SAM 35 rules: Control Line
Vintage Stunt

sam35.org/rules

OBJECTIVE:

To provide a standard set of competition rules for control line stunt models designed during the period up to the end of 1957. The schedule of manoeuvres used is based on the schedule that was used during this period in Great Britain. These manoeuvres are chosen to allow the pilot to demonstrate the model's ability without over- stretching the ability of a reasonably competent C/L stunt flier.

RULES FOR COMPETITIONS:

1. AIRCRAFT:

1.1. Design must have been available in kit or plan form prior to 31st December 1957. January 1958 magazines are accepted as published in 1957. eg a magazine photograph published prior to 31st December 1957. Exceptions to this rule may be permitted as follows:

a) Where evidence of the existence of the kit or plan prototype before 31st December 1957 is available. eg a magazine photograph published prior to 31st December 1957.

b) Where only photographic evidence of design was published before 31st December 1957, but the original designer can provide accurate details of the model's design.

1.2. Take apart construction is permissible, but should not compromise the original external appearance of the model. Beyond that, no modifications will be permitted other than structural changes to strengthen the aircraft (however, see also rule 2.7 para1).

1.3. Any modifications, which in the opinion of the judges, significantly change the appearance and/ or performance of the aircraft as originally designed will not be allowed.

2. GENERAL:

2.1. The contest to consist of at least two official flights. The resulting score to be the better one of the two flights. At the discretion of the CD, the contest may consist of three flights where the highest two scores will be totalled. This to be announced before the start of the contest. The contestant is to be allowed two attempts at each official flight. An official flight is when the contestant signals the next manoeuvre after level flight. All manoeuvres must be signalled before they are started by the raising of the free hand for at least 1⁄2 lap. Manoeuvres are to be performed in accordance with the attached schedule.

2.2. All current BMFA Safety Rules shall be applied. The assembled model complete with lines & handle to be subjected to a test pull of 10 times the model weight. The following minimum control line wire diameters are recommended according to engine displacement, regardless of the model's weight:

Up to 2.5cc (0.15 cu in) 0.012in
Up to 7.5cc (0.46 cu in) 0.015in
Up to 10.0 cc (0.61 cu in) 0.018in

2.3. No appearance points will be awarded.

2.4. A bonus of 25 points will be awarded for successfully completing the schedule in the correct order.

2.5. Silencers should be used for IC-powered models whenever possible and the system may be pressurised. Local silencer rules must be obeyed.

2.6. Scaling up or down of designs is not permitted.

2.7. Aircraft designs that did not include a fixed undercarriage may be fitted with an undercarriage of the two wheel, tail dragger type. Models that do not have undercarriages are eligible. In this case, ‘ take off’ will be judged on smoothness of the fly away from a hand launch. Landings will be judged on smoothness of approach.

2.8. Some model designs were configured such that the largest fuel tank that could be installed is of insufficient size to complete a full schedule of manoeuvres. In this case, the contestant may land to refuel, restart and re launch the model. When this is to be done, the contestant will inform the judge (s) at which point in the schedule the flight will be broken. The first start & take off and the last landing will be judged. In the event of a failure to restart, the one landing will be scored.

2.9. Aircraft that were originally designed to have operating wing flaps must have wing flaps. Fixing the wing flaps constitutes a design modification and is disallowed under rule 1.3 above.

SCHEDULE:

Notes:
A minimum of two normal level laps should separate each manoeuvre. All hand signals must be clearly given. The bonus points for the completion of the schedule will be awarded only if each manoeuvre is:

a) completed, and
b) completed in the correct order.

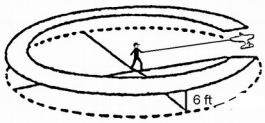
Incomplete manoeuvres will be marked, but no bonus points will be awarded.
The contestant is allowed 10 minutes to complete the flight programme including the take off and landing and any refuelling stops (see para 2.8 under General Heading). The 10 minute time limit commences when the contestant gives a hand signal prior to starting the engine. Any manoeuvres performed after the 10 minute point will not be marked, the resulting score for the flight being the total of points awarded up to that point. The contestant may attempt a manoeuvre only once in any flight. Normal level flight height and inverted flight height is between 5ft (1.5m) and 7ft (2.10m). The bottom level of all manoeuvres except the overhead eights is also between 5ft (1.5m) and 7ft (2.10m).

1. TAKE OFF WITHIN 1 MINUTE. (5 points) The time allowed to obtain 5 points for getting the model airborne within 1 minute begins when the contestant signals that he/she is ready to start. The contestant has a total of 3 minutes to get the model into the air from the time the handle is placed in the centre of the flight circle. Failure to become airborne within the 3 minute limit will constitute an attempt. An IC engine must be started by the contestant. The use of a starter is permitted.
2. TAKE OFF. (5 points max) Upon release, the model must be seen to roll forward under proper control and rise smoothly to level flight within one lap. If hand launched, the model must be seen to be under control after release and to rise smoothly as with R O G.
3. LEVEL FLIGHT - 2 laps exactly (5 points max) Starting one lap from release the model must fly at a constant altitude of between 5ft (1.5m) and 7ft (2.10m). No signal from the pilot is required.
4. VERTICAL CLIMB - 1 (10 points max) The model climbs vertically for a minimum distance of 15 feet (4.6m) and returns to a horizontal attitude before reaching a point directly over the pilot, after which it makes a smooth return to normal level flight. There should be a precise change of direction into and out of the manoeuvre.
5. VERTICAL DIVE - 1 (10 points max) The model enters the Vertical Dive after smoothly climbing to a level below the overhead point, dives for a minimum of 15 feet (4.6m) and then pulls out into normal level flight. There should be a precise change of direction into and out of the manoeuvre.

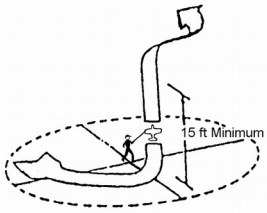
6. WINGOVER -1 (15 points max) The model starts from upright level flight and climbs vertically, passing directly over the pilot down to the other side, cutting the ground circle in half, before pulling out again into upright level flight. There should be a precise change of direction into and out of the manoeuvre
7. INSIDE LOOPS - 5 (30 points max) Inside loops are entered and exited from level flight. The line angle at the top of the loop should be 60° and all loops to be circular and superimposed.
8. OUTSIDE LOOPS - 5 (Scoring as inside loops) These may be entered downwards from 60 degree line angle or optionally upwards from inverted flight after a 'flip over'. In either case the manoeuvre is entered and exited from the 60 degree line angle point. Other conditions as inside loops.
9. INVERTED FLIGHT - 2 laps exactly (30 points max) Entry is an inside or outside 'flip over'. The model must fly at a constant altitude of between 5ft (1.50m) and 7ft (2.10m). Two scored laps begin at the end of the 'flip over'. Recovery, part of an outside loop, begins exactly two laps later. Both entry and exit manoeuvres are judged as part of the whole manoeuvre.
10. HORIZONTAL EIGHTS - 3 (40 max) The line angle at the top of loops in the horizontal 8s should be 60°. Each loop must be circular, the intersections vertical and superimposed. The manoeuvres must be entered and exited via the inside loop which is to the left of the pilot.
11. VERTICAL EIGHTS - 3 (40 max) This is a vertical version of the horizontal Eight with entry into the bottom inside half following on to an outside loop with a line angle at the intersection point of 45° degrees and at the top of 90°. The exit is out of the inside loop into level flight. The intersections must be horizontal and superimposed.
12. OVERHEAD EIGHTS - 3 (40 max) This is the overhead version of the above eights with entry and exit at 30° line angle at the bottom of the inside loop, to the left of the pilot. The intersections must be overhead, superimposed and split the circle in half.
13. SQUARE LOOP - 1 (40 points max) This is a square-cornered inside loop (correctly flown, the manoeuvre is an oblong rather than a square) with the horizontal portion covering at least one quarter of a lap. The corners shall have a radius of approximately 5ft (1.5m). The top of the loop should be at 60° line angle. Entry and exit is upright level flight.
14. THREE LEAF CLOVER - 1 (40 points max) This manoeuvre consists of a single horizontal eight stretched over approximately half a lap. At the intersection point, the model will be travelling downwards after the outside loop, at an angle of about 30°. At the point of intersection an inside loop is performed to a line angle of 75° at the top. The manoeuvre is completed when the intersection point has been passed and the model returns to level flight.
15. LANDING (15 points max : Nose over =1, rough = 5, bounce = 10, smooth = 15) When the motor stops, the model is to make smooth approach to ground level where it will make contact gently. Models with an undercarriage will roll forward and come to a stand still in an upright position, without bouncing. Those without an undercarriage will slide along for a short distance and settle in an upright position.

Rules Sponsor: Mick Taylor Second Revision Jan 2018

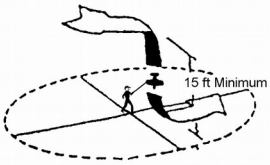
SAM 35 Vintage and Taster Stunt Schedules



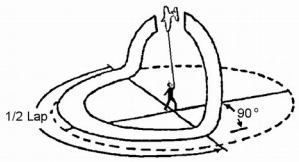
3. Level Flight



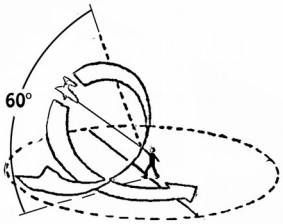
4. Vertical Climb



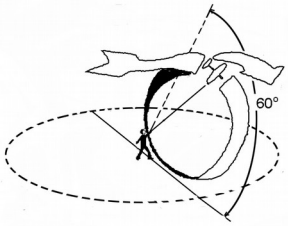
5. Vertical Dive



6. Wing Over

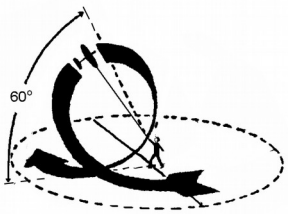


7. Inside Loops

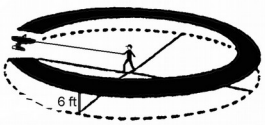


8. Outside Loops (usual)

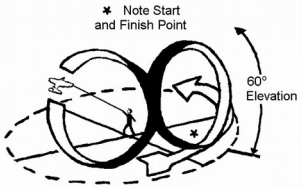
OR



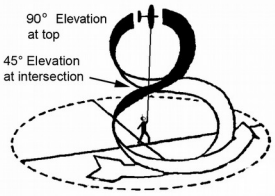
8. Outside Loops (alternative)



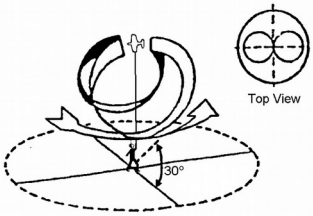
9. Inverted Flight



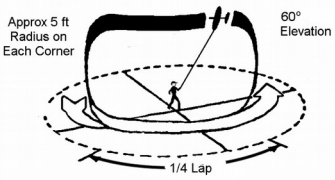
10. Horizontal Eight



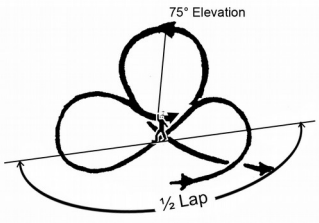
11. Vertical Eight



12. Overhead Eight



13. Square Loop



14. Three Leaf Clover

VINTAGE STUNT SCORE SHEET

Name _____ Draw Number _____

	POOR	FAIR	GOOD	EXEL	SCORE
TAKE OFF IN ONE MINUTE				5	
TAKEOFF	1	3	4	5	
LEVEL FLIGHT (2 laps)	1	3	4	5	
CLIMB (1)	3	5	7	10	
DIVE (1)	3	5	7	10	
WINGOVER (1)	3	8	12	15	
INSIDE LOOPS (5)	5	10	20	30	
OUTSIDE LOOPS (5)	5	10	20	30	
INVERTED FLIGHT (2 laps)	5	10	20	30	
HORIZONTAL EIGHTS (3)	10	20	30	40	
VERTICAL EIGHTS (3)	10	20	30	40	
OVERHEAD EIGHTS (3)	10	20	30	40	
SQUARE LOOP (1)	10	20	30	40	
3 LEAF CLOVER (1)	10	20	30	40	
LANDING	1	5	10	15	
BONUS FOR COMPLETING SCHEDULE IN CORRECT ORDER				25	
				TOTAL	

JUDGED BY _____