Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24





Fédération Aéronautique Internationale

COMPETITION RULES

FOR

WINGSUIT FLYING

2017 Edition Effective 01 March 2017

Maison du Sport International Av. de Rhodanie 54 CH-1007 Lausanne Switzerland Tél. +41 (0)21 345 10 70 Fax +41 (0)21 345 10 77 E-mail: info@fai.org Web: www.fai.org

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

FEDERATION AERONAUTIQUE INTERNATIONALE MSI - Avenue de Rhodanie 54 – CH-1007 Lausanne – Switzerland

Copyright 2015

All rights reserved. Copyright in this document is owned by the Fédération Aéronautique Internationale (FAI). Any person acting on behalf of the FAI or one of its Members is hereby authorised to copy, print, and distribute this document, subject to the following conditions:

- 1. The document may be used for information only and may not be exploited for commercial purposes.
- 2. Any copy of this document or portion thereof must include this copyright notice.
- 3. Regulations applicable to air law, air traffic and control in the respective countries are reserved in any event. They must be observed and, where applicable, take precedence over any sport regulations

Note that any product, process or technology described in the document may be the subject of other Intellectual Property rights reserved by the Fédération Aéronautique Internationale or other entities and is not licensed hereunder.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

RIGHTS TO FAI INTERNATIONAL SPORTING EVENTS

All international sporting events organised wholly or partly under the rules of the Fédération Aéronautique Internationale (FAI) Sporting Code¹ are termed *FAI International Sporting Events*². Under the FAI Statutes³, FAI owns and controls all rights relating to FAI International Sporting Events. FAI Members⁴ shall, within their national territories⁵, enforce FAI ownership of FAI International Sporting Events and require them to be registered in the FAI Sporting Calendar⁶.

Permission and authority to exploit any rights to any commercial activity at such events, including but not limited to advertising at or for such events, use of the event name or logo for merchandising purposes and use of any sound and/or image, whether recorded electronically or otherwise or transmitted in real time, must be sought by way of prior agreement with FAI. This includes specifically all rights to the use of any material, electronic or other, that forms part of any method or system for judging, scoring, performance evaluation or information utilised in any FAI International Sporting Event⁷.

Each FAI Air Sport Commission⁸ is authorised to negotiate prior agreements on behalf of FAI with FAI Members or other entities as appropriate, of the transfer of all or parts of the rights to any FAI International Sporting Event (except World Air Games events⁹) which is organised wholly or partly under the Sporting Code section¹⁰ for which that Commission is responsible¹¹. Any such transfer of rights shall be by "Organiser Agreement"¹² as specified in the current FAI Bylaws Chapter 1, para 1.2 "Rules for Transfer of Rights to FAI International Sporting Events".

Any person or legal entity which accepts the responsibility for organising an FAI Sporting Event, whether or not by written agreement, in doing so also accepts the proprietary rights of FAI as stated above. Where no formal transfer of rights has been established, FAI retains all rights to the event. Regardless of any agreement or transfer of rights, FAI shall have, free of charge for its own archival and/or promotional use, full access to any sound and/or visual images of any FAI Sporting Event, and always reserves itself the right to have any and all parts of any event recorded, filmed and/or photographed for such use, without charge.

¹ FAI Statutes, Chapter 1, para. 1.6

² FAI Sporting Code, General Section, Chapter 3, para 3.1.3.

³ FAI Statutes, Chapter 1, para 1.8.1

⁴ FAI Statutes, Chapter 2, para 2.1.1

⁵ FAI Bylaws, Chapter 1, para 1.2.1

⁶ FAI Sporting Code, General Section, Chapter 3, para 3.4

⁷ FAI Bylaws, Chapter 1, para 1.2.3

⁸ FAI Statutes, Chapter 5, para 5.2

⁹ FAI Sporting Code, General Section, Chapter 3, para 3.1.7

¹⁰ FAI Sporting Code, General Section, Chapter 1, paras 1.2. and 1.4

¹¹ FAI Statutes, Chapter 5, para 5.2.3.3.7

¹² FAI Bylaws, Chapter 1, para 1.2.2

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Table of Contents

1	FAI AUTHORITY	5
2	DEFINITIONS OF WORDS AND PHRASES.	5
3	THE PERFORMANCE EVENT	6
3.1	OBJECTIVE	6
3.2	TASKS	6
3.3	PROGRAM	6
3.4	JUMP RUN AND EXIT ORDER	
3.5	FLIGHT PATTERN	
3.6	GENERAL RULES	
3.7		
3.8 3.9	POSITION LOGGING DEVICE (PLD) DETERMINATION OF WINNERS	
4	THE ACROBATIC EVENT	
4.1	OBJECTIVE	
4.2	PROGRAM	
4.3		10
4.4	GENERAL RULES	
4.5	COMPULSORY ROUTINES	
4.6		10
4.7	AIR-TO-AIR VIDEO RECORDING	
4.8	REJUMPS DETERMINATION OF WINNERS	112
4.9		
5		13
5.1		123
5.2	ACROBATIC EVENT	
5.3	TRAINING JUMPS	
5.4	OTHER JUDGING RESPONSIBILITIES	
6	TITLE OF THE COMPETITION	14 5
6.1		145
6.2		145
6.3	PRIZES AND AWARDS	16

Addendum A: Basic orientations, body positions and definitions

Addendum B: Acrobatic Wingsuit Flying Compulsory Sequences

Addendum C: Acrobatic Wingsuit Flying Judging Criteria

Addendum D: Judging Scoring Sheet

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

1 FAI AUTHORITY

1.1 The competition will be conducted under the authority granted by the FAI, according to the regulations of the Sporting Code of the FAI, General Section, and Section 5 as approved by the IPC and validated by the FAI, and these rules. All participants accept these rules and the FAI regulations as binding by registering in the competition.

2 DEFINITIONS OF WORDS AND PHRASES

Performance Event:

Competition window: A vertical 1000 meter window, starting at 2500 m (8200ft) Geometric Altitude and ending at 1500 m (4920ft) Geometric Altitude, in which the performance of the wingsuit flyer is evaluated. The first crossing of the upper window boundary starts the evaluation process, which is stopped at the first crossing of the lower window boundary.

Heading: the direction in which the wingsuit competitor Performer is flying.

Position logging device (PLD): A device used to record the real-time, three-dimensional (3D) position of the wingsuit flyer, which is mounted on the wingsuit flyer's body or equipment.

Spherical error probability (SEP): The horizontal and vertical accuracy specifications of a PLD expressed in terms of a sphere of given radius; for example, "real-time accuracy <10 meters SEP."

Geometric Altitude: The height, as measured by a Global Navigation Satellite System, optical methods or radar, above ground level. The ground level for the competition site will be determined by the Meet Director and will be made known at the pre-event competitors' meeting.

Designated Flight Path: This is the path determined by the Meet Director to be flown while in the Competition Window toward a ground reference point.

Lane: This is the path, equal in width to the exit spacing distance (3.4.4) and centred on the designated flight path, to be flown while in the Competition Window

Acrobatic Event

Compulsory routine: a routine composed of compulsory sequences and maneuvers chosen at random from the dive pool Addendum B by the Chief Judge.

Free routine: a routine composed of maneuvers chosen entirely by the Team.

Grips

- 1) A **grip**: a recognizable stationary contact, performed in a controlled manner, of the hand(s) of one Performer on a specified part of the body of the other Performer.
- 2) A hand grip consists of a handhold on the hand or wrist. The grip must be on or below the wrist.
- 3) A **leg grip** consists of a handhold on the leg below the hip.
- 4) A grip on the surface of any wingsuit without also achieving stationary contact on a specified part of the body as defined in 1), 2) and 3) above by these rules is specifically excluded from the definition of a valid grip.

Heading: the direction in which the Performer is flying.

Maneuver: a change in body position or a rotation around one or more of the three (3) body axes or a static pose

Normal Flight; The performer is in a belly-to-earth stable position

Omission

1) a maneuver or grip missing from the drawn sequence or

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 2) there is no clear intent to perform the drawn-chosen maneuver or
- 3) an attempt at a *grip* is seen and another *maneuver* or *grip* is presented and there is an advantage to the team resulting from the substitution.

Routine: a sequence of maneuvers performed during the working time.

Team: an Acrobatic Wingsuit Flying Team is composed of two (2) Performers and a Videographer.

Working time: the period of time during which Teams may perform a routine during a jump. Working time starts the instant any Team Member separates from the aircraft and terminates after an interval established in these rules or.

Competition Window: A vertical 7500ft window, starting at the exit altitude, in which the performance of the Team is evaluated.

Working Time; The Working Time is the time in seconds that the team takes to cover the Competition Window

3 THE PERFORMANCE EVENT

3.1 Objective

- 3.1.1 The objective is to fly a single wingsuit in three separate tasks to demonstrate a combination of best lift (time task), best glide (distance task) and least drag (speed task).
- 3.1.2 Each round of the event is therefore comprised of the three tasks.
- 3.1.3 Each task is performed on a separate flight.

3.2 Tasks

- 3.2.1 Time Task: The wingsuit flyer is to fly with the slowest fall rate possible through the competition window. The result for this task will be the time taken to fly through the competition window, expressed in seconds, rounded to one decimal place.
- 3.2.2 Distance Task: The wingsuit flyer is to fly as far as possible through the competition window. The result for this task will be the straight-line distance flown over the ground while in the competition window, expressed in meters, rounded to whole numbers.
- 3.2.3 Speed Task: The wingsuit flyer is to fly as fast as possible horizontally over the ground through the competition window. The result for this task will be the straight-line distance flown over the ground while in the competition window divided by the time spent in the competition window, expressed in meters per second, rounded to one decimal place.

3.3 Program

- 3.3.1 A competition shall consist of three rounds, with three tasks in each round, for a total of nine flights.
- 3.3.2 At least one round (three tasks, each task performed on a separate flight) must be completed to determine rankings and declare winners.
- 3.3.3 The minimum exit altitude is 10,500ft Geometric Altitude. The maximum exit altitude (at the start of jump run) is 11,000ft Geometric Altitude.
- 3.3.4 For meteorological and/or Air Traffic Control reasons only, and with the consent of the Chief Judge, the Meet Director may lower the exit altitude to 8,500ft Geometric Altitude and continue the competition. The Competition Window does not change; i.e. it stays 2500-1500 m. However, If the exit altitude is lowered it must apply for a complete task of a round for all competitors.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

3.4 Jump Run and Exit Order

- 3.4.1 The jump run should be perpendicular to the wind line upwind of the designated landing area, which is established by at the discretion of the Meet Director and Chief Judge, based on drop zone safety considerations and local aviation/airspace regulations.
- 3.4.2 The starting order of the first round of jumping shall be in reverse order of the standings order of at the most recent FCE, subject to the discretion of the Meet Director and Chief Judge based on safety considerations. Competitors that did not participate in the most recent FCE will jump at the beginning of the round with the order determined by random draw made by the Meet Director.
- 3.4.3 At the discretion of the Meet Director, with the concurrence of the FAI Controller, safety officers may be placed aboard the aircraft to assist competitors with waypoints identification of ground reference points and landmarks.
 - Under no circumstances will such safety officers direct a competitor to exit. That decision is solely the responsibility of the competitor.
- 3.4.4 The number of competitors to exit on a single pass of the aircraft and the spacing of those exits will be determined by the Meet Director. The horizontal spacing must be no less than 320 m. Exits will be spaced apart to achieve safe separation. Immediately after exit, each competitor/team will turn ninety degrees from the aircraft heading towards his designated target to fly back in parallel lanes.flight path
- 3.4.5 Exit procedure: There are no limitations on the exit other than those imposed by the Chief Pilot for safety reasons.
 - If a competitor exits in a manner deemed unsafe by a safety officer or pilot, that competitor shall receive a score of zero for that task. A second occurrence will result in disqualification from the event. This decision is not grounds for protest.
- 3.4.6 Refusal to jump: a competitor may choose to abort a jump for any pertinent reason and may descend with the aircraft (SC-5, 5.2.8). If a jump-run is aborted and the Meet Director decides the reason is pertinent, the jump must then be made at the earliest opportunity as determined by the Meet Director.

3.5 Flight Pattern

- 3.5.1 The first exit point on an aircraft pass will be determined by the Meet Director and Chief Judge. The aircraft pilot will signal the competitors when they are clear to exit. All the competitors will be briefed on the specific exit signals at the pre-event competitors' meeting.
- 3.5.2 The designated flight path of each competitor toward a ground reference point will be determined by the Meet Director and will be given to that competitor using a detailed map or aerial photograph of the area.
- 3.5.3 A competitor must not leave his assigned lane while in the Competition Window other lanes nor deviate more than 30 degrees from the designated flight path at any time. Violation of this rule, as determined by decision of the Chief Judge, will result in a score of zero for that jump. If violation of this rule results in endangering other competitors, the competitor may, by decision of the Safety Panel (SC5, 4.8) Chief Judge, be disqualified from further participation in the competition and the competitor will be removed from the official standings. This decision is not grounds for protest.

3.6 **GENERAL RULES**

3.6.1 The deployment altitude for each competitor will be pre-determined by the Meet Director and Chief Judge in order to maximize horizontal and vertical separation and must be between 4000ft and 4600ft AGL. If a violation of this rule results in endangering other competitors, the competitor may, by decision of the Safety Panel (SC5, 4.8) chief judge, be disqualified from further participation in the competition and will be removed from the official standings. This decision is not grounds for protest.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

3.6.2 All jumps for the distance and speed tasks of a round should be made from the same load, or back-to-back loads, in order that competitors jump in similar winds. Rejumps for the distance task or the speed task should be made as soon as possible to ensure similar wind conditions.

3.7 Equipment

- 3.7.1 Competitors shall not carry additional or removable weight on their body or equipment. They will be weighed by the FAI Controller at the start of the competition wearing all their normal jump equipment to establish a baseline weight. Any subsequent weight check may which may fluctuate from the baseline weight by +/- 2kg before requiring an inspection. If the addition or removal of weight is detected by the FAI Controller or the Chief Judge, the score for that jump will be zero. This rule shall apply to include parachute equipment that is overweight in the judgment of the Chief Judge. This decision shall not be grounds for protest.
- 3.7.2 Competitors shall not use propulsion systems. If any propulsion system is used, the score will be zero for that jump.
- 3.7.3 A competitor shall not wear any other electronic device or wires closer than 2.54cm from the official PLD as measured by the judging staff. However, a second identical PLD unit may be worn without regard to this separation requirement. If any such electronic device affects the PLD system, and the source of the interference is not obvious and beyond the reasonable control of the jumper, a rejump may be granted by the Chief Judge, without respect to 3.6.2.
- 3.7.4 Each competitor must wear a functioning audio altitude warning device on every jump. Failure to do so will result in a score of zero for that jump.
- 3.7.5 The same wingsuit, without any changes or modifications of its parts, must be used for all tasks in all rounds. In exceptional circumstances, a different wingsuit of the same model as the original may be changed between rounds used in another round with the consent of the Chief Judge, e.g., if the original suit gets damaged and cannot be made airworthy by the next round.
- 3.7.6 Wingsuits will be inspected and marked by a Judge. Only marked suits may be used for the event. Using an unmarked suit will result in a score of zero for that jump.
- 3.7.7 Each competitor shall wear one PLD issued by a Judge. The device will be attached on the jumper's equipment with the antenna having a clear view of the sky, located and positioned to the satisfaction of the Judge. This decision is not grounds for protest.
- 3.7.8 The PLD will be attached and sealed in its location by a Judge.
- 3.7.9 The PLD will be turned on and off by a Judge or by the competitor if instructed to do so.
- 3.7.10 Immediately after landing, the competitor shall return the PLD used on that jump to a Judge.
- 3.7.11 If the seal is found to be broken after the jump, and if in the opinion of a Judge this was not caused by circumstances beyond the control of the competitor, then no rejump will be awarded and the competitor will receive a score of zero for that jump. This decision is not grounds for a protest.
- 3.7.12 If the PLD malfunctions, and in the opinion of a Judge the malfunction was not caused by action or interference by the competitor, then the competitor will be given the option of making a rejump or receiving a score of zero for that jump.

3.8 Position Logging Device (PLD)

- 3.8.1 The PLD must record real-time three-dimensional (3D) data with a resolution of at least 5Hz and a position accuracy (SEP) of less than 10 meters.
- 3.8.2 The PLD must not require any action by the competitor in order for it to function, and it must activate its recording function automatically.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 3.8.3. Once attached to the competitor, the settings on the device must not be capable of being altered by the competitor, nor must it be possible for the competitor to delete the data without this being easily evident to the Judges. Tampering with the device will result in a score of zero for the jump. This decision is not grounds for protest.
- 3.8.4 The data recorded by the PLD must be downloaded and saved as soon as possible after the competitor has handed in the devices, and before the PLD is used again

3.9 Determination of the Winners

- 3.9.1 Each task in each round will be scored based on the top score of the task performed in that round. The top result will be scored 100%. The other results will be scored as a percentage of the top score.
- 3.9.2 All rounds for each task will be averaged for each competitor for an intermediate result of the task.
- 3.9.3 The three intermediate results for each task for each competitor are added and rounded to one decimal place to give the total result for the competitor.
- 3.9.4 The total result for the competitor determines the ranking.
- 3.9.4.1 In the event of a tie in the first three places, the following tie-break rules apply:
- 3.9.4.2 A tie-break jump will be made. The task shall be drawn at random by the Chief Judge.
- 3.9.4.3 If the tie cannot be broken, the competitors concerned shall be declared co-medalists.
- 3.9.4.4 All other ties in the standings shall be ranked equally.

4 THE ACROBATIC EVENT

4.1 Objective

- 4.1.1 The objective is for a team perform a sequence of maneuvers (compulsory or free routine) in wingsuit flight with the highest possible merit
- 4.1.2 There is no distinction as to gender separation.

4.2 Program

- 4.2.1 The competition will consist of seven rounds five initial rounds followed by two final rounds be organized with one (1) official training day and a maximum of four (4) consecutive competition days. Time must be reserved before the end of the competition to allow for the completion of the final rounds. The minimum number of rounds for a valid competition will be one (1) round.
- 4.2.2 The seven (7) rounds shall consist of: Seven (7)
 - Four (4) Compulsory Routine rounds
 - Three (3) Free Routine rounds
- 4.2.3 The order of the routines shall be five (5) initial rounds F-C-C-F-C and two (2) final rounds C- F (C = compulsory; F = free).
- 4.2.4 The five (5) initial rounds will be used as the selection rounds for the final two (2) rounds. If all five rounds are not completed at the stated starting time for the final rounds, the final rounds will start based on the standings from the completed rounds.
- 4.2.5 The top eight (8) teams will jump in the final rounds. The drawn compulsory sequence and order of routines remain unchanged for the final rounds.
- 4.2.6 If two (2) or more teams have equal scores for entry into the final rounds the following procedure for selection into the finals will be applied:
- 4.2.6.1 the best score, then the second best score, of any completed free rounds.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

4.2.6.2 the best score, then the second best score, of any completed compulsory rounds.

4.3 Exit Altitude and Working Time

- 4.3.1 Unless otherwise specified in this section, the exit altitude is determined by the Meet Director and may be no less than 10,500ft AGL or greater.
- 4.3.2 Unless otherwise specified in this section, the working time is 65 seconds. The Working Time is determined using a "Logging Altimeter" that is worn by a team member. If the Working Time cannot be determined the team will receive a score of zero for the jump.
- 4.3.3 For meteorological and/or Air Traffic Control reasons only, and with the consent of the Chief Judge, the Meet Director may lower the exit altitude to 10,000 ft. AGL with a working time of no less than 55 seconds and continue the competition. However, if the exit altitude is lowered it must apply for a complete task of a round for all competitors and there is no change to the Competition Window.

4.4 General Rules

- 4.4.1 The Deployment altitude for each competitor team will be pre-determined by the Meet Director and Chief Judge in order to maximize Team separation and may not exceed 5000ft AGL.
- 4.4.2 Equipment: competitors must jump the same model wingsuit throughout the event.
- 4.4.3 Competitors may change their role in the team from jump to jump; however, they may only perform one role (Performer A, Performer B, Videographer) during a jump
- 4.4.4. The performer (defined as Performer A, Performer B) who executes the first maneuver in each compulsory routine is defined as Performer A; this establishes the performer's role in the sequences (described in Addendum B) for the remainder of the routine
- 4.4.5 The jump order of all teams will be determined by a draw performed by the Chief Judge, subject to 5.1.2 above.
- 4.4.6 Representation: a team may only represent one (1) NAC.
 - Each participant may only be a member of one team.
- 4.4.7 Refusal to jump: a team may choose to abort a jump for any pertinent reason and may descend with the aircraft (SC-5, 5.2.8). If a jump-run is aborted and the Meet Director decides the reason is pertinent, the jump must then be made at the earliest opportunity as determined by the Meet Director.

4.5 Compulsory Routines

- 4.5.1 The Compulsory Routines consist of two (2) Compulsory Sequences as described in Addendum B.
- 4.5.2 Compulsory sequences may be are repeated until the end of working time.
- 4.5.3 The Compulsory Sequences to be used on each jump are determined via a random draw
- 4.5.4 The Chief Judge performs the draw for each compulsory routine round.
- 4.5.5 A sequence, once drawn, will be put aside and may not be used again Drawn sequences are added back into the sequence pool after each draw.
- 4.5.6 The order of the compulsory sequences is determined by the order in which they are drawn.

4.6 Free Routines

- 4.6.1 The content of the Free Routine(s) is chosen entirely by the Team and may or may not include grips.
- 4.6.2 The Team may perform the same Free Routine in may be repeated for each Free Round.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

4.6.3 Teams are encouraged to deliver a description of their Free Routine(s) to the Chief Judge before the start of the competition, using a standard form provided by the Chief Judge. Not providing this information shall not influence the team's score. Deviation from the described Free Routine shall not influence the scoring.

4.7 <u>Air-to-air video recording</u>

- 4.7.1 For the purpose of these rules, "air-to-air video equipment" shall consist of the complete video system used to record the evidence of the team's performance, including only one camera, recording media, cables and battery. The air-to-air video equipment must be able to deliver a High Definition (HD 1080i / 1080p) digital signal through a compatible video connection approved by the Video Controller.
- 4.7.2 The videographer is responsible for assuring the compatibility of the air-to-air video equipment with the scoring system.
- 4.7.3 The camera must be fixed by a static mount to the helmet. No roll, pitch or yaw movements of the camera, mechanical and/or digital zoom adjustment, or any digital effects (excluding "steady shot" or other image stabilization feature) may be used during competition jumps. Failure to meet any of these requirements will result in a score of zero (0) points.
- 4.7.4 A Video Controller will be appointed by the Chief Judge prior to the start of the judges' conference. The Video Controller may inspect a team's air-to-air video equipment to verify that it meets the performance requirements. Inspections may be made at any time during the competition which does not interfere with a team's performance, as determined by the Event Judge. If any air-to-air video equipment does not meet the performance requirements as determined by the Video Controller, this equipment will be deemed to be unusable for the competition.
- 4.7.5 Video Review Panel (VRP). A VRP will be established prior to the start of the official training jumps, consisting of the Chief Judge, the President of the Jury, and the FAI Controller. The VRP may enlist the help of the Video Controller. Decisions rendered by the VRP shall be final and shall not be subject to protest or review by the Jury.
- 4.7.6 The Organizer shall provide the teams with a way of identification showing the team and round number, to be recorded by the videographer just before exit.
- 4.7.7 The team's video recording must continue from team/round identification through the exit and the jump without interruption. Failure to meet this requirement will result in a score of zero (0) points.
- 4.7.8 The videographer shall provide the video evidence required to judge each jump and to show the team's performance to relevant third parties. It is the responsibility of the videographer to show the start of working time.
- 4.7.9 As soon as possible after each jump, the videographer must deliver the air-to-air video equipment for dubbing at the designated station. The video evidence must remain available for viewing or dubbing until all scores are posted as final.

4.8 Rejumps

- 4.8.1 In a situation where the video evidence is considered insufficient for judging by a majority of the judging panel, the air-to-air video equipment will be handed directly to the VRP for assessment and a determination as follows:
- 4.8.2 If the VRP determines that there has been an intentional abuse of the rules by the team, no rejump will be granted and the team's score for that jump will be zero (0).
- 4.8.3 In the case the VRP determines the insufficiency of the video evidence is due to a factor that could be controlled by the team, no rejump will be granted and the team will receive a score based on the video evidence available.
- 4.8.4 If the VRP determines the insufficiency of the video evidence is due to weather conditions or a cause beyond the control of the team, a rejump will be given.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 4.8.5 Contact or other means of inference between performer(s) and/or the videographer in a team shall not be grounds for a rejump.
- 4.8.6 Problems with a competitor's equipment (excluding air-to-air video equipment) shall not be grounds for a rejump.
- 4.8.7 Adverse weather conditions during a jump are not grounds for protest. However, in circumstances not covered by 4.8.1, a rejump may be granted due to adverse weather conditions, at the discretion of the Chief Judge.

4.9 Determination of Winners

- 4.9.1 The winners (1st, 2nd and 3rd) are the teams with the three highest total scores for all completed rounds.
- 4.9.2 If two (2) or more teams have equal scores, then if time permits, the first three (3) places will be determined by a tie-break Free Round. If a tie still exists, the procedure described in paragraph 4.2.6 above will apply until a clear placing is determined.

5 JUDGING & SCORING

5.1 <u>Performance Event</u>

5.1.1 Scoring will be supervised by at least two FAI Wingsuit Judges.

5.2 Acrobatic Event

- 5.2.1 Once any team member has left the aircraft, the jump shall be evaluated and scored.
- 5.2.2 The evaluation judging of each sequence will take place during the full ends when the judges see the team complete the working time but may cease before the end of working time if the team abandons the performance requirements for the required routine that sequence.
- 5.2.3 Judging procedures:
- 5.2.3.1 The jumps shall be judged using the video evidence as provided by the videographer.
- 5.2.3.2 A panel consisting of five (5) judges must evaluate each team's routine. Where possible, a complete round shall be judged by the same panel.
- 5.2.3.3 Compulsory Routine: all judges will evaluate the routine.
- 5.2.3.4 Free Routines: all judges evaluate all scoring measures and criteria.
- 5.2.3.5 Judges may view the jump a maximum of three (3) times. On the first viewing, the judges will score all three measures: grips (or dive plan), style and camera. A fourth viewing may be allowed at the discretion of the Event Judge.
- 5.2.4 All viewings must be at normal speed.
- 5.2.5 The judges will use the electronic scoring system to record the evaluation of the performance. At the end of working time, freeze frame will be applied on each viewing, based on the timing taken from the first viewing only. The judges may correct their evaluation record after the jump has been judged. Corrections to the evaluation record can only be made before the Chief Judge signs the score sheet.
- 5.2.6 The chronometer will be operated by the judges or by (a) person(s) appointed by the Chief Judge, and will be started when any team member leaves the aircraft. If the judges cannot determine the start of the working time, then the working time starts when the videographer separates from the aircraft. A penalty of 20% (rounded down) of the score will be deducted to produce a final score for that jump.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 5.2.7 Scoring Compulsory Routines:
- 5.2.7.1 The Routine is judged on evaluated using three (3) criteria: style, number of grips and camerawork.
- 5.2.7.2 Judges will give each of the above criteria the style and camerawork a point score between zero and ten (between 0 and 10, up to one decimal point), based on the guidelines in Addendum C.
- 5.2.7.3 For each maneuver omission 1.5 style points will be deducted from the style point score otherwise given .
- 5.2.7.4 Judges give one point for each scoring grip performed in the routine sequence within the allotted working time of each round. Teams may continue scoring by continually repeating the sequences.
- 5.2.7.5 For each grip omission one (1) point will be deducted from the total determined in 5.2.7.4 If an infringement in the scoring formation of a maneuver is carried into to the next grip this will be considered as one infringement only, provided that the intent of the maneuver requirements for the next formation is clearly presented.
- 5.2.7.6 The minimum score for any of the criteria measure is zero points.
- 5.2.8 Scoring Free Routines:
- 5.2.8.1 The Routine is evaluated using judged on three (3) criteria: style, dive plan and camerawork.
- 5.2.8.2 Judges will give each of the above three criteria a score from zero to ten (between 0 and 10, up to one decimal point), based on the guidelines in Addendum C.
- 5.2.9 Score Calculation:
- 5.2.9.1 The team's score for a round for each of the criteria in 5.2.7 and 5.2.8 round is calculated by discarding the high and low scores and averaging the three remaining scores, rounded to one decimal place.
- 5.2.9.2 The team's score (calculated in 5.2.9.1) for grips (compulsories), style (all rounds), dive plan (free round) and camera (all rounds) will be weighted 0% to 100% for each criteria between all teams for that round, the highest score defining 100% (100), and a no-score being 0% (0). A total score for a round is then calculated by adding the three weighted percentage scores for that round.
- 5.2.9.3 The team's final score for the event is the sum of the total scores from all completed rounds as calculated in 5.2.9.2.
- 5.2.10 All scores for each judge will be published.

5.3 Training Jumps:

- 5.3.1 Each team will be given the opportunity of two (2) official training jumps prior to the start of the competition. The aircraft/configuration plus the judging and scoring systems to be used in the competition will be used for the official training jumps.
- 5.3.2 If no official training jumps are possible due to weather, this is not grounds for protest.
- 5.3.3 Prior to the start of official training jumps, the team captain has the option of presenting the free routine description form(s) to the Chief Judge and explaining the team's maneuvers. If no training jumps are possible due to weather, teams may deliver up to two (2) previously recorded training jumps for scoring.

5.4 Other Judging responsibilities

5.4.1 One or more individuals, supervised by the Chief Judge (or trainees under the supervision of the Chief of Judge Training) may support the judges in equipment, device and data management.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 5.4.2 One or more qualified individuals, supervised by the Chief Judge, must observe the competitors during their descent and on opening. The observer must check for any conditions or incidents that might constitute grounds for a re-jump and/or disqualification for safety reasons. A written record must be made of any unusual observations or incidents.
- 5.4.3 The Chief Judge and/or Meet Director may interrupt the event if they determine the meteorological conditions are not safe for the conduct of the event. This decision is not grounds for a protest.

6	TITLE OF THE COMPETITION
"The _ "The _ "The _	FAI World Wingsuit Flying Championship, (location), (year)" or, FAI World Cup of Wingsuit Flying, (location), (year)" or, FAI World Wingsuit Flying Championship, (location), (year)" or, FAI (continent) Wingsuit Flying Championship, (location), (year)" or, FAI (continent) Cup of Wingsuit Flying, (location), (year)."
6.1	Aims of the Competition
6.1.1	To determine the Champions (1st, 2nd, 3rd) of Wingsuit Performance Flying.
6.1.2	To determine the Champions (1 st , 2 ^{nd,} 3 rd) of Wingsuit Acrobatic Flying.
6.1.3	To promote and develop Wingsuit Flying training and competition.

- 6.1.4 To establish new World and Continental Wingsuit Performance Flying competition records.
- 6.1.5 To present a visually attractive image of the competition jumps and timely standings (scores) for competitors, spectators and media.
- 6.1.6 To exchange ideas and strengthen friendly relations between wingsuit flyers, judges and support personnel of all nations.
- 6.1.7 To allow participants to share and exchange experience, knowledge and information.
- 6.1.8 To improve judging methods and practices.

6.2 <u>Composition of Delegations</u>

- 6.2.1 Each delegation may be comprised of:
- 6.2.1.1 One Head of Delegation.
- 6.2.1.2 One Team Manager/Coach
- 6.2.1.3 One Interpreter.
- 6.2.1.4 A maximum of eight (8) performance competitors for a World Championships.
- 6.2.1.5 A maximum of twelve (12) performance competitors for a World Cup or Continental Regional Championships
- 6.2.1.6 A maximum of two (2) acrobatic teams for a World Parachuting Championships.
- 6.2.1.7 A maximum of four (4) acrobatic teams for a World Cup or Continental Championship
- 6.2.1.8 Accompanying persons and additional support personnel at the discretion of the event organizer.

6.3 Prizes and Awards

- 6.3.1 Medals are awarded to the first three performance competitors with the highest overall ranking.
- 6.3.1.1 Diplomas are awarded to the top ten performers in the Performance event.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- 6.3.1.2 The flags of the first, second and third-placed performance competitors shall be flown and the national anthem of the first-place winner played.
- 6.3.2 Medals are awarded to the first three acrobatic teams.
- 6.3.2.1 The flags of the countries of the first, second and third-placed acrobatic teams shall be flown and the national anthem of the first-place team played.
- 6.3.2.2 In the event an FAI International acrobatic team is among the first three places, the flag of the FAI shall be flown for that team. In the event the international team wins first place, the FAI anthem will be played.
- 6.3.3 The title of World or Continental Champion is awarded to the first placed competitor or team in a FAI World/Continental Parachuting Championships.
- 6.3.4 The title of World Cup Winner is awarded to the first placed competitor or team in a FAI World Cup.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

ADDENDA A, B, C, D

Addendum A: Basic orientations, body positions and definitions

Addendum B: Acrobatic Wingsuit Flying Compulsory Sequences

Addendum C: Acrobatic Wingsuit Flying Judging Criteria

Addendum D: Judging Scoring Sheet

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Addendum – A Definitions

A. Basic rotational actions

A-1 Barrel Roll

A barrel roll is a 360 degree rotation about the body head-toe axis, when that axis is aligned with the direction of flight. The rotation of a barrel roll may be performed in either direction (left or right).

A-2 Back Loop

A back loop is a loop where the rotation is initiated about the body left-right axis with the torso rotating backwards.

A-3 Front Loop

A front loop is a loop where the rotation is initiated about the body left-right axis with the torso rotating forwards.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Addendum - B Acrobatic Wingsuit Flying Compulsory Sequences

- Compulsory sequences may be broken down into separate elements during execution, but will result in lower scoring on style.
- The last position of each Compulsory sequence leads into the beginning position of the next Compulsory sequence, and is counted as one grip.
- Performers are defined as Performer A and B.
- Online compulsory sequences with animations may be found at http://www.wingsuitcompetition.com/divepool.php

Sequence A: Up and Over

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions over Performer B to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions over Performer A to the other side.
- Performers take a hand grip in normal flight.

Sequence B: Rock and Roll

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A performs a barrel roll.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B performs a barrel roll.
- Performers take a hand grip in normal flight.

Sequence C: Revolutions

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions over Performer B to the other side and then transitions back under Performer B to the original starting position.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions over Performer A to the other side and then transitions back under Performer A to the original starting position.
- Performers take a hand grip in normal flight.

Sequence D: Roll Over

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A performs a barrel roll over Performer B to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B performs a barrel roll over Performer A to the other side.
- Performers take a hand grip in normal flight.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Sequence E: Fruity Loops

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A performs a front loop.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B performs a front loop.
- Performers take a hand grip in normal flight.

Sequence F: Duck and Roll

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A performs a barrel roll under Performer B to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B performs a barrel roll under Performer A to the other side.
- Performers take a hand grip in normal flight.

Sequence G: Déjà vu

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions over Performer B to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer A transitions over Performer B back to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions over Performer A to the other side.
- · Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions over Performer A back to the other side.
- Performers take a hand grip in normal flight.

Sequence H: Yin Yang

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions to inverted flight.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer A transitions to normal flight.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions to inverted flight.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer B transitions to normal flight.
- Performers take a hand grip in normal flight.

Sequence I: Back to Back

- Performers are in normal flight with a hand grip.
- Performers release the grip and both transition to inverted flight.
- Performers take a hand grip in inverted flight.
- Performers release the grip and both transition to normal flight.
- Performers take a hand grip in normal flight.

Sequence J: Pancakes

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions to inverted flight over Performer B to the other side.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer A transitions back to normal flight over Performer B to the other side.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions to inverted flight over Performer A to the other side.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer B transitions to normal flight over Performer A to the other side.
- Performers take a hand grip in normal flight

Sequence K: Reversed Pancakes

- Performers are in normal flight with a hand grip.
- Performers release the grip and Performer A transitions to inverted flight under Performer B to the other side.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer A transitions to normal flight under Performer B to the other side.
- Performers take a hand grip in normal flight.
- Performers release the grip and Performer B transitions to inverted flight under Performer A to the other side.
- Performers take a hand grip in mixed orientation.
- Performers release the grip and Performer B transitions to normal flight under Performer A to the other side.
- Performers take a hand grip in normal flight.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Addendum - C Acrobatic Wingsuit Flying Judging Criteria

C-1 Scoring Grips

Grip scoring is only required for the Compulsory Routines

- Each completed grip at the start of, during and between each Compulsory sequence will be added up to create a total number of grips.
- If multiple grips are taken during and between each Compulsory sequence, only one grip will be counted.
- A grip that cannot be seen not on video, or is considered not to meet the definition in Section 2
 by a majority of the Judges will not be included in the total number of grips not recognizable as
 such, will receive no score.
- Compulsory Routines have to be made in the correct sequence. A Compulsory sequence omitted in the sequence will result in one point being subtracted from the total scoring number of grips otherwise given for that routine. This score may not fall may not be less than zero. below 0.

C-2 Scoring Style

Judges give a score for the Team (between 0 and 10, up to one decimal point) for Presentation and for each of the four (4) Compulsory Rounds and three (3) Free Rounds, using the following guidelines:

10 points - Maneuver is performed flawlessly with no noticeable mistakes.

8 points - Maneuver is performed with some small mistakes.

5 points - Maneuver is performed with several medium mistakes.

3 points - Maneuver is performed with several major mistakes.

0 points - Maneuvers are not performed or identifiable

Examples of style:

- Body position: the performers' posture should present clean and defined arm and leg position ideal for flight.
- Grips: each grip is made smooth and fully in control.
- Control: all movements made by the performers are precise and deliberate, without a lot of 'nervous' movement in the arms, legs and body or heading.
- Leveling: the performer is adjusting fall rate and level accordingly during each maneuver, allowing the other pilot to remain static. The less changes the static performer has to make to accommodate the active performer making a maneuver, the higher the score.
- Proximity: the performers stay close together, never moving more than one body distance apart.
- Transitions: more complex maneuvers are made according to the intended figures, rather than broken down into two or more simpler elements.

Small mistake examples:

- Maneuver: finish slightly off heading, slight wobble, etc.
- Maneuver: arms bent down or forward, knees bent
- Maneuver: grips made resulting in tension and movement

Medium mistake examples:

• Maneuver: significantly off heading, wobble, not enough rotation, etc.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Maneuver: grips made with considerable force, not fully in control

Major mistake examples:

- Maneuver: completely missing required elements of performed so poorly that maneuver is barely recognizable.
- Not generating forward movement (using aerodynamic properties of the Wingsuit).
- Maneuver: grips made with considerable force, resulting in out of control flying on one or both Performers.

C-3 Scoring Camera

Judges give a score for the Team (between 0 and 10, up to one decimal point) for each of the four (4) Compulsory Sequences and three (3) Free Rounds, using the following guidelines:

10 points - Camerawork is flawless with no noticeable mistakes and creative flying

8 points - Camerawork has some small mistakes.

5 points - Camerawork has several medium mistakes.

3 points - Camerawork has with several major mistakes.

0 points - Camerawork show no Performer Routines.

Examples for good camerawork:

- Video is smooth and does not bounce around.
- Utilizes available landmarks, clouds and/or lighting to enhance video.
- Performers occupy most of the video and remain centered
- Cameraman remains within a consistent distance of the Performers.
- Utilizes advanced flying techniques (i.e. Carving around the performers, back flying) resulting in creative angles without loss of framing or proximity.

Small mistake examples:

Momentary loss of framing or focus, occasional minor distance errors, etc.

Medium mistake examples:

• Momentary loss of image, framing, focus, or distance errors for about 20 % or more of the Compulsory Sequence, etc.

Major mistake examples:

- Contact with one or both performers
- Loss of control, resulting in in lost framing of the performers or no video
- 50% or more of Compulsory Routine or Free Routine cannot be judged. .

C-4 Scoring Dive Plan

Dive plan scoring is only required for the free routine rounds. Judges give the following judging criteria a score, between 0 and 10 expressed as a number up to one decimal point, taking into account the following guidelines:

Technical:

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

- Difficulty: The degree of difficulty of all set sequences and transitions in the routine.
- Flying Skills: Ability to maneuver smoothly or fly in any orientation (vertically, horizontally, back flying, etc.).
- Precision, control: Ability of the Team to demonstrate body control and smoothness of transitions.
- Team Work: The ability to for the team to perform movements together to create a unified performance.

Examples for Technical:

- The two (2) Performers maintain proper proximity throughout each sequence.
- All flying surfaces and/or flight angles are used (i.e. belly to earth and back flying, steeper angles)
- A constant interaction and teamwork is displayed.
- The routine shows a wide variety of set sequences that vary by complexity.
- Team separation after each set sequence.
- Grip complexity, if present.

Presentation:

- Visual Excitement: Routine should hold the viewer's attention throughout, dynamic variety, entertaining without being unnecessary.
- Originality: Creative choreography in variety.
- Team Work: Routines that demonstrate combined skills of all Team Members.
- Grips performed in a controlled manner.

Examples for Presentation:

- The routine has a defining beginning and end.
- Working time is utilized to the fullest extent possible.
- The routine has a high level of creativity that contains new maneuvers, and flows from one set sequence to the next.
- The routine is enjoyable and aesthetically pleasing to watch.

Subject:	PROPOSED CHANGES TO WINGSUIT FLYING COMPETITION RULES	Annex No	32a
Author:	John Smyth, Committee Chair	Agenda ref	18.3
Date:	30 November 2016	Total Pages -	24

Addendum - D Acrobatic Wingsuit Flying Judging Form

Judge:	Round:			
Team Name	Grips / DiveFlow	Style	Camera	Total
	Notes:			
	The score for each			
	1. Grips - number o			
	2. Style - rated -10 (
	3. Camerawork - rat			
	The score for each			
	1. Diveflow - rated 0			
	2. Style - rated 0-10			
	3. Camerawork - rat			

Competition organized under same rules: http://wingsuitcompetition.com/Acrobatic_competitions.htm