



ANNEXE **STOL**

Back-wood flyers

FIXED WING – COMPETITION rules @ LKSZ





Table of content

I.	PRESENTATION OF THE SPECIFIC LOCAL RULES & CONDITIONS OF STOL FLYING at LKSZ.....	3
II.	GENERALITIES.....	4
A.	PILOTS.....	4
1.	Registrations & terms.....	4
2.	Arrival procedures.....	4
3.	Pilot's equipment.....	4
4.	Support and technical assistance during the competition.....	4
B.	SUPERVISION.....	5
5.	Pilots' briefing.....	5
6.	ULM coordination in flight and moving on the ground.....	5
7.	Course of the competition, air safety:.....	5
8.	Radio frequencies.....	5
9.	Safety and ground marshals.....	5
C.	AIRCRAFTS :.....	6
10.	Control of the aircrafts.....	6
11.	Fuel.....	6
D.	RULES & CONDITIONS.....	7
12.	Weather.....	7
13.	Parking.....	7
14.	Presence of visitors on STOL zones, maneuvering areas and traffic.....	7
15.	Holding point management.....	7
16.	In case of an accident.....	7
17.	Health recommendation.....	7
E.	FLYING.....	8
18.	<i>Aircraft carrier « The landing zone »</i>	8
19.	Take-off.....	8
20.	Landing.....	8
21.	Management of not stabilized or interrupted/missed approaches.....	8
F.	SCORING.....	9
22.	National reference ranking.....	9
23.	Penalties.....	9
24.	Pools and results.....	9
25.	Podium.....	9
III.	TEST CATALOGS: LANDING ACCURACY.....	10
IV.	MANAGEMENT AND ORGANISATION TEAM.....	<i>Not defined.</i>
V.	FACT SHEETS.....	<i>Not here defined.</i>

I. PRESENTATION OF THE SPECIFIC CHARACTERISTICS OF STOL FLYING

STOL is one of the disciplines of aeronautical sport competitions in ULM (Ultralight Aircraft – fixed wings 3 axis control)

The specificity of this discipline consists in taking off and landing over the shortest possible distance in complete safety.

The flights take place at an airfield or a microlight aerodrome ("*base ULM*") and within the volume of the landing pattern, as per the local rules (RNW15/33 and traffic pattern to the West)

The competition is open to all STOL pilots with minimum 320 Kg empty weight or within the UL registration limits

However, registrations will be limited in the organizer's practical sheet.

The ranking is made by adding up the take-off and landing distances for each AC. The lowest total is sought. If you however land before the defined landing line, penalty will be applied.

Definition of terms used in this document:

- **ORGANIZER:** In charge of organizing the competition in various aspects: sports, security, equipment, and reception for the public (CLUBS and/or REGION).
- **SITE MANAGER:** Person in charge of the operation of the facilities (aerodrome or Microlight base "*base ULM*").
- **EVENT OFFICIAL:** Referent from the CZECH Microlight Federation "*CFPLUM*", responsible for accompanying, helping, controlling the preparation and conduct of the competition in accordance with the rules as well as the issuance of titles.
- **RACE DIRECTOR (DC):** Person validated by the ORGANIZERS to oversee the official competition in sporting aspects. He/She supervises the teams responsible for conducting the competition pools, measuring performance, and co-hosting briefings.
- **FLIGHT COORDINATOR (CV):** In large sites or aerodrome facilities, this position can be activated with specific functions under the direction of the DC.
- **STARTER:** Person responsible for giving the start on the white start-line. He is the technical referent and validates the take-off and landing distances recorded by the referees.
- **PARKER:** Person responsible for managing the flow of microlights on the ground. He/she guarantees good traffic flow on the ground. Competing pilots receive his/her instructions to taxi during the competition.
- **MARSHAL:** Responsible for recording ground distances of pilots' performances.
- **SCRIPT:** Person who write down pilot's performances in real time to remedy a computer failure.
- **SCORING:** Person in charge of transcribing the results over time onto a computer medium.
- **RADIO:** Person responsible for communicating important information to competitors on the ground and in flight depending on the situation. He/she also provides information to visiting air traffic around the competition aerodrome to make the competition area safe.

II. GENERALITIES

A. PILOTS

1. Registrations & terms

Only registrations that have a complete application will be validated & 350 € entrance fee be paid, i.e.:

- Aircraft identification card
- Medical airworthiness declaration less than 2 years old.
- Radio certificate of the competing aircraft.
- Active federal license of your home federation or active German Microlight Federation license or active FAI license.
- Valid insurance.
- Registration sheet entitled:
- Be up to date with registration participation fee of 350 € .

2. Arrival procedures

- The arrival procedure must be in accordance with the local rules (AIP LKSZ)
- On arrival, taxi and park in front of the hangars on the parking area provided for this purpose.
- The runway in service will be indicated by the organization according to the elements of the day (see VAC map).
- After the daily briefing, the participating microlights will taxi in groups (number to be defined) from the parking area to the STOL zone under the orders of the “Parkers”.
- The runway in service will be named STOL ZONE on the map.
- An area will be used for taxing the microlights (named on the map).
- An area is reserved for visitors and the public.
- During the competition, microlights participating to the STOL training will be parked, if possible, in a dedicated area dedicated called “*PARKING MACHINES*”

3. Pilot's equipment

- Wearing a safety belt or harness is mandatory.
- Wearing a helmet is not mandatory but strongly recommended.
- Wearing non-synthetic gloves (fine leather or Nomex) is not mandatory but recommended.
- Wearing synthetic clothes shall be avoided.
- Wearing non-synthetic clothes or at best fire-retardant clothes is not mandatory but recommended
- Wearing shoes protecting the ankles is not mandatory but recommended.

4. Support and technical assistance during the training (practice competition)

The assistants must comply with the regulations of the organizer and are under the responsibility of the competitor. A “public” zone will welcome accompanying persons.

(pass) + Vests of a specific color depending on the missions and access areas.

Example: orange for the organization, blue for competitors, assistants will have a “pass” badge.

B. SUPERVISION

5. Pilots' briefing

- Mandatory presence at each pilot briefing.
- Briefings will take place in a room dedicated to this purpose. Every morning and before the afternoon resumes.
- All STOL specific procedures as well as safety reminders will be given at each crew briefing.
- For the first briefing, bring the following papers:
 - Up to date pilot's license
 - Up-to-date microlight insurance
 - Up-to-date microlight documents N/N
 - ULL membership or Home Federation membership or FAI License of the year if you have it
 - Medical certificate

6. ULM/airport coordination in flight and moving on the ground

- A frequency dedicated to the event; It will be used by competitors both on the ground and in flight. The **STARTER** and the **PARKER** will give instructions via this frequency.
- For the air traffic of visiting microlights, a frequency will be communicated (in accordance with the VAC card) and used for auto-information or in accordance with the rules set by the manager.
- An organization manager (RADIO) will constantly monitor this frequency and will be able to give traffic information to visitors, if necessary. However, the pilot is responsible for his decisions.
- Use of visual signals (flags for ground maneuvers in the STOL zone). To ensure constant spacing between microlights, the layout of the pattern and certain speeds will be recommended during the briefing.

7. Course of the competition, air safety:

- Arrival of trainees (competitors) and verification of documents, (recommendation under the responsibility of the pilot)
- Management of departures under the responsibility of the pilots.
- Fatigue management/Provision of a rest area for competitors (briefing room or other).
- Attendance at each briefing is mandatory.
- There must be at least **15L** of gas left in the fuel tanks at the end of each RUN.

8. Radio frequencies : 119.640

- 1 single frequency (pilots/ground). (See above)
- The registration/competition number will be used and must be visible.
- Disruption of flights by foreign aircraft at the meeting, an authorized person (RADIO) will make the link between the two frequencies.

9. Safety and ground marshals

The top take-off will be given by the line referee (STARTER).

C. AIRCRAFTS :

- Two-seater 3 axis microlights only have **one person on board** during the runs, passengers are prohibited, for training purposes/safety pilots an instructor is allowed
- Weight: within the regulation. It is under the responsibility of the pilot
- Engine power: under the corresponding microlight regulation. Elimination will be the rule in the event of a finding.
- The down-wind speed is set to 120-130 km/h.
For safety reasons, each aircraft must be able to fly at this speed.
- Fuel: Quantity > 15L at the end of the RUNs.
- Define possible off-airport landings on authorized sites (specified during the briefing and under the responsibility of the pilots).

10. Control of the aircrafts

A point will be made with one of the referees on aircraft status at the start and during the competition.

The points checked in the presence of the pilot will be:

- The general condition of the aircraft
- In line with the aircraft regulations
- In the event of an aeronautical incident, only the flight director is mandated to authorize the resumption of flights. A competent technical adviser, recognized by the race director, will be able to give an opinion.
- All of aircraft elements are under the responsibility of the pilot.

11. Fuel

- Fuel management remains the sole responsibility of the pilot, however MO-GAS 95RON will be available at the airfield
- The minimum quantity must make it possible to reach nearby installations, in particular the alternate aerodrome: see information sheet.
- Have at least 15L of reserve in your aircraft in addition to the minimum fuel intended for the RUN. (In regard to the regulation).
- Pay attention to managing your fuel.
- The organizer provides for a sealed parking area; a closed or marked parking, to which access is prohibited without authorization from the ORG Director.
Three aircrafts (selected randomly) will be checked at the end of a competition run.

D. RULES & CONDITIONS

12. Weather

The DC and/or CV will communicate the situation and the weather minima to activate or pause the training. The pilot makes the decision on his own whether to take off or not.

13. Parking

- Safety when starting up the engine. No unmanned engine start in the microlight will be allowed. (The penalty will be elimination).
- Taxiing is done only at the orders of **PARKER or STARTER**.
- Your microlight and pilot documents must be present on board.

14. Presence of visitors on STOL zones, maneuvering areas and traffic

Zones should be organized with supervised access.

Installation of barriers and access restrictions put in place by the organization.

15. Holding point management

Under the responsibility of **PARKER**.

16. In case of an accident

In the event of an incident and the presence of a damaged microlight on the runway, the aerodrome will be inaccessible to aircrafts in flight. Alternate landing would be communicated.

The DC and/or the CV with the organizer will organize the steps to ensure safety and the relay for rescue and care on the site.

If the aircraft on the runway cannot be moved, the radio operator (responsible for visiting traffic) and the starter (aircrafts in competition) will organize the communication of instructions to the aircraft in flight so that they could head to the alternate aerodrome.

A referee will be responsible for relaying information to organize the return flight.

If the aircraft is moveable, the radio operator and the STARTER will be responsible for providing spacing information and recommendations to organize landings under normal conditions.

Depending on the situation, the organizer, and the DC and/or the CV will organize the resumption or official end of the competition.

17. Health recommendation

Be well

18. Aircraft carrier « Landing & T-off zone »

- The official *playground* called **Landing & T-off zone** or aircraft carrier, includes the departure and arrival within a **30x100m** rectangle. The aircraft carrier is delimited by clearly visible marks (generally white paint, chalk, small cones at the 4 corners).
- Taxiing out of the aircraft carrier is under the order of the runway referee; U-turns are not allowed.
- If the AC leaves the aircraft carrier before taking off, the takeoff is not validated.
- Communicate and respect phraseology and radio use on the frequency communicated by the DC. It will be specified in the organizer's practical information sheet.

19. Take-off

- Recommendations and reminders communicated at the briefing.
- Taxi into position as directed by the STARTER, with main gear stopped on reference line.
- Begin take-off roll after the STARTER lowers down the flag.
Once the aircraft starts their departure roll, the next aircraft should already have started their taxi towards the starting line.
- The start, acceleration, rotation, and climb are carried out along the axis of the runway.
- **Steep Initial climbs must be avoided.**
- **NO MAX RATE CLIMBS:** When the wheels leave the ground, your performance is over. Any reckless maneuvers is subject to immediately disqualification.
- No hot-dogging, low passes, sudden or abrupt maneuvers on take-off or in the pattern.

20. Landing

- Navigate, be precise in your flying and respect the landing pattern.
- Control your aircraft, keep an eye on traffic, carry out safe approaches and GO AROUND if necessary!
- Main gear must land on or beyond the reference line and **full stop made with all 3 wheel on ground!**
- Main gear touchdown prior to reference line is invalidating this pattern cycle landing & is penalized.
- Tailwheel touchdown prior to reference line is NOT disqualifying.
- "Go Arouns" are common real-world safety decisions. If conditions deteriorate on short approach and you are too close to the edge of the safe flight envelope, GO AROUND.
- Aircraft must come to a full stop, straight ahead, and remain stopped until judges have had a chance to measure the distance and wave the aircraft clear of the runway. Do not move until cleared ahead by the ground marshal.
- Landing distance will be measured from the reference line to closest main landing gear wheel.
- If the AC leaves the aircraft carrier before stopping after landing, the pattern cycle landing is not validated.
- If you land before the landing zone line penalty will be applied (+100m would be added to the run)

21. Management of not stabilized or interrupted/missed approaches

No time limit is given, **go arounds are not sanctioned** but encouraged to avoid risky landings and, above all, to ensure safety.

22. National **LKSZ reference ranking**

The best distance from the competition runs will be added and compared with the rest of the participants – simple & straightforward.

23. Penalties

List of general penalties applicable to the competition:

- In the event of an aerial incident involving an aircraft in flight or on the ground, only the registered aircraft can complete the competition; the pilot cannot continue with another one.
- If the aircraft is serviceable, it will only be able to fly again after repair, and only with the authorization of the race director DC or flight coordinator CV.
- The order of passage defined in the pools must be respected; if you are unable to line up on the starting line at the desired time, the turn will be skipped and not recovered.
- Landing before the touch down landing zone will add 100m to your run.
- The organization takes the right to disqualify any participant threatening safety.

24. Pools and results

- There is no selection by elimination!
- In principle, for selections, depending on the number of participants, we want all participants to be able to fly every day. As such, we chose a competition in the form of groups with a ranking within each group – now by the shortest over all distance (T-off & Landing)
- In the event of an *ex aequo* during the qualifying phase, an additional round will be held to tie-break the competitors.
- If there is a **complaint**, the procedure provides for a commission, made up of 3 members appointed by the race management and independent, which will study the requests made.
- The fixed price for filing a claim is €50.
- In the event of an irregularity or error on the part of the organization or the competition, this amount will be refunded. This sum will be integrated into the organization's budget.

25. Podium

- The categories are mixed male/female.
- Only 1 AC classes will be differentiated.
 - Only fixed wing
 - Single-seater categories must have min of MTOW 350kg will not be differentiated from two-seater categories.
- There must be at least three aircrafts to compete.
- A reward will be awarded to the winners per category (only 1 in this case).
A trophy may be created and presented each year.

The target :

Land on or after the start line by stopping inside the vicinity of the *aircraft carrier* and coming to a **full stop**, straight ahead, and remain stopped until judges have had a chance to measure the distance and wave the aircraft clear of the runway. Do not move until cleared ahead by the marshal.

The *aircraft carrier* must be cleared at its fore end and not from the sides, unless expressly indicated by a referee.

Only distances are counted, no points are awarded! In the event of a rebound, the last touchdown is retained.

By touchdown, we mean the entire main landing gear of the microlight touching the ground (both wheels). Touching the start line gives the most favorable score.

Taildraggers will not be penalized when the tail wheel or skid, touches outside the *aircraft carrier* during landing. Tailwheel touchdown prior to reference line is **NOT** disqualifying.

Exiting the *aircraft carrier* or judging zone is defined by the first element of the landing gear that leaves the limits of the *aircraft carrier* area.

Each group (RUN) includes a maximum number of microlights in the pattern; this number is specified during the general briefing and in the practice sheet.

Two pattern cycles are allotted for each **RUN = 2x Take offs and 2x Landings**, or if given **time 3x**

The score of a RUN is based on adding the shortest take-off distance to the shortest landing distance, recorded over the two pattern cycles or 3 . This will then be the best result of the RUN.

If you land before the landing zone line penalty will be applied (+100m would be added to the run)

Example: TO-1=15m, **Landing-1=35m**, TO-2=10m, Landing-2=40m: **distance retained = 45m**, this choice was made to free pilots from the stress. Everyone has a second chance to do it again in the same RUN. The rule is common to all.

All the scores will be recorder for evaluation by the judges