



Regler för Mästerskapstävlingar i Konstflygning (Aerobatics) 2025

Mästerskapstävlingar

Mästerskapstävlingar anordnas i Sverige enligt dessa, av SKFF framtagna och av FSF godkända tävlingsregler i klasserna Primary, Sportsman, Intermediate, Advanced och Unlimited i både Motorflygaerobatics och Segelflygaerobatics. Reglerna följer IAC tävlingsregler. Skillnader är att reglerna för Basic (Primary) är helt egna för oss i Sverige och att i klasserna Advanced och Unlimited finns delar av FAI-CIVA reglerna med i de nationella reglerna. Mästerskapstävlingar i Glider Aerobatics och i Power Aerobatics kan arrangeras tillsammans eller som separata tävlingar.

Sportlicens

För deltagande i Mästerskapstävlingar krävs FAI Sportlicens.

Sök FAI Sportlicens via länken nedan.

[FAI-sportlicens | Svenska Flygsportförbundet](#)

Sekvenser

Alla sekvenser måste tillhandahållas i Open Aero-format (<https://openaero.net>)

Förkortningar

FAI Fédération Aéronautique Internationale

FSF Svenska Flygsportförbundet

MANIAC Meeting of Annual Nordic Information and Aerobatic Coordination

SKFF Svenska Konstflygförbundet

IAC International Aerobatic Club

Reglerna baseras på dessa dokument

Svenska Flygsport förbundets generella tävlingsregler.

<https://flygsport.se/organisation/stadgar-regler-och-riktlinjer?folder=19.9be6c7118bfb1e4021ac709&sv.url=12.b96dd81182e93dd449139c2>

IAC Official Rule Book 2025. Regelboken kan erhållas av medlemmar i IAC via IAC (USA) hemsida. Ett aktuellt exemplar av denna bok finns på FSF Kansli. Piloter som anmäler sig till ett SM eller ett DM erhåller ett exemplar av regelboken vid anmälan. IAC regelbok får inte publiceras eller spridas vidare utan IAC medgivande.

<https://www.iac.org/download-contest-rules>

FAI CIVA regler

In Advanced och Unlimited power, specified paragraphs of FAI Sporting Code Section 6 - part 1 Edition 2025

In Advanced och Unlimited glider, specified paragraphs of FAI Sporting Code Section 6 - part 2 Edition 2025

<https://www.fai.org/civa-documents>



Tävlingsregler

Regeländringarna nedan visar skillnaden mellan IAC tävlingsregler och de svenska tävlingsreglerna. Ändringarna beskrivs på engelska eftersom IAC och FAI reglerna är på engelska.

Judges Quick Reference

No changes except.

For FAI CIVA, Advanced and Unlimited Glider, the bank angle must be exactly 60 degrees for all turns.

IAC §2 Contest Staff

This text replaces the IAC Rule book

Contest Director

The Contest Director is the general manager of the event, responsible for all contest planning, delegation, appointments, and operations. The **Contest Director** also assumes the duties of **Safety Director**, **Medical Director**, **Volunteer Coordinator** and **Technical Committee**.

Chief Judge

Chief Judge may also perform scoring.

Scoring Director

The Scoring Director assumes the duties of the Registrar and the contest Office.

Starter

For safety reasons and the smooth execution of the contest, it is mandatory to have a Starter. The Starter must have direct communication both to the Chief Judge and the field frequency.

Judges

3-5 Scoring Judges. If less than 3 judges are available pilots may be asked to work as judges. A pilot cannot judge in the same class he is competing in.

Judge assistant (Caller)

Not used in Basic, Sportsman and Intermediate.

Registrar (Skrivare)

Writes down judge grades and remarks.



Boundary and Deadline Judges

Not used.

IAC §3 Sanctioning and Insurance

This text replaces the IAC Rule book.

Sequences

All submitted sequences must be submitted in OpenAero format <https://openaero.net>

Contest Insurance

The aircraft must have an insurance of minimum EU Regulation 785/2004.

MTOM <500 kg Minimum SDR 750 000

MTOM <1,000 kg Minimum SDR 1 500 000

IAC §4 Registration

This paragraph stands with the following changes.

The organizer will determine the latest date when the entry fee is refunded.

Replace "IAC Official Contest Entry Form" with "Official Contest Entry Form" as published by the organizer

4.2 Entry Forms

The self-briefing form, Appendix 3 must be sent to the organizer.

4.3 Competitor Qualifications

Competitors must hold a valid pilot certificate, aerobatic rating, current medical approval and sporting license.

4.6.2 A competitor that arrives late will score zero for all programs already flown and all unknown programs that have already been published

IAC §5 Technical Matters

This text replaces the IAC Rule book

Aircraft and Equipment Entrance Requirements

A valid certificate of airworthiness or equivalent document issued by the competent aviation authority of the aircraft's state of registration must be produced to the Contest Director for every contest aircraft.



IAC §6 Safety

Safety is always the primary concern. The Contest Director is responsible for the safety matters.

Supplementary Rules and Waivers of Rules

All competitors must observe and adhere to the regulations currently in force in the Organizer's country for air safety as well as the special regulations in force at the contest aerodrome.

Any additional local rules and procedures applicable to the contest must be published as early as possible, preferably in the invitation.

IAC §7 The Aerobatic Box

No changes.

IAC §8 Boundary judges

This text replaces the IAC Rule book
Boundary judges are not used.

IAC §9 The starting line

This paragraph stands with the following change.

9.3 Starting line procedure

The starting line procedures will be part of the briefing.

IAC §10 Public Address System

This paragraph stands unchanged.

IAC §11 The judging line

This paragraph stands with the following change.

11.4 Number of judges

3-5 Scoring Judges.

IAC §12 Weather

This paragraph stands unchanged.

IAC §13 Penalties

This paragraph stands with the following change.

For Advanced and Unlimited category the FAI CIVA penalties will apply.



IAC §14 Box Procedures

This text replaces the entire §14.3

14.3 Safety Checks

For Power Primary, Sportsman and Intermediate, the following is allowed: Half roll, half roll back, and a pull-pull-pull humpty bump.

In Advanced power the FAI Sporting Code Section 6 - part 1 applies.

In Advanced glider safety maneuvers are not applicable. The competitor may not perform any aerobatic maneuvers between tow release and the start of the sequence.

Addition to 14.4.2

For gliders the wing dips shall be minimum 30 degrees.

IAC §15 Interruptions

This paragraph stands unchanged.

IAC §16 Temporary Competitor Incapacitation

This paragraph stands unchanged.

IAC §17 Mechanical Defects

This paragraph stands with the following change.

No change in Primary, Sportsman and Intermediate.

In Advanced power FAI Sporting Code Section 6 - part 1 applies

In Advanced glider FAI Sporting Code Section 6 - part 2 applies

IAC §18 Relight after Abort

This paragraph stands unchanged.

IAC §19 Non-Competition Flying

This paragraph stands unchanged.

IAC §20 Scheduling

This paragraph stands with the following changes.

The order of flight shall be determined by the drawing of lots for determining the starting order at the opening briefing for all flights.

To facilitate a smoother contest, categories can be mixed, however, experience says that mixing power and glider is not always optimal.



Competition Flight Programs at Nordic Championships

No changes for Primary, Sportsman and Intermediate.

For NAC, additional programs may be scheduled in Primary and Sportsman, but not in Intermediate or Advanced.

In Advanced and Unlimited, these programs are flown:

Power

Programme 1: Free Known (as per CIVA)

Programme 2: Free (as per IAC)

Programme 3: Free Unknown (as per CIVA's "Programme 2")

Programme 4: Free Unknown (as per CIVA's "Programme 3")

In Advanced power, specified paragraphs of FAI Sporting Code Section 6 - part 1 Edition 2020

In Advanced glider, specified paragraphs of FAI Sporting Code Section 6 - part 2 Edition 2020

The advanced and Unlimited categories use the FAI CIVA Free known programs and those differences between IAC and FAI Rules that are important for the pilot such as the wing wag.

Special note: No tail slides are allowed in the Advanced category in NAC

Special note: The Free (as per IAC) flown in Programme 2 is selected to make it easier to recruit pilots from Intermediate, and for safety reasons (the program is designed by the pilot to suit the pilot/aircraft)

Glider

Programme 1: Free Known (as per CIVA)

Programme 2: Free (as per IAC)

Programme 3: Free Unknown (as per CIVA)

Programme 4: Unknown (as per CIVA)

20.2.2 New wording; The order of Flight will be determined by drawing of lots at the opening briefing.

IAC §21 Program Forms

This paragraph is valid for both Power and Glider Aircraft.

This paragraph stands with the following addition.

All programs submitted to the contest organization must be in openaero.net format. For practical reasons, the allowed figures are given by openaero.net (there should not be a difference to the IAC Official Rule Book)

IAC §22 The known program

This paragraph is valid for both Power and Glider Aircraft.



Everything stands, except these items.

a) The IAC 2020 Glider Sportsman Known program contains a spin. We will use the IAC 2019 sequence. This is to accommodate ASK21 and DG500 gliders to participate (the most common airplanes) (- they don't spin)

IAC §23 The Free program

This paragraph is valid for both Power and Glider Aircraft.

This paragraph stands with the following addition.

The Free Program must be submitted to the contest organization in openaero.net format and comply with the validation rules in OpenAero.

IAC §23 B. The Free Known program

This paragraph is valid for both Power and Glider Aircraft.

This is a new paragraph addressing the FAI CIVA Free Known programs in Advanced and Unlimited categories.

The Free known programs shall be designed according to.

In Advanced and Unlimited power, specified paragraphs of FAI Sporting Code Section 6 - part 1 Edition 2020.

In Advanced and Unlimited glider, specified paragraphs of FAI Sporting Code Section 6 - part 2 Edition 2020.

Each program must comply with the validation rules in OpenAero for that program/category.

IAC §24 The Unknown program

This paragraph is valid for both Power and Glider Aircraft.

This paragraph stands with the following addition.

The contest organization will produce the Unknown sequences. Each program must comply with the validation rules in OpenAero for that program/category.

Distribution

Minimum time between flights is 2 hours. Sequences must be published 4 hours prior to the program is scheduled to be flown

IAC §24 B. The Free Unknown program

This paragraph is valid for both Power and Glider Aircraft.

The Free known programs shall be designed according to.

In Advanced and Unlimited power, specified paragraphs of FAI Sporting Code Section 6 - part 1 Edition 2020.



In Advanced and Unlimited glider, specified paragraphs of FAI Sporting Code Section 6 - part 2 Edition 2020.

Selection of figures for the Free Unknown programs

Ideally, all Advanced and Unlimited pilots will participate in this exercise. Any safety concern with a particular figure must be raised here, and then the pilots can agree to accept the suggested figure or request another figure to be submitted. If the pilots cannot agree, the chief judge must decide.

Submission, publication, and selection of Free Unknowns

After submission of the free unknown sequences the contest director randomly selects a sequence (in each Programme) as the default sequence. Any pilot that has not selected a sequence before the published deadline will be assigned the default sequence.

IAC §25 Program Briefings

This paragraph stands with the following addition.

Amendments for National Competitions

Drawing of lots (starting order)

The following items should also be clarified:

Allowed safety maneuvers in the various categories

Difference in wing tipping IAC/CIVA

Difference in procedures for cloud in the box IAC/CIVA

Difference in procedures with technical difficulties IAC/CIVA

What constitutes a training violation?

IAC §26 Grading Judge Concepts

This paragraph stands except for judging of the Primary category.

IAC §27 Basic Criteria for judging Aerobatic Figures

This paragraph stands unchanged.

IAC §28 Family-Specific Grading Criteria

This paragraph stands unchanged.

IAC §29 Presentation

This paragraph stands unchanged.

IAC §30 Chief Judge Responsibilities

This paragraph stands unchanged.



IAC §31 Contest Jury

This paragraph stands with the following changes.

A chairman and at least two additional members. A jury can be elected using pilots or officials at the opening briefing. A pilot cannot be a jury member in the same class that he competes in.

Replace "IAC Official Protest Form" with "Official Protest Form" as published by the organizer. Replace "\$50" with "SEK 500 or equivalent local currency".

IAC §32 Scoring

This paragraph stands with the following change.

32.3.1 The Acro software shall be used at NAC and NGAC.

IAC §33 Trophies and Recognition

This paragraph stands with the following changes.

33.2.1 Competitors per Category

The competition is valid as a championship in each category where a minimum of 2 pilots have flown at least one flight each.

Pilots from other countries may participate but will not become champions and will not receive any medals or prizes

Delete all § from 33.4 -33.8.5.

IAC §34 Gliders

This paragraph stands with the following changes.

34.15 Tow and release

The glider is towed into the box at 1250 m. The glider may release at any time. Turning into position is allowed but thermalling is not allowed. If the positioning is not accepted, the pilot may choose not to release and will then be towed into the box a second time. This second time the pilot must release and commence the sequence, or land and file a protest.

34.16 Mixing Gliders with Powered aircraft

Experience shows that there are no benefits in mixing Glider and Power aircraft. It may be better to fly one category of Glider and then a category of Power. The decision in this matter lies with the organizer.

IAC §35 The Four Minute Freestyle

N/A at NAC or NGAC.



IAC §36 Understanding Aresti Notation

This paragraph stands unchanged.

IAC §37 Allowable Figures for Unknown Sequences

This paragraph stands with the following changes.

No snap rolls are allowed in intermediate unknown programs.

Each program must comply with the validation rules in OpenAero for that program/category.



Appendices

1. Nordic Basic (Primary) rules for Power and Glider aircraft replacing IAC Primary rules.
2. A list of not approved maneuvers in Power Advanced.
3. Self-Briefing form



Appendix 1 Nordic Power and Glider Primary Category

1: Deskription

The category is based on IAC rules, but with some of the figures adjusted to provide a fair contest for aircraft without inverted fuel systems. The adjusted figures and judging criteria are described below. The sequence is designed to accommodate lower performance aircraft.

2: Adjusted figures

In the sequence diagram, the adjusted figures are preceded by a letter “P”. The principal adjustments are as follows:

In Cuban 8s and $\frac{3}{4}$ loop, the roll, may commence once the 45-degree attitude is reached, with no downgrade for the missing line. If a line is drawn, there will be no downgrade for not centering the roll on the line. In a diagonal humpty bump, the rolls do not need to be centered on the line. There will be no downgrade for the line missing between the roll and the loop. In rolls, the nose may pitch up, up to 15 degrees, before the roll starts, and pitch down up to 15 degrees after the roll ends, with no downgrade for breaking the roll line.

REMOVED

In addition, a wingover (a figure used for IAC glider sequences) may be used to give the sequence good flow and energy management.

3: Judging criteria

Normal IAC judging criteria are used, but adjusted to represent the Primary figures:

Family 7.3 PRIMARY Three Quarter Loops:

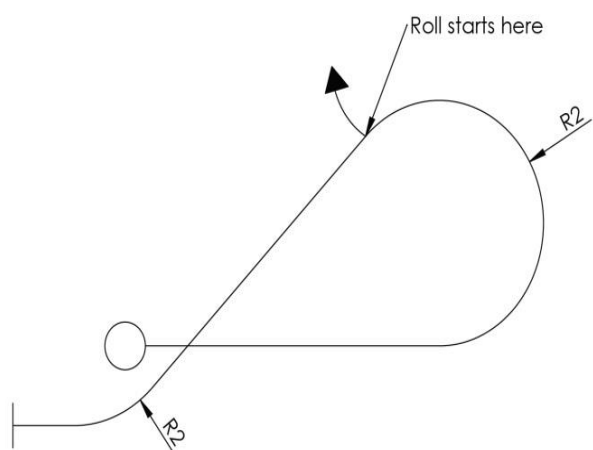
Sometimes referred to as “Goldfish,” it is not required that the lengths of the 45-degree lines bear any strict relation to the diameter of the three-quarter loop. That is, the lengths of the two 45-degree lines may be different and the entry and exit altitudes need not correspond to the altitude limits of the loop.

The half roll may commence once the 45-degree attitude is reached. If a line is drawn there will be no downgrade for not centering the roll on the line.

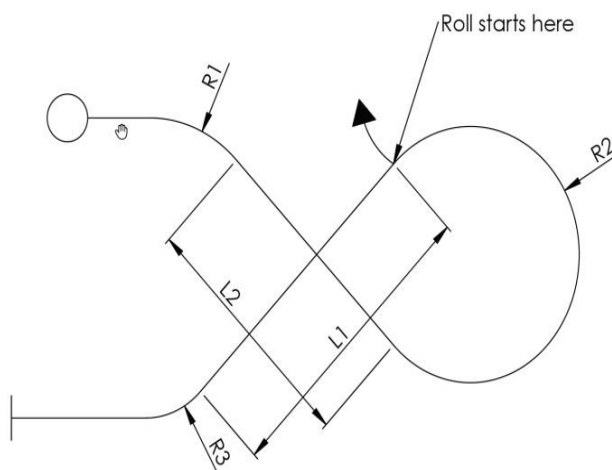
The half roll shall commence once the 45-degree attitude is reached. If a line is drawn or the roll starts before reaching the 45-degree attitude, the figure will be downgraded according to **IAC Official**

Contest Rules 8.4.2.d:

When the looping portion of a figure is immediately preceded or followed by one or more rolls (i.e., rolls not centered on a straight line), there must be no visible line between the roll and loop elements. Drawing a line requires a downgrade of at least one (1) point depending on the length of the line drawn. This criterion is not meant to imply that one element (roll or loop) must start before the preceding element is finished. A brief hesitation between elements (similar to opposite rolls) must not be downgraded.



R1 and R2 do not have to be equal



R1, R2 and R3 do not have to be equal
L1 and L2 do not have to be equal

altitude difference between entry and exit altitude)

The penalty for varying the rate of roll is one (1) point per variation. Any stoppage in the Primary roll that could result in it being considered a hesitation roll would result in a grade of HZ for the figure. The finish of the roll must be as crisp and precise as possible. Coming to a slow finish in fact represents a change in the rate of roll and must be penalized accordingly. The wings must stop precisely after the desired degree of rotation and not go past the stop point and then return. This is referred to as “bumping the point”. A deduction of 0.5 point to one (1) point is given depending on the severity of the “bump”. Deviation from the 15 degrees nose-up and nose-down attitudes are downgraded 1 point per 5 degrees deviation. Variation in the arc where the roll is performed is downgraded with 1 point, according to **IAC Official Contest Rules 8.4.2.b**. If a line is drawn before or after rolling, or the roll starts during pull-up or ends pull-out back to horizontal, the figure will be downgraded according to **IAC Official Contest Rules 8.4.2.d**:

When the looping portion of a figure is immediately preceded or followed by one or more rolls (i.e., rolls not centered on a straight line), there must be no visible line between the roll and loop elements. Drawing a line requires a downgrade of at least one (1) point depending on the length of the line drawn. This criterion is not meant to imply that one element (roll or loop) must start before the preceding element is completely finished. A brief hesitation between elements (similar to opposite rolls) must not be downgraded.

Family 0.0 Wingover

The wingover is judged according to IAC glider criteria:

The criteria may seem somewhat complex at first, but they are simply based upon existing IAC judging principles and should present no difficulty for judges and or pilots.

Example:

In a $\frac{3}{4}$ loop (P 7.3.3.3 + 9.1.4.2, figure 2 in the 2019 Nordic Primary), a line is drawn before the roll. According to 8.4.2.d, 1 point is deducted.



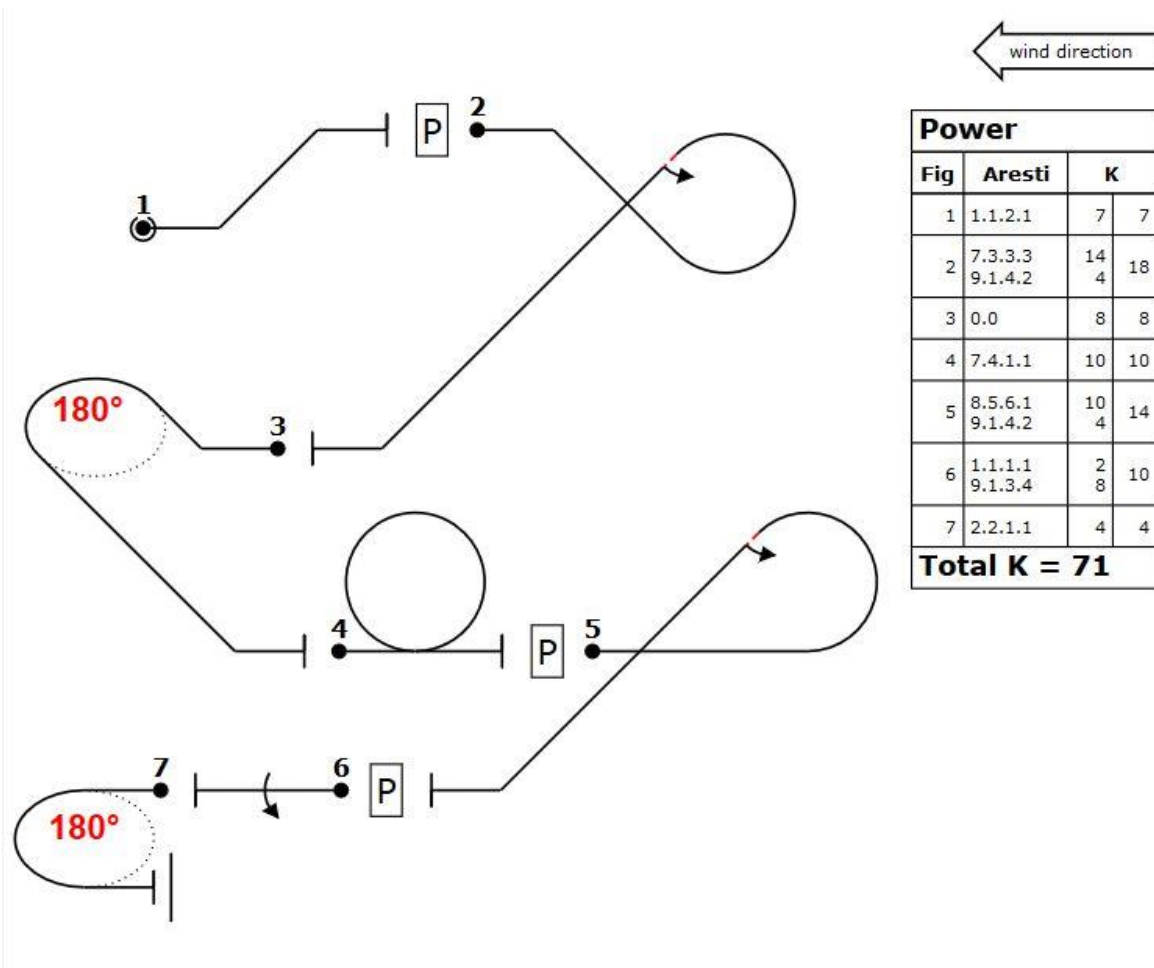
In a half Cuban (P 8.5.6.1 + 9.1.4.2, figure 5 in the 2019 Nordic Primary), the roll is started 10 degrees before reaching the 45-degree attitude. 2 points are deducted according to the standard 1 point/5-degree rule.

In the Primary roll, the rotational element is judged according to existing criteria in the IAC rule book, i.e., constant roll rate and wings level start/stop. In the entry, we have a radius immediately followed by the roll, and in the exit, a radius immediately following the roll. Again, “think Immelmann”, same criteria apply. The arc where the roll is placed must have constant radius, this is downgraded like radius variations in looping portions in other figures. The figure must start and end with a horizontal line. There is no requirement for equal radius or equal altitude in entry and exit. This is to make the criteria practical and conforms to other figures where there is no such requirement, like Cuban eights and hammerheads. Since the radius only describes a 15 degrees arc, a huge difference in radius would be required to make a visible difference in entry and exit altitude as long as the roll is started and finished at the 15-degree point. Thus, an equal radius requirement would be purely academic.

Example:

In the Primary roll (P 1.1.1.1 + 9.1.3.4, figure 6 in the 2019 Nordic Primary), a 25-degree line is drawn after the roll stops. 1 point is deducted for drawing a line, and 2 points are deducted for the attitude error. No points are deducted for the altitude difference in start and finish horizontal lines.

In the Primary roll (P 1.1.1.1 + 9.1.3.4, figure 6 in the 2019 Nordic Primary), the roll is started 10 degrees before reaching the 15 degrees attitude. The resulting arc is uneven. 2 points are deducted for initiating the roll 10 degrees too early, according to the standard 1 point/5-degree rule. 1 point is deducted for the uneven arc.

2020 Nordic Primary Sequence Power


Nordic Primary Sequence Glider 2024

This can be flown with the Swedish AVA1 training.

o h." (2,0) o h.'++~ (-3,1) jw. 3j j



Category: Glider Sportsman

Date:

Program: Free

wind direction **R**

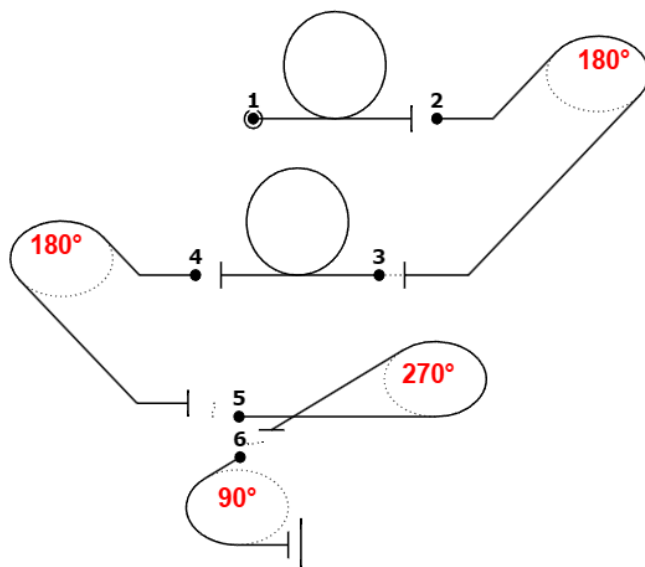


Figure K 44	Judge Name	IAC#	Pilot #
Total K 59	Asst. Name	IAC#	

Fig	Grade	Remarks
1	.	
2	.	
3	.	
4	.	
5	.	
6	.	

Presentation	
15	.

Fig 1	K	Fig 2	K	Fig 3	K	Fig 4	K	Fig 5	K	Fig 6	K
7.4.1.1	10	0.0	8	7.4.1.1	10	0.0	8	2.3.1.1	5	2.1.1.1	3
	10		8		10		8		5		3

Pilot:

A/C:



Appendix 2 Not approved maneuvers in Power

No tail slides are allowed in the Advanced category.

No snap rolls are allowed in the Intermediate unknown programs.



Appendix 3

SELF BRIEFING/ENTRY FORM

Pilot name	
Competition class (Basic, Sportsman, Intermediate, Advanced, Unlimited)	
Aero Club	
Aircraft type and registration	
Sporting license	
Billing adress	
Mobile phone number	
E-mejl adress	
Pilot license expiration date	
Aircraft insurance expiration date	
Pilot license No.	
Medical certificate expiration date	
Name and phone to next of kin	
Date	
Signature	