

PIPER PA-18 SUPER CUB (150 HP) QUICK REFERENCE GUIDE (QRG)

X Plane 12 ONLY



TAKEOFF & CLIMB

- **V_r (Liftoff Speed):** 45–50 MPH IAS (39–43 KIAS)
- **Best Angle of Climb (V_x):** 55 MPH IAS (48 KIAS)
- **Best Rate of Climb (V_y):** 65 MPH IAS (57 KIAS)
- **Normal Climb Speed:** 70–80 MPH IAS
- **Takeoff Flap Setting:** 0° (short field: up to 1/2 flap)
- **Climb Configuration:** Flaps UP, full power, cowl flaps OPEN (if installed)

CRUISE PERFORMANCE

- **Typical Cruise Speed:** 95–105 MPH IAS (~83–91 KTAS)
 - **Economy Cruise:** ~90 MPH IAS @ ~2350 RPM
 - **Recommended Altitude Range:** 3,000 – 8,000 ft
 - **Fuel Consumption:** 6.5 – 8.5 GPH
 - **Endurance:** ~4–5 hours (standard tanks), up to ~7 hrs (with extended tanks)
 - **Mixture:** Lean above 3000 ft or when below 75% power
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DESCENT

- **Normal Descent Speed:** 80–90 MPH IAS
 - **Approach Descent:** 70–75 MPH IAS (clean), 60–65 MPH (with flaps)
 - **Descent Rate:** 500–800 fpm
 - **Descent Planning:** High drag – plan early, reduce power slowly
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APPROACH & LANDING

- **Downwind:** 80–90 MPH IAS | Flaps 0°
 - **Base:** 70–75 MPH IAS | Flaps as needed
 - **Final Approach:** 60–65 MPH IAS (full flap)
 - **Short Field Approach:** 55–60 MPH IAS | Full flaps
 - **Touchdown:** ~45–50 MPH IAS
 - **Flare Technique:** Tailwheel first (three-point) or mains first (wheel landing)
 - **Braking:** Gentle — avoid nose-over
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V-SPEEDS SUMMARY (MPH IAS unless noted)

V-Speed	MPH (IAS)	KIAS (approx)	Definition
V _{so}	43	37	Stall speed in landing config (flaps)
V _{s1}	50	43	Stall speed clean
V _r	45–50	39–43	Rotation speed / lift-off
V _x	55	48	Best angle of climb
V _y	65	57	Best rate of climb
V _g	60	52	Best glide speed
V _a	~97	~84	Maneuvering speed (varies by weight)
V _{fe}	~85	~74	Max flaps extended speed (half to full)
V _{ne}	162	141	Never exceed speed

EMERGENCY OPERATIONS

- **Best Glide Speed (V_g):** 60 MPH IAS (~52 KIAS)
- **Engine Failure During Takeoff:**
 - Lower nose immediately
 - Land straight ahead
 - Flaps as required

- **Engine Failure In Flight:**
 - Airspeed: 60 MPH IAS (best glide)
 - Carb Heat: ON
 - Fuel Selector: ON
 - Mixture: RICH
 - Throttle: OPEN
 - Mags: BOTH
 - Restart: Attempt once
- **Emergency Landing:**
 - Flaps: FULL if runway assured
 - Master, fuel: OFF before touchdown
 - Doors: Unlatch if needed

NOTES

- All values are approximate and vary slightly with aircraft weight and configuration
- Airspeeds are in MPH IAS as per original instrumentation – adjust for conversions
- Tailwheel handling on landing is critical – manage pitch carefully
- Always confirm with your aircraft's POH or builder's notes (for experimental Cubs)