

General Aviation 1966

Riding on the crest of the most sustained upward climb in its history, the general aviation industry sees even further gains in both production and profits this year

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As general aviation's sales year 1966 enters into its busiest period this month, the industry's perennial note of cautious optimism seemed to have given way to enthusiasm over the market outlook for the year. More cynical veterans of the false boom of two decades ago are being outshouted by those who believe that the industry's upward spiraling activity continues to present a marketing ceiling and visibility unlimited.

Already five months into the new fiscal year—most of the lightplane airframe manufacturers operate on an October-through-September fiscal basis—the industry has ample cause for strong optimism. All national financial indicators are pointing upward. Aircraft inventories are at comfortably low levels and orders continue to run high. And too, the industry is riding on the crest of the 37th consecutive month in which deliveries are higher than they were for the corresponding month of the preceding year.

Still glowing over the financial blessings bestowed during calendar year 1965, general aviation as a whole mirrored confidence that its cornucopia of good fortune was far from exhausted. Here are some of the highlights from its healthiest year ever:

Total sales of nearly 12,500 units by the 28 airframe manufacturers listed in the supplement to this issue of *The PILOT*, at a gross retail figure estimated in the neighborhood of \$500,000,000, made 1965 the most financially rewarding year in general aviation's sometimes rocky history.

The successes enjoyed by industry giants—Aero Commander, Beech, Cessna, Lear, Mooney and Piper—generally were reflected across the board. Not only was this true among aircraft builders, but also by radio and instrument manufacturers, maintenance and service operations, and a host of suppliers of services and equipment.

Expanded public interest in general aviation during 1965 was especially noted in aircraft engines and service parts business. Continental Motors Corporation, in an early year-end report, listed net earnings of \$2,298,299 on sales of \$184,003,189. A substantial

part of that, it indicated, was attributable to its Aircraft Engine Division. That division provides powerplants for Cessna, Beech, some models of the Aero Commander, Champion, Maule and Alon. The other general aviation aircraft engine "giant" is Lycoming Division of Avco Corporation.

By the end of October 1965, the eight aircraft manufacturers that report to the Utility Aircraft Council of the Aerospace Industries Association had peddled 9,621 aircraft—285 more than were delivered during the entire calendar year 1964. At year's end, AIA reported 11,852 deliveries, citing an estimated retail value of \$422,000,000.

An encouraging sign of the market's tenor was illustrated by average per unit investment. While 1965 production registered an increase of 27% over that of 1964, manufacturers' net billing income jumped by 60% for the same period. This was reflected in an average unit retail price of about \$35,600, up nearly \$10,000 from the overall average plane price of two years ago.

That dollar volume increase was laid to the greater number of twin-engine, turboprop and jet aircraft sold to the business segment of general aviation during 1965. Of the more than 50 different models offered by AIA-member general aviation planemakers, 1,979 units were twin-engine (this included 200 turboprop and pure jet models), an increase of 22% over 1964. Of the remainder, 3,452 were single-engine, under four-place (up 115%) and 6,421 were single-engine, four seats or more (up 5%).

Statistics compiled by *The Weekly of Business Aviation* reflected slightly higher total sales for 1965. Those figures showed 12,331 general aviation planes delivered, 2,041 of which were twin-engine. In addition to manufacturers who report to AIA, they included Alon (87 deliveries), Bellanca (39), CallAir (120), Grumman (73), Lockheed (18), Maule (47), North American (28) and Snow (67).

Leading the industry for the 10th consecutive year, both in units and dollar volume sales, was Cessna Aircraft Company. Its total deliveries of 5,629

aircraft at a net billing of \$97,238,000 included 707 twin-engine planes, placing it first in that category also. Following, in order of units delivered, with net billings, were Piper (3,776 planes billed at \$61,664,000), Beech (1,192 and \$72,211,000), Mooney (775 and \$12,173,000), Champion (271 and \$1,018,000), Aero Commander (110 and \$27,727,000), Lear (80 and \$45,130,000), and Lake (19 and \$505,000).

Personnel employed by those eight firms also reached an all-time high by the close of 1965. Last March, the number of persons employed totaled 19,435. By December, there were 21,958 on the payrolls. Hiring during the past two months has added an estimated 3,000 more and there are probably an additional 5,000 employed by AIA-nonmember manufacturers.

Average weekly earnings in the aerospace industries during 1965—which, presumably, would apply to the general aviation facet of it too—were up \$5.72 over 1964, to \$130.12. But employees put in a 1965 work week that averaged 36 minutes longer than the 1964 work week.

New student pilot starts also reflected the general rosy hue of 1965. By year's end, FAA had issued close to 100,000 student pilot certificates, nearly 20,000 more than were recorded during 1964. While that was substantially below the hundreds of thousands issued under the G.I. Bill at the close of World War II, it was a significant record for recent years and reflected a steadily growing public interest in general aviation.

FAA has made some drastic revisions in virtually all of its statistics concerning general aviation activities and forecasts. Noted for its conservatism in estimates and prognostications with regard to general aviation operations, the agency nevertheless acknowledges that general aviation's growth is trending steadily upward. In its recently released "Aviation Forecasts, Fiscal Years 1966-1971," FAA predicted that general aviation active aircraft will increase from 88,742 as of Jan. 1, 1965, to 123,400 by 1971. AIA placed the 1965 year-end count of active planes at more than 95,000. FAA's estimate that there would

THIS IS GENERAL AVIATION

A three-year review of its growth and trends in the United States, compiled from AOPA, FAA and industry data

Pilots	Jan. 1964	Jan. 1965	Jan. 1966*
Student	105,298	120,743	140,000
Private	152,209	175,574	200,000
Commercial	96,341	108,428	122,700
Air Transport	20,269	21,572	23,400
Other (Helicopter, glider, etc.)	4,583	4,724	5,300
Total	378,700	431,041	491,400
Active Aircraft			
Single-engine, 1-3 place	30,971	30,363	31,400
Single-engine, 4 place or more	42,655	45,773	51,200
Multi-engine (piston)	9,458	10,346	12,200
Rotor	1,171	1,306	1,460
Other (jet, turbine, etc.)	833	954	1,040
Total	85,088	88,742	97,300
Aircraft Operations (in millions of hours)			
Business	5.9	6.1	6.4
Commercial	3.2	3.4	3.6
Instruction	2.6	2.8	3.0
Personal	3.7	3.9	4.2
Total	15.5	16.2	17.2
Aircraft Landing Places In The United States (includes military)	8,788	9,463	9,600
General Aviation Operations At FAA-Controlled Airports (in millions)			
Local	11.3	12.7	14.5
Itinerant	12.4	13.7	15.5
Total	23.7	26.4	30.0

* Estimates based on projection of growth rate recorded for Jan.-July 1965

be 11,400 general aviation aircraft produced during fiscal 1966 was exceeded in calendar year 1965 by nearly 1,000.

The agency also forecast an increase of 29% in general aviation flying hours, a 60% gain in operations at controlled airports, a 58% rise in IFR operations, and 40% growth in FSS-combined station/tower workloads over the coming five years. Most industry officials believe those estimates are too low.

Several observers of the general aviation scene heralded 1965 as a milestone year for improvements and advance-

ment of new concepts. Perhaps one of the most noteworthy was the competitive drive on the part of the majority of manufacturers to reach every conceivable market with their respective products. Topped by Rockwell-Standard's acquisition of Volaire and Meyers Aircraft Companies—and later the Snow agplane—to complement the Aero Commander corporate aircraft line, 1965 saw the introduction of new and exciting innovations by all the major producers. Mooney's "PC" (for positive control) system became standard equip-

ment in all its models, and the company introduced both the single-engine, pressurized *Mustang* and the Japanese-developed, twin-turboprop MU-2.

Piper aimed at expanded sales of its *Cherokee* series, brought out a four-place conversion of the *Cherokee 140*, introduced the six-place *Comanche* and began testing of its turbocharged *Navajo*, slated for the market this year.

Cessna, through an accelerated "learn to fly" campaign, moved into quadrupled production of its two-place Model 150 and at the same time increased marketing emphasis for its twin-engine models, topped by the sophisticated executive Model 411. Twin-engine production in 1965 nearly doubled that posted by Cessna in 1964.

A leading 1965 phenomenon was the expansion of product lines. This was typified by Beech. That company enlarged its business fleet production to 15 different models last year and indicated that there will probably be even a wider range to entice the prospective buyer in the near future.

Export sales, a mushrooming market that has been assiduously nurtured by all aircraft manufacturers, continued to grow at a heartening rate during 1965. Overseas deliveries for the year amounted to a reported \$55,000,000, about 15% of total billings. This was for 2,200 planes, 425 over 1964 total.

Conversely, 1965 saw a heightened invasion of the United States by the wares of foreign planemakers, especially jet and turboprop aircraft of the corporate plane category. Pan American World Airways launched a spirited promotional campaign for its *Fan Jet Falcon* (the French-built *Mystere*). Hawker Siddeley Aviation of England created a sizable U.S. market for its speedy twin-jet DH-125. De Havilland of Canada, with its growing line of turboprop STOL aircraft, broadened its activities on the U.S. market with introduction of its two-ton capacity DHC-6 *Twin Otter*.

Perhaps the brightest aspect of 1965 was that seen from the stockholder's-eye-view. Virtually every U.S. airframe manufacturer registered seldom if ever paralleled earnings during the past year. Beech's 61% increase in net earnings over 1964 set a new high for that company. Cessna posted a 46% net increase. Piper, despite a 51-day strike that reduced fiscal 1965 gross income by an estimated \$2,000,000, claimed a new net margin of nearly 30%. Among other manufacturers, it was much the same story of heady success.

Because of the unflagging upward trend in general aviation's popularity over the past several years, confidence in the market has steadily strengthened. This is reflected in programs of capital construction. Last year, the industry leaders alone invested an estimated \$10,000,000 in production facilities expansion and improvement. This year that figure reportedly will surpass \$20,000,000.

The optimism with which calendar year 1966 is viewed would seem to be fully justified in light of results of the

first quarter of the fiscal year observed by most airframe manufacturers. Nearly all reported sales totals and billings were substantially above those for the same period a year earlier. Between Oct. 1 and Dec. 31, 1965, Beech registered an increase of 19%. Cessna continued to post new records with sales up 50% over the first quarter of the preceding year and earnings after taxes up 52%.

An exception to that trend was reflected by Piper, which reflected a 13% decrease from the same three-month period of the preceding fiscal year. That was laid to a strike which idled production during one entire month of the period, however, and the company viewed an overall 1966 increase that will run about 25% over 1965 business.

Cessna announced in 1961 that it planned to attain sales leadership in the twin-engine market by the close of 1965. It did. During December alone, the company delivered 80 of its four twin-engine models. The 411, introduced in February 1965, had accounted for 122 of Cessna's 707 twin-engine deliveries by the close of the calendar year.

Piper's big push to promote the six-place *Aztec* during 1965 paid off equally well. That plane took the honor of being the largest selling single model light twin, with 365 units delivered by the end of December.

Among the many plans for this year, either already in being or projected by the major manufacturers, these represent the highlights:

Aero Commander, backed by the financial muscle of Rockwell-Standard Corporation, is expected to attain a healthier share of unit as well as volume sales this year. Orders for its "big boys"—the *Turbo Commander* and the *Jet Commander*—reportedly are exceeding all expectations. Inclusion of the low-cost, four-place Aero Commander 100 (formerly the *Volaire*) and the high-performance, single-engine 200 (formerly *Meyers*) puts the company more in the "something for everybody" line. Assembly at Aero Commander facilities of the *Sud Aviation Gardan Horizon* is rumored to begin this year. If it does, that will fill the company's

price gap in business and utility models. Purchase of the Snow Aeronautical Company has given the firm a running jump into what officials believe will be a 1,000-plus industry-wide annual production category, the agricultural plane field.

Alon, Inc., with almost phenomenal first-year sales of its two-place sport trainer, is expected to react this year with "instant opportunism." That reportedly will take the form of a four-place companion model to its present version of the *Aircoupe*. If it emerges as more or less a modification of the two-place model, it may get into production this year.

Beech, with 1965 gross commercial aircraft income of \$74,329,005—an all-time high for its 33-year history—predicts a 1966 increase of nearly \$16,000,000 over that figure. This would put the company 80% ahead of its 1961-65 forecast. Primary reasons for its optimism include expansion at the bottom of its cost line—now three *Musketeers* in place of the previous single model—and stepped-up efforts to win a broader share of the corporate market with two added *Queen Air* models. The pressurized, twin-turboprop *King Air* completed its first full sales year with nearly 90 deliveries. It is targeted for 100 units this year.

Cessna's apparently "winningest" formula is expected to continue domination of the general aviation market this year. The company's "learn to fly" drive reportedly has paid off handsomely and will be accelerated as Cessna single-handedly assumes the responsibility for precipitating at least 120,000 new student pilot starts. Under a marketing and distribution program launched last fall, Cessna views everyone with an income of \$8,000 a year or over as a prospective plane owner; nearly 300,000 U.S. nonflying business firms as a virtually untapped source of potential corporate aircraft sales. Chief 1966 inducements to "Buy Cessna" include a hold-fast price line; optional turbo-charging for all twin-engine models and several single-engine "workhorses." Growth of its lower-priced line spreads overseas this year. Cessna will assemble 150's as well as 172's at its Reims,

GROWTH OF GENERAL AVIATION AIRCRAFT DOLLAR VOLUME SALES*

Year	Manufacturer's Net Billing	Estimated Retail Value
1961	\$125,480,000	\$170,000,000
1962	136,837,000	180,000,000
1963	153,415,000	200,000,000
1964	198,876,000	244,000,000
1965	318,266,000	422,000,000

* Figures represent reports from AIA member companies only

France, plant and has had an agreement approved for manufacture of the 182 in Argentina.

Cessna president Del Roskam (AOPA 262992) has predicted that his company will sell more than 7,000 planes during 1966. A year ago, he prophesied that Cessna would deliver 5,000 aircraft in 1965. That forecast was exceeded by 629 units.

IMCO, Inc., manufacturer of CallAir agplanes, has announced it will expand this year into production of a four-place, single-engine utility aircraft. With a record of 125 units sold during 1965, the Afton, Wyo., firm believes it has the solvency and talent to effectively compete with the "Big Five" for a share of the four-place utility plane market.

Lear Jet Corporation, in a scant two years, has vaulted into a commanding dollar volume position in the business jet market with its single Model 23. But it reportedly regards 1966 as its big growth year. Among its promises, immediate and future, are the Model 24, an updated, heavier version of the Model 23; a \$75,000 twin-engine, single pusher-prop business plane; and a "third-level-airline" size Model 40, identified as the *Lear Liner*.

Mooney Aircraft this year adds spacious facilities in San Angelo, Tex., to

U.S. GENERAL AVIATION AIRCRAFT PRODUCTION (Number of Units)

Year	Aero Commander	Beech	Cessna	Champion	Lake	Lear	Mooney	Piper	Other	Total
1961	139	818	2,756	112	9		286	2,646	31	6,778
1962	121	830	3,124	91	5		387	2,139	5	6,697
1963	114	1,061	3,456	99	16		502	2,321	16	7,569
1964	109	1,103	4,188	60	27	3	650	3,196	316	9,652
1965	110	1,192	5,629	271	19	80	775	3,776	479	12,331

Phenomenal growth trend of general aviation manufacturing is indicated by review of past five years, which have seen annual aircraft production nearly double. Blanks indicate aircraft were not in production. Marked increase in "Other" is due to the fact that more accurate figures were not available for earlier years

its Kerrville capability. Company officials indicate that this year's activities will be marked by increased production of the regular three-model M-20 series, complete certification of the pressurized *Mustang* and concerted "market preparation" for the twin-turboprop MU-2. In addition, development is slated to get underway on two more twin-engine models.

Piper, with inventories depleted to near exhaustion as a result of the production workers' strike last fall, reportedly is laboring desperately to catch up to the demand for its regular line of single- and twin-engine models. Its most significant contribution this year is expected to be full production of the twin-turbocharged *Navajo*, but diverse internal "optionals" at the lower end of its *Cherokee* series are expected to maintain those single-engine models as Piper's best sellers. In common with Cessna, Piper will continue its campaign to get more people into the air. At the same time, it is stepping up its efforts to induce communities to provide more places where aircraft can land.

Despite the many abrupt ups and downs of general aviation in its past history, leading industry spokesmen predict that its current rate of ascendancy will continue unabated into the foreseeable future. If any change is registered, it can only be an acceleration of the present growth rate, they claim.

As evidence for that outlook, several pointed to four main factors: (1) The increasing public interest in general aviation, elicited in part by the manufacturers' updated advertising and marketing practices. (2) The growing affluence of Americans, who now have greater amounts of "discretionary income" with which they can learn to fly and invest in a plane. (3) Increasing realization among businessmen that they can compete more effectively with their fellow businessmen if they take to the air. (4) Improvements in aircraft that have made them safer, more efficient means of economical transportation.

The general aviation market appears to be brighter than ever before in its history and manufacturers indicate that they are fully geared to exploit the opportunity. But there is an omnipresent cloud that threatens to besmirch the otherwise clear horizon of General Aviation 1966.

As private flying grows in size and scope, it is a virtual certainty that governmental desires for increasingly restrictive limitations to lightplane activities will be vocalized.

As AIA indicated in its recount of 1965, the year just past was a banner one for the general aviation industry. But it appears to be a mild prelude for what is yet to come. If 1966 sales measure up to the anticipated 20% increase, the year will close at a new record high of more than 15,000 aircraft deliveries valued at nearly \$600,000,000. That is success, no matter how you look at it. ●