applicable to all operations conducted under the provisions of this part unless otherwise specified. This means that the provisions of Part 43 would be applicable, both in and outside the United States. Therefore, to avoid repetition and to simplify the determination of the additional instruments and equipment which are required for each category of operation under this part, only the additional required items are listed. The one exception is in § 47.36 where, for the sake of clarity, the complete radio equipment-requirements for all types of operations with passengers are shown. It is proposed to use a similar procedure in the revision as finally adopted.

In consideration of the foregoing, it is proposed to promulgate the attached Part 47 of the Civil Air Regulations in its entirety to replace the existing Part 47, adopted December 30, 1958.

These regulations are proposed under the authority of sections 313(a), 314(a), 601-610, 1102, of the Federal Aviation Act of 1958 (72 Stat. 752, 754, 775-780, 797; 49 U.S.C. 1354(a), 1355, 1421-1430, 1502).

Issued in Washington, D.C., on August 2, 1960.

B. PUTNAM,
Acting Director,
Bureau of Flight Standards.

Proposed revision of Part 47 of the Civil Air Regulations:

Subpart A—Applicability and Definitions

Sec.
47.1 Applicability of this part.
47.2 Applicability of Parts 18, 43, and 60 of this chapter (Civil Air Regulations).
47.5 Definitions.

Subpart B—Certification Rules and Operations Specifications Requirements

47.10 Certificates required.
47.11 Renewal of existing operating authority.
47.12 Application for operating authority.
47.13 Issuance of operating authority.
47.14 Display of certificates and operations specifications.
47.15 Duration, renewal, and reissuance of certificate.
47.16 Transferability of certificate.
47.17 Surrender of certificate and operations specifications.
47.18 Operations specifications.
47.19 Amendment of operations specifications.
47.20 Deviation.
47.21 Inspection authority.
47.22 Advertising.
47.23 Maintenance of equipment, facilities, and material.

Subpart C—Instruments and Equipment

47.30 Instrument and equipment standards.
47.31 Additional instruments and equipment for all operations.
47.32 Additional instruments and equipment for day VFR over-the-top operations with passengers.
47.33 Additional instruments and equipment for night operations with passengers.
4734 Additional instruments and equipment for IFR operations with passengers.
47.35 Autopilot requirements.
47.36 Radio equipment for aircraft carrying passengers.
47.37 Emergency equipment.
47.38 Oxygen requirements.
47.39 Cockpit check list requirements.

Subpart D—Operation Rules

47.50 Facilities and material required.
47.51 Aircraft required.
47.52 Notification of change of helicopters, multiengine aircraft, and all aircraft utilized in IFR operations.
47.53 Limitations for IFR operations with passengers.
47.53a Limitations for over-the-top operations with passengers.
47.54 Aircraft limitations for overwater operations with passengers.
47.55 IFR route limits.
47.56 Flight manifest requirements.
Sec.
47.60 Weather.
47.61 Additional minimum flight altitude rules.
47.62 Fuel supply for VFR operations.
47.63 Lighting for night operations.
47.64 Operation in icing conditions.
47.65 International operations.
47.66 Emergency operations.
47.68 Area of operation.

Subpart E—Flight Crew Requirements

47.80 Pilot qualifications and second pilot requirements.
47.81 Recent flight experience requirements.
47.82 Pilot training requirements for IFR and multiengine operations.
47.83 Pilot check requirements for IFR and multiengine operations.
47.84 Grace period for airman periodic checks.
47.86 Airman records.
47.87 Responsibilities of pilot in command.
47.88 Flight crewmembers at controls.

Subpart A—Applicability and Definitions

§ 47.1 Applicability of this part.

The provisions of this part shall be applicable to the following persons engaging in the carriage of mail, persons, or property for compensation or hire with small aircraft:

(a) Air taxi operators;

(b) Alaskan air taxi operators;

(c) Alaskan air carriers when authorized under the provisions of § 41.1(a) of this chapter (Civil Air Regulations);

(d) Supplemental air carriers;

(e) Air carriers holding a scheduled air carrier operating certificate issued under Part 40, 41, or 46 of this chapter (Civil Air Regulations) when conducting charter trips and special services, except that such air carriers may elect to conduct charter trips and special services between those points they are authorized to serve under the terms of such certificate in accordance with Part 40, 41, or 46 of this chapter as the case may be; and

(f) Commercial operators, except that for the purpose of this provision, persons engaging in student instructions, banner towing, aerial application, and similar aerial work operations shall not be considered commercial operators in the conduct of such operations.

§ 47.2 Applicability of Parts 18, 43, and 60 of this chapter (Civil Air Regulations).

The provisions of Parts 18, 43, and 60 of this chapter (Civil Air Regulations) shall be applicable to all operations conducted under the provisions of this part unless otherwise specified in this part. (See § 47.65 for additional rules pertaining to international operations.)

§ 47.5 Definitions.

As used in this part, terms are defined as follows:

Administrator. The Administrator is the Administrator of the Federal Aviation Agency.

Air carrier. Air carrier means any citizen of the United States who undertakes directly, or by a lease or any other arrangement, to engage in air transportation.

Air commerce. Air commerce means interstate, overseas, or foreign air com-

merce or the transportation of mail by aircraft or any operation or navigation of aircraft within the limits of any Federal airway or any operation or navigation of aircraft which directly affects, or which may endanger safety in, interstate, overseas, or foreign air commerce.

Aircraft. An aircraft is any contrivance now known or hereafter invented, used, or designed for navigation of or flight in the air.

Airport. Airport means a landing area used regularly by aircraft for receiving or discharging passengers or cargo.

Air taxi operator. An air taxi operator is an air carrier who engages in air transportation subject to Part 298 of this title (Economic Regulations of the Board) and (1) does not utilize in such transportation any aircraft having a maximum certificated takeoff weight of more than 12,500 pounds, unless otherwise authorized by an exemption order from the Board, and (2) does not hold a certificate of public convenience and necessity or other economic authority issued by the Board.

Air transportation. Air transportation means interstate, overseas, or foreign air transportation or the transportation of mail by aircraft.

Alaskan air taxi operator. An Alaskan air taxi operator is an air carrier who engages in air transportation solely within the State of Alaska subject to Part 293 of this title (Economic Regulations of the Board), and (1) does not utilize in such transportation any aircraft having a maximum certificated takeoff weight of more than 7,900 pounds, unless otherwise authorized by an exemption order from the Board, and (2) holds a letter of registration issued by the Board.

Approach-departure path (helicopter). An approach-departure path is a path for flight in a plane leading outward and upward from the end of the takeoff and landing area.

Authorized representative of the Administrator. An authorized representative of the Administrator is an employee of the Federal Aviation Agency authorized by the Administrator to perform particular duties of the Administrator under the provisions of this part.

Board. Board means the Civil Aeronautics Board.

Cabin pressure altitude. Cabin pressure altitude means the pressure altitude corresponding with the pressure in the cabin of the airplane.

NOTE: For airplanes not equipped with pressurized cabins, "cabin pressure altitude" and "flight altitude" shall be considered identical.

Calendar month. A calendar month is that period of time extending from the first day of any month as delineated by the calendar through the last day thereof. (A period of 12 calendar months would extend from any day within any month to the end of the last day af the same month of the following year.)

Category of aircraft. A category of aircraft is a broad classification with distinct configuration and operating characteristics such as airplane, helicopter, or glider.

Check pilot. A check pilot is a pilot designated by the operator and approved by an authorized representative of the Administrator to examine other pilots utilized by the operator, to determine their proficiency with respect to procedures and techniques and their competence to perform their duties.

Citizen of the United States. Citizen of the United States means (1) an individual who is a citizen of the United States or of one of its possessions, or (2) a partnership of which each member is such an individual, or (3) a corporation or association created or organized under the laws of the United States or of any State, Territory, or possession of the United States, of which the president and two-thirds or more of the board of directors and other managing officers thereof are such individuals and in which at least 75 per centum of the voting interest is owned or controlled by persons who are citizens of the United States or of one of its possessions.

Commercial operator. A commercial operator is a person engaging in the carriage in air commerce of persons or property for compensation or hire other than in the capacity of an air carrier. (Generally, a person may be described as a commercial operator when he engages in operations as a private carrier for hire on an interstate or intrastate basis, or as a common carrier on an intrastate basis. Under circumstances where it is doubtful whether such operations are for "compensation or hire," the test to be applied is whether the air carriage is merely incidental to the operator's other business or is, in and of itself, a major enterprise for profit.)

Crewmember. A crewmember is any individual assigned by the operator for the performance of duty on an aircraft in flight.

Critical engine. The critical engine is that engine the failure of which gives the most adverse effect on the performance characteristics of the aircraft. (See the airworthiness requirements under which the aircraft was type certificated for the manner in which such engine is determined.)

Day. Day is the time between the beginning of morning civil twilight and the end of evening civil twilight as published in the American Air Almanac and converted to local time for the locality concerned.

Extended overwater operation. An extended overwater operation is a flight conducted over water more than 50 miles from the nearest shoreline.

Flight altitude. Flight altitude means the altitude above sea level at which the aircraft is operated.

Flight crewmember. A flight crewmember is a crewmember assigned to flight deck duty on an aircraft.

Flight time. Flight time is the total time from the moment the aircraft first moves under its own power for the purpose of flight until the moment it comes to rest at the next point of landing (block-to-block time).

IFR. IFR is the symbol used to designate instrument flight rules.

IFR weather conditions. IFR weather condtions are weather conditions less than the minimums prescribed for flight under VFR of Part 60 of this chapter (Civil Air Regulations).

Interstate air commerce. "Interstate air commerce", "overseas air commerce", and "foreign air commerce", respectively, mean the carriage by aircraft of persons or property for compensation or hire, or the carriage of mail by aircraft, or the operation or navigation of aircraft in the conduct or furtherance of a business or vocation, in commerce between, respectively:

(1) A place in any State of the United States, or the District of Columbia, and a place in any other State of the United States, or the District of Columbia; or between places in the same State of the United States through the airspace over any place outside thereof; or between places in the same Territory or possession of the United States, or the District of Columbia;

(2) A place in any State of the United States, or the District of Columbia, and any place in a Territory or possession of the United States; or between a place in a Territory or possession of the United States; and

(3) A place in the United States and any place outside thereof;

whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation.

Interstate air transportation. "Interstate air transportation", "overseas air transportation", and "foreign air transportation", respectively, mean the carriage by aircraft of persons or property as a common carrier for compensation or hire or the carriage of mail by aircraft, in commerce between, respectively:

(1) A place in any State of the United States, or the District of Columbia, and a place in any other State of the United States, or the District of Columbia; or between places in the same State of the United States through the airspace over any place outside thereof; or between places in the same Territory or possession of the United States, or the District of Columbia;

(2) A place in any State of the United States, or the District of Columbia, and any place in a Territory or possession of the United States; or between a place in a Territory or possession of the United States, and a place in any other Territory or possession of the United States; and

(3) A place in the United States and any place outside thereof;

whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation.

Landing area. A landing area is an area of land or water which is used or intended for use for the takeoff or landing of aircraft.

Maximum certificated takeoff weight. Maximum certificated takeoff weight is the maximum takeoff weight authorized by the terms of the aircraft airworthiness certificate.

Night. Night is the time between the ending of evening civil twilight and the beginning of morning civil twilight as published in the American Air Almanac converted to local time for the locality concerned.

NOTE: The American Air Almanac containing the ending of evening twilight and the beginning of morning twilight tables may be obtained from the Superintendent of

Documents, Government Printing Office, Washington 25, D.C. Information concerning such tables is also available in the offices of the Federal Aviation Agency or the United States Weather Bureau.

Operation of aircraft. Operation of aircraft or operate aircraft means the use of aircraft, for the purpose of air navigation and includes the navigation of aircraft. Any person who causes or authorizes the operation of aircraft, whether with or without the right of legal control (in the capacity of owner, leasee, or otherwise) of the aircraft, shall be deemed to be engaged in the operation of aircraft.

Operations specifications. Operations specifications are rules of particular applicability issued by an authorized representative of the Administrator and are not part of the operating certificate.

Operator. Operator is an air carrier, commercial operator, or other person subject to the provisions of this part.

Over-the-top. Over-the-top means the operation of an aircraft above a layer of clouds or obscuring phenomena that is reported as "broken", "overcast", or "obscuration" and not classified as "thin" or "partial."

Passenger. A passenger is an individual other than a crewmember, company employee, or an authorized Government representative.

Person. Person means any individual, firm, copartnership, corporation, company, association, joint-stock association, or body politic; and includes any trustee, receiver, assignee, or other similar representative thereof.

Pilot in command. A pilot in command is the pilot designated by the operator as the pilot responsible for the operation and safety of the aircraft during the time defined as flight time.

Second pilot. A second pilot is a certificated pilot serving in any piloting capacity other than as pilot in command on an aircraft equipped with dual controls.

Show or shows. Show or shows means to demonstrate or prove to the satisfaction of the Administrator or his authorized representative prior to the issuance of an operating certificate and at any time thereafter upon request.

Small aircraft. Small aircraft means aircraft having a maximum certificated takeoff weight of 12,500 pounds or less.

Type of aircraft. Type of aircraft is a specific classification of aircraft having the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

NOTE: In general, aircraft of a particular type are of the same make and basic model.

VFR. VFR is the symbol used to designate visual flight rules.

Subpart B—Certification Rules and Operations Specifications Requirements

§ 47.10 Certificates required.

No person subject to this part shall conduct operations without, or in violation of an appropriate operating certificate. The appropriate operating certificates are as follows:

(a) *Air carrier operating certificates.* An air carrier operating certificate issued pursuant to the provisions of this part is required for operations conducted as an air taxi operator or an Alaskan air taxi operator. Other air carriers subject to the provisions of this part shall not be required to obtain, or be eligible for the issuance of, an additional operating certificate to conduct operations subject to this part with small aircraft. In lieu of an additional certificate such air carriers shall obtain an appropriate amendment to their operations specifications authorizing operations with small aircraft.

(b) *Commercial operator certificate.* A commercial operator certificate issued pursuant to the provisions of this part is required for operations conducted as a commercial operator with small aircraft. Such certificate is also required for a commercial operator holding a commercial operator certificate authorizing operations with large aircraft. Other persons subject to the provisions of this part shall not be required to obtain, or be eligible for the issuance of, a commercial operator certificate to conduct operations with small aircraft as a commercial operator except an Alaskan air taxi operator using small aircraft with a maximum certificated takeoff weight of more than 7,900 pounds in the conduct of its operations as a commercial operator.

§ 47.11 Renewal of existing operating authority.

Any person engaging in operations to which this part becomes applicable and holding a currently effective air carrier operating certificate authorizing operations with small aircraft under Part 42 of this chapter (Civil Air Regulations) who files an application for operating authority required by § 47.10(a) prior to the effective date of this part, may continue operations in accordance with the authority held at the time of filing until final action has been taken on such application, unless such authority is sooner suspended, revoked, or otherwise terminated.

§ 47.12 Application for operating authority.

An application for an air carrier or commercial operator certificate required by § 47.10 shall be made in triplicate on an FAA application form and shall be filed with the local Federal Aviation Agency District Office. The application shall show the true name(s) of the operator and any business name(s) under which he operates. Application forms may be secured from any local Federal Aviation Agency District Office. Persons required by § 47.10(a) to obtain an amendment to their operations specifications for authority to operate small aircraft in air carrier operations subject to this part shall make application for such an amendment in accordance with the provisions of § 47.19(a).

§ 47.13 Issuance of operating authority.

(a) Operating authority required by § 47.10 will be issued to an applicant who is a citizen of the United States and shows that he is properly and adequately equipped and able to conduct a safe operation in accordance with the requirements of this part: *Provided,* That an applicant, who is required to hold economic authority issued by the Board, will not be issued operating authority pursuant to this part until such economic authority is obtained from the Board.

(b) A person shall not operate under more than one business name unless his operating certificate contains the names and addresses of his principal business office and all other business offices used.

NOTE: For example, John Doe doing business as (d/b/a) "Toledo Airways" in Ohio may wish to operate as "Carolina Airways" while based at Raleigh, North Carolina. All operating names and the addresses of the principal business office and other business offices used by the certificate holder shall be set forth in the certificate.

§ 47.14 Display of certificates and operations specifications.

Operating certificates and operations specifications issued under this part shall be kept by the operator at the principal business office required by § 47.50 (a) and (b) and made available for inspection by an authorized representative of the Administrator.

§ 47.15 Duration, renewal, and reissuance of certificate.

(a) An air carrier or commercial operator certificate issued pursuant to this part shall expire 24 calendar months after the date of issuance or renewal thereof, unless such certificate has been sooner surrendered, suspended, revoked, or otherwise terminated.

(b) An application for renewal or reissuance of an air carrier or commercial operator certificate shall be made in triplicate on the prescribed form and shall be submitted to the local Federal Aviation Agency District Office. The application for renewal shall be submitted within 60 days prior to the month of expiration. If desired, application for renewal may also be submitted whenever an application is made for amendment of operating authorization which necessitates a complete inspection of the operator's facilities and equipment. In such cases, the duration of any certificate issued will be 24 calendar months from the month of issuance.

(c) An operating certificate will be renewed or reissued if, upon investigation and examination, it is found that the operator meets the requirements of this part.

§ 47.16 Transferability of certificate.

An operating certificate is not transferable.

§ 47.17 Surrender of certificate and operations specifications.

Upon the suspension, revocation, termination, or cancellation of an operating certificate the holder thereof shall surrender the certificate and the operations specifications to an authorized representative of the Administrator.

§ 47.18 Operations specifications.

(a) On and after the effective date of this part all operations specifications previously issued to any person subject to this part and currently in effect shall

cease to be a part of any operating certificate and shall be deemed to be operations specifications issued under this part. Thereafter such new or amended specifications as are required for operations under this part will be issued by an authorized representative of the Administrator.

(b) No person shall conduct any operations governed by this part without operations specifications issued pursuant to the provisions of this part, or in violation of the terms of such operations specifications.

(c) The operations specifications shall contain the following: Types of operations authorized; category and class of aircraft with which operations are authorized; geographical area of operations; and such additional items as are necessary to cover a particular situation.

NOTE: Areas of operation will be described by geographical terms such as "Puerto Rico," "Canada," "Guatemala," "Continental United States (excluding or including Alaska)", etc.

(d) Prior to issuance of operations specifications, the applicant shall have qualified personnel and appropriate equipment available for each type of operation applied for.

(e) The operator shall keep his personnel informed with respect to the contents of the operations specifications and all amendments thereto applicable to the individual's duties and responsibilities.

§ 47.19 Amendment of operations specifications.

(a) An operator may apply for amendment of his operations specifications. The application shall be made in the appropriate portion of a blank operations specifications form. The application shall be submitted in quadruplicate to the local Federal Aviation Agency District Office.

(b) Failure of an operator to provide aircraft, pilots, or equipment to meet the requirements for any authorization contained in the operations specifications shall be cause for deletion of such authorization from the operations specifications.

(c) Any operations specifications may be amended by an authorized representative of the Administrator if it is found that safety of the operations so requires or permits.

§ 47.20 Deviation.

Whenever it is found that the general standards of safety require or permit a deviation from any specific requirement of this part, operations specifications providing for such deviation will be issued.

§ 47.21 Inspection authority.

An authorized representative of the Administrator shall be permitted at any time and place to make inspections or examinations, including en route inspections, to determine compliance with the Civil Air Regulations and operations specifications.

§ 47.22 Advertising.

No person subject to this part shall offer through advertising media or other means, air carrier or commercial operator services other than those authorized in his operations specifications.

§ 47.23 Maintenance of equipment, facilities, and material.

(a) The operator shall maintain all required equipment, facilities, and material in conformity with the standards required for original issuance of the operating certificate and operations specifications.

(b) Aircraft shall be maintained and inspected in accordance with the provisions of Parts 18 and 43 of this chapter (Civil Air Regulations), except that air carrier and commercial operator aircraft certificated to be operated under the provisions of Part 40, 41, 42, 45, or 46 of this chapter may be maintained under the provisions of such part.

Subpart C—Instruments and Equipment

§ 47.30 Instrument and equipment standards.

Instruments and equipment used in operations under this part shall meet one of the following standards:

(a) Type certification.
(b) Supplemental type certification.
(c) Technical standard order.
(d) Installation in aircraft as a part of type certification.
(e) Approval by the aircraft manufacturer under delegated option authority.
(f) Approval by an authorized representative of the Administrator.
(g) Other standards specifically set forth in this part.

§ 47.31 Additional instruments and equipment for all operations.

The following instruments and equipment in addition to those required by § 43.30 of this chapter (Civil Air Regulations) for VFR day operations are required for all operations under this part:

(a) Sensitive altimeter;
(b) Carburetor heating or deicing equipment for each engine or alternate air source for pressure-type carburetors;
(c) A seat for each occupant; and
(d) In passenger service, a minimum of 2 hand-type fire extinguishers, one of which is installed in the pilot compartment, the other accessible to the passengers, unless the aircraft is so designed that the fire extinguisher in the pilot compartment is directly available to passengers, in which case only one fire extinguisher is required. Such extinguishers shall be approved by the Underwriters' Laboratories and shall have a minimum capacity, if carbon tetrachloride, of 1 quart; or, if carbon dioxide, of 2 pounds; or, if other, of equivalent effectiveness.

§ 47.32 Additional instruments and equipment for day VFR over-the-top operations with passengers.

When passengers are carried, aircraft used in day VFR "over-the-top" operations shall, in addition to the requirements of § 47.31 and Part 43 of this chapter (Civil Air Regulations), be equipped with instruments and equipment as follows:

(a) Gyroscopic rate-of-turn indicator combined with a slip-skid indicator (turn and bank indicator);
(b) Gyroscopic bank and pitch indicator (artificial horizon);
(c) Gyroscopic direction indicator (directional gyro or equivalent);
(d) Generator(s) of sufficient capacity for the equipment installed in the aircraft.

§ 47.33 Additional instruments and equipment for night operations with passengers.

The following instruments and equipment in addition to those required by § 47.31 and § 43.30 of this chapter (Civil Air Regulations) are required for operations conducted at night with passengers:

(a) Gyroscopic rate-of-turn indicator combined with a slip-skid indicator (turn and bank indicator);
(b) Gyroscopic band and pitch indicator (artificial horizon);
(c) Gyroscopic direction indicator (directional gyro or equivalent);
(d) One anti-collision light;
(e) Instrument lights providing sufficient illumination to make all instruments, switches, and gauges easily readable, so installed that their direct rays are shielded from the flight crewmembers' eyes;
(f) Generator(s) of sufficient capacity for the equipment installed in the aircraft; and
(g) One standard size two-cell flashlight in working condition.

§ 47.34 Additional instruments and equipment for IFR operations with passengers.

The following instruments and equipment in addition to those required by § 47.31 and § 43.30 of this chapter (Civil Air Regulations) are required for operations conducted under IFR with passengers:

(a) Vertical speed indicator (rate-of-climb indicator);
(b) Free-air temperature indicator (outside air temperature gauge);
(c) Power failure warning means or vacuum indicator on instrument panel connecting to lines leading to gyroscopic instruments;
(d) Heated pitot tube for each airspeed indicator;
(e) An alternate source of energy to supply gyroscopic instruments which shall be capable of carrying the required load. The installation shall be such that the failure of one source of energy will not interfere with the proper functioning of the instruments when the other source is used. Engine-driven pumps, when used, shall be on separate engines;
(f) An emergency source of static pressure capable of providing static pressure to the altimeter, airspeed, and the rate of climb indicators; and
(g) Generators as required to provide one on at least two engines of multi-engine aircraft. The generators shall be of such capacity that 50 percent of the total units will provide sufficient capacity to operate essential equipment, radio, and instruments on the aircraft.

§ 47.35 Autopilot requirements.

(a) An approved autopilot system may be used in lieu of the second pilot required by § 47.80(b) when passengers are carried under IFR and IFR weather conditions.

(b) Application for authorization to use an autopilot system as provided in paragraph (a) of this section shall be submitted in writing to the local Federal Aviation Agency District Office and shall include the following:

(1) Make, model, and registration number of each aircraft to be utilized;

(2) Make, model, and serial number of the autopilot installed in each aircraft; and

(3) Name(s) of all pilot(s) to be utilized in such operations.

(c) Operations specifications authorizing use of an autopilot system in lieu of a second pilot will be issued if upon investigation it is found that the operator can demonstrate and conduct a safe operation in compliance with this part.

(d) An approved autopilot system is one that is type certificated or manufactured in compliance with a technical standard order. It shall be installed in a manner approved by an authorized representative of the Administrator and be capable of maintaining the heading of the aircraft in flight without attention by the pilot for periods of at least 5 minutes.

(e) An autopilot shall not be used in lieu of a second pilot in passenger-carrying operations under IFR conditions unless the pilot is familiar with the currently effective approach procedures, holding patterns, and reporting points appropriate to the operation to be conducted.

(f) Each pilot authorized to use an autopilot system in lieu of a second pilot shall demonstrate during the required 6-month instrument check his ability to conduct instrument operations competently without the assistance of a second pilot by demonstrating his ability to properly handle air-ground communications and complex air traffic control instructions. The standard of proficiency shall be equivalent to that obtained with the assistance of a second pilot handling air-ground communications and copying air traffic control instructions.

§ 47.36 Radio equipment for aircraft carrying passengers.

No aircraft shall be operated with passengers, unless equipped with radio systems that meet the requirements and standards specified below for the category of operations indicated.

(a) *VFR day.* Each aircraft operated in control zones shall be equipped with a two-way radio communication system.

(b) *VFR night and over-the-top.* Each aircraft shall be equipped with a two-way radio communication system and independent navigational equipment.

(c) *Equipment standards for VFR day and night operations.* Radio equipment required by paragraphs (a) and (b) of this section shall meet the following standards:

(1) Communications equipment shall be capable of transmitting to, and receiving communications from, ground facilities at least 25 miles from the aircraft when in flight;

(2) Navigational equipment shall be capable of receiving radio signals from the ground facilities to be used.

(d) *IFR operations.* Each aircraft shall be equipped with radio systems which will provide a transmitter, two independent means of receiving communications, and two independent means of receiving navigational signals. If appropriate, one or both of the receivers provided to meet the communications requirements may also be used in meeting the navigational requirements. In addition, each aircraft shall be equipped with at least one marker beacon receiver. The minimum radio equipment required to meet the requirements of this paragraph is as follows:

(1) One transmitter;

(2) Two microphones;

(3) Two headsets or one headset and one speaker; and

(4) Three receivers as follows:

(i) Two receivers for communications and for radio navigation appropriate to the ground facilities to be used;

(ii) One marker beacon receiver.

(e) *IFR operations outside the United States.* When operated outside the United States in extended overwater operations, each aircraft shall, in addition to the equipment required by paragraph (d) of this section, be equipped with an independent means of transmitting to at least one appropriate ground station from any point on the route.

(f) *Equipment standards for IFR operations.* Radio equipment required by paragraphs (d) and (e) of this section shall meet the following standards:

(1) Radio equipment for approach and landing shall be appropriate to the type of facility used;

(2) Communication equipment shall be capable of transmitting to and receiving from at least one ground station at any point on the route and of transmitting to and receiving from airport traffic control towers at least 25 miles from the aircraft when in flight; and

(3) Radio navigational equipment shall be capable of receiving radio navigational signals from at least one ground facility at any point on the route.

§ 47.37 Emergency equipment.

Each aircraft shall be equipped with readily available emergency equipment as follows:

(a) Each aircraft used in extended overwater operations shall be equipped with:

(1) Individual approved flotation gear readily available for each occupant;

(2) Liferafts sufficient in number and of such rated capacity and buoyancy as to accommodate all occupants of the aircraft; and

(3) A survival kit attached to each liferaft and containing at least the following items:

1 canopy (for sail, sunshade, or for rain catcher);
1 radar reflector (or similar device);
1 liferaft repair kit;
1 bailing bucket;
1 signaling mirror;
1 police whistle;
1 raft knife;
1 CO_2 bottle for emergency inflation;
1 inflation pump;
2 oars;
1 75-foot retaining line;
1 magnetic compass;
1 pyrotechnic pistol and 6 cartridges;
2-day supply of emergency food ration supplying at least 1,000 calories per day for each person;
1 seawater desalting kit for each 2 persons the raft is rated to carry, or 2 pints of water per person;
1 fishing kit; and
1 book on survival appropriate for the area.

(b) Each aircraft operated over or within any foreign country which requires emergency equipment for the preservation of life shall carry such equipment as is prescribed by the foreign country for the particular area and type of operation and for the number of passengers carried.

(c) When requesting a clearance to operate over or within any foreign country, the operator shall obtain the pertinent emergency equipment requirements.

NOTE: The International Flight Information Manual and the Alaska Flight Information Manual list emergency equipment required by local government for flight in certain areas.

(d) Prior to takeoff for overwater operations the pilot shall brief the passengers on the use of required flotation equipment. All other required emergency equipment shall be clearly identified.

§ 47.38 Oxygen requirements.

An adequate supply of oxygen and dispensing equipment shall be provided as follows:

(a) Oxygen requirements for aircraft not equipped with pressurized cabins:

(1) *Crewmembers.* Oxygen shall be provided for and continuously used by each crewmember in aircraft operated:

(i) At cabin pressure altitudes above 10,000 feet to and including 12,000 feet for the duration of flight in excess of 30 minutes;

(ii) At cabin pressure altitudes above 12,000 feet.

(2) *Other occupants.* (i) Oxygen shall be provided for at least one occupant other than crewmembers in aircraft operated at cabin pressure altitudes above 10,000 feet, to and including 15,000 feet, for the duration of the flight in excess of 30 minutes;

(ii) Oxygen shall be provided for all occupants other than crewmembers for the duration of the flight in aircraft operated at cabin pressure altitudes above 15,000 feet.

(b) Supplemental oxygen requirements for emergency descent and for first aid for aircraft with pressurized cabins:

(1) *Crewmembers.* (i) When operating at flight altitudes above 10,000 feet, oxygen shall be provided to permit compliance with paragraph (a)(1)(i) and (ii) of this section except that not less than a two-hour supply shall be provided for the flight crewmembers.

(ii) When operating at flight altitudes above 25,000 feet, one pilot at the controls of the aircraft shall wear and use an oxygen mask at all times and all other

flight crewmembers on flight deck duty shall be provided with oxygen masks, connected to appropriate supply terminals, which shall be worn in a manner that will permit immediate placing of the masks on their faces for use, properly secured and sealed: *Provided*, That the one pilot need not wear a mask at or below 30,000 feet[1] if all flight crewmembers are equipped with a quick-donning type of oxygen mask which is demonstrated to be satisfactory to a representative of the Administrator.

(2) *Other occupants.* (i) A 30-minute supply of oxygen shall be available for each occupant other than crewmembers when operating at flight altitudes above 14,000 feet if at any point along the route the airplane can descend safely to 14,000 feet or less within 4 minutes;

(ii) A one-hour supply of oxygen shall be available for each occupant other than crewmembers when operating at flight altitudes above 14,000 feet and descent to 14,000 feet or less cannot be made within 4 minutes;

(iii) *Briefing.* A crewmember shall give instructions and demonstrations to the occupants other than crewmembers in the normal and emergency use of oxygen, before flight is conducted at a flight or cabin pressure altitude of 10,000 feet or above.

(c) *Equipment standards.* The oxygen equipment and the minimum rates of oxygen flow necessary to comply with the requirements of this section shall meet the standards of § 47.30.

§ 47.39 Cockpit check list requirements.

(a) The operator shall provide a cockpit check list for each aircraft used. The check list shall be carried or installed in a readily accessible or readable location in the cockpit and shall be used by the flight crew.

(b) Cockpit check lists shall cover at least the following procedures:

(1) Prior to starting engine(s);
(2) Prior to takeoff;
(3) Cruise;
(4) Prior to landing;
(5) After landing; and
(6) Stopping engine(s).

(c) In addition, an emergency cockpit check list shall be provided for multiengine aircraft and aircraft equipped with retractable landing gear. This check list shall include at least the following procedures as applicable:

(1) Emergency operation of fuel, hydraulic, electrical, heating, pressurization, air, and other systems;

(2) Emergency operation of landing gear, propellers, flaps, brakes, steering, and other systems;

(3) Emergency operation of instruments and controls;

(4) Engine(s) inoperative procedures during takeoff, en route, landing, and go-around; and

(5) Other emergency procedures necessary in the interest of safety.

Subpart D—Operation Rules

§ 47.50 Facilities and material required.

(a) The operator shall provide a principal business office where all records required by this part shall be located.

(b) The operator shall state in writing the location and address of his principal business office and shall not change its location without giving prior notice in writing to the local Federal Aviation Agency District Office.

(c) The operator shall provide at least the following current material appropriate to the operations authorized and aircraft used and shall assure that a copy of each is carried on every flight as required by the type of operation:

(1) For VFR operations: Parts 47, 43, and 60 of this chapter (Civil Air Regulations), Airman's Guide, Flight Information Manual (Alaska Airman's Guide and Flight Information Manual, if applicable) pertinent aeronautical charts, Airplane Equipment Manual(s), Owner's Manual or Handbook, and applicable performance charts prepared or approved by the Federal Aviation Agency if multiengine aircraft are used.

(2) For IFR operations: All items required for VFR operations and in addition pertinent navigational en route charts, terminal area charts, approach and letdown charts, and a manual computer.

(3) For foreign operations: All applicable items required for VFR, and IFR operations (if IFR authorization is held), and, in addition, the International Flight Information Manual, and a copy of all operational and entry requirements for foreign operations obtained from appropriate government(s).

§ 47.51 Aircraft required.

An operator shall have the exclusive use of at least one aircraft for each category and class authorized in the operations specifications. "Exclusive use" means that an operator has the sole possession, control, and use of an aircraft for flight arising from either, (a) a written lease or other written agreement or arrangement under which the operator is to have the right to such possession, control, and use for a period of at least 6 consecutive months from the date of such lease or other agreement or arrangement, or (b) ownership of the aircraft.

§ 47.52 Notification of change of helicopters, multiengine aircraft, and all aircraft utilized in IFR operations.

Each operator shall notify the local Federal Aviation Agency District Office of any additions or deletions of helicopters, multiengine aircraft, and all aircraft utilized in IFR operations after original certification, reissuance, or renewal of an operating certificate. The notification shall be in writing and shall be delivered or mailed within 7 days after the change. The notification shall include the aircraft make, model, and registration number.

§ 47.53 Limitations for IFR operations with passengers.

(a) Aircraft shall be equipped with fully functioning dual controls when a second pilot is required. (See § 47.80 (b).)

(b) Except as provided in paragraph (c) of this section, aircraft shall be multiengine and shall meet the following en route performance requirements:

(1) No operation shall be conducted at a weight in excess of that which will permit the aircraft to climb at least 50 feet per minute with the critical engine inoperative: Over Federal Airways or approved off-airway IFR routes, when at least at the minimum en route altitudes applicable to the route(s) to be flown, as shown in Part 610 of this title (Regulations of the Administrator) or in the operations specifications authorizing off-airways IFR operations, or when at 5,000 feet above sea level, whichever is the higher.

(2) In applying the requirements of subparagraph (1) of this paragraph, it shall be assumed that:

(i) The critical engine is inoperative;

(ii) The propeller of the inoperative engine is in the minimum drag position;

(iii) The wing flaps and landing gear are in the most favorable positions;

(iv) The operative engine or engines are operating at the maximum continuous power available;

(v) The aircraft is operating in the standard atmosphere; and

(vi) The weight of the aircraft is progressively reduced by the weight of the anticipated consumption of fuel and oil.

NOTE: En route weight limitations charts for each make and model of small multiengine aircraft may be obtained from the local Federal Aviation Agency District Office.

(c) Operations may be conducted with single-engine aircraft or multiengine aircraft which are unable to meet the en route performance requirements of paragraph (b) (1) and (2) of this section, subject to the following limitations:

(1) The ceiling shall be at least 1,000 feet and the visibility at least one mile for day and at least 2 miles for night at the point where the IFR operation begins, at each weather reporting station along the planned flight route, and at the destination, and shall be forecast to remain at or above such minimums for at least one hour after the estimated time of passing over each such reporting station and arrival at the destination;

(2) If, while en route, the weather at the destination or at one or more of the weather reporting stations ahead and along the remainder of the planned flight route is reported as below the minimums specified in subparagraph (1) of this paragraph, the pilot shall immediately take such action as may be necessary to insure that the flight will be operated over a route where the specified minimums exist;

(3) When IFR weather minimums or approach and landing weather minimums are referred to in § 47.60, the minimums shall be those specified in subparagraph (1) of this paragraph unless the minimums specified in Part 609 of this title (Regulations of the Administrator) are higher, in which case the higher minimums shall apply.

§ 47.53a Limitations for over-the-top operations with passengers.

When aircraft are flown over-the-top:

(a) They shall be operated at such an altitude or under such conditions that descent or continuance of the flight under VFR could be accomplished in case

[1] A proposal to increase this altitude to 35,000 feet is under consideration.

of the failure of the engine of a single-engine aircraft or the critical engine of a multiengine aircraft; or

(b) The operation shall be conducted in accordance with the limitations and requirements for IFR operations under this part; or

(c) The operation shall be conducted in accordance with the applicable over-the-top provisions specified elsewhere in this part and the following limitations:

(1) At the time the actual over-the-top operation begins, the weather at the destination, or at the point of intended termination of the over-the-top portion of the flight, shall be such that descent from on top to beneath the overcast or cloud cover could be made under VFR, and shall be forecast to remain so for at least one hour after the estimated time of arrival thereat, and

(2) When operations are conducted with single-engine aircraft or with multiengine aircraft which are unable to meet the en route performance requirements of § 47.53(b) (1) and (2), the weather minimums, except at the point of departure, shall be as follows:

(i) *On airways.* At the time the actual over-the-top operation begins, the ceiling and visibility at each weather reporting station along the planned flight route shall be at least 1,000 feet and the visibility at least one mile for day and at least 2 miles for night, and shall be forecast to remain at or above such minimums ahead of the flight as it progresses along the over-the-top portion of the planned flight route;

(ii) *Off airways.* At the time the actual over-to-top operation begins, the forecast for the area over which the flight is to be made shall indicate that the ceiling is at least 1,500 feet and the visibility is at least one mile for day and at least 2 miles for night along the planned flight route and will remain at or above such minimums ahead of the flight as it progresses along the over-the-top portion of the planned flight route: *Provided,* That, if weather reporting stations are located at not more than 150-mile intervals along or within 25 miles on either side of the planned flight route, the minimums shown in subdivision (i) of this subparagraph may be used.

(3) If, while en route, later reports or forecasts indicate that the weather ahead and along the remainder of the planned flight route is, or will be, prior to his estimated time of arrival over the station or area, below the minimums specified in subparagraphs (1) and (2) of this paragraph, the pilot shall take immediate action to alter his route of flight to an area or areas where the specified minimums exist or a descent under VFR may be made.

§ 47.54 Aircraft limitations for over-water operations with passengers.

When passengers are carried, land aircraft operated over water shall be multiengine, and shall be flown at a weight which will permit the aircraft to climb at least 50 feet per minute with the critical engine inoperative when at least 1,000 feet above the surface, unless the overwater operation consists only of that portion of the flight necessary for takeoffs and landings or the aircraft is flown at such an altitude that it can reach land in the event of engine failure.

NOTE: En route weight limitations charts for each make and model of small-multi-engine aircraft may be obtained from the local Federal Aviation Agency District Office.

§ 47.55 IFR route limits.

(a) IFR operations shall be conducted only within controlled airspace, except as provided in paragraph (b) of this section, and at airports where approved standard instrument approach procedures have been established.

(b) IFR operations over routes outside controlled airspace will be authorized if it is found after investigation and consideration of all factors, including demonstration by the operator, that such operations can be conducted safely, and the operator's designated flight crew demonstrates that it is capable of navigating without visual reference to the ground along a predetermined flight path over a proposed route without deviating more than 5 miles or 5 degrees on either side (whichever is the lesser) from a straight line drawn between the point of departure and the next point of arrival.

§ 47.56 Flight manifest requirements.

A flight manifest shall be prepared before departure when passengers are carried under IFR or IFR weather conditions. The pilot in command shall certify that the flight manifest is complete and accurate by signing it.

(a) The flight manifest shall include at least the following:

(1) Operator's name, and operating certificate number;

(2) Aircraft make, model, and registration number;

(3) Date and type of last inspection of aircraft and engine(s);

(4) Point of departure;

(5) Route;

(6) Destination;

(7) Aircraft weights, to include empty weight, useful load, maximum certificated takeoff weight, and weight as loaded;

(8) Aircraft c.g. limits and the c.g. as loaded when it is possible to load the aircraft beyond the c.g. limits, unless the aircraft is loaded according to an approved loading chart;

(9) Total amount of fuel, oil, and cargo on board;

(10) Names and addresses and destination of passengers;

(11) Remarks; and

(12) Signature of pilot in command.

(b) A signed copy and any revisions to the flight manifest shall be retained in the personal possession of the pilot for the duration of the flight, and a copy shall be retained by the operator at his principal business office for at least one year after completion of the flight.

(c) When passengers are picked up at en route stops, a revised manifest shall be prepared, and a signed copy shall be mailed or caused to be mailed to the operator's principal business office. If this is not possible due to operation in areas where there is no mail service, the last manifest prepared and mailed shall include any known changes to the manifest.

§ 47.60 Weather.

(a) *Weather reports and forecasts for VFR operations.* Ceiling and visibility conditions and other weather phenomena pertinent to takeoff, en route, approach, and landing shall be those reported and forecast by the U.S. Weather Bureau or by a source approved by the Weather Bureau, or, if unavailable, by the most reliable source.

(b) *VFR weather minimums.* For VFR operations the VFR weather minimums of Part 60 of this chapter (Civil Air Regulations) for takeoff, en route, or landing shall apply, except as follows:

(1) For operations within uncontrolled airspace with aircraft other than helicopters, the flight visibility shall not be less than 2 miles for day when the ceiling is less than 1,000 feet, or less than 2 miles for night.

(2) For operations with helicopters, the flight visibility shall not be less than ½ mile for day and one mile for night.

NOTE: An air traffic clearance does not constitute authority to deviate from the minimum flight visibility rules of paragraph (b)(2) of § 47.60 or the minimum flight altitude rules of § 47.61.

(c) *Weather reports and forecasts for IFR operations.* Ceiling and visibility conditions and other weather phenomena pertinent to takeoff, en route, approach, and landing shall be those reported and forecast by the U.S. Weather Bureau or by a source approved by the Weather Bureau, unless a particular source other than the U.S. Weather Bureau is authorized in the operations specifications.

(d) *IFR weather minimums.* For IFR operations the takeoff ceiling and visibility weather minimums, standard instrument approach and landing procedures and minimums, including alternate airport requirements, shall be those specified in Part 609 of this title (Regulations of the Administrator).

(1) No flight shall be started unless the appropriate weather reports and forecasts or a combination thereof, pertaining to the airport of destination indicate that the ceiling and visibility will be at or above the landing minimums at the estimated time of arrival thereat.

(e) *IFR takeoff minimums.* When takeoffs are conducted with ceiling and visibility minimums that are less than the approach and landing minimums, an additional alternate airport shall be available within 15 minutes flying time at normal cruising airspeed. Such airport at the time of departure shall have ceiling and visibility equal to or above the approach and landing weather minimums specified in Part 609 of this title (Regulations of the Administrator).

(f) *IFR alternate airport weather minimums.* At the time of departure, the alternate airport weather shall be equal to or above the ceiling and visibility minimums approved for such airports when using it as an alternate, and the current weather reports and forecasts shall indicate that the weather conditions will be at or above such minimums until the flight arrives thereat.

(g) *IFR approach and landing weather limitations.* (1) No instrument approach procedure shall be started when the latest weather report for the airport for which the procedure is prescribed indicates the ceiling or visibility to be less than that approved for landing at such airport.

(2) No aircraft shall descend below the minimum altitude prescribed for landing at the airport of intended landing unless clear of the clouds. If at any time after descent below the clouds the pilot cannot maintain visual reference to the ground or lights, he shall immediately execute the appropriate missed approach procedure prescribed for that airport.

(3) Lowest ILS weather minimums may be used only when all components of the ILS system and related airborne equipment are fully functioning and signals are being received.

NOTE: Approach minimums and standards when one or more components of an ILS are inoperative are published in Part 609 of this title (Regulations of the Administrator).

(4) The ceiling and visibility landing minimums shall be increased by 100 feet ceiling and ½ mile visibility when a turbine-powered airplane is operated and the pilot in command has not served 100 hours as pilot in command in the particular type of airplane being operated. The ceiling and visibility minimums need not be increased above those applicable to the airport when used as an alternate airport.

(h) *Private radio facilities and weather minimums.* An instrument approach using a private radio facility shall not be conducted unless authorized in the operations specifications issued to the operator. The approach procedures and weather minimums shall be those specified in the Form ACA-511 approved by the Federal Aviation Agency for such facilities.

(i) *Military airport procedures and weather minimums.* Procedures and weather minimums for military airports shall be those established by the military agency having jurisdiction over such airports.

(j) *Foreign airport procedures and weather minimums.* Procedures and weather minimums for foreign airports shall be those established by the appropriate agency having jurisdiction over such airports.

NOTE 1: Weather minimums including alternate airport requirements also may be found in the Approach and Landing Charts and Radio Facility Charts of the Coast and Geodetic Survey and in the Airman's Guide.

NOTE 2: When the phrase "Part 609 of this title (Regulations of the Administrator)," is used in this part in referring to instrument approach procedures and IFR minimums, it shall also mean instrument approach procedures and IFR minimums for a particular airport as specified on an approved Form ACA-511.

§ 47.61 Additional minimum flight altitude rules.

The following flight altitude rules apply in addition to those prescribed in Part 60 of this chapter (Civil Air Regulations).

(a) *Day VFR operations.* (1) Except when necessary for takeoff or landing, no aircraft other than a helicopter shall be flown less than 500 feet above the surface or less than 500 feet horizontally from any mountain, hill, or other obstruction to flight.

(2) Except when necessary for takeoff or landing, no helicopter shall be flown less than 300 feet above the surface or less than 300 feet horizontally from any mountain, hill, or other obstruction to flight.

(b) *Night VFR operations.* (1) Except when necessary for take-off or landing, no aircraft other than a helicopter shall be flown at an altitude less than 1,000 feet above the highest obstacle located within a horizontal distance of 5 miles from the center of the course intended to be flown, or, in areas designated as mountainous terrain, less than 2,000 feet above the highest obstacle located within a horizontal distance of 5 miles from the center of the course intended to be flown.

(2) Except when necessary for takeoff or landing, no helicopter shall be flown at an altitude less than 500 feet above the highest obstacle located within a horizontal distance of one mile from the center of the course intended to be flown.

(c) *Minimum altitudes for use of autopilot*—(1) *En route operations.* An autopilot shall not be used at an altitude of less than 500 feet above the terrain during en route operations, including climb or descent.

(2) *All approaches including ILS approaches using an approach coupler.* When an approach coupler is being used, an autopilot may remain engaged during an approach to an altitude above the terrain of not less than the IFR standard instrument approach and landing minimum specified in Part 609 of the Regulations of the Administrator for the airport being used and for the type of approach being conducted.

(d) Helicopters shall be operated at such altitudes and under such conditions that sufficient visual ground reference is obtained to allow proper control of the aircraft. At night ample ground reference lights shall be available for that purpose.

(e) During takeoffs and landing, helicopters shall be operated within a selected approach-departure path and takeoff and landing areas in a manner which will permit an emergency landing without undue hazard to the passengers or to persons or property on the surface.

NOTE: Compliance with § 47.61(e) shall not be based upon the availability of areas such as school yards, parking lots, recreation areas, highways, shopping centers, and public docks for emergency landings when such areas are occupied by persons or vehicles.

§ 47.62 Fuel supply for VFR operations.

(a) *Aircraft other than helicopters.* No flight under VFR shall be started unless the aircraft carries sufficient fuel and oil considering the wind and other weather conditions forecast, to fly to the point of first intended landing, and to fly thereafter for a period of at least 30 minutes during day and one hour during night at normal cruising fuel consumption.

(b) *Helicopters.* No flight under VFR shall be started unless the helicopter carries sufficient fuel and oil considering the wind and other weather conditions forecast, to fly to the point of first intended landing and thereafter to fly for a period of at least 20 minutes at normal cruising fuel consumption.

§ 47.63 Lighting for night operations.

When carrying passengers at night, no takeoff or landing shall be made unless the area or runway being used is equipped with lighted boundary or runway marker lights of appropriate color that will clearly define the outer limits of the area or runway. The landing area shall be equipped with an illuminated wind direction indicator so located that it will be clearly visible from the ground and the air unless the wind direction and velocity are obtained from local ground communications.

NOTE: To clearly outline an area or runway, boundary or runway marker lights should normally be spaced approximately 200 feet longitudinally.

§ 47.64 Operation in icing conditions.

(a) *General.* (1) No aircraft shall be flown into known or forecast heavy icing conditions.

(2) No aircraft shall be taken off when frost, snow, or ice is adhering to the rotor blades, propellers, or windshields; nor when ice or snow is adhering to the wings, stabilizing surfaces, or control surfaces; nor when frost is adhering to the wings, stabilizing surfaces, or control surfaces, unless the frost formation has been polished to insure that a smooth surface exists. Snow, ice, or frost shall also be removed from any other parts and systems of the aircraft requiring protection from adverse icing effects. These parts and systems are specified in paragraph (b) of this section.

(3) De-icing and anti-icing equipment and systems shall meet one of the standards established in § 47.30.

(b) IFR: When operating under IFR conditions no aircraft shall be intentionally flown into known or forecast light or moderate icing conditions, unless it has the required properly functioning equipment for icing protection. Protection from adverse icing effects on the aircraft controllability and performance involves the airspeed/altimeter/rate-of-climb indicator systems, flight attitude instrument systems, propeller(s)/rotor(s)/powerplant installations, wings, stabilizing and control surfaces, and windshields.

(c) VFR: The pilot shall take prompt action to leave an area where icing conditions are encountered in flight in an aircraft not equipped as required for icing protection. The required icing protection equipment and systems are specified in paragraph (b) of this section.

NOTE: Bureau of Flight Standards Release No. 434 dated November 2, 1959, subject, "Flight Control Hazards and Protection from Icing," contains valuable information concerning icing and recommended operational procedures when icing conditions are present.

§ 47.65 International operations.

International operations shall be conducted only to, from, or over foreign

countries listed, and in accordance with the terms and conditions specified, in the operations specifications issued pursuant to this part by an authorized representative of the Administrator.

(a) Prior to conducting operations to, from, or over a foreign country, persons subject to this part shall obtain operating authority, copies of appropriate regulations and instructions, and other essential information issued by the government of such foreign state, territory, or country.

(b) All operations to, from, or over a foreign country shall be conducted in accordance with an authorization granted by the foreign government and shall be conducted in compliance with the applicable foreign government rules and regulations, except where any rule prescribed in the Civil Air Regulations is more restrictive and may be followed without violating the laws or rules of such foreign government.

NOTE 1: The International Flight Information Manual provides information applicable to foreign operations. It is for sale by Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

NOTE 2: For operations into Canada or Mexico, requests for authorization should be directed as follows:

Canada: Department of Transport, Air Transport Board, Ottawa, Canada.

Mexico: Director General, Civil Aviation, Mexico, D. F., Mexico.

§ 47.66 Emergency operations.

(a) In the case of emergencies necessitating the transportation of persons or property for the protection of life or property, the rules contained herein regarding aircraft, equipment, and weather minimums to be observed need not be complied with.

(b) The operator shall file a written report within 48 hours after the operation is completed when deviation(s) from any rule has or have occurred. The report shall be filed with the local Federal Aviation Agency District Office and shall set forth the conditions under which the operations were conducted, the reasons therefor, and the names and addresses of the crew and passengers.

§ 47.68 Area of operation.

An operator may operate only to, from, over, or within the specific area or areas of operation set forth in his operations specifications, except that an air taxi operator may not operate within Alaska other than as part of a flight which originates or terminates outside the State of Alaska. (See Part 298 of this title (Economic Regulations of the Board).)

Subpart E—Flight Crew Requirements

§ 47.80 Pilot qualifications and second pilot requirements.

(a) *Pilot in command.* Any pilot serving as pilot in command shall hold at least a currently effective commercial pilot certificate with an appropriate rating for the aircraft on which he is to serve and shall meet the following requirements:

(1) For day VFR flight he shall have at least 50 hours of cross-country flight time as a pilot.

(2) For night VFR flight he shall have a total of at least 500 hours flight time as pilot, including 100 hours of cross-country flight time of which 25 hours shall have been at night. When carrying passengers at night in an airplane, he shall also possess a currently effective instrument rating.

(3) For over-the-top flight with passengers he shall have a total of at least 500 hours flight time as pilot, including 100 hours of cross-country flight time. He shall also possess a currently effective instrument rating.

(4) For IFR he shall possess a currently effective instrument rating and have a total of at least 500 hours of flight time as pilot, including 100 hours of cross-country flight time.

(b) *Second pilot.* A second pilot holding at least a currently effective commercial pilot certificate with an appropriate aircraft rating and a currently effective instrument rating shall be required on aircraft when passenger operations are conducted under IFR and IFR weather conditions unless use of an autopilot is authorized.

§ 47.81 Recent flight experience requirements.

No operator shall utilize a pilot, nor shall any individual serve as pilot, unless he meets the following recent flight experience requirements:

(a) Within the preceding 90 days, a pilot in command shall have made at least 3 takeoffs and landings in an aircraft of the same category, class, and type on which he is to serve. For night flight one of the takeoffs and landings required by this paragraph shall have been made at night.

(b) Within the preceding 6 calendar months, a pilot in command of a small multiengine aircraft shall have served as pilot in command of small multiengine aircraft for at least 20 hours.

(c) Within the preceding 12 calendar months, a pilot in command of a particular type of multiengine aircraft shall have served as pilot in command of such type of multiengine aircraft for at least 10 hours.

(d) In lieu of paragraphs (b) or (c) of this section, the pilot in command shall meet the flight check and oral examination requirements set forth in § 47.83(b) or (c).

(e) The recent flight experience requirements for instrument flight as specified in Part 43 of this chapter (Civil Air Regulations) shall apply.

§ 47.82 Pilot training requirements for IFR and multiengine operations.

The operator shall provide or arrange for facilities and training necessary to insure the continued competence of each pilot authorized to operate under IFR and/or to operate multiengine aircraft; and to insure that each such pilot is familiar with all new equipment and procedures to be used.

§ 47.83 Pilot check requirements for IFR and multiengine operations.

No operator shall utilize a pilot, nor shall any individual serve as pilot, unless he meets the appropriate check requirements as follows:

(a) Six-month instrument check for IFR operations:

(1) Prior to authorizing IFR operation and prior to flight under IFR or IFR weather conditions, the pilot in command shall have passed his most recent instrument check within the preceding 6 calendar months. The check shall be given in flight under actual or simulated IFR conditions. The pilot shall demonstrate his ability to pilot and navigate by instruments, to recover from simulated emergency situations, to make a standard instrument approach using radio range facilities, and to make an instrument approach in accordance with VOR, ILS, Radar, or ADF procedures when such facilities are to be used. This instrument check shall be given by a Federal Aviation Agency inspector or a check pilot approved by an authorized representative of the Administrator. Checks given to a pilot by the check pilot of a previous or other employer will not satisfy the 6-month instrument check requirements. The standards of proficiency shall be those established for the original issuance of an instrument rating.

(2) The 6-month instrument check shall also include an equipment examination, which may be oral or written, pertinent to the type of aircraft to be flown. The examination shall include but need not be limited to questions relative to engine operation, fuel and lubrication systems, power settings, stall speeds, best engine-out speed, propeller and supercharger operations, control systems, hydraulic and electrical systems, anti-icing, heating, ventilating and pressurization systems, and all emergency systems and procedures.

(3) When the pilot is scheduled to fly only one type of aircraft, the required 6-month instrument check shall be taken in an aircraft of that type.

(4) When a pilot is scheduled to fly both multiengine and single-engine aircraft, the required 6-month instrument check shall be taken alternately in multiengine and single-engine aircraft.

(5) When a pilot is scheduled to fly different types of multiengine or single-engine aircraft, the required 6-month instrument check shall be rotated among the different types.

(b) Flight check for multiengine operations: A pilot in command who does not meet the requirements of § 47.81 (b) and (c) shall pass a flight and oral check appropriate to the class and type of aircraft to be flown. The check shall include but not be limited to normal and emergency flight procedures. This check will be given by a Federal Aviation Agency Inspector or by a check pilot approved by an authorized representative of the Administrator. The standards of proficiency shall be those established for the original issuance of a multiengine class or type rating.

(c) The 6-month instrument check, if taken in multiengine aircraft, will fulfill the requirements of paragraph (b) of this section for the type of aircraft in which the check was taken.

(d) Requests for the approval of a check pilot shall be submitted in writing by the operator to the appropriate Federal Aviation Agency District Office.

Prior to approval as a check pilot, the candidate will be required to satisfactorily accomplish an appropriate oral examination and a flight test. A letter of authority will be issued to all approved check pilots.

§ 47.84 Grace period for airman periodic checks.

Whenever this part requires an airman check at stated intervals, such check may be given at any time during the month preceding or following the month in which it becomes due. The effective date of the check, if given within the preceding or following month, shall be the same as if given within the month in which it become due.

§ 47.86 Airman records.

(a) Each operator shall maintain at his business office, records of each airman utilized as a crewmember. These records shall contain at least the following:

(1) Name in full;

(2) Airman certificate held, including type, number, and ratings, and a breakdown of the pilot's flying time to show compliance with §§ 47.80, 47.81, and 47.82;

(3) Current duties and date of assignment;

(4) Date, result, and class of last physical examination;

(5) Date and result of 6-month instrument competency check, including type of aircraft flown; and

(6) Check pilot authorization (if any).

(b) These records shall be revised with such regularity as is required to provide evidence of compliance with airman requirements of this part.

(c) All records shall be retained by the operator for at least one year after preparation or after the last revision.

§ 47.87 Responsibilities of pilot in command.

The pilot in command of the aircraft shall be designated by the operator.

(a) *Preflight action.* Before beginning a flight, the pilot in command shall familiarize himself with the latest weather reports pertinent to the flight. He shall also familiarize himself with information necessary for the safe operation of the aircraft en route, information on the airports or other landing areas to be used, and such other information as is necessary to determine that the flight can be completed with safety.

(b) *Charts and flight equipment.* The pilot in command shall have proper flight and radio facility charts in the cockpit, including instrument approach procedures when instrument flight is authorized, and shall have such other flight equipment as may be necessary properly to conduct the particular flight proposed.

(c) *Serviceability of equipment.* Prior to starting any flight, the pilot in command shall ascertain by appropriate cockpit checks or inspection, that the aircraft, engines and propellers, appliances, and required equipment including instruments, are in proper operating condition. He shall determine that required inspections, repairs, or preventive maintenance operations have been carried out: *Provided,* That the pilot may accept a maintenance release form endorsed by an appropriately certificated mechanic or an authorized maintenance supervisor as a showing that required inspections, repairs, or preventive maintenance operations have been carried out.

(d) *Emergency decisions.* (1) In emergency situations which require immediate decision and action, the pilot in command may follow any course of action which he considers necessary under the circumstances. In such instances the pilot in command, to the extent required in the interest of safety, may deviate from prescribed operations procedures and methods, weather minimums, and the regulations of this part.

(2) When emergency authority is exercised by the pilot in command, he shall, within 10 days after completion of the trip, file a report with the local Federal Aviation Agency District Office stating circumstances of the emergency and the nature of the deviation.

NOTE: See part 60 of this chapter (Civil Air Regulations) for emergency decision authority and reporting requirements involving air traffic regulations.

§ 47.88 Flight crewmembers at controls.

(a) All required flight crewmembers shall remain at their respective stations while the aircraft is taking off or landing, and while en route except when the absence of one such flight crewmember is necessary for the performance of his duties in connection with the operation of the aircraft. These duties include: checking, examining, or visually inspecting parts, accessories, or systems of the aircraft regarding their functioning or malfunctioning, and attending to passengers in the interest of their safety.

(b) All flight crewmembers shall keep their seat belts fastened when at their respective stations.

CROSS REFERENCE OF SECTION NUMBERS IN PRESENT PART AND PROPOSED REVISION

Present Part 47		*Proposed Revision of Part 47*	
Sec.		Sec.	
47.1	Applicability of this part.	47.1	Same.
47.2	Applicability of Parts 43 and 60 of the Civil Air Regulations.	47.2	Applicability of Parts 18, 43, and 60 of the Civil Air Regulations.
47.5	Definitions.	47.5	Same.
47.10	Certificate required.	47.10	Same.
47.11	Renewal of existing authority.	47.11	Same.
47.12	Application for certificate.	47.12	Same.
47.13	Issuance of certificate.	47.13	Same.
47.15	Display of certificate.	47.14	Display of certificate and operations specifications.
47.16	Duration and renewal of certificate.	47.15	Duration, renewal, and reissuance of certificate.
47.17	Transferability of certificate.	47.16	Transferability of certificate.
47.18	Operations specifications required.	47.18	Operations specifications.
47.19	Contents of operations specifications.		
47.20	Deviation authority.	47.20	Same.
47.21	Amendment of operations specifications.	47.19	Amendment of operations specifications.
47.22	Inspection authority.	47.21	Inspection authority.
47.30	Aircraft requirements.	47.23	Maintenance of equipment, facilities, and materials (identification and certification not included).
47.31	Aircraft limitations for IFR and land aircraft overwater operations.	47.35	Auto pilot requirements, and
		47.53	Limitations for IFR operations with passengers, and
		47.54	Aircraft limitations for overwater operations with passengers.
47.40	Instruments and equipment.	47.23	Maintenance of equipment, facilities, and material, and
		47.30	Instrument and equipment standards.
47.41	Instrument and equipment for all operations.	47.31	Additional instruments and equipment for all operations.
47.42	Emergency equipment.	47.37	Emergency equipment.
47.43	Instruments and equipment for operations at night.	47.33	Additional instruments and equipment for night operations with passengers.
47.44	Instruments and equipment for IFR flight.	47.34	Additional instruments and equipment for IFR operations with passengers.
47.45	Oxygen.	47.38	Oxygen requirements.
47.60	Radio equipment.	47.36	Radio equipment for aircraft carrying passengers.
47.61	Navigational aids for IFR flights.	47.55	IFR route limits.
47.30	Pilot qualifications.	47.80	Same.
47.81	Recent flight experience requirements for pilots.	47.81	Recent flight experience requirements.
47.82	Airman records.	47.86	Airman records.
47.90	Responsibilities of pilot in command.	47.87	Responsibilities of pilot in command.
47.91	Cockpit check list.	47.39	Cockpit check list requirements.
47.92	Weather minimums.	47.60	Weather.
47.93	Fuel supply.	47.62	Fuel supply for VFR operations.
47.94	Lighting for night operations.	47.63	Lighting for night operations.
47.95	Operation in icing conditions.	47.64	Operation in icing conditions.
47.96	Flight manifest requirements.	47.56	Flight manifest requirements.

The following proposed sections have no counterpart in present Part 47:

47.17 Surrender of certificate and operations specifications.
47.22 Advertising.
47.32 Additional instruments and equipment for day VFR over-the-top operations with passengers.
47.50 Facilities and material required.
47.51 Aircraft required.
47.52 Notification of change of helicopters, multiengine aircraft, and all aircraft utilized in IFR operations.
47.53a Limitations for over-the-top operations with passengers.
47.61 Additional minimum flight altitude rules.
47.65 International operations.
47.66 Emergency operations.
47.68 Area of operation.
47.82 Pilot training requirements for IFR and multiengine operations.
47.83 Pilot check requirements for IFR and multiengine operations.
47.84 Grace period for airman periodic checks.
47.88 Flight crewmembers at controls.

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