

# **THE BLUE MAX 2018**

## **Outstanding Flight Award Criteria**

To be eligible for a Blue Max Outstanding Flight Award, a pilot must complete two successful flights during Saturday's open flying. This is subject to change based on weather or any other unforeseen circumstances. A team of three observers will document and make notes of a pilot's flight. Observation and notes will be reviewed by the observers. Collectively, the three observers will then make a decision on the most realistic and scale like flight. Flight realism is paramount and should be considered during each flight. Flight observation for the Blue Max Outstanding Flight Awards will end at 3:00pm on Saturday. Open flying will continue until 5:00pm. A Blue Max Outstanding Flight Award will be awarded in each class. Balsa USA, Kit, Scratch Built and ARF. In the event that one of the four classes does not have a competing aircraft in the class, the observers will award that Blue Max to a deserving pilot from one of the other classes.

The more scale like maneuvers performed by a pilot will only improve a pilot's chances of being awarded a Blue Max. Keep in mind that the maneuvers should be performed accurately and in a scale manner. AGAIN- Flight realism is the key. Throughout a flight, scale realism will be noted and recognized by the Blue Max Observation Team.

Flight realism is observed when the model performs smooth transitions through each axis (roll, pitch and yaw) consistently throughout the entire flight (including in between maneuvers).

- Bank angles consistent with full-size aircraft.
- G-loading consistent with full-size aircraft.
- Management of power appropriate with performed maneuvers.
- Chosen maneuvers consistent with full-size aircraft's capabilities.

Listed below are maneuvers that can be considered to enhance a scale flight.

## 1. Takeoff

Roll out straight and down the indicated centerline.

Gentle lift off, wings level, tracking straight, climb out angle consistent with prototype.

Gentle and steady climb out to 30 feet altitude.

## 2. Figure eight

Maneuver called at 45 degrees from Judges' centerline (left or right of Judges).

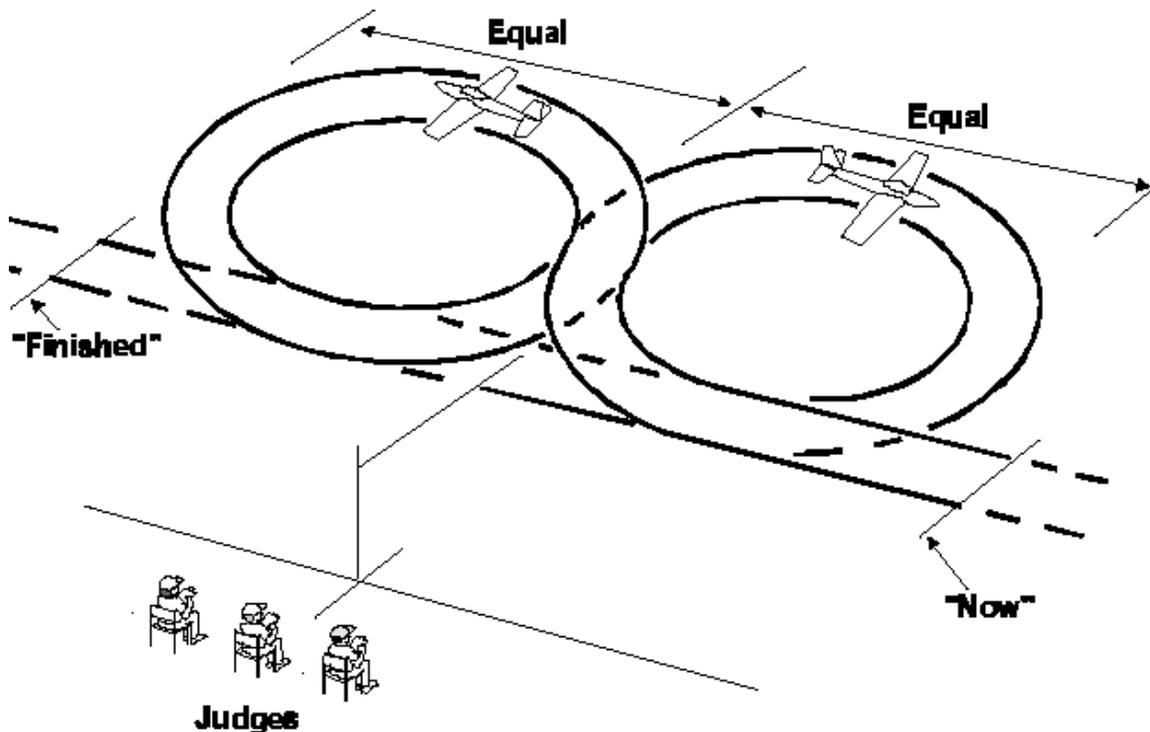
Bank angle typical of full-size aircraft at speed.

Crossover points on Judges' centerline (directly in front of Judges).

Crossover points at same altitude and location.

Symmetry, left circle same size/diameter as right circle.

Exit altitude same as entry altitude.



### 3. Fly past

Direction is same as take off (into the wind).

Altitude between 10 and 20 feet.

Heading is straight and tracks parallel to centerline.

Maintains constant altitude.

Equal distance on Judges' centerline, minimum 150 feet left and right.

### 4. Landing

Pilot calls maneuver when turning final.

Wings level, gentle glide angle, constant rate of descent, tracks on runway centerline on rollout.

Smooth flare, gentle contact with ground both wheels simultaneously, minimal bounce on touchdown.

Straight rollout down runway centerline.

Slows to taxi speed before turning.

### 5. Touch and Go

The touch and go is a two-part maneuver. During the touch part the aircraft must slow to below flying speed after landing before accelerating for the go part of the maneuver.

Maneuver will start at the beginning of final approach and end after straight climb out to 30 feet.

Tail skid/wheel is not required to touch the ground.

Touch and Go is considered two maneuvers, the Touch and then the Go.

## 6. Chandelle

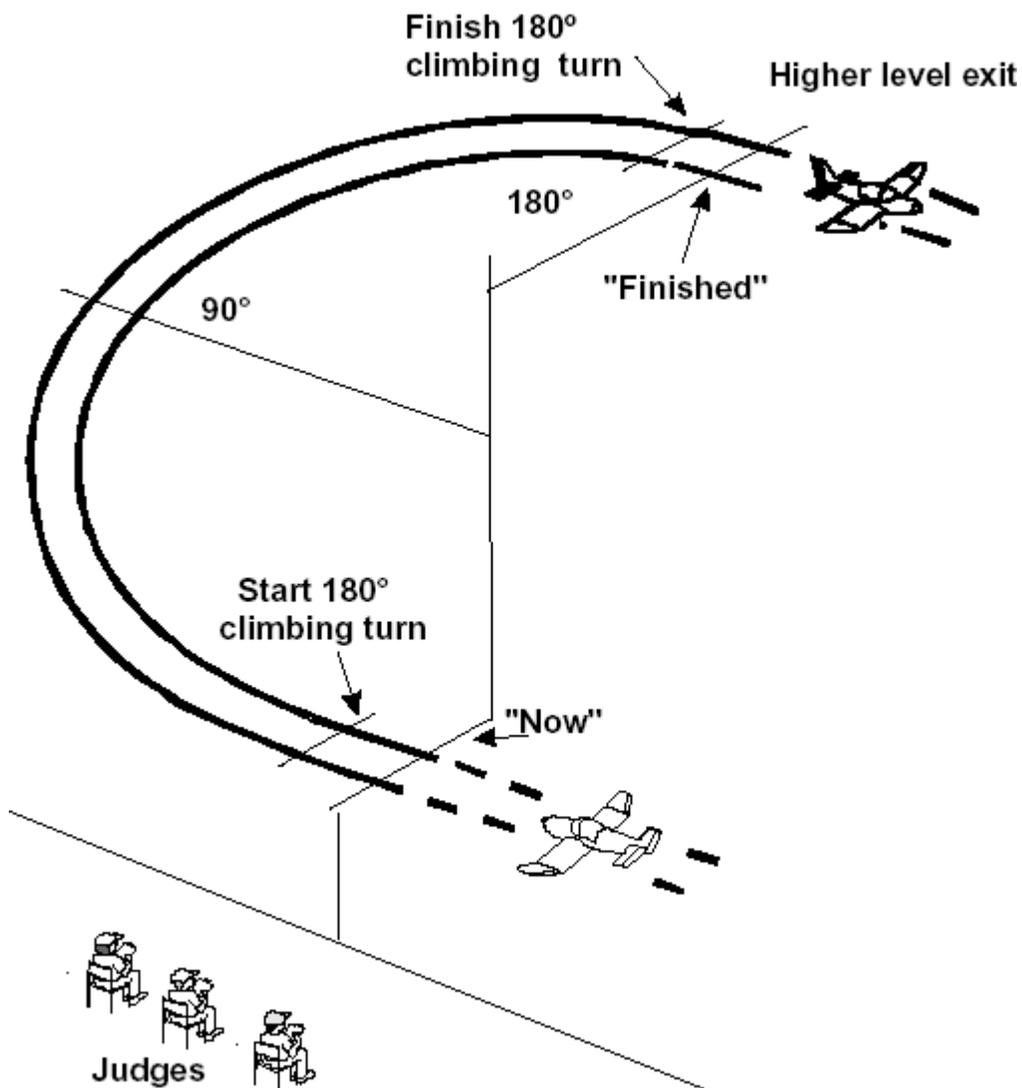
Exaggerated climbing turn in which the aircraft changes direction through 180 degrees exiting at a higher altitude than at entry.

Bank angle, speed, and rate of climb depend upon the type of aircraft being flown.

Turn shall be executed away from flight line.

Entry speed should be sufficient to prevent visible slipping or skidding and maintain the same rate of turn throughout the maneuver.

Bank angle may be 45 to 60 degrees for non-aerobatic aircraft and up to 90 degrees for fully aerobatic aircraft.



## 7. Observation Circle (360 degree descending circle)

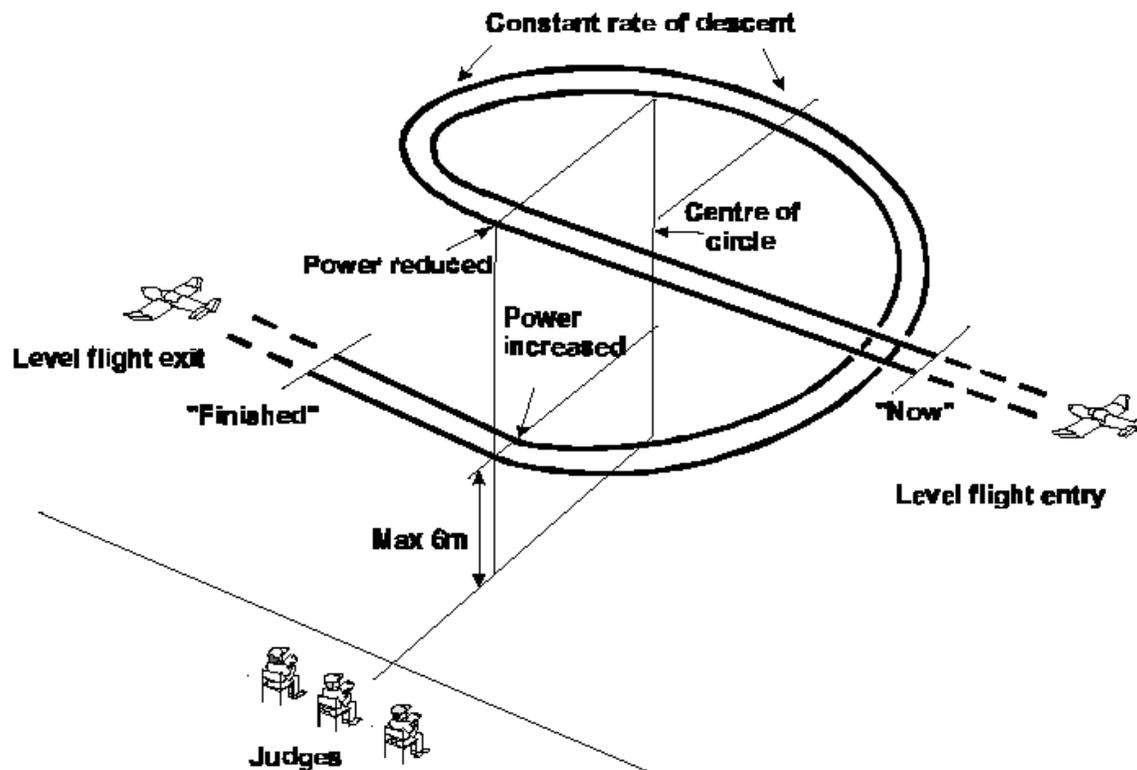
From straight and level flight aircraft enters a descending, 360 degree circle away from judges.

Decent must be accomplished at a constant low throttle setting with a constant RATE of descent.

Model must lose significant height to a maximum altitude of 20 feet.

Circle must not be misshapen or too steep.

Throttle is increased to resume straight and level flight.



## 8. Bomb drop

Aircraft must enter maneuver from a higher altitude than that at which bombs are dropped.

Model cannot enter maneuver from a straight flight path in same direction of bomb run.

Bombs should hit directly in front of judges.

Pure bombers should release bombs from a level attitude.

Fighters dropping bombs should drop after entering a slight dive (Dive bombing)

## 9. Loop

From straight and level flight, model pulls up into circular loop resuming straight and level flight in same direction as entry.

Throttle may be reduced at the top of loop as appropriate and opened when normal flight is resumed.

Loop must be near circular and centered on judge's position.

## 10. Barrel Roll

From straight and level flight model commences roll, away from judges, at a constant rate through one complete rotation then resumes straight and level flight on same heading as entry.

Roll should not be axial but more barrel shaped.

Roll should be centered on judge's position.

## 11. Lazy Eight

From straight and level flight and after passing judges position model begins a smooth climbing turn away from judges.

The bank angle should be at least 60 degrees at apex of turn.

As nose of the model lowers bank angle is relieved at same rate as it was added.

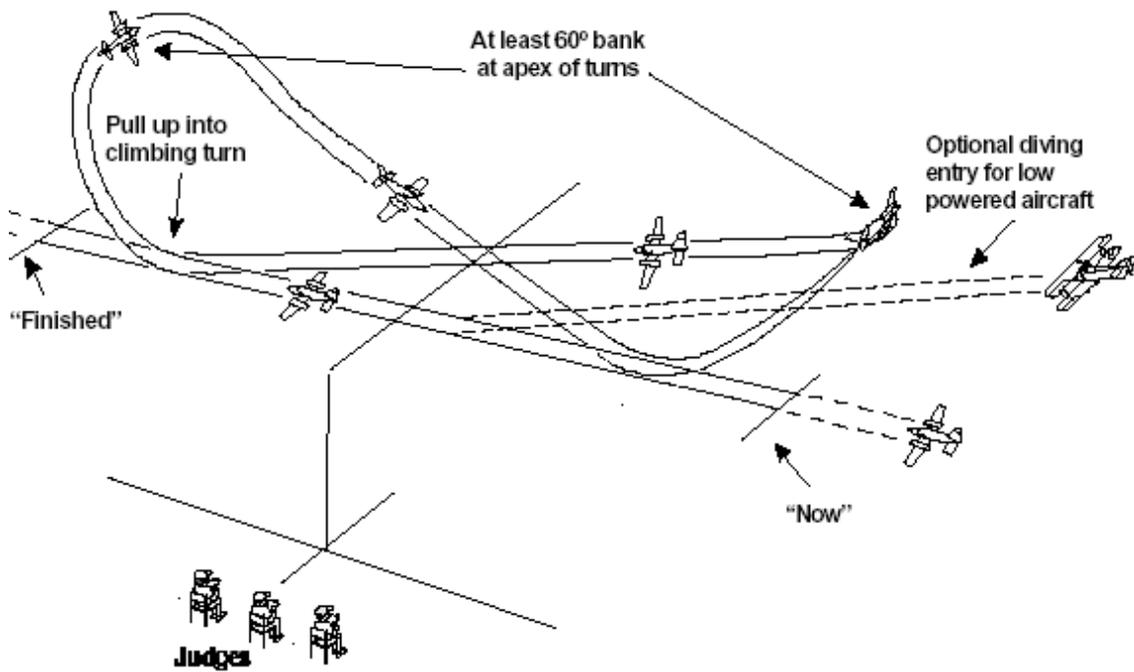
The turn is continued through 180 degrees so as to pass in front of judges before a smooth climbing turn again away from judges is commenced.

Bank angle should be at least 60 degrees at apex of turn.

As nose of the model lowers bank angle is relieved at same rate as it was added.

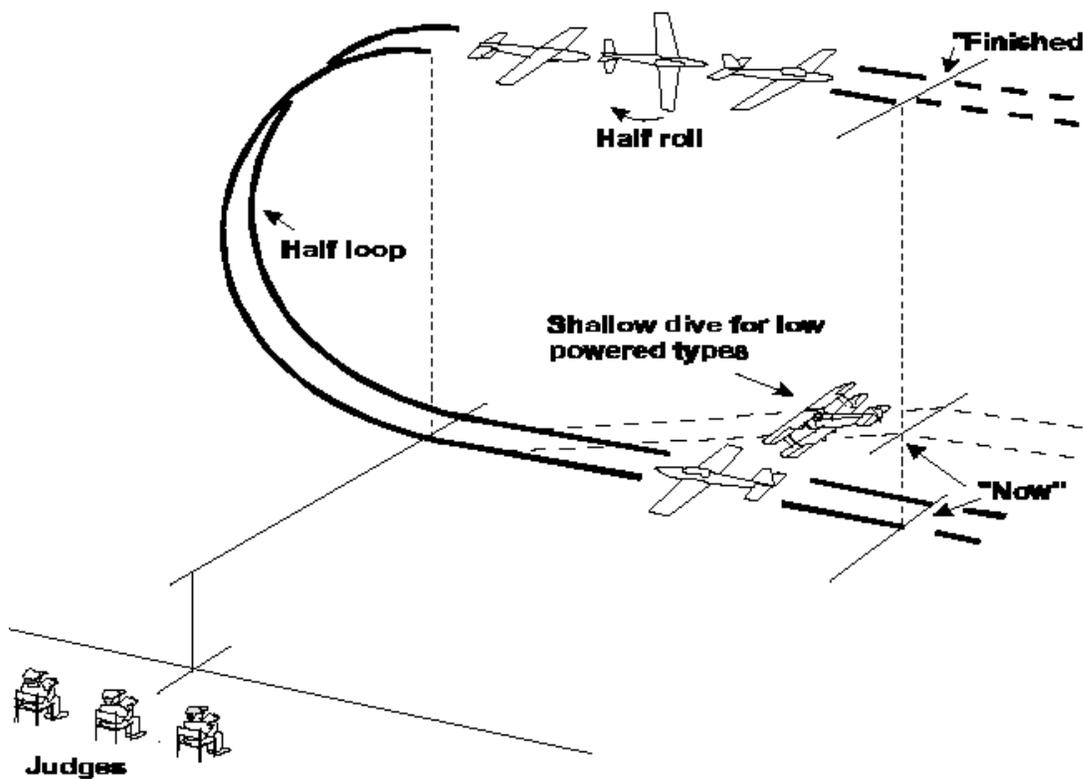
The turn is continued through 180 degrees, so as to cross preceding flight path in front of judges eventually intersecting with original entry flight path thus describing a figure eight.

The maneuver is essentially two wingovers in opposite directions.



## 12. Immelmann turn

From straight and level flight, the model pulls into half of a loop. When the model becomes inverted a half roll is executed to resume level flight in the opposite direction.



### 13. Stall turn

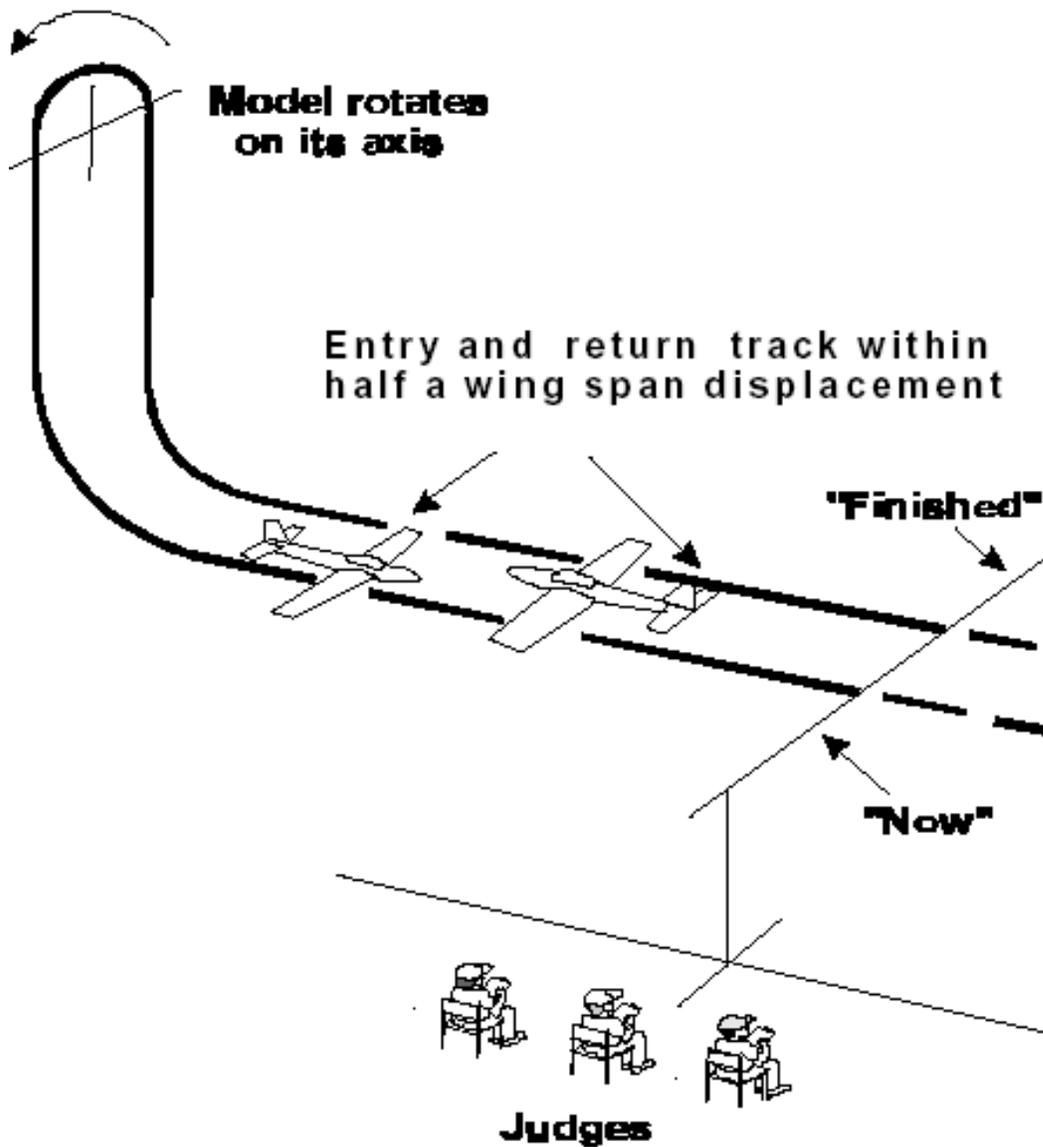
Model starts in level flight.

Noses up into a vertical flight path until it comes to a stop.

Aircraft yaws through 180 degrees.

Dives vertically and recovers straight and level heading in the opposite direction to entry.

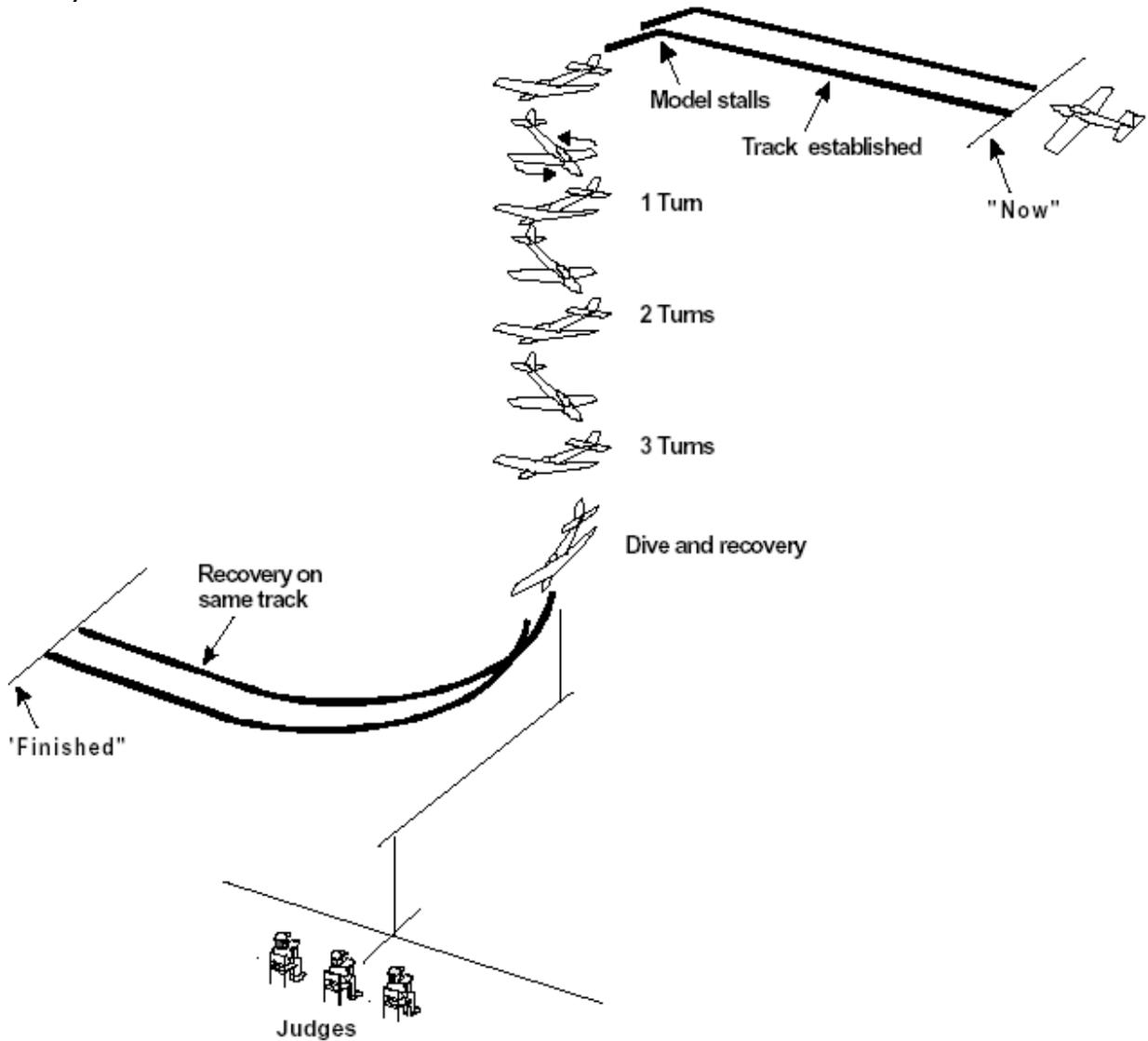
Entry and exit altitude should be the same.



## 14. 3-Turn Spin

Entry from straight and level flight.

Model slows into the stall and commences the spin through three turns. Model recovers into straight and level flight moving in same direction as entry.



## 15. Side Slip

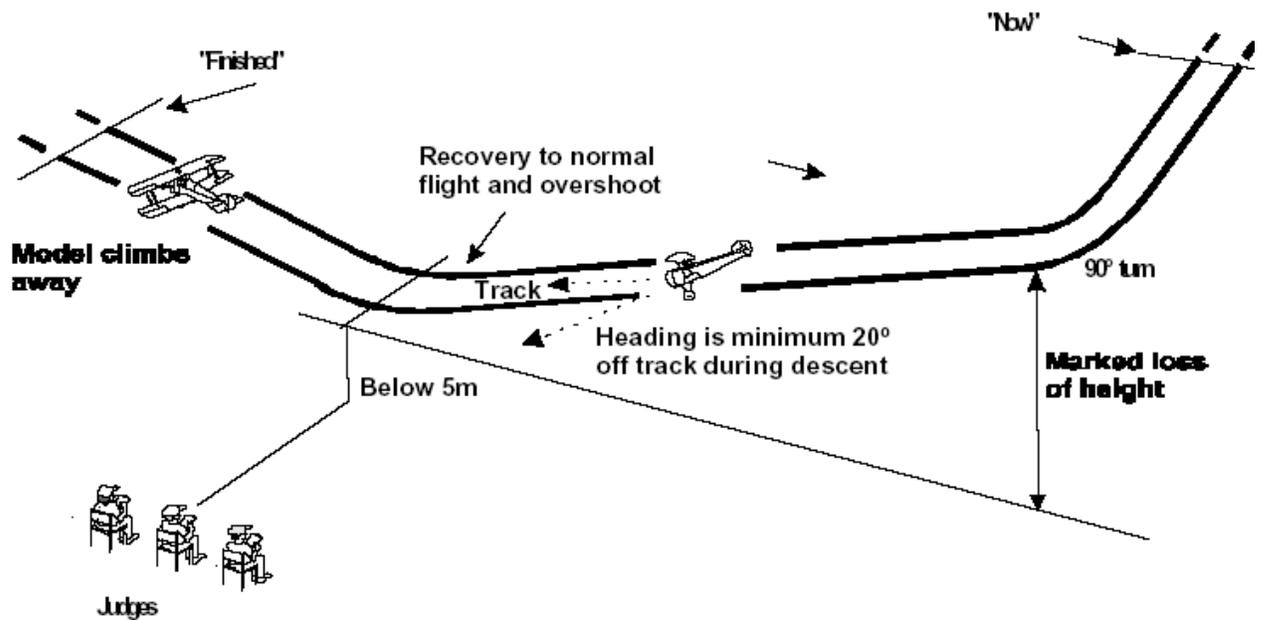
Maneuver starts on the base leg of landing pattern.

Turning final the model should be higher than for normal landing approach.

Upon turning final model sideslips by applying opposite rudder to direction of turn, yawing at least 20 degrees off track.

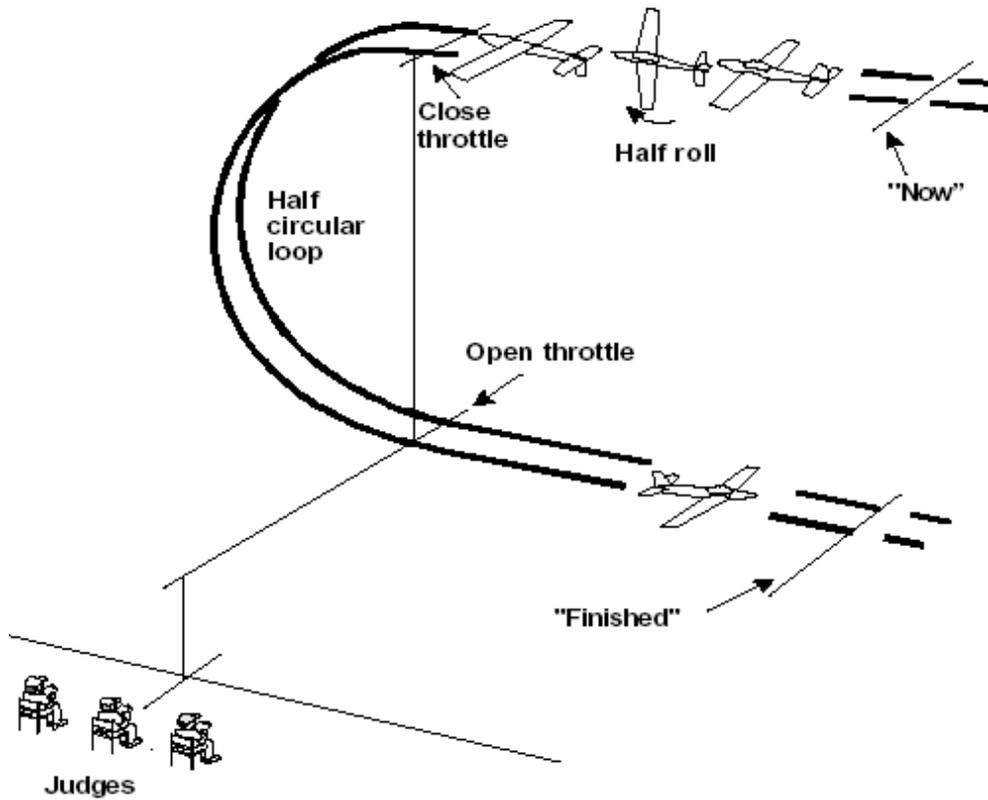
A marked loss of height must be observed while maintaining approach speed.

Recovery can be either a judged landing or straightening of aircraft and a power on climb out.



## 16. Split S

From straight flight the model is rolled inverted and then performs a half loop, resuming straight and level flight in the opposite direction to entry. The throttle should be closed after model rolls inverted and opened when normal flight is resumed.



## 17. Wingover

After passing judges in straight and level flight model commences a smooth climbing turn away from flight line.

Bank angle should be at least 60 degrees at apex of turn.

As the nose of the model lowers bank angle is relieved at same rate it was added making a symmetrical arc.

Turn is continued through 180 degrees recovering straight and level heading in opposite direction as entry.

