

## VII.K. Power-Off 180° Accuracy Approach and Landing

**About:** Approach and landing made by gliding with the engine idling, through a specific pattern and touchdown within 200ft of a mark on the runway.

**TSW:** Develop judgement and understand procedures necessary for accurately flying the airplane, without power, to a safe landing.

**How:** Performed by gliding with the power off from a given point on a downwind leg to a preselected landing spot

### Procedure (C172):

#### **Downwind**

1. Carb heat, mixture rich, no more than 1000AGL
2. Abeam touchdown point: Power Idle
3. Hold same level attitude- TRIM 80 MPH (Best Glide)
4. Based on wind, turn base as appropriate (will be sooner than normal)

#### **Base**

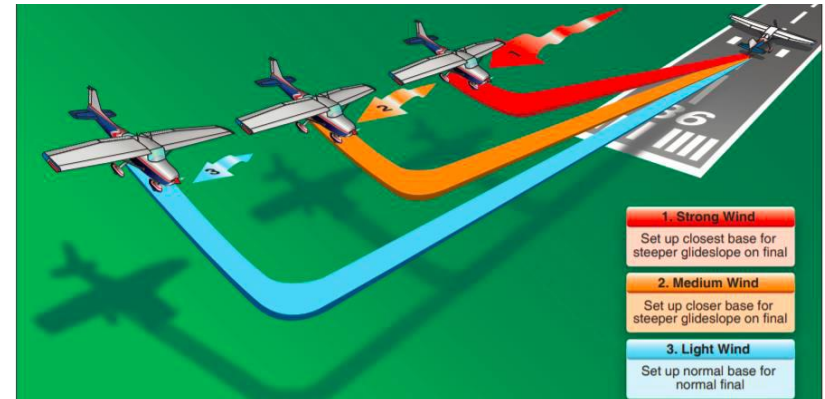
5. Adjust distance from runway based on wind and current altitude

#### **Final Approach**

6. Dissipate altitude as needed (Flaps/ forwards slips).
7. Account for ground effect

### Discussion Points:

8. Very important to maintain best glide speed.
  - a. **Lower nose** -> increase airspeed, **Raise nose** -> decrease airspeed
  - b. Increasing airspeed-> steeper decent angle
  - c. Decreasing airspeed-> rapid settling due to slow AS and low lift
9. Wind factors will change pattern size. This will change every time.
10. Tools available:
  - a. Drag: Flaps, forward slips (bank into wind)
  - b. Size of pattern: Turning base early/late, dogleg to final, S turns
11. Don't attempt to increase the rate of turn with rudder: cross controlled stall: **STAY COORDINATED**



### Common errors:

1. TRIM
2. Downwind leg to far from runway
3. Overextension of downwind leg resulting from a tailwind
4. No accounting from wind on base leg
5. Skidding turns on base to final
6. Attempting to stretch glide
7. Premature flap extension
8. Forcing airplane onto the runway.

### Evaluations/ Standards (Commercial ACS):

9. Complete the appropriate checklist.
10. Make radio calls as appropriate.
11. Plan and follow a flightpath to the selected landing area considering altitude, wind, terrain, and obstructions.
12. Select the most suitable touchdown point based on wind, landing surface, obstructions, and aircraft limitations
13. Position airplane on downwind leg, parallel to landing runway.
14. Correctly configure the airplane.
15. As necessary, correlate crosswind with direction of forward slip and transition to sideslip for landing.
16. Touch down at the proper pitch attitude, **within 200 feet beyond or on the specified touchdown point** with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over the runway centerline.