



PARACHUTIST

INFORMATION

MANUAL

PART 4B

COMPETITION RULES

Artistic Events - Freefly

APRIL 2020

Canadian Sport Parachuting Association
204 - 1468 Laurier St
Rockland, ON K4K 1C7
www.cspa.ca

Table of Contents

Page

ACKNOWLEDGEMENTS	4
LIST OF REVISIONS / CHANGES	5
CHAPTER 1 – CSPA AUTHORITY	6
CHAPTER 2 – DEFINITIONS OF WORDS AND PHRASES USED IN THESE RULES.....	7
CHAPTER 3 – THE EVENT	8
3.1. Event	8
3.2. Objective of the Event	8
3.3. Exit Altitude.....	8
3.4. National Champions.....	8
CHAPTER 4 – GENERAL RULES	9
4.1. Exit Procedure.....	9
4.2. Jump Order.....	9
4.3. Aborting a Jump.....	9
4.4. Video Recording and Transmission.....	9
4.5. Rejumps	10
4.6. Wind tunnel.....	10
CHAPTER 5 – RULES SPECIFIC TO THE EVENT	11
5.1. Teams	11
5.2. Routine.....	11
5.3. Number of Rounds	11
5.4. Jump Order of Routines	11
CHAPTER 6 – JUDGING AND SCORING.....	12
6.1. General	12
6.2. Scoring Free Routines.....	12
6.3. Scoring Compulsory Routines	13
6.4. Score Calculation	14
6.5. Judging Rules.....	14
CHAPTER 7 – RULES SPECIFIC TO THE COMPETITION	15
7.1. Composition of Teams.....	15
7.2. Not Used	15
CHAPTER 8 – DECLARATION OF CHAMPIONS	16
8.1. Freely Champions.....	16
8.2. Intermediate Freely Champions.....	16
8.3. Medals.....	16

8.4. Videographer Medals.....	16
APPENDIX A1 – FREEFLY COMPULSORY SEQUENCES	17
APPENDIX A2 – INTERMEDIATE FREEFLY COMPULSORY SEQUENCES	23
APPENDIX B – BASIC BODY POSITIONS, ORIENTATIONS AND ROTATIONS.....	25
APPENDIX C – TECHNICAL	30
APPENDIX D – ROUTINE DESCRIPTION	32

ACKNOWLEDGEMENTS

The CSPA Judging Committee has prepared the Competition Rules under the authority granted to it by the CSPA Board of Directors.

Prior to 2016, this manual was developed and prepared by the CSPA Competition and National Teams Committee.

LIST OF REVISIONS / CHANGES

<u>Date</u>	<u>Section</u>
April 2020	Revisions: Sections 2.6., 5.2.3.(3), 6.2., 6.3., 6.4., 6.5.4.
May 2019	Revisions: Sections 2.6., 5.2.3., 6.2., 6.3., 6.4., 6.4.2., 6.4.3., 6.5(2), Appendix A1, Appendix B, Appendix C, Appendix D
August 2017	Revisions: Section 5.3.2.
March 2017	Revisions: sections 5.2.3., 6.2., 6.3., 6.4., 6.5.3., 6.5.4., Appendix A1, Appendix A2, Appendix C
October 2016	Formatting
July 2016	Full Revision
June 2013	
June 2011	

CHAPTER 1 – CSPA AUTHORITY

- 1.1 The Event will be conducted in accordance with PIM4B - Competition Rules – General Section and Artistic Events - Freefly plus PIM 4A - Canadian National Parachuting Championships Hosting Manual. All participants accept and agree to abide by PIM 4B, PIM 4A and all other relevant CSPA regulations upon registration for the CNPC.

CHAPTER 2 – DEFINITIONS OF WORDS AND PHRASES USED IN THESE RULES

- 2.1. **TEAM:** A Freefly 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 Appendix B.
- 2.4. **GRIPS AND DOCKS:**
- 2.4.1 **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.
 - 2.4.2 **DOCK:** a recognizable 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 43 seconds later.

CHAPTER 3 – THE EVENT

3.1. Event

The event is comprised of Freestyle Skydiving.

3.1.1. The Event is comprised of Compulsory and Free Routines.

3.1.2. There is no separation by gender in the composition of a Team.

3.2. Objective of the Event

The objective of the event is for a Team to perform a sequence of moves in freefall within working time in order to achieve as high a score as possible.

3.3. Exit Altitude

13,000 feet (3,960 m.) AGL.

3.4. National Champions

The Freestyle National Champion is the Team with the highest total score for all completed rounds. If two (2) or more Teams have equal scores, and if time permits, the first three (3) places will be determined by a tie-breaking Free Routine jump. If a tie still exists, the best score, then the second best score and then the third best score of any completed Free Routine jump will determine the winners. If a tie still exists, the best score, then the second best score for any completed Compulsory Routine jump will be used.

CHAPTER 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 Meet Director will determine the jump order of Teams by blind draw before the beginning of the competition. The relevant jump order will be maintained throughout the competition, except for any logistical changes deemed necessary by the Meet Director.

4.3. Aborting a Jump

The Team may choose to abort a jump for any pertinent reason and may descend with the aircraft. If a jump is aborted and the Meet Director and Chief Judge decide the reason is pertinent, the jump must then be made at the earliest opportunity.

4.4. Video Recording and Transmission

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 the start of working time.

4.4.2. A Video Controller will be appointed by the organizer, and approved by the Chief Judge and Meet Director prior to the start of the competition. Prior to the competition beginning, 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 that do not interfere with a Team's Performance may be made at any time during the competition, as determined by the Chief 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 the camera(s), recording media, cables and battery. The freefall video equipment must be able to deliver a High Definition 1080 type digital signal with a minimum frame rate of 25 frames per second through memory card (minimum class 10), 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(s) must be fixed static to the helmet. No roll, pitch or yaw movements of the camera(s), 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 for the jump affected.

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 Video Review Panel (VRP) will be established prior to the start of the competition, consisting of the Chief Judge, the Meet Director, and the Video Controller. Decisions rendered by the Video Review Panel 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, by means 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 means 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;

- (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).
- (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.
- (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 interference 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 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.

CHAPTER 5 – RULES SPECIFIC TO THE EVENT

5.1. Teams

5.1.1. Teams may consist of either or both sexes. There is no gender separation.

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

5.1.3. Teams shall be three persons of which two (2) shall be performers and one (1) a videographer.

5.1.4. No competitor may jump with more than one team during the same round. If any competitor is registered with more than one team in one event and has already jumped with one team and for any reason jumps with a second team during a subsequent round, that competitor must not jump again with the first team. In the event, a team is awarded a rejump for a round and if a Team Member is injured and is unable to make the rejump, then this provision will not apply to the rejump, in that a registered member who has already jumped that round with another team may make the rejump, in order to allow the team to complete the rejump. The question of valid injury shall, be decided by the competition management - specifically, the Meet Director, Chief Judge, Meet Safety Officer and any medical doctor present.

5.2. Routine

The Event 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 Appendix A1, 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.

- (1) Compulsory Routine- Intermediate Event: consist of three (3) Compulsory Sequences as described in Appendix A2 and other moves at the Team's 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 must deliver a video of their Free Routine(s) to the Chief Judge at least 24 hours before the start of the competition. (Teams may optionally include a written list of elements and/or present and explain their Free Routine to the panel.) Each team may submit multiple Free Routines, but, during the competition, may submit a change only one time. 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. For this purpose, the Chief Judge should provide a standard form (see Appendix D)

- (1) 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.
- (2) Failure to provide the video of the Free Routine(s) will lead to a score of zero (0) points for Difficulty for all Free Routines.
- (3) Executing Compulsory Sequences in other order than the one submitted, will lead to a score of zero for the moves that are out of order.

5.3. Number of Rounds

5.3.1. Full competition

- Compulsory Routines: 2 rounds
- Free Routines: 4 rounds

5.3.2. Minimum competition

- A minimum of two (2) rounds will constitute a valid competition.

5.4. Jump Order of Routines

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

CHAPTER 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

Technical:

- The degree of difficulty of all moves and transitions (e.g., movements and spins in both directions, multiple simultaneous rotations, combined moves, new move and variation etc.) and teamwork of the jump. Technical includes, but is not limited to, the ability to move vertical and horizontal, and perform multiple rotations in a belly-down, back-down, sideways, head-down and/or head-up orientation and any other possible orientation as well as the ability to combine technical skills and create complex effects of movement, including the degree of the Videographer's involvement in the routine. See Appendix C.

During the competition, the Judges give the following judging criteria a score, between 0,0 and 10,0 expressed as a number up to one decimal point, taking into account the following guidelines;

Execution:

- Precision, control: Ability of the Team to demonstrate body control skill and appropriate control of proximity of all Team members, including the Videographer.
- During the competition, three (3) Judges will determine Execution deductions according to the following guidelines;

Up to 1.0 points deduction	For each missing element
Up to 0.5 points deduction	For each instance, one or both Performers are off heading / off level / wobble
Up to 0.5 points deduction	Team Work: Levels between performers / synchronization between members (including camera) / proximity between performers (excluding camera)

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

Presentation:

- Creativity: Routine composition is original with new moves, original choreography and/or new presentation of old moves. Routine has a nice flow with a definite beginning and a definite ending and full use of working time. Routine is aesthetically pleasing to watch throughout, with/without dynamic variety.
- Camera work: Good use of video angle(s), creative interactivity and/or lighting to enhance vision. Clean image and clear focus shown. Steadiness and accuracy of video framing. No parts of the Videographer's camera helmet/equipment/body parts unintentionally showing in the frame.

During the competition, two (2) Judges determine Camera deductions, according to the following guidelines:

Up to -2.0 points	Proximity overall jump: Performer(s) too far away from camera.
Up to -1.0 points	Proximity overall jump: Performer(s) at medium distance from camera.
-2.0 points	For each instance, both Performer(s) are completely out of the frame.
-1.0 points	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 centre frame.
-0.1 to -0.5 points	For each instance of unintentional cropping body part(s) off frame.
-0.1 points	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 of the helmet out of frame.
- Each of the two (2) Judges will total all of their camera deductions.

6.3. Scoring Compulsory Routines

Judges give a score for the Team (between 0.0 and 10.0, up to one decimal point) for Presentation (as per Free Routine) and for each of the four (4) Compulsory Sequences using the following guidelines:

	Deduction up to:	Explanation:	Example:
Set-up	10%	Facing the correct direction; In the correct body position. Camera in correct position.	Performance requirements described “at the beginning...” for orientation, body position, camera position, etc.
Major part of the compulsory	50%	The part that defines the sequence	The twist in the loop twist; Angle position; Split at the straddle spins, etc.
Static Camera work:	Up to 50%	When the camera is too far to judge the move	
(on top of the setup)	Up to 20%	Camera is moving when static image is required.	When not on the specific level or not on the right angle.
Required Camera move	Up to 30%	When camera is doing the wrong move	Wrong roll direction, synchronization, carving, etc.
Image orientation	30%	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	
Specific body position requirements	30%	When specific grips/docks are wrong	Hand to hand/feet on shoulder/lower legs on the cat move
Execution mistakes	Up to 30%	Flow, Wobble, Off heading, Off centre Proximity	
Specific Judging Guidelines	See Appendix A	As specified for each compulsory	See Appendix A

See the Appendix A for Guidelines on scoring for common mistakes on some Compulsory Sequences.

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.

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. 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. 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. Each compulsory move is worth 22.5% and the presentation is 10%.
- Free Rounds: 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 two (2) total scores for the Camera deductions will be added, and the result will be divided by two (2), with no rounding applied. The highest and the lowest Judges' scores for the Presentation criterion will be discarded, the remaining three (3) scores for Presentation will be averaged separately, with no rounding applied.
 - To determine the Technical score, the averaged Execution score will be deducted from the Difficulty score. The minimum possible score for Technical is zero (0) points.
 - 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.
 - The Technical and Presentation scores will be added, and the result will be divided by two (2), then rounded to the first decimal place.

6.4.1. 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.

6.4.2. Total scores for the events are calculated by adding the Team's official scores of all completed rounds, excluding the lowest scoring Free Routine before Round 5.

6.4.3. All scores for each Judge, for all competition jumps, will be published.

- (1) The scores Difficulty will be published before the start of the competition.

6.5. Judging Rules

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

6.5.2. 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.

- (1) Compulsory Routines: all five (5) Judges will evaluate the routines.
- (2) Free Routines: three (3) Judges will evaluate the Execution criterion. Two (2) Judges will determine Camera deductions. All five (5) Judges will evaluate the Presentation criterion.

6.5.3. The Judges will watch each jump once with a second viewing optional.

6.5.4. All viewings must be at normal speed. At the discretion of the Event Judge, a third view of a Compulsory Round jump, or part of it, is allowed in normal or reduced speed (70%) or video pause.

6.5.5. The Judges will use the electronic scoring system to record the evaluation of the performance. At the end of working time, freeze frame will be applied on each viewing, based on the timing taken from the first viewing only. The Judges may correct their evaluation record after the jump has been judged. Corrections to the evaluation record can only be made before the Chief Judge signs the score sheet.

6.5.6. 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 the 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.

CHAPTER 7 – RULES SPECIFIC TO THE COMPETITION

7.1. Composition of Teams

Each Team may be comprised of:

- Up to four (4) persons
- Two (2) Performers
- One (1) Alternate
- One (1) Videographer

of which three will jump in any round as per 2.1 and 5.1.3

7.1.2. The alternate may participate as either a performer or a videographer.

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

7.2. Not Used

CHAPTER 8 – DECLARATION OF CHAMPIONS

8.1. Freely Champions

The Freely Team whose total score in that event is highest will be declared Freely Team Champion.

8.2. Intermediate Freely Champions

The Intermediate Freely Team whose total score in that event is highest will be declared Intermediate Freely Team Champion.

8.3. Medals

Gold, silver and bronze medals will be awarded. to the first, second and third place winners (including properly registered alternate Team Member competitors) in all valid events subject to the citizenship restrictions in PIM 4B – General Section Competition Rules 4.4 and with the following exceptions:

- a) where there are only three teams registered in an event, only gold and silver medals shall be awarded
- b) where there are only two teams registered in an event, only the gold medal will be awarded.

8.4. Videographer Medals

In the Freely events videographers shall receive medals if they are the registered videographer of a medal winning team and film at least 70% of said team's jumps or are registered as an alternate competitor on a medal winning team subject to citizenship restrictions in PIM 4B Competition Rules – General Section 2.1.

APPENDIX A1 – FREEFLY COMPULSORY SEQUENCES

Performance Requirements & Judgement Criteria

The order in which these Compulsory Sequences can be performed is determined by the Team. The Team must submit the order of the Compulsory Sequences at the start of the competition to the Chief Judge. (see para 5.2.3. and appendix D)

The face to face requirement means that the Performers must be with their heads at the same level and looking at each other. Being on the same level means that the centres of the bodies are at the same level.

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 RPerfoequirements of that sequence.

The Videographer must maintain a consistent distance from the Performers' centre point throughout each Compulsory Sequence, except where the Sequence description specifically prescribes otherwise.

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.

The definition of each body position is described in Appendix B.

First Compulsory Round (Round 2)

FF-1. Double Joker Reverse

Double Joker

- One Performer is in a head-up orientation, the other in a head-down orientation, face to face.
- A right hand-to-right hand (or left hand-to-left 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, (180° over the top) until the Performers end on the original heading in their original orientations.

Videographer requirements

- At the beginning the Videographer must show the Performers from the side.
- The Videographer must be on the same level with the Performers' centre point.

Max Value 5 pts: Double Joker Reverse is performed as described above.

Max Value 7.5 pts: Double Joker Reverse with Synchronised Roll

- Double Joker Reverse is performed as described plus the following:
- The Videographer must make a synchronised roll with the Performers, showing an image as if the
- Performers remain static with only the background moving.

Max Value 10 pts: Double Joker Reverse in Layout Position with Synchronised Roll

- Double Joker Reverse is performed as described plus the following:
- The Performers must maintain a layout position, without any bend at the waist, with the knees straight, throughout the entire sequence.
- The Videographer must make a synchronised roll with the Performers, showing an image as if the Performers remain static with only the background moving.

Judging guidelines

- Wrong grip location (not right-to-right hand or left-to-left hand), the maximum score will be 70% of the Max Value.
- Wrong grip is not hand-to-hand, the maximum score will be 70% of the Max Value.
- When the Videographer makes the roll in the wrong direction, the maximum score will be 50% of the Max Value.
- When the Performers rotate in the wrong direction, the maximum score will be 50% of the Max Value.

FF-2. Cat Barrel Roll

Cat position

- Both Performers are in belly-down orientation.
- One Performer has grips on the lower legs 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 rolls can be in either direction.

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' centre point and remain in place throughout the sequence.

Max Value 5 pts: Cat Barrel Roll is performed as described above.

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.

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, with the knees straight, throughout the entire sequence.

Judging guidelines

- One or both grips in wrong location (i.e., not on lower leg), the maximum score will be 70% of the Max Value.
- If the two (2) barrel rolls are not consecutive and smooth, the maximum score will be 80% of the Max Value.
- When one Performer is not in layout position when it is required, the maximum score will be 75% of the Max Value.
- When both Performers are not in layout position when it is required, the maximum score will be 60% of the Max Value.

FF-3. Turning Totem

Totem

- Both Performers are in head-up orientation, on the same heading.
- One Performer demonstrates a feet-to-shoulder dock, a separate foot on each side of the head of the lower Performer, without any additional grips.
- 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 simultaneously pirouette 360°.
- The pirouette can be in either direction.
- Both Performers must stay in the same axis and in layout position during the pirouette, without wobbling.

Videographer requirements

- At the beginning and the end, the Videographer must show the front of both Performers on level with the head of the lower Performer and remain in place throughout the sequence.

Max Value 5 pts: Turning Totem is performed as described above.

Max Value 7.5 pts: Layout Top Turning Totem

- Turning Totem is performed as described plus the following:
- The Performer on the top must be in a layout position, without any bend at the waist, with the knees straight throughout the sequence.

Max Value 10 pts: Layout Turning Totem

- Turning Totem is performed as described plus the following:
- Both Performers must be in a layout position, without any bend at the waist, with the knees straight throughout the sequence.

Judging guidelines

- Wrong body position (when not in layout position when it is required), the maximum score will be 50% of the Max Value.
- For assisting grip(s) (i.e. hands on feet), the maximum score will be 70% of the Max Value.

FF-4. Head-Down Carve

Head-Down Carve

- Both Performers are in head-down orientation, facing one another on the same level.
- Both Performers start carving around an imaginary centre between them.
- A minimum of 360° of carving must be performed by the Performers.
- The carving orbits must be circular (not elliptical).
- The Performers must maintain the same distance from each other and remain facing one another during the sequence.

Videographer requirements

- 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.
- Videographer must stay on the same level as the Performers.

Max Value 3 pts: 360° Head-Down Carve is performed as described above.

Max Value 5 pts: Head-Down Carve with Carousel

- 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.

Max Value 7.5 pts: Out-face 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.

Max Value 10 pts: Out-face 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, with the knees straight throughout the sequence.

Second Compulsory Round (Round 5)

Full Eagle

Eagle

- Both Performers are in head-down orientation, facing the Videographer.
- The Performers go below the Videographer as the Videographer goes over the top, moving around an imaginary centre between them so that they end up in opposite positions and orientations than they originally began. The movement continues until the Performers and the Videographer 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.

Videographer requirements

- Videographer must show Performers from their front during the whole sequence.

Max Value 3 pts: Full Eagle is performed as described above.

Max Value 5 pts: Linked Full Eagle

- Full Eagle is performed as described above, but linked.
- Both Performers maintain a hand-to-hand grip (left hand of one Performer with the right hand of the other Performer or vice versa) throughout the entire sequence.

Max Value 7.5 pts: Linked Full Eagle with 360° Pirouette

- Linked Full Eagle is performed as described above.
- Both Performers maintain a hand-to-hand grip (left hand of one Performer with the right hand of the other Performer or vice versa) throughout the entire sequence, except for the 360° Pirouettes.
- The Performers must simultaneously perform individual 360° Pirouettes in the middle of the second part of the Eagle (when they are above the Videographer).
- Videographer must show Performers from their front during the whole sequence, with the exception of the Pirouettes.

Max Value 10 pts: Linked Full Eagle with Front Loop

- Full Eagle is performed as described above, but linked and with a Front Loop.
- Both Performers maintain a hand-to-hand grip (left hand of one Performer with the right hand of the other Performer or vice versa) throughout the entire sequence.
- The Performers must perform a tight tuck front loop (trick) in the middle of the second part of the Eagle (when they are above the Videographer).
- Videographer must show Performers from their front during the whole sequence, with the exception of the full tuck front loop.

Judging guidelines

- When no trick (pirouette or Front Loop) is performed, the maximum score will be 60% of the Max Value.
- When the grip is not hand-to-hand, when required, the maximum score will be 75% of the Max Value.
- When the tuck is not tight for the front loop, the maximum score will be 8.5 points.

FF-6. Angle Flying

THIS COMPULSORY SEQUENCE MUST **NOT** BE THE FIRST ONE PERFORMED!

- Both Performers are in an approximately 45° diagonal orientation with their heads low.

Max Value 3 pts: Angle Flying Pose

- One performer is facing upward, and the other performer is facing downward, face-to-face.
- This angle flying must be maintained for a minimum of 3 seconds.
- The Videographer must show the Performers from the side.
- The Videographer must show the horizon at an approximately 45° diagonal angle.

Max Value 5 pts: Angle Flying with Synchronised Back Loops

- At the beginning and the end, both Performers are side-by-side, facing upward.
- Both Performers must simultaneously perform a full back loop.
- The Videographer must show the front of the Performers from above.

Max Value 7.5 pts: Angle Flying with Synchronised Barrel Rolls

- At the beginning and the end, both Performers are side-by-side, facing downward.
- At the beginning and the end, the Videographer must show the Performers from the side.
- Both Performers must simultaneously perform a 360° barrel roll.
- Videographer must simultaneously carve 180° going over the Performers and end on the opposite side of the Performers' centre point.

CSPA PIM 4B © April 2020

This is a controlled document. The only official version of this document is the version of the document on the CSPA website.

All printed versions (ie. hard copies) are not official versions.

Max Value 10 pts: Angle Carving in Layout Position

- At the beginning, one performer is facing upward, and the other performer is facing downward, face-to-face.
- At the beginning and the end, the Performer facing upward must be in a layout position, without any bend at the waist.
- At the beginning and the end, the Videographer must show the Performers from the side.
- At the beginning and the end, the Videographer must show the horizon at an approximately 45° diagonal angle.
- The Performers make a 180° in-face carve on the same diagonal line of flight.
- The carving must be round (not elliptical).
- During the carve, Performers must stay on level (based on the line perpendicular to the diagonal).
- Videographer must simultaneously carve 180° going under the Performers in the opposite direction and end on the opposite side of the Performers' centre point.
- Videographer must maintain the same distance and the same level with the Performers' centre point.

Judging guidelines

- When this Compulsory Sequence is performed first in the compulsory routine, the maximum score will be 30% of the Max Value.
- When 180° in-face carve made by the Performers is not on the same diagonal line of flight (i.e. both Performers with wind on their backs), the maximum score will be 7.0 points.
- If the angle is not approximately 45° where specified, the maximum score will be 50% of the Max Value.

FF-7. Synchronized Back Layouts

Back Layouts

- Both Performers begin in layout position in head-up orientation, side by side, on the same level and heading.
- Both Performers simultaneously perform a full layout back loop.
- Looping motion must be smooth, around the same horizontal axis, without wobbling.
- Both Performers simultaneously end in head-up orientation, side by side, both facing the Videographer.

Videographer requirements

- At the beginning, the Videographer must be in front of both Performers.
- Videographer must stay on the same level as the Performers' centre point and remain in place throughout the sequence.

Max Value 3 pts: Single Back Layouts performed as described above.

Max Value 7.5 pts: Two (2) Back Layouts

- Without stopping, both performers simultaneously perform a second full layout back loop.

Max Value 10 pts: Two Back Layouts with Half Twist

- Back Layouts performed as described above.
- Without stopping, both Performers simultaneously perform a second full layout back loop with a half twist.
- The half twist must be performed within and evenly executed throughout the loop, and performed in the same direction.
- Both Performers simultaneously end in head-up orientation, side by side, both facing away from the Videographer.

Judging guidelines

- When each Performer is twisting in a different direction, the maximum score will be 50% of the Max Value.
- When no twist (when it is required), the maximum score will be 30% of the Max Value.

FF-8. 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.

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 or right-to-left hand).

- After grip release, both Performers simultaneously perform 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.

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 and right-to-left hand).
- After grip release, both Performers simultaneously perform 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.

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.

Max Value 10 pts: Stand-Up Face-to-Face Grips 360° - Layout Position

- Both Performers must maintain the layout position throughout the entire sequence.

Judging Guidelines

- Wrong body position (when not in layout position when it is required), the maximum score will be 50% of the Max Value.
- When double hand-to-hand grips are not taken simultaneously, the maximum score will be 80% of the Max Value.
- When only one (1) grip is taken when two (2) should be taken, the maximum score is 70% of the Max Value.
- When any grip(s) is (are) not hand-to-hand, the maximum score is 75% of the Max Value.

APPENDIX A2 – INTERMEDIATE FREEFLY COMPULSORY SEQUENCES

Compulsory Rounds Description

The compulsory rounds consist of three Compulsory Sequences as described below and other moves at the Team's discretion. The order in which these Compulsory Sequences can be performed is determined by the Team.

The Team should deliver a description of their Free Routine(s) and the order of their Compulsory Sequences (for both Compulsory Rounds) to the Chief Judge before the start of the competition.

First Compulsory Round (Round 2)

I-FF 1. Belly-to-Belly Synchronized Backflip

- Both Performers are in belly-to-earth orientation and are facing the same direction.
- The Performers maintain a single hand grip (one Performer has their right hand in the other Performer's left hand or vice versa).
- The Videographer is positioned on the same level, facing both Performers.
- The Performers execute a synchronized backflip while maintaining the hand grip.
- The backflip is to be performed at a steady pace, while maintaining heading.
- The Performers finish the move in a belly-to-earth orientation, facing the same direction as when they started.

I-FF 2. Head-up Foot Grip to Head-up Foot Grip

- Both Performers are in the head-up orientation, facing each other.
- Performer 1 takes a grip on the foot of Performer 2.
- While maintaining the same heading, Performer 2 then takes a grip on the foot of Performer 1.
- The move should be performed while maintaining heading and avoiding unnecessary long distance horizontal and/or vertical separation.
- The Videographer is filming both performers from the side, while maintaining the level with the grips.

I-FF 3. Head-up Carving

- Both Performers set up on the same level, facing each other in the head-up orientation.
- Both Performers simultaneously begin a carving move, still facing each other and maintaining the level, while the Videographer begins carving move in the opposite direction.
- Both Performers remain near each other and on level throughout the movement.
- Both Performers execute 360° carve before stopping.
- The Videographer executes a 360° carve around the Performers before stopping.
- The Performers and the Videographer should begin and finish the carving movements simultaneously.

Second Compulsory Round (Round 5)

I-FF 4. Head-up 360's

- Both Performers are in the head-up orientation, facing the same direction, while holding a single hand grip (one Performer has their right hand in the other Performers left hand or vice versa).
- The Videographer is facing the Performers.
- Both Performers let go of their grip, then simultaneously perform an individual 360° turn in the same direction around a vertical axis, while maintaining level and proximity.
- When the turn is finished, both Performers pick up their original grip.
- Performers face the Videographer at the start and the end of the movement.

I-FF 5. Compressed Accordion Front Flip

- While in a belly-to-earth orientation, both Performers build a Compressed Accordion formation (Performer 1 has their right hand on the right leg of Performer 2 and Performer 2 has their right hand on the right leg of Performer 1 OR Performer 1 has their left hand on the left leg of Performer 2 and Performer 2 has their left hand on the left leg of Performer 1).
- The Videographer is facing one of the two Performers.
- Both Performers release their grip simultaneously and perform a full front flip, while maintaining heading and proximity with each other.
- Both Performers then rebuild the Compressed Accordion formation by simultaneously taking the same grips as at the beginning of the movement.

I-FF 6. Head-up-to-Head-up Synchronized Front Flip

- Both Performers are in the head-up orientation, facing the same direction, while holding a single hand grip (one Performer has their right hand in the other Performer's left hand or vice versa).
- The Videographer is facing the Performers.
- While maintaining the grip, both Performers simultaneously execute a full front flip.
- The front flip is to be performed at a steady pace, while maintaining the heading.
- The Performers finish the flip facing the Videographer.

CSPA acknowledge with thanks, the contributions of Bent Kristoffer Onshus and Kristin Karthum Hansen from the Norwegian National team and Team Rise 'N Shine for their generous assistance.

APPENDIX B – BASIC BODY POSITIONS, ORIENTATIONS AND ROTATIONS

A. Definition – Body Parts

A Body consists of the entire Performer and his/her equipment. The parachutist's 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 (thigh): the part of the leg between the leg strap of the parachute harness and the knee.
- knee: the part of the leg between the upper leg and the lower leg.
- 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.

B. Body Position

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 positions of the legs. The arms are left free to control the position. For description purposes on heading, torso means the front of the torso.

B-1. 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.

B-2. 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 be 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).

B-3. 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)

B-4. 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).

CSPA PIM 4B © April 2020

This is a controlled document. The only official version of this document is the version of the document on the CSPA website.

All printed versions (ie. hard copies) are not official versions.

B-5. 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.

B-6. 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.

B-7. 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.

B-8. Split Position

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

B-9. 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.

B-10. 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.

C. Orientations

There are six (6) different basic 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.

C-1. Belly-down Orientation

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

C-2. Back-down Orientation

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

C-3. 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.

C-4. Head-up Orientation

- The torso is vertical with the head up, directly away from the relative wind.

C-5. Head-Down Orientation

- The torso is vertical with the head pointing directly into the relative wind.

C-6. Diagonal Orientation

- 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.

D. Rotation Axes

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

D-1. Earth/Wind Axes

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

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).

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).

D-2. Body Axes

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

Body Head-Tail Axis

The body head-tail axis is oriented lengthwise, pointing from head to tail-bone, normally through the Performer's torso. (In a layout position, the head and feet are in the same line. When the body is bent at the hips, this axis is aligned with the spine does not include the legs.)

Body Front-Back Axis

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

Body Left-Right Axis

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

E. Basic Rotational Actions

There are six (6) basic rotational actions. 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.

E-1. 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.

E-2 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.
-

E-3 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.
-

E-4 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.

E-5. Loops

- 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, belly-down, head-down and/or back-down orientation. A loop is considered to be a full loop when the head has travelled 360° around the horizontal axis from the point at which is started. There are two (2) kinds of loops. (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 rotation initiated with the torso rotating backwards.

Front Loop

A front loop is a loop rotation initiated with the torso rotating forwards.

E-6. Side Loops (Loops in the sideways orientation)

- 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.

E-7. Twists

- 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.

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.

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.

F. Circular Pathways

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).

In-face

The front of the torso faces inward towards the concave side of the pathway, while moving about an imaginary centre.

Out-face (Blind)

The front of the torso faces outward away from the concave side of the pathway, while moving about an imaginary centre.

F-1. Carving

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

F-2. Vertical Orbits

- The Performer's body traces a circular path about an imaginary centre 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.

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.

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.

APPENDIX C – TECHNICAL

'Technical' 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
Single spins in loops	Multiple spins in loops
Single moves	Consecutive moves
No direction change	Reversal of direction
No synchronization with Videographer	Moves synchronized with Videographer
Eye contact	No eye contact

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

Freely					
Manoeuvres	Very easy	Easy	Moderate	Difficult	Very difficult
Carving head down	In-face	In-face with snake (direction change) or tricks	One Performer in-face, the other Out-face; in-face with snakes (direction changes) and/or tricks; Out-face	Mixed or Out-face with snakes (direction changes) and/or tricks; Sideflying	
Carving head up			In-face	In-face with grip and/or tricks; in-face/Out-face	In-face/Out-face with snakes (direction changes) and/or tricks; Out-face
Eagles	Half	Full; Half with one Performer reverse	Full with one Performer reverse; Full with tricks, spins; Half reverse	Full reverse; Full with one Performer reverse with tricks, spins	Full reverse with tricks, spins
Eagles on Angle		Half	Full	Full with, tricks	
Synchronized moves	Tucked back/front Loop	Layout Loop	Layout Loops with half twists	Layout Loops with full twist	Layout Loops with multiple twists
Angle Head-Down	Side-by-side background is still	Side-by-side background is moving	Side-by-side in a different orientation, background is moving	Slot swapping/rolls while background is moving, side flying	Cork screwing in sync with camera including tricks/rolls/spins Side flying with tricks
Angle Head-Up			Facing each other	side-by-side	Feet first with tricks/rolls/spins; side flying
Vertical	Double spock Compress Totem Double joker Double grip vice-versa	Sole-to-sole Vertical compressed rotations Double grips Head Up Surf	Double joker reverse Head-to-head Vertical compressed switch Totem rotation	Head-to-head rotation Double Sole-to-sole Sole-to-sole rotation	
Belly-down/back-down position	Cat Star Compressed	Brouette Cat barrel roll	Interlock (leg lock)	breakers	
Videographer flying	Static	Motion with no interaction with Performers	Continuous motion in the same axis, Direction switches	Continuous motion while moving from one axis to another	Maintain framing while transitioning on an angle. Continuous motion.

APPENDIX D – ROUTINE DESCRIPTION

Instructions for use:

PDF file:

- Print the page of the appendix – D.
- Fill in the required data with pen (black or blue only). If you need to select, circle the appropriate event / round.
- Print the last page with boxes only if you need more rows in the Free Routine description. When done, deliver it to the Chief Judge.

Do not write out of the boxes, or in the sidelines or edges of the paper.

Team number #	Team name:			
Please indicate the event <i>(handle as appropriate)</i>	SKYDIVING – FREEFLY			
State the order in which the compulsory sequences will be performed. The valid sequences are listed in this manual in Appendix A1 (open) and A2 (intermediate).				
First Compulsory Round, round 2: <i>(FF -1 through FF-4)</i>				
Second Compulsory Round, round 5: <i>(FF -5 through FF-8)</i>				
The Free Routine description covers the following rounds <i>(handle as appropriate)</i>	ALL - 1 - 3 - 4 - 6			

#	Name of move/ sequence	Difficulty Value (for judges' use)
1		
2		
3		
4		
5		
6		
7		
8		
9		