

STEEN SKYBOLT

TYPE: Two-seat aerobatic homebuilt biplane.

WINGS: Braced biplane with single interplane strut each side. N-type centre-section struts. Streamline-section landing and flying wires. Wing sections: upper wing NACA 63,A015, lower wing NACA 0012. Incidence (both) 1° 30'. Sweepback 6° on upper wing only. Wooden two-spar structures with spruce spars, built-up ribs and fabric covering. Fabric-covered Frise-type ailerons on both wings. Cut-out in centre-section trailing-edge of upper wing.

FUSELAGE: Welded structure of 4130 chrome-molybdenum steel tube, with fabric covering.

TAIL UNIT: Wire-braced welded structure of 4130 chrome-molybdenum steel tube, with fabric covering. Adjustable trim tab in port elevator.

LANDING GEAR: Non-retractable main wheels and tailwheel. Two side Vees and half axles hinged to fuselage structure. Shock-absorption by rubber bungee. Cleveland wheels with tyres size 6-00-6, pressure 25 lb/sq in (1.8 kg/cm²). Cleveland hydraulic disc brakes. Glassfibre fairings for main wheels.

POWER PLANT: One 180 hp Lycoming HO-360-B1B four-cylinder horizontally-opposed air-cooled engine, driving a McCauley two-blade fixed-pitch propeller with spinner. Provision for alternative engines of 125-300 hp. Fuselage fuel tank, immediately aft of firewall, capacity 30 US gallons (113.4 litres). Optional tank of 10 US gallons (37.8 litres) capacity can be installed in centre-section of upper wing. Total optional fuel capacity 40 US gallons. Refuelling points on fuselage upper surface, forward of windscreen, and on top surface of upper wing. Oil capacity 2 US gallons (7.5 litres).

ACCOMMODATION: Two seats in open cockpits. Space for 30 lb (13.6 kg) baggage aft of rear seat.

SYSTEM: Hydraulic system for brakes only.

ELECTRONICS: Battery-powered Alpha 200 nav/com transceiver.

DIMENSIONS, EXTERNAL:

Wing span, upper	24 ft 0 in (7.32 m)
Wing span, lower	23 ft 0 in (7.01 m)
Wing chord (constant, both)	3 ft 6 in (1.07 m)
Length overall	19 ft 0 in (5.79 m)
Height overall	7 ft 0 in (2.13 m)
Propeller diameter	6 ft 2 in (1.88 m)
Propeller ground clearance	1 ft 0 in (0.31 m)

AREA:

Wings, gross 152.7 sq ft (14.2 m²)

WEIGHTS AND LOADINGS:

Weight empty	1,080 lb (490 kg)
Max T-O weight	1,680 lb (762 kg)
Max wing loading	11 lb/sq ft (53.7 kg/m²)
Max power loading	9.3 lb/hp (4.22 kg/hp)

PERFORMANCE (at max T-O weight):

Max level speed	126 knots (145 mph; 233 km/h)
Cruising speed	113 knots (130 mph; 209 km/h)
Landing speed	43 knots (50 mph; 80.5 km/h)
Rate of climb at S/L	2,500 ft (762 m)/min
Service ceiling	18,000 ft (5,500 m)
T-O run	400 ft (122 m)
Range with max fuel	390 nm (450 miles; 720 km)

TABLE 2.

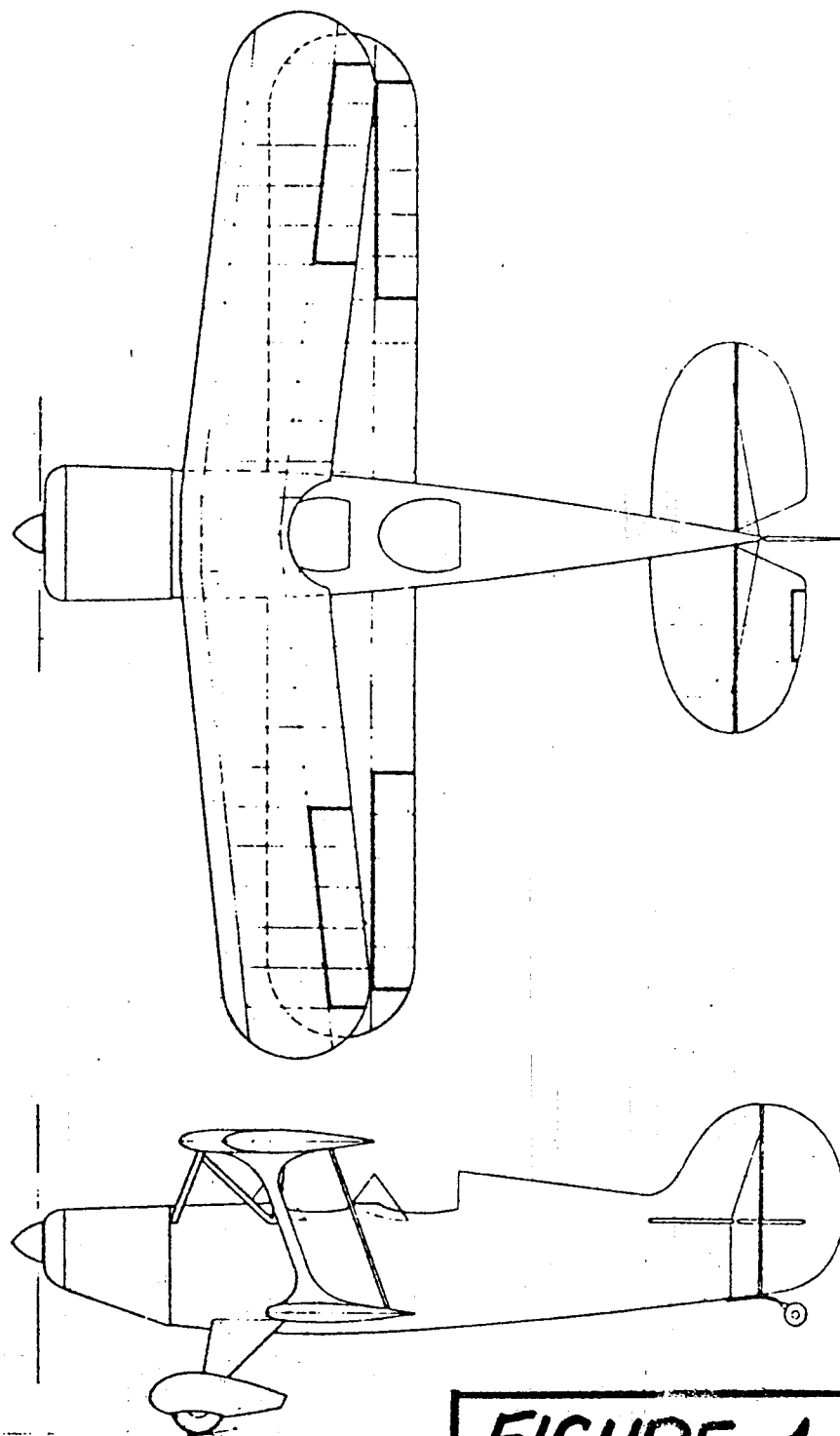


FIGURE 1.