



# FAA

WHAT IT IS—  
WHAT IT DOES



## AIRCRAFT

The FAA is vitally interested in every civilian aircraft from the time it is in the design stage until it goes into service—and forever after. When a prototype is built, the plane must meet certain standards before it can qualify for airborne tests.

Later, after it passes its flight tests, the prototype that qualifies receives what the FAA calls a "Type Certificate." Then, every similar plane that comes off the assembly line must earn its own individual "Certificate of Airworthiness." After a plane goes into service, the FAA prescribes certain minimum maintenance standards which must be met to fly in the United States. Every plane that comes in for an overhaul must be signed off by an FAA-certificated aviation mechanic before it can take off.

## AIRPORTS

After FAA has qualified both airmen and aircraft, the third basic need for aviation is the airport. The FAA provides guidance in this area by establishing and updating a National Airport Plan to identify locations where airports are needed and to suggest what type of development is desirable at these airports. Through the Federal-Aid Airport Program (FAAP), the FAA helps communities develop their airports by providing about 50 per cent of the cost of such things as runways and runway lighting. The agency also gives planning and engineering advice to airport owners.

Since local communities find airports a significant economic asset, they provide most of the money for America's network of some 9,500 airports.

## AIRMEN

The FAA issues a license to fly only to those who are able to pass appropriate medical, written and flight examinations. There are different classes of examinations, depending on whether a pilot wants to fly by referring to the ground (under Visual Flight Rules, or VFR as it is called), to fly by instruments (Instrument Flight Rules or IFR), to be a flight instructor or to fly for hire (a crop duster, business pilot or airline pilot, for example). As might be expected, the pilot of an airliner must pass the most demanding written, flight and physical examinations.

The law requires that other airmen (such as aviation mechanics, flight engineers and parachute riggers) also meet strict standards and be able to pass practical and written examinations required by the FAA.







## AIR TRAFFIC CONTROL

Even with first rate airmen, aircraft and airports, modern aviation could not exist without some organized system for the most effective use of airspace. The control of air traffic is at the very heart of FAA activities, involving almost 40 per cent of its 43,000 employees.

The thousands of aircraft that might be in the air at a given time—ranging from jet liners and supersonic military aircraft to small general aviation aircraft—are not spaced evenly over America's 3,000,000 square miles. Rather, they are thickly concentrated around cities and along the 175,000 miles of aerial highways—the established Federal airways that link the large cities.

The FAA is responsible for establishing procedures so that high speed aircraft flying by instrument do not collide with each other or with small private planes flying IFR or VFR. All IFR pilots must file their flight plans with the agency which studies each plan to guard against possible conflicts.

With the miracle of radar, FAA controllers follow IFR flights and provide the necessary margin of separation. The separation is accomplished by routing and re-routing aircraft, by assigning different altitudes so as to maintain an adequate margin

of clearance, and by advising pilots to slow down or speed up so no two planes will reach the same point at the same time.

At all airports with FAA towers, controllers in the tower cabs and in the radar rooms below the cabs communicate with pilots by two-way radio, giving them taxi and takeoff instructions and guiding them out of the airport area. As an aircraft moves out of sight and beyond the range of the airport's short-range radar, other FAA controllers stationed in the 21 air route traffic control centers strategically located throughout the country guide the pilot as he moves along the airways. The flight, followed on radar screens fed by long-range radar, is passed off from one center to another as it continues across the country. When the flight nears its destination, the center controllers notify controllers at the airport who contact the pilot and direct him to a safe landing.

Hundreds of airports have FAA flight service stations and similar facilities where pilots may secure weather and route information, and file flight plans.

## NAVIGATION AIDS

Today's pattern of flight requires a widespread and complex system of navigation aids (NAVAIDS) which are installed, op-

erated and maintained by the agency. Because it is essential that the NAVAIDS guiding the nation's pilots be absolutely accurate, the FAA has a fleet of aircraft loaded with complicated, sensitive electronic testing equipment checking the NAVAIDS regularly. Other agency specialists on the ground provide preventive maintenance on a regular basis, and make emergency repairs, often in rugged, remote areas under adverse conditions.

## OTHER MAJOR ACTIVITIES

As air traffic continues to increase, the navigation system, aircraft equipment and pilot operating requirements must be continually improved. This requires an intensive research and development effort, much of which is carried on at Atlantic City, N.J. FAA's records center, medical research center and training center are at Oklahoma City, Okla. Many foreign nationals are trained in air traffic control and other specialties here and in foreign countries.

The FAA headquarters building is in Washington, D.C., but since the FAA operates under the decentralized management concept, the seven regional headquarters in the United States (New York, Kansas City, Atlanta, Los Angeles, Fort Worth, Honolulu

and Anchorage) are of great importance, as are the 18 area manager offices located throughout the United States.

There is also an FAA office in Brussels. This office handles the same administrative activities as the seven domestic regions for U.S. aircraft operating in Europe, Africa and the Middle East.

The Federal Aviation Administration establishes safety rules and regulations for all airmen and aircraft and publishes them as the Federal Aviation Regulations. While the National Transportation Safety Board is charged with investigating and establishing the probable cause of accidents, in practice the FAA participates because of its deep interest and involvement in aviation safety.

The FAA promotes aviation and aviation safety with a variety of publications, exhibits, slides and motion pictures. A free list of films is available from the Film Library, FAA Aeronautical Center, P.O. Box 1082, Oklahoma City, Okla. 73101.

Pilots and others with a special interest in aviation can keep up with safety developments and Agency activities in FAA's monthly magazine, *FAA AVIATION NEWS*.



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