



# FAI Sporting Code

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*Fédération  
Aéronautique  
Internationale*

## **Aerobatic Annex to Section 7B – Class O**

### **PARAGLIDERS CLASS III**

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**Editor's note:** The FAI Sporting Code for Paragliding consists of the General Section and Section 7B combined, it also includes this Annex for aerobatic competition. In cases of doubt, consult the General Section to establish the principles before applying the specific rules which appear in this Section 7B document.

Paragliding is a sport in which both men and women participate. Throughout this document the words "he", "him" or "his" are intended to apply equally to either sex unless it is specifically stated otherwise.

## **FEDERATION AERONAUTIQUE INTERNATIONALE**

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<b>Table of Contents</b>	<b>Page</b>
<b>Chapter 1 – Competition Formats</b>	<b>5</b>
<b>Chapter 2 - Competition Rules</b>	<b>5</b>
2.1 - Registration and responsibility	5
2.2 – Equipment	6
2.3 – Safety	6
2.4 - Emergency stop signal	6
2.5 - General behaviour	6
2.6 - Warnings and penalties	6
2.6.1 - Persons entitled to impose warnings	6
2.6.2 - When a warning can be imposed	6
2.6.3 - Official list of warnings	6
2.6.4 - Running of the warnings	7
2.6.5 - Point penalties	7
2.6.6 - Announcement of warnings and penalties	7
2.7 - Safety Committee	7
2.8 – Safety Director	7
2.9 – Complaint, protest and appeal	7
2.9.1 - Category 1 events	7
2.9.2 - Category 2 events	8
2.9.3 - Notes and video	8
2.10 - Validation of run	8
2.11 - Validation of the competition	8
2.12 - Prize money	8
2.13 - Number of pilots	8
2.14 - Entry fee	9
2.15 – Judging panel	9
<b>Chapter 3 - Competition Details</b>	<b>10</b>
3.1 – Safety Selection	10
3.2 - Official manoeuvres to be performed during the safety selection	10
3.3 – Qualification run and cuts	10
3.4 - Competition for Individuals	11
3.4.1 - Solo pilot announced program	11
3.4.2- Solo restricted announced program	11
3.5 - Competitions for Teams	11
3.5.1 - Synchro pilot announced program	11
3.5.2 – Synchro restricted announced program	11
3.6 - Typical competition schedule	11
3.7 – Announcement of programme start	12

<b>Chapter 4 – Scoring</b>	<b>13</b>
4.1 – Technical scoring	14
4.2 - Synchronisation scoring (for synchro competition only)	15
4.3 - Scoring of landing	16
4.3.1 - Landing on the ground	17
4.3.2 - No landing scoring	17
4.4 - Scoring of choreography	17
4.5 - Total points	18
4.6 - Criteria of technical evaluation	18
<b>Chapter 5 – Rankings</b>	<b>20</b>
5.1 - Permanent ranking: W.A.P.R.	20
5.2 – ACRO WORLD CUP Ranking	20
<b>Chapter 6 – Organiser Rules</b>	<b>21</b>
6.1 - The competition place	21
6.2 - Take Off	21
6.3 – Landing	21
6.4 – Communication	21
6.5 - Organisation facilities	21
6.6 - Aerobatics area movements	22
6.7 - Organisation team	22
6.8 – Briefing	22
6.9 - Local Regulations	22
6.10 - Weather forecast	22
6.11 – Safety	22
6.12 – Insurance	22
6.13 - Media exposure	23
6.14 – Panel of judges	23
6.15 – Results	23
<b>Chapter 7 – Local Rules</b>	<b>24</b>
7.1 - Name of the event	24
7.2 – Dates	24
7.3 - Description of the event	24
7.4 - Maximum number of pilots and selection method	24
7.5 - Entry fee	24
7.6 - Protest fee	24
7.7 - Prize money	24
7.8 – Telephone number	24
7.9 - Daily programme	24
7.10 – Competition	24
<b>Annexes - Annex 1 - List of Judges (See: <a href="http://www.fai.org/hang_gliding/documents">www.fai.org/hang_gliding/documents</a> )</b>	
<b>Annexes - Annex 2 - Official Manoeuvres Board SOLO &amp; SYNCHRO</b>	<b>26</b>
<b>Annexes - Annex 3 - Aerobatics Paragliding World Cup (APWC)</b>	<b>30</b>

# International Aerobatics Competition Rules for Paragliding

These rules cover the technical aspects of organising, running and scoring an aerobatic competition in paragliding. Organisers of FAI sanctioned events in this discipline should read this Annex in conjunction with the full Section 7B of the FAI Sporting Code which covers all other matters which must be addressed when running Category 1 or Category 2 events.

## Chapter 1 – Competition Formats

In Aerobatic Paragliding there exist two different kinds of competitions. There are competitions for:

**Individuals (Solo)**

**Teams (Synchro)**

The competition calendar must indicate if it is open to teams and/or individuals.

A competition can also be held in different categories:

**FAI CAT 1:** World Championship, World Air Games, Continental Championships

**FAI CAT 2:** National and International Competitions, World Cup Competitions

## Chapter 2 - Competition Rules

### 2.1 - Registration and responsibility

The entry fee and the number of selection and competition days will be announced in the Local Regulations of the event.

Each competitor must hold an FAI sporting licence issued by the NAC he represents. Drugs are prohibited: Refer to FAI GS Rules and FAI Anti-Doping Rules & Procedures.

Each competitor in the competition participates under his own responsibility. By signing the liability waiver (national law permitting), the pilot assumes the responsibility for any damage caused during the competition, the flights or transportation, to the pilot himself and to third parties.

Each competitor must hold valid air third party insurance. Personal medical insurance is highly recommended.

Each competitor is responsible for his manoeuvres and should only perform manoeuvres that he has practised and can control.

The senior judge and/or the technical delegate must make sure that the organiser properly checks the administrative documents: FAI licence, liability waiver if appropriate, third party liability insurance, and equipment verification.

Final registration, equipment and documents check shall be completed on the evening preceding the competition start between 17:00 (5:00pm) and 21:00 (9:00pm). The Local Regulations will specify exactly the opening time of the registration.

## **2.2 – Equipment**

A dry reserve parachute is compulsory, and should be in good condition and recently folded. After a landing in water a new and dry reserve must be used. A helmet is compulsory. The helmet has to be a certified flying helmet.

No ballast is allowed.

## **2.3 – Safety**

The aerobic manoeuvres are only allowed above the water and in a designated area called “**flight box**”. Pilots must take into account the drift caused by wind.

It is strictly forbidden to fly over the public (penalty: immediate elimination from the competition).

## **2.4 - Emergency stop signal**

In case of emergency, the flight box can be closed.

A sound signal (loud enough to be heard by pilots) and a visual signal (cross and additionally a smoke bomb can be used) over the raft announce that all aerobatics manoeuvres and all water landing must immediately stop.

## **2.5 - General behaviour**

Competitors must respect the decisions of the judges.

Competitors must respect the schedule of briefings and shuttles.

## **2.6 - Warnings and penalties**

For safety reasons but also for lack of sportsmanship and respect for the rules, warning and penalties can be imposed on pilots.

### **2.6.1 - Persons entitled to impose warnings**

The judges for sporting aspects.

The organiser for sportsmanship aspects.

### **2.6.2 - When a warning can be imposed**

At any time during the event (flight, registration, meals, transport to the take off, at the take off, during the briefings, etc...)

### **2.6.3 - Official list of warnings**

GENERAL SAFETY:

- Disrespect of the flight box

- Disrespect of the signal closing the flight box

- Starting manoeuvre before 1 minute after the preceding pilot has landed

- Flying over the public

- Unauthorised take off

TAKING RISKS:

- Loss of control

- Endangering others (raft crew)

- Unsafe landing

RESPECT – SPORTSMANSHIP:

- Delay at briefings\*

- Delay at Take Off

- Unsporting behaviour

- Harmful behaviour towards the organisation

Not listening for program start

\*If for any acceptable reason (plan delay...), a pilot cannot be on time at a briefing he must nominate someone to represent him during the briefing and inform the judges following this procedure:

- Before the first pilots' briefing inform the organiser as soon as possible by a 'phone call (the number must be shown in the Local Regulations). The organiser will inform the senior judge.
- After the first pilots' briefing inform the pilots committee and/or the senior judge.
- When the pilot arrives in the competition area he must contact the senior judge to explain what happened. The judges will decide to give a warning or not.

#### **2.6.4 - Running of the warnings**

Each judge notes the warning on his scoring sheet. The warning is valid if at least 2 judges (or 3 when 5 judges are present) give a warning.

#### **2.6.5 - Point penalties**

The total of the point penalties are shown on the results and are deducted from the total results.

- 1 warning = to make the pilot aware that something went wrong
- 2 warnings = - 5 points
- 3 warnings = - 30 points
- 4 warnings = disqualification

#### **2.6.6 - Announcement of warnings and penalties**

Each warning is to be displayed on the result sheet.

### **2.7 - Safety Committee**

At the beginning of the competition 3 pilots must be elected (by the team leaders in Cat 1 or by the pilots in Cat 2) to represent the pilots in the safety committee whenever needed.

### **2.8 – Safety Director**

In Category 1 events the organiser shall appoint a safety director acceptable to the CIVL Bureau whose sole responsibility is safety (see Section 7B – Class O PARAGLIDERS Class III – chapter 2.6.2.1)

### **2.9 – Complaint, protest and appeal**

#### **2.9.1 - Category 1 events**

**Complaint:** To dispute a decision, the pilot must present his complaint to the Competition Director. The last moment to deposit a complaint is the first pilots' briefing after the results are published.

**Protest:** the protesting pilot must present his protest to the Competition Director who is to take the protest fee and pass both protest and fee to the international jury for consideration. The jury is nominated by CIVL and composed of three members from different nations.

**Appeal:** An appeal may be made to the FAI by the NAC as per the General Section.

### **2.9.2 - Category 2 events**

**Complaint:** To dispute a decision, the pilot must present his complaint to the Competition Director. The last moment to deposit a complaint is the first pilots' briefing after the result are published.

**Protest:** The Competition Director and the senior judge study all the protests.

### **2.9.3 - Notes and video**

The organiser has to keep and archive the papers and notes from the judges until 6 months after the competition.

All routines are recorded on video and will be referred to in case of dispute. All the judgement calls are final. The Competition Director may hold a conference with the judges to adjust a score in case of an obvious error, but the final scores are not protestable.

### **2.10 - Validation of run**

In case of difficulties (meteorological conditions, organisation etc), the pilots' representatives and the judges meet to decide to validate or cancel the run.

If, for any reason, a run cannot be completed one day, it may be continued on a later scheduled day (similar conditions permitted).

### **2.11 - Validation of the competition**

A minimum of **2** runs is required to validate the competition in each category (solo and synchro).

### **2.12 - Prize money**

The Local Regulations will state the amount of prize money available and the rules for allocating it. For a FAI CAT 2 ACRO WORLD CUP event the minimum prize money is fixed – see Annex 3.

### **2.13 - Number of pilots**

The organiser must specify the maximum number of places available in each competition, solo and synchro.

A pilot who is competing in solo and synchro will be counted as 2 pilots.

The minimum number of pilots for a Solo competition is 10 pilots.

The minimum number of pilots for a Synchro competition is 5 teams.

The organiser can control the number of pilots in his competition using:

- The world ranking order (published 6 weeks before the competition)
- Registration order
- A qualification run just before the competition

This must be announced on the pilot registration form.

The organiser must publish a waiting list.



## **2.14 - Entry fee**

The entry fee is determined by the organiser but 25 Euros per competition day maximum is recommended by the CIVL Aerobatic Subcommittee. The entry fee should cover:

- Take off access
- Free access to supplementary events

For a FAI CAT 2 ACRO WORLD CUP event the entry fee is different –See Annex 3.

## **2.15 – Judging panel**

The judging panel is to consist of at least 3 independent judges from at least 2 different countries (or 3 different countries if there are to be 4 or 5 judges). One chosen from the list of senior judges is to be the chief judge. The list is in Annex 1 to these rules (see [www.fai.org/hang\\_gliding/documents](http://www.fai.org/hang_gliding/documents) ).

Other judges can be national or international.

The CIVL Aerobatic Subcommittee in consultation with the organiser nominates the senior judges.

After the competition the senior judge is to write a report to the CIVL subcommittee and must stay in contact with the organiser until the results have been sent to the CIVL.

## **Chapter 3 - Competition Details**

### **3.1 – Safety Selection**

Safety selection is compulsory for pilots who are not in the world pilot ranking. Pilots in the WAPR do not need to participate in the safety selection. The judges state which manoeuvres have to be flown at the safety selection.

The aim is to demonstrate the pilot's ability to fly the competition. The judging panel uses the safety selection flight to make the pilot selection.

### **3.2 - Official manoeuvres to be performed during the safety selection**

All pilots entering the competition should be able to safely perform the following manoeuvres:

- Full stall + exit
- Tail slide + exit
- Wing over
- SAT
- Helico

Choreography:

- Placement and drift
- Management of altitude
- Flow, rhythm, connection
- Originality, diversity

Synchro co-ordination (only for synchro flights)

Elimination if:

- The pilots' skills are insufficient to perform the minimum required manoeuvres for the competition
- The manoeuvres are performed unsafely.
- No respect of the flight box (including the drift).
- Other safety reasons...

### **3.3 – Qualification run and cuts**

If there are more pilots than the number fixed by the organiser, they will be selected according to the WAPR or the order of registration (this is to be specified in the Local Regulations) or through a qualification run.

Cuts (elimination round) are only allowed for a final run and after having minimum 2 valid runs (with all pilots and teams) for a CAT 1 event.

Cuts at qualification runs are allowed in CAT 1 and CAT 2 events. An eliminated pilot may lodge a complaint.

The qualification is a free announced programme or a restricted programme. Other aspects that count at a qualification run are:

Choreography:

- Placement and drift
- Management of altitude
- Flow, rhythm, connection
- Originality, diversity
- Synchro co-ordination (only for synchro flights)

Landing (only if landing into a raft on water)

See scoring of landing.

### **3.4 - Competition for Individuals**

#### **3.4.1 - Solo pilot announced programme**

Each pilot must submit his routine prior to his run. The pilot may choose his routine from the list of manoeuvres by filling in the “announced programme” table. The number of manoeuvres is compulsory: and announced before the run.

#### **3.4.2- Solo restricted announced program**

The pilot may choose his routine from a list of manoeuvres decided by the judges’ panel.

### **3.5 - Competitions for Teams**

#### **3.5.1 - Synchro pilot announced programme**

Each team must submit his routine prior to his run. The team may choose their routine from the list of manoeuvres by filling in the “Synchro announced program” table. The number of manoeuvres is compulsory: and announced before the run.

#### **3.5.2 – Synchro restricted announced program**

The team may choose their routine from a list of manoeuvres decided by the judges’ panel.

### **3.6 - Typical competition schedule**

Safety selection:

Qualification Run

1<sup>st</sup> Task

2<sup>nd</sup> Task

3<sup>rd</sup> Task

4<sup>th</sup> Task

**Safety selection manoeuvres**

**Restricted or announced programme**

(Does not count for the scoring)

**Restricted or announced programme**

**Restricted or announced programme**

**Announced programme**

**Announced programme**

The starting order of the 1st run is determined by random drawing, or the reverse order of the FAI ranking. For the following runs, pilots will start in the reverse order of the last updated competition standing.

### **3.7 – Announcement of programme start**

A pilot, before starting his routine makes one ear to validate his run. If, before starting the first manoeuvre, he estimates the conditions unsafe or the altitude too low to complete the run, he notifies the judges' panel by making 2 ears with the risk to receive warnings if the judges' panel does not agree with his decision.

Then the pilot must descend swiftly without making any aerobatic manoeuvre and land dry. In that case he will be allowed a re-flight.

This is the pilot responsibility to start or not to start his routine.

Launch order will be either the reverse of the current points standing or by random drawing.

## Chapter 4 - Scoring

The programme (or routine) consists of a series of X manoeuvres from the official list. Each manoeuvre may only be performed once within the routine (unless performed in the opposite direction i.e. left/right).

### **The scoring is based on 3 sets of notes for solo competitions:**

The technique during the programme, the general choreography, and the landing.

### **The scoring is based on 4 sets of notes for synchro competition:**

The technique during the programme, the synchronisation of each manoeuvre, the general choreography, and the landing.

### **Each set of points must be averaged on a 100 points basis:**

For that, the pilot's score will be compared to a maximum score or an average score.

This averaged score will be balanced with the percentages granted to this set of points. The following percentages apply:

Solo:

Technical	60%
Landing	20%
Choreography	20%

Synchro:

Technical	50%
Synchronisation	20%
Landing	15%
Choreography	15%

## 4.1 – Technical scoring

Each manoeuvre has a fixed difficulty coefficient in accordance with this table:

Official Manoeuvres	
Manoeuvres	Coef
Full stall	1,00
Tail Slide	1,15
SAT	1,25
Wing Over	1,35
Asymmetric Spiral	1,35
Looping (Inversion)	1,50
Asymmetric SAT	1,55
Dynamic Full Stall	1,60
Mac Twist	1,60
Misty Flip	1,65
Helicopter	1,70
Twisty Flip	1,70
SAT to HELICO	1,75
Misty to Misty	1,75
Mac Twist to Helico	1,80
Tumbling***	1,80
Twister (Helico to Helico)	1,85
HELICO to SAT	1,85
Trippy	1,90
Rhythmic SAT***	1,95
Infinity Tumbling***	2,00
Misty Tumbling***	2,10
Synchro Manoeuvre	Coef
Rodeo SAT	1,65
Rodeo Helico	1,70
Synchro Spiral	1,80
Pitch Pendulum	1,85

\*\*\* These manoeuvres can NOT be the last 2.

The CIVL Aerobatic Subcommittee is empowered to continuously review these difficulty coefficients and make changes, as it considers necessary.

**Execution points:** Each manoeuvre is judged on a scale of 0 minimum to **100** maximum.

**Manoeuvre Connection, which are NOT allowed** (exit in between is needed)

Helico to Helico - same direction

SAT to SAT – same direction

Tumble to Infinity

Rhythmic SAT to Infinity

Rhythmic SAT to Tumble

### **Calculation of each manoeuvres score for each judge:**

Manoeuvres score = execution points X difficulty coefficient

### **3 judges average:**

For each manoeuvre, the scoring software calculates the average score of the 3 judges.

This manoeuvre average score is shown in the Judging Details.

### **Calculation of final technical score:**

An **average score** is calculated depending of the number of manoeuvres and the difficulty coefficient average.

The **difficulty coefficient average** is fixed at **1,70** for every kind of task and for solo and synchro competitions.

Average score = quantity of manoeuvres X 1,70 X 100

Average technical score = (total of the X manoeuvres / medium score)\*100

Final technical score for solo = average technical score X 60%

Final technical score for synchro = average technical score X 50%

## **4.2 - Synchronisation scoring (for synchro competition only)**

The synchronisation of each manoeuvre is judged on a scale of 0 minimum to 10 maximum.

The judges' average is made with the final judges synchronisation scores.

The **max score** to refer to is:

Max score = number of manoeuvres X 10

Average synchronisation score = (total of the X manoeuvres / max score)\*100

Final synchronisation score = average synchronisation score X 20%

### 4.3 - Scoring of landing

Landing on the raft is an integral part of the competition.

It is important for the media and spectacular for the public.

The raft must be at least 4m wide and 6m long when on a lake 10 times larger when on sea water in order to protect, as much as possible, the glider from the salt.

The judges' average is made with the final judges landing scores.

The landing score for solo takes into account the following criteria and coefficients:

LANDING on RAFT for SOLO	Coef
Approach and precision	1,0
Raft	1,5
Ground spiral	4,0
Hand touch	1,2
Feet touch	0,5
Spin	1,0

**Execution points:** Each manoeuvre is judged on a scale of 0 minimum to 10 maximum and multiplied by the respective coefficient.

The max score to refer to is:

$$\text{Max score} = 92$$

$$\text{Average landing score} = (\text{total of the 6 manoeuvres} / \text{maxi score}) * 100$$

$$\text{Final landing score} = \text{average landing score} \times 20\%$$

The landing score for Synchro takes into account the following criteria and coefficients:

LANDING on RAFT for SYNCHRO	Coef	Pilot 1	Pilot 2
Approach and precision	1,0		
Raft	1,5		
SOLO Ground spiral	4,0		
SYNCHRO Ground spiral	5,0		
Hand touch	1,2		
Feet touch	0,5		
Spin	1,0		

**Execution points:** Each manoeuvre is judged on a scale of 0 minimum to 10 maximum and multiplied by the respective coefficient.

Each pilot's execution will be graded separately and added.

The maxi score to refer to is:

$$\text{Max score} = 204$$

$$\text{Average landing score} = (\text{total of the 6 manoeuvres} / \text{max score}) * 100$$

$$\text{Final landing score} = \text{average landing score} \times 15\%$$

#### 4.3.1 - Landing on the ground



The pilot committee in agreement with the organiser can decide to cancel the landing on the raft in case of seawater, very cold water (less than 10°C) or unsafe landing conditions.

In that case, a ground landing can be scored under the following conditions:

- The pilots should be able to safely approach the landing area without over flying the public.
- A target landing gives the “raft points”. The target must be 1 m large.
- No ground spiral is allowed.

#### 4.3.2 - No landing scoring

If the conditions cannot permit safe competition landing, the landing will not be scored. The landing score will be 0 for all pilots.

### 4.4 - Scoring of choreography

Choreography is scored for the entire run (including the landing).

The judges' average is made with the final judges choreography scores.

The choreography score for solo takes into account the following criteria and coefficients:

SOLO CHOREOGRAPHY	Coef
Placement and drift	1,6
Management of altitude	1,0
Flow	1,2
Rhythm and connexions	1,5
Originality, diversity	2,0

Each criteria is judged on a scale of 0 minimum to 10 maximum.

The max score to refer to is:

$$\text{Max score} = 73$$

$$\text{Average choreography score} = (\text{pilots choreography points} / \text{maxi score}) * 100$$

$$\text{Final choreography score} = \text{average choreography score} \times 20\%$$

The choreography score for Synchro takes into account the following criteria and coefficients:

SYNCHRO CHOREOGRAPHY	Coef
Placement and drift	1,6
Management of altitude	1,0
Flow	1,2
Rhythm and connexions	1,5
Originality, diversity	2,0
Synchro Coordination	2,0

Each criteria is judged on a scale of 0 minimum to 10 maximum.

The max score to refer to is:

Max score = 93

Average choreography score = (pilots choreography points / max score)\*100

Final choreography score = average choreography score X 15%

#### 4.5 - Total points

All the different scores will be added to obtain a score based on 100. The score will be rounded to one decimal place.

**Final pilot score =**            final technical score  
                                         +    Final landing score  
                                         +    Final choreography score

**Final team score =**            final technical score  
                                         +    Final synchronisation score  
                                         +    Final landing score  
                                         +    Final choreography score

#### 4.6 - Criteria of technical evaluation

The manoeuvres table is the reference for the season.

Only the official manoeuvres defined in the manoeuvres table can be scored in every run.

The manoeuvres table includes for each manoeuvre.

- The manoeuvre's **name** and its **difficulty** coefficient,
- The **criteria of technical evaluation** that is the reference for the execution score.
- The **imperative**: minimum requirements to validate the manoeuvre.
- The **penalties**: reference for discount in execution scoring.

#### Penalties:

The following criteria are some references. It is up to the judges to assess the context in which the incident happens, its importance and the way the pilot is managing the situation.

#### Collapses / Tucks:

0 % to 25%	=> 0 to -20 points for the manoeuvre
25% to 50%	=> -20 to -50 points for the manoeuvre
50% to 100%	=> -50 to -80 points for the manoeuvre

#### Change of direction:

< 90°	=> 0 to -20 points
90° to 180°	=> -20 to -50 points
> 180°	=> -50 to -80 points

**Cravat:**

In case of a cravat, the judges assess the way the pilot manages the situation. Fast recovery and keeping the wing under control is required.

Cravat penalty:

Cravat <10% and <3 seconds	=> -20 points
Cravat >50% and >3 seconds	=> -20 to -80 points

**Twist:**

In case of a twist, the judges assess the way the pilot manages the situation.

< 1 turn	=> -20 to -50 points
1 turn and more	=> -50 to -80 points

**Loss of control: 0 for the run**

A loss of control is defined as more than a momentary lapse where the pilot no longer has control of the situation: a problem with the glider (collapse, cravat...) or twist that causes the pilot some unexpected and uncontrolled trajectories.

The judges will determine whether the pilot has gone too far and into a dangerous situation.

**Opening of the reserve (rescue parachute) - 0 (zero) points for the manoeuvre, but the points allocated earlier in the run will be counted**

**Not opening the reserve or delay in opening in case of needing it: 0 (zero) points for the run + Warnings**

## Chapter 5 - Rankings

Two different rankings, in paragliding aerobatics competition, are calculated.

- 1) An Aerobatic Paragliding World Cup (ACRO WORLD CUP) of maximum 5 major events with a ranking formula define below (see Chapter 7)
- 2) A permanent ranking based on the formula of the World Aerobatic Pilot Ranking. This formula and its explanations are available at the following address:  
[http://www.fai.org/hang\\_gliding/rankings/newrankings/formulahg/index.html](http://www.fai.org/hang_gliding/rankings/newrankings/formulahg/index.html)

All the international aerobatics events including those counting for the ACRO CUP will be taken into account for this permanent ranking provided they are sanctioned as FAI Cat 2 events

This ranking will give points to all the pilots competing in an event and could be used for selection purposes.

### 5.1 - Permanent ranking: WAPR

The CIVL Competitions Co-ordinator will maintain the WAPR provided the following conditions are met:

The Aerobatics competition must be FAI Category 2 sanctioned. The organiser has to contact the CIVL Competitions Co-ordinator at the following address: **civl\_comps@fai.org** to obtain the dossier that requires:

- A sanction fee equivalent to one pilot entry fee,
- The competition is on the CIVL calendar one month before the event,
- The organiser checks that pilots hold a valid FAI sporting licence

Only the pilots holding an FAI sporting licence will be included in the WAPR

The organiser must send to the CIVL Co-ordinator the results the same day they are official.

### 5.2 – ACRO WORLD CUP Ranking

In addition to sending the results to the CIVL Competitions Co-ordinator, the Aerobatic Paragliding World Cup (Acro World Cup) organisers must send to Pal Hammar-Rognoy the results the same day they are official at the following address: **pal@downteam.com**

## **Chapter 6 – Organiser Rules**

These organiser rules apply to all events counting for the World Aerobatic Pilot Ranking.

**An organiser has to complete a form to be FAI Category 2 event (see annex). He must specify on this form the name of the senior judge. He must send it to the FAI (mail address as in 5.1) with fee of one pilot entry fee.**

For the ACRO WORLD CUP rules apply but others are added (see chapter 7 and Annex 3).

### **6.1 - The competition place**

Aerobatic competitions can only take place above water. It is necessary to get a height of at least 400 m above water in order to perform the movement.

The wind should not normally be stronger than 30 km/h.

The box must be large enough to permit, a pilot to use his rescue parachute and land safely in water.

### **6.2 - Take Off**

A necessary space must be available to spread a minimum of 2 gliders. Easy and fast access for rescue. If it is a towing competition a minimum of two boats/winches are required. A starter is required to regulate take offs & for the communication to the landing area.

### **6.3 - Landing**

The main landing place is on the raft. The size of the protected platform is at least 6m X 4m, without any sharp edges. All sides and corners must be well protected.

It is necessary to have a “dry” landing. It is also possible to use a landing place on water. In that case a protected floating platform (10m X 10m) without any sharp parts. Each side and corners must be well protected.

Windssocks must be posted at various appropriate locations.

**No flight over the public is allowed.**

### **6.4 - Communication**

Radios and / or mobile phones (homologated if necessary) can be used for the communication.

The start of the run must be announced to all the judges with confirmation.

### **6.5 - Organisation facilities**

Reception of the public in a delimited area (parking close to the event, catering, announcers).

Headquarters with the necessary infrastructure for the input of results, computers, Internet access, and a high performance photocopy machine, paper (minimum 4 reams) and telephone lines.

Each judge needs one secretary to assist him or her during the notation.

In addition deck chairs (chaises longue) must be provided to the judges.

## **6.6 - Aerobatics area movements**

It is the pilot's responsibility to consider the strength of the wind and to estimate its drift in case of rescue opening so that he can land in water. The beginning of the routine will start at a minimum distance from the bank. The judges, the organiser and pilot committee fix the maximum strength of wind accepted during the competition.

## **6.7 - Organisation team**

Continuous shuttles or cable car with operators giving priority to the competitors.

A flight director who must be present at landing place.

At take off: a starter who is responsible for take offs and helped by 2 or 3 assistants.

A speaker for public address.

A cameraman with a camera who is permanently filming. This person must be placed next to the jury.

A secretary who assists the judges' panel and helps entering the results (score keeper).

## **6.8 – Briefing**

Pilot committee election (2 pilots). The pilot committee gives his point of view on the competition and particularly on all the aspects concerning safety.

## **6.9 - Local Regulations**

The Local Regulations must be published according to the Section 7 template (see below). These rules should contain all site and meet specific information. They must be published five months prior to a Cat 1 event, and two months prior to a Cat 2 event, on the official web site. LRs must be posted on the competition information board during the event.

## **6.10 - Weather forecast**

Weather forecast publication. At take off, information on the landing wind strength must be provided.

## **6.11 - Safety**

- An emergency response team or medical team at the competition area must be available.
- An emergency rescue helicopter must be available within 30 min of contact.
- 2 motorised boats with staff (3 - 4 for Synchro), hook knives and easy access for the pilots.
- Additional safety equipment where appropriate.

## **6.12 - Insurance**

Each organiser must consider what insurance cover is necessary for each competitor and include this in the Local Regulations for the event. The following wording is recommended:

It is the responsibility of each competing pilot to ensure that he has valid insurance cover as follows:

Public liability risk: ..... (Organiser to specify requirement)

Personal accident/hospitalisation/repatriation..... (Organiser to specify requirement)

If insurance can be arranged on arrival through the organisers this should also be stated and details given.

The Local Regulations should also state what proofs of insurance the organiser will check before competition flying commences.

### **6.13 - Media exposure**

The organiser should organise an event well suited to the media, at least at a national or local level.

Information should be given to the pilots about the broadcast dates on the different channels of the images of the competition.

### **6.14 – Panel of judges**

The organiser must select a senior judge among the list included in the annex to this document. He must contact him directly.

The role of the senior judge is:

- To choose and organise the judges panel with the organiser
- To score the pilots
- To make sure that the competition rules are implemented
- To make sure that the FAI licences are checked.
- To check the safety aspect of the event
- To train the local judges

The chief judge is paid by the organiser 200 Euros per day plus his travel and accommodation expenses.

The chief judge is encouraged to organise a training course for new judges during and/or before the event.

A student judge must have followed a theoretical training course provided by a senior judge.

### **6.15 – Results**

The organiser must send the results in the correct format (Excel or Access) to the CIVL Competitions Co-ordinator at the following address: [civil\\_comps@fai.org](mailto:civil_comps@fai.org) as soon as the final results are official. The results have to be published on the official website of the event one hour after they are official.

## **Chapter 7 – Local Regulations**

### **7.1 - Name of the event**

### **7.2 – Dates**

Including training dates and place:

### **7.3 - Description of the event**

Open to teams and/or individuals

Number of competition days

Date of the qualifying run

### **7.4 - Maximum number of pilots and selection method**

Maximum number of pilots:

Selection method:

- WAPR
- Qualifying run
- Order of inscription (date)

### **7.5 - Entry fee**

Amount.

What is included in the entry fee.

### **7.6 - Protest fee**

Amount.

### **7.7 - Prize money**

Amount

How it is awarded

### **7.8 – Telephone number**

The number to be called by pilots in case of a delay.

### **7.9 - Daily programme**

This programme must be respected.

### **7.10 – Competition**

Type of competition

Definition of the Flight Box

Elimination round (cut) before the final run after 2 valid rounds if possible.



**Annex 1 - List of Judges** (See: [www.fai.org/hang\\_gliding/documents](http://www.fai.org/hang_gliding/documents))

## Annexes - Annex 2 - Official Manoeuvres Board SOLO & SYNCHRO

Manoeuvre's name	Coef	DESCRIPTION, IMPERATIVE	Criteria of technical evaluation	CONNECTIONS
<b>Full Stall</b>	<b>1,00</b>	Full stall No required duration	Entry, control of pendulum movement control of direction and exit or connection	- -
<b>Tail Slide</b>	<b>1,15</b>	Backward flying with open glider Min. 3 seconds	maintenance of the shape, stability perceptible backwards flight, control of direction, duration, exit or connection	
<b>SAT</b>	<b>1,25</b>	Equilibrated SAT rotation  Min. 2 revolutions in SAT	Entry, angle of wing (90° for max score), low sink rate exit or connection (no collapse penalty for tip collapse during exit)	no connection to combo manoeuvres
<b>Wing Over</b>	<b>1,35</b>	Series of pendulum turns with change of direction each time Min. twice to one side, twice to the other side with wide angle (min. 135°)	Rhythm, flow, trajectory  angle (minimum 135 ° for maximum score – the higher the better)	
<b>Asymmetric Spiral</b>	<b>1,35</b>	Series of pendulum turns in the same direction each time	Rhythm, flow, trajectory  angle (135 ° for maximum score- the higher the better)	
<b>Looping</b>	<b>1,50</b>	Entry from asymmetric spiral or a normal spiral - Reversal of a rotation that makes the pilot turn around the wing on a pitch movement. min. angle : 135°	Entry, energy, timing, flow, trajectory (pitch movement)  angle (180 ° for maximum score), exit or connection	
<b>Asymmetric SAT</b>	<b>1,55</b>	Entry from say spiral or wing over in the same direction (old school)	energy, timing, flow,  trajectory (SAT rotation), angle (135° for maximum score), asymmetric dynamic exit (no collapse, no stall)	
<b>Dynamic Full Stall (Super Stall)</b>	<b>1,60</b>	Strait climb Min. 1 revolution (min. 45° backwards pitch) + full stall No required duration	Energy, importance of pitch ( pitch 90° for maximum score), control of direction and exit or connection	
<b>Mac Twist</b>	<b>1,60</b>	Spin from spiral maintained until pendulum stabilisation. Minimum 90° for maximum score	Energy and asymmetry on entry, speed and importance of rotation pendulum stabilisation, fast exit or connexion	

Manoeuvre's name	Coef	DESCRIPTION, IMPERATIVE	Criteria of technical evaluation	CONNECTIONS
<b>Misty Flip</b>	<b>1,65</b>	Straight entry, straight climb , straight shooting + 360° spin + exit with front pitch to the same direction as entry.	Importance of pitch on entry, 360° rotation, maintenance of the shape  no rotation on entry and exit, direction.	
<b>Helicopter</b>	<b>1,70</b>	Perfect spin with open glider and vertical axe of rotation. Min. 3 revolutions	maintenance of the shape, stability of rotation axis (vertical) speed of rotation, low sink rate, duration, exit or connection	no connection to combo manoeuvres (twister, Helico-sat...)
<b>Twisty Flip</b>	<b>1,70</b>	Half twist before climb + misty flip. The pilot untwists during the spin rotation only on the 2 last manoeuvres	quality of the twist (early timing, flow, balance)  + misty flip criteria	
<b>SAT to Helico</b>	<b>1,75</b>	Min 2 SAT revolutions + connection to min 3 Helico revolutions	Sat criteria (/30 pts) + Helico criteria (/30 pts)  + connection (/40 pts): flow and speed of transition	no connection to Helico
<b>Misty to Misty</b>	<b>1,75</b>	same criteria as misty, transitions: use the energy of the first misty for the next one, the exit must be straight, to the opposite side	for maximum points the pilot should end up by the same direction as the first entry, direction must be changed	
<b>Mac Twist to Helico</b>	<b>1,80</b>	Radical negative spin from spiral maintained to Helico. Min 3 revolutions Helico	Mac twist criteria (/30 pts) + Helico criteria (/30 pts) + connection (/40 pts): flow and speed of transition	no connection to Helico
<b>Tumbling ***</b>	<b>1,80</b>	Asymmetric or inversion entry, perfect pitch movement min 1 revolution	Energy on entry, timing, flow,  trajectory (pitch movement), angle (180° for max score, minimum 135°), exit or connexion	no connection to infinity
<b>Twister (Helico to Helico)</b>	<b>1,85</b>	Helico one side to Helico other side  Min 3 revolutions each side	1st Helico (/30 pts) + 2nd Helico (/30 pts)  + connection (/40 pts): speed of transition	no connection to Helico

Manoeuvre's name	Coef	DESCRIPTION, IMPERATIVE	Criteria of technical evaluation	CONNECTIONS
<b>Helico to SAT</b>	<b>1,85</b>	Min 3 Helico revolutions + connection to min 2 SAT revolutions. No rotation in entry and exit	Helico criteria (/30 pts) + SAT criteria (/30 pts) no rotation on entry and exit, direction.	no connection to simple SAT
<b>Trippy</b>	<b>1,90</b>	Helico – SAT – Helico, SAT – Helico – SAT one manoeuvre but option to start with SAT or Helico	3 rotations for Helico and 2 rotations for SAT 20 pts for each manoeuvre and connection part	
<b>Rhythmic SAT ***</b>	<b>1,95</b>	Entry without pitch, constant progression  Minimum 135 ° in the best revolution, 180° for maximum points	Rhythm and increase of the amplitude, flow, angle, exit or connection	no connection to Tumbling
<b>Infinity Tumbling ***</b>	<b>2,00</b>	Series of perfect Tumbling (pitch movement)  Min entry plus 5 revolutions	Rhythm, flow, trajectory (no roll movement), tension in the lines and glider, duration, exit or connexion	no connexion to Tumbling
<b>Misty Tumbling ***</b>	<b>2,10</b>	Dynamic entry of the Misty (does not have to be straight), dynamic climb, the spin can be more than 360° dynamic shooting and use the energy of the shoot for the tumbling, the first revolution of the tumbling counts	Importance of the pitch, speed of the rotation, rotation 360° or more, maintenance of the shape Energy on entry to the tumbling, angle (180° for max score, minimum 135°), exit	No connection to Infinity Tumbling or Rhythmic SAT is allowed
<b>SYNCHRO MANOEUVRES</b>				
<b>Rodeo SAT</b>	<b>1,65</b>	Synchronised and rapid entry, proximity of the wings flow duration, exit	Min. 2 rotations around the SAT at the same altitude	
<b>Rodeo Helico</b>	<b>1,70</b>	Synchronised and rapid entry, proximity of the wings flow duration, exit	Min. 2 spiral rotations around the helicopter at the same altitude	
<b>Synchro Spiral</b>	<b>1,80</b>	Synchronised and rapid entry, proximity of the wings, duration, high sink rate, rapid and controlled exit	Min. 2 revolutions max. distance is one paraglider line length in between (approx. 10 m)	
<b>Pitch pendulum Synchro (Moline)</b>	<b>1,85</b>	Rapid and synchronised entry, pilots should be vertically aligned for max. score	Min. twice one over the other one	

<b>Landing manoeuvres</b>				
<b>Approach and precision</b>	<b>1,0</b>	Touch the raft for max score	Quality of the approach and precision (distance to the raft)	
<b>Raft</b>	<b>1,5</b>	pilot standing for max score	Landing well on the raft	
<b>Ground spiral</b>	<b>4,0</b>	Min. 360° revolution, height of wing tip below 3m at the lowest point	Entry (speed, sink rate), height of wing tip over water (touch for max. score)	
<b>Synchro Ground Spiral</b>	<b>5,0</b>	Min. 360° revolution, height of wing tip below 3m at the lowest point	Entry (speed, sink rate), height of wing tip over water (touch for max. score) very close to each other	
<b>Hand touch</b>	<b>1,0</b>		Precision, length of touch with hands...	
<b>Feet touch</b>	<b>0,5</b>		Precision, length of touch with foot...	
<b>Spin</b>	<b>1,0</b>	Min. rotation : ½ turn before pilot's landing	speed of rotation, good sink rate and standing landing	
<b>Penalties:</b>		<b>Cravat :</b>	<b>Change of direction :</b>	<b>Twist:</b>
<b>Collapse :</b>				
0 to 25% => 0 to -20 points		cravat <10% and <3 seconds => -20 points	<90° => 0 to -20 points	<1 turn => -20 to -50 points
25% to 50% => -20 to -50 points		cravat >50% and >3 seconds => -20 to -80 points	90° to 180° => -20 to -50 points	1 turn and more => -50 to -80 points
50% to 100% => -50 to -80 points			>180° => -50 to -80 points	
***this manoeuvre cannot be performed in the last two positions on the programme				

## **Annex 3 - Aerobatics Paragliding World Cup (APWC)**

The Acro World Cup represents the highest (Cat 2) competition level in paragliding aerobatics.

The “Acro Cup” is organised every year around 4 to 6 major events chosen by the CIVL Aerobatics working group.

All the competitions in the Acro World Cup are to be Category 2 events and will therefore count in the permanent ranking (WAPR).

All the rules described above (Chapter 1 to 6) are applied to the **ACRO WORLD CUP** competition except that the rules in chapter 7 take precedence.

The winner’s title of the Acro World Cup in solo and in Synchro are awarded each year (see 7.9).

### **1 Competition format**

The solo and the synchro competitions are separated in two different rankings.

The pilots can participate to both competition at the same time but it is highly recommended to have two complete equipments (reserve and glider).

### **2 Number of pilots**

The minimum number of pilots :

When the organiser runs only a solo competition, he should be able to accept a minimum of 20 pilots.

When the organiser runs a solo and synchro competition, he should be able to accept a minimum of 20 solo pilots and 10 teams.

The maximum number of pilots :

- 40 solo and no synchro
- or 30 solo and 20 teams
- or 30 teams and no solo

No cut will be made during the competition (all pilots have the opportunity to compete the all runs).

### **3 Selection method**

The registration is open until 6 weeks before the event start.

If there are more pilots registered than the maximum allowed by the organiser, the pilots will be selected based on the WAPR (for synchro team: based on the best pilots position in the WAPR).

Pilot entry will be confirmed 4 weeks before the event start.

Pilots unknown to the judges, will have to undertake a **safety selection flight** to allow judges to check the pilot’s ability to compete.

## 4 Qualifications

Due to the fact that we have a not enough national competitions in the sport discipline, an Aerobatic Paragliding World Cup organiser may run a pilot qualification round, provided it is announced in advance.

The qualification round can be flown before the competition starts. 80% of the maximum numbers of pilots are defined through the CIVL Ranking, updated 6 weeks before the event start. Other pilots, even if they have previously flown an APWC, must fly the qualification round. Therefore, up to 20% of competitors can be selected through the qualification round.

## 5 Amount of entry fee

Solo : 150 € max / pilot / competition

Synchro : 250€ max / team / competition.

Including minimum: breakfast and lunch pack and transportation to take off.

The organiser can propose a lower entry fee.

## 6 Number of competition day

Minimum 3 days (including safety selection flights)

## 7 Number of tasks per day

At least 1 in each category (in case of good conditions).

The organiser must ensure the maximum task per day for one pilot is limited to 3 runs.

## 8 Prize money (minimum amount)

The organiser is welcome to increase the prize money.

Rank	Solo	Synchro
1st	600 €	1.200 €
2nd	400 €	800 €
3rd	200 €	400 €
4th	100 €	
5th	100 €	
1st woman (if at there are least 3 women)	200 €	400 €
<b>Subtotal</b>	<b>1.600 €</b>	<b>2.800 €</b>
<b>Total</b>	<b>4.400 €</b>	

We recommend prize money and others prizes (materials) are also provided for the 4<sup>th</sup> and the 5<sup>th</sup> ranked pilots.

The organiser should pay in euros.

## 9 Judges panel

At least 1 senior judge and 2 qualified judges. It is recommended to have 2 other training judges.

The final score of the run is the total of the 5 judges' scores to which the 2 extreme scores are removed keeping the 3 remaining.

If only 4 judges are available, average the 2 extreme scores and consider this average score and the 2 remaining scores.

If only 3 judges are available, the final score of the run is the average of the 3 judges.

The chief judge is paid 300 euros per day by the organiser (including the registration day).

The other qualified judges are paid 150 euros per competition day.

The organiser will reimburse all travel expenses (up to 150 €), and cover accommodation costs of the 3 qualified judges.

The equipment check must be undertaken by the senior judge during the pilots' registration (the evening preceding to the competition start).

## 10 World Cup Ranking

The world cup ranking is based on all valid runs minus 1/3 worst run for each pilot or team.

### For example :

If the season attained 12 valid APWC runs in total, every pilot will be scored on his 8 best runs ( $1/3 \cdot 12 = 4 \Rightarrow 4$  runs are removed).

If 13 runs are valid  $\Rightarrow 9$  best results are taken into account ( $1/3 \cdot 13 = 4,33 \Rightarrow 4$  runs are removed).

If 14 runs are valid  $\Rightarrow 10$  best results are taken into account ( $1/3 \cdot 14 = 4,67 \Rightarrow 4$  runs are removed).

If 15 runs are valid  $\Rightarrow 10$  best results are taken into account ( $1/3 \cdot 15 = 5 \Rightarrow 5$  runs are removed).

### Calculation of pilots' points per run:

A coefficient is calculated depending on the winner's result compared to 100 points (theoretical maximum points):

$$\text{Coefficient} = 100 / \text{winner's points}$$

$$\text{The APWC points} = \text{pilots run points} \times \text{coefficient.}$$

Example: the winner has 83 points  $\Rightarrow$  the coefficient is 1,2

The winner has:  $1,2 \cdot 83 = 100$  APWC points

If the 2nd pilots has 80 points  $\Rightarrow 1,2 \cdot 80 = 96$  APWC points.

A pilot with 25 points  $\Rightarrow 30$  APCW points.