FAI Sporting Code

Section 7B – Class O
Paragliding Aerobatic
Paragliders
Classe 3

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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.
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1 INTRODUCTION AND FLIGHT DEFINITIONS
Section 7B of the FAI Sporting Code is the subset of Section 7 (or “Common Section 7”) dedicated to Paragliding Aerobatics Championships. This document must be read in conjunction with the Common Section 7, Section 7 Guidelines and Templates, and the General Section.

This document defines rules for 1st Category Events. For 2nd Category Events, see Common Section 7-14.

### 1.1 Flight Definitions

Additional definitions relevant to paragliding can be found in the Section 7A Cross Country.

#### 1.1.1 Flight Box

A three dimensional virtual and variable space, within which all manoeuvres must take place. The flight box includes an area over the water where a pilot must land in case he loses control of his glider or throws his reserve parachute. The size and shape of the flight box is highly dependent on weather conditions, especially wind drift. It is the pilot’s responsibility to monitor conditions closely during his flight in order to ensure he is in, and stays in, the flight box during all manoeuvres.

The overall flight box area is defined and described during the General Briefing. It may be adjusted later during the event.

#### 1.1.2 No-fly Zone

The area over which flying is strictly forbidden at all times, irrespective of wind conditions. The no-fly zone is defined during the General Briefing and may be adjusted later during the event.

In the case where the Flight Box includes part of a No-Fly Zone, the rules of the No-Fly Zone prevail.
2 ENTRY AND REGISTRATION

2.1 Entry

The Local Regulations shall state:
- The maximum number of pilots that may be accepted in the Solo Championship.
- The maximum number of pairs of pilots that may be accepted in the Synchro Championship.
- The maximum number of pilots that may be entered by a NAC.

2.2 Eligibility to Compete

In the 5 years preceding the start of the Championships:
- Men shall have scored a minimum of 25 WPRS points
- Women shall have scored a minimum of 20 WPRS points

Synchro pairs must demonstrate their skill either in a previous event or just prior to the championship.

2.2.1 Exemption to Eligibility to Compete

For any exemptions to pilot qualification requirements, applications must be made by the pilot’s NAC, with supporting evidence of the pilot’s skill and competition history. It is the responsibility of the NAC to ensure this is received by the CIVL President at least 30 days before the start of the competition.

The list of exempted pilots is published on the organisers’ website.

The Meet Director, before the start of the competition, may request an exempted pilot or a Synchro pair, to participate in a safety selection to demonstrate the skills defined in 2.2.1.1. In agreement with the Safety Director and Chief Judge, he may refuse entry to the competition if the pilot or the pair is unable to demonstrate these skills.

2.2.1.1 Safety Selection

All pilots entering the competition shall be able to safely perform the following manoeuvres:
- Full stall + exit
- Tail slide + exit
- Wingover
- SAT
- Helicopter

All pilots entering the competition shall be able to demonstrate the following points of choreography:
- Placement and drift
- Management of altitude
- Flow, rhythm, connection
- Synchro co-ordination (only for synchro flights)

2.2.2 Qualification Dates

Pilot qualifications must be finalised 30 days before the start of the championship.

2.2.3 Procedure for Checking Qualification

Qualification is to be checked by four parties to avoid unnecessary travel, expenses and disappointment in the event that a pilot’s entry is rejected due to not meeting the qualification criteria:
- The NAC or National Association/Federation before selecting their pilots.
- The competition organiser.
• The pilot.
• The CIVL Screening Committee.

### 2.2.4 CIVL Screening Committee

A Screening Committee is appointed by CIVL Bureau for each championship. It consists of three people: one representing the Bureau, one representing the Aerobatics Committee, and a Senior Judge.

The screening committee shall:
- Check that entries accepted by the organiser meet eligibility to compete criteria. Notify the organiser promptly of any that do not, so that the pilot can apply for an exemption under 2.2.1.
- Accept and check applications for exemptions. Request additional information if needed, make decisions with safety in mind and inform NAC and organisers.
- Check that the allocation process is effected according to the rules.

It is each pilot’s responsibility to make sure he is qualified.

### 2.2.5 Organiser’s Responsibility

It is the organiser’s responsibility to notify NACs of any pilots who do not appear to meet the qualification criteria.

### 2.3 Allocation

The nation ranking for this purpose shall be the WPRS Nation Ranking three calendar months before the championship starts.

Places are allocated to nations, one by one, in order from the top nation in the WPRS nation ranking down to the last ranked nation; if any places are still available, the process starts at the top again.

This process will continue until the maximum number of pilots is reached or until 60 days before the start of the championship or otherwise stated in the local regulations.

#### 2.3.1 Mixed Championships

The base for all nations is one pilot plus one female pilot (1+1). The allocation is done according to 2.3, but in this process the place allocated to the one female pilot in the base team size cannot be filled by a male pilot in any round of allocation.

#### 2.3.2 Host Nation

The host nation shall have the opportunity of entering the same number of pilots as the top nation, except that in mixed championships they may not enter males as substitutes for females with places allocated under the 1+1 rule (see 2.3.1).

### 2.4 Registration

Each competitor will be required to present to the organisers upon registration:
- Proof of identity.
- Satisfactory evidence of equipment airworthiness.
- Proof of valid insurance as detailed.

Each competitor will be requested to sign:
- Waiver declaration (agreement on release of liability). See Appendix II.
- Certified glider statement. See Appendix III.
- Entry form.

Each competitor will be requested to present his equipment to be checked by the Safety Director and/or a Senior Judge. In case of non-compliance (see Chapter 8), the pilot might not be accepted.
3 BRIEFINGS

3.1 General Briefing
A general briefing is attended by all pilots before the start of the first run. It is mandatory for all pilots to attend the meeting. The general briefing includes:
- Review of Local Regulations
- Election of the Pilot and Safety Committees.
- Cuts policy.
- Maximum wind limits.
- Safety briefing (see Common Section-4 and 9).

3.2 Pilot Committee
A Pilot Committee must be formed and shall include three pilots elected by the competitors from nominations put forward by the Meet Director.

3.3 Safety Committee
As per Common Section 4.

3.4 Daily Briefing
It is mandatory for all pilots to attend the daily briefings.
4 RUNS

4.1 Official Practice Period
As per Common Section 7-2. All aspects of the organisation are in place except that there is no judging or scoring.
Timings of the practice runs are stated in the Local Regulations.

4.2 Cuts
Cuts are allowed after a minimum of 2 valid runs.
Cuts policy is decided by the Meet Director in agreement with the Chief Judge.
Cuts policy will be presented and discussed during the general briefing.
Cuts policy may evolve during the event depending on weather or other variable elements. In this case, it is presented during the daily briefing.
A pilot which has been cut must remain available until the end of the championship for show flights, otherwise he may be disqualified from the competitions.

4.3 Programmes
Programmes may be free, imposed or restricted.
In an imposed or restricted programme, the Meet Director and/or the Chief Judge are entitled to specify technical limitations.

4.4 Pre-Flyers
Pre-flyers may be used at the discretion of the Meet Director.

4.5 Start Order
The starting order of the first run is set by a random draw or the reverse order of the last updated WPRS. For subsequent runs, pilots/pairs will start in the reverse order of the last updated competition standing.
In case a pilot notices a technical problem to his equipment before taking off, the start marshal or drop master must be informed and a delay might be granted.

4.6 Announcement of Programme Start
Before starting the programme, every pilot/pair has to make one “big ear” to notify to the judges the start of the run.
If, before starting the first manoeuvre, he estimates the conditions unsafe or the altitude too low to complete the run, the judges are notified by making 2 “big ears”. Then the pilot has to fly down immediately to a safe landing without making any aerobatic manoeuvre.
The pilot/pair will be allowed a re-flight, except when judges estimate that the pilot/pair showed unsportsmanlike behaviour: in this case, warning(s) might be issued. Nevertheless, it is always the pilot’s responsibility when to start his routine.
4.7 **Flight Box**

Aerobatic manoeuvres are only allowed in the flight box. The characteristics of the flight box are explained during the general briefing, and when necessary, updated at the daily briefing. A detailed image clearly showing no-fly zones and the general area of the flight box will be permanently displayed on the official information board.

At take-off, information on the wind strength along the run and at landing must be provided and constantly updated. The Meet Director, in agreement with the Safety Director and Chief Judge, define the maximum strength of wind acceptable. This is discussed at the general briefing. It is strictly forbidden to fly over the public at any height (immediate elimination from the competition), even when the flight box technically extends over that area (no fly zone).

4.8 **Emergency Stop Signal**

In case of emergency, the flight box can be closed. A sound signal (loud enough to be heard by pilots) and/or a visual signal (cross and additionally a smoke bomb can be used) over the raft to announce that all aerobatics manoeuvres and all water landings must immediately stop. Pilots in the air must fly down and dry land safely.

4.9 **Re-flight**

The Meet Director or the Chief Judge may allow a re-flight if a pilot/pair has not been given the opportunity to make a scored run. In case of a re-flight the pilot/pair shall repeat the same manoeuvres that had been flown prior to the moment the run was interrupted. When a pilot/pair is disturbed by any external factor during the landing (safety boat, unauthorised craft, swimmers etc) only the landing will be repeated and scored, and will be preceded by the last manoeuvre flown during the interrupted run.

When a re-flight cannot be granted due to lack of time (final run) the preceding run score will be considered by the Judging team. Providing all affected pilots agree, the run may be validated. If not, the run is cancelled and the scores are disregarded.

4.10 **Validation of Run**

A run is valid if all competitors have been given the opportunity to make a scored flight. In case of difficulties (meteorological conditions, logistics etc.), the Meet Director may decide to cancel or stop a run after consultation with the Safety Director, Chief Judge and Pilot Committee.

If a run cannot be completed one day, it will be continued on the next scheduled day, provided that similar meteorological conditions prevail.

If a run cannot be completed before the end of the time allowed for the competition, the run is cancelled and the scores are disregarded.

4.11 **Communication**

Radios and/or mobile phones can be used for communication, including between pilots of the same pair. The start of the run must be communicated by operating staff to the judges who will acknowledge confirmation.
5 MANOEUVRE DEFINITIONS AND EVALUATION CRITERIA

5.1 Solo and Synchro

Manoeuvre
- Description, minimum criteria
- Technical evaluation criteria
- Twisted, Reversed and Flipped criteria
- Connections and other criteria
- Technical scoring coefficient
- Choreography bonus

Full Stall
- No specified duration.
- Entry, control of pendulum movement, control of direction and exit or connection.
- Twisted Full Stall: twisted on the entry, stay twisted when the glider stalls, untwist during the dive.
- Free connection.
- Technical scoring coefficient: 1.00
- Choreography twisted bonus: +5%

Tail Slide
- Backward flying with open glider. Minimum 3 seconds.
- Maintenance of the shape, stability, perceptible backwards flight, control of direction, duration, exit or connection.
- Free connection.
- Technical scoring coefficient: 1.15

SAT
- Evenly balanced SAT rotation. Minimum 2 rotations in SAT.
- Entry, angle of wing (90° for max score), low sink rate exit or connection (no collapse penalty for tip collapse during exit).
- Twisted SAT: twisted on the entry, must stay twisted for 2 turns can be exited untwisted.
- Forbidden connection to combo manoeuvres.
- Technical scoring coefficient: 1.25
- Choreography twisted bonus: +5%

Wingover
- Series of pendulum turns with change of direction each time. Minimum twice to one side, twice to the other side with high angle (minimum 135°).
- Rhythm, flow, trajectory, angle (minimum 135° for maximum score – the higher the better).
- Twisted Wingover: must be twisted during the entry, and stays twisted until the glider stabilises.
- Free connection.
- Technical scoring coefficient: 1.35
- Choreography twisted bonus: +7%

Asymmetric Spiral
- Series of pendulum turns in the same direction each time.
• Rhythm, flow, trajectory, angle (135° for maximum score - the higher the better).
• Free connection.
• Technical scoring coefficient: 1.35
Looping (inversion)
- Entry from asymmetric spiral or a normal spiral. Reversal of a revolution that makes the pilot turn around the wing in a roll movement. Minimum angle: 135°.
- Energy, timing, flow, trajectory (pitch movement), angle (180° for maximum score), exit or connection.
- Twisted Looping: twisted on the entry, must stay twisted until the glider stabilises.
- Free connection.
- Technical scoring coefficient: 1.50
- Choreography twisted bonus: +7%

Asymmetric SAT
- Entry from, say, spiral or wingover in same direction (old school).
- Energy, timing, flow, trajectory (SAT rotation), angle (135° for maximum score), asymmetric dynamic exit (no collapse, no stall).
- Free connection.
- Technical scoring coefficient: 1.55

Dynamic Full Stall
- Straight climb. Minimum 1 rotation (minimum 45° backwards pitch) + full stall. No specified duration.
- Energy, importance of pitch (90° for maximum score), control of direction and exit or connection.
- Twisted Dynamic Full Stall: twisted on the entry, stay twisted when the glider stalls, untwist during the dive.
- Flipped Dynamic Full Stall: body flip either forward or backwards during the stall. Flip may begin during the climb out and must be completed before the dive.
- Free connection.
- Technical scoring coefficient: 1.60
- Choreography twisted bonus: +6%
- Choreography flipped bonus: +10%

Misty Flip
- Straight entry & climb, 360° spin, straight horizontal dive, exit not more than 180° from the direction of entry.
- Importance of pitch on entry, 360°rotation, maintenance of shape, strong dive, no rotation on entry and exit, direction.
- Twisted Misty Flip: twisted on the entry, untwisted by the rotation of the glider.
- Free connection.
- Technical scoring coefficient: 1.65
- Choreography twisted bonus: +5%

Mac Twist
- Spin from spiral maintained until pendulum stabilised. Minimum 90° for maximum score.
- Energy and asymmetry on entry, speed and importance of rotation, pendulum stabilisation, fast exit or connection.
- Twisted Mac Twist: must be twisted during the entry, untwisted by the rotation of the Mac Twist Twisted.
- Free connection.
- Technical scoring coefficient: 1.70
- Choreography twisted bonus: +8%

**Helicopter**
- Perfect spin with open glider and vertical axe of rotation. Minimum 3 rotations.
- Maintenance of the shape, stability of rotation axis (vertical), speed of rotation, low sink rate, duration, exit or connection.
- Twisted Helicopter: twisting during the helicopter, must stay twisted for 2 turns, can untwist for the exit.
- Forbidden connection to combo manoeuvres (Twister, Heli-SAT...).
- Technical scoring coefficient: 1.70
- Choreography twisted bonus: +5%

**X-Chopper**
- Entry with high energy, constant & rapid climb, minimum 90°, minimum 360° spin, strong dive, exit dive not more than 270° from the direction of entry.
- Importance of pitch on entry, minimum 360° rotation, energy, maintenance of shape, strong dive.
- Free connection.
- Technical scoring coefficient: 1.70

**Misty to SAT**
- Same criteria as for a Misty Flip. Minimum 45° climb before rotation + transition to SAT + SAT criteria.
  - Flow and speed of transition.
  - Twisted Misty to SAT: must be twisted during the entry, untwisted by the rotation of the Misty flip.
  - Forbidden connection to SAT.
  - Technical scoring coefficient: 1.70

**Misty to Misty**
- Same criteria as for Misty Flip, transition: use the exit energy of the first Misty for the next one.
- Direction must be changed.
- Twisted Misty to Misty: twisted on the entry, untwisted by the rotation of the glider.
- Technical scoring coefficient: 1.75
- Choreography twisted bonus: +8%

**Misty to Helicopter**
- Same criteria as for a Misty Flip. Minimum 45° climb before rotation + transition to Helicopter + Heli criteria.
- Flow and speed of transition.
- Twisted Misty to Helicopter: must be twisted during the entry, untwisted by the rotation of the Misty.
- Reversed Misty to Heli: immediate transition to a Helicopter in the opposite direction.
- Forbidden connection to Heli.
- Technical scoring coefficient: 1.75
- Choreography twisted bonus: +6%
- Choreography reversed bonus: +6%
Tumbling

- Asymmetric or inversion entry, perfect pitch movement. Minimum 1 rotation.
- Energy on entry, timing, flow, trajectory (pitch movement), angle (180° for maximum score, minimum 135°), exit or connection.
- Forbidden connection to Infinite.
- Twisted Tumbling: twisted on the entry, must stay twisted, untwist at the exit NOT during the turns.
- This manoeuvre cannot be one of the last two manoeuvres.
- Technical scoring coefficient: 1.80
- Choreography twisted bonus: +10%

Supprimé: Misty Reverse
Supprimé: Misty Flip entry, 360° rotation stopped and connected straight into a Helicopter in the opposite direction.
Supprimé: Energy on entry, timing, flow, angle, connection to Heli (fluidity, rapidity, openness).
Supprimé: Free connection.
Supprimé: 1.80
**SAT to Helicopter**
- Minimum 2 SAT rotations + connection + minimum 3 Heli rotations.
- Flow and speed of transition.
- Twisted SAT to Heli: twisted on the entry, must be untwisted during the transition into helicopter, NOT before.
  - **Reversed SAT to Heli:** immediate transition to a Helicopter in the opposite direction.
  - **Technical scoring coefficient:** 1.85
  - **Choreography twisted bonus:** +8%
  - **Choreography reversed bonus:** +9%

**Mac Twist to Helicopter**
- Mac Twist criteria + spiral maintained to Heli + minimum 3 Heli rotations.
- Flow and speed of transition.
- Twisted Mac Twist to Heli: must be twisted during the entry, untwisted by the rotation of the Mac Twist.
  - **Reversed Mac Twist to Heli:** immediate transition to a Helicopter in the opposite direction.
  - **Technical scoring coefficient:** 1.85
  - **Choreography twisted bonus:** +9%
  - **Choreography reversed bonus:** +7%

**Twister (Helicopter to Helicopter)**
- Hel to one side, Hel to other side. Minimum 3 rotations each side.
- Speed of transition.
- Forbidden connection to Helicopter.
  - **Technical scoring coefficient:** 1.85

**Helicopter to SAT**
- Minimum 3 Heli rotations + connection to minimum 2 SAT rotations.
- No rotation on entry and exit, direction.
- Twisted Heli to SAT: twist during the helicopter. Must stay twisted during the whole transition, at least 1 turn of SAT twisted. Can untwist on the exit.
  - **Reversed Heli to SAT:** immediate transition to a SAT in the opposite direction.
  - **Technical scoring coefficient:** 1.85
  - **Choreography twisted bonus:** +9%
  - **Choreography reversed bonus:** +7%

**Corkscrew**
- Tumbling entry, spin during the entry over the glider (minimum 120°) into a Helicopter.
- Energy on entry, timing, flow. Stable entry into the Helicopter.
- Twisted Corkscrew: twisted during the entry, untwisted by the rotation of the cork.
  - **Reversed Corkscrew:** immediate transition to a Helicopter in the opposite direction.
  - Free connection.
  - **Technical scoring coefficient:** 1.90
- **Choreography twisted bonus**: +9%
- **Choreography reversed bonus**: +8%

### Cowboy
- Misty Flip to dive to Helicopter.
- Same criteria as for Misty Flip. Minimum 45° climb before rotation + forward dive + short SAT move + transition to Helicopter + Heli criteria.
- Twisted Cowboy: must be twisted during the entry, untwisted by the rotation of the Misty.
- Forbidden connection to Heli.
- **Technical scoring coefficient**: 1.90
- **Choreography twisted bonus**: +8%

### Infinite Tumbling
- Series of perfect Tumbling (pitch movement). Minimum entry plus 5 rotations.
- Rhythm, flow, trajectory (no roll movement), tension in the lines and glider, duration, exit or connexion.
- Twisted Infinite: twisted on the entry, must stay twisted, untwist at exit NOT during the turns.
- Flipped Infinite Tumbling: body flip either forward or backwards during the Infinite Tumbling. Flip must begin and end at the same point of one full rotation.
- Forbidden connection to Tumbling or Anti-Rhythmic.
- This manoeuvre cannot be one of last two manoeuvres.
- **Technical scoring coefficient**: 1.95
- **Choreography twisted bonus**: +11%
- **Choreography flipped bonus**: +12%

### Rhythmic SAT
- Entry without pitch, constant progression. Minimum 135° in the best rotation, 180° for maximum points + 1 straight rotation at the end.
- Rhythm and regularity of the variation of the axis, flow, angle, exit or connection.
- Twisted Rhythmic SAT: twisted on the entry, must stay twisted, untwist at the at exit NOT during the turns.
- Forbidden connection to Tumbling, Infinite and Anti Rhythmic.
- This manoeuvre cannot be one of last two manoeuvres.
- **Technical scoring coefficient**: 1.95
- **Choreography twisted bonus**: +11%

### Joker
- Tumbling entry. 1 rotation only, stopped during the dive. Exit with high energy connected to a Helicopter to the same side + SAT to Heli connection.
- Energy on entry, timing, flow, energy on exit, angle, connection to Helicopter (fluidity, rapidity). Only 1 Tumbling rotation.
- Twisted Joker: twisted on the entry, twisted on the dive, must untwist during the connection into helicopter.
- Reversed Joker: immediate transition to a Helicopter in the opposite direction.
- Free connection.
- **Technical scoring coefficient**: 2.00
- **Choreography twisted bonus**: +11%
- **Choreography reversed bonus**: +10%

**Anti-Rhythmic SAT**
- Entry by Tumbling, minimum 135° in the first rotation (180° for maximum points) + 1 SAT rotation at the end.
- Rhythm and regularity of the decreasing angle of the axis, flow, exit or connection.
- Twisted Anti Rhythmic SAT from Cab Slide: twist during the infinite turns, must stay twisted until the SAT. Must stay twisted for 1 SAT rotation, can untwist for the exit.
- Twisted Anti Rhythmic SAT from Tumbling: twisted on the entry, must stay twisted until the SAT. Must stay twisted for 1 SAT turn, can untwist for the exit.
- Free connection.
- This manoeuvre cannot be one of last two manoeuvres.
- **Technical scoring coefficient**: 2.00
- **Choreography twisted bonus**: +10%

**Esfera**
- Rhythmic SAT pulled to the vertical and followed by an Anti-Rhythmic to the other side.
- Twisted Esfera: twisted on the entry. Must stay twisted until going vertical, untwist when vertical and twist again on the other side for the Anti-Rhythmic. Must stay twisted for at least one SAT rotation. Can exit untwisted. The pilot must twist immediately after untwisting. Untwist during 1 rotation and twist again during the next rotation.
- Free connection.
- This manoeuvre cannot be one of the last two manoeuvres.
- **Technical scoring coefficient**: 2.10
- **Choreography twisted bonus**: +12%
Misty to Tumbling
- Misty Flip followed by a high Tumbling using dive into the Misty Flip.
- Energy on entry, timing, flow.
- Possibility to connect to Infinite Tumbling.
- This manoeuvre cannot be one of the last two manoeuvres.
- Technical scoring coefficient: 2.20

5.2 Synchro only

Manoeuvre
- Description, minimum criteria
- Technical evaluation criteria
- Connections and other criteria
- Technical scoring coefficient

Rodeo SAT
- Synchronised and rapid entry, proximity of the wings, flow, duration, exit.
- Minimum 2 revolutions around the SAT at the same altitude.
- Twisted Rodeo SAT: the SAT must be twisted on the entry, must stay twisted for 2 turns, can be exited untwisted.
- Free connection.
- Technical scoring coefficient: 1.65
- Choreography twisted bonus: +5%

Rodeo Helicopter
- Synchronised and rapid entry, proximity of the wings, flow, duration, exit.
- Minimum 2 spiral revolutions around the helicopter at the same altitude.
- Twisted Rodeo Helicopter: twisting during the helicopter, must stay twisted for 2 turns, can untwist for exit.
- Free connection.
- Technical scoring coefficient: 1.70
- Choreography twisted bonus: +5%

Bitch Switch
- Synchronised and rapid entry, proximity of the wings flow duration, synchronised and rapid switch, exit.
- Minimum 2 spiral revolutions around the SAT at the same altitude for each pilot.
- Free connection.
- Technical scoring coefficient: 1.75

Bro Hook
- One pilot flies straight, the other pilot approaches from behind and connects.
- Flow, entry, duration (min 5 sec.), disconnection.
- Free connection.
- Technical scoring coefficient: 1.80

Synchro Spiral
• Synchronised and rapid entry, proximity of the wings, duration, high sink rate, rapid and controlled exit.
• Minimum 2 revolutions, maximum distance is one paraglider line length between (approx. 10m).
• Free connection.
• Technical scoring coefficient: 1.80

Pitch Pendulum Synchro
• Rapid and synchronised entry. Pilots should be vertically aligned for maximum score.
• Minimum twice, one over the other.
• Twisted Pitch Pendulum: both pilots must stay twisted during at least 2 revolutions.
• Free connection.
• This manoeuvre can only be one of the last 2 manoeuvres.
• Technical scoring coefficient: 1.95
• Choreography twisted bonus: +11%

5.3 Landing

Manoeuvre
• Description, minimum criteria
• Technical evaluation criteria

Approach and precision
• Land on the raft for maximum score.
• Quality of the approach and precision (distance to the raft).

Raft
• Pilot standing for maximum score.
• Landing fully on the raft.

Ground Spiral
• Minimum 360° revolution, height of wing tip over water, less than 3m at the lowest point.
• Entry (speed, sink rate), height of wing tip over water (touch for max. score).

Synchro Ground Spiral
• Minimum 720° revolution when performed independently, or 360° when following a Synchro Spiral (total 3 revolutions), height of wing tip below 3m at the lowest point.
• Entry (speed, sink rate), height of wing tip over water (touch for maximum score) in close proximity to each other.

Hand touch
• Precision, length of touch with hand.

Foot touch
• Precision, length of touch with foot.

Jesus walk
• Precision, length of walk and frequency of the steps.
Spin

- Minimum rotation: ½ turn before pilot lands.
- Speed of rotation, good sink rate and standing landing.
5.4 **Choreography**

**Manoeuvre**
- Technical evaluation criteria

**Placement and Drift**
- For maximum score: start the programme considering the drift of the routine and finish with enough altitude for the (+ spiral) landing approaching the raft.

**Management of Altitude**
- Managing all manoeuvres of the programme and using all the altitude available.

**Flow**
- Each manoeuvre has to be flown fluently with good energy management.

**Rhythm and Connection**
- Good energy management between the manoeuvres and smooth connections.

**Originality and Diversity**
- Innovative and varied use of spin/stall/dynamic manoeuvres. Also moving to both sides left and right. Using different entries for manoeuvres. Appeal to public.

**Synchro Coordination**
- Maintain the same altitude when performing the manoeuvres. Staying in close proximity to each other. Starting/ending manoeuvres simultaneously.
6 SCORING

6.1 Competition Validity
A minimum of 2 runs is required to validate the Championships in each category (Solo and Synchro). A maximum of 7 rounds may be flown in each category.

6.2 Champions

6.2.1 Solo
The overall score of each pilot is calculated by adding up all his task scores. The winner has the highest scores. Pilots with the same score are ranked in the same position.

6.2.2 Synchro
Pairs of pilots can be of the same or different nationalities. Pairs of pilots of different nationalities fly under their respective national flags and anthems. The overall score of each pair is calculated by adding up all their task scores. The winning pair has the highest score. Pairs with the same score are ranked in the same position.

6.2.3 Team
The number of pilots constituting a national team (X) and the number of pilot scores used to calculate the team score (Y) will be stated in the Local Regulations. There is no team competition in Synchro. The run score of a nation is calculated by adding up the highest Y scores of that nation’s team pilots (X) for that run. The overall team score is the sum of the run scores. The winning nation has the highest score. Nations with the same score are ranked in the same position.

6.2.3.1 Non Team Pilots
The number of pilots entered by a NAC might be higher than the number of pilots constituting a national team. Pilots that are not eligible to score for the national team are eligible to compete for the individual championships.

6.2.4 Tied Scores
If, at the end of the competition there is a tie for any of the first three places, the pilot or pair with the highest run score will be declared the higher placed pilot or pair. If both have the same highest score, the second highest scores will be considered.

6.3 Scoring
A scoring system that has been approved by CIVL (currently Acropyx) will be used for competition scoring. A scoring system shall be tested at a major competition before it is used in a 1st Category event. Only manoeuvres defined in Chapter 5 are scored. Definitions include description, minimum criteria, technical evaluation criteria, connections, technical scoring coefficient and other criteria.
There is no limitation in number and type of manoeuvres unless specified by the Meet Director and/or the Chief Judge. Any limitation must be clearly notified to all pilots prior to the start of the run.

The judging panel consists of at least 3 CIVL qualified judges. No more than 2 judges can be of the same nationality.

### 6.3.1 Solo

Each judge awards 3 marks between 1 and 10: technical expression during the programme, general choreography, landing.

Marks are from 1 to 10, with half points.

The Judges’ mark is composed of the average of the Judges’ scores for technical expression (adjusted, see 6.3.1.1 below) + average score for choreography (including choreography twisted, reversed and flipped bonus marks) + average score for landing.

The final mark is generated by the scoring software such that the technical expression component represents 40% of the final mark, choreography 40% and landing 20%.

These values can be modified depending on local factors. Information about the values in force will be provided, at the latest, at the general briefing.

#### 6.3.1.1 Technical

Manoeuvres are judged according to:

- criteria
- difficulty coefficients
- penalties

The final mark for technical expression is the average mark multiplied by a difficulty coefficient, which is calculated as the average of the 3 highest coefficient manoeuvres flown during the run.

#### 6.3.1.2 Choreography

Manoeuvres are judged according to:

- Placement and drift, number of manoeuvres, management of altitude (3/10)
- Flow, rhythm, connections, originality, diversity, style, overall artistic impact of the run (7/10)

#### 6.3.1.3 Landing

Manoeuvres are judged according to:

- Approach and precision of the raft landing (3/10)
- Ground Spiral (5/10)
- Other tricks: hand and foot touch, Jesus walk, spin (2/10)

### 6.3.2 Synchro

Each judge gives 4 marks between 1 and 10: technical expression during the programme, general choreography, landing, synchronisation of manoeuvres.

Marks are from 1 to 10, with half points. The Judges’mark is composed of the average of the Judges’ scores for technical expression + average score for choreography + average score for landing + average score for synchronisation.

The final mark is generated by the scoring software such that the technical expression component represents 25% of the final mark, choreography 25%, landing 25% and synchronisation 25%.

These values can be modified depending on local factors. Information about the values in force will be provided, at the latest, at the general briefing.
6.3.2.1 Technical

Manoeuvres are judged according to:
- criteria
- difficulty coefficients
- penalties

The final mark for technical expression is the average mark multiplied by a difficulty coefficient, which is calculated as the average of the 3 highest coefficient manoeuvres flown during the run.

6.3.2.2 Choreography

Judging criteria:
- Placement and drift, number of manoeuvres, management of altitude (3/10)
- Flow, rhythm, connections, originality, diversity, style, overall artistic impact of the run (7/10)

6.3.2.3 Landing

Judging criteria:
- Approach and precision of the raft landing (3/10)
- Ground Spiral (3/10), Mirror Ground Spiral (4/10) or Synchro Ground Spiral (5/10)
- Other tricks: hand and foot touch, Jesus walk, spin (2/10)

6.3.2.4 Synchronisation

Judging criteria is based on the average of the synchronisation achieved during all single manoeuvres (5/10) and an appreciation of the general synchronisation (5/10).

6.4 Technical

Each manoeuvre has a fixed difficulty coefficient in accordance with the table found in 5.1 (Solo) and 5.2 (Synchro).

6.4.1 High coefficient manoeuvres

During each run, a maximum of 2 manoeuvres with coefficient of 1.95 or more can be flown. If more than 2 such manoeuvres are flown, the extra manoeuvres will not be scored and their coefficients not taken into account for the determination of the average coefficient.

6.4.2 Points Deductions

The following provide some reference criteria. The judges shall appreciate the context in which the problem occurs, its importance, and the way in which the pilot manages the situation.

Collapses/Tucks:
- 0 to 25%: 0 to 2.5 points reduction for the manoeuvre
- 25 to 50%: 2.5 to 5 points reduction for the manoeuvre
- 50 to 100%: 5 to 8 points reduction for the manoeuvre

Unplanned Change of Direction:
- <90°: 0 to 2.5 points reduction for the manoeuvre
- 90 to 180°: 2.5 to 5 points reduction for the manoeuvre
- >180°: 5 to 8 points reduction for the manoeuvre
Cravat:
Fast recovery and full control are required.
- <10% and recovery in less than 3s: 2.5 points reduction for the manoeuvre
- >50% and recovery in more than 3s: 2.5 to 8 points reduction for the manoeuvre

Unplanned Twist
- <1 turn: 2.5 to 5 points reduction for the manoeuvre
- 1 turn or more: 5 to 8 points reduction for the manoeuvre

6.4.3

1.1.1

1.1.2

6.4.4

6.4.5 Synchro

Each manoeuvre has a fixed difficulty coefficient in accordance with the listing found in 5.2.
All manoeuvres allowed to be flown twisted, reversed and flipped in Solo can be performed twisted, reversed and flipped in Synchro.
They will be rewarded by the same choreography bonus points according to the same criteria.
**6.5 Choreography**

Choreography is scored for the entire run, including the landing.

### 6.5.1 Repetition

Each manoeuvre may only be performed once within the competition without deductions to the choreographic score, unless performed in the opposite direction i.e. left/right. When the same manoeuvre is flown more than once in the same direction during the same competition, every repetition will be accorded a deduction of the choreography mark. This rule also applies when the same manoeuvre is flown once untwisted or unreversed and then twisted or reversed. Under certain conditions, the Chief Judge and/or Meet Director may choose to ignore this rule, in which case, information shall be provided at the briefing preceding that run. For Rodeo SAT and Rodeo Helicopter, the rotation of the SAT or the helicopter will determine the direction of the manoeuvre. In Synchro, when the two pilots perform the same manoeuvre simultaneously in opposite directions, (mirror) the manoeuvre is considered as neutral, without a specific direction of rotation.

#### 6.5.1.1 Deductions

The penalty for repetition is typically a reduction of 13% of the choreography mark for each repetition, but may be specified differently (especially for events where the completion of more than 4 runs is expected) and will be stated at the general briefing.

#### 6.5.1.2 Exceptions to Repetition

The following manoeuvres can be performed more than once without penalty: Tail Slide, Wingover, Full Stall, Dynamic Full Stall, Pitch Pendulum, Bro Hook.

### 6.5.2 Twisted manoeuvres

During each run, up to 3 manoeuvres can be performed twisted. They will be rewarded with choreography bonus points in accordance with the listing found in 5.1. and 5.2. If more than 3 manoeuvres are flown twisted, the extra manoeuvres will not be scored and their coefficients not taken into account for the determination of the average coefficient. All manoeuvres allowed to be flown twisted in Solo can be performed twisted in Synchro.

### 6.5.3 Reversed Manoeuvres

During each run, up to 2 manoeuvres can be performed reversed. They will be rewarded with choreography bonus points. If more than 2 manoeuvres are flown reversed, the extra manoeuvres will not be scored and their coefficients not taken into account for the determination of the average coefficient. All manoeuvres allowed to be flown reversed in Solo can be performed reversed in Synchro.
6.5.4 Flipped Manoeuvres

During each run, up to 1 manoeuvre can be performed flipped. It will be rewarded with choreography bonus points. If more than 1 manoeuvre is flown flipped, the extra manoeuvres will not be scored and their coefficients not taken into account for the determination of the average coefficient. All manoeuvres allowed to be flown flipped in Solo can be performed flipped in Synchro. If a flipped manoeuvre is to be performed, it must be one of the last 3 manoeuvres, and must be announced before the run by personally informing one of the judges, or, at the latest before take-off, by requesting the start marshal or drop master to inform the judges.

6.6 Landing

Landing on the raft is an integral part of the competition. The raft must have a surface area of 25 square meters minimum on a lake, and larger when on sea water in order to protect, as much as possible, the glider from the salt.

6.6.1 Landing On Ground

The Meet Director, in agreement with the Safety Director and Chief Judge and after consultation with the Safety Committee can decide to eliminate the landing on the raft in the case of rough seas, 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 1m diameter minimum.
- Ground spirals are not allowed.

6.6.2 No Landing Scoring

If the conditions are not safe, the Meet Director, in agreement with the Safety Director and Chief Judge and after consultation with the Safety Committee can decide that landing will not be scored (0 for all pilots/pairs).

6.7 Synchronisation

Synchronisation is scored for the entire run, including the landing.

6.8 Manoeuvre and Score Validation

Just after completing the run, pilots/pairs are requested to validate their manoeuvres by checking in at the judges’ tent.

When a run is completed the results are published on the official information board. The pilots/pairs have 1 hour time to check the scores and report to the judges to point out possible errors.

6.9 Obvious Error

The Meet Director may hold a conference with the judges to adjust a score in case of an obvious error.
7 PENALTIES AND WARNINGS

7.1 Penalties

7.1.1 Dangerous Flying
When the judges determine that a pilot has put himself into a dangerous situation through recklessness, poor preparation or by attempting a manoeuvre beyond his current skill level/proficiency.
- 0 points for the run.

7.1.2 Opening of Reserve
Opening of the rescue parachute:
- Technical score only for the manoeuvres already completed. 0 for choreography and landing. A warning will be issued in the case of 7.1.1

7.1.3 Not Opening of Reserve
Not opening the reserve or delayed deployment when needed:
- 0 points for the run + Warning.

7.2 Warnings
For safety reasons but also to ensure sportsmanship and fair play, warnings can be imposed on pilots/pairs. Warnings carry penalties.
Each warning is displayed on the results sheet.
The penalty points are shown in the results and are deducted from the total results.

Officials entitled to impose warnings:
- The judges for safety and competition related aspects: each judge notes the warning on his scoring sheet. The warning is valid if at least 2 judges (or 3 when 5 judges) give a warning.
- The Meet Director and Safety Director for safety related aspects.
- The Meet Director for sportsmanship related aspects.

Warnings can be imposed for incidents occurring at any time during the event: flight, registration, meals, transport to the take-off, at the take-off, during the briefings etc.

7.2.1 Offences liable to result in a warning

7.2.1.1 General Safety
- Disregard of the flight box.
- Disregard of the signal closing the flight box.
- Performing one of the manoeuvres not allowed to be flown as one the last 2 manoeuvres.
- Over flying the public.
- Unauthorised take off.
7.2.1.2 Taking Risks
- Dangerous flying.
- Endangering others (raft crew).
- Unsafe landing.

7.2.1.3 Respect – Sportsmanship
- Late arrival/non-attendance at briefings.
- Delay at take-off.
- Unsporting behaviour.
- Disrespectful or aggressive behaviour towards the organisation, officials or other competitors.
- No ‘ear’ before programme start.
- Any other behaviour deemed by the judges and/or the meet director as serious misconduct.

7.2.2 Warning Penalties
Warnings carry penalties:
- 1 warning: 0.5 point.
- 2 warnings: 1 point.
- 3 warnings: Disqualification.

Penalties will be applied whether the same offence is repeated or whether warnings have been applied for different offences.
## 8 COMPLAINTS AND PROTESTS

The competition organiser shall retain and archive the video footage and other relevant competition material which might be used as evidence for at least 90 days after the end of the event, or until an appeal has been dealt with (see General Section Chapter 6).

### 8.1 Technical errors

A pilot who notices a technical error (wrong manoeuvre, undeserved warning...) has the right to notify the judges who will take into account the notification, will evaluate it and will correct their decision if appropriate. Scoring a routine remains a subjective matter, even when the scores of the 3 judges are averaged. Pilots and Team leaders should be aware that complaints or protests that are not about technical errors, but about the subjective way a run has been appreciated, are unlikely to be upheld by a Meet Director or a Jury.

### 8.2 Video Evidence

The competition organiser shall arrange a video recording of all runs. The video recording can be used as an additional source of evidence only if:

- The Meet Director requests the adjustment of a score.
- The Chief Judge decides to review it when dealing with a complaint.
- The Jury decides to review it when dealing with a protest.

Amateur video evidence is not accepted.

### 8.3 Complaints

A complaint may be made to the Meet Director, preferably by the Team leader, in writing in English, to request a correction. It must be made within one hour of the publication of the provisional results.

If provisional scores are posted more than 2 hours after sunset and before 6.00 am next day, then the deadline for a complaint is 8.00 am.

For the last competition run, complaints must be submitted at the latest one hour after the publication of the provisional results.

Complaints will be dealt with expeditiously.

The Local Regulations might change the complaint deadlines.

### 8.4 Protests

If the complainant is not satisfied with the outcome, a protest may be made to the Meet Director, which is passed to the FAI Jury. Protests should be made, preferably by the Team leader, in writing in English, within two hours of the result of the complaint being notified to the complainant.

For the last competition task, protests must be submitted within one hour after the result of the complaint is notified to the complainant.

The protest fee is defined in the Local Regulations. It may not be larger than $50 US or €50 for championships held on the European Continent. It will be returned if the protest is upheld.

The Local Regulations may adjust the protest deadlines.
9 SAFETY & EQUIPMENT

9.1 Personal Responsibility
Each competitor has a personal responsibility for his own safety and those of others. He should only perform manoeuvres that he has practised and that he can control fully.

9.2 Equipment
All equipment, including glider, harness and rescue parachutes must be in perfect condition. Pilots will not be able to compete with damaged or broken lines, damaged fabric, coverings, stitching or reinforcements.

9.2.1 Glider
All competing gliders must be certified according to EN 926-1 or LTF 91-09, for shock and load tests.

9.2.2 Harness
The harness must be certified according to EN 1651 or LTF.

9.2.3 Reserve Parachutes
Two reserve parachutes are compulsory: 2 classic or 1 classic and 1 Rogallo or BASE system. For D-bag drop competitions, at least one rescue parachute must be a Rogallo or BASE system. An organiser may request an exemption from this requirement when bidding. They must be certified according to EN 12491 (except for BASE system). Both reserve parachutes must be dry and recently repacked. After a water landing, they must be dried or replaced by dry material.

9.2.4 Helmets
All pilots must wear a helmet certified according to either EN 966 (HPG), ASTM 2040 (Snow sports) or SNELL rs98 (Snow sports).

9.2.5 Ballast
No ballast is allowed.

9.3 Equipment Checks
The Safety Director and/or a Senior Judge will perform an equipment check during the pilot registration. Further checks may be made during the event. Any equipment change during the event has to be notified to the Meet Director. In case of non-compliance with the above regulations, the Meet Director may suspend or exclude the pilot from the competition.