

## **ANNEX 5L**

### **F3M – RADIO CONTROLLED AEROBATIC MODEL AIRCRAFT**

#### **DESCRIPTION OF MANOEUVRES – KNOWN SCHEDULE**

**1. Double turn with two  $\frac{3}{4}$ -loops and knife edge connecting line between them **K=5****

From upright pull to vertical line and perform  $\frac{1}{4}$ -roll. Turn to vertical down line and perform  $\frac{1}{4}$ -roll, pull to  $\frac{3}{4}$ -loop followed by  $\frac{1}{4}$ -roll to knife edge flight and  $\frac{1}{4}$ -roll. Pull to  $\frac{3}{4}$ -loop to vertical line and perform  $\frac{1}{4}$ -roll. Turn to vertical down line and perform  $\frac{1}{4}$ -roll, pull to upright.

Possible mistakes:

- Diameters of both loops are not the same
- The vertical lines are not placed on the centre line of the flight area
- Both turns are performed in different altitude
- All  $\frac{1}{4}$ -rolls in verticals have to be at the same altitude

**2. Glass hours on side with snap roll on the vertical line **K=3****

From upright pull to 45° upline, perform full roll and push to vertical down line and perform a snap roll (+ or -), push to 45° upline with  $\frac{1}{2}$ -roll and push to upright in opposite direction and higher altitude than the entry.

Possible mistakes:

- Uplines are not 45°
- The rolls are not in the middle of lines
- Both 45° lines are not the same length

**3. Double inverted top hat with loop in knife edge and snap roll on the top of it **K=4****

From upright push to vertical down line, perform  $\frac{1}{4}$ -roll and push to inverted horizontal flight, push to vertical upline and perform  $\frac{1}{2}$ -loop in knife edge with snap roll (+ or -) on the top, push to inverted horizontal flight, push to vertical upline, perform  $\frac{1}{4}$ -roll and push to upright .

Possible mistakes:

- Both  $\frac{1}{4}$ -rolls have to be in the same altitude
- Both inverted flights have to be the same length
- Top snap roll has to be on the center line
- The entry and exit have to be in the same altitude

**4. Half loop with integrated full roll **K=2****

From upright push to half inverted loop with integrated full roll. Exit inverted .

Possible mistakes:

- Roll does not have constant rotation speed
- Half loop is not half round shaped
- Roll is not integrated to whole half loop

### **5. Cobra with snap rolls up and down**

**K=3**

From inverted flight push to 45° upline, perform negative snap roll, than pull to 45° down line and perform 1½ negative snap roll, pull to upright .

Possible mistakes:

- The up and down lines are not 45°
- The snap rolls are not in the middle of 45° lines
- Model is changing direction after the snap rolls

### **6. Humpty Bump (pull-push-push) with 2-point roll up and 4-point roll down**

**K=2**

From upright pull to vertical upline with 2-point roll, push to half negative loop to vertical down line with 4-point roll and push to horizontal flight. Exit inverted.

Possible mistakes:

- Up and down lines are not vertical
- Rolls have to be in the middle of vertical lines
- First and last ¼ loops do not have the same diameter as upper ½ loop

### **7. Combination of roll, knife edge flight and snap roll**

**K=4**

From inverted flight perform ¾ roll to knife edge flight and perform 1¼ positive snap roll in opposite direction to exit upright.

Possible mistakes:

- Model is changing direction during the whole manoeuvre
- Snap roll in the same direction as point roll – 0 points!

### **8. Shark tooth with full roll up and 1½-roll down**

**K=2**

From upright pull to 45° upline with full roll and push 135° to vertical down line with 1½ roll and pull to upright.

Possible mistakes:

- Rolls are not in the middle of lines
- Upline is not 45°
- Downline is not vertical

### **9. Golf ball in knife edge flight**

**K=4**

From upright pull to 45° upline and perform ¼-roll to knife edge flight, perform ¾-loop to 45° down line, perform ¼-roll and pull to upright.

Possible mistakes:

- The loop is not round shaped
- The ¼-rolls are not on the center line

### **10. Turn with 4-point roll up and two alternating snap rolls down**

**K=3**

From upright pull to vertical upline, perform 4-point roll and turn to vertical down line, perform two snap rolls (+ or -) in opposite direction and pull to upright.

Possible mistakes:

- Rolls are not in the middle of the vertical lines
- Model falls forward or backward in the turn – 0 points!

**11. Horizontal circle 8 with 8 integrated alternating ½-rolls**

**K=5**

From upright perform  $\frac{1}{4}$  horizontal circle with inside integrated  $\frac{1}{2}$ -roll, then perform immediately another (full) circle in the opposite direction with 4 integrated alternated  $\frac{1}{2}$  rolls. Then, perform immediately another  $\frac{3}{4}$  circle in the opposite direction with 3 integrated alternated  $\frac{1}{2}$  rolls, exit upright.

Possible mistakes:

- All  $\frac{1}{2}$ -rolls are not changing direction of rotation – 0 points
- Both circles are not the same size
- Not keeping the constant altitude during both circles

**12. Half loop with integrated full roll and 2½ turns of inverted spin**

**K=4**

From upright pull to half loop with integrated full roll. Briefly after the end of  $\frac{1}{2}$ -loop perform  $2\frac{1}{2}$  turns of inverted spin to vertical down line and pull to upright.

Possible mistakes:

- Spin has to start briefly after the end of half loop
- Missing vertical line after the spin
- Rotation speed of the integrated roll is not constant during the whole half loop

Manoeuvre diagram appears overleaf

