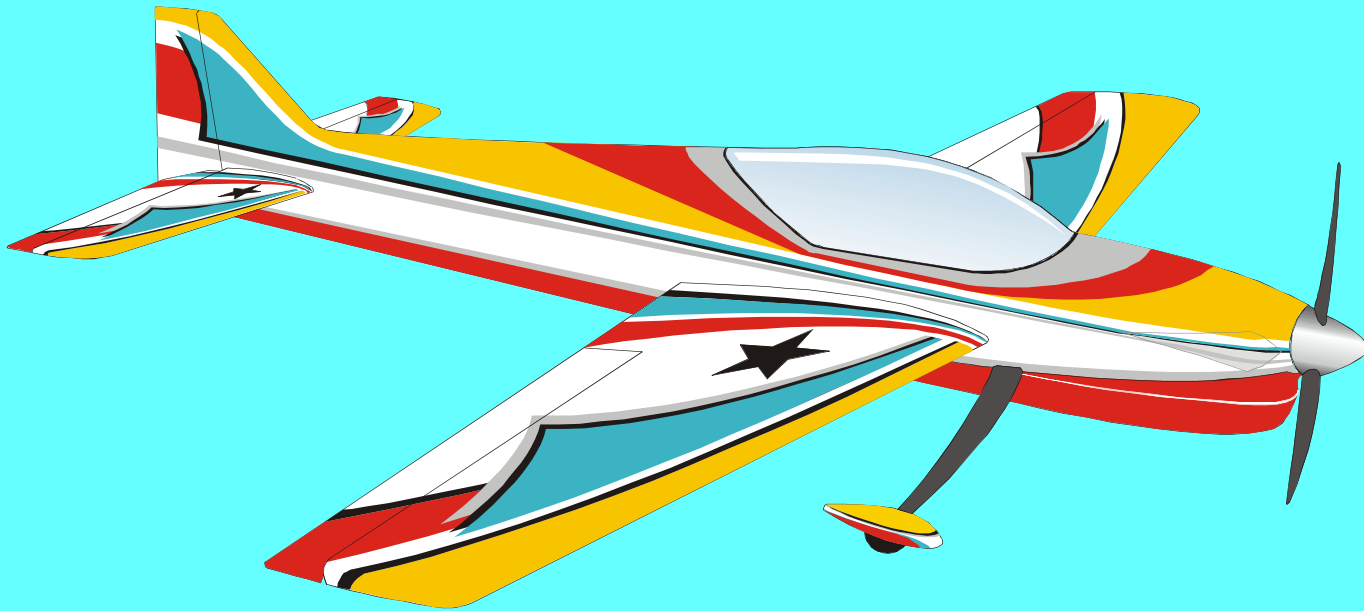


# Flying and Judging F3A

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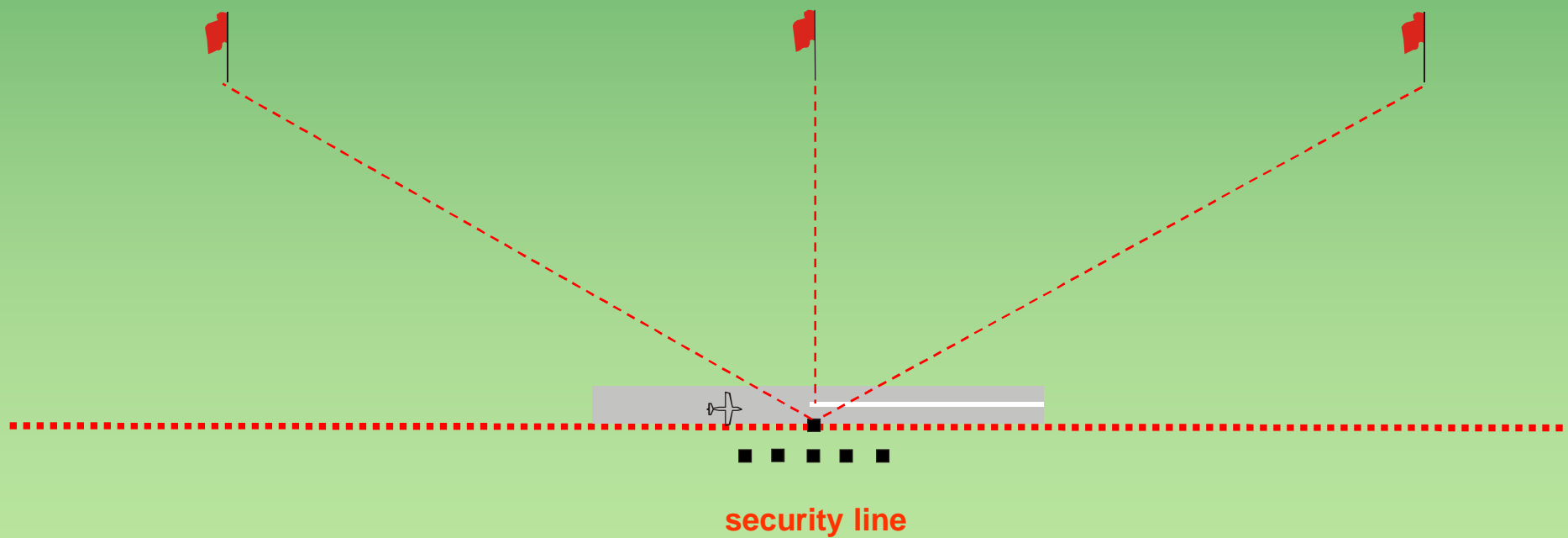
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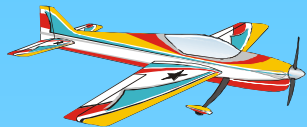
**SCHEMATIC MANOEUVRE ILLUSTRATIONS**  
**SCHEDULE F-13**



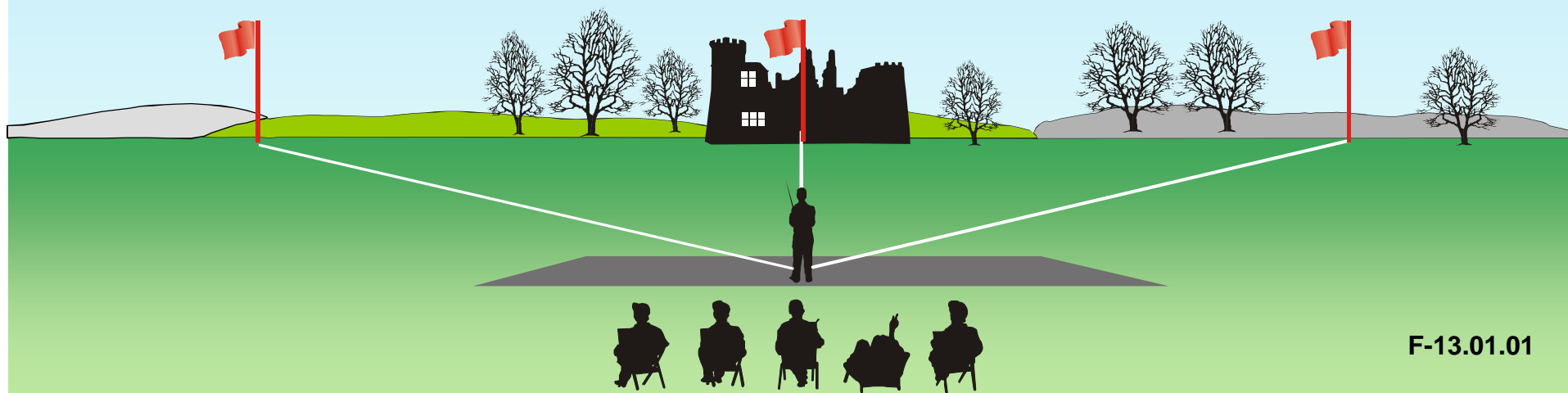
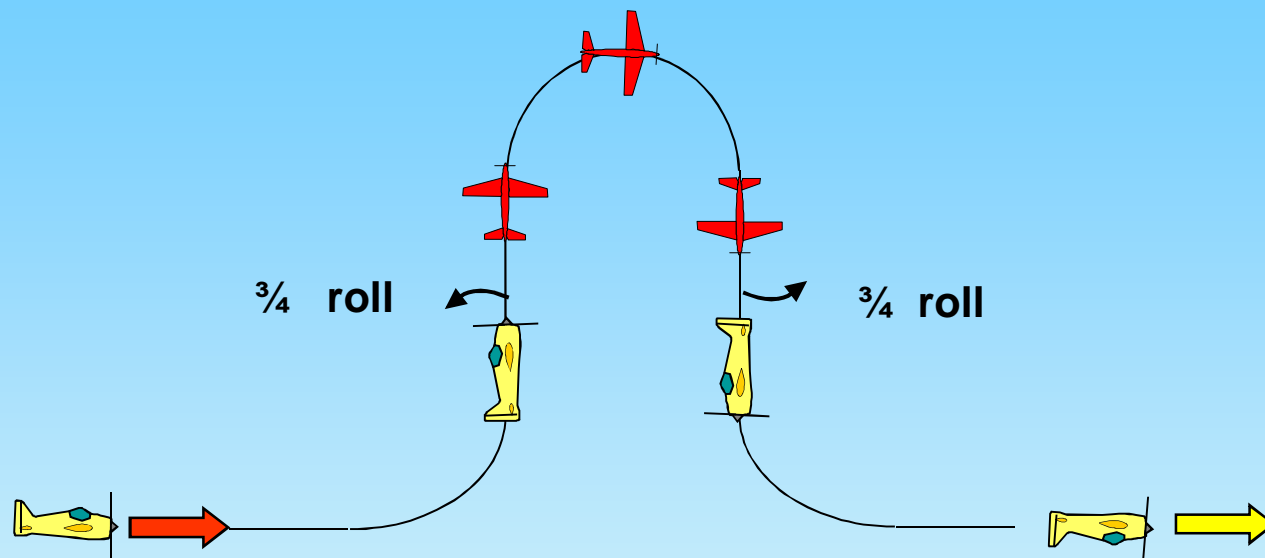
# Take-off procedure ( not judged, not scored )

← wind





## F-13.01: Humpty Bump with $\frac{3}{4}$ roll up, $\frac{1}{2}$ knife edge loop, $\frac{3}{4}$ roll down



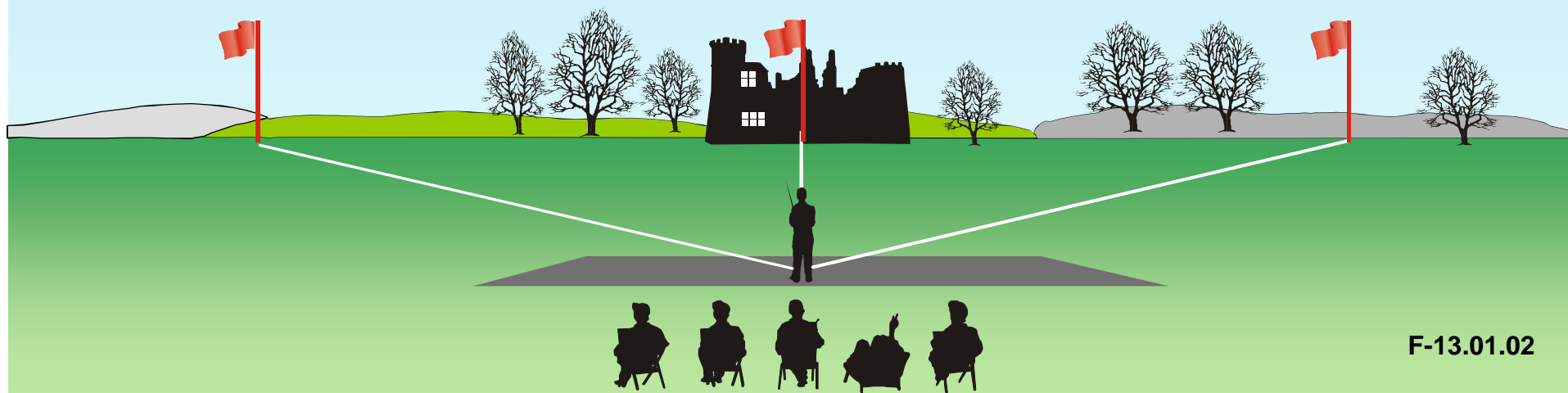
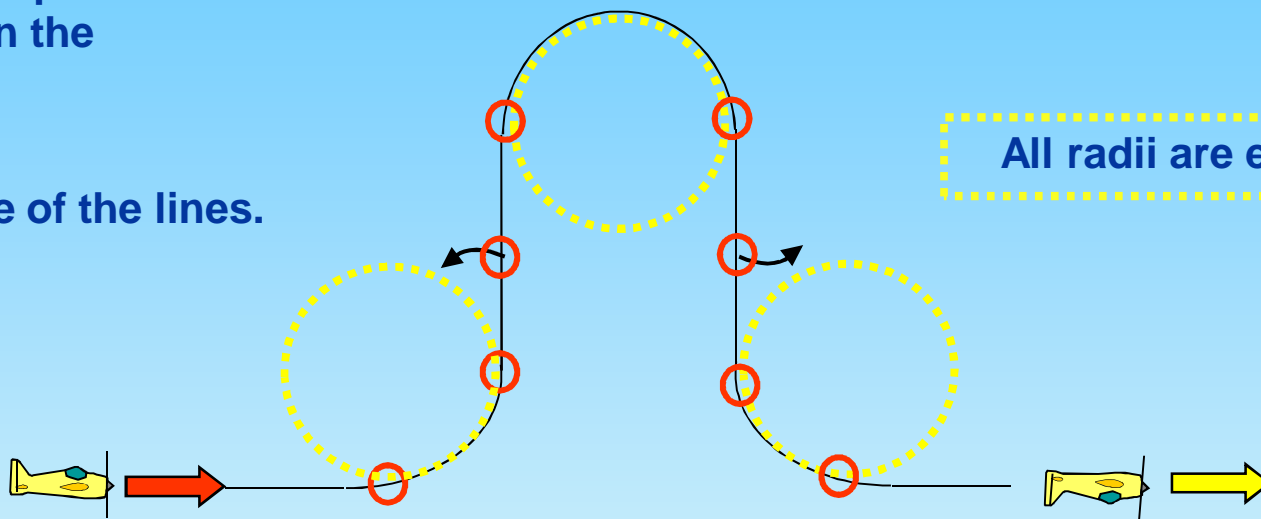


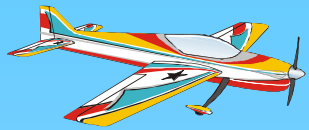
## F-13.01: Humpty Bump with $\frac{3}{4}$ roll up, $\frac{1}{2}$ knife edge loop, $\frac{3}{4}$ roll down

During the  $\frac{1}{2}$  loop the wing must be in the vertical plane.

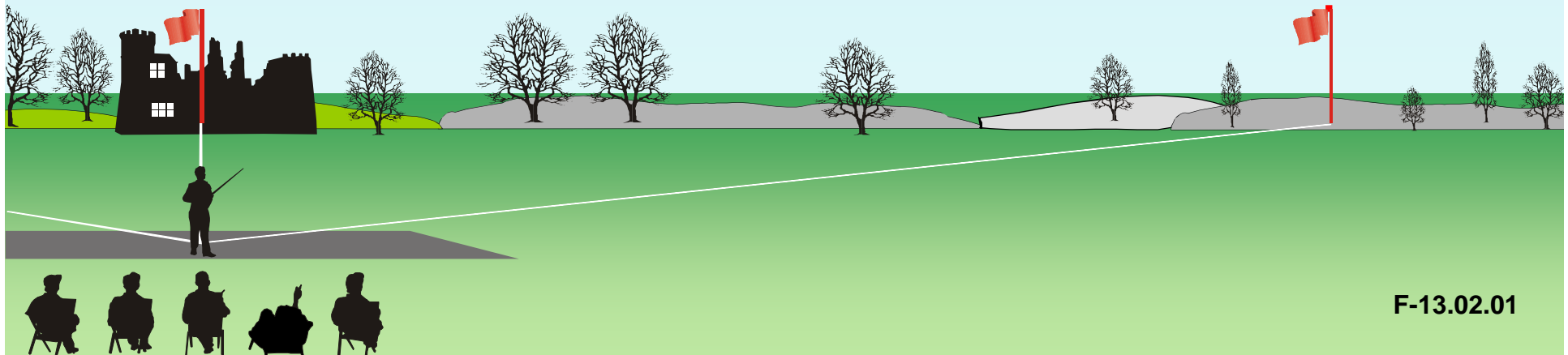
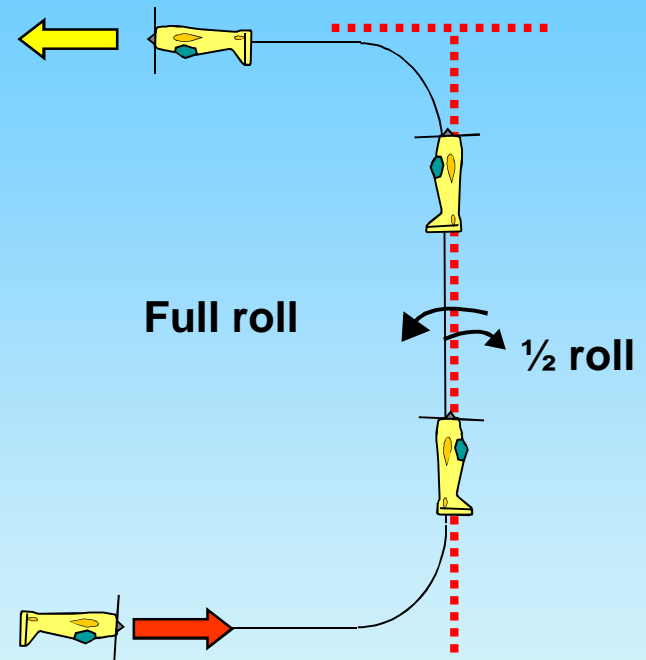
Rolls on middle of the lines.

All radii are equal.





## F-13.02: Half Square Loop with consecutive $\frac{1}{2}$ roll and roll in opposite direction

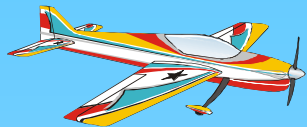




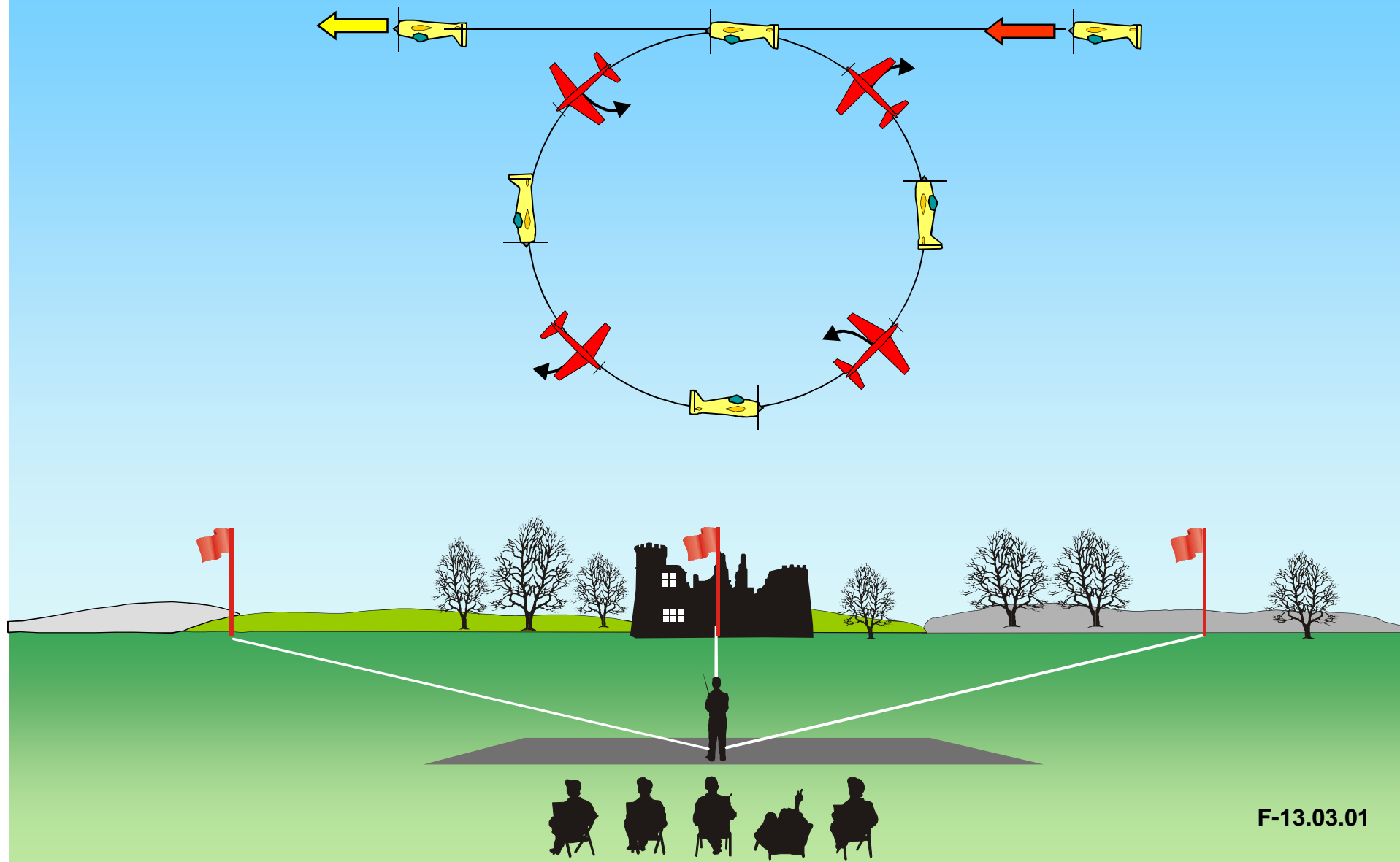
**Between part roll and roll in opposite direction there must be no line.**

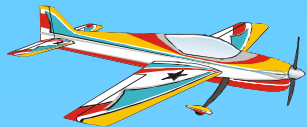
The diagram shows two aircraft performing turns. The top aircraft, labeled 'Full roll', is shown in a turn with a dashed yellow circle representing the path and a red circle at the center. The bottom aircraft, labeled '1/2 roll', is shown in a turn with a dashed blue circle representing the path and a red circle at the center. The text 'Full roll' and '1/2 roll' are placed next to their respective paths. A red dashed line separates the two scenarios.





## F-13.03: Loop with consecutive four $\frac{1}{2}$ rolls in opposite direction

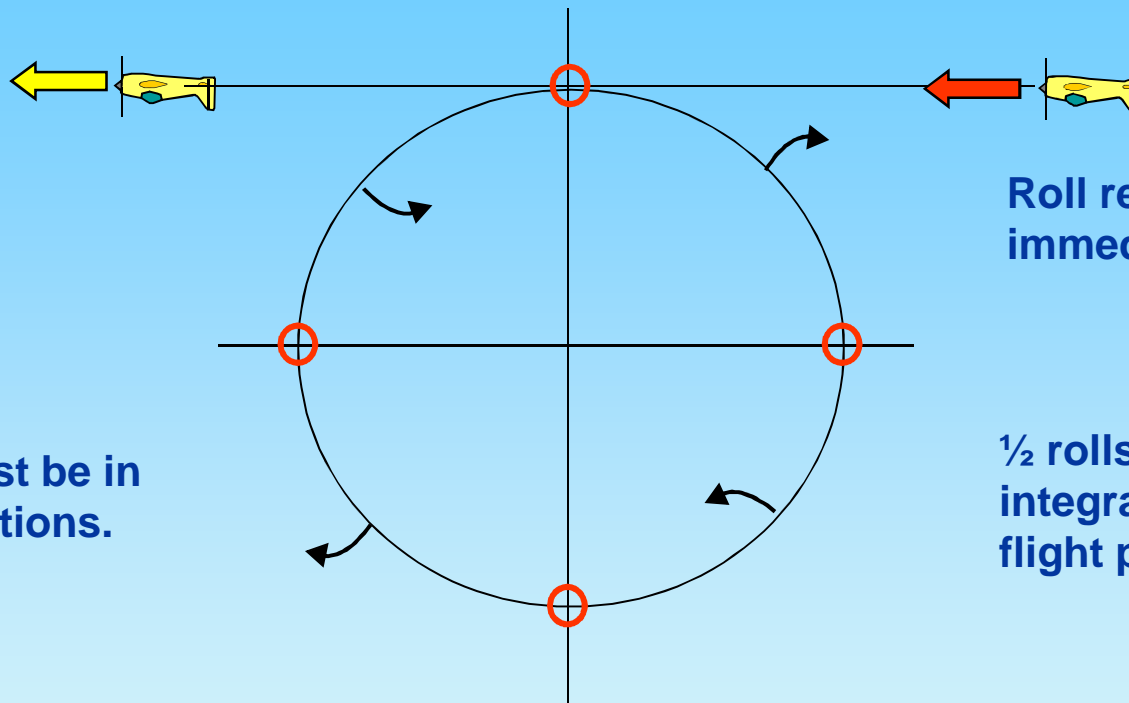




## F-13.03: Loop with consecutive four $\frac{1}{2}$ rolls in opposite direction

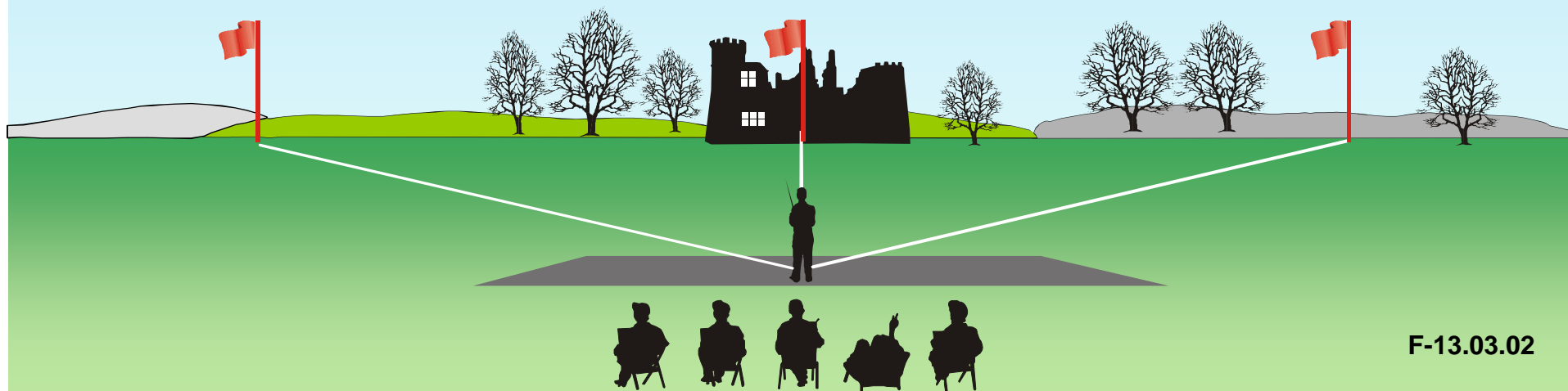
Loop must be round.

All  $\frac{1}{2}$  rolls must be in opposite directions.



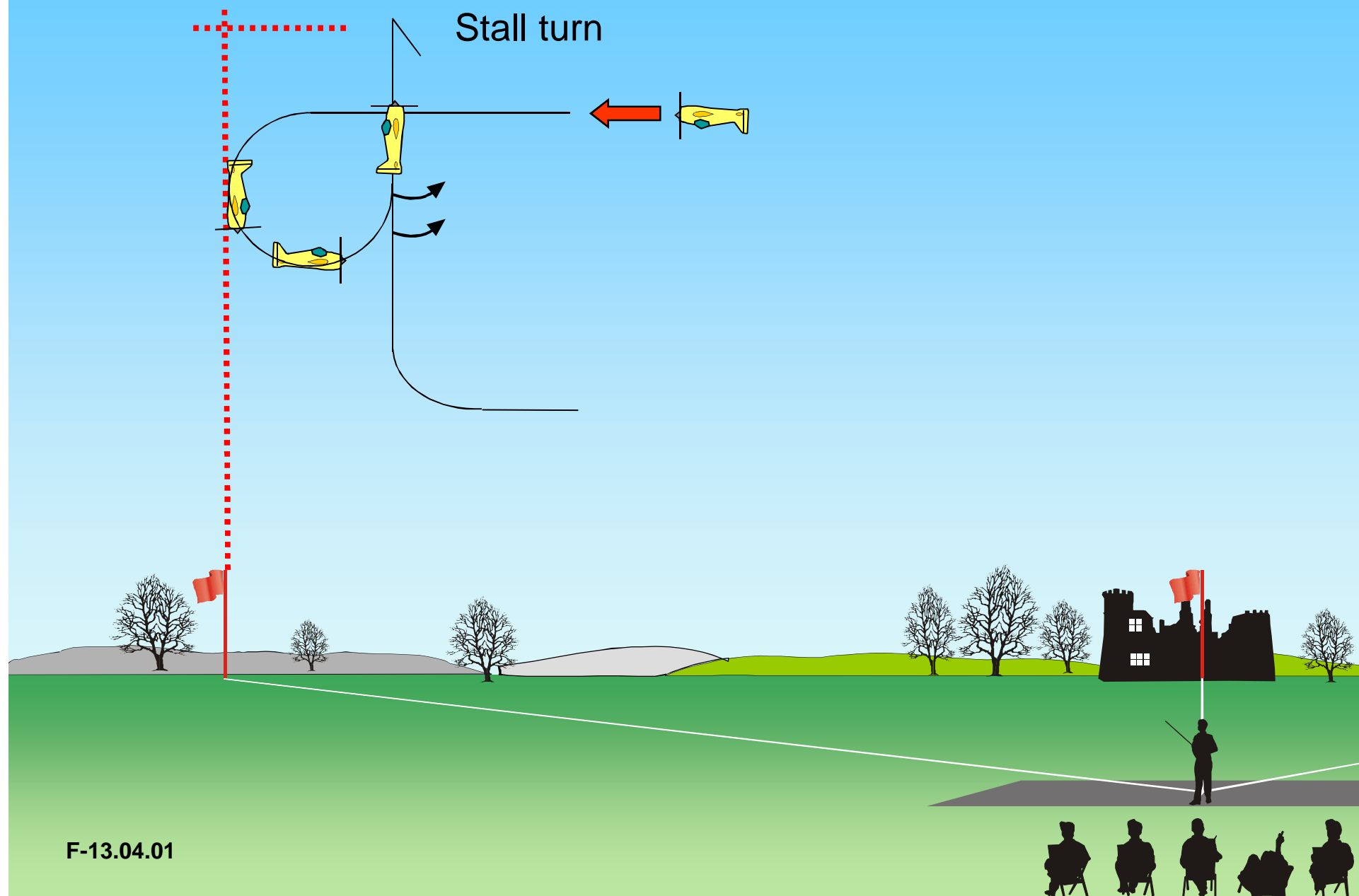
Roll reversal is immediate

$\frac{1}{2}$  rolls must be integrated on circular flight path of the loop.



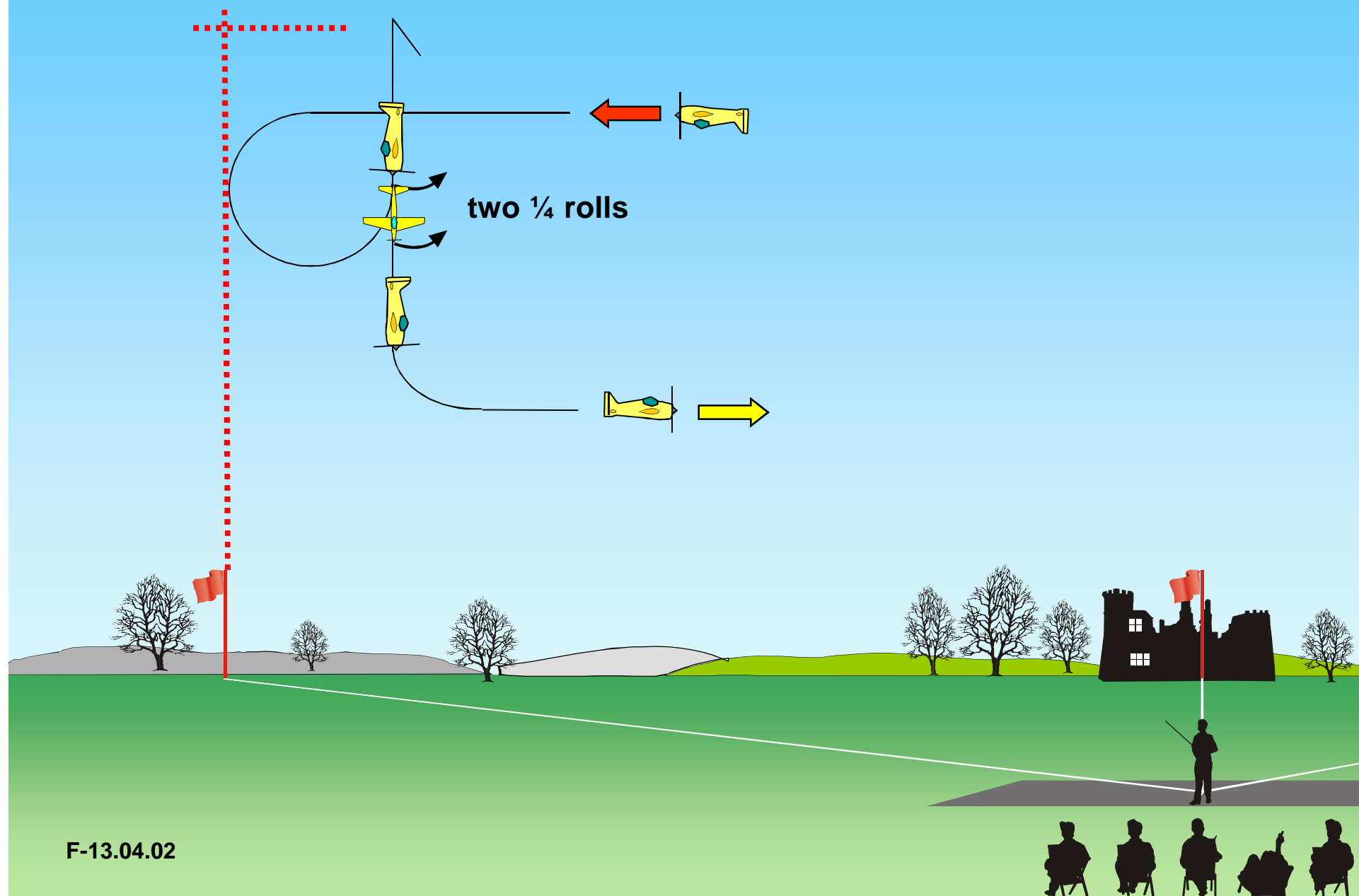


## F-13.04: Figure 6, with stall turn, consecutive two $\frac{1}{4}$ rolls down



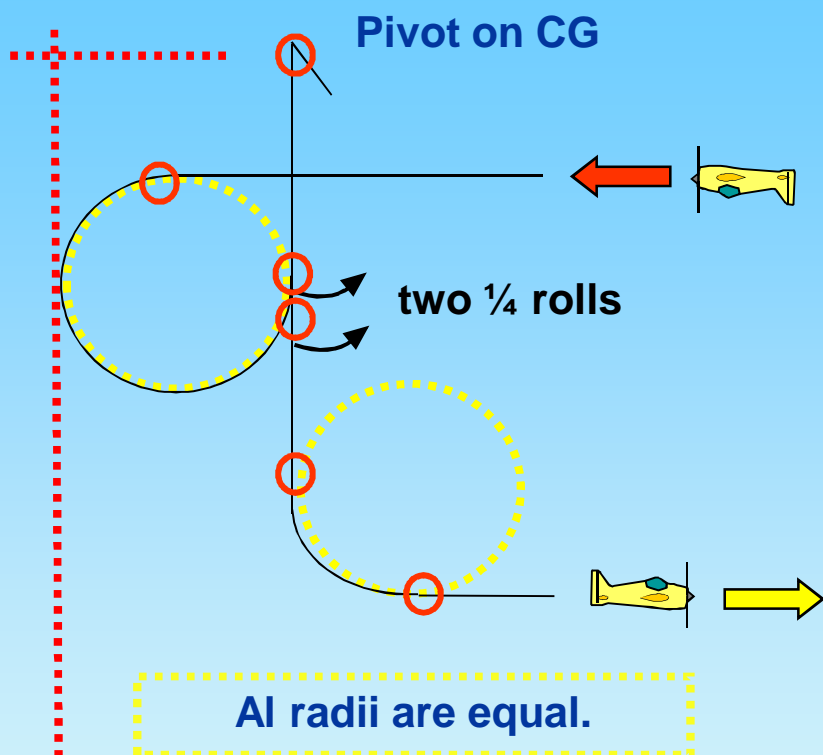


## F-13.04: Figure 6, with stall turn, consecutive two $\frac{1}{4}$ rolls down





## F-13.04: Figure 6, with stall turn, consecutive two $\frac{1}{4}$ rolls down



Two wing spans or more **zero points!**

$\frac{1}{4}$  rolls on middle of the line (down).

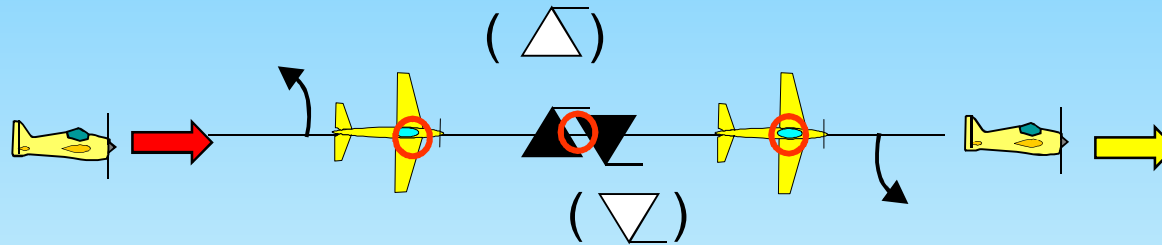




## F-13.05: Roll Combination with consecutive $\frac{1}{4}$ roll, two snap rolls in opposite direction, $\frac{1}{4}$ roll

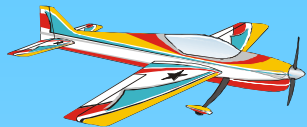
If snap roll = barrel roll or aileron roll:

Severe downgrade > 5 pts.

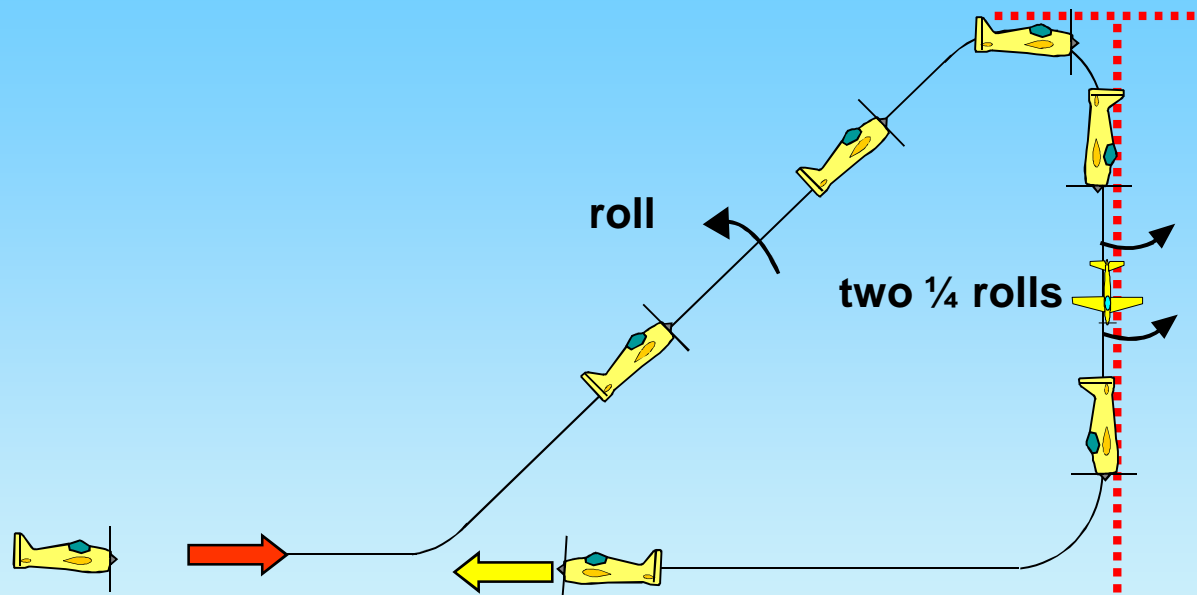


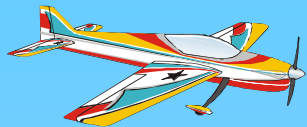
No line between opposite snap rolls.

If the first snap roll is opposite to the first  $\frac{1}{4}$  roll there must be no lines between the  $\frac{1}{4}$  rolls and the snap rolls.



## F-13.06: Shark Fin with roll up, consecutive two $\frac{1}{4}$ rolls down

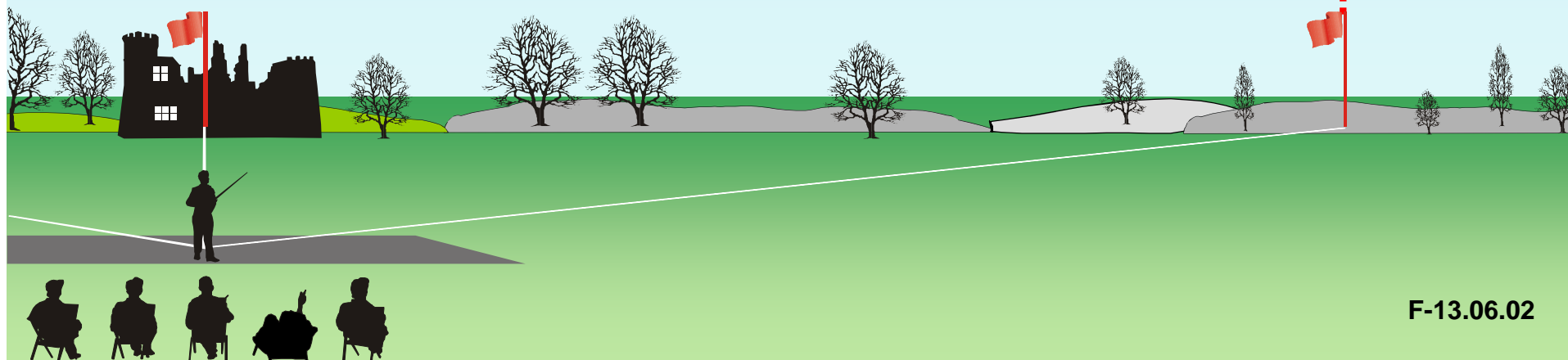
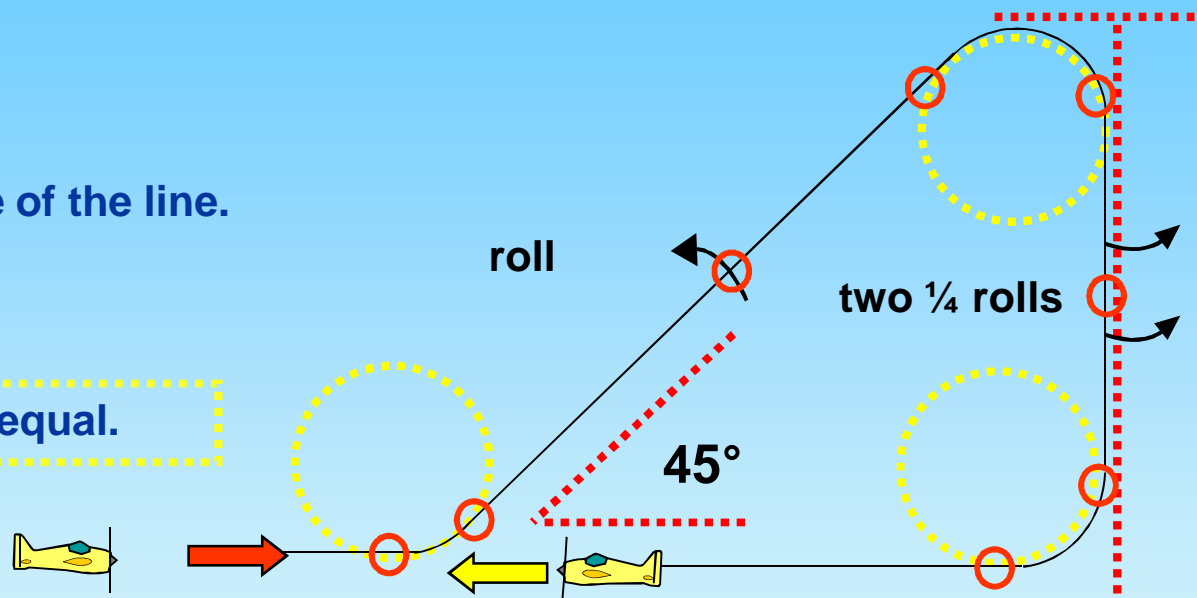


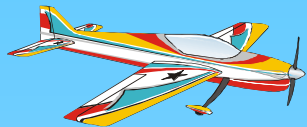


## F-13.06: Shark Fin with roll up, consecutive two $\frac{1}{4}$ rolls down

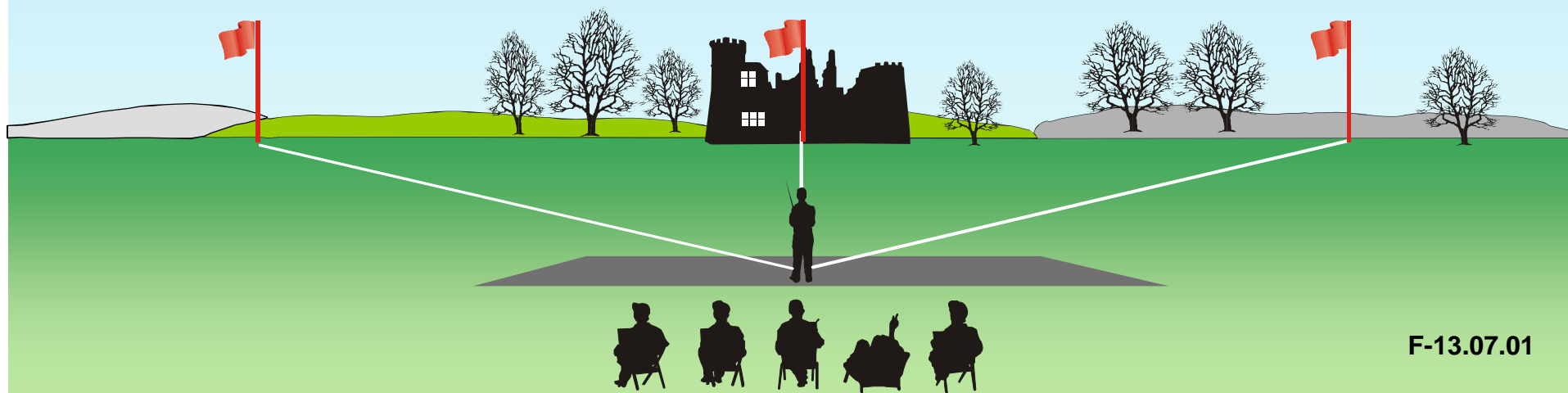
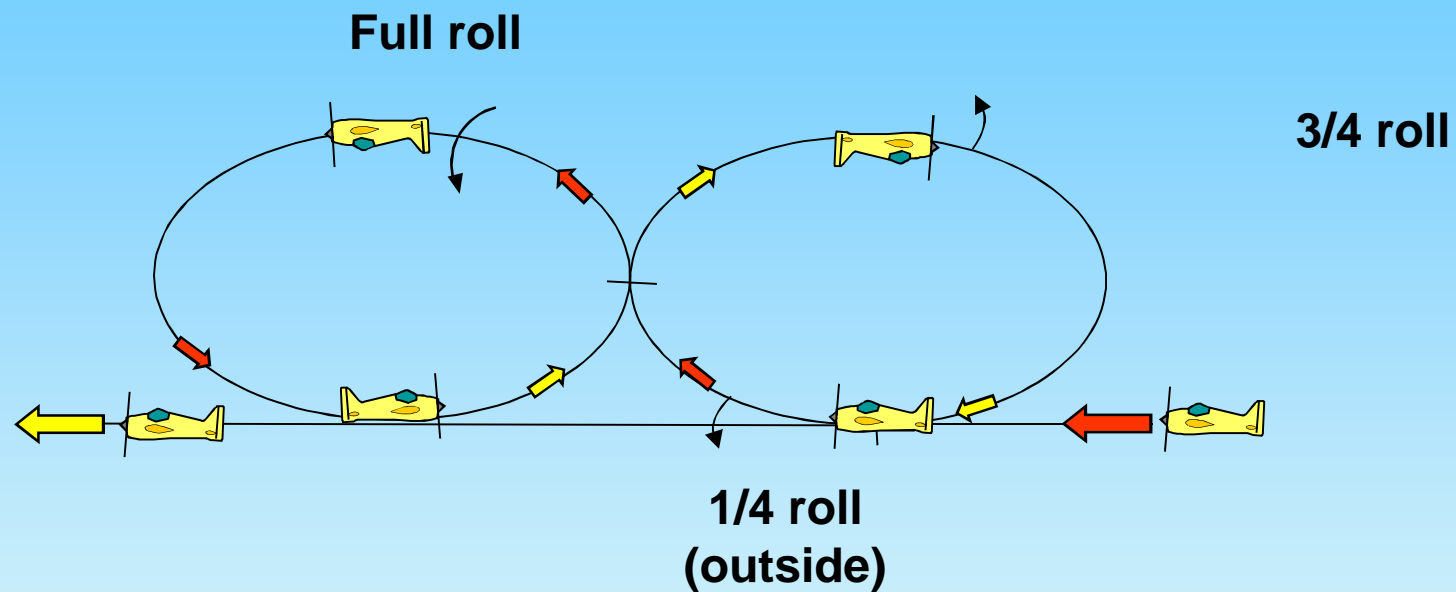
rolls on middle of the line.

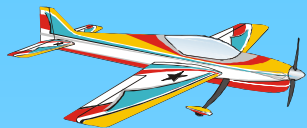
All radii are equal.





## F-13.07: Horizontal Circle 8 with consecutive two rolls

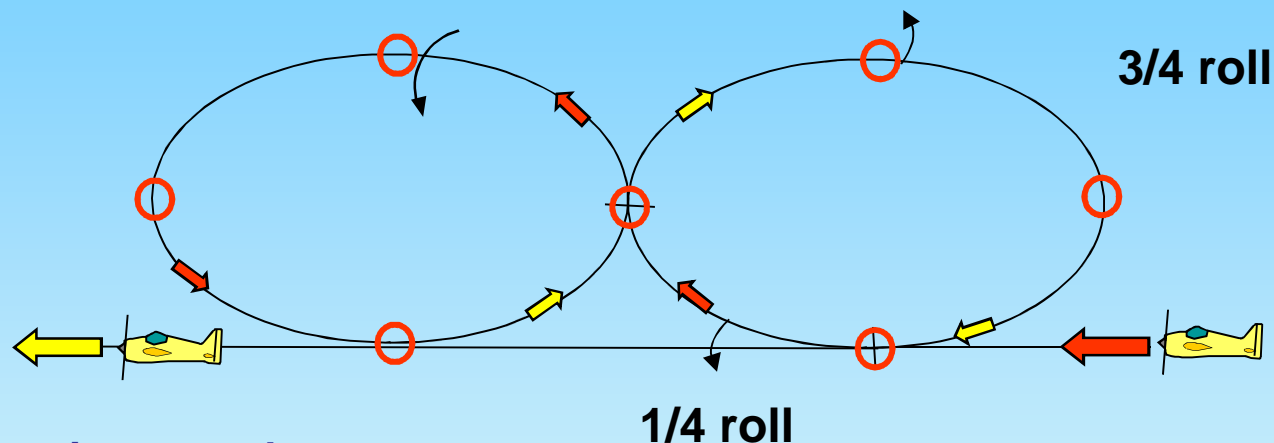




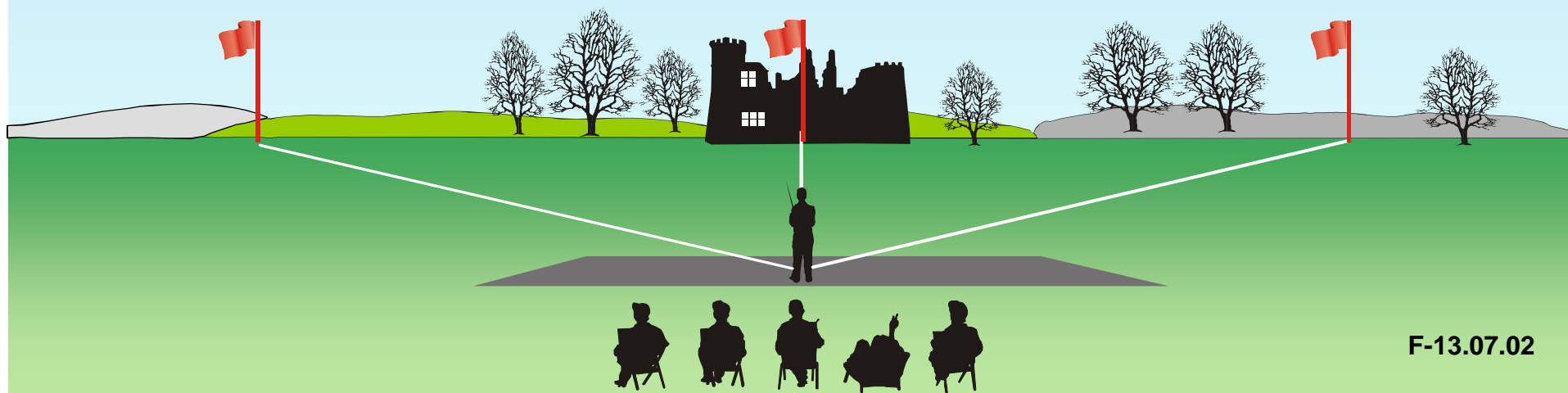
## F-13.07: Horizontal Circle 8 with consecutive two rolls

Roll rate must be constant.

Circles must be of constant radius and windcorrected.

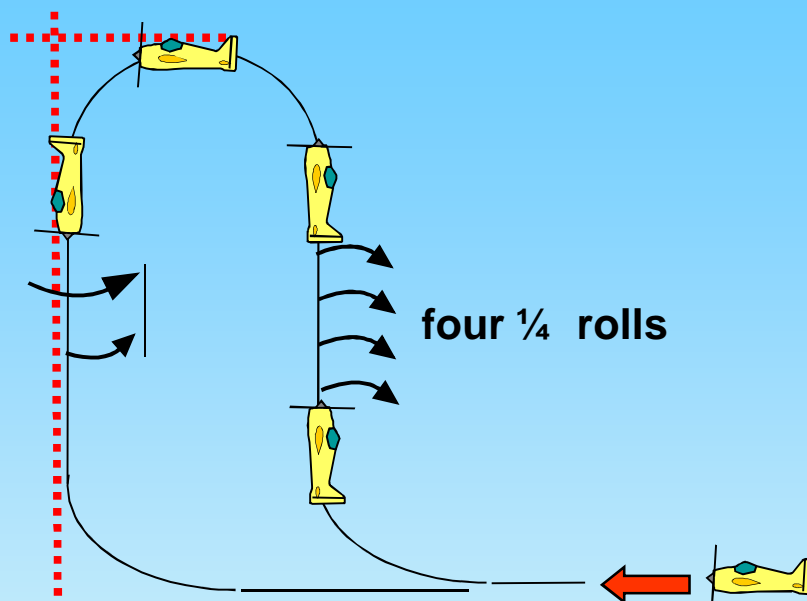


All rolls are integrated on circular flightpath and in the same direction.



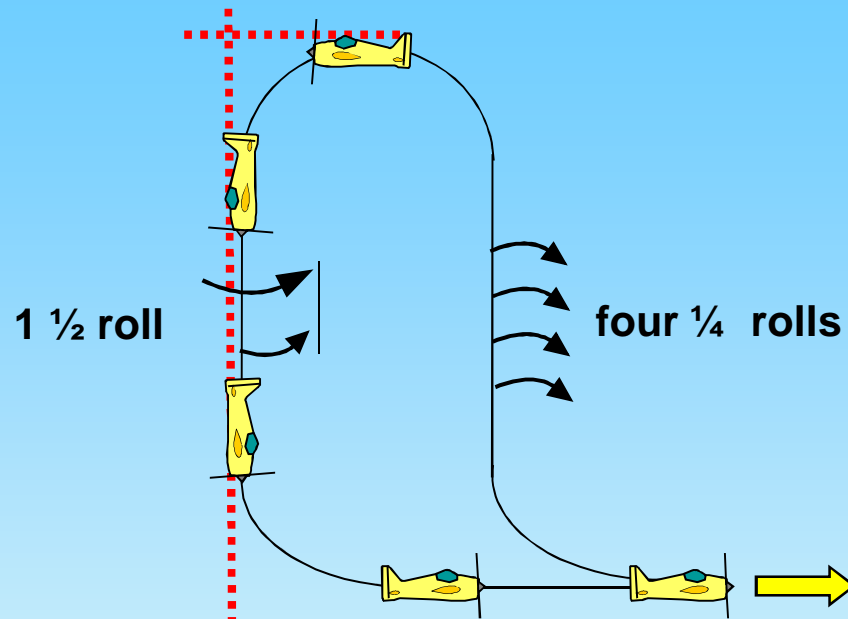


## F-13.08: Pull-Push Pull Humpty Bump with consecutive four $\frac{1}{4}$ rolls up 1 $\frac{1}{2}$ roll down





## F-13.08: Pull-Push Pull Humpty Bump with consecutive four $\frac{1}{4}$ rolls up 1 $\frac{1}{2}$ roll down

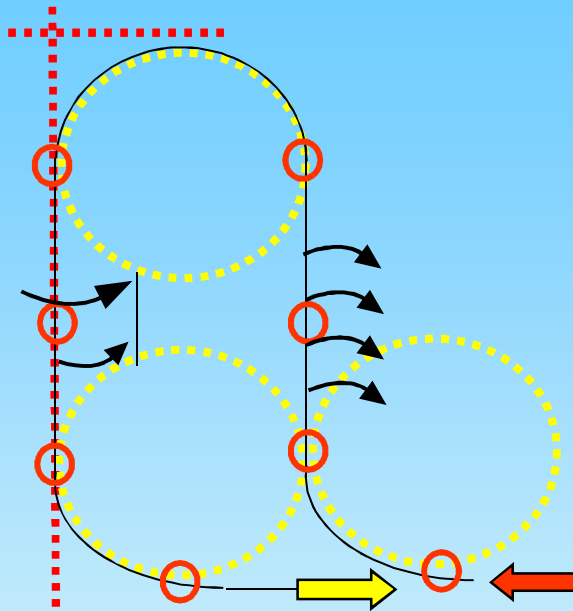


F-13.08.02





## F-13.08: Pull-Push Pull Humpty Bump with consecutive $\frac{1}{4}$ rolls up 1 $\frac{1}{2}$ roll down



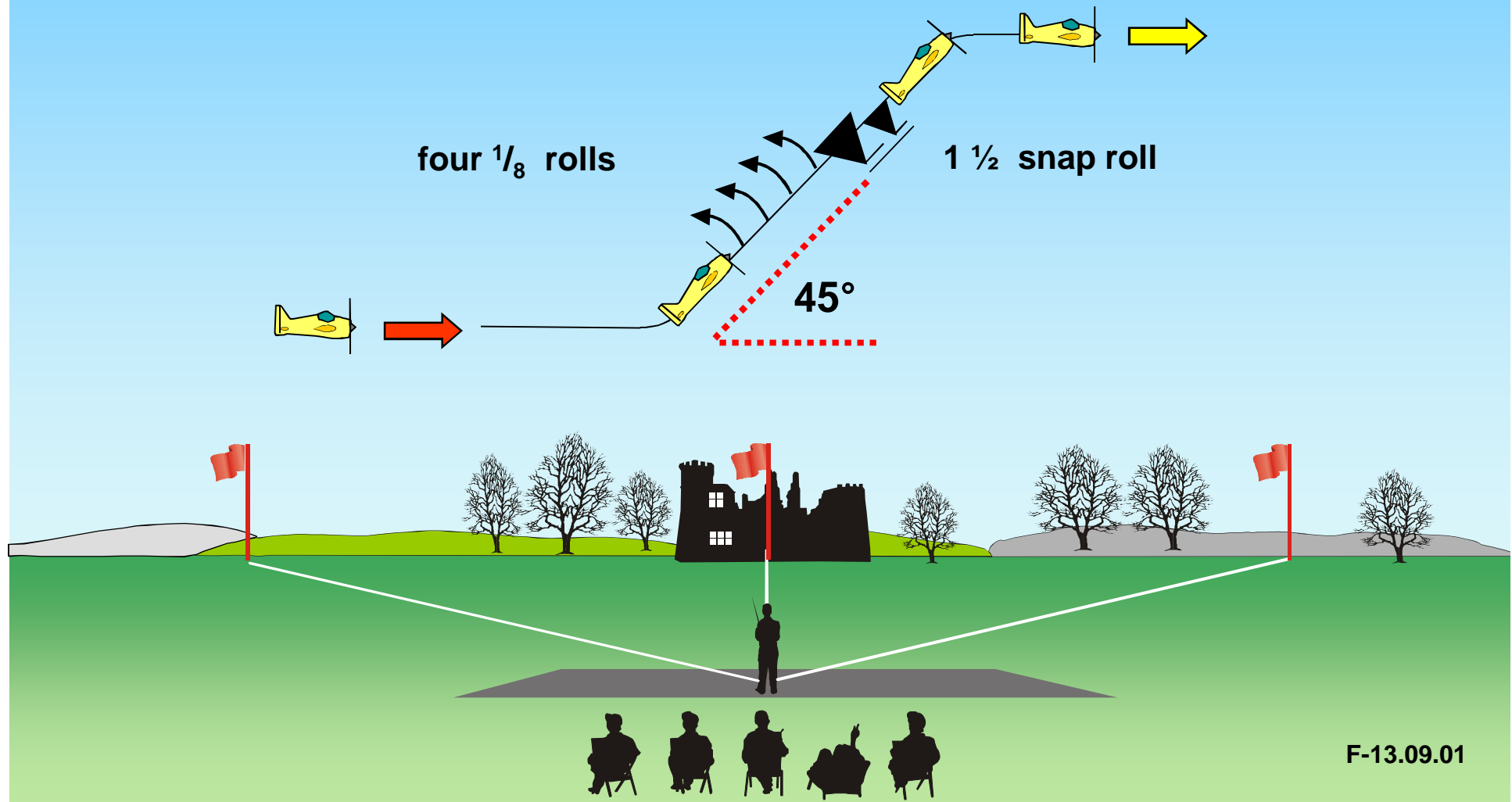
Rolls on middle of the line.

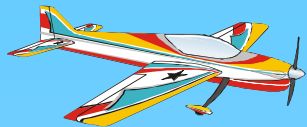
All radii are equal.





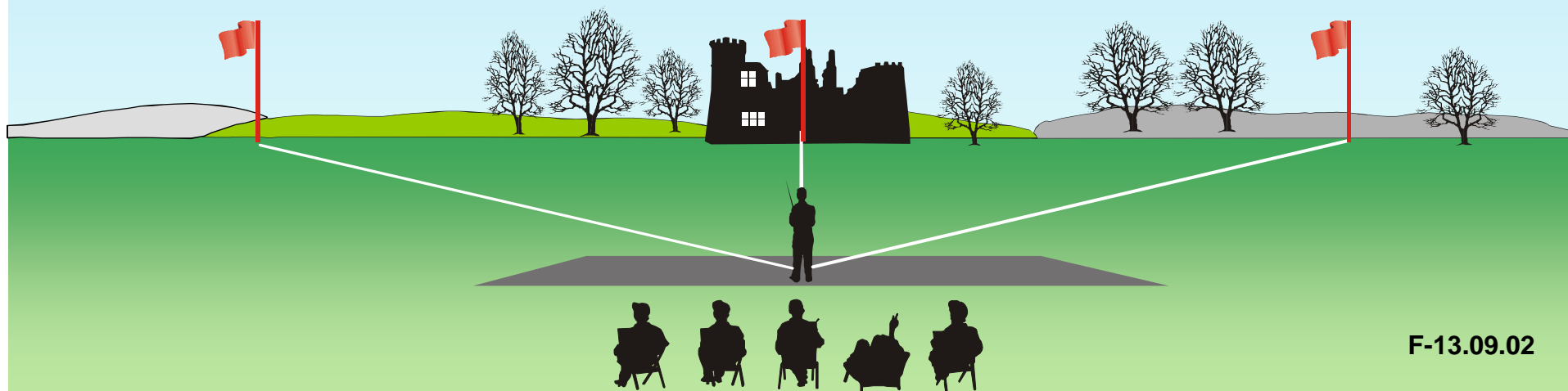
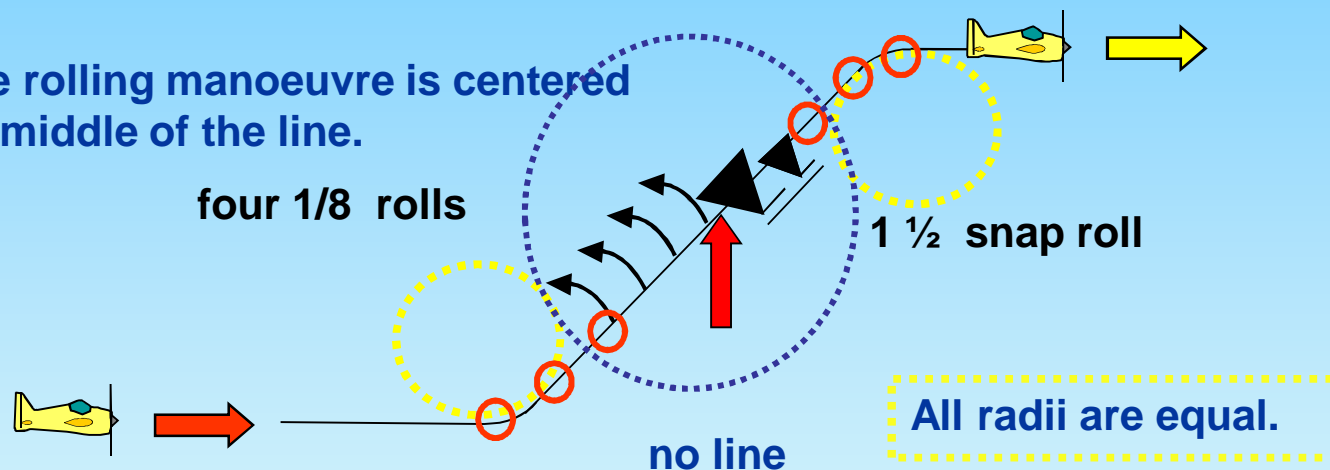
## F-13.09: 45° Upline with consecutive four $\frac{1}{8}$ rolls, 1 $\frac{1}{2}$ snap roll in opposite direction

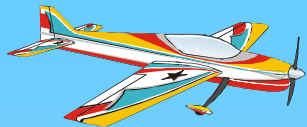




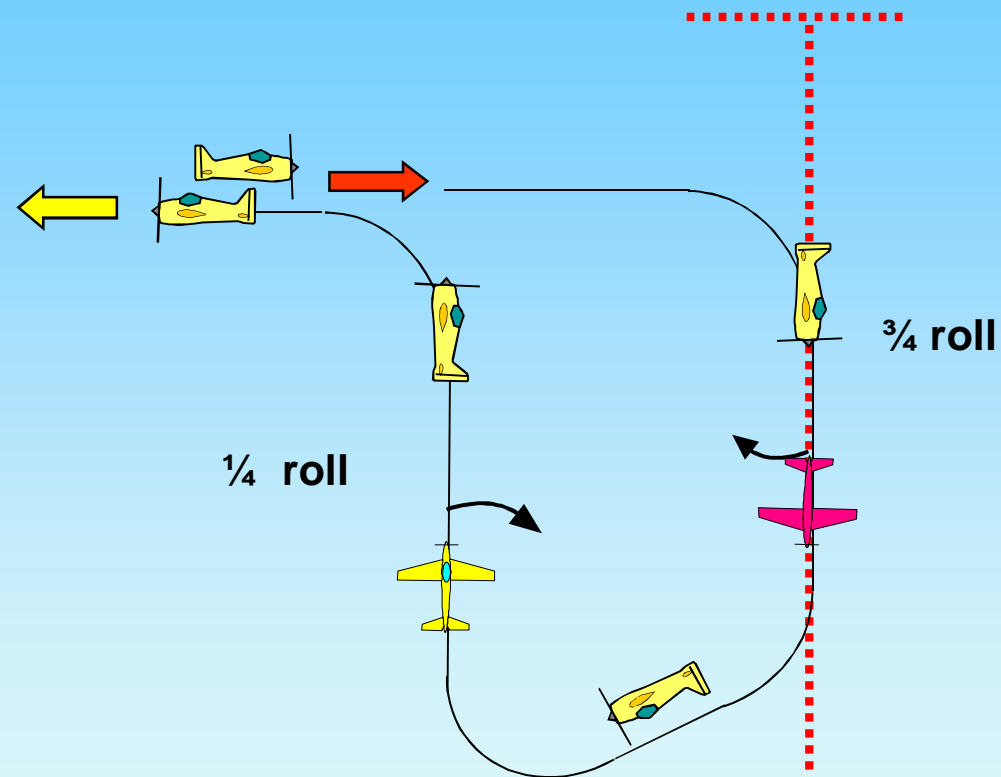
## F-13.09: 45° Upline with consecutive four $\frac{1}{8}$ rolls, 1 $\frac{1}{2}$ snap roll in opposite direction

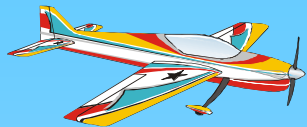
The rolling manoeuvre is centered on middle of the line.





## F-13.10: Reverse Top Hat with $\frac{3}{4}$ roll down, $\frac{1}{4}$ roll up (Option: roll down, consecutive two $\frac{1}{4}$ rolls up)



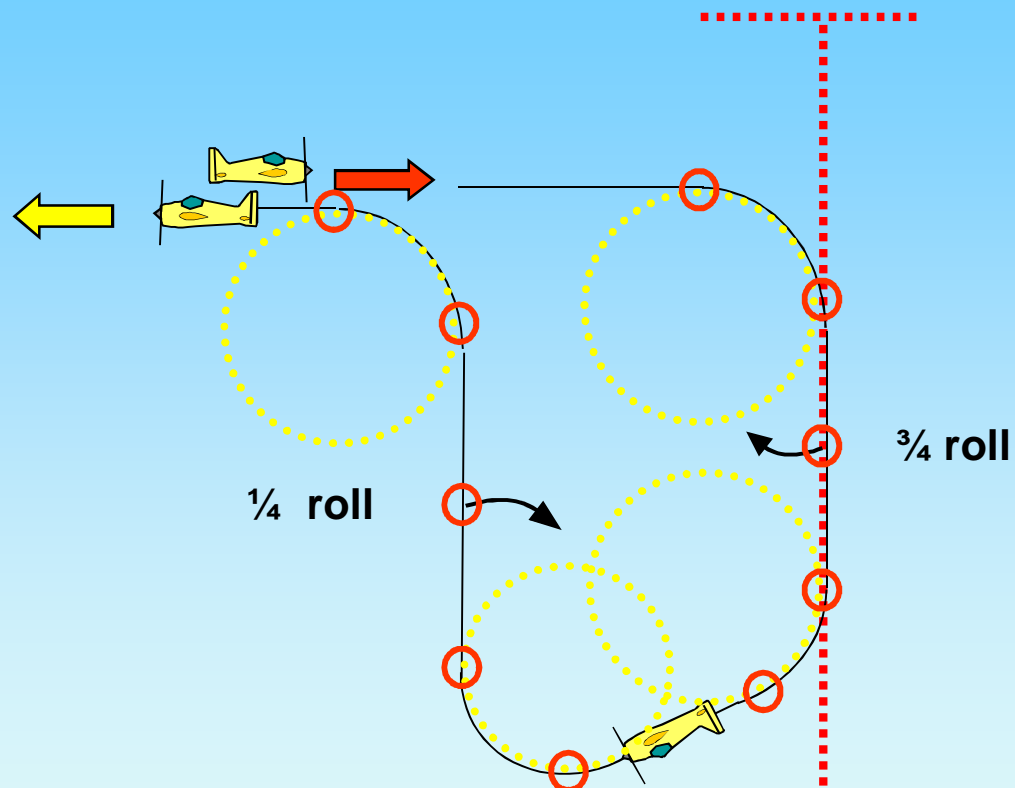


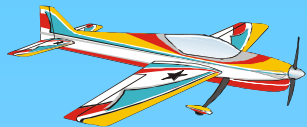
## F-13.10: Reverse Top Hat with $\frac{3}{4}$ roll down, $\frac{1}{4}$ roll up (Option: roll down, consecutive two $\frac{1}{4}$ rolls up)

Rolls in middle of the lines.

Horizontal cross box must be inverted.

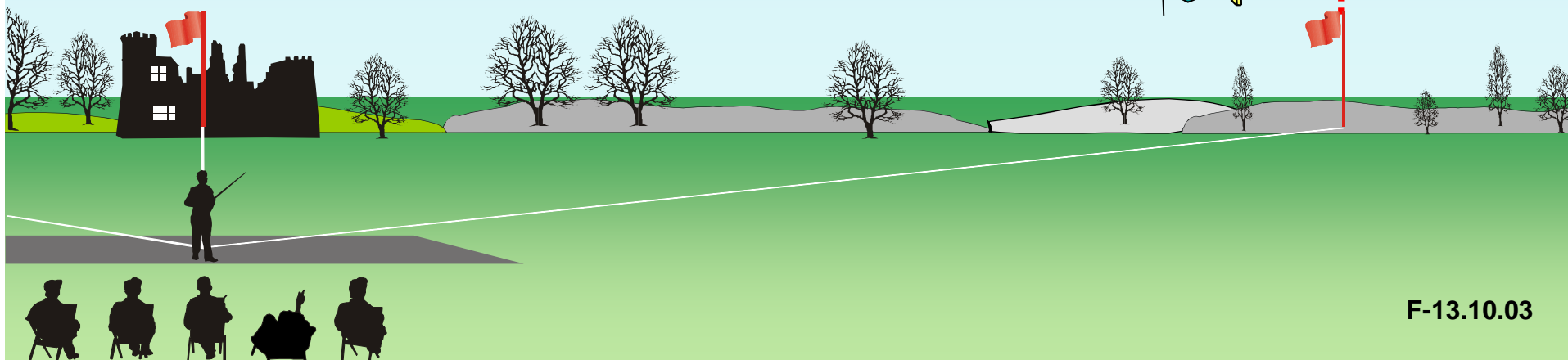
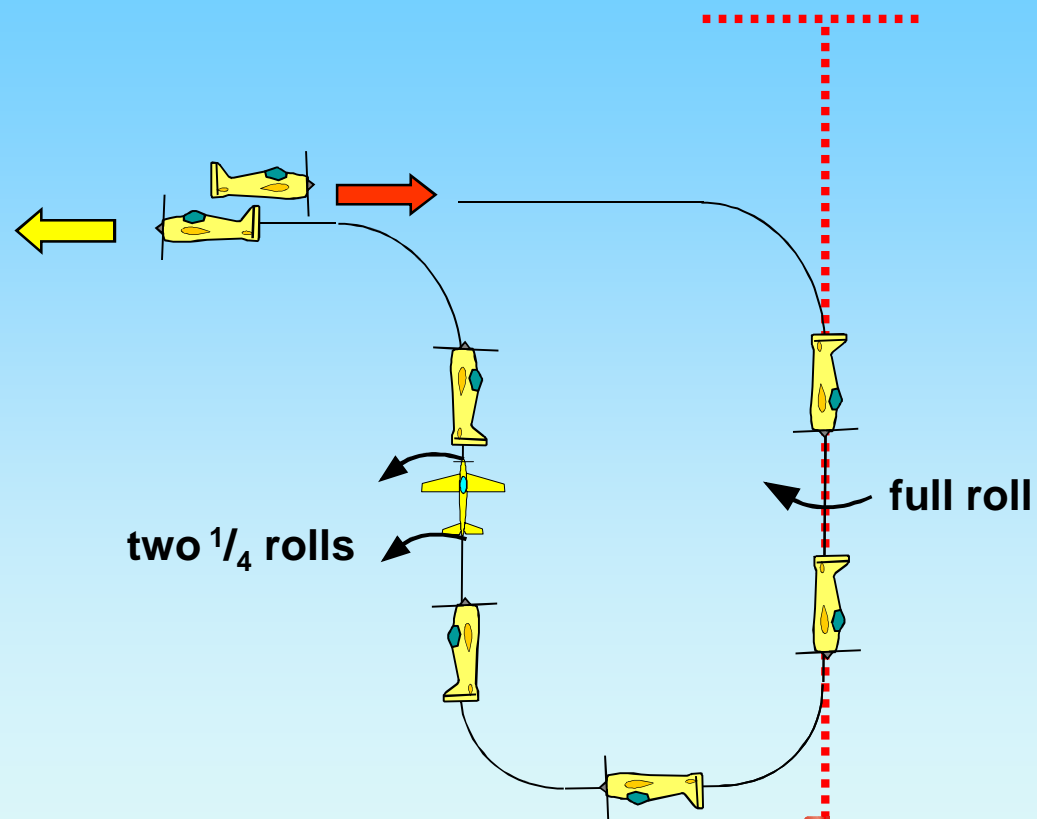
All radii are equal.





## F-13.10: Reverse Top Hat with $\frac{3}{4}$ roll down, $\frac{1}{4}$ roll up (Option: roll down, consecutive two $\frac{1}{4}$ rolls up)

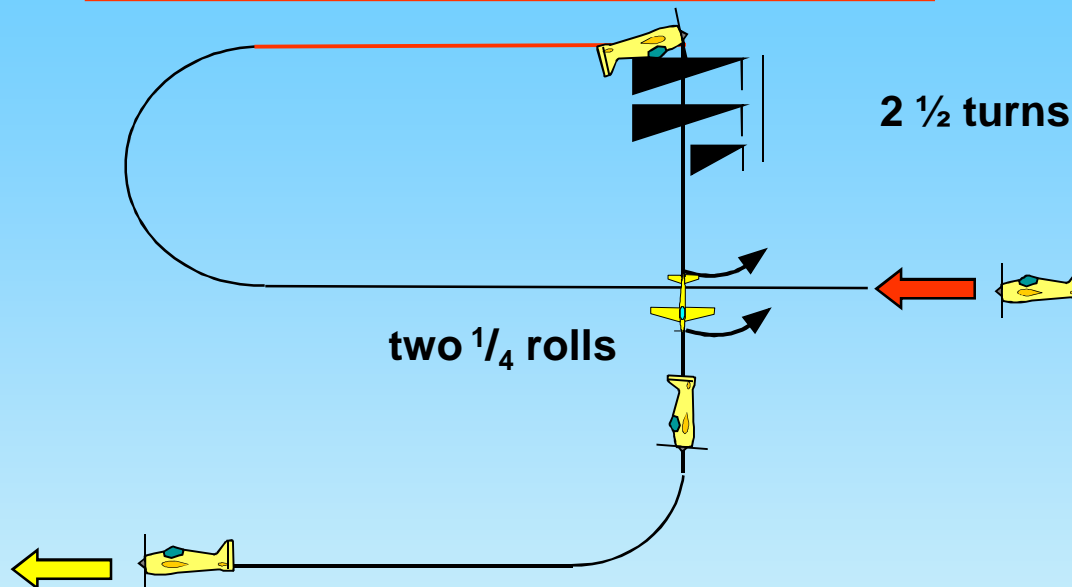
Option

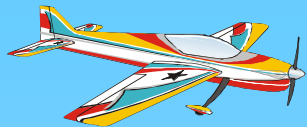




## F-13.11: Clown Dance with $\frac{1}{2}$ loop, inverted spins $2\frac{1}{2}$ turns, consecutive two $\frac{1}{4}$ rolls down

The length of the line is not defined.





## F-13.11: Clown Dance with $\frac{1}{2}$ loop, inverted spins $2\frac{1}{2}$ turns, consecutive two $\frac{1}{4}$ rolls down

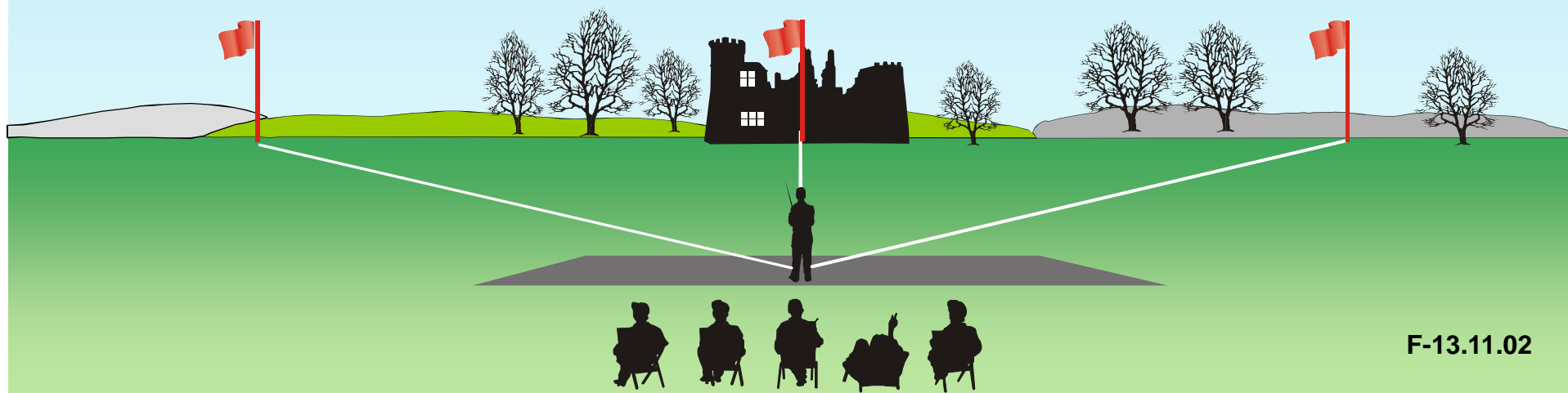
Snap entry - **zero points!**

Forced entry: **downgrade.**

Spiral dive - **0 points!**

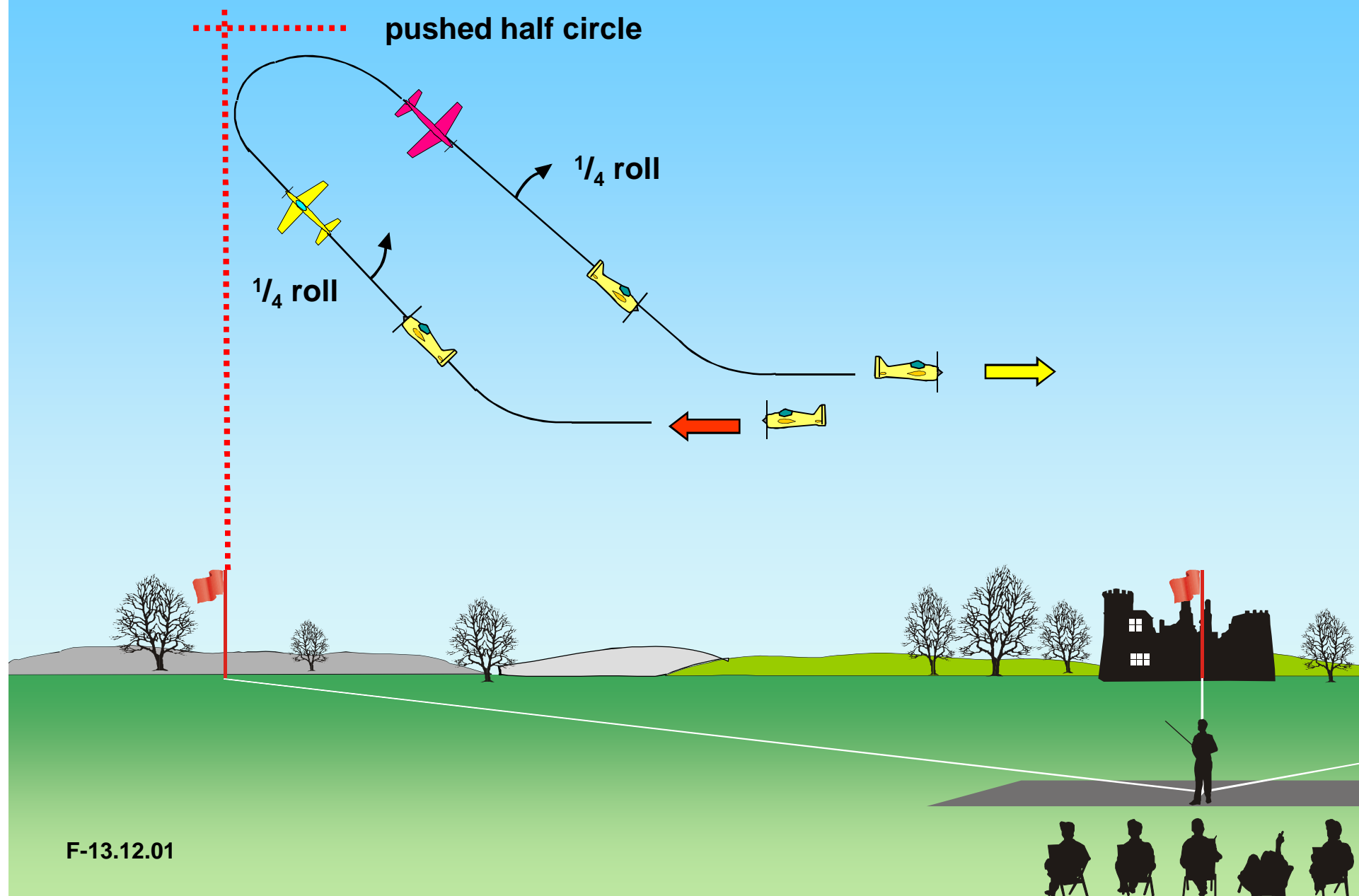
Rolls on middle of the line.

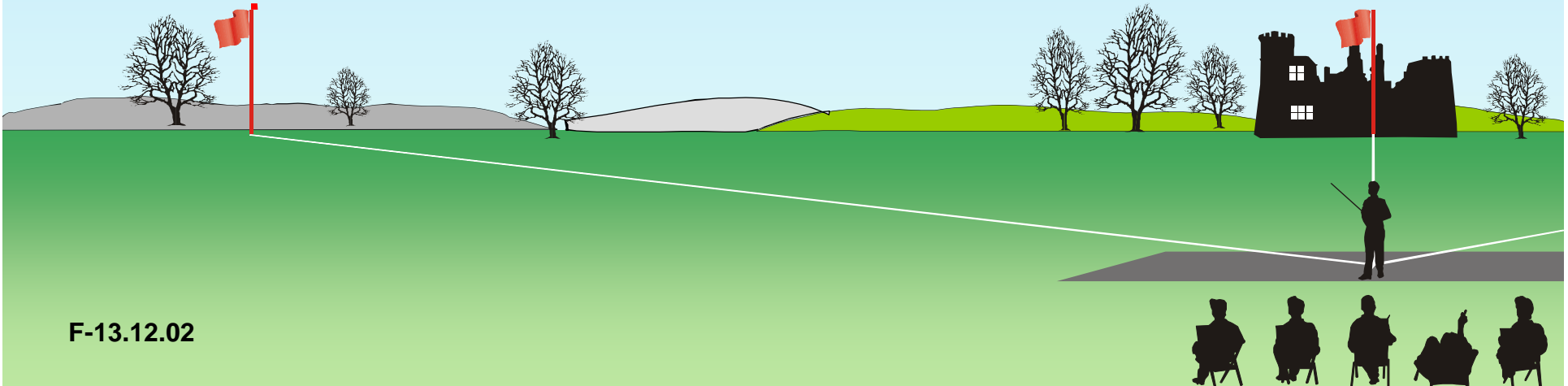
All radii are equal.





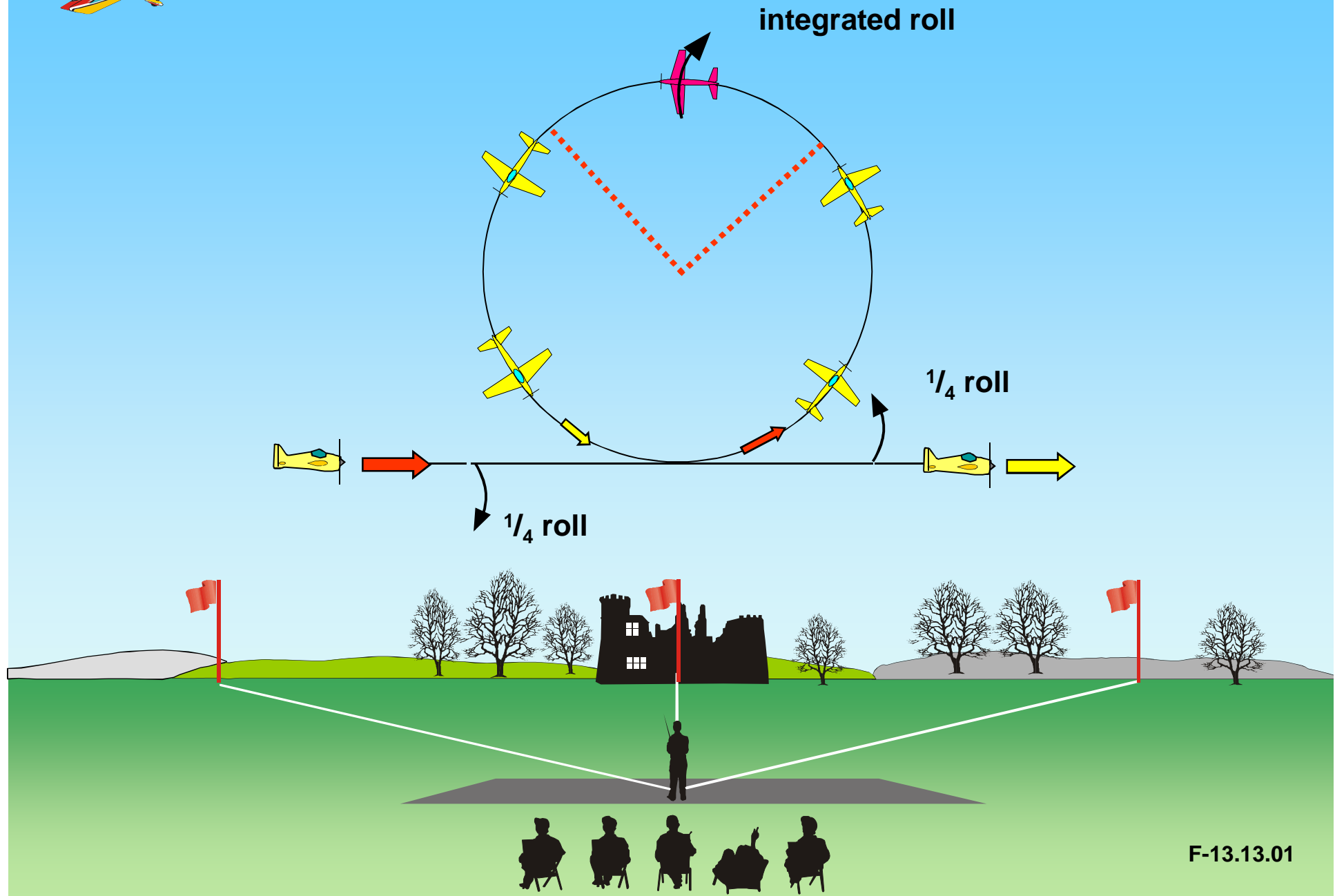
## F-13.12: Fighter Turn with two $\frac{1}{4}$ rolls







## F-13.13: Knife-Edge Loop with integrated roll on top 90°

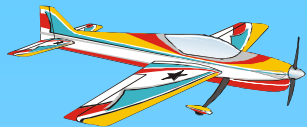




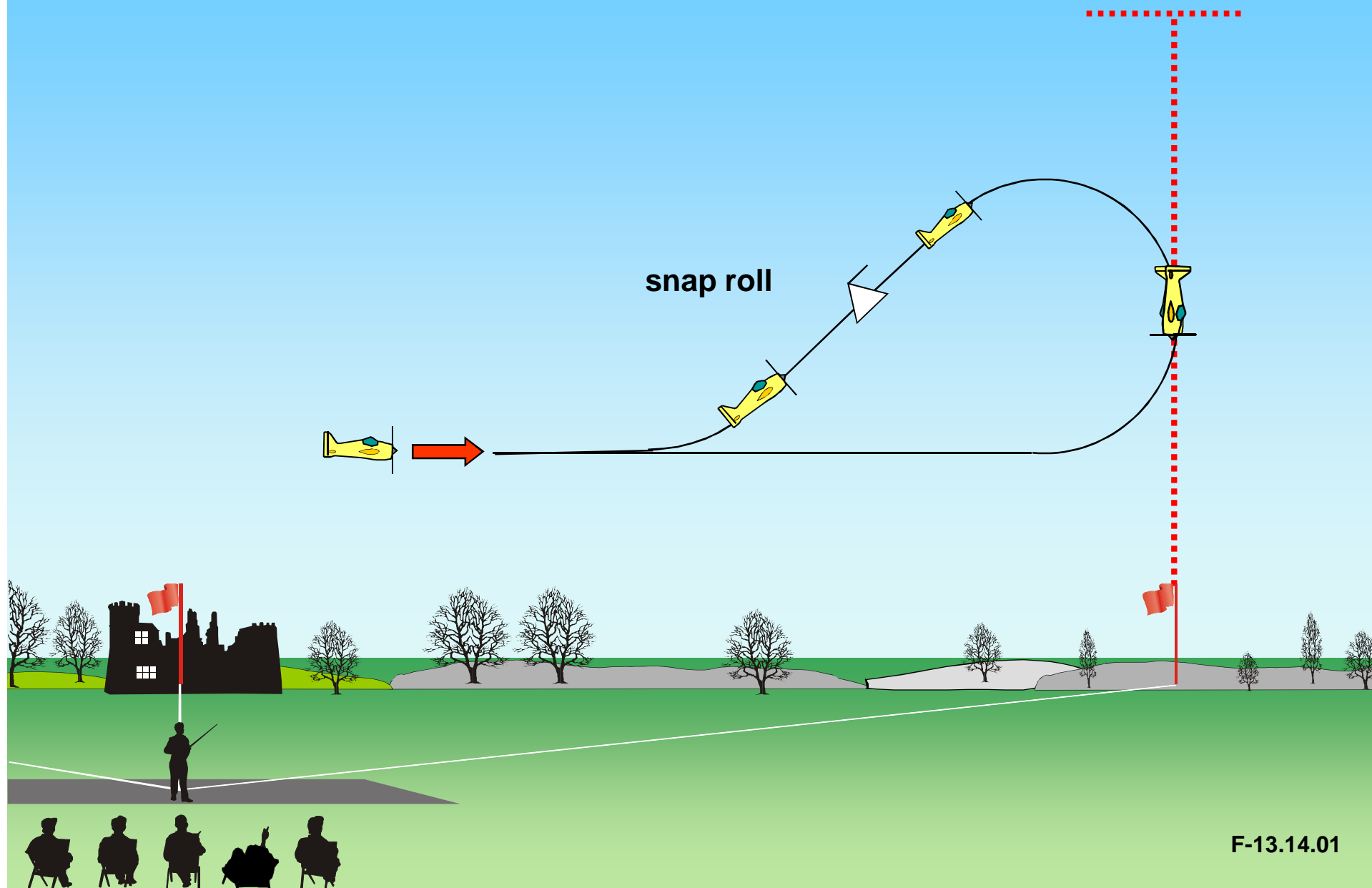
A diagram showing a circular flight path. A large black circle is centered on a light blue background. A pink airplane is at the top of the circle, with a yellow circle around its tail. A red dotted line forms a V-shape, starting from the pink airplane and extending downwards to a point below the circle. The angle between the two arms of the V is labeled  $90^\circ$ . Four yellow airplanes are positioned around the circle: one on the left, one on the right, one at the bottom-left, and one at the bottom-right. Red circles are placed at the top, bottom-left, and bottom-right of the circle. A black arrow points from the bottom-left red circle towards the bottom of the image.

**The roll must be integrated on circular flight path of the loop.**

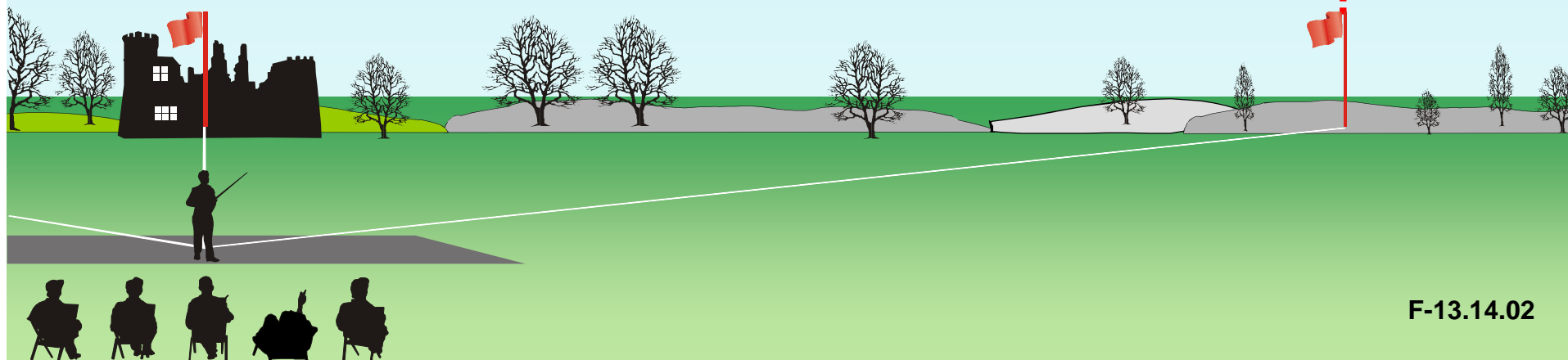


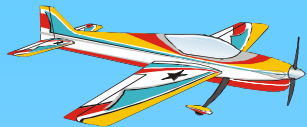


## F-13.14: ½ Reverse Cuban 8 with snap roll up



F-13.14.01

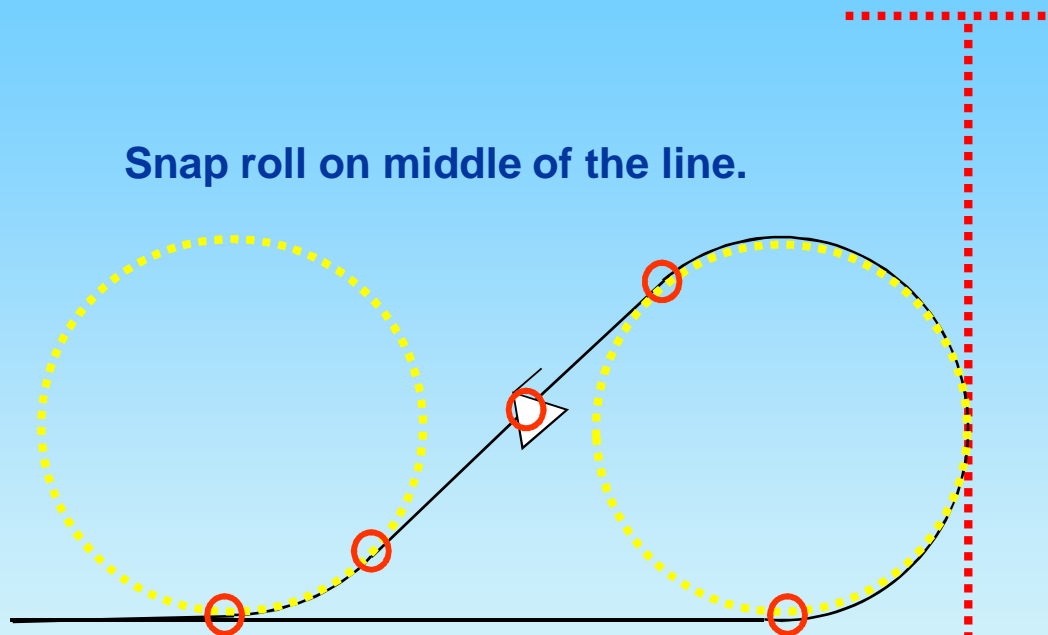




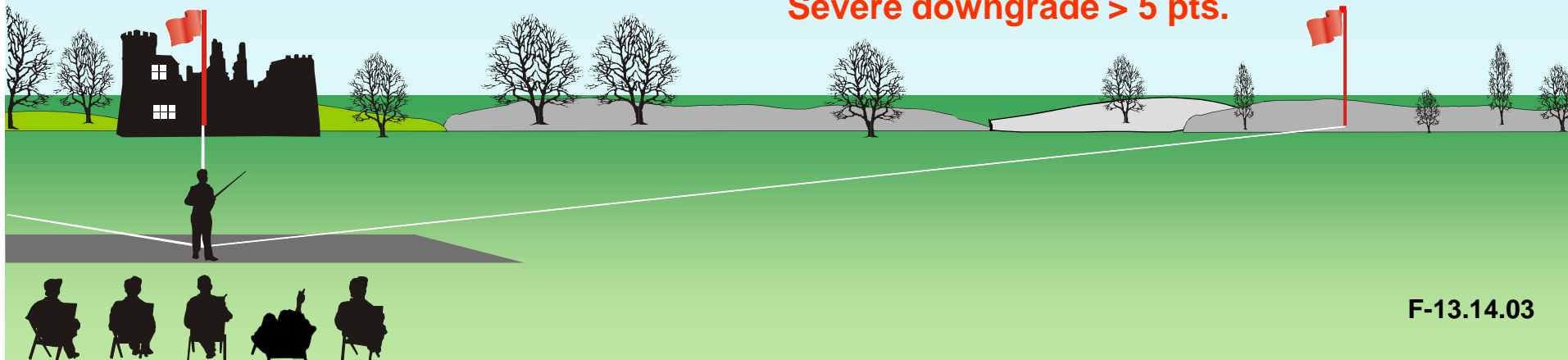
## F-13.14: ½ Reverse Cuban 8 with snap roll up

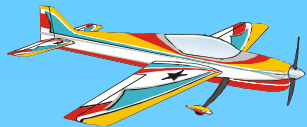
Snap roll on middle of the line.

All radii are equal.

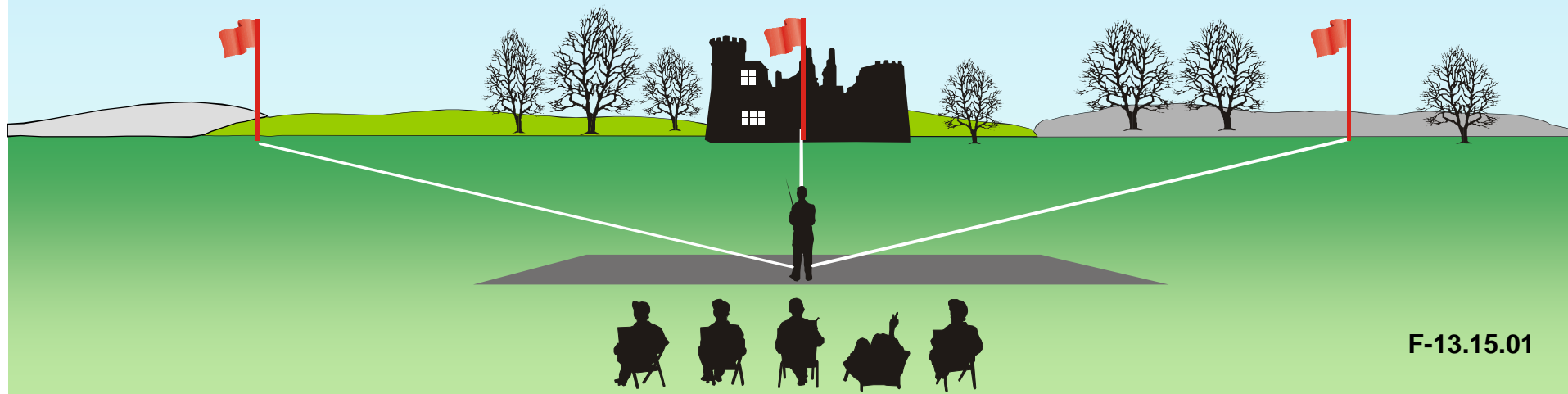
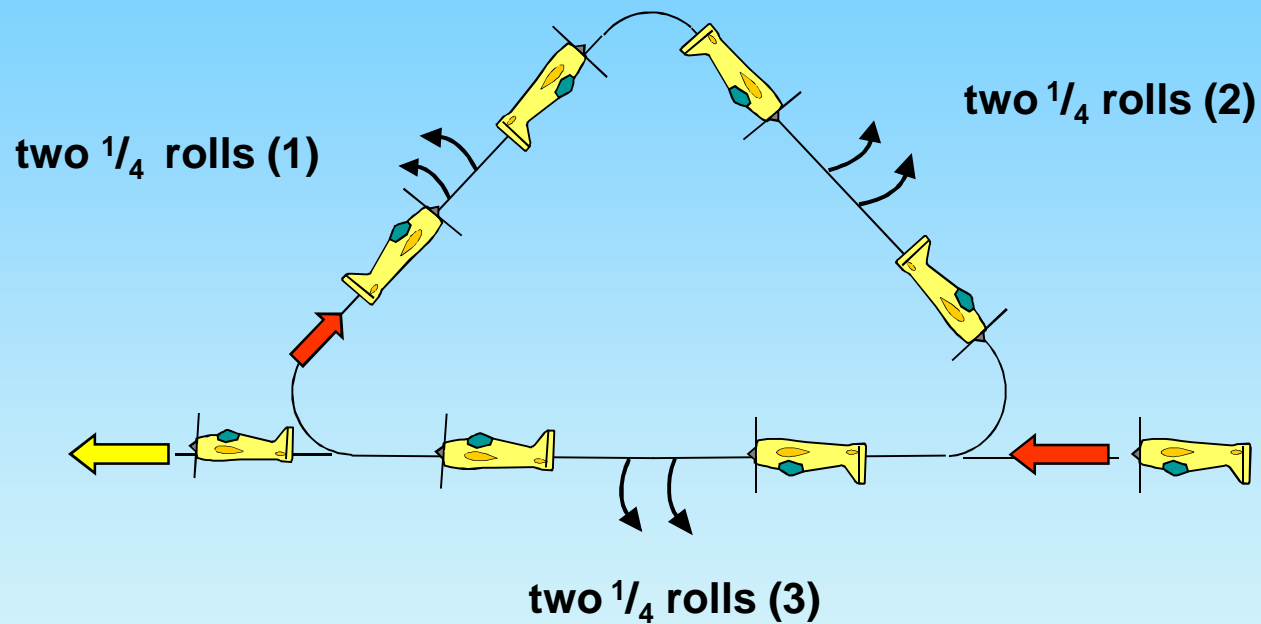


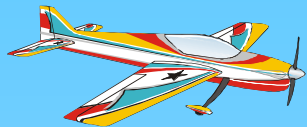
If snap roll = barrel roll or  
aileron roll:  
Severe downgrade > 5 pts.



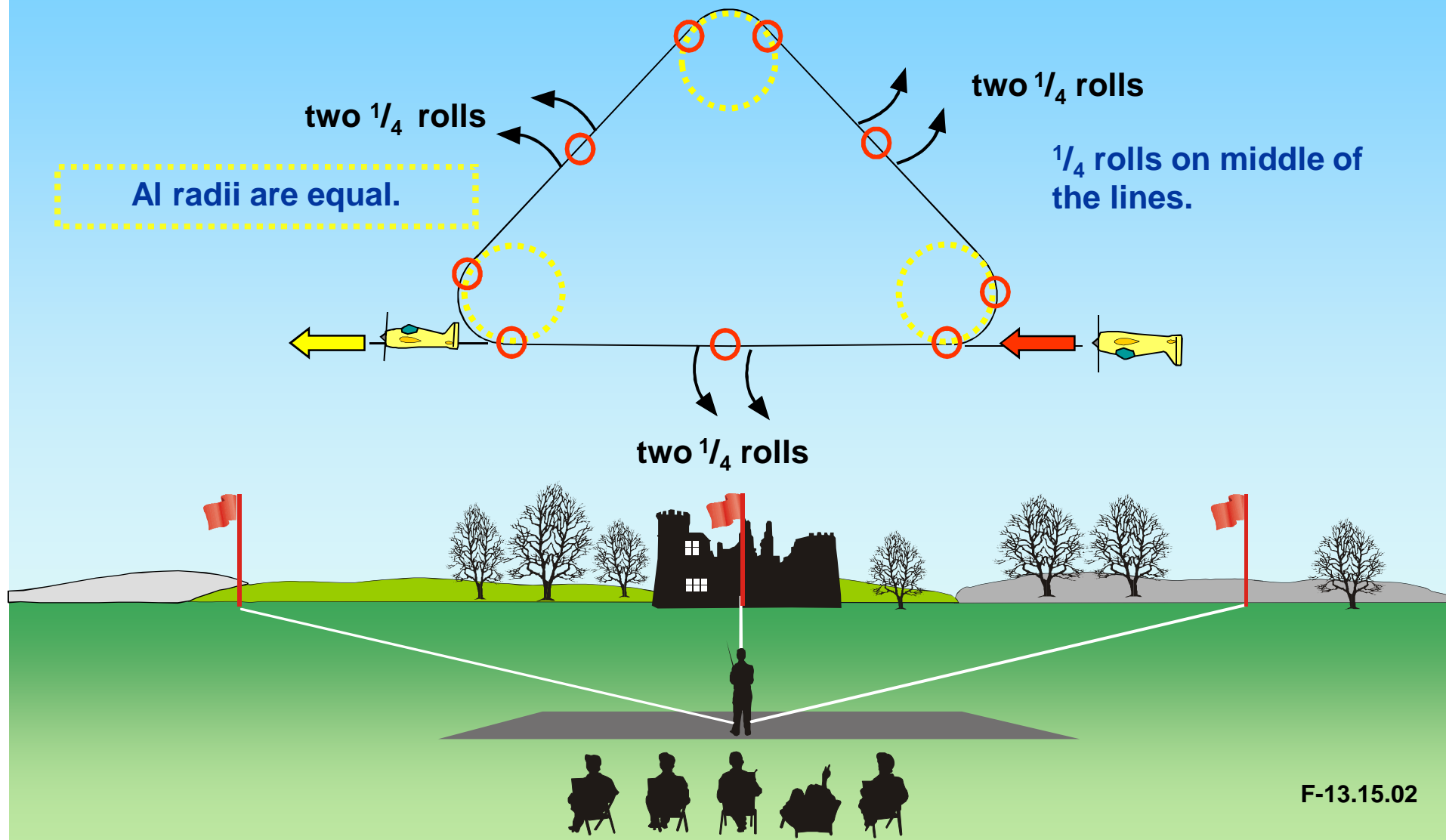


## F-13.15: Triangle with consecutive two $\frac{1}{4}$ rolls in each line



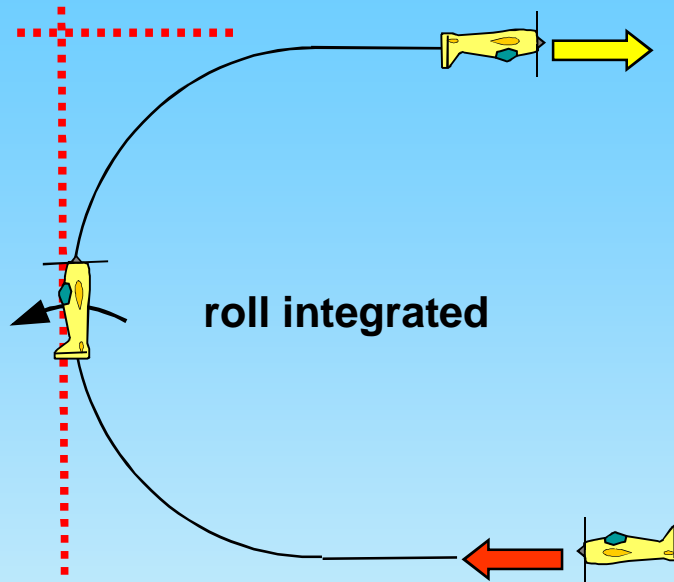


## F-13.15: Triangle with consecutive two $\frac{1}{4}$ rolls in each line





## F-13.16: Loop with roll integrated

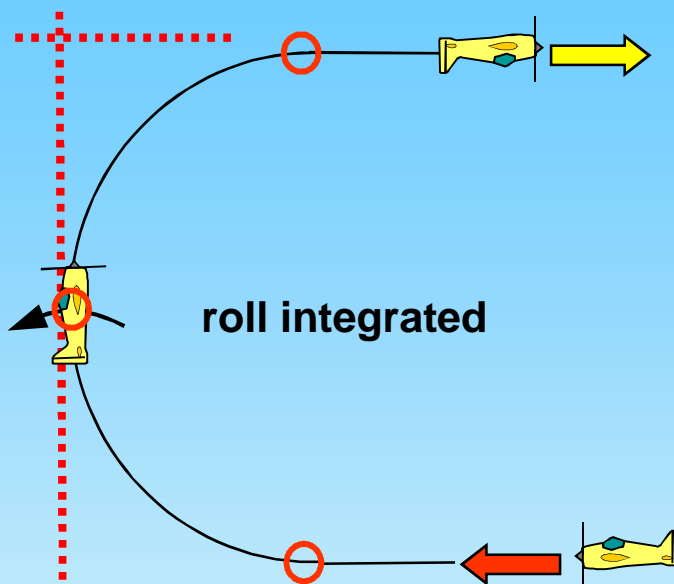


F-13.16.01



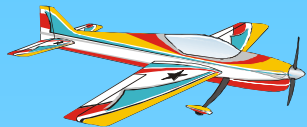


## F-13.16: $\frac{1}{2}$ Loop with roll integrated

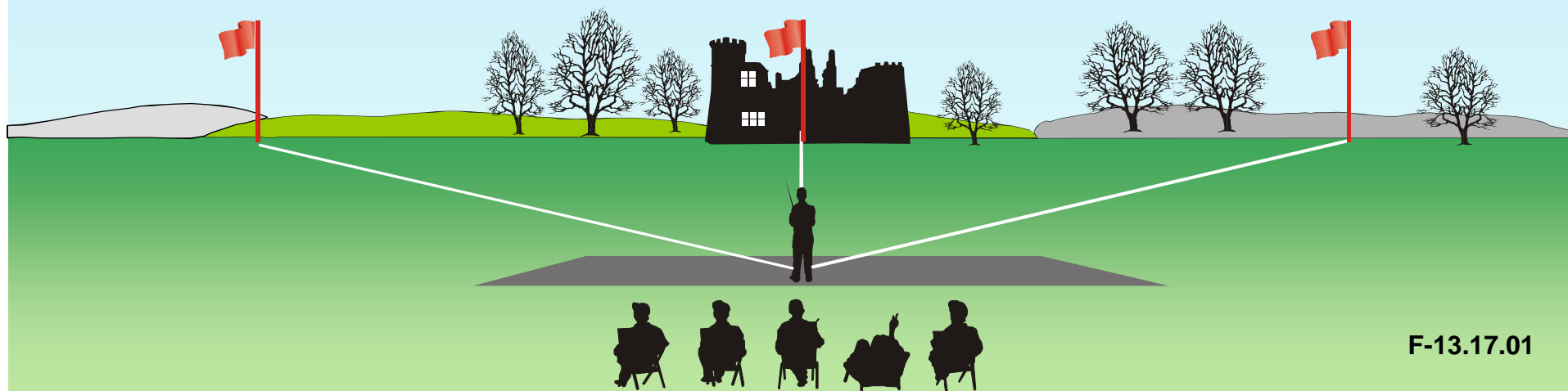
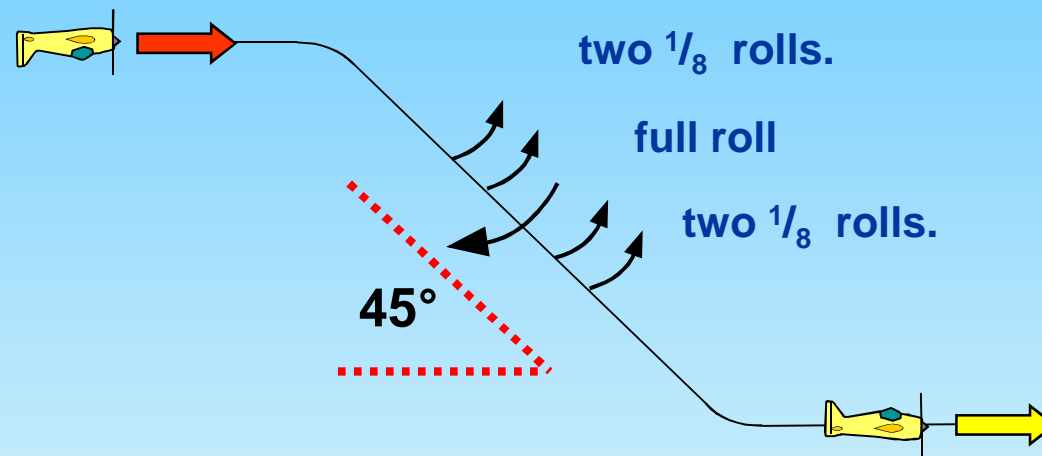


Roll must be integrated  
on circular flight path of  
the  $\frac{1}{2}$  loop.





## F-13.17: 45° Downline with consecutive two $\frac{1}{8}$ rolls, roll, two $\frac{1}{8}$ rolls in opposite directions





**Between rolls and part rolls in opposite direction there must be no line.**

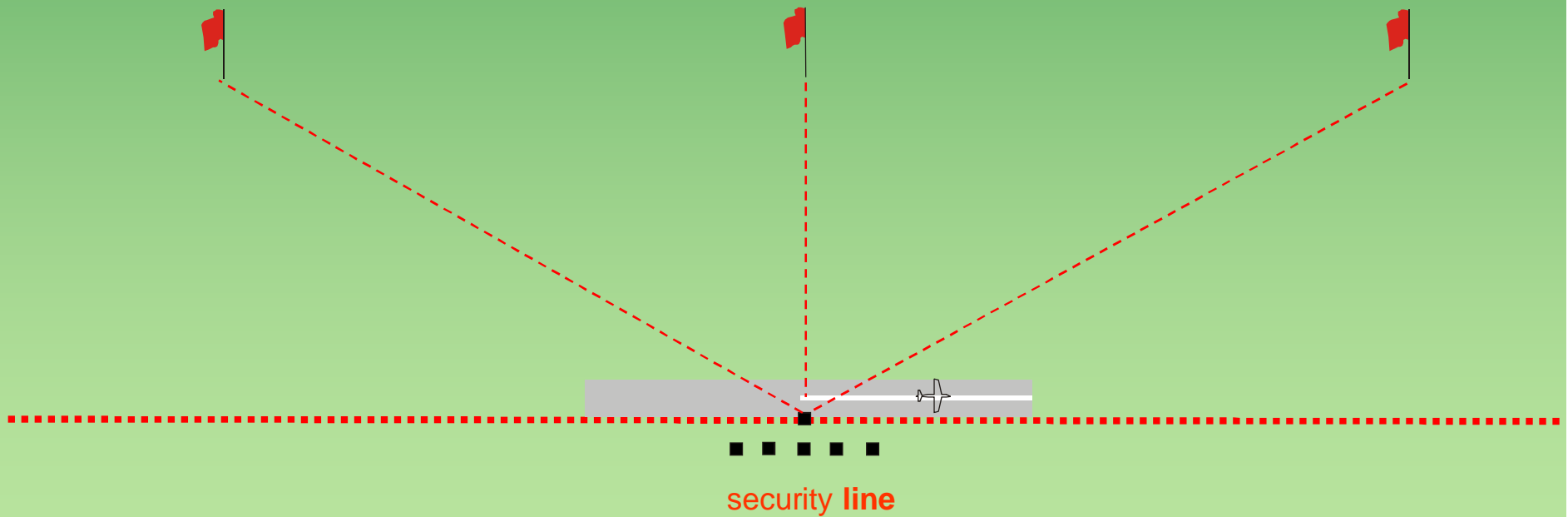




## Landing procedure ( not judged, not scored )

The direction of the landing may be different to the take off.

 **wind**



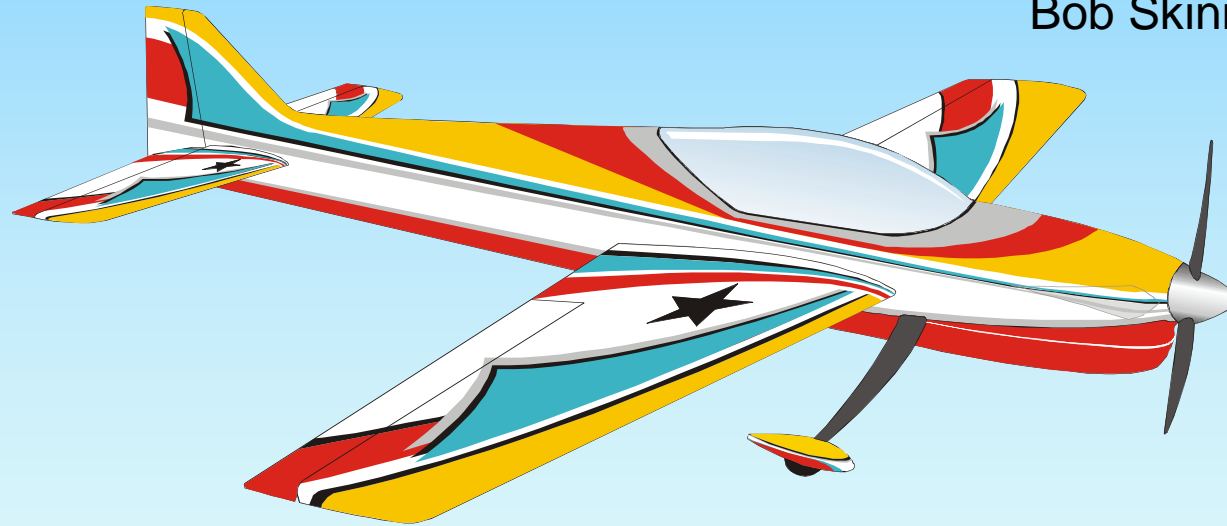
Forget **WHO** is flying  
(friend, rival, countryman, flier from other nation)  
Forget **WHAT** is flying

(2-stroke, 4-stroke, electric, turbine, rubber-power)

**LOOK ONLY AT LINES DESCRIBED IN THE SKY!**

(and the precision, smoothness, positioning, and size)

Bob Skinner 2006



# Thank you!

Peter Uhlig, October 2011