# Federal Aviation Agency
# Washington, D.C.

## Civil Air Regulations, Part 60

## AIR TRAFFIC RULES

Supplement No. 6, CAR 60 dated May 15, 1961 — January 1, 1962

SUBJECT: Amendment 60–26 to CAR 60 and Supplement 60–32 to CAM 60.

Amendment 60–26 was adopted by the Administrator on December 19, 1961, effective January 23, 1962. This amendment revised section 60.18(c) (3) to provide for the depiction of Flight Service Stations on World Aeronautical Charts for locations where Sectional Charts are not published.

Supplement 60-32 was adopted by the Administrator on December 20, 1961, effective December 26, 1961. This supplement rescinded the Special Airport Traffic Area rules at LaGuardia, Newark, and Teterboro Airports contained in sections 60.18–4 and 60.18–8 of CAM 60. This rescission appeared in the Federal Register on December 23, 1961.

Included in this supplement as addendum material is the preamble to Amendment 60–26 which provides information relative to this rule-making action. Additionally, page revisions are included to incorporate section 60.18 in its proper place in the text. This section was revised by Amendment 60–24 and was effective December 26, 1961.

| *Remove the following pages:* | *Insert the following new pages:* |
|---|---|
| III through VI | III through VI |
| 3 through 6–1 | 3 through 6–2 |
| 9 through 11 | 9 through 12 |
| 46–1 through 46–4 | — |
| 57 and 58 | 57 and 58 |
| 67 through 72 | 67 and 68 |
| — | 72 |
| P–5 | P–5 and P–6 |

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ATTACHMENTS.

623845 O—62——1

# Civil Air Regulations Part 60

## Contents

### General



### General Flight Rules (GFR)



### Visual Flight Rules (VFR)



### Instrument Flight Rules (IFR)



### Definitions



NOTE.—The statements contained in the notes in this Part are intended as explanation only and shall not be construed as official interpretations of the regulations.



(Rev. 1/1/62)

## Special Civil Air Regulations Which Affect Part 60



## Addendum

# Civil Aeronautics Manual 60

## Contents

### General



### General Flight Rules (GFR)

## Visual Flight Rules (VFR)



## Instrument Flight Rules (IFR)



### Appendixes

positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear;

*Note:* Passing an overtaken aircraft on the right is required because the pilot in side-by-side, dual-control aircraft is seated on the left and has a better view on that side. Further, in narrow traffic lanes, passing on the left of an overtaken aircraft would place the overtaking aircraft in the path of the oncoming traffic.

(e) *Landing.* Aircraft, while on final approach to land, or while landing, have the right-of-way over other aircraft in flight or operating on the surface. When two or more aircraft are approaching an airport for the purpose of landing, the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in in front of another which is on final approach to land, or to overtake that aircraft.

*Note:* Pilots must recognize that once committed to a landing in certain aircraft the pilot has little chance to avoid other aircraft which may interfere with that landing and, therefore, careful observance of this rule is important to the safety of all concerned.

*60.15 Proximity of aircraft.* No person shall operate an aircraft in such proximity to other aircraft as to create a collision hazard. No person shall operate an aircraft in formation flight when passengers are carried for hire. No aircraft shall be operated in formation flight except by prearrangement between the pilots in command of such aircraft.

*60.16 Acrobatic flight.* No person shall engage in acrobatic flight:

(a) Over congested areas of cities, towns, settlements, or over an open-air assembly of persons, or

(b) Within any Federal airway or control zone, or

(c) When the flight visibility is less than 3 miles, or

(d) Below an altitude of 1,500 feet above the surface.

*Note:* Acrobatic maneuvers performed over a congested area or an open assembly of persons, or in areas where considerable air traffic exists, creates an undue hazard to persons or property. Flight visibility of at least 3 miles is believed to be a prerequisite to acrobatic flight in order that the pilot, after scanning the entire vicinity, may be reasonably assured that no other aircraft is within dangerous proximity prior to performing such maneuvers.

*60.17 Minimum safe altitudes.* Except when necessary for take-off or landing, no person shall operate an aircraft below the following altitudes:

(a) *Anywhere.* An altitude which will permit, in the event of the failure of a power unit, an emergency landing without undue hazard to persons or property on the surface;

(b) *Over congested areas.* Over the congested areas of cities, towns or settlements, or over an open-air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet from the aircraft. Helicopters may be flown at less than the minimum prescribed herein if such operations are conducted without hazard to persons or property on the surface and in accordance with paragraph (a) of this section; however, the Administrator, in the interest of safety, may prescribe specific routes and altitudes for such operations, in which event helicopters shall conform thereto;

*Note:* The rule recognizes the special flight characteristics of the helicopter which can accomplish an emergency landing within a relatively small space. However, if a helicopter is flown over the congested area of a city, town or settlement, at less than 1,000 feet above the highest obstacle, the pilot is required to fly with due regard to places in which an emergency landing can be made with safety and, further, to maintain an altitude along the flight path thus selected from which such an emergency landing can be effected at any time.

(c) *Over other than congested areas.* An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In such event, the aircraft shall not be operated closer than 500 feet to any person, vessel, vehicle, or structure. Helicopters may be flown at less than the minimums prescribed herein if such operations are conducted without hazard to persons or property on the surface and in accordance with paragraph (a) of this section;

*Note:* When flight is necessary at an altitude of less than 500 feet above the surface, the pilot must avoid creating any hazard to persons or property on the surface which may result from such flight. In no event

should the pilot expose his passengers to unnecessary hazard while engaging in flight at low altitude. The maneuverability of the helicopter permits safe flight below the minimums required in section 60.17, provided good judgment and caution are exercised by the pilot.

(d) *IFR operations.* The minimum IFR altitude established by the Administrator for that portion of the route over which the operation is conducted. Such altitude shall be that which the safe conduct of flight permits or requires considering the character of the terrain being traversed, the meteorological services and navigational facilities available, and other flight conditions. Where the Administrator has not established such a minimum, operations shall be conducted at not less than 1,000 feet above the highest obstacle within a horizontal distance of 5 miles from the center of the course intended to be flown.

*Note:* When minimum altitudes are established by the Administrator for particular routes, such altitudes will be published in Parts 609 and 610 of this title, and 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:* Civil Air Regulations, Interpretation 1, 19 F.R. 4602, July 27, 1954, provides in part as follows:

"The Board construes the words 'Except when necessary for take-off or landing, no persons shall operate an aircraft below the following altitudes' where such words appear in section 60.17 of the Civil Air Regulations, as establishing a minimum altitude rule of specific applicability to aircraft taking off and landing. It is a rule based on the standard of necessity, and applies during every instant that the airplane climbs after take-off and throughout its approach to land. Since this provision does prescribe a series of minimum altitudes within the meaning of the act, it follows, through the application of section 3, that an aircraft pursuing a normal and necessary flight path in climb after take-off or in approaching to land is operating in the navigable airspace."

*60.18 Operation on and in the vicinity of an airport.* Aircraft shall be operated on and in the vicinity of an airport in accordance with the following rules:

(a) *General rules.*

(1) *Avoidance of airport traffic areas.* No person shall operate an aircraft within an airport traffic area, except for the purpose of landing or taking off at airports located within such airport traffic area, or unless authorized by air traffic control.

(2) *Speed.* Except as otherwise authorized by air traffic control, no person shall operate an aircraft within an airport traffic area at an indicated airspeed in excess of 156 knots (180 m.p.h.) for reciprocating engine aircraft or 200 knots (230 m.p.h.) for turbine powered aircraft unless the operating limitations or military normal operating procedures require a greater airspeed, in which case the aircraft shall not be flown in excess of such airspeed.

(b) *Airport with control tower.* Aircraft being operated to, from, or on an airport served by an airport traffic control tower shall be operated in accordance with the following rules unless otherwise authorized or required by the airport traffic control tower of that airport. Such authorization may be provided as individual approvals of specific operations or contained in written agreements between airport users and the tower.

(1) *Communications.* During the hours the airport traffic control tower is in operation the following radio communication requirements shall apply:

(i) *United States Government operated control towers.* When operating an aircraft to, from, or on an airport at which an airport traffic control tower is operated by the United States Government, two-way radio communications shall be maintained with that control tower while operating within the airport traffic area. In the event of an in-flight failure of radio communications equipment during VFR flight, the foregoing requirement shall not apply and a pilot may enter the airport traffic area and land; *Provided,* That the weather conditions are equal to or above VFR conditions and the pilot maintains visual contact with the control tower and obtains a clearance (light signal) prior to landing. In the event of in-flight failure of radio communications equipment during IFR flight, the provisions of section 60.49 shall apply.

(ii) *Other control towers.* When operating an aircraft to, from, or on an airport at which an airport traffic control tower is operated by a person other than the United States Government, pilots of aircraft having radio equipment permitting two-way radio communications with the airport traffic control

tower shall maintain such communications and pilots of aircraft having radio equipment permitting reception only from such control tower shall maintain a listening watch on the appropriate tower frequency while operating within the airport traffic area of that airport.

*Note:* Pilots of aircraft operating to or from uncontrolled airports within the airport traffic area are *not required to maintain radio contact with the control* tower. However, such pilots should maintain two-way radio communications or a listening watch when feasible.

(2) *Clearances.*

(i) *Take-off, landing or taxi clearance.* During the hours the airport traffic control tower is in operation, a clearance shall be obtained prior to taxiing on a runway, taking off, or landing. Authorization to taxi "to" a runway is authorization to cross runways that intersect the taxi route unless instructions to the contrary are received. *Authorization to* taxi "to" a runway shall not constitute a clearance to taxi "on" that runway.

(ii) *Pilots shall obtain a visual light* signal clearance prior to taxiing on a runway and prior to take-off and landing at those airports where the control tower has authorized noncompliance with the requirement for two-way radio communications, or at those airports at which a non-United States Government airport traffic control tower is in operation if, for any reason, radio communications cannot be established.

(iii) Air traffic control may grant continuing permission to the pilot of an aircraft to conduct landings and take-offs within an airport traffic area of a controlled airport without individual clearance for each such operation.

(3) *Airport traffic area altitudes.* Unless prevented by terrain, obstacles or the VFR distance-from-cloud criteria, turbine powered fixed-wing aircraft shall be flown within the airport traffic area, including the traffic pattern, at an altitude of at least 1,500 feet, above the surface of the airport, until maneuvering for a safe landing requires further descent.

(4) *Traffic pattern direction.* Pilots of fixed-wing aircraft shall circle the airport to the left unless the airport traffic control tower specifies a different traffic pattern. In approaching to land, helicopters shall be flown in a manner which avoids the flow of fixed-wing aircraft.

(5) *Preferential runway system.*

(i) When a preferential runway system has been established by the Federal Aviation Agency for an airport, pilots of large fixed-wing aircraft landing at or taking off from such airport shall use a preferential runway when it has been assigned by the airport traffic control tower; *Provided,* That pilots shall retain final authority and responsibility for the operational safety of the aircraft and if a pilot determination is made to use another runway on the basis of safety, such other runway shall be authorized by air traffic control, traffic and other conditions permitting. When such authorization is given, the pilot retains responsibility for deviation from the provisions of the preferential runway system.

(ii) When a runway other than the originally assigned preferential runway is used, the pilot shall file, if requested by air traffic control, a written report of the reasons therefor, including a full description of the safety basis for his determination to use such other runway. This report shall be forwarded within 48 hours to the Chief, Airport Traffic Controller, Federal Aviation Agency, located at that airport at which the report is required.

(6) *Final approach.*

(i) When approaching to land on a runway served by a functioning instrument landing system (ILS), large fixed-wing aircraft equipped with a functioning ILS instrumentation shall be flown so as to remain at or above the glide slope between the outer marker and the middle marker; *Provided,* That when the VFR distance-from-cloud criteria require interception of the glide slope between the outer marker and the middle marker, large fixed-wing aircraft shall be flown so as to remain at or above the glide slope altitude between the point of interception and the middle marker.

(ii) When approaching to land on a runway served by visual glide slope devices, fixed-wing aircraft shall be flown so as to remain at or above the glide slope until arrival at the runway threshold.



623845 O—62——2

(7) *Departures.* Aircraft taking off shall be operated as follows:

(i) Pilots shall, prior to departure, familiarize themselves with any departure procedures established by the Federal Aviation Agency and shall comply with such procedures upon departure.

(ii) When departure procedure altitudes for a particular airport are not specified and unless otherwise required by the VFR distance-from-cloud criteria, large fixed-wing aircraft shall be flown so that a climb is made as rapidly as practicable to at least 1,500 feet above the surface: *Provided*, That the Federal Aviation Agency may specify a different rate of climb for a particular type of aircraft when a greater advantage in noise reduction can thereby be achieved with no derogation of safety.

(c) *Airports without control tower.* Aircraft being operated to or from an airport not served by a control tower shall be operated in accordance with the following rules:

(1) *Approaching to land.* When approaching for landing, fixed-wing aircraft shall be flown so that all turns are made to the left unless the airport displays light signals or standard visual markings of a type approved by the Federal Aviation Agency and which indicate that all turns are to be made to the right. When approaching for landing, helicopters shall be flown in a manner which avoids the flow of fixed-wing aircraft.

(2) *Departures.* Pilots of aircraft operating from an airport shall conform to the traffic patterns established for that airport.

[(3) *Communications.* Aircraft being operated to or from an airport not served by a control tower, but at which an operative Federal Aviation Agency Flight Service Station is located and so depicted on the current appropriate Sectional Aeronautical Chart of the U.S. Coast and Geodetic Survey, or World Aeronautical Chart in the case of an area for which a Sectional Chart is not published, shall be operated in accordance with the following:]

(i) Pilots of aircraft having radio equipment permitting two-way radio communications with the Flight Service Station shall maintain such communications when within 5 statute miles of the uncontrolled airport for purposes of receiving airport advisory information: *Provided*, That for instrument flight rules operations, air traffic control may require otherwise.

(ii) Pilots of aircraft having radio equipment permitting reception only from the Flight Service Station shall maintain a listening watch on the appropriate frequency when within 5 statute miles of the uncontrolled airport for purposes of receiving airport advisory information.

*60.19 Air traffic control instructions.* No person shall operate an aircraft contrary to air traffic control instructions in areas where air traffic control is exercised.

*60.20 Notification of arrival.* If a flight plan has been filed, the pilot in command of the aircraft, upon landing or completion of the flight, shall file an arrival or completion notice with the nearest Federal Aviation Agency communication station or control tower.

*60.21 Adherence to air traffic clearances.* When an air traffic clearance has been obtained under either the VFR or IFR rules, the pilot in command of the aircraft shall not deviate from the provisions thereof unless an amended clearance is obtained. In case emergency authority is used to deviate from the provision of an air traffic clearance, the pilot in command shall notify air traffic control as soon as possible and, if necessary, obtain an amended clearance. However, nothing in this section shall prevent a pilot, operating on an IFR traffic clearance, from notifying air traffic control that he is canceling his IFR flight plan and proceeding under VFR: *Provided*, That he is operating in VFR weather conditions when he takes such action.

*60.22 Water operations.* An aircraft operated on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation. The following rules shall be observed with respect to other aircraft or vessels operated on the water:

(a) *Crossing.* The aircraft or vessel which has the other on its right shall give way so as to keep well clear;

(b) *Approaching head-on.* When aircraft, or an aircraft and vessel, approach head-on, or approximately so, each shall alter its course to the right to keep well clear;

(c) *Overtaking.* The aircraft or vessel which is being overtaken has the right-of-way, and the one overtaking shall alter its course to keep well clear;

(d) *Special circumstances.* When two aircraft, or an aircraft and vessel, approach so as to involve risk of collision, each shall proceed with careful regard to existing circumstances and conditions including the limitations of the respective craft.

*Note:* The rules for operating aircraft on the surface of the water conform to marine rules for the operation of vessels. The "Special circumstances" rule is provided for situations wherein it may be impracticable or hazardous for a vessel or another aircraft to bear to the right because of depth of a waterway, wind conditions, or other circumstances.

*60.23 Aircraft lights.* Between sunset and sunrise:

(a) All aircraft in flight or operated on the ground or under way on the water shall display position lights;

(b) All aircraft parked or moved within or in dangerous proximity to that portion of any airport used for, or available to, night flight operations shall be clearly illuminated or lighted, unless the aircraft are parked or moved in an area marked with obstruction lights;

(c) All aircraft at anchor shall display anchor lights, unless in an area within which lights are not required for vessels at anchor; and

(d) Within the State of Alaska the lights required in paragraphs (a), (b), and (c) of this section shall be displayed during those hours specified and published by the Administrator.

*Note:* International visual distress and urgency signals are contained in the FAA Flight Information Manual for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

*60.24 Flight test.* The following provisions shall apply to the flight testing of aircraft unless otherwise authorized by the Administrator under such conditions as he may prescribe:

(a) No person shall flight test an aircraft unless such flight test is conducted:

(1) Over open water or sparsely populated areas having light air traffic and approved by the Administrator; or

(2) Over an area designated by the Administrator.

(b) This section shall not apply to take-offs and landings and operations necessary for flights to and from approved flight areas of production aircraft and aircraft which have been subject to major alterations as defined in Part 18 of the Civil Air Regulations.

(c) All flight tests shall be conducted in accordance with such traffic rules as the Administrator may from time to time prescribe.

*Note:* It should be recognized that any flight operation that requires excessive preoccupation with cockpit duties may result in careless or reckless operation of aircraft. See Example (c) under section 60.12 of the Civil Air Regulations.

*60.25 Altimeter setting.* The cruising altitude or flight level of aircraft shall be maintained by reference to an altimeter which shall be set:

(a) At or below 23,500 feet MSL, to the current reported altimeter setting of a station along the route of flight within 100 nautical miles: *Provided,* That where there is no such station, the current reported altimeter setting of an appropriate available station shall be used: *And provided further,* That in aircraft having no radio the altimeter shall be set to the elevation of the airport of departure or appropriate altimeter settings available prior to departure shall be used.

(b) At or above 24,000 feet MSL, to 29.92″ Hg. The use of flights levels below this altitude is not permissible.

(c) For overseas operations, in ICAO Flight Information Regions, in accordance with ICAO Regional Supplementary Procedures.

*Note:* Flight levels appropriate to normally encountered atmospheric pressure are shown in the table following:

| Atmospheric pressure in inches of mercury | Lowest usable flight level |
|---|---|
| 29.92 | 240 |
| 29.91 to 29.42 | 245 |
| 29.41 to 28.92 | 250 |
| 28.91 to 28.42 | 255 |
| 28.41 to 27.92 | 260 |

*60.26 Flight crew members at controls.* All required flight crew members when on flight deck duty 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 crew member is necessary for the performance of his duties in connection with the operation of the aircraft. All flight crew members shall keep their seat belts fastened when at their respective stations.

*60.27 Aircraft speed.* A person shall not operate an arriving aircraft at an indicated airspeed in excess of 250 knots (288 m.p.h.) during flight below 10,000 feet mean sea level within 30 nautical miles of an airport where a landing is intended or where a simulated approach will be conducted unless the operating limitations or military normal operating procedures require a greater airspeed, in which case the aircraft shall not be flown in excess of such speed.

## Visual Flight Rules (VFR)

*60.30 Basic VFR minimum weather conditions.* Aircraft shall not be flown VFR in weather conditions below those specified herein except as provided in section 60.31. When VFR flight operations are conducted in accordance with the provisions of section 60.32 at an altitude coincident with the designated base of the continental control area, control area or transition area, the visibility and clearance-from-cloud requirements applicable to the immediately underlying airspace shall govern.

(a) *Clearance from clouds.*

(1) *In controlled airspace.* Aircraft shall not be flown VFR less than 500 feet vertically under, 1,000 feet vertically over, and 2,000 feet horizontally from any cloud formation, except that in the continental control area, aircraft shall not be flown VFR less than 1,000 feet vertically and one mile horizontally from any cloud formation. Aircraft shall not be flown VFR within a control zone beneath the ceiling when the ceiling is less than 1,000 feet.

(2) *Outside controlled airspace.* When at an altitude of more than 1,200 feet above the surface, aircraft shall not be flown VFR less than 500 feet vertically under, 1,000 feet vertically over, and 2,000 feet horizontally from any cloud formation. When at an altitude of 1,200 feet or less above the surface, aircraft flown VFR shall be flown clear of clouds.

(b) *Visibility within controlled airspace.*

(1) *Control zones.* When the flight visibility is less than 3 miles, no person shall operate an aircraft VFR in flight within a control zone. When the ground visibility is less than 3 miles, no person shall take off or land an aircraft or enter the traffic pattern of an airport within a control zone.

(2) *Control area.* When the flight visibility is less than 3 miles, no person shall operate an aircraft VFR in flight within a control area.

(3) *Transition area.* When the flight visibility is less than three miles, no person shall operate an aircraft VFR within a transition area.

(4) *Continental control area.* When the flight visibility is less than 5 miles, no person shall operate an aircraft VFR in flight within the continental control area.

cedure prescribed for that airport by the Administrator shall be used, unless:

(a) A different instrument approach procedure specifically authorized by the Administrator is used, or

(b) A different instrument approach procedure is authorized by air traffic control for the particular approach, provided such authorization is issued in accordance with procedures approved by the Administrator.

*Note:* Standard instrument approach procedures prescribed by the Administrator are published in Parts 609 and 610 of this title, and also may be found in the Approach and Landing Charts and Radio Facility Charts of the U.S. Coast and Geodetic Survey, and in the Airman's Guide. Such procedures have been carefully investigated with respect to pattern and terrain clearance. Safety would not permit several aircraft to make simultaneous use of more than one instrument approach procedure unless such operations were controlled.

*60.47 Radio communications.* Within controlled airspace the pilot in command of the aircraft shall ensure that a continuous watch is maintained on the appropriate radio frequencies and shall report by radio as soon as possible the time and altitude of passing each designated reporting point, or the reporting points specified by air traffic control, together with weather conditions which have not been forecast, and other information pertinent to the safety of flight.

*Note:* Designated reporting points are noted in publications of aids to air navigation. Control of air traffic is predicated on knowledge of the position of aircraft in flight. The reporting of unanticipated weather encountered en route such as icing or extreme turbulence may be of importance to the safety of other aircraft anticipating flight within the area.

*60.49 Radio failure.* If unable to maintain two-way radio communications, the pilot in command of the aircraft shall:

(a) If operating under VFR conditions, proceed under VFR and land as soon as practicable, or

(b) Proceed according to the latest air traffic clearance to the radio facility serving the airport of intended landing, maintaining the minimum safe altitude, or the last acknowledged assigned altitude or flight level, whichever is higher. Descent shall start at the expected approach time last authorized or, if not received and acknowledged, at the estimated time of arrival indicated by the elapsed time specified in the flight plan.

*Note:* Detailed procedures to be followed by the pilot are contained in the FAA Flight Information Manual, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

## Definitions

*60.60 Definitions.* As used in this Part, terms shall be defined as follows:

*Acrobatic flight.* Maneuvers intentionally performed by an aircraft involving an abrupt change in its altitude, an abnormal attitude, or an abnormal acceleration.

Note: The term "acrobatic flight" is not intended to include turns or maneuvers necessary to normal flight.

*Air traffic.* Aircraft in operation anywhere in the airspace and on that area of an airport normally used for the movement of aircraft.

*Air traffic clearance.* Authorization by air traffic control, for the purpose of preventing collision between known aircraft, for an aircraft to proceed under specified traffic conditions within controlled airspace.

*Air traffic control.* A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.

*Aircraft.* Any contrivance used or designed for navigation of or flight in the air, except a parachute or other contrivance designed for such navigation but used primarily as safety equipment.

*Airplane.* A mechanically propelled aircraft the support of which in flight is derived dynamically from the reaction on surfaces in a fixed position relative to the aircraft but in motion relative to the air.

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

*Airport traffic area.* An airport traffic area is that airspace within a circular limit defined by a 5 statute mile horizontal radius from the geographical center of an airport at which an

operative airport traffic control tower is located and extending upwards from the surface to, but not including 2,000 feet above the surface.

*Airship.* A mechanically propelled aircraft whose support is derived from lighter-than-air gas.

*Alternate airport.* An airport specified in the flight plan to which a flight may proceed when a landing at the point of first intended landing becomes inadvisable.

*Balloon.* An aircraft, excluding moored balloons, without mechanical means of propulsion, the support of which is derived from lighter-than-air gas.

*Basic airworthiness.* "Basic airworthiness" means the structural integrity and controllability of an aircraft as determined by the pilot in normal flight maneuvering such that there is no reasonable probability of failure which would endanger persons or property.

*Ceiling.* The height above the ground or water of the lowest layer of clouds or obscuring phenomena that is reported as "broken," "overcast," or "obscuration" and not classified as "thin" or "partial."

*Controlled airspace.* Airspace of defined dimensions designated in Part 601 of this title as continental control area, control area, control zone or transition area, within which air traffic control is exercised.

(1) *Continental control area.* The Continental Control Area consists of the airspace of the continental United States at and above 14,500 feet MSL but excludes: (1) The State of Alaska, (2) the airspace less than 1,500 feet above terrain, and (3) prohibited and restricted areas except those restricted areas specified in Part 601 of this Title.

(2) *Control area.* Unless otherwise provided in appropriate cases, control areas extend upward from 700 feet above the surface until designated from 1,200 feet above the surface or from at least 500 feet below the MEA, whichever is higher, to the base of the continental control area.

(3) *Control zone.* Control zones extend upward from the surface. A control zone may include one or more airports and is normally a circular area of 5 statute miles in radius with extensions where necessary to include instrument approach and departure paths.

(4) *Transition area.* Transition areas extend upward from 1,200 feet or higher above the surface when designated to complement control zones; from 700 feet above the surface when designated in conjunction with an airport with no control zone but for which an instrument approach procedure has been prescribed; or from 1,200 feet or higher above the surface when designated in conjunction with airway route structures or segments. Unless otherwise limited, transition areas terminate at the base of the overlying controlled airspace.

*Cruising altitude.* Cruising altitude is a level determined by vertical measurement from mean sea level.

*Expected approach time.* The time at which it is expected that an arriving aircraft will be cleared to commence approach for a landing.

*Flight level.* Flight level is a level of constant atmospheric pressure related to a reference datum of 29.92″ Hg. For example, flight level 250 is equivalent to an altimeter indication of 25,000 feet, and flight level 265 to 26,500 feet.

*Flight plan.* Specified information filed either verbally or in writing with air traffic control relative to the intended flight of an aircraft.

*Flight test.* "Flight test" means flight for the purpose of investigating or checking the operational capabilities of a new type of aircraft, engine, or propeller, the airworthiness of which has not been determined by appropriate military or civil authority; or flights of production aircraft until the basic airworthiness of the aircraft, engine, or propeller contemplated by the appropriate production specification or type certificate is determined by the pilot; or flights involving aircraft, engines, or propellers following major alteration, as defined in Part 18 of the Civil Air Regulations, until the basic airworthiness of the aircraft, engine, or propeller has been determined by the pilot.

*Flight visibility.* The average horizontal distance that prominent objects may be seen from the cockpit.

*Glider.* An aircraft without mechanical means of propulsion, the support of which in flight is derived dynamically from the reaction on surfaces in motion relative to the air.

*Ground visibility.* The average range of vision in the vicinity of an airport as reported

by the U.S. Weather Bureau or, if unavailable, by an accredited observer.

*Helicopter.* A type of rotorcraft the support of which in the air is normally derived from airfoils mechanically rotated about an approximately vertical axis.

*IFR.* The symbol used to designate instrument flight rules.

*IFR conditions.* Weather conditions below the minimum prescribed for flights under VFR.

*Large aircraft.* Aircraft of more than 12,500 pounds maximum certificated take-off weight.

*Magnetic course.* The true course or track, corrected for magnetic variation, between two points on the surface of the earth.

*MEA.* The minimum en route IFR altitude applicable to a particular route or route segment, from radio fix to radio fix, as specified in Part 610 of this title.

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

*Prohibited area.* Airspace identified by an area on the surface of the earth within which the flight of aircraft is prohibited.

*Reporting point.* A geographical location in relation to which the position of an aircraft is reported.

*Restricted area.* Airspace identified by an area on the surface of the earth within which the flight of aircraft, while not wholly prohibited, is subject to restrictions.

*Rotorcraft.* An aircraft whose support in the air is chiefly derived from the vertical component of the force produced by rotating airfoils.

*Special VFR conditions (special VFR minimum weather conditions).* Weather conditions which are less than basic VFR weather conditions and which permit flight under Visual Flight Rules as specified in section 60.31.

*Sunset and sunrise.* Sunset and sunrise are the mean solar times of sunset and sunrise as published in the Nautical Almanac converted to local standard time for the locality concerned, except within the State of Alaska.

*Note:* The Nautical Almanac containing sunshine tables may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. Information is also available from the sunshine tables in the offices of the Federal Aviation Agency or the United States Weather Bureau.

*Traffic pattern.* The flow of aircraft operating on and in the vicinity of an airport during specified wind conditions as established by appropriate authority.

*VFR.* The symbol used to designate visual flight rules.

*VFR conditions (VFR minimum weather conditions).* Basic weather conditions precribed in section 60.30 for flight under VFR.

## *Basic VFR minimums as provided in section 60.30*

| | Visibility | Distance from clouds | |
|---|---|---|---|
| Control zone | 3 miles [1] | 500 feet under. [1]<br>1,000 feet over. [1]<br>2,000 feet horizontally. [1] and 1,000-foot ceiling. | |
| Control area and transition area | 3 miles | 500 feet under.<br>1,000 feet over.<br>2,000 feet horizontally. | |
| Continental control area | 5 miles | 1,000 feet under.<br>1,000 feet over.<br>1 mile horizontally. | |
| | | 1,200 feet or below | Above 1,200 feet |
| Outside controlled airspace | 1 mile [2] | Clear of clouds | 500 feet under.<br>1,000 feet over.<br>2,000 feet horizontally. |

[1] If traffic conditions permit, Air Traffic Control will issue an air traffic clearance for flight within a control zone when the weather conditions are less than above. However, no person shall operate an aircraft VFR, other than a helicopter, irrespective of any clearance, unless the visibility is 1 mile. All flights shall remain clear of clouds.

[2] Helicopters are excepted from the 1 mile requirement when operated at or below 1,200 feet and at reduced airspeed. (See section 60.30.)

(e) The applicant shall establish a central operations point from which activities will be directed, and he or his representatives shall be immediately available at this point during activities.

(f) The applicant shall provide means to advise all participants that an activity has been halted.

(g) An activity shall be halted when unauthorized persons enter the operations area, or for any other reason in the interest of safety.

(h) No aircraft will be flown closer than (specified distance) horizontally to spectators.

(i) Acrobatics or inverted flight will not be demonstrated lower than (specified altitude).

(j) No object will be dropped from an aircraft if the object will land within (specified distance) from spectators.

(k) A closed field signal, readily seen from an altitude of 3,000 feet (large white "X"), shall be displayed on the landing area when the activities are in progress.

(l) A physical barrier shall be provided to confine spectators to designated areas.

(m) A deadline readily visible to the participants shall be provided to insure that aircraft will maintain the approved horizontal distance from the spectators.

(n) The holder shall notify the nearest FAA Flight Service Station of the date, time, place, nature, and duration of the operations and request that an appropriate Notice to Airmen be disseminated.

(o) The course and pylons for races shall be located and spaced to provide protection to persons and property on the ground.

(p) The holder shall, prior to beginning activities, submit to the approving agent a written statement, signed by all participants that they have read and understand the conditions of the certificate of waiver.

(q) All participants shall be briefed on special field rules, and the manner and order of events before beginning activities.

(r) Clearance for all participating pilots and aircraft shall be obtained from the approving inspector before beginning activities.

(s) All aircraft and special equipment shall be inspected prior to each day's operation.

(t) Any other special provisions which the approving inspector may deem necessary in the interest of safety.

(Published in 20 F. R. 2513, on Apr. 16, 1955, effective Apr. 15, 1955.)

60.2–1 *Emergency situation, report required within 48 hours (FAA policies which apply to sec. 60.2).* When a pilot has been involved in a situation for which a report must be submitted within 48 hours to the nearest regional office of the Administrator, he should describe the incident in detail and forward the report to the regional office [4] having jurisdiction over the area in which the incident occurred.

(Published in 20 F. R. 2514, on Apr. 16, 1955, effective Apr. 15, 1955.)

## General Flight Rules (GFR)

60.13–1 *Appropriate authority (FAA interpretations which apply to sec. 60.13).*

(a) Appropriate authority to issue permission for aircraft operation within a Prohibited or Restricted Area will mean the "Using Agency" (Controlling Agency) as shown on radio facility charts and sectional and world aeronautical charts published by the U.S. Coast and Geodetic Survey.

(b) Application for permission to operate aircraft within a Prohibited or Restricted Area will be made to the "Using Agency" (Controlling Agency).

(c) Application for permission to operate within the Washington, D. C., prohibited area will be made to the Federal Aviation Agency, Bureau of Flight Standards, Washington 25, D.C.

(Published in 20 F. R. 5676 on Aug. 6, 1955, effective Sept. 1, 1955.)

60.16–1 *Issuance of a waiver or authorization (FAA policies which apply to sec. 60.16).*

(a) No Certificate of Waiver or Authorization will be issued for acrobatic flights over congested areas, cities, towns, settlements, or open air assembly of persons.

(b) A waiver may be issued for acrobatic flight within a civil airway premised on a satisfactory showing by the applicant that the flight or flights will be conducted at such altitudes, locations, and times as not to be a hazard to other traffic using the airway.

A waiver may be issued for acrobatic flight within a control zone only after concurrence of

[4] See appendix A.

the appropriate traffic control authority, and on a showing by the applicant that the flight or flights will be conducted at such altitudes, locations, and times as not to be a hazard to other known traffic. Any waiver issued for such flight will stipulate ceiling and visibility minimums to insure safety to air traffic.

(c) A Certificate of Waiver or Authorization for acrobatic flight under 1,500 feet altitude will be restricted to air meets, air shows, and related activities.

(d) The policies and procedures of section 60.1–1 apply to an application for a Certificate of Waiver or Authorization.

60.17–1 *Minimum en route instrument altitudes (FAA rules which apply to sec. 60.17 (d)).* Minimum en route instrument altitudes prescribed by the Administrator are published in Part 610 of Regulations of the Administrator.

(Published in 16 F. R. 7351, July 27, 1951, effective upon publication.)

60.18–1 Vacant.

60.18–2 *Right-turn indicators (FAA rules which apply to sec. 60.18 (a)).* (a) Daytime operations. The L-shaped marker described in this paragraph is approved as a standard visual marker which indicates that turns are to be made to the right.[5] The marker shall be prepared in such size and color, and located in such area, that when displayed between sunrise and sunset it will be readily visible to pilots using the airport. The marker shall be placed in such position that the short member of the L will show the direction of the traffic in the air, the long member of the L will point out the landing strip to be used, and the entire L will indicate the course of the turn to be executed by pilots using the landing strip.

[5] The L-shaped marker is applied to the Segmented Circle Airport Marker System in Technical Standard Order TSO–N5, available free of charge from Aeronautical Reference Branch, Washington 25, D.C.

(b) *Night-time operation.* A flashing amber light shall mean that a clockwise flow of traffic around the airport is required unless otherwise authorized by the control tower operator.

(Published in 16 F. R. 6829, July 17, 1951, effective 0001 A. S. T. July 14, 1951.)

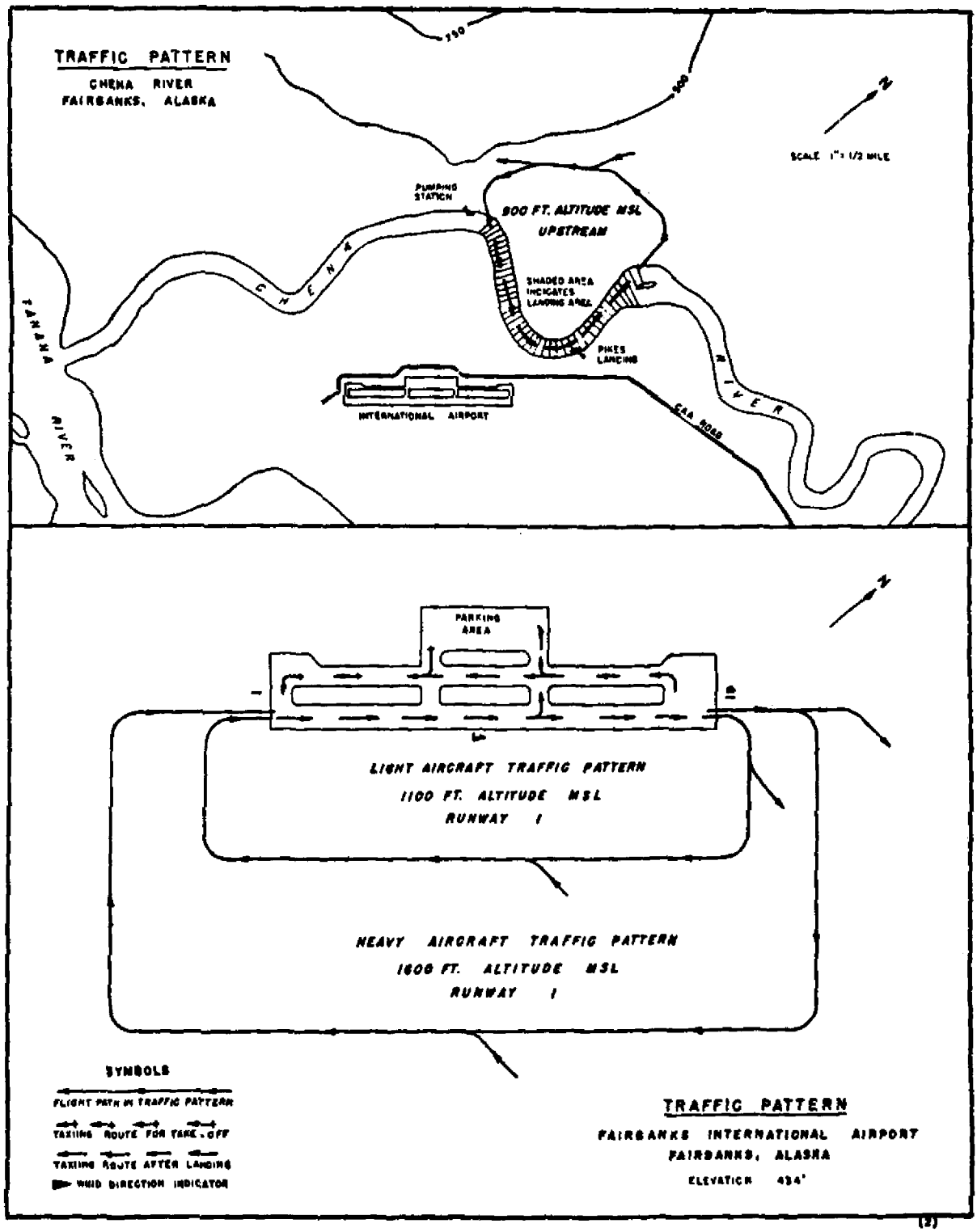
60.18–3 *Light signals (FAA rules which apply to sec. 60.18 (e)).* Light signals used for the control of air traffic shall be of the color and shall mean the following:

| Color and type of signal | On the ground | In flight |
|---|---|---|
| Steady green | Cleared for take-off. | Cleared to land. |
| Flashing green | Cleared to taxi | Return for landing (to be followed by steady green at proper time). |
| Steady red | Stop | Give way to other aircraft and continue circling. |
| Flashing red | Taxi clear of landing area (runway) in use. | Airport unsafe—do not land. |
| Flashing white | Return to starting point on airport. | |
| Alternating red and green. | General warning signal—exercise extreme caution. | |

(Published in 16 F. R. 6829, July 17, 1951, effective 0001 A. S. T., July 14, 1951.)

60.18–4 [Deleted]

60.18–5 *Traffic patterns for Anchorage Airport and Lake Hood-Lake Spenard Landing Area (FAA rules which apply to sec. 60.18 (d)).* Aircraft taking off from or landing at the Anchorage Airport or the Lake Hood-Lake Spenard Landing Area, shall adhere to the following traffic patterns and the altitudes made a part thereof, unless otherwise author-


TRAFFIC PATTERN
CHENA RIVER
FAIRBANKS, ALASKA
SCALE 1" = 1/2 MILE
PUMPING STATION
800 FT. ALTITUDE MSL
UPSTREAM
SHADED AREA INDICATES LANDING AREA
PIKES LANDING
CHENA
RIVER
INTERNATIONAL AIRPORT
SEA ROAD
PARKING AREA
LIGHT AIRCRAFT TRAFFIC PATTERN
1100 FT. ALTITUDE MSL
RUNWAY 1
HEAVY AIRCRAFT TRAFFIC PATTERN
1600 FT. ALTITUDE MSL
RUNWAY 1
SYMBOLS
FLIGHT PATH IN TRAFFIC PATTERN
TAXIING ROUTE FOR TAKE-OFF
TAXIING ROUTE AFTER LANDING
WIND DIRECTION INDICATOR
TRAFFIC PATTERN
FAIRBANKS INTERNATIONAL AIRPORT
FAIRBANKS, ALASKA
ELEVATION 434'

(Rev. 1/1/62)

(*ii*) Heavy aircraft shall enter the traffic pattern at an altitude of 1,600 feet mean sea level and at an angle of 45° to the approximate midpoint of the downwind leg.

(*4*) *Landing.*

(*i*) Light aircraft shall be operated so as to enter the final approach at a distance of at least 1,000 feet from the approach end of the runway.

(*ii*) Heavy aircraft shall be operated so as to enter the final approach at a distance of at least 1,500 feet from the approach end of the runway.

(b) *Chena River Landing Area.*

(1) *Landing area.* The landing area shall be defined as those portions of the Chena River upstream and downstream from a place on the river commonly known and identified as Pike's Landing, and extending downstream to the pumping station and upstream to the first right turn from Pike's Landing.

(2) *Traffic control.*

(i) Aircraft operating in the traffic patterns defined in this chapter will not normally be controlled by the Fairbanks Control Tower.

(ii) Any traffic control instructions issued by the Fairbanks Tower to aircraft landing at or taking off from the defined landing area on the Chena River will be issued only with respect to existing traffic at the Fairbanks Airport. Separation of surface traffic, therefore, will be the responsibility of the aircraft operator.

(3) *Traffic patterns.*

(i) Traffic patterns for the defined landing area on the Chena River shall be circular, shall lie to the west side of the river, and shall not extend east of the defined landing area on the Chena River as illustrated on the diagram set forth below.

(ii) Landing or takeoff upstream (north or east) shall be to the left.

(iii) Landing or takeoff downstream (south or west) shall be to the right.

(4) *Departure from traffic pattern.* Aircraft shall depart from the traffic pattern on a westerly heading.

(5) *Entrance to traffic pattern.* Aircraft shall enter the traffic pattern on an easterly heading at an altitude of 900 feet mean sea level.

(Published in 16 F. R. 6831, July 17, 1951, effective 0001 A. S. T., July 14, 1951, and amended in 20 F. R. 5676, Aug. 6, 1955, effective Sept. 1, 1955.)

**[The next page is 72.]**

[Page 72 follows. Section 60.18–8 on pages 68 through 72 were removed by Supplement No. 6, January 1, 1962.]

60.21–1 *Air traffic clearance*[6] *(FAA policies which apply to sec. 60.21).* (a) When an air traffic clearance has been obtained under either VFR or IFR rules, the pilot in command may not deviate from the provisions thereof unless an amended clearance is obtained or an emergency exists. Pilots desiring to make a change in altitude, route, or destination should request the change from an appropriate communications facility and receive Air Traffic Control approval prior to making the change.

(b) In case emergency authority is used to deviate from provisions of an air traffic clearance, the pilot in command should notify Air Traffic Control as soon as possible and obtain an amended clearance.

(c) In an emergency situation which results in no deviation from the rules prescribed in Part 60, but which requires Air Traffic Control to give priority to an aircraft, the pilot of such aircraft should make a report within 48 hours of such emergency to the nearest regional office of the Administrator.

(d) An amendment to the initial clearance may be issued to a flight at any time Air Traffic Control deems such action necessary to avoid possible conflict between en route, landing, or departing aircraft.

(e) A flight is always cleared to a specific point or location (radio or visual reporting point), defined as a clearance limit. When two-way radio failure is experienced and the pilot proceeds according to the latest traffic clearance, he is expected to observe the following, unless other instructions to the contrary are received:

(1) If the pilot has received and acknowledged a clearance to the destination airport or the radio facility serving that point, he should continue flight at the altitude(s) last assigned by Air Traffic Control, or the minimum instrument altitude,[7] whichever is the higher, to the radio facility servicing the destination airport.

(2) If the pilot has received and acknowledged a clearance to a point other than the destination airport or the radio facility serving the destination airport, he should continue flight at the altitude(s) last assigned by Air Traffic Control or the minimum instrument altitude, whichever is the higher, to the radio facility serving the destination airport.

(3) If holding instructions have been received, the pilot should comply with these instructions until such time as it will be necessary to continue flight so as to arrive at the radio facility serving the destination airport at the expected approach time last received and acknowledged, maintaining the last assigned altitude or the minimum instrument altitude, whichever is the higher.

(4) If holding instructions have been received, but no expected approach time has been received, the pilot should comply with these instructions until the time Air Traffic Control has specified that further clearance may be expected. He should then continue, maintaining the last assigned altitude or the minimum instrument altitude, whichever is the higher.

60.21–2 *Emergency descent (FAA policies which apply to sec. 60.21).* Upon receipt of

[6] An air traffic clearance is an authorization by Air Traffic Control for an aircraft to proceed under specified traffic conditions within a control zone or control area. It is issued for the purpose of preventing collision between aircraft known to Air Traffic Control and does not constitute authority to violate any provision of the CAR. A traffic clearance issued by a center and relayed through a communications facility is prefixed by "ATC clears." Other Air Traffic Control messages originated by a center for relay to a pilot will be prefixed by "ATC advises," or "ATC requests," as appropriate. Traffic clearances are issued to flights through ground-air radio communication facilities, such as radio range stations, airport traffic control towers, and air carrier and military communications stations, or on direct communications channels.

An air traffic clearance provides separation from other aircraft only during that portion of a flight conducted in weather conditions less than VFR minimums. It is the direct responsibility of the pilot to avoid other aircraft when flying in VFR conditions even with a traffic clearance. The initial traffic clearance issued to an aircraft prior to departure will normally authorize flight to the point of first intended landing, with instructions to maintain the altitude at which the aircraft enters the next control area. The pilot should request any desired altitude changes en route.

Air Traffic Control normally attempts to issue a traffic clearance specifying the altitude and route proposed in the flight plan. However, due to traffic conditions, it is frequently necessary that Air Traffic Control specify an altitude or route different from that requested by the pilot. It is important that pilots pay particular attention to the air traffic clearance and not assume that the route and altitude are the same as requested in the flight plan. It is suggested that pilots make a written record of clearances at the time they are received, and verify the clearance with Air Traffic Control if any doubt exists.

[7] The minimum instrument altitude referred to is the minimum established for that portion of the route over which the operation is conducted, regardless of the direction of flight. If deviation from the altitude assigned by Air Traffic Control is necessary in order to comply with a higher minimum instrument altitude, any subsequent descent required in order to comply with a lower minimum instrument altitude should not be made below the altitude last assigned by Air Traffic Control.

The close proximity of airports indicated that it would be impractical to depict the specific points for any given airport. Such action is, therefore, considered inadvisable.

Considerable apprehension was expressed that adoption of speed regulations would impose a severe economic burden upon the air lines and it was stated that adoption of the proposed rule might result in an added annual operating cost to air carrier companies as high as $15,000,000. The Agency appreciates the seriousness of such a consequence; however, it must weigh all safety factors and consider the public interest as the matter of primary concern in making its decisions. It is unfortunate that the intrinsic assets of safety cannot be utilized to balance a monetary deficit. Although the Agency does not wish to penalize the nation's air transportation system, it has no alternative but to select that course which it considers necessary in the interest of safety. This responsibility and authority are exercised only after careful and deliberate judgment.

In this regard, sufficiently persuasive arguments have been presented to convince the Agency that the area in which the speed limitation is applicable should be reduced to the absolute minimum consistent with the requirements of safety. Accordingly, the area of applicability has been reduced to include that airspace below 10,000 feet m.s.l. within 30 nautical miles of the destination airport. While there are various ways whereby this reduction might be accomplished, each has inherent limitations. For example, it was suggested that the altitude of applicability should be established "above terrain" rather than in reference to "mean sea level." This treatment would result in a variable "ceiling" that would follow the contour of the earth's surface. Such a limitation would present obvious compliance difficulties in mountainous areas. While it is equally true that some of the benefits of this rule will be lost in the vicinity of airports located in mountainous areas, due to a "mean sea level" application, it appears that this loss can be countenanced without compromising the rule to an unacceptable degree. Further reduction of the economic impact may be realized from a study currently being conducted to consider the feasibility of permitting the transition of turbojet aircraft from the terminal fixes to final approach courses at altitudes in excess of 10,000 feet m.s.l. Should such procedures prove feasible, a significant reduction in the economic impact of this rule will be realized.

Concern was expressed that the proposal did not clearly indicate the time or place at which a pilot would be required to comply with the speed limitation. The phrase "arriving aircraft" has always, in an aeronautical sense, been used to connote an arrival operation as opposed to any other phase of flight. The exact time at which an aircraft becomes an "arrival aircraft" is entirely dependent upon the intentions of the pilot. The word "arriving" as used in the rule is intended to apply to a pilot operating an aircraft inbound to an airport for the purpose of conducting an actual or simulated approach regardless of whether a landing is effected.

Amendment added a new section 60.27, Aircraft speed.

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Amendment 60–26

Operation at Airports

Adopted: December 19, 1961
Effective: January 23, 1962
Published: December 23, 1962 (26 F.R. 12283)

Civil Air Regulations Amendment 60–24, as published on September 27, 1961, (26 F.R. 9069) amends Part 60, section 60.18, *Operation on and in the vicinity of an airport.* As revised, section 60.18(c)(3) establishes certain communications requirements for aircraft operating to or from an airport not served by a control tower, but at which an operative Federal Aviation Agency Flight Service Station (FSS) is located, and so depicted on the current appropriate Sectional Aeronautical Chart of the U.S. Coast and Geodetic Survey.

At the present time, Sectional Aeronautical Charts are not published for the State of Alaska, the Virgin Islands and certain Pacific Ocean islands. Therefore, until such Sectional Charts are published, it will be necessary to depict Flight Service Stations in these areas on appropriate World Aeronautical Charts. Such depictions will be accomplished no earlier than May 1962.

The Notice of Proposed Rule Making on this subject, Draft Release 60–17, published October 7, 1960 (25 F.R. 9868), had proposed application of this requirement to each airport not served by a control tower but having an FSS, without regard to the FSS being appropriately charted.

Since this amendment is within the scope of the original Notice, further compliance with the notice and public procedures requirements of the Administrative Procedure Act is unnecessary. The amendment will be made effective at least thirty days after publication.

Amendment revised section 60.18(c) (3).

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