S10 Editor’s report
Proposed Section 10 amendments 2016

S10 Editor
Barney TOWNSEND (GBR)

S10 Committee
Jose-Luis ESTEBAN (ESP)
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November 2016 v2
S10 Editor’s report, October 2016

- S10 Editor has made some editorial changes to S10; these include spelling corrections and updating links to the FAI website.
- S10 Editor has split into S10 (main body) and then 7 separate annexes.
  
  • 1) Conformation requirements
  • 2) Guide for Championship organisers
  • 3) Model Local Regulations
  • 4) Task Catalogue
  • 5) Notes for Directors, officials, observers
  • 6) GNSS Flight recorders
  • 7) Paramotor Slalom LRs

- 21 S10 amendment proposals were received, either through the CIMA WIKI or directly to S10 Editor. The actual number was slightly more than this, but some of the CZE proposals that make the same amendment to a number of different tasks have been combined for brevity.

NOTE version two of this document (published 09/11/17) includes an additional proposal 21

- Proposals in this document have been reordered from those uploaded to the CIMA Wiki; they are presented in order of their occurrence in S10.

- Competition Directors must use the model local regulations and model task catalogue unless changes are approved by CIMA. This ensures a satisfactory standard of task setting and avoids numerous problems.

- The voting guide for Sub-Committee Chairmen has been included in this report to help the Microlight and Paramotor Sub-Committee Chairmen.

- Sub-Committee Chairmen; please fill out the enclosed voting sheet

Changes for Version 2 of this document.

Proposal 21 added. This was submitted in time for the deadline but was inadvertently omitted through the loss of an email. To save confusion on numbering, it has been inserted as number 21, rather than in the correct S10 order as all the other proposals have been.

Text amended in proposal 3 following review by proposer.
Sub-committee voting guide
For Sub-committee Chairman

1. Votes must follow FAI rules
Paramotor and Microlight sub-committees shall vote on S10 proposed amendments, according to a decision taken during the CIMA 2013 plenary. These votes therefore have to be conducted according to FAI statutes and by-laws.

2. Votes are limited to S10 amendments
Votes are limited to S10 proposed amendments according to the list provided by the S10 Editor. Any new items must receive 2/3 majority support before being discussed. Any issue affecting CIMA in general must be raised during a plenary session and be voted on accordingly.

3. Eligible votes only
Only those who are eligible to vote will have their votes counted. SC Chairmen must ensure that only valid votes are counted. These will include (for example):
NAC Delegates
NAC Alternate Delegates if the Delegate is not present
NAC Voting Representatives if neither the Delegate nor the Alternate is present.
Proxies, if they have been accepted by the FAI office.
The FAI representative can confirm who is eligible and will provide country panels which should be distributed to eligible voters.

4. Record all decisions
All votes (and any amendments or other relevant comments) must be recorded. The SC Chairmen should ask someone to act as a meeting secretary and take Minutes. Any votes not recorded in Minutes are not valid. These Minutes shall be published and distributed to CIMA Delegates before the start of the Plenary sessions.

The Minutes can be short - just a list of the votes. Any further amendments or clarifications should be included in the Minutes. The Minutes should be sent out via the CIMA email lists as soon as the meetings have finished.

Barney Townsend
October 2016
Proposal 1a

Proposal from

Wojtek DOMAŃSKI (POL)

Proposal title

01a - Change of jets

Existing text

4.17.4 An aircraft shall fly throughout the championships as a single structural entity using the same set of components used on the first day. However, propellers may be changed to enhance performance providing that the weight limit of the aircraft is not exceeded, and that the certificate of airworthiness is not prejudiced.

New text

4.17.4 An aircraft shall fly throughout the championships as a single structural entity using the same set of components used on the first day. However, propellers or carburettor jets may be changed (before a task) to enhance performance providing that the weight limit of the aircraft is not exceeded, and that the certificate of airworthiness is not prejudiced.

Reason

The issue of possibility to change jets before a task was widely discussed during the briefings of WPC’2016 in Popham. A majority of team leaders and pilots opted for allowing such a possibility within Section 10. Arguments are:
- possibility of jet changes will balance fairness to pilots flying with motors with diaphragm pump,
- amendment to section 10 will sanction the practise of jet changes done silently anyway.
**Proposal 1b**

**Proposal from**

Wojtek DOMAŃSKI (POL)

**Proposal title**

01b - Change of jets for paramotors

**Existing text**

4.17.4 An aircraft shall fly throughout the championships as a single structural entity using the same set of components used on the first day. However, propellers may be changed to enhance performance providing that the weight limit of the aircraft is not exceeded, and that the certificate of airworthiness is not prejudiced.

**New text**

4.17.4 An aircraft shall fly throughout the championships as a single structural entity using the same set of components used on the first day. However, propellers or in the case of paramotors carburettor jets may be changed (before a task) to enhance performance providing that the weight limit of the aircraft is not exceeded, and that the certificate of airworthiness is not prejudiced.

**Reason**

This is almost the same amendment like 01a, except that it impacts only paramotor class. The issue of jet changes had been discussed on WPC'2016 meeting, but I am not sure if other microlight classes share the same point of view. In case Microlight Subcommittee will not recommend amendment 01a, then Paramotor Subcommittee will have an option to decide separately voting over amendment 01b.
Proposal 2

Proposal from

Wolfgang Lintl, GER delegate and CIMA President

Proposal title

Clarification of rules for backtracking

Existing text

4.24.5 During a navigation along a leg, competitors must not backtrack along the track line against the direction of the task. 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.

New text

4.24.5 During a navigation along a leg, competitors must not backtrack along the track line against the direction of the task. 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. **Flying a track or part of a track twice is counted as backtracking.**

Reason

At the WMPC we had a case, that a competitor realised, that he was wrong at one turnpoint, flying part of the remaining track, returned to one of the right entry points and flew part of the track twice. This was not in the spirit of the task, but not against the existing rules. The jury had to accept the protest of this competitor against penalties, because the rules are not clear enough.
Proposal 3

Proposal from
Rob HUGHES (GBR)

Proposal title
Amendment to backtracking definition

Existing text
4.24.5
During a navigation along a leg, competitors must not backtrack along the track line against the direction of the task. 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.

And

A3 1.11.9
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.

New text
4.24.5
During a navigation along a leg, competitors must not backtrack along the track line against the direction of the task under any circumstances. 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 along the track line within the width of the corridor defined by the scoring gates against the direction of the task or rejoining the track line at a point prior to the point where you left it.

And

A3 1.11.9
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 under any circumstances. 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 along the track line within the width of the corridor defined by the scoring gates against the direction of the task or rejoining the track line at a point prior to the point where you left it.
The current wording appears only to see backtracking as a Flight Safety & Collision Avoidance issue and only restricts backtracking within the width of the corridor defined by the width used to score gates in the task. It does not prohibit the repeated flying of the track line by a competitor in order to gain competitive advantage provided that they fly to a previous point on the track line whilst remaining outside the corridor.
Proposal 4

Proposal from
Petr Jonáš (CZE)

Proposal title
Change to balance of tasks for microlights

Existing text
S10 4.29.3 Tasks shall, as far as practicable, conform to the following guidelines in standard championships:
For Microlight aircraft classes AL, WL WF and GL
A Tasks for flight planning, navigation, etc with no fuel limit: 55% of the total value of the tasks flown.
B Tasks for fuel economy, speed, duration, etc with limited fuel: 30% of the total value of the tasks flown.
C Precision tasks: 15% of the total value of the tasks flown.
For Paramotor aircraft classes PF and PL
A Navigation: 33% of the total value of the tasks flown.
B Economy: 33% of the total value of the tasks flown.
C Precision: 33% of the total value of the tasks flown.

New text
4.29.3 Tasks shall, as far as practicable, conform to the following guidelines in standard championships:
For Microlight aircraft classes AL, WL WF and GL
A Tasks for flight planning, navigation, etc with no fuel limit: 65% of the total value of the tasks flown.
B Tasks for fuel economy, speed, duration, etc with limited fuel: 20% of the total value of the tasks flown.
C Precision tasks: 15% of the total value of the tasks flown.
For Paramotor aircraft classes PF and PL
A Navigation: 33% of the total value of the tasks flown.
B Economy: 33% of the total value of the tasks flown.
C Precision: 33% of the total value of the tasks flown.

Reason
There is a discrepancy between this section and the Annex 3, where the guidelines for percentages are different. This should be harmonized. Let’s keep the percentage of the navigation tasks high, because that shows the best the skills of the whole crew and they are also the most popular.
The tasks for economy, speed, duration should be kept low because they are less popular, are more dangerous, often press the crew to fly on the edge of the aircraft possibilities (high speed) or on the edge of the regulations (low or no fuel). The result of these tasks also depends largely on the aircraft performance, rather than on the skill of the crew and therefore should be kept to a minimum.
The tasks for precision should can be kept as it is, because there is a very thin line between full score and 0 and also because they practically only engage the pilot, and not the navigator. They should nicely complement the navigation tasks by adding a precision task at the end of each navigation task.
Proposal 5

Proposal from
Wolfgang Lintl, GER delegate and CIMA President

Proposal title
Editorial change

Existing text
4.31.5 Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty. Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).

New text
4.31.5 Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty. Deck length shall be corrected for altitude at the rate of a 7% increase for every full 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 3.41.5).

Reason
clarification how to use this regulation
delete the wrong reference
Proposal 6

Proposal from
Petr Jonáš (CZE)

Proposal title
Microlight takeoff and landing

Existing text
4.31.5
Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty.
Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).

New text
4.31.5
Take-offs and landings by Microlights in all tasks shall be completed within using a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty.
Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).

Reason
To maintain consistency with changes to Annex 4, where landing over obstacle is proposed to be changed to use 100 x 25m deck.

Reason
To maintain consistency with changes to Annex 4, where landing over obstacle is proposed to be changed to use 100 x 25m deck.
Proposal 7

Proposal from
Petr Jonáš (CZE)

Proposal title
Definition of photographs to be used

Existing text
None

New text
4.31.8 The en-route photographs used for navigation tasks of Microlights must be taken from the air, between 150 and 300m AGL in the direction of the track, not more than 30 degrees off the track direction. The object on the photograph, that has to be found by the competitor, must not lie more than 200m off the track.

Reason
The object to be found must be clear and on the track and the photo needs to be of good quality to enable the crews to find them. Pictures taken from Google Earth and such are simply not acceptable for an international competition.
**Proposal 8**

**Proposal from**
Wolfgang Lintl, GER delegate and CIMA President

**Proposal title**
Clarification for computing team results

**Existing text**

4.34.11 The team score shall be computed from
a) the sum of the scores of the top three pilots of each country in each class in each task grouped together in:
   - Classes AL1, AL2, WL1, WL2, GL1 and GL2
   - Each valid Paramotor class which has a minimum of 8 pilots.
b) a combined Nation Score for paramotor classes shall be computed from the sum of the scores of:
   - top 3 pilots in PF1 class
   - top 3 pilots in PL1 class
   - 1 top crew in PF2 class
   - 1 top crew in PL2 class
   - 1 top female pilot in PF1f class
   of each country in each task grouped together.

**New text**

4.34.11 The team score shall be computed from
a) the sum of the scores of the top three pilots of each country in each class in each task grouped together in:
   - Classes AL1, AL2, WL1, WL2, GL1 and GL2
   - Each valid Paramotor class which has a minimum of 8 pilots.
b) a combined Nation Score for paramotor classes shall be computed from the sum of the scores of:
   - top 3 pilots in PF1 class excluding any PF 1 f participant
   - top 3 pilots in PL1 class
   - 1 top crew in PF2 class
   - 1 top crew in PL2 class
   - 1 top female pilot in PF1f class
   of each country in each task grouped together.

**Reason**
If the PF 1 class is mixed with PF 1 f pilots, and the female pilot is on a high ranking, it is unclear with the existing text, how to calculate her result into the Nation score.
Proposal 9

Proposal from

Wolfgang Lintl, GER delegate and CIMA President

Proposal title

Clarification in case of oil injection 2 stroke engines

Existing text

5.4 FUEL
5.4.1 The maximum amount of fuel, which may be carried for records, is stated in S10 Chapter 3. Fuel shall be measured by mass, or volume. For Championships, the maximum amount of fuel permitted for limited fuel consumption tasks is 15 kg for aircraft flown solo and 22 kg for aircraft flown with two people, or the equivalent in litres, although lesser amounts may be stated at briefing.
5.4.2 The permitted amount of fuel shall be put into the aircraft tank when it is empty.
5.4.3 An official observer must control fuelling. In championships this may also be done by a competitor or team leader from a rival team.
5.4.4 An official observer must seal the tank. In championships, sealing of tanks is optional if aircraft are moved under supervision of officials directly to the take off place.

New text

5.4 FUEL
5.4.1 The maximum amount of fuel, which may be carried for records, is stated in S10 Chapter 3. Fuel shall be measured by mass, or volume. For Championships, the maximum amount of fuel permitted for limited fuel consumption tasks is 15 kg for aircraft flown solo and 22 kg for aircraft flown with two people, or the equivalent in litres, although lesser amounts may be stated at briefing.
5.4.2 In case of 2 stroke engines with oil injection the mass of oil for a mixture ratio of 1:50 has to be added to the mass of allowed fuel.
5.4.3 The permitted amount of fuel shall be put into the aircraft tank when it is empty.
5.4.4 An official observer must control fuelling. In championships this may also be done by a competitor or team leader from a rival team.
5.4.5 An official observer must seal the tank. In championships, sealing of tanks is optional if aircraft are moved under supervision of officials directly to the take off place.

Reason

In some rare cases, competitors use two stroke engines working with oil injection. Current regulation are not clear, how to measure the given amount of fuel.
Proposal 10

Proposal from
Petr Jonáš (CZE)

Proposal title
Definition of gates

Existing text
A3 1.13.4
GATES, TURNPOINTS AND MARKERS
Gates are normally a straight line 250m wide perpendicular to the briefed track.
Gates may be:
- Known gates. Their position and height to be crossed will be briefed.
- Hidden gates. The height to be kept along the sections of the course where they are situated will be briefed.
Proof of passing a gate and it's timing will be by Marshals report or GNSS flight recorder evidence, as briefed.
Control points may be: A geographical point, a ground marker, a landing marker or a kicking stick.
Control points may be:
- Known control (turn) points. Their position and description will be briefed.
- Hidden control points. The track along which they will be found and their description will be briefed.
Proof of reaching a control point may be:
- by the competitor recording the symbol and position on the declaration sheet.
- by a Marshal's report.
- by flight recorder evidence.
The precise requirements will be described in the Task Description.

New text
Gates are normally:
For Paramotor aircraft classes PF and PL a straight line 250m wide perpendicular to the briefed track.
For Microlight aircraft classes AL, WL WF and GL a straight line wide perpendicular to the briefed track, extending 250m to either side of the track.

Gates may be:
- Known gates. Their position and height to be crossed will be briefed.
- Hidden gates. The height to be kept along the sections of the course where they are situated will be briefed.
Proof of passing a gate and it's timing will be by Marshals report or GNSS flight recorder evidence, as briefed.
Control points may be: A geographical point, a ground marker, a landing marker or a kicking stick.
Control points may be:
- Known control (turn) points. Their position and description will be briefed.
- Hidden control points. The track along which they will be found and their description will be briefed.
Gates and control points must be placed on a natural line depicted in the map (such as a road, river, high voltage transmission lines etc.), where the line is crossing the track, or at the level of an object that is depicted in the map (such as a church), when the object is not more than 300meters off the track (in that case the gate is placed on the track at the closest point to the given object).
Known control (turn) points must be placed on an object that is depicted in the map (such as a crossroad, church etc.).

Proof of reaching a control point may be:
- by the competitor recording the symbol and position on the declaration sheet.
- by a Marshal’s report.
- by flight recorder evidence.

The precise requirements will be described in the Task Description.

Reason
According to 5.7.3, the width of a gate has to be at least 2mm in the official map. Since the normal scales used to competitions of microlights are 1:200 000 or 1:250 000, the gate cannot be 250m, as that would only be around 1mm. By extending the gate 250m to each side, therefore making it 500m, it is 2mm wide on the 1:250 000 map.

The accuracy and time measurements should be done on a landmark, that the pilot can find and can adjust his position and timing to.
Proposal 11

Proposal from
Petr Jonáš (CZE)

Proposal title
Takeoff and landing

Existing text
A3 2.1.2
TAKE-OFF AND LANDING
Unless it is stated differently in the task description all competition take-offs and landings must be completed within the marked deck. The penalty for failing to take off or land entirely within the deck will be 20% - 50% of pilot score, as briefed.

New text
A3 2.1.2 TAKE-OFF AND LANDING
Unless it is stated differently in the task description all competition take-offs and landings must be completed within using the marked deck. The penalty for failing to take off or land entirely within the deck will be 20% - 50% of pilot score, as briefed.

Reason
The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.
Proposal 12

Proposal from
Petr Jonáš (CZE)

Proposal title
Removal of class conformity rule

Existing text
A3 2.1.3 CONTROL OF CLASS CONFORMITY:
2.1.3.1 Weighing equipment shall be made available to competitors during the practice period. All aircraft may be weighed again at any time in the championships. The take-off weight is the weight of the aircraft ready to fly including pilot(s), fuel, and any supplementary equipment. The take-off weight must not exceed the FAI definition of a Microlight for the class in which it is flown.
2.1.3.2 Any competitor attempting to start a task overweight will be disqualified from that task.

New text
2.1.3 CONTROL OF CLASS CONFORMITY:
2.1.3.1 Weighing equipment shall be made available to competitors during the practice period. All aircraft may be weighed again at any time in the championships. The take-off weight is the weight of the aircraft ready to fly including pilot(s), fuel, and any supplementary equipment. The take-off weight must not exceed the FAI definition of a Microlight for the class in which it is flown.
2.1.3.2 Any competitor attempting to start a task overweight will be disqualified from that task.

Reason
The conformity to the class is enforced by law and should be under the pilot’s responsibility, just like the good technical condition of the aircraft and compliance to other rules and regulations. Weighing all the aircraft of all the competitors takes a lot of time and effort and creates unnecessary delays. Being over-weight does not create any advantage for the competition tasks, so from the fair-play point of view, there is no need for this general check.
Proposal 13

Proposal from
Petr Jonáš (CZE)

Proposal title
Change to balance of tasks for microlights

Existing text
A3 2.3 SCORING
2.3.1 The total value of tasks flown in each class during the championships must as far as possible be very close to:
A Tasks for flight planning, navigation, etc with no fuel limit: 50% of the total value of the tasks flown.
B Tasks for fuel economy, speed, duration, etc with limited fuel: 20% of the total value of the tasks.
C Precision tasks: 30% of the total value of the tasks flown.

New text
2.3 SCORING
2.3.1 The total value of tasks flown in each class during the championships must as far as possible be very close to:
A Tasks for flight planning, navigation, etc with no fuel limit: 65% of the total value of the tasks flown.
B Tasks for fuel economy, speed, duration, etc with limited fuel: 20% of the total value of the tasks.
C Precision tasks: 15% of the total value of the tasks flown.

Reason
There is a discrepancy between this section and the Annex 3, where the guidelines for percentages are different. This should be harmonized. Let’s keep the percentage of the navigation tasks high, because that shows the best the skills of the whole crew and they are also the most popular.
The tasks for economy, speed, duration should be kept low because they are less popular, are more dangerous, often press the crew to fly on the edge of the aircraft possibilities (high speed) or on the edge of the regulations (low or no fuel). The result of these tasks also depends largely on the aircraft performance, rather than on the skill of the crew and therefore should be kept to a minimum.
The tasks for precision should be harmonized with the value in S10, because there is a very thin line between full score and 0 and also because they practically only engage the pilot, and not the navigator. They should nicely complement the navigation tasks by adding a precision task at the end of each navigation task.
Proposal 14

Proposal from
Petr Jonáš (CZE)

Proposal title
Removal of short landings

Existing text
A3
2.4.3.2 SUMMARY
Competitors are required to demonstrate:
- Normal takeoffs.
- Short takeoffs.
- Powered landings.
- Engine-off landings.
- Short landings.

New text
A3 2.4.3.2 SUMMARY
Competitors are required to demonstrate:
- Normal takeoffs.
- Short takeoffs.
- Powered landings.
- Engine-off landings.
- Short landings.

Reason
The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.
Proposal 15

Proposal from
Petr Jonáš (CZE)

Proposal title

Existing text

A4 2.A4
Summary
Competitors will be given:
A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.
The location of a start point (SP) before which no markers, ground features or gates will be found.
The time at which they must overfly the start point.
The location of a finish point (FP) after which no markers or ground features will be found.
Photos of any ground features or description of canvas markers to be identified.
If the task is to contain a speed prediction element before takeoff the competitor must either:
Declare the ground speed at which he plans to fly, or
Select a ground speed from those specified at the briefing, or
Declare crossing times at certain turn points.
The task will normally start and finish with a Deck Takeoff and Deck Landing and after completing the landing the competitor will be required to enter a Quarantine area for scoring.

Penalties
Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:
Takeoff deck penalty: 20%
Landing deck penalty: 20%
Backtracking against the task direction or crossing a hidden gate backwards: 100%
Breach of Quarantine: 100%
Crossing a hidden gate twice invalidates the gate.

New text

A4 2.A4 Summary
Competitors will be given:
A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.
The location of a start point (SP) before which no markers, ground features or gates will be found.
The time at which they must overfly the start point.
The location of a finish point (FP) after which no markers or ground features will be found.
Photos of any ground features or description of canvas markers to be identified.
If the task is to contain a speed prediction element before takeoff the competitor must either:
Declare the ground speed at which he plans to fly, or
Select a ground speed from those specified at the briefing, or
Declare crossing times at certain turn points.
The task will normally start and finish with a Deck Takeoff and Deck Landing and after completing the landing the competitor will be required to enter a Quarantine area for scoring.

Penalties
Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:
- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Backtracking against the task direction or crossing a hidden gate backwards: 100%
- Breach of Quarantine: 100%
- Crossing a hidden gate twice invalidates the gate.


Reason

The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.
Proposal 16

Proposal from
Petr Jonáš (CZE)

Proposal title

Existing text
A4 2.C1
Objectives
The objective is for the aircraft to touch down within a marked deck, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary
This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible.

Landing
Once the aircraft has started its final approach no deviation of over 90° from the deck centreline either in the air or on the ground is permitted and the engine must remain at idle or may be switched off. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring
The score will be the value of the strip in which both main wheels touch down with the ground (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips. The pilot will be scored zero if:
- The aircraft commences takeoff before instructed to do so by the marshal
- The engine is not stopped or the throttle is not closed before passing over the deck
- The aircraft does not pass over the entire length of the deck before turning to descend
- The engine does not remain at idle once final approach has started if engine idle permitted
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- Any part of the aircraft touches the ground before the deck.
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal.
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty.
Thus the score calculation will be (PS + PD) with a hypothetical maximum score of 350.

New text

A4 2.C1

Objectives
The objective is for the aircraft to touch down within a marked deck, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary
This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible.

Landing
Once the aircraft has started its final approach no deviation of over 90 degrees from the deck centreline either in the air or on the ground is permitted and the engine must remain at idle or may be switched off. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring
The score will be the value of the strip in which both main wheels touch down with the ground (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips. If the aircraft bounces after touchdown and jumps over more than 1 strip, the touchdown after the bounce is measured as the first touchdown for scoring.
The pilot will be scored zero if:
- The aircraft commences takeoff before instructed to do so by the marshal
- The engine is not stopped or the throttle is not closed before passing over the deck
- The aircraft does not pass over the entire length of the deck before turning to descend
- The engine does not remain at idle once final approach has started if engine idle permitted
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and landing coming to a standstill.
- Any part of the aircraft touches the ground before the deck.
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal.
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty.
- The aircraft touches the ground with any part other than the main wheels before touching with both main wheels.

Thus the score calculation will be \( (PS + PD) \) with a hypothetical maximum score of 350.

This proposal includes the same modifications to tasks 2.C2, 2.C3, and 2.C4.

**Reason**

The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.

By adding the restriction on bouncing and touchdown with the main wheels first, we encourage the pilots to execute a nice, low speed precision landing on the main wheels, instead of pushing the aircraft into the deck, sometimes nose wheel first and then braking hard. That will increase both safety and recognition of well executed landings instead of pushing the landing gear and the brakes to (or beyond) its limits.
Proposal 17

Proposal from
Petr Jonáš (CZE)

Proposal title
Removal of short landing score from 2.C7

Existing text
A4 2.C7
SHORT LANDING OVER AN OBSTACLE
Objectives
The objective is for the aircraft to fly over and clear an obstacle, to land and come to a standstill as close to the obstacle as possible.

Summary
This task simulates a short field landing over a hedge, the hedge being represented by a tape stretched across the runway 1 metre above the ground. The pilot must land over the tape and stop. This distance will be measured from the centre of the foremost wheel and rounded up to the nearest 0.1 metre.

Joining
This task may form part of another task. Instructions for joining will be provided at the briefing or in the instructions for the main task.

Landing
Once the aircraft has started its final approach no deviation of over 90° from the centreline of the runway is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring
The competitor in each class that comes to a standstill closest to the tape (DMIN) having cleared the tape without breaking it will score 250 points. Other competitors will be awarded scores
based on their distance from the tape when they stop (DP) relative to DMIN. The competitor will be scored zero if:
- The aircraft fails to fly over the tape
- Any part of the aircraft touches the ground before the tape
- Any part of the aircraft breaks the tape
- The aircraft turns by more than 90 degrees from the runway centreline between starting the landing approach and coming to a standstill
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be \((250 \times DMIN / DP)\) with a maximum score of 250

New text
A4 2.C7
SHORT LANDING OVER AN OBSTACLE

Objectives
The objective is for the aircraft to fly over and clear an obstacle before the deck during a precision landing, to land and come to a standstill as close to the obstacle as possible.

Summary
This task simulates a short field landing over a hedge, the hedge being represented by a tape stretched across the runway 1 metre above the ground. Land over the tape and stop. This distance will be measured from the centre of the foremost wheel and rounded up to the nearest 0.1 metre. The pilot must fly over the tape and land in the deck 100 metres long and 25 metres wide. The width of the deck may be decreased to be adjusted to the width of the existing runway. The first 25-metre section of the deck is divided into five 5-metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip.

Joining
This task may form part of another task. Instructions for joining will be provided at the briefing or in the instructions for the main task.

Landing
Once the aircraft has started its final approach no deviation of over 90° from the centreline of the runway is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring
The competitor in each class that comes to a standstill closest to the tape (DMIN) having cleared the tape without breaking it will score 250 points. Other competitors will be awarded scores based on their distance from the tape when they stop (DP) relative to DMIN. The competitor will be scored zero if...
The aircraft fails to fly over the tape
- Any part of the aircraft touches the ground before the tape
- Any part of the aircraft breaks the tape
- The aircraft turns by more than 90 degrees from the runway centreline between starting the landing approach and coming to a standstill
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be \( (250 \times \frac{D_{MIN}}{DP}) \) with a maximum score of 250.

Scoring
The score will be the value of the strip in which both main wheels touch down with the ground. Touching down on a dividing line scores the higher of the two strips. If the aircraft touches down on a full minute, the time being taken from the official clock, ±5 seconds a further 100 points is scored (PT). This score will be reduced by 5 points for every second outside ±5 seconds from a full minute. If the aircraft bounces after touchdown and jumps over more than 1 strip, the touchdown after the bounce is measured as the first touchdown for scoring.

The pilot will be scored zero if:
- Any part of the aircraft touches the ground before the deck.
- Any part of the aircraft breaks the tape
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and landing
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty
- The aircraft touches the ground with any part other than the main wheels before touching with both main wheels.

Reason
The landing over the tape like this would create a psychological effect for the pilot and make the precision landing more difficult and fun. However, it would still be about precision and nice landing with main wheels first, rather than pushing the aircraft over the tape quickly and very hard to the ground and then braking hard. That will increase both safety and recognition of well executed landings instead of pushing the landing gear and the brakes to (or beyond) its limits.
Proposal 18

Proposal from
Petr Jonáš (CZE)

Proposal title
Removal of 2.C8 Deck Takeoff

Existing text
A4 2.C8
DECK TAKEOFF
Objectives
The objective is for the aircraft to take off from a deck 100 metres long by 25 metres wide.
Summary
This task proves the short takeoff capability that is fundamental to the performance characteristics of a Microlight by demonstrating that the aircraft can take off in 100 metres in still air at sea level. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). Where other local conditions, such as slope of the runway, will make a significant difference to takeoff runs the length of the deck may be adjusted accordingly.

Takeoff
This task will form the start of another task. The takeoff order will be specified at the main task briefing. The pilot must position his aircraft with its main wheels, or tail wheel in the case of a tail-dragger, immediately in front of the start line of the deck to the satisfaction of the marshal and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Procedure after Takeoff
The procedure to be flown after takeoff will be specified in the main task at the briefing.

New text
A4 2.C8
DECK TAKEOFF
Objectives
The objective is for the aircraft to take off from a deck 100 metres long by 25 metres wide.
Summary
This task proves the short takeoff capability that is fundamental to the performance characteristics of a Microlight by demonstrating that the aircraft can take off in 100 metres in still air at sea level. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). Where other local conditions, such as slope of the runway, will make a significant difference to takeoff runs the length of the deck may be adjusted accordingly.

Takeoff
This task will form the start of another task. The takeoff order will be specified at the main task briefing. The pilot must position his aircraft with its main wheels, or tail wheel in the case of a tail-dragger, immediately in front of the start line of the deck to the satisfaction of the marshal and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Procedure after Takeoff
The procedure to be flown after takeoff will be specified in the main task at the briefing.

Reason
The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.
Proposal 19

Proposal from
Petr Jonáš (CZE)

Proposal title
Removal of 2.C9 Deck Landing

Existing text
A4 2.C9
Objectives
The objective is for the aircraft to land in a deck 100 metres long by 25 metres wide.
Summary
This task proves the short landing capability that is fundamental to the performance characteristics of a Microlight by demonstrating that the aircraft can land in 100 metres in still air at sea level. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). Where other local conditions, such as slope of the runway, will make a significant difference to landing runs the length of the deck may be adjusted accordingly.
Joining
This task will form the end of a task. Instructions for joining will be provided at the briefing or in the instructions for the prior task.
Landing
Once the aircraft has started its final approach no deviation of over 90° from the deck centreline either in the air or on the ground is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.
Scoring
There is no score for a deck landing but instead a 20% penalty will normally be applied to the main task if the aircraft fails to touch down and come to a halt within the deck. This penalty will normally apply if:
- Any part of the aircraft touches the ground before the deck.
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill.
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal.
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty.

New text
A4 2.C9
Objectives
The objective is for the aircraft to land in a deck 100 metres long by 25 metres wide.
Summary
This task proves the short landing capability that is fundamental to the performance characteristics of a Microlight by demonstrating that the aircraft can land in 100 metres in still air at sea level. Deck length shall be adjusted according to the airfield elevation (S10 4.31.5). The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5). Where other local conditions, such as slope of the runway, will make a significant difference to landing runs the length of the deck may be adjusted accordingly.
Joining
This task will form the end of a task. Instructions for joining will be provided at the briefing or in the instructions for the prior task.
Landing
Once the aircraft has started its final approach no deviation of over 90° from the deck centreline either in the air or on the ground is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

**Scoring**

There is no score for a deck landing but instead a 20% penalty will normally be applied to the main task if the aircraft fails to touch down and come to a halt within the deck. This penalty will normally apply if:

- Any part of the aircraft touches the ground before the deck.
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill.
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal.
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty.

**Reason**

The short take-off and short landing tasks are the most dangerous, leading to most accidents, putting a lot of strain on the aircraft undercarriages and are one of the reasons why not more participants are coming to the competitions. By removing this, we can attract new competitors and prevent practically all accidents.
Proposal 20

Proposal from
Paap Kolar (EST)

Proposal title
Paramotor Endurance format

Existing text
None

New text
Refer to uploaded document:
S10 Proposal (EST) - WPEC Local Regs and Task Catalogue.pdf

[Note from S10 Editor: Although it has not been specified in the proposal, this document would become S10 Annex 8, in the same way that S7 was created in 2015 to provide local regulations and task catalogue for slalom championships]

Reason

Paramotor Endurance is a new format with emphasis on navigation and endurance in such new correlation, which would allow a lot of flying and fun without too much restrictions, stressful economy elements and with focus on real practical values, to promote development of pilots’ flying skills, ground skills and flight planning skills on a new level.

Paramotor Endurance format has been developed in Estonia from 2010 and after testing different approaches in competition practice, completely new and fascinating format has born.

Final outcome has been surprising, as all pilots who ever took part in our events so far, have been completely addicted to this adventure, regardless of the results. Naturally this format will continue to grow and develop from existing framework.

Here is data from the last Paramotor Endurance event.  
1-st FAI World Paramotor Endurance Cup 2016 (WPEC 2016)
&
3-rd Nordic Open Paramotor Endurance Race 2016 (NOPER 2016)
held in Estonia, Saaremaa, from 29.05. to 5.06.2016

The whole event was a great success. 
Nordic Endurance format will continue next year in Sweden.
WPEC will be most probably proposed as Cat 1 event for the coming seasons.
I hope you all will be seeing a new and exciting FAI Paramotor Endurance competition developing from here on, with growing popularity and more countries involved than ever before. This innovative and new concept of future paramotor competition format was highly appreciated by every single pilot ever participating.

Some basic statistics of passed competitions.
4 countries
Nearly 20 pilots
No protests, no complaints, only few corrections due to Amod malfunction, which were solved with the help of GPS tracking system.
New GPS online tracking system proved its necessity fulltime and in some cases saved situations, crucial otherwise.
Competition area 3000 km²
96 Turnpoints + about 115 Hidden gates

WPEC Winner: Annti Tuutti (FIN)
Max speed 126 km/h
Max distance 665 km
Number of flights 22 (not counting numerous bonus landings and takeoffs)

All last 3 years' winners were flying Dudek Snake 18 (2014, 2015) or 20 (2016) and Polini 250.

All results, Amod and GPS online tracks, pictures and social media info is available here:
https://www.facebook.com/EstPPA
http://metrotec.ee/SRV/ENG/estppa/#pos (here you can also find full archive of all GPS tracks)
Competition map:

With regards,
Paap Kolar / Competition Director / CIMA Delegate for Estonia
Proposal 21

Proposal from
Rob HUGHES (GBR)

Proposal title
Landing Deck Approach Area

Existing text

4.31.5: Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty.

Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).

New text

Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty.

Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).

To minimise the potential for incorrectly applying landing penalties for landing decks prepared on grass runways, the approach area to the landing deck shall have its grass cut short. The length of the approach area shall be at least equal in length to the landing deck unless otherwise constrained by airfield physical limitations. When scoring landings to a deck, all official video footage (ie all that available from differing viewing angles) shall be reviewed before landing penalties are confirmed.

Reason:

Low approaches to a landing deck over ‘long’ grass can give the impression that the aircraft has touched down before the landing deck due to the wheels becoming obscured by the grass. To help avoid competitors being scored zero for apparently touching down before the landing deck, the approach area should be prepared to minimise this potential. Furthermore, video footage from one angle may misrepresent the true aircraft status due to line of sight obscuration.