

## ANNEX 7I SWE F3C Manoeuvres (1) A

### Agenda Item 11.8 n)

#### F3C Manoeuvre Schedule Preliminary

October 22, 2008. By Johannes Melén Sweden

The following manoeuvres are to be done under the rules applied in Sporting Code Volume 4 section F3C. Hovering manoeuvre stops are to be minimum 2 seconds. The schedule is a combination of the “old” F3C A+B+C schedule. Some minor changes have been done to old manoeuvres and some completely new manoeuvres exist. As for electric models, the sequence of the manoeuvres have been compromised and hopefully will give more flight time and better battery performance. Time has been saved after manoeuvre B9. There is no need for a fly-by, before performing the S-Auto.

## **F3C Manoeuvre Proposal A-Schedule**

### **A1. DIAMOND 2 - UPWIND/UPWIND**

The model aircraft lifts off from the helipad and hovers at eye level. Model aircraft then ascends backwards at 26,5°, while simultaneously performing a 180° pirouette in either direction, to a spot directly over flag 1(2) to stop and hover 2.5m AEL. The model aircraft then climbs another 2.5m, while simultaneously performing a 180° pirouette in either direction, to stop and hover over the helipad at a height of 5m AEL. A 360° pirouette in either direction is performed. The model aircraft then descends 2.5m, while simultaneously performing a 180° pirouette in either direction, to arrive over flag 2(1) to stop and hover 2.5m AEL. The model aircraft then descends, while simultaneously performing a 180° pirouette in either direction to the helipad. The model stops to hover at eye level over the centre of the helipad. The model aircraft descends and lands on the helipad.

### **A2. HOURGLASS 1 – UPWIND/UPWIND**

Model aircraft takes off vertically from the helipad and ascends to eye level and stops. The model backs up to flag 1(2) while executing a travelling 180° pirouette in either direction and stops. A diagonal line is flown backwards across and up to 4m AEL, and stops to hover over the opposite flag 2(1). A 360° pirouette in either direction is performed while travelling at the same altitude to stop and hover over flag 1(2). A diagonal line is flown backward across and down to arrive at eye level over flag 2(1). Another 180° pirouette in either direction is performed while travelling to the centre helipad. The model stops to hover at eye level over the centre of the helipad. The model aircraft descends and lands on the helipad.

### **A3. HOVERING “M2” -UPWIND/UPWIND**

Model aircraft takes off vertically from the helipad and ascends to eye level and stops. The model backs up to flag 1(2). Model aircraft then ascends vertically 5m while performing two 180° pirouettes of opposite direction and stops. Model then performs two 180° pirouettes of opposite direction, while descending at a 45° angle to eye level above the helipad and stops. Model then ascends at a 45° angle while performing two 180° pirouettes of opposite direction to a point 5m AEL over flag 2(1) and stops. Model aircraft then descends vertically 5m while performing two 180° pirouettes of opposite direction to eye level and stops. The model then flies backward to the helipad. The model stops to hover over the centre of the helipad. The model aircraft descends and lands on the helipad.

### **A4. ROLL REVERSAL – DOWNWIND/DOWNWIND**

Model aircraft flies straight and level for a minimum of 10m. Model aircraft executes a roll in either direction followed by a recognisable upright straight segment, followed by a roll in the opposite direction while maintaining longitudinal axis in the direction of flight. Second roll must be executed at same roll rate. The upright straight segment must be centred on the centre line. The total duration of the two rolls must be four (4) seconds minimum.

#### A5. FIGURE M WITH 180° STALL TURNS -UPWIND/UPWIND

Model aircraft flies straight and level for a minimum of 10m. Model pulls vertical and does a quarter roll so that the top of the disk is toward the pilot and continues for a minimum of 1 fuselage length. When the model stops climbing the model performs a 180° stall turn. On the way down the model does another quarter roll and performs an inside half loop. Model goes vertical again and does another quarter roll so that the top of the disk is toward the pilot and continues for a minimum of 1 fuselage length. Model does another 180° stall turn. Model does another quarter roll and pulls out at starting altitude in level flight for 10m to finish the manoeuvre.

#### A6. CUBAN EIGHT with 2-point rolls -DOWNWIND/DOWNWIND

Model aircraft flies straight and level for a minimum of 10m and executes a 5/8 inside loop. When the model aircraft is in 45° descent and inverted it executes a 2-point roll in either direction to upright and enters a 3/4 inside loop. When the model aircraft is again in 45° descent and inverted it executes a second 2-point roll in either direction and finishes the first partial loop in upright attitude.

#### A7. FLIPPING PULLBACK -UPWIND/UPWIND

Model aircraft flies straight and level for 10m and enters the manoeuvre by pulling up into a vertical ascent after passing the centre line. After the model comes to a stop the model performs small backward 1/4 inside loop and flies backwards and performs a travelling, centred pushed flip at constant altitude. This is followed by another small backward 1/4 inside loop to a vertical nose down stop. The model then continues by descending on a path that mirrors the entry path. After the descent, model transitions to same heading and altitude as at the start of the manoeuvre. Model continues for 10m to finish the manoeuvre.

#### A8. COBRA ROLL WITH HALF ROLLS – DOWNWIND/DOWNWIND

Model aircraft flies straight and level for 10m and enters the manoeuvre by pulling up into a 45° climb. After a 5m minimum straight segment the model aircraft performs a half roll in either direction to the inverted position and continues to climb at 45° for 5m minimum. At this point the model aircraft performs a 1/4 inside loop and enters a 45° dive inverted and after a 5m minimum straight segment performs another half roll in either direction. Model aircraft continues for 5m minimum and then recovers at starting altitude in level flight for 10m to finish manoeuvre.

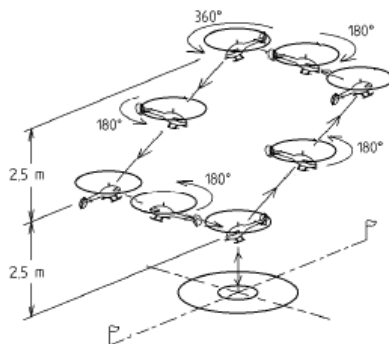
#### A9. PUSH OVER WITH HALF ROLL -UPWIND/UPWIND

Model aircraft flies straight and level for a minimum of 10 m, then transitions to a vertical ascent at 90° followed by a half roll in either direction and followed by a vertical ascent of one fuselage length minimum. When model aircraft comes to a stop, model aircraft performs a 1/4 pushed flip to upright position and stops. The model then completes two 90° pirouettes pausing to hover for a minimum of 2 second at each point to complete the 180° rotation. The direction of pirouette must be such that the model completes the 180° with the nose into the wind. Model aircraft then performs a 1/4 pushed flip to vertical (nose down) position followed by vertical descent and 1/4 inside loop back to the same altitude and heading as at start of the manoeuvre. Flying straight and level for 10m minimum completes manoeuvre.

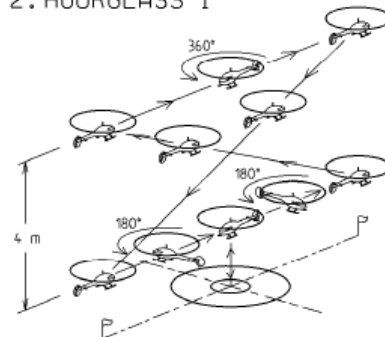
## A10. AUTOROTATION WITH TWO 90° TURNS -DOWNWIND/UPWIND

Model aircraft flies at a minimum altitude of 20 m. Manoeuvre begins when model aircraft crosses an imaginary plane that extends vertically upward from a line drawn from the centre judge out through the helipad. Model aircraft must be in the autorotation state when it cuts this plane, the engine must be off at this point and the model aircraft must be descending. The first 90° turn must be made after the model aircraft has made 1/3 of the total descent. After this turn the model aircraft must fly straight before the next turn is made after the model aircraft has made 2/3 of the descent. The model aircraft then flies straight down to the helipad. Each leg of the manoeuvre must be a minimum of 10m in length. The descent rate must be constant from start to a point just before touchdown on the helipad. The flight path of the model aircraft must appear as an open square when viewed from above, starting at the vertical plane and ending at a line drawn from the centre judge through the helipad.

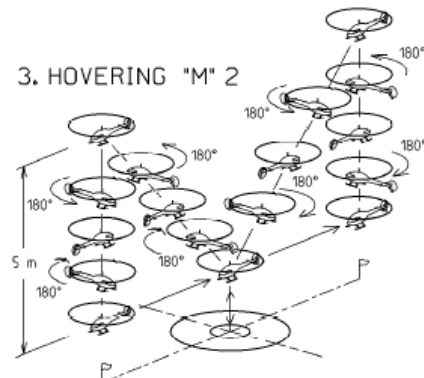
### 1. DIAMOND 2

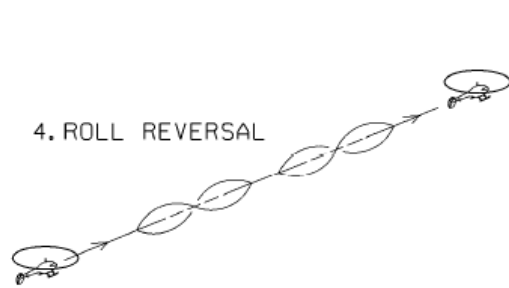


### 2. HOURGLASS 1

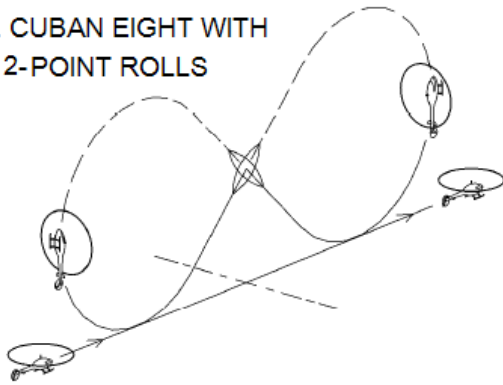


### 3. HOVERING "M" 2

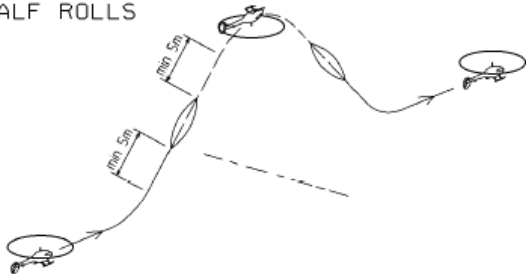




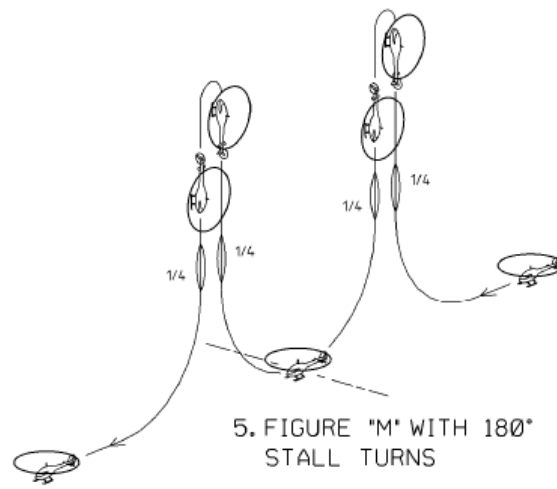
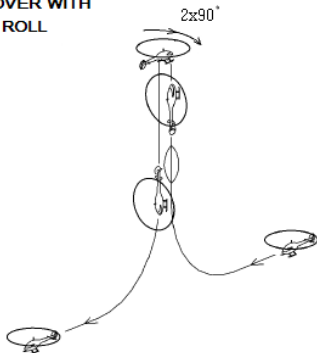
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2-POINT ROLLS



8. COBRA ROLL WITH  
HALF ROLLS



9. PUSH OVER WITH  
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7. FLIPPING PULLBACK

