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

Civil Aeronautics Manual 27
For Information Only

[Reg. Docket No. 444; Supp. 9]

PART 27—AIRCRAFT DISPATCHER CERTIFICATES

Miscellaneous Amendments

When Part 27 was last revised, effective November 1, 1958 (23 F.R. 5864), the numbers of the sections were changed, so that references to sections of Part 27 appearing in the manual material related to Part 27 were no longer accurate.

In addition, the revised part requires changes in the manual material for practical examinations and elimination of the Morse Code requirement, with a corresponding reduction in the number of classroom hours pertaining to "Communications" from 10 to 8. The policy material and study guide, including the related Appendix, are now out of date and a current study guide for the written examinations required by § 27.32 is now available from the Government Printing Office.

Therefore, for convenience and clarity it appears desirable to rescind all of the existing manual material and reissue the material to be retained in a complete form.

Since the changes being made are either minor in nature or impose no additional burden on any person, notice and public procedure hereon are unnecessary, and they may be made effective immediately.

In consideration of the foregoing, Part 27 of the Civil Air Regulations (14 CFR Part 27) is hereby amended, effective August 29, 1960, by deleting all the manual material heretofore in effect and by adding, in their appropriate sequence, §§ 27.5–1, 27.31–1, 27.32–1, and 27.33–1 to read as follows:

§ 27.5–1 Application for certificate (FAA rules which apply to § 27.5).

Application for the certificates shall be made on Form ACA–374. The applicant for an aircraft dispatcher certificate shall complete items 1 through 16, inclusive. Incorrectly executed applications will be returned for amendment.

§ 27.31–1 Requirements for approved aircraft dispatcher course (FAA rules which apply to § 27.31(d)).

(a) *General.* Graduates of an aircraft dispatcher course approved by the Administrator are deemed to have met the aeronautical experience requirements for the aircraft dispatcher certificate. This means that they are accepted on equal terms with an applicant who has met any of the alternate minimum experience requirements provided for in § 27.31. For this reason it is essential that the requirements for approved aircraft dispatcher courses include adequate training facilities, and sufficient coverage of the subject matter to insure acceptable proficiency of persons applying for aircraft dispatcher certification as graduates of an approved course.

(b) *Application for approval.* The agency or applicant desiring approval of a flight dispatcher course must submit to the local inspector[1] three copies of the course outline, a description of the equipment and facilities to be used, and a list of instructors with their qualifications, together with a letter to the Administrator of the Federal Aviation Agency requesting approval of the course of study. The letter requesting approval shall be submitted to the nearest regional office of the Federal Aviation Agency through the local inspector.

(1) *Training course outline.* It is not mandatory that the training course outline have the subject headings arranged exactly as listed in the following example. Any arrangement of headings and subheadings will be satisfactory provided all the subjects listed in this section are included. Each general subject of the outline shall be broken down, in detail, showing the items to be covered. Additional subjects, especially those which are not closely associated with the training of aircraft dispatchers, may be listed so long as the hourly requirements devoted to the subjects are not included as a part of the basic minimum hours.

(2) *Format of the training outline.* The course outline submitted for approval shall be in looseleaf form and shall include a table of contents and minimum coverage of the course material shall include the following:

[1] The word "Inspector," unless otherwise specified means "Bureau of Flight Standards Inspector."

Subject	*Classroom hours*
Civil Air Regulations	15
Part 4b—Airplane Airworthiness; Transport Categories.	
Part 27—Aircraft Dispatcher Certificates.	
Part 40—Scheduled Interstate Air Carrier Certification and Operation Rules.	
Part 41—Certification and Operation Rules for Scheduled Air Carrier Operations Outside the Continental Limits of the United States.	
Part 42—Irregular Air Carrier and Off-Route Rules.	
Part 43—General Operation Rules.	
Part 49—Transportation of Explosives and Other Dangerous Articles.	
Part 60—Air Traffic Rules.	
Part 320 of the Civil Aeronautics Board's Safety Investigation Regulations—Notification and Reporting of Aircraft Accidents and Overdue Aircraft.	
Meteorology	75
Basic properties of the atmosphere:	
Composition.	
Density.	
Measurement.	
General circulation.	
Solar heating.	
Clouds:	
Formation.	
Condensation.	
Precipitation.	
Use of cloud knowledge in forecasting.	
Stability and instability.	
Air mass analysis:	
Classification.	
Flying conditions to be encountered.	
Use of air mass knowledge in forecasting.	
Analysis of Fronts:	
Structure and characteristics.	
Cloud sequences in fronts.	
Establishing position of front by cloud types.	
Fronts in North America and seasonal variations.	
Flying weather in fronts.	
Cyclones and anticyclones.	
Fog:	
Types.	
Cause and formation.	
Ice:	
Type.	
Cause and formation.	
Thunderstorms, hurricanes, tornadoes:	
Causes.	

Methods of forecasting.
Structure and complexity of internal winds.
Hail, its cause and formation.
Turbulence:
Cause.
Determining the smooth level of flight.
Interpreting weather data:
Weather sequences and symbols.
Weather map symbols.
Drawing a weather map.
Reading a weather map.
Meteorology—Continued
Interpreting weather data—Con.
Upper-level charts.
Adiabatic charts.
Winds-aloft charts.
Instruments used to gather and record the weather.
Weather forecasting:
Extrapolation.
Movement of fronts and air masses.
Isobars.
Barometric tendency.
Application of weather knowledge; Planning a flight.
Navigation ---------- 30
Study of the earth as a planet (charts, maps, and projections):
Mercator projections.
Gnomonic projections.
Lambert projections.
Polyconic projections.
Chart reading: Symbols, landmarks, etc.
Dead reckoning:
Magnetic variation, compass deviation terms, winds and vectors.
Correction angle.
Finding wind drift-off course.
Off-course problems.
Wind velocity by single and double drift.
Interception problems.
Radius of action—problems.
Search problems.
Computer use—problems.
Radio navigation:
Principles of the radio range, radio compass direction finder, marker beacons, ILS, GCA, radio altimeter, LORAN, and any other.
Navigation instruments: Altimeter, air-speed indicator, compass, drift and rate of climb indicator.
Aircraft ---------- 15
Weight and balance:
Center of gravity.
How determined.
Center of gravity limits.
Problem in loading.
Engine specifications: Power plant:
Operating limits.
Fuel consumption.
Accessories.
Operating manual.
Airplane specifications:
Operational equipment.
Flight controls, landing gear hydraulic system, electrical system, loading characteristics, fuel capacity heating and ventilating system, and de-icing equipment.
Performance:
Effect of weight, wind, air density, and runway surfaces on take-off performance of aircraft.
Power setting and cockpit procedure.
Types of cruise control.
Communications ---------- 8
Radio-telephone rules and regulations.
FCC rules and regulations.
Company communications:
Air to ground radio communications and procedures.
Point to point communications and procedures.
Equipment air to ground and point to point.
FAA Communications:
Air to ground radio communications and procedures.
Point to point communications and procedures.
Equipment air to ground and point to point.
Simulated instrument flight---------- 10
Instrument familiarization.
Bracketing.
Simulated instrument flight—Continued.
Orientation.
Holding procedure.
Let-down procedure.
Missed-approach procedure.
Air Traffic Control---------- 30
Air route traffic control procedures and equipment.
Airport traffic control procedures and equipment.
Practical Dispatching---------- 15
Pre-flight:
Safety.
Economic advantage.
Crew.
Notams.
The course and distance.
Horizontal and vertical extent of the weather.
Winds.
Forecast.
Minimum safe altitude.
The cruising altitude.
Flight plan.
The alternate plan.
Clearances, company air traffic control.
The fuel.
The load.
The departure time.
In-flight:
Position report.
Altimeter settings.
Weather reports.
Changes in forecast.
Changing instrument altitude.
Changing from VFR to IFR.
Additional clearances.
Emergency procedures.
Post-flight:
Arrival report.
Differences between the forecasted and actual weather encountered for subsequent flights.

(c) *Facilities, equipment, and material.* Applicant for authority to operate an approved aircraft dispatcher course of study shall have the following facilities, equipment, and materials:

(1) *Facilities.* Suitable classrooms, adequate to accommodate the largest number of students scheduled for attendance at any one time. Such classrooms shall be properly heated, lighted, and ventilated.

(2) *Equipment and materials.* Suitable devices for the teaching of simulated instrument flight, navigation, and meteorology, acceptable textbooks, operations manuals, wall maps, charts, blackboards, and visual aids of a quantity which will provide for each student the theoretical and practical aspects of aircraft dispatching.

(d) *Instructors.* (1) The number of instructors available for conducting the course of study shall be determined according to the needs and facilities of the applicant. However, the ratio of students per instructor shall not exceed 25 students for one instructor.

(2) At least one instructor who possesses a currently effective aircraft dispatcher certificate shall be available for coordination of the training course instruction.

(e) *Revision of training course.* Requests for revision of course outlines, facilities, and equipment shall be accomplished in the same manner established for securing approval of the original course of study. Revisions shall be submitted in such form that an entire page or pages of the approved outline can be removed and replaced by the revision.

The list of instructors may be revised at any time without request for approval, provided the minimum requirements are maintained and the local inspector is notified.

(f) *Credit for previous experience or training.* A course operator may evaluate an entrant's previous experience or training and where the training or experience is provable and comparable to portions of the approved course curriculum, may, as each individual case warrants, allow credit for such, commensurate with accepted training practices. Where credit is allowed, the basis for allowance and the total hours credited shall be incorporated as a part of the student's records, provided for in paragraph (g) of this section.

(g) *Student records and reports.* Approval of a course shall not be continued in effect unless the course operator keeps an accurate record of each student, including a chronological log of all instructions, subjects covered, and course examinations and grades, and unless he prepares and transmits to the FAA not later than January 31 of each year, a report containing the following information:

(1) The names of all students graduated, together with school grades for aircraft dispatcher courses.

(2) The names of all students failed or dropped, together with school grades and reasons for dropping. (A sample form is included in appendix A for your guidance.)

(h) *Quality of instruction.* Approval of a course shall not be continued in effect unless at least 80 percent of the students who apply within 90 days after graduation are able to qualify on the first attempt for certification as aircraft dispatchers.

(i) *Statement of graduation.* Each student who successfully completes the approved aircraft dispatcher course shall

be given a statement of graduation. An acceptable statement of graduation is:

FEDERAL AVIATION AGENCY,
Washington 25, D.C.
GENTLEMEN:
This is to certify that _____ on
(Name of graduate)
_____ successfully completed
(Date of graduation)
a course of training for aircraft dispatchers which is approved by the administrator of the Federal Aviation Agency.

Signed_____
Title_____
School_____

(j) *Change of ownership, name, or location*—(1) *Change of ownership.* Approval of an aircraft dispatcher course shall not be continued in effect after the course has changed ownership. The new owner must obtain a new approval by following the procedure prescribed for original approval.

(2) *Change in name.* An approved course changed in name but not changed in ownership shall remain valid if the change is reported by the approved course operator to the local inspector who will issue a letter of approval under the new name.

(3) *Change in location.* An approved course shall remain in effect even though the approved course operator changes location if the change is reported without delay by the operator to the local inspector who will inspect the facilities to be used in the new location and, if they are found to be adequate, issue a letter of approval showing the new location.

(k) *Cancellation of approval.* (1) Failure to meet or maintain any of the standards set forth herein for the approval or operation of an approved aircraft dispatcher course shall be considered sufficient reason for discontinuing approval of the course.

(2) If an operator desires voluntary cancellation of his approved course, a letter requesting cancellation shall be directed to the Administrator of the Federal Aviation Agency through the local inspector.

(l) *Duration.* The authority to operate an approved aircraft dispatcher course of study shall expire 24 months after the last day of the month of issuance.

(m) *Renewal.* Application for renewal of an approved aircraft dispatcher course shall be made by letter addressed to the Administrator of the Federal Aviation Agency through the local inspector at any time within 60 days of the expiration date. Renewal of approval will depend on the course operator's meeting the current conditions of course approval and having a satisfactory record as a course operator.

§ 27.32–1 Written examination (FAA policies which apply to § 27.32).

(a) An applicant for the written examination must meet the experience requirements contained in § 27.31 of this part.

(b) Application for the written examination will be made on the combination application and score sheet Form ACA–933.

§ 27.33–1 Practical examination (FAA policies which apply to § 27.33).

(a) An applicant for the practical examination must meet the eligibility requirements contained in § 27.31 of this part. The written examination required by § 27.32 should be satisfactorily completed by the applicant before taking the practical examination. However, where delay would cause inconvenience to an applicant, the practical examination may be taken first. If the practical examination is taken before the written and the applicant is successful, the inspector will issue Form ACA–578, Evidence of Aeronautical Knowledge. Form FAA–578A issued by the Federal Aviation Agency for reporting an applicant's performance on the written portion of the examination will be accepted for a period of 24 months from the date of issuance.

(b) The practical examination for an aircraft dispatcher certificate is of approximately 4 hours' duration, and is divided into 6 sections of equal value, as follows:

(1) Aircraft.
(2) Air routes and airports.
(3) Altimeters.
(4) Weather analysis.
(5) Dispatch and flight assistance.
(6) Emergency procedures.

(c) The applicant will provide the inspector or examiner with two copies of an acceptable operations manual. Since the examination is based on specific airplanes and specific routes chosen by the applicant, no problem should be encountered as to the acceptability of the manuals. During the examination, the applicant will be required to use the operations manual he provides, and to demonstrate his familiarity with the contents and use of the manual. He will also be required to demonstrate his familiarity with the contents and use of the Airman's Guide and the Flight Information Manual.

(Secs. 313(a), 601, 602, 608–610, 72 Stat. 752, 775, 776, 779–780; 49 U.S.C. 1354(a), 1421, 1422, 1428–1430)

Issued in Washington, D.C., on August 29, 1960.

E. R. QUESADA,
Administrator.

[F.R. Doc. 60-8164; Filed, Sept. 1, 1960; 8:45 a.m.]

(As published in the Federal Register /25 F.R. 8481/ on September 2, 1960)

GPO 900185

Regulations
Serial No. 71

27

THE UNITED STATES OF AMERICA
CIVIL AERONAUTICS AUTHORITY
WASHINGTON, D. C.

At a session of the Civil Aeronautics Authority
held at its office in Washington, D. C.,
on the 22nd day of December, 1939.

Acting pursuant to the authority vested in it by the Civil Aeronautics Act of 1938, particularly sections 205 (a), 601 (a) and 602 of said Act, and finding that its action is desirable in the public interest and is necessary to carry out the provisions of and to exercise and perform its powers and duties under said Act, the Civil Aeronautics Authority hereby amends the Civil Air Regulations as follows:

AMENDMENT NO. 46
OF THE CIVIL AIR
REGULATIONS

CREATING A NEW METHOD
FOR CERTIFICATION OF
AIR CARRIER DISPATCHERS

Effective July 15, 1940, Part 27, as amended, of the Civil Air Regulations is stricken and the following new Part 27 is inserted in lieu thereof:

"PART 27--AIRCRAFT DISPATCHER CERTIFICATES

Sec.		Sec.	
27.1	Aircraft dispatcher certificate requirements.	27.22	Duration
27.10	Age.	27.23	Periodic endorsement requirements.
27.11	Character.	27.24	Special issuance of certificate.
27.12	Citizenship.	27.25	Non-transferability.
27.13	Education.	27.26	Surrender.
27.14	Aeronautical knowledge.	27.27	Reexamination.
27.15	Aeronautical experience.	27.3	Examinations and tests.
27.16	Aeronautical skill.	27.30	General.
27.2	Aircraft dispatcher certificate.	27.31	Time and place.
27.20	Application.	27.32	Inspection.
27.21	Display.	27.33	Standard of performance.

27.1 Aircraft dispatcher certificate requirements. To be eligible for an aircraft dispatcher certificate, an applicant shall comply with the following requirements:

27.10 Age. Applicant shall be at least 23 years of age.

27.11 Character. Applicant shall be of good moral character.

27.12 Citizenship. Applicant shall be--

(a) A citizen of the United States, or

(b) A citizen of a foreign country which grants reciprocal commercial airman privileges to citizens of the United States on equal terms and conditions with citizens of such foreign country, or

(c) An alien who has filed his declaration of intention to become a citizen of the United States and notifies the Authority of the serial number of such declaration and of the date thereof and of the court in which it is filed: Provided, that the certificate is, in such case, subject to revocation by the Authority if the holder does not from time to time keep the Authority advised of the status of the proceedings in court and does not diligently and successfully prosecute them and become admitted as a citizen.

27.13 Education. Applicant shall be able to read, write and understand the English language, and speak the same without any accent or impediment of speech that would interfere with two-way radio conversation.

27.14 Aeronautical knowledge. Applicant shall be familiar with and shall accomplish a satisfactory written examination on--

(a) The provisions of Parts 40 and 61 and those parts of Part 60 which apply to dispatching. In each case the applicant shall understand the relation of each provision to air carrier operation.

(b) The characteristics of at least one make and model of air carrier aircraft, with particular reference to performance, gross load, pay loads under conditions of various fuel loads, fuel capacity, fuel consumption at specified power outputs at various altitudes, most economical speed at which level flight can be maintained, and loading charts.

(c) The general system of collection and dissemination of weather information.

(d) Weather map, forecast and sequence abbreviations, symbols and nomenclature. The general principles of modern methods of weather analysis including the application of data obtained from airplane weather observations and meteorological data reported from observations made by pilots engaged in air carrier flights.

(e) Cloud forms, including average heights of their bases and approximate upper and lower limits within which their bases and tops respectively occur.

(f) Weather conditions adversely affecting aeronautical activities, the circumstances under which they occur, how such are ascertained and located, and principles of forecasting such conditions.

(g) The influence of terrain upon meteorological conditions and developments, and the relation thereof to air carrier flight operations.

(h) Elementary principles of radio range operation and radio communication, including weather conditions adversely affecting them and the communication procedures and practices used between airplanes and ground stations.

(i) Department of Agriculture Weather Bureau Circular "N", Instructions for Airway Meteorological Service, and all amendments thereto.

(j) Air navigation facilities in use on the civil airways, including rotating beacons, course lights, radio ranges, radio marker beacons and intermediate fields.

(k) Principles of aircraft navigation, with particular respect to instrument operation and use of radio range and direction-finding equipment, including let-down procedures.

(l) Use and limitations of sensitive type altimeters, particularly with respect to barometric settings.

(m) Airway and airport traffic control procedures.

27.15 Aeronautical experience. Applicant shall--

(a) Have served for two years of the four years immediately preceding application as a first or second pilot of a certificated air carrier and have served in connection with the dispatching of air carrier aircraft under the supervision of a certificated aircraft dispatcher in regular service for at least 30 days within the six months immediately preceding application, or

(b) Have served in connection with the dispatching of air carrier aircraft under the supervision of a certificated aircraft dispatcher in regular service for at least one year within the two

years immediately preceding application, or

(c) Be a graduate of an aircraft dispatcher course of a certificated flying school, which course is approved by the Authority and have served in connection with the dispatching of air carrier aircraft under the supervision of a certificated aircraft dispatcher in regular service for at least 90 days within the six months immediately preceding application.

27.16 Aeronautical Skill. Applicant shall be able to--

(a) Make a reasonably accurate and intelligent analysis of a series of daily Weather Bureau maps, in accordance with modern methods, and forecast therefrom the subsequent weather conditions pertinent to air carrier flying operations.

(b) Make an accurate and detailed analysis, in accordance with modern methods, of weather conditions prevailing in the general neighborhood of a specified civil airway from a series of daily Weather Bureau maps and sequence reports, and forecast with a high degree of accuracy subsequent weather trends pertinent to air carrier flying operations, with particular reference to specified terminals.

(c) Be sufficiently familiar with the Morse Code to be able to identify radio ranges by their identification signals,

(d) Prepare and use charts to determine the most economical fuel consumption settings of an aircraft at given altitudes, and

(e) Dispatch and assist a hypothetical flight under adverse weather conditions.

27.2 Aircraft dispatcher certificate.

27.20 Application. Application for an aircraft dispatcher certificate shall be made upon the applicable form prescribed and furnished by the Authority.

27.21 Display. An aircraft dispatcher certificate shall be kept readily available to the holder thereof at all times when he is on duty in connection with the dispatching of air carrier aircraft, and shall be presented upon the request of any authorized representative of the Authority or of any State or municipal official charged with the duty of enforcing local laws or regulations involving Federal compliance.

27.22 Duration. An aircraft dispatcher certificate shall be of 60 days' duration and, unless the holder thereof is otherwise notified by the Authority within such period, shall continue in effect indefinitely thereafter, unless suspended or revoked by the Authority, except that it shall immediately expire (1) at the end of each designated period* after the date of issuance thereof if the holder of such certificate fails to secure an endorsement by an authorized inspector of the Authority within the last 45 days of each such period, or (2) at any time an authorized inspector of the Authority shall refuse to endorse such certificate after inspection or examination.

*NOTE: A statement of duration in substantially the form of § 27.22 will appear on all aircraft dispatcher certificates and the period here referred to will be designated in that statement. The holder of an aircraft dispatcher certificate will be required, under ordinary circumstances, to secure an endorsement every 12 months. Hereafter in this Part this period will be referred to as the "endorsement period."

27.23 Periodic endorsement requirements. No aircraft dispatcher certificate shall receive a periodic endorsement unless the holder thereof shall make application for endorsement upon the applicable form prescribed and furnished by the Authority and shall have served as an aircraft dispatcher for at least 6 months of the 12 months' period immediately preceding the expiration of the endorsement period.

27.24 Special issuance of certificate. In the event an aircraft dispatcher satisfactorily shows to the Authority that an emergency prevented the endorsement of his certificate within 45 days immediately preceding the expiration of the endorsement period a new certificate will be issued if application is made therefor within 90 days immediately following the expiration of such endorsement period and the applicant complies with the requirements for periodic endorsement prescribed for an aircraft dispatcher certificate.

27.25 Non-transferability. An aircraft dispatcher certificate is not transferable.

27.26 Surrender. Upon the suspension, revocation, or expiration of an aircraft dispatcher certificate, the holder thereof shall, upon request, surrender such certificate to any officer or employee of the Authority.

27.27 Reexamination. An applicant for an aircraft dispatcher certificate who has failed to successfully accomplish the prescribed theoretical or practical tests may apply for re-examination at any time after the expiration of 90 days from the date of such failure.

27.3 Examinations and tests.

27.30 General. The examinations and tests prescribed in this Part shall be conducted by an authorized representative for the Authority.

27.31 Time and place. All examinations and tests will be held at such times and places as the Authority may designate.

27.32 Inspection. The applicant for an aircraft dispatcher certificate shall offer full cooperation with respect to any inspection or examination which may be made of such applicant upon proper request by any authorized representative of the Authority prior or subsequent to the issuance of an aircraft dispatcher certificate.

27.33 Standard of performance. All practical or theoretical examinations and tests shall be accomplished to the satisfaction of the Authority and the passing grade in each subject shall be at least 70 percent."

By the Authority:

/s/ Paul J. Frizzell

Paul J. Frizzell,
Secretary.

(SEAL)
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