

## ANNEX 7m SWE F3C Manoeuvres (2) B

### Agenda Item 11.8 n)

#### F3C Manoeuvre Schedule Finals

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 B-Schedule**

### **B1. DIAMOND 3 - 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 360° 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 360° 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 360° 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 360° pirouette in either direction, to the helipad and stops to hover at eye level. The model aircraft descends and lands on the helipad.

### **B2. CIRCLE WITH TWO 360° PIROUETTES – UPWIND/UPWIND**

Model aircraft takes off vertically from helipad and stops at eye level. Model flies backwards into an ascending vertical circle (5m diameter) while simultaneously executing a 360° pirouette ending at the top of the first half. At this point the pirouette switches direction for the second half of the circle stopping over the helipad at eye level. Model then descends to a landing on the helipad.

### **B3. RECTANGLE 4 -UPWIND/UPWIND**

Model aircraft takes off vertically from helipad to eye level and stops. The model backs up to flag 1(2) while simultaneously performing a 360° pirouette in either direction and stops. Model aircraft then ascends vertically 5m while performing two 360° pirouettes of opposite direction and stops. Model then flies horizontally across to flag 1(2) simultaneously performing two 360° pirouettes in opposite directions and stops. Model aircraft then descends vertically 5m while performing two 360° pirouettes of opposite direction to eye level and stops. Another 360° pirouette in either direction is performed while travelling to the centre helipad. The model stops to hover over the centre helipad then lands.

### **B4. ROLL REVERSAL 3 -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. The second roll is done in the opposite direction, passing the centre line when half the second roll is performed, followed by a recognisable upright straight segment. A third and final roll is executed in the opposite direction of the second roll (same direction as the first roll). All rolls are maintaining longitudinal axis in the direction of flight. All rolls must be executed at same roll rate. The total duration of the three rolls must be four (4) seconds minimum.

#### B5. FIGURE "M" WITH 540° STALL TURNS AND OUTSIDE ROLLS -UPWIND/UPWIND

Model aircraft enters the manoeuvre by performing a half roll to inverted flight. Model then flies straight and level for 20m. Helicopter pulls vertical and establishes a vertical line. The helicopter completes a ¼ roll such that the rotor disc faces pilot and continues for a minimum of 1 fuselage length. At the top, model aircraft executes a 540° pirouette so that the nose points downward. The model aircraft descends vertically and performs a ¼ roll to an inverted attitude. The model aircraft then performs a centred inverted outside half loop and continues on a second vertical ascent. The model aircraft performs another ¼ roll so that the rotor disc again pilot and continues for a minimum of 1 fuselage length. After the model aircraft stops it performs another 540° pirouette until the nose points downward. The model aircraft then descends vertically and performs another ¼ roll. The model aircraft then performs a ¼ inside loop to recover at the same altitude as the entry. After the ¼ inside loop, model aircraft flies straight and level for 20m and executes a half roll to upright flight.

#### B6. COBRA ROLL WITH ½ ROLLS AND PUSHED FLIP -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 makes a 270° pushed flip before it enters a 45° dive 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.

#### B7. TWO REVERSE OUTSIDE LOOPS -UPWIND/UPWIND

Model aircraft enters the manoeuvre by performing a half roll to inverted flight. Model then flies straight and level for 20m and executes two upward outside loops. After the loops, model aircraft flies straight and level for 20m and executes a half roll to upright flight.

#### B8. HORIZONTAL EIGHT WITH ROLLS -DOWNWIND/DOWNWIND

Model aircraft flies straight and level and executes a 5/8 inside loop. When the model aircraft is in 45° descent it performs a full roll and enters a ¾ outside loop. When the model aircraft is again in 45° descent it executes another full roll and a partial inside loop to upright attitude.

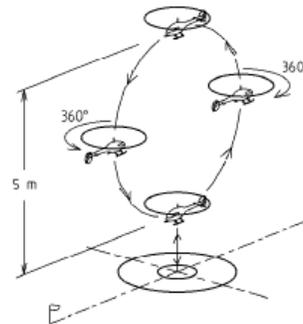
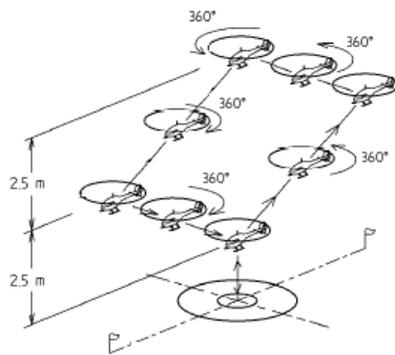
#### B9. VERTICAL SPIKE 2 -UPWIND/DOWNWIND

Model aircraft flies straight and level for 10m minimum. The model aircraft pulls to vertical and ascends vertically and performs a ¼ roll such that the rotor disc pilot and continues for a minimum of 1 fuselage length. After the model stops it performs a ¼ pulled flip to an inverted nose-in hover and stops. The model aircraft then hovers inverted for 3 seconds. The model then completes three 90° pirouettes pausing to hover inverted for a minimum of 1 second at each point to complete the 270° rotation. The direction of pirouette must be such that the model completes the 270° with the tail into the wind and inverted. The model then performs a ¼ pulled flip and begins to fall vertically. The model aircraft descends vertically and executes a ½ roll. The model aircraft then performs a ¼ inside loop and recovers upright at the starting altitude.

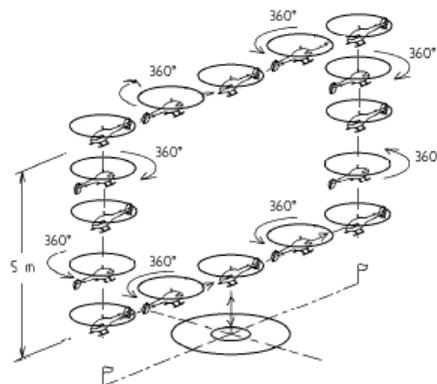
## B10. "S" AUTOROTATION- UPWIND/DOWNWIND/UPWIND

The model aircraft enters the manoeuvre going upwind at a minimum altitude of 40m and some distance out. After crossing the plane upwind, and some distance out, the model makes the first 180° turn towards the pilot. As the model crosses the plane again but downwind it enters another descending 180° turn toward the pilot and lands.

1. DIAMOND 3

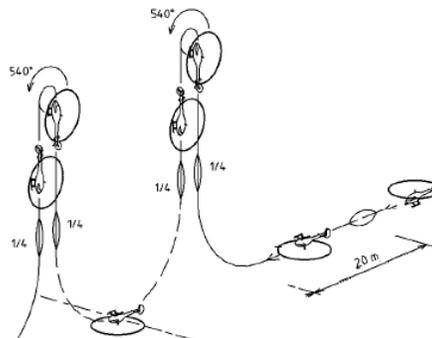
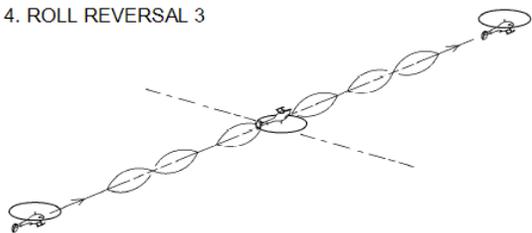


2. CIRCLE WITH TWO 360° PIRQUETTES



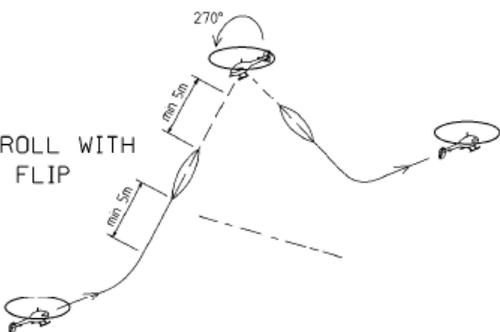
3. RECTANGLE 4

4. ROLL REVERSAL 3

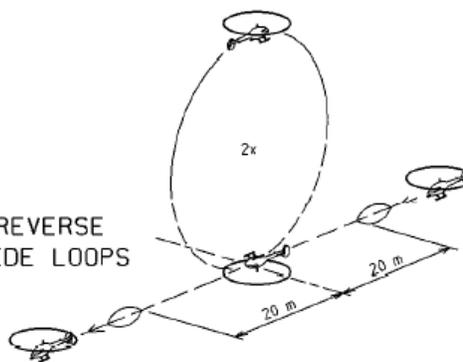


5. FIGURE M WITH 540° STALL TURNS AND OUTSIDE ROLLS

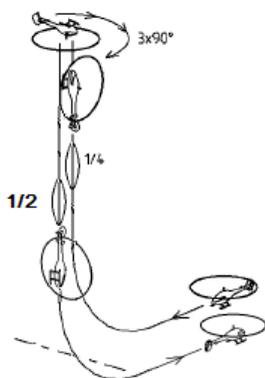
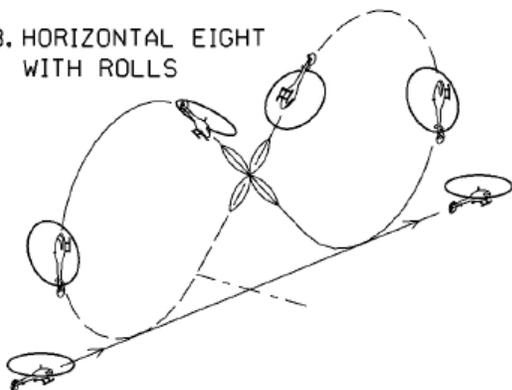
6. COBRA ROLL WITH PUSHED FLIP



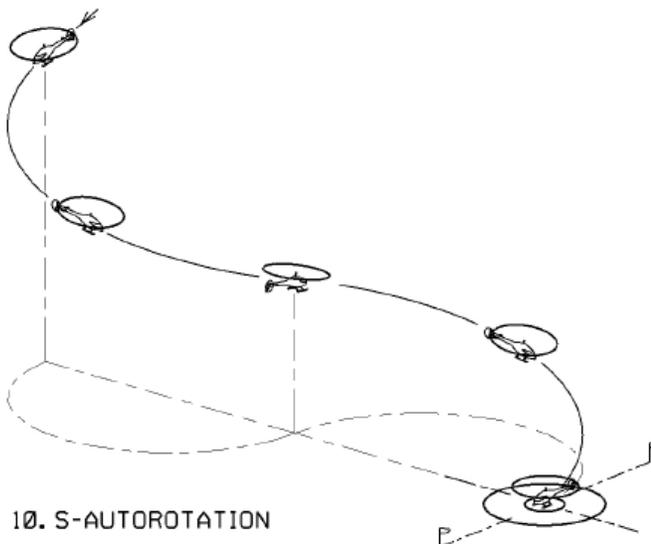
7. TWO REVERSE OUTSIDE LOOPS



8. HORIZONTAL EIGHT WITH ROLLS



9. VERTICAL SPIKE 2



10. S-AUTOROTATION