

## Upward Spiral Seen In Production

*Industry girds for increased lightplane output after minor setback in 1961. Business use expected to lead expansion*

The general aviation industry paused to "regroup" in 1961 after its record-shattering volume sales and operations of 1960, but the industry appears to be geared for a new upward spiral in 1962.

This optimism is reinforced by a market and business survey report which indicates that in the nation's general economic upturn "the private aircraft industry is set to soar." In the report, E. F. Hutton and Company, a major national brokerage firm, points out that in view of population expansion and dispersal of industrial plants, more rapid and efficient transportation of personnel and freight is becoming an absolute necessity. General aviation is envisioned as the workhorse of that transportation picture. This means that the industry will play a role of ever-increasing importance in the U.S. economy.

Of 80,500 planes estimated by FAA to be currently active in general aviation, about half are flown for business, half for pleasure or instruction. General aviation interests expect to see the total fleet expand, beginning this year, to at least 90,000 by 1965. Manufacturers have girded for increased annual production, allowing for replacement of many presently used aircraft, that will place 38,000 planes in operation between now and 1965, in contrast to the 50,000 built during the past decade. Industry sales by 1965 are expected to reach \$300,000,000 annually, substantially above the \$170,000,000 paid for 6,778 new aircraft in 1961.

According to the Hutton report, demand for low cost pleasure aircraft should be stimulated by expansion of personal leisure time and disposable income. The real mass market for lightplanes, however, lies in the business community. By 1965 the business fleet is expected to increase 100%, while personal and pleasure aircraft should in-

crease 50% to 75% and the number of instructional planes should remain stable.

The practicality of lightplane use in such business and industrial applications as patrolling pipelines, selling real estate, crop dusting and spraying, and particularly for transportation of salesmen and executives, is gaining wider acceptance. With decentralization of U.S. industry—an estimated 94% of post-war plants have been built in areas

with less than 50,000 population—and with just over 600 of the nation's 6,000-plus landing places serviced by scheduled airlines, point-to-point private air transportation is becoming a necessity rather than a luxury.

Industry feels the general aviation market among business users remains virtually untapped. Only 360 of the 3,000 largest industrial and commercial companies in the United States fly their own planes. A survey places the potential market here at 390,000 prospects; 230,000 for single engine aircraft, 100,000 for light twins and 60,000 for medium class twins.

Hutton's report cites major selling points for private aircraft as improved quality, long usefulness and high resale or trade-in values. Attractive financing plans are becoming more readily available. If the general aviation industry has a weakness, the Hutton survey reports, it is in the need for additional airstrips, ground navigation facilities and air traffic control systems.

Although dollar volume transactions last year decreased by more than \$30,000,000 from 1960, due to the general business slump, the Aerospace Industries Association indicated that general aviation is rebounding strongly as economic conditions improve. Perhaps the best measure of the industry's faith in the future is the fact that, during 1961, lightplane manufacturers continued to

### THIS IS GENERAL AVIATION

#### PEOPLE

Total pilots, all categories	348,062
Private	138,869
Commercial	89,904
Student	99,182
Air carrier, other	20,107

#### PLANES

Total registrations as of Jan. 1, 1962	111,580
Air carrier	2,135
Active general aviation aircraft (AOPA survey)	86,524

#### OPERATIONS

Comparison of activity during 1961

	General Aviation	Air carrier
Hours flown	16,700,000 (AOPA survey) 12,600,000 (FAA estimate)	3,500,000
Estimated passengers	81,944,000 (57% of total)	61,800,000 (43% of total)
Aircraft movements	14,800,000	7,100,000
Airports served by	6,881	615

#### MONEY

General aviation sales and services are estimated at more than \$1 billion a year.



make capital expenditures in the millions of dollars to improve plant equipment, expand floor space, and increase the efficiency of production and customer service.

General aviation aircraft as an integral part of the national transportation economy was emphasized by the fact that they constituted the largest user of the nation's airspace, air communications and air navigation facilities last year.

Foreign markets are seen as an increasingly valuable outlet for U.S. plane manufacturers this year and in the future. Last year, oversea sales accounted for about 15% of the business of Cessna, Beech, and Piper, the three acknowledged leaders in the general aviation field. That triumvirate claimed some 92% of aircraft unit sales in 1961, with Aero Commander, CallAir, Champion, Lake and Mooney making up the remainder. Broken down farther, Cessna led with 44%, Piper posted 36% and Beech accounted for 12%.

In sales forces, Cessna during 1961 had 300 retail outlets in the United States and Canada, and 110 export dealers; Piper had 43 distributors and 400 dealers, plus eight foreign distributors; and Beech, far behind but building rapidly, claimed 103 dealers and distributors in this country, and 32 overseas.

Completing its 34th year of business, Cessna posted sales figures for all divisions and subsidiaries of \$87,654,000 in 1961, compared to \$103,278,000 the preceding year. Despite unfavorable 1961 economic conditions, commercial air-

craft sales were the second highest in Cessna's history.

The firm's new six-place, single-engine *Skywagon*, designed primarily for the foreign market, found good acceptance in this country. Oversea deliveries did not start until late in 1961, so export volume for 1962 is expected to be considerably greater.

The new Cessna *Skyknight*, a five-place executive twin engine plane with turbo-charged plants, was introduced last August, and deliveries of the tandem twin *Skymaster* will start next fall.

Cessna reports that major changes have been made in many of its 1962 models. Completely new cabin configurations on the 182, the *Skylane* and the 210 reportedly will make them among the most comfortable, stable and easy to fly in their class.

Piper Aircraft Corporation, though predicting a bright future, sounded a somber note on last year's operations by reporting its lowest net profit since 1954. Total aircraft sales were down only 5% from 1960, but deliveries of the higher priced, more profitable models were 35% lower. Almost as significant in the reduction of profits was the firm's Vero Beach, Fla., operation, consisting largely of production of the *Cherokee*, an all-metal single-engine four placer designed to replace the *Tri-Pacer*. Problems in placing the new plant in operation, production delays and several engineering changes retarded *Cherokee* output so that only 98 units were built instead of the 300 to 400 planned.

Expected sales of 1,000 *Cherokees*

and an equal number of *Colts*, *Super Cubs* and *Pawnees* in 1962 should change the picture materially, Piper officials feel. Economists have indicated that 1962 should be a boom year, but Piper executives see no definite signs of economic recovery in general aviation thus far. They expect to continue a conservative production schedule while maintaining a high level of activity in research, development and sales promotion.

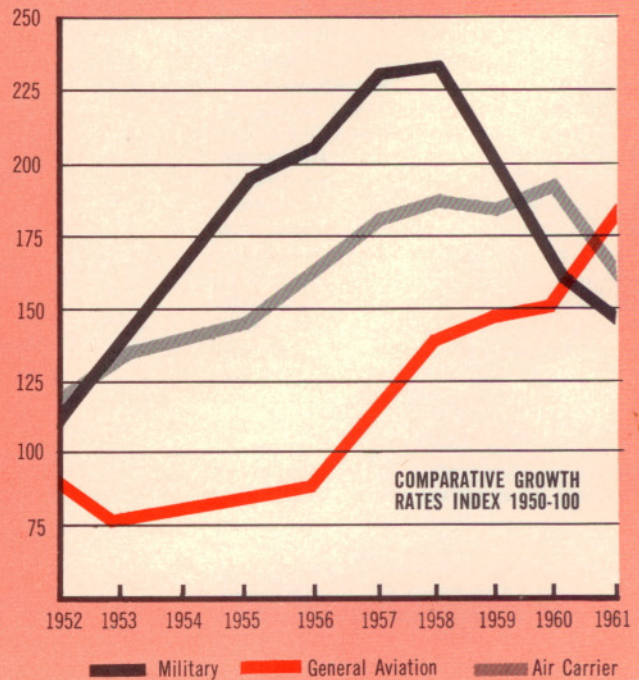
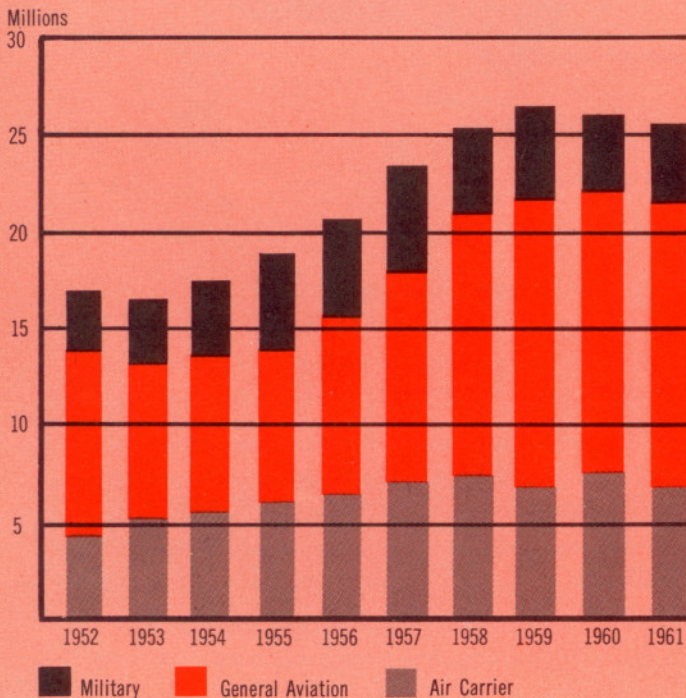
Beech Aircraft Corporation received its severest economic blow during 1961 from reduced military contracts. General aviation sales, however, were up. The company moved into first place in dollar volume sales of business planes in late 1961, claiming more than 30% of the total industry volume for the first nine months of the year. Officials forecast total military and commercial sales in 1962 of about \$75,000,000.

In nine years, sales of Beechcraft commercial and business planes has increased 151%. Domestic and export sales in 1961 totaled \$43,109,590. For this year the firm will offer eight Beechcraft models ranging in price from about \$12,000 to \$123,300.

During 1961 Beechcraft completed the research and development program for its Model 23 *Musketeer*. Looking farther into the future, it is gearing for development of a six- to eight-place turboprop business aircraft with speeds of more than 300 m.p.h., to be marketed for about 50% less than any pure jet aircraft now on the market.

FAA's aviation forecast for the next six years reflects a burgeoning expan-

TOTAL AIRCRAFT OPERATIONS  
AT AIRPORTS HAVING FAA TRAFFIC CONTROL SERVICE  
Fiscal Years 1952-1961





sion of general aviation. In 1961, Agency figures show 76,549 lightplanes spent more than 12,600,000 hours in the air. This year an estimated 80,500 are expected to accumulate 13,300,000 air-borne hours. This is expected to expand to 96,000 general aviation planes logging 16,500,000 hours by 1967.

A recent AOPA survey indicates that FAA's figures are entirely too conservative. On the basis of a poll of more than 105,000 registered aircraft owners, the AOPA survey revealed 86,524 general aviation aircraft logged a total of 16,700,000 flying hours in 1961 (see Figure 1).

FAA's computations indicate that business flying will remain the largest category of general aviation flying, advancing from an estimated 5,500,000 hours this year to 6,400,000 by 1967. Sizable increases also are anticipated in personal (from 3,500,000 to 5,200,000 hours) and commercial flying (2,400,000 to 2,900,000 hours) during the same period.

Characterizing the next six years will be a continuing shift to larger and faster piston-engine aircraft, and an increasing but relatively small inventory of turbine-powered planes. The number of multi-engine and large single-engine craft will grow markedly. Smaller single-engine models should show little change. During the 1962-67 period the number of rotorcraft is expected to double to a total of 1,400.

Distribution and utilization of aircraft by FAA region is expected to show significant changes. While use will increase in all regions, above average rates of growth are anticipated in the southern, southwestern, western and Alaskan regions.

General aviation IFR activity will spiral upward, while an irregular decline is foreseen in military IFR flights. Services provided by FAA Flight Service stations should also show significant gains by 1967.

Total aircraft contacted by FAA stations and combined station/towers may continue to decline this year but should pick up thereafter as increases in VFR aircraft contacted exceed probable reductions in IFR-DVFR contacts. The VFR aircraft contacted category should continue its strong growth trend of recent years, particularly with respect to general aviation aircraft, which constitute about 80% of this activity. Major reason for the increase will be a greater amount of flight following service provided by the stations.

Flight plans have increased at a greater rate during the past four years than any other FAA flight activity measured. The particularly marked upsurge here in 1961 reflected the transfer to FAA of the functions of six military flight service centers on Dec. 15, 1960. As a result of that transfer it is expected that 3,600,000 flight plans will be filed with FAA this year; nearly a million more than in 1961.

The prime mover in steady expansion of general aviation, however, is seen as the existence of adequate aviation facilities. In its National Airport Plan,

FAA outlines requirements for these facilities for fiscal years 1962-66. That document points out that the growth of air traffic, the size and composition of the aircraft fleet and the technological advances in the science of aeronautics are, to a great extent, controlled by the ability of the airport system to keep pace. Airport planning must advance simultaneously with development of aircraft or the advantages of one segment

of the industry will be offset by the disadvantages of the other.

To insure that aviation facilities keep pace with the industry, FAA has allocated \$70,108,464 for construction and improvement of 327 airports this year under the Federal Aid to Airports program. Of that number, 148 will be developed or improved for the exclusive use of general aviation aircraft. Some 17.2% (\$12,020,000) of programmed

#### 10-Year Review of FAA Air Traffic Workload (General Aviation)

Fiscal Year	Total Aircraft Operations	General Aviation	Percent of Total	Percent of Change
1952	16,673,562	9,122,481	55	- 4
1953	16,214,716	7,626,951	47	- 16
1954	17,261,461	7,755,500	45	+ 2
1955	18,800,577	8,321,382	44	+ 7
1956	20,383,867	9,107,226	45	+ 9
1957	23,728,374	11,037,490	47	+ 21
1958	26,297,687	13,228,714	50	+ 20
1959	26,812,001	14,669,555	55	+ 11
1960	26,367,475	14,989,159	57	+ 2
1961	25,623,718	14,925,312	58	- 25

#### HOURS FLOWN IN GENERAL AVIATION BY TYPE OF FLYING FAA REPORT (In millions)

Fiscal Year	Total	Business	Commercial	Instruction	Personal
1957	10.6	4.8	2.0	1.7	2.1
1958	11.3	5.1	2.1	1.9	2.2
1959	11.9	5.3	2.2	2.0	2.4
1960	12.1	5.3	2.2	1.8	2.8
1961	12.6	5.4	2.3	1.8	3.1
1962 (est.)	13.3	5.5	2.4	1.9	3.5

#### HOURS FLOWN IN COMMERCIAL GENERAL AVIATION FLYING FAA REPORT (000 omitted)

Fiscal Year	Total	Agricultural	Industrial	Air Taxi/Charter
1957	1,970	835	575	560
1958	2,100	870	560	670
1959	2,200	875	505	820
1960	2,200	883	430	887
1961	2,300	892	458	950
1962 (est.)	2,400	900	475	1,025



funds will be devoted to those airports. This is about \$5,000,000 more than the minimum amount specified for general aviation by Congress.

A breakdown of total Federal Aid to Airports program funds shows 41.3% earmarked for runways and taxiways; 26.1% to buy land for clear zones and new airports; 15.1% for aprons; 7.8% for land for approach lighting systems; 4.1% for lighting; 2.9% for fire and rescue maintenance buildings; and the remainder for approach clearing and obstruction removal, airport roads, fencing and marking.

Aviation's past decade is viewed in retrospect as an era of mushrooming growth. In 1961 the industry experienced a leveling off that prompted a critical review of the past and a realistic appraisal of its future. The general consensus is that general aviation has become widely recognized as an integral and important part of the national economy. A stepped-up rate of activity, interest and production is a virtual certainty in the years immediately ahead.

## GENERAL AVIATION HIGHLIGHTS OF 1961

- Jan. 1 VFR Flight Following Service initiated by FAA as added safety, flight assistance for general aviation.
- Jan. 16 First multi-point, high speed weather teletype network placed in operation, capable of 850 words a minute. Allowed increase in speed and scope of weather communication service.
- Jan. 17 Amendment 1-4 to CAR established uniform aircraft marking standards.
- Jan. 19 N. E. Halaby appointed FAA Administrator; assumed office Mar. 3.
- Feb. 21 New control area floor adopted by FAA, raising floor for specified areas from 700 to 1,200 feet above ground or 500 feet

below minimum en route instrument altitude.

- May 27 First public "Air Share" meeting held by Halaby to learn "grass roots" attitudes of general aviation owners, pilots and operators toward FAA rules and policies.
- June 16 Distance Measuring Equipment procedures initiated on nation wide basis. First economically priced DME for general aviation aircraft placed on the market.
- June 21 New "tall tower" rule (Part 626, FAA Regulations) announced. Established new criteria to determine potential hazards to aviation which might be created by proposed tall structures.
- July 1 Pilot-to-forecaster simplex weather briefing experiment launched at Washington, D.C., and Kansas City to provide instantaneous weather information.
- Aug. 9 CAR Part 43 amended to allow private pilots to carry passengers in charitable fund-raising drives, provided no compensation received.
- Sept. 10 Project Horizon report completed, recommending aviation goals for 1961-70.
- Sept. 13 Plan announced to codify FAA safety rules for simplification and conciseness.
- Sept. 21 FAA rescinded requirements for landing flares on aircraft operating over water at night.
- Oct. 1 "Blue Seal" program initiated to distinguish pilots who acquire enough instrument skill to fly out of potentially dangerous weather situations.
- Oct. 9 AOPA Plantation Party held at St. Petersburg, Fla., where 360° Rating course was introduced; 136 pilots completed short course to qualify for FAA Blue Seal certificate.
- Oct. 21 Ninety "Air Share" meetings held by FAA throughout nation to discuss changes in rules governing pilots and owners.
- Nov. 7 Project Beacon report published; a study of air traffic management, recommending a system to insure safe and efficient use of nation's airspace.
- Nov. 11 New landing fees went into effect at all major municipally owned Chicago airports.
- Nov. 15 New ADIZ rules adopted, eliminating Northern ADIZ, changing exemption speeds, setting up new DEWIZ.
- Nov. 27 New FAA regulatory council set up, based on Project Tight Rope report to consolidate regulation making functions.
- Dec. 26 Two-way radio requirement established for aircraft operating into or out of FAA tower controlled airports.

## ANNUAL SHIPMENTS OF GENERAL AVIATION AIRCRAFT

(Companies reporting to the Utility Aircraft Council, AIA)

Year	Unit Total	Aero Commander	Beech	Cessna	Champion	Mooney	Piper	Others	Total Retail Value
1957	6,118	139	788	2,489	217	107	2,300	78	\$132,868,000
1958	6,414	97	694	2,926	296	160	2,160	79	135,916,000
1959	7,689	148	893	3,588	274	182	2,530	74	173,168,000
1960	7,588	155	962	3,721	248	172	2,313	17	201,626,000
1961	6,778	139	818	2,756	112	286	2,646	31	170,000,000

## ACTIVE GENERAL AVIATION AIRCRAFT BY TYPE OF AIRCRAFT

(FAA REPORT)

As of January 1	Total	Multi-engine	Single-engine 4-place and Over	All Other	Turbine-powered Aircraft	Rotorcraft
1957	62,886	4,183	22,805	35,898		282
1958	65,289	5,036	23,751	36,502		344
1959	67,839	5,416	26,170	36,253		437
1960	68,727	6,034	27,301	35,392	77	520
1961	76,549	7,243	34,327	34,979	114	626
1962 (est.)	80,500	8,200	37,800	34,500	150	720