# C172 PRIVATE PILOT MANEUVERS N8182U

## Pre-Maneuver

1) Clearing Turns ..... 2x 90°
2) Altitude ..... Adequate
3) Fuel ..... Both
4) Mixture ..... Set
5) Carb Heat .....Off In Green Arc

## Slow Flight

1) Clearing turn at or above 1500 feet AGL
2) Power to 1500 • flaps 10° in white arc
3) Increase pitch to maintain ALT as airspeed decreases
4) Extend full flaps (in white arc)
5) (60mph/ 50kts) increase power to maintain level flt
6) TRIM
7) Perform straight and level, and turns (20° or less)
8) Pitch Airspeed- Power Altitude

### Recovery

9) Apply full power, flaps 20°, pitch level flight
10) Retract flaps to 10° accelerating through (63/55)
11) Retract flaps to 0° accelerating through (70/60)- TRIM
12) Accelerate to normal cruise

## Power Off Stall (Landing Stall)

1) Clearing turn at or above 1500 feet AGL
2) Reduce Power to 1500 RPM
3) Extend 30° flaps in white arc
4) Establish (80mph/70kt) descent
5) Power to idle
6) Apply back pressure to maintain altitude
7) Announce "stall" when stall occurs

### Recovery

8) Reduce pitch, full power, wings level with coordinated rudder and aileron
9) Retract flaps to 20° establish climb pitch attitude
10) Retract flaps to 10° accelerating through (63/55)
11) Retract flaps to 0° accelerating through (70/60)
12) Stabilize climb out at Vy (80mph/70kts)- TRIM

## Power On Stall (Departure Stall)

1) Clearing turn at or above 1500 feet AGL
2) Slow to (65mph/ 56kts) level flight
3) Add power to 2200 rpm
4) Smoothly increase the pitch to induce stall.
5) Announce "stall" when stall occurs

### Recovery

6) Full power, reduce pitch
7) Wings level with coordinated rudder and aileron
8) Establish Vy pitch attitude
9) Stabilize climb out at Vy (80mph/70kts)- TRIM

## Steep Turns

1) Note heading (outside reference point) and altitude
2) Establish airspeed at (~110mph/ 95 kts)
3) Roll into a 45° bank turn
4) Back pressure and power to maintain altitude and airspeed
5) Continuous scan (out front, altimeter, AS indicator)
6) Lead rollout for heading by 20°
7) Reduce power and pitch as necessary to maintain altitude and airspeed

| V Speeds (MPH/*Kts*) | | B Glide: 80/*70* | |
|---|---|---|---|
| Vso: | 49/*43* | Vfe: | 100/*87* |
| Vs1: | 57/*50* | **Va:** | **122/*106*** |
| Vr: | 65/*56* | Vno: | 140/*122* |
| Vx: | 65/*56* | Vne: | 174/*151* |
| Vy: | 80/*70* | Max X-wind: 15kts | |

## Turns Around a Point

1) Clearing turn, 600'-1,000'AGL
2) Enter downwind at (~110mph/ 95 kts)
3) When point is under wing, begin left turn of approx. 30° (steepest bank)
4) Two circuits Alt +/-100' A/S +10 Kts. Hdg. +10°

## S Turns

1) Clearing turns, 600'-1,000'AGL
2) Enter downwind trimmed at (~110mph/ 95 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.
7) Altitude +100' A/S +10 Kts.

## Short Field Takeoff (0° Flaps)

1) Taxi onto runway centerline (use all available runway)
2) Hold brakes
3) Apply full power
4) Release brakes
5) Announce (engine instruments in green)
6) Announce "airspeed alive"
7) Accelerate to Vx (65/56) and rotate
8) Climb at Vx (65/56) until obstacle is cleared
9) Announce "obstacles cleared" pitch for Vy (80/70)

## Short Field Landing (30° Flaps)

1) Select runway touchdown point
2) Abeam touchdown point (power 1700rpm, 10° flaps)
3) Pitch for (80mph/ 70kts).
4) When touchdown point is 45° off shoulder turn base
5) Apply 20° flaps and pitch for (75mph/ 65kts).
6) Turn final, extend 30° flaps, pitch for (70mph/ 60kts).
7) Smoothly reduce power so as to land on the selected point on the runway +200 feet
8) Upon landing, simulate max braking

## Soft Field Takeoff (10° Flaps)

1) Taxi onto runway centerline with yoke full aft
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 off ground
5) Announce "airspeed alive"
6) When airborne, lower nose in order to remain in ground effect
7) Accelerate to Vx (65mph/ 56kts).
8) Retract flaps
9) Continue climb at Vy (80mph/ 70kts).

## Soft Field Landing (30° Flaps)

1) Abeam touchdown point (power 1700rpm, 10° flaps)
2) Pitch for (80mph/ 70kts).
3) When touchdown point is 45° off shoulder turn base
4) Extend 20° flaps and pitch for (75mph/ 65kts).
5) Turn final, extend 30° flaps, and pitch (70mph/ 60kts).
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. Aerodynamic braking only