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# 1. Introduction

# 1.1. Definitions

- 1.1.1 Team: a Freestyle Skydiving team is composed of a performer and a videographer.
- 1.1.2 A Freeflying team is composed of two (2) performers and a videographer.
- 1.1.3 Heading: the direction of the compass (East, South, North, West or anywhere in between) in which the performer or formation faces.
- 1.1.4 Move: a change in body position, a rotation around one (1) or more of the three (3) body axes, and/or a translation. A move may also be any static pose in which there are no rotational and translational movements. See Appendix C.
- 1.1.5 Grips and Docks.
  - 1.1.5.1 Grip: a recognizable 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. For the Freeflying compulsory sequences, no grips are allowed on any part of the parachute harness.
  - 1.1.5.2 Dock: a recognizable stationary contact of the foot (feet) or the head of one performer on a specified part of the body of the other performer, performed in a controlled manner.
- 1.1.6 Routine: a sequence of moves performed during the working time.
  - 1.1.6.1 Compulsory Routine: a routine composed of compulsory sequences and additional moves chosen by the team.
  - 1.1.6.2 Free Routine: a sequence of moves chosen entirely by the team.
- 1.1.7 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:
  - 1.1.7.1 45 seconds later for Freestyle Skydiving, and
- 1.1.7.2 43 seconds later for Freeflying.
- 1.1.7.3 The start of working time may be determined by the Event Judge, any one Principal Judge designated by the Event Judge, or all the Principal Judges subject to scoring system support

# 1.2. The Events

- 1.2.1 Events: the Artistic Events (AE) comprise of Freestyle Skydiving (FR) and Freeflying (FF). There is no gender separation.
- 1.2.2 Objective of the Events: the objective for the team is to record a sequence of moves in freefall with the highest possible merit.
- 1.2.3 Exit Altitude: 13,000 feet (3960 meters) AGL.

# 2. General Rules

# 2.1. Aircraft

2.1.1 All competition aircraft must be similar in configuration, interior and exterior, as determined by the Meet Director. Aircraft speed at the time of exit will be determined by the Meet Director and be kept constant for each aircraft type for the duration of the competition.

# 2.2. Exit Procedure

2.2.1 There are no limitations on the exit, other than those imposed by the Chief Pilot for safety reasons.

# 2.3. Air-to-Air Video Recording

- 2.3.1 The videographer shall provide the video evidence required to judge each jump. It is the responsibility of the videographer to show the start of working time.
- 2.3.2 The Meet Director, with the approval of the Chief Judge, will appoint a Video Controller prior to the competition. The Video Controller may inspect a team's freefall video equipment to verify that it meets competition standards. As determined by the Chief Judge, inspections that do not interfere with the team's performance may be made at any time during the competition. If any freefall video equipment does not meet the criteria determined by the Video Controller, this equipment will be deemed unusable for the competition.
- 2.3.3 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 the camera(s), recording media, cables and battery. The freefall video equipment must be able to deliver a High Definition digital video file in a compatible file format approved by the Video Controller.
- 2.3.4 The videographer is responsible for assuring the compatibility of the freefall video equipment with the scoring system.

- 2.3.5 The camera(s) 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.
- 2.3.6 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 copying at the designated video station. The video evidence must remain available for viewing or copying until all scores are posted as final.
- 2.3.7 Failure to meet any of these requirements will lead to a score of zero (0) points.

# 2.4. Rejumps

- 2.4.1 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:
  - 2.4.1.1 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).
  - 2.4.1.2 If the VRP determines that the video evidence insufficiency is due to weather conditions or any other cause not controllable by the team, a rejump will be given.
  - 2.4.1.3 If 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.
- 2.4.2 Contact or other means of interference between (a) performer(s) and/or the videographer in a team shall not be grounds for a rejump.
- 2.4.3 Problems with a team's equipment (including video equipment) shall not be grounds for a rejump.
- 2.4.4 Adverse weather conditions during a jump are not grounds for protest. However, a rejump may be granted due to adverse weather conditions, at the discretion of the Chief Judge.

# 2.5. Weather

2.5.1 Meet management will make wind speed and direction recordings at no greater than 30-minute intervals. Maximum allowable wind speed limit is nine (9) meters per second.

# 2.6. Equipment

2.6.1 Team Members are responsible for outfitting themselves and being fully trained in the safe operation of all appropriate equipment and clothing. Each Artistic Events Team Member is required to carry at least one audible or visual altimeter during the jump, and it is recommended that they carry both. The use of functioning and armed AADs by all Artistic Events Team Members is recommended.

# 3. Rules Specific To The Event

# 3.1. Teams

- 3.1.1 A Freestyle team consists of a performer (freestylist) and a videographer.
- 3.1.2 Teams may consist of either or both sexes.
- 3.1.3 Freestyle Team Members are allowed to change their position in the team. Only one (1) Team Member may carry freefall video equipment on any particular round.
- 3.1.4 A Freeflying team consists of three (3) Team Members, and any one, but only one of the Team Members may serve as the videographer on any particular round.
- 3.1.5 A performer and videographer may be a part of, at most, one (1) Freestyle Skydiving team and one (1) Freeflying team.

# 3.2. Routines

- 3.2.1 Each round consists of either a Compulsory Routine or Free Routine.
- 3.2.2 Compulsory Routine. Each Compulsory Routine consists of four (4) Compulsory Sequences as described in the relevant Appendix, 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.
- 3.2.3 Free Routine. The content of the Free Routine(s) is chosen entirely by the team. There may be any number of different free routines within the set number of free rounds.
- 3.2.4 Submission of Compulsory Sequences with Max Values and Free Routine Videos:
  - 3.2.4.1 Teams must deliver the order of the Compulsory Sequences and their chosen Max Values (for both Compulsory Rounds) to the Chief Judge before the beginning of the competition.

- 3.2.4.2 Failure to provide the order of the Compulsory Sequences and their Max Values will lead to a score of zero (0) points for that round.
- 3.2.4.3 Teams must deliver a video of their Free Routine(s) to the Chief Judge at least 48 hours before the close of registration. The Chief Judge may extend this deadline at his/her discretion with an official announcement. (Teams may optionally include a written list of elements and/or present and explain their Free Routine(s) to the Judges.) Ideally, the video is one (1) unedited jump. When it is necessary to edit more than one jump into the submitted video, no special effects should be used, cuts only. Each Team may submit multiple Free Routines, but, during the competition, may submit a change only one time. Teams must declare which Free Routine they will perform for each Free Round.
- 3.2.4.4 Failure to provide the video of the Free Routine(s) will lead to a score of zero (0) points for the Initial Difficulty Score for all Free Routines.
- 3.2.4.5 For Teams who register less than 48 hours before the start of the competition, the Judges will evaluate their round 1 video for Initial Difficulty Score before the start of judging round 1.
- 3.2.4.6 For this purpose, the Chief Judge should provide a standard form (Appendix E).

### 3.3. Number of Rounds

- 3.3.1 The minimum number of rounds to constitute a meet is one (1), which is round one, the free round. The maximum number of rounds (scheduled) is seven (7).
- 3.3.2 Full competition
  - 3.3.2.1 Compulsory Routines: 2 rounds
  - 3.3.2.2 Free Routines: 5 rounds
- 3.3.3 Minimum competition 1 round (Free Routine)
- 3.3.4 The jump order of the routines must be: F C F F C F F (C = Compulsory Routine, F = Free Routine).

# 4. Judging And Scoring

# 4.1. General

4.1.1 Once any Team Member has left the aircraft (except in an emergency), the jump becomes official and will be scored.

# 4.2. Scoring Free Routines

- 4.2.1 Before the start of the competition, the Judges will view the submitted videos and determine the Initial Difficulty Score, between 0.0 and 10.0 expressed as a number up to one (1) decimal point, taking into account the following guidelines:
  - Variety of orientations used (Head-up, Head-down, Belly-down, Back-down, Sideways, Diagonal, Angle, etc.)
  - Variety of moves and styles (Carving, Eagles, Tricks, Acrobatics, etc.)
  - The degree of difficulty of all moves and transitions (e.g., Exit sequence, pace of the jump, movements and spins in both directions, multiple simultaneous rotations, combined moves, blind moves, original moves, challenging body positions etc.)
  - Overall "Technicality" of Flying: Holding body position and orientation, confidence in flying and maneuvers, control, etc.
  - Team Work: The ability to combine technical skills and create complex effects of movement, including the videographer's involvement in the routine.

### 4.2.2 Execution

4.2.2.1 During the competition, three (3) Judges determine Execution deductions, according to the following guidelines:

Freestyle Skydiving				
Deduction	Reason			
Up to -0.2 to -1.0 point	For each missing element or portion of element. (for example, single instead of double twist)			
-0.1 to -0.3 points	For each instance, the performer is off heading, off level, wobble			
Freeflying				
Deduction	Reason			
Up to -0.2 to -1.0 point	For each missing element			
Up to -0.5 point	For each instance, one or both performers are off heading, off level, wobble			
Up to -0.5 point	Team work: Levels between the performers, synchronization between members (including camera), proximity between performers (excluding camera)			

4.2.2.2 Each of the three (3) Judges will total all their Execution deductions.

# 4.2.3 Presentation:

- 4.2.3.1 During the competition, the Judges will give a presentation score, between 0.0 and 10.0 expressed as a number up to one decimal point, taking into account the following guidelines:
  - 4.2.3.1.1 Creativity and routine composition:
    - Routine is aesthetically pleasing to watch and has a good flow.
    - Creative choreography (original routine composition)
    - Well executed new moves (and/or new presentation of old moves),
    - There is a definite beginning and a definite ending.

### 4.2.3.1.2 Camera Work:

- Good use of video angle(s),
- · Creative interactivity
- · Clean image and clear focus shown.
- 4.2.3.2 During the competition, the Judges determine Camera deductions, according to the following guidelines:

Up to -2.0 points	Proximity overall jump: performer(s) too far away from camera
-2.0 points	For each instance, both performers are completely out of the frame
-1.0 point	For each instance, one performer is completely out of the frame
-0.1 to -0.5 points	For each instance, performer(s) is(are) off center frame
-0.1 to -0.5 points	For each instance, unintentional cropping body part(s) off frame
-0.1 point	For each instance, any part of the videographer body/equipment is in the frame

- To encourage enhanced video, when 'full frame' close video of the performer(s) is shown, there will be no deduction for cropping the hands, feet, or part/top of the helmet parts out of the frame.
- Each Judge will total all their Camera deductions.

# 4.3. Scoring Compulsory Routines

4.3.1 Judges give a score for the team, between zero (0.0) and ten (10.0) up to one (1) decimal point, for Presentation (as per Free Routine) and for each of the four (4) Compulsory Sequences relative to the Max Value of the team's selected Compulsory Sequences using the following guidelines:

Component:	Deduction	Explanation:	Example:	
Set-up	Up to 10%	Facing the correct direction; in the correct body position; Camera in correct position	Performance requirements described for "at the beginning orientation, body position, camera position, etc	
Major part of the compusiory	Up to 50%	The part that defines the Sequence	The twist in the loop twist; angle position; body orientation, etc	
Static Camera Up to 50		Camera too far to judge the Sequence		
Camera Setup	Up to 20%	Camera is moving when static image is required	When not on the specified level or not at the correct angle	
Camera Moves	Up to 30%	When camera is doing the wrong movement	Incorrect direction of roll, synchronization, carving, etc	
Image Orientation	30%	Upright video image (sky in upper portion of frame) throughout sequence, except when specificed in Sequence description	Incorrect image orientation, or not according to sequence description	
Specific body position requirements	Up to 30%	Specific body position or specific levels among the Team Members	Layout position; straddle position, face-to-face, split position	
Grip(s)/Dock(s)	Up to 30%	Incorrect grip(s)/dock(s)	Not hand-to-hand, hands-to-lower-legs (FF-2) when required	
Execution mistakes	Up to 30%	Flow, wobble, off-heading, off-center frame		
Specific judging guidelines	See Appendices A & B	As specified for each Sequence	See Appendices A & B	

- 4.3.2 Presentation in the Compulsory Routines is scored for the beginning and the end of the routine, and move(s) performed between the Compulsory Sequences. If the Judges cannot identify any presentation element, the score for Presentation will be 0.0 points.
- 4.3.3 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.

- 4.3.3.1 Executing Compulsory Sequences in a different order than the one submitted, will lead to a score of zero (0) for the sequences that are out of order. The Judges will judge each next Compulsory Sequence in the order submitted. (Any Compulsory Sequence that comes before the next in the submitted order will receive a score of zero (0), but will be counted as presentation.)
- 4.3.4 If the Judges determine that the team has performed a lower Max Value of a Compulsory Sequence than the declared Max Value, the maximum score will be 0.5 points less than the lower Max Value actually performed.

# 4.4. Judging Rules

- 4.4.1 The jumps shall be judged using the video evidence as provided by the videographer.
- 4.4.2 Where possible, a complete round shall be judged by the same panel.
  - 4.4.2.1 A panel of three (3) Judges will evaluate the routines.
- 4.4.3 The Judges will watch each jump one (1) time with an optional second viewing. All viewings must be at normal speed. A third view of a Free Round jump is allowed for determining the camera deductions. At the discretion of the Event Judge, a third view of a Compulsory Round jump, or part of it, is allowed, in normal, reduced speed (70%), and/or with use of video pause.
- 4.4.4 After viewing, each Judge will give preliminary scores for the jump.
- 4.4.5 The Judges may use an electronic scoring system to record the evaluation of the performance. At the end of working time, a 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.
- 4.4.6 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 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.

# 4.5. Score Calculation

- 4.5.1 The score for each round is calculated as follows:
- 4.5.2 Compulsory Round
  - 4.5.2.1 For each Compulsory Sequence and for Presentation, the average score is calculated by adding the three (3) Judges' scores and dividing by three (3) with no rounding applied.
  - 4.5.2.2 The average score for each Compulsory Sequence will be multiplied by 0.225, the average score for Presentation will be multiplied by 0.1, and then the sum of these five (5) values will be rounded to the first decimal place.

### 4.5.3 Free Round

- The three (3) total scores for the Execution deductions will be added and the result will be divided by three (3), with no rounding applied. The three (3) total scores for the Camera deductions will be added, and the result will be divided by three (3), with no rounding applied. The three (3) scores for Presentation will be averaged separately, with no rounding applied.
- 4.5.3.1 To determine the Technical score, the averaged Execution score will be deducted from the Initial Difficulty Score, with no rounding applied. The minimum possible score for Technical is zero (0) points.
- 4.5.3.2 To determine the final Presentation score, the averaged Camera score will be deducted from the averaged Presentation score, with no rounding applied. The minimum possible score for Presentation is zero (0) points.
- 4.5.3.3 The Technical and Presentation scores will be added, and the result will be divided by two (2), then rounded to the first decimal place.

# 4.5.4 Rounding

- 4.5.4.1 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.
- 4.5.4.2 Total scores for the events are calculated by adding the Team's official scores of all completed rounds.
- 4.5.5 All scores for each Judge, for all competition jumps, will be published.
  - 4.5.5.1 For all free routine videos submitted 48 hours before the start of the competition, the scores for Initial Difficulty Score will be published before the start of the competition.

# 5. Classification Of Final Results

# 5.1. General

5.1.1 The final scores are calculated by adding the team's jump scores of all completed rounds.

5.1.2 The winner is the team with the highest score.

# 5.2. National Champions

- 5.2.1 After all completed round(s), National Champions in Freestyle Skydiving and Freeflying will be declared.
- 5.2.2 The Freestyle Skydiving National Champions and the Freeflying National Champions are the teams with the highest total score for all completed rounds.
- 5.2.3 Prizes and awards are awarded as follows:
  - 5.2.3.1 All Team Members in Freestyle and Freeflying events will be awarded medals for First, Second and Third places.

# 5.3. Ties

- 5.3.1 If two (2) or more teams have equal scores, the first three (3) places will be determined by a tie-break free round, if time permits.
- 5.3.2 If two (2) or more teams still have equal scores, the winners will be determined by using the following procedure until a clear placing is determined:
  - 5.3.2.1 The best score, then the second best score, and then third best score, of any completed free rounds.
  - 5.3.2.2 The best score, then the second best score, of any completed compulsory rounds.

# 5.4. National Championships Title Classifications

- 5.4.1 National Freestyle Skydiving Champions—1st, 2nd, 3rd
- 5.4.2 National Freeflying Champions-1st, 2nd, 3rd

# **Appendix A: Freestyle Skydiving Compulsory Sequences**

# 1. General

- 1.1. The order in which these Compulsory Sequences can be performed is determined by the team.
- 1.2. The team must submit the order of the Compulsory Sequences and their chosen Max Values before the start of the competition to the Chief Judge. (See Rules Specific to the Event, 3.2.4 and Appendix E.)
- 1.3. If the Judges determine that the Team has performed a lower Max Value of a Compulsory Sequence than the declared Max Value, the maximum score will be 0.5 points less than the lower Max Value actually performed.
- 1.4. The Compulsory Sequences must be performed in the submitted order.
- 1.5. 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).
- 1.6. The judging of each sequence ends when the judges see the team completes or abandons the performance requirements of that sequence.
- 1.7. The videographer must maintain proximity to the performer throughout each compulsory sequence, except where the compulsory sequence description specifically prescribes otherwise.
- 1.8. The video image must be upright with the sky in the upper portion of the frame throughout each Compulsory Sequence, except where the Sequence description specifically prescribes otherwise. Otherwise, the maximum possible score for the Compulsory Sequence is 70% of the Max Value.
- 1.9. The definition of each body position is described in Addendum B.

# 2. First Compulsory Round (Round 2)

# 2.1. FR-1. Eagle Sequence

- 2.1.1 Half Eagle:
  - At the beginning, the performer is in a head-down orientation.
  - The 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 center between them so that both end up in opposite positions and orientations than they originally began.
  - · The Eagle should be performed as one continuous movement.
  - The Eagle must remain on the same heading.
- 2.1.2 Videographer requirements:
  - The videographer must show performer from his/her front during the whole sequence.
- 2.1.3 Max Value 3 pts: Half Eagle is performed as described above.
- 2.1.4 Max Value 7.5 pts: Full Eagle
  - Half Eagle is performed as described above, then:
  - The movement continues until the performer and the videographer end up in their relative beginning positions.
- 2.1.5 Max Value 10 pts: Full Eagle with Trick
  - Half Eagle is performed as described above, then:
  - The movement continues until the performer and the videographer end up in their relative beginning positions.
  - The performer must perform a tight tuck front loop (trick) in the middle of the second part of the Eagle (when he/she is above the videographer).
  - The videographer must show performer from his/her front during the whole sequence, with the exception of the full tight tuck front loop.
- 2.1.6 Judging Guidelines:
  - When the tuck is not tight for the front loop, 15% will be deducted.
  - When the front of the performer is not shown throughout the whole sequence (except for the front loop), 20% will be deducted.
  - When the front loop is not performed above the videographer in the middle of the second part of the Eagle, 15% will be deducted.

# 2.2. FR-2. Mixed Carve

- 2.2.1 Performer Requirements
  - At the beginning, the performer must be in a head-down orientation, facing the videographer.
  - The Performer and Videographer must inface carve 180° around an imaginary center, stop, then make a transition (presenting the side to the camera) to head-up outfacing through the belly-down orientation. (During the stop, the Performer makes a ¼ pirouette before and after the transition through the belly-down orientation.)
  - In the head-up orientation, outfacing, the Performer then carves 180° in the opposite direction.
- 2.2.2 Videographer requirements:
  - Videographer must show the front of the performer while the performer is inface carving, and the back of the performer while outface carving
  - · Videographer must show the image as if the performer remains static with only the background moving.
  - Videographer must be on the same level as the performer (and show the performer on the horizon throughout the sequence)
  - Videographer must maintain the same distance from the performer throughout the sequence.
- 2.2.3 Max Value 5 pts: Inface Carve with Switching Direction
  - At the beginning, The Performer must be in a head-down orientation, facing the Videographer.
  - The Performer and Videographer must carve 180° around an imaginary center, stop, and then inface carve 180° to the opposite direction.
- 2.2.4 Max Value 7.5 pts: Mixed Carve
  - The Mixed carve is performed as described above.
- 2.2.5 Max Value 10 pts: Layout Mixed Carve
  - The Mixed carve is performed as described above.
  - The Performer must maintain the layout position throughout the sequence
- 2.2.6 Judging Guidelines:
  - If the performer is not in layout position when it is required, 30% will be deducted.
  - · If the performer, during the outface carving, flies in a straight line instead of carving, 30% will be deducted.

# 2.3. FR-3. Rebound

- 2.3.1 Performer Requirements
  - The performer is in a head-down or angle back-flying orientation, facing the videographer.
  - The Performer makes a half reverse eagle over the Videographer ("back-layout" movement) to the belly-down orientation.
  - The Performer then makes a half eagle ("front layout" movement) to a head-down or angle back-flying, ending on the original heading in the original starting position.
  - The Performer must keep eye contact with the Videographer throughout the move.
- 2.3.2 Videographer requirements:
  - The camera shows the Performer on the horizon at beginning, middle and the end of the sequence.
- 2.3.3 Max Value 7.5 pts: Rebound
  - The move is performed as described above.
- 2.3.4 Max Value 10 pts: Rebound with a roll
  - The move is performed as described in 7.5 points, but the performer does a belly-to-belly barrel-roll in the middle of the move, on the horizon. (Back Layout-Roll-Front Layout)
- 2.3.5 Judging Guidelines
  - When the Performer loses eye contact, up to 10% will be deducted.

# 2.4. FR-4. Looping Sequence

- 2.4.1 Layout Back Loops:
  - Beginning is from a layout position in a head-up orientation.
  - $\bullet \quad \text{Three (3) complete 360} \ \text{back-loop rotations, without stopping, must be performed in the layout position.} \\$

- 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/hips.
- 2.4.2 Videographer requirements:
  - The videographer must be on the same level with the performer and show the performer from his/her side at start of the sequence, and must remain in place.
- 2.4.3 Max Value 3 pts: Layout Back Loops are performed as described above.
- 2.4.4 Max Value 7.5 pts: Layout Loops with Half Twist
  - The first back loop is performed as described above.
  - A half twist must be performed within and evenly executed throughout the second loop.
  - After a momentary stop in the head-up orientation, a full front loop must be performed.
- 2.4.5 Max Value 10 pts: Layout Back Loops with Full Twist
  - Layout Back Loops are performed as described above but:
  - A full twist must be performed within and evenly executed throughout the second loop.
  - Looping motion must be smooth.
  - The sequence must end with a momentary stop in a layout position in a head-up orientation, on the same heading as the beginning.
- 2.4.6 Judging Guidelines:
  - When the half or full twist is not within the second loop, 30%-50% will be deducted..
  - If there is stopping between the loops, 15% will be deducted.
  - If no momentary stop is shown at the end, the maximum score will be 9.5 points.

# 3. Second Compulsory Round (Round 5)

# 3.1. FR-5. Reverse Eagle Sequence

- 3.1.1 Half Reverse Eagle:
  - At the beginning, the performer is in a head-up orientation, facing the camera.
  - The performer goes below the videographer as the videographer goes over the top, moving around an imaginary center between them so that both end up in opposite positions and orientations than they originally began.
  - The Reverse Eagle must be performed as one continuous movement.
  - The Reverse Eagle must remain on the same heading.
- 3.1.2 Max Value 3 pts: Half Reverse Eagle is performed as described above.
- 3.1.3 Max Value 7.5 pts: Full Reverse Eagle
  - Half Reverse Eagle is performed as described above, then:
  - The movement continues until the performer and the videographer end up in their relative beginning positions.
- 3.1.4 Max Value 10 pts: Full Reverse Eagle in Layout Position
  - Half Reverse Eagle is performed as described above, then:
  - The movement continues until the performer and the videographer end up in their relative beginning positions.
  - The legs must be in line with the torso (when viewed from the side) throughout the sequence.

# 3.2. FR-6. Angle Flying

This compulsory sequence must not be the first one performed.

- 3.2.1 Performer Requirements
  - Performer is flying at a minimum of a 20° diagonally off vertical and horizontal compared to the horizon with the head low.
  - Videographer must demonstrate an on-level position.
- 3.2.2 Max Value 3 pts: Angle Flying Pose
  - Performer is facing upward.
  - This angle flying must be maintained for a minimum of three (3) seconds.

- Videographer must show Performer from his/her side throughout the sequence.
- 3.2.3 Max Value 5 pts: Angle Flying Half Roll
  - The move is performed as described above.
  - After 3 seconds of angle flying, the Performer will make a 180° rotation on the Body Head-Tail axis (half a barrel roll into face-down) while maintaining the heading and the angle.
  - · Videographer maintains position and must show Performer from his/her side at the beginning and end of the move.
- 3.2.4 Max Value 7.5 pts: Angle Flying with a flip
  - The performer is angle-flying on the belly, with the head low for minimum two (2) seconds
  - The performer does a front "flip" to head-up belly angle going the opposite direction.
  - The performer holds the head-up belly angle for minimum two (2) seconds.
  - Videographer must show Performer from his/her side throughout the sequence.
- 3.2.5 Max Value 10 pts: Layout Angle Flying with a flip
  - The move is performed as described in 7.5, but performer must maintain a layout position through the full sequence.
- 3.2.6 Judging Guidelines:
  - When this Compulsory Sequence is performed first in the compulsory routine, 70% will be deducted.
  - If the angle flying is not held for a minimum of two (2) seconds at the beginning or end, 10% will be deducted. If not held for two (2) seconds at both the beginning and end, 20% will be deducted.

# 3.3. FR-7. Side Flying

- 3.3.1 Rotating Side Pose:
  - · At the beginning, the performer is on their side, with the legs together, facing the camera.
  - While on their side, the Performer does a 360° rotation (either forward or backward).
- 3.3.2 Videographer Requirements
  - Videographer must be on the same level with the performer.
  - Videographer must maintain the same distance from the performer throughout the sequence.
- 3.3.3 Max Value 5 pts: Rotating Side Pose
  - The move is performed as described above.
- 3.3.4 Max Value 7.5 pts: Rotating Layout Side Pose
  - The move is performed as described above.
  - The performer must be in a layout position, without a bend in the waist/hips/knees, with their legs together.
- 3.3.5 Max Value 10 pts: Rotating Layout Side Pose with a Stop
  - The layout side rotation is performed as described above.
  - At the end of the rotation, the performer must hold a side pose, in a layout position for two (2) seconds.
- 3.3.6 Judging Guidelines:
  - If the side pose is not held for a minimum of two (2) seconds at the end with the Videographer remaining in place, 15% will be deducted.

# 3.4. FR-8. Head-up Straddle Spins

- 3.4.1 Head-up Straddle Spins
  - The performer is in the straddle position, without any bend at the waist/hips, in the head-up orientation, with the toes pointed and the knees straight.
  - Spins can be in either direction.
  - At the beginning and end, the performer must show a momentary stop in the Head-up Straddle.
  - At the beginning and the end, the videographer must show the front of the performer.
- 3.4.2 Max Value 3 pts: Head-up Straddle Spins
  - The Straddle must pirouette rapidly, with three (3) pirouette rotations performed within five (5) seconds from the start of the first rotation.

- The videographer must be on the same level throughout the sequence.
- 3.4.3 Max Value 5 pts: Head-up Straddle Spins with Synchronized Carve
  - The straddle must pirouette rapidly, with three and a half (3.5) pirouette rotations performed within five (5) seconds from the start of the first rotation.
  - Synchronous with the performer's pirouetting, the videographer must carve 180° opposite the performer's rotation.
  - The videographer must be on the same level throughout the sequence.
- 3.4.4 Max Value 10 pts: Head-up Straddle Spins with Half Eagle
  - The Straddle must pirouette rapidly, with three and a half (3.5) pirouette rotations performed within five (5) seconds from the start of the first rotation.
  - Synchronous with the performer's pirouetting, the videographer must perform a Half Eagle, passing under the performer with a half (180°) camera roll at the lowest point.
  - The half (180°) camera roll must be in the opposite direction of the performer's pirouetting.
  - At the beginning and end, the videographer must be on the same level.

# 3.4.5 Judging Guidelines:

- When the videographer passing under the performer, during the Half Eagle, makes the camera roll to the wrong direction, 30% will be deducted.
- When the Videographer is not passing directly under the Performer, during the Half Eagle, up to 30% will be deducted.
- When the legs are clearly not straddled at least 90° apart, 30%-50% will be deducted.
- If there is a forward bend (i.e., torso is not vertical) at the waist/hips, 20% to 50% will be deducted.
- If the Performer executed less than the required number of spins, 15% will be deducted for each missing spin.
- When the toes are not pointed and/or the knees are not straight, 10% will be deducted.
- If no momentary stop is shown at the beginning OR end, 5% will be deducted.
- If the stop is not shown at the beginning AND end, 10% will be deducted.

# **Appendix B: Freeflying Compulsory Sequences**

# 1. General

- 1.1. The order in which these Compulsory Sequences can be performed is determined by the team.
- 1.2. The team must submit the order of the Compulsory Sequences and their chosen Max Values before the start of the competition to the Chief Judge. (See Rules Specific to the Event, 3.2.4 and Appendix E.)
- 1.3. If the Judges determine that the Team has performed a lower Max Value of a Compulsory Sequence than the declared Max Value, the maximum score will be 0.5 points less than the lower Max Value actually performed.
- 1.4. The Compulsory Sequences must be performed in the submitted order.
- 1.5. When the layout position is specified, both legs must be together (max shoulder width), with the knees straight, without any bend at the waist / hips.
- 1.6. The face-to-face requirement means that the performers must be with their heads at the same level and looking at each other.
- 1.7. Being on the same levels means that the Centers of Gravity (CGs) of the performers are at the same level.
- 1.8. The judging of each sequence begins when the Judges see the team begin the sequence from the described beginning position (after a transition from the previous move with or without a momentary stop).
- 1.9. The judging of each sequence ends when the Judges see the team completes or abandons the performance requirements of that sequence.
- 1.10. The videographer must maintain a consistent distance from the performer's center point throughout each Compulsory Sequence, except where the Compulsory Sequence description specifically prescribes otherwise.
- 1.11. The video image must be upright with the sky in the upper portion of the frame throughout each Compulsory Sequence, except where the Sequence description specifically prescribes otherwise. Otherwise, the maximum possible score for the Compulsory Sequence is 70% of the Max Value.

# 2. First Compulsory Round (Round 2)

# 2.1. FF-1. 2-way Eagle Half Eagle

- One Performer is in a head-up orientation, the other in a head-down orientation, face-to-face on level.
- The HD-Performer goes below the HU-Performer as the HU-Performer goes over the top, moving around an imaginary center between them so that they end up in opposite positions and orientations to where they began.
- The Half Eagle should be performed as one continuous movement.
- The Half Eagle must remain on the same heading.
- 2.1.1 Videographer requirements
  - The Videographer must show the Performers from the side.
  - The Videographer must be on the same level with the Performers' center point.
- 2.1.2 Max Value 5 pts: 2-way half eagle
  - The move is performed as described above.
- 2.1.3 Max Value 7.5 pts: 2-way eagle
  - The move is performed as described above, plus the following: The movement continues until the Performers end up in their relative beginning positions.
  - The Full Eagle should be performed as one continuous movement.
  - The Full Eagle must remain on the same heading.
- 2.1.4 Max Value 10 pts: 2-way Eagle with Synchronized Roll
  - The move is performed as described for 7.5 points above plus the following:
  - The Videographer must make a synchronized roll with the Performers, showing an image as if the Performers remain static with only the background moving.
- 2.1.5 Judging guidelines
  - When the Videographer makes the roll in the wrong direction, 30% will be deducted.

• When the Full Eagle is not performed as one continuous movement, 20% will be deducted

# 2.2. FF-2 Cat Barrel Roll

# 2.2.1 Cat position

- Both Performers are in belly-down orientation.
- One Performer has grips on the lower legs or feet of the other Performer, the right hand on the right lower leg/foot and the left hand on the left lower leg/foot.
- The upper legs should be in line with the torso.
- Both Performers simultaneously perform one (1) full barrel roll along the same axis,
- · maintaining the same heading.
- The barrel rolling can be in either direction.

# 2.2.2 Videographer requirements

- At the beginning, the Videographer must be in line with the body Left-Right axes of the Performers showing a side of the Performers.
- Videographer must be on the same level as the Performers' center point and remain in place throughout the sequence.
- 2.2.3 Max Value 5 pts: Single Cat Barrel Roll
  - The move is performed as described above.
- 2.2.4 Max Value 7.5 pts: Double Cat Barrel Roll
  - Cat Barrel Roll is performed as described but with two (2) rolls.
  - Both Performers simultaneously perform two (2) consecutive full barrel rolls, without stopping, along the same axis, maintaining the same heading.
- 2.2.5 Max Value 10 pts: Double Cat Barrel Roll in Layout Position
  - Cat Barrel Roll is performed as described but with two (2) rolls.
  - Both Performers simultaneously perform two (2) consecutive full barrel rolls, without stopping, along the same axis, maintaining the same heading.
  - The Performers must maintain a layout position, without any bend at the waist/hips, with the knees straight, throughout the entire sequence.

### 2.2.6 Judging guidelines

- One or both grips in wrong location (i.e., not on lower leg/feet), 30% will be deducted.
- If the two (2) barrel rolls are not consecutive and smooth, 20% will be deducted.
- When one Performer is not in layout position when it is required, 25% will be deducted.
- When both Performers are not in layout position when it is required, 40% will be deducted.

# 2.3. FF-3. Head-Up Grip Sequence

- Both Performers are in head-up orientation.
- After making the required grip(s), both Performers simultaneously release their grip(s).
- The distance between the Performers must remain the same during the sequence.
- 2.3.1 Max Value 3 pts: Head-Up Side-by-Side Grip 360°
  - At the beginning, both Performers are side-by-side. (Sit position allowed).
  - A hand-to-hand grip is taken (left-to-right hand or right-to-left hand).
  - After grip release, both performers simultaneously perform a 360° pirouette while remaining on the same level and retake the grip.
  - Videographer must show the front of the Performers at the beginning, on the same level, stay on level and remain in place.
- 2.3.2 Max Value 5 pts: Head-Up Face-to-Face Grips 360°
  - At the beginning, both Performers are face-to-face. (Sit position allowed).
  - A double hand-to-hand grip is taken (left-to-right hand and right-to-left hand).
  - After grip release, both performers simultaneously perform a 360° pirouette while remaining on the same level.
  - Both Performers retake both grips at the same time.

- Videographer must show the side of the Performers at the beginning, on the same level, stay on level and remain in place.
- 2.3.3 Max Value 7.5 pts: Stand-Up Side-by-Side Grip 360° Layout Position
  - Both Performers must maintain the layout position throughout the entire sequence.
- 2.3.4 Max Value 10 pts: Stand-Up Face-to-Face Grips 360° Layout Position
  - Both Performers must maintain the layout position throughout the entire sequence.

# 2.3.5 Judging guidelines

- · Wrong body position (when not in layout position when it is required), 50% will be deducted.
- When double hand-to-hand grips are not taken simultaneously, 20% will be deducted.
- When only one (1) grip is taken when two (2) should be taken, 30% will be deducted.
- When any grip(s) is (are) not hand-to-hand, 30% will be deducted.

# 2.4. FF-4 Side-by-Side Mixed Carve

# 2.4.1 Max Value 5 pts: Inface Mixed Carve

# 2.4.1.1 Head-Down Carve

- At the beginning, both Performers must be in a head-down orientation, side by side, facing the Videographer. A hand-to-hand grip (left-to-right hand or right-to-left hand) is to be taken.
- Both Performers start inface carving around the Videographer.
- A minimum of 180° of head-down inface carving must be performed.
- The carving orbits must be circular (not elliptical).

# 2.4.1.2 Transition to Head-Up Carve

- While maintaining the grip, the Performers make a half eagle under the Videographer, to a Head-Up orientation.
- Synchronous with the Performers' half eagle, the Videographer must perform a half eagle passing over the Performers with a half (180°) camera roll at the highest point to show an upright image after the transition.

### 2.4.1.3 Head-Up Carve

- Without stopping, both Performers continue to carve in a head-up orientation, side by side, facing the Videographer. (It is not required to maintain the grip while carving in the head-up orientation.)
- If the Performers were head-up carving to their right, they must be head-down carving to their right, or vice versa. A minimum of 180° of head-down inface carving must be performed.

# 2.4.2 Max Value 7.5 pts: Inface/Outface Mixed Carve

# 2.4.2.1 Head Up Carve

- At the beginning, both Performers must be in a head-up orientation, side by side, one facing the videographer and the other outfacing. A hand-to-hand grip (left-to-left hand or right-to-right hand) is taken. (One Performer must show their back to the Videographer, throughout the sequence).
- Both Performers start carving around the Videographer.
- A minimum of 180° of head-up carving must be performed.
- The carving orbits must be circular (not elliptical).

# 2.4.2.2 Transition to Head-Down Carve

- While maintaining the grip, the Performers make a half reverse eagle under the Videographer, to a Head-Down orientation.
- Synchronous with the Performers' half reverse eagle, the Videographer must perform a half eagle passing over the Performers with a half (180°) camera roll at the highest point to show an upright image after the transition.

# 2.4.2.3 Head-Down Carve

- Without stopping, both Performers continue to carve in a head-Down orientation, side by side. (maintained throughout the sequence).
- If the inface Performer was head-up carving to their right, that inface Performer must be head-down carving to their right, or vice versa.
- A minimum of 180° of head-down inface carving must be performed.

# 2.4.3 Max Value 10 pts: Outface Mixed Carve

- 2.4.3.1 The Mixed Carve is performed as described for the Max Value 7.5 pts version, but:
  - Both Performers must be outfacing, showing their backs to the Videographer, with their knees straight, throughout the sequence.
- 2.4.4 Judging guidelines:
  - If the knees are not straight when required, up to 20% will be deducted.
- 2.4.5 Videographer requirements:
  - · While carving, the Videographer must show an upright image as if the Performers remain static with only the background moving.
  - Videographer must be on the same level as the Performers (and show the Performers on the horizon) throughout the sequence, except for the transition.
  - Videographer must maintain the same distance from the Performers throughout the sequence.

# 3. Second Compulsory Round (Round 5)

# 3.1. FF-5. Head-Down Carve

- 3.1.1 Head-Down Carve:
  - Both performers are in a head-down orientation, facing one another on the same level.
  - · Both performers start carving around an imaginary center between them.
  - A minimum of 360° of carving must be performed by the performers.
  - The carving orbits must be round (not elliptical).
  - The performers must maintain the same distance from each other and remain facing one another during the sequence.
- 3.1.2 Videographer requirements:
  - The videographer must be carving around in the opposite direction of the performers, maintaining the same distance and the same level.
  - A minimum of 360° of carving must be performed by the videographer, at the same speed as the performers.
  - The videographer must stay on the same level as the performers.
- 3.1.3 Max Value 3 pts: 360° Head-Down Carve is performed as described above.
- 3.1.4 Max Value 5 pts: Head-Down Carve with Carousel
  - The Head-Down Carve is performed as described above and then a Carousel.
  - Upon completing 360° of carving, the performers, each perform an individual 360° pirouette while arched at the hips.
  - The videographer must be stationary, showing the sides of the performers at the beginning and end of the Carousel.
- 3.1.5 Max Value 7.5 pts: Head-Down Carve with Videographer Carving
  - Head-Down Carve is performed as described above, but outfacing (without a Carousel).
  - Both performers are in head-down orientation, outfacing with their backs to one another, and on the same level.
  - A minimum of 720° of carving must be performed by the performers.
  - A minimum of 360° of carving must be performed by the videographer.
- 3.1.6 Max Value 10 pts: Outface Head-Down Layout Carve with Videographer Carving
  - Outface Head-Down Carve is performed as described above, plus the following:
  - Both performers must be in a layout position, without any bend at the waist/hips, with the knees straight throughout the sequence.

# 3.2. FF-6 Angle Flying

THIS COMPULSORY SEQUENCE MUST NOT BE THE FIRST ONE PERFORMED!

- Both Performers are flying at a minimum of 20° diagonally off vertical and horizontal compared to the horizon with their heads low
- No grips
- The Videographer must show the Performers from the side.
- The Videographer must demonstrate an on-level position.
- 3.2.1 Max Value 3 pts: Angle Flying Pose
  - One Performer is facing upward, and the other performer is facing downward, face-to-face with their heads low.

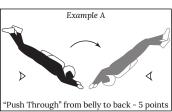
- This angle flying must be maintained for a minimum of three (3) seconds.
- 3.2.2 Max Value 5 pts: Angle Flying with Push Through
  - The Performers are side-by-side angle flying on the belly with the head low for a minimum of two (2) seconds.
  - The Performers push through to head-low angle flying on their back, traveling in the opposite direction for a minimum two (2) seconds. (See Example A)
- 3.2.3 Max Value 7.5 pts: Angle Flying with a loop
  - At the beginning, both Performers are angle flying side-by-side on the belly, with their heads low for a minimum two (2) seconds.
  - The Performers make a synchronized front loop to head-high angle-flying on the belly traveling in the opposite direction, for a minimum two (2) seconds. (See Example B)
- 3.2.4 Max Value 10 pts: Angle Flying with a loop
  - The move is performed as described above for 7.5, keeping the legs straight.
- 3.2.5 Judging guidelines
  - When this Compulsory Sequence is performed first in the Compulsory Routine, 70% will be deducted.
  - If any grips are taken, 30% will be deducted.
  - If the angle flying is not held for a minimum of two (2) seconds at the beginning or end, 10% will be deducted. If not held for two (2) seconds at both the beginning and end, 20% will be deducted.

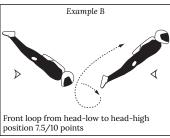
# 3.3. FF-7. Synchronized Back Layouts

- 3.3.1 Synchronized Layout Backloops:
  - Both performers begin in a layout position in a head-up orientation, side by side, on the same level and heading.
  - Both performers simultaneously perform a full back loop in the layout position.
  - · Looping motion must be smooth, around the same horizontal axis, without wobbling.
  - Both performers simultaneously end in a head-up orientation, side-by-side, both facing the videographer.
  - Both performers must maintain the layout position throughout the sequence.
- 3.3.2 Videographer requirements:
  - At the beginning, the videographer must be in front of both performers.
  - The videographer must stay on the same level as the performers' center point and remain in place throughout the sequence.
- 3.3.3 Max Value 3 pts: Single Layout Backloops performed as described above.
- 3.3.4 Max Value 7.5 pts: Two (2) Layout Backloops
  - · Without stopping, both performers simultaneously perform a second full back loop in the layout position.
- 3.3.5 Max Value 10 pts: Two (2) Layout Backloops with Half Twist
  - · Layout Backloops performed as described above.
  - · Without stopping, both performers simultaneously perform a second full back loop with half twist in the layout position.
  - The half twist must be performed within and evenly executed throughout the loop, and performed in the same direction.
  - · Both performers simultaneously end in a head-up orientation, side-by-side, both facing away from the videographer.
- 3.3.6 Judging Guidelines:
  - When each performer is twisting in a different direction, 30% will be deducted.

# 3.4. FF-8. Rebound

- 3.4.1 Max Value 5 pts: Half Linked Rebound
  - · Both Performers are side-by-side in a head-down or angle back-flying orientation facing the videographer.
  - A hand-to-hand grip (left hand of one Performer with the right hand of the other Performer or vice versa) is taken.
  - While maintaining the grip, both Performers make a half reverse eagle over the Videographer ("back-layout" movement) to the belly and then release the grip.





- The Performers then make a half eagle ("front layout" movement) to a head-down or angle back-flying, ending on the original heading in the original starting position.
- The performers must maintain eye contact with the videographer throughout the sequence.
- 3.4.2 Videographer requirements
  - The Videographer is facing the performers and shows them on the horizon at beginning, middle and the end of the sequence.
- 3.4.3 Max Value 7.5 pts: Linked Rebound
  - The move is performed as described above, but the Performers maintaining the grip throughout the sequence.
- 3.4.4 Max Value 10 pts: Linked Rebound with a tucked loop
  - · Both Performers are side-by-side in a head-down or angle back-flying orientation. Facing the videographer.
  - A hand-to-hand grip (left hand of one Performer with the right hand of the other Performer or vice versa) is taken and is maintained throughout the sequence.
  - While maintaining the grip, both Performers make a half reverse eagle over the Videographer ("back-layout" movement) to the belly.
  - After a momentary stop in the belly-down orientation, both Performers, while maintaining the grip, then make a half eagle ("front layout movement") to a head-down or angle back-flying, ending on the original heading in the original starting position.
  - · The Performers must perform a linked tight tuck front loop (trick) when they are above the Videographer the second time.
  - At the end, both Performers should be in their original starting position.
- 3.4.5 Judging guidelines
  - When the Performers lose eye contact (except for the trick), 20% will be deducted.
  - $\bullet$   $\,$  When the tuck is not tight for the front loop, 15% will be deducted.

# Appendix C: Body Parts, Positions, Orientations, Rotations And Videography

# 1. Body Parts

- 1.1. In Freeflying, grips can be taken and docks can be placed on specified body parts as follows:
- 1.1.1 Head: the part of the body above the neck.
- 1.1.2 Shoulder: the upper part of the body between the neck and the upper arm.
- 1.1.3 Torso: the body, including the shoulder and parachute, but excluding arms, legs, head and neck.
- 1.1.4 Arm: the whole arm from the parachute harness, including upper arm, lower arm, wrist and hand, but excluding the shoulder.
- 1.1.5 Upper Arm: the part of the arm between the shoulder and the elbow.
- 1.1.6 Lower Arm: the part of the arm between the elbow and the wrist.
- 1.1.7 Hand: the part of the arm past the wrist.
- 1.1.8 Leg: the whole leg from the parachute harness, including the upper leg, knee, lower leg and foot.
- 1.1.9 Upper Leg: the part of the leg between the leg strap of the parachute harness and the knee.
- 1.1.10 Knee: the part of the leg between the upper leg and the lower leg.
- 1.1.11 Lower Leg: the part of the leg between the knee and the ankle.
- 1.1.12 Foot: the part of the leg past the ankle.
- 1.1.13 Sole: that part of the foot on which a person stands.

# 2. Body Positions

# 2.1. Introduction

• The body can be in an arch, layout or pike position with the limbs in any of various positions. These define the amount of bend at the waist/hips and the angle of the upper legs (thighs) relative to the torso. Additional body positions define the relationship of the limbs to the torso. The arms are left free to control the position.

# 2.2. Arch Position

- The torso is arched at the waist/hips, such that the angle between the front of the torso and the thighs is greater than 180° (if viewed from the side).
- If both legs are together with the knees straight, the angle between the front of the torso and both thighs must be greater than 180° (if viewed from the side).
- If the legs are in a creative position, at least one thigh must show an angle greater than 180° from the front of the torso (if viewed from the side).
- The head may be arched back.

# 2.3. Layout Position

- The torso is straight; with no bend at the waist/hips (if viewed from the side).
- If both legs are together with the knees straight, both legs must in line with the torso (if viewed from the side).
- If the legs are in a creative position, at least one thigh must be in line with the torso (if viewed from the side).

# 2.4. Pike Position

- The torso is bent forward at the waist/hips, such that the angle between the front of the torso and the thighs is less than 180° (if viewed from the side).
- If the legs are both together and straight at the knees or in a creative position, the angle between the front of the torso and the thighs must be less than 180° (if viewed from the side).
- For a Loose Pike, the angle between the front of the torso and the thighs is between 90° and 180° (if viewed from the side).
- For a Tight Pike, the angle between the front of the torso and the thighs is less than 90° (if viewed from the side).

# 2.5. Tight Tuck Position

- The torso is bent forward at the waist/hips such that the angle between the front of the torso and the thighs is less than 90° (if viewed from the side).
- The knees are bent, such that the angle between the upper and lower legs is less than 90°. The knees are not necessarily all the way up against the chest.
- The knees may be together or spread apart.
- For a Loose Tuck, the two described angles are between 90° and 180° (if viewed from the side).

### 2.6. Sit Position

- The torso is vertical in a head-up orientation.
- The angle between the front of the torso and thighs is between 90° and 145° (if viewed from the side).
- The knees are bent such that the angle between the upper and lower legs is between 90° and 145°.
- The lower legs are parallel to the torso.
- The knees may be together or spread apart.

# 2.7. Stag Position

- One leg is completely straight at the knee.
- The other leg is flexed forward at the hip and the knee is flexed to place the toe at the knee of the straight leg. The knee is flexed at least 90°.
- An Open Stag is when the lower leg of the bent leg is parallel with the upper leg of the straight leg. (The toe is not placed at the knee of the straight leg.)
- The knee of the leg placed in the Stag points forward.
- The body can be in an arched, layout or piked position while in a Stag Position.

# 2.8. Straddle Position

- The legs are split apart, from side to side, with at least a 90° angle between them (if viewed from the front).
- · Both knees are straight.
- The body can be arched (Arched Straddle Position), in a layout (Layout Straddle Position) or piked (Piked Straddle Position) with the legs in a Straddle position.

# 2.9. Split Position

- The legs split apart from front and back, with at least a 90° angle between them (if viewed from the side).
- · Both knees are straight.

### 2.10. Tee Position

- The torso may be straight, with no bend at the waist, or arched.
- One leg is extended in front of the torso, with an angle of 90° between the front of the torso and the thigh (if viewed from the side).
- The other thigh is in line with the torso or has an angle greater than 180° from the torso (if viewed from the side).
- Both knees are straight.

# 2.11. Compass position

- The torso is in the head-up orientation.
- One leg is in line with the torso.
- For a parallel Compass, the other leg is raised forward, such that the angle between the thigh and torso is 90° or less.
- For a turned-out Compass, the other leg is split to the side with the knee pointed upward, such that the angle between the thigh and torso is 90° or less.
- Both knees are straight.
- The body can be in an arched or layout position with the legs in a Compass.

# 3. Orientations

# 3.1. Introduction

• There are six (6) different orientations (not including the diagonal orientations) which a body can have to the relative wind (or ground when at terminal velocity without horizontal movement). These define which way the torso is oriented.

# 3.2. Belly-down Orientation

• The torso is horizontal, on its front, facing down towards the relative wind.

# 3.3. Back-down Orientation

• The torso is horizontal, on its back, facing upwards away from the relative wind.

# 3.4. Sideways Orientation

• The torso is horizontal, on its side, with either side facing towards the relative wind. At terminal velocity without horizontal motion, the chest is facing the horizon.

# 3.5. Head-up Orientation

• The torso is vertical with the head pointing up, away from the relative wind.

### 3.6. Head-Down Orientation

• The torso is vertical with the head presented into the relative wind.

# 3.7. Diagonal (Angle) Orientations

• The diagonal orientation is with respect to the horizon line and ground at terminal velocity. The torso is on a diagonal with respect to the horizon line and ground, at an angle between the six (6) basic orientations. The torso may be head high or head low. The front of the torso may be pointed towards the ground, towards the sky or any direction about the Body Head-Tail axis.

# 4. Rotation Axes

# 4.1. Introduction

Most moves involve some rotational motion of the body. A total of five (5) axes are used to describe the six (6) possible basic rotational
motions.

# 4.2. Wind Axes

• There are two (2) inertial axes that stay fixed with respect to the relative wind (or ground when at terminal velocity with no horizontal motion).

### 4.2.1 Vertical Axis

• The vertical axis remains parallel to the relative wind, (pointing from the sky to the ground when at terminal velocity with no horizontal motion).

# 4.2.2 Horizontal Axis

• The horizontal axis is any axis perpendicular (90°) to the relative wind, (pointing to the horizon when at terminal velocity with no horizontal motion). It may have any heading (pointing towards any desired point on the horizon).

# 4.3. Body Axes

- 4.3.1 There are three (3) body axes that stay fixed with respect to the performer's body.
- 4.3.2 Body Head-Tail Axis
  - The body head-tail axis is oriented lengthwise through the performer's torso, pointing form head to tail-bone.
- 4.3.3 Body Front-Back Axis
  - The body front-back axis is oriented forwards and backwards through the performer's belly, pointing from front to back.
- 4.3.4 Body Left-Right Axis
  - The body left-right axis is oriented sideways through the performer's hips, pointing from left to right.

# 5. Basic Rotational Actions

# 5.1. Introduction

• There are six (6) basic rotational actions that form the basis for most moves. Twisting combines rotational actions.

# 5.2. Flat Turns

• Flat turns involve a rotation about the body front-back axis when that axis is aligned with the vertical axis. The performer's heading is changing. The body can be belly-down or back-down while performing a flat turn. During a right flat turn, the upper body is moving towards the right shoulder, or vice versa.

# 5.3. Pirouettes

• Pirouettes involve a rotation about the body head-tail axis when that axis is aligned with the vertical axis. The performer's heading is changing. The body can be head-up or head-down while performing a pirouette. During a right pirouette, the front of the chest is rotating towards the right, or vice versa.

# 5.4. Barrel Rolls

A barrel roll is a rotation about the body head-tail axis when that axis is aligned with the horizontal axis. A barrel roll may begin and
end in a belly-down, back-down or sideways orientation. During a right barrel roll, the front of the chest is rotating towards the
right, or vice versa.

# **5.5. Loops**

5.5.1 A loop is a head-over-heels rotation about the body left-right axis when that axis is aligned with the horizontal axis. The body passes through a head-up, belly-down, head-down and/or back-down orientation during the course of the loop. A loop may begin and end in a head-up, belly-down, head-down, and/or back-down orientation. A loop needs not start nor finish in an exact head-up, head-down, belly-down, and/or back-down orientation. A loop is considered to be a full loop when the head has traveled 360° around the horizontal axis from the point at which it started. There are two kinds of loops:

# 5.5.2 Back Loop

• A back loop is a loop rotation initiated with the torso rotating backwards.

# 5.5.3 Front Loop

• A front loop is a loop initiated with the torso rotating forward.

# 5.6. Cartwheels

A cartwheel is a head-over-heels rotation about the body front-back axis when that axis is aligned with the horizontal axis. The body
passes through a head-up, sideways and/or head-down orientations during the course of a cartwheel. A cartwheel needs not start
nor finish in an exact head-up, sideways or head-down orientation. A cartwheel is considered to be a full cartwheel when the head
has travelled 360° around the horizontal axis from the point at which it started. During a right Cartwheel, the upper body is moving
towards the right shoulder, or vice versa.

# 5.7. Sideloops

A loop in the sideways orientation is a rotation about the body left-right axis when that axis is aligned with the vertical axis. For
example, a pinwheel is a true loop on the side.

# 5.8. Twists

5.8.1 Twisting combines rotational actions by adding a rotation about the body head-tail axis during a rotation about the body left-right or front-back axis, aligned with either the horizontal or vertical axis. There are two (2) basic categories of twists.

# 5.8.2 Vertical Twists

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

# 5.8.3 Horizontal Twists

• A horizontal twist is a rotation about the vertical axis (flat turn or side loop) combined with a rotation about the body head-tail axis. A single or full twist is defined to be a 360° rotation about the body head-tail axis over the course of a 360° flat turn or side loop. For example, a Flip Through is a horizontal twist.

# 6. Circular Pathways

### 6.1. Introduction

- 6.1.1 There are two (2) basic types of circular pathways a performer(s) may follow with respect to another Team Member, which can be performed either infacing or outfacing. Circular pathways may have embedded moves (e.g. Carousel).
- 6.1.2 Inface

- The front of the torso faces inward towards the concave side of the pathway, while moving about an imaginary center.
- 6.1.3 Outface (Blind)
  - The front of the torso faces outward away from the concave side of the pathway, while moving about an imaginary center.

# 6.2. Carving

• The performer's body traces a circular path about an imaginary center in approximately a horizontal plane. Carving is performed while head-down, head-up or in other orientations.

### 6.3. Vertical Orbits

- 6.3.1 The performer's body traces a circular path about an imaginary center in a vertical plane. Eagles and Reverse Eagles are two (2) common forms of Vertical Orbits that involve also rotating about the Body Left-Right Axis.
- 6.3.2 Eagle
  - An Eagle begins with each Team Member in the opposite orientation, facing away or toward one another. An Eagle may be performed by a performer(s) with their videographer or by two performers with each other. The Team Members travel in a Vertical Orbit while continuously leading with the head, passing through the back-down, head-up, belly-down and/or head-down orientation (in that order, if infacing, maintaining continuous eye contact). An Eagle may begin from any orientation in this progression. A Half Eagle is when 180° of vertical orbiting is complete. A Full Eagle is when 360° of vertical orbiting is complete.
- 6.3.3 Reverse Eagle
  - A Reverse Eagle begins with each Team Member in the opposite orientation, facing away or toward one another. A Reverse Eagle may be performed by a performer(s) with their videographer or by two performers with each other. The Team Members travel in a Vertical Orbit while continuously leading with the feet (or tail-bone), passing through the back-down, head-down, belly-down and/or head-up orientation (in that order, if infacing, maintaining continuous eye contact). A Reverse Eagle may begin from any orientation in this progression. A Half Reverse Eagle is when 180° of vertical orbiting is complete. A Full Reverse Eagle is when 360° of vertical orbiting is complete.

# 7. Artistic Videography

# 7.1. Introduction

7.1.1 Videographers can provide basic types of images, camera motions and rotations. Any one or any combination of the following may be performed in artistic videography.

# 7.2. Orientation of the Video Image

- 7.2.1 Upright Video Image The scenery is right side up on the screen. When at terminal velocity falling straight down, the sky appears in the top of the TV screen and the ground appears in the bottom of the TV screen.
- 7.2.2 Upside-down Video Image The scenery is upside-down on the screen. When at terminal velocity falling straight down, the sky appears in the bottom of the TV screen and the ground appears in the top of the TV screen.
- 7.2.3 Sideways Video Image The scenery is sideways on the screen. When at terminal velocity falling straight down, the horizon line extends from the top to the bottom of the TV screen with the sky on one side and the ground on the other side.

### 7.3. Rotational Movements of the Camera

- 7.3.1 Camera Roll The videographer performs a maneuver that causes the scenery to rotate within the frame. There is a point on the TV screen about which everything appears to rotate. It may be performed even with, looking up to, or looking down to the performer(s).
- 7.3.2 Camera Pan The videographer rotates in such a manner as to cause the scenery to move into and out of either the right or left side of the TV screen. The camera may pan right or pan left.
- 7.3.3 Camera Tilt The videographer rotates in such a manner as to cause the scenery to move into and out of either the top or bottom of the TV screen. The camera may tilt up or tilt down.

# 7.4. Translational Movements of the Camera

- 7.4.1 Pedestal Up/Down (fall-rate control) The act of changing levels relative to the performer(s). By means of fall-rate control, the videographer may ascend or descend relative to the performer(s).
- 7.4.2 Dolly In/Out (proximity) The act of changing distance relative to the performer(s). The videographer may dolly in (move closer) to the performer(s) or dolly out (move farther) from the performer(s).
- 7.4.3 Horizontal Orbit or Horizontal Carve A complete or partial arcing path performed by the videographer even, below, or above the performer(s).
- 7.4.4 Vertical Orbit (Eagling or Reverse Eagling) Complete or partial arcing path performed by the videographer flying over and/or under the performer(s).

# **Appendix D: Artistic Events Initial Difficulty Score**

# 1. General

- 1.1. Initial Difficulty Score is the combined result of several factors.
- 1.2. Moves are classified from very easy to very difficult. The overall performance of the routines (poses, moves and transitions) counts for the Initial Difficulty Score.

# 2. Difficulty Factors

2.1. In general, difficulty factors include:

	Easy	Difficult			
Body Position	Large support base	Small support base			
	Bent body position	Layout body position			
Orientation	Head-down	Head-up (with feet well below knees and knees well below hips)			
Vertical movement		Traveling movement			
Moves	Minimum or no variety of moves and styles	Variety of moves and styles (Carving, Eagle, Tricks, Acrobatics, etc.)			
	Rotations on one axis	Rotations on more than one axis (in which use of three axes is more difficult than use of two axes)			
	Transitions between moves with the same axes	Transitions between moves with different axes			
	Single rotation	Multiple rotations			
	Single move	Consecutive moves with minimal setup; combined moves (a move within a move)			
	No direction change	Reversal of direction			
	No speed changes	A lot of speed changes			
Team Work	Poor or lack of synchronization with videographer	Moves synchronized with videographer			
	Eye Contact; Team Members facing each other	No Eye Contact; Team Members "out facing" from each other (blind)			
	Static images	Ongoing camera moves utilizing all axes			

Combinations of multiple factors further increase the Initial Difficulty Score. Teams are not expected to demonstrate all of the above factors within one routine. A difficulty factor may sometimes have the opposite effect of making a move easier, e.g., headup flying with the knees and feet higher than the hips makes the headup move easier than a head-down move. Judges are expected to apply additional knowledge and understanding of difficulty.

# **Appendix E: Routine Description**

<b>Note:</b> Do NOT Write Near The Edge Of Paper.						
Team #	Team Name:					
Event (Choose one):						
State the oder in which the co	ompulsory sequences are performe	ed.				
First Compulsory Round (Ro	und 2):					
Compulsory Sequence Max \	/alue:					
Second Compulsory Round (	Round 5):					
Compulsory Sequence Max \	/alue:					
The Free Routine description	covers the following rounds:	□ All	<b>1 3</b>	<b>4 6</b>	5 🗆 7	
Name	of move / Sequence	Des	scription and Came	ra Flying details	, as appropriate	

**NOTE:** If performing more than one Free Routine, please complete a Routine Description sheet for each Free Routine and mark which rounds it will be performed.

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