FAI

FAI INTERNATIONAL PARACHUTING COMMISSION

Fédération Aéronautique Internationale

Competition Rules

For

Artistic Events

2012 Edition
Effective 1st March 2012

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RIGHTS TO FAI INTERNATIONAL SPORTING EVENTS

All international sporting events organised wholly or partly under the rules of the Fédération Aéronautique Internationale (FAI) Sporting Code[1] are termed *FAI International Sporting Events*[2]. Under the FAI Statutes[3], FAI owns and controls all rights relating to FAI International Sporting Events. FAI Members[4] shall, within their national territories[5], enforce FAI ownership of FAI International Sporting Events and require them to be registered in the FAI Sporting Calendar[6].

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 Event[7].

Each FAI Air Sport Commission[8] 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 events[9]) which is organised wholly or partly under the Sporting Code section[10] for which that Commission is responsible[11]. 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.

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[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; 2.4.2; 2.5.2 and 2.7.2
[5] FAI Bylaws, Chapter 1, para 1.2.1
[6] FAI Statutes, Chapter 2, para 2.4.2.2.5
[7] FAI Bylaws, Chapter 1, para 1.2.3
[8] FAI Statutes, Chapter 5, para 5.1.1; 5.5 and 5.6
[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 5.6.3
[12] FAI Bylaws, Chapter 1, para 1.2.2

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This document takes effect on the 1st of March2012.

The 2012 Edition differs from the 2011 Edition in those paragraphs with a vertical bar in the margin.

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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 used in these Rules

2.1. Team: a Freestyle Skydiving Team is composed of a Performer and a Videographer. A Freeflying Team is composed of two (2) Performers and a Videographer.

2.2. Heading: the direction in which the front of the torso of the Performer faces.

2.3. Move: a change in body position, and/or a rotation around one or more of the three (3) body axes, or a static pose. See Addendum B.

2.4. Grips and docks.

2.4.1. Grip: a recognisable stationary contact of the hand(s) of one Performer on a specified part of the body of the other Performer, performed in a controlled manner.

2.4.2. Dock: a recognisable stationary contact of the foot (feet) of one Performer on a specified part of the body of the other Performer, performed in a controlled manner.

2.5. Routine: a sequence of moves performed during the working time.

2.5.1. Compulsory routine: a routine composed of compulsory sequences and moves chosen by the Team.

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

2.6. 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, as determined by the Judges, and terminates a fixed length of time later, as specified in para. 3.3.

3. The events

3.1. Discipline: the discipline comprises Freestyle Skydiving and Freeflying. There is no gender separation.

3.2. Objective of the events: the objective for the Team is to record a sequence of moves in freefall with the highest possible merit.

3.3. Exit altitude: 13.000 feet (3960 m.) AGL, working time is 45 seconds.

3.4. World Champions.

3.4.1. After all completed round(s), World Champions in Freestyle Skydiving and in Freeflying, will be declared.

3.4.2. The The Freestyle Skydiving World Champions and the Freeflying World Champions are the Teams with the highest total score for all completed rounds. 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 Rounds. If a tie still exists, the procedure as in para. 4.4.3. will apply (including all completed free rounds) until a clear placing is determined.

3.4.3. Prizes and awards are awarded as follows:

- All Team Members in the events will be awarded medals if placed First, Second or Third.
- The flags of the countries of the Teams in the events placed First, Second and Third shall be flown and the national anthems of the countries of the Teams placed First shall be played.
- Diplomas are awarded to all Competitors that are placed First to Tenth.

4. General rules

4.1. Exit procedure: There are no limitations on the exit other than those imposed by the Chief Pilot for safety reasons.

4.2. Jump order. The jump order for the first competition round of each event will be in the reverse order of the placings in that event at the most recent IPC sanctioned World Parachuting Championships or World Cup of Artistic Events. All teams not covered by this procedure will jump at the beginning of the round, with their jump order determined by a draw. After round five (5) the final rounds will start. The final rounds will be executed by an updated reverse-order-of-jumping which shall be implemented after round five (5) and six (6). The relevant jump order will be maintained throughout the competition, excepts for any logistical changes deemed necessary by the Chief Judge and the Meet Director.

4.3. Jump abortion. The Team may choose to abort a jump for any pertinent reason and may descend with the aircraft. 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. (Sporting Code, para 5.2.8.)

4.4. Air-to-air video recording.

4.4.1. The Videographer shall provide the video evidence required to judge each jump and to show the Team's performance to third parties. It is the responsibility of the Videographer to show start of working time.

4.4.2. 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 freefall video equipment to verify that it meets the performance requirements as determined by him/her. 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 freefall 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.

4.4.3. For the purpose of these rules, "freefall video equipment" shall consist of the complete video system used to record the video evidence of the Team's freefall performance, including only one camera, recording media, cables and battery. The freefall video equipment must be able to deliver a High Definition (HD 1080i AVCHD) PAL digital signal through a compatible video connection approved by the Video Controller.

4.4.4. The Videographer is responsible for assuring the compatibility of the freefall video equipment with the scoring system.

4.4.5. The camera must be fixed static 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 lead to a score of zero (0) points.

4.4.6. As soon as possible after each jump is completed, the Videographer must deliver the freefall video equipment (including the recording media used to record that jump) for dubbing at the designated dubbing station. The video evidence must remain available for viewing or dubbing until all scores are posted as final.

4.4.7. Video Review Panel (VRP). a VRP will be established prior to the start of the official Training Jump, 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.

4.4.8 The Videographer must record, just before exit, a slate inside the airplane with the relevant round number and date. The recording should continue with the jump without a stop in recording. Failure to meet this requirement will lead to a score of zero (0) points.

4.4.9 The Organizer must provide the Teams with a way of identification of the Team, showing the team number to be recorded by the Videographer just before exit. The recording should continue with the jump without a stop in recording.

4.5. Rejumps.

4.5.1. In a situation where the video evidence is considered insufficient for judging purposes by a majority of the Judging Panel, the freefall video equipment will be handed directly to the VRP for assessing the conditions and circumstances of that occurrence. In this case a rejump situation will be handled as follows:

4.5.1.1. In the case 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).

4.5.1.2. In the case the VRP determines that the video's evidence insufficiency is due to weather conditions or any other cause not controllable by the Team, a rejump will be given.

4.5.1.3. In the case the VRP determines that the video's evidence insufficiency 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.

4.5.2. Contact or other means of inference between (a) Performer(s) and/or the Videographer in a Team shall not be grounds for a rejump.

4.5.3. Problems with a competitor's equipment (excluding freefall video equipment) shall not be grounds for a rejump.

4.5.4. Adverse weather conditions during a jump are no grounds for protest. However, a rejump may be granted due to adverse weather conditions, at the discretion of the Chief Judge.

4.6. Wind tunnel: competitors are not allowed to use a wind tunnel (freefall simulator) after the commencement of the competition.

5. Rules specific to the event

5.1. Teams

5.1.1. Teams may consist of either or both sexes.

5.1.2. Team members are allowed to change their position in the Team.

5.1.3. A Team may only represent one (1) NAC.

5.1.4. Each Team Member may compete in maximum two (2) Teams per First Category Event, in different events only (Freestyle Skydiving and Freeflying), as Performer and as Videographer.

5.2. Routines. The discipline is comprised of Compulsory Routines and Free Routines.

5.2.1. Compulsory Routine. The Compulsory Routines consist of four (4) Compulsory Sequences as described in the relevant Addenda A, and other moves at the Teams' discretion. The order in which these Compulsory Sequences and other moves can be performed is determined by the Team.

5.2.2. Free Routine. The content of the Free Routine(s) is chosen entirely by the Team.

5.2.3. Teams are requested to deliver a description of their Free Routine(s) and the order of the Compulsory Sequences (for both Compulsory Rounds) to the Chief Judge before the start of the competition. For this purpose, the Chief Judge should provide a standard form (see Addendum D). Failure to provide this information has no influence on the scoring. Deviation from the Free Routine description or the Compulsory Routine will not influence the scoring.

5.3. Number of rounds.

5.3.1.

Full competition	Compulsory Routines:	2 rounds
	Free Routines:	5 rounds
Minimum competition		1 round

5.4. Jump order of the routines must be: F - C - F - F - C - F - F
(C = Compulsory Routine, F = Free Routine)

5.5. Finals

5.5.1. The first five (5) rounds will be the selection rounds for the final rounds. If the selection rounds are not completed at the stated starting time for the final rounds, they will start regardless of the number of completed rounds. For the final rounds, only the standings from the completed rounds are considered.'

5.5.2. The 6th and 7th round of each event shall be the final rounds, consisting of the top eight (8) Teams per event. This cut does not affect the jump order of routines as stated in para. 5.4.

5.5.3. 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:

i) the best score, then the second best score, and then third best score, of any completed free rounds.

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

6. Judging and scoring

6.1. General. Once any Team Member has left the aircraft, the jump shall be evaluated and scored.

6.2. Scoring Free Routines. 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:

- *Difficulty:* The degree of difficulty of all moves and transitions of the jump.
- *Movement Skills*: Ability to move vertical, horizontal and multiple rotations in an flat, back-down, sideways, and/or head-up attitude or any other possible orientation.
- *Precision, control:* Ability of the Team to demonstrate body control skill or series of skills.
- *Team Work*: The ability to combine technical skills of the Team to stay within close proximity of each other throughout the routine and/or create complex effects of movement.

Examples for Technical:

- The Team maintains proper proximity throughout moves.
- All flying surfaces are used (i.e. flat, back-down, head-up, head-down, sideways, diagonal).
- A constant interaction and teamwork is displayed.
- The routine shows a wide variety of skills.
- The total amount of difficulty and the moves are performed in a controlled manner.

Presentation:

- *Visual Excitement*: Routine should hold the viewers attention throughout, dynamic variety, entertaining without being unnecessary.
- *Originality*: Creative choreography in variety.
- *Composition*: A balanced, well-composed, dynamic, smooth, interactive video image that uses a variety of photographic techniques that makes the routine interesting to view.
- *Team Work:* Routines that demonstrate combined skills of all Team Members.

Examples for Presentation:

- A good use of available landmarks, clouds and/or lighting to enhance video.
- The routine has a definite beginning, a definite ending and full use of working time.
- The routine has a nice flow. There is a high level of creativity in the way of new moves, original choreography and new twists on old moves.
- The routine is enjoyable and aesthetically pleasing to watch.

6.3. Scoring Compulsory Routines. Judges give a score for the Team (between 0 and 10, up to one decimal point) for Presentation (as per Free Routine) and for each of the four (4) Compulsory Sequences, using the following guidelines:

10 points	Move is performed and filmed flawlessly with no noticeable mistakes.
8 points	Move is performed or filmed with some small mistakes.
5 points	Move is performed and filmed with several medium mistakes.
3 points	Move is performed and filmed with several major mistakes.
0 points	Move not performed or identifiable or unjudgeable camera image.

Small mistake examples

- Move: finish slightly off heading, slight wobble, etc.
- Camera: momentary loss of framing or focus, occasional minor distance errors, etc.
- Move (Freestyle Skydiving): toes not pointed, knees bent.

Medium mistake examples

- Move: significantly off heading, wobble, not enough rotation, etc.
- Camera: momentary loss of image, framing, focus, or distance errors for about 20 % or more of the Compulsory Sequence, etc.

Major mistake examples

- Move: completely missing required elements of performed so poorly that move is barely recognizable.
- Camera: unjudgeable picture for about 50 % or more of the Compulsory Sequence, etc.

Presentation in the Compulsory Routines is scored for the beginning and the end of the routine, and move(s) performed between the Compulsory Sequences. A Compulsory Routine without any additional moves for presentation will result in a score of zero (0) for presentation.

6.3.1. The Judges will only score the Compulsory Sequences they recognize. If an attempt is made for a Compulsory Sequence and the Judges recognize this as such, scoring for that sequence will commence. A second attempt will not receive a score. The judging of each sequence begins when the Judges see the Team beginning the sequence from the described beginning position (after a transition from the previous move with or without a momentary stop).
The judging of each sequence ends when the Judges see the Team completes or abandons the performance requirements of that sequence.

6.4. After viewing, each Judge will give preliminary scores for the jump.

6.5. Score calculation. The score for each round is calculated as follows:

- Compulsory Rounds: the highest and lowest Judges' scores of each Compulsory Sequence and Presentation will be discarded, and then the remaining three (3) scores will be averaged with no rounding applied. The average scores will be added, and the result will be divided by five (5), then rounded to the first decimal place.
- Free Rounds: the scores for the technical criterion will be added, and the result will be divided by two (2) with no rounding applied. The scores for the presentation criterion will be added, and the result will be divided by three (3) with no rounding applied. These two results will be added, divided by two (2), then rounded to the first decimal place.

6.5.1. Rounding must be done as follows: intermediate values must be converted from two decimal places to one, by rounding to the nearest tenth, except where the second decimal digit is exactly halfway between the two values, where it must be rounded to the higher of the two.

6.5.2. Total scores for the events are calculated by adding Team's official scores of all completed rounds.

6.5.3. All scores for each Judge will be published.

6.6. Judging rules.

6.6.1. The jumps shall be judged using the video evidence as provided by the Videographer.

6.6.2. A panel consisting of five (5) Judges must evaluate each Team's Performance. Where possible a complete round shall be judged by the same panel.

6.6.2.1. Compulsory Routines: all five (5) Judges will evaluate the routines.

6.6.2.2. Free Routines: two (2) Judges will evaluate the technical criterion. Three (3) Judges will evaluate the presentation criterion.

6.6.3. The Judges will watch each jump one (1) time at normal speed. A second viewing is optional if requested by a Judge, at the discretion of the Event Judge.

6.6.4. 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.

6.6.5. The chronometer will be operated by the Judges or by (a) person(s) appointed by the Chief Judge, and will be started when a Team Member leaves the aircraft. If Judges cannot determine the start of the working time, the following procedure will be followed. Working time will start as the Videographer separates from the aircraft and a penalty equal to 20 % (rounded down) of the score for that jump will be deducted from the score for that jump.

6.7. Training Jump.

6.7.1. Each Team in each event will be given the option of one (1) official training jump prior to the draw. The aircraft type and configuration plus the judging and scoring systems to be used in the competition will be used for the official training jump.

6.7.2. For the training jump, if the Team performs Compulsory Sequences as chosen by the Team, the jump will be evaluated by the Judges and the score will be displayed before the Team makes its first competition jump. (This is to allow the Team to assess the Judges' evaluation.)

6.7.3. For the training jump, if the Team performs a Free Routine, the jump will be evaluated and scored; for the technical criterion only. This score will be made available to the Team only.

7. Rules specific to the competition

7.1. Composition of Delegations. Each Delegation may be comprised of:

- One (1) Head of Delegation
- One (1) Team Manager
- A maximum of two (2) Teams for each event for a WPC or Continental Championship.
- The number of Teams for a World Cup will be up to the organiser.

7.2. Competition schedule. The competition will be organised in accordance with a maximum time frame of five (5) consecutive competition days. Time must be reserved before the end of the competition to allow for the completion of the final rounds.

ADDENDA A1, A2, B, C D

- Addendum A1: Freestyle Skydiving Compulsory Sequences
- Addendum A2: Freeflying Compulsory Sequences
- Addendum B: Basic orientations, body positions and definitions
- Addendum C: Difficulty
- Addendum D: Routine description

ADDENDUM – A1

FREESTYLE SKYDIVING COMPULSORY SEQUENCES
PERFORMANCE REQUIREMENTS & JUDGEMENT CRITERIA

- The order in which these Compulsory Routines can be performed is determined by the Team.
- The Team is requested to submit the order of the Compulsory Sequences at the start of the competition to the Chief Judge. (see para 5.6. and addendum D)
- Each Team must ensure that clothing and/or the camera do not hinder the ability for judges to clearly see the performance requirements being met. (E.g. if Judges cannot see straight arms and/or legs then they may assume that the Performer does not have straight arms and/or legs).
- Toes should be pointed.
- The judging of each sequence begins when the Judges see the Team beginning the sequence from the described beginning position (after a transition from the previous move with or without a momentary stop).
- The judging of each sequence ends when the Judges see the Team completes or abandons the performance requirements of that sequence.

FIRST COMPULSORY ROUND (ROUND 2)

FR-1. Cartwheel Sequence

Cartwheels:

- Beginning is a straddle position in head-up orientation.
- Torso must be straight, without any bend at the waist.
- Head, shoulders and torso must be in line, facing the same direction throughout the Cartwheel (without any twist in the torso).
- Two complete 360° sideways rotations (in the same direction, without stopping) must be performed.
- The sequence must end in a straddle position in head-up orientation.

Camera requirements:

- The camera must stay on the same level and show the Performer from his/her front throughout the entire sequence.
- The camera must make a synchronised Barrel Roll with the Performer during the
- second Cartwheel, showing an image as if the Performer remains static with only the background moving.

FR-2. Double Eouzan with full barrel

Double Eouzan

- Beginning is a Daffy position in head-down orientation.
- Two full 360° back loops must be performed, the Da ffy position must be maintained during the loops.
- Loops must be around a horizontal axis, without wobbling.
- Loops must be smooth.
- The sequence must end in a Daffy position in head-down orientation.

Camera requirements:

- Camera must show Performer from his/her side at the beginning of the sequence and must stay in place throughout the sequence.
- The camera must make a synchronised turn with the Performer during

his/her second loop, showing an image as if the Performer remains static with only the background moving.

- The camera must be in the same horizontal axis as the Performer.
- The camera must maintain the same distance.

FR-3. Straddle Loops Sequence

Back Layout Half Loop

- Beginning shall be from the straddle position in a head-up orientation facing the Videographer.
- One complete 180º back layout rotation must be performed in the layout position.
- Half loop must be about a horizontal axis, without tilting or changing the heading. Looping motion must be smooth.
- Torso must be straight and legs in line with torso, without any bend at the waist.
- A momentary stop in a head-down orientation in the straddle position should follow the half loop, without changing heading.

Back Layout One and Half Loop

- After the momentary stop, one and half 540° back layout rotation must be performed in the layout position.
- One and half loop must be about the same horizontal axis as the first half loop, without tilting or changing the heading. Looping motion must be smooth.
- Torso must be straight and legs in line with torso, without any bend at the waist.
- The sequence must end in the straddle position in a head-up orientation, facing the Videographer.

Camera requirements:

- Camera must show Performer from his/her front at the beginning of the sequence and must stay in place and on the same level with the Performer throughout the sequence.

FR-4. Carving Sequence

Carve:

- The body must be in a layout position in head-down orientation.
- The Performer and Videographer must orbit 360° around an imaginary centre between them.
- The Performer must maintain the layout position during the orbit.

Camera requirements:

- At the beginning, camera must show the front of the Performer (face to face).
- The camera must show the image as if the Performer remains static with only the background moving.
- The same distance and level between the Performer and Videographer must be maintained.
- The camera must be on the same level with the Performer and show a portion of the ground within the video frame.

SECOND COMPULSORY ROUND (ROUND 5)

FR-5. Robin Spin Sequence

Back Tracking:

- Beginning is from a layout position in a tracking, back-down orientation, with an angle that does not exceed 30º.
- The arms are straight (crucifix), with an angle of 90º in comparison with the torso.
- Torso must be straight and legs in line with the torso without any bend at the waist.
- Legs must be together.

Robin Spin

- A minimum of five (5) complete 360º rolls must be performed within five (5) seconds.
- During the rolls, the arms of the Performer must stay straddled, with an angle between 60º and 90º to the torso.
- During the rolls, the forearms can be bent. The arms are forming a propeller shape.
- The forearms must not be directly in front of, or directly behind the torso (obscuring a part of it if the Performer is viewed from directly in front or behind.)

Camera requirements:

- Videographer must be in line with the body axis of the Performer (on the same level), showing the feet in the foreground.
- The same distance and level between Performer and Videographer must be maintained during the sequence.

FR-6. Full Eagle Trick Sequence

Full Eagle:

- Beginning is from a head-down orientation.
- Legs must be in line with the torso (when viewed from the side).
- The Performer goes below the Videographer as the Videographer goes over the top, moving around an imaginary centre between them so that both end up in opposite positions and orientations than they originally began. The movement continues until the Performer and the Videographer end up in their relative beginning positions.
- The Performer must perform a front tuck loop (trick) in the middle of the second part of the Eagle (when he/she is above the Videographer).
- The Full Eagle should be performed as one continuous movement.
- The same heading must be maintained during the Full Eagle.

Camera requirements:

- Camera must show Performer from his/her front during the whole sequence, with the exception of the full tuck loop.
- The same distance between Performer and Videographer must be maintained during the sequence.
- The same heading must be maintained during the Full Eagle.

FR-7. Head-down Loop Twist Sequence

Back Layout Loop:

- Beginning is from a layout position in head-down orientation.
- Three complete 360º back layout rotation must be performed.
- A full twist must be performed within and evenly executed throughout the second loop.
- Looping movement must remain about a horizontal axis, without tilting or changing heading.
- Torso must be straight and legs in line with torso, without any bend at the waist.
- Looping motion must be smooth.
- The sequence must end in a layout position in a head-down orientation, on the same heading as the beginning.

Camera requirements:

- Camera must be on the same level with the Performer and show the Performer from his/her side at start of the sequence, should stay in place, and must show the same side of the Performer at the end of the sequence.

FR-8. Orbiting Compass

Compass position:

- Beginning is a Compass position in head-up orientation.

Compass turn:

- The Performer must make a 360º turn.
- Turn can be in either direction.
- Turning motion must be smooth.
- The body and legs must maintain the Compass position during the turn.

Camera requirements:

- At the beginning, camera must show a side of the Performer.
- Videographer must make a full 360° orbit around the Performer (without changing the distance during orbit).
- Camera Orbit must be in the same direction as the turning direction of the Performer, showing the image as if the Performer remains static with only the background moving.
- The camera must be slightly above the Performer throughout the entire sequence, in order to show some ground.

ADDENDUM – A2

FREEFLYING COMPULSORY SEQUENCES
PERFORMANCE REQUIREMENTS & JUDGEMENT CRITERIA

- The order in which these Compulsory Routines can be performed is determined by the Team.
- The Team is requested to submit the order of the Compulsory Sequences at the start of the competition to the Chief Judge. (see para 5.6. and addendum D)
- The judging of each sequence begins when the Judges see the Team beginning the sequence from the described beginning position (after a transition from the previous move with or without a momentary stop).
- The judging of each sequence ends when the Judges see the Team completes or abandons the performance requirements of that sequence.

FIRST COMPULSORY ROUND (ROUND 2)

FF-1. Synchronized Back Layouts

Both Performers begin in a head-up orientation, side by side, on the same heading.
Both Performers simultaneously perform a full back layout loop.
Without stopping, both performers simultaneously perform a full back layout loop half twist.
The half twist must be performed within and evenly executed throughout the loop, and performed in the same direction.
Looping motion must be smooth, around the same horizontal axis, without wobbling.
Both Performers end at the same time in head-up orientation, side by side, both facing the opposite heading (of the beginning).

At the beginning camera must be in front of both Performers, on the same level and remain in place.

FF-2. Vertical Compressed Switch

One Performer is in head-up orientation, the other Performer in head-down orientation.
The right hand of each Performer must be on the right leg of the other Performer (or left hand on left leg)
Both Performers release their grip at the same time.
Both performers simultaneously perform a half front loop.
Both Performers retake their grip at the same time.

At the beginning camera must be in front of both Performers, on the same level and remain in place.

FF-3. Full reverse Eagle

One Performer is in head-up orientation, the other in head-down orientation facing each other.
The Performer in head-up orientation moves feet first under the other Performer in head-down orientation while performing half a back loop, maintaining visual contact with the other Performer. The Performer passes through the head-down orientation. The rotation continues and the Performer moves from the head-down orientation over the other Performer while performing half a back loop, maintaining visual contact with the other Performer. The other Performer (who started in head-down orientation) performs a back loop synchronous with the Performer.
Both Performers begin and end in the same orientations and heading.
This whole rotation should be one continuous movement. Basically, a reverse eagle is an eagle performed feet first. Both Performers are moving towards their feet as they perform a backloop rotation while remaining facing each other.

At the beginning the camera must show the Performers from the side, on the same level and remain in place.

FF-4. Double Joker Reverse

One Performer is in a head-up orientation, the other in a head-down orientation, facing each other.
A hand-to-hand grip is taken and must be maintained during the entire sequence.
The formation is rotated 180° over the top, i.e. the head-up Performer moves directly over the other Performer into a head-down orientation. At the same time, the head-down Performer moves directly underneath into a head-up orientation. (No sideways rotation is allowed.) This 180° rotation must be continuous.
The Performers end in the opposite orientations and on the opposite heading.
After this 180° rotation (the stop in between is only momentary), the formation is rotated in the reverse direction, (180º over the top) until the Performers end on the original heading in their original orientations.

At the beginning camera must show the Performers from the side.
The camera must rotate simultaneously with the Performers, showing an image as if the Performers remain static with only the background moving.
The camera must stay on level and maintain the same distance.

SECOND COMPULSORY ROUND (ROUND 5)

FF-5. Head-up Head-down Carve

One Performer is in head-down orientation, the other Performer is in head-up orientation, facing each other.
Both Performers start carving around an imaginary center between them.
A minimum 720º rotation must be performed by the carving Performers.
The carving orbits must be round (not elliptical).
The carving Performers must stay on level(head to feet), maintain the same distance from each other and must keep facing each other during the move.

Camera must be carving around in the same direction as the Performer who is in head-down orientation, staying in line behind this Performer during the whole carve, maintaining the same distance.

FF-6. Turning Totem

Both Performers are in head-up orientation, facing the same direction.
One Performer demonstrates a feet-to-shoulder dock, a separate foot on each side of the head of the lower Performer.
The left foot of the top Performer must be on the left shoulder of the lower Performer and the right foot of the top Performer must be on the right shoulder of the lower Performer.
Both Performers turn a minimum of 720º simultaneously. The turns can be in either direction.
Both Performers must stay in the same axis during the turns, without wobbling.

Camera must show the front of both Performers at the beginning, on level with the head of the lower Performer and remain in place.

FF-7. Rock the Cradle

Beginning is when both Performers are in a head-up orientation facing each other.
One Performer initiates an arc motion (feet first) under the other Performer, as the other Performer performs a half front loop in place, so that both Performers end facing each other in the head-down orientation with their heads level.
After a momentary stop in the head-down orientation, the Performer that initiated the feet first arc, now initiates an arc motion (head first) under the other Performer, as the other Performer performs half a back loop in place, so that both Performers end facing each other on the original heading in the head-up orientation with their heads level.
The distance between the Performers must remain the same during the sequence.

Camera must show the side of the Performers at the beginning, on the same level and remain in place.

FF-8. Cat Barrel Roll

Both Performers are in a flat orientation.
One Performer has grips on the lower legs of the other Performer, the right hand on the right lower leg and the left hand on the left lower leg.
Both Performers perform a minimum of two (2) full barrel rolls simultaneously, along the same axis, maintaining the same heading.
The barrel rolls can be in either direction.

At the beginning camera must be in line with the body Left-Right axes of the Performers showing a side of the Performers, on the same level and maintaining the same distance.

ADDENDUM B
BASIC ORIENTATIONS, BODY POSITIONS AND DEFINITIONS

A. BODY POSITION

The body positions define the relationship of the limbs to the torso**.** This includes the angle of the legs relative to the torso and the amount of bend at the hips and waist**,** knees and ankles. The arms are left free to control the position. For description purposes on heading, torso means the front of the torso.

A-1. Layout Position

- The torso is straight; with no bend at the waist (a slight arch is possible).
- The legs are together.
- The legs are straight, and in line with the torso.
- The head is in line with the torso.

A-2. Stag Position

- The torso is straight, with no bend at the waist.
- One leg is straight and in line with the torso.
- The other leg is bent forward at the hip and the knee is bent back to place the toe beside the knee of the straight leg. The bent leg is bent at least 90° at the knee.
- The head is in line with the torso.

A-3. Straddle Position

- The torso is straight, with no bend at the waist.
- The legs are split apart, from side to side, with at least a 90° angle between them.
- The legs are straight.
- The head is in line with the torso.

A-4. Pike Position

- The torso is bent forward at waist such that the angle between the torso and thighs is less than 90°.
- The legs are together.
- The legs are straight.

A-5. Straddle Pike Position

- The torso is bent forward at the waist such that the angle between the torso and the thighs is less than 90°.
- The legs are split apart, from side to side (in a Straddle), with at least a 90° angle between them.
- The legs are straight.

A-6. Split Position

- The torso is straight, with no bend at the waist.
- The legs split apart from front and back, with at least a 90° angle between them.
- The front leg is straight, the back leg as straight as possible.
- The head is in line with the torso.

A-7. Tuck Position

- The torso is bent forward at waist such that the angle between the torso and thighs is less than 90°.
- The legs are bent at the knees, such that the angle between the upper and lower leg is less than 90°. The knees are not necessarily all the way up against the chest.
- The legs are together.

A-8. Tee Position

- The torso is straight, with no bent at the waist
- One leg is extended in front of the torso, at 90° to the torso.
- The other leg is straight in line with the torso.
- The legs are straight.

A-9. Sit Position

- The torso must be straight.
- Both legs are bent at the hips and at the knees, at an angle of about 45º.
- The lower legs must be parallel to the Torso.
- The toes are pointed. (freestyle skydiving only)

A-10. Compass position

- Torso must be vertical and straight, with no bend at the waist.
- One leg must be straight down.
- The other leg is bent forward 90° at the hip, with the leg straight
- Either leg may be the forward leg.

B. ORIENTATIONS

There are six (6) different basic orientations which a body can have to the relative wind or ground. These define which way the torso is oriented, and the orientation is the first way to categorise the poses.

B-1. Belly-down Orientation

The torso is horizontal, on its front, facing down towards the ground.

B-2. Back-down Orientation

The torso is horizontal, on its back, facing up towards the sky.

B-3. Sideways Orientation

The torso is horizontal, on its side, with either side facing towards the ground. The chest is facing the horizon.

B-4. Head-up Orientation

The torso is vertical with the head up, towards the sky.

B-5. Head-Down Orientation

The torso is vertical with the head down, towards the ground.

B-6. Diagonal Orientation

Diagonal flying is any angle between 1° and 89°. For description purposes, the diagonal orientations are described in reference to the ground only when at terminal velocity. The angles can be classified into three (3) major groups:

- "Tracking" is horizontal movement with the torso predominantly horizontal with respect to the ground.
- "Flock" is horizontal movement with the torso predominantly vertical with respect to the ground.
- "Atmonauti" is horizontal movement with the torso at an angle between a "Track" and a "Flock", but preferred to be close to 45° with respect to the ground.

C. ROTATION AXES

Most moves involve some sort of rotational motion of the body. A total of five (5) axes are required and sufficient to describe all possible rotational motions.

C-1. Earth/Wind Axes

There are two inertial axes which stay fixed with respect to the relative wind (or ground when at terminal velocity).

Vertical Axis

The vertical axis remains parallel to the relative wind, (pointing from the sky to the ground when at terminal velocity).

Horizontal Axis

The horizontal axis is any axis perpendicular (90°) to the relative wind, (pointing to the horizon when at terminal velocity). It may have any heading (pointing towards any desired point on the horizon).

C-2. Body Axes

There are three (3) body axes which stay fixed with respect to the Performer's body.

Body Head-Toe Axis

The body head-toe axis is oriented lengthwise through the Performer's torso, pointing form head to toe.

Body Front-Back Axis

The body front-back axis is oriented forwards and backwards through the Performer's belly, pointing from front to back.

Body Left-Right Axis

The body left-right axis is oriented sideways through the Performer's hips, pointing from left to right.

D. BASIC ROTATIONAL ACTIONS

There are four (4) basic rotational actions which form the basis for most moves.

D-1. Turns

Turns in general involve a rotation about the vertical axis such that the heading is changing. The body can be in any orientation while performing a turn.

D-2 Rolls

A roll is a rotation about the body head-toe axis when that axis is aligned with the horizontal axis.

D-3. Loops

A loop is a head-over-heels rotation around the horizontal axis, initiated about either the body left-right axis or the body front-back axis, when either of these axes are aligned with the horizontal axis. The body goes through a head-up position and a head-down position during the course of the loop. A loop is considered complete when the head has travelled 360° around the horizontal axis from the point at which is started. A loop can start from any orientation. There are three (3) kinds of loops. Note that loops are referred to by the direction in which the loop is initiated, since in the case of twisting loops, the direction in which the loop completes may be different from the direction at the start.

Back Loop

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

Front Loop

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

Side Loop

A side loop is a loop where the rotation is initiated about the body front-back axis with the torso rotating sideways.

D-4. Twist

A twist is a rotation about the body head-toe axis when combined with a loop. A single or full twist is defined to be a 360° rotation about the body head-toe axis. The amount of twist contained within a loop is the amount of twisting rotation completed after a 360° looping rotation has been performed, when measured from the point in the loop at which the twist was first initiated. Twists may be initiated at any position in the loop and in any direction.

E. DEFINITION BODY PARTS

The parachutists' body is defined in specified parts, as follows:

- head: the part of the body above the neck.
- shoulder: the upper part of the body between the neck and the upper arm.
- torso: the body, including the shoulder, and parachute, but excluding arms, legs, head and neck.
- arm: the whole arm from the parachute harness, including upper arm, lower arm, wrist and hand. (the shoulder is excluded).
- upper arm: the part of the arm between the shoulder and the elbow.
- lower arm: the part of the arm between the elbow and the wrist.
- hand: the part of the arm past the wrist.
- leg: the whole leg from the parachute harness, including the upper leg, knee, lower leg and foot.
- upper leg: the part of the leg between the leg strap of the parachute harness and the knee.
- lower leg: the part of the leg between the knee and the ankle.
- foot: the part of the leg past the ankle.
- sole: that part of the foot on which a person stands.

Grips can be taken and docks can be placed on these parts.

ADDENDUM – C
DIFFICULTY

'Difficulty' is the combined result of several factors. Moves are classified from very easy to very difficult. The overall performance of the jumps (poses, moves and transitions) counts for difficulty.
In general difficulty factors are:

Easy	Difficult
Large support base	Small support base
Rotations on 1 axis	Rotations on >1 axis (in which use of 3 axes is more difficult than use of 2 axes)
Transitions between moves with the same axes	Transitions between moves with different axes
Little Control	Highly Control
Single spins in loops	Multiple spins in loops
Single moves	Consecutive moves
Body position not kept during the movement	Ideal body position maintained throughout movement
No direction change	Reversal of direction
Poor of synchronization with Videographer	Moves synchronized with Videographer

According to this list of difficulty factors, the following are examples only of the grading:

Freeflying					
Manoeuvres	**Very easy**	**Easy**	**Moderate**	**Difficult**	**Very difficult**
Carving head down	Inface	Inface with direction change or spins	Taking grips out face	Outface	Outface with direction change, inclusion of spins/ tricks
Carving head up			Inface	Inface direction change or spins	Outface
Eagle head up/head down	Half	Full	Full with tricks spins Half reverse	Full reverse	Full reverse with tricks, spins
Eagle head up/head up		Half	Full	Full with, tricks, spins	
Synchronized trick	Loop	Loops	Loops with half twists	Loops full twist	Loops with multiple twists
Tracking/angled flight	Side by side belly fly Background is still	Side by side back fly background is still	Side by side belly or back fly Background is moving	Slot swapping/ rolls while background is moving	Cork screwing in sync with camera including tricks/ rolls/spins Feet first
Head-up & Head-down	Double spock Compress Totem Double joker Double grip vice-versa	Sole-to-sole Vertical compressed rotations Double grips Head Up	Double joker reverse Double sole-to-sole Head-to-Head	Head-to-head rotation Sole-to-sole rotation	
Flat Position	Cat Star Compressed	Brouette	Interlock (leg lock)		
Camera flying	Camera static Camera has obvious set up	Static spins (cartwheels)	Camera has continuous motion	Camera has non linear set ups and continuous motion (move from one axis to another in carving motion) Direction switches	Camera shows elliptical orbits as well as circular orbits to showcase speed. Camera spins whilst maintaining directional movement

According to this list of difficulty factors, the following are examples only of the grading:

Freestyle Skydiving				
very easy	Easy	**moderate**	**difficult**	**very difficult**
F/B tuck loop F/B LO loop	F/B LO 0.5 twist	F/B LO 1 twist Side LO 0.5 twist Side LO	F/B LO 1.5 twist Side LO 1 twist Consecutive full twists	F/B LO 2 or more twists Side LO 1.5 or more twists Consecutive double twists
Straddle Standup	Straddle headstand	Straddle headstand turn	Cartwheel, Swan (headstand with legs straight and together, with a straight body)	Swan spin, head-down spin with legs at 90º
Flip through		Thomas Flair		
Symmetrical head-up poses (i.e. Standup, V-Seat, Straddle Seat, Sitfly)	Straddle headstand Daffy, Daffy switch, Daffy swivel, Daffy reverse, Billman	Compass switch, Compass swivel, Compass illusion, Compass inversion	Swan turn, Helix spin, Stag 1 twist, Helicopter	Blind carving with 360º inside the carve
Tee Tee reverse Tee switch Tee swivel Pinwheel	Back-down Tee, Propellor, Arabian	Stag kick turns, Stag spin	Robin Spin	
		Pike backstop	Cele (continuous back loop, tuck position + at least 1 twist in each loop)	Double Cele (continuous back loop, tuck position + double twist in each loop)
	Half Eagle	Half Eagle + tricks, Full Eagle, Half Reverse Eagle	Half Reverse Eagle + tricks, Full Reverse Eagle, Full Eagle + tricks	Full Blind Eagle, Full Reverse Eagle with tricks

NOTE: No stops are allowed between (part of) twists or these parts will be valued as single twisting moves.

Over-under moves of the Performer and Videographer combined are at present known under different names. There is even difference in the names of these moves between the Freestyle Skydiving and Freeflying community. The Committee has chosen for the following set of names with the following criteria:

- It is assumed the video camera is mounted in a normal (e.g. not inverted) position. Therefore the Videographer also starts the over-under moves in a sit/stand-up position. This is because it is practically very difficult to incorporate the position of the Videographer according to the image of the screen between jumps.
- For description convenience all starting positions are with the Performer in a head-up orientation. However, the moves can be started from any position and orientation.
- The “tricks” in the table are loops (layout, tucked or piked) or barrels.

Full Eagle: The Performer is in a head-up orientation. The Performer tracks over the Videographer while performing half a front loop, maintaining visual contact with the video camera. The Performer passes through the head-down orientation. The rotation continues and the Performer tracks from the head-down orientation under the Videographer while performing half a front loop, again maintaining visual contact with the video camera. The Videographer performs a back loop synchronous with the Performer. The Performer and the Videographer end up in the same positions where they originally started. This whole rotation should be one continuous movement.

Half Eagle: A 50% section of the Full Eagle, starting and stopping point undefined.

Full Reverse Eagle: The Performer is in a head-up orientation. The Performer moves feet first under the Videographer while performing half a back loop, maintaining visual contact with the video camera. The Performer passes through the head-down orientation. The rotation continues and the Performer moves from the head-down orientation over the Videographer while performing half a back loop, again maintaining visual contact with the video camera. The Videographer performs a front loop synchronous with the Performer. The Performer and the Videographer end up in the same positions where they originally started. This whole rotation should be one continuous movement. Basically, a reverse eagle is an eagle performed feet first by the Performer.

Half Reverse Eagle: A 50% section of the Full Reverse Eagle, starting and stopping point undefined.

Switch: A simultaneous change of the legs of the leg position (left to right, front to back, up to down) while maintaining the same body position and orientation.

Swivel: A transition between similar positions, but on opposite legs, while keeping the legs in approximately the same place. For example, a daffy swivel might start in a right daffy (right leg forward), and then you twist your upper body 180º over your legs, such that you end up in a left daffy, facing 180º away from where you started.

Illusion: An upward transition where only the orientation changes while maintaining the same body position, (for example from a tee to a compass while holding the legs in place and rotating the torso over the legs).

Inversion: A downward transition where only the orientation changes while maintaining the same body position, (for example from a compass to a tee while holding the legs in place and rotating the torso over the legs).

ADDENDUM - D
ROUTINE DESCRIPTION

Team #	Team Name:	
Please circle event	**FREESTYLE SKYDIVING**	**FREEFLYING**

State the order in which the compulsory sequences are performed.				
First Compulsory Round, round 2:				
Second Compulsory Round, round 5:				

The Free Routine description covers the circled rounds	**ALL - 1 - 3 - 4 - 6 - 7**

Name of move / sequence	Description if appropriate