

**ANNEX 5M**

**F3P – RADIO CONTROLLED INDOOR AEROBATIC AIRCRAFT**  
**DESCRIPTION OF MANOEUVRES**

**Advanced – Schedule AA-23 (2022-2023)****II****AA-23.01 Pyramid with quarter roll, quarter roll**

From upright, pull through a one eighth loop into a forty-five degree upline, perform a quarter roll, perform a quarter knife loop into a forty-five degree knife-edge downline, perform a quarter roll, push through a one eighth loop, exit inverted.

**AA-23.02 Crossbox Top Hat with quarter roll, half roll, quarter roll**

From inverted, push through a quarter loop into a vertical upline, perform a quarter roll, push through a quarter loop into a crossbox upright horizontal line, perform a half roll, pull through a quarter loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

**AA-23.03 Loop with roll integrated**

From upright, pull through a loop while integrating a roll, exit upright.

**AA-23.04 Shark Fin with half roll, half roll**

From upright, pull through a quarter loop into a vertical upline, perform a half roll, push through a three eighths loop into a forty-five-degree downline, perform a half roll, push through a one eighth loop, exit inverted.

**AA-23.05 Torque Roll**

From inverted, push through a quarter loop into a vertical upline, perform a torque roll, pull through a quarter loop, exit inverted

**AA-23.06 Half Hourglass**

From inverted, pull through a one eighth loop into a forty-five degree downline, push through a three eighths loop into a vertical upline, push through a three eighths loop into a forty-five degree downline, pull through a one eighth loop, exit upright.

**AA-23.07 Rolling Circle**

From upright, perform a rolling circle with one roll integrated, exit upright.

**AA-23.08 Figure ET with half roll**

From upright, pull through a one eighth loop into a forty-five-degree upline, perform a half roll, push through a five eighths loop into a vertical downline, pull through a quarter loop, exit upright.

**AA-23.09 Crossbox Figure Z with quarter roll, half roll, quarter roll**

From upright, in the center, perform a quarter roll into knife-edge flight, push through a three eighths knife-edge circle into a forty-five-degree cross box line, perform a half roll, push through a three eighths knife-edge circle, perform a quarter roll, exit upright.

**AA-23.10 Stall Turn with quarter roll, quarter roll**

From upright pull through a quarter loop into a vertical upline, perform a quarter roll, perform a stall turn into a vertical downline, perform a quarter roll, pull through a quarter loop exit upright.

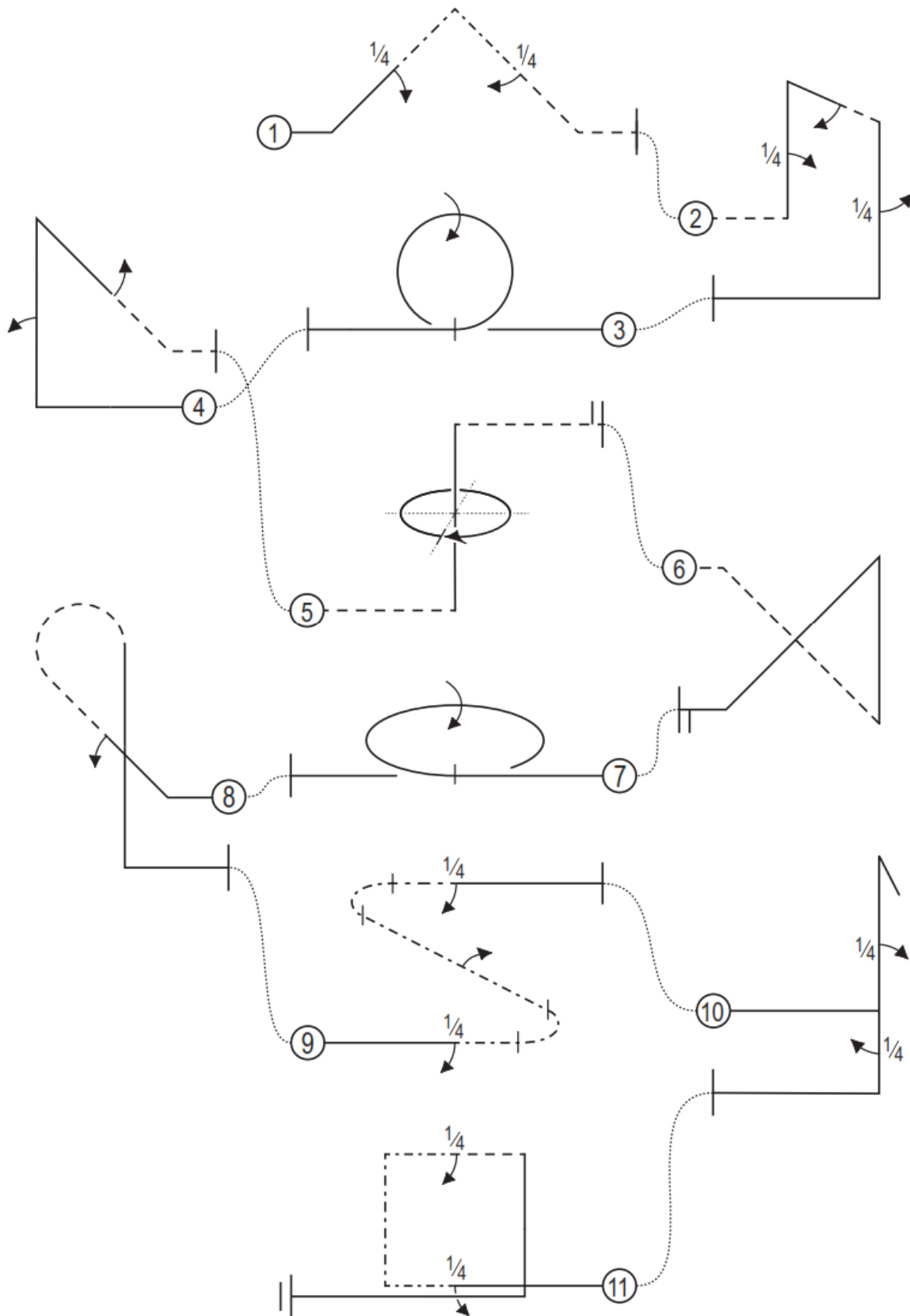
**AA-23.11 Square Loop with quarter roll, quarter roll**

From upright, in the center perform a quarter roll into knife-edge flight, perform a quarter knife-edge loop into a vertical upline, perform a quarter knife-edge loop, perform a quarter roll, pull through a quarter loop into a vertical downline, pull through a quarter loop, exit upright.

(Note: The manoeuvre is finished when the aircraft has crossed the center line.)

*The Aresti diagram appears overleaf.*

## ADVANCED SCHEDULE AA-23 (2022-2023)



**Preliminary Schedule AP-23 (2022-2023)****AP-23.01 Pyramid with quarter roll, half roll integrated, quarter roll**

From upright, pull through a one eighth loop into a forty-five degree upline, perform a quarter roll, perform a quarter knife-edge loop with integrated half roll into a forty-five-degree knife-edge downline, perform a quarter roll, push through a one eighth loop, exit inverted.

**AP-23.02 Crossbox Top Hat with half roll, half roll, half roll**

From inverted, push through a quarter loop into a vertical upline, perform a half roll, perform a quarter knife-edge loop into a crossbox knife-edge flight, perform a half roll, perform a quarter knife-edge loop into a vertical downline, perform a half roll, pull through a quarter loop, exit upright.

**AP-23.03 Loop with half roll integrated, half roll in opposite direction integrated**

From upright, pull through a loop while integrating a half roll into the first 180 degrees of the loop and a half roll in opposite direction to the first half roll into the second 180 degrees of the loop, exit upright.

**AP-23.04 Shark Fin with quarter roll, half roll, quarter roll**

From upright, perform a quarter roll into knife-edge flight, perform a quarter knife-edge loop into a vertical upline, perform a half roll, perform a three eighths knife-edge loop into a forty-five degree downline, perform a quarter roll, push through a one eighth loop, exit inverted.

**AP-23.05 Three quarter Torque Roll, Upline, three Quarter Torque Roll in opposite direction**

From inverted, push through a quarter loop into a vertical upline, perform a three quarter torque roll, followed by a vertical upline, perform a three quarter torque roll in opposite direction to the first torque roll, pull through a quarter loop, exit inverted.

**AP-23.06 Half Hourglass with two consecutive quarter rolls, roll, half roll**

From inverted, pull through a one eighth loop into a forty-five-degree downline, perform consecutively two quarter rolls, pull through a three eighths loop into a vertical upline, perform a roll, pull through a three eighths loop into a forty-five-degree downline, perform a half roll, pull through a one eighth loop, exit upright.

**AP-23.07 Rolling Circle with two rolls in opposite directions**

From upright, perform a rolling circle with two rolls in opposite directions integrated (first roll to the outside), exit upright.

**AP-23.08 Figure ET with quarter roll, quarter roll**

From upright, pull through a one eighth loop into a forty-five degree upline, perform a quarter roll, perform a five eighths knife-edge loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

**AP-23.09 Crossbox Figure Z with quarter roll, four consecutive one eighth rolls, quarter roll**

From upright, in the center, perform a quarter roll into knife-edge flight, push through a three eighths knife-edge circle into a forty-five degree cross box line, perform consecutively four one eighth rolls, push through a three eighths knife-edge circle, perform a quarter roll, exit inverted.

**AP-23.10 Stall Turn with three quarter roll, quarter roll**

From inverted push through a quarter loop into a vertical upline, perform a three quarter roll, perform a stall turn into a vertical downline, perform a quarter roll, pull through a quarter loop exit upright.

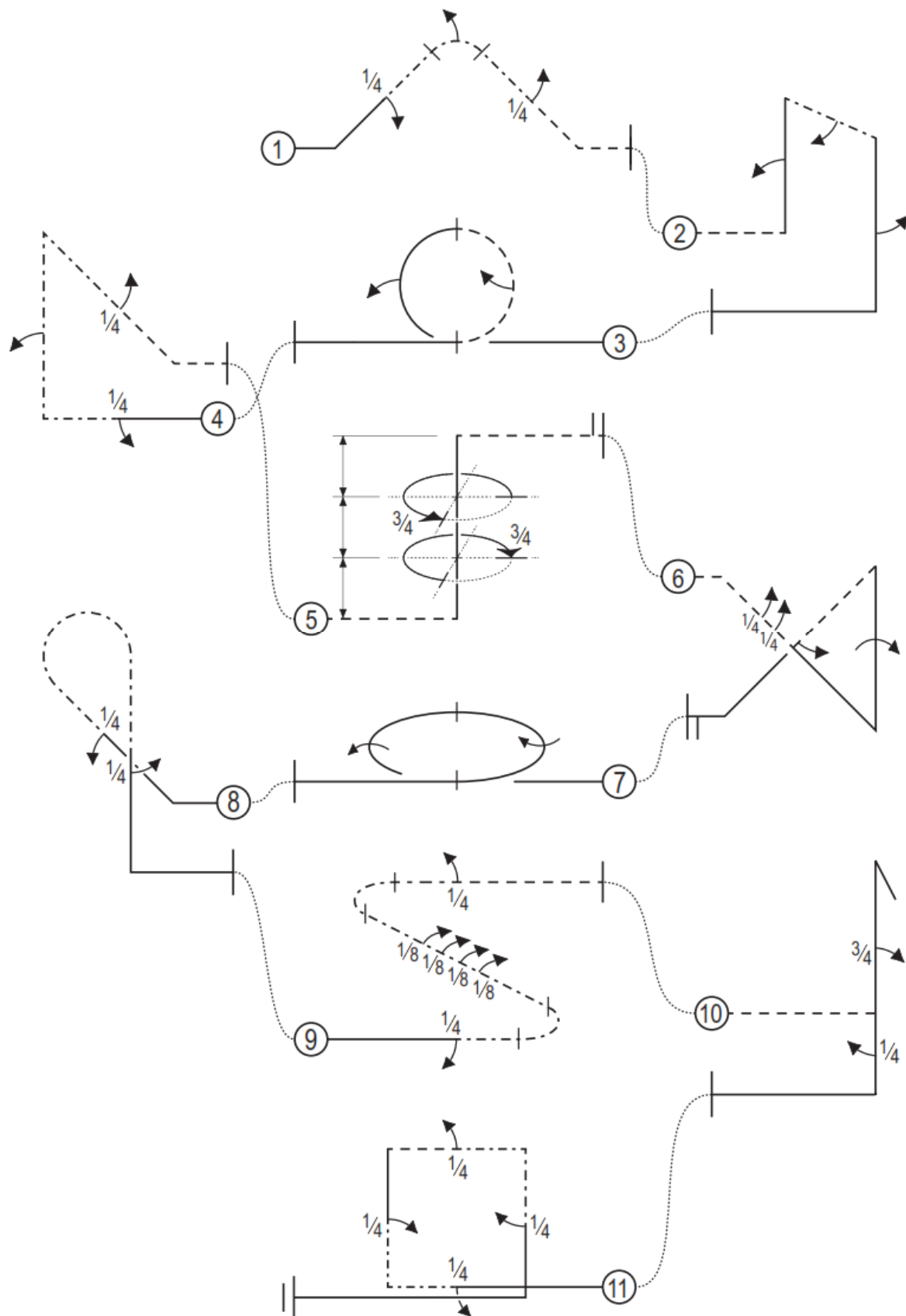
**AP-23.11 Square Loop with quarter roll, quarter roll, quarter roll, quarter roll**

From upright, in the center perform a quarter roll into knife-edge flight, perform a quarter knife-edge loop into a vertical upline, perform a quarter roll, pull through a quarter loop, perform a quarter roll, perform a quarter knife-edge loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

(Note: The manoeuvre is finished when the aircraft has crossed the center line.)

*The Aresti diagram appears overleaf.*

# PRELIMINARY SCHEDULE AP-23 (2022-2023)



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Drawings by Ken Hirose  
Oct. 2020

**Final Schedule AF-23 (2022-2023)****AF-23.01 Square Loop with half roll, quarter roll, two consecutive quarter rolls, quarter roll**

From upright, perform a half roll in the center, push through a quarter loop into a vertical upline, perform a quarter roll, perform a quarter knife-edge loop into knife-edge flight, perform consecutively two consecutive quarter rolls in the center, perform a quarter knife-edge loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

**AF-23.02 Double Stall Turn with half roll, half roll, half roll**

From upright, pull through a quarter loop into a vertical upline, perform a half roll, perform a stall turn into a vertical downline, perform a quarter knife-edge loop into a knife-edge crossbox line, perform a half roll, perform a quarter knife-edge loop into a vertical upline, perform a half roll, perform a stall turn into a vertical downline, push through a quarter loop, exit inverted.

**AF-23.03 Double Humpty Bump with quarter roll, half roll integrated, quarter roll, quarter roll, half roll integrated, quarter roll**

From inverted, before the center push through a quarter loop into a vertical upline, perform a quarter roll, perform a half knife-edge loop (towards the center) with integrated half roll into a vertical downline, perform a quarter roll, push through a half loop in the center into a vertical upline, perform a quarter roll, perform a half knife-edge loop (away from the center) with integrated half roll into a vertical downline, perform a quarter roll, push through a quarter loop, exit inverted.

**AF-23.04 Half Square Loop with four consecutive one quarter torque rolls**

From inverted, push through a quarter loop into a vertical upline, perform consecutively four one quarter torque rolls on same level, push through a quarter loop, exit upright.

**AF-23.05 Loop Crossbox Circle Combination with half roll integrated, half roll integrated, half roll integrated, half roll integrated**

From upright, push through a half loop, while integrating a half roll, perform a crossbox circle with two half rolls in opposite directions integrated, pull through a half loop, while integrating a half roll in opposite direction of the half roll in the first half loop, exit upright.

**AF-23.06 Half Loop with two consecutive quarter rolls in opposite directions integrated**

From upright push through a half loop while integrating consecutively two quarter rolls in opposite directions, exit inverted.

**AF-23.07 Crossbox Top Hat with quarter roll, two consecutive one eighth rolls, two consecutive one eighth rolls in opposite direction, quarter roll**

From inverted, push through a quarter loop into a vertical upline, perform a quarter roll, push through a quarter loop into a horizontal crossbox line, perform consecutively two one eighth rolls, followed by two consecutive one eighth rolls in opposite direction, push through a quarter loop into a vertical downline, perform a quarter roll, pull through a quarter loop, exit upright.

**AF-23.08 Corner Combination with half roll integrated, quarter roll, half roll integrated**

From upright, perform a quarter circle into a crossbox line, while integrating a half roll, push through a quarter loop into a vertical upline, perform a quarter roll, pull through a quarter loop while integrating a half roll, exit upright.

**AF-23.09 Triangle with quarter roll, half roll integrated, quarter roll**

From upright, fly past center, push through a three eighths loop into a forty-five degree downline, perform a quarter roll, perform a quarter knife-edge loop into a forty-five degree upline, while integrating a half roll, perform a quarter roll, push through a three eighths loop, exit upright.

**AF-23.10 Reverse Shark Fin from Top with quarter roll, half roll, quarter roll**

From upright, push through a one eighth loop into a forty-five degree downline, perform a quarter roll, perform a three eighths knife-edge loop into a vertical upline, perform a half roll, perform a quarter knife-edge loop, perform a quarter roll, exit upright.

**AF-23.11 Triangle Crossbox Square Combination with quarter roll, three consecutive one eighth rolls, half roll, three consecutive one eighth rolls, quarter roll**

From upright, push through a one eighth loop into a forty-five degree downline, perform a quarter roll, pull through a quarter knife-edge loop into a crossbox line with forty-five degree wing level,

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perform consecutively three one eighth rolls into knife-edge flight, push through a quarter knife-edge circle, perform a half roll, pull through a quarter knife-edge circle into a knife-edge crossbox line, perform consecutively three one eighth rolls into forty five degree wing level flight, push through a quarter knife-edge loop into a forty-five degree upline, perform a quarter roll, push through a one eighth loop, exit upright.

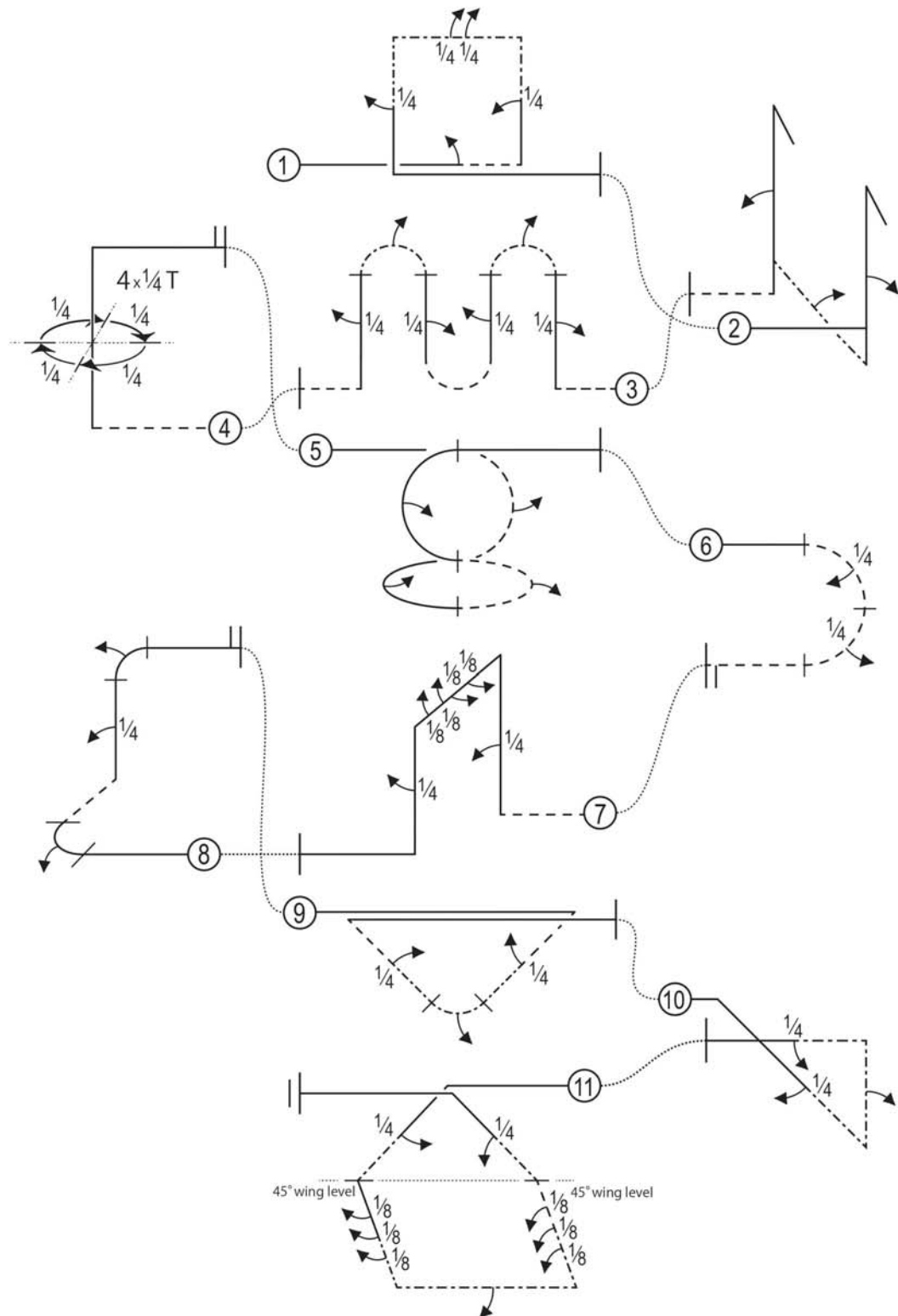
Option:

From upright, push through a one eighth loop into a forty-five degree downline, perform a quarter roll, push through a quarter knife-edge loop into a crossbox line with forty-five degree wing level, perform consecutively three one eighth rolls into knife-edge flight, pull through a quarter knife-edge circle, perform a half roll, push through a quarter knife-edge circle into a knife-edge crossbox line, perform consecutively three one eighth rolls into forty five degree wing level flight, pull through a quarter knife-edge loop into a forty-five degree upline, perform a quarter roll, push through a one eighth loop, exit upright.

Note: Exit starts in the center.

*The Aresti diagram appears on the following page.*

## FINAL SCHEDULE AF-23 (2022-2023)



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Drawings by Ken Hirose  
Nov. 2020