

Saturday, May 9, 2026

Slope Landing

Purpose and Objective

A slope landing is the maneuver that allows a helicopter to touch down on an uneven surface. This procedure emphasizes precise control and requires continual assessment of the slope's suitability for landing. A slope landing can be done with either skid towards the slope, or with the front part of both skids, also called a toe-in.

Maneuver

1. Approach the slope at a 45-degree angle until established in a 3-foot hover directly above the slope.
2. Make a controlled pedal turn to position the helicopter parallel to the slope.
3. Keeping your eyes outside, apply slight downward collective pressure. This will allow the helicopter to settle toward the slope.
4. Once the upslope skid touches the slope, use slight downward collective pressure and lateral cyclic input to maintain pressure/weight on the slope.
5. With the helicopter stable on the slope, upslope skid grounded, gently lower the collective slightly and apply further lateral cyclic to allow the downslope skid to settle.
6. Once both skids touch the ground and the helicopter is firmly on the slope, conduct a series of slope checks to check for suitability. A slope check is done by lowering the collective slightly, applying small left/right cyclic movement, and small left/right pedal inputs to check for unwanted movement.
7. When you have confirmed that the helicopter is firmly on the ground and you can lower the collective fully, return the cyclic to its neutral position and centralize the pedals.
8. To pick up from the slope, place the cyclic into the slope (approximately the position it was in after setting down), give slight left pedal, and smoothly raise collective until the downslope skid becomes light. Raising the collective while slowly moving the cyclic away from the slope until downslope skid is off the ground. Continue raising the collective and moving the cyclic away from the slope until the helicopter is established in a safe hover above the slope.
9. Hover away from the slope at a 45-degree angle, only making a pedal turn once far enough away from the slope. Consider turning towards the slope if a pedal turn is necessary.



Common Errors

- Over-controlling the helicopter.
 - Rushing.
 - Staring at the slope.
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Performance Standards

Private Pilot for Rotorcraft Category Helicopter Rating ACS, Area of Operation IV, Task E.

Highlights

- Maintain heading and ground position and prevent movement of aircraft on slope.
- Make a smooth positive descent to touch the upslope skid on the sloping surface.
- Maintain positive control while lowering the downslope skid to touchdown.
- Make a smooth transition from the slope to a stabilized hover parallel to the slope.
- Properly move away from the slope.
- Maintain heading $\pm 10^\circ$ throughout operation.

