# Competition Rules

## Speed Skydiving

2021 Edition

Effective 1 March 2021

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1 FAI Statutes, ..... Chapter 1, .....para 1.6
2 FAI Sporting Code, Gen. Section, ..... Chapter 4, .....para 4.1.2
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 4, .....para 4.1.5
10 FAI Sporting Code, Gen. Section, ..... Chapter 2, .....para 2.2
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, the Competition Rules for Speed Skydiving, 2021 Edition, takes effect on the 1st March 2021. The 2021 Edition differs from the 2020 Edition in those paragraphs with a vertical bar in the margin.

# 1 FAI AUTHORITY

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 ISC 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 SPEED MEASURING DEVICE (SMD)

A device used to determine the vertical speed of the skydiver, which is mounted on the skydiver's helmet.

## 2.2 BREAKOFF ALTITUDE

Breakoff altitude is set at 5,600 ft. (1,707 metres). Below the breakoff altitude no speed measurements are taken into account.

Note: All altitude information refers to altitude above ground level (AGL) as measured by the approved SMD.

## 2.3 PERFORMANCE WINDOW

The performance window is the scoring part of the speed jump, which starts at exit. The end of the performance window is either 7,400 ft. (2,256 metres) below exit or at Breakoff altitude whichever is reached first.

## 2.4 VALIDATION WINDOW

The validation window is the part of the jump which is used to determine the accuracy of the SMD data. The validation window is 3300ft (1006m) in length, the end of which is determined by the end of the performance window.

## 2.5 TECHNICAL SCORING DIRECTOR (TSD)

Appointed by the ISC Speed Skydiving Committee and approved by the organiser for that position. The Technical Scoring Director is responsible for the planning, setup and maintenance of the downloading and analysing software before and during a World Championship/FCE.

# 3 THE EVENT

## 3.1 EVENT DESCRIPTION

3.1.1 The discipline will be comprised of the following event:

Speed Skydiving Open

3.1.2 Within the Speed Skydiving Open event, separate classifications will be made for:

Speed Skydiving Male
Speed Skydiving Female
Speed Skydiving Junior

Speed Skydiving Junior Male

Speed Skydiving Junior Female

Speed Skydiving National Team

3.1.3 The competition in the classifications takes place during the rounds, and no separate jumps are made. The scores achieved in the rounds are used to determine the placings in the classifications.

3.1.4 The final scores in the open classification are carried across to male, female, junior, junior male, junior female and national team classifications as soon as all competitors in that classification have completed a round during the open event.

### 3.2 PROGRAMME OF EVENTS

3.2.1 The event consists of 8 rounds.

3.2.2 The minimum number of rounds for a valid event is one.

3.2.3 Competitors make 8 rounds in the Open event. The final results for the classifications are those obtained in the Open event.

### 3.3 OBJECTIVE OF THE EVENT

The objective of the event is for the competitors to fly their body as fast as possible to achieve the highest average vertical speed through a 3 second window (see 5.5.1).

### 3.4 PERFORMANCE REQUIREMENTS

The accumulated total of the competition jumps is used to determine the final placings. The standings will also have a column showing the average speed based on number of rounds completed.

## 4 GENERAL RULES

### 4.1 EQUIPMENT

4.1.1 Competitors may not wear additional weight on their body, in any of their equipment, or on any of their equipment.

4.1.2 Parachutes and equipment will be inspected by the Chief Judge or Meet Director to confirm that they conform to normal weights for that equipment. Chief Judge and Meet Director may delegate this task to a qualified person, such as a Rigger, Senior Rigger or Master Rigger. If, in the opinion of the Chief Judge and Meet Director, the equipment does not conform to normal weights for that equipment, the competitor may be required to demonstrate that the equipment does not contain extra weight. This decision is not grounds for protest.

4.1.3 Chief Judge, or the person appointed by the CJ for this purpose, at the start of the competitions wearing all competitor's normal jump equipment to establish a baseline weight. CJ or appointed by CJ for that purpose person must conduct subsequent random weight checks, which may deviate from the base line weight no more than +/- 2 kg before requiring an inspection. If the additional or removal weight is detected, the result for that jump will be zero. This decision shall not be grounds for protest.

4.1.4 Parachutes and equipment will be inspected by the Chief Judge, Meet Director or FAI Controller to confirm that they are safe for the event. Chief Judge, Meet Director or FAI Controller may delegate this task to a qualified person, such as a Rigger, Senior Rigger or Master Rigger. If, in the opinion of the Chief Judge, Meet Director and FAI Controller, the parachute and/or equipment are not safe for the event, the competitor will not be permitted to use it. Inspections that do not interfere with a competitor's performance may be made at any time during the competition, as determined by the Chief Judge. If any equipment does not meet the requirements as determined by the Chief Judge, Meet Director or FAI Controller, this equipment will be deemed to be unusable for the competition. This decision is not grounds for protest.

4.1.5 Each competitor must wear a suitable audible altitude warning device on every jump. Two suitable audible altitude warning devices, with visual indications in the goggles/visor, are recommended.

4.1.6 Each competitor will wear one SMD provided by the organiser and issued by the Chief Judge. The devices will be attached on the helmet to the satisfaction of the Chief Judge.

4.1.7 If at any time after the start of the competition the Chief Judge finds the mounting position of the SMD unsatisfactory (for example, if the GPS signal is compromised) the SMD must be remounted to Chief Judge satisfaction.

4.1.8 If a competitors changes his rig or helmet during competition, the new rig or helmet must be inspected by the Chief Judge or Meet Director according to 4.1.1, 4.1.2, 4.1.3 and 4.1.5 before the competitor is allowed to jump with the rig or helmet.

4.1.9 The SMD will be attached on the competitiors helmet by a member of the judging staff, the device will be attached with the antenna having a clear view of the sky, located and positioned to the satisfaction of the Judge. The device will be attached prior to the start of the competition.

4.1.10 A competitor shall not wear any other electronic device or wires closer than 2.54 cm from the official SMD as measured by the judging staff. However, a second identical SMD unit may be worn without regard to this separation requirement. If any such electronic device affects the SMD system, and the source of the interference is not obvious and beyond the reasonable control of the jumper, a rejump may be granted by the Chief Judge.

4.1.11 The SMD will be turned on before the jump and off after the jump by a Judge or by the competitor if instructed to do so by any Judge. The judge will verify that the SMD is on and receiving satellite signal.

4.1.12 Immediately after the jump, the competitor must return the SMD to the judging staff. The competitor is not allowed to read the data directly from the SMDs before it is registered by the judges.

4.1.13 Within the validation window every SMD data sample used for scoring must satisfy precision criteria. Every data sample must have a speed accuracy of less than 3m/s (10.8 kmh). If the accuracy requirement of the SMD data is not met then a re-jump will be given.

4.1.14 If the SMD is found to have been tampered with and if in the opinion of the Chief Judge this was not caused by circumstances beyond the control of the competitor, then no re-jump will be awarded and the competitor will receive a score of zero for that jump. This decision shall not be grounds for a protest.

4.1.15 If the SMD malfunctions and, in the opinion of the Chief Judge, the malfunction was not caused by action or interference by the competitor, then the competitor will be given the option of making a re-jump or receiving a score of zero for that jump.

### 4.2 TRAINING JUMPS

4.2.1 All competitors must have the opportunity on the official practice day to make at least one official training jump, weather permitting.

4.2.2 The SMDs in use in the competition, and all competition rules and procedures, will be used for these jumps.

4.2.3 The official training jumps shall be judged by the Official Panel of Judges, or Judges in Training under direct supervision of the Chief of Judge Training, and the scores may be published.

### 4.3 ORDER OF JUMPING

4.3.1 The order of jumping in the first round will be determined by reverse order of placing during the last World Championship.

4.3.2 Individuals not covered by this procedure will jump at the beginning or end of the first round, with order determined at the discretion of the Meet Director and Chief Judge.

4.3.3 Time permitting, and at the discretion of the Meet Director, reverse order of ranking may be used for all other rounds.

## 5 RULES SPECIFIC TO THE EVENT

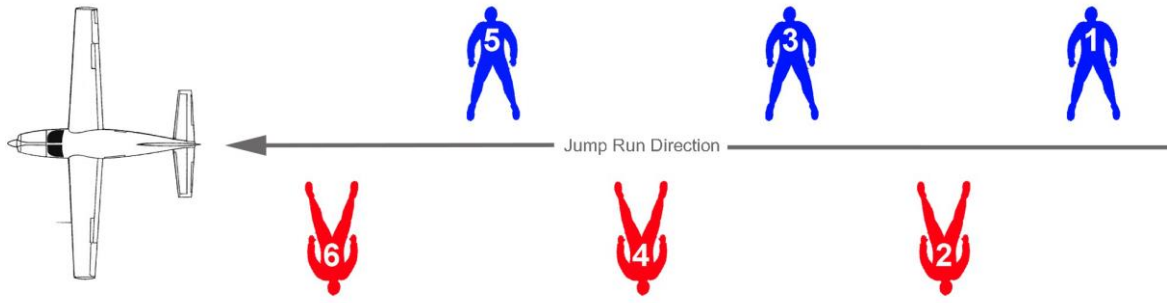
### 5.1 EXIT PROCEDURE

5.1.1 The exit point is determined by the pilot in conjunction with the Meet Director. The aircraft pilot will signal the competitors when they are clear to exit. All the competitors will be briefed on the specific exit signals at the pre-event competitors' meeting.

5.1.2 The exit delay between competitors must be such so as to ensure safe separation, and be at least 5 seconds.

5.1.3 The first person to exit on a pass turns 90 degrees to the right of the aircraft line of flight, the second turns 90 degrees left, and so on. All Competitors must turn to the appropriate direction immediateley after their freefall trajectory is no longer affected by the forward throw/momentum of the aircraft. This is to prevent horizontal movement in the line of flight of the jump run. See figure 1.

Figure 1 :




### 5.2 EXIT ORDER

5.2.1 For safety reasons, the exit order in a jump run is determined by the personal best of the competitors. The exit order in a jump run is personal best descending.

5.2.2 There will be a maximum of six competitors per exit pass, but this may be reduced by the Meet Director taking into consideration the aircraft size and the dropzone area.

## 5.3 EXIT ALTITUDE

5.3.1 Standard Exit Altitude: 13,000 ft. (3,962 metres) to 14,000 ft. (4,267 metres). It is the responsibility of the Meet director in conjunction with the pilot(s) to make sure that the maximum and minimum exit altitudes (as measured by the approved SMD) are not exceeded.

5.3.2 For meteorological reasons or air traffic circumstances only, and with the consent of the FAI Controller and the Chief Judge, the Meet Director may reduce the minimum exit altitude by any amount down to 11,000 ft. (3,353 metres) to continue the competition. The maximum altitude and the performance window will be reduced by the same amount but the breakoff altitude still remains 5,600 ft. (1,707 metres). Any one round must be completed with the same altitude parameters.

5.3.3 Maximum Exit Altitude: The maximum exit altitude for a valid jump is 14,000 ft. (4,267 metres) as measured by the approved competition SMD. A competitor should not exit the aircraft at a higher altitude than the maximum exit altitude. If the SMD registers a higher exit altitude than the maximum exit altitude, the jump will be considered as not valid and a re-jump will be granted.

5.3.4 Minimum Exit Altitude: The minimum exit altitude for a valid jump is 13,000 ft. (3,962 metres) a competitor should not exit the aircraft at a lower altitude than the minimum altitude. If the SMD registers a lower exit altitude than the minimum exit altitude the competitor may choose to accept the score for the jump. The competitor must make an immediate decision and inform the Chief judge of their decision; otherwise a re-jump will be granted automatically.

## 5.4 SPEED MEASURING DEVICE (SMD)

5.4.1 The SMD must be capable of gathering data, and/or transmitting real-time data to a ground station or stations, which allows the competitor's vertical freefall speed to be displayed in kilometres per hour to an accuracy of less than 10.8 km/h (3m/s), The SMD must also be capable of recording the exit altitude to an accuracy of 33 ft. (10 metres).

5.4.2 The data from an SMD may or may not be required to be downloaded to computer in order to determine the competitors speed.

5.4.3 If the SMD transmits its data to the ground station during the jump, then that data must be recorded and saved when it is received.

5.4.4 If the data from the SMD is downloaded for analysis to a computer after landing, then that data must be recorded and saved when it is downloaded.

5.4.5 If the speed result is to be read directly from the SMD after landing, then the result needs to be retained on the SMD for the duration of the competition and recorded on the score sheets.

5.4.6 The SMD must record real-time three-dimensional (3D) data with a resolution of at least 5Hz and a speed accuracy of less than 3m/s

5.4.7 The SMD must not require any action by the competitor in order for it to function.

5.4.8 Once attached to the competitor's helmet, it should not be possible for the competitor to alter settings or data from the device without this being evident to the judges. Tampering with the device will result in a score of zero for the jump. This decision is not grounds for protest.

### 5.5 SCORING SPEED SKYDIVING

5.5.1 The score for a Speed Skydiving jump is the average vertical speed in kilometres per hour, to the nearest hundredth of a km/h, of the fastest 3 seconds, which the competitor achieves within the performance window.

5.5.2 The length of the performance window is 7400 ft. (2,256 metres), this is determined by the distance between the minimum exit altitude and breakoff altitude.

5.5.3 In the case of a standard exit altitude of between 13,000 ft. (3,962 metres) and 14,000 ft. (4,267 metres) the performance window is the maximum of 7,400 ft. (2,256 metres). The competition window ends 7,400 ft. (2,256 metres) below exit altitude.

## 6 WORK OF THE JUDGES IN THE DISCIPLINE

### 6.1 SCORING THE JUMP

6.1.1 Each performance shall be assessed by at least 2 Judges. All Judges must be FAI Speed Skydiving Judges. FAI Speed Skydiving Judges in Training, provided they are under the direct supervision of the Chief of Judge Training or his designee, having attended the Judge's Conference, may be used in addition to the Official Panel of Judges.

6.1.2 One or more individuals, supervised by the Chief Judge (or trainees under the supervision of the Chief of Judge Training) may support the judges in equipment and device management

6.1.3 One judge conducts the analysis of the jump and determines the appropriate score. The second judge then checks the analysis and score before collation of the score sheet.

6.1.4 If a computer is used to analyse the data to obtain the speed, then the data must be downloaded as soon as possible after the competitor has handed in the device, and before the SMD is used again.

6.1.5 If the speed is read directly from the device, then the readings are to be taken when the competitor hands in the SMDs, the speeds are to be written directly on to the score sheets, and the competitor is to sign for the score. The SMDs may then be used again.

6.1.6 If the speed is obtained from data transmitted during the jump to a ground station or stations, the SMD may only be used again once it has been determined that valid data has been obtained.

6.1.7 The scores will not be final until the data have been reviewed. The Chief Judge is responsible for determining a competitor's final score and placing.

### 6.2 COLLATION OF THE SCORE SHEETS

The scores are collated immediately after the judges have assessed the jump. The Chief Judge must check the results of the collation.

### 6.3 DETERMINING PLACING

6.3.1 At the end of a completed round, the accumulation of the competitor's single scores is used to determine the competitor's total result. The total result for the competitor determines the ranking. The competitors are ranked in descending order of their total results.

6.3.2 While a round is in progress, unofficial results may be published. However, if the round does not get completed, the scores from the incomplete round must be discarded and the results must be amended to reflect the scores from the number of completed rounds.

6.3.3 In case if the round is incomplete in open event, but complete in any of separate classifications, this round will be accepted as a complete round for these separate classifications.

### 6.4 DETERMINATION OF THE WINNERS

6.4.1 The competitor with the highest score is the winner.

6.4.2 In the event of a tie in the first three places, the following rules apply:

(i) Where possible tie-break jumps shall be made.
(ii) If this does not break a tie, then the competitor with the best result in any one round obtains the higher place.
(iii) If the tie cannot be broken, the competitors concerned shall be declared co-medallists.
(iv) All other ties shall be ranked equal.

6.4.3 In the event of a tie in the first three places in any of the classifications, paragraphs 6.4.2 will be applied.

### 6.5 OTHER RESPONSIBILITIES

The Meet Director and Chief Judge may decide to interrupt the event if they consider that the meteorological conditions are not safe for the conduct of the event. This decision is not grounds for a protest.

## 7 TITLE OF THE COMPETITION

**"The --- FAI World Speed Skydiving Championship, (insert location), (insert year)", or**

**"The --- FAI (insert continent) Speed Skydiving Championship, (insert location), (insert year)", or**

**"The --- FAI World Cup of Speed Skydiving, (insert location), (insert year)"**

### 7.1 AIMS OF THE COMPETITION

7.1.1 To determine the Champions of Speed Skydiving.

7.1.2 To promote and develop Speed Skydiving training and competition.

7.1.3 To establish new World and Continental Speed Skydiving competition records.

7.1.4 To exchange ideas and strengthen friendly relations between skydivers, judges and support personnel of all nations.

7.1.5 To allow participants to share and exchange experience, knowledge, and information.

7.1.6 To improve judging methods and practices.

### 7.2 DURATION OF THE COMPETITION

The competition will be organized during a maximum time frame of five (5) competition days. Exceptions may be made where a bid is received for multiple FCE competitions at one time.

## 8 DELEGATIONS

### 8.1 COMPOSITION OF DELEGATIONS

- One Head of Delegation.
- One Team Manager/Coach.
- A maximum of eight competitors for a World Parachuting Championship – seven places open to male or female competitors and one place exclusively for a competitor from whichever is the gender minority.
- A maximum of twelve competitors for a World Cup or a Continental Championship – ten places open to male or female competitors and two places exclusively for competitors from whichever is the gender minority.
- Accompanying persons at the discretion of the event organiser.

### 8.2 FORMING NATIONAL TEAMS

8.2.1 For delegations with 3 registered competitors, the competitors will automatically form the national SP team upon registration, unless the Head of Delegations or Team Manager disagrees.

8.2.2 For delegations with more than three registered competitors the NAC may nominate 3 of its competitors to form the national SP team. This must be done before the starting order is finalized. There is only one SP team per NAC.

## 9 DETERMINATION OF CHAMPIONS

### 9.1 INDIVIDUAL CHAMPION

The title of World Champion is awarded to the first placed competitor in the Open event, and in each classification.

### 9.2 NATIONAL TEAM CHAMPION

The team which accumulates the highest aggregated score using each team members aggregated scores.

### 9.3 MEDALS AND AWARDS

10.3.1 Individual Medals – Overall Champion: 1st place, 2nd place, 3rd place

10.3.2 Individual Medals – Male Champion: 1st place, 2nd place, 3rd place

10.3.3 Individual Medals – Female Champion: 1st place, 2nd place, 3rd place

10.3.4 Individual Medals – Junior Champion: 1st place, 2nd place, 3rd place

10.3.5 Individual Medals – Junior Male Champion: 1st place, 2nd place, 3rd place

10.3.6 Individual Medals – Junior Female Champion: 1st place, 2nd place, 3rd place

10.3.7 National Team Medals : 1st place, 2nd place, 3rd place

## 10 PROTEST FEES

A fee of 50 EUR must accompany each protest.

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