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GENERAL AVIATION 1967

Upward Spiral Continues

In both numbers of units and dollar volume sales, 1966 set new records for lightplane industry, but observers believe it only foretells greater successes to come

Most observers agree that if the general aviation scene during the past year could be summed up in a word, that term would have to be "dynamic." As a record setter, 1966 was unprecedented. Based upon current financial indicators, however, its future should be even more heartening.

The optimism with which general aviation manufacturers approached Calendar Year 1966 has been more than justified by the factual evidence of statistics. Virtually all prognostications offered last January underwent mid-year revisions upward. As of Oct. 1, 1966, the beginning of a new fiscal year for most general aviation manufacturers, the 18 major aircraft builders had delivered a total of 15,724 planes having an estimated retail value of more than $512,00,000. This reflected an increase of 34.4% in deliveries over 1965, the previously record-high year, and a conservatively estimated 20% upturn in profits.

Because of the various methods of records keeping that exist within general aviation, it is difficult to assess the full impact of the industry on the overall national economy, or to come up always with precise figures on every facet of the field. Manufacturers base their figures on differing fiscal years. FAA maintains tabulations on both the Federal fiscal (July 1–June 30) and calendar year bases, as well as attempting to project figures for several years to come. The Utility Airplane Council of the Aerospace Industries Association, official scorekeeper for 11 of the more than 30 general aviation airframe makers, tries to provide a running monthly count, culminated by an annual calendar year report.

Results of those several compilations sometimes are conflicting, but are generally complimentary in that they reflect similar growth trends. For 1966, those trends all have been definitely up.

According to AIA, October was the 13th consecutive month in which deliveries made by 11 leading manufacturers exceeded 1,000 units. New model introductions during September and October stimulated a total of 2,595 deliveries for that two-month period, as compared to 1,946 for the same two months of 1965.

Of the 15,724 planes shipped in the 12 months ending Sept. 30, there were 13,153 single-engine and 2,571 multi-engine models. Among the latter were 297 business jets and 141 turboprop aircraft.

From the standpoint of general aviation operations, newly posted records were similarly impressive. In a compilation of miscellaneous statistics released shortly before the end of 1966, FAA projected a calendar year total of 45,100,000 operations at the 303 airports in the country equipped with control towers. Of that total—an increase of 19% over 1965—general aviation was estimated to account for 33,800,000; a 27% increase in its activities over the preceding year.

General aviation IFR operations handled by air route traffic control centers also were projected to reflect a substantial rise—from 1,500,000 in 1965 to 2,100,000 in 1966.

In a breakdown of airman certificates issued during Fiscal Year 1966, FAA registered a total of 211,153, an increase of 25% over the 169,465 certificate issuances in 1965. These broke out to 116,354 student certificates, 41,449 private, 25,770 commercial and 6,369 air transport licenses, swelling the total of active pilot licenses to nearly 550,000.

Aircraft manufacturers themselves pointed up the healthy state of the industry, which was due in no small measure to the extent and effectiveness of their individual merchandising efforts. Sales posted by each apparently correlated well with those efforts.

Cessna Aircraft Company, riding its 11th straight year as the industry leader in unit production and the ninth consecutive year it has been first in dollar volume sales, boosted its deliveries by 57% over those of 1965. Production of 7,922 planes made it the biggest year in the company's 39-year history and represented a doubling of business in

Active Airman Certificates

Fiscal Year	Student	Private	Commercial	ATR	Other	Total
1962	95,870	149,405	96,047	20,032	4,617	365,971
1963	105,298	152,209	96,341	20,269	4,583	378,700
1964	120,743	175,574	108,428	21,572	4,724	431,041
1965	139,172	196,393	116,665	22,440	5,100	479,770
1966*	172,914	204,682	138,831	26,743	5,800	548,970

**AOPA interpolation based on rate of increase and past FAA records*

just three years' time.

According to Cessna President Del Roskam, 1966 saw significant gains in every one of the company's individual markets. The largest was in its "learn to fly" market, made up of four versions of the two-place Cessna 150, the 172 and its companion model, the *Skyhawk*. Those accounted for 3,985 of Cessna's total units for the year, a 78.8% increase over sales of the same models in 1965.

Next largest increase was in multi-engine sales, which climbed from 567 in 1965 to 817 units in 1966, a gain of 44%. Cessna's middle-priced line—the 182, *Skylane, Super Skylane, 210 Centurion* and *Turbo-System Centurion*—was up 24% in sales, while utility aircraft, including the new *Agwagon*, accounted for a 30% increase over 1965 deliveries.

Of the company's record $202,000,000 in total income for the year (up from $148,419,000 in 1965), commercial aircraft sales accounted for $140,000,000, 35% more in dollar volume than during the preceding year. Cessna ended its fiscal year with September sales of $20,200,000, the largest single month's business in the company's history.

Piper Aircraft Corporation, with a 1966 production record of 4,319 units (up about 12% from 1965's 3,838 units, despite a three-month-long strike that exhausted distributor-dealer inventories) has focused its sights on 1967 as the year to remember. Company officials have pledged themselves to a 39% production increase to bring their Fiscal '67 output to 6,000 units. They made a slow start toward that goal in October, however, with delivery of only 217 units worth an estimated $6,125,000.

Piper billings of $80,000,000 in 1966 represented a 17.5% rise over 1965 income. A generous share of that reportedly is being plowed into plant expansion to further increase company production capabilities.

Beech Aircraft Corporation, sharing the industry's optimistic outlook for 1966, originally forecast a dollar volume market of $140,000,000 for all of its wares, of which $92,000,000 was expected to be earned on commercial aircraft sales. By midyear it had upped that estimate by $10,000,000, with the bulk of the increase expected from general aviation production.

The accuracy of that projection was borne out by year-end tabulations that showed total Beech general aviation deliveries of 1,442 units worth $100,731,368 in net billings. That was a 35% increase over 1965's dollar volume business.

For the future, Beech sees only more of the same gratifying growth. In a recent report to stockholders, company officials forecast increases of 10% for 1967, bringing total income to about $180,000,000 for the year. By 1970, they predicted, that figure will top $200,000,000.

Mooney Aircraft Company's fiscal year differs from that of its competitors. It runs from November through October. With 1966 sales in excess of $14,000,000, the company was geared for a $24,000,000 volume during the current year and had projected a $32,000,000 market for Fiscal 1968.

Frustrated in its efforts to bring its pressurized M-22 *Mustang* to full fruition in 1966—a shortage of properly trained manpower worked against that, according to company president Hal Rachal—Mooney used its resources instead to push production of the *Executive 21*. That course of action apparently paid off handsomely, with that model accounting for 120 of Mooney's 772-unit production record during the past year. An income of $14,150,000 represented an increase of about 15% over 1965's 750 aircraft sold.

Mooney's successful experience with merchandising the Japanese-developed Mitsubishi MU-2 reportedly has led the Texas-based firm to seriously consider development of a twin of its own design. But that is still in the comparatively distant offing. Meantime, Mooney has sold 18 of the MU-2's to U.S., Canadian and Mexican business firms, has contracted with Mitsubishi Heavy Industries to buy another 80 and is dickering with the Japanese company to obtain South American sales rights.

Aero Commander, with its expanded line of acquired single-engine models (the Aero Commander 100, nee Volaire; 200, nee Meyers; and Snow Commander) complementing its twin-engine and business jet models, reportedly posted a phenomenal increase in both units and dollar volume during its fiscal year, which corresponds with the calendar year. With year-end deliveries slated at 255 to 260, worth net billings of a reported $56,000,000 to $60,000,000, the company claimed an increase of about 53% in unit deliveries and better than 100% in dollar volume.

The company's most recent acquisition, the Snow Agplane, broadened the base of Aero Commander's product line as well as contributing to increased unit sales. But apparently the firm's parent company, Rockwell Standard Corporation, still intends to make good its pledge to transform the "Big Four" in general aviation to the "Big Five." Besides holding an option to acquire the Ted Smith Aircraft Company's developing *Aerostar* line, Rockwell Standard reportedly is still looking over the lightplane products of several domestic and foreign manufacturers with the idea of further buyouts.

Among some of the smaller unit producers in the United States, several recorded 1966 sales increases far in excess of the industry giants, percentage-wise. Alon, Inc., with its popular two-place trainer, tripled its sales during 1966, (from 52 to 157); Bellanca's deliveries rose from 29 to 57; and Champion, with its *Citabria*, registered an increase from 225 to 338.

How did this unprecedented unit/dollar volume growth affect the overall general aviation picture? According to an FAA report for Fiscal Year 1966, it probably drove the number of active privately owned aircraft in this country comfortably above the 100,000 mark. FAA figures generally are regarded as being too conservative, however, and many industry officials estimate the true size of the active general aviation fleet at more than 110,000.

FAA's report, titled "Selected Year End Statistics," placed the total active civil aviation fleet as of last January at 97,741, of which 95,442 were general aviation planes. With an estimated 4.5% "attrition rate," more than offset by 1966 sales in the United States, FAA's next reported official figure is expected to be in the neighborhood of 100,000.

Growth of the general aviation industry has necessarily led to greater employment all down the line during 1966.

In October, the Aerospace Industries Association disclosed that total employment within that broad field would reach an expected record of 1,349,000 by the close of the year, an increase of 11% over that of a year earlier. The biggest proportion of increased employment was within the aircraft segment of the industry.

Utility, or general aviation aircraft, manufacturing reflected a rise of about 3,000 employees during the year among the 11 companies reporting to AIA. That brought the year end total to some 31,000. Announced expansion plans by the major producers during 1967 would indicate that employment will increase even more—provided there are workers to be found.

That, according to virtually all lightplane manufacturers, is the thorniest problem in an otherwise bright future. All of the major plane builders have indicated that they are beginning to focus nearly as much attention on getting and keeping good employees as they are on merchandising their wares. In exulting over its recent growth to more than 10,000 employees, Cessna noted with some alarm that the demand for personnel in almost all facets of the industry is increasingly dwarfing the apparent supply.

Of total employment and employment opportunity within the industry, more than 60% is in the production line. Scientists, engineers and technicians comprise about 25%. The remainder is made up of administrative, sales and similar forces.

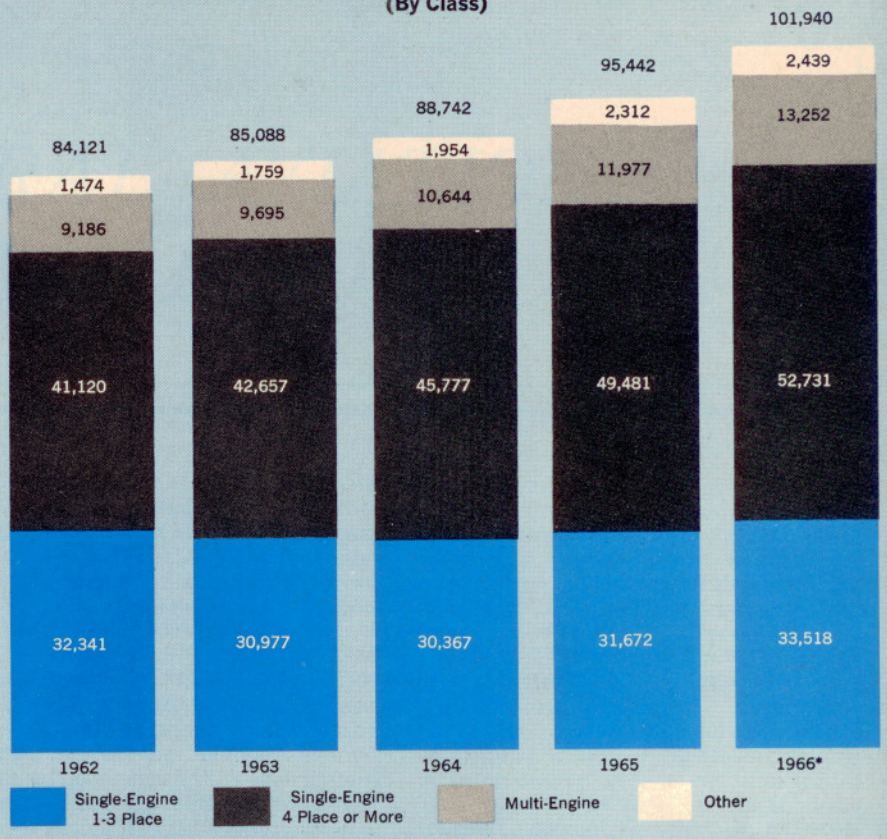
To achieve a hoped for 30% industry-wide growth rate during 1967, most observers claim there will have to be at least a 15% employment increase. By the same token, similar personnel increases will have to be registered among maintenance and support services, engine and equipment manufacturing companies, and similar organizations which now employ a conservatively estimated 250,000 people.

Looking ahead, the general aviation industry seems to be destined for even more explosive growth than it has enjoyed in the past year. A recent FAA publication, "General Aviation—A Study and Forecast of the Fleet and Its Use in 1975," partially mirrors the cause for the industry's continued optimism.

General aviation's history has been characterized by changing trends and shifting emphasis, at the same time establishing a strong foundation for future growth, the FAA study points out. It acknowledges that flying has become an accepted means of travel, with greater public understanding of the safety and usefulness of lightplane operations a direct result.

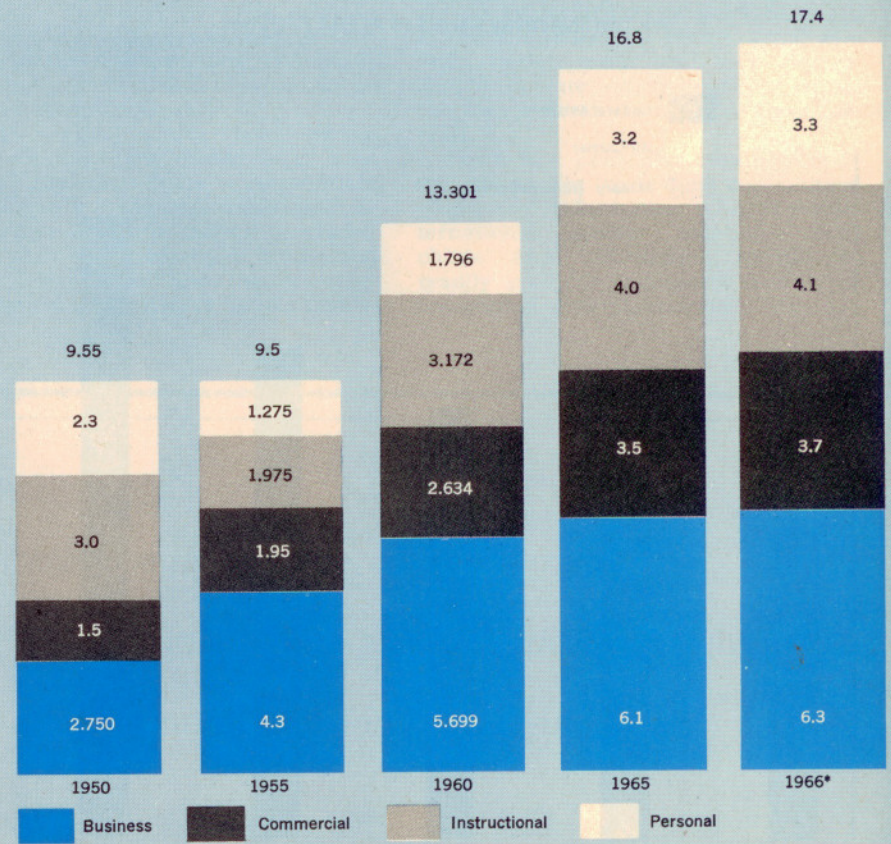
Lightplane aircraft production has been very sensitive to business cycle fluctuations, FAA claims, and the sharp increase in shipments from 1963 to 1965 reflects the unusually high growth rates experienced by the national economy. The agency's study estimates that by 1975, normal annual production of general aviation planes will approxi-

Active General Aviation Aircraft (By Class)



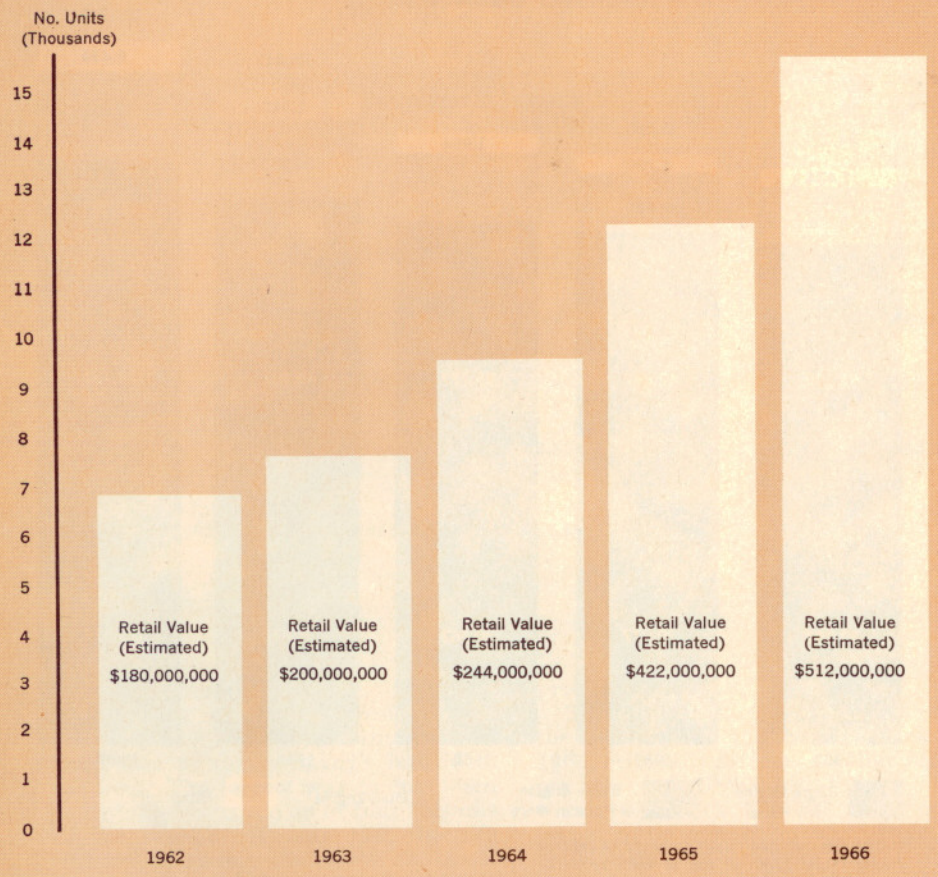
*AOPA interpolation based on past FAA records
(Note: Total given at top of each column)

General Aviation Hours Flown, By Type (In Millions)

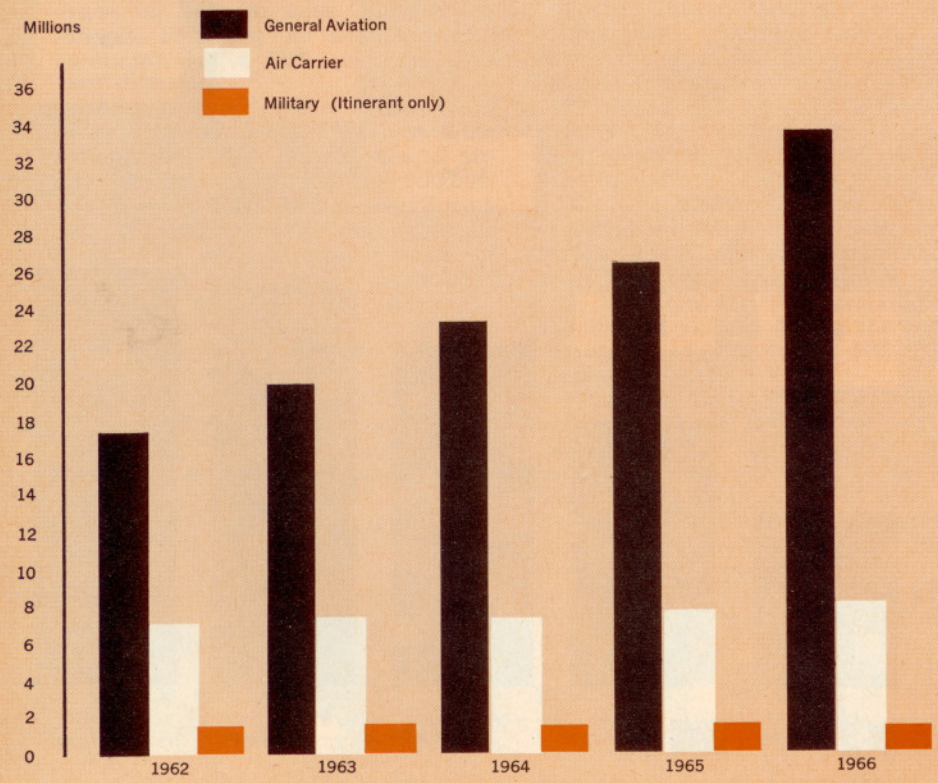


*AOPA interpolation based on past FAA records
(Note: Total given at top of each column)

General Aviation Aircraft Deliveries



Air Traffic Activity Recorded At FAA Facilities



mate 22,000, but could go as high as 27,000. That estimate includes 8,000 aircraft required to meet normal growth in the private fleet, about 7,000 to replace those lost through attrition, and export sales of about 7,000.

Industry, on the other hand, sees a rosier outlook. It predicts annual sales of some 35,000 by 1975.

Concerning technological developments in the coming decade, FAA has this to say:

"In airframe structures, the aluminum-stressed skin construction will continue. No need is foreseen for any of the exotic materials or radically altered construction methods. Cabin pressurization . . . may be anticipated in the more expensive single-engine aircraft. However, it will not be the general rule.

"Aerodynamic improvement can be anticipated with a resultant increase in speed, but some of these improvements may be accompanied by certain low-speed regime problems which may require additional systems to counteract these problems. The latter, of course, would add to the cost and complexity of the aircraft.

"The 1975 general aviation fleet will still be essentially a piston-engine fleet . . . the use of lightweight turbo-superchargers and higher horsepower piston engines can be expected to increase, for these engines expand the usefulness of the aircraft by permitting higher altitude flight above many levels of bad weather.

"The general increase in speed, range and size of general aviation aircraft has made them more acceptable for longer trips. This has led to the requirement for more and better navigation and communications equipment . . . Most of this flying is still VFR, however. IFR capability in both pilot and aircraft is relatively expensive to attain and is justified in only a small percentage of operations. The continued development of solid state electronic gear and hoped for reductions in cost as well as their light weight, low power requirements, and reliability should stimulate a wider use of more sophisticated equipment by 1975.

"All of the technological advances . . . will lead to a more useful aircraft for general aviation. As the aircraft become more useful, they can logically expect to be in greater demand."

Looking into their own crystal ball, some industry officials have revealed that they will be scarcely surprised to see nearly 20,000 private planes produced this year that will sell for upwards of $600,000,000.

Problems and question marks the industry has aplenty—the manpower supply, availability and quality of materials, public education and merchandising, stability of the economy and, of no little concern, the ramifications of FAA's absorption by the newly created Department of Transportation. But at this point, as with each of the preceding three years, industry leaders predict only brighter prospects and more prosperous fortune in the year ahead. □