

Cessna 172S Maneuvers --- Quick Reference Sheet

Private

Slow Flight

1. Clearing turn at or above 1500 feet AGL (4,000 MSL+)
2. Power to 1500 • flaps 10° (below 110 kts.)
3. Increase pitch to maintain altitude as airspeed decreases - TRIM
4. Extend full flaps (in white arc)
5. Upon reaching 50 kts increase power to maintain level flt approx 2000
6. Maintain coordinated flight(increased right rudder at low speed and high power setting)
7. Perform straight and level, and turns (20° or less)
8. Use power to maintain altitude and pitch to maintain airspeed

Recovery

1. Apply full power, flaps 20°, reduce pitch to maintain altitude - TRIM
2. Retract flaps to 10° accelerating through 55 kts - TRIM
3. Retract flaps to 0° accelerating through 60 kts - TRIM
4. Accelerate to normal cruise or as specified and reduce power as necessary.

Power Off Stall (Approach to landing Stall)

1. Clearing turn at or above 1500 feet AGL (4,000 MSL+)
2. Reduce Power to 1800 RPM
3. Extend full flaps (below 110 for 10 flaps, below 85 for 20 & 30 flaps)
4. Establish 1500rpm/70 KIAS descent
5. Power to idle
6. Apply back pressure to maintain altitude
7. Announce “imminent stall” at stall warning horn.
8. Announce “stall” when stall occurs

Recovery

1. Reduce pitch, full power, wings level with coordinated rudder and aileron
- 2 Retract flaps to 20° establish climb pitch attitude
- 3 Retract flaps to 10° accelerating through 55 kts TRIM
4. Retract flaps to 0° accelerating through 60 kts TRIM
5. Stabilize climbout at Vy (74 kts.)
6. Level off as briefed

Power On Stall (Departure Stall)

1. Clearing turn at or above 1500 feet AGL (4,000 MSL+)
2. Slow to 70-75 KIAS level flight
3. Add power to 2000 rpm
4. Smoothly increase the pitch to induce stall.
5. Announce “imminent stall” at stall warning horn
6. Announce “stall” when stall occurs

Recovery

1. Full power, reduce pitch then establish Vy pitch attitude
2. Accelerate to and maintain Vy 74 kts
3. Level off as briefed

Steep Turns

- 1 Note heading (outside reference point) and altitude
2. Establish airspeed at 95 kts
3. Roll into a 45° bank turn
4. Back pressure and power to maintain altitude and airspeed
5. Continuous scan (out front, VSI, altimeter, airspeed indicator)
6. Lead rollout for heading by 20°
7. Reduce power and pitch as necessary to maintain altitude and airspeed

Turns Around a Point

1. Clearing turn, emergency landing spot, 600'-1,000' AGL (3,000 MSL)
 2. Enter downwind at 90 kts
 3. When point is under wing, begin left turn of approx. 30°* (steepest bank)
 4. At crosswind, reduce the bank to compensate for decreasing tailwind
 5. At upwind, bank will be shallowest due to slowest groundspeed
 6. At crosswind, increase bank to maintain equidistance from ref. point
 7. Complete two circuits Altitude +100' A/S +10 Kts. Hdg. +10°
- *The maximum and minimum bank angles will vary according to wind speed and distance from the point

S Turns

1. Clearing turn, emergency landing spot, 600'-1,000' AGL (3,000 MSL)
2. Enter maneuver downwind stabilized at 90 kts
3. When reference line is under wing, roll into left turn (steepest bank)
4. As you turn past the 90° point, reduce bank to track a symm. half circle
5. Cross the 180° point with wings level and parallel with reference line
6. Repeat 1-4 but in a right turn. Altitude +100' A/S +10 Kts.

Short Field Takeoff and Landing

Takeoff (10° Flaps)

1. Taxi onto runway centerline (use all available runway)
2. Hold brakes
3. Apply full power
4. Release brakes
5. Announce (engine instruments checked) (RPM and Oil Gauge)
6. Announce “airspeed alive”
7. Accelerate to Vr (48 kts) and pitch, be airborne at 51 kts
8. Climb at Vx (56 kts) until obstacle is cleared
9. Announce “obstacles cleared” pitch for Vy, retract flaps above 62 kts,
10. Continue climb at Vy (74 kts)

Landing

1. Select runway touchdown point
2. Abeam touchdown point (power 1500rpm, 10° flaps-below 110 kts)
3. Pitch for 80 kts.
4. When touchdown point is 45° off shoulder turn base/Target Altitude 2800'
5. Apply 20° flaps and pitch for 70 kts.
6. Turn final, (Target Altitude 2600') extend 30° flaps, and pitch for 61 kts.
7. Smoothly reduce power so as to land on the selected point on the runway (must be at or beyond specified point, within 200 feet)
8. Upon landing, retract all flaps, apply maximum braking (no tire skid), full back pressure on yoke

Soft Field Takeoff and Landing

Takeoff (10° Flaps)

1. Taxi onto runway centerline with yoke in full aft position
2. No brakes, keep rolling and smoothly apply full power
3. Announce (engine instruments checked)
4. Reduce back pressure to allow nose wheel to remain 2 inches off ground
5. Announce “airspeed alive”
6. When airborne, lower nose in order to remain in ground effect
7. No obstacle - accelerate to 56 kts, pitch for Vy, retract flaps above 62 kts, Continue climb at Vy (74 kts)
8. Obstacle - accelerate to and climb at Vx-56 kts until clear of obstacle
9. Announce “obstacles cleared” pitch for Vy, retract flaps above 62 kts, Continue climb at Vy (74 kts)

Landing

1. Abeam touchdown point (power 1500rpm, 10° flaps-under 110 kts)
2. Pitch for 80 kts.
3. When touchdown point is 45° off shoulder turn base/Target Altitude 2800'
4. Extend 20° flaps and pitch for 70 kts.
5. Turn final, (Target Altitude 2600') extend 30° flaps, and pitch for 61 kts
6. Approaching touchdown, begin flare, using power to minimize sink rate and touchdown as gently as possible
7. Apply full back pressure on yoke to keep weight off nosewheel
9. Keep flaps down, use aerodynamic braking only

Crosswind Taxi

Climb into headwind or dive away from tailwind

Reference Air speeds/KIAS

Vr 55	Vno 129
Vx 62-0 Flaps, 56-10° flaps	Vne 163
Vy 74	Vfe 85
Best Glide 70	
Vso 40	
Vs1 48	
Va 105 @ Max Gross wt 98 @ 2200 lbs.	