



NEMETH DESIGNS

# ***PARTENAVIA PB8B VICTOR***

FOR MS FLIGHT SIMULATOR





The P68 is a normal category aircraft, aerobatic maneuvers are prohibited. When above 130 kts the controls must not be fully deflected. The standard airplane is approved for day and night operations under VFR conditions. Flying into icing conditions is not approved.

## AIRFRAME

The P68C is a twin-engine high-wing monoplane. The airframe is mainly of all-metal construction, with tail cone, fairings and wing tips made of fiberglass. The fuselage is a semi-monocoque structure with rivetted skin, the fully cantilevered wing and empennage are both of all metal, stressed-skin construction. The tail unit is composed of a swept-back vertical stabilizer and rudder, with an all moving tailplane. Trim tabs are on both rudder and stabilator trailing edge. Both ailerons and flaps are of all metal construction.

The fixed tricycle landing gear has cantilever spring steel main legs and an oleo-pneumatic shock absorber nose gear, which is steerable through the rudder pedals. The steering system automatically disengages when the nose wheel clears the ground. Brakes are hydraulically actuated through the rudder pedal tips.

The cabin may be accessed through the door under the left wing and the forward right-side crew door. The aft baggage compartment is accessed through the rear door on the right side of the fuselage. The crew door also functions as an emergency exit, and is equipped with a solenoid operated locking plunger that prevents the door from opening while the right-hand engine is running and the propeller is turning. Two different seating arrangements are available: "Club" seating with the two middle seats facing aft, and the "Commuter" arrangement with all seats facing forward. To give the aircraft a continuous metal surface, lightning strike bonding is fitted between fiberglass and metal components.

## ENGINE

The P68C is powered by two Lycoming 10-360-A186 engines, which are air-cooled, four cylinder, normally aspirated fuel-injected units with direct propeller drive. Baffles are fitted to direct cooling air through the engine compartment. The Dual Ignition system comprises two mechanically driven magnetos, a shielded wiring harness, and spark-plugs. Fuel injection is ensured by an engine driven fuel pump that feeds the fuel injector. The fuel injector senses the air in the manifold, compares it to external static air pressure, and then sends fuel at the correct pressure to the distributor, and then to a fuel nozzle in the air intake close to the cylinders. The air is fed through the manifold ducting after being filtered. An alternate air system is also fitted between the filter and the manifold intake to prevent ice build-up. The engine lubrication system consists of a wet sump, engine driven oil pump, an oil filter and an oil cooler. Engines drive Hartzell two bladed, constant speed, fully feathering metal propellers. Propeller speed is maintained constant by a governor that controls the engine oil pressure being fed to the pitch change mechanism. The engines and propellers are operated by three sets of control levers mounted on the control pedestal below and at the center of the instrument panel. Controls are (from left to right): power levers, propeller speed levers and mixture control levers. The alternate air controls are located on the instrument panel.

## FLIGHT CONTROLS

Flight controls are of a conventional type, operated by dual control wheels and rudder pedals. The horizontal tail is entirely mobile (stabilator). The control wheel operates the ailerons and the stabilator. The rudder pedals operate the rudder and the nose wheel steering. A typical control wheel incorporates switches associated with autopilot operation, electrical trim and communications. Secondary controls are provided by the stabilator and rudder trim tabs. Stabilator trim is operated by a wheel, located on the left side of the control pedestal. The rudder trim wheel is located on the aft of the control pedestal. An indicator showing trim tab position is mounted close to each trim control wheel. The flaps, one on each wing, are operated by an electric motor mounted in the right wing box. This motor is connected to a drive pulley which operates the right wing flap through a push-pull rod, and the left wing drive pulley through cables. Flap operation is controlled by a switch mounted on the lower part of the pedestal, while flap position is mechanically/electrically transmitted to the indicator located next to this switch. The brakes are hydraulically operated by individual hydraulic brake cylinders mounted on the rudder pedals. To operate the brakes, apply pressure against the top of the rudder pedals.

## ELECTRICAL SYSTEM

The aircraft system is powered by two 130 A alternators. A 24 volt, 24 A/h battery provides for engine starting and as a reserve power source in case of alternator power loss. The electrical system is controlled by three switches, located on the pilot's left side panel. Avionic systems power is controlled by one switch located on the pilot's left side panel. The electrical system may be monitored through a volt and amp indicator located also on the pilot's left side panel. Lighting includes standard navigation lights, landing/taxi lights on the left wing leading edge and one tail anti-collision light. Cabin lighting consists of four reading lights, each with its own switch. Cockpit lighting consists of two map lights, instrument panel lighting and one main panel light. Other electrical systems include pitot heat, propeller heat, windshield heater, a stall warning horn, and dimming rheostat switches to control instrument panel lighting.

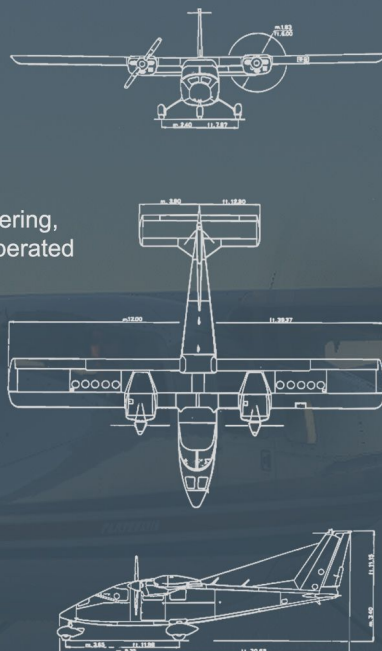


## SPECIFICATIONS

Aileron travel: 20° UP / 15° DOWN  
 Flap movement: 37° in three segments  
 Rudder travel: +/- 22°  
 Overall wingspan: 12.00 m (39.37 ft)  
 Overall length: 3.35 m (30.68 ft)  
 Overall height: 3.7 m (11.15 ft)  
 Wing area: 18.60 m<sup>2</sup> (200.2 ft<sup>2</sup>)  
 Aileron area: 1.75 m<sup>2</sup> (18.90 ft<sup>2</sup>)  
 Flap area: 2.42 m<sup>2</sup> (16.00 ft<sup>2</sup>)  
 Elevator area: 3.85 m<sup>2</sup> (41.4 ft<sup>2</sup>)  
 Rudder area: 2.02 m<sup>2</sup> (21.80 ft<sup>2</sup>)  
 Number of engines: 2 x Lycoming 10-360A-1  
 Rated horsepower: 200  
 Propellers: 2 x Constant speed, fully feathering, non-reversible, hydraulically operated

Propeller diameter: 72 inch / 1.83 meter  
 Normal engine RPM: 550-2700  
 Range: 1300 km (700 nm)  
 Service ceiling: 5852 m (19200 feet)  
 VNE (never exceed): 370 km/h (200 knots)  
 Max flap speed: 290 km/h (157 knots) @ 15°  
 187 km/h (101 knots) @ 35°

Cruise speed: 292 km/h (158 knots)  
 Manoeuvring speed: 240 km/h (130 knots)  
 Stall speed: 115 km/h (62 knots)  
 Minimum single engine: 115 km/h (62 knots)  
 Maximum rate of climb: 7.32 m/s (~1460 ft/min)  
 Optimal sink rate: 2.53 m/s (~500 ft/min)  
 Roll rate: 40 degrees  
 Takeoff distance: 307 m (1008 feet)  
 Landing distance: 248 m (816 feet)  
 Empty weight: 1230 kg (2.712 lbs)  
 Max. takeoff weight: 1.990 kg (4.387 lbs)  
 Standard fuel capacity: 392 L (103 gallons)  
 Long range fuel capacity: 696 L (184 gallons)  
 Fuel type: Avgas  
 Cruise fuel flow: 0-22 gallons/hour  
 Normal manifold pressure: 10 – 32 InHg



**NOTE:** Please set the flight model to **MODERN** at the realism settings in the options menu otherwise the airplane won't function properly. Legacy flight model is **NOT** supported.

## COCKPIT LAYOUT



1. Generator fail warning lights
2. Marker beacon indicator lights
3. Distance measuring equipment
4. Advisory lights
5. Compass adjustment
6. Radio altimeter
7. Stall warning light
8. Indicated airspeed (knots)
9. Artificial horizon indicator
10. Altimeter (feet)
11. VOR2 indicator
12. Clock
13. Engine suction indicator
14. Turn and slip indicator
15. Horizontal situation indicator
16. Vertical speed indicator (foot/minute)
17. ADF indicator
18. COM1 frequency setting
19. NAV1 frequency setting
20. COM2 frequency setting
21. NAV2 frequency setting
22. ADF radio
23. Transponder
24. Audio panel
25. Manifold pressure dual gauge
26. Fuel quantity indicator
27. Tachometer dual gauge
28. Left engine oil temperature, oil pressure and cylinder temperature
29. Right engine oil temperature, oil pressure and cylinder temperature
30. Fuel pressure dual gauge
31. Fuel flow dual gauge
32. Artificial horizon indicator
33. Left engine exhaust gas temperature
34. Right engine exhaust gas temperature
35. Autocontrol Roll hold engage
36. Autocontrol Heading hold engage
37. Autocontrol Altitude hold engage
38. Autocontrol Pitch hold engage
39. Autocontrol Roll adjustment
40. Autocontrol Pitch adjustment
41. Yoke hider clickspot
42. Parking brake lever
43. Flaps adjust lever
44. Flaps position indicator
45. Propeller heater
46. Windshield heater
47. Anti-collision light
48. Taxi light
49. Landing light
50. Pitot heater
51. Light dimmer knobs
52. Instrument lights
53. Position lights
54. Strobe lights
47. Generator
48. Battery
49. Starter switch
50. Magnetos switch
51. Carburetor heater adjustment knob
52. Throttle lever
53. Fuel mixture lever
54. Instrument light dimming knob
55. Garmin GNS430 GPS
56. Autocontrol engage-disengage
57. Emergency signal transmitter
58. Alternator heaters
59. Cabin air heaters
60. Ammeter and voltmeter
61. Right generator
62. Battery
63. Left generator
64. Ammeter/voltmeter switch
65. Avionics master switch
66. Throttle levers
67. Propeller pitch levers
68. Fuel mixture levers
69. Elevator trim position indicator
70. Elevator trim adjust wheel
71. Aileron trim position indicator
72. Aileron trim adjust wheel
73. Left fuel tank feed adjust knob
74. Right fuel tank feed adjust knob
75. Auxiliary fuel pump light
76. Left engine starter light
77. Right engine starter light
78. Right auxiliary fuel pump light
79. Left auxiliary fuel pump switch
80. Left engine starter button
81. Engine 1 left magneto switch
82. Engine 1 right magneto switch
83. Right engine starter switch
84. Right auxiliary fuel pump switch
85. Engine 2 left magneto switch
86. Engine 2 right magneto switch

**Notes:**  
 Press the adjusting knob on the **transponder** once to change which local of the numbers to be adjusted.  
 The **autocontrol** can be activated with the yoke button. Establish a stable cruise before activating any autocontrol axis.