

PERCIVAL P56 PISTON PROVOST T1

for FS9

(Port over to FSX possible)

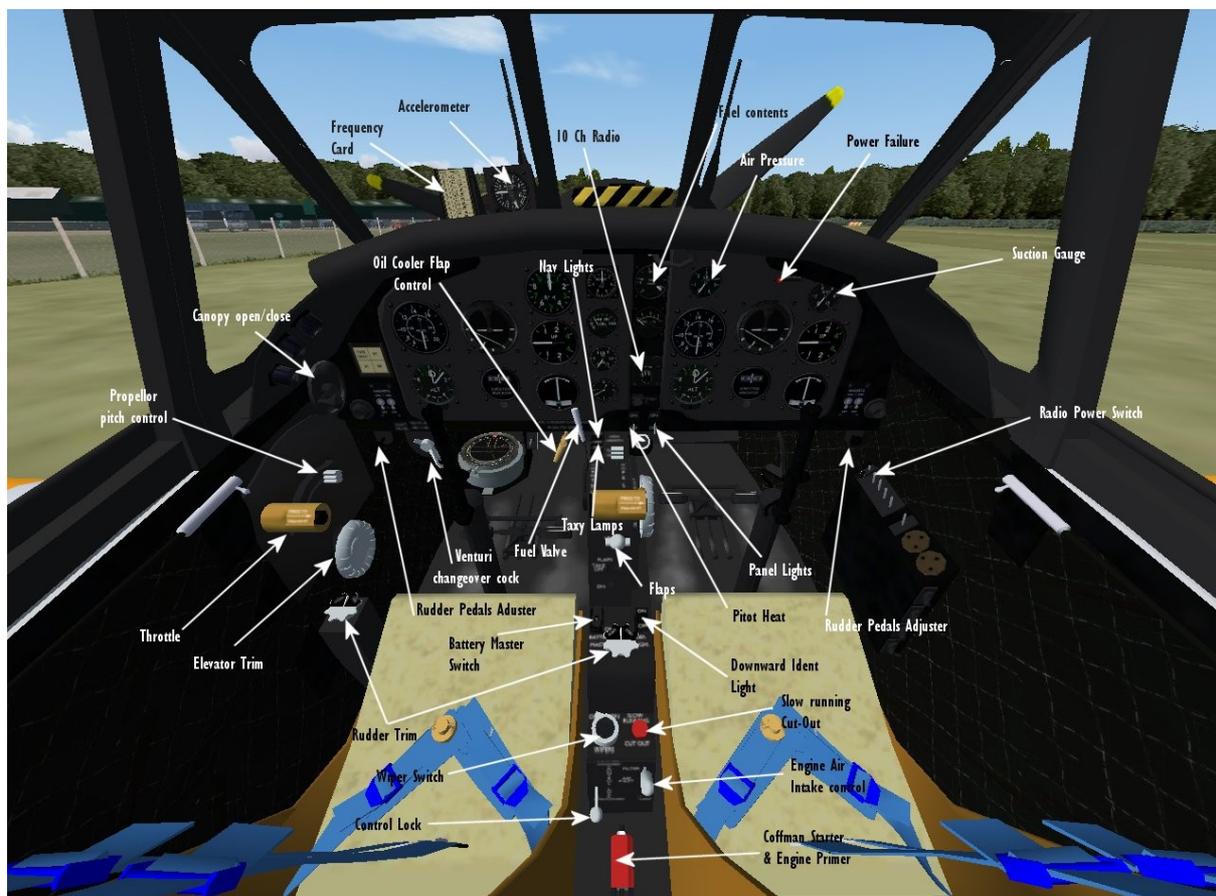


Notes on installation & operation.
Includes extracts from Pilots Notes.

INSTALLATION.

1. Unzip to your Aircraft or Airplane (FSX) folder.
2. Copy or transfer the two .fx files to your Effects folder.
3. Allocate a keyboard key for the Wingfold command.
4. Allocate a keyboard key for the Tailhook command.

COCKPIT CONTROLS



These are the controls that animate and/or select commands.

The Oil Cooler Control lever only animates, it has no effect on oil temperature.

Control Lock: This closes the throttle & disables your Joystick. For some reason in the VC the lever has a long delay before returning to the unlocked position, but the controls are enabled immediately. If it does not reselect your Joystick, select 'Options', 'Commands' then 'Activate Joystick' from the drop down menu.

Wingfold: This removes the pilots from the cockpit in External views & places chocks in front of the tyres.

Tailhook: This removes the Right hand pilot from the VC & External views & the harness from the Left hand seat in the VC, allowing solo flying.

Radio: The original ARI.5846 VHF radio fit of a 10 channel remote controlled system is represented here & the frequency can be changed by clicking around the knob. There should be an onscreen readout of the frequency which is also displayed on the Frequency card.

Rudder Pedals: Can be adjusted by clicking a moving the mouse on the knobs either side of the instrument panel.

Windscreen Wipers: Switch On in the VC with a Right click & Off with a Left click. In the Centre console pop up a left click only is required.

Venturi changeover cock: In the real aircraft this allocates the Venturi to either the Left or Right instrument panel gauges, with the engine driven pump supplying the other. In this sim it changes the vacuum supply from normal to emergency & the suction gauge has a different value for each.

Engine Air Intake Control: In the real aircraft this has 3 position; Filter, Ram or Hot. In this sim only 2 positions are available, Cold or Hot.

The remainder of the controls are, I hope, self explanatory.

Extracts from official Pilots Notes.

LIMITATIONS.

ENGINE.

Take off; 3000 rpm, +8 psi boost, CHT; 230°C Oil temp; 85°C

Max Rich continuous; 2900 rpm, +4.5 psi boost, CHT; 230°C, Oil temp; 85°C

Max Weak continuous; 2600 rpm, 0 boost, CHT; 210°C, Oil temp; 85°C

Overspeed; 3150 rpm, +8 psi for 20 seconds

3300 rpm, +8 psi for 5 seconds

Oil Pressure; Normal at 2900 rpm; 70 to 80 psi, minimum at any rpm in flight, 60 psi.

Oil temperatures; Recommended in flight 70 to 75°C, minimum for opening up: 20°C.

AIRCRAFT.

Max speeds:

Diving: 235 kts

Flaps down to Take Off, 125 kts

Flaps down to landing, 110 kts

Hood open: 180 kts.

Max G with post mod 335 wings:

No aileron, 6G

Half aileron, 6G

Full aileron, 4G.

HANDLING.

Take off at 60 kts half flap, 65 kts no flap.

Best Climb speed is 100 kts, +3.5 psi boost, 2900 rpm. Reducing by 5 kts every 5000 ft.

There is very little trim change with flaps down.

Sim model trim: This is adjusted for zero elevator trim at 2150 rpm, 0 psi boost at an airspeed of 125 kts.

Flying controls: The aircraft is easy & pleasant to fly & is at its best during aerobatics. The controls are light & effective, the ailerons remaining effective down to the stall. Rudder trim is sensitive & powerful. Owing to light stick forces, care should be taken not to overstress the aircraft at high speeds.

Stall speeds:	Power off Flaps Up,	65 kts.
	Power Off Flaps down,	60 kts.
	Power on flaps down,	50 to 55 kts.

FS9 unfortunately does not appear to differentiate between power off & power on stalls & the sim stalls at about 50 kts flaps down.

In a steep turn if a stall is allowed to develop the aircraft will flick. Recovery is immediate on relaxing pressure on the control column.

Extracts from flight test reports re-inforce the above comment & include comments, for example, that in max rate turns above 3G the aircraft will flick out of a turn – this sim replicates this!

Spinning: This has been difficult to achieve in the sim, but adjustments to the MoI values has made left hand spins possible whilst right hand spins are unstable. A spin report by Cranfield also notes that there is some instability in spins, upright or inverted but the aircraft was cleared for up to 8 turns.

Recovery is straightforward, centralise controls & pull out gently to avoid a high speed stall & overstressing the airframe!

Recommended speeds for aerobatics:

Roll	140 kts	Stall turn	160 kts
Loop	165 kts	Verical roll	200 kts
Half roll off loop	175 kts		

A power setting of +3.5 psi boost & 2600 rpm is sufficient for all aerobatics. If additional power is required increase rpm to 2900.

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SOUND FILE.

The sound file has been aliased to the Lockheed Vega. For a much, much better experience download Gary Jones single Leonides sound file from:

www.britsim.com/index.php?option=com_remository&Itemid=162&func=fileinfo&id=1991

ACKNOWLEDGEMENTS

To Martin Pengelly for supplying photos & documents from his library.

To David Molyneaux for use of many of his software logic programs.

To 'Captain Bombay' on the Key Publishing website for radio details & supply of photographs of the cockpit interior of his newly acquired Provost, now registered ZK-PPP, & to other forum members for the supply of further radio information.

To Mark Polles for photographs of the RAF Museum, Cosford example, which this sim tries to represent.

To all the Pre-Beta & Beta testers.

FSX users.

This model will port-over, but I cannot get the Wingfold command to work on my acceleration installation.

The tailhook command needs the engine to be running to operate.

FSX users should also use the aircraft.cfg file that will be found inside the FSX folder as it adjusts the tailplane incidence so that zero elevator trim is required at 2100rpm, 0 psi boost & 125 kts cruise. Moi values are also adjusted to allow spins to the left; right hand spins remain unstable.

Keith Paine. Issue 4, 11 Sept 2011.

For comments please contact via the www.britsim.com website forum.

Enjoy & happy landings!