



Fédération Française d'ULM



ANNEXE **STOL**

MICROLIGHTS

TRIKE, FIXED WING & GYROPLANE



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I. PRESENTATION OF THE SPECIFIC CHARACTERISTICS OF STOL FLYING

STOL is one of the disciplines of aeronautical sport competitions in ULM.

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, in the form of a sporting and technical flying demonstration.

The competition is open to all microlight pilots in classes 2-3-4 (Trike, Fixed wing and Gyro). 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 microlight. The lowest total is sought.

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*").
- **FFPLUM OFFICIAL:** Referent from the French Microlight Federation "*FFPLUM*", 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 FFPLUM 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, i.e.:

- Aircraft identification card (yellow card for French registered microlights)
- Aircraft identification sheet (additional document to the French yellow card).
- Medical airworthiness declaration less than 2 years old. (Beware, this is not a medical class 2!)
- Radio certificate of the competing aircraft.
- Active federal license of your home federation **or** active French Microlight Federation (FFPLUM) license **or** active FAI license.
- Valid insurance.
- Medical certificate of fitness to compete (issued by a general practitioner).
- Registration sheet entitled: *FICHE DE PRÉSENTATION EN VOL* (issue de l'arrêté du 4 avril 1996).
- Be up to date with registration participation fee.

2. Foreign pilots

Foreign pilots are welcome to participate into French STOL competitions under specific regulations:

- Registration must be completed at least 2 weeks before the start of the competition.
- For microlights that do not meet the conditions of French ULM regulations (e.g. MTOW 600kg and/or power >109hp), allow at least 4 weeks before the start of the competition to register. Don't forget to apply for a permit to fly with the DGAC!
(<https://www.ecologie.gouv.fr/en/foreign-aircraft> -->
https://www.ecologie.gouv.fr/sites/default/files/Form_DGAC_LP6_20220617_1.pdf)
- Although all pilots, including foreigners, who participated in a competition join the general (open) ranking of the current season, the National ranking of the French STOL championship will not consider the results of foreign pilots.
Only pilots with a microlight identified in France and holding a valid FFPLUM license can claim the National ranking of the French STOL Championship.

3. Arrival procedures

- The arrival procedure must be in accordance with the VAC card.
- 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 taxiing the microlights (named on the map).
- An area is reserved for visitors and the public.
- During the competition, microlights participating to the STOL competition will be parked, if possible, in a dedicated area dedicated called "*PARKING MACHINES EN COMPÉTITIONS*"

4. 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.

5. Support and technical assistance during the 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

6. 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
 - FFPLUM membership or Home Federation membership or FAI License of the year
 - Medical certificate of fitness to compete dated less than a year ago.

7. ULM 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.

8. Course of the competition, air safety:

- Arrival of competitors and verification of documents, (recommendation under the responsibility of the pilot) preferably **the day before** the competition.
- 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.

9. Radio frequencies

- 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.

10. Safety and ground marshals

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

C. AIRCRAFTS :

- Two-seater microlights only have **one person on board** during the runs, passengers are prohibited.
- 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 110 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).

11. 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.

12. Fuel

- Fuel management remains the sole responsibility of the pilot.
- 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 Race Director.
Three aircrafts (selected randomly) will be checked at the end of a competition run.

D. RULES & CONDITIONS

13. Weather

The DC and/or CV will communicate the situation and the weather minima to activate or pause the competition.

The pilot makes the decision on his own whether to take off or not.

14. 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.

15. 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.

16. Holding point management

Under the responsibility of **PARKER**.

17. 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.

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.

18. Health recommendation (Covid)

During the COVID period, compliance with the local health rules in force is essential.

E. FLYING

19. Aircraft carrier « *Porte-avions* »

- The official *playground* called *Porte-avion* 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 microlight 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.

20. 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.

21. 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.
- Main gear touchdown prior to reference line is invalidating this pattern cycle landing.
- 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 with all wheels on the ground, 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 microlight leaves the aircraft carrier before stopping after landing, the pattern cycle landing is not validated.

22. 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.

F. SCORING

23. National reference ranking

For pilots residing in France with a microlight identified in France and holding a valid FFPLUM license, a national ranking integrates performances acquired during the period of regional competitions and finals of the French Championships.

At the end of each competition, the points acquired are added to each competitor to contribute to the national ranking by category.

At the end of a competition, competitors will be classified in their category.

Points will be awarded according to the ranking of each participant, according to the table below.

Ranking	Points per event
1	25
2	18
3	15
4	12
5	11
6	10
7	9
8	8
9	7
10	6
11	5
12	4
13	3
14	2
15 et +	1

The national ranking ends after the final of the French championship, ending then the season. The points for each round are added up at the end of the season to award the national title in all categories.

In case of an ex aequo, the best place of the year will be retained, if not the one who had the best performance in the final of one competition.

24. 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.
- The organization takes the right to disqualify any participant threatening safety.

25. 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.
- The top performers in each group will meet in the finals, the runners-up will meet each other, the third-placed as well, and so on. So, the last in the group “of the first” will not be able to do a worse place than 6th, the first in the group of the second group will do at worst, 12th, etc.
- The **national ranking** of the French championship will be considered to separate the top performers and avoid having them in the same qualification pool during the final competition in Belmont.
- 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.

26. Podium

- The categories are mixed male/female.
- The three different microlight classes will be differentiated.
 - The trikes together, the Gyros between them and the fixed wing too.
 - Single-seater categories will be differentiated from two-seater categories.
- There must be at least three aircrafts in a class for the class to compete.
- A cup will be awarded to the winners of each microlight class per category.
- A trophy may be created and presented each year, the name of the winner, all categories together, as well as the performance will be engraved on it.

III. TEST CATALOGS: LANDING ACCURACY

The target :

Land on or after the start line by stopping inside the vicinity of the *aircraft carrier* and coming to a **full stop** with all wheels on the ground, 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 marshall.**

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.

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. This will then be the best result of 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.

IV. MANAGEMENT AND ORGANISATION TEAM

- **The organizing club**, affiliated to FFPLUM, is responsible for organizing and conducting flights, as well as welcoming crews.
- **The FFPLUM** provides support to formalize and support the sports organization. As part of the Sport and Sports Policy Division, this competition is integrated into the federal sports agenda.
- **The manager of the aerodrome** or *base ULM* is responsible for aeronautical infrastructures and for welcoming visitors. He/she provides material logistics (barriers, signaling, maintenance of the runway, premises and car parks, etc.).
- An organization chart will be provided with the functions and contacts in the practical information sheet.

V. FACT SHEETS

A practical information sheet will include all the useful information for the organization of the competition and access to competitors.

It includes the general information of the organizer, the organization chart of the organizing structure during the competition as well as local specificities.