



Set Manoeuvres 2007



Proposed Set Manoeuvres for 3D Masters 2007, subject to confirmation on the official entry form January 2007.

No.	'k'	Manoeuvre	Judges Notes
1	1	Travelling Backwards Flip	With the aircraft travelling forwards along the flightline, a backwards flip is performed. The manoeuvre will be flown at medium speed maintaining constant height, direction and speed throughout.
2	1	2 x 4 point Backward Roll	With the model moving backwards at medium pace, the model will be aileron-rolled twice, each roll being clearly delineated by 4 hesitation points.
3	1	540 Bounce	This manoeuvre consists of 2 inverted stationary 540° pirouettes, 1 in each direction with the minimum hesitation at direction reversal. The manoeuvre will be entered from a stationary hover and should start and finish nose-in.
4	1	Stationary Metronomes	This manoeuvre consists of a repetitive metronome with 6 pitch-reversals. The manoeuvre will be symmetrical about the centre-line and of consistent height and speed. The manoeuvre may be performed tailboom vertical or horizontal
5	1	Pie Dish	The helicopter will prescribe remote circuits centred on the contest centreline. The model will maintain an acute angle while flying sideways at constant speed, altitude and attitude. There will be at least 4 complete revolutions, skids in, skids out, nose up or nose-down.
6	1	Figure 8 Inverted Circuit	The model should describe a uniform Figure 8 at a slow pace with consistent height and correctly centered
7	1.5	Coronet	The coronet is a series of tail-low Rainbows* each finishing with a 90° pirouette before moving on to the next Rainbow. In this way a square circuit is flown. There will be minimal hesitation at the pirouettes.
8	1.5	Tumbling Loop	The model will perform continuous Forward- or Backward tumbles while it describes a Forward or Backward Loop in the sky. The Loop will be centred and the rate of tumbling will be uniform.
9	1.5	K 1.5 Auto*	The K1.5 auto consists of an autorotational landing with a 360° Aileron Roll. The manoeuvre will show consistent height loss, uniform forward speed and land as close as possible to a marker positioned 3m in front of the pilot on the field centreline.
10	1.5	Inverted Nose-in Circuit	The circuit will be flat and slow with consistent height and properly centred on the pilot and judges.
11	1.5	Inverted Backward Loops	This manoeuvre consists of 2 consecutive inverted backward loops entered from backward inverted flight.
12	1.5	Sustained Chaos	The chaos should be sustained for a minimum of 10 seconds, up to a maximum of 30 seconds. The Manoeuvre will be stationary in front of the pilot and accurately centred
13	1.5	Pirouetting Roll / Flip (2)	The 2 pirouetting rolls / flips will be executed as a travelling manoeuvre continuously with no hesitation.
14	1.5	Snake	This snake-like manoeuvre should be performed along the flight line and consist of at least 4 joined crescents, tailboom-horizontal, switching skids-in to skids-out and vice-versa between crescents.
15	2	Slapper	This manoeuvre consists of a series of tailboom-vertical metronomes with a half aileron roll between the metronome stop points. 6 pitch reversals are required, and the model will retain constant tailboom orientation. The roll will be centred at the mid-point of the arc.
16	2	Inverted Pirouetting Figure 8	The inverted pirouetting figure 8 can be performed at any pirouette rate. The model will describe a symmetrical Figure 8 with a consistent rate of rotation.
17	2	Pirouetting Loop	The Pirouetting Loop will be positioned symmetrically examples with a constant rate of rotation.
18	2	Pirouetting Outside Loop	The Pirouetting outside loop can be entered from either the top or bottom of the manoeuvre. It will be positioned symmetrically with a constant rate of rotation.
19	2	Pirouetting Metronome	The helicopter must metronome back and forth approximately 45° either side of vertical with least 6 pitch reversals and at least one complete pirouette during each traversal. The manoeuvre will be 'stationary' and consistent height, pirouette rate and reversal rate will be maintained.

20	2	Tumbling Circuit	The tumbling circuit can be performed with either forward or backward tumbles. The manoeuvre will exhibit accurate positioning and height control with a consistent rate of tumbling.
21	2	Waltzer - Pie-Dish with Multiple Aileron Rolls	A 'pie-dish' is a remote circuit flown with the tailboom of the helicopter vertical (or near-vertical), skids in or out. In the Waltzer, the model should perform at least 2 revolutions while continuously aileron-rolling.
22	2	K2 Auto*	The K2 auto consists of an autorotational landing beginning with a 360° Aileron Roll, followed by a further half roll to inverted, and ending with a Forward Elevator Flip. The manoeuvre will show consistent height loss, uniform forward speed and land as close as possible to a marker positioned 3m in front of the pilot on the field centreline.
23	2.5	London Eye	A vertical circle in front of the pilot/judges prescribed by a succession of sustained pirouetting metronomes with the full rotor disc at all times visible to the pilot/judges.
24	2.5	Pirouetting Vertical 8	The helicopter will prescribe a vertical 8 while executing a continuous series of pirouettes, in effect two pirouetting loops, one inside, the other outside.
25	2.5	Pirouetting Wall of Death	The model will be made to prescribe at least two remote knife-edge circles while pirouetting continuously.
26	2.5	K 2.5 Auto*	The K2.5 auto consists of an autorotational landing beginning with a Pirouetting Flip, followed by a 360° Aileron Roll, a further half roll to inverted, and ending with a Forward Elevator Flip. The manoeuvre will show consistent height loss, uniform forward speed and land as close as possible to a marker positioned 3m in front of the pilot on the field centreline.
27	3	Haymaker	Backwards horizontal eight, with multiple consecutive 4 point hesitation rolls with knife edge 360 pirouettes at every knife edge, the pirouette direction reversing each time.
28	3	Rainbow* Twister (Bouncy Castle)	The Rainbow Twister or Bouncy Castle is a succession of Rainbows alternating nose-up, nose down each with an aileron half-roll in the centre and then a 90° pirouette at the stop point, joined to produce a square circuit. 2 complete circuits will be flown.
29	3	Big Ben - Metronoming Clock Face	The model will be held in a sustained metronome directly in front of the judges with its nose vertical, the Judges viewing the rotor disk as a clock face. The model will then be made to rotate yawing clockwise prescribing the 12 points of a clock-face, each point defined by a 'tick' of the metronome. Start and finish of the manoeuvre are the two 12 o'clock points.
30	3	Pirouetting Globe	This is a succession of Pirouetting Loops, but with the axis of the loop rotating by degrees for each loop until an imaginary globe in the sky has been prescribed. Exit from the manoeuvre should be the same as the point of entry, but with the model moving in the opposite direction. The Manoeuvre will consist of at least 4 loops.

- In this context, a Rainbow is an arcing Forward or Backward Half-Flip.
- In this context, an auto is an autorotation with drive disengaged

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