

PIPER SPORT FAMILIARISATION - BEST PRACTICE PILOT HANDLING TECHNIQUE

1. A full grip hand position on Control Stick will induce significant over control in all areas of the flight regime of the PiperSport in particular on Takeoff, in moderate to severe turbulence, and in the Hold Off on landing. Enforce correct hand and finger position to hold stick for optimum smooth control. (with two fingers and thumb lightly under or near the bottom of the handgrip)
2. Speed control in rough air 80-90kts range (75kts if really bad) Watch to keep well away from yellow arc of the ASI.
3. Technique of keeping control stick frozen in turbulence and not causing Pilot induced oscillation by trying to react and counter turbulence with control inputs.
4. Two stage advance for throttle on takeoff with initial right brake anti torque input until right rudder takes effect.
5. Nose wheel hold off commencing at 35-40kts while still advancing to full throttle. Avoid tendency to not positively advance throttle smoothly to full position before liftoff. Nose wheel hold off with fixed elevator back stick position until PiperSport **unsticks by itself** and lifts off without extra pilot elevator input.
6. A need to pitch down gently after autonomous liftoff to gain TOSS climb out airspeed of 65 knots. Generally accelerate to 70kts and above then gently ease back on control stick to achieve 65 knots and a VSI of 800 to 1200 FPM. Watch for airspeed decay at 400 to 600 feet and adjust control stick pressure forward as required.
7. Engine management power reduction to 26-28" MAP by 500ft upwind after PUFF checks or on X wind climb out.
8. Trim Out Level Technique(using finger taps) to stop pitch over control in cruise. Allow for the inherent sensitive pitch nature of the PiperSport design. **It flies best "Hands Free" of stick.**
9. Engine power management with MAP control or engine RPM in 4500 - 5400 range as required. Use the sound of the engine to judge, with cross reference to EMS readout.
10. Use power to correct low speed induced by pitch up on Base turn or Long Finals rather than push the nose down. Then reduce power again once attained and recommence speed control with a constant elevator pitch input and descent control with power setting.
11. Carburettor Heat application on power reduction below 3500 engine RPM.

12. PTT button. Use right hand only to press PTT button while keeping the left hand low on the control stick at the optimal low control position. **Use R/hand too for the trim button finger taps.**

13. Trim Adjust **NOT** required for landing. Use the position set for level cruise. Elevator stick force on landing approach should have some tactile back pressure feel through fingers **and not your hand palm wrapped around the control stick.**

14. The use of power control all the way to touch down with Vref in the 55kts range. As soon as your line up on finals is stabilized at 600 feet in the 60kt range , check the ASI every five seconds. Eye focus to switch from airspeed to Runway Threshold (Piano Keys) every 5 seconds to judge your correct Approach Profile (on 3deg glide slope). Make the necessary adjustments to power setting to control the rate of sink and maintain Approach Profile while keeping a constant set elevator back pressure on control stick **with your two fingers and thumb under or near the bottom of the stick handgrip** to maintain the Vref speed pegged by mid finals. Avoid over control even in turbulence. If you get low and below profile, just apply power to stop descent but keep your elevator control position frozen to maintain Vref until you meet correct profile height again. Begin to align the nose to the RWY centreline with rudder input by Short Finals with any compensating aileron input to check for crosswind drift as required.

As you approach short finals your Airspeed/Threshold eye cycles will gradually reduce with a quick check before the piano keys that you are still in the 50's kts range. Then eyes to the end of the runway and maintain pointing the nose directly down rwy centreline with a fixed rudder pressure input. Aim for a smooth touchdown with power slowly being bled off **to just above the idle setting** while holding a constant attitude angle . **DO NOT** pull check and oscillate the control stick backwards to arrest sink. (No over control of the Flare). Just hold a gentle back pressure on the control stick with a couple of fingers, increasing it only very slightly to achieve that soft touchdown as you feel the gradual sink in ground effect at just one foot AGL.

Maintain a constant rudder pressure as required (DO NOT relax off the live foot) to maintain directional control after touchdown with Aileron into cross wind if necessary and enough elevator back pressure to keep the nose wheel off runway until you can gently lower it.

15. Taxi Technique and use of brakes. Do not ride the Brakes. Throttle control for coasting. Do not leave throttle on high setting for more than 10 seconds always return to 2000-2200 RPM or less and coast.

