

Taken over by the Nazis in 1933 and banned by the Allies after World War II, German private flying was reborn in 1955. Like the legendary phoenix, it has come back strong

The German Phoenix: General

West Germany may have its political ups and downs, but one factor has remained constant over the last few years—the growth of general aviation.

Compared with the number of private aircraft registered in North America, the approximately 1,200 private planes registered in West Germany represent a miniature air fleet. This figure would be considerably larger had not the German government taken over all private interests in aviation in 1933; all general aviation was banned in the country from 1945 until 1955.

In early 1956, West German aero clubs began to form and they were the spark that set off the enthusiasm which still grows today in general aviation. The growth of the German aero clubs was slow, however, due to the fact that there were no aircraft to buy except the rather old, mostly surplus U. S. Air Force planes that were based in countries around West Germany and sold for extremely high prices. In 1956, a Piper J-3 cost more than \$5,000, a Czech *Sokol*, built in 1938, cost about as much. The British De Havilland *Tiger Moth* was a little less expensive, but prices for the required spare parts were extremely high.

Lower aircraft prices were introduced when American secondhand aircraft companies started businesses in West Germany, independently or through the assistance of already established German firms. Unfortunately, the low rates were not maintained because most of the American firms either did not have qualified sales representatives in Germany or they were careless about supplying spare parts.

Bad service makes the rounds surprisingly fast in a small country like Germany. This has been improved in the last several years and there are now qualified service shops at most of the larger airports. Only about five or six of these shops, however, are qualified to perform periodic inspections and overhauls. The same Civil Air Regulations that govern periodic inspection and licensing of private aircraft in the United States are also applicable in West Germany.

In general, the same rules apply in obtaining a pilot's license in Germany as apply in the United States: An applicant must be 21 years of age; he must

pass a medical examination equivalent to a third-class medical by a licensed doctor; the applicant must have 40 hours of flying time, all of which must have been logged in a year's time, and 20 hours of which must be solo time.

The applicant must perform: 10 landings at three different airports; a minimum 50-mile cross-country solo flight with two intermediate stops; an altitude flight of 30 minutes at an altitude

of 10,000 feet, which may be combined with the cross-country flight; three landings without power and three landings with power from an altitude of 2,000 feet into a field 984 by 318 feet. The aircraft must touchdown within the first 488 feet.

In addition to the above requirements, a theoretical exam must be passed. These prerequisites are the same as those required to obtain a U. S. student



A German fly-in, which took place in 1958, included gliders as well as single- and twin-engine aircraft

Wilhelm Sachsenberg (left) was one of the first Germans to recognize the potential growth of general aviation in Germany after the war. He is presently president of the Powered Flight Commission and the General Aviation Association of the Aero Club of Germany. Sachsenberg, who is also interim vice president of ICAOPA, has made several visits to the United States



Aviation

pilot's permit.

After successful completion of the theoretical exam and flight test, the pilot applicant must pass the following flight test and another theoretical examination before he is qualified for a private pilot's license: One landing with power must be made into a field 984 by 318 feet, with touchdown made within the first 164 feet; one landing must be made without power into a field 984 by 318 feet, with touchdown made within the first 318 feet; one landing must be made from an altitude of approximately 2,000 feet, power off, with three 360° turns to the left, a side-slip to the left, and the landing made within the first 318 feet; one landing must be made with three 360° turns to the right, and a side-slip to the right; one missed approach and one stall-recovery procedure must be executed.

A German pilot's license is valid for only two years. At the end of this time, it will be renewed subject to proof that the pilot has flown a minimum of 18 hours and made 50 landings within the two-year period of time. Six hours of the 18 hours flight time must have been flown in the preceding 12 months. Pilots with more than 200 hours total flight time have to meet 50% of the above outlined requirements.

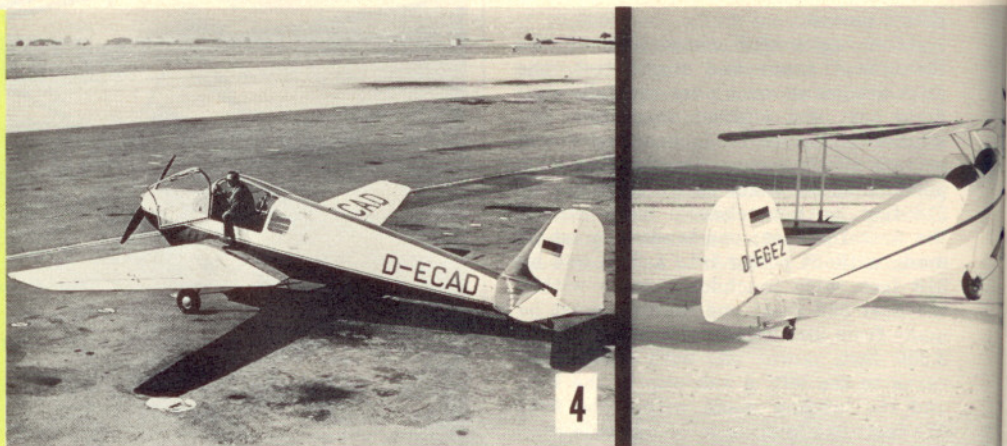
There are several factors that have influenced the growth of German general aviation from 1956 to the present time. The improving economic situation in West Germany has opened a sales market for new and better aircraft. Pilots can fly in Germany with comparative freedom. Through the successful promotional work of the aero clubs, the reconstruction of 10 large civil airports have been completed in the last two years—there are presently 124 civil airports in West Germany. Increased and improved airport facilities have stimulated the interest of German business firms towards the purchase of twin-engine aircraft; an airplane used in business may be depreciated over a five-year period at the rate of 16% a year, leaving 20% of the cost to be absorbed by the owner.

Cessna Aircraft Corporation was one of the first to realize the good sales prospects in West Germany. Besides Cessna, increasing interest was shown by Piper, Mooney and Aero Commander.

- 1 The KL-107C sells for \$10,975. At 60% h.p., it cruises at 128 m.p.h. for a range of 510 miles
- 2 The F-207 is a popular four-seater manufactured in West Germany by Boelkow. It is of wooden construction and sells for \$13,625
- 3 The single-engine Dornier Do-27, which sells for \$29,250, has a cruising speed of 130 m.p.h. and a range of 505 miles



- 4 The German Klemm KL-107B two-seater is one of the first single-engine aircraft manufactured by a German firm after the rebirth of German general aviation in 1955. The plane was later converted to a three-seater and called the KL-107C. Both are in popular use today
- 5 The German Bucker 181 is used for pilot training and acrobatic flying
- 6 The most popularly used German-made light twin is the Dornier Do-28. It sells for \$51,500, cruises at 150 m.p.h., and has an optimum range of 620 miles



Since foreign aircraft can be imported into Germany duty free, this is an added incentive to the purchase of foreign aircraft.

The fact also that the former large aircraft companies in Germany were not concerned with the development of private aircraft further left the field open to the advanced aircraft designs of other countries. Only two German companies did much in the way of producing small aircraft.

Klemm, the original creator of light-plane engines, developed a KL-107. Klemm was later taken over by Boelkow which designed the F-207 with a seating capacity of four in a series of 100

aircraft. This all-wood cabin aircraft costs, with a 180 h.p. Lycoming engine, \$13,625. Dornier is the other company that has come up with a lightplane. It offers the Do-28, (a twin-engine version of the popular single-engine Do-27), for \$51,500. Various amateur aircraft were built by aero clubs. Most notable were the *Elster* and the *Rheinflug*, which is commonly known in the United States as the RW-3.

Limitations on flying in West Germany apply to flights into the Eastern ADIZ Zone, and, of course, across the borders of the various European communist countries. Customs clearance is required in every country visited, i.e., on a flight from Germany to Spain, customs clearance is required not only in Spain, but also at any places where intermediate landings occur. All airports are open to civil pilots, although big municipal aerodromes (Frankfurt, Munich, etc.) accept only aircraft equipped with two-way radio, and permission must be obtained from the commanding officers of military airports. The French-operated airports are the only exception to this rule.

With respect to transmitting and receiving equipment, it is subject to license by the German Federal Post Ministry. Most American radios do not meet the requirements concerning radiation of harmonics and therefore are not licensed for use by German pilots. Al-

though the past two years have seen West Germany virtually covered with VOR stations, general use of VOR equipment in light aircraft is limited by the excessive cost of such equipment.

VFR flights inside controlled air space require that the pilot be 1,000 feet above or below the cloud layers with a visibility of five miles. The same rule applies outside of controlled air space.

The aircraft depreciation allowance applies only to aircraft used almost wholly for business. Operational costs (fuel, oil, insurance, and landing fees) are the same for aero club members as for those who do not belong to a club. It may vary only in a difference in insurance coverage or in that no landing fee is charged to club members on the club's own field.

The distribution of aircraft in the categories of commercial planes, aero club-owned planes and company or individually owned planes is about equal. The percentages average out as: 35% commercial aircraft, 35% aero club owned aircraft, and 30% private or company-owned aircraft.

The single-engine aircraft seen most frequently in Germany are the: Piper J3C-65, Piper PA-18 150, Piper JC3-85, Bucker 181, De Havilland *Tiger Moth*, Klemm KL-107 B and C, Cessna 172, Do-27.

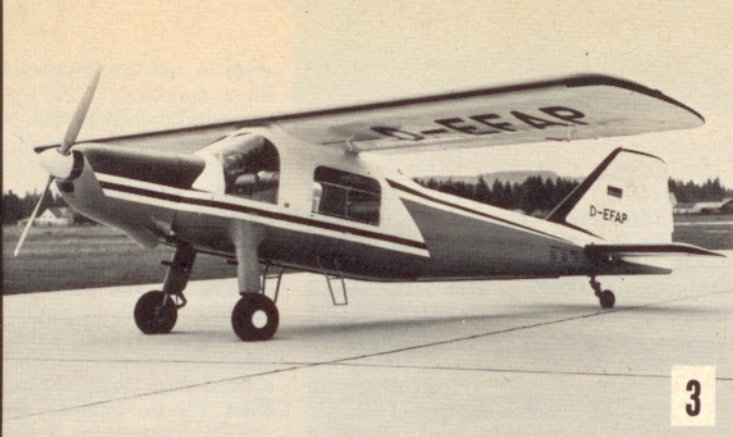
The aircraft most used for training and charter service are the Piper *Cub*,

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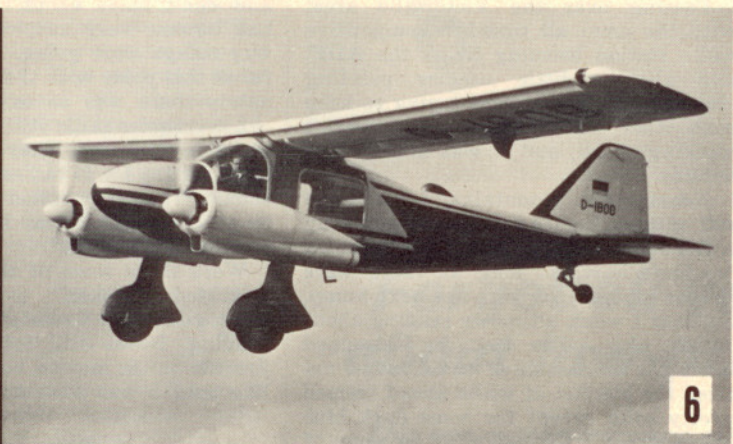
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Fairchild 24 and the Cessna 170 B. Rental prices per flight hour, inclusive of insurance, are \$15, \$22.50, and \$30, respectively.

Gasoline prices in Germany are approximately 38 cents per U. S. gallon; oil cost per U. S. gallon is \$1. Other costs include landing fees which are approximately \$2 for a plane the size of a Cessna 310—then upward or downward in cost depending on the size of the aircraft. This of course does not apply to aero club members landing on a club-owned field.

Aero clubs carry on the greatest amount of flying activity, usually for sport or vacation pleasure. It is interesting to note that in 1955 only 488 pilots' licenses were issued. This number climbed steadily and rapidly in 1956 to 1,092; in 1957 to 3,738; in 1958 to 4,721; in 1959 to 6,033; in 1960 to 6,792.

There is no information available as to the size and number of employees in the German Federal Aviation Agency, called "Luftfahrt-Bundesamt." The general feeling in aviation circles, however, is that it is "too big and has too many employees." It has in the past actively discouraged private pilots and has placed ridiculous limitations on the use of U. S. surplus aircraft and parts.

In spite of this discouraging note to Germany's general aviation, it nevertheless has continued to grow and re-

ceive encouragement from the growing population of private pilots and aero club activities.

It is primarily through the work of the aero clubs that old airports have been reconstructed and new ones built. As soon as airport facilities became available, a large department store and the Krupp industrial combine were the first to purchase large aircraft. Each bought a *Lodestar*. Their example was soon followed by other firms, which bought such aircraft as the Piper *Apache*, Beech *Queen Air*, *Twin Bonanza* and the *Travel Air*.

Harold Quandt, president of the German Aero Club, to which most local aero clubs belong, bought the first private jet aircraft in Germany—a *Morane-Saulnier MS-760 Paris*. The latter part of November 1960, Krupp took delivery on another plane—this time a *Lockheed Jetstar*.

Thus, through a snowball process of more airports, more planes, and more airports, West Germany's general aviation continues to make striding steps. Though the growth of general aviation in West Germany cannot be expected to develop to the large extent it has in the United States, it should continue at an even more accelerated pace than it has between the years 1955 to 1962. Considering that general aviation in West Germany was reborn in 1955, it already has reached noteworthy maturity. ●