

360's Method to dissipate high energy state

Normally the ELP will be entered at high key, but the ELP can be intercepted at any point on the ELP profile between high key and final. Carefully manage energy to arrive at high key on altitude and airspeed

Approximate Altitude loss using 360's and AOB

125 KIAS, Idle power:

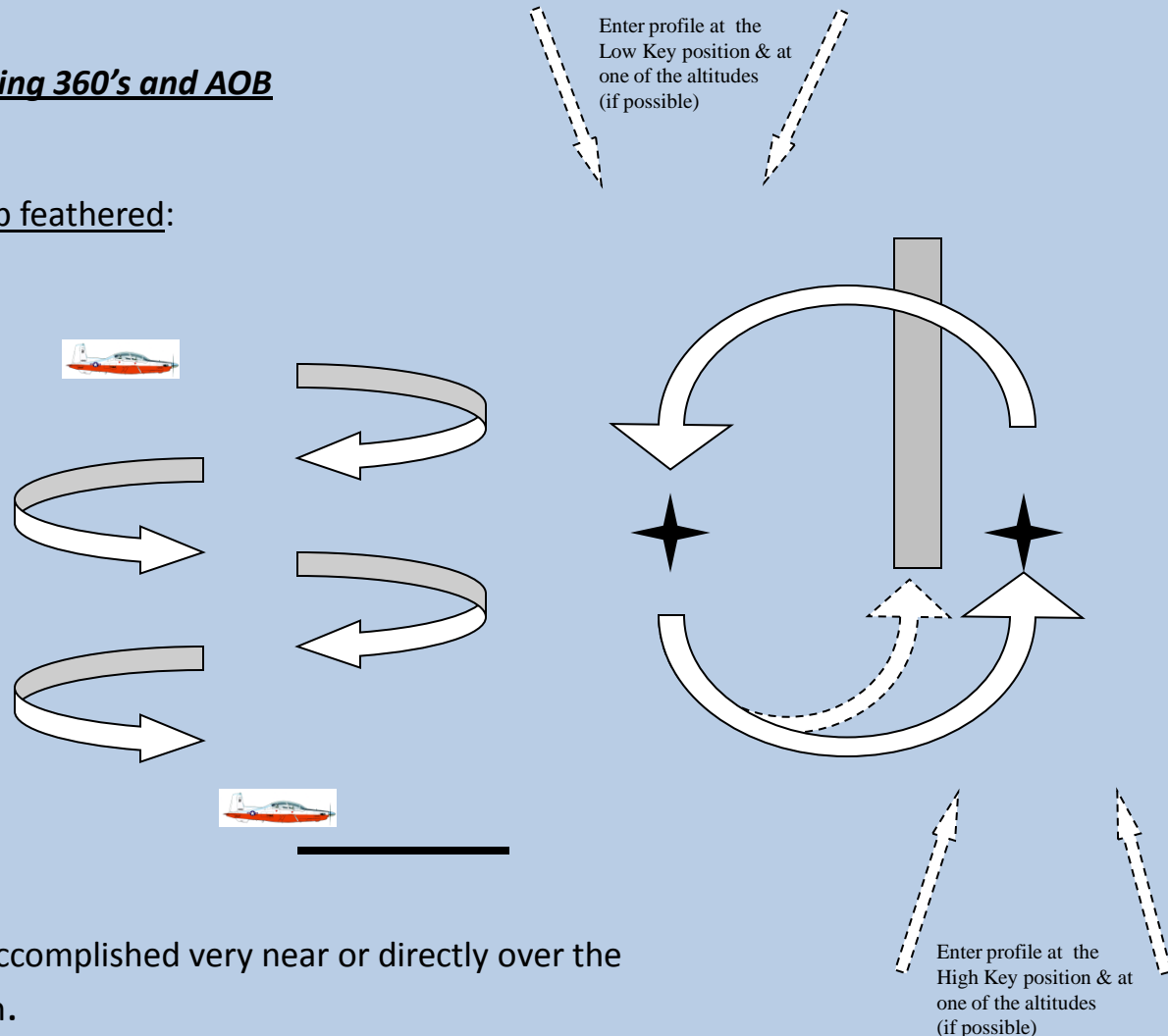
➤ 30° bank - 3000-3500 feet.

125 KIAS, 4-6% torque or prop feathered:

➤ 30° bank - 2,000 feet.

➤ 45° bank - 1,500 feet.

➤ 60° bank - 1,000 feet.

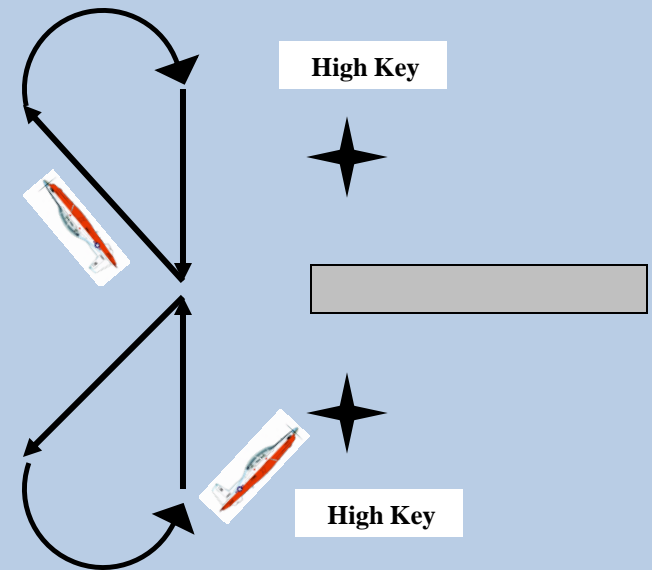


FTI NOTE: This is generally accomplished very near or directly over the intended landing destination.

Bow Ties method to dissipate high energy state

Bow Ties are essentially a continuous set of mild turns in the shape of a bow tie flown approximately $\frac{1}{2}$ wing tip distance (WTD) away and on the downwind side of the landing area. With each bow tie, you should attempt to keep the landing runway in sight.

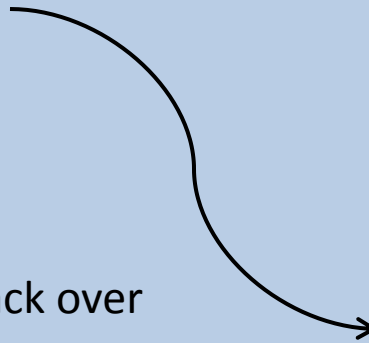
- **Use**
 - Oriented perpendicular to runway with $\frac{1}{2}$ wing tip spacing
 - Can hit HK on either side of runway
 - Head for HK 1,200-1,500' prior
- **Additional Methods/Concerns**
 - Use 45 deg bank angles during turns
 - Use wind arrow on PFD to help
 - Variable altitude loss depending on methods (ie. Timing on legs)



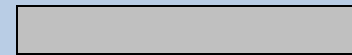
FTI NOTE: Bow ties are not precise maneuvers and different techniques exist on how to fly them. Your instructor will provide guidance; however, plan to depart the bow ties for high key with sufficient altitude remaining to glide to high key altitude.

S-Turns method to dissipate high energy state

S-turns are used to affect a milder altitude loss and may be specifically used to make controlled corrections while proceeding direct to high key.



High Key

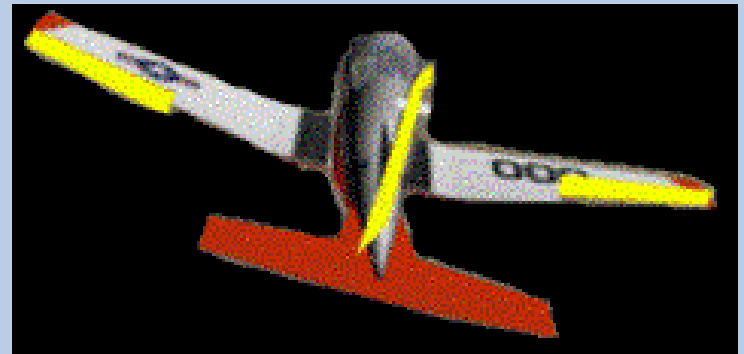


- Designed to increase the actual track over the ground
- S-turns are simply lazy turns back and forth deviating from a straight-line ground track in order to provide more time to descend.

Slips method to dissipate high energy state

A slip may be used to dissipate energy by applying the wing-down, top-rudder method. The amount of altitude loss depends on the force of control inputs using the rudder and ailerons

- Use caution slipping when configured and close to the ground.
- The slip must be taken out carefully with enough altitude remaining (200-300 feet) to slow the rate of descent and ensure positive control of the aircraft during the final moments of the maneuver



NATOPS Warning: Improper use of the rudder or ailerons during a slip maneuver may cause a departure from controlled flight with insufficient altitude for recovery

Methods for correcting low energy state

- For a power loss (Forced Landing): correct for low energy by delaying landing gear or flap extension, intercepting the ELP at some point other than high key (low key, base key, final), and/or adjusting the pattern ground track.

- For a PEL or PEL(P): Do not delay configuration. Use immediate power (as required) to correct for low energy as soon as its recognized.