FAI Sporting Code

Fédération
Aéronautique
Internationale

Section 10 – Microlights and Paramotors

Annex 9

RULES AND TASK CATALOGUE FOR
AIRSPORTS CHALLENGE CHAMPIONSHIPS

To Take Effect on February 22nd 2025

Section 09 and General Section combined make up the complete Sporting Code for Microlights and Paramotors

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Annex 9. Applies to all classes

The following regulations and tasks are supplementary to S.10 and apply specifically to AIRSPORT CHALLENGE competitions.

1 COMPETITION DESCRIPTION

AirSport Challenge is a combination of both landing and navigation tasks, with real time display scoring, and live tracking for easing TV broadcasting. Navigation will be within a defined corridor with variable or fixed width and a declared speed. Out or inside of the corridor Orange zones can be established. Known timed gates or hidden timed gates can be arranged along the corridor. ORANGE and RED zones will be used to be avoided during a competition. Red zones will be drawn to define prohibited areas according to the rules of the air. Orange zones will be drawn for penalisation purposes as part of the competition task design.

2 EQUIPMENT AND SAFETY

2.1 A protective helmet is mandatory when an aircraft has an open cockpit. Ideally this will be an integral helmet (or helmet with a roll-bar).

2.2 The airworthiness of paramotor/microlight used is the responsibility of the competitor and registration will be taken as a declaration by the Delegation and competitor that the paramotor equipment or microlight aircraft to be used is certified as being airworthy by competent authorities. The Organizer has no responsibility in this regard; the responsibility rests fully with the Delegation and competitor.

2.3 With the exception of any equipment which could be considered as dangerous by the competition director, any complementary equipment will be accepted.

2.4 No GNSS or inertial based navigation aids are allowed onboard except those that are allowed for competition tracking.

3 AIMS

3.1 To determine champions in AirSport Challenge.

3.2 To promote safety and develop airsports training and competition.

3.3 To exchange ideas and strengthen friendly relations between participants of the FAI competition.

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

3.5 To explore new alternatives like eSports.

4 AWARDS

Medals and Trophies will be awarded for the first three positions according to the Competition Rules. It might be awarded landing and navigation competition as individual championships, in such a way that in a competition it might optionally run three Championships as follows: AirSport Challenge Landing Championship, AirSport Challenge Navigation Championship and AirSport Challenge Championship (resulting in a scoring combination of both two firsts). In any case the combined championship must be run.
Awards giving event or ceremony should be celebrated immediately after the last task is finished.

5 GENERAL REGULATIONS

5.1 All paramotors and microlight aircraft in the competition have to satisfy the requirements of FAI sporting code section 10. All aircraft are allowed if they are under 600 kg FAI microlight definition. It is recommended that separated competitions will run for each aircraft class and subclasses, being necessary to be defined in the LR. GAC classes and subclasses are invited to be eligible for the competition if defined in LR and a convenient agreement with GAC at national or international level is developed.

5.2 The official competition time shall be the local time or UTC, as defined in the Local Rules.

5.3 Each crew shall fly the same aircraft throughout the competition.

5.4 Modifications to aircraft shall only be accepted when certified by the responsible national authority.

5.5 For each competition, local rules and a registration system, including official maps, must be generated and published at least 60 days before the competition takes place. However, specifications in 6.4.2 and 6.7.1 points must be given and noticed once the competition is publicly announced.

5.6 Each crew will be provided with maps, not necessarily aeronautical, with a scale between 1:25,000 and 1:250,000, to cover the entire race. The scale will be determined by the Local Rules for each competition.

5.7 A list with the starting order and times will be published before each stage in the noticeboard.

5.8 The use of electronic navigation aids and/or autopilot is not permitted, all unauthorized devices must be sealed or guarded by the organizer during the flight. Electronic magnetic compasses are allowed.

5.9 Aircraft, crews and their personal baggage shall be inspected.

5.10 The crew shall have, in a room or place provided for this purpose, the time determined by Local Rules to prepare the map and transfer to their aircraft, prepare it for flight and taxi to their position at the standby point on the runway.

5.11 It is recommended a navigation task duration not higher than 45 minutes from departure to arrival taking the slowest crew speed as a reference.
5.12 Aircraft or paramotor equipment must have an endurance of the double of a task duration.
5.13 The use of an aircraft or paramotor equipment by two different crew contestants, is allowed if defined in the Local Rules. This is only allowed in case it does not hinder the execution of the intended number of tasks.
5.14 An online public noticeboard will be arranged for any public communication from the organization to the competitors.
5.15 All crews must declare a specific speed to fly the navigation tasks before the competition starts. Units used during the competition must be declared in the LR.

6 COMPETITION TASKS AND RULES

6.1 BRIEFINGS

6.1.1 Before the beginning of the competition the CD will organise a general briefing handling particular conditions relating to flights in competition sites, conditions of flights, ways to take off and land as well as any information useful for the pilots or operational procedures.
6.1.2 Free flights during the competition are not allowed except by authorisation of the CD.
6.1.3 The signals of marshals, the authorisations of take-off and the procedures of take off and landings will be reminded during the briefings.
6.1.4 Every pilot makes a commitment to follow and not disturb the briefings.
6.1.5 At least a briefing will take place every day.

6.2 LIMITATIONS OF FLIGHT

6.2.1 Any situation considered as dangerous to the public, the structures, another aircraft or the pilot himself are forbidden and will incur penalties or disqualification.
6.2.2 Flight over congregated persons is not allowed
6.2.3 Every pilot is responsible for paying attention to possible collisions and making efforts to avoid them.
6.2.4 Task will take place only in VMC. During the tasks, if the meteorological situation turns under IMC, the task could be cancelled. CD criteria will be imposed. Wind intensity limit must be given in the Local Rules depending on type of aircraft and their standard speed ranges. Organisation will create a coherent and safe criteria.
6.2.5 The quantity of fuel will be enough to double the intended flight task.

6.3 USE OF AUTOMATIC SCORING SYSTEMS

In both navigation and landing tasks, organisation must use whatever the technology is available in order to provide real time scoring:

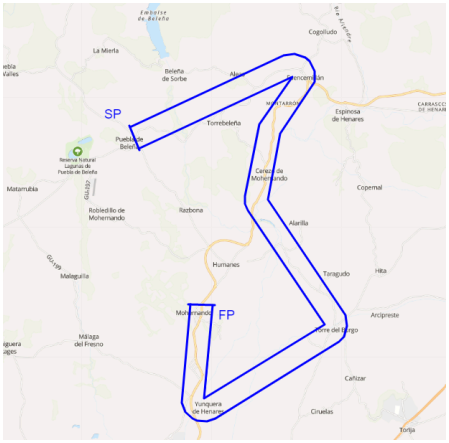
6.3.1 In navigation tasks a scoring software must be used to be displayed in real time.
6.3.2 During landing tasks, although it is preferable to have an automatic landing detector system, in the case this is not available, the organisation must arrange all human and technical resources needed to guarantee scoring results displaying as soon as possible, not lasting more than 1 minute since the task is executed by any contestant.
6.3.3 All above scoring results will be displayed as provisional until it is turned to final results.
6.3.4 A period defined in the Local Rules will be given to review all contestant results. After the review is made, the CD will turn from provisional to final results.

6.4 NAVIGATION TASKS

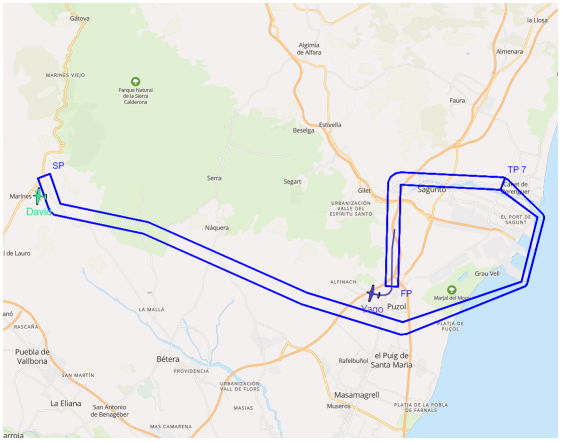
Competitors given times are related to the speed declared by each crew. It is recommended a navigation task duration not longer than 45 minutes from departure to arrival taking the slowest crew speed as a reference.
A whole competition is recommended to be designed with tasks from easy to more complex in terms of difficulty, unless a unique navigation task is defined for a competition. That is to say, in case of more than one navigation task in a competition it is recommended to design the tasks from the easy to more difficult. Easiest configuration is a standard corridor with fixed width and only starting point and finish point. To increase difficulty it will be used the following elements at organisation discretion:

- Variable corridor width (minimum width no lower than 0,1 Nm or 185 m).
- Known timed gates
- Hidden timed gates,
- RED or ORANGE zones areas.

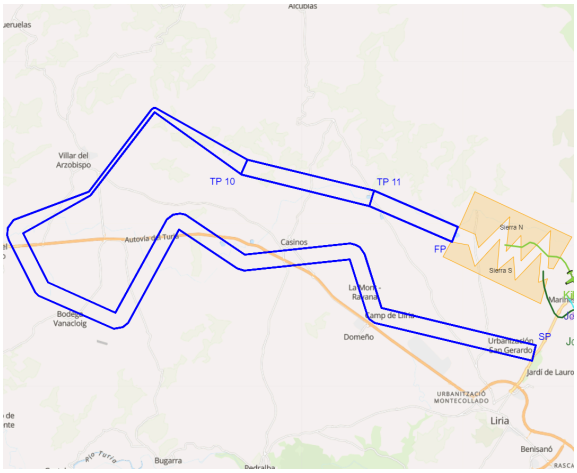
It is recommended a progressive use of these difficulty elements progressively along the competition, as shown below:



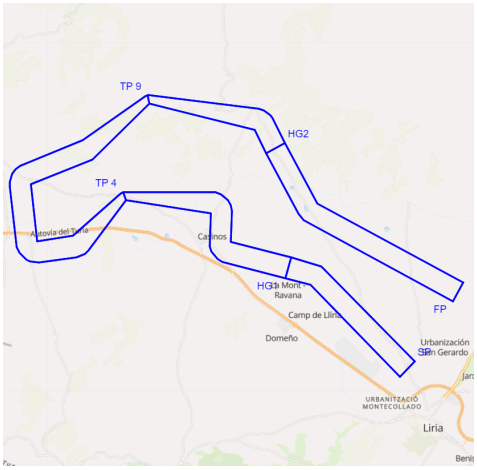
Example 1(simple corridor): SP, FP and fixed width. No timed gates, neither ORANGE zones



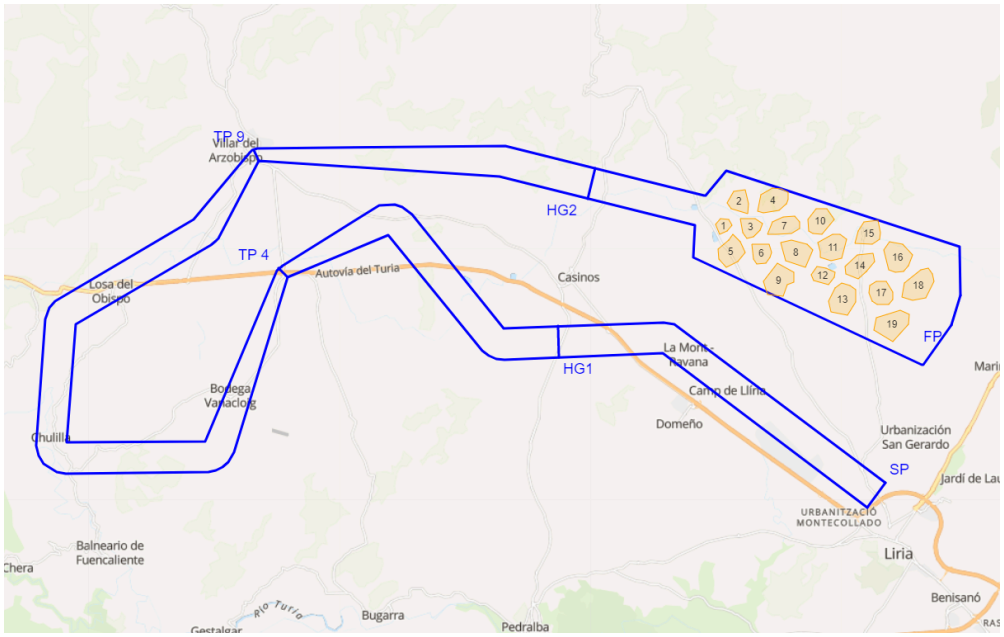
Example 2: task design with SP, FP, variable width corridor and 1 timed known gate. No ORANGE zones



Example 3: SP, FP, variable width, 2 timed known gates, ORANGE zone after FP.



Example 4: SP, FP, 2 hidden timed gates, 2 known timed gates, variable corridor, and no ORANGE zones.



Example 5 (maximum difficulty): SP, FP, 2 hidden timed gates, 2 known timed gates, variable corridor, and ORANGE zones within the corridor before FP.

6.4.1 Starting list: it must be published in advance by the organiser in the online noticeboard. Starting list must include the order of flights of all crews, and the following items: duration of preparation of the flight, quarantine area entry time, taking off time,

6.4.2 Quarantine area: this area will be used for preparing the flight, but also for avoiding personal contact between crews and maintaining the contestants out of any external input. Within the quarantine area, crews must prepare the flight during a given time. A set of items (instructions envelope) will be given at a given time to each crew.

6.4.3 Envelope instructions: A set of documents with the following information and instructions will be included:

- ➢ a map with the corridor and penalty zones,
- ➢ lines over visual references of the starting point, known timed gates and finish point drawn,
- ➢ a set of photos of known gates (including starting and finish points), Google Earth images can be used if this is included in the local rules,
- ➢ flight instructions with all particular operational procedures,
- ➢ take off time,
- ➢ a time table relative to the given take off time or starting point time (chronometer time) including: time of each crossing known timed gate, time of starting/finish point and time of landing. It must be defined if given times are relative to master time or chronometer starting time (from take off, or starting point passing).

6.4.4 Taking Off: Every crew must take off at their given time. Take off before and after the grace period will be penalised (ref. 6.7.5.).

6.4.5 Starting, finish, and known timed gates, must be clearly placed over visual recognisable references on both map and ground. Photos must be provided in the direction of flight by default if no other instruction is made in the Local Rules. Description of the exact part of the photo where the gate line is bounded, must be detailed.

6.4.6 Landing can be scored if briefed

6.4.7 After the finish point and before starting point, crews may find penalisation zones defined that must be avoided.

6.4.8 For each navigation task it is recommended that not more than two timed known gates and two hidden timed gates will be placed. However this may be changed in the local rules.

6.4.9 Prohibited Areas must be avoided for *safety* or *rules of the air* reasons. Penalty Areas should be avoided as well but for competition reasons.

6.4.10 Shape of the corridors: the turning points of the corridors should be rounded outside (arcs with a radius equal to the corridor width). If it's not technically possible to implement such shapes, then the shape should be mentioned in the local rules.

6.4.11 During a navigation task, display live tracking must be delayed in order to avoid giving any advantage to competitors. Recommended delay is 2 minutes. Bottom map might not be displayed as well in order to avoid advantage to competitors. Quarantine area may be used to waive the above measures.

6.5 LANDING TASKS

6.5.1 A landing deck must be marked in visually acceptable conditions according to the following scheme:

Landing direction

TARGET (0)	↑2 meters↓
A (10)	↑ 5 meters ↓
B (30)	↑ 5 meters ↓
C (50)	↑ 5 meters ↓
D (80)	↑ 5 meters ↓
E (120)	↑ 5 meters ↓

TAG (penalty points) | distance between lines

6.5.2 Main gear tires must be painted with a T or X mark at both sides each.

6.5.3 Under the principle of adapting the rules to the technology available, as landings are evaluated with a ALDS (Automatic Landing Detection System), the score will be obtained by taking the landing spot on the first strip where a tire begins to roll continuously along the rest of the deck, rolling at least one tire over each separation strip line until completing the entire deck.

6.5.4 Landing tasks might be powered or power idle if defined so in LR. The number of landing tasks must be in balance. Flaps may be used at pilot's discretion.

6.5.5 In order to optimise day time during a competition, it will be preferable to make a landing task just after a navigation task and crews are proceeding to make their final landing. It will be briefed if a second landing task is also scheduled.

6.5.6 During landing tasks it is allowed that crews have communication with team leaders or trainers. It is also allowed to check real time scoring in order to inform themselves about the ongoing results of their opponents, so they can decide the best strategy in subsequent landings.

6.6 JUDGING EQUIPMENT

6.6.1 Data Transmitters: this device must register the GNSS track with a resolution of at least one point per second, and send it in real time to a specific server that will be processed for scoring. This device will be used as the primary scoring source. In the case of use of smartphones as Data Transmitters, these must be conveniently protected or sealed to avoid any type of information exchange with crews.

6.6.2 Data Logger: Loggers may be used by crews as backup data. They can use all accepted loggers by any FAI commission.

6.6.3 Video content might be created and used to help landing tasks scoring.

6.6.4 Automatic landing detection systems might be used to help speed up scoring display. This system may integrate or exchange data from Data Transmitters in order to link results with specific crews.

6.6.5 Live streaming video cameras might be installed in the cockpit.

6.7 SCORING AND PENALTIES

6.7.1 The recommended scoring weight between navigation and landing tasks will be 50%, however this ratio can be

modified in the Local Rules. When a competition is designed in a single flight in the way that since take off and landing it is included navigation in a corridor, navigation with orange and red zones, and 1 or 2 landings, scoring may be calculated using penalty points directly in order to be displayed and understood easily in a TV broadcasting.

6.7.2 Scoring results are provisionals until they are declared as final results by the CD.

6.7.3 Navigation scores will be processed from the Data Transmitters track, unless it is found any technical reason to use an alternative track coming from the secondary logger (backup logger).

6.7.4 Tasks scoring is based on cumulative penalisation so, the less penalties given the best position is achieved. A task result (task standings) will be given in descent order of crews according to their penalisation results.

6.7.5 Navigation penalties:

PENALTIES - Navigation TASKS	POINTS	MISSED	MAXIMUM
Flight preparation - Leaving the quarantine after the designated time limit.	100		
Take-off 3 seconds before or 60 seconds after designated time (grace period). A transversal line to be crossed might be defined along the runway or beyond thresholds as reference to calculate the time limits with GNSS track. Location of this line should be mentioned in LR.	200		
Crossing through SP, known or hidden timed gates or FP within +/- 2 second grace period (points/second difference).	0		
Crossing through hidden timed gates after or before +/- 2 second (points/second difference).	1	100	200
Crossing through SP, FP, known timed gate after or before +/- 2 second (points/second difference).	2	100	200
Flying outside the corridor or into a penalty zone (ORANGE), within the first 5 seconds grace period).*	0		
Flying outside the corridor after the first 5 seconds grace period (points/second difference).*	1		
Flying into a penalty zone (ORANGE), after the first 5 seconds grace period (points/second difference).*	3		100
Flying into a prohibited zone (RED), within the first 5 seconds (grace period).	0		
Flying into a prohibited zone (RED), after the first 5 seconds (grace period) penalty per entrance.	200		
Backtrack.**	200		
Failure to follow airfield departure and arrival instructions.	100		

*The grace period seconds for penalty zones (ORANGE) can be different than 5 seconds, however if so it must be stated in the briefing before a task.

**Backtrack is defined as flight at an angle greater than 90 degrees when a flight recorder shows a deviation of more than 5 seconds in sequence from the intended direction of flight within a defined width corridor.

6.7.6 Landing penalties:

PENALTIES PER TAG STRIP- Landing TASKS	POINTS
Landing on target strip	0
A-strip landing	10
B-strip landing	30
C-strip landing	50
D-strip landing	80
E-strip landing	120
Land before the target line or after strip E, or off the deck	200
Increasing engine power or breaking during rolling within the deck	75

Abnormal landing	200
Abort before landing	150
Abort after landing without having gone through the whole grid	100
Failure to listen to the prescribed frequency	90
Violating any other rule imposed in the Local Rules and Regulations.	TBD
Violating aviation safety rules or putting another aircrew in an unsafe situation	500

6.7.7 Final task: The competition consists of a series of tasks. The competition organiser determines the number and distribution of navigation tasks and landing tasks. These serve as qualifications for the final. The final consists of a single navigation task followed by a single landing task, when the participants are returning from the navigation. The winner is declared when the last plane has landed, and the competition management has verified the landing.

The final should consist of between 3 and 15 participants. Participants start in reverse order of their placement in the qualification. All participants start equally in the final without any penalty points. If the final is live broadcasted, positions 2 and 3 can be distributed among the top 10, allowing commentators to focus extra time on following top three participants. This depends on the allocated airtime. If the TV production has less airtime, the focus will be on the top participants towards the end. This is done to crown a winner live at the end and to simplify scoring results for the viewers. The qualification also allows the TV production to prioritize camera and audio mounting, depending on what the production has available and what is technically feasible.

In cases where the final is broadcast live on TV or via live stream, it is recommended that the competition management collaborates with the production company regarding the duration of the competition and the setup. This is crucial for good TV entertainment. It is not recommended to have a live broadcast production lasting longer than 1-3 hours. The more professional the production, the longer it can potentially last, but in most cases, 1-2 hours would be more than sufficient to maintain excitement for the audience.

6.7.8 As tasks scoring as overall results, must both be permanently displayed in real time accessible to the public and spectators.

6.8 e-AIRSPORTS CHALLENGE

According to paragraph 2.1.2. of FAI Sporting Code General Section, above is developed the rules for competitions AirSports Challenge.

6.8.1 Single pilot operation
6.8.2 Using MSFS2020
6.8.3 Landing on deck not precision scoring.
6.8.4 No instruments restrictions, but it is not allowed to use any auto pilot system.
6.8.5 All standard airplanes can be used, but it must be able to be operated between 50-80 knots
6.8.6 Local rules can define a specific aircraft type used by all competitors in a competition. This must be notified at least 5 months before the competition starts.
6.8.7 Flight order and map is allowed the use on an electronic device, as an e-bag or on paper.
6.8.8 Pilots are allowed to use VR or any system they prefer to get the best outlook.
6.8.9 Pilot is responsible for all technical equipment, computers, etc. Anny technical error is the pilot's responsibility, if it is not regulated by the local rules.
6.8.10 Live streaming

PS. The computer, hardware, software etc is the pilot's responsibility, no manual.
This is how you join: https://www.dropbox.com/s/1bpjpa8w9qw8tlx/AirSports%20MSFS%20Client.pdf?dl=0
The Air Sports Live Tracking web page can be set with one or several minutes delay, so the live map is of no use for cheating.

NB! The goal of the e-game is to do it for the public. All participants will have a camera that films live during the competition. That makes cheating more difficult.