

**ANNEX 5M****F3P – RADIO CONTROLLED INDOOR AEROBATIC AIRCRAFT****DESCRIPTION OF MANOEUVRES****Preliminary Manoeuvres – Schedule F3P-AP-19 (2018-2019)****AP-19.01 Square Loop with  $\frac{1}{4}$  roll,  $\frac{1}{2}$  roll,  $\frac{1}{4}$  roll**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{1}{4}$  roll. perform a  $\frac{1}{4}$  knife-edge loop into a knife-edge horizontal line, perform a  $\frac{1}{2}$  roll, perform a  $\frac{1}{4}$  knife-edge loop into a vertical downline, perform a  $\frac{1}{4}$  roll, pull through a  $\frac{1}{4}$  loop, exit upright.

**AP-19.02 Half Reverse Knife-Edge Cuban Eight**

From upright, pull through a  $\frac{1}{8}$  loop into a  $45^\circ$  upline, perform a  $\frac{1}{4}$  roll, perform  $\frac{5}{8}$  knife-edge loop perform a  $\frac{1}{4}$  roll, exit upright.

**AP-19.03 Horizontal Eye Catcher with  $\frac{3}{4}$  rolls integrated**

From upright, perform two consecutive  $\frac{3}{4}$  circles while integrating a  $\frac{3}{4}$  roll into the first  $\frac{3}{4}$  circle and a second  $\frac{3}{4}$  roll in opposite direction into the second  $\frac{3}{4}$  circle, exit upright.

**AP-19.04 Double Humpty Bumps with  $\frac{3}{4}$  torque rolls**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{3}{4}$  torque roll, pull through a  $\frac{1}{2}$  loop into a vertical downline, push through a  $\frac{1}{4}$  loop into inverted flight, push through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{3}{4}$  torque roll, push through a  $\frac{1}{2}$  loop into a vertical downline, push through a  $\frac{1}{4}$  loop, exit inverted.

**AP-19.05 Knife-Edge Roll Combination with  $\frac{1}{4}$  roll, four consecutive  $\frac{1}{8}$  rolls,  $\frac{1}{4}$  roll**

From inverted, perform a  $\frac{1}{4}$  roll into sustained knife-edge flight, perform consecutively four  $\frac{1}{8}$  rolls in opposite direction, into sustained knife-edge flight, perform a  $\frac{1}{4}$  roll, exit inverted.

**AP-19.06 Half Square Loop with two consecutive opposite  $\frac{1}{2}$  rolls**

From inverted, push through a  $\frac{1}{4}$  loop into a vertical upline, perform consecutively two  $\frac{1}{2}$  rolls in opposite direction, push through a  $\frac{1}{4}$  loop, exit upright.

**AP-19.07 Eye Catcher with  $\frac{1}{2}$  rolls integrated**

From upright, push through a  $\frac{3}{4}$  loop while integrating a  $\frac{1}{2}$  roll into the first 180 degrees of the  $\frac{3}{4}$  loop, push through a second  $\frac{3}{4}$  loop while integrating a  $\frac{1}{2}$  roll into the last 180 degrees of the  $\frac{3}{4}$  loop, exit upright.

**AP-19.08 Figure M with  $\frac{1}{2}$  rolls**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{1}{2}$  roll, perform a stall turn into a vertical downline, perform a  $\frac{1}{2}$  knife edge loop into a vertical upline, perform a  $\frac{1}{2}$  roll, perform a stall turn into a vertical downline, pull through a  $\frac{1}{4}$  loop, exit upright.

**AP-19.09 Horizontal Square with  $\frac{3}{4}$  roll, two consecutive  $\frac{1}{4}$  rolls,  $\frac{1}{2}$  roll, two consecutive  $\frac{1}{4}$  rolls,  $\frac{1}{4}$  roll**

From upright, perform a  $\frac{3}{4}$  roll in the centre, perform a  $\frac{1}{4}$  knife edge circle, perform consecutively two  $\frac{1}{4}$  rolls, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{2}$  roll, perform a  $\frac{1}{4}$  knife edge circle, perform consecutively two  $\frac{1}{4}$  rolls, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{4}$  roll, exit inverted.

**AP-19.10 Corner Combination with  $\frac{3}{4}$  roll**

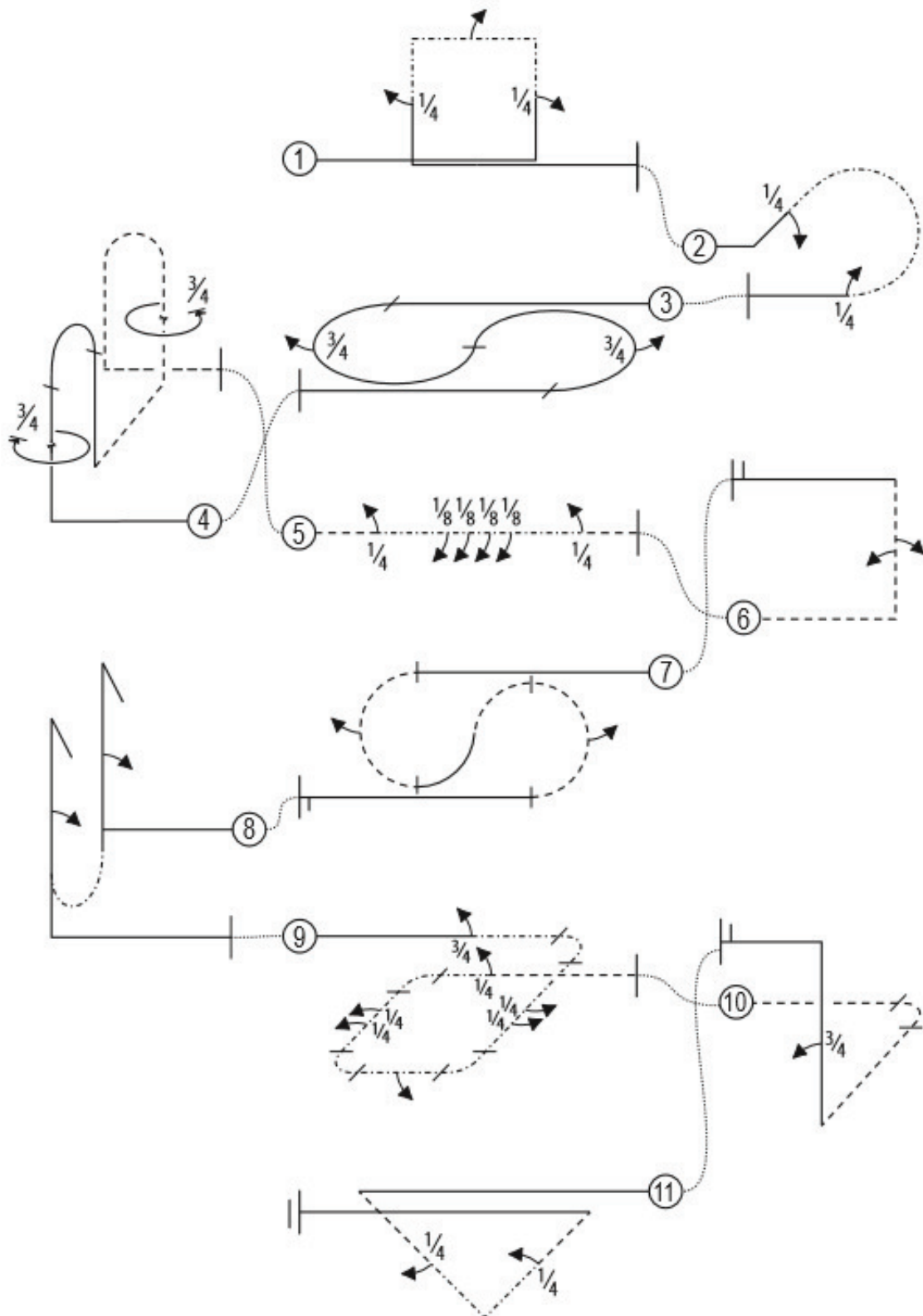
From inverted perform a  $\frac{1}{4}$  circle with wing level into a cross box line, push through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{3}{4}$  roll, push through a  $\frac{1}{4}$  loop, exit upright.

**AP-19.11 Triangle Loop with  $\frac{1}{4}$  roll,  $\frac{1}{4}$  roll**

From upright, push through a  $\frac{3}{8}$  loop into a  $45^\circ$  downline, perform a  $\frac{1}{4}$  roll into knife edge, perform a  $\frac{1}{4}$  knife edge loop into a  $45^\circ$  upline, perform a  $\frac{1}{4}$  roll push through a  $\frac{3}{8}$  loop, exit upright.

*The Aresti diagrams appear overleaf.*

## PRELIMINARY SCHEDULE AP-19 (2018-2019)



Drawings by Ken Hirose  
June 2017

**Final Manoeuvres – Schedule F3P-AF-19 (2018-2019)****AF-19.01 Double Key with  $\frac{1}{4}$  roll,  $\frac{1}{4}$  roll,  $\frac{1}{4}$  roll,  $\frac{1}{4}$  roll**

From upright, pull through a  $\frac{1}{4}$  loop into a centre vertical upline, perform a  $\frac{1}{4}$  roll, perform a  $\frac{5}{8}$  knife-edge loop into a  $45^\circ$  downline, perform a  $\frac{1}{4}$  roll, push through a  $\frac{1}{4}$  loop into a  $45^\circ$  upline, perform a  $\frac{1}{4}$  roll, perform a  $\frac{5}{8}$  knife edge loop into a centre vertical downline, perform a  $\frac{1}{4}$  roll, pull through a  $\frac{1}{4}$  loop, exit upright.

**AF-19.02 Shark Fin with four consecutive  $\frac{1}{8}$  rolls,  $\frac{1}{2}$  roll,  $\frac{1}{2}$  roll**

From upright, pull through a  $\frac{1}{8}$  loop into a  $45^\circ$  upline, perform consecutively four  $\frac{1}{8}$  rolls, pull through a  $\frac{3}{8}$  loop into a vertical downline, perform a  $\frac{1}{2}$  roll, push through a  $\frac{1}{4}$  loop, perform a  $\frac{1}{2}$  roll, exit upright.

**AF-19.03 Three consecutive opposite rolls**

From upright, perform three consecutive rolls in opposite direction, exit upright.

**AF-19.04 Knife Edge Humpty Bump with two consecutive opposite  $\frac{1}{4}$  rolls,  $\frac{1}{2}$  roll integrated,  $\frac{1}{2}$  roll**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform consecutively two  $\frac{1}{4}$  rolls in opposite direction, perform a  $\frac{1}{2}$  knife-edge loop, while integrating a  $\frac{1}{2}$  roll, perform a  $\frac{1}{2}$  roll, pull through a  $\frac{1}{4}$  loop, exit upright.

**AF-19.05 Two Loops with opposite rolls integrated**

From upright, pull through a loop while performing a roll integrated, pull through another loop, while performing a roll integrated in opposite direction, exit upright.

**AF-19.06 Tail Slide with  $\frac{1}{2}$  roll**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{1}{2}$  roll, perform a tail slide (canopy up) into a vertical downline pull through a  $\frac{1}{4}$  loop, exit upright.

**AF-19.07 Figure N with  $\frac{1}{4}$  roll,  $\frac{1}{4}$  circle, two consecutive  $\frac{1}{4}$  rolls, two  $\frac{1}{2}$  rolls integrated in the corners, two consecutive  $\frac{1}{4}$  rolls,  $\frac{1}{4}$  circle,  $\frac{1}{4}$  roll**

From upright, perform a  $\frac{1}{4}$  roll in the centre, perform a sustained knife-edge flight, perform a  $\frac{1}{4}$  knife-edge circle into crossbox knife edge-flight, perform two consecutive  $\frac{1}{4}$  rolls, perform a  $\frac{3}{8}$  knife-edge circle while integrating a  $\frac{1}{2}$  roll outside into a knife edge-flight on  $45^\circ$ , perform a  $\frac{3}{8}$  knife-edge circle while integrating a  $\frac{1}{2}$  roll outside, into a crossbox knife edge-flight, perform two consecutive  $\frac{1}{4}$  rolls, perform a  $\frac{1}{4}$  knife-edge circle, perform a  $\frac{1}{4}$  roll, exit upright.

**AF-19.08  $45^\circ$  Knife Edge Humpty Bump with  $\frac{1}{4}$  roll,  $\frac{1}{4}$  roll**

From upright, pull through a  $\frac{3}{8}$  loop into a  $45^\circ$  upline, perform a  $\frac{1}{4}$  roll, perform a  $\frac{1}{2}$  knife-edge loop into a  $45^\circ$  downline, perform a  $\frac{1}{4}$  roll, pull through a  $\frac{3}{8}$  loop, exit upright.

**AF-19.09 Square Eight with consecutive  $\frac{1}{4}$  torque roll, opposite  $\frac{1}{2}$  torque roll,  $\frac{1}{2}$  roll,  $\frac{1}{2}$  roll, consecutive  $\frac{1}{2}$  torque roll, opposite  $\frac{1}{4}$  torque roll**

From upright, fly past centre, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform consecutively a  $\frac{1}{4}$  torque roll and a  $\frac{1}{2}$  torque roll in opposite direction, perform a  $\frac{1}{4}$  knife loop, perform a  $\frac{1}{2}$  roll, perform a  $\frac{1}{4}$  knife-edge loop into a vertical downline, perform a  $\frac{1}{4}$  knife loop, perform a  $\frac{1}{2}$  roll, perform a  $\frac{1}{4}$  knife-edge loop into a vertical upline, perform consecutively a  $\frac{1}{2}$  torque roll and a  $\frac{1}{4}$  torque roll in opposite direction, push through a  $\frac{1}{4}$  loop, exit upright.

**AF-19.10 Half Hourglass with two consecutive  $\frac{1}{4}$  rolls, roll, two consecutive  $\frac{1}{4}$  rolls**

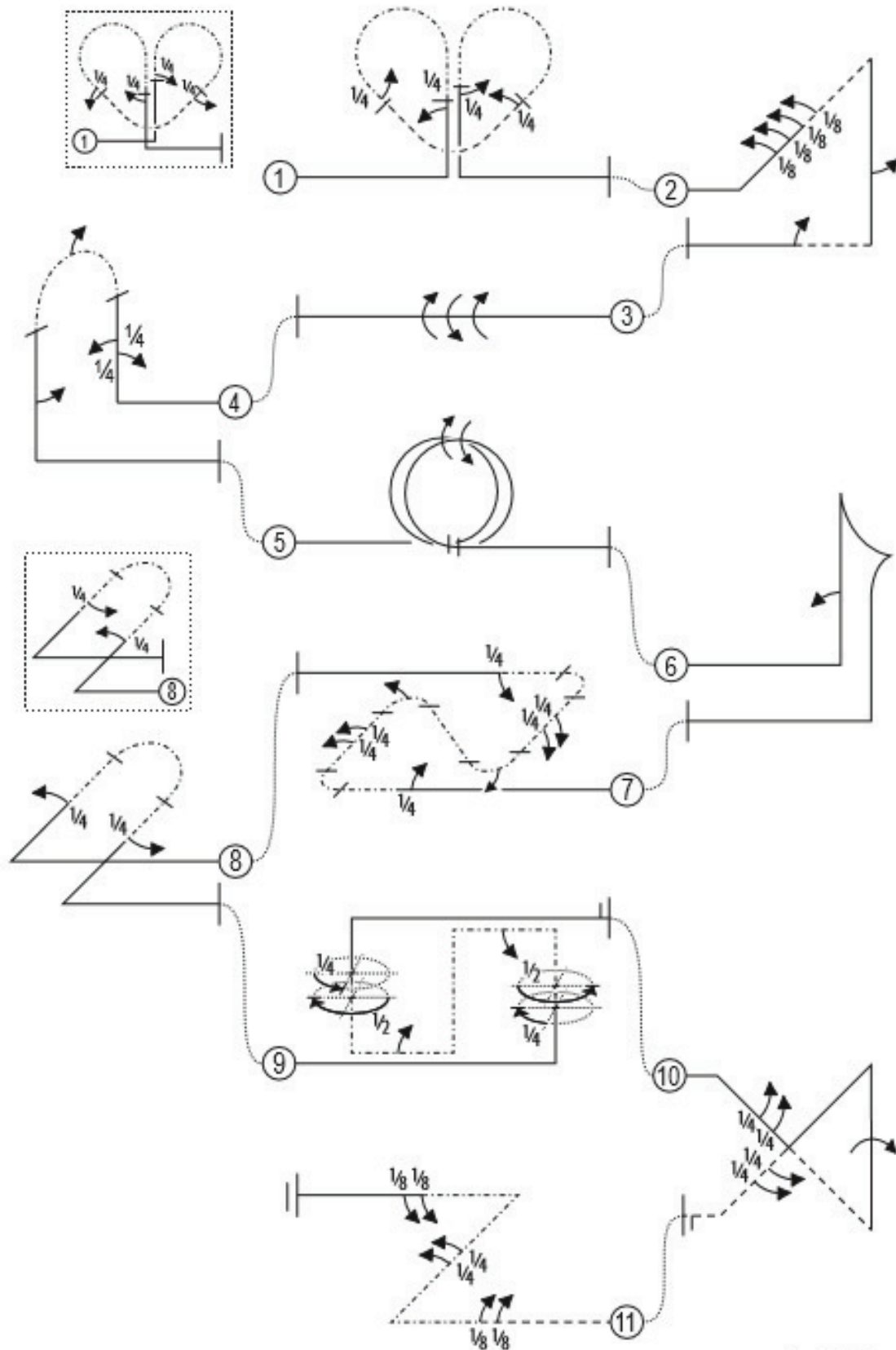
From upright, push through a  $\frac{1}{8}$  loop into a  $45^\circ$  downline, perform consecutively two  $\frac{1}{4}$  rolls, push through a  $\frac{3}{8}$  loop into a vertical upline, perform a roll, push through a  $\frac{3}{8}$  loop into a  $45^\circ$  downline, perform consecutively two  $\frac{1}{4}$  rolls, push through a  $\frac{1}{8}$  loop, exit inverted.

**AF-19.11 Figure Z with two consecutive  $\frac{1}{8}$  rolls, two consecutive  $\frac{1}{4}$  rolls, two consecutive  $\frac{1}{8}$  rolls**

From inverted, perform consecutively two  $\frac{1}{8}$  rolls, perform a  $\frac{3}{8}$  knife-edge loop into a  $45^\circ$  upline, perform consecutively two  $\frac{1}{4}$  rolls, perform a  $\frac{3}{8}$  knife edge loop, perform consecutively two  $\frac{1}{8}$  rolls, exit upright.

*The Aresti diagrams appear overleaf.*

## FINAL SCHEDULE AF-19 (2018-2019)



Drawings by Ken Hlose  
June 2017

## **Advanced Manoeuvres – Schedule F3P-AA-19 (2018-2019)**

### **AA-19.01 Square Loop with $\frac{1}{2}$ roll, $\frac{1}{2}$ roll**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, pull through a  $\frac{1}{4}$  loop into a horizontal line, perform a  $\frac{1}{2}$  roll, push through a  $\frac{1}{4}$  loop into a vertical downline, push through a  $\frac{1}{4}$  loop, perform a  $\frac{1}{2}$  roll, exit upright

### **AA-19.02 Half Reverse Cuban Eight with $\frac{1}{2}$ roll**

From upright, pull through a  $\frac{1}{8}$  loop into a  $45^\circ$  upline, perform a  $\frac{1}{2}$  roll, pull through a  $\frac{5}{8}$  loop, exit upright.

### **AA-19.03 Horizontal Eye Catcher**

From upright, perform two consecutive  $\frac{3}{4}$  circles, exit upright.

### **AA-19.04 Humpty Bump with torque roll**

From upright, perform a  $\frac{1}{4}$  loop into a vertical upline, perform a torque roll, perform a  $\frac{1}{2}$  knife-edge loop into a vertical downline, pull through a  $\frac{1}{4}$  loop, exit upright.

### **AA-19.05 Knife-Edge Flight**

From upright, perform a  $\frac{1}{4}$  roll into sustained knife-edge flight, perform a  $\frac{1}{4}$  roll, exit upright.

### **AA-19.06 Half Square Loop with $\frac{1}{2}$ roll**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{1}{2}$  roll, push through a  $\frac{1}{4}$  loop, exit upright.

### **AA-19.07 Eye Catcher**

From upright, push through a  $\frac{3}{4}$  loop, pull through a second  $\frac{3}{4}$  loop exit upright.

### **AA-19.08 Stall Turn**

From upright, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a stall turn into a vertical downline. pull through a  $\frac{1}{4}$  loop, exit upright.

### **AA-19.09 Horizontal Square with $\frac{1}{4}$ roll, $\frac{1}{2}$ roll, $\frac{1}{4}$ roll**

From upright, perform a  $\frac{1}{4}$  roll in the centre, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{2}$  roll, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{4}$  knife edge circle, perform a  $\frac{1}{4}$  roll, exit upright.

### **AA-19.10 Corner Combination with $\frac{1}{4}$ roll**

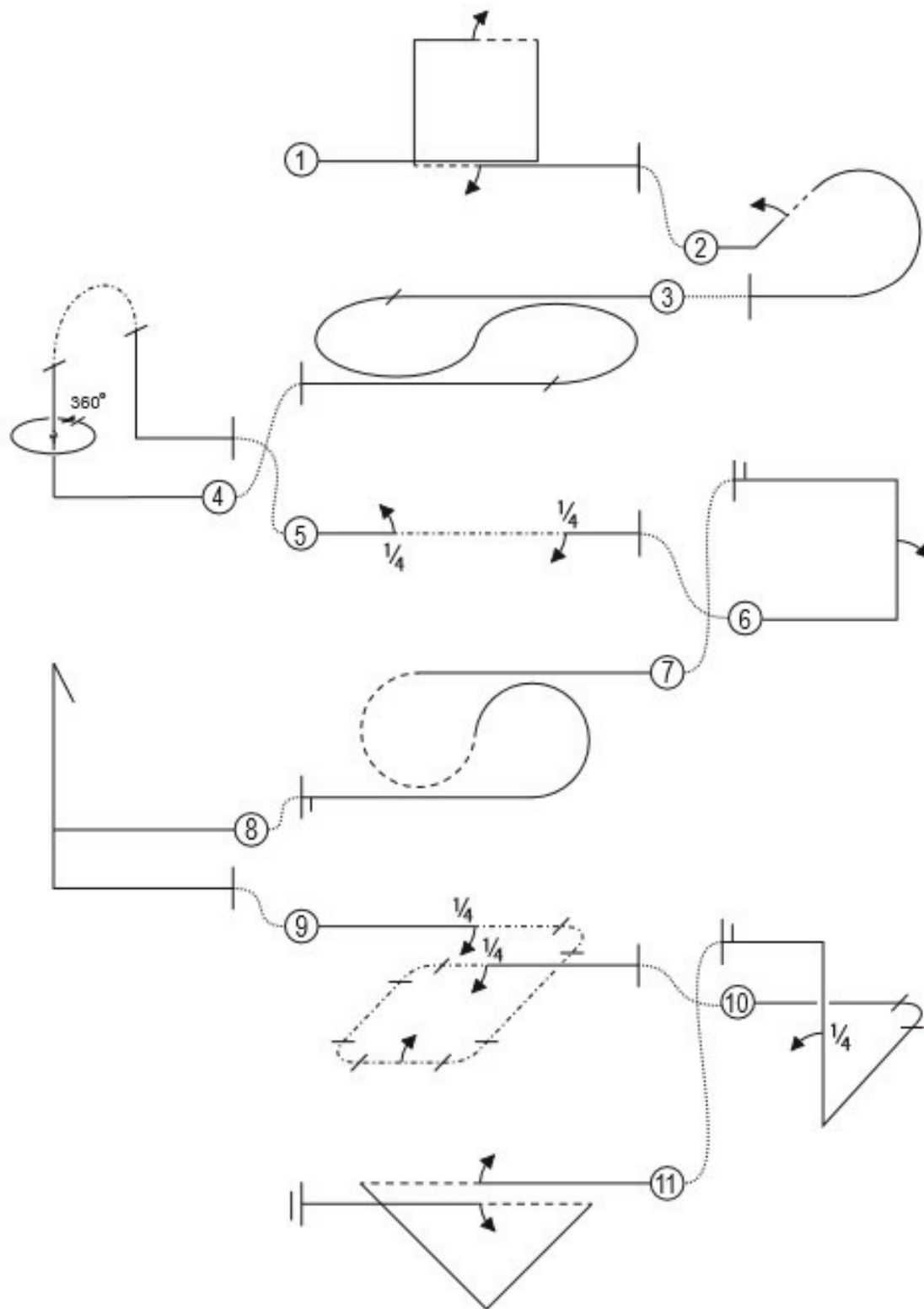
From upright perform a  $\frac{1}{4}$  circle with wing level into a cross box line, pull through a  $\frac{1}{4}$  loop into a vertical upline, perform a  $\frac{1}{4}$  roll, push through a  $\frac{1}{4}$  loop exit upright.

### **AA-19.11 Triangle Loop with $\frac{1}{2}$ roll, $\frac{1}{2}$ roll**

From upright, perform a  $\frac{1}{2}$  roll in the centre, pull through a  $\frac{3}{8}$  loop into a  $45^\circ$  downline, pull through a  $\frac{1}{4}$  loop into a  $45^\circ$  upline, pull through a  $\frac{3}{8}$  loop, perform a  $\frac{1}{2}$  roll in the centre, exit upright.

*The Aresti diagrams appear overleaf.*

## ADVANCED SCHEDULE AA-19 (2018-2019)



Drawings by Ken Allcock  
June 2017

## Manoeuvres – Schedule F3P-AFM

### AFM1. Take-off Sequence

Place the model aircraft on the floor and take-off.

### AFM2. Freestyle

A sequence of manoeuvres, freely composed by the competitor and flown in harmony to simultaneously played music of his choice. Any possible flight manoeuvres may be flown and "show effects" presented, as long as safety is not compromised and conformity to the rules is met. It is permitted to perform different programs in conjunction with different music in each round. The performance is judged for the entire flight from start to finish and in accordance to the following three criteria:

		K Factors
1		Flying Style
	- Precision of manoeuvres	2
	- Utilisation of flight performance scope/difficulty of manoeuvres	2
	-Variety of manoeuvres/new manoeuvres	2
2		Artistic Quality
	- Synchronisation to music	3
	- Reflection of the mood of the music/show effects	2
	- Sequence of quiet and dynamic phases	1
3		Overall Impression
	- Utilisation of manoeuvring area	2
	- Continuity of schedule	2
	- Positioning/safety	2

#### Judges Notes:

Unlike class F3A, although accompanied by its basic rules, F3P-AFM mostly focuses on spectator and media efficacy. This is why the performances should be extraordinarily spectacular and entertaining under these aspects.

For the Judges it is recommended to make "pencil" notes right away during the presentation. So corrections are still possible in course of the flight. All three criteria have to be marked simultaneously and evenly.

Although it is subjective, judging the presentations has to follow the judging guide and judging notes. Bias in favour of, or against, particular persons, models, music pieces etc must not influence the judging.

#### 1 Flying Style

The flying skills of the pilot count herein. Flight sections and manoeuvres should be precise in the sense of F3A. Difficult manoeuvres are marked higher. The pilot is to demonstrate that he safely governs his model in any position. (Judges Guide F3A Annex 5B)

In addition, the pilot is to utilise the full flight performance scope of his model. Fast and slow flying, snap manoeuvres, hovering etc. The manoeuvres should show positive as well as negative "g"-portions: loops, rolls, snaps, spins, stall-turns, tailslides, hovering, torque-rolls, flat circles, Lomcevac, circles, etc. New or extraordinary manoeuvres are marked higher. Frequent repetition of the same manoeuvre has to be downgraded respectively. Manoeuvres should be positioned in parallel or rectangular to the safety line. Poorly governed, unplanned or casually flown manoeuvres will be downgraded. The same applies to phases less extraordinarily attractive.

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## 2 Artistic Quality

The music (choreography) has to enhance the presentation and to create a complimentary atmosphere. The flight performance should be synchronised with the music and must not be a "3D-sketch" with background music. On the other hand the music must not detract from the presentation. The selected music piece(s) should contain fast-slow, soft-loud and dramatic sections. The manoeuvres should follow the music and end with it. The mood of the selected music should be reflected in the manoeuvres and the presentation. Show effects can support this. Music pieces with little contrast, variety or tempi result in downgrades.

## 3 Overall impression

A well made combination of flying style-music-entertainment is desired. The presentation should fill the manoeuvring area and form an uninterrupted unit with fluent transitions between the individual elements. Various thrill effects are requested. The performance should be orientated towards judges and spectators, although risky flying towards judges and spectators will result in downgrades.

### **AFM3. Landing Sequence**

The termination of the flight in any kind of way provided it is performed in a safe manner.