



*Fédération  
Aéronautique  
Internationale*

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# Competition Rules

## For Vertical Formation Skydiving

2011 Edition  
Effective 1<sup>st</sup> March 2011

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# **FEDERATION AERONAUTIQUE INTERNATIONALE**

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- 1 FAI Statutes, ..... Chapter 1, ..... para. 1.6
  - 2 FAI Sporting Code, Gen. Section, ..... Chapter 3, ..... para 3.1.3.
  - 3 FAI Statutes, ..... Chapter 1, ..... para 1.8.1
  - 4 FAI Statutes, ..... Chapter 2, ..... para 2.1.1; 2.4.2; 2.5.2 and 2.7.2
  - 5 FAI By-Laws, ..... Chapter 1, ..... para 1.2.1
  - 6 FAI Statutes, ..... Chapter 2, ..... para 2.4.2.2.5
  - 7 FAI By-Laws, ..... Chapter 1, ..... paras 1.2.2 to 1.2.5
  - 8 FAI Statutes, ..... Chapter 5, ..... paras 5.1.1, 5.2, 5.2.3 and 5.2.3.3
  - 9 FAI Sporting Code, Gen. Section, ..... Chapter 3, ..... para 3.1.7
  - 10 FAI Sporting Code, Gen. Section, ..... Chapter 1, ..... paras 1.2. and 1.4
  - 11 FAI Statutes, ..... Chapter 5, ..... para 5.2.3.3.7
  - 12 FAI Statutes, ..... Chapter 6, ..... para 6.1.2.1.3

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This document takes effect on 1<sup>st</sup> of March 2011

The 2011 Edition differs from the 2010 Edition in those paragraphs with a vertical bar in the margin.

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## 1. FAI Authority

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

## 2. Definitions of Words and Phrases used in these Rules

- 2.1. Formation: consists of jumpers linked by grips, with each jumper in the correct orientation to the relative wind.
- 2.2. Grip: consists of a handhold on an arm or leg (as shown in diagram 7.2 ) or foot of another jumper as shown in 7.2. a grip requires stationary contact. A foot grip consists of a handhold on a foot or ankle.
- 2.3. Grip Line: This is the line linking the torsos of two competitors via their arms or legs and the grip that joins them.
- 2.4. Body: consists of the entire competitor and their equipment.
- 2.5. Dive Pool: consists of the Random Formations and Block Sequences depicted in the annexes of these rules.
- 2.6. Subgroup: is the individual jumper, or linked jumpers, required to complete a designated manoeuvre during the inter of a block sequence.
- 2.7. A subgroup's centerpoint: is one of the following:
1. The defined grip or the geometric centre of the defined grips within a subgroup of linked jumpers.
  2. The geometric centre of an individual's torso.
- 2.8. Total Separation: is when all competitors show at one point in time they have released all their grips and no part of their arms have contact with another body.
- 2.9. Inter: is an intermediate requirement within a block sequence which must be performed as depicted in the dive pools.
- 2.10. Sequence: is a series of random formations and block sequences which are designated to be performed on a jump.
- 2.11. Scoring formation: is a formation which is correctly completed and clearly presented either as a random formation or within a block sequence as depicted in the dive pool, and which, apart from the first formation after exit, must be preceded by a correctly completed and clearly presented total separation or inter, as appropriate.
- 2.12. Infringement: is one of the following:
1. An incorrect or incomplete formation which is followed within working time by either
    - a total separation or,
    - an inter, whether correct or not.
  2. A correctly completed formation preceded by an incorrect inter or incorrect total

- separation.
3. A formation, inter, or total separation not clearly presented.
- 2.13.** Omission: is one of the following:
1. A formation or inter missing from the drawn sequence.
  2. No clear intent to build the correct formation or inter is seen and another formation or inter is presented and there is an advantage to the team resulting from the substitution.
- 2.14.** Working Time: is the period of time during which teams are scored on a jump which starts the first moment any competitor (other than the Videographer) separates from the aircraft, as determined by the Judges, and terminates a number of seconds later as specified in 3.1.
- 2.15.** NV: Formations, inters, or total separations not visible on screen due to meteorological conditions, or factors relating to the Videographer's freefall video equipment that can not be controlled.
- 2.16.** Orientation:
1. "Relative wind" is defined as the direction from which the air appears to be coming due to the relative speed of the competitors in freefall.
  2. "Head down" orientation consists of the competitor's head having advanced further into the relative wind than the competitor's feet by a significant amount, i.e., the length of the competitor's torso. All distances and lengths are in terms of what is shown on the judging screen.
  3. "Upright" orientation consists of the competitor's head trailing behind the average position of the competitor's feet by more than the length of the competitor's torso. All distances and lengths are in terms of what is shown on the judging screen.
  4. "Bellyflying" or "Belly to Earth" orientation consists of the competitor's chest region facing the relative wind and the competitor's head being neither above nor below the average position of the competitor's feet by more than the length of the competitor's torso. All distances and lengths are in terms of what is shown on the judging screen. ("Bellyflying" is not currently used in VFS formations)
  5. "Backflying" orientation consists of the competitor's back region facing the relative wind and the competitor's head being neither above nor below the average position of the competitor's feet by more than the length of the competitor's torso. All distances and lengths are in terms of what is shown on the judging screen. ("Backflying" is not currently used in VFS formations)

### **3. The Events**

- 3.1.** The discipline will be comprised of the following events:
- 3.1.1 4-Way Event: Exit altitude is 3 960 meters / 13 000 feet AGL. Working Time is 35 seconds.
  - 3.1.2 For meteorological reasons only, and with the consent of the FAI Controller and the Chief Judge, the Meet Director may change the exit altitude and/or working time and continue the competition. In this case the following conditions will apply:
    - 3.1.2.1 The working time will be
      - 20 or 35 seconds for the 4-Way events,The reduced working time must be used if the exit altitude is lowered (ref 3.1.1). The next round must commence if the working time is changed.
    - 3.1.2.2 The minimum exit altitude will be
      - 2750 meters / 9000 feet AGL for the 4-Way event.The maximum exit altitude will be 3960 meters / 13000 feet AGL for the event.

**3.2. Objective of the Event**

- 3.2.1 The objective of the event is for the team to complete as many scoring formations as possible within the working time, while correctly following the sequence for the round.
- 3.2.2 The accumulated total of all rounds completed is used to determine the placing of teams. Only one completed round is required to declare champions. If two or more teams have equal scores the following order of procedures will be applied to determine the final placings:
- i. one tie break round, if possible (for the first three placings only). The tie break round will be the next drawn round of the competition,
  - ii. the highest score in any completed round,
  - iii. the highest score starting with the last completed round and continuing in reverse order, round by round until the tie is broken,
  - iv. the fastest time (measured to hundredths of a second) to the last common scoring formation in the last completed round.

**3.3 Performance Requirements**

- 3.3.1 Each round consists of a sequence of formations depicted in the dive pools of the appropriate annexes, as determined by the draw.
- 3.3.2 It is the responsibility of the team to clearly present the start of working time, correct scoring formations, inters and total separations to the judges.
- 3.3.3 Scoring formations need not be perfectly symmetrical, but they must be performed in a controlled manner. Mirror images of random formations and whole block sequences are permitted. Mirrors are only permitted when set in a vertical plane.
- 3.3.4 In sequences, total separation is required between block sequences, between random formations, and between block sequences and random formations.
- 3.3.5 Where degrees are shown, (180°, 270°, 360°, 540°), this indicates the approximate degrees and direction of turn required to complete the inter as intended. The degrees shown are approximately that amount of the circumference of the subgroup's centerpoint to be presented to the centerpoint(s) of the other subgroup(s).  
For judging purposes, the approximate degrees and direction of turn of subgroups centerpoints will be assessed using only the two dimensional video evidence as presented.
- 3.3.6 Contact is allowed between different subgroups during the inter of a block sequence.
- 3.3.7 Where subgroups are shown, they must remain intact as a subgroup with only the depicted grips on other jumpers in that subgroup.
- 3.3.8 Assisting handholds on other bodies in a scoring formation are not permitted.
- 3.3.9 Handholds by the jumper on their own body within a subgroup or a scoring formation are permitted.
- 3.3.10 No grip line (ref 2.3) may cross another grip line within a formation.

**4. General Rules**

4.1. Teams may consist of competitors of either or both sexes.

**4.2. The Draw**

- 4.2.1 The draw of the sequences will be done publicly and supervised by the Chief Judge. Teams will be given not less than two hours knowledge of the results of the draw before the competition starts.
- 4.2.2 Event Draws: All the «Block Sequences» (numerically numbered) and the «Random Formations» (alphabetically marked) shown in the appropriate annex will be

singularly placed in one container. Individual withdrawal from the container, (without replacement) will determine the sequences to be jumped in each round. Each round will be drawn so as to consist of five or six scoring formations, whichever number is reached first.

- 4.2.3 Use of Dive Pool: Each block or formation will be drawn only once for the scheduled rounds of each competition. In the event that additional rounds are necessary, due to the tie-breaking jump-off, the dive pool for this round will consist of the blocks and formations which were not drawn for the scheduled rounds. In the event that all of the remaining blocks and formations do not complete the tie breaking round, the draw will continue from an entire original dive pool in that event, excluding any blocks or formations which have already been drawn for that round.
- 4.3. Competitors are not allowed to use a wind tunnel (freefall simulator) after the draw has been made.
- 4.4. Jump Order
- 4.4.1 The jump order for the first competition round will be determined by a draw.
- 4.4.2 An updated reverse-order-of-jumping shall be implemented after every break in the competition jumps which occurs after a completed round.
- 4.5. Video Transmission and Recording
- 4.5.1. Each team shall provide the video evidence required to judge each round. Each freefall Videographer must use the video transmission system if provided by the Organiser.
- 4.5.2. For the purpose of these rules, «freefall video equipment» shall consist of the complete video system(s) used to record the video evidence of the team's freefall performance, including the camera(s), recording media, and battery(ies). All video equipment must be able to deliver a PAL digital signal through a compatible video connection approved by the Video Controller. The videographer is responsible for ensuring the compatibility of the freefall video equipment with the scoring system.
- 4.5.3. As soon as possible after each jump is completed, the freefall videographer must deliver the freefall video equipment (including the tape(s) used to record that jump) for dubbing at the designated dubbing station. The video evidence must remain available for viewing or download until all scores are posted as final.
- 4.5.4. Only one video recording will be dubbed and judged. Secondary video recordings may only be used in NV situations.
- 4.5.5. The dubbing station will be as close to the landing area as possible.
- 4.5.6. A Video Controller will be appointed by the Chief Judge prior to the start of the Judges' Conference. The Video Controller may inspect a team's freefall video equipment to verify that it meets the performance requirements as determined by him/her. Inspections may be made at any time during the competition which do not interfere with a team's performance, as determined by the Event Judge. If any freefall video equipment does not meet the performance requirements as determined by the Video Controller, this equipment will be deemed to be unusable for the competition.
- 4.5.7. A Video Review Panel will be established prior to the start of the official training jumps, consisting of the Chief Judge, the President of the Jury, and the FAI Controller. Decisions rendered by the Video Review Panel shall be final and shall not be subject to protest or review by the Jury.
- 4.5.8. If the Video Review Panel determines that the freefall video equipment has been deliberately tampered with, the team will receive no points for all competition rounds involved with this tampering.
- 4.6. Exit Procedure
- 4.6.1. There are no limitations on the exit other than those imposed by the Chief Pilot for safety reasons.
- 4.6.2. The exit will be controlled by radio and commands relayed to the team in the aircraft by the pilot or crew. Exit commands will be made using an appropriate signal system.

- 4.7. Scoring**
- 4.7.1. A team will score one point for each scoring formation performed in the sequence within the allotted Working Time of each round. Teams may continue scoring by continually repeating the sequence.
  - 4.7.2. For each omission three points will be deducted. If both the inter and the second formation in a block sequence are omitted, this will be considered as only one omission.
  - 4.7.3. If an infringement in the scoring formation of a block sequence is carried into the inter (ref. 2.9.), this will be considered as one infringement only, provided that the intent of the inter requirements for the next formation is clearly presented and no other infringement occurs in the inter.
  - 4.7.4. The minimum score for any round is zero points.
- 4.8. Rejumps**
- 4.8.1. In a NV situation, the video evidence will be considered insufficient for judging purposes, and the Video Review Panel will assess the conditions and circumstances surrounding that occurrence. In this case a rejump will be given unless the Video Review Panel determines that there has been an intentional abuse of the rules by the team, in which case no rejump will be granted and the team's score for that jump will be zero.
  - 4.8.2. Contact or other means of interference between competitors in a team and/or their Videographer shall not be grounds for the team to request a rejump.
  - 4.8.3. Adverse weather conditions during a jump are no grounds for protest. However, a rejump may be granted due to adverse weather conditions, at the discretion of the Chief Judge.
  - 4.8.4. Problems with a competitor's equipment (excluding freefall video equipment) shall not be grounds for the team to request a rejump.
- 4.9. Training Jumps**
- 4.9.1. Each team in each event will be given the option of one official training jump before the draw is made.
  - 4.9.2. The aircraft type and configuration, plus the judging and scoring systems to be used in the competition will be used for the official training jump.
  - 4.9.3. Two sequences will be created by the Chief Judge. Only teams performing one of these sequences will receive an evaluation and posted score.

## **5. Judging**

- 5.1. The official training jump and competition jumps will be judged as the Videographer provides the video evidence. The Chief Judge may modify this procedure with the consent of the FAI Controller.
- 5.2. The judging will, as far as practical circumstances allow (landings out, rejumps etc), be judged in the reverse order of placing.
- 5.3. Five Judges must evaluate each team's performance.
- 5.4. The Judges will watch the video evidence of each jump to a maximum of three times at normal speed. If, after the viewings are completed, and within fifteen seconds of the knowledge of the result, the Chief Judge, Event Judge or any Judge on the panel considers that an absolutely incorrect assessment has occurred, the Chief Judge or Event Judge will direct that only that part(s) of the jump in question be reviewed. If the review results in a unanimous decision by the Judges on the part(s) of the performance in question, the score for the jump will be adjusted accordingly. Only one review is permitted for each jump.

- 5.5.** The Judges will use the electronic scoring system to record their 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. All individual Judge's evaluation will be published.
- 5.6.** A majority of Judges must agree in the evaluation in order to;
- credit the scoring formation, or
  - assign an omission, or
  - determine an NV situation.
- 5.7.** The chronometer will be operated by the Judges or by a person(s) appointed by the Chief Judge, and will be started as determined in 2.14. If Judges cannot determine the start of the working time, the following procedure will be followed. Working time will start as the videographer separates from the aircraft and a penalty equal to 20% (rounded down) of the score for that jump will be deducted from the score for that jump.

## **6. Rules Specific to the Competition**

- 6.1.** Title of the Competition: “\_\_\_TH FAI World/Continental Parachuting Championships or World Cup of Vertical Formation Skydiving (insert location), (insert year)”.
- 6.2.** Aims of World/Continental Parachuting Championships and World Cups
- To determine World/Continental Champions and World Cup Winners of Vertical Formation Skydiving in the 4-Way Event,
  - To determine the world standings of the competing teams,
  - To establish Vertical Formation Skydiving world records,
  - To promote and develop Vertical Formation Skydiving,
  - To present a visually attractive image of the competition jumps and standings (scores) for competitors, spectators and media,
  - To exchange ideas and strengthen friendly relations between the sport parachutists, judges, and support personnel of all nations,
  - To allow participants to share and exchange experience, knowledge and information,
  - To improve judging methods and practices.
- 6.3.** Composition of Delegations:
- 6.3.1. Each delegation may be comprised of:
- One (1) Head of Delegation,
  - One (1) Team Manager,
  - Freefall videographers as in 6.3.4
- 6.3.2. At a World/Continental Championship:
- One 4-Way team consisting of up to:
  - Five (5) 4-Way Competitors
- 6.3.3. At a World Cup:
- 4-Way team consisting of up to:
  - Five (5) 4-Way Competitors
  - Any number (to a maximum of 4) teams per event to be decided by the Organiser and announced in the bulletins.
- 6.3.4. Videographers must be entered for each team as part of the delegation and must be a member of the Delegation's NAC. A Videographer may be replaced at any time during the competition, (with the agreement of the FAI Controller). The evaluation process for the video evidence will be the same for any Videographer. Videographers may be one of the following:

- A. One person in addition to the team composition in 6.3.2 or 6.3.3. This competitor is to be considered as a team member for the purposes of awards and medals.
  - B. Any other person (ref 6.3.5). This Videographer is not eligible to receive awards and medals. This Videographer may jump only as a Videographer and is subject to the same regulations as other competitors on the team.
- 6.3.5. Any 4-Way competitor (including Videographers) can only enter in one 4-Way team.
- 6.4.** Program of Events:  
The World/Continental Championships or World Cup are comprised of up to 8 rounds.
- 6.4.1. The competition will be organised during a maximum time frame of 5 competition days. Exceptions may be made where a bid is received for multiple FCE competitions at one time.
- 6.5.** Medals and Diplomas are awarded as follows:
- All team members in the events will be awarded medals if placed First, Second or Third.
  - Diplomas are awarded to all competitors that are placed First to Tenth.

**7. Definitions of Symbols**

7.1. Coding in the Dive Pool annexes is as follows:

7.1.1 Indicates direction of turn by the subgroup



7.1.2 Indicates turn by the subgroup in either direction



7.1.3 Indicates turns by all subgroups



7.1.4 Indicates clarification of intent symbolising only one performer in a block.

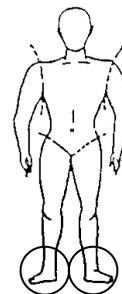


7.2. Visualisation for grip positions, ref 2.2.

ARM:

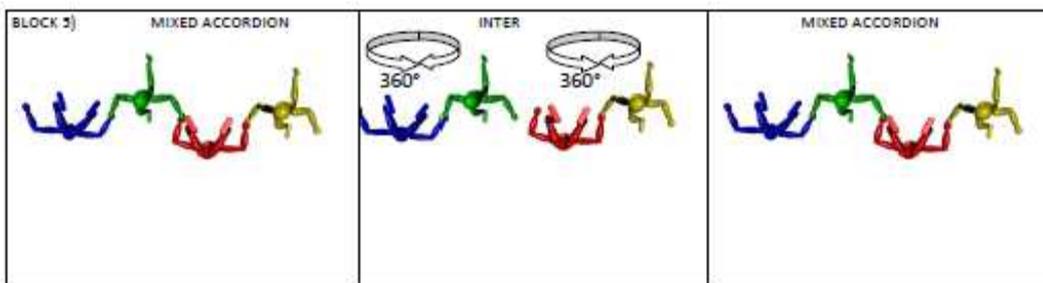
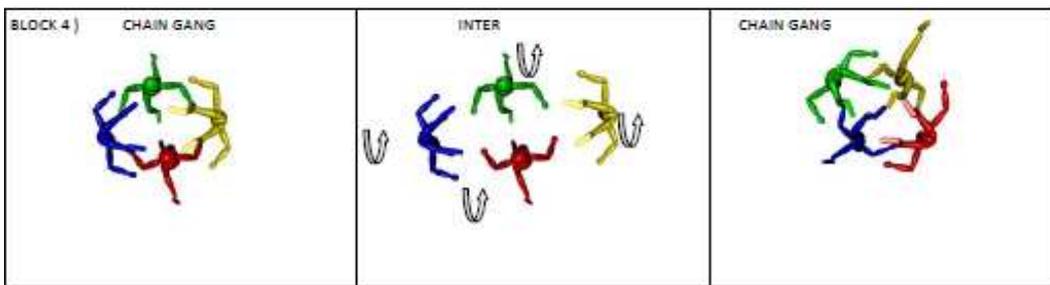
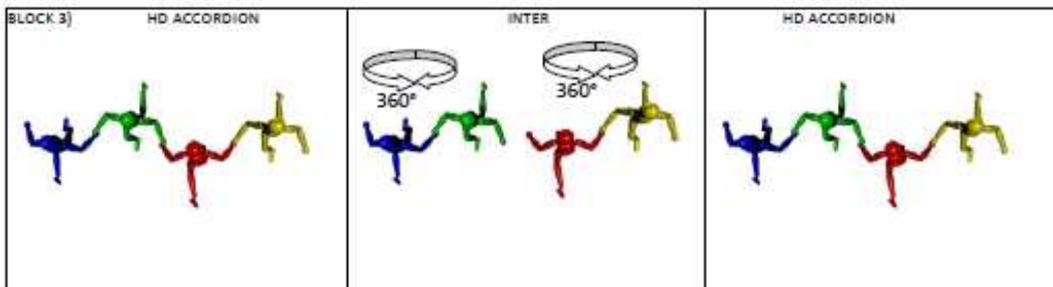
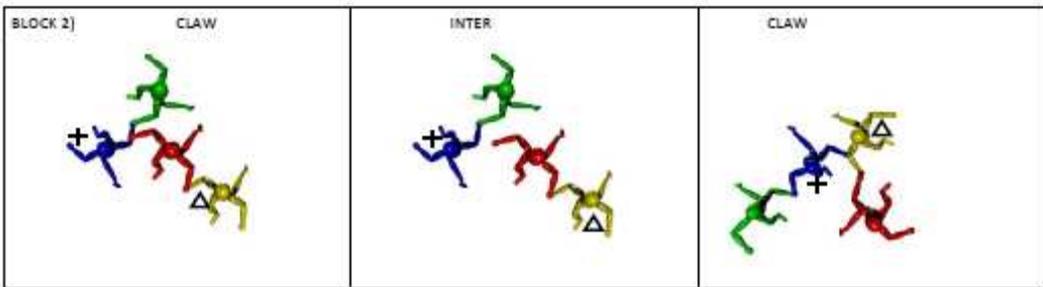
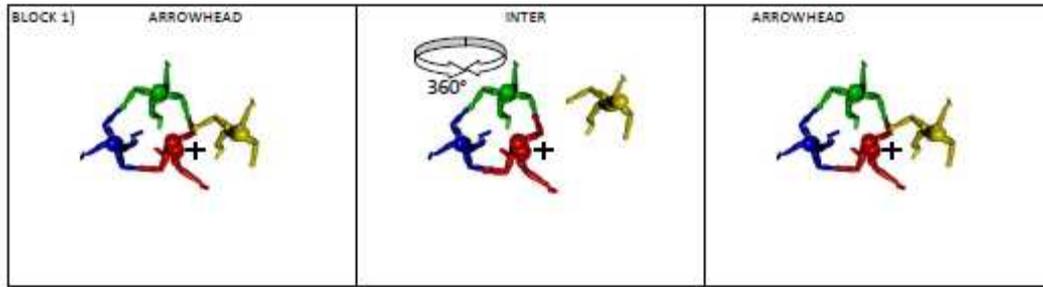
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FOOT:



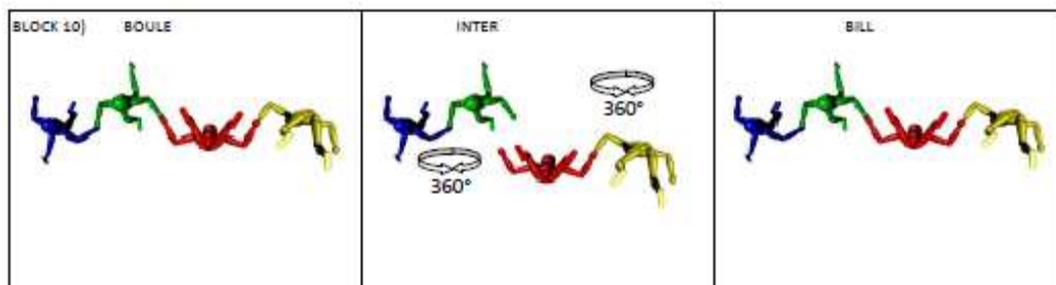
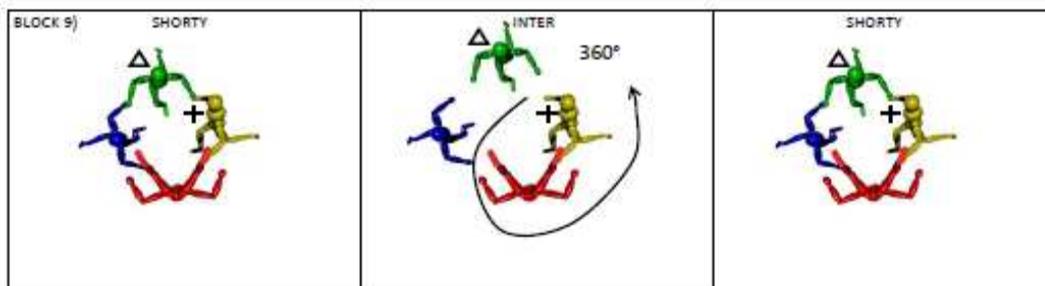
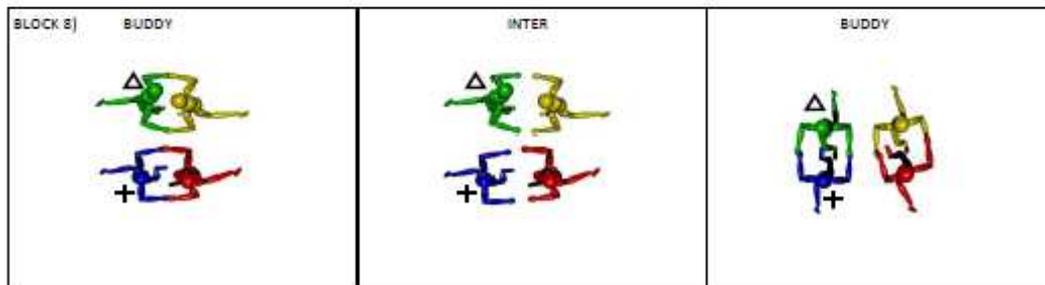
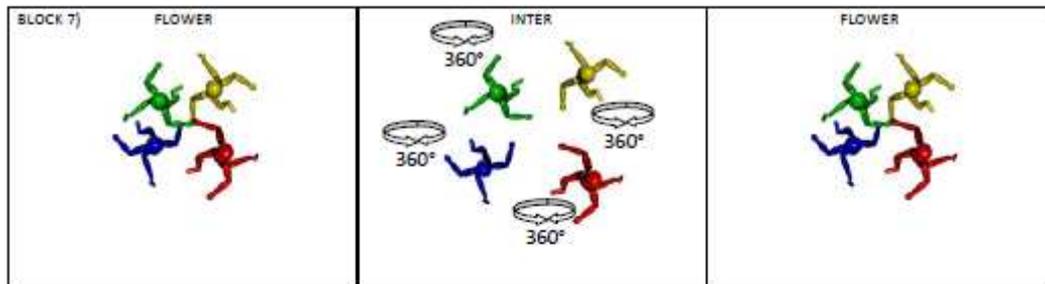
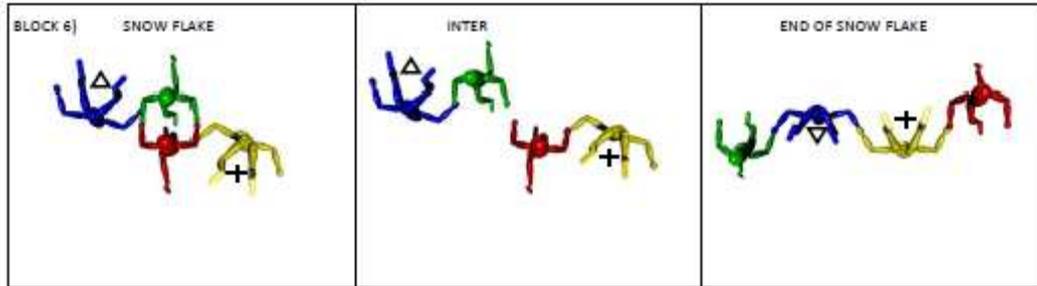
**ADDENDUM – A**

Vertical Formation Skydiving 4-Way Block Pool 2011



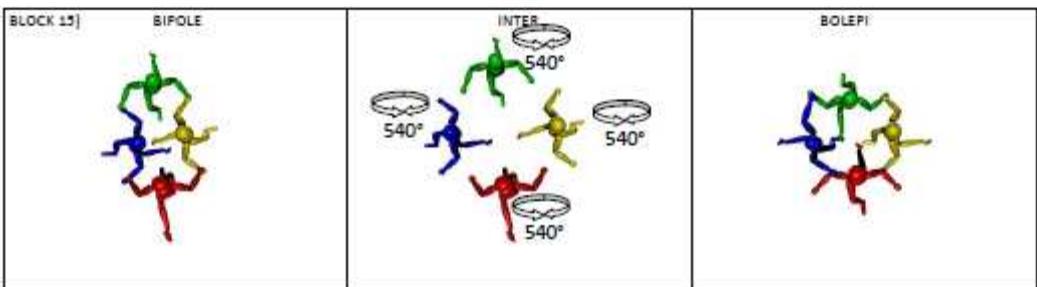
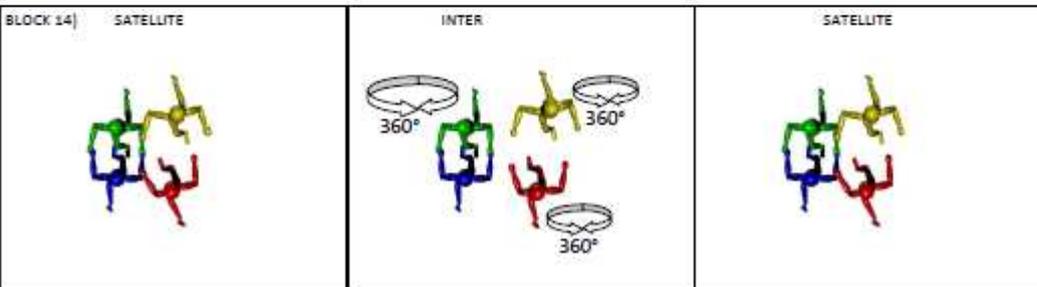
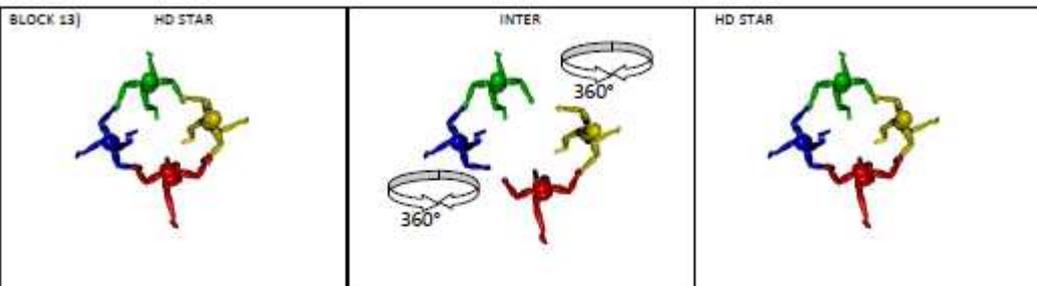
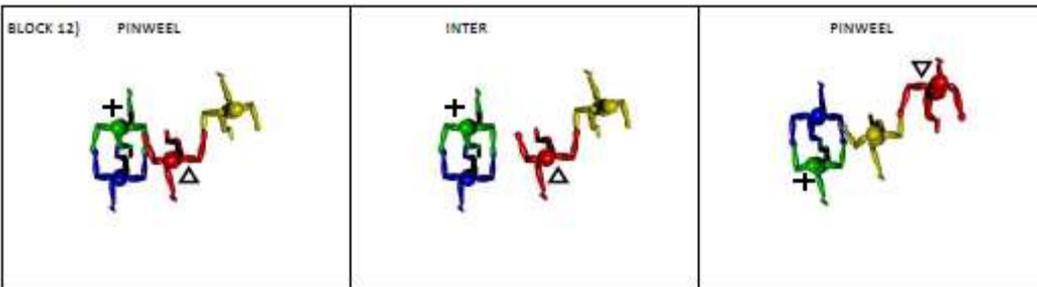
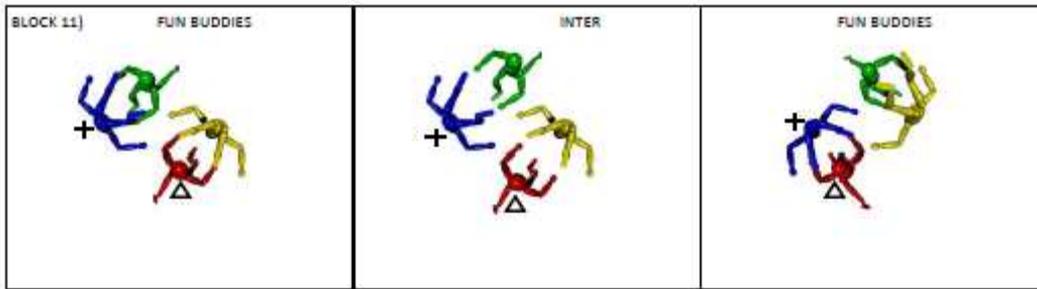
**ADDENDUM – A (Continued)**

Vertical Formation Skydiving 4-Way Block Pool 2011



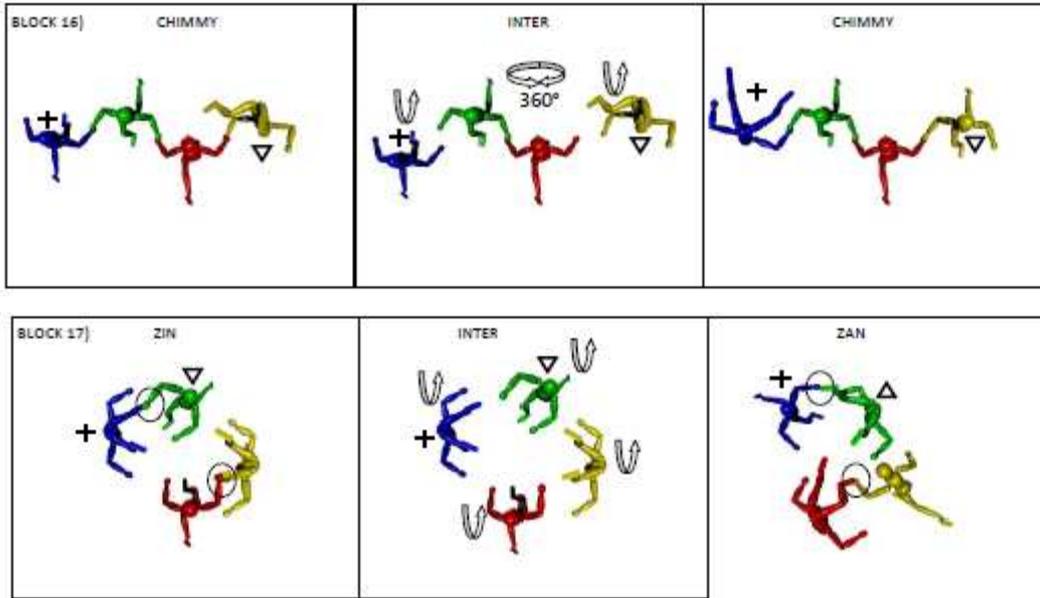
**ADDENDUM – A (Continued)**

Vertical Formation Skydiving 4-Way Block Pool 2011



**ADDENDUM – A (Continued)**

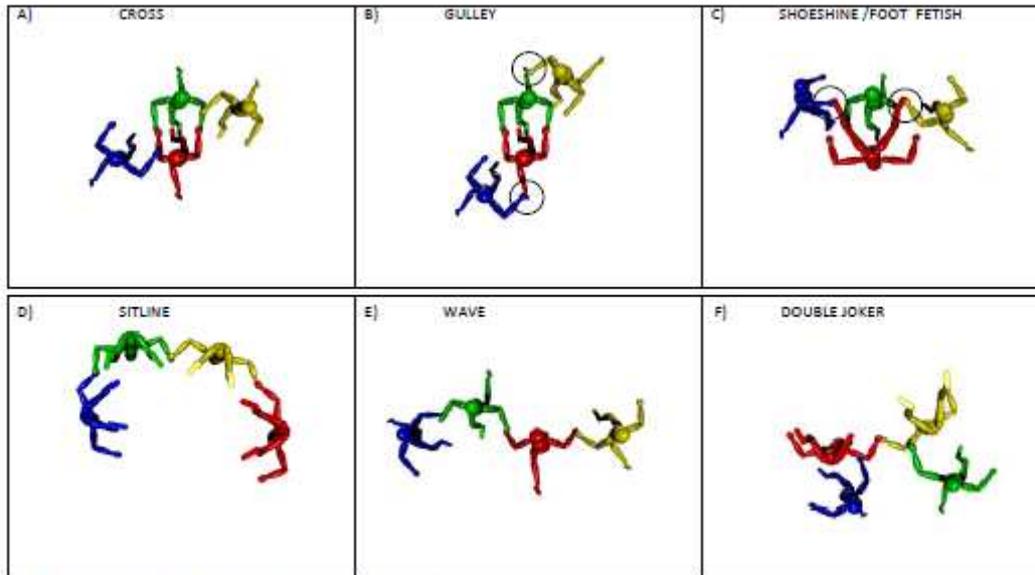
Vertical Formation Skydiving 4-Way Block Pool 2011



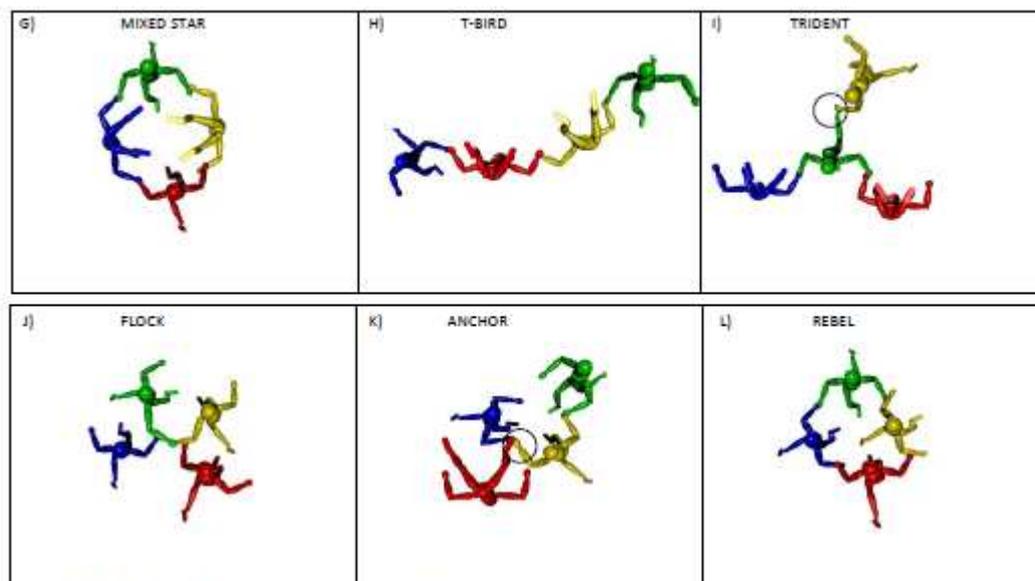
Note: A circle denotes a foot grip (ref: VFS Competition rules 2.2)

**ADDENDUM – B**

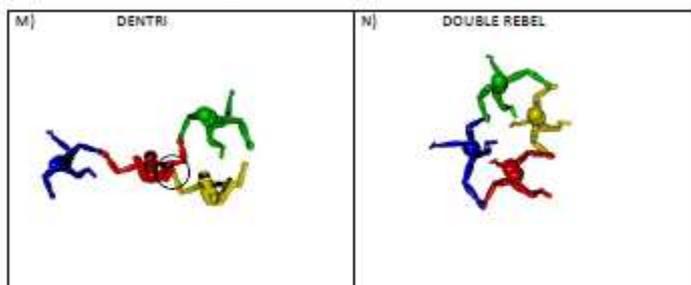
## Vertical Formation Skydiving 4-Way Random Pool 2011



Note: A circle denotes a foot grip (ref: VFS Competition rules 2.2)



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