



**LOCAL REGULATIONS FOR THE
12th FAI WORLD MICROLIGHT CHAMPIONSHIP**

(unrevised edition, we welcome any comments up to end of the March 2009)

Place: JIHLAVA Country: CZECH REPUBLIC Date: 15. 8. – 22.8. 2009

ORGANISED BY : Light Aircraft Association of the Czech Republic in cooperation with the Aeroklub Jihlava

ON BEHALF OF THE FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE

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AUTHORITY

These Local Regulations are to be used in conjunction with the General Section and Section 10 of the FAI Sporting Code which shall take precedence over the Local Regulation wording if there is ambiguity

CLARIFICATION: CLASSES: R AL1, AL2, WL1, WL 2



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1 GENERAL

The purpose of the championships is to provide a good and satisfying contest to determine the champion in each class and to reinforce friendship amongst pilots and nations (S10 4.2).

1.1 PROGRAMME DATES

Training, aircraft inspection, registration: 10. – 14. 8. 2009
Opening Ceremony: 15. 8. 2009
First Competition briefing: general briefing 14. 8. 2009 21:00
Contest Flying Days 15. 8. 2009 – 21. 8. 2009
Closing Ceremony, Prize-giving 22. 8. 2009

1.2 OFFICIALS

Event director Vladimír Šilhan
Competition director Jan Hynčica
Deputy Director Jan Bém
International Jury : Wolfgang Lientel , Germany (President)
To be nominated ,
To be nominated.....
Stewards : Ján Sluvka, Slovakia
Gerhardt Gerecht, Luxembourg

1.3 ENTRY

The Championships are open to all Active Member and Associate Member countries of FAI who may enter 6 pilots plus one all-female crew in each classic class.

- Entries must be made on the official Entry Form.
- If applications, with fees paid, are not received by 1. 7. 2009 the entry may be refused.
- The entry fee is:

400 € for pilot in each class

400 € for each co-pilot (navigator)

100 € for each Team Leaders and and team leader assistant.

25 € charge for Aeroklub for accompaniment people in the camp. Children up to 12 years will be free.

Discounts:

For every complete quartet of competitors in all clases (1 AL2, 1 AL1, 1WL2 and 1 WL1 – it is 2400€) there will be offered discount 20% - this is 480 €.

Payment before 1. 5. 2009 will be given discount 5 %.

The entry fee includes:

- Competition operations (setting, controlling and evaluating the tasks)
- All competition materials (maps, photos, task descriptions.)
- Free use of the airport and free entry to all official events.
- Camping place for each team with water, electricity, WiFi internet connection and tents or caravans in sufficient number
- Free entry to the Welcome party (15. 8. 2008) and to the Goodbye Party (22. 8. 2009)

The entry fee is to be transferred before 1. 8. 2009

The fee shall be delivered to the Ceska sporitelna bank account:

For the domestic payments in the Czech Republic

1479917359/0800

For the international payments

IBAN CZ88 0800 0000 0014 7991 7359

BIC GIBACZPX

1.4 INSURANCE

Third party insurance of minimum **750 000 SDR** in conformity with the Regulation (EC) No 785/2004 of the European Parliament and the Council of 21 April 2004 is obligatory. The organizers support for insurance by a Czech insurance company will be available by request. Details about the insurance possibilities in Jihlava will be published by the bulletin.

Personal accident insurance for team members and insurance against damage to aircraft are highly recommended. Documentary proof of insurance as specified on the Entry Form must be presented to the Organizers at Registration. (GS. 3.9.6)

1.5 LANGUAGE

The official language of the Championships is English.

1.6 MEDALS AND PRIZES

FAI medals will be awarded to:

- Pilots placed first, second and third in each class.
- National teams placed first, second and third.
- FAI Diplomas will be awarded for those placed first to tenth.

Other prizes:

- The Highland Cup

for national teams with in advance nominated one pilot or crew in each class (only complete teams one RAL 1, one RAL 2, one RWL 1 and one RWL2) can compete, each National team can register maximum 3 teams (for example UK 1, UK 2 and UK 3). Results will be calculated by official scoring.

- The "Pilot" journal Award

The Organizer will support a special non official team competition. Teams will be set together from one aircraft in each class, whereas each crew should be from different national team. A special team of "non official scorers" will be established. Official score of the team members will be used for computing of results of the championship's tasks. It can be an opportunity to have a good time thus creating a non formal friendly international atmosphere.

1.7 CHAMPIONSHIP CLASSES

The Championships may be held in the following classes (S10 1.5):

WL1, WL2, AL1, AL2

Each class is a championship in its own right and as far as possible interference of one class by another shall be avoided.

1.7.1 CLASS VIABILITY (S10 4.3.2)

For a World or Continental Championship to be valid there must be competitors from no less than 4 countries in a class, ready to fly the first task.

1.7.2 CHAMPIONSHIP VALIDITY

The title of Champion in any class shall be awarded only if there have been at least 6 separate tasks.

1.8 GENERAL COMPETITION RULES

1.8.1 REGISTRATION

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 nationality
- Valid FAI Sporting License for pilot and navigator
- Aircraft Certificate of Airworthiness or Permit to Fly
- Declaration of conformity to class rules
- Certificate of Insurance
- Receipt for payment of entry fees.

The registration procedure shall be apply from 11th August. Pilots would be asked for a pilot licence, airworthiness certificate, declaration of conformity, insurance certificate and FAI sporting licence. Navigators would be asked for a FAI sporting licence and some ID document.

The technical check and weighing will be included in the registration procedure, from beginning up to the end of the registration procedure (Friday 14.08.2009, 20:00) There will be a technical specialist equipped with the scales, present from 07:00 up to 20:00. No flying for aircraft, which didn't pass the registration check will be allowed. During the check procedure a checking protocol will be made and photo documentation of aircraft and its equipment will be recorded. Equipment of the aircrafts should be strictly in accordance with the section 10 rules. (No GPS or electronic navigation equipment, no gyro equipment at cetera) No changes will be allowed excluding change of the propeller. The changes that have not been allowed will be a reason for disqualification.

Aircrafts will be regarded as empty without fuel. Mass of aircraft and crew should be less than MTOM about equivalent for 25 l of fuel for two seaters, 20 l for one seaters. Parachute rescue system should be taken as 0 kg by declaration, but MTOM cannot exceeded 472,5 kg for two seaters and 315 kg for one seaters, because these are the limits based in the Czech civil aviation act.

1.8.2 PILOT AND NAVIGATOR QUALIFICATIONS

A competing pilot shall be of sufficient standard to meet the demands of an international competition and hold a valid pilot license or equivalent certificate. Both pilot and navigator must hold an FAI Sporting License issued by his own NAC. The navigator must have reached the minimum age of 14 years.

1.8.3 AIRCRAFT AND ASSOCIATED EQUIPMENT

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 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 4.13.2)

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 and all available clamps during the flights. No installation of additional equipment incl. special fuel tanks for endurance will be allowed, nor de-installation of any equipment for some tasks (for example special air brakes, instruments and so on) will be not allowed.

Minimal equipment by the Czech regulation involve: speedometer, altimeter, inclinometer and magnetic compass.

For electronic's equipment, will be competitors asked for proof of conformity with the section 10 by the producers manual and confirmation (both in the english or czech language), that equipment will not include functions at variance with the section 10. Exemptions (equipment known to the organizer) will be published in the bulletins. (S10 4.20.6, S10 4.22.3)

1.8.4 TEAM LEADER RESPONSIBILITIES

The team leader is the liaison between the organisers and his team. **He is responsible** for the proper conduct of his team members, **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.

1.8.5 STATUS OF RULES AND REGULATIONS

Once competition flying on the first day has started no rules or regulations may be changed. Any additional requirements within the rules needed during the event will not be retrospective. Competitors may not be substituted, change to another class nor change their aircraft (S10 4.6.2 & 4.10.2).

1.8.6 REST DAYS

Will only be held:

- on the account of bad weather
- unforeseen emergency
- more than 12 tasks were flown and officially scored.
- after minimal 20 flying hours in less than 5 days

1.8.7 COMPLAINTS AND PROTESTS

A competitor who is dissatisfied on any matter may, through his team leader, make a complaint in writing to the Director.

Complaints shall be made, and dealt with, without delay. Complaints concerning provisional scores must be made in writing within the time limit specified on the PROVISIONAL score sheet. No less than 6 hours will be available for complaints from beginning of the first task up to 20. 8. 2009. Only last competition flying day – 21. 8. 2009 can organizer appoint time for complaints 2 hours, but not during the competition flight and time, when competitor will be obliged to be in the quarantine.

A complaint that could effect a task result must be dealt with and answered in writing before any official score sheet is issued.

If the competitor is dissatisfied with the decision, the Team Leader may make a protest to the director in writing within 12 hours of an OFFICIAL score sheet being issued, or two hours in the case of the last contest task. The protest fee is 100 € .

1.9 FLYING AND SAFETY REGULATIONS

1.9.1 BRIEFING

Briefings will be held for team leaders 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 to team leaders, Jury members and Stewards. (S10 4.17.1)

Procedures for flight preparation, take-off, flying the task, landing and scoring together with any penalties will be specified in each task description. (S10 4.17)

Flight safety requirements given at briefing carry the status of regulations. (S10 4.17.3)

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 4.18)

1.9.2 COMPLIANCE WITH THE LAW

Each competitor is required to conform to the laws and to the rules of the air of the Czech Republic. (S10 4.19.1)

1.9.3 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 4.19.3)

1.9.4 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 4.19.2)

1.9.5 DAMAGE TO A COMPETING AIRCRAFT

Any damage shall be reported to the organisers without delay and the aircraft may then be repaired. Any damaged part must be replaced by an identical part.

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 4.19.5)

1.9.6 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 4.21)

1.9.7 FITNESS

- 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 nation 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, it is the **Czech Anti-Doping Committee (CADC)**, the Czech highest body and exclusive special place operating nationwide and authorized, by government decree no. 12 from January 4th 1995, about the access of the Czech Republic to European Anti-Doping Convention, to ensure the anti-doping program of the Czech Republic.
- All relevant information can be found on the FAI Web site: www.fai.org/medical and www.antidoping.cz

1.9.8 AIRFIELD DISCIPLINE

Marshalling signals and circuit and landing patterns will be given at briefing and must be complied with. Non compliance will be penalized.

1.9.9 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 4.20.5)

1.9.10 CLOUD FLYING

Cloud flying is prohibited and aircraft may not carry gyro instruments or other equipment permitting flight without visual reference to the ground. (S10 4.20.6)

1.9.11 ELECTRONIC EQUIPMENT:

CIMA approved GNSS flight recorders and ELT's without voice transmission capability are permitted and may be carried. Sealed mobile phones may be carried for use after landing or in an emergency, the director must be immediately informed if the seal is broken. All other electronic devices with real or potential communication or navigation capabilities must be declared and approved for carriage by the Championship Director. (S10 4.22.3)

Before each task the Director will ask marshals to check for infringements. The penalty is disqualification from the competition.

A document describing the device will be signed by the competitor when it is being sealed, and the document will be retained by the organization. After the task, provided the seal is not broken, documents will be returned to each competitor when he comes to unseal the device. If a document is still in the possession of the organization at the time of issuing the scores, the competitor will get a 100% task penalty.

1.9.12 EXTERNAL AID TO COMPETITORS

Any help in navigation or thermal location by non-competing aircraft, including a competing aircraft not carrying out the task of their own class is prohibited. This is to ensure as far as possible that the competition is between individual competitors neither helped nor controlled by external aids. (S10 4.22)

1.10 CHAMPIONSHIP TASKS

1.10.1 GENERAL

To count as a valid championship task all competitors in the class concerned will be given the opportunity to have at least one contest flight with time to carry out the task.

A task for each class may be different and a task may be set for all classes. (S10 4.24.4)

A competitor will generally be allowed only one take-off for each task and the task may be flown once only. A competitor may return to the airfield within 5 minutes of take-off for safety reasons or in the event of a GNSS flight recorder failure. In this case a further start may in principle be made without penalty but equally the competitor must not benefit in any way from restarting. Exceptions and penalties will be specified in the Task Description. (S10 4.25.2)

Precision tasks may be combined with other tasks or set separately.

1.10.2 TASK PERIOD

Times for take-off, closing of take-off windows, turn points and last landing will be displayed in writing. If the start is delayed, given times will be correspondingly delayed unless specifically briefed to the contrary.

1.10.3 TASK SUSPENSION OR CANCELLATION

The Director may suspend flying after take-offs have started, if to continue is dangerous. If the period of suspension is sufficiently long to give an unfair advantage to any competitor, the task shall be cancelled. Once all competitors in a class have taken off or had the opportunity to do so, the task will not be cancelled except for reasons of force majeure. (S10 4.25.3)

1.10.4 TYPES OF TASKS

Only tasks approved by CIMA or listed in S10 A4 will be used:

- A Flight planning, navigation estimated time and speed. No fuel limitation.
- B Fuel economy, speed range, duration, with limited fuel.
- C Precision

A catalogue of tasks (and their scoring systems) to be implemented during the championship is attached to these local regulations.

1.10.5 OUTLANDINGS

Outlandings shall be scored zero, unless specifically stated at the briefing. If a pilot lands away from the goal field or from base he must inform the organisers by telephone, with the minimum of delay and at the latest by the closing time of the task. He may break the fuel tank seal and fly home or return by road. Evidence of the landing place must be obtained from photographs and the name and addresses of a witness other than the pilot's national team. On return to base the pilot must go immediately to Control with his report and films. Failure to follow this procedure without good reason may result in no score for the task, charges for any rescue services called out, or disqualification. (S10 4.27)

1.10.6 FLIGHT BOUNDARIES

Flights terminating beyond the boundaries of the organiser's country shall score only to the point where a straight line between the start point or last turn point and the landing place last cuts the boundary, unless permission is given at briefing to cross such boundaries. (S10 4.28)

1.10.7 EMERGENCIES

A competitor landing to help an injured pilot should not, at the discretion of the Director, be disadvantaged by this action.

1.10.8 THE SECURE AREA

This is a clearly marked area where the aircraft must be placed from time to time as instructed by the director. Once in the Secure Area and without the expressed permission of the director, no aircraft may be touched for any reason other than to remove it from the Secure Area. Competitors who do not respect the rules of the Secure Area may be liable to penalty.

1.10.9 QUARANTINE

This is a clearly marked area to which aircraft and crew must go from time to time as instructed by the director, usually for the purposes of scoring, fuel measurement and scrutineering of fuel tank seals, fuel systems, telephone seals etc. Once in the Quarantine and without the expressed permission of the Quarantine Marshal, the crew may not communicate with anyone else and may not modify or otherwise change the configuration of their aircraft and items carried. Competitors who do not respect the rules of the Quarantine area may be liable to penalty.

1.11 CONTROL OF TASK FLIGHTS.

1.11.1 TIMING

All times are given, taken and calculated in local time in hours, minutes and seconds.

1.11.2 FUELLING

Fuel will be measured by weight or volume but will be consistent for any given refuelling session. Measured fuel quantities include oil where it is mixed with petrol. Fuel measured by volume shall be within $\pm 10^{\circ}\text{C}$ of the ambient temperature.

Refuelling will be in the order and in accordance with the instructions given at briefing. Failure of the aircraft to be present on time may result in penalty for the pilot.

Official observers will collect documentary evidence that all competitor's fuel systems are sealed immediately after fuelling, and that all competitor's fuel systems seals have been inspected after landing.

1.12 GNSS FLIGHT RECORDERS

1.12.1 The status of GNSS flight recorder evidence relative to other forms of evidence is as follows:

- All aircraft shall carry a FR which will be used as primary evidence.
- In the event of a failure of the primary FR, a second FR, photographic evidence or observers report may be used as secondary evidence.

1.12.2 Only CIMA approved FR may be used and they must be operated in strict accordance with their approval documents. (S10 A6)

1.12.3 The FR to be used by a pilot in a championship will be supplied by the pilot. The FR case must be clearly labelled with the pilots name and competition number and (if applicable) this information must be entered into the memory of the FR.

1.12.4 The pilot must make available a data transfer cable and a copy of the transfer software on CD ROM.

Before the championship starts each FR must be presented together with its CIMA approval document to the organization for inspection and recording of type and serial number. The pilot must be sure it fully complies with any requirements in the approval document e.g. that manufacturer's seals are intact and it is equipped with a data-port sealing device if it is required or it will be rejected by the organization.

Once the championship has started the pilot must always use the same FR. In the event of a permanent failure, another FR may be used after it has been presented together with its CIMA approval document to the organization for inspection and recording of type and serial number.

All FR's must be presented to the organization for inspection immediately before the start of each task. If secondary evidence is presented then both sets must be clearly marked 1 and 2. Only one set of evidence will be used to verify the flight.

1.12.5 It is the pilots responsibility to ensure that he is fully aware of the functions and capabilities of his FR eg. how to operate the PEV marker button, that it has sufficient battery power and that the antenna is correctly positioned etc.

1.12.6 Where FR data is to be used for scoring, the organizer must have visited every location which could affect the scoring and got a GNSS fix of that position. E.g. turnpoints, hidden gates etc. It is not acceptable to extract positions from a map in any circumstances. Points that will not require FR evidence for scoring (eg. because a marshal is taking times at a hidden gate) must be specifically briefed.

1.12.7 The scoring zone for FR's is independent of any other zone or sector (eg. photo sector). A scoring zone will normally be a cylinder of 200 m radius and of infinite height.

To score a fix point must either be within this circle, or the line connecting two sequential track fixes must pass through the circle. Additionally the task may require one of these fixes to be associated with a pilot event mark (PEV).

Complaints about the physical mis-positioning of a scoring zone relative to a turnpoint will not be accepted unless it can be shown that the physical position of the location is outside a circle of radius $R = R_p/2$ where R_p = Radius or size of the scoring zone defined by the Organizers (ie the physical location must lie inside an inner circle half the width of a gate or radius of a scoring zone).

1.12.8 Gate or point time is taken from the fix immediately before it is crossed.

1.13 SCORING

1.13.1 GENERAL

The overall results will be computed from the sum of the task scores for each competitor, the winner having the highest total score in the class. (S10 4.29.2)

A score given to a competitor shall be expressed to the nearest whole number, 0.5 being rounded up. (S10 4.29.5)

All distances not obtained from GNSS shall be calculated from the official map and rounded up to the next 0.5 km. (S10 4.29.6)

A pilot who did not fly scores zero and will be marked DNF or "Did Not Fly" on the score sheet. A pilot who is disqualified scores zero and will be marked DSQ or "Disqualified" (S10 4.29.7)

Deduction of penalty points shall be made after scoring for that task is completed. (S10 4.29.8)

If a pilot's score is for any reason negative including penalties his score for the task will be taken as zero. Negative scores will not be carried forward. (S10 4.29.10)

The following standard symbols will be used for scoring:

V = Speed, D = Distance, T = Time

Score sheets shall state the Date for the task and the date and the time when the score sheet was issued, the task description, Task number, classes involved, competitors name, Country, the Competitors Number and Score.

Score sheets shall be marked Provisional, Official, or if a protest is involved, Final. A Provisional score sheet may only become Official after all complaints have been addressed. Scores may not be altered when the Provisional sheet is made Official. (S10 4.29.1)

If a failure in GNSS flight analysis or scoring is discovered before the end of the championship and the failure is due to a technical error which emanates from either the Competition Director, or the scoring staff, or the equipment being used for the GNSS flight analysis or scoring, this failure must be corrected regardless of time limits for complaints and protests. (S10 4.29.11)

1.13.2 PENALTIES

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. The use of hostile 'tactical protests' falls into this category.
- 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

2 GENERAL REMARKS

2.1.1 RANGE

All aircraft will be expected to have a still air range of 250 km.

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 a deck 100m x 25m. The penalty for failing to take off or land entirely within the deck will be 20% - 50% of pilot score, as briefed.

2.1.3 CONTROL OF CLASS CONFORMITY:

All aircrafts will be weighed before the event, and any 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, but excluding an emergency parachute. The take-off weight must not exceed the FAI definition of a microlight for the class in which it is flown.

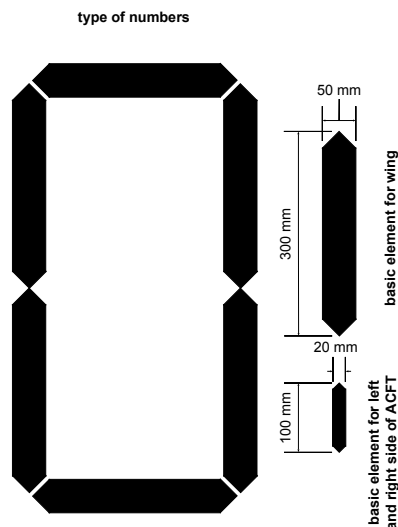
2.1.4 CONTEST NUMBERS

The numbers should be supplied by the pilot, because this will ensure that numbers will stay in place and do not damage the surface of the aircraft.

However some material will be available by organizers for those in need.

Numbers must be :

- Low side of right wing (three axes) or right side of the wing (weightshifts)
- Both sides of fuselage



2.1.5 PROTECTIVE EQUIPMENT

A protective helmet must be worn on all flights unless this restricts vision from within an enclosed cockpit canopy with supine seating. An emergency parachute system is highly recommended. (S10 4.20.1)

2.2 FLIGHT CONTROL

2.2.1 FUEL

Prior to fuelling for economy tasks competitors must be able to demonstrate that their aircraft tanks are empty and that the engine cannot run in either the ground or in-flight attitude of the microlight. The engine will then be run for 60 seconds to ensure all systems are free of air. Where possible this process will take place immediately prior to the task to enable engines to be warmed up. When tanks are required to be sealed before a task the penalty for returning to the Quarantine area with a broken or a missing seal will be 100% of the pilot score.

2.2.2 DISTANCE MEASUREMENTS

Distance will be measured for all competitors on the same official map, of a scale of 1:200 000. Measurement will be made to the nearest 0,5 km.

2.2.3 KNOWN GATES

When competitors prior to take off are informed of the location of a timing gate, the approach to that gate may be between 500 and 1000 feet height and in a straight line for the final 1 km. Any deviation from this approach may incur a penalty

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.

2.3.2 The winner of each class shall be the pilot or crew gaining the highest total points in the class.(S10 4.29.2)

2.3.3 The team prize shall be computed from the sum of the scores of the top three pilots from each country in each class in each task. The task score for which a pilot was disqualified shall not count for team scoring. Other valid tasks flown by this pilot are not affected (S10 4.29.3)

2.4 GENERIC TASKS

2.4.1 FLIGHT PLANNING, NAVIGATION TASKS

2.4.1.1 OBJECTIVES

The objectives of a flight planning navigation task include testing the competitors' ability to:

- plan a flight from information provided
- follow an accurate course in the prevailing conditions

maintain a given or predicted ground speed

2.4.1.2 SUMMARY

Competitors are required to fly accurately along a course provided by means of :

a straight line, an arc, a circle, a polygon, an irregular line or any combination of these drawn on a map.

a line with beginning and end points marked on a map or provided as map references with geometric instructions specifying the line between them.

a line start point marked on the map or provided as a map reference with geometric instructions specifying the route to be followed.

A start point located on the ground with a true or magnetic heading or geometric instructions specifying the route to be followed.

The task may consist of one or several legs, each using any of the above. In addition competitors may be required to fly all or part of the course at a given or predicted ground speed.

2.4.1.3 EVIDENCE

Evidence of the accuracy with which the competitors have flown may be provided by means of:

- marks made by competitors on a map indicating the location of on-track ground features identified from photographs provided
- a GNSS record of the flight

Competitors may be required to provide a pre-flight declaration which may include:

- the time a waypoints or turnpoints is to be visited
- the predicted groundspeed over any part or parts of the course

2.4.2 FUEL ECONOMY, SPEED RANGE, DURATION TASKS

2.4.2.1 OBJECTIVES

The objectives of a fuel economy task include testing the competitors' ability to:

- maximise aircraft fuel performance
- predict aircraft fuel consumption
- use prevailing weather conditions to supplement fuel

2.4.2.2 SUMMARY

Competitors are required to fuel their aircraft with a measured volume or weight of fuel, or with the amount of fuel they predict they will need to fly a given task in the prevailing conditions, to seal their fuel tanks and then:

- fly as far as possible before landing at a designated landing area
- fly for as long as possible before landing at a designated landing area
- fly a multi-leg task in which each leg may have different performance objectives, or
- fly a planned task before landing in a designated landing area

or any combination of these. Competitors may be permitted to fly to empty tanks or may be required to return with a specified safety quantity of fuel.

2.4.2.3 EVIDENCE

Evidence of competitors' performance may be provided by means of:

- a GNSS record of the flight

Evidence of fuel consumption may be provided by:

- verifying that the competitors' fuel tanks and systems are empty before fueling
- measuring the fuel with which the tank is filled
- sealing the fuel tank before the flight
- verifying after the flight that seals on the fuel tank are intact

2.4.3 PRECISION TASKS

2.4.3.1 OBJECTIVES

The objectives of a precision task involve testing the competitors' ability to handle their aircraft, where possible in circumstances similar to those that may be encountered during normal or emergency flying activity.

2.4.3.2 SUMMARY

Competitors are required to demonstrate:

- normal takeoffs
- short takeoffs
- powered landings
- engine-off landings
- short landings

2.4.3.3 EVIDENCE

Evidence of competitors' skill may be provided by means of:

- observation recorded by marshals with reference to marks or measurements on or near the ground
- tapes, that may be cut or broken by an aircraft without causing damage to the aircraft or injury to the crew or observers
- electrical or electronic equipment that records the passage of the aircraft using a pressure detector, photo cell and video

2.4.4 COMPOSITE OR SEQUENTIAL TASKS

2.4.4.1 OBJECTIVES

The objective of a composite task, which may combine any of the above, is to make the competition more demanding and more interesting for the competitors. The objective of a sequential task, in which any of the above tasks may follow another without a break, is to enable a competition director to run two tasks in a shorter time than would otherwise be possible.

2.4.4.2 SUMMARY

Composite tasks may combine any or all of the Navigation, Economy & Precision tasks, although such tasks must be carefully designed in order to ensure that one aspect of the task does not compromise another.

3. LKJI INFORMATION

AIP CZ

AIP
CZECH REPUBLIC

JIHLAVA

AD 4-LKJI-1
29 MAY 03

**Veřejné vnitrostátní letiště.
Public domestic aerodrome.**

LKJI - JIHLAVA

1	Umístění/Location	4 km NE Jihlava
2	Provozní použitelnost/Operational availability	VFR den, výsadková činnost VFR day, parachute jumping operation
	Druhy letadel/Aircraft types	letouny, vrtulníky, kluzáky, ultralehká letadla, volné balony, vzducholodě aeroplanes, helicopters, gliders, ultralight aircraft, free balloons, airships
3	Provozní doba/Operational Hours	1 APR - 31 OCT SAT, SUN 0700 - 1400 jinak/otherwise O/R
4	Celní a pasové odbavení/ Customs and immigration clearance	NIL

5	Provozovatel letiště/Aerodrome operator	Aeroklub Jihlava
	✉ Henčov 61, P.O.Box 150, 586 01 Jihlava, ☎ +420 567 303 171, 📠 +420 567 221 574, ✉ aeroklub.jihlava@ji.cz, 🌐 http://www.aeroklub.ji.cz	
	Další spojení/Next contacts	AFIS ☎ +420 567 221 600

6	Druhy paliva/Fuel grades	letecký benzín/aviation petrol 78 oct., 100 oct. letecký petrolej/aviation kerosene PL-6
7	Druhy olejů/Oil grades	ELF 100 AD, AEROSHELL 100
8	Hangárování/Hangar space	O/R, omezeně/limited
9	Opravy/Repairs	O/R, omezeně/limited
10	Ubytování/Accommodation	32 osob na letišti/persons at the aerodrome, jinak/otherwise Jihlava
11	Restaurace/Restaurant	NIL
12	Doprava/Transportation	linka městské hromadné dopravy č. 4 z Masarykova náměstí do Henčova, linka autobusové dopravy Jihlava - Polná, taxi public transport - line No. 4 from Masarykovo náměstí to Henčov, local bus line Jihlava - Polná, taxi

13. PRAVIDLA A OMEZENÍ MÍSTNÍHO LETOVÉHO PROVOZU

- 13.1 Údaje o tomto letišti se průběžně neaktualizují NOTAMy.
- 13.2 V zimním období není zajišťováno odklízení sněhu.
- 13.3 Při dlouhotrvajících deštích je nutno se informovat o způsobilosti RWY.

13. LOCAL TRAFFIC REGULATIONS AND RESTRICTIONS

- 13.1 Information about this AD is not updated by NOTAMs.
- 13.2 Snow clearance is not provided in the winter season.
- 13.3 It is necessary to get the information about RWY ability after a prolonged rains.

AD 4-LKJI-2
6 NOV 08

JIHLAVA

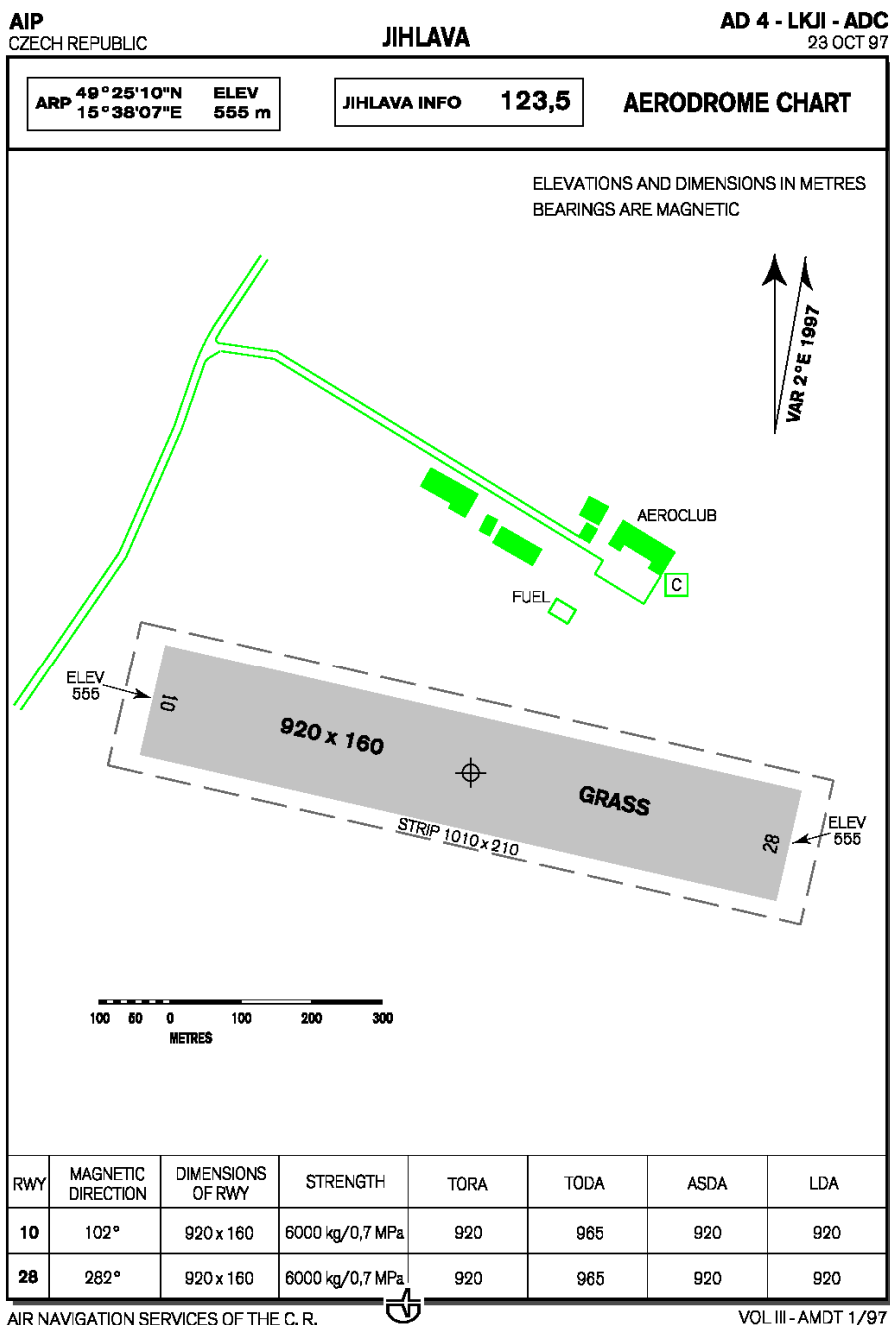
AIP
CZECH REPUBLIC

13.4 Letištní okruhy
13.4.1 Výška letu po okruhu je 2800 ft / 850 m AMSL.

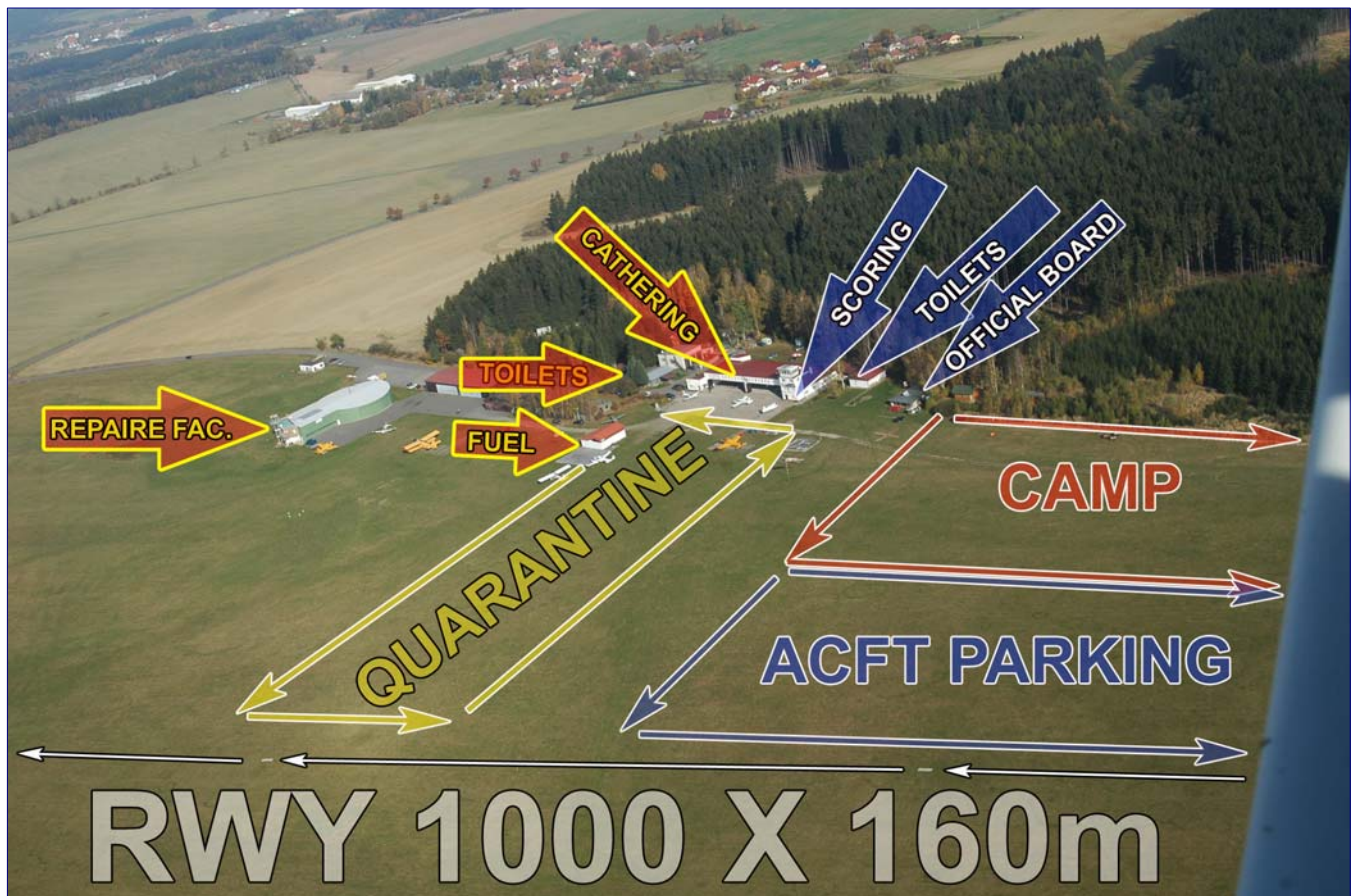
13.4 The traffic circuits
13.4.1 The traffic circuit altitude is 2800 ft / 850 m AMSL.

14. DOPLŇUJÍCÍ INFORMACE
NIL

14. ADDITIONAL INFORMATION
NIL



LAY OUT OF THE FACILITIES



THE TYPICAL COUNTRY



4. TASK CATALOGUE – GENERAL CONDITIONS

All tasks with the exception of those on precision landing are scored with the aid of the GNSS recording equipment.

The recording devices are set up for recording in two-second intervals, unless specified otherwise for a particular task. Each competitor is responsible for correctly setting up their recording equipment and for the condition of their batteries.

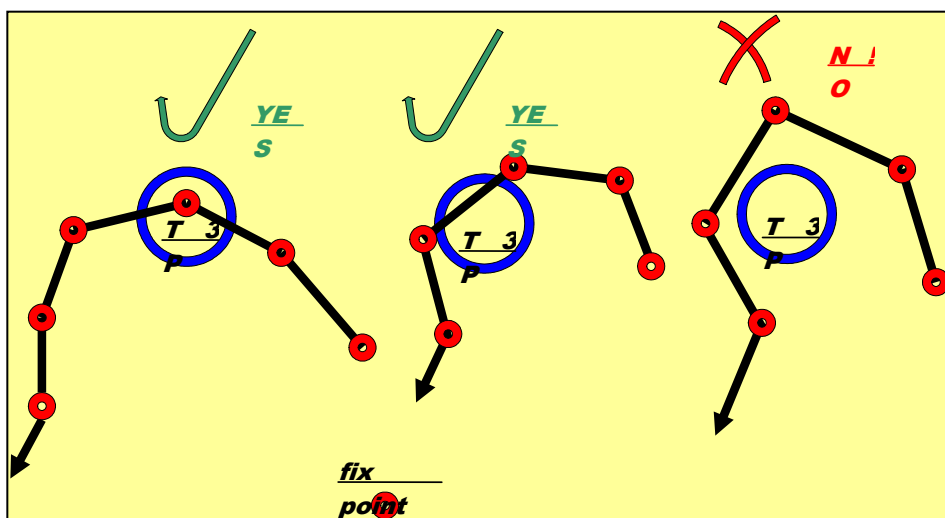
The recording equipment records location in values of co-ordinates and parallels of latitude, altitude above the sea-level and the time of performing each particular recording at preset intervals. The location in which the recording was taken is called a fixed point or "a fix".

In the event an error is made or any competitor becomes disadvantaged as a result of incorrect setting or placement of the recording equipment, discharged batteries or a technical failure, the organizers cannot be held responsible for such occurrence and competitor may not request an adjustment or change to be made to his results.

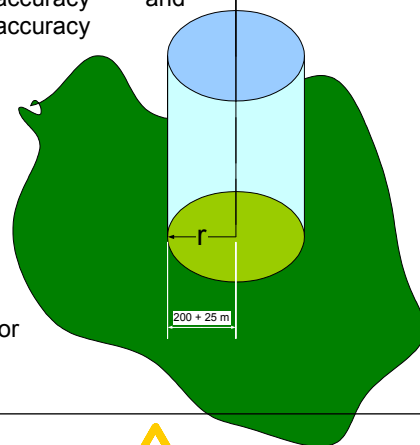
A competitor may utilize two sets of recording equipment and, in the event of failure or of limited functionality of one set, the other set or a combination of both sets of recorders may be used by the organizers. Should the recording not be continuous and it wasn't possible to substantially prove flight continuity and assess the flight with the aid of both recorders, then the flight shall not be evaluated.

TURN POINTS AND CHECK POINTS:

Reaching the turn points – A turn point has been reached when a minimum of one fix point of the recording is located inside the marked zone or when a straight line connecting two consecutive fix points runs through the marked zone.



The scoring zone is a cylinder of infinite height, perpendicular to the earth surface (vertical), with its center at a defined point, and of a 200 m radius. The organizer may expand the radius by a value compensating for variation caused by the inaccuracy of measuring method (this covers for the GPS measurements inaccuracy and inaccuracy 25 m).

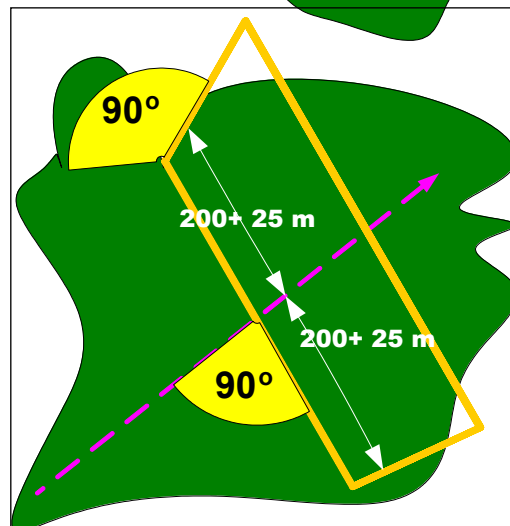


caused by rounding off the co-ordinates values in the evaluating program). This permissible variation, compensating for the measuring method inaccuracy, does not primarily provide the competitors with the benefit of an enlarged marked zone. It ensures that the competitor who had correctly passed over a turn point within the 200 metre radius is always properly evaluated and receives his points. A procedural turn performed past the turn point at a sharp angle shall not be considered to be flying in the opposite direction or circling over the route; there shall, however, be no time added for this turn.

TIME GATES :

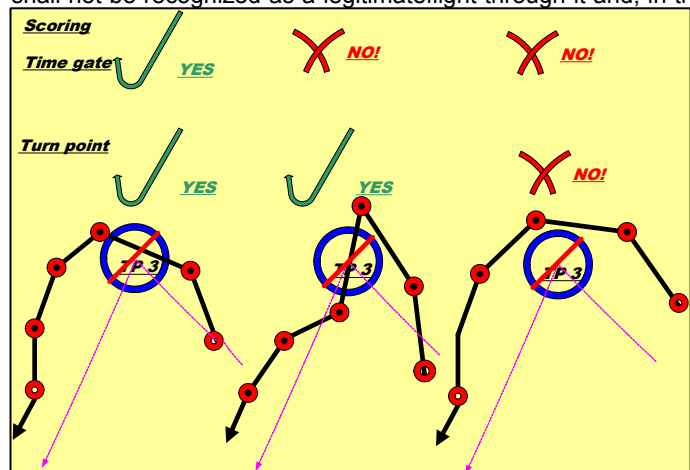
A time gate is surface perpendicular both to the earth surface and to the route, of a 200 m width + 25 m permissible variation (to compensate for the measuring method inaccuracy) on each side of the route's axis, and of infinite height. The variation of 25 m is intended to compensate for the measuring method inaccuracy and does not primarily provide the competitors with the benefit of an expanded time gate. This permissible variation ensures that each competitor, who correctly passes over the route within the 200 m radius limit, is always properly evaluated and receives his points.

The route contains both known and hidden gates. The known gates will usually be the start point and the final point, unless specified otherwise at the briefing. A known gate will always be formed by either a geographical object depicted in the official map (such as a highway, a road, crossroads, a railway, a water stream, the dam of a water reservoir and other similar objects) or it shall be marked in the



terrain by 4x0.8 m sections of white canvas placed in a straight line in direction perpendicular to the route's direction, at 10 m intervals of one another. The hidden gates may be placed anywhere on the route and their locations aren't recorded on the maps provided to the competitors, nor are they disclosed in any other way.

The time gates must always be passed through in the right direction. Flying through a time gate in the opposite direction shall not be recognized as a legitimate flight through it and, in the event this time gate is located on a straight line, this flight in the opposite direction shall be considered to be a proof of flying in the opposite direction and as such shall be penalized. A time gate may be located even on a turn point.



When the competitor clears both the gate and the turn point correctly, he shall receive points for both the gate and the turn point. When the competitor clears the turn point correctly but clears the gate incorrectly or not at all, he shall be evaluated and receive points for only clearing the turn point. In the event the competitor misses the turn point, he shall not be evaluated or receive points for neither the turn point nor the gate.

THE TIME AND SPEED MEASURING

- The time is primarily measured by subtracting the time of the appropriate fix point of the GNSS recorder recording in a defined location – the time gate.
 - The first measured time is the time measured at the start point. The time of the fix point located immediately before the start point shall be considered to be the time of clearing the SP. The time at each of the following gates is subtracted from the first fix point located immediately before each particular gate.
 - In those cases, where the route is divided into several independently measured sections, the time subtracted from a fix point located immediately before the gate marking the ending of an independently measured section shall also be considered to be the time of entry and start into the following independently measured section.
 - Permissible variation of ± 3 seconds is granted while measuring time. This variation is provided to compensate for inaccuracies caused by the measuring method used, resulting from setting the recording interval of GNSS to 2 seconds, and to also compensate for inaccuracies in the measuring of location using the above mentioned 25 m permissible variance. This permissible variance does not primarily provide the competitors with an additional benefit. It ensures that the competitor, who correctly and within the right time clears a gate, will always be properly evaluated and receives a full complement of points without being disadvantaged due to errors caused by measuring methods.
 - Each flight crew is assigned their take-off time by the take-off document. For navigation tasks it is determined by the hour, minute and the second in the following format HH:MM:SS. (for example. 12:05:00). It is each competitors duty to take off at the predetermined time at the earliest and within the 60 seconds following this predetermined time at the latest. Commencement of movement of the aircraft leading smoothly to take-off of this aircraft is hereby considered to be a start. A premature or delayed start shall be penalized, unless specified otherwise at the briefing, at 10 % of the task value.
- f) Speed is determined by a calculation using this formula $v = \frac{s}{t}$ where
- v is speed,
 - s is distance
 - t is time.
- Speed is to be declared by the competitors in km/h for the purpose of all navigation tasks. Each competitor is to maintain their declared speed for the entire route duration or on it's independently measured section. Unless specified otherwise at the briefing, measurements to ascertain that this speed is maintained always commence at the start point and continue to the point of measuring.
 - The time determined for clearing the startpoint (SP) is specified as time the flight crew was assigned for take-off in the take-off document after adding the time determined for beeing put on track (usually 3 – 5 minutes).
 - The flight crew is to properly clear the starting gate at the zero second of the appropriate minute. (example – the starting time is set to 12:00:00. The time to be put on track is 00:05:00. The flight crew should correctly clear the gate at 12:05:00.). In the event the flight crew clears the gate at a time different from the specified or calculated time with a margin of error greater than 5 seconds, it shall be penalized, usually by a deduction of 3 points for each one second of a difference

LOCAL REGULATIONS 12th FAI WORLD MICROLIGHT CHAMPIONSHIP JIHLAVA – CZECH REPUBLIC

- j) The organizer may, at certain points of the route, decide to add time for the crew's benefit to allow for the completion of a specific task – quick landing, designing their route during flight etc.... The flight crews shall be notified at the briefing of any time extensions for any tasks. The competitor is then responsible for adjusting their navigation calculations for the time extensions granted, and must clear the gates following the extensions of time at times corresponding with the distance, their declared route speed and the added time.

Example:

A touch and go landing with a 3 minute time allowance was inserted after the first time gate. The correct time calculations will be as follows:

Take off time 13:15:00 Velocity 102 km/h	Distances in km	Additional time hh:mm:ss	Calculated time for distance from SP	Time
Time for SP	0,00	0:05:00	0:05:00	13:20:00
Distance 1 gate	20,6	0:00:00	0:12:07	13:32:07
Distance 2 gate	29,2	0:03:00	0:17:11	13:40:11
Distance 3 gate	53,5	0:03:00	0:31:28	13:54:28
Distance 4 gate	62,2	0:03:00	0:36:36	13:59:36
Distance 5gate	67,3	0:03:00	0:39:36	14:02:36
Distance 6 gate	70	0:03:00	0:41:11	14:04:11
Distance FP	92,2	0:03:00	0:54:14	14:17:14

Evaluation of times after completing the route will be as follows:

DECLARATED GROUND SPEED	102	TAKE OFF TIME		TIME TO START POINT			
		13:15:00		0:05:00			
POINT	DISTANCE FROM SP	TIME TO DISTANCE	CALCULATED TIME	MEASURED TIME	DIFFERENCE	time scoring	2217
TAKE OF TIME	0	-	13:15:00	13:15:03	0:00:03	.	
START POINT	0	0:05:00	13:20:00	13:20:03	0:00:03	300	
GATE 1	20,6	0:12:07	13:32:07	13:32:51	0:00:44	183	
GATE 2	29,2	0:17:11	13:40:11	13:40:18	0:00:07	294	
GATE 3	53,5	0:31:28	13:54:28	13:54:30	0:00:02	300	
GATE 4	62,2	0:36:36	13:59:36	13:59:18	0:00:18	261	
GATE 5	67,3	0:39:36	14:02:36	14:02:34	0:00:02	300	
GATE 6	70	0:41:11	14:04:11	14:03:59	0:00:12	279	
FINAL POINT	92,2	0:54:14	14:17:14	14:17:14	0:00:00	300	

GROUND FEATURES - MARKERS AND PHOTOGRAPHS

Markers are objects formed on the ground by sections of white canvas measuring 4 x 0,8 m. Those markers must form shapes corresponding with the markers catalogue attached. The markers are either geometric signs or capital letters of the latin alphabet.

The photographs depict objects on the ground photographed from a flying plane in direction corresponding approximately with the approach achieved when following the route as intended.

The flight crews are to correctly locate and identify these markers and photographs, and to record their locations on the map. Their recording is performed in the following manner: the crew records the location of a marker or of a photograph on the route using a thin line which is approximately perpendicular to the route, and then records the corresponding photograph number, the letter or a drawing of the marker next to this line.

The legitimate photographs or markers, which should be recorded, are located on the route or within 200 m of the route's axis.

False photographs are located farther than 300 m away from the route's axis, and recording them into the map shall be penalized in accordance with briefing.

Markers located farther than 200 m away from the route's axis , those of different shapes or depicting letters other than those listed in the catalogue of markers are false markers, and recording these into the map shall be penalized in accordance with briefing.

All markers and photographs must be recorded with accuracy corresponding to 400 m, therefore within 2 mm of it's correct placement on a map of scale 1:200 000. Only those correctly identified and recorded photographs and markers will earn points for the flight crew.

The crew shall not receive any evaluation or points for markers and photographs recorded inaccurately – those recorded with a margin of error greater of 2 mm but lesser of 5 mm. In the event any photograph or any marker is recorded at a distance greater than 5 mm away from it's correct location, the crew shall be penalized on the basis of an assumption that they didn't actually locate the photograph or marker in question and had only attempted to guess it's location. The reality as to whether this was the case or the incorrect drawing was simply just an error shall be of no consequence in evaluating and the penalty shall always apply.

4.1 THE TASK SHEET CATALOGUE

4.1.1. NAVIGATION TASKS – GENERAL CONDITIONS:

Targets:

While completing the navigation tasks, the flight crews are to demonstrate their ability to direct their plane precisely on course of their given route, to maintain the track speed, to locate objects in the terrain on the basis of photographs, to locate markers on the ground – identify them correctly and record their position on the map.

The navigation tasks are assigned either as tasks with a known route, or as tasks with the route designed during flight in 3 levels of complexity:

- Task with known track
- Task with partially unknown track with only partial checking the time or speed
- Task with known or partially unknown track with checking the time or speed on whole track with specified spaces, in which competitors shall find ground features in nonspecified position.

For those tasks the competitors will receive the following prior to departure:

- The task sheet with the task description, maximal or precise length of track or length of legs, description of the start and final point and known turnpoints, a list of allowable markers, take off and landing manoeuvre description and the scoring table (no later than 2 hours before the first take off).
- A map with the known track drawn on it (30 – 45 minutes before take off time by the starting list).
- A set (sets) of photographs meant for locating objects on the ground, (maximally 2 sets with 6 pictures in the each, 30 – 45 minutes before take off)

The route may be formed by straight sections, partial circles, curves, lines of any shape or by any combination of the above.

The map contains :

- start point
- final point
- known turn points,
- known check points,
- known time-gates, if utilized.

The tasks of the flight crew are to declare in advance their ground speed and to fly the route with maximum precision in terms of time and navigation accuracy following the prescribed route. While en-route, the competitor must locate the objects depicted on the photographs and determine their exact location on the map, find the markers placed on the route and determine their exact location. Some pictures or markers may be false.

The route has fly-through time gates which the crew must clear within times corresponding with the distance of each particular gate from the starting point and their declared ground speed. Time will be computed from the time stated for the competitor in the starting list. If the ground speed will be checked, it will be done from some gate or turnpoint to the next gate or turnpoint.

Speed will be computed from the length of measured leg and from the times in gates. It will be not computed from the take off time by the starting list. Speed will be rounded to the whole km/h.

THE QUARANTINE RULES :

After receiving of the map and photos, the competitor mustn't speak with anybody and he is obliged make all preparations in his aircraft or very close to the aircraft. Any discussions with anybody excl. marshals will be the reason for 100% penalty in the task.

THE DEFINITIONS:

T_0 – time period before T_1 in minutes - in this time will be competition map, photos and other materials given to the competitors for preparation of the competition flight. Number of minutes will be briefed.

T_1 - time scheduled in starting list as take off time

T_2 - time for passing the start point = T_1 + ___ minutes – number will be briefed.

T_3 - time limit for passing the distance from the FP to the airfield of destination

CP – Change point - The 1st set of photos is intended for first part of task, the 2nd for the second part of task. CP is the point, where sets should be changed - CP = TP3

SCORING

The flight crew earns positive points :

- for all correct passes over the turning points and check points from 100 up to 300 points for each point – it will be defined at the briefing

- b) for correctly clearing the time gates with keeping their time schedule from 100 up to 300 points for each gate, or for the keeping of the declared ground speed (it will be defined at the briefing). for a time (speed) limit deviation while clearing any gate from 3% up to 10% of gate value, for each second (km/h) over the limit (The seconds/ speed limit and % of reduction will be defined at the briefing),
- a) for correctly locating and recording ground features (markers and photographs) from 100 up to 300 points for each, it will be defined at the briefing. for recording any photographs or markers incorrectly there will be an applied reduction:
 - 1. 0 points for deviation over 2 mm up to 5 mm
 - 2. -100% in case of deviation > 5 mm
 - 3. -100 % for marking the false photographs or markers

The flight crew will be penalized (these penalties will be not written in the following task sheets and will be apply by this general rule) :

- a) exceeding the take off time more than 60 seconds - 10% from task value for each following initiated minute;
- b) take off or the landing deck penalty (if is take off and/or landing included in the task) – 20% from the task value.
- c) circling above the route or making turns over 90 degrees - 50% from the task value in each case.
- d) outlanding – 100% from the task value
- e) back tracking 100%
- f) flying in the clouds 100%
- g) flying in the forbidden airspace 100%
- h) breaking the quarantine rules – (discussions with anybody, leaving the quarantine area before approval) 100%,
- i) missing the time limit for passing the distance from final point to the airfield of destination 100%
- j) violating any of the basic general flight rules, dangerous flying 100%

TASK SHEET A : navigation with known track

Name of task: Warming up

Competitors should take off from the departure deck in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the ground features and mark it into the map and keep the declared speed.

Task finishes at the final point. Following landing will be an independent precision task.

The track description :

point	Description:	Distance to next (in km rounded to 0,1)
Take off		
SP		
TP1		
TP2 = CP		
TP3		
TP4		
FP		
Landing		

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

CP – is drawn in the competition map)

The scoring system:

Description	Points
For correctly clearing: start point, final point, check point, turn point	100 points
For correctly identifying and recording a marker/photograph within 2 mm	100 points
For each time gate passed in the limit	300 points
Greater than a 5 second deviation from the calculated time in the gates	-5 points for each second

Penalties: by the general

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed

$$\text{RESULT} = \left(\frac{\text{score } C}{\text{score } W} \times 1000 \right) - \text{penalty}$$
, where *score C* is the total of all points earned by the competitor, *score W* is the point total reached by the most successful competitor.

TASK SHEET B : navigation with known track
name of task: To be in the right time at the right place

Competitors should take off from the departure deck in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the ground features and mark it into the map and keep the declared speed.
Task finishes at the final point. Following landing will be an independent precision task.

The track description :

point	Description:	Distance to next (in km rounded to 0,1)
Take off		
SP		
TP1		
TP2		
TP3		
FP		
Landing		

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

CP – is drawn in the competition map)

Keeping of the „Declared ground speed“ by special method of checking :

At the known points should be from one up to the three markers covered by tarp. Only in calculated arrival time of competitor it will be opened. In the case of 1 marker there will be a period of opening ± 30 seconds from the correct time, in the case of two markers the first will be opened ± 30 seconds, the second ± 15 seconds. In the case of three markers the first will be opened ± 30 seconds, the second ± 15 second and the third ± 5 seconds. So keeping of speed will be scored only through scoring of these markers.

The competitor(s) will receive the map and 2 sets of photos. in time $T_1 - \text{___ minutes}$. After receiving of the map and photos, he (they) mustn't speak with anybody and he is (they are) obliged make all preparations in his (their) aircraft or very close to the aircraft. Any discussions with anybody excl. marshals will be the reason for disqualification in the task.

The scoring system: (values may be altered during the briefing session but system of evaluation don't be altered)

Description	Points
For correctly clearing: start point, final point, check point, turn point	100 points
For correctly identifying and recording a marker/photograph within 2 mm	100 points
Recording of a marker/photograph with a margin of error $> 2 \text{ mm}; \leq 5 \text{ mm}$	0 points
Greater than a 45 second deviation from the calculated time above the time measuring markers	0 points for time measuring markers although, if marker will be correctly drawn in the map.

Penalties: by the general part

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula:

$$\text{RESULT} = \left(\frac{\text{scoreC}}{\text{scoreW}} \times 1000 \right) - \text{penalty}$$

where scoreC is the total of all points earned by the competitor, scoreW is the point total reached by the best competitor.

TASK SHEET C : navigation with partially known track

Name of task: Hidden circuits

Competitors should take off from the departure deck in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the ground features and mark it into the map, draw 3 circles in accordance with the following instructions, keep the declared speed over the known part of the track. Competitors will obtain competition map and 2 sets of photos. Task finishes at the final point. Following landing will be an independent precision task.

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

CP = Point B.

Instructions for construction the unknown parts of the track:

SP, TP1, TP2, TP3 and FP and straight lines between them are drawn in the map. In the centers of TP1,2 and 3 are drawn centers of circles. Competitors shall find markers (letters of latin alphabet) on the ground. Position of this letter defines:

- Position of time gate
- Radius of circle around the turnpoint.

Competitors shall draw the circle around turnpoint. Point of intersections of circle and legs defines the new turnpoints A_1 and A_2 . (B_1, B_2 and C_1, C_2). Competitors have 1 minut for drawing each circle. Turns or circling during this minute will be not penalized.

Time will be checked only in SP. Speed will be checked at the streight parts of legs between points SP – A_1 , A_2-B_1 , B_2-C_1 , C_2 - FP. No speed nor times will be checked at the constructed circles. Passing of the time gates should be done in accordance with the general part.

If the time gate will be missed, but the competitor will find the marker and gate will be passed during drawing of the circle, no score will be given to the competitor for keeping the declared ground speed. If the marker will not be found, competitor will follow to next turnpoint (TP1, TP2, TP3) by the straight line and will follow to the next leg. If the time gates will be passed well, there will be a score given to the competitor, but no score for turnpoints (incl TP1, TP2 and TP3, because they are not real turnpoints) will be given.

True or false photos or markers can be situated on the straight lines, only true photos or markers can be on the circles.

The track description :

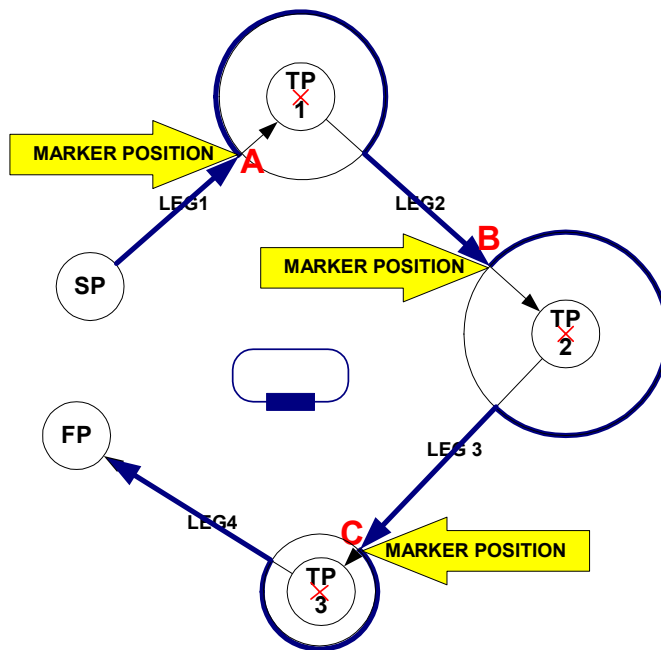
point	Description:
Take off	
SP	
TP1	
TP2	
TP3	
FP	
Landing	

The scoring system:

Description	Points
For correctly clearing: start point, final point, check point, turn point	___ points
For correctly identifying and recording a marker/photograph within 2 mm	___ points
For keeping time in the time gate	___ points
Greater than a 5 second deviation from the calculated time	- ___ points for each second

Penalties: by the general

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula: $RESULT = \left(\frac{scoreC}{scoreW} \times 1000 \right) - penalty$, where $scoreC$ is the total of all points earned by the competitor, $scoreW$ is the point total reached by the most successfull competitor.



TASK SHEET D : navigation with partially known track

Name of task: Find the right way

Competitors should take off from the departure deck in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the ground features and mark it into the map, construct unknown part of track in accordance with the following instructions, keep the declared speed over the drawn part of the track. The competitor(s) will receive the map and 2 sets of photos.

Task finishes at the final point. Into the task is inserted precision task – 6 m box. Landing after passing the FP will be independent precision task.

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

$CP = TP4$.

Instructions for construction the unknown parts of the track and the Task description:

In the competition map will be drawn:

SP, TP1, straight line between SP and TP1, arcs r_1 and r_2 and center S_1 , TP3Alfa, TP3 Echo, TP3 Foxtrot, TP4, curves between TP3 (A, E, F) and TP 4, position of 6m box, TP5, TP6, curve between TP5 and TP6 and lines Whiski, Yankee and Zulu and FP.

Unknown will be the position of the marker (letter) at the arc r_1 , the position of TP2 and correct track from TP2 to TP 4 and the position of the marker (letter) situated at the curve between TP5 and TP6, what defines the correct track from the TP6 to the FP.

The SP and the TP1 are the the known time gates. In the SP gate will be checked the time T_2 . In the TP1 gate will be checked correct time calculated from pilot's declared GND speed and distance SP – TP1.

Competitor shall find a marker – (letter or A, or E or F) at the arc r_1 .

Position of this letter defines:

- construction point,
- position of hidden gate
- letter defines, which TP 3 (A, E, F) is the right one.

Competitors shall draw streight line from S_1 , through the markers position to r_2 . The junction of r_2 and streight line from S_1 defines position of TP2. From TP2 competitor shall draw streight line to the right TP3. In the hidden gate will be checked time calculated from pilot's declared speed and distance. If competitor did not find the marker at the arc r_1 , he shall fly directly to the TP4.

Competitor shall follow the track from position of marker to TP2 and to right TP 3 (Only for example TP3F is used, how is displayed in the picture) and TP4. Anywhere between the right TP3 and TP 4 can be situated hidden gates. Checked will be keeping of declared speed calculated in km/h. No hidden gate will be between the letter position and the right TP3.

After passing the TP4 competitor will make touch and go landing into the 6 m box. From 6m box competitor shall fly directly to the TP5. TP5 is the known time gate. After passing TP5 competitor shall follow the curve to the TP6. At the curve is loaded marker – letter or Whiski, or Yankee or Zulu. Letter defines, which line is the right one track from TP 6 to FP. (Only for example Zulu is used, how is displayed in the picture)

Anywhere on the track from TP5 to FP can be some sectors, where will be checked keeping of declared ground speed (in km/h). If competitor did not find the letter (W, Y, Z), he shall fly directly from TP 6 to FP.

True or false photos or markers can be situated on the track, only true photos or markers can be on the track from position of marker at the arc r_1 to TP3.

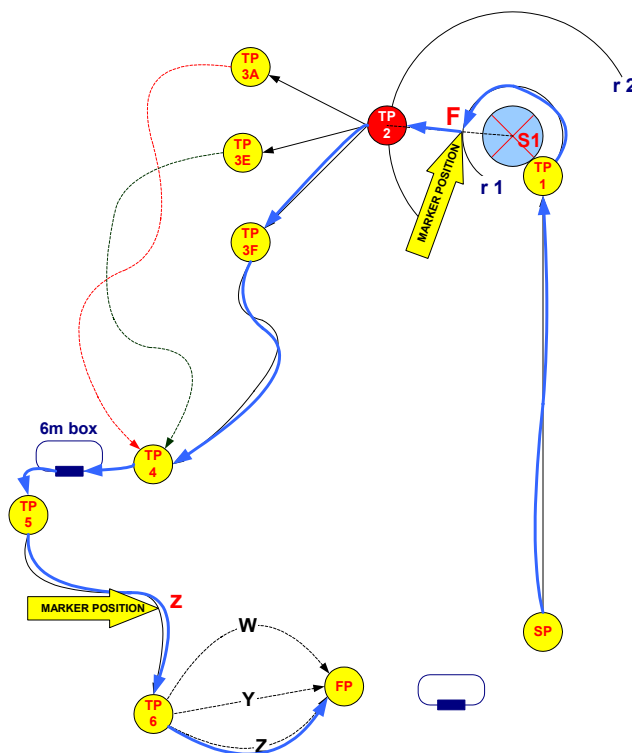
After passing FP competitor shall fly directly to the airfield. Landing will be independently scored precision task.

The scoring system:

Description	Points
For correctly clearing: start point, final point, check point, turn point (scoring zone radius is 200 m excl. TP2, where it is 500m)	___ points
For correctly identifying and recording a marker/photograph within 2 mm	___ points
For keeping time in the time gate or keeping declared speed	___ points

Penalties: by the general + following

Greater than a 5 second deviation from the calculated time or 5% deviation from the declared speed	5% from gate value for each second over the limit
--	---



Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula: $RESULT = \left(\frac{scoreC}{scoreW} \times 1000 \right) - penalty$

where scoreC is the total of all points earned by the competitor, scoreW is the point total reached by the most successful competitor.

TASK SHEET E : navigation with partially known track

Name of task: Sightseeing trip

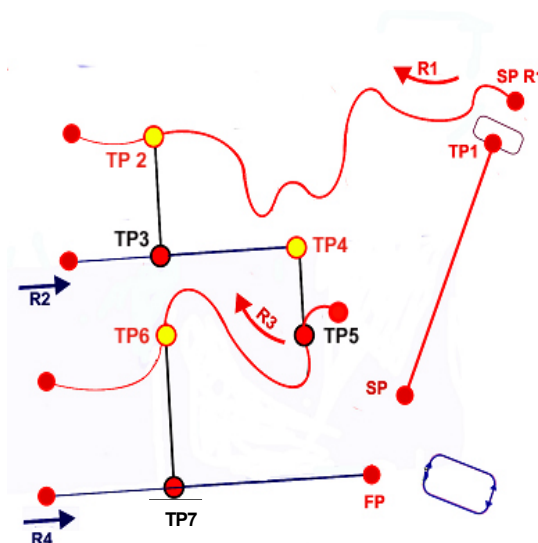
Competitors should take off from the departure deck in T₁, in the time T₂ shall pass the Start point gate, follow the drawn track, find the ground features and mark it into the map, draw unknown part of track in accordance with the following instructions, keep the declared speed. Task finishes at the final point. Into the task is inserted precision task – 6 m box. Landing after passing the FP will be independent precision task too. The competitor will receive the map and 2 sets of photos

T₀ = T₁ - ___ minutes

T₂ = T₁ + ___ minutes

T₃ = time of passing the FP + ___ minutes

CP = TP3



Instructions for construction the unknown parts of the track and the Task description:

In the competition map will be drawn:

SP, TP1, straight line between SP and TP1, SP R1, curve R1, straight line R2, curve R3, straight line R4, FP.

Unknown will be the position of the markers what defines **TP2, TP4 and TP6** (it will be one from letters Kilo, Mike, November, Victor or Whiski) and constructed **TP 3, 5 and 7**.

TP3 is created by junction of R2 and perpendicular from R2 to the found TP2 at the R1.

TP5 is created by junction of R3 and perpendicular from found TP4 at the R2

TP7 is created by junction of R4 and perpendicular from R4 to found TP6 at the R3.

SP and TP1 are the known time gates. IN SP gate will be checked time T₂. In the TP1 gate will be checked right time calculated from pilot's declared GND speed and distance SP – TP1. Near the TP1 is airfield, where will be into the task inserted separately scored task 6 m box. After 6m box competitor shall pass the SPR1 point and follow the R1 curve. At the curve will be located Marker – the capital K, or M or N or V or W). Found letter defines TP3. The competitor will draw the following track in accordance with the above described instructions. If some letter will not be found, the competitor shall follow to the end of the relevant line (R1, 2 and3) and from the end of line will follow to the beginning of the next line.

On the lines R1 – R4 there can be sectors, where keeping of the declared speed would be checked (in km/h). TP 2 – 7 will not be time gates.

True or false photos or markers can be situated on the track, only true photos or markers can be at the constructed perpendiculars.

The scoring system: (Figures may be altered by the briefing)

Description	Points
For correctly clearing: start point, final point, check point, turn points 3, 5 and 7 (scoring zone radius is 200 m excl. TP3,5 and 7, where it is 500m) Turnpoints 2, 4 and 6 are scored by found markers only.	100 points
For correctly identifying and recording a marker/photograph within 2 mm	100 points
For keeping time in the time gate or keeping declared speed	300 points
Penalties – by the general +	
Greater than a 5 second deviation from the calculated time or 5% deviation from the declared speed	5% from gate value for each second or each % over the limit

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula: $RESULT = \left(\frac{scoreC}{scoreW} \times 1000 \right) - penalty$

where scoreC is the total of all points earned by the competitor, scoreW is the point total reached by the most successful competitor.

TASK SHEET F : navigation with known track

Name of task: The survey flight

Competitors should take off from the departure deck in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the ground features and mark it into the map, keep the declared speed over the whole track. Task finishes at the final point. Into the task can be inserted precision task – 6 m box. Landing after passing the FP will be independent precision task too.

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

CP = TP6

Task description:

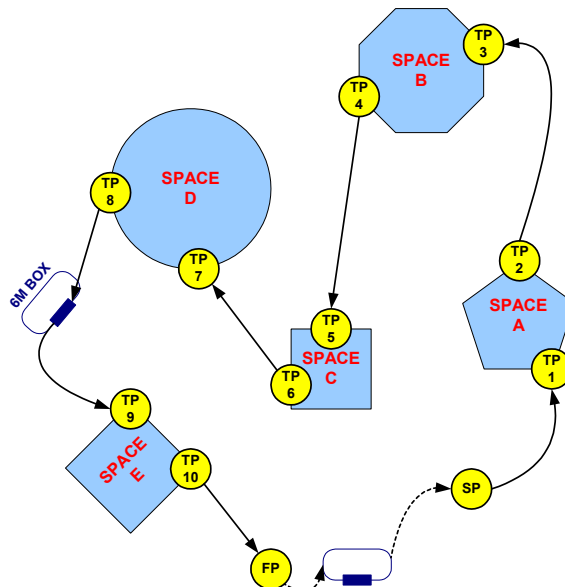
The competitor(s) will receive the map and 2 sets of photos. in time $T_1 - \text{___ minutes}$. After receiving of the map and photos, he (they) musn't to speak with anybody and he is (they are) obliged make all preparing in his (their) aircraft or very closed to the aircraft.

In the competition map will be drawn:

SP, TP1 – TP10, FP, the random lines between SP, TP's and FP, SPACE A – E, 6m box location.

All points (SP, TP1 – 10 and FP) are the known time gates, where will be checked time calculated from SP to FP. In the SP gate will be checked time T_2 . Next the TP1, 3, 5, 7 and 9 are spaces in random shape. For each space is specified time determined for survey of relevant space. Competitors shall use this specified time for finding ground features in the space. Time in the gate behind the space shall be calculated as the correct time in previous gate calculated from distance and declared ground speed plus specified time for survey. Anywhere on the lines nor in the spaces can be correct and false photos and markers.

Between two specified turnpoints will be insert into the navigation task the timed 6m box. It will be scored separately. The front line of the box will be a time gate. Competitor shall pass this gate and touch and go landing should make in ___ second past first crossing the front line of the box. Time will be checked in the same gate. Time for the touch and go landing will be add to the correct flight time.



The scoring system:

Description	Points
For correctly clearing: start point, final point, and turn points (scoring zone radius is 200 m)	___ points
For correctly identifying and recording a marker/photograph within 2 mm	___ points
For keeping time in the time gate	___ points

Penalties: by general +

Description	penalties
Greater than a 5 second deviation from the calculated time	5% from gate value for each second over the limit

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula: $RESULT = \left(\frac{scoreC}{scoreW} \times 1000 \right) - penalty$

where scoreC is the total of all points earned by the competitor, scoreW is the point total reached by the most successful competitor.

TASK SHEET G : navigation with partially known track

Name of task: The Honeycomb

Competitors should take off from the deck¹ in T_1 , in the time T_2 pass the Start point gate, follow the drawn track, find the photos and markers, construct unknown parts of the track and keep the declared ground speed. Landing will be an independent precision task.

$T_0 = T_1 - \text{___ minutes}$

$T_2 = T_1 + \text{___ minutes}$

$T_3 = \text{time of passing the FP} + \text{___ minutes}$

CP = D

Description and Instructions

In the center there is hexagonal cell with marked center of drawing S^1 . Around this cell there are six hexagonal cells marked Alfa, Bravo, Charlie, Delta, Echo and Foxtrot. These Cells create the honeycomb. Area around the "Honeycomb" is divided into sectors A, B, C, D, E and F. The radials from the center S^1 round each 60° are the sector boundary.

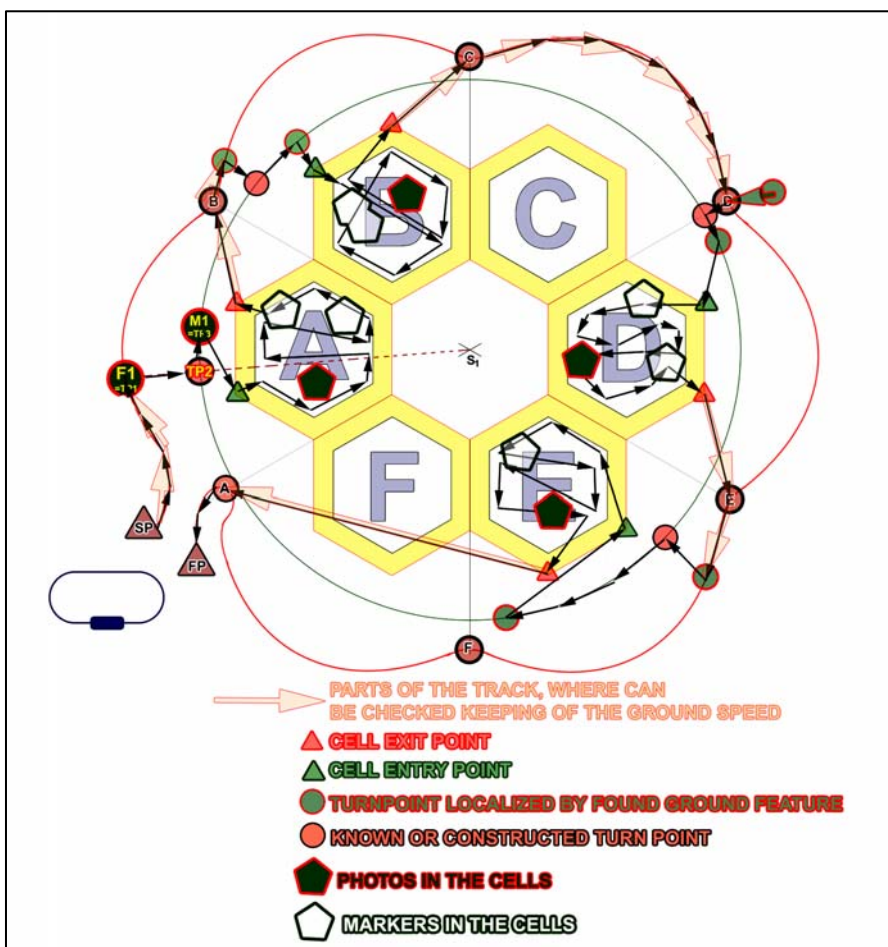
Around the Honeycomb there are drawn two lines. The red line of a random shape creates the outside boundary of the sectors. Inside the sectors lies a green circle with the center in S^1 . The junctions of this red line and the sector's radials are the sector's Entry and Exit points. The Sector B Entry point is the Sector A Exit point and so on. Only Entry points A – F are marked in the picture and will be drawn in the competitor map, **but markers of these entry and exit points will not be placed on the track.**

Competitor(s) will receive two sets of photos. In the first set for sectors A, B and C there will be photos marked by numbers 1, 2 and 3, and also photos marked by Letters A, B and C. Respectively In the second set for the sectors D, E and F there will be photos marked by numbers 4, 5 and 6, and photos marked by Letters D, E and F. In each set there may be false photos, so there may be some cells without any true ground features.

Instructions

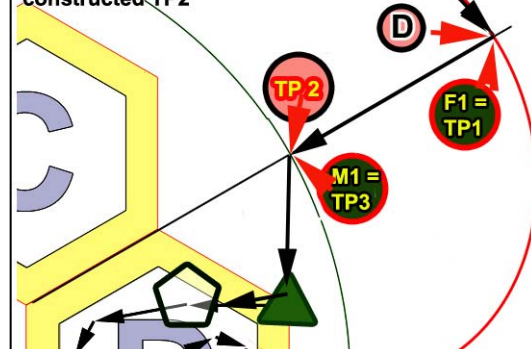
Competitor(s) shall pass SP and will follow the red line clockwise. Somewhere in the sector there will be located at the red line a photo of a ground feature. This photo will be marked by a number. This ground feature is the Turn point No1 in the relevant sector. This ground feature will be shown in the competition map. Competitor shall draw a radial from the center S^1 through the found ground feature in his map. In the junction of this radial and the green circle will be position of the turn point No 2.

Competitor shall pass this turn point and shall follow the green circle clockwise. At the green circle will be a marker – one from the letters Uniform, Victor, Whisky, X-ray, Yankee, Zulu. In the marker's position is the Turn point No 3 in the relevant sector. Competitor shall pass this turn point and shall fly into the cell via the cell entry point. In inner space of the cell there will be a photo marked by a letter. This ground feature may not be shown in the competition map. In the cell will be only one photo, but there may, but not must be one or two markers. Competitor has 5 minute time limit to look for the photo and markers. Flight follows from the cell's exit point to the sector exit point. A Cell's entry and exit



attention:

photo defining location of the TP1 can be situated in the same position as is turnpoint A-F, the marker defining location of the TP 3 can be situated in the same position as is constructed TP2



¹ Independently scored „Short take off“ task can be the variety

points are the time gates for checking if the time limit 5 min. inside the cell was kept.

Keeping of declared ground speed may be checked from the cell exit point up to the TP 1 in the next sector, or anywhere between these points.

If competitor will correctly visit the 4th cell, he shall fly directly from this cell's exit point to the turnpoint A and follow to the FP.

SPECIAL COMMENTS PHOTOS AND MARKERS

Photos and markers positions at the red and green lines should be draw in with accuracy ± 2 mm. Photos and markers in the cells will be draw in as small cross shape with accuracy ± 5 mm.

Correctly draw in photo or marker will be drawn with accuracy up to 2 mm at the lines and up to 5 mm in the cells.

TIME GATES and the SCORING ZONES

Scoring zone of known TP's and gates has radius 200 m, the radius of scoring zones of found or constructed TP's and hidden gates will be 300 m.

Only if the photo located at the red line and the marker located at the green line are found and correctly drawn, is competitor rightfull to fly into the cell. In the opposite case all gates, photos and markers in the relevant sector will be scored zero and there will be applied penalty of 25% for the whole task.

CELLS

In the cells there is highlighted special area around the inner space. Ground features will be only in the inner cell. **The space around inner cell shall not be used for flying** excluded entrance end exit. There are two reasons for this request:

- to avoid colisions and/or incidents
- to avoid searching for photos and markers in the next cell

Crossing the cell's boundary line in to the next cell will be evaluated as Non rightfull flight into the cell!

SCORING

Description	Points
For correctly clearing: start point, final point, turn points and the cell entry and exit points	100 points for each
For correctly identifying and recording a marker/photograph	150 points for each
For keeping the declared ground speed	300 points in each checked sector

Penalties: by the general +:

Description	Penalties
Deviation from the declared ground speed	10 % from checked sector for each initiated 1% over 5 %
Exceeding of 2 mm tolerance at the lines and 5 mm in the cells for draw in photos and markers.	Competitor will get 0 points for this greound feature
Exceeding of 5 mm tolerance at the lines and 10 mm in the cells for drawn in photos and markers. ²	-100% value of that ground feature
Exceeding of the time limit given for finding features in the cells more than 10 seconds	10 % from the value of relevant sector scoring for each following initiated 5 seconds.
Non rightfull flight into the cell	0 points for relevant sector and 25% penalty from whole task score

Once all the flight crew scores have been marked, recalculation of the scores to 1000 points will be performed using the following formula: $RESULT = \left(\frac{scoreC}{scoreW} \times 1000 \right) - penalty$

where scoreC is the total of all points earned by the competitor, scoreW is the point total reached by the most successfull competitor.

² draw in a false photo/marker or exceeding limit for accuracy of drawing in will be penalized by general conditions

3.1.2. TASKS ON FUEL CONSUMPTION, ENDURANCE AND FLYING RANGE

TASK SHEET H : endurance with limited fuel

Name of task: Marshal's free afternoon

Goals:

To fly for the longest time possible with limited amount of fuel.

A summary:

The competitors will receive 7 kg of fuel for two seaters, 5 kg for one seaters

This task will start by take-off from the deck within a specified flight window. Measuring of time will be commenced by leaving a circle of 1 km radius centered around a specified point of the airport, measuring of time will conclude at entering the same circle.

The landing shall proceed on the surface in the specified space at the airfield prior to ending of the flight window.

The remaining-fuel will not be required, but after landing the competitor will be asked to enter the quarantine area for a check of the sealing and he must start up the engine. If engine will not run by some malfunction reason, competitor shall demonstrate no less 1/4 l of fuel in the fuel system of his ACFT.

Safety:

Especially in those tasks which require flying until fuel tanks are empty, the pilots must pay carefull attention in terms of the other aircraft preparing to land with their engines turned off. They must maintain the correct scope of vision for the entire duration of their flight.

Any aircraft joining another plane in a thermal stream must circle in the same direction the first plane is circling in, irregardless of their altitude difference.

Awarding points and penalties:

Awarding points

The flight crew achieving the best time earns 1000 points, the other ones get proportionately fewer points as per the following formula

$$\text{Score} = \left(\frac{\text{score}_C}{\text{score}_W} \times 1000 \right) - \text{penalties}$$

Penalties

Penalty for Take off deck	20%
Penalty for a premature take-off	100%
Penalty for exceeding the flight window - Flight time will only be scored to the ending of the flight window and additional penalty will be applied	-1 minute for each minute of exceeding
Flight after sun set	100%
Flying outside the specified boundaries or flying in the prohibited space	100%
Landing outside the specified airport	100 %
A engine doesn't run and less then 1/4 l of fuel was demonstrated	100%

TASK SHEET I : maximal speed and flying range with limited fuel

Name of task: SPEED LEG AND TURN POINTS HUNT

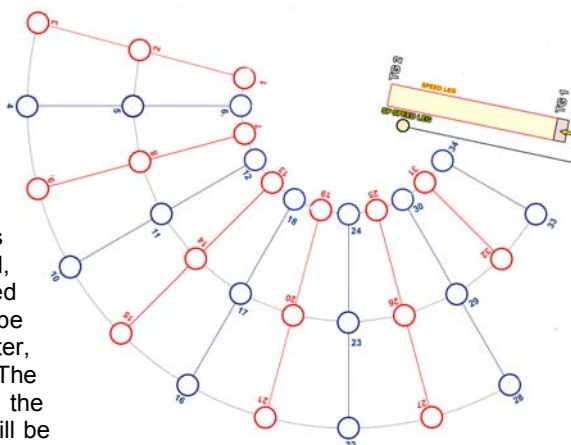
Goal – to fly as fast as is possible and to fly over the greatest possible distance with limited fuel.

Summary:

This task will begin by a free take-off from the airport within the specified time flight window by the “Le Mans” start method. This procedure will be specified during the briefing.

Competitor shall fly to the specified gate and fly as fast as possible through the speed leg defined by the gates TG1 and TG2. After crossing the TG2 gate the competitor shall fly to the turn points hunt diagram and he shall fly the greatest possible distance. Landing will be in a specified space at the airfield. The remaining-fuel will be required in an amount of 2 litres, after landing the competitor will be asked to enter the quarantine area for a check of the sealing and he shall demonstrate no less than 2l of the remaining fuel.

The turn points hunt diagram is created from three circle arcs with the center at the airfield. The radius of the circles are 10, 20 and 30 km. From the center there are drawn radials by ___ degrees. In junctions of each radial and each arc there are situated turn points. The turnpoints are numbered, as is displayed in the picture. The pilot shall fly only by the radials or by the arcs every time from the number with lower value to the number with the higher value. To fly from TP 1 to TP 2 is allowed (by the radial), from TP 1 to TP 6 is Allowed (by the arc). To fly from the TP1 to the TP 5 is not allowed, since it does not follow an arc or a radial. No turn point shall be used more than once. More than 300 km of track will be available. It shall be maintained that the blue radials be used for heading out from the center, and that the red radials shall be used for heading into the center. The direction of the flight at the arcs (CW or CCW) shall be defined at the briefing. Only upon performance of this manner passed turnpoints will be scored, some others will be regarded as missed.



If a turnpoint will be missed, no score will be given for the distance from the last correctly passed turnpoint up to the first next correctly passed turnpoint.

Example: Competitor flew from TP1 to TP 6 via TP2, 3, 4 and 5.

Turnpoints 1, 2, 4 and 6 were passed correctly, turn points 3 and 5 were missed. Only the distance TP 1 –TP2 will be scored.

The scoring zone will have a radius of 500 m.

Scoring:

1) Speed:

The fastest speed will have a value of 300 points. Other scores will be calculated by formula

$$\text{RESULT} = \left(\frac{\text{scoreC}}{\text{scoreW}} \times 300 \right)$$

where scoreC is the competitor's speed, scoreW is the fastest competitor speed.

2) Distance

Each distance between the arcs has a value of 10 km, between the center and the first arc 10 km. Each distance at the largest arc has a value ___ km, at the middle arc ___ km, at the smallest arc ___ km. All flown distances will be added together.

The greatest distance will be evaluated as scoring 700 points.

Other scores will be calculated by the formula:

$$\text{RESULT} = \left(\frac{\text{scoreC}}{\text{scoreW}} \times 700 \right)$$

where score C is the competitor's distance, scoreW is the greatest achieved distance.

Scoring of point 1) and 2) will be added together.

3) Score of the task will be calculated by formula:

$$\text{score} = \left(\frac{\text{scoreC}}{\text{scoreW}} \times 1000 \right) - \text{penalties},$$

where score c is the algebraic sum of score for the speed and score for the distance of competitor, score w is the best algebraic sum of these scores.

Penalties

Penalty for a premature take-off	100%
Backtrack	100%
Landing outside the specified airport	100 %
less than the minimum specified amount of remaining fuel	100% unless specified otherwise during the briefing session

3.1.3 PRECISION TASKS

TASK SHEET J and K: precision landing with the engine running (K) with the engine off (L)

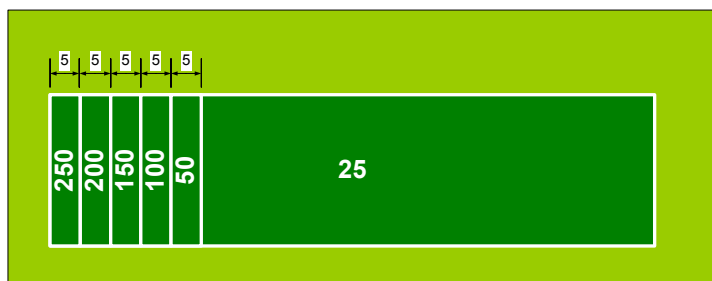
The objective:

The objective is to have the aircraft touch the landing deck and to stop the aircraft as near to the beginning of the deck as possible.

Summary:

This task simulates landing on board an aircraft carrier ship, the deck has under ISA conditions (international standard atmosphere - 0 altitude AMSL, QNH 1013,25 HPa, 15°C) the following measurements – length of 100 meters and width of 25 meters. The length will be recalculated to the length corresponding with our above-sea level and with the average daily temperature for the month. (LKJ altitude 555 m AMSL, temperature 23°C).

The first 25 metre section of the deck is divided into five strips of five metres each, which carry scores of 250 to 50 points. The remaining part of the deck is scored at 25 points. The main wheels of the aircraft must touch the deck in the specified strip and the aircraft must reach a full stop inside the deck in order to earn any points. While stopping, the aircraft must not leave the deck nor perform a turn greater than 90 degrees. Crossing the side boundary lane of the deck is considered leaving the deck. The competitors may leave the deck only after achieving a full stop and upon the Marshall's instructions, and that only in a specified manner. The competitors must not cross the side boundary lines of the deck while departing, unless instructed otherwise by the Marshall.



Take-off:

The take-off sequence shall be specified at the briefing. Pilot must follow the referee's directions for his plane placement and must not take off until directed to do so by the referee. The form of signal used by the referee for this purpose shall be specified at the briefing.

Climbing by circling:

The procedure for climbing by circling shall be specified at the briefing.

Turning the engines off: (only K task sheet)

The aircraft must reach the deck in the direction of landing at an altitude of approximately 1000 feet. While completing the task of precision landing with the engine off, the engine must be turned off prior to passing over the beginning of the deck. The aircraft must then pass over the entire length of the deck before commencing its circling descent.

Circling descent:

The circling descent procedure shall be specified at the briefing.

Landing:

Upon the commencement of the aircraft final approach, no diversion greater than 90 degrees of the centre axis of the deck is allowed, neither in the air or on the ground. The aircraft must be brought to a complete standstill and must not be manipulated with until directed to do so by the referee.

Scoring:

Points shall be awarded for the value of the strip in which both of the main wheels touched the ground and 1 point for every meter of distance between the nearest wheel and line on the end of the deck. (In the case, where landing will be at some airfield out from Jihlava, distance to the end of deck will be not measured and scored. The reason is, fast breaking increases risk of some damage to the aircraft and repairing of damages in the field should be to complicated, because spares, tools and so on will be not available there.)

Results will be recalculated for 250 points by formula:

$$\text{score} = \left(\frac{\text{score}_C}{\text{score}_W} \times 1000 \right) - \text{penalties},$$

where score c is algebraic sum of competitors score for strip of the deck and score for distance up to the end of deck, score w is the best algebraic sum of these scores.

Penalties:

The aircraft doesn't take off from the deck	20%
Take-off performed prior to the referee's instructions	100%
The engine not turned off prior to passing over the deck during the task of landing with engine off.	100%
The aircraft does not pass over the entire length of the deck prior to it commencing its descent during the task of landing with engine off.	100%
The aircraft turns by more than 90 degrees of the centre line of the deck between the commencement of its landing manoeuvre and bringing the aircraft to a full stop.	100%
Any part of the plane touches the ground before reaching the deck.	100%
The aircraft doesn't fully stop inside the deck.	100%

The aircraft moves off the deck prior to receiving the referee's direction to do so.	100%
The aircraft is damaged and unable to move, drive or take off without receiving assistance (there shall be no penalty for failing to start the engine).	100%

ATTENTION: Crossing of any boundary line of the deck constitutes not landing on the deck or not taking off from the deck.

TASK SHEET L : precision landing with a time limit, with the engine running.

This task is an application of the previous task with the difference that the flight crews shall be assigned a specific amount of time within which to land on the deck, for example 4 minutes. The flight crew must not take off prior to the time designated by the starting document, but no later than 15 seconds after this time. The pilot takes off independently and doesn't wait for the Marshall's instructions, it is, however, his duty to obey the Marshall's direction, if it is prohibiting his take-off or landing. This direction shall be given by the posting of a red flag. In the event the competitor was stopped before his take-off, he shall be allocated a new departure time – this is invalid in the event that he had already exceeded the pre-determined 15 second time limit for take-off and the Marshall had posted the red flag after this time period had passed. In the event a pilot is not allowed to land, he shall have the right to a new flight. Premature take-off or a late take-off (after the expiry of the 15 second time limit) both result in the flight crew's disqualification in this task.

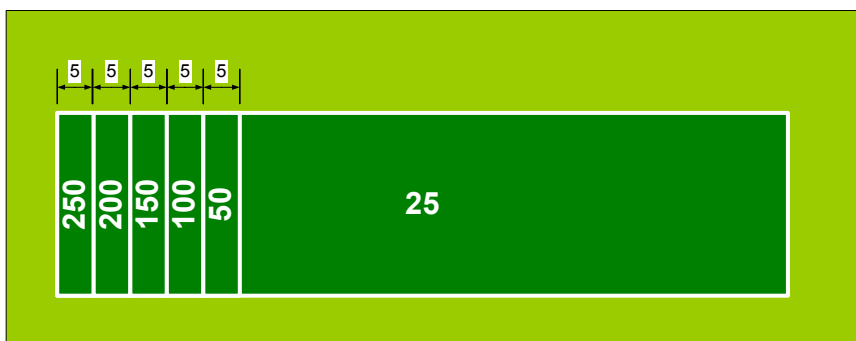
Scoring

The flight crews must, within the specified time limit, perform a round trip flight of the route, approach and landing on the landing deck all within the time allocated for take-off + time predetermined for the circle flight and landing. The time of landing on the deck is measured by the referee at the precise moment of the first part of the aircraft crossing the front deck boundary. The time will be checked by radiocontrolled clock in the view of camera. The limit of tolerance for the full score for this task is 2 seconds. Each 1 second over the limit will be penalized 10 points. The maximum complement of points for crossing the deck boundary within the range of tolerance is 250 points.

No points for a timely crossing of the deck boundary shall be awarded a flight crew which didn't make the full stop landing in the deck.

Scoring points for landing in the deck in this task is equivalent to the scoring in the task J, but distance to end of the deck will be not measured and evaluated by the safety reason, because any delay in the deck can make risky situation, or non fair conditions for next competitor.

The final total score for the task shall be determined by adding together the points for time and the points for landing.



Penalties:

The aircraft doesn't take off from the deck	20%
Take-off performed prior to the referee's instructions	100%
The aircraft turns by more than 90 degrees of the centre line of the deck between the commencement of it's landing manoeuvre and bringing the aircraft to a full stop.	100%
Any part of the plane touches the ground before reaching the deck.	100%
The aircraft doesn't fully stop inside the deck boundaries.	100%
The aircraft moves off the deck prior to receiving the referee's direction to do so.	100%
The aircraft is damaged and unable to move, drive or take off without receiving assistance (there shall be no penalty for failing to start the engine).	100%

Score will be calculated for 250 points for the best result by the formula

$$\text{score} = \left(\frac{\text{scoreC}}{\text{scoreW}} \times 250 \right) - \text{penalties},$$

where score c is algebraic sum of competitors score for strip of the deck and score for time, score w is the best algebraic sum of these scores.

TASK SHEET M : six meter box

TASK: To do a touch and go landing into a space (box) marked by lines. The box is 10 m (32,81 ft) wide and 6 m (19,69 ft) long. The box is divided into four fields 1,5 m (4,92 ft) wide.

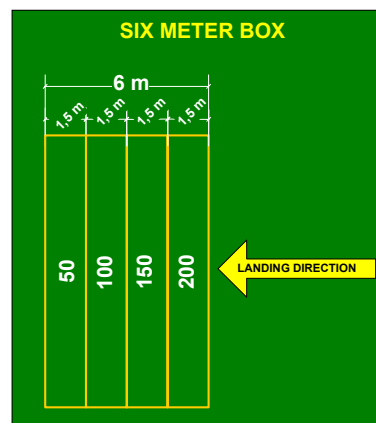
Scored will be the first touch of the main gear.

Take off following after the touch and go landing, should be provide no further than 50 m behind the 6 m box. This distance will be marked by a line and flags or cones.

Scoring:

By the field of the first touch of the ground by the main gear.

Penalties:



Touch of ground before the front line of the box	100 %
Missing the box	100 %
Crossing the side lines of the box	100 %
No take off in the distance 50 m or touch the ground behind the 50 m line	100 %

TASK SHEET N : six meter box timed

TASK: To do a touch and go landing into the field marked by lines which is 10 m wide and 6 m long in the specified time (for example each full minute) or in a time limit after crossing the front line of the 6 m box in a specified altitude of flight (from 150 to 300 m ground level). Time limit shall be specified in minutes and tens of seconds. Score will assume scoring of landing and scoring of the keeping of the time.

The field is divided into four fields 1,5 m wide.

Scored will be the first touch of the main gear.

The following take off should be provide no further than 50 m behind the 6 m box. This distance will be marked by line and flags or cones.

In the case of specified time will be time of crossing the front line of the box checked by radio controlled clock located in the camera screen in axes of the front line.

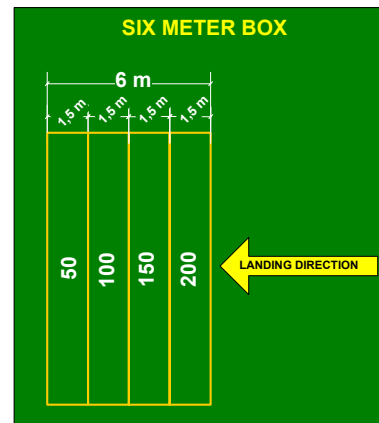
In the case of a time limit the time will be measured by the flight recorder at the front line previous to the final approach, the time of crossing the front line during touch and go landing will be measured with the flight recorder. too.

Crossing the front line in the 0 second of the specified time or time limit, will be scored as 200 points. Evaluation of crossing the line in zero seconds means crossing this line in a given tolerance of ± 5 seconds.

Scoring:

1. Evaluation of landing: by the field of the first touch
2. Evaluation of time : 200 – penalty for time error
3. Summary evaluation – $score = \frac{score^c}{score^w} \times 250 - penalties$

Score^c is the competitor's arithmetical sum of score for landing and score for time, score^w is the best competitor's arithmetical sum of score for landing and score for time



Penalties:

Exceeding the tolerance of time	10 % for each second over tolerance
Touch of ground before the front line of the box	100%
Missing the box	100%
Crossing the side lines of the box	100%
Error of the time over 20 seconds	100%
No take of in distance 50 m or touch the ground behind the 50 m line	100%

TASK SHEET O : short take off

GOALS: competitors shall demonstrate an ability for operation from the very small airfields. This is the reason for the short take off (as short as possible).

Description of the short take off :

The short take off is provided from the special space.

Space is 150 m long and 25 m wide.

For better orientation the space is divided into 25 m wide fields, marked by the boundary lines. This fields will be divided into 5 m wide fields marked by markers at the both sides of the space. The First and the Last field will be not marked, use is not supposed by the competitors. At the end of the space there is a tight tape in height 1 m above the ground.

The Task is take off from the a minimal distance in front of the tape and without a breaking it. The distance in the space depends on the competitors choice only. The distance will be measured from the axis of the nearest wheel before the tape. Accuracy will be 0,1 m.

Scoring:

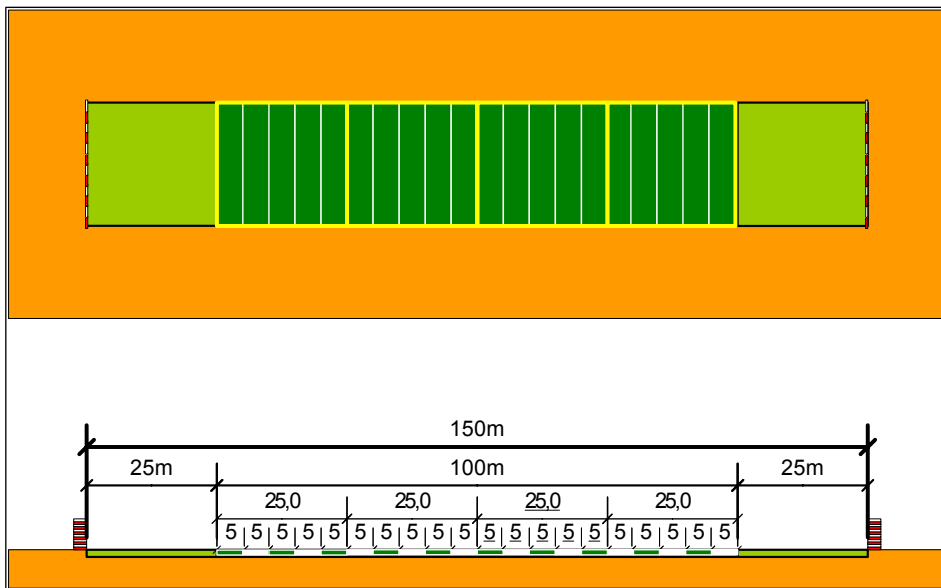
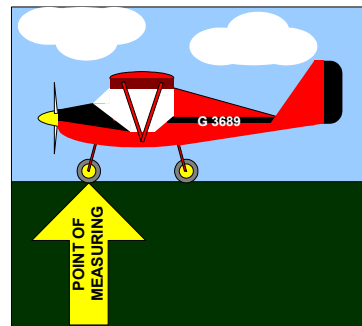
Score will be calculated by the following formula:

$$score = \frac{D_w}{D_c} \times 250$$

D_w is the shortest achieved distance in the class, D_c is the distance of the competitor.

Penalties:

Breaking of the tape	100 %
Crossing of the side or rear lines of the space	100 %
No flying over the tape	100 %
Exceeding of the time limit by the start list more than 1 minute	100%



TASK SHEET P : short landing

GOALS: competitors shall demonstrate ability for operation from the very small airfields. This is reason for the short landing (as short as is possible).

Description of the short landing :

The short landing is provided to the special space.

Space is 150 m long and 25 m wide.

For the better orientation is the space divided to 25 m wide fields, marked by the boundary lines. This fields are divided to the 5 m fields marked by the markers at the both sides of the space. First and Last field will be not marked, is not supposed using of this fields by competitors.

At the front boundary of the space is tight the tape in height 1 m above the ground.

Task is to land and full stop in the minimal distance behind the tape and don't break it. The distance will be measured from the axis of the furthestmost wheel behind the tape. Accuracy will be 0,1 m.

Scoring:

Score will be calculated by the following formula:

$$score = \frac{D_w}{D_c} \times 250$$

D_w is the shortest achieved distance in the class, D_c is the distance of the competitor.

Penalties:

Breaking of the tape	100 %
Crossing of the side or rear lines of the space	100 %
No flying over the tape	100 %
Damage of aircraft (ACFT dont taxi from the space by itself power)	100%

