



Piper Apache
Span ... 37ft
Length ... 27ft 1in
Height ... 9ft 6in

Cessna 310
Span ... 35ft 8in
Length ... 27ft
Height ... 10ft 5in

Riley '55
Span ... 33ft 4in
Length ... 27ft 2in
Height ... 9ft 6in

The three smaller twins approximately to scale. The sharply kinked leading edges of the Apache's wings are noteworthy.

production model's Narco Omnigator with I.L.S. localizer and eight-channel transmitter, Narco Simplex 12-channel V.H.F. transceiver, and Lear A.D.F. 12. The only non-standard equipment was a Sunny South M.F. transmitter.

Conrad wore a U.S.A.F. exposure suit and Mae West; and carried with him an inflatable life-raft and a suitcase of normal clothing. Provisions consisted of a box of biscuits, two bottles of Coca-Cola and a fresh grapefruit. The Apache is reported to have reached Paris—after 22 hr 23 min in the air—with 70 gallons of fuel remaining in the tanks. Calculations showed that for the total distance, which is officially 3,625 miles, the average speed was 161 m.p.h., and the average fuel consumption 12.88 gal/hr. At take-off from New York (Idlewild) the Apache weighed 5,000 lb—1,500 lb overload—and the take-off was measured as 2,500ft in a 6-8 m.p.h. cross-wind. This flight alone gives some measure of the capabilities of the Apache—and at least one other of the light twins here described has put up similar performances.

Among them is the Aero Commander, made by Aero Design and Engineering Company, Bethany, Oklahoma. One of these aircraft actually flew non-stop from Oklahoma City to Washington, D.C., over 1,100 miles, with one of its airscrews removed. Moreover, normal cruising power was used and the "live" engine did not suffer unduly. The Aero Commander has also flown over the 19,000ft Mount Popocatepetl in Mexico and, utilizing its normal range of 1,050 miles, it has made delivery flights all over the world, one in particular from Oklahoma City eastwards to Tokyo.

The latest Aero Commander, the model 560, has swept vertical tail surfaces, to compensate for three- instead of two-bladed airscrews and more powerful engines, but the allure of a swept surface is well exploited as a sales attraction. In its standard production form it has two individual seats in front and a three-place bench seat in the rear of the cabin. The space between them is sufficient for the addition of a third row of two seats, these being supplied at extra cost. Various arrangements of ice-boxes and cocktail cabinets can also be located here. A full-length bunk can be made up with collapsible back-

Bearing some resemblance to the Navion, the Riley '55 twin is in fact a direct conversion by Temco.

rests, or the seating so arranged that the passengers can sit round a table. Conversely, all seating can be removed to allow the carriage of freight.

The standard instrument layout provides for full blind-flying panel and engine instruments, and basic radio communications equipment, but "custom" arrangements of I.L.S., V.O.R., D.M.E. and omni-navigation aids can easily be added, and usually are.

Its Lycoming GO-480-B six-cylinder geared 270-h.p. engines make the Aero Commander one of the largest of all the light twins. At a maximum gross weight of 6,000 lb, it takes off over a 50ft obstacle in 1,100ft, and climbs at 1,400 ft/min on two engines, or with one airscrew feathered at 340 ft/min. Single-engine ceiling is 9,800ft. Cruising speed at 70 per cent rated power at 10,000ft is 197 m.p.h., stalling speed 59 m.p.h. and landing distance over a 50ft obstacle 1,050ft. The lowest stalling speed at 75 per cent rated power, and with 40 deg flap, is 45 m.p.h. at full load. Maximum range with the full 145 gallons usable fuel load is 1,050 miles, with 30 min reserve. All these figures are for the maximum a.u.w.; in the optimum configuration, at an all-up weight of 5,500 lb, performance all round is improved. The Aero Commander is one of the most popular of the light twin executive aircraft on the market and is used by a large number of companies on the American continent and elsewhere.

Probably the most ambitious of the five light twins, and claimed to be the fastest and farthest-flying, is the latest Beech Twin-Bonanza Model C50. It is, in fact, in very much the same speed, weight and range bracket as the Aero Commander. Its maximum range with no reserve, at 10,000ft, is 1,100 miles, similar to that for the Aero Commander with 30 minutes' reserve. Maximum all-up weight is 6,000 lb and cruising speed at 66 per cent power is 200 m.p.h. at 10,000ft. Other figures are very similar to those for the Aero Commander; service ceiling 20,000ft on both engines and 8,500ft single engine, take-off over 50ft obstacle 1,260ft, and landing distance over a similar obstacle 1,375ft. In its standard layout it is a six-seater.

Last year's Twin-Bonanza,* which was in production from January to October—99 were built—had 260 h.p. Lycomings, whereas the C50 has 15 h.p. more each side. Among detail improvements is a more effective and simpler airscrew control, and redesigned cabin heating whereby the blower and automatic control system can also operate when the 50,000 B.Th.U. heating unit is switched off. Exterior finish is offered in 17 different colours, and the interior incorporates "luxurious new fabrics and genuine leather trim." Inevitably, the instrument panel has been redesigned, and radio navigation equipment is now placed within easy reach of the pilot. Optional extras include an airscrew anti-icing system, a rotating navigation light atop the cabin, a nose-mounted taxiing light, an evaporative air conditioner and an engine pre-heating system for cold-weather operation.

In their brochures on the Twin-Bonanza, Beech Aircraft make a particular point of safety features. They state, for instance, that the low-wing layout permits 65 per cent of the weight to be located below and forward of the passengers. Shoulder harness is provided as standard equipment and the airframe has been stressed to 8 g maximum load—i.e., considerably higher than the 5.7 g required by the C.A.A. for this type of aircraft. It is, in fact, a very tough aircraft well suited for rough work.

The latest arrival in the field is the Cessna 310, which can boast many distinctive design features. A low-wing five-seat monoplane with single fin and rudder, it is powered by two

*Subject of an "In the Air" report by the Editor in our December 31st, 1954, issue.

