

2017-2018

**Senior Pattern
Association**



*Antique Pattern
Sequences and
Maneuvers
Descriptions*

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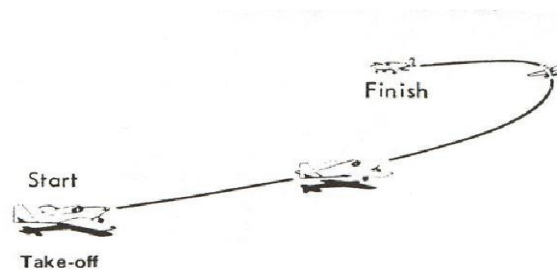
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ANTIQUE NOVICE

MANEUVER	K-FACTOR
1. TAKEOFF (U) (DOWNWIND TRIM PASS)	1
2. STRAIGHT FLIGHT OUT (U)	1
3. PROCEDURE TURN (D)	2
4. STRAIGHT FLIGHT BACK (U)	1
5. 3 INSIDE LOOPS (U)	3
6. 1 HORIZONTAL ROLL (D)	2
7. IMMELMAN TURN (U)	2
8. STALL TURN (U)	2
9. SPLIT S (U)	2
10. TRAFFIC PATTERN APPROACH (U)	2
11. LANDING PERFECTION (U)	2
12. SPOT LANDING (U)	2

Note: No Fly-By's Allowed. Maneuvers flown out of sequence shall be scored zero (0).

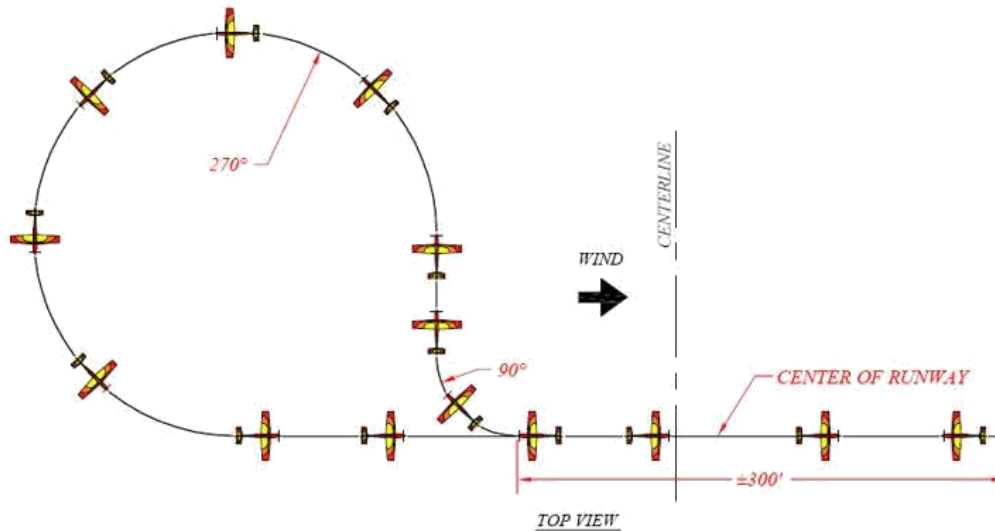


1. TAKEOFF The model must start from a standstill. Model shall accelerate gradually and the takeoff run shall be in a straight line. Plane shall lift off gently and climb at a gradual angle, continuing in its straight flight path until at least six feet off the ground. Pilot shall call "Takeoff (or maneuver) complete" when model has gained at least six feet of altitude and is still climbing in a straight flight path.

Downgrades:

- 1 Pushing or assisting the model when released.
- 2 Change in heading during the takeoff run
- 3 "Jumping" from the ground
- 4 Retouching the ground after becoming airborne
- 5 Too steep a climb angle
- 6 Gallops in pitch, roll or yaw during climb
- 7 Change in heading during climb
- 8 Dropping a wingtip

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2. STRAIGHT FLIGHT OUT The model must be brought exactly over the center of runway and/or landing circle and flown in an absolutely straight path into the wind for a distance of approximately 300 feet before starting the Procedure Turn (Distance does not have to be accurate, however, judges may specify start of turn if they wish).

Downgrades:

1. Does not fly over center of runway and/or landing circle
2. Plane deviates left or right
3. Does not hold constant altitude
4. Turns before permission is given by judge

3. PROCEDURE TURN After the straight flight, the model must turn exactly 90 degrees to the left or right, whichever will take the plane away from the spectator line (direction to be specified by the Contest Director) then exactly 270 degrees to the right (or left) and cross over the point where the first turn commenced.

Downgrades:

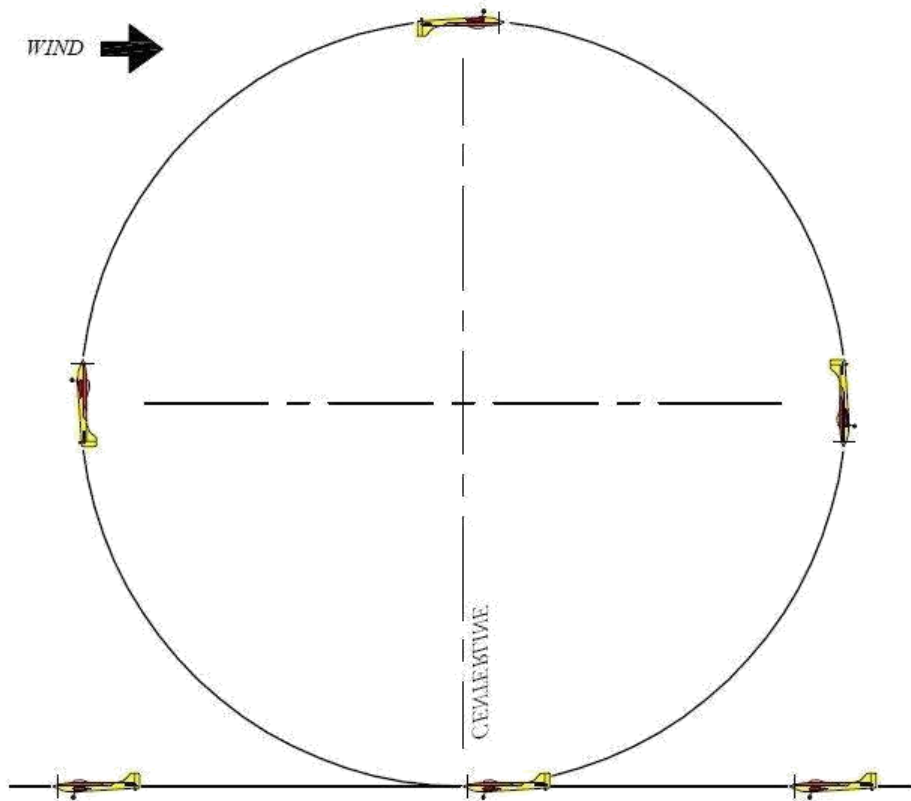
1. Left turn not 90 degrees
2. Right turn not 270 degrees
3. Change in altitude during turn
4. Turns not smooth and circular
5. Does not head back over exact outgoing path

4. STRAIGHT FLIGHT BACK The model should fly back toward the circle along the same line as the outgoing path and pass exactly over the circle.

Downgrades:

1. Turns or wiggles during straight flight
2. Change in altitude
3. Gallops in pitch, yaw or roll
4. Flight not along original path
5. Does not pass over circle

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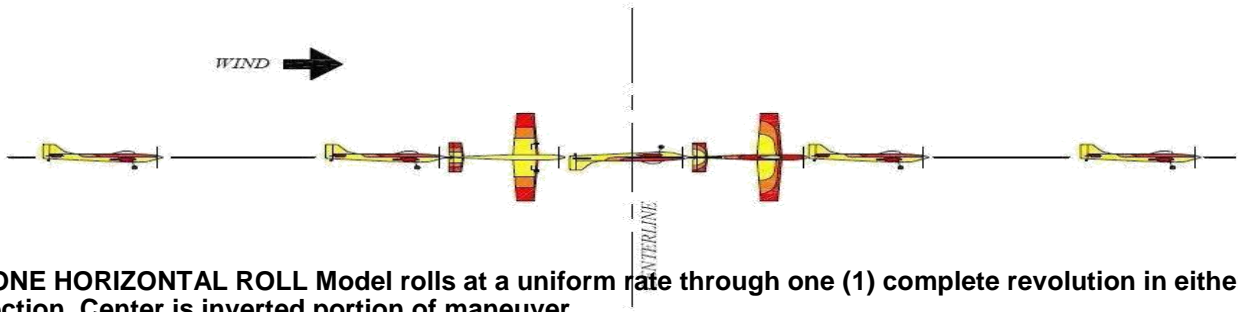


5. THREE INSIDE LOOPS The model starts the maneuver flying straight and level, then pulls up into a smooth, round loop, followed by a second loop, and a third loop in exactly the same path with a straight and level recovery finish.

Downgrades:

- 1. Loops not round and smooth**
- 2. Loops not superimposed**
- 3. Wings not level during loops**
- 4. Changes in heading during loops**
- 5. Exit not same heading and altitude as entry**

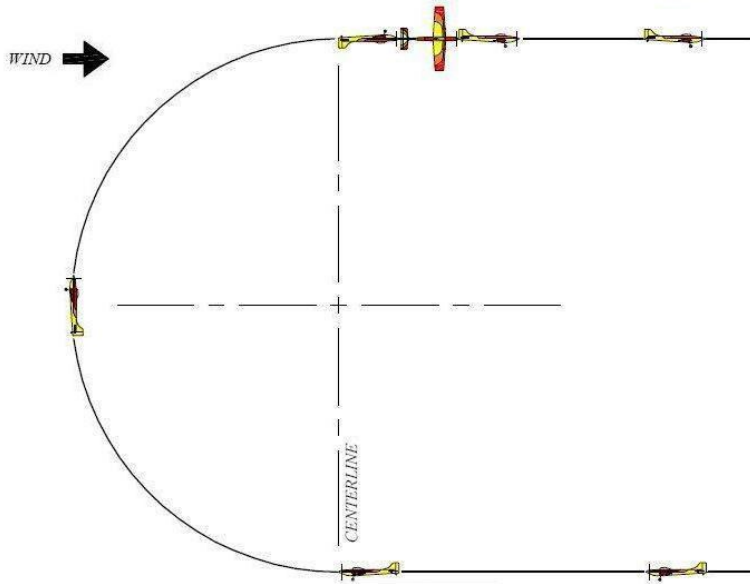
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6. ONE HORIZONTAL ROLL Model rolls at a uniform rate through one (1) complete revolution in either direction. Center is inverted portion of maneuver.

Downgrades:

1. Changes in heading during roll
2. Changes in altitude during roll
3. Roll rate not constant
4. Model does not perform exactly one roll



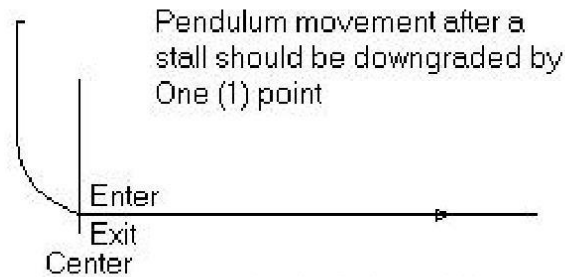
7. IMMELMAN TURN The model starts the Immelmann flying straight and level, pulls up into half loop followed by a half roll and finishes flying straight and level exactly 180 degrees from the heading at entry.

Downgrades:

1. Model not level at start
2. Model deviates left or right during half loop
3. Half loop not completed exactly above point of commencement of half loop
4. Half roll does not commence immediately after half loop
5. Plane deviates from a straight line during roll
6. Model does not finish in level flight
7. Model heading does not finish exactly opposite the direction of entry
8. Half loop not round

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Stall Turn

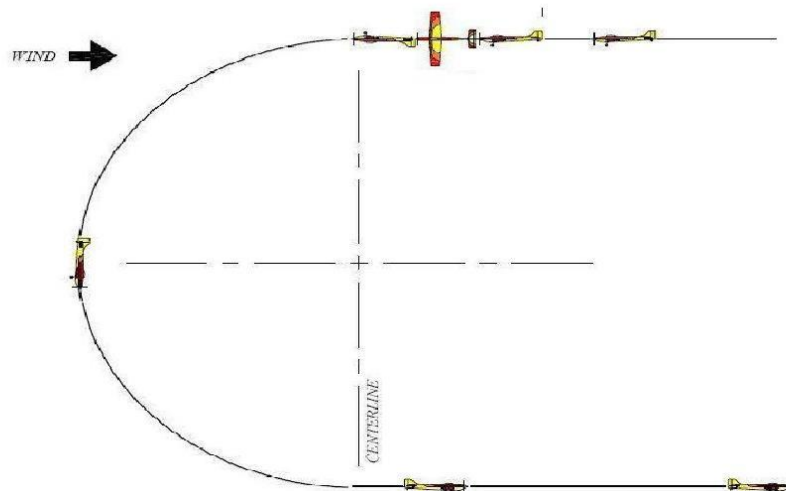


Drawing by Lamar Blair

8. STALL TURN The model starts from straight and level flight and noses up to a vertical position, yaws through 180 degrees, then dives along a parallel path and finishes the maneuver with the plane level at the same altitude as the entry.

Downgrades:

1. Model not level at start
2. Does not become exactly vertical
3. Turns left or right during pull up
4. Does not yaw tightly through 180 degrees
5. Return path more than one and one-half wing-spans from entry path
6. Return path not parallel to entry path
7. Maneuver not finished at same altitude as entry
8. Plane not level at finish of maneuver
9. Model does not fly straight and level to complete maneuver

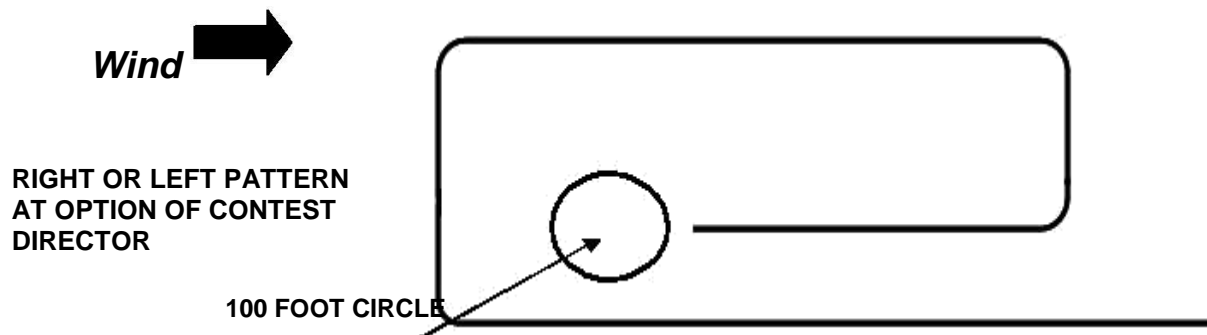


9. SPLIT-S Half roll to inverted with immediate half loop back to upright flight. Model must lose altitude and make 180-degree change in heading.

Downgrades:

1. Straight line before pulling to half loop
2. Half loop not round
3. Exit not straight and level
4. Exit heading not 180 degrees from entry

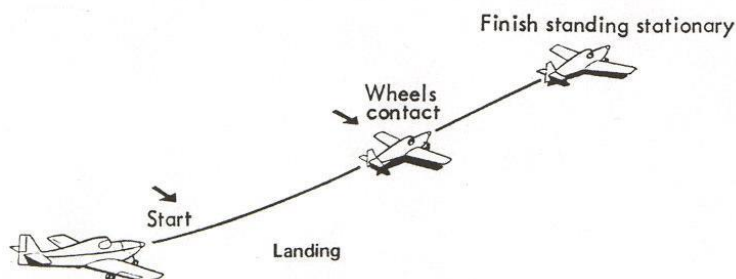
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10. TRAFFIC PATTERN APPROACH The rectangular approach is commenced with the model flying into the wind above the transmitter, a turn of 90 degrees, a cross-wind leg, a second turn of 90 degrees, a downwind leg, a third turnoff 90 degrees, a cross-wind leg, a fourth turn of 90 degrees, and straight flight toward the point of touchdown. The maneuver is finished just prior to the point of touchdown (six feet altitude). *Note:*

The contest director will announce whether the turns should be left or right. The rectangular approach may be downgraded because:

1. Legs of rectangle are not straight and perpendicular to each other.
2. The 90 degree turns are not smooth, precise or sharp.
3. Gallops in pitch, yaw, or roll during approach.
4. Attempts to break out of pattern to go around again. Zero points!
5. Model climbs during approach.

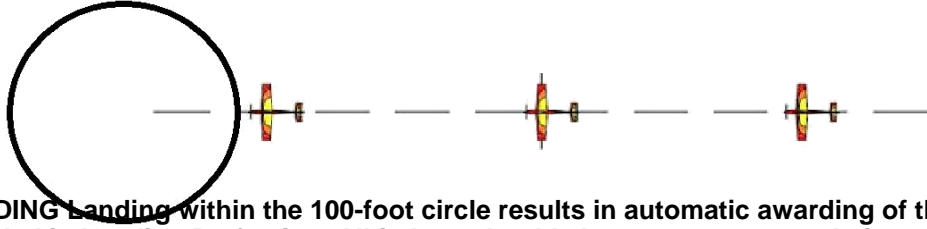


11. LANDING PERFECTION When the contestant has his plane lined up and on heading for the final approach, and not less than six (6) feet off the ground, he must announce the start of the Landing maneuver. From this point on, the Landing will be judged.

Downgrades:

1. Approach during landing too steep
2. Gallops in pitch, yaw or roll during approach
3. Model impacts or thuds onto ground due to lack of flare
4. Model bounces on landing
5. Model turns left or right while rolling to a stop. Turns unnecessarily to avoid running off the runway may be excused if wind direction and spot location are adverse. However, this leniency applies only if the model lands on the runway and should not be employed in cases where the flyer accidentally lands near the edge of the runway.
6. All landings judged only for 50 feet after touchdown.

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12. SPOT LANDING Landing within the 100-foot circle results in automatic awarding of the same number of points awarded in Landing Perfection. All judges should show agreement on their score sheets (Not on the amount of score, just on whether or not a Spot Landing was accomplished) and in the event of a disagreement, a majority vote of the judges should dictate.

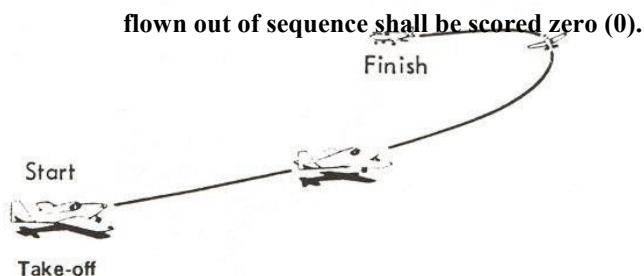
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ANTIQUÉ SPORTSMAN

MANEUVERS	K-FACTOR
1. PROTO TAXI AND TAKEOFF (U) (FLY BY FOR TRIM)	2
2. TOUCH AND GO (U)	3
3. 3 HORIZONTAL ROLLS (D)	3
4. 3 INSIDE LOOPS (U)	3
5. FOUR POINT ROLL (D)	4
6. DOUBLE IMMELMAN (U)	3
7. SLOW ROLL (D)	3
8. TAIL SLIDE (U)	3
9. CUBAN EIGHT (D)	4
10. TRAFFIC PATTERN APPROACH (U)	2
11. LANDING PERFECTION (U)	2
12. SPOT LANDING	2

Note: No Allowed.

Fly-Bys
Maneuvers

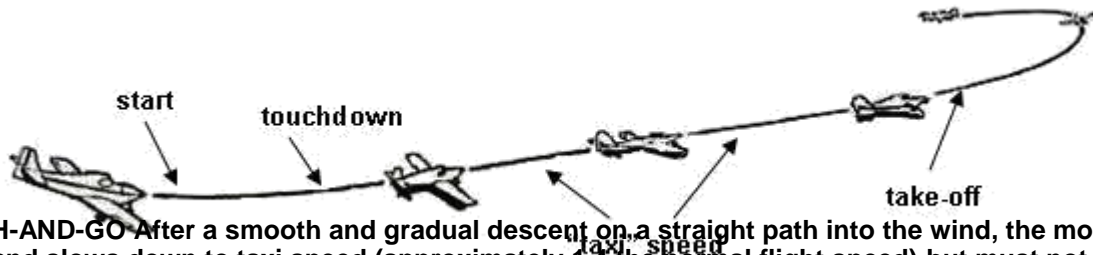


1. TAKEOFF The model must start from a standstill. Model shall accelerate gradually and the takeoff run shall be in a straight line. Plane shall lift off gently and climb at a gradual angle, continuing in its straight flight path until at least six feet off the ground. Pilot shall call “Takeoff (or maneuver) complete” when model has gained at least six feet of altitude and is still climbing in a straight flight path.

Downgrades:

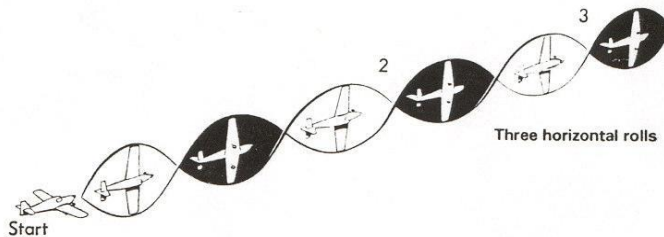
1. Pushing or assisting the model when released.
2. Change in heading during the takeoff run
3. “Jumping” from the ground
4. Retouching the ground after becoming airborne
5. Too steep a climb angle
6. Gallops in pitch, roll or yaw during climb
7. Change in heading during climb
8. Dropping a wingtip

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2. **TOUCH-AND-GO** After a smooth and gradual descent on a straight path into the wind, the model lands and slows down to taxi speed (approximately 1.4 the normal flight speed) but must not stop. Following this the model must accelerate and take off on the same heading as the entry. The maneuver may be downgraded for the following:

1. Approach during landing is too steep.
2. Gallops in pitch, yaw or roll during approach.
3. Model impacts or thuds onto the ground due to lack of flare-out.
4. Model bounces on landing
5. Model deviates left or right while rolling on ground
6. Model fails to slow down to distinct taxi or “unairborne” condition.
7. Model stops on ground.
8. Changes in heading during take-off run.
9. “Jumping from ground.
10. Retouching the ground after becoming airborne.
11. Too steep a climb angle.
12. Gallops in pitch, roll or yaw during climb.
13. Changes in heading during climb.
14. Dropping a wingtip.
15. Model is too far away to be seen clearly at any time during the maneuver.

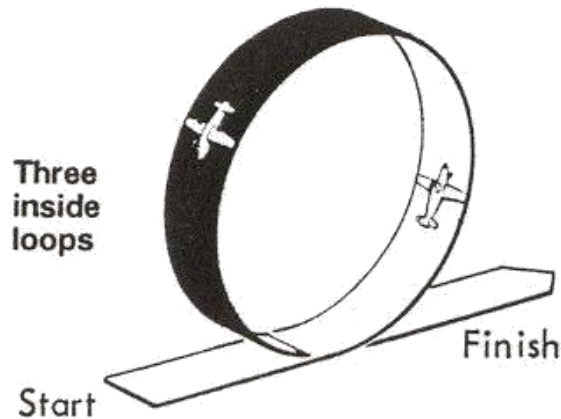


3. **THREE HORIZONTAL ROLLS** The model enters from a straight and level flight and rolls on its axis to the right or left until three complete rolls are performed. The recovery must be on the same heading and altitude as the entry.

Downgrades:

1. Model not level at the start of the rolls
2. The path traced out by the model is not a straight line. i.e. the plane does barrel rolls or suffers changes in heading
3. Roll rate not uniform throughout three rolls
4. Pause between rolls
5. Sudden changes in heading between rolls
6. The axis of the fuselage veers out at an angle to the flight path
7. Plane changes altitude during rolls
8. Plane does not do exactly three rolls
9. Plane is not level at end of rolls
10. Plane fails to do level flight at end of rolls

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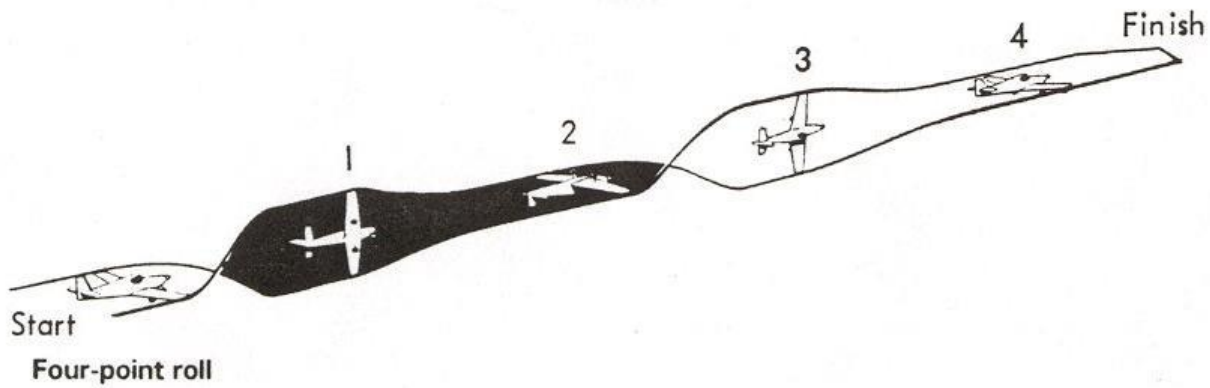


4. THREE INSIDE LOOPS The model starts the Loops maneuver flying straight and level, then pulls up into a smooth, round loop, followed by a second loop, and a third loop in exactly the same path with a straight and level recovery finish. The maneuver may be downgraded because:

- A. *During the first loop:*
 1. Entry not level.
 2. Loop not round and smooth
 3. Loop deviates left or right.
 4. Finish of loop not at same altitude as entry.
 5. Model pauses before start of second loop.
- B. *During second loop:*
 1. Not on same heading as first loop.
 2. Not the same circular path as first loop.
 3. Loop deviates left or right.
 4. Finish of loop not at same altitude as entry.
 5. Model pauses before start of third loop.
- C. *During third loop:*
 1. Not on same heading as first loop.
 2. Not the same circular path as first loop.
 3. Loop deviates left or right.
 4. Recovery not at same altitude as entry.
 5. Recovery not on same heading as entry.
 6. Recovery not level

Note: Loops must appear round and super-imposed to the ground-observer in the presence of the wind.

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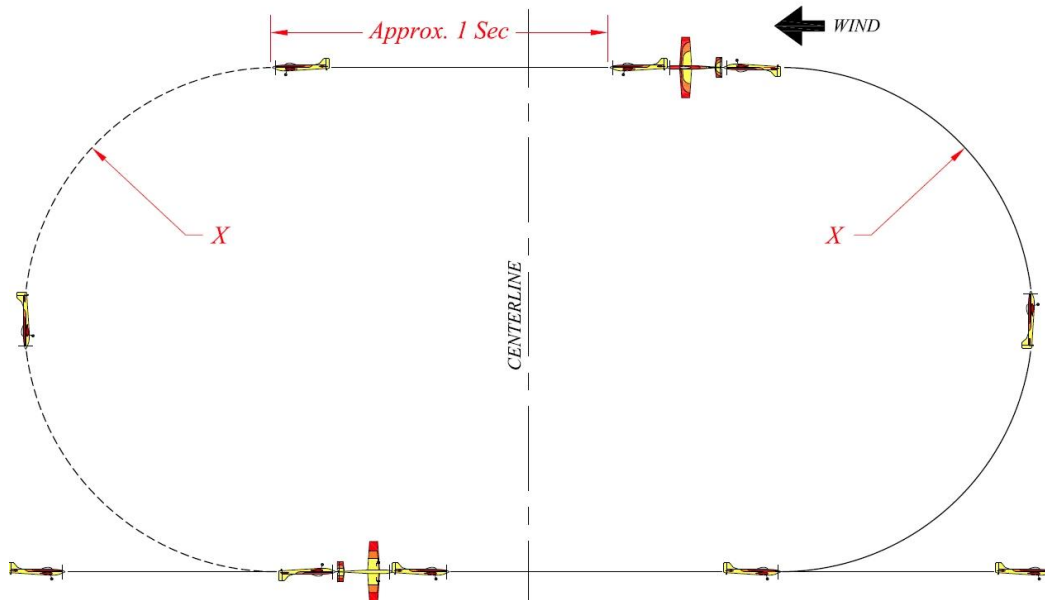


5. FOUR POINT ROLL From a straight and level flight path, the model is rolled 90 degrees and holds this attitude, with the wings in a vertical position, long enough for it to be clearly defined. The model is then rolled another 90 degrees, in the same direction of rotation and holds the inverted attitude long enough for it to be clearly defined. This is followed by another 90 degree roll in the same direction, bringing the ship to another knife edge position. Following a similar pause in the roll, the ship finally rolls another 90 degrees to upright and level flight.

Downgrades:

1. Model not level at start of roll
2. The path traced by the model is not a straight line. (The plane does barrel roll segments or suffers changes in heading.)
3. Sudden correction in heading between roll segments.
4. Plane changes altitude during roll
5. Plane does not pause long enough between each segment of roll
6. Wings are not exactly vertical at 1/4 and 3/4 positions
7. Plane fails to do level flight at end of roll.

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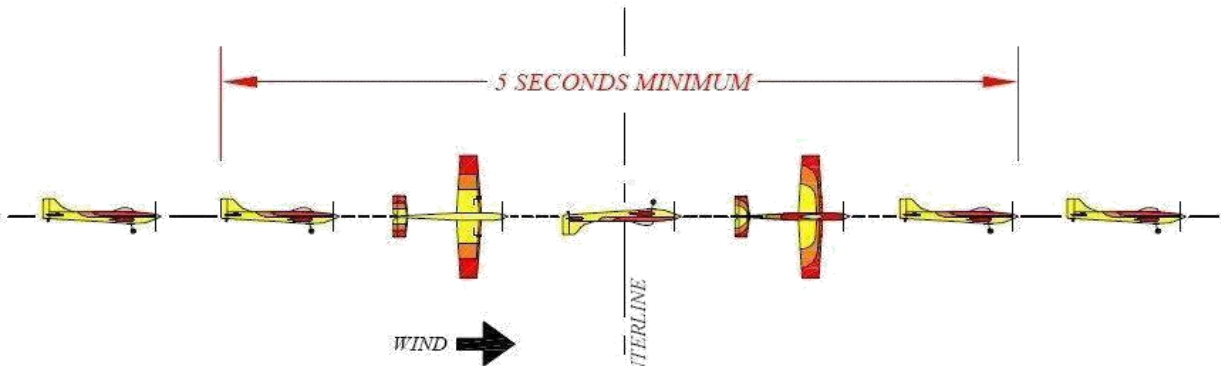


6. **DOUBLE IMMELMAN** Model commences in straight and level flight, pulls into half an inside loop followed by a half roll to upright, does approximately 1 second of level flight followed by 1/2 outside loop, then followed by a half roll to upright, recovering in straight and level flight on the same heading and at the same altitude as the entry.

Downgrades:

1. Entry not straight and level
2. First half loop not round
3. Model deviates left or right during half loop
4. Half loop not completed exactly above starting point
5. Half roll does not start immediately after half loop
6. Roll is not on a straight line and 180 degrees from entry heading
7. Plane goes immediately into outside loop upon completion of half roll
8. Plane holds straight flight too long before going to outside loop.
9. Half outside loop not round or same size as first half loop
10. Model deviates left or right during half loop
11. Half loop not completed exactly below starting point
12. Final half roll does not start immediately after half outside loop
13. Final half roll longer or shorter than first half roll
14. Model does not finish on same heading and at same altitude as entry
15. Plane fails to do straight and level flight at end of maneuver

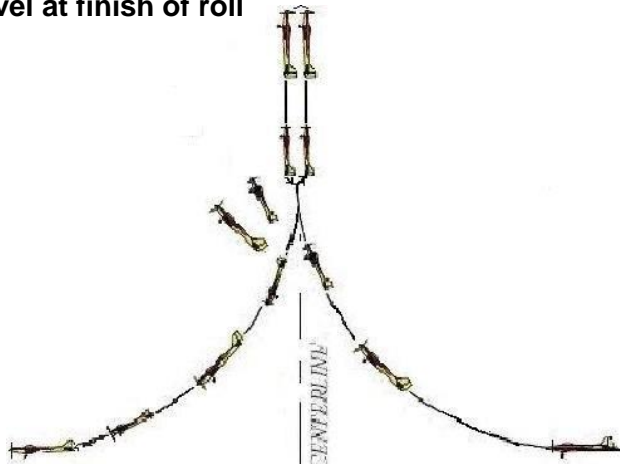
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7. **SLOW ROLL** Model commences from straight and level flight and then rolls slowly at a uniform rate through one complete rotation. The approximate time of the roll to be five seconds. Note: No downgrade for slight overtime.

Downgrades:

1. Model not level at entry
2. Plane deviates from a straight line during roll
3. Roll rate not uniform
4. Plane does not roll through exactly one revolution
5. Plane changes altitude during roll
6. Plane changes heading
7. Roll rate is too rapid resulting in less than five seconds elapse during roll
8. Plane is not level at finish of roll



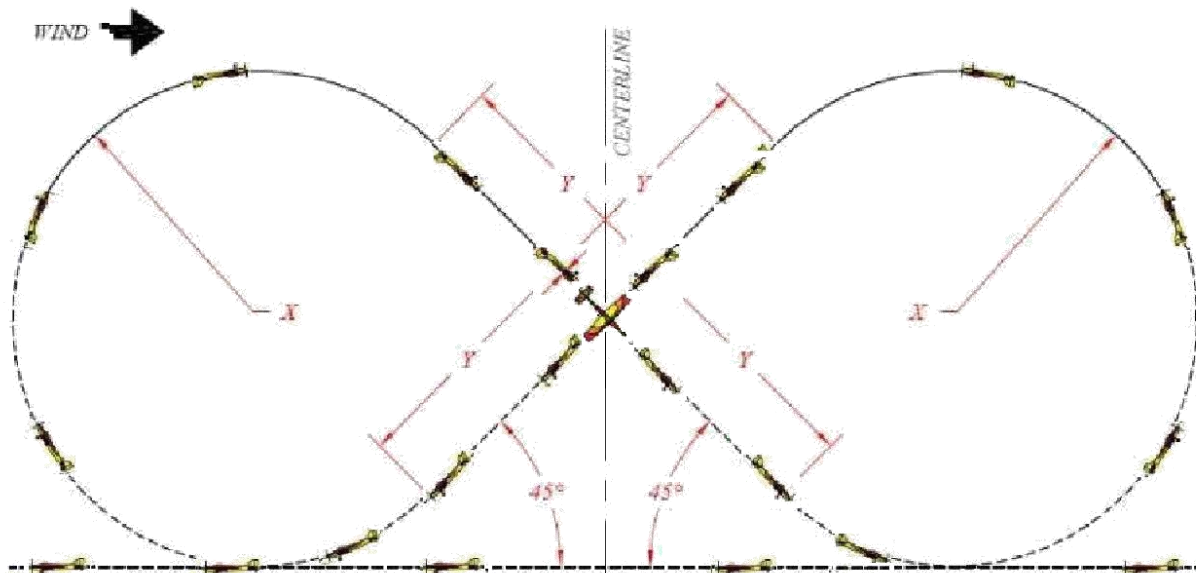
8. **TAIL SLIDE** The Tail Slide commences with straight and level flight, pulls up to a vertical position, slides downward tail first for two plane-lengths, recovers in a right-side-up position and finishes in straight and level flight at the same altitude as the entry.

Downgrades:

1. Entry not level.
2. Pull-up not exactly vertical.
3. Does not fall tail first.
4. Yaws left or right.
5. Does not tail slide exactly two plane lengths.
6. Falls into inverted position. Zero points.
7. Does not finish with level flight for 50 feet.
8. Does not finish on same heading as entry.
9. Does not finish at same altitude as entry.

Note: If the model does not slide backwards a recognizable amount, the score should be zero.

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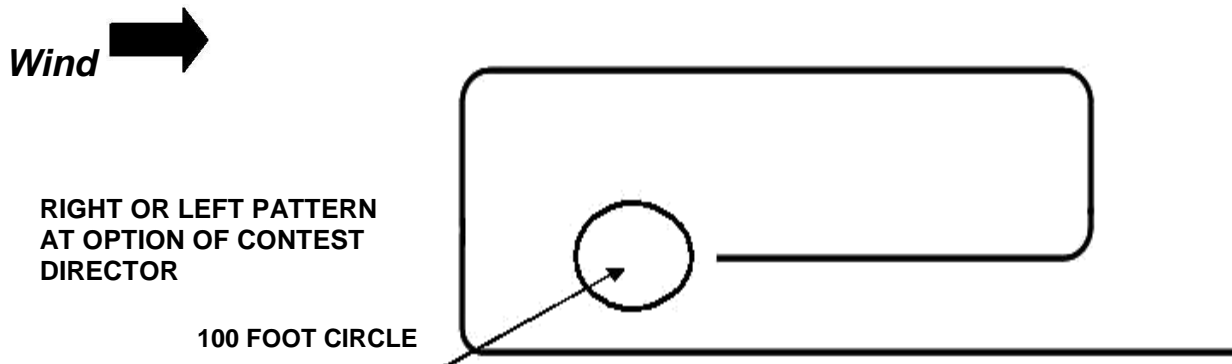


9. CUBAN EIGHT: The plane enters this maneuver in straight and level flight, pulls up into a 45 degree climb, half rolls to inverted and proceeds to loop until it is again climbing at a 45 degree angle. The plane then performs another half roll to inverted flight that should cross the flight path of the first roll, then again proceeds to loop until it has reached straight and level flight on the same heading and at the same altitude as the beginning.

Downgrades:

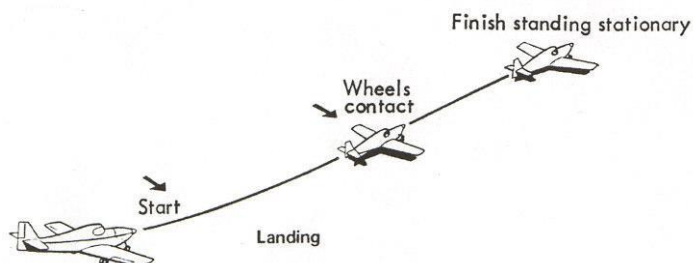
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|--------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 1. Entry is not straight and level | 7. Second loop not at same altitude |
| 2. First roll not on 45 degree line | 8. Second loop not same size as first loop |
| 3. First loop not round or deviates to left or right | 9. Maneuver not complete at same altitude and on same heading as entry |
| 4. Second roll not on 45 degree line | 10. Plane fails to do straight and level flight at conclusion |
| 5. Middle of second roll does not cross middle point of first roll of maneuver | |
| 6. Second loop not round or deviates to left or right | |

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10. TRAFFIC PATTERN APPROACH The rectangular approach is commenced with the model flying into the wind above the transmitter, a turn of 90 degrees, a cross-wind leg, a second turn of 90 degrees, a downwind leg, a third turnoff 90 degrees, a cross-wind leg, a fourth turn of 90 degrees, and straight flight toward the point of touchdown. The maneuver is finished just prior to the point of touchdown (six feet altitude). *Note:* The contest director will announce whether the turns should be left or right. The rectangular approach may be downgraded because:

1. Legs of rectangle are not straight and perpendicular to each other.
2. The 90 degree turns are not smooth, precise or sharp.
3. Gallops in pitch, yaw, or roll during approach.
4. Attempts to break out of pattern to go around again. Zero points!
5. Model climbs during approach.

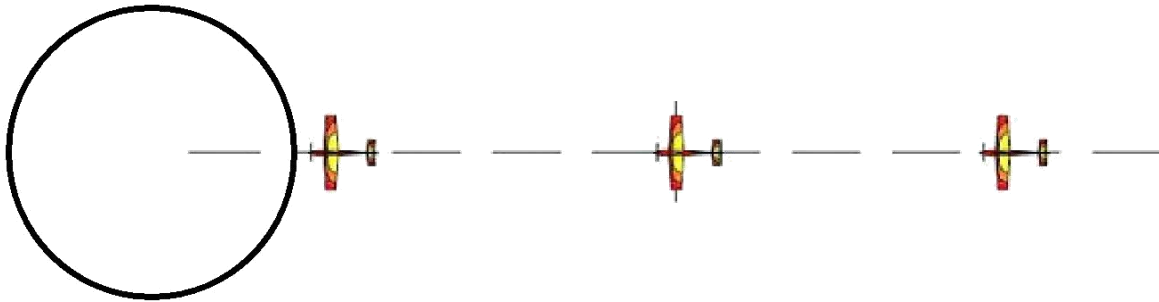


11. LANDING PERFECTION When the contestant has his plane lined up and on heading for the final approach, and not less than six (6) feet off the ground, he must announce the start of the Landing maneuver. From this point on, the Landing will be judged.

Downgrades:

1. Approach during landing too steep
2. Gallops in pitch, yaw or roll during approach
3. Model impacts or thuds onto ground due to lack of flare
4. Model bounces on landing
5. Model turns left or right while rolling to a stop. Turns unnecessarily to avoid running off the runway may be excused if wind direction and spot location are adverse. However, this leniency applies only if the model lands on the runway and should not be employed in cases where the flyer accidentally lands near the edge of the runway.
6. All landings judged only for 50 feet after touchdown.

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12. SPOT LANDING Landing within the 100-foot circle results in automatic awarding of the same number of points awarded in Landing Perfection. All judges should show agreement on their score sheets (Not on the amount of score, just on whether or not a Spot Landing was accomplished) and in the event of a disagreement, a majority vote of the judges should dictate.

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ANTIQUA EXPERT

	MANEUVER	K-FACTOR
1.	PROTO TAXI AND TAKEOFF (U) (DOWNWIND TRIM PASS)	1
2.	TOUCH AND GO (U)	3
3.	3 HORIZONTAL ROLLS (D)	3
4.	DOUBLE IMMELMANN	3
5.	EIGHT POINT ROLL (D)	4
6.	THREE INSIDE LOOPS (U)	3
7.	THREE OUTSIDE LOOPS FM TOP (D)	3
8.	TOPHAT (U)	3
9.	SLOW ROLL (D)	3
	10. VERTICAL EIGHT (U)	4
	11. KNIFE EDGE FLIGHT (D)	3
	12. TRAFFIC PATTERN APPROACH	3
	13. LANDING PERFECTION(U)	2
	14. TAXI TO HANGAR)	2

Note: No Fly-Bys Allowed. Maneuvers flown out of sequence shall be scored zero (0).

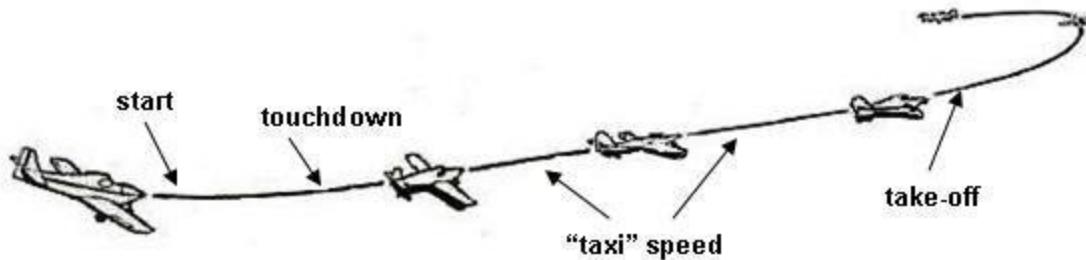


1. TAKEOFF The model must start from a standstill. Model shall accelerate gradually and the takeoff run shall be in a straight line. Plane shall lift off gently and climb at a gradual angle, continuing in its straight flight path until at least six feet off the ground. Pilot shall call "Takeoff (or maneuver) complete" when model has gained at least six feet of altitude and is still climbing in a straight flight path.

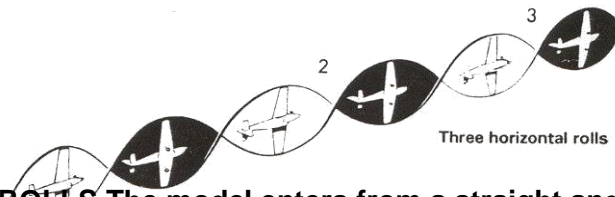
Downgrades:

1. Pushing or assisting the model when released.
2. Change in heading during the takeoff run
3. "Jumping" from the ground
4. Retouching the ground after become airborne
5. Too steep a climb angle
6. Gallops in pitch, roll or yaw during climb
7. Change in heading during climb
8. Dropping a wingtip

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2. **TOUCH-AND-GO** After a smooth and gradual descent on a straight path into the wind, the model lands and slows down to taxi speed (approximately 1.4 the normal flight speed) but must not stop. Following this the model must accelerate and take off on the same heading as the entry. The maneuver may be downgraded for the following:
1. Approach during landing is too steep.
 2. Gallops in pitch, yaw or roll during approach.
 3. Model impacts or thuds onto the ground due to lack of flare-out.
 4. Model bounces on landing
 5. Model deviates left or right while rolling on ground
 6. Model fails to slow down to distinct taxi or “unairborne” condition.
 7. Model stops on ground.
 8. Changes in heading during take-off run.
 9. “Jumping” from ground.
 10. Retouching the ground after becoming airborne.
 11. Too steep a climb angle.
 12. Gallops in pitch, roll or yaw during climb.
 13. Changes in heading during climb.
 14. Dropping a wingtip.
 15. Model is too far away to be seen clearly at any time during the maneuver.

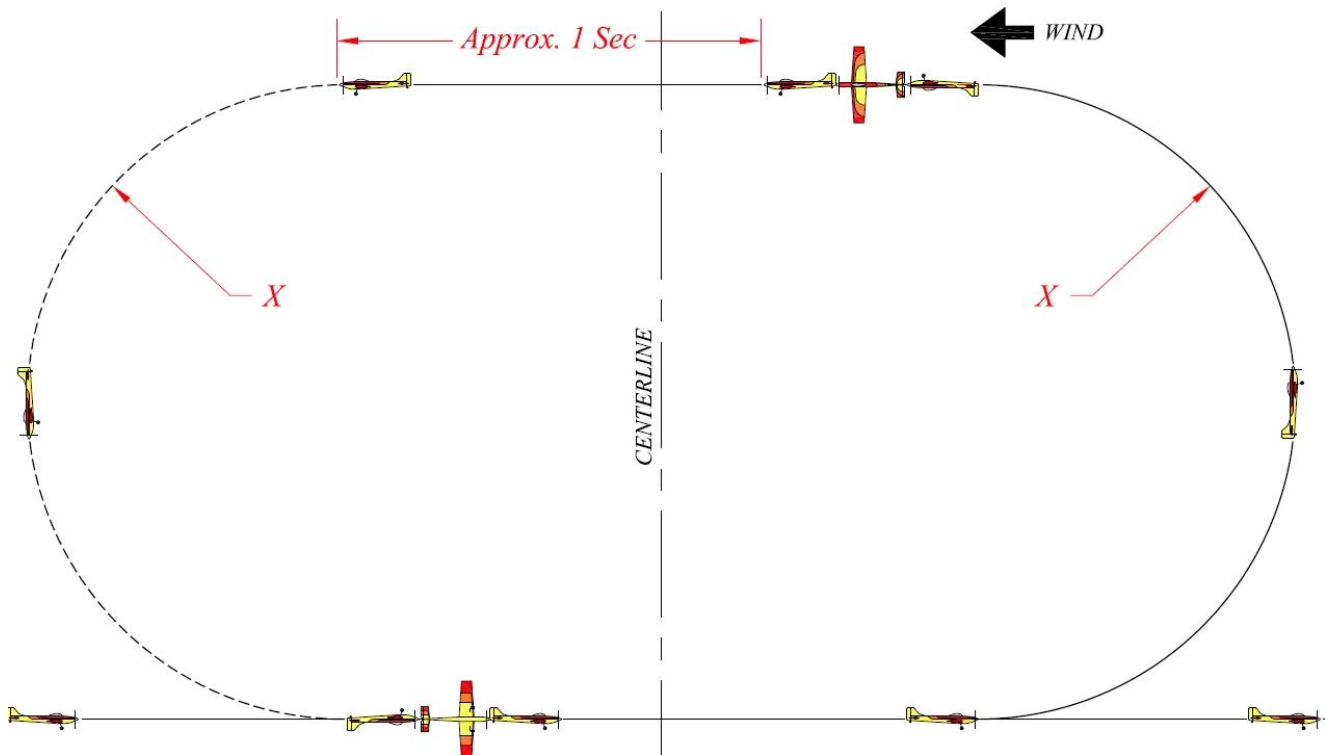


3. **THREE HORIZONTAL ROLLS** The model enters from a straight and level flight and rolls on its axis to the right or left until three complete rolls are performed. The recovery must be on the same heading and altitude as the entry.

Downgrades:

1. Model not level at the start of the rolls
2. The path traced out by the model is not a straight line. i.e. the plane does barrel rolls or suffers changes in heading
3. Roll rate not uniform throughout three rolls
4. Pause between rolls
5. Sudden changes in heading between rolls
6. The axis of the fuselage veers out at an angle to the flight path
7. Plane changes altitude during rolls
8. Plane does not do exactly three rolls
9. Plane is not level at end of rolls
10. Plane fails to do level flight at end of rolls

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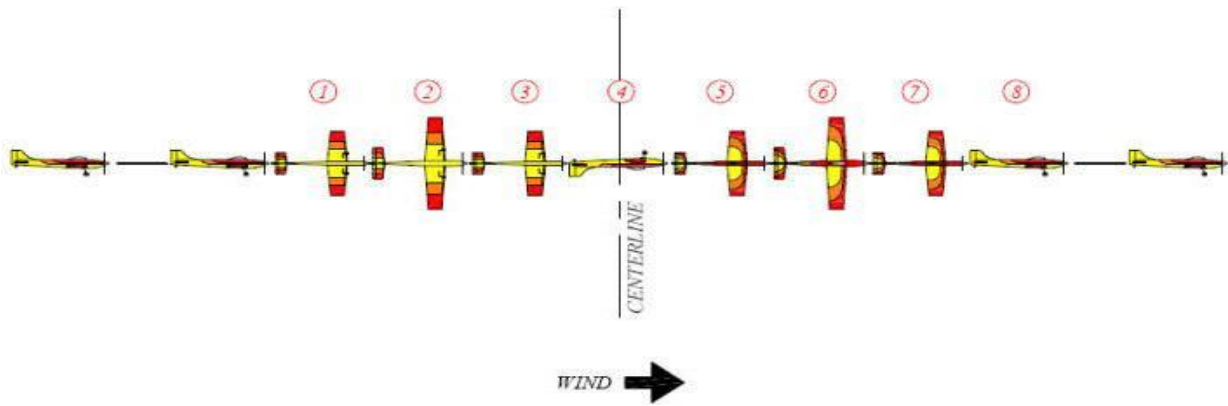


4. DOUBLE IMMELMAN Model commences in straight and level flight, pulls into half an inside loop followed by a half roll to upright, does approximately 1 second of level flight followed by 1/2 outside loop, then followed by a half roll to upright, recovering in straight and level flight on the same heading and at the same altitude as the entry.

Downgrades:

1. Entry not straight and level
2. First half loop not round
3. Model deviates left or right during half loop
4. Half loop not completed exactly above starting point
5. Half roll does not start immediately after half loop
6. Roll is not on a straight line and 180 degrees heading from entry
7. Plane goes immediately into outside loop upon completion of half roll
8. Plane holds straight flight too long before going to outside loop
9. Half outside loop not round or same size as first half loop
10. Model deviates left or right during half loop
11. Half loop not completed exactly below starting point
12. Final half roll does not start immediately after half outside loop
13. Final half roll longer or shorter than first half roll
14. Model does not finish on same heading and at same altitude as entry

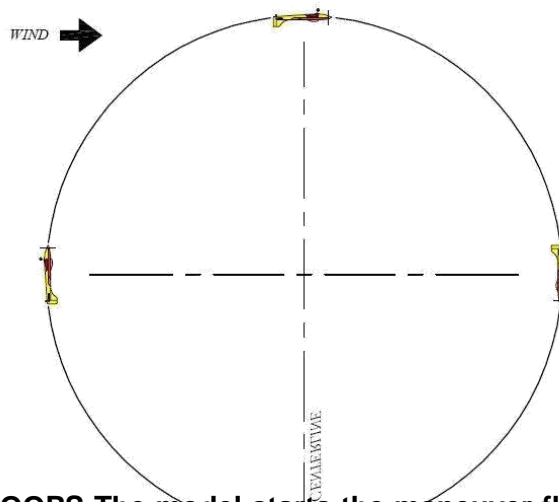
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5. EIGHT POINT ROLL Model starts in level flight then rolls one complete rotation hesitating at each 1/8 revolution. Each 1/8 roll to be forty-five degrees at each hesitation. The wing will be parallel with 45 or 90 degrees to the horizon. Model recovers on same heading and altitude as entry..

Downgrades:

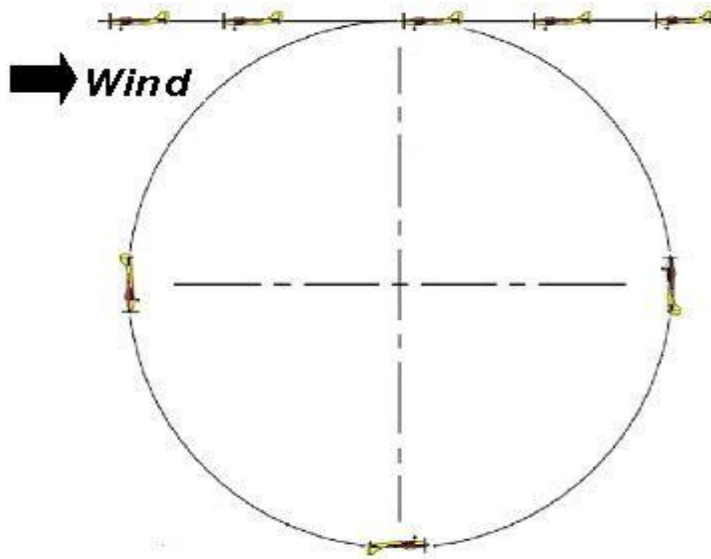
1. Model not level at start
2. Model does not hesitate after each 1/8 roll
3. 1/8 rolls more or less than 45 degrees
4. Model takes less than 4 or more than 6 seconds to complete roll
5. Time in each segment is not equal
6. Model not level at finish of maneuver
7. Model does not finish on same heading and altitude as entry



6. THREE INSIDE LOOPS The model starts the maneuver flying straight and level, then pulls up into a smooth, round loop, followed by a second loop, and a third loop in exactly the same path with a straight and level recovery finish. Downgrades:

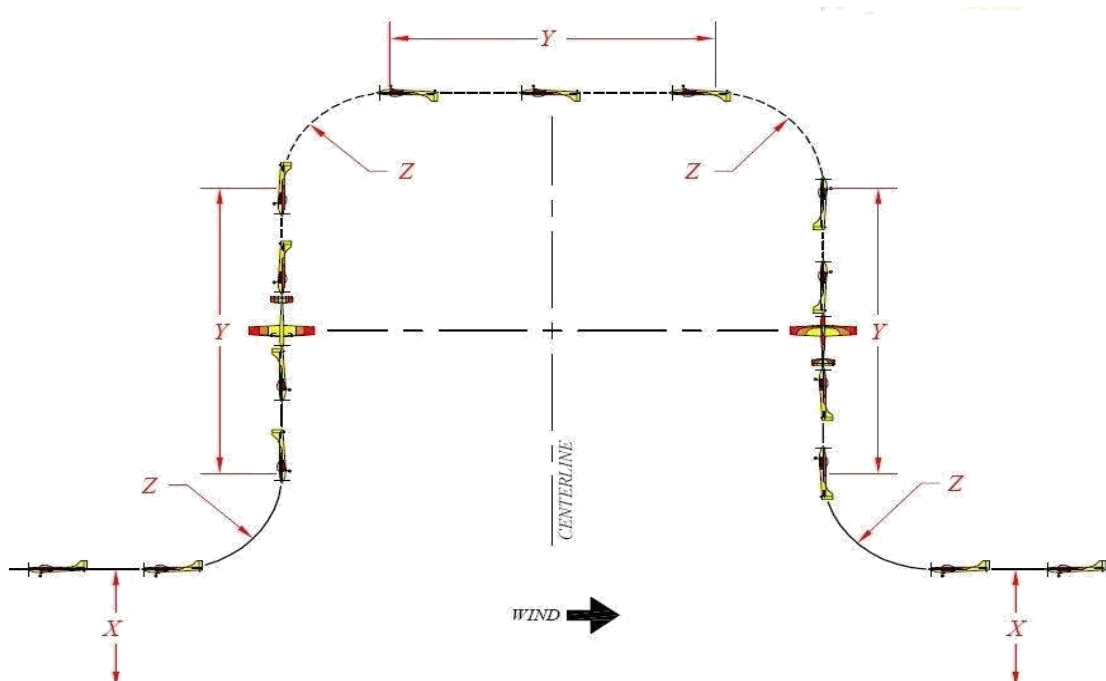
1. Loops not round and smooth
2. Loops not superimposed
3. Wings not level during loops
4. Changes in heading during loops
5. Exit not same heading and altitude as entry

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7. **THREE OUTSIDE LOOPS FROM THE TOP** The model commences the outside loop flying straight and level, then noses down into three outside loops and recovers straight and level on the same heading and altitude as the entry. The outside loops are downgraded in the same manner as the inside loops:
1. Loops not round and smooth
 2. Loops not superimposed
 3. Wings not level during loops
 4. Changes in heading during loops

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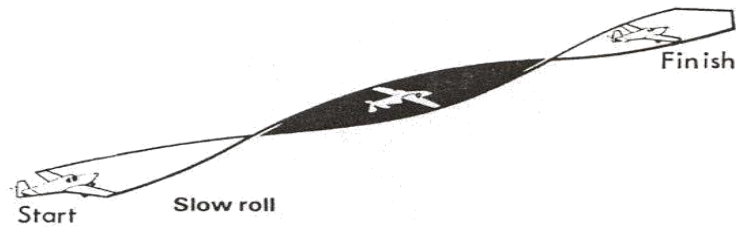


8. TOP HAT Model starts in straight level flight, pulls up into vertical climb and makes a half roll, then levels out inverted on the same heading as entry. After short inverted flight, model dives vertically, performs a half roll and finally recovers in straight level upright flight on same heading and height as entry.

Downgrades:

1. Model does not start level.
2. Model doesn't go exactly vertical before starting roll
3. Roll does not stop at exactly 180 degrees from entry
4. Model does not climb vertically for equal time before and
5. Inverted flight path at top is not level
6. Model does not fly inverted for the same distance as the vertical climb and roll
7. Model does not dive vertically briefly before starting half roll
8. Second half roll not started at the same altitude as that where the first half roll was completed.
9. Second half roll not completed at same altitude as that where first roll started after 1/2 roll
10. Model does not dive vertically for a brief period after completing second half roll
11. Model deviates left or right of the entry path at any point in the maneuver
12. Model does not recover at same altitude and heading as entry

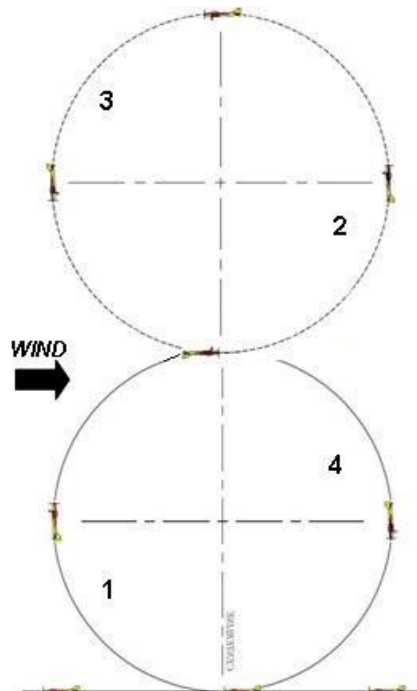
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9. SLOW ROLL Model commences from straight and level flight and rolls slowly at a uniform rate through one complete rotation. The approximate time of the roll to be five seconds. Note: No downgrade for slight overtime.

Downgrades:

1. Model not level at entry
2. Plane deviates from a straight line during roll
3. Roll rate not uniform
4. Plane does not roll through exactly one revolution
5. Plane changes altitude during roll
6. Plane changes heading
7. Roll rate is too rapid resulting in less than five seconds elapse during roll
8. Plane is not level at finish of roll

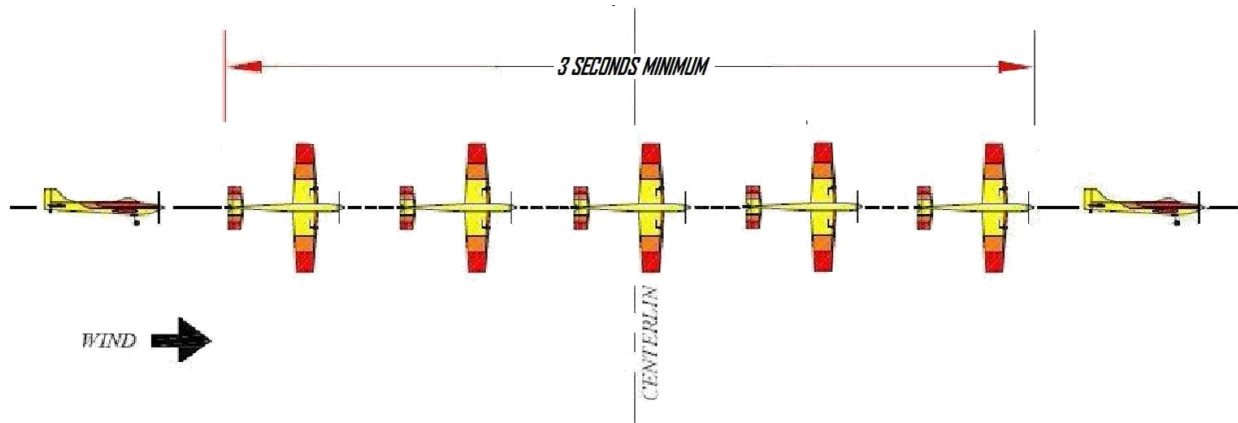


10. VERTICAL EIGHT Level entry, one half inside loop, one complete outside loop, one half inside loop, and level recovery at same altitude as entry. The complete maneuver is an eight in the vertical plane with all parts of the figure above the entry-recovery altitude.

Downgrades:

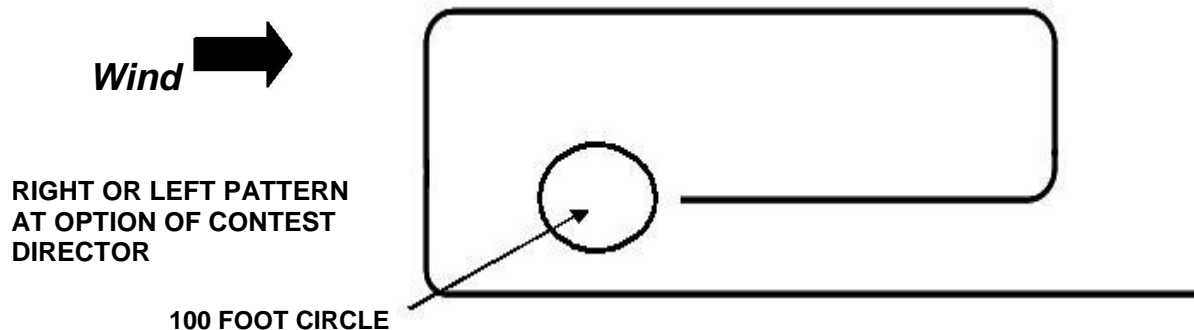
1. Loops not round and same diameter.
2. Changes in heading during loops.

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11. KNIFE EDGE FLIGHT: From straight and level flight path, model does a quarter roll (90 degrees) in either direction and holds this attitude for three full seconds. Model is then rolled back in the opposite direction to level, upright flight. The maneuver may be downgraded for the following reasons:

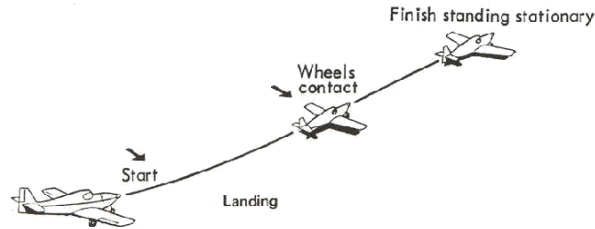
1. Model not level at start of roll.
2. The path traced by the model is not a straight line.
3. The axis of the fuselage veer out too much of an angle to the flight path.
4. Knife edge attitude not held for at least 3 seconds.
5. Wings are not exactly vertical throughout the three seconds of knife edge flight.
6. Plane changes altitude or heading.
7. Recovery roll is in same direction as entry roll, zero points



12. TRAFFIC PATTERN APPROACH The rectangular approach is commenced with the model flying into the wind above the transmitter, a turn of 90 degrees, a cross-wind leg, a second turn of 90 degrees, a downwind leg, a third turnoff 90 degrees, a cross-wind leg, a fourth turn of 90 degrees, and straight flight toward the point of touch-down. The maneuver is finished just prior to the point of touchdown (six feet altitude). *Note:* The contest director will announce whether the turns should be left or right. The rectangular approach may be downgraded because:

1. Legs of rectangle are not straight and perpendicular to each other.
2. The 90 degree turns are not smooth, precise or sharp.
3. Gallops in pitch, yaw, or roll during approach.
4. Attempts to break out of pattern to go around again. Zero points!
5. Model climbs during approach.

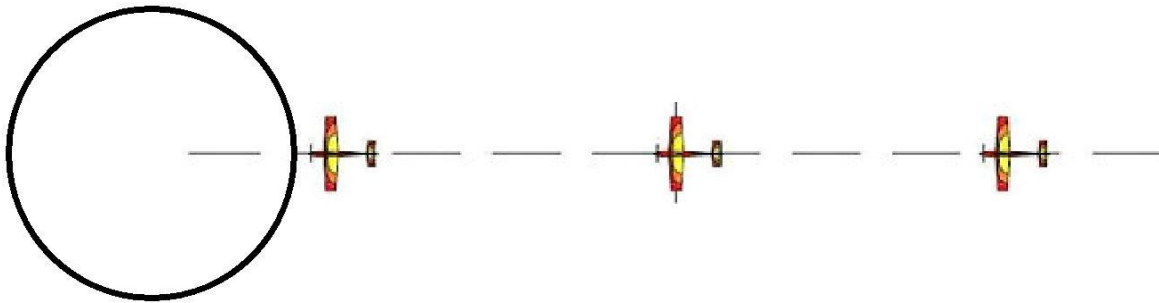
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13. LANDING PERFECTION When the contestant has his plane lined up and on heading for the final approach, and not less than six (6) feet off the ground, he must announce the start of the Landing maneuver. From this point on, the Landing will be judged.

Downgrades:

1. Approach during landing too steep
2. Gallops in pitch, yaw or roll during approach
3. Model impacts or thuds onto ground due to lack of flare
4. Model bounces on landing
5. Model turns left or right while rolling to a stop. Turns unnecessarily to avoid running off the runway may be excused if wind direction and spot location are adverse. However, this leniency applies only if the model lands on the runway and should not be employed in cases where the flyer accidentally lands near the edge of the runway.
6. All landings judged only for 50 feet after touchdown.



14. SPOT LANDING Landing within the 100-foot circle results in automatic awarding of the same number of points awarded in Landing Perfection. All judges should show agreement on their score sheets (Not on the amount of score, just on whether or not a Spot Landing was accomplished) and in the event of a disagreement, a majority vote of the judges should dictate.

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