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# U.S. National Formation Skydiving Championships Competition Rules



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# CHAPTER 5: FORMATION SKYDIVING

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# FORMATION SKYDIVING

## 1 GENERAL

- On a freefall jump, teams perform a designated formation or a sequence or series of formations and/or intermediate maneuvers (inter) drawn from the dive pool as shown in this chapter.

## 2 EVENT DESCRIPTION

### 2.1 2-Way MFS

2.1.1 Open: Each round consists of four or five (whichever is drawn first) scoring formations from the dive pool. All points from the dive pool may be drawn in the same round.

Advanced: Each round consists of four or five (whichever is drawn first) scoring formations from the dive pool. The draw for advanced excludes certain more difficult randoms (listed in event specific draws).

### 2.2 4-Way VFS

2.2.1 Open: Each round consists of five or six (whichever is drawn first) scoring formations from the dive pool.

2.2.2 Advanced: Each round consists of three or four (whichever is drawn first) scoring formations from the dive pool; a maximum of one flier in the upright orientation is allowed.

### 2.3 4-Way FS

2.3.1 Advanced and Open: Each round consists of five or six (whichever is drawn first) scoring formations from the dive pool.

2.3.2 Intermediate: Each round consists of four or five (whichever is drawn first) scoring formations from the dive pool.

### 2.4 8-Way

2.4.1 Advanced and Open: Each round consists of five or six (whichever is drawn first) scoring formations from the dive pool.

2.4.2 Intermediate: Each round consists of four or five (whichever is drawn first) scoring formations from the dive pool.

### 2.5 16-Way

2.5.1 Each round consists of three or four (whichever is drawn first) scoring formations drawn from the dive pool.

### 2.6 10-Way

2.6.1 Each round consists of building one formation drawn from the dive pool.

## 3 TEAM COMPOSITION

- No team in the Advanced or Intermediate 4-Way or Advanced 8-Way Formation Skydiving classes may be composed of more than one quarter of members who have won a gold medal in that class at the five previous U.S. National Skydiving Championships or won a medal in a higher class at the five previous U.S. National Skydiving Championships or in the same event at an FAI First Category Event; the videographer shall not be considered when applying this rule.
- A competitor or videographer is allowed to compete on only one team in each of the events.

### 3.1 2-Way MFS

3.1.1 Each team consists of three (3) members, including a videographer, and any one, but only one of the team members may serve as videographer on any particular round.

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### 3.2 4-Way FS/VFS

3.2.1 Each team may consist of up to six members, including a videographer, but is eliminated from competition if, for any reason, it is cut to three or fewer members and a videographer.

3.2.2 The videographer on an all-women 4-Way team competing in the Open class may be either sex.

### 3.3 8-Way

3.3.1 Each team may consist of up to ten members, including a videographer, but is eliminated from competition if, for any reason, it is cut to seven or fewer members and a videographer.

### 3.4 16-Way

3.4.1 Each team may consist of up to 18 members, including a videographer, but is eliminated from competition if, for any reason, it is cut to 15 or fewer members and a videographer.

### 3.5 10-Way

3.5.1 Each team may consist of up to 12 members, including a videographer, but is eliminated from competition if, for any reason, it is cut to nine or fewer members and a videographer.

## 4 COMPETITION DRAW

### 4.1 General

4.1.1 The Chief Judge will supervise a public draw of the sequences.

4.1.2 Teams will be given not less than two hours between the draw and the start of competition.

4.1.3 When available, an electronically generated draw may be used.

### 4.2 Event Specific Draws

4.2.1 A separate draw will be made for the following classes and events:

#### 4.2.1.1 2-Way MFS Open, 4-way VFS Open, 4-Way Advanced & Open, 8-Way Advanced & Open, and 16-Way

- Representations of the numbered block sequences and lettered random formations from the current dive pool are singularly placed in one container for each event.
- Individual withdrawal from the container, without replacement, determines the sequences to be jumped in each round.
- In 2-Way MFS Open, all points from the dive pool may be drawn in the same round.
- In 4-Way VFS, if while drawing for a round, there are insufficient formations remaining to complete that round, all formations are replaced in the container and said round is re-drawn.

#### 4.2.1.2 2-Way MFS Advanced

- Representations of the numbered block sequences and lettered random formations (except blocks 7 & 8 and randoms D, G, I, J, K and L) from the current dive pool are singularly placed in one container.
- Individual withdrawal from the container, without replacement, determines the sequences to be jumped in each round.

#### 4.2.1.3 4-Way VFS Advanced

- Representations of the numbered block sequences (except blocks 4, 5, 6, 10, 11 and 17) and lettered random formations (except D, F, G, H, I and M) from the current dive pool are singularly placed in one container.
- Individual withdrawal from the container, without replacement, determines the sequences to be jumped in each round.
- If while drawing for a round, there are insufficient formations remaining to complete that round, all formations are replaced in the container and said round is re-drawn.

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### 4.2.1.4 4-Way Intermediate

- Representations of the numbered block sequences (except blocks 3, 5, 10, 12, 16 and 17) and lettered random formations from the current dive pool are singularly placed in one container.
- Individual withdrawal from the container, without replacement, determines the sequences to be jumped in each round.

### 4.2.1.5 8-Way Intermediate

- Representations of the numbered block sequences (except blocks 2, 9, 11, 12, 15, 20 and 22) and lettered random formations from the current dive pool are singularly placed in one container.
- Individual withdrawal from the container, without replacement, determines the sequences to be jumped in each round.
- If the pool is exhausted, the entire pool will be put back in the container and the draw will continue until it is completed. If a duplicate random or block is drawn within a single round, the duplicate will be redrawn.

### 4.2.1.6 10-Way

- Representations of the lettered random formations from the current dive pool are singularly placed in one container.
- Individual withdrawal from the container, without replacement, determines the formation to be built on each round.

## 4.3 Number of Rounds

4.3.1 2-Way MFS: One complete round constitutes a meet; the maximum (scheduled) number is six.

4.3.2 4-Way VFS: One complete round constitutes a meet; the maximum (scheduled) number is eight.

4.3.3 4- and 8-Way: One complete round constitutes a meet; the maximum (scheduled) number is 10.

4.3.4 16- and 10-Way: One complete round constitutes a meet; the maximum (scheduled) number is six.

## 5 EXIT ALTITUDE AND WORKING TIME

### 5.1 2-Way MFS and 4-Way VFS

5.1.1 Each jump is made from 13,000 feet.

5.1.2 Working time starts the moment any team member (excluding the videographer) separates from the aircraft, as determined by the judges.

5.1.3 Each sequence should be repeated until the working time of 35 seconds has expired.

5.1.4 For meteorological reasons only and with the consent of the USPA Controller or the Chief Judge, the Meet Director may lower the exit altitude to 10,000 feet with a working time of 25 seconds.

5.1.4.1 The round in progress will stop.

5.1.4.2 The next round will be conducted from the lower altitude.

5.1.4.3 The remaining incomplete round will be completed as soon as the weather permits.

5.1.4.4 If the incomplete round cannot be completed from the full altitude:

- The teams that have not jumped will finish the round from the lower altitude.
- The teams that jumped from full altitude in the incomplete round will be re-scored using the reduced working time.

### 5.2 4-Way FS

5.2.1 Each jump is made from 10,500 feet, which may be lowered for a complete round to 9,500 feet (without change to the working time) by the Meet Director to negotiate weather.

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- 5.6.4.2 If the incomplete round cannot be completed from the full altitude, the teams that jumped from full altitude in the incomplete round will be rescored using the reduced working time; in this case:
- Exit altitude for the 4-Way event is 7,000 feet, and the working time is 20 seconds.
  - Exit altitude for the 8-Way event is 9,000 feet, and the working time is 30 seconds.
  - Exit altitude for the 16-Way event is 10,000 feet, and the working time is 30 seconds.
  - Exit altitude for the 10-Way event is 8,000 feet, and the working time is 20 seconds.

### 6 EXIT AND BREAK-OFF PROCEDURES

#### 6.1 2-, 4-, 8-, and 16-Way

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

#### 6.2 10-Way

6.2.1 A line is marked on the floor of a side-door aircraft from the front edge of the door to the opposite fuselage wall aft of the rear edge of the door; and for tailgate aircraft, the line is drawn five feet forward of the tailgate edge and parallel to the edge of the tailgate.

6.2.1.1 The videographer must record an image of the line on the floor prior to the team exiting the aircraft.

6.2.1.2 The team must line up behind the line, and no members of the team, except the videographer, may come in contact with any portion of the aircraft on the door side or tailgate side of the line prior to commencing exit.

6.2.2 After exit, two unlinked jumpers must initiate all formations after completely passing through the door with the remaining jumpers converging on those two jumpers.

#### 6.3 Refusal to Jump

6.3.1 The team may choose not to exit the aircraft for any pertinent reason and land with the aircraft.

6.3.2 Once any team member (other than the videographer) has left the aircraft the jump shall be evaluated and scored.

6.3.3 A team that has landed with the aircraft shall be given a new opportunity to jump as soon as possible

#### 6.4 Break-Off Procedures

6.4.1 The intent of these breakoff procedures is to ensure teams are able to meet the Basic Safety Requirements for minimum opening altitude.

6.4.2 Breakoff altitude

6.4.2.1 4-Way—3,500 feet

6.4.2.2 8-Way, 10-Way, and 16-Way—4,000 feet

6.4.2.3 2-Way MFS and 4-way VFS—4,500 feet

### 7 SCORING

#### 7.1 2-, 4-, 8-, and 16-Way

7.1.1 A team will score one point for each judgeable scoring formation performed in the sequence within the allotted working time of each round. Teams may continue scoring by continually repeating the sequence.

7.1.2 Three points will be deducted for each omission; if both the inter and the second formation in a block sequence are omitted, this will be considered as only one omission.

7.1.3 If an infringement in the scoring formation of a block sequence is carried into the inter, 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.

7.1.4 The minimum score for any round is zero points.

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- 7.1.5 It is the responsibility of the team to clearly present the correct scoring formations, inters, and total separations to the videographer and the judges.
- 7.1.6 Scoring formations need not be perfectly symmetrical, but they must be performed in a controlled manner.
- 7.1.7 Mirror images of random formations and whole block sequences are permitted.
- 7.1.8 **MFS/VFS: No grip line may cross another grip line within a formation.**
- 7.2 10-Way**
- 7.2.1 Each team receives a score (in seconds) for the completed 10-Way formation that is held for a minimum of five seconds.
- 7.2.1.1 These five seconds must fall within working time (i.e., the last grip must be completed within 35 seconds).
- 7.2.1.2 If a team does not complete a 10-Way formation, it will receive the maximum score of 35 seconds.
- 7.2.2 The score for each jump is computed by averaging the three scores to one one-hundredth (.01) of a second.
- 7.2.3 It is the responsibility of the team to clearly present the correct scoring formation.

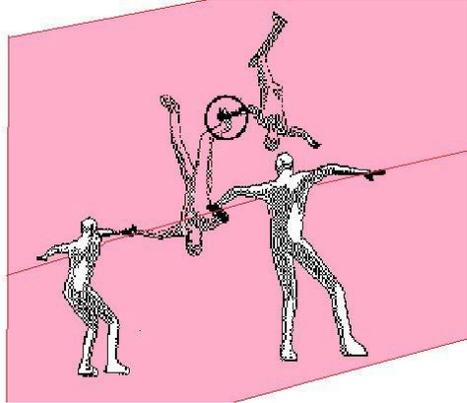
### 8 DEFINITIONS

- 8.1.1 A scoring formation is a formation that 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.
- 8.1.2 Grips
- 8.1.2.1 FS: A grip consists of a handhold on an arm or leg of another jumper. As a minimum, a grip requires stationary contact of the hand on an arm or leg, as shown in the Definition of Symbols in this section.
- 8.1.2.2 **MFS/VFS: A grip requires stationary contact of the hand on an arm, leg, or foot as shown in the dive pool. A foot grip consists of a handhold on the foot or ankle; the grip must be below the anklebone.**
- 8.1.3 FS: Any side-body link-up requires an arm grip and a leg grip on the same person.
- 8.1.4 An inter is an intermediate requirement which must be performed as depicted in the block portions of the dive pools.
- 8.1.4.1 A subgroup consists of an individual or two or more jumpers linked by a grip or grips.
- 8.1.4.2 When shown, each subgroup must remain intact as a subgroup from the break of the previous scoring formation in the sequence until the correct completion of the next scoring formation in the sequence.
- 8.1.4.3 Where degrees are shown, (180°, 270°, 360°, 540°), this indicates the approximate degrees and direction of turn required to complete the inter as indicated.
- 8.1.4.4 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).
- 8.1.4.5 Contact is allowed between subgroups during the inter of a block sequence.
- Any assisting body contact on other jumpers or their equipment within a subgroup or a scoring formation is not permitted.
  - Where subgroups are shown, they must remain intact as a subgroup with only the depicted grips on other jumpers in that subgroup.
  - Handholds by the jumper on their own body within a subgroup or a scoring formation are permitted.
- 8.1.4.6 A subgroup's centerpoint is one of the following:
- The defined grip or the geometric center of the defined grips within a subgroup within linked jumpers
  - The geometric center of an individual's torso

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8.1.4.7 VFS “Grip line”: This is the line linking the torsos of two competitors via their arms or legs and feet and the grip that joins them.

- Clarification regarding random I and M: There is an imaginary vertical plane passing through the handgrips, with outside competitors having hand grips on one side of the vertical plane and the competitor taking the leg grip on the other side of the vertical plane. No grip line may cross the vertical plane within the formations.



8.1.4.8 MFS/VFS Orientation: “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.

8.1.4.9 MFS/VFS “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.

8.1.4.10 MFS/VFS “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.

8.1.5 An infringement is one of the following:

8.1.5.1 An incorrect or incomplete formation which, apart from the last point at freeze frame, is followed within working time by either—

- A total separation or
- An inter, whether correct or not

8.1.5.2 A correctly completed formation preceded by an incorrect inter or incorrect total separation

8.1.5.3 A formation, inter, or total separation not clearly presented

8.1.6 Omission is one of the following:

8.1.6.1 A formation or inter is missing from the drawn sequence.

8.1.6.2 No clear intent to build the correct formation or inter is seen, but another formation or inter is presented, and there is an advantage to the team resulting from the substitution.

8.1.7 Separation

8.1.7.1 In 4- and 8-way sequences, total separation is required between whole blocks, between random formations, and between whole blocks and random formations.

8.1.7.2 Total separation is when all competitors show at one point in time they have released all their grips and no part of their arms are in contact with another body.

8.1.7.3 In 16-way sequences, teams are allowed free transitions between random formations, between block sequences, and between block sequences and random formations.