U. S. DEPARTMENT OF COMMERCE

DANIEL C. ROPER, Secretary

BUREAU OF AIR COMMERCE

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CIVIL AIR REGULATIONS

60.—AIR TRAFFIC RULES

As Amended to May 31, 1938

UNITED STATES
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CIVIL AIR REGULATIONS

Pursuant to the authority contained in the Air Commerce Act of 1926 (44 Stat. 568) as amended by the Act of February 28, 1929 (45 Stat. 1404), the Act of June 19, 1934 (48 Stat. 1113), the Act of June 19, 1934 (48 Stat. 1116), and Sections 11 and 12 of the Act of June 12, 1934 (48 Stat. 933, 937), the following Civil Air Regulations are hereby made, prescribed, and issued to be known as—

Part 00. Aircraft Registration Certificate.
Part 01. Aircraft Certificates.
Part 02. Aircraft Identification Mark.
Part 03. Aircraft Title Transfer.
Part 04. Airplane Airworthiness.
Part 13. Aircraft Engine Airworthiness.
Part 14. Aircraft Propeller Airworthiness.
Part 15. Aircraft Equipment Airworthiness.
Part 18. Repair and Alteration of Aircraft.
Part 20. Pilot Rating.
Part 21. Airline Pilot Rating.
Part 23. Ground Instructor Rating.
Part 24. Mechanic Rating.
Part 25. Parachute Rigger Rating.
Part 26. Airport Control Tower Operator Rating.
Part 27. Airline Dispatcher Rating.
Part 40. Scheduled Airline Certification (Interstate and Intra-Territorial).
Part 50. Flying School Rating.
Part 52. Aircraft Repair Station Rating.
Part 60. Air Traffic Rules.
Part 61. Scheduled Airline Rules (Interstate).
Part 90. Air Mail.
Part 91. Aircraft Accident Investigations.
Part 92. Hearings Upon Certificates (Issued, Renewed, Denied, Suspended or Revoked).
Part 93. Evidence.
Part 94. Penalties.
Part 95. Imposition, Remission and Mitigation of Penalties.
Part 96. Authorization to Act for the Secretary.
Part 98. Definitions.
Part 99. Mode of Citation of Regulations.

Any and all rules and regulations heretofore made, prescribed, and issued by the Secretary of Commerce pursuant to the authority first above stated are hereby repealed.

Approved May 31, 1938.

[SEAL]

DANIEL C. ROPER,
Secretary of Commerce.

PART 60.—AIR TRAFFIC RULES

60.0 Provision for issuance. Pursuant to the provisions of the Air Commerce Act requiring the Secretary of Commerce to provide regulations for the rating of aircraft, airmen, air navigation facilities, air carriers and flying schools, and for the navigation, protection and identification of aircraft, and for prohibiting the operation or navigation in violation thereof, the following air traffic rules relating thereto, in addition to those prescribed elsewhere in the Civil Air Regulations, are hereby prescribed.

60.1 Definitions.

60.100 Civil airway. A civil airway is a route in the navigable airspace designated by the Secretary of Commerce as a route suitable for

interstate or foreign air commerce and includes the airspace located vertically above an area on the horizontal plane contained within lines encircling each terminal airport, intermediate airport, and other intermediate points, specified on such airway within a radius of 10 miles from the center of such airport or other specified intermediate point and also contained within two parallel lines located 10 miles from the center line connecting the terminal airports by way of each intermediate airport or other intermediate point specified to designate the route of such airway. Each civil airway shall also include the terminal and intermediate airports, emergency landing fields and all other air navigation facilities located, or which may be hereafter located and established, within the said area. No civil airway shall include an airspace reservation, or any part thereof, set aside and protected pursuant to the provisions of Section 4 of the Air Commerce Act of 1926, the navigable airspace above non-territorial waters, nor the navigable airspace above foreign territorial lands or waters. (For a list of civil airways, see § 60.20.)

60.101 Airspace reservation. An airspace reservation is the airspace located vertically above an area on the surface of the land or water designated and set apart by an executive order of the President or by a State for purposes of national defense or for other governmental purposes. (For a list of airspace reservations, see Appendix A and B.)

60.102 Control airport. A control airport is an airport which has been so designated by the Secretary to provide for the safety of aircraft moving in interstate or foreign air commerce. (For a list of control airports, see § 60.21.)

60.103 Control zone. A control zone is the airspace above an area within a circle with a radius of 3 miles drawn from the center of a control airport: *Prorided, however,* That if a radio directional aid station designed to direct air traffic to the control airport is more than 3 miles from the center thereof, then the control zone is extended above an area one-half mile on each side of a line projected from the center of such airport to such radio aid. (See § 60.21.)

60.104 Zone of intersection. A zone of intersection is that part of a civil airway which overlaps and lies within any part of any other civil airway.

60.105 Control zone of intersection. A control zone of intersection is the airspace above an area within a circle with a radius of 25 miles drawn from the center of the zone of intersection as specified in § 60.106 (a), (b), or (c).

60.106 Center of control zone of intersection. The center of a control zone of intersection is:

(*a*) The radio range station located at an intersection of airways, or

(*b*) the center of the intersection of the "on course" radio range signals projected down intersecting airways, or

(*c*) the center of an "on course" signal projected down an airway, at a point designated by the Secretary.

60.107 Green zone of intersection. A green zone of intersection is a zone of intersection of a green civil airway in which through traffic on a green civil airway continues through such zone at a constant altitude, and in which zone traffic on the intersected amber, red, or

blue civil airway shall proceed as outlined in §§ 60.58410, 60.58420, and 60.5843.

60.108 Amber zone of intersection. An amber zone of intersection is a zone of intersection on an amber civil airway in which through traffic on an amber civil airway continues through such zone at a constant altitude and in which zone traffic on the intersected red, or blue civil airway shall proceed as outlined in §§ 60.58420 and 60.5843.

60.109 Red zone of intersection. A red zone of intersection is a zone of intersection on a red civil airway in which traffic on a red civil airway continues through such zone at a constant altitude and traffic on a blue civil airway shall proceed as outlined in § 60.5843.

60.110 Zone of intersection priority. That part of an amber, red, or blue zone of intersection which may overlap and lie within a green zone of intersection shall be considered as the green zone of intersection, and that part of a red or blue zone of intersection which may overlap or lie within an amber zone of intersection shall be considered as the amber zone of intersection, and that part of a blue civil airway which may overlap or lie within a red zone of intersection shall be considered as the red zone of intersection.

60.111 Alternate airport. An alternate airport is an airport, other than the point of first intended landing, specified in the flight plan, and to which the flight may be directed in case of emergency.

60.112 Radio fix. A radio fix is a geographical location on a civil airway, above which the position of an aircraft in flight can be accurately determined by means of radio only. (Such as a cone of silence marker, Z type marker, fan type marker, or intersection of radio range "on course" signals.) (For a list of designated radio fixes, see § 60.23.)

60.113 Check point. A check point is a geographical location on the surface of the land or water, above which the position of an aircraft in flight can be accurately determined by means of visual reference. (Such as a river, highway, mountain, bridge, lightship, etc.)

60.114 Radio range station. A radio range station is that point in a radio station from which radio signals are emitted for the purpose of assisting an aircraft to maintain a course.

60.115 (Unassigned).

60.116 (Unassigned).

60.117 (Unassigned).

60.118 (Unassigned).

60.119 (Unassigned).

60.120 Airway traffic control station. An airway traffic control station is a station operated by the Bureau for the purpose of air traffic control on civil airways within the jurisdiction of such station. (For a list of airway traffic control stations, see Appendix D.)

60.121 Airway traffic control area. An airway traffic control area is an area within the limits of designated civil airways and over which a particular Bureau airway traffic control station exercises traffic control. (For a list of airway traffic control areas, see § 60.24.)

60.122 Airway communications station. An airway communications station is an airway radio, teletype, or other communications station operated by the Bureau.

60.123 Airport control tower. An airport control tower is an establishment properly situated and equipped to allow an operator thereof to adequately control air traffic in the immediate vicinity of the air port on or adjacent to which such airport control tower is located.

60.124 (Unassigned).

60.125 (Unassigned).

60.126 (Unassigned).

60.127 (Unassigned).

60.128 (Unassigned).

60.129 (Unassigned).

60.130 Contact flight. Contact flight is flight of aircraft in which the attitude of the aircraft and its flight path can at all times be controlled by means of visual reference to the ground or water.

60.131 Instrument flight. Instrument flight is flight of aircraft in which the visual reference in § 60.130 is not continuously available and the attitude of the aircraft and its flight path can be controlled in part or in whole by reference to instruments only.

60.132 Over-the-top flight. Over-the-top flight is flight of aircraft made above an overcast, usually a cloud formation.

60.133 Flight plan. A flight plan means a plan of flight which shall contain the following information:

(*a*) The aircraft identification mark, or the name of the governmental service in which the aircraft is employed, if so employed, or the name of the airline operator and the trip number, if engaged in scheduled airline service.

(*b*) The type of aircraft involved and the number of aircraft making the flight, if the aircraft are in formation.

(*c*) The name of the pilot, or of the flight commander if the aircraft are in formation.

(*d*) The point of departure of the particular flight for which such plan is being filed.

(*e*) The proposed cruising altitude or altitudes.

(*f*) The point of first intended landing.

(*g*) The proposed cruising airspeed.

(*h*) The radio equipment carried in the aircraft. (If no radio—NORDO; if radio receiver only—RONLY; if two-way radio, statement of transmitter frequency to be used.)

(*i*) The proposed time of departure. (The time of departure shall be considered as the time when the aircraft leaves the ground.)

(*j*) The estimated elapsed time until arrival on the ground at the point of first intended landing. (For scheduled operation, the first stop to be made, together with additional stops if requested by an airway traffic control station.)

(*k*) The alternate airport, if the flight is to involve instrument flight.

(*l*) The route, if other than a direct course, and any other pertinent information which the pilot deems useful for control purposes or which may be requested by an airway traffic control station.

60.134 Approved flight plan. An approved flight plan is a plan of flight, containing the information required by § 60.133, which has been approved solely with respect to known air traffic conditions by the Bureau airway traffic control station into the control area of which

the flight will first enter. (For a list of airway traffic control areas, see § 60.24.)

NOTE.—Approval of a flight plan is an authorization for an aircraft to proceed in accordance with the provisions of such flight plan only insofar as known air traffic conditions are concerned and does *not* constitute authority to violate any provision or provisions of the Civil Air Regulations.

60.1340 Traffic control instructions issued to the pilot before departure or enroute shall be considered to be a part of the approved flight plan.

60.135 Cruising altitude. A cruising altitude is a flight altitude, measured in feet above sea level, proposed for that part of a flight from point to point during which a constant altitude will be maintained.

60.136 (Unassigned).

60.137 (Unassigned).

60.138 (Unassigned).

60.139 (Unassigned).

60.140 Ceiling. Ceiling is the distance from the cloud base to the ground. (The reports of the U. S. Weather Bureau, when available to the pilot, shall govern.)

60.141 Unlimited ceiling. A ceiling is considered unlimited when clouds cover less than one-half of the sky or when the base of the clouds is more than 9,750 feet above the point of observation. (The reports of the U. S. Weather Bureau, when available to the pilot, shall govern.)

60.142. Daylight, hours of. (Day flight, daylight hours, day.) The hours of daylight as used in these rules are those hours between the mean solar times of sunrise and sunset, as published in the Nautical Almanac, converted to local standard time for the locality concerned.

NOTE.—The "Nautical Almanac", price 50 cents, containing sunshine tables, may be obtained from the Supt. of Documents, Government Printing Office, Washington, D. C. Information is available from the "Sunshine Tables", in the offices of Officials in Charge, Airport Station, U. S. Weather Bureau, at:

Newark, N. J.
Washington Airport, Washington, D. C.
Atlanta, Ga.
Cleveland, Ohio.
Chicago, Ill.
Kansas City, Mo.
Fort Worth, Tex.
Salt Lake City, Utah
Portland, Ore.
Oakland, Calif.

These "Sunshine Tables" are not available for distribution.

60.143 Darkness, hours of. (Night flight, hours of darkness, night.) The hours of darkness as used in these rules are those hours between the mean solar times of sunset and sunrise, as published in the Nautical Almanac, converted to local standard time for the locality concerned.

NOTE.—See Note under § 60.142.

60.144 Visibility. Visibility is the greatest distance toward the horizon at which conspicuous objects can be seen and identified.

60.145 Weather minimums. Weather minimums are ceiling, visibility and other minimums provided for specified types of flight

operation, and below which flight operation is not permitted, unless specifically authorized elsewhere in these regulations or by the Secretary.

NOTE.—The local United States Weather Bureau reporting station for each control airport will classify existing weather conditions for such airport by one of the following symbols:

Class C—*Contact:* Weather equal to or better than the minimums specified for the particular airport for flight in accordance with contact flight rules. (Satisfactory for contact flight.)

Class N—*Instrument:* Weather less than the minimums specified for the particular airport for contact flight (Class C above) and down to the minimums prescribed for the particular airport for suspension of flight operations. (Requiring observance of instrument flight rules, unless flight in accordance with contact flight rules has been authorized as provided for in §§ 60.440 and 60.441.)

Class X—*Closed:* Weather below the minimums specified for the particular airport, wherein any landing or take-off, other than a flight of public aircraft or scheduled airline aircraft if otherwise authorized, is suspended. (Take-off and landing of non-scheduled civil aircraft suspended, unless authorized as provided for in § 60.540.)

60.146 (Unassigned).

60.147 (Unassigned).

60.148 (Unassigned).

60.149 (Unassigned).

60.150 Military aircraft. Military aircraft are public aircraft operated in the service of the United States Army, National Guard, Navy, Marine Corps or Coast Guard.

60.151 Public aircraft. A public aircraft is an aircraft used exclusively in the governmental service.

60.152 Acrobatics (acrobatic flight). Acrobatics are evolutions voluntarily performed with an aircraft other than those required for normal flight.

60.2 Airway, airport, and other designations.

60.20 Civil airway designation. The following air routes in the navigable airspace, deemed suitable for interstate or foreign air commerce, are designated as civil airways, and are further designated, for the protection of aircraft in flight, as green, amber, red, or blue civil airways, as hereinafter specified.

60.200 Green civil airways. The following air routes are designated as civil airways and are further designated as green civil airways:

60.20000 Green civil airway No. 1. Seattle, Wash.-Boston, Mass.—Seattle, Wash. (Boeing Field), via the Seattle, Wash., radio range station; Easton, Wash., radio marker station; Ellensburg, Wash., radio range station; Ephrata, Wash., radio range station; Spokane, Wash., radio range station; Coeur D'Alene, Idaho, radio range station; Mullan Pass, Idaho, radio range station; Superior, Mont., radio range station; Missoula, Mont., radio range station; Drummond, Mont., radio range station; Helena, Mont., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Helena, Mont., radio range and the northwest leg of the Belgrade, Mont., radio range (Townsend, Mont., intermediate field); Belgrade, Mont., radio range station; Livingston, Mont., radio range station; Billings, Mont., radio range station; Miles City, Mont., radio range station; the intersection of the center lines of the on course

signals of the northeast leg of the Miles City, Mont., radio range and the west leg of the Dickinson, N. Dak., radio range (Mildred, Mont., intermediate field); Dickinson, N. Dak., radio range station; Bismarck, N. Dak., radio range station; Jamestown, N. Dak., radio range station: Fargo, N. Dak., radio range station; Alexandria, Minn., radio range station; Minneapolis, Minn., radio range station; Hager City, Wis., radio marker station; La Crosse, Wis., radio range station; Lone Rock, Wis., radio range station; Milwaukee, Wis., radio range station; Grand Rapids, Mich. (Kent County Airport); Lansing, Mich. (Capitol City Airport); the intersection of the center lines of the on course signals of the north leg of the Detroit, Mich. (Wayne County Airport), radio range and the west leg of the Strathburn, Ontario, radio range (approximately Pontiac, Mich.); Detroit, Mich. (Wayne County Airport), radio range station to the intersection of the center line of the on course signal of the east leg of the Detroit, Mich. (Wayne County Airport), radio range and the U. S.-Canadian Border. (The intersection of the center line of the on course signal of the east leg of the Detroit, Mich. (Wayne County Airport), radio range and the U. S.-Canadian Border over Canada to the intersection of the center line of the on course signal of the west leg of the Buffalo, N. Y., radio range and the U. S.-Canadian Border not designated.) The intersection of the center line of the on course signal of the west leg of the Buffalo, N. Y., radio range and the U. S.-Canadian Border via the Buffalo, N. Y., radio range station; Rochester, N. Y. (Municipal Airport); Syracuse, N. Y., radio range station; the intersection of the center lines of the on course signals of the east leg of the Syracuse N. Y., radio range and the northwest leg of the Albany, N. Y., radio range (Utica, N. Y.); Albany, N. Y., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Albany, N. Y., radio range and the southwest leg of the Boston, Mass., radio range (approximately Putnam, Conn., radio marker station); Boston, Mass., radio range station to the Boston Municipal Airport.

60.20001 Green civil airway No. 2. San Francisco, Calif.-New York, N. Y. San Francisco, Calif. (Municipal Airport), via the Oakland, Calif., radio range station; Sacramento, Calif., radio range station; Auburn, Calif., radio marker station; the intersection of the center lines of the on course signals of the northeast leg of the Oakland, Calif., radio range and the southwest leg of the Donner Summit, Calif., radio range (Colfax, Calif.); Donner Summit, Calif., radio range station; Reno, Nev., radio range station; Humboldt, Nev., radio marker station; Buffalo Valley, Nev., radio range station; Beowawe, Nev., radio marker station; Elko, Nev., radio range station: Ventosa, Nev., radio marker station; Wendover, Utah, radio range station; Salt Lake City, Utah, radio range station; Knight, Wyo., radio range station; Rock Springs, Wyo., radio range station; Cherokee, Wyo., radio range station; Medicine Bow, Wyo., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Medicine Bow, Wyo., radio range and the northwest leg of the Cheyenne, Wyo., radio range (approximately Beacon Site No. 35); Cheyenne, Wyo., radio range station;

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Sidney, Nebr., radio range station; Big Springs, Nebr., radio marker station; North Platte, Nebr., radio range station; Grand Island, Nebr., radio range station; Omaha, Nebr., radio range station; Adair, Iowa, radio marker station; Des Moines, Iowa, radio range station; Montezuma, Iowa, radio marker station; Davenport, Iowa, radio range station; the intersection of the center lines of the on course signals of the east leg of the Davenport, Iowa, radio range and the southwest leg of the Chicago, Ill., radio range (Sheridan, Ill.); Chicago, Ill., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range (approximately Lansing, Ill.); McCool, Ind., radio marker station; Goshen, Ind., radio range station; Helmer, Ind., radio marker station; Archbold, Ohio, radio range station; Toledo, Ohio, radio range station; Vickery, Ohio, radio marker station; Cleveland, Ohio, radio range station; Warren, Ohio, radio marker station; Mercer, Pa., radio range station; Brookville, Pa., radio marker station; Kylertown, Pa., radio range station; Bellefonte, Pa., radio range station; Woodward, Pa., radio marker station; Sunbury, Pa., radio marker station; Allentown, Pa., radio range station; the intersection of the center lines of the on course signals of the east leg of the Allentown, Pa., radio range and the southwest leg of the Newark, N. J., radio range (New Brunswick, N. J., fan type radio marker station); Newark, N. J., radio range station; Floyd Bennett Field, New York, N. Y., radio range station to the Floyd Bennett Field, New York, N. Y.

60.20002 Green civil airway No. 3. Los Angeles, Calif.-Camden, N. J.—Los Angeles, Calif. (Burbank, Calif., Union Air Terminal), via the Los Angeles, Calif. (Burbank, Calif., Union Air Terminal), radio range station; Van Nuys, Calif., radio range station; Saugus, Calif., radio range station; Palmdale, Calif., radio marker station; Daggett, Calif., radio range station; the intersection of the center lines of the on course signals of the east leg of the Daggett, Calif., radio range and the southwest leg of the Kingman, Ariz., radio range (Goffs, Calif.); Kingman, Ariz., radio range station; Ashfork, Ariz., radio range station; Winslow, Ariz., radio range station; El Morro, N. Mex., radio range station; Albuquerque, N. Mex., radio range station; Otto, N. Mex., radio range station; Anton-Chico, N. Mex., radio marker station; Tucumcari, N. Mex., radio range station; Amarillo, Tex., radio range station; Conway, Tex.; Canadian, Tex., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Canadian, Tex., radio range and the southwest leg of the Wichita, Kans., radio range (Waynoka, Okla., intermediate field); Wichita, Kans., radio range station; Cassoday, Kans., radio marker station; Lebo, Kans., radio range station; Kansas City, Mo., radio range station; Knoxville, Mo., radio marker station; Marshall, Mo. (Nicholas Beazley Airport); Columbia, Mo., radio range station; New Florence, Mo., radio marker station; St. Louis, Mo., radio range station; Effingham, Ill., radio range station; Terre Haute, Ind., radio range station; Indianapolis, Ind., radio range station; Columbus, Ohio, radio range station; Cambridge, Ohio, radio marker station; Pittsburgh, Pa., radio range station; the intersection

of the center lines of the on course signals of the east leg of the Pittsburgh, Pa., radio range and the west leg of the Harrisburg, Pa., radio range (Ashville, Pa., Airport); Harrisburg, Pa., radio range station; the intersection of the center lines of the on course signals of the east leg of the Harrisburg, Pa., radio range and the southwest leg of the Camden, N. J., radio range (Chester, Pa.); Camden, N. J., radio range station to Camden, N. J. (Central Airport).

60.20003 Green civil airway No. 4. Los Angeles, Calif.-Washington, D. C.—Los Angeles, Calif. (Glendale, Calif., Grand Central Air Terminal), via the intersection of the center lines of the on course signals of the southeast leg of the Burbank, Calif. (Union Air Terminal), radio range and the west leg of the Fontana, Calif., radio range; Fontana, Calif., radio range station; Indio, Calif. (Indio Airport); Blythe, Calif., radio range station; Phoenix, Ariz., radio range station; the intersection of the center lines of the on course signals of the south leg of the Phoenix, Ariz., radio range and the northwest leg of the Tucson, Ariz., radio range (approximately Beacon Site No. 0); Tucson, Ariz., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Tucson, Ariz., radio range and the southwest leg of the Rodeo, N. Mex., radio range (Douglas, Ariz., International Airport); Rodeo, N. Mex., radio range station; Columbus, N. Mex. (intermediate field); El Paso, Tex., radio range station; Guadalupe Pass, Tex., radio range station; Wink, Tex., radio range station; Big Spring, Tex., radio range station; Abilene, Tex. (Abilene Airport); Eastland, Tex. (Eastland Airport); Santo, Tex., radio marker station; Fort Worth, Tex., radio range station; Texarkana, Ark., radio range station; Little Rock, Ark., radio range station; Memphis, Tenn., radio range station; Nashville, Tenn., radio range station; Smithville, Tenn., radio range station; Knoxville, Tenn., radio range station; Bristol, Tenn., radio range station; Pulaski, Va., radio range station; Roanoke, Va., radio range station; Gordonsville, Va., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Gordonsville, Va., radio range and the south leg of the Washington, D. C., radio range (Mason Springs, Md.); Washington, D. C., radio range station to the Washington, D. C., Washington Airport.

60.20004 Green civil airway No. 5. Corpus Christi, Tex.-Norfolk, Va.—Corpus Christi, Tex. (Cliff Maus Field), via the Houston, Tex., radio range station; Beaumont, Tex. (Beaumont Airport); New Orleans, La., radio range station; the intersection of the center lines of the on course signals of the east leg of the New Orleans, La., radio range and the southwest leg of the Mobile, Ala., radio range (Gulfport, Miss. Airport); Mobile, Ala., radio range station; Montgomery, Ala. (Montgomery Airport); Atlanta, Ga., radio range station; Jefferson, Ga., radio marker station; Anderson, S. C., radio marker station; Spartanburg, S. C., radio range station; Greensboro, N. C., radio range station; South Boston, Va., radio marker station; Crewe, Va. (intermediate field); Chester, Va.; Richmond, Va., radio range station to Norfolk, Va. (Norfolk Municipal Airport).

60.201 Amber civil airways. The following air routes are designated as civil airways and are further designated as amber civil airways:

60.20100 Amber civil airway No. 1. San Diego, Calif.-Blaine, Wash. (U. S.-Mexican Border to U. S.-Canadian Border)—The intersection of the center line of the south leg of the San Diego, Calif., radio range and the U. S.-Mexican Border (San Ysidro, Calif.), via the San Diego, Calif., radio range station; Oceanside, Calif., radio marker station; Long Beach, Calif., radio range station; the intersection of the center lines of the on course signals of the north leg of the Long Beach, Calif., radio range and the southeast leg of the Burbank, Calif. (Union Air Terminal), radio range (Downey, Calif.) to the intersection of the center lines of the on course signals of the southeast leg of the Burbank, Calif. (Union Air Terminal), radio range and the west leg of the Fontana, Calif., radio range. (Green Civil Airways No. 3 and No. 4 to Saugus, Calif., radio range station.) Saugus, Calif., radio range station via the Bakersfield, Calif., radio range station; Fresno, Calif., radio range station; the intersection of the center lines of the on course signals of the northwest leg of the Fresno, Calif., radio range and the southeast leg of the Oakland, Calif., radio range (Modesto, Calif., Modesto Airport); Livermore, Calif., radio marker station to the Oakland, Calif., radio range station. (Green Civil Airway No. 2 Oakland, Calif., radio range station to the intersection of the center lines of the on course signals of the northeast leg of the Oakland, Calif., radio range and the south leg of the Williams, Calif., radio range.) The intersection of the center lines of the on course signals of the northeast leg of the Oakland, Calif., radio range and the south leg of the Williams, Calif., radio range via the Potrero Hill, Calif., radio marker station; Williams, Calif., radio range station; Mt. Shasta, Calif., radio range station; Montague, Calif., radio range station; Medford, Oreg., radio range station; Eugene, Oreg., radio range station; Portland, Oreg., radio range station; Castle Rock, Wash., radio marker station; the intersection of the center lines of the on course signals of the northwest leg of the Portland, Oreg., radio range and the southwest leg of the Tacoma, Wash., radio range (Chehalis, Wash., Chehalis Airport); Tacoma, Wash., radio range station; Seattle, Wash., radio range station; Monroe, Wash. to Blaine, Wash. (U. S.-Canadian Border).

60.20101 Amber civil airway No. 2. Daggett, Calif.-Great Falls, Mont.—Daggett, Calif. (intermediate field), via the Daggett, Calif., radio range station; Baker, Calif. (intermediate field); Kingston, Calif. (intermediate field); Las Vegas, Nev., radio range station; Glendale, Nev. (intermediate field); Enterprise, Utah, radio range station; Milford, Utah, radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Milford, Utah, radio range and the south leg of the Salt Lake City, Utah, radio range; Salt Lake City, Utah, radio range station; Pocatello, Idaho, radio range station; Idaho Falls, Idaho, radio range station; the intersection of the center lines of the on course signals of the northwest leg of the Idaho Falls, Idaho, radio range and the southwest leg of the Whitehall, Mont., radio range (Dillon, Mont., intermediate field); Whitehall, Mont., radio range station; Helena, Mont., radio range station to Great Falls, Mont. (Great Falls Airport).

60.20102 Amber civil airway No. 3. El Paso, Tex.-Cheyenne, Wyo.—El Paso, Tex. (El Paso Airport) via the El Paso, Tex., radio range station; Albuquerque, N. Mex., radio range station; Santa Fe, N. Mex. (Ashley Pond Airport); Las Vegas, N. Mex. (Las Vegas Airport); Wagon Mound, N. Mex. (Wagon Mound Airport); Trinidad, Colo. (Trinidad Airport); Pueblo, Colo., radio range station; Denver, Colo. (Denver Airport), to the Cheyenne, Wyo., radio range station.

60.20103 Amber civil airway No. 4. Brownsville, Tex.-Minneapolis, Minn.—Brownsville, Tex. (Pan American Airport), via the Kingsville, Tex. (intermediate field); Corpus Christi, Tex. (Cliff Maus Airport); San Antonio, Tex., radio range station; Austin, Tex. (Robert Mueller Airport); Waco, Tex., radio range station; Fort Worth, Tex., radio range station; Ardmore, Okla., radio marker station; Oklahoma City, Okla., radio range station; Britton, Okla.; Tulsa, Okla., radio range station; Moran, Kans., radio range to the intersection of the center lines of the on course signals of the north leg of the Moran, Kans., radio range and the southwest leg of the Kansas City, Mo., radio range (approximately Bonner Springs, Kans.). (Green Civil Airway No. 3, Bonner Springs, Kans., to Kansas City, Mo.) Kansas City, Mo., radio range station via Omaha, Nebr., radio range station; Sioux City, Iowa (Rickenbacker Airport), to Minneapolis, Minn., radio range station.

60.20104 Amber civil airway No. 5. New Orleans, La.-Milwaukee, Wis.—New Orleans, La. (Shushan Airport), via the New Orleans, La., radio range station; Tylertown, Miss., radio range station; Jackson, Miss., radio range station; Greenwood, Miss, radio range station; Memphis, Tenn., radio range station; Advance, Mo., radio range station; the intersection of the center lines of the on course signals of the north leg of the Advance, Mo., radio range and the southeast leg of the St. Louis, Mo., radio range (approximately Beacon Site No. 54); St. Louis, Mo., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the St. Louis, Mo., radio range and the south leg of the Sterling, Ill., radio range (Springfield, Ill., Springfield Airport); the intersection of the center lines of the on course signals of the south leg of the Sterling, Ill., radio range and the southwest leg of the Chicago, Ill., radio range (approximately Morse, Ill., radio marker station) to the intersection of the center lines of the on course signals of the southwest leg of the Chicago, Ill., radio range and the east leg of the Davenport, Iowa, radio range (approximately Sheridan, Ill.). (Green Airway No. 2 Sheridan, Ill., to Chicago, Ill., radio range station.) Chicago, Ill., radio range station via the intersection of the center lines of the on course signals of the northwest leg of the Chicago, Ill., radio range and the south leg of the Milwaukee, Wis., radio range; Milwaukee, Wis., radio range station to Milwaukee, Wis., (Milwaukee County Airport).

60.20105 Amber civil airway No. 6. Bryceville, Fla.-Buffalo, N. Y.—Bryceville, Fla., via the Alma, Ga., radio range station; Macon, Ga. (Macon Airport); Atlanta, Ga., radio range station; Adairsville, Ga., radio marker station; Chattanooga, Tenn., radio range station; Manchester, Tenn. (intermediate field); Nashville, Tenn., radio range station; Louisville, Ky., radio range station;

Warsaw, Ky., radio marker station; Cincinnati, Ohio, radio range station; Columbus, Ohio, radio range station; Hayesville, Ohio, radio marker station to the intersection of the center lines of the on course signals of the northwest leg of the Akron, Ohio, radio range and the west leg of the Cleveland, Ohio, radio range (approximately Elyria, Ohio). (Green Civil Airway No. 2 Elyria, Ohio, to Bedford, Ohio.) Bedford, Ohio (Bedford Airport), via the Perry, Ohio, radio marker station; Erie, Pa., radio range station; Dunkirk, N. Y., radio marker station; Buffalo, N. Y., radio range station to the Buffalo Airport.

60.20106 Amber civil airway No. 7. Key West, Fla.-Bangor, Maine.—Key West, Fla. (Meacham Airport), via the Key West, Fla., radio range station; the intersection of the center lines of the on course signals of the east leg of the Key West, Fla., radio range and the southwest leg of the Miami, Fla., radio range (Marathon, Fla.); Miami, Fla., radio range station; the intersection of the center lines of the on course signals of the north leg of the Miami, Fla., radio range and the southeast leg of the Titusville, Fla., radio range (Jupiter, Fla.); Titusville, Fla., radio range station; Jacksonville, Fla., radio range station; Savannah, Ga. (Savannah, Ga. Airport); Charleston, S. C., radio range station; Florence, S. C. (intermediate field); Raleigh, N. C.; radio range station to Chester, Va. (Green Civil Airway No. 5 Chester, Va., to Richmond, Va., radio range station.) Richmond, Va., radio range station to Mason Springs, Md. (Green Civil Airway No. 4 Mason Springs, Md., to Washington, D. C., radio range station.) Washington, D. C., radio range station via the intersection of the center lines of the on course signals of the northeast leg of the Washington, D. C., radio range and the southwest leg of the Camden, N. J., radio range (Havre de Grace, Md.) to Chester, Pa. (Green Civil Airway No. 3 Chester, Pa., to Camden, N. J.) Camden, N. J., radio range station to New Brunswick, N. J. (fan type radio marker station). (Green Civil Airway No. 2 New Brunswick, N. J., fan type radio marker station to Newark, N. J., radio range station.) Newark, N. J., radio range station via Hartford, Conn. (Rentschler Field), to Putnam, Conn., radio marker station. (Green Civil Airway No. 1 Putnam, Conn., radio marker station to Boston, Mass., radio range station.) Boston, Mass., radio range station via the Portland, Maine, radio range station; Augusta, Maine, radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Augusta, Maine, radio range and the southwest leg of the Bangor, Maine, radio range (approximately Waterville, Maine, Airport); Bangor, Maine, radio range station to the Bangor, Maine, Airport.

60.202 Red civil airways. The following air routes are designated as civil airways and are further designated as red civil airways:

60.20200 Red civil airway No. 1. Portland, Oreg.-Clearfield, Utah.—Portland, Oreg., radio range station, via the Cascade Locks, Oreg., radio marker station; North Dalles, Wash., radio range station; Arlington, Oreg., radio marker station; Pendleton, Oreg., radio range station; Baker, Oreg. (intermediate field); Weiser, Idaho, radio marker station; Boise, Idaho, radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Boise, Idaho,

radio range and the northwest leg of the Burley, Idaho, radio range (approximately King Hill, Idaho, radio marker station); Burley, Idaho, radio range station; Strevell, Idaho, radio marker station; Locomotive Springs, Utah, radio range station to Clearfield, Utah (Beacon Site No. 2).

60.20201 Red civil airway No. 2. Ellensburg, Wash.-Ephrata, Wash.—Ellensburg, Wash., radio range station via Wenatchee, Wash. (Fancher Airport), to the Ephrata, Wash., radio range station.

60.20202 Red civil airway No. 3. Drummond, Mont.-Belgrade, Mont.—Drummond, Mont., radio range station via Deer Lodge, Mont.; Anaconda, Mont.; Butte, Mont., radio range station; White Hall, Mont., radio range station to the Belgrade, Mont., radio range station.

60.20203 Red civil airway No. 4. Billings, Mont.-Great Falls, Mont.—Billings, Mont., radio range station via Lewiston, Mont. (Lewiston Airport), to Great Falls, Mont. (Great Falls Airport).

60.20204 Red civil airway No. 5. Pantano, Ariz.-Rodeo, N. Mex.—Pantano, Ariz., via Benson, N. Mex. (intermediate field), to the Rodeo, N. Mex., radio range station.

60.20205 Red civil airway No. 6. Laramie, Wyo.-Grand Island, Nebr.—Laramie, Wyo., radio range station via Denver, Colo. (Denver Airport); Akron, Colo. (American Legion Airport); Hayes Center, Nebr. (Hayes Center Airport), to the Grand Island, Nebr., radio range station.

60.20206 Red civil airway No. 7. Conway, Tex.-Oklahoma City, Okla.—Conway, Tex., to the Oklahoma City, Okla., radio range station.

60.20207 Red civil airway No. 8. Waco, Tex.-Galveston, Tex.—Waco, Tex., radio range station via the Navasota, Tex., radio range station; Houston, Tex., radio range station to Galveston, Tex. (Galveston Airport).

60.20208 Red civil airway No. 9. Fargo, N. Dak.-Pembina, N. Dak.—Fargo, N. Dak., radio range station via the Grand Forks, N. Dak., radio range station; Pembina, N. Dak., radio range station to the intersection of the center line of the on course signal of the north leg of the Pembina radio range and the U. S.—Canadian Border.

60.20209 Red civil airway No. 10. Fort Worth, Tex.-Charleston, S. C.—Fort Worth, Tex., radio range station via the Dallas, Tex., radio range station; Shreveport, La., radio range station; Jackson, Miss., radio range station; the intersection of the center lines of the on course signals of the east leg of the Jackson, Miss., radio range and the southwest leg of the Birmingham, Ala., radio range (Meridian, Miss., Key Airport); Birmingham, Ala., radio range station to Union City, Ga. (Green Civil Airway No. 5 Union City, Ga., to Atlanta, Ga.) (Amber Civil Airway No. 6 Atlanta, Ga., to Jonesboro, Ga.) Jonesboro, Ga., via Augusta, Ga. (Daniel Airport); Columbia, S. C. (Columbia Airport), to the Charleston, S. C., radio range station.

60.20210 Red civil airway No. 11. Tulsa, Okla.-St. Charles, Mo.—Tulsa, Okla., radio range station via the Neosho, Mo., radio range station; Springfield, Mo., radio range station; Spring Bluff, Mo., radio range station to the intersection of the center lines of the on course

signals of the northeast leg of the Spring Bluff, Mo , radio range and the west leg of the St. Louis, Mo., radio range (approximately St. Charles, Mo.).

60.20211 Red civil airway No. 12. Knoxville, Mo.-Morse, Ill.—Knoxville, Mo., radio market station via the Kirksville, Mo., radio range station; Burlington, Iowa, radio range station to the intersection of the center lines of the on course signals of the southwest leg of the Chicago, Ill., radio range and the south leg of the Sterling, Ill., radio range (approximately Morse, Ill., radio market station).

60.20212 Red civil airway No. 13. Hager City, Wis.-La Crosse, Wis.—Hager City, Wis., radio marker station via Rochester, Minn. (Rochester Airport), to the La Crosse, Wis., radio range station.

60.20213 Red civil airway No. 14. Lone Rock, Wis.-Elmhurst, Ill.—Lone Rock, Wis., radio range station via the Rockford, Ill., radio range station to Elmhurst, Ill. (Elmhurst Airport).

60.20214 Red civil airway No. 15. Chicago, Ill.-Detroit, Mich. (Wayne County Airport)—Chicago, Ill., radio range station via the intersection of the center lines of the on course signals of the east leg of the Chicago, Ill., radio range and the southwest leg of the Detroit, Mich. (Wayne County Airport), radio range (approximately Constantine, Mich.) to Detroit, Mich. (Wayne County Airport), radio range station.

60.20215 Red civil airway No. 16. Lansing, Ill.-La Grange, Ky.—The intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range (approximately Lansing, Ill.) via the Lafayette, Ind., radio market station; Indianapolis, Ind., radio range station to La Grange, Ky. (Beacon Site No. 2).

60.20216 Red civil airway No. 17. Goshen, Ind.-Dayton, Ohio—Goshen, Ind., radio range station via Ft. Wayne, Ind. (Baer Field), to Dayton, Ohio (Dayton Airport).

60.20217 Red civil airway No. 18. Greenfield, Ind.-Cincinnati, Ohio—Greenfield, Ind. (Beacon Site No. 2), via the Milroy, Ind., radio marker station to the Cincinnati, Ohio, radio range station.

60.20218 Red civil airway No. 19. Toledo, Ohio-Detroit, Mich. (Wayne County Airport)—Toledo, Ohio, radio range station to the Detroit, Mich. (Wayne County Airport), radio range station.

60.20219 Red civil airway No. 20. Detroit, Mich. (Wayne County Airport)-Washington, D. C.—(The intersection of the center line of the on course signal of the east leg of the Detroit, Mich. (Wayne County Airport), radio range and the U. S.-Canadian Border over Canada to the intersection of the center line of the on course signal of the northwest leg of the Cleveland, Ohio, radio range and the U. S.-Canadian Border not designated.) The intersection of the center line of the on course signal of the northwest leg of the Cleveland, Ohio, radio range and the U. S.-Canadian Border via the Cleveland, Ohio, radio range station; Akron, Ohio, radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Cleveland, Ohio, radio range and the west leg of the Pittsburgh, Pa., radio range (approximately Wellsburg, W. Va.). (Green Civil Air-

way No. 3 Wellsburg, W. Va., to Pittsburgh, Pa.) Pittsburgh, Pa., radio range station via the intersection of the center lines of the on course signals of the south leg of the Pittsburgh, Pa., radio range and the west leg of the Buckstown, Pa., radio range (Monessen, Pa.); Buckstown, Pa., radio range station; McConnellsburg, Pa., radio range station to the Washington, D. C., radio range station.

60.20220 Red civil airway No. 21. Akron, Ohio-Pittsburgh, Pa.—Akron, Ohio, radio range station to the Pittsburgh, Pa., radio range station.

60.20221 Red civil airway No. 22. Roanoke, Va.-Gordonsville, Va. Roanoke, Va., radio range station via the Lynchburg, Va., radio range station to the Gordonsville, Va., radio range station.

60.20222 Red civil airway No. 23. Batavia, N. Y.-Newark, N. J.—Batavia, N. Y., via the Elmira, N. Y., radio range station to the Newark, N. J., radio range station.

60.20223 Red civil airway No. 24. Bryceville, Fla.-Jacksonville, Fla.—Bryceville, Fla., to the Jacksonville, Fla. radio range station.

60.20224 Red civil airway No. 25. Titusville, Fla.-Miami, Fla.—Titusville, Fla., radio range station via Orlando, Fla. (Orlando Airport); Tampa, Fla. (Peter O. Knight Airport); St. Petersburg, Fla. (Grand Central Airport); Ft. Myers, Fla. (Ft. Myers Airport), to the Miami, Fla., radio range station.

60.20225 Red civil airway No. 26. Palisades, N. J.-Swanton, Vt. (U. S.-Canadian Border) The intersection of the center lines of the on course signals of the northeast leg of the Newark, N. J., radio range and the south leg of the Albany, N. Y., radio range (approximately Palisades, N. J.) via the New Hackensack, N. Y., radio marker station; Columbiaville, N. Y., radio marker station; Albany, N. Y., radio range station; Burlington, Vt. (Burlington Airport), to Swanton, Vt. (U. S.-Canadian Border).

60.203 Blue civil airways. The following air routes are designated as civil airways and are further designated as blue civil airways:

60.20300 Blue civil airway No. 1. Pendleton, Oreg.-Spokane, Wash.—Pendleton, Oreg., radio range station via Walla Walla, Wash. (Walla Walla Airport), to the Spokane, Wash., radio range station.

60.20301 Blue civil airway No. 2. Idaho Falls, Idaho-Whitehall, Mont.—Idaho Falls, Idaho, radio range station via West Yellowstone, Idaho (West Yellowstone Airport), to the Whitehall, Mont., radio range station.

60.20302 Blue civil airway No. 3. Baltimore, Md.-Elmira, N. Y.—Baltimore, Md. (Logan Field), via the Harrisburg, Pa., radio range station; Sunbury, Pa., radio marker station; Williamsport, Pa. (Williamsport Airport), to the Elmira, N. Y., radio range station.

60.20303 Blue civil airway No. 4. Boston, Mass.-Burlington, Vt.—Boston, Mass., radio range station via the intersection of the center lines of the on course signals of the northwest leg of the Boston, Mass., radio range and the south leg of the Concord, N. H., radio range (approximately Manchester, N. H.); Concord, N. H., radio range station; Montpelier, Vt. (Barre-Montpelier Airport), to Burlington, Vt. (Burlington Airport).

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60.20304 Blue civil airway No. 5. Ardmore, Okla.-Dallas, Tex.—Ardmore, Okla., radio marker station to the Dallas, Tex., radio range station.

60.20305 Blue civil airway No. 6. Britton, Okla.-Wichita, Kans.—Britton, Okla. (Curtis Wright Airport), via Ponca City, Okla. (Ponca City Airport), to the Wichita, Kans., radio range station.

NOTE.—The radio range courses specified herein shall be considered to be those shown by the following Department of Commerce charts and publications:

Aeronautical charts (Coast and Geodetic Survey)
Tabulation of Air Navigation Radio Aids (Bureau of Air Commerce)

Changes and additions to maintain these issues current are covered by Weekly Notices to Airmen issued by the Bureau of Air Commerce, Washington, D. C., and other notices to airmen issued from the field offices of the Bureau.

60.21 Control airport designation. The following airports are designated as control airports:

City	*Name of airport*
Akron, Ohio	Akron Airport.
Albany, N. Y.	Albany Airport.
Albuquerque, N. Mex.	T&WA, Inc., Airport.
Amarillo, Tex.	English Field.
Atlanta, Ga.	Atlanta Airport.
Baltimore, Md.	Baltimore Airport.
Billings, Mont.	Billings Airport.
Birmingham, Ala.	Birmingham Airport.
Bismarck, N. Dak.	Bismarck Airport.
Boston, Mass.	Boston Airport.
Buffalo, N. Y.	Buffalo Airport.
Butte, Mont.	Butte Airport.
Camden, N. J.	Central Airport.
Charleston, S. C.	Charleston Airport.
Cheyenne, Wyo.	Cheyenne Airport.
Chicago, Ill.	Chicago Airport.
Cincinnati, Ohio	Cincinnati Airport.
Cleveland, Ohio	Cleveland Airport.
Columbus, Ohio	Port Columbus.
Dallas, Tex.	Love Field.
Denver, Colo.	Denver Airport.
Detroit, Mich.	Detroit City Airport.
Detroit, Mich.	Detroit Wayne County Airport.
El Paso, Tex.	El Paso Airport.
Fargo, N. Dak.	Hector Field.
Fort Worth, Tex.	Meacham Field.
Harrisburg, Pa.	Harrisburg Airport.
Houston, Tex.	Houston Airport.
Indianapolis, Ind.	Indianapolis Airport.
Jackson, Miss.	Jackson Airport.
Jacksonville, Fla.	Jacksonville Airport.
Kansas City, Mo.	Kansas City Airport.
Los Angeles, Calif. (Burbank, Calif.)	Union Air Terminal.
Los Angeles, Calif. (Glendale, Calif.)	Grand Central Air Terminal.
Louisville, Ky.	Bowman Field.
Memphis, Tenn.	Memphis Airport.
Miami, Fla.	Miami Airport.
Miami, Fla.	Pan American Airport.
Milwaukee, Wis.	Milwaukee County Airport.
Minneapolis, Minn.	Wold-Chamberlain Field.
Nashville, Tenn.	Nashville Airport.

City	*Name of airport*
Newark, N. J.	Newark Metropolitan Airport.
New York, N. Y.	Floyd Bennett Field.
New Orleans, La.	Shushan Airport.
Oakland, Calif.	Oakland Airport.
Oklahoma City, Okla.	Oklahoma City Air Terminal.
Omaha, Nebr.	Omaha Airport.
Pittsburgh, Pa.	Pittsburgh-Alleghany County Airport.
Portland, Oreg.	Portland Airport (Swan Island).
Providence, R. I.	Rhode Island State Airport.
Richmond, Va.	Richard E. Byrd Field.
St. Louis, Mo.	Lambert-St. Louis Airport.
St. Paul, Minn.	Holman Municipal Airport.
Salt Lake City, Utah.	Salt Lake City Airport.
San Antonio, Tex.	Stinson Field.
San Diego, Calif.	Lindbergh Field.
San Francisco, Calif.	San Francisco Airport.
Seattle, Wash.	Boeing Field.
Spokane, Wash.	Felts Field.
Toledo, Ohio.	Toledo Airport.
Tulsa, Okla.	Tulsa Airport.
Washington, D. C.	Washington Airport.
Wichita, Kans.	Wichita Airport.

60.22 Control zones of intersection designation. The following zones of intersection are designated as control zones of intersection:

60.220 Green zones of intersection designated as control zones of intersection.

Location	*Center of Zone*
Albany, N. Y.	Albany, N. Y., radio range station.
Albuquerque, N. Mex.	Albuquerque, N. Mex., radio range station.
Atlanta, Ga.	Atlanta, Ga., radio range station.
Batavia, N. Y.	Batavia, N. Y.
Bedford, Ohio.	Bedford, Ohio, Airport.
Billings, Mont.	Billings, Mont., radio range station.
Bonner Springs, Kans.	The intersection of the center lines of the on course signals of the north leg of the Moran, Kans., radio range and the southwest leg of the Kansas City, Mo., radio range.
Boston, Mass.	Boston, Mass., radio range station.
Buffalo, N. Y.	Buffalo, N. Y., radio range station.
Camden, N. J.	Camden, N. J., radio range station.
Chester, Pa.	The intersection of the center lines of the on course signals of the southwest leg of the Camden, N. J., radio range and the southeast leg of the Harrisburg, Pa., radio range.
Chester, Va.	Chester, Va.
Cheyenne, Wyo.	Cheyenne, Wyo., radio range station.
Chicago, Ill.	Chicago, Ill., radio range station.
Cleveland, Ohio.	Cleveland, Ohio, radio range station.
Columbus, Ohio.	Columbus, Ohio, radio range station.
Conway, Tex.	Conway, Tex.
Corpus Christi, Tex.	Corpus Christi, Tex. (Cliff Maus Field).
Daggett, Calif.	Daggett, Calif., radio range station.
Dallas, Tex.	Dallas, Tex., radio range station.
Dayton, Ohio.	Dayton, Ohio, Municipal Airport.
Detroit, Mich.	Detroit, Mich. (Wayne County Airport), radio range station.
Drummond, Mont.	Drummond, Mont., radio range station.
Ellensburg, Wash.	Ellensburg, Wash., radio range station.
El Paso, Tex.	El Paso, Tex., radio range station.

Location	*Center of Zone*
Elyria, Ohio	The intersection of the center lines of the on course signals of the west leg of the Cleveland, Ohio, radio range and the northwest leg of the Akron, Ohio, radio range.
Ephrata, Wash	Ephrata, Wash., radio range station.
Fargo, N. Dak	Fargo, N. Dak., radio range station.
Fort Worth, Tex	Fort Worth, Tex., radio range station.
Goshen, Ind	Goshen, Ind., radio range station.
Greenfield, Ind	The intersection of the center lines of the on course signals of the east leg of the Indianapolis, Ind., radio range and the northwest leg of the Cincinnati, Ohio, radio range.
Hager City, Wis	Hager City, Wis., radio marker station.
Harrisburg, Pa	Harrisburg, Pa., radio range station.
Helena, Mont	Helena, Mont., radio range station.
Houston, Tex	Houston, Tex., radio range station.
Indianapolis, Ind	Indianapolis, Ind., radio range station.
Kansas City, Mo	Kansas City, Mo., radio range station.
Knoxville, Mo	Knoxville, Mo., radio marker station.
La Crosse, Wis	La Crosse, Wis., radio range station.
Lansing, Ill	The intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range.
Laramie, Wyo	Laramie, Wyo., radio range station.
Livingston, Mont	Livingston, Mont., radio range station.
Lone Rock, Wis	Lone Rock, Wis., radio range station.
Los Angeles, Calif	Van Nuys, Calif., radio range station.
Mason Springs, Md	The intersection of the center lines of the on course signals of the northeast leg of the Gordonsville, Va., radio range and the south leg of the Washington, D. C., radio range.
Memphis, Tenn	Memphis, Tenn., radio range station.
Milwaukee, Wis	Milwaukee, Wis., radio range station.
Minneapolis, Minn	Minneapolis, Minn., radio range station.
Nashville, Tenn	Nashville, Tenn., radio range station.
Newark, N. J	Newark, N. J., radio range station.
New Brunswick, N. J	The intersection of the center lines of the on course signals of the southwest leg of the Newark, N. J., radio range and the east leg of the Allentown, Pa., radio range.
New Orleans, La	New Orleans, La., radio range station.
Oakland, Calif	Oakland, Calif., radio range station.
Omaha, Nebr	Omaha, Nebr., radio range station.
Pantano, Ariz	Pantano, Ariz.
Pittsburgh, Pa	Pittsburgh, Pa., radio range station.
Potrero Hill, Calif	Potrero Hill, Calif., radio marker station.
Putnam, Conn	Putnam, Conn., radio marker station.
Richmond, Va	Richmond, Va., radio range station.
Rodeo, N. Mex	Rodeo, N. Mex., radio range station.
St. Charles, Mo	The intersection of the center lines of the on course signals of the northeast leg of the Spring Bluff, Mo., radio range and the west leg of the St. Louis, Mo., radio range.
St. Louis, Mo	St. Louis, Mo., radio range station.
Salt Lake City, Utah	Salt Lake City, Utah, radio range station.
Saugus, Calif	Saugus, Calif., radio range station.
Seattle, Wash	Seattle, Wash., radio range station.
Sheridan, Ill	The intersection of the center lines of the on course signals of the east leg of the Davenport, Iowa, radio range and the southwest leg of the Chicago, Ill., radio range.

Location	*Center of Zone*
Spokane, Wash	Spokane, Wash., radio range station.
Sunbury, Pa	Sunbury, Pa., radio marker station.
Toledo, Ohio	Toledo, Ohio, radio range station.
Union City, Ga	Union City, Ga.
Washington, D. C	Washington, D. C., radio range station.
Wichita, Kans	Wichita, Kans., radio range station.
Wellsburg, W. Va	The intersection of the center lines of the on course signals of the southeast leg of the Cleveland, Ohio, radio range and the west leg of the Pittsburgh, Pa., radio range.

60.221 Amber zones of intersection designated as control zones of intersection.

Location	*Center of Zone*
Ardmore, Okla	Ardmore, Okla., radio marker station.
Baltimore, Md	Baltimore, Md., Municipal Airport.
Britton, Okla	Britton, Okla.
Bryceville, Fla	Bryceville, Fla.
Charleston, S. C	Charleston, S. C., radio range station.
Cincinnati, Ohio	Cincinnati, Ohio, radio range station.
Clearfield, Utah	Clearfield, Utah.
Denver, Col	Denver Col., Municipal Airport.
Elmhurst, Ill	Elmhurst, Ill.
Great Falls, Mont	Great Falls, Mont., Municipal Airport.
Jackson, Miss	Jackson, Miss., radio range station.
Jacksonville, Fla	Jacksonville, Fla., radio range station.
Jonesboro, Ga	Jonesboro, Ga.
LaGrange, Ky	LaGrange, Ky.
Miami, Fla	Miami, Fla., radio range station.
Morse, Ill	Morse, Ill., radio marker station.
Oklahoma City, Okla	Oklahoma City, Okla., radio range station.
Palisades, N. J	The intersection of the center lines of the on course signals of the south leg of the Albany, N. Y., radio range and the northeast leg of the Newark, N. J., radio range.
Portland, Oreg	Portland, Oreg., radio range station.
Titusville, Fla	Titusville, Fla., radio range station.
Tulsa, Okla	Tulsa, Okla., radio range station.
Waco, Tex	Waco, Tex., radio range station.
Whitehall, Mont	Whitehall, Mont., radio range station.

60.222 Red zones of intersection designated as control zones of intersection.

Location	*Center of Zone*
Burlington, Vt	Burlington, Vt., Municipal Airport.
Elmira, N. Y	Elmira, N. Y., radio range station.
Pendleton, Oreg	Pendleton, Oreg., radio range station.

NOTE.—The radio range courses specified herein shall be considered to be those shown by the following Department of Commerce charts and publications:

Aeronautical Charts, (Coast and Geodetic Survey)
Tabulation of Air Navigation Radio Aids, (Bureau of Air Commerce)

Changes and additions to maintain these issues current are covered by Weekly Notices to Airmen issued by the Bureau of Air Commerce, Washington, D. C., and other notices to airmen issued from the field offices of the Bureau.

60.23 Radio fix designation. The following locations are designated as radio fixes:

60.230 On green civil airways. The following locations are designated as radio fixes on green civil airways:

60.23000 Green civil airway No. 1. Seattle, Wash.-Boston, Mass.—Seattle, Wash., radio range station; Easton, Wash., radio marker station; Ellensburg, Wash., radio range station; Ephrata, Wash., radio range station; Spokane, Wash., radio range station; Coeur D'Alene, Idaho, radio range station; Mullan Pass, Idaho, radio range station; Superior, Mont., radio range station; Missoula, Mont., radio range station; Drummond, Mont., radio range station; Helena, Mont., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Helena, Mont., radio range and the northwest leg of the Belgrade, Mont., radio range (Townsend, Mont.); Belgrade, Mont., radio range station; Livingston, Mont., radio range station; Billings, Mont., radio range station; Miles City, Mont., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Miles City, Mont., radio range and the west leg of the Dickinson, N. Dak., radio range (Mildred, Mont.); Dickinson, N. Dak., radio range station; Bismarck, N. Dak., radio range station; Jamestown, N. Dak., radio range station; Fargo, N. Dak., radio range station; Alexandria, Minn., radio range station; Minneapolis, Minn., radio range station; Hager City, Wis., radio marker station; La Crosse, Wis., radio range station; Lone Rock, Wis., radio range station; Milwaukee, Wis., radio range station; the intersection of the center lines of the on course signals of the north leg of the Detroit, Mich. (Wayne County Airport), radio range and the west leg of the Strathburn, Ontario, radio range (Pontiac, Mich.); Detroit, Mich. (Wayne County Airport), radio range station; Buffalo, N. Y., radio range station; Syracuse, N. Y., radio range station; the intersection of the center lines of the on course signals of the east leg of the Syracuse, N. Y., radio range and the northwest leg of the Albany, N. Y., radio range (Utica, N. Y.); Albany, N. Y., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Albany, N. Y., radio range and the southwest leg of the Boston, Mass., radio range (Putnam, Conn.); Boston, Mass., radio range station.

60.23001 Green civil airway No. 2. San Francisco, Calif.-New York, N. Y.—Oakland, Calif., radio range station; Sacramento, Calif., radio range station; Donner Summit, Calif., radio range station; Reno, Nev., radio range station; Buffalo Valley, Nev., radio range station; Elko, Nev., radio range station; Wendover, Utah, radio range station; Salt Lake City, Utah, radio range station; Knight, Wyo., radio range station; Rock Springs, Wyo., radio range station; Medicine Bow, Wyo., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Laramie, Wyo., radio range and the northwest leg of the Cheyenne, Wyo., radio range; Cheyenne, Wyo., radio range station; Sidney, Nebr., radio range station; North Platte, Nebr., radio range station; Grand Island, Nebr., radio range station; Omaha, Nebr., radio range station; Adair, Iowa, radio marker station; Des Moines, Iowa, radio range station; the intersection of the center lines of the on course signals of the south leg of the Iowa City, Iowa, radio range and the west leg of the Davenport, Iowa, radio range; Davenport, Iowa, radio range station; the intersection of the center lines of the on course signals of the east leg of the Davenport, Iowa,

radio range and the south leg of the Sterling, Ill., radio range; the intersection of the center lines of the on course signals of the east leg of the Davenport, Iowa, radio range and the southwest leg of the Chicago, Ill., radio range (Sheridan, Ill.); Chicago, Ill., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range (Lansing, Ill.); McCool, Ind., radio marker station; Goshen, Ind., radio range station; Archbold, Ohio, radio range station; Toledo, Ohio, radio range station; Cleveland, Ohio, radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Akron, Ohio, radio range and the east leg of the Cleveland, Ohio, radio range; Mercer, Pa., radio range station; Bellefonte, Pa., radio range station; Sunbury, Pa., radio marker station; Allentown, Pa., radio range station; the intersection of the center lines of the on course signals of the east leg of the Allentown, Pa., radio range and the southwest leg of the Newark, N. J., radio range (New Brunswick, N. J.); Newark, N. J., radio range station; Floyd Bennett Field, New York, N. Y., radio range station.

60.23002 Green civil airway No. 3. Los Angeles, Calif.-Camden, N. J.—Burbank, Calif. (Union Air Terminal), radio range station; Saugus, Calif., radio range station; Palmdale, Calif., radio marker station; Daggett, Calif., radio range station; the intersection of the center lines of the on course signals of the east leg of the Daggett, Calif., radio range and the southwest leg of the Kingman, Ariz., radio range (Goffs, Calif.); Kingman, Ariz., radio range station; Ashfork, Ariz., radio range station; Winslow, Ariz., radio range station; El Morro, N. Mex., radio range station; Albuquerque, N. Mex., radio range station; Otto, N. Mex., radio range station; Tucumcari, N. Mex., radio range station; Amarillo, Tex., radio range station; Canadian, Tex., radio range station; Wichita, Kans., radio range station; Cassoday, Kans., radio marker station; Lebo, Kans., radio range station; the intersection of the center lines of the on course signals of the southwest leg of the Kansas City, Mo., radio range and the north leg of the Moran, Kans., radio range (Bonner Springs, Kans.); Kansas City, Mo., radio range station; Knoxville, Mo., radio marker station; Columbia, Mo., radio range station; New Florence, Mo., radio marker station; St. Louis, Mo., radio range station; Effingham, Ill., radio range station; Terre Haute, Ind., radio range station; Indianapolis, Ind., radio range station; the intersection of the center lines of the on course signals of the east leg of the Indianapolis, Ind., radio range and the northwest leg of the Cincinnati, Ohio, radio range (Greenfield, Ind.); the intersection of the center lines of the on course signals of the west leg of the Columbus, Ohio, radio range and the northwest leg of the Wright Field, Dayton, Ohio, radio range; Columbus, Ohio, radio range station; Cambridge, Ohio, radio marker station; the intersection of the center lines of the on course signals of the southeast leg of the Cleveland, Ohio, radio range and the west leg of the Pittsburgh, Pa., radio range (Wellsburg, W. Va.); Pittsburgh, Pa., radio range station; the intersection of the center lines of the on course signals of the northeast

leg of the Pittsburgh, Pa., radio range and the north leg of the Buckstown, Pa., radio range; the intersection of the center lines of the on course signals of the south leg of the Bellefonte, Pa., radio range and the west leg of the Harrisburg, Pa., radio range; Harrisburg, Pa., radio range station; the intersection of the center lines of the on course signals of the east leg of the Harrisburg, Pa., radio range and the southwest leg of the Camden, N. J., radio range (Chester, Pa); Camden, N. J., radio range station.

60.23003 Green civil airway No. 4. Los Angeles, Calif.-Washington, D. C.—Fontana, Calif., radio range station; Blythe, Calif., radio range station; Phoenix, Ariz., radio range station; Tucson, Ariz., radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Tucson, Ariz., radio range and the southwest leg of the Rodeo, N. Mex., radio range (Douglas, Ariz.); Rodeo, N. Mex., radio range station; El Paso, Tex., radio range station; Guadalupe Pass, Tex., radio range station; Wink, Tex., radio range station; Big Spring, Tex., radio range station; Santo, Tex., radio marker station; Fort Worth, Tex., radio range station; the intersection of the center lines of the on course signals of the east leg of the Fort Worth, Tex., radio range and the north leg of the Dallas, Tex., radio range; Texarkana, Ark., radio range station; Little Rock, Ark., radio range station; Memphis, Tenn., radio range station; Nashville, Tenn., radio range station; Smithville, Tenn., radio range station; Knoxville, Tenn., radio range station; Bristol, Tenn., radio range station; Roanoke, Va., radio range station; Gordonsville, Va., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Gordonsville, Va., radio range and the south leg of the Washington, D. C., radio range (Mason Springs, Md.); Washington, D. C., radio range station.

60.23004 Green civil airway No. 5. Corpus Christi, Tex.-Norfolk, Va.—Houston, Tex., radio range station; New Orleans, La., radio range station; Mobile, Ala., radio range station; Atlanta, Ga., radio range station; Jefferson, Ga., radio marker station; Spartanburg, S. C., radio range station; Greensboro, N. C., radio range station; South Boston, Va., radio marker station; Richmond, Va., radio range station.

60.231 On amber civil airways. The following locations are designated as radio fixes on amber civil airways:

60.23100 Amber civil airway No. 1. San Diego, Calif.-Blaine, Wash.—San Diego, Calif., radio range station; Oceanside, Calif., radio marker station; Long Beach, Calif., radio range station; Burbank, Calif. (Union Air Terminal), radio range station; Saugus, Calif., radio range station; Bakersfield, Calif., radio range station, Fresno, Calif., radio range station; the intersection of the center lines of the on course signals of the northwest leg of the Fresno, Calif., radio range and the southeast leg of the Oakland, Calif., radio range (Modesto, Calif.); Livermore, Calif., radio marker station; Oakland, Calif., radio range station; Potrero Hill, Calif., radio marker station; Williams, Calif., radio range station; Mt. Shasta, Calif., radio range station; Medford, Oreg., radio range station; Eugene, Oreg., radio range station; Portland, Oreg., radio range station; Castle Rock, Wash., radio marker station; the intersection of the center lines of the on course signals of

the northwest leg of the Portland, Oreg., radio range and the southwest leg of the Tacoma, Wash., radio range (Chehalis, Wash.); Tacoma, Wash., radio range station; Seattle, Wash., radio range station.

60.23101 Amber civil airway No. 2. Daggett, Calif.-Great Falls, Mont.—Daggett, Calif., radio range station; Las Vegas, Nev., radio range station; Milford, Utah, radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Milford, Utah, radio range and the south leg of the Salt Lake City, Utah, radio range; Salt Lake City, Utah, radio range station; Pocatello, Idaho, radio range station; Idaho Falls, Idaho, radio range station; the intersection of the center lines of the on course signals of the northwest leg of the Idaho Falls, Idaho, radio range and the southwest leg of the Whitehall, Mont., radio range (Dillon, Mont.); Whitehall, Mont., radio range station; Helena, Mont., radio range station.

60.23102 Amber civil airway No. 3. El Paso, Tex.-Cheyenne, Wyo.—El Paso, Tex., radio range station; Albuquerque, N. Mex., radio range station; Pueblo, Colo., radio range station; Cheyenne, Wyo., radio range station.

60.23103 Amber civil airway No. 4. Brownsville, Tex.-Minneapolis, Minn.—San Antonio, Tex., radio range station; Waco, Tex., radio range station; Fort Worth, Tex., radio range station; Gainesville, Tex., radio marker station; Ardmore, Okla., radio marker station; Oklahoma City, Okla., radio range station; Tulsa, Okla., radio range station; Moran, Kans., radio range station; the intersection of the center lines of the on course signals of the north leg of the Moran, Kans., radio range and the southwest leg of the Kansas City, Mo., radio range (Bonner Springs, Kans.); Kansas City, Mo., radio range station; Omaha, Nebr., radio range station; Minneapolis, Minn., radio range station.

60.23104 Amber civil airway No. 5. New Orleans, La.-Milwaukee, Wis.— New Orleans, La., radio range station; Tylertown, Miss., radio range station; Jackson, Miss., radio range station; Greenwood, Miss., radio range station; Memphis, Tenn., radio range station; Advance, Mo., radio range station; St. Louis, Mo., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the St. Louis, Mo., radio range and the south leg of the Sterling, Ill., radio range (Springfield, Ill.); the intersection of the center lines of the on course signals of the south leg of the Sterling, Ill., radio range and the southwest leg of the Chicago, Ill., radio range; the intersection of the center lines of the on course signals of the southwest leg of the Chicago, Ill., radio range and the east leg of the Davenport, Iowa, radio range (Sheridan, Ill.); Chicago, Ill., radio range station; Milwaukee, Wis., radio range station.

60.23105 Amber civil airway No. 6. Bryceville, Fla.-Buffalo, N. Y.—Alma, Ga., radio range station; Atlanta, Ga., radio range station; Adairsville, Ga., radio marker station; Chattanooga, Tenn., radio range station; Nashville, Tenn., radio range station; Louisville, Ky., radio range station; Warsaw, Ky., radio marker station; Cincinnati, Ohio, radio range station; Columbus, Ohio, radio range station; Hayesville, Ohio, radio marker station; the intersection of the center lines of the on course signals of the northwest leg of the Akron, Ohio,

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radio range and the west leg of the Cleveland, Ohio, radio range (Elyria, Ohio); Cleveland, Ohio, radio range station; Perry, Ohio, radio marker station; Erie, Pa., radio range station; Dunkirk, N. Y., radio marker station; Buffalo, N. Y., radio range station.

60.23106 Amber civil airway No. 7. Key West, Fla.–Bangor Maine.—Key West, Fla., radio range station; the intersection of the center lines of the on course signals of the east leg of the Key West, Fla., radio range and the southwest leg of the Miami, Fla., radio range (Marathon, Fla.); Miami, Fla., radio range station; the intersection of the center lines of the on course signals of the north leg of the Miami, Fla., radio range and the southeast leg of the Titusville, Fla., radio range (Jupiter, Fla.); Titusville, Fla., radio range station; Jacksonville, Fla., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Jacksonville, Fla., radio range and the southwest leg of the Charleston, S. C., radio range (Savannah, Ga.); Charleston S. C., radio range station; Raleigh, N. C., radio range station; Richmond, Va., radio range station, the intersection of the center lines of the on course signals of the northeast leg of the Gordonsville, Va., radio range and the south leg of the Washington, D. C., radio range (Mason Springs, Md.); Washington, D. C., radio range station; the intersection of the center lines of the on course signals of the east leg of the Harrisburg, Pa., radio range and the southwest leg of the Camden, N. J., radio range (Chester, Pa.); Camden, N. J., radio range station; the intersection of the center lines of the on course signals of the east leg of the Allentown, Pa., radio range and the southwest leg of the Newark, N. J., radio range (New Brunswick, N. J.); Newark, N. J., radio range station; the intersection of the center lines of the on course signals of the northeast leg of the Newark, N. J., radio range and the northwest leg of the Mitchel Field, Hempstead, N. Y., radio range; Putnam, Conn., radio marker station; Boston, Mass., radio range station; Portland, Maine, radio range station; Augusta, Maine, radio range station; Bangor, Maine, radio range station.

60.232 On red civil airways. The following locations are designated as radio fixes on red civil airways:

60.23200 Red civil airway No. 1. Portland, Oreg.–Clearfield, Utah.—Portland, Oreg., radio range station; Cascade Locks, Oreg., radio marker station; North Dalles, Wash., radio range station; Arlington, Oreg., radio marker station; Pendleton, Oreg., radio range station; Weiser, Idaho, radio marker station; Boise, Idaho, radio range station; King Hill, Idaho, radio marker station; Burley, Idaho, radio range station; Locomotive Springs, Utah, radio range station.

60.23201 Red civil airway No. 2. Ellensburg, Wash.-Ephrata, Wash.—Ellensburg, Wash., radio range station; Ephrata, Wash., radio range station.

60.23202 Red civil airway No. 3. Drummond, Mont.-Belgrade, Mont.—Drummond, Mont., radio range station; Butte, Mont., radio range station; Belgrade, Mont., radio range station.

60.23203 Red civil airway No. 4. Billings, Mont.-Great Falls, Mont.—Billings, Mont., radio range station.

60.23204 Red civil airway No. 5. Pantano, Ariz.-Rodeo, N. Mex.—Rodeo, N. Mex., radio range station.

60.23205 Red civil airway No. 6. Laramie, Wyo.-Grand Island, Nebr.—Laramie, Wyo., radio range station; Grand Island, Nebr., radio range station.

60.23206 Red civil airway No. 7. Conway, Tex.-Oklahoma City, Okla.—Oklahoma City, Okla., radio range station.

60.23207 Red civil airway No. 8. Waco, Tex.-Galveston, Tex.—Waco, Tex., radio range station; Navasota, Tex., radio range station; Houston, Tex., radio range station.

60.23208 Red civil airway No. 9. Fargo, N. Dak.-Pembina, N. Dak.—Fargo, N. Dak., radio range station; Grand Forks, N. Dak., radio range station; Pembina, N. Dak., radio range station.

60.23209 Red civil airway No. 10. Fort Worth, Tex.—Charleston, S. C.—Fort Worth, Tex., radio range station; Dallas, Tex., radio range station; Shreveport, La., radio range station; Jackson, Miss., radio range station; the intersection of the center lines of the on course signals of the east leg of the Jackson, Miss. radio range and the southwest leg of the Birmingham, Ala., radio range (Meridian, Miss.); Birmingham, Ala., radio range station; Atlanta, Ga., radio range station; Charleston, S. C., rado range station.

60.23210 Red civil airway No. 11. Tulsa, Okla.-St. Charles, Mo.—Tulsa, Okla., radio range station; Neosho, Mo., radio range station; Springfield, Mo., radio range station; Spring Bluff, Mo., radio range station.

60.23211 Red civil airway No. 12. Knoxville, Mo.-Morse, Ill.—Knoxville, Mo., radio marker station; Kirksville, Mo., radio range station; Burlington, Iowa, radio range station; the intersection of the center lines of the on course signals of the southwest leg of the Chicago, Ill., radio range and the south leg of the Sterling, Ill., radio range.

60.23212 Red civil airway No. 13. Hager City, Wis.-La Crosse, Wis.—Hager City, Wis., radio marker station; La Crosse, Wis., radio range station.

60.23213 Red civil airway No. 14. Lone Rock, Wis.-Elmhurst, Ill.—Lone Rock, Wis., radio range station; Rockford, Ill., radio range station.

60.23214 Red civil airway No. 15. Chicago, Ill.-Detroit, Mich. (Wayne County Airport)- Chicago, Ill., radio range station; the intersection of the center lines of the on course signals of the north leg of the Goshen, Ind., radio range and the east leg of the Chicago, Ill., radio range; the intersection of the center lines of the on course signals of the north leg of the Archbold, Ohio, radio range and the southwest leg of the Detroit, Mich. (Wayne County Airport), radio range station; Detroit, Mich. (Wayne County Airport), radio range station.

60.23215 Red civil airway No. 16. Lansing, Ill.-La Grange, Ky.—The intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range (Lansing, Ill.); Lafayette, Ind., radio marker station; Indianapolis, Ind., radio range station.

60.23216 Red civil airway No. 17. Goshen, Ind.-Dayton, Ohio—Goshen, Ind., radio range station.

60.23217 Red civil airway No. 18. Greenfield, Ind.-Cincinnati, Ohio—The intersection of the center lines of the on course signals of the east leg of the Indianapolis, Ind., radio range and the northwest leg of the Cincinnati, Ohio, radio range (Greenfield, Ind.); Milroy, Ind., radio marker station; Cincinnati, Ohio, radio range station.

60.23218 Red civil airway No. 19. Toledo, Ohio-Detroit, Mich. (Wayne County Airport)—Toledo, Ohio, radio range station; Detroit, Mich. (Wayne County Airport), radio range station.

60.23219 Red civil airway No. 20. Detroit, Mich. (Wayne County Airport)-Washington, D. C.—Cleveland, Ohio, radio range station; Akron, Ohio, radio range station; the intersection of the center lines of the on course signals of the southeast leg of the Cleveland, Ohio, radio range and the west leg of the Pittsburgh, Pa., radio range (Wellsburg, W. Va.); Pittsburgh, Pa., radio range station; the intersection of the center lines of the on course signals of the south leg of the Pittsburgh, Pa., radio range and the west leg of the Buckstown, Pa., radio range (Monesson, Pa.); Buckstown, Pa., radio range station; McConnellsburg, Pa., radio range station; the intersection of the center lines of the on course signals of the south leg of the Harrisburg, Pa., radio range and the northwest leg of the Washington, D. C., radio range Washington, D. C., radio range station.

60.23220 Red civil airway No. 21. Akron, Ohio-Pittsburgh, Pa.—Akron, Ohio, radio range station; Pittsburgh, Pa., radio range station.

60.23221 Red civil airway No. 22. Roanoke, Va.-Gordonsville, Va.—Roanoke, Va., radio range station; Lynchburg, Va., radio range station; Gordonsville, Va., radio range station.

60.23222 Red civil airway No. 23. Batavia, N. Y.-Newark, N. J.—Elmira, N. Y., radio range station; the intersection of the center lines of the on course signals of the northwest leg of the Newark, N. J., radio range and the northeast leg of the Allentown, Pa., radio range; Newark, N. J., radio range station.

60.23223 Red civil airway No. 24. Bryceville, Fla.-Jacksonville, Fla.—Jacksonville, Fla., radio range station.

60.23224 Red civil airway No. 25. Titusville, Fla.-Miami, Fla.—Titusville, Fla., radio range station; Miami, Fla., radio range station.

60.23225 Red civil airway No. 26. Palisades, N. J.-Swanton, Vt.—The intersection of the center lines of the on course signals of the northeast leg of the Newark, N. J., radio range and the south leg of the Albany, N. Y., radio range (Palisades, N. J.); New Hackensack, N. Y., radio marker station; Columbiaville, N. Y., radio marker station; Albany, N. Y., radio range station.

60.233 On blue civil airways. The following locations are designated as radio fixes on blue civil airways.

60.23300 Blue civil airway No. 1. Pendleton, Oreg.-Spokane, Wash.—Pendleton, Oreg., radio range station; Spokane, Wash., radio range station.

60.23301 Blue civil airway No. 2. Idaho Falls, Idaho-Whitehall, Mont.—Idaho Falls, Idaho, radio range station; Whitehall, Mont., radio range station.

60.23302. Blue civil airway No. 3. Baltimore, Md.-Elmira, N. Y.—Harrisburg, Pa., radio range station; Sunbury, Pa., radio marker station; Elmira, N. Y., radio range station.

60.23303 Blue civil airway No. 4. Boston, Mass.-Burlington, Vt.—Boston, Mass., radio range station; Concord, N. H., radio range station.

60.23304 Blue civil airway No. 5. Ardmore, Okla.-Dallas, Tex.—Ardmore, Okla., radio marker station; Dallas, Tex., radio range station.

60.23305 Blue civil airway No. 6. Britton, Okla.-Wichita, Kans.—Wichita, Kans., radio range station.

NOTE.—The radio range courses specified herein shall be considered to be those shown by the following Department of Commerce charts and publications:

Aeronautical Charts (Coast & Geodetic Survey).

Tabulation of Air Navigation Radio Aids (Bureau of Air Commerce).

Changes and additions to maintain these issues current are covered by Weekly Notices to Airmen issued by the Bureau of Air Commerce, Washington, D. C., and other notices to airmen issued from the field offices of the Bureau.

60.24 Airway traffic control area designation. The following part or parts of the civil airways are designated as airway traffic control areas:

60.240 On green civil airways.

60.2400 Green civil airway No. 1. From a point 25 miles southeast of the La Crosse, Wis., radio range station to the Lone Rock, Wis., radio range station; from a point 25 miles east of the Grand Rapids, Mich., Kent County Airport to the intersection of the center line of the east leg of the Detroit, Mich. (Wayne County Airport), radio range and the U. S.-Canadian Border.

60.2401 Green civil airway No. 2. From the San Francisco, Calif., Municipal Airport to a point 25 miles west of the Elko, Nev., radio range station; from a point 25 miles east of the Des Moines, Iowa, radio range station to the Floyd Bennett Field, New York, N. Y.

60.2402 Green civil airway No. 3. From the Burbank, Calif., Union Air Terminal to a point 25 miles west of the Kingman, Ariz., radio range station; from a point 25 miles east of the Columbus, Ohio, radio range station to the Camden, N. J., Central Airport.

60.2403 Green civil airway No. 4. From the Glendale, Calif., Grand Central Air Terminal to a point 25 miles west of the Blythe, Calif., radio range station; from a point 25 miles northeast of the Roanoke, Va., radio range station to the Washington, D. C., Washington Airport.

60.241 On amber civil airways.

60.2410 Amber civil airway No. 1. From a point 25 miles north of the San Diego, Calif., radio range station to a point 25 miles south of the Medford, Oreg., radio range station.

60.2411 Amber civil airway No. 2. From the Daggett, Calif., intermediate field to a point 25 miles southwest of the Las Vegas, Nev., radio range station.

60.2412 Amber civil airway No. 5. From a point 25 miles north of the Springfield, Ill., Springfield Airport to a point 25 miles south of the Milwaukee, Wis., radio range station.

60.2413 Amber civil airway No. 6. From a point 25 miles north of the Columbus, Ohio, radio range station to a point 25 miles southwest of the Buffalo, N. Y., radio range station.

60.2414 Amber civil airway No. 7. From a point 25 miles north of the Richmond, Va., radio range station to a point 25 miles southwest of the Putnam, Conn., radio marker station.

60.242 On red civil airways.

60.24200 Red civil airway No. 14. From a point 25 miles northeast of the Knoxville, Mo., radio marker station to the intersection of the center lines of the on course signals of the southwest leg of the Chicago, Ill., radio range and the south leg of the Sterling, Ill., radio range.

60.24201 Red civil airway No. 16. From the Lone Rock, Wis., radio range station to the Elmhurst, Ill., Elmhurst Airport.

60.24202 Red civil airway No. 17. From the Chicago, Ill., radio range station to the Detroit, Mich. (Wayne County Airport), radio range station.

60.24203 Red civil airway No. 18. From the intersection of the center lines of the on course signals of the southeast leg of the Chicago, Ill., radio range and the west leg of the Goshen, Ind., radio range to a point 25 miles northwest of the Indianapolis, Ind., radio range station.

60.24204 Red civil airway No. 19. From the Goshen, Ind., radio range station to a point 25 miles northwest of the Dayton, Ohio, Dayton Airport.

60.24205 Red civil airway No. 21. From the Toledo, Ohio, radio range station to the Detroit, Mich. (Wayne County Airport), radio range station.

60.24206 Red civil airway No. 22. From the intersection of the center line of the on course signal of the northwest leg of the Cleveland, Ohio, radio range and the U. S.-Canadian Border to the Washington, D. C., radio range station.

60.24207 Red civil airway No. 23. From the Akron, Ohio, radio range station to the Pittsburgh, Pa., radio range station.

60.24208 Red civil airway No. 24. From a point 25 miles northeast of the Roanoke, Va., radio range station to the Gordonsville, Va., radio range station.

60.24209 Red civil airway No. 25. From a point 25 miles southeast of the Elmira, N. Y., radio range station to the Newark, N. J., radio range station.

60.24210 Red civil airway No. 28. From the intersection of the center lines of the on course signals of the northeast leg of the Newark, N. J., radio range and the south leg of the Albany, N. Y., radio range to a point 25 miles south of the Albany, N. Y., radio range station.

60.243 On blue civil airways.

60.2430 Blue civil airway No. 3. From the Baltimore, Md., Logan Field to a point 25 miles southwest of the Elmira, N. Y., radio range station.

NOTE.—The radio range courses specified herein shall be considered to be those shown by the following Department of Commerce charts and publications:
Aeronautical Charts (Coast & Geodetic Survey).
Tabulation of Air Navigation Radio Aids (Bureau of Air Commerce).

Changes and additions to maintain these issues current are covered by Weekly Notices to Airmen issued by the Bureau of Air Commerce, Washington, D. C., and other notices to airmen issued from the field offices of the Bureau.

60.3 Flight rules (general).

60.30 Pilot certificates. No person shall pilot a civil aircraft within the limits of a civil airway or control zone of intersection, or elsewhere in interstate or foreign air commerce

(*a*) unless possessed of a valid pilot certificate of competency, or

(*b*) unless possessed, if an alien, of such certificate or a similar pilot certificate issued or validated according to the provisions of Part 65, or

(*c*) *in violation of any term, specification or limitation of such* certificate.

60.31 Aircraft certificate. No flight of civil aircraft, other than of a foreign aircraft, shall be made or authorized to be made

(*a*) within the limits of a civil airway or control zone of intersection whatever the purpose or nature of the flight may be, unless such aircraft is possessed of valid aircraft registration and airworthiness or experimental certificates, or

(*b*) elsewhere in the navigable airspace over the lands and waters of the United States if engaged in interstate or foreign air commerce, unless such aircraft is possessed of such valid aircraft certificates, or

(*c*) in violation of any term, specification or limitation of such certificates.

60.310 No foreign aircraft shall engage in interstate or intrastate commerce; nor shall it be otherwise navigated in the United States except in compliance with these air traffic rules and the provisions of Part 65.

60.32 Identification mark. No flight of aircraft shall be made or authorized to be made in the navigable airspace over the lands or the waters of the United States unless such aircraft is possessed of and displays a valid identification mark assigned or approved therefor by the Secretary.

60.33 Take-off and landing.

60.330 Method of taking-off and landing. The following rules shall govern the method by which aircraft shall take-off and land:

60.3300 (*a*) Aircraft, when taking-off or landing, shall observe the local field traffic rules issued for the protection of interstate and foreign air commerce, as approved by the Secretary.

60.3301 (*b*) A take-off shall not be commenced until there is no risk of collision with other aircraft during such take-off.

60.3302 (*c*). Aircraft approaching for a landing shall circle the airport or other landing area sufficiently to observe other traffic, unless the pilot receives other instructions from the airport traffic control operator. Such circles shall be made to the left unless the pilot receives other instructions from the airport traffic control operator, or unless local traffic rules approved by the Secretary provide otherwise.

60.3303 (*d*) Aircraft approaching for a landing shall, unless impracticable, maintain a straight approach course for the last 1,000 feet before crossing the airport boundary.

60.3304 (*e*). Aircraft making contact flights within 3 miles horizontally of the center of an airport or landing area shall conform to the circuit rule provided in § 60.3302 unless flying at an altitude in excess of 3,000 feet above the ground or water.

60.3305 (*f*). Air traffic departing from, or arriving at, a control airport shall take precedence over other air traffic within the control zone of such airport when required in the interests of safety, and all traffic will be governed by special traffic rules approved by the Secretary.

60.331 Running motors, supervision of. No aircraft engine shall be started or run unless a competent operator is in the aircraft attending the engine controls. Blocks, equipped with ropes or other suitable means of pulling them, shall always be placed in front of the wheels before starting the engine, or engines, unless the aircraft is provided with adequate parking brakes and the same are fully on.

60.332 Air meet landing. In approaching a landing area where there is a congestion of aircraft or an assembly of persons or automobiles in the vicinity of aircraft, pilots shall proceed with caution and ascertain before landing, or before flying at low altitude over the landing area, whether or not an air meet or aeronautical demonstration is in progress. (See § 60.8911.)

60.333 Certified high explosive areas. Aircraft, when taking off or landing over any certified high explosive danger area, shall be flown in such a manner as to permit at all times an emergency landing outside of such area in the event of complete power failure.

60.34 Flight enroute.

60.340 Right of way. The following rules will govern aircraft right of way:

60.3400 (*a*) **Order.** Aircraft in flight shall have right of way in the following order: (1) Balloons, fixed or free (an airship not under control is classed as a free balloon), (2) gliders, (3) airships, and (4) airplanes, including rotorplanes).

60.3401 (*b*) **Crossing.** When two aircraft are on crossing courses at approximately the same altitude, the aircraft which has the other on its left shall have right of way, and the other aircraft shall give way.

60.3402 (*c*) **Approaching head-on.** When two aircraft are approaching head-on, or approximately so, and there is danger of collision, each shall alter its course to the right so that they will pass each other at a distance of at least 500 feet.

60.3403 (*d*) **Overtaking.** An overtaken aircraft shall have right of way and the overtaking aircraft shall keep clear of the overtaken aircraft by altering its own course to the right.

60.3404 (*e*) **Landing.** An aircraft landing in the manner prescribed in § 60.3303 (*d*) shall have right of way over other aircraft in flight or on the ground or water, except aircraft landing in distress.

60.3405 (*f*) **Distress landing.** An aircraft in distress shall have right of way in attempting to land.

60.341 Duty to give way. When landing or maneuvering in preparation to land, it shall be the duty of the aircraft at the higher altitude to avoid the aircraft at the lower altitude.

60.342 Right side traffic. Aircraft making a contact flight along a civil airway in accordance with the provisions of § 60.4, except when impracticable for reasons of safety, shall keep to the right side of such radio range course as is projected along the airway. Except when otherwise specified in a flight plan, and except when impracticable because of any natural or other obstruction, aircraft making a flight along a civil airway in accordance with the provisions of § 60.5 shall keep to the right side of, and close to, such radio range course as is projected along the airway: *Provided,* That inbound aircraft may fly along the on course signal.

60.343 Proximity in flight. No aircraft, other than military aircraft of the United States engaged in military maneuvers, shall be flown closer than 500 feet to any other aircraft in flight, except that by prearrangement two or more civil aircraft may be flown in formation closer than 500 feet to each other.

60.344 Transport of prohibited articles. No explosives, arms, or munitions of war or other materials deemed by the Secretary to be dangerous goods shall be carried by or in any aircraft other than public aircraft or aircraft in which mail is being transported or arms are required, provided that the provisions of this rule shall not apply to persons lawfully carrying arms and ammunition for legitimate purposes, proper signalling or safety equipment (such as a Very pistol or landing flares) nor to the aircraft fuel, nor to materials for industrial and agricultural spraying (dusting).

60.345 Liquor, narcotics, and drugs. No pilot or other member of the crew of an aircraft in flight shall be under the influence of, or use intoxicating liquor, cocaine, or other habit-forming drugs, nor shall such person carry any other person who is obviously under the influence of intoxicating liquor, cocaine, or other habit-forming drugs, except a medical patient under proper care, or in case of emergency.

60.346 Towing by aircraft. The towing of aircraft by other aircraft or the towing of any device or object by aircraft is prohibited, unless permission therefor has been granted by the Secretary in accordance with the provisions of § 60.901: *Provided, however,* Such restriction shall not apply to military aircraft previously authorized by the appropriate governmental agency to make such flights in the public interest.

60.347 Dropping objects or things. No object or thing, other than fine sand, fine (#7 or smaller) lead shot, fuel, or water (all unconfined), shall be dropped or released from an aircraft in flight by any person on board the aircraft, unless permission therefor has been granted by the Secretary in accordance with the provisions of § 60.901: *Provided, however,* Such restriction shall not apply to military aircraft previously authorized by the appropriate governmental agency to make such flights in the public interest: *And provided, further,* That such exemption shall not include bombing and aerial gunnery within the limits of a civil airway. The pilot or person in charge of the aircraft shall be responsible for the observance of this rule by all persons in the aircraft.

60.348 Airspace reservations. No flight of aircraft shall be made within any airspace reservation set apart by order of the President of the United States, any authorized Federal agency, or by any of the several States, pursuant to the provisions of the Air Commerce Act, as amended, or other applicable law: *Provided, however*, That such restriction of flight shall not apply to public aircraft previously authorized by the appropriate governmental agency to make such flights. (See Appendix A for a list of airspace reservations.)

60.35 Minimum safe altitudes. Exclusive of taking off from or landing upon an airport or other landing area, aircraft shall not be flown below the following minimum safe altitudes of flight:

60.350 (*a*) An altitude over the congested parts of cities, towns, or settlements, sufficient to permit at all times an emergency landing outside of such areas in the event of complete power failure, but in no case less than 1,000 feet above the ground.

60.351 (*b*) An altitude over certified high explosive danger areas other than airspace reservations, sufficient to permit at all times an emergency landing outside of such certified danger area in the event of complete power failure, but in no case less than 1,000 feet above the ground: *Provided, however*, That the restrictions of this subparagraph shall not apply to public aircraft, previously authorized by the appropriate governmental agency, to make specific flights below such minimums in the public interest.

63.352 (*c*) 1,000 feet above the ground over any Federal penal institution or any open air assembly of persons.

60.353 (*d*) 500 feet above the ground or water elsewhere than as specified in §§ 60.350, 60.351 and 60.352, or within 500 feet from any mountain, hill or other obstruction to flight, except as may be specifically approved by the Secretary: *Provided, however*, That seaplanes and amphibians may be flown below 500 feet, but not below 300 feet, if making a contact flight during daylight hours over open water and where an emergency landing may, at all times, be made, without the aid of power, into the wind and without danger of collision with craft on the surface or other obstructions: *And provided, further*, That the restrictions of this subparagraph shall not apply to public aircraft, previously authorized by the appropriate governmental agency, to make specific flights below such minimums in the public interest.

60.354 (*e*) 1,000 feet above the ground or water, or within 1,000 feet of any mountain, hill or other obstruction to flight, if an aircraft is making an instrument flight as defined in § 60.131.

60.36 Parachutes. No parachute shall be carried, available for immediate use as such, in any aircraft in flight unless it has been packed within the preceding 60 days by a person authorized by the provisions of § 25.40.

NOTE.—§ 60.36 does not apply to military personnel when flying, or flying in, military aircraft.

60.37 Landing flares. No aircraft shall be flown for hire at night beyond an area within a circle with a radius of 3 miles drawn from the center of the airport of take-off unless equipped with certificated landing flares as required in § 04.512 (*c*).

60.4 Flight rules (contact). In addition to general or special air traffic rules which apply, the following rules shall govern a contact flight in weather conditions equal to or better than those described in § 60.44, within the limits of a civil airway or control zone of intersection, or elsewhere in interstate or foreign air commerce. For flight in weather conditions worse than those described in § 60.44 and for flight in closer proximity to cloud formations than the distances prescribed in § 60.44, see § 60.5.

NOTE.—The rules prescribed under § 60.4 will apply to scheduled airline operations unless otherwise specifically indicated.

60.40 Pilot. No instrument rating required. (See Parts 40 and 61 for provisions applicable to scheduled airlines.)

60.41 Equipment. Aircraft shall be certificated as to equipment as provided for in §§ 04.510, 04.511, 04.512 or 04.515, depending upon whether the flight is visual-contact day within 100 miles of a fixed base, visual-contact day unlimited distance or visual-contact night for landplanes, or either of the same for seaplanes or amphibians. (See §§ 04.530 and 04.531 for provisions applicable to scheduled airlines.)

60.42 Fuel requirements. No aircraft shall take off without sufficient fuel and oil, taking into account wind and other weather conditions to be encountered during the course of the flight, to arrive at its point of first intended landing and effect a safe landing thereat. (See § 61.7020 for provisions applicable to scheduled airlines.)

60.43 Flight plan. No flight plan is required.

NOTE.—If a pilot desires that any information concerning his proposed flight be transmitted by a Bureau communications facility to the point of destination, a complete flight plan as defined in § 60.133 shall be submitted to such facility. Such flight plan will, if possible, be transmitted by Bureau communications facilities to such point of destination as soon as practicable.

60.430 Notification of arrival. If the pilot of an aircraft has submitted, or authorized the submission of, a flight plan for transmission to destination, he shall, immediately upon landing or upon completion of the flight, file an arrival message for transmission to the point of departure.

60.44 Weather minimums. The following weather minimums shall govern flight made in accordance with contact flight rules: *Provided, however,* That a Bureau airway traffic control station may, for reasons of safety, restrict or suspend contact flight operation within the airway traffic control area of such station: *And provided further,* That the Secretary may require higher minimums at any particular control airport, and that such minimums shall govern the control zone in which such control airport lies. Pending the issuance of airport control tower operator certificates by the Secretary in accordance with the provisions of Part 26, but in no case later than July 1, 1938, the authority granted to certificated airport control tower operators to permit flights in accordance with the provisions of §§ 60.440 and 60.441 is hereby granted to any airport control tower operator who has had not less than six months satisfactory service as an airport control tower operator, during the year immediately preceding the effective date of these air traffic rules, at the particular airport involved.

60.440 Within control zones (day). Flight of aircraft shall not be made during the hours of daylight within a control zone unless the ceiling is at least 800 feet (1,000 feet if precipitation is occurring in any form) and the visibility is at least 3 miles: *Provided, however,*

(*a*) that a certificated airport control tower operator on duty in a radio equipped airport control tower in operation at the control airport may authorize flight, in accordance with §§ 60.442 and 60.443, at or below 1,000 feet above the ground or water in the control zone of such control airport when the visibility is less than 3 miles but not less than 1 mile, and

(*b*) that such operator shall suspend contact flight operations within the control zone whenever in his opinion safety requires such action.

60.441 Within control zones (night). Flight of aircraft shall not be made during the hours of darkness within a control zone unless the ceiling is at least 1,000 feet and the visibility is at least 3 miles: *Provided, however,*

(*a*) that a certificated airport control tower operator on duty in a radio equipped airport control tower in operation at the control airport may authorize flight, in accordance with §§ 60.442 and 60.443, at or below 1,000 feet above the ground in the control zone for such control airport when the visibility is less than 3 miles but not less than 2 miles, and

(*b*) that such operator shall suspend contact flight operations within the control zone whenever in his opinion safety requires such action.

60.442 Within control zones (day or night below overcast). No flight of aircraft shall be made during daylight within a control zone closer than 300 feet vertically to the base of an overcast or cloud formation within such zone, nor closer than 500 feet vertically if precipitation is occurring in any form. No flight of aircraft shall be made at night within a control zone closer than 500 feet vertically to the base of an overcast or cloud formation within such zone.

60.443 Within control zones (day or night above overcast or through cloud level). No flight of aircraft shall be made during daylight within a control zone closer than 300 feet vertically to the top of an overcast or cloud formation within such zone, nor closer than 500 feet vertically if precipitation is occurring in any form. No flight of aircraft shall be made at night within a control zone closer than 500 feet vertically to the top of an overcast or cloud formation within such zone. At no time during ascent, descent, or level flight within the cloud level shall the aircraft be flown closer than 2,000 feet horizontally to the cloud formation or overcast.

60.444 Outside of control zones (day flight at or below 1,000 feet above the ground or water). No flight of aircraft shall be made during daylight outside of a control zone at or below 1,000 feet above the ground or water, unless the ceiling is sufficient to permit flight at the minimum altitudes prescribed in § 60.35 and unless the visibility is at least 1 mile.

60.445 Outside of control zones (day flight above 1,000 feet above the ground or water). No flight of aircraft shall be made during daylight outside of a control zone above 1,000 feet above the ground or water, unless the ceiling is sufficient to permit flight at the minimum

altitudes prescribed in § 60.35 and unless the visibility is at least 3 miles at the flight altitude, except as provided in §§ 60.443 and 60.449.

60.446 Outside of control zones (night flight at or below 1,000 feet above the ground or water). No flight of aircraft shall be made at night outside of a control zone at or below 1,000 feet above the ground or water, unless the ceiling is sufficient to permit flight at the minimum altitudes prescribed in § 60.35 and unless the visibility is at least 2 miles.

60.447 Outside of control zones (night flight above 1,000 feet above the ground or water). No flight of aircraft shall be made at night outside of a control zone above 1,000 feet above the ground or water, unless the ceiling is sufficient to permit flight at the minimum altitudes prescribed in § 60.35 and unless the visibility is at least 3 miles at the flight altitude, except as provided in §§ 60.443 and 60.449.

60.448 Outside of control zones (day or night below overcast). No flight of aircraft shall be made during daylight outside of a control zone closer than 300 feet vertically to the base of an overcast or cloud formation, nor closer than 500 feet vertically if precipitation is occurring in any form. No flight of aircraft shall be made during darkness outside of a control zone closer than 500 feet vertically to the base of an overcast or cloud formation.

60.449 Outside of control zones (day or night above overcast or through cloud level). No flight of aircraft shall be made during daylight outside of a control zone closer than 300 feet vertically to the top of an overcast or cloud formation, nor closer than 500 feet vertically if precipitation is occurring in any form. No flight of aircraft shall be made at night outside of a control zone closer than 500 feet vertically to the top of an overcast or cloud formation. At no time during ascent, descent, or level flight within the cloud level shall the aircraft be flown closer than 2,000 feet horizontally to the cloud formation or overcast.

60.45 Alternate airport. No requirement.

60.46 Over-the-top flight. No flight of aircraft shall be made over broken clouds or stretches of solid overcast unless the attitude of the aircraft and its flight path can at all times be controlled by visual reference to the ground or water and ascent and descent can be made in accordance with the provisions of §§ 60.443 or 60.449. (For scheduled airline operations, see Parts 40 and 61.)

60.47 Flight enroute.

60.470 Weather changes. If weather conditions below the minimums prescribed in § 60.44 are anticipated or are actually encountered enroute, a landing shall be made at the nearest airport at which weather conditions are equal to or better than those prescribed in § 60.44, or the flight shall be altered so that it may be made in weather conditions as good as, or better than, such minimums, unless such flight can and does proceed in accordance with the instrument flight rules prescribed in § 60.5.

60.471 Communication contacts. No communication contacts required.

NOTE.—If the aircraft is possessed of two-way radio, it is recommended that the procedure provided for in § 60.571 be followed.

60.472 Flight plan changes. No notice of any change in flight plan is required. See, however, § 60.430.

NOTE.—If a flight plan has been submitted and the aircraft is possessed of two-way radio, it is recommended that the procedure provided for in § 60.573 be followed.

60.48 Flight altitudes. None required.

NOTE.—It is recommended that cruising altitudes shall conform to those provided for in § 60.58 if the flight is made above 1,000 feet above the ground or water.

60.5 Flight rules (instrument). In addition to general or special air traffic rules which apply, the following rules shall govern instrument flight, flight in closer proximity to cloud formation than the distances prescribed in § 60.44, and flight in weather conditions worse than those described in § 60.44, within or approaching the limits of a civil airway or control zone of intersection, or elsewhere in interstate or foreign air commerce.

NOTE.—The rules prescribed under § 60.5 will apply to scheduled airline operations unless otherwise specifically indicated.

60.50 Pilot. No flight shall be made unless the pilot in charge holds a valid instrument rating, or is the holder of a valid airline pilot certificate.

60.51 Equipment. Aircraft shall be properly certificated as to equipment according to the provisions of §§ 04.513, 04.514, and 04.515. (Scheduled airline aircraft shall be certificated as provided in §§ 04.532, 04.533, and 04.534.)

60.52 Fuel requirements. No aircraft shall take off without fuel and oil sufficient, considering the wind and other weather conditions forecast for the flight, at least

(*a*) to complete such flight to the point of the first intended landing and thereafter

(*b*) to fly to and land at the alternate airport designated in the approved flight plan, and thereafter

(*c*) to fly, at normal cruising consumption, for a period of 45 minutes.

(For scheduled airline operations, see § 61.7021.)

60.53 Flight plan. Prior to take-off from any point within an airway traffic control area, and prior to entering such an area, an approved flight plan as prescribed in § 60.134 is required. No flight plan shall be submitted until after the pilot has made a careful study of available current weather reports and forecasts and believes the flight can be made with safety. (For a list of airway traffic control areas, see § 60.24.)

60.530 Traffic control instructions. Traffic control instructions from a Bureau airway traffic control station issued to the pilot before departure or enroute are a part of the approved flight plan, and the pilot shall comply with the same in all respects.

60.531 Control zone of intersection. No control zone of intersection served by a Bureau radio voice communication station shall be entered without first establishing communication with such station, directly or through other communication channels, and forwarding the expected

time of arrival over the center of such zone, the altitude to be flown through such zone, and the course or courses to be followed while within such zone, and thereafter observing such traffic instructions as may be issued by such station: *Provided,* That such procedure shall not be required within an airway traffic control area if the flight plan has been approved by a Bureau airway traffic control station prior to entering such zone.

NOTE.— For a list of control zones of intersection, see § 60.22. For further information concerning aids to air navigation, see "Tabulation of Air Navigation Radio Aids" published periodically by the Bureau of Air Commerce.

60.532 Notification of arrival. If the pilot of an aircraft has submitted, or authorized the submission of, a flight plan for transmission to destination as provided for in § 60.53, he shall, immediately upon landing or upon completion of the flight, file an arrival message for transmission to the point of departure.

60.54 Weather minimums. The following weather minimums shall govern landings and take-offs made in accordance with instrument flight rules: *Provided, however,* That the Secretary may require higher minimums at any airport: *And provided further,* That such minimums, if for a control airport, shall govern the control zone in which such airport lies. Pending the issuance of traffic control tower operator certificates by the Secretary in accordance with the provisions of Part 26, but in no case later than July 1, 1938, the authority granted to certificated airport control tower operators to permit flights in accordance with the provisions of § 60.540 is hereby granted to any airport control tower operator who has had not less than six months' experience as an airport control tower operator during the year immediately preceding the effective date of these air traffic rules.

60.540 Airports within control zones. No flight, other than by a public aircraft or by a scheduled airline aircraft from or to a regular terminal or scheduled intermediate stop on the regular route, shall be made to or from a control airport nor to or from any other airport within a control zone, when the ceiling is less than 500 feet or the visibility is less than 1 mile: *Provided, however,* That if the control airport is equipped with a radio directional aid to air navigation designed to direct aircraft to that airport by the aid of instruments, a certificated airport control tower operator on duty in a radio equipped airport control tower in operation at such airport may authorize departure from such control airport when the ceiling is not less than 300 feet and the visibility is not less than one-half mile. (For scheduled airline operation at terminals and scheduled intermediate stops, see §§ 40.290, 40.390, 61.7109 and 61.730.)

60.541 Airports outside a control zone. No flight, other than by a public aircraft or by a scheduled airline aircraft, shall be made to or from an airport outside of a control zone when the ceiling is less than 500 feet or the visibility is less than 1 mile. (For scheduled airline operation, see §§ 40.290, 40.390, 61.7109, and 61.730.)

60.55 Alternate airport. No take-off of aircraft shall be made unless:

(*a*) the flight plan as submitted includes an alternate airport having a landing area suitable for the equipment to be used, and

(*b*) weather reports and forecasts indicate that the weather conditions at the alternate airport will remain at or above the minimums specified in (*c*) or (*d*) below until the arrival of the aircraft thereat, and

(*c*) if the alternate airport is equipped with a radio directional aid to air navigation in operation and there is at such alternate airport a ceiling of at least 2,000 feet and a visibility of at least 3 miles if an overcast exists, or a ceiling of at least 1,500 feet and a visibility of at least 3 miles if broken clouds exist, or

(*d*) if the alternate airport is not equipped with a radio directional aid to air navigation, there is at such alternate airport an unlimited ceiling and a visibility of at least 3 miles. (For scheduled airline operation see §§ 61.23 and 61.7109.)

60.56 Over-the-top flight. Over-the-top flight shall be governed by instrument flight rules whenever the attitude of the aircraft and its flight path can not be controlled at all times by visual reference to the ground or water.

60.57 Flight enroute.

60.570 Weather changes. If weather reports available to the pilot enroute indicate that the weather conditions will be below the minimums allowing operation into the airport of destination at the expected time of arrival, the pilot shall not attempt a landing at the airport of destination but shall either proceed to the appropriate alternate airport as provided for in § 60.55, or proceed to an airport where weather conditions are at such time equal to or better than the weather minimums prescribed in § 60.54. (For scheduled airline operation, see § 61.7106.)

60.571 Communications contacts. The pilot shall maintain a continuous listening watch on the appropriate radio frequency and shall, by radio, contact and report as soon as possible to the appropriate communication station the time and altitude of passing each radio fix or other check point designated by the Secretary or specified in the flight plan together with unanticipated weather conditions being encountered and any other information pertinent to the aircraft movement and, further, if not within an airway traffic control area, shall, prior to entering a control zone of intersection, served by a Bureau radio voice communication station, establish communication with such station, directly or through other communication channels, forwarding the expected time of arrival over the center of such zone, the altitude to be flown through such zone, and the course or courses proposed to be followed while within such zone.

60.5710 Aircraft utilizing airline communication facilities shall transmit information as required in this paragraph through such facilities, or such information may be transmitted directly by radio, to the appropriate agency of the Bureau.

NOTE.—For further information concerning aids to air navigation, see "Tabulation of Air Navigation Radio Aids" published periodically by the Bureau of Air Commerce.

60.572 Communications failure. In the event of mechanical failure of aircraft two-way communication equipment or in the event that the pilot does not receive radio signals sufficient to permit his main-

taining an instrument flight on course, (see § 60.342) one of the following procedures shall be observed.

60.5720 (*a*) **Continue flight in accordance with contact flight rules.** The pilot may proceed provided that the flight may be made in accordance with contact flight rules as provided for in § 60.4.

60.5721 (*b*) **Effect a landing.** The pilot may effect a landing at the nearest suitable airport at which favorable weather conditions exist and where no airway traffic control station is located.

60.5722 (*c*) **Continue flight in accordance with flight plan.** In the event weather conditions do not permit the procedures provided for in § 60.5720 or § 60.5721, the pilot may, when sufficient radio signals are received, proceed according to his flight plan, including any amending instructions issued and acknowledged enroute, with particular attention to maintaining his last acknowledged assigned altitude until the approach time last authorized for, and acknowledged by, the pilot of such aircraft, after which landing may be made.

NOTE.—Normal traffic will resume as soon as the aircraft has landed or been accounted for, but, in any event in not more than 30 minutes after the approach time last authorized for the aircraft and acknowledged by the pilot of such aircraft.

60.573 Flight plan changes. No change shall be made enroute in any approved flight plan until approval has first been obtained from the Bureau airway traffic control station for the area in which the flight is progressing, unless an emergency situation arises which requires immediate decision and action, in which case as soon as possible after such emergency authority is exercised the pilot shall inform the proper control station of the new flight plan and obtain approval therefor.

60.58 Flight altitudes. Unless different altitudes are assigned by a Bureau airway traffic control station, the following flight altitudes shall govern flights made in accordance with instrument flight rules. (See § 60.354.)

60.580 Flight altitudes along green civil airways. The following rules will govern the altitude at which aircraft shall fly when making flights along green civil airways:

60.5800 Eastbround flights. Aircraft making good a true course of from 0° (or 360°) to, but not including, 180° along a green civil airway shall fly at an ODD thousand foot level above sea level (such as 3,000, 5,000, or 7,000 feet).

60.5801 Westbound flights. Aircraft making good a true course of from 180° to, but not including, 360° (or 0°) along a green civil airway shall fly at an EVEN thousand foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

60.581 Flight altitudes along amber civil airways. The following rules will govern the altitude at which aircraft shall fly when making flights along amber civil airways:

60.5810 Northbound flights. Aircraft making good a true course of from 270° to, but not including, 90° along an amber civil airway shall fly at an ODD thousand foot level above sea level (such as 3,000, 5,000, or 7,000 feet).

60.5811 Southbound flights. Aircraft making good a true course of from 90° to, but not including, 270° along an amber civil airway

shall fly at an EVEN thousand foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

60.582 Flight altitudes along red civil airways. The following rules will govern the altitude at which aircraft shall fly when making flights along red civil airways:

60.5820 Eastbound flights. Aircraft making good a true course of 0° (or 360°) to, but not including, 180° along a red civil airway shall fly at an ODD thousand foot level above sea level (such as 3,000, 5,000, or 7,000 feet).

60.5821 Westbound flights. Aircraft making good a true course of 180° to, but not including, 360° (or 0°) along a red civil airway shall fly at an EVEN thousand foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

60.583 Flight altitudes along blue civil airways. The following rules will govern the altitude at which aircraft shall fly when making flights along blue civil airways:

60.5830 Northbound flights. Aircraft making good a true course of from 270° to, but not including, 90° along a blue civil airway shall fly at an ODD thousand foot level above sea level (such as 3,000, 5,000, or 7,000 feet).

60.5831 Southbound flights. Aircraft making good a true course of from 90° to, but not including, 270° along a blue civil airway shall fly at an EVEN thousand foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

60.584 Flight altitudes on airway intersections. The following flight procedure and altitude rules will govern aircraft making flights on the civil airways where two or more such airways intersect.

60.5840 Flight on green civil airway. An aircraft flying along a green civil airway and continuing the flight through a green zone of intersection shall, while within a green zone of intersection, maintain the altitude approved for flight on the green civil airway being followed and, upon leaving a green zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.5841 Flight on amber civil airway.

60.58410 Through green zone of intersection. An aircraft flying along an amber civil airway and continuing flight through a green zone of intersection shall, while within a green zone of intersection, maintain an altitude 500 feet higher than the altitude approved for flight on the amber civil airway being followed and, upon leaving a green zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.58411 Through amber zone of intersection. An aircraft flying along an amber civil airway and continuing the flight through an amber zone of intersection shall, while within an amber zone of intersection, maintain the altitude approved for flight on the amber civil airway being followed and, upon leaving an amber zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.5842 Flight on red civil airway.

60.58420 Through green zone of intersection. An aircraft flying along a red civil airway and continuing flight through a green zone of intersection shall, while within a green zone of intersection, maintain

an altitude 500 feet higher than the altitude approved for flight on the red civil airway being followed and, upon leaving a green zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.58421 Through amber zone of intersection. An aircraft flying along a red civil airway and continuing flight through an amber zone of intersection shall, while within an amber zone of intersection, maintain an altitude 500 feet higher than the altitude approved for flight on the red civil airway being followed and, upon leaving an amber zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.58422 Through red zone of intersection. An aircraft flying along a red civil airway and continuing flight through a red zone of intersection shall, while within a red zone of intersection, maintain an altitude approved for flight on the red civil airway being followed and, upon leaving the red zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.5843 Flight on blue civil airway.

60.58430 Through a green, amber, or red zone of intersection. An aircraft flying along a blue civil airway and continuing flight through a green, amber, or red zone of intersection shall, while within such zone of intersection, maintain an altitude 500 feet higher than the altitude approved for flight on the blue civil airway being followed and, upon leaving such zone of intersection, shall assume an altitude prescribed for the airway to be followed.

60.585 Flight altitudes on off-airway flights. The following rules will govern the altitudes of aircraft making instrument flights when approaching for crossing a civil airway not at a control zone of intersection:

60.5850 (a) Eastbound flights. Aircraft making good a true course of 0° (or 360°) to, but not including, 180° shall fly at an ODD thousand foot level plus 500 feet, above sea level (such as 3,500, 5,500, or 7,500 feet); and

60.5851 (b) Westbound flights. Aircraft making good a true course of 180° to, but not including, 360° (or 0°) shall fly at an EVEN thousand foot level plus 500 feet, above sea level (such as 2,500, 4,500, or 6,500 feet).

60.586 Crossing an airway. Unless otherwise instructed by a Bureau airway traffic control station, a civil airway shall not be crossed at an angle of less than 45° to such airway, and the appropriate altitude as prescribed in § 60.585, shall be maintained throughout the entire crossing of such airway: *Provided, however,* That if such crossing is through any part of a zone of intersection the pertinent provisions of § 60.584 shall govern, and if such crossing is through any part of a control zone of intersection the pertinent provisions of §§ 60.571 and 60.584 shall govern.

60.59 Approach and departure procedures. (To be issued.)

60.6 Light and signal rules.

60.60 Angular limits. The angular limits prescribed in the following rules relating to lights will be determined with the aircraft in normal flying position.

60.61 Airplane lights. Between sunset and sunrise, all airplanes in flight shall show the following lights:

60.610 (*a*). On the right (starboard) side a green light and on the left (port) side a red light, each showing unbroken light between 2 vertical planes whose dihedral angle is 110 degrees when measured to the left and right, respectively, from dead ahead. These lights shall be visible at least 2 miles.

60.611 (*b*) At the rear, and as far aft as possible, a white light shining rearward, visible for at least 3 miles in a dihedral angle of 140 degrees bisected by a vertical plane through the longitudinal axis of the aircraft.

60.62 Airship lights. Between sunset and sunrise, airships shall carry and display the same lights that are prescribed for airplanes, except that the side lights shall be doubled horizontally in a fore-and-aft position and the rear light shall be doubled vertically. Lights in a pair shall be at least 7 feet apart.

60.63 Balloon lights. Between sunset and sunrise, a free balloon shall display one white light visible for at least 2 miles and located not less than 20 feet below the car. A fixed balloon, or airship, shall carry 3 lights—red, white, and red—in a vertical line, one over the other, visible at least 2 miles. The top light shall be not less than 20 feet below the car, and the lights shall be not less than 7, nor more than 10, feet apart.

60.64 Lights on stationary aircraft. Between sunset and sunrise, all aircraft which are on the surface of water and not under way, or which are moored or anchored in navigation lanes, shall show a white light visible for at least 2 miles in all directions. Between sunset and sunrise balloon and airship mooring cables shall show groups of 3 red lights at intervals of at least every 100 feet, measured from the car. The first light in the first group shall be approximately 20 feet from the lower red balloon light. The object to which the balloon is moored on the ground shall have an adequate group of lights to mark its position.

60.65 Signals on stationary aircraft. By day, balloon and airship mooring cables shall be marked with chrome yellow colored conical streamers not less than 10 inches in diameter at the mouth and 7 feet long. The object to which the balloon or airship is moored on the ground shall have the same kind of streamers, which must be in the same position as the lights specified in § 60.64.

60.66 Distress signals. The following signals, separately or together shall, where practicable, be used in case of distress:

60.660 (*a*) The international signal, S O S by radio: In radiotelephony, the spoken expression MAYDAY (corresponding to the French pronunciation of the expression "m'aider"). When, owing to the rapidity of the maneuvers to be accomplished, an aircraft is unable to transmit the intended message, the signal P A N not followed by a message retains such meaning.

60.661 (*b*) The international code flag signal of Distress, NC.

60.662 (*c*) A square flag having either above or below it a ball, or anything resembling a ball.

60.67 Forced landing signals. When an aircraft is forced to land at night at an airport, it shall signal its forced landing by making a series of short flashes with its navigation lights, if practicable to do so.

60.68 Fog signals. In fog, mist, or heavy weather, an aircraft on the water in navigation lanes shall signal its presence by a sound device emitting a signal for about 5 seconds at one-minute intervals.

60.7 Acrobatic flight rules.

60.70 Prohibited zones. No person shall acrobatically fly an aircraft

60.700 (*a*) at any height whatsoever over a congested area of any city, town, or settlement, or over any open air assembly of persons, or over any airport or landing area or within 1,000 feet horizontally thereof, or within any control zone unless under the supervision of a Bureau inspector observing flight tests and then only between 2,000 and 5,000 feet above the ground or water.

60.701 (*b*) at any height less than 1,500 feet over any place over which flight is not otherwise restricted.

60.702 (*c*) at any place unless the visibility is at least 3 miles and the ceiling at least 3,000 feet, and unless the pilot has first ascertained that there is no danger of collision with other aircraft.

60.71 Acrobatics while carrying persons. No person shall acrobatically fly an aircraft while carrying any other person or persons for hire: *Provided, however,* That this provision shall not apply to the giving of instruction in acrobatic flying to a person receiving dual instruction.

60.72 Equipment for acrobatics. Each person in an aircraft flown acrobatically shall be properly equipped with a parachute manufactured under a valid type certificate and maintained in accordance with the provisions of the Civil Air Regulations.

60.73 Parachute jump. No person shall make any exhibition, test, training or demonstration parachute jump, unless wearing a certificated and properly maintained auxiliary parachute so arranged that it can be operated if the first parachute should fail to function or become fouled. Whenever an auxiliary parachute is required, it shall consist of a single-harness pack.

60.730 Altitude before jump. No person shall make any exhibition, training or demonstration parachute jump from an altitude of less than 2,000 feet above the surface of the ground or water.

60.731 Delayed jump. No person shall delay opening his parachute more than is necessary to properly and safely clear the aircraft, which in no case, except in an emergency jump, shall be less than 1,500 feet above the surface of the ground.

60.732 Jump in high wind. No person shall make any exhibition, test, training or demonstration parachute jump from any aircraft when the surface wind is more than 15 miles per hour.

60.733 Jump near open water. No person shall make any exhibition, test, training or demonstration parachute jump from any aircraft within 2 miles horizontally from any body of water, unless the jumper

wears a flotation device approved by the Secretary and unless motor-powered marine rescue equipment is available.

NOTE.—§§ 60.71, 60.72 and 60.73 do not apply to military personnel when flying, or flying in, military aircraft.

60.8 Air meet rules.

60.80 Classification. Air meets will be classified as follows:

60.800 Class 1 air meets. Meaning those meets which will receive wide publicity, large crowds and large numbers of visiting aircraft and in which any one or all of the following events are included:

60.8000 (*a*) Races in which "NC", "NR" or "NX" aircraft are permitted to enter. (See § 02.11.)

60.8001 (*b*) Acrobatic flights over the airport at or below 1,500 feet.

60.8002 (*c*) Formation flying over the airport at or below 1,500 feet.

60.8003 (*d*) So called "crazy flying" over the airport.

60.8004 (*e*) Parachute jumping for a spot.

60.801 Class 2 air meets. Meaning those meets which are locally-sponsored amateur meets and which may combine passenger-carrying activities with one or more of the following events:

60.8010 (*a*) Races for "NC" aircraft.

60.8011 (*b*) Simulated bomb dropping contests.

60.8012 (*c*) Acrobatic flights over the airport above 1,500 feet.

60.8013 (*d*) Formation flights over the airport above 1,500 feet.

60.8014 (*e*) Paper-cutting over the airport above 1,500 feet.

60.8015 (*f*) Balloon-bursting over the airport above 1,500 feet.

60.8016 (*g*) Spot landing contests (switches not cut).

60.8017 (*h*) Parachute jumping (not for spot).

60.81 Permit required. No air meet shall be held or conducted, or authorized to be held or conducted, on a civil airway or elsewhere within the United States where there is likelihood of endangering aircraft moving in interstate or foreign air commerce unless a permit for such meet has been issued by the Secretary.

60.82 Provision for issuance. The Secretary will issue a permit, in appropriate form, for the holding of an air meet provided:

60.820 (*a*) Such proposed air meet is to be held on a civil airway or elsewhere within the United States where there is likelihood of endangering aircraft moving in interstate or foreign air commerce, and

60.821 (*b*) proper application therefor is made and information submitted in accordance with the provisions of § 60.83 or § 60.84, and

60.822 (*c*) the person or persons proposing to hold or conduct such air meet appear, in the opinion of the Secretary, to have taken all necessary and proper precautions for safeguarding the interests of the public and those engaged in aeronautics.

60.83 Application for class 1 air meet permit. In order to enable the Secretary to make adequate investigation and to permit publication and distribution of field rules and regulations for the protection of the public and for the benefit of those engaged in aeronautics, any person or persons desiring a permit for the conduct of a Class 1 Air Meet, shall make application therefor to the Secretary, or to the Bureau supervising aeronautical inspector whose office is located in the district in which such meet will be held, at least 15 days prior to

the time of holding of such proposed air meet, upon a form to be supplied for the purpose, which form shall contain at least the following information:

60.8300 (*a*) Name, address and telephone number of the person or persons making the application.

60.8301 (*b*) Names and addresses of sponsors and backers, if any, of the air meet other than the applicant.

60.8302 (*c*) List of names of the personnel charged with operation of the air meet and their duties.

60.8303 (*d*) Certified copy of permission granted by State or local authorities for conduct of such air meet.

60.8304 (*e*) Certified copy of permission granted for the use of the airport or other landing area.

60.8305 (*f*) Map or blueprint showing the scale of measurement of the airport or other landing area and race course, if any, and showing the course in relation to obstructions, congested areas, grandstand or spectators' seats, and parking areas.

60.8306 (*g*) Schedule of airline operation in and out of, or in the vicinity of, the airport during the time the air meet is in progress.

60.8307 (*h*) Complete description of all events, showing time and qualification for entry.

60.8308 (*i*) Detailed description of method of policing, particularly as to methods of preventing spectators or unauthorized persons from entering restricted areas. Also, detailed description of the provisions for compliance with § 60.8912.

60.8309 (*j*) Copy of rules and regulations covering the conduct of the air meet. These regulations shall conform substantially with the rules prescribed in § 60.89 and shall include such additional rules as, in the opinion of the operator, are necessary for the particular meet involved, including the proposed method of local air traffic control for the operation of all aircraft during the time of such air meet and until the air operations have returned to normal.

60.84 Application for class 2 air meet permit. In order to enable the Secretary to make adequate investigation and to permit publication and distribution of field rules and regulations, if any, for the protection of the public and for the benefit of those engaged in aeronautics, any person or persons desiring a permit for the conduct of a Class 2 Air Meet shall make application to the Secretary, or to the Bureau supervising aeronautical inspector whose office is in the district in which such meet will be held, at least 5 days prior to the holding of such proposed air meet, upon a form to be supplied for the purpose, which form shall contain at least the following information:

60.8400 (*a*) Name, address and telephone number of the person or persons making the application.

60.8401 (*b*) Names and addresses of sponsors or backers, if any, of the air meet other than the applicant.

60.8402 (*c*) List of the names of the personnel charged with operation of the air meet and their duties.

60.8403 (*d*) Statement that permission will be obtained from State or local authorities for conduct of the air meet prior to the holding of such meet.

60.8404 (*e*) Statement that permission will be obtained for the use of the airport or other landing area.

60.8405 (*f*) Map or sketch of airport or other landing area and race course, if any, showing the course in relation to obstructions, congested areas, grandstand or spectators' seats, and parking areas.

60.8406 (*g*) Schedule of airline operation in and out of, or in the vicinity of, the airport or landing area during the time the air meet is in progress.

60.8407 (*h*) Complete description of all events, showing time and qualification of entry.

60.8408 (*i*) Detailed description of method of policing, particularly as to methods of preventing spectators or unauthorized persons from entering restricted areas.

60.85 **Issuance.** Upon approval of an application duly made, data submitted and investigations and inspections completed, an air meet permit will be issued in appropriate form.

60.86 **Duration.** An air meet permit will be granted for a limited time only and for a specific purpose, which time and purpose will be clearly stated in such permit.

60.87 **Non-transferability.** An air meet permit is not transferable.

60.88 **Suspension and revocation.** An air meet permit may be suspended or revoked by the Secretary for any of the following reasons:

60.880 (*a*) Any false statement on the part of the person making application for such permit or in any information accompanying the application.

60.881 (*b*) Adverse weather conditions affecting the safety of the public or those engaged in aeronautics, as determined by the local Bureau inspector.

60.882 (*c*) Failure of those in charge of the air meet to properly enforce any term or condition in the air meet permit.

60.883 (*d*) Violation of any term or condition contained in the permit granted for the air meet.

60.884 (*e*) Violation of any provision of the Air Commerce Act or any rule or regulations duly promulgated thereunder.

60.89 **Air meet rules.** The following rules shall apply to, and govern the conduct of, all Class 1 and Class 2 air meets for which a permit may be issued by the Secretary.

60.8900 (*a*) No person shall be permitted to take part in any air meet until he has furnished the air meet officials a signed statement to the effect that he has read the rules and regulations governing such meets, and which obligates him to abide by all local and Department of Commerce rules and regulations.

60.8901 (*b*) No person shall be permitted on the operations area of an airport or flying field during any air meet held thereon, except the operating personnel, contestants and their crews, police, State and Federal aeronautics officials and inspectors, and authorized press, radio and photographer personnel.

60.8902 (*c*) A white dead line paralleling the area reserved for spectators and at least 200 feet in front of such area shall be provided by the air meet officials and the crossing by any aircraft of this dead

line in the direction of the spectators will result in the suspension of the certificate of the operator of such aircraft.

60.8903 (*d*) The air meet management shall be held responsible for the proper policing of the air meet area within the airport and for other suitable provisions to insure that all spectators and unauthorized persons are kept off prohibited areas.

60.8904 (*e*) No air meet event shall be conducted unless the operations area of the airport or flying field is clear, the operating personnel are present, sufficient police or guards are on duty and at their posts, no other air operations are going on and scheduled airline aircraft are not flying in the vicinity.

60.8905 (*f*) Participants in racing events shall not come in closer proximity to other participating aircraft than 50 feet, and a participant must be not less than 150 feet in the lead before cutting into the same lane of plane or planes just passed.

60.8906 (*g*) No aircraft shall be flown toward, over, nor within 200 feet horizontally of, the grandstand or spectators.

60.8907 (*h*) No aircraft performing acrobatics shall be flown toward or over the grandstands or spectators nor within 500 feet thereof.

60.8908 (*i*) No object shall be dropped or released from aircraft in connection with an air meet which will fall over, toward, nor within 500 feet of, the grandstands or spectators.

60.8909 (*j*) Race-horse-starts shall be prohibited except when such starts provide for minimum spacing from wing tip to wing tip of at least 100 feet between participating aircraft and then only in case the take-off area is suitable for such starts and a scattering pylon is used for the first pylon, which scattering pylon must be located beyond the boundaries of the airport at least a sufficient distance to permit all aircraft participating to attain their normal speed before reaching it. For races in which aircraft capable of 200 miles per hour or over participate, this pylon and race course pylons shall be so located that no continuous turn of over 100 degrees is required.

60.8910 (*k*) The home pylon shall be located at least 800 feet from the grandstands or spectators, and racing aircraft shall not be flown toward, over, or within a minimum distance of 500 feet horizontally of, the grandstands or spectators. The home stretches of all race courses shall be parallel to the grandstands and other sections provided for spectators.

60.8911 (*l*) For purposes of controlling traffic at, and in the vicinity of, an airport or other landing area used for an air meet, signals shall be located either near the announcer's stand or near the home pylon and shall consist either of a large white letter "O" indicating open, and a large white letter "X" indicating closed, or by the words spelled in large white letters on the ground, "OPEN" or "CLOSED", as the case may be. Such signals shall be so constructed as to be easily legible from 2,000 feet altitude and these signals shall be properly operated during the period of the air meet to indicate whether the airport is open for landing to non-participants in the meet, or whether it is closed. For the safety and convenience of non-participating aircraft, the airport or landing area shall be declared open for landing

and take-off purposes for a period of 5 minutes at not more than 30 minute intervals during the air meet.

60.8912 (*m*) A physician and ambulance and a fully equipped emergency truck shall be available at the air meet for emergency use. This provision is mandatory for Class 1 Air Meets only.

60.9 Miscellaneous air traffic rules.

60.90 Non-application of air traffic rules. The air traffic rules, or any particular air traffic rule, shall not apply in the following cases:

60.900 (*a*) When special circumstances render non-observance necessary to avoid immediate danger, or when such non-observance is required because of stress of weather conditions which could not reasonably have been foreseen, or other unavoidable causes. Such non-observance shall be reported within 24 hours in full detail by letter to the Secretary, including the emergency making such non-observance necessary, the results accomplished by non-observance, and when regular observance was resumed after the emergency had passed. In such case of non-observance if, after investigation by the Secretary, non-observance is deemed to have been necessary in the interests of safety, no infraction of these rules will have been incurred.

60.901 (*b*) When the public safety, the safety of those engaged in aeronautics or the interests of sound fostering and promotion of aeronautics is deemed by the Secretary to require a non-observance of the air traffic rules, or any particular rules, as evidence by a certificate of non-application issued by, or under the authority of, the Secretary.

60.91 Certificate of non-application. A certificate of non-application of air traffic rules will be issued for a limited time and will specifically set forth the subject matter involved, the time limits involved, and will be strictly construed. Requests for such certificate shall be addressed to the Secretary at least ten days before the certificate applied for is to have effect.

60.910 Surrender. Upon notice from a duly authorized Bureau inspector of the suspension of a certificate of non-application by such inspector or by the Secretary, and upon the demand of either of the same for the surrender of such certificate, or upon notice from the Secretary of the revocation of such certificate, the holder thereof shall immediately surrender such certificate to such inspector or immediately return such certificate to the Secretary, as the case may be.

60.92 Aircraft on water. Seaplanes on the water shall navigate according to the laws and regulations of the United States governing the navigation and operation of watercraft, except as otherwise provided in these regulations.

60.93 Aircraft model flying activities, supervision of. No model aircraft shall be flown from, or over, any airport or landing field unless permission therefor, in writing, has been secured from the airport manager or his duly authorized representative. The airport manager shall designate the portion of the field to be used and shall take all necessary precautions to assure the safety of the public on the ground and of aircraft in the air. Rules governing the conduct of such activity shall be drawn and shall include:

60.930 (*a*) The definite boundaries of the area to be utilized.

60.931 (*b*) The periods of suspensions of activity before, during and after any scheduled or other aircraft operations.
60.932 (*c*) The limitation of duration of flight of the models.
60.933 (*d*) Procedure for the retrieving of models.
60.934 (*e*) Notification by the airport manager to all model operators so engaged of the rules as drawn.

Approved, to take effect March 31, 1938.

[SEAL] DANIEL C. ROPER,
Secretary of Commerce.

APPENDIX A

Presidential Airspace Reservations

The following airspace reservation has been set apart by order of the President, by Executive Order No. 5211, October 19, 1929:

Aberdeen Proving Ground, portions of the Fort Hoyle and the Edgewood Arsenal Military Reservations, and portions of Bush River, Gunpowder River and Chesapeake Bay, all in the State of Maryland, as more particularly shown by the designation of said areas on official aeronautical charts.

The following airspace reservations have been set apart by order of the President, by Executive Order No. 7138, August 12, 1935:

Picatinny Arsenal, Dover, New Jersey.
Savanna Ordnance Depot, Savanna, Illinois.
Nansomond Ordnance Depot, Portsmouth, Virginia.
Wingate Ordnance Depot, Gallup, New Mexico.
Camp Stanley Ordnance Reservations, Leon Springs, Texas.
Fort Hancock, Sandy Hook, New Jersey.
Fort Saulsbury, about 4 miles east of Milford, Delaware.
Fort Pickens, western portion of Santa Rose Island, Pensacola Bay, Florida.
Fort Barry, near Point Bonita Lighthouse, San Francisco Bay, California.
Fort Canby, near Cape Disappointment Lighthouse, Washington.
Fort Casey, near Admiralty Head Lighthouse, Washington.
Naval Ammunition Depot, Hingham, Massachusetts.
Naval Ammunition Depot, Fort Lafayette, New York.
Naval Ammunition Depot, Lake Denmark, New Jersey.
Naval Ammunition Depot, St. Juliens Creek, Virginia.
Naval Ammunition Depot, Hawthorne, Nevada.
Naval Ammunition Depot, Mare Island, California.
Naval Ammunition Depot, Puget Sound, Washington.
Naval Mine Depot, Yorktown, Virginia.
Naval Torpedo Station, Newport, Rhode Island.
Naval Torpedo Station, Keyport, Washington.
Naval Ordnance Plant, Baldwin, Long Island, New York.
Naval Fuel Depot, San Diego, California.

That part of the Aleutian Islands, Alaska, with their territorial waters, lying west of the 167th meridian.

The following harbors were declared to be reserved areas by Executive Order No. 5281, dated February 17, 1930, and navigation of aircraft within the airspace above the same was put under the authority of the United States Navy Department:

Tortugas, Florida.
Great Harbor, Culebra, Canal Zone.
Guantanamo Naval Station, Cuba.
Pearl Harbor, Hawaii.
Guam.
Subic Bay, Philippine Islands.
Kiska, Aleutian Islands.

APPENDIX B

State Airspace Reservations

None at present.

APPENDIX C

Restricted Areas Under Other Federal Agencies

The following areas are under the administrative control of the United States Navy Department, and application should be made thereto for information as to aeronautical regulations:

Samoa (including Tutuila and various smaller islands).
Midway Island.
Wake Island (with a few adjacent small islands).

APPENDIX D

Bureau Airway Traffic Control Stations

The following is a list of Bureau Airway Traffic Control Stations:

Burbank, California.
Chicago, Illinois.
Cleveland, Ohio.
Detroit, Michigan.
Newark, New Jersey.
Oakland, California.
Pittsburgh, Pennsylvania.
Washington, D. C.

APPENDIX E

Special Air Traffic Rules

By Special Air Traffic Rule dated March 6, 1935, all aircraft are prohibited at all times from navigating at any altitude in the airspace above that portion of the downtown district of Washington, D. C., as described as follows:

All that area extending one quarter of a mile in the horizontal plane beyond the outside limits of that section of the City of Washington, D. C., and all the land included within its boundaries, which are marked on the northeast corner by the Union Station, on the southeast corner by the Capitol, on the southwest corner by the Naval Hospital (approximately three-eights of a mile north of the Lincoln Memorial), and on the northwest corner by the Executive Mansion.