Solo

Approach to Landing
Part 4 of 4

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To conclude the approach to landing article, here are some thoughts and techniques that might be of use.

Airspeed

- Pitch and Power equals performance

  If you find yourself in a situation where a steeper than usual descent angle must be maintained to make the landing, reduce the power setting. The extra power will result in excess speed, which will be difficult to loose during the landing round-out.

  If you find yourself in the reverse situation a shallower than usual descent angle, carry some additional power to avoid a stall condition.

- Wind

  If it should suddenly get gusty, consider a steeper than usual descent angle keeping the approach as short as possible.

Flight path

- Give yourself room to aviate

  Set the plane up on a downwind leg that is far enough away from the runway that you can make the downwind to base turn followed by a few seconds of straight and level flight before making the next turn.

  This will permit you to make a solid evaluation on the planes position and altitude before making the base to final turn.

- Avoid high bank angle turns

  High bank angles result in significant lose of lift. Significant changes in lift will result in significant lose of altitude during the turns. Use shallow bank angles of 10-20 degrees during each turn.

- Fly the established approach path

  The base to final turn is the critical turn. Anticipate where the aircraft must roll into level flight to be aligned with the runway. If you evaluate the turn as being completed too soon or too late, make immediate shallow bank angle

heading corrections to bring the plane to runway centerline. No doubt, if the aircraft is not aligned with the runway, it will not land on the runway.

- Small control inputs

  Make small attitude and course corrections and then evaluate what the impact is to the flight path. Excessive or large amounts of control inputs induce significant amounts of drag, which will slow the aircraft down. Consider switching the ailerons and elevator to low rate during the approach.

Descent rate

- Establish the descent rate on downwind leg when the aircraft is abeam the pilot at the flight station.

  If the descent is started when abeam the pilot stations, you will have several seconds to observe what the trend is before the downwind to base turn.

- Consider using the halve method of power management

  Large power changes result in “porpoising” up and down on the approach path. Small power changes minimize the change to the aircraft stability.