



FAI Sporting Code

*Fédération
Aéronautique
Internationale*

Section 10 – Microlights and Paramotors

Annex 9 Guidelines for Risk Assessment for Championships

To Take Effect on 1st January 2019

Section 10 and General Section combined make up the complete Sporting Code for Microlights and Paramotors

*Maison du Sport International
Av. de Rhodanie 54
CH-1007 Lausanne
Switzerland
Tél. +41 (0)21 345 10 70
Fax +41 (0)21 345 10 77
E-mail: info@fai.org
Web: www.fai.org*

FEDERATION AERONAUTIQUE INTERNATIONALE

Maison du Sport International, Av. de Rhodanie 54, CH-1007 LAUSANNE, Switzerland

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1 INTRODUCTION

1.1 DESCRIPTION

Important Note: safety in all championships is the sole responsibility of the organiser and not FAI. This document is published as a guideline only.

The purpose of providing such guidance is to help improve the safety of competitors, and to assist championship organisers in ensuring that they have considered all risk elements in relation to their championships and taken appropriate action to minimise such risks.

The text has been written to encapsulate all of the safety related information and rules of a championship into a single document that is comprehensible for local authorities, airfield site owners, and accident investigators, many of whom may be unfamiliar with the sports of paramotor and microlight flying. As such, it repeats some information that is already in S10 and the Local Regulations. It may also be useful in assisting prospective championship organisers in finding sites, by demonstrating to site owners that they have considered all safety issues carefully.

Championship organisers may of course adapt and modify the text provided in this document, to suit the context of their own local venue, national regulations, and style of championship. These guidelines recommend that particular consideration should be paid to issues relating to public spectators on the site. Organisers may wish to nominate a Chief Safety Officer, who has overall responsibility for safety on the championship site.

1.2 PROGRAMME DATES

Arrival of pilots, aircraft inspection, registration:

First Competition briefing:

Contest Flying Days:

Closing Ceremony, Prize-giving:

1.3 OFFICIALS

Event Director:

Paramotor Competition Director:

Chief Marshal:

Chief Safety Officer:

Site contact:

1.4 TIMINGS

During official training and competition flying days, tasks will be flown between XXXX and XXXX.

A NOTAM or equivalent will be issued by the event organiser to cover the event.

1.6 SITE LAYOUT

Detailed maps showing the layout of the site should be included in the appendix and the details described here. Clearly indicate which areas are accessible to public visitors, which are 'Airsides' and accessible to pilots and marshals only, and the area of the camp site. Flight decks should be indicated, and a minimum separation zone between flight decks and any spectators.

Also describe who has responsibility for different areas of the site, for example – Marshals are responsible for Airside, Local Airfield staff are responsible for camping areas. Etc.

2 GENERAL SAFETY

2.1 EVENT MANAGEMENT

Provide details of the team running the event and the site. What experience do they have? How many volunteers will there be? What will be specific responsibilities?

2.2 ANTICIPATED NUMBERS AND VISITORS

How many pilots, team leaders, and supporters are expected to be on site during the championship?

What is your policy on public spectators attending? And if so, how many do you anticipate?

On what basis have you made the estimates for these figures?

Are any spectators likely to be pilots who can reasonably be expected to be familiar with the risks inherent to the sport, particularly in relation to the dangers present in airside areas? Or are they likely to be new to the sport and unaware of the dangers? Are they likely to bring small children? Or are they likely to be elderly?

2.3 ACCESS AREAS

Access zones should be clearly signposted to indicate which areas are accessible to public visitors, which are 'Airside' and accessible to pilots and marshals only, and the area of the camp site. Flight decks should be indicated, and a minimum separation zone between flight decks and any spectators.

2.4 WARNING SIGNS

Warning signs will be placed (for example):

- 1) At all entrances to the Competition Site
- 2) Along the boundaries of 'Airside' areas.
- 3) Along the boundary of the camping area that segregates it from engine testing and fuelling areas.

These signs are intended to warn the public of potential hazards, and to communicate the access level

2.5 BOUNDARIES

How will specific boundaries between airside and public viewing areas be defined?

2.6 SEPARATION ZONES AND OVERFLYING

The nearest point of any Paramotor deck to any viewing area should be separated from spectators by a separation zone of at least 25m.

There will be a rule in place for no overflying of public areas, including the camp site and any viewing areas around decks.

2.7 TRADERS

Will traders be operating at your event? If so, what is your policy regarding their public liability insurance and their own Risk Assessments?

2.8 RUNNING ENGINES

There will be no running of engines in any area other than those designated 'Airside'.

2.9 CAMPING

Will you allow barbeques or fires in the camp site? What about legitimate camping cooking equipment such as gas stoves will be allowed. Is power provided to the campsite? What is your policy on the use of generators?

2.10 PUBLIC FOOTPATHS

Are there any public footpaths crossing the airfield site? If so, how will these be signposted and how will you ensure that members of the public are kept safe?

3 COMPETITION SAFETY

Many of the following rules are extracted from the FAI Sporting Code model Local Regulations (S.10 Annex 3) document (found at www.fai.org/cima-documents). They are in place primarily for safety reasons, and therefore repeated here.

3.1 REGISTRATION (S10 A3 1.10.1)

On arrival the team leader and members shall report to the Registration Office to have their documents checked and to receive supplementary regulations and information. The following documents are required:

- Pilot License and qualifications.
- Evidence of competitor's identity.
- Valid FAI Sporting License for pilot and navigator.
- Aircraft Certificate of Airworthiness or Permit to Fly.
- Minimum speed declaration (not required for Paramotors or foot-launched Microlights).
- Evidence of conformity to class rules.
- Certificate of Insurance.
- Receipt for payment of entry fees.

The Registration Office will be open as indicated on the information board.

Registration forms may be inspected by Team Leaders on request prior to the start of competition flying.

3.2 FLYING DURING ARRIVAL PERIOD AND FREE FLYING

What is your organisational policy on free flying during the period of the championship and how will this be controlled?

EG. Do pilots need to register before they can fly, after arriving on site?

3.3 PILOT AND NAVIGATOR QUALIFICATIONS (S10 A3 1.10.2)

A competing pilot shall be of sufficient standard to meet the demands of a national competition, and be permitted to fly legally in their country of original.

3.4 AIRCRAFT AND ASSOCIATED EQUIPMENT (S10 A3 1.10.3)

Aircraft and equipment provided by the competitor must be of a performance and standard suitable for the event.

Each aircraft must possess a valid Certificate of Airworthiness or Permit to Fly not excluding competition flying. This document must be issued in or accepted by the country of origin of the aircraft or the country entering it or the country of the organisers. The aircraft must comply with the FAI definition of a Microlight or Paramotor at all times (S10 1.3).

The aircraft shall fly throughout the championships as a single structural entity using the same set of components as used on the first day except that propellers may be changed provided that the weight limit is not exceeded and the Certificate of Airworthiness or Permit to Fly is not invalidated. (S10 4.17.4)

All aircraft must be made available during the Registration period for an acceptance check in the configuration in which they will be flown. The organisers have the right to inspect for class conformity and airworthiness and, if necessary, ground any aircraft for safety reasons at any time during the event.

All aircraft must be equipped with a simple method of sealing the fuel tank.

3.5 PILOT RESPONSIBILITIES

Each pilot is responsible for their own proper conduct, for ensuring that they do not fly if ill or suffering from any disability which might endanger the safety of others and that they have read and understand the rules. No pilot may fly during the training period until they have been briefed.

3.6 FLYING AND SAFETY REGULATIONS

3.6.1 BRIEFING

Briefings will be held for team leaders and/or competitors on each flying day. The time and place for briefing meetings and any postponements will be prominently displayed.

All briefings will be in English and be recorded in notes, by tape recorder or video. A Full task description, meteorological information, flight safety requirements, penalties and details of any prohibited or restricted flying areas will be given in writing, as a minimum, to team leaders, Jury members and Stewards. (S10 4.21)

Procedures for flight preparation, takeoff, flying the task, landing and scoring together with any penalties will be specified in each task description. (S10 4.21)

Flight safety requirements given at briefing carry the status of regulations. (S10 4.21)

Team Leaders' meetings, in addition to briefings, may be called by the Director, but shall be held within 18 hours if requested by five or more team leaders. (S10 4.22)

3.6.2 COMPLIANCE WITH THE LAW

Each competitor is required to conform to the laws and to the rules of the air of the country in which the championships are held. (S10 4.23.1)

3.6.3 PREPARATION FOR FLIGHT

Each aircraft shall be given a pre-flight check by its pilot and may not be flown unless it is serviceable. (S10 4.23.3)

3.6.4 FLIGHT LIMITATIONS

Each aircraft shall be flown within the limitations of its Certificate of Airworthiness or Permit to Fly. Any manoeuvre hazardous to other competitors or the public shall be avoided. Unauthorised aerobatics are prohibited. (S10 4.23.2)

3.6.5 DAMAGE TO A COMPETING AIRCRAFT

Any damage shall be reported to the organisers without delay and the aircraft may then be repaired. Any replacement parts must be replaced by an identical part, except that major parts such as a wing for a paraglider controlled aircraft may be replaced by a similar model or one of lesser performance. Note. Change of major parts may incur a penalty. (S10 4.23.4)

An aircraft may be replaced by permission of the Director if damage has resulted through no fault of the pilot. Replacement may be only by an identical make or model or by an aircraft of similar or lower performance and eligible to fly in the same class. (S10 4.23.5)

3.6.6 TEST AND OTHER FLYING

No competitor may take-off on a competition day from the contest site without the permission of the Director. Permission may be given for a test flight but if the task for that class has started the pilot must land and make a competition take-off on the task. Practising prior to a task is not permitted. (S10 4.25)

3.6.7 FITNESS (S10 A3 1.11.7)

- A pilot may not fly unless fit. Any injury, drugs or medication taken, which might affect the pilot's performance in the air, must be reported to the Director before flying.
- Every pilot has the full responsibility to fight against doping. Anti doping control may be undertaken on any competitor at any time.
- The decision to impose anti-doping controls may be taken by the FAI, the organiser or the organiser's national authority.
- All relevant information can be found on the FAI Web site: www.fai.org/commission/cimp & www.fai.org/anti-doping

3.6.8 AIRFIELD DISCIPLINE

Marshalling signals and circuit and landing patterns will be given at briefing and must be complied with. Non-compliance will be penalised. Indicative circuit patterns are attached to this document

No engines will be started in any area other than those designated AIRSIDE. Pilots should perform normal safety and clearance checks, and be heard to shout 'CLEAR PROP' before engines are started. Failure to do so, if noted by marshals, may result in a penalty at the discretion of the director.

3.6.9 COLLISION AVOIDANCE

A proper look-out must be kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first regardless of height separation.

A competitor involved in collision in the air must not continue the flight if the structural integrity of the aircraft is in doubt. (S10 4.24.5)

During a navigation **along a leg**, competitors must not backtrack along the track line against the direction of the task. If there is a need to backtrack, competitors must leave the track line and fly back well clear of it before rejoining the track line at an earlier point.

Backtracking is defined as flying with an angle of greater than 90 degrees in respect to the intended flight direction. This limitation is extended to the corridor defined by the width used to score gates in the task.

3.6.10 CLOUD FLYING

Cloud flying is prohibited and aircraft shall not carry gyro instruments or other equipment permitting flight without visual reference to the ground. (S10 4.24.6)

3.6.11 PENALTIES (S10 A3 1.15.2)

In general, any infringement of any flying, safety or task regulation will result in penalty.

Actions which will normally result in disqualification:

- a. Bringing the event, its organisers, the FAI or the sporting code into disrepute.
- b. The use of banned substances.
- c. Unauthorised interference with an aircraft in a Secure Area.
- d. Flight outside the specified flight envelope of the aircraft or dangerous flying.
- e. Flight or attempted flight with prohibited equipment.
- f. Unauthorised assistance during a task.
- g. Interference with the firmware or software of a CIMA approved GNSS flight recorder

3.6.12 FUELLING

There is to be strictly NO refuelling conducted in areas anywhere other than those described on the maps provided and described below. This applies particularly to the camping areas, and this rule will be reiterated in pilot briefing and published notes.

There shall be designated refuelling areas adjacent to the Airside zone entrance. These will be signposted and referenced in the main Competition Briefing. Adequate provision of fire extinguishers will be provided at this site as detailed above.

4 EMERGENCY MEASURES

4.1 MEDICAL ASSISTANCE

Describe the medical cover that you will have available at the event:

- How many qualified and current first aiders will be on site? Where will the list of these will be kept?. How will they be distinguishable on the field? i.e. by a specific marker, either a hat or arm band?
- Where will first aid kits be kept in relation to deck areas or wherever flying activities are taking place?
- Where will the central first aid location be? What will it consist of? i.e. a segregated area within the competition briefing room?

4.2 EMERGENCY SERVICES

The Ambulance, Air Ambulance, Fire, and Police services will be notified of the Championship's location. Describe the location of the nearest Hospital (with Accident & Emergency).

How will the site entrance will be signposted from the road for emergency services access? In the event of an emergency, what is your procedure for assigning marshals to guiding emergency services to the site?

4.3 FIRE

Describe the provisions you will make to protect against fire:

Numbers, types, and locations of fire extinguishers. Ensure that extinguishers in use been recently serviced.

5 RISK ASSESSMENT

5.1 CORE DEFINITIONS

Hazard: anything that can cause harm

Likelihood - the chance or probability that someone or something may be harmed by a hazard.

Risk = Severity of Hazard x Likelihood of Occurrence.

5.2 TYPES OF HAZARD

Fire in the Air; Mid-Air Collision; Heavy Landing; Fuel Exhaustion; Pilot Incapacitation on the Ground; Pilot Incapacitation; Structural Failure; Accident involving Runaway Aircraft; Aircraft Crash; Articles Falling from Aircraft; Fire on the Ground; Pilot Intoxication; Unauthorised Air Displays; Un-airworthy Aircraft; Contravention of ANO/Rules of the Air; Injury from Propellers – Pilots; Injury from Broken Propellers – Spectators.

5.3 SEVERITY OF HAZARD

The severity of a hazard should be assessed under the following headings, depending on the possible outcome should the hazard become a reality, and allocated a score:

Trivial	Minor Injury	Serious Injury	Single Fatality	Multiple Fatality
1	2	3	4	5

5.4 LIKELIHOOD OF OCCURENCE

The likelihood of the hazard occurring should be assessed against the following headings and again allocated a score:

Highly Unlikely	Possible	Quite Possible	Likely	Highly Likely
1	2	3	4	5

5.5 RISK MATRIX – GENERAL SAFETY

The following risks and mitigating factors are provided as an example. Competition organisers should use what is applicable to their championships and venue, delete any that are not relevant, add any new ones that are appropriate and fill out their own assessment of the severity and likelihood of the risks.

Hazard	S Severity	L Likelihood	S x L Rating	Mitigation	Mitigating Factor
<i>Higher visitor numbers than expected. Associated crowd crushing issues.</i>				<i>Niche sport with limited public recognition or appeal. Site is large and has experience of hosting public events.</i>	
<i>Unauthorised public entry to airside areas</i>				<i>Visible barriers separating viewing areas from airside ones, with clear signposting of dangers. Marshals to exercise vigilance. Existing familiarity of most visitors with the dangers associated with active airfields.</i>	
<i>General trip / slip hazards</i>				<i>Site is on flat or very slightly sloping grass that will be mown shortly before the event. It is well drained, and not expected to be muddy. Litter bins will be placed throughout site to encourage people not to drop litter on the ground.</i>	

<i>Marquee collapse / damage</i>				<i>Briefings will take place in the marquee, which may also be used as a social tent within the camp site. This will be set up by a professional team, and checked by the organisation before use.</i>		
<i>Heat stroke / dehydration of visitors in hot weather</i>				<i>Catering facilities are available on site that can provide shade, water, or first aid.</i>		
<i>Fire in public areas</i>				<i>The public area at highest risk of fire is the catering area. This will be provided with adequate fire extinguishers. A central bonfire may be provided by the Organisation in an open area separated from the tents by a reasonable margin of space.</i>		
<i>Fire in the camping areas</i>				<i>Proper camping cooking equipment such as gas stoves will be allowed, and also barbeques in the camp site. Safety briefing to include use of gas cookers. Bonfires will not be allowed in the main camping area. Fire extinguishers located at HQ and Kitchen, and water outlet points are distributed throughout the campsite.</i>		
<i>Moving vehicles passing pedestrians</i>				<i>Road ways into the camp site will be very little used after the initial setup. A speed limitation of 5mph within the camp site area will be applied.</i>		
<i>Public drunken behaviour</i>				<i>General vigilance from organisation team and competitors. Offenders may be expelled from site if necessary.</i>		
<i>Public footpaths (if applicable)</i>				<i>Entry points to the area will be clearly signposted on each side, and monitored by marshals during flying activity.</i>		
<i>Hazards associated with traders (if applicable)</i>				<i>Traders required to conduct their own risk assessments and demonstrate evidence of public liability insurance</i>		

5.6 RISK MATRIX – COMPETITION SAFETY

The following risks and mitigating factors are provided as an example. Competition organisers should use what is applicable to their championships and venue, delete any that are not relevant, add any new ones that are appropriate and fill out their own assessment of the severity and likelihood of the risks.

Hazard	S Severity	L Likelihood	S x L Rating	Mitigation	Mitigating Factor
<i>Fire in the Air</i>				<i>Pilot's own pre-flight checks, Aircraft airworthiness</i>	
<i>Mid-Air Collision</i>				<i>Minimum hours requirement, Air Law, Safety Briefing, Marshalling, Task Layout, Circuit pattern layouts</i>	
<i>Heavy Landing</i>				<i>First Aiders. Ambulance Service.</i>	
<i>Fuel Exhaustion</i>				<i>Ability to land in a wide variety of small spaces</i>	
<i>Pilot Incapacitation on the Ground</i>				<i>First Aiders. Ambulance Service.</i>	
<i>Pilot Incapacitation</i>				<i>First Aiders. Ambulance Service.</i>	
<i>Structural Failure</i>				<i>Periodic & Pre-flight checks</i>	
<i>Accident involving Runaway Aircraft</i>				<i>Improbable for foot-launched aircraft. All aircraft have sprung hand-throttles and caged propellers.</i>	

				<i>Standard safety procedures. Paramotor decks are separate from microlight decks</i>		
<i>Aircraft Crash</i>				<i>Strict rules covering free-flying and other aerial activities on the site. For precision tasks, First Aiders, Ambulance Service.</i>		
<i>Articles Falling from Aircraft</i>				<i>Safety Briefing. Standard safety procedures. Over-flying the Airfield Service Area is forbidden.</i>		
<i>Fire on the Ground</i>				<i>Designated re-fuelling areas, supplied with adequate fire extinguishers</i>		
<i>Pilot Intoxication</i>				<i>Safety Brief. Peer pressure. Threat or execution of sanctions</i>		
<i>Unauthorised Air Displays</i>				<i>Safety Brief. Threat or execution of sanctions including disqualification</i>		
<i>Un-airworthy Aircraft</i>				<i>Pilot pre-flight checks. Aircraft forbidden to fly by Competition Director/Chief Marshal</i>		
<i>Contravention of Competition Flying Rules</i>				<i>Penalties/Disqualification/ Report to NAC</i>		
<i>Injury from Propellers – Pilots</i>				<i>Airworthy aircraft, no assistance allowed – explicit in Rules.</i>		
<i>Injury from Broken Propellers – Spectators</i>				<i>Segregation of airfield and spectator area by “no-man’s land”. No motors to be run in the Airfield Service Area. Over-flying the Airfield Service Area is forbidden.</i>		
<i>Storage of fuel in quarantine</i>				<i>Storage of fuel in safe, marked zone separated from public.</i>		

6 ACTION

6.1 PROCEDURES

In the event of an accident, describe the procedure that will be followed. For example:

- Marshals or other first responders report to Chief Marshal, who should be nearby.
- Chief marshals oversee first aid with local first aiders, and report incident over radio to Event Director or their deputy.
- Event director (or deputy) distributes information to local emergency services as appropriate, and liaises with them to guide to site.

6.2 SANCTIONS AVAILABLE

Penalties as described in Championships Rules and Regulations document

Disqualification

Ejection from airfield by security

Local procedures for reporting on Infringements of Air Navigation Legislation

Police attendance

6.3 POLICY

Zero tolerance with respect to any violation of Rules or safety instructions given by the competition director in briefing.

6.4 DISTRIBUTION

Organising NAC Chief Executive

Competition Director

Event Director

Chief Marshal

Chief Safety Officer

CIMA Competition Monitor

8 APPENDIX

8.1 FIRST AID CERTIFICATES

Attach the current first aid certificates of designated first aiders to this document.

8.2 SITE MAPS

Site maps should be included that show the site layout, positions of decks, camping, and refuelling zones. Areas accessible to public and areas that are designated 'Airside'. Also larger scale maps with indicative circuit patterns from decks accounting for take off and landing in a range of wind directions – particularly with reference to any existing circuit patterns used by other airfield traffic (if any).