



# FAI Sporting Code

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*Fédération  
Aéronautique  
Internationale*

## Rules and Regulations **AIR NAVIGATION RACE**

**2025 Edition**

Approved by the FAI General Aviation Commission (GAC)  
at the FAI/GAC Meeting, March 1<sup>st</sup>, 2025, Catania, Sicilia

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<sup>1</sup> FAI Statutes, Chapter 1, para. 1.6

<sup>2</sup> FAI Sporting Code, General Section, Chapter 3, para 3.1.3.

<sup>3</sup> FAI Statutes, Chapter 1, para 1.8.1

<sup>4</sup> FAI Statutes, Chapter 2, para 2.1.1; 2.4.2; 2.5.2 and 2.7.2

<sup>5</sup> FAI Bylaws, Chapter 1, para 1.2.1

<sup>6</sup> FAI Statutes, Chapter 2, para 2.4.2.2.5,

<sup>7</sup> FAI Bylaws, Chapter 1, para 1.2.3

<sup>8</sup> FAI Statutes, Chapter 5, para 5.1.1; 5.5 and 5.6

<sup>9</sup> FAI Sporting Code, General Section, Chapter 3, para 3.1.7

<sup>10</sup> FAI Sporting Code, General Section, Chapter 1, paras 1.2. and 1.4

<sup>11</sup> FAI Statutes, Chapter 5, para 5.6.3

<sup>12</sup> FAI Bylaws, Chapter 1, para 1.2.2

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## **AIMS FOR AIR NAVIGATION RACE (ANR) FLYING COMPETITIONS**

The competition is designed for Pilot and Navigator Team flying single piston engine aircraft. The sport of Air Navigation Race flying is aimed at improving fundamental flying skills to enable a Pilot/Navigator Team to navigate and handle an aircraft under basic visual flying conditions independent of the use of technical systems thus enhancing flying safety.

The competition consists of the following two main groups of tests:

1. Air Navigation Race
2. Landing

The overall aim for the sport of Air Navigation Race flying is achieved by:

1. Emphasizing the ability to follow a precise track whilst adhering closely to a time schedule.
2. Emphasizing the ability to land an aircraft in short and narrow places with the simulation of trees or other obstacles on the approach, thereby fully demonstrating a pilot's ability to handle an aircraft both accurately and safely.
3. Basics:
  - Fun for pilots / navigators and friends
  - Real race atmosphere including live tracking on large screen
  - Qualifications – 1/8 finals - 1/4 finals - 1/2 finals – final
  - The best competing against the best!
  - Media attention means sponsoring possibilities
  - Simple regulations. Easy entrance for young pilots
  - No solo flights. Pilot plus navigator obligatory (for safety reasons).
  - Up to 160 participants possible
  - Low costs allowing extra financial resources for local entertainments

## **A. COMPETITION RULES**

### **A.0 INTRODUCTION**

- A.0.1.1 The competition is for teams: Pilot / Navigator (Crew) in single piston-engine class C aero planes, with a minimum 2 hours endurance and with a minimum empty (dry) weight of 175kg. Each competing pilot-in-command should have a valid pilot license for the competition aircraft and both competitors a valid FAI Sporting License. Each competing aircraft must possess a Certificate of airworthiness or Permit to fly that does not exclude competition flight. Each aircraft must be operated according to its Airworthiness Certificate.
- A.0.1.2 Each participating country is allowed to send as much competitors Teams as they like and in addition a team manager, engineers and observers. Each participating country is invited to send current qualified international judges for the landing test. The competition director might define the total number of competitors (e.g. based on airfield capacity or possible other limitations) in the local rules with the recommendation that the number of competitors do not exceed one hundred and sixty (160).
- A.0.1.3 The competition will consist of the following two groups of tests:
- NAVIGATION TEST
  - LANDING TEST
- A.0.1.4 The competition will consist of: Air Navigation Race (ANR) tests (typically including qualification round(s), 1/8 final, 1/4 final, 1/2 final, final), and landing tests.
- A.0.1.5 Planned are normally 4 starting gates. The competition management will define the number of starting gates. In case of more than one gate all the ANR parcours (tracks) must be flown by each crew.
- A.0.1.6 The competition management defines a suitable process (from qualification round to final) for the ANR tests and landings, (depending on the number of competitors and possible other limitations, e.g., geographical region). The qualification process and how the landings are carried out must be declared in the local rules (C.13).

### **A.0.2 USE OF GNSS-LOGGERS**

- A.0.2.1 The use of flight data recording equipment is mandatory for World and Continental Championships.
- A.0.2.2 Only equipment approved by the GAC may be used. Competitor must declare type of GNSS logger in entry form.
- A.0.2.3 Requirements for flight data recording equipment are documented in the Sporting Code, Section 2, Annex 4.
- A.0.2.4 The competitor must declare which logger is the master logger. It should be clear that the master logger will be the only logger used for scoring the flight. Only when this log is not complete the scoring team will ask the competitor to use the backup. Even for the jury the backup logger should not be used.
- A.0.2.5 Responsibility for the operation of the Flight Data Recording Equipment rests with the Competitor.
- A.0.2.6 Before each flight the pilot must make sure that his Flight Data Recording Equipment is cleared of all previously registered data.

- A.0.2.7 The International Chief Judge – or a Judge appointed by him – will use the registered flight track of each competitor, as depicted on paper-printout or screen-display, to make judgments on passing times and possible violations of the flight rules or of the given flight instructions.
- A.0.2.8 The master clock will show GNSS- or atomic- or satellite-time.

## **A.1 AIR NAVIGATION RACE TEST**

### **A.1.1 FLIGHT PLANNING**

- A.1.1.1 The competitor may enter the flight planning room at the assigned time to be ready in time to receive (1) an envelope, (2) two competition maps, (3) a set of instructions, (4) departure and arrival charts, (5) Start point and finish point.
- A.1.1.2 The competitor is required to calculate his flight plan for the route of the Air Navigation Race test.
- A.1.1.3 Wind direction and speed over the competition airport will be given.
- A.1.1.4 For flight planning and map preparation, the competitor is allowed 30 minutes. Map preparation will take place in the flight planning room. From the time when the competitor is scheduled to leave the flight planning room, he shall be allowed 15 minutes to go to his aircraft, prepare it for flight and taxi to the take-off position.
- A.1.1.5 na

### **A.1.2 AIR NAVIGATION RACE TESTS**

- A.1.2.1 There will be Air Navigation Race tests. The object of each test is to assess the competitor's skill in precise navigation and timing. The test includes maintaining correct tracks, altitudes and ground speeds.
- A.1.2.2 Times will be checked on passing Take-off line and overhead Start- and Finish point.
- A.1.2.3 The aircraft must be established on the correct track of the first leg when crossing the start point. Circling after passing the start point is not allowed.
- A.1.2.4 The start and finish points must be well defined features, both on the map and on the ground.
- A.1.2.5 During the navigation tests the recommended flying altitude is 1'000 feet AGL. The organizer has the right to declare a different altitude for safety reasons. The minimum altitude to be flown is 500 feet AGL or the state limits, whichever is higher. If the state limit is higher than 500 feet AGL, it must be published in the local regulations.
- A.1.2.6 The distance for each Air Navigation Race tests will not be less than 15 Nm. And not more than 35 Nm.
- A.1.2.7 The competition management will define the race speed. Normally airplanes must be able to fly 80kts GS irrespective of wind conditions. The used race speed has to be declared in the local rules.
- A.1.2.8 The departure and arrival charts will give the position of the start and finish points. The charts will be to an approximate scale of 1:50,000 and will be defined in the local regulations.
- A.1.2.9 Departure and return flight via prescribed route is mandatory.
- A.1.2.10 All corridors must be passed by the Competitor inside. The competition management will define the corridor width.



- A.1.2.11 na
- A.1.2.12 At SP / FP the gate has an extended “Gate line”, being a distance of 0.3 NM right and left of the SP / FP.
- Crossing opposite to the direction of flight this “extended SP-gate line” any time gives penalties for circling.
  - Timing at the SP takes place when the aircraft is for the first time passing the 0,3 NM right or left gate of the SP in the direction of flight.
- A.1.2.13 Only maps with good topographic information to a scale of 1:100'000, 1:150'000, 1:200'000, 1:250'000, 1:300'000 will be used for competition purposes. The used map scale has to be declared in the local rules.
- A.1.2.14 For emergency uses only, an additional unmarked ICAO 1:500,000 chart is permitted in the aircraft. No other maps or charts except arrival and departure charts, may be carried during the competition.
- A.1.2.15 Use of receivers that determine their position by analysing satellite signals are allowed (GNSS). Use of any electronic device capable of two-way communication is not allowed (iPad, tablets, mobile phones, any smart watch, etc.). Equipment showing maps below scale 1:500.000 or enable plotting competition route is not allowed. Mobile equipment is not allowed to show any maps. Any electronic equipment and autopilots could be sealed and shall not be used during the competition except in case of emergency. Any broken seals could result in disqualification of the competitor.
- A.1.2.16 Competitor must declare type of equipment mentioned in A.1.2.15 in entry form (including fixed installed equipment). For rental aircraft the declaration is made by the organizer.

## A.2 LANDING TEST

The Landing Test is described in the document Landing Appendix GAC [1].

## A.3 GENERAL RULES

- A.3.1 The General Rules for the Landings are described in the document Landing Appendix GAC [1].
- A.3.2 In the event of a failure to start, the competitor must not leave the aircraft and he must not communicate with his team. He will make a radio call to competition management to explain the situation and then follow given instructions.
- A.3.3 In the event of a reduction in flying time, the competition director will discuss alternative tasks with the juror, international chief judge and the team managers before issuing directives on how the championship will be concluded. The landing test includes at least one landing. The Air Navigation Race test includes at least two navigation rounds.
- A.3.4 Smoking is prohibited at all briefings and in the flight planning room.
- A.3.5 No competitor is permitted to take any alcohol less than 10 hours prior to the start of daily competition.
- A.3.6 The competition language will be English.

## A.4 SCORING

A.4.1 The competition is an individual competitor (Pilot/Navigator) competition.

A.4.2 There will be a champion in the categories:

- Air Navigation Race
- Landing
- Combined (Air Navigation Race and Landing)

A.4.3 Air Navigation Race trophy:

- The Crew with the lowest number of penalties of all flown ANR flights (excluding training flights).

**Scoring:** Sum of the penalties of all flown ANR flights (excluding training flights).

A.4.3.1 In the case of two or more competitors having the same number of penalties:

- a) The competitor in the final race with the lowest number of penalties for flying (timing) or
- b) The competitor in the final race with the lowest number of penalties for corridor flying
- c) The winner of a second flight.

A.4.4 Landing trophy:

- The Crew with the lowest number of landing penalties.

**Scoring:** Sum of the penalties of all landings.

A.4.4.1 In the case of two or more Crews having the same number of penalties:

- a) Forced landing or
- b) Obstacle landing (Normal landing)
- c) The winner of a second flight.

A.4.5 Combined trophy:

- The Crew with the lowest combined penalties, calculated as follows: Adding the Crews best single ANR Flight (excluding training flights) and adding the Crews total penalties of the landing calculation.  
If the landing competition consists of two landings, a multiplication factor of 2.0 is applied to the penalties of the landing competition.  
If the landing competition consists of four landings, no multiplication factor is used.

A.4.5.1 In the case of two or more Crews having the same number of penalties, the Crew with the lowest penalties in each group in the following order will be adjudged the winner:

- a) The Crew with the lowest number of penalties for Air Navigation Race, or,
- b) The Crew with the lowest number of penalties for landings.

A.4.6 If there is a continuing tie multiple winners will be declared.

## A.5 DISQUALIFICATION

- A.5.1 Any misconduct or bad behavior on the ground or in the air including unsporting behavior or protests against other competitors could result in the international juror disqualifying the competitor concerned.
- A.5.2 If a competitor communicates with any unauthorized person from the time of entering the flight planning room until the debriefing after his Air Navigation Race test or enters any restricted area on the competition site without permission, he runs the risk of disqualification both for himself and the whole of his national team.
- A.5.3 Any competitor, found using non permitted equipment in the flight planning room or aircraft, or found to have tampered with any sealed navigation or radio equipment or manipulating the flight recording system will be disqualified and may risk disqualification of their team.
- A.5.4 Any unauthorized alterations to aircraft landing gear during the landing tests as indicated in [1] may result in disqualification.

## A.6 JUDGING

- A.6.1 An international chief judge shall be appointed by FAI-CIAG prior to the championship. Each country will be invited to send current international judges. International judges will be positioned by the international chief judge. International judges will also participate in the landing competition, as directed by the international chief judge.

## A.7 PROTESTS

- A.7.1 The juror will be appointed by FAI-CIAG in accordance with the sporting code, general section. His/her duties include observing and ensuring that the championship is being run in accordance with the FAI sporting code and championship rules. They also rule on all formal protests. In the event of a replacement of any member, the new member will be appointed by the president of CIAG after consultation with the rules committee.
- A.7.2 The Competition Director will publish individual results as quickly as possible by the best available method. The results will be marked "preliminary and subject to protest".
- A.7.3 Within 30 minutes of the release of the individual results the Competitor and/or Team Manager may present a written request ("complaints") to the International Chief Judge for clarification. If not satisfied with the clarification, a "protest" may be filed with the Competition Director within 30 minutes after the clarification was given, accompanied by the relevant protest fee.

If after Complaints and a correction a new personal result-sheet is delivered to the pilot concerned, this one is not subject for further Complaints or Protest.
- A.7.4 The video recordings of landing can be used by Chief Judge for checking the results of landings before final judging of the landings. After final judging, the video recordings of landing are to be used only by the juror when dealing with protests [1].
- A.7.5 If the correction of the International Chief Judge at Complaints or the ruling of the Juror affects another or other competitors, the appropriate alterations will be made to the results.
- A.7.6 When the prescribed fee has been paid to the competition management and the protest filed in writing, the protest becomes official and is referred to the international juror for a decision. The team manager and competitor have the right to address the juror if desired.

A.7.7 Protests against other competitors are forbidden.

A.7.8 The juror must be available at all time during the championship to deal with protests.

A.7.9 The prescribed fee in connection with any protest submitted to the juror will be EURO 200.- and shall accompany the written protest. The fee will be returned in the case of a successful protest only.

## A.8 TABLE OF PENALTIES

| A.8.1 AIR NAVIGATION RACE |  | Penalties     | Maximum Penalties |
|---------------------------|--|---------------|-------------------|
| A.8.1.1                   | Preparation of flight plan – Failure to leave flight planning room after 30 minutes  | 100           | 100               |
| A.8.1.2                   | Take-off time (aircraft passing take-off gate)<br>- Limit + 60 seconds<br>- Take-off “gate” before or after time slot  | 0<br>200      | 200               |
| A.8.1.3                   | Passing each timed point<br>- Limit + or – 2 seconds<br>- Additional error per full second<br>- Outside gate, each time  | 0<br>3<br>200 | 200               |
| A.8.1.4                   | Flying below the minimum altitude (each time / buffer 100 ft). It's up to the organizer to apply a technical margin of minimum 100 ft.   | 500           | 500               |
| A.8.1.5                   | Other deviations from track (each time)<br>- Circling or backtracking being a turn of more than 90 degrees either way (each time)<br>- not following described arrival/departure routes and/or procedure (each time) | 200<br>200    | 400<br>400        |
| A.8.1.6                   | Entering restricted areas will result in the following penalties each time:<br>- 0 – 5 sec.<br>- Additional error per full second (each time)  | 0<br>3        |                   |

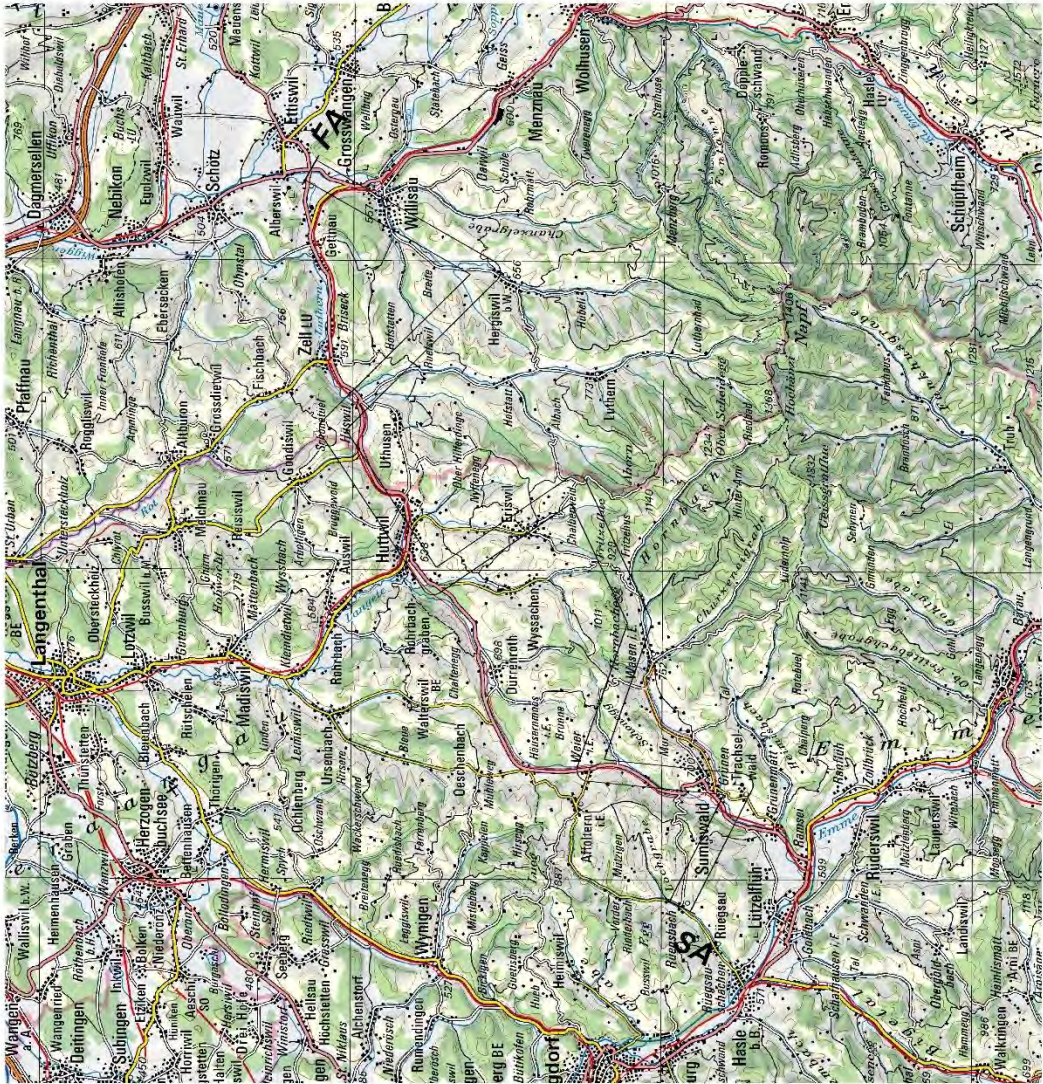


APPENDIX A1 Example Competition Map



Map scale = 1:200 000

Competition: ANR Training Langenthal LSPL  
Parcours: Parours Example ANR



| Comp. Nr: |       | Route: |     |     |  |
|-----------|-------|--------|-----|-----|--|
|           | Dist. | TT     | EET | ETO |  |
| T/O       |       |        |     |     |  |
| SP        |       |        |     |     |  |
| TP1       |       |        |     |     |  |
| TP2       |       |        |     |     |  |
| TP3       |       |        |     |     |  |
| TP4       |       |        |     |     |  |
| TP5       |       |        |     |     |  |
| TP6       |       |        |     |     |  |
| TP7       |       |        |     |     |  |
| TP8       |       |        |     |     |  |
| TP9       |       |        |     |     |  |
| TP10      |       |        |     |     |  |
| FP        |       |        |     |     |  |
| Σ         |       |        |     |     |  |

Corridor width = 0.4NM  
SP to FP length = 24NM  
SP to FP time @ 80kts = 18min

## **B. ORGANISATION RULES**

### **B.1 GENERAL**

- B.1.1 Before any National Aero Club offers to host a continental or world championship, that National Aero Club must be able to satisfy the FAI on the following points:
- B.1.1.1 That sufficient experience in the discipline exists in the host country to ensure a high standard.
  - B.1.1.2 There should be at least 3 officials experienced in the discipline and able to provide their capabilities of organizing the championship.
- B.1.2 The host Aero Club must be able to provide an airfield with limited traffic. An airfield with bilingual controlling during practice or any championship must be avoided.
- B.1.3 In selecting a venue, the host Aero Club must be able to provide reasonable accommodation close to the airfield. (see also B 4.1)
- B.1.4 The host Aero Club should develop a close working relationship at an early stage with the Juror and the International Chief Judge.
- B.1.5 The host Aero Club must follow the rules and regulations. If any doubts exist as to interpretation the advice of the International Chief Judge and/or the Juror should be sought.
- B.1.6 The host country must not run other competitions at the same time, on the same airfield or competition area.
- B.1.7 Practice for display, demonstrations, etc. must not interfere with competition practice schedule, which must have priority.
- B.1.8 Any display, show or demonstration must not interfere with the competition.
- B.1.9 The host National Aero Club will take adequate insurance coverage for all competitors as required by the national law. In any case all international personnel (i.e. Juror, Judges, support personnel) must be insured by the Organizer against third party legal liability risk.
- B.1.10 The host National Aero Club will provide figures of competition expenses in accordance with Appendix B1 to GAC together with the Local Rules.
- B.1.11 To ensure that the organizers of world and continental flight championships abide by the appropriate rules and regulations and fulfils the commitments made by the organizers, an amount in EUROS equal to the entry fee for five (5) crews will be given to the Juror prior to the start of competition, to be held by him until the Juror certifies at the close of the competition that the event has been conducted correctly, the complete results prepared for transmission to FAI headquarters, and the Sanction Fee has been transferred to FAI. At this time the amount withheld shall be returned to the organizers. Should the Juror determine for any reason that the competition was not properly conducted, the total amount will be forwarded immediately by the Juror to FAI headquarters, to be held there until the matter can be reviewed at the next plenary meeting of GAC.

## **B.2 VENUE**

- B.2.1 It is necessary when considering the location of the championship to give careful consideration to the type of terrain readily available around possible airfields. It is ideal to arrange for flat or mixed terrain of flat and hill ground and to select an area that is not too easy to navigate over.
- B.2.2 Consideration should be given to the general air traffic flow within the competition area, and to control zones, prohibited areas and danger areas, which exist and would hinder the settling of a competition navigation course.
- B.2.3 Reference should be made to the facilities offered on each aerodrome, including those of air traffic control, Firefighting and Ambulance service, availability of fuel, hangar space, etc.
- B.2.4 It is of advantage if the airfield enjoys either a restaurant or adequate clubhouse facilities for competitors and spectators.
- B.2.5 The airfield should not be located more than 30 minutes travel time from the given recommendations for the participants.
- B.2.6 The airfield should be available for formal familiarization and practice in the week prior to the championship, during which time the airfield will be run under strict local rules to which all participants will be expected to adhere. There must be no charge for practice landings.
- B.2.7 The airfield should be provided with 2 concrete or hard surface runways wherever possible. An airfield where the runways do not have a uniform surface at least 15 meters wide is not acceptable.
- B.2.8 When selecting the time frame for the championship the weather history within the area of the competition should be considered.
- B.2.9 Special attention should be given to the placing and size of the flight planning/briefing room. For Air Navigation Race Competitions the room should have ample space to hold sufficient tables with adequate separation between them.
- B.2.10 Telephone and telefax facilities should be available.
- B.2.11 Communication and information about the competition will take place via internet (e-mail/website). All reports will be displayed on the info-board at the airfield.

## **B.3 TRANSPORT**

- B.3.1 Participants are responsible for their own transport.
- B.3.2 The International Chief Judge and the Juror must be provided with one own independent transportation.

## **B.4 ACCOMMODATION**

- B.4.1 Participants organize their own accommodation. The organizers will be happy to give recommendations on request.
- B.4.2 There will only be basic refreshments/food on the airfield (to be paid for).

## **B.5 AIRCRAFT HIRE**

- B.5.1 Participants organize their own aircraft. The organizers will be happy to give recommendations on request.
- B.5.2 Pilots planning to avail themselves of this service should initiate a request at least six months before the event, specifying type, length of hire, hours to be flown, etc. They should also furnish details of their own licenses and experience.
- B.5.3 Aircraft for hire should have the following minimum standard guaranteed:
- a) Air speed indicator
  - b) Altimeter
  - c) Magnetic compass and directional gyro
  - d) Turn and bank indicator and/or artificial horizon
  - e) VHF/COM equipment with all appropriate frequencies
  - f) Third party legal liability insurance to the level required in the host country.

## **B.6 TRAINING PRACTICE**

- B.6.1 Practice and familiarization of the competition area should be available in the week prior to the championship. There should be no additional charges for landings.
- B.6.2 Navigation practice can take place without affecting the normal airfield routine.
- B.6.3 The Landing practice is described in the document Landing Appendix GAC [1].
- B.6.4 During practice, it is essential that airfield routine regulations be observed. It is also necessary for other non-competitive traffic to use the airfield and therefore strict R/T control will be necessary.
- B.6.5 Daily flying should be restricted to 08.00 – 18.00.
- B.6.6 Training practice must not be interrupted for display or show practice.
- B.6.7 An example of the flight planning form to be used in the competition is attached as Appendix A2.
- B.6.8 Organizing National Aero Club must provide a sample of the competition map one month before the competition.
- B.6.9 Organizing National Aero Club must prepare 1 Air Navigation Race with 2 training routes of the same level as Competition Routes and free of charge.



## **B.7 BRIEFINGS**

- B.7.1 Full briefings must be attended by all concerned.
- B.7.2 Opening briefing must be attended by juror, judges, operational officials, team managers and teams (pilot/navigator); the object being to explain the running of the competition, the program to be adhered to including the social program, channels of communication, the basis of judging, define operating procedures.
- Specific issues concerning the use of Flight Data Recording and GSM / GNSS data transmitter Equipment have to be covered during the Opening Briefing.
- B.7.3 Competitors briefing with operating procedures by internet.
- B.7.4 Daily program by internet.
- B.7.5 Met briefing by internet.
- B.7.6 Landing briefing must be attended by juror, judges, team managers and all teams; the object being to define procedures, circuit discipline, signals, etc.

## **B.8 METEOROLOGY**

- B.8.1 A competent meteorologist shall be available for the weather briefings via internet.
- B.8.2 The meteorologist should be familiar with the local weather patterns and familiar with VFR flying.
- B.8.3 Forecasts must be published prior to the take-off for each navigation group.
- B.8.4 General forecasts will be given by internet before the first Air Navigation Race flight planning begins and will be updated.
- B.8.5 The weather minima for the Air Navigation Race tests will not be less than 5 kilometers visibility with the cloud base 1'000 ft above ground level of the highest point of the course (VMC). In the event that any part of the Air Navigation Race course is within controlled airspace, consent must be given for the minimum to apply.
- B.8.6 Throughout the Air Navigation Race test there should be an aircraft available to check deterioration of weather. Either the juror or the international chief judge will accompany the aircraft during any check flight.
- B.8.7 The minimum cloud base for power landings will be 500 AGL and power off landings 1'000 AGL. In both cases the visibility will be at least 1.5 kilometers. If the minima are below those legally required in the host country, then the host country's rules must be applied.
- B.8.8 If the wind speed near the ground in the ANR competition area (including SP, FP and turning points) exceeds 25kts, gusts included, flying will be stopped. The meteorological briefing (B.7.5) in the respective ANR parcours area serves as reference and decision maker. If the crosswind component, gusts included, exceeds the published maximum demonstrated crosswind or a stated limit, flying will be stopped on the runway in use. The maximum crosswind component for the competition will be 12kts.

## B.9 AIR NAVIGATION RACE TEST

- B.9.1 The organizer has to prepare a minimum of 3 complete Air Navigation Race parcours.
- B.9.2 A single map will be used for the navigation test. Details of the map should include all roads and railways in normal use, large lakes, rivers and creeks, color coded and/or elevation contours, towns and villages, etc. It should also contain certain spot heights and location of high obstacles.
- B.9.3 In selecting a course for the Air Navigation Race event, the competition director should give thought to the type of terrain available to him to ensure that a mixture is within the set route.
- B.9.4 The route planner must consider the following points:
- Positions of SP and FP must be determined on the ground, using two independent GPS, working on WGS 84.
  - To provide the number of Computers and Printers deemed necessary by the scoring team.
  - The wind speed and direction for route planning in the ANR parcours area.
  - The distance for each Air Navigation Race tests will not be less than 15 Nm and not more than 35 Nm (A.1.2.6).
  - The ANR parcours must contain a sufficient amount of turning points. "Rule of thumb": The mean distance between turning points should be 2.5NM.
  - As a supplement to legs, curve elements can also be implemented.
- B.9.5 The start and finish points (SP and FP) must be clearly marked or defined. Departure and arrival charts shall be given to competitors where the start and finish points are defined.
- B.9.6 A master clock shall be placed outside the flight planning room and will be synchronized with GPS-Time taken from a GPS-unit.
- B.9.7 The Competition Management can declare an isolation area (quarantine) for the Crews before / after flying. If a competition round uses multiple tracks, the Crews needs to be separated into different isolation areas (per track one isolation area). The isolation area needs to have chairs and if feasible tables available per each Crew. In the isolation area only a screen without a map will be shown and all kinds of electronic devices are forbidden.
- B.9.8 The competition management will define the radio frequency to be selected for the Air Navigation Race event. Competitors may be issued other frequencies to be used in the case of emergency.
- Competitors should be advised at briefing that use of other frequencies will result in disqualification. They should also be advised of the possibility that the flight will be scanned by radar hence it will be essential for a listening watch to be always kept on the prescribed frequency.
- B.9.9 After flight planning, the competitor will be required to depart from the flight planning room to his aircraft. Under no circumstances will he be permitted to communicate with any other person apart from the competition management and it must be made clear to him that his start-up time, taxi and readiness for take-off at the prescribed time is entirely his responsibility. In the event of a delayed start to an Air Navigation Race flight by more than 1 minute for the group, by reason of mechanical or ATC failure, the competitors will be rescheduled to fly later.
- B.9.10 On return from the competition, the competitor will be taken to a debriefing area. The competitor will be debriefed by members of the competition management who will examine his data logger.
- B.9.11 If a competitor, by radio, reports deteriorating weather to the minima allowed, this should be checked immediately by a weather aircraft (see B.8.6). A competitor asking for assistance automatically terminates his navigation flight at the point. The competition management may not recall any competitor from his navigation flight.

B.9.12 The competition director will not, without the express consent of the international chief judge and the international juror, permit any person other than observation crews, the international chief judge or the international juror, to have knowledge of or visit any part of the Air Navigation Race course until the Air Navigation Race test is concluded.

## **B.10 LANDINGS**

B.10.1 The Section Landings is described in the document Landing Appendix GAC [1].

## **B.11 LIVE TRACKING**

B.11.1 In case Live Tracking is in use: No landscape data or other landmarks shall be visible on the displayed maps (screens, internet and electronical devices in general). Only the Corridors and the Logging data of the Crews without any other Reference points may be visible. This applies to the entire Competition and no distinction will be made for Spectators or Competitors.

## **B.12 INTERNATIONAL JUDGES AND OPERATIONAL OFFICIALS**

B.12.1 The differing rules must be made clear at the initial briefing.

B.12.2 The landing competition will be run under the control of the international chief judge supported by the official responsible for landings. Each participating country will be invited to provide international judges to officiate under the chairmanship of the International Chief Judge.

B.12.3 The international chief judge will be responsible for the placing of the individual judges and for the recording of the results of each competitor. The competition director will not participate in judging the landings in any way whatsoever.

- Judging comments must in competition language (English).

B.12.4 In the event of the judges not being able to reach a definitive decision regarding any landing, then the international chief judge makes the final decision. In the case of an abnormal landing the international chief judge must consult at least two other international judges.

B.12.5 It should be made perfectly clear that although the juror will be present in the same locality and making their own notes these are only usable as supporting evidence, should they be required to decide a protest. At no time will they seek to influence any decision made by the judges. However the juror may, if the opportunity occurs, offer advice to the international chief judge if requested.

B.12.6 Para B.11.5 above does not prevent the juror disqualifying any competitor guilty of dangerous flying.

## **B.13 JUROR**

B.13.1 The international juror is commissioned by FAI to observe that the event is properly organized and run. The juror should be a qualified expert in the sport.

B.13.2 The juror must be privy to all matters of detail of the Championships and be kept fully informed.

B.13.3 The juror has access at all times to the competition director and may advice upon organizational problems. He's allowed to inspect any part of the facilities including the course. He will be provided with master maps at the start of the Air Navigation Race event.

B.13.4 The juror should be acquainted with the details of the Air Navigation Race test.

- B.13.5 The juror will be provided with an office of adequate size to hear protests. The office will be kept always locked in the absence of the juror. The room will, where appropriate, contain a TV, videocassette recorder and monitor.
- B.13.6 The obligation for organizing an event is that the host nation, the juror and international chief judge are available to ensure that the event is run in accordance with the rules. Neither the juror nor the international chief judge is responsible for any organizational problems.
- B.13.7 The Juror, in consultation with the International Chief Judge, has the right to authorize the use of technical equipment after suitable testing at the appropriate level.

## **B.14 RESULTS**

- B.14.1 It should be the aim of the competition director to post the results at the earliest possible moment after all protests have been investigated, amendments made and the results ratified by the international chief judge and the juror.
- B.14.2 Results will be displayed on internet.
- B.14.3 All final results together with all maps and flight plans will be returned to each competitor as soon as the competition is closed. If necessary, the competition director will send these to the National Aero Club immediately after the championship.
- B.14.4 The individual results with all maps and flight plans will be returned to each competitor as soon as a qualification round (stage) is declared as closed.

## **B.15 PRIZES AND PRIZE-GIVING**

- B.15.1 The usual awards approved by FAI will be made following ratification of the results by the international chief judge and the juror.
- B.15.2 The host Aero Club should endeavor to provide additional prizes and souvenir gifts to the championship.
- B.15.3 Awards should be made at the final banquet or at the closing function of the championship.
- B.15.4 The competition director must allow a sufficient time of 6 hours minimum between the commencement of hearings on protests and the start of the final banquet. See also protests.
- B.15.5 Gold, silver and bronze medals will be awarded to the top 3 ranks in each category. Both pilots and navigators will receive medals.
- B.15.6 List of trophies - It's up to the organizer if he would like to introduce other trophies, e.g. Junior trophy, Team trophy, etc.

## **C. LOCAL REGULATIONS**

### **C.1 INTRODUCTION**

### **C.2 ORGANIZER**

### **C.3 PLACE**

### **C.4 DATES**

### **C.5 ENTRIES**

Completed entry forms shall be submitted by the Competitor's National Aero Club and shall be sent to:

to arrive by.....together with the entry fee. Entries received after this date may be accepted if there are vacancies, at the discretion of the Organizer. If a NAC sends a final entry but fails to pay the required entry fee, that NAC shall lose its right to participate in subsequent General Aviation Commission events until the fee is paid.

### **C.6 ENTRY FEE**

C.6.1 The entry fee for each category is set out below:

- a) for the aircraft: NONE
- b) for each Pilot (and Navigator)
- c) for each additional Member of the Team (Team Manager, Engineers, etc.)
- d) for International Judges and Judge Observers ( 50% discount for 1 Intl. Judge / country)

The entry fee must be paid with a check for the amount entitled to....., or by a bank transfer to:.....

C.6.2 Each entry form is regarded as accepted only when it is acknowledged by the Organizer; the acknowledgement will only be given when the entry fee has been received by the Organizer.

C.6.3 Entry fees include Opening Ceremony and Prize Giving Banquet; 1 Competitors ICAO 1:500'000 map is also included.

C.6.4 Cancellation of entries are possible before the final entry date without penalty.

After the final entry date, cancellation will be penalized by withholding 10% of the entry fee for each crew.

Cancellation later than 15 days before the beginning of the event will be penalized by withholding a maximum of 50% of the entry fee.

## **C.7 TEAM MEMBERS**

## **C.8 AIRCRAFT AND INSURANCE**

### **C.8.1 AIRCRAFT**

### **C.8.2 INSURANCE**

## **C.9 ARRIVALS**

## **C.10 LANGUAGE**

## **C.11 BRIEFINGS**

## **C.12 SPECIFIC RULES**

## **C.13 QUALIFICATION & LANDING PROCESS**

C.13.1 The Organizer must specify a qualification process for the ANR flight competition. GS and corridor width per qualification round needs to be announced. The qualification process may differ depending on the geographical Region, the number of Crews and Planes. A typical qualification process can be structured as follows:

- Kick off process: After a group phase, having 16th, 8th, 4th, semi-finals and final. As example see APPENDIX C1 (Kick-Off System WAG Dubai).
- Parallel or in sequence depending on the number of ANR parcours used per qualification round (stage). For example, having each time four Crews race against each other and keeping the best two could be a nice option.
- It must be in the interest of the Organizer that each Crew can fly as many ANR parcours as possible. Because most Crews wants to fly as much as possible during a championship.

C.13.2 The Organizer must specify a qualification process for the ANR landing competition. E.g. the amount of landings, the landing types [1], to have the landing competition on a separate day, to have the landing on return of an ANR parcours.

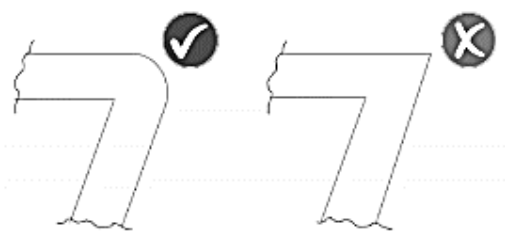
## **C.14 COMPETITION MAP**

C.14.1 The Competition Map needs to contain at least the following information (see also APPENDIX A1):

- Map scale
- Corridor width
- Corridor length (SP to FP)
- SP and FP marking with symbol or coloured
- In case the Organizer will not provide Departure and Arrival procedures, Start point and Finish point and Waiting/Circling area maps then these information needs to be implemented into the Competition Map.

C.14.2 Shape of the corridors: the turning points of the corridors should be rounded outside (arcs with a radius equal to the corridor width). If it's not technically possible to implement such shapes, then the shape

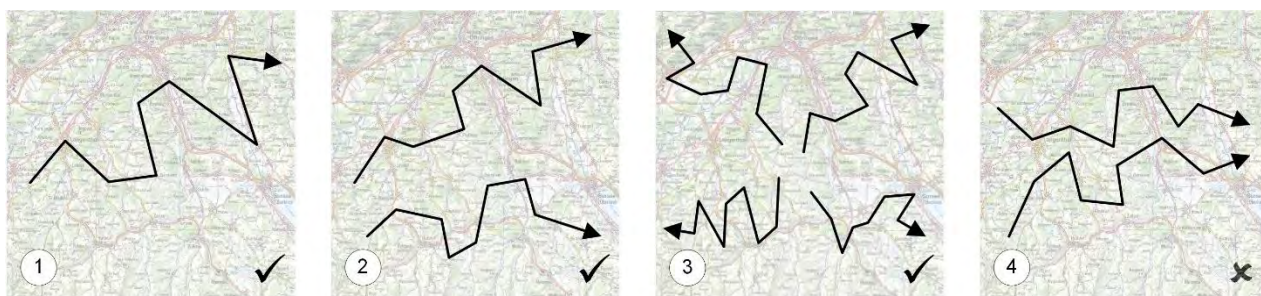
should be mentioned in the local rules.



C.14.3 In case the Organizer is running the qualification rounds with multiple tracks a Competition map must be created for each track. Displaying multiple tracks on one Competition map is not allowed.

## C.15 ANR PARCOURS (TRACKS)

An ANR parcours consists of multiple tracks or a single track, depending on the qualification process set-up. In case multiple tracks will be applied the Organiser must make sure that the track layout will not lead to unsafe or dangerous situations. See also the following figures for a better explanation:



Figures 1 -3 Applicable tracks, either single, multiple but diverging, multiple in different directions for example with the airfield as origin.

Figure 4 Converging tracks that pose hazards and risks are not allowed.

## C.16 DOPING CONTROL

## C.17 CORRESPONDENCE AND COMMUNICATION

## APPENDIX C1 Example KickOff System WAG Dubai



**WAG**

الدولة الامارات العربية المتحدة  
UAE WORLD AIR GAMES  
F.A.I. as part of participation  
2015 United Arab Emirates DUBAI

## WAG Air Navigation Race Qualification Process



Fédération Aéronautique Internationale  
Fédération Aéronautique Internationale  
Fédération Aéronautique Internationale

| We, 02. Dec  | Th, 03. Dec       | Fr, 04. Dec    | Sa, 05. Dec    | Su, 06. Dec           | Mo, 07. Dec        | Tu, 08. Dec  | We, 09. Dec        |
|--|-------------------|----------------|----------------|-----------------------|--------------------|--------------|--------------------|
| <b>Training 1</b>  | <b>Training 2</b> | <b>Round 1</b> | <b>Round 2</b> | <b>Quarter Finals</b> | <b>Semi Finals</b> | <b>Final</b> | <b>Reserve day</b> |
| <p>The Starting rows (1 - 16) will be defined by ANR Organizer (Starting row = Crew Number).</p> <p>The A/C will be allocated by the ANR Organizer.</p>  |                   |                |                |                       |                    |              |                    |
| <p>The Starting rows (1 - 16) will be defined by ANR Organizer (The Crew that has flown in Training 1 the northern Track will fly the southern Track and vice versa in the same Group).</p> <p>The A/C will be allocated by the ANR Organizer.</p>   |                   |                |                |                       |                    |              |                    |
| <p>The Starting rows (1 - 16) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p>   |                   |                |                |                       |                    |              |                    |
| <p>The Crew that has flown in Round 1 Track A will fly Track B and vice versa in the same Group.</p> <p>The A/C will be allocated by the ANR Organizer.</p> <p>The Penalty points of round 1 &amp; 2 will be added together. The first eight Crews with the fewest Penalty points out of Round 1 &amp; 2 are selected for the Quarter Finals.</p>  |                   |                |                |                       |                    |              |                    |
| <p><b>Round 3 (Rank 11 - 16)</b></p> <p>All Crews not qualified for the Quarter Finals are selected for Round 3. The Best Crew out of Track A will compete against the Best Crew out of Track B in the Small Final. The Rest of the Crews will be ranked according to the penalty points out of Round 3.</p> <p>The Starting rows (1 - 8) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p> |                   |                |                |                       |                    |              |                    |
| <p><b>Quarter Finals (Rank 5 - 8)</b></p> <p>The Starting rows (1 - 8) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p> <p>The Winning Crew is the Crew with the lower Penalty points of each Group and is selected to compete in the Semi Finals.</p>   |                   |                |                |                       |                    |              |                    |
| <p><b>Semi Finals (Rank 3 and 4)</b></p> <p>The Starting rows (1 - 4) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p> <p>The Winning Crew is the Crew with the lower Penalty points of each Group and is selected for the Final.</p>  |                   |                |                |                       |                    |              |                    |
| <p><b>Small Final (Rank 9 and 10)</b></p> <p>The Starting rows (1 - 2) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p>  |                   |                |                |                       |                    |              |                    |
| <p><b>Final (Rank 1 and 2)</b></p> <p>The Starting rows (1 - 2) will be defined by lottery for the Crews. Each Crew draws a lottery number.</p> <p>The A/C will be allocated by the ANR Organizer.</p>   |                   |                |                |                       |                    |              |                    |

**Group**  

Crew 1

Crew 2

**Crew**  

1

2

Crew number Loyalty Points

**Group**  

Crew 1

Crew 2

**Crew**  

1

2

Crew number Loyalty Points

### Air Navigation Race Champions

#### Air Navigation Race trophy

The crew with the lowest number of penalties in the Final.

#### Landing trophy

The crew with the lowest number of penalties both landings will be counted.

#### TOP Air Navigation Race trophy

The crew with the lowest number of penalties flown in a Round and the Landings. The better result either out of Round 1 or Round 2 will be added with the result of both landings.





## **D. JUDGES AND JUROR**

### **D.1 GENERAL**

- D.1.1 The General Section of the Sporting Code (4.3.2) specifies that the International Juror must have a thorough knowledge of both the Sporting Code and the Rules and Regulations governing the event. 4.3.3 requires International Judges to have detailed knowledge of the Rules and Regulations of the Sport concerned.
- D.1.2 The General Section of the Sporting Code specifies that the International Juror (4.3.2) and the International Chief Judge (4.3.3) shall be appointed by the Commission concerned with the discipline (GAC).
- D.1.3 In the event that a Juror or the International Chief Judge is unable to take up his appointment, he must inform through his NAC, at the earliest possible moment FAI/GAC, the organizing NAC. A replacement will be appointed by the President of GAC following consultation with the Chairman of the Sub-Committee concerned and the organizing NAC.

### **D.2 INTERNATIONAL JUROR**

#### **D.2.1 SELECTION**

- D.2.1.1 GAC ANR Championships will have one Juror. The Juror must be selected from the appropriate approved list of International Jurors, which is held and updated by FAI/GAC.
- Jurors for an event will be proposed by the organizing NAC to the Subcommittee concerned. The Sub-committee will evaluate the proposal and will give advice to GAC.
- GAC will then decide on the advice of the Subcommittee and appoint the Juror for the event concerned.
- D.2.1.2 In selecting a Juror attention must be given to the relevant sections of the Sporting Code particularly in respect to not having two Members of the same nationality or the same nationality as the organizing NAC.

#### **D.2.2 QUALIFICATION**

- D.2.2.1 International Jurors must have had experience either as a Jury «Observer», International Judge, Chief Judge or as Competition Director. The qualification as International Judge and a working knowledge of English is compulsory.
- D.2.2.2 The Sub-committee concerned will propose to GAC to delete any person from the LIST OF INTERNATIONAL JUROR MEMBERS if the individual was not acting as INTERNATIONAL JUROR MEMBER or INTERNATIONAL JUDGE or Competition Director of International competitions within the last 5 years (or as a competitor in International competitions within the last 2 years).
- D.2.2.3 Juror «Observers» are only permitted to study the working of the Juror, as directed by the the Juror itself, without, in any way, interfering with decisions.
- D.2.2.4 Requirements for being a Juror Observer:
- Attendance at one World or Continental Championship as competitor.
  - Experience of organizational work and judging at major national events.
  - Appointment as an International Judge.

D.2.2.5 Experience in the organizational work and judging is obtained by participating in at least three major national events either as a Judge or Assistant Competition Director.

D.2.2.6 Application form for appointments as an International Juror is attached as Appendix D1.

### **D.3 INTERNATIONAL JUDGES**

A panel of International Judges should be appointed whenever a Competition contains subjective evaluation of performance (Sporting Code 4.3.3). International Judges shall be appointed for all GAC events.

Each participating country has to send a minimum of one qualified International Judge to an event defined according to the Sporting Code (4.1.2.2), if that country sends a team of three or more pilots. If no International Judge is sent, entry fee for the missing judge must be paid. The organizing NAC can offer to accept more than one International Judge per country.

The panel of International Judges will be led by an International Chief Judge according to the Sporting Code (4.3.3).

#### **D.3.1 SELECTION**

D.3.1.1 The International Chief Judge for an event will be proposed by the organizing NAC to the Subcommittee concerned. The Subcommittee will evaluate the proposal and will give advice to GAC. GAC will then decide on the proposal of the Sub-committee and appoint the International Chief Judge for the event concerned.

D.3.1.2 The International Chief Judge shall not be of the same nationality as the organizing NAC according to the Sporting Code (4.3.5). The organizing NAC has the right to appoint an International Judge.

D.3.1.3 An International Judge shall not be a Competitor, nor a team manager, nor hold any position in the organization of the Championship.

D.3.1.4 An International Judge must be selected only from the approved list of International Judges, which is held and updated by FAI/GAC.

#### **D.3.2 QUALIFICATION**

D.3.2.1 Qualification for being an International Chief Judge shall require experience as an International Judge during at least one World or Continental Championship, in addition to experience of organizational work and judging at major national events. Any effort should be made to propose/select the International Chief Judge from the current list of International Juror Members.

D.3.2.2 Any person should be deleted from the GAC's LIST OF INTERNATIONAL JUDGES if the individual was not acting as INTERNATIONAL JUDGE or Competition Director or competing pilot within the last 6 years.

D.3.2.3 An International Judge shall have detailed knowledge of all the Rules and Regulations of the sport concerned according to the Sporting Code (4.3.2). A working knowledge of English is compulsory.

D.3.2.4 International Judges should have experience of judging at not less than three major national events and should preferably also have had experience as a competitor. He/she shall have been the Chief Judge or Competition Director at not less than one major national event. Participation as Judge Observer can replace one other requirement.

- D.3.2.5 It is essential that NAC's organize training seminars for prospective Judges in connection with national events. At such seminars, the relevant Rules and Regulations including the Sporting Code should be instructed in theory. The event itself then becomes a practical exercise.
- D.3.2.6 Application form for appointment as International Judge is attached as Appendix D2.

#### **D.4 CHAMPIONSHIP OFFICIALS**

- D.4.1 The Competition Director shall be an International Judge. A working knowledge of English is compulsory.
- D.4.2 The Route Planner must have experience in the route planning of major national events, run according to these rules and regulations.
- D.4.3 The Local Chief Judge must have a working knowledge of English. He/she should have the qualification of an International Judge.

#### **D.5 COSTS**

- D.5.1 The cost of travel to and from the venue for the event, together with the cost of accommodation and meals during the required stay at the venue, shall be borne by the organizing NAC for the International Juror and the International Chief Judge.
- D.5.2 Organizing NAC shall not be required to bear all the cost for the other International Judges. The organizational NAC shall not charge more than half of the regular entry fee for an International Judge / country.

**APPENDIX D1****APPLICATION FORM FOR APPOINTMENT AS INTERNATIONAL JUROR  
FOR AIR NAVIGATION RACE**

Please print

Name.....

Address.....

.....

Tel.:..... Fax:.....

National Aero Club.....

Date of application:.....

Year approved as FAI International Judge .....

Requirements (any two of the following four items):

1. Participation as Juror Observer (World or Continental Championships, 1 only)

Year:..... Venue:.....

2. Participation as International Chief Judge (World or Continental Championships, 1 only)

Year:..... Venue:.....

3. Participation as Competition Director ( World or Continental or National Championships under identical rules, 2 only)

Year:..... Venue:.....

Year:..... Venue:.....

4. Participation as a Competitor (in FAI Air Navigation Race Championships, 2 only)

Year:..... Venue:.....

Year:..... Venue:.....

I confirm that I have a detailed and thorough knowledge of the FAI Sporting Code and the current Rules and Regulations of the sport of Air Navigation Race.

Signed:.....

The National Aero Club of..... confirms, that the information given above is correct.

Date:..... Name of NAC Official (printed):..... Signature:.....

Position in NAC:..... NAC Address:

Tel.:..... Fax:.....

**APPENDIX D2****APPLICATION FORM FOR APPOINTMENT AS INTERNATIONAL JUDGE  
FOR AIR NAVIGATION RACE**Please print

Name:.....

Address:.....

.....

Tel.:..... Fax:.....

National Aero Club:..... Date of application:.....

**Requirements** (any two of the following four items):**1. Participation as Judge** (National Championships, minimum of 3 required)

Year:..... Venue:.....

Year:..... Venue:.....

Year:..... Venue:.....

**2. Participation as Chief Judge or Competition Director** (National Championships,  
minimum of 1 required)

Year:..... Venue:.....

**3. Participation as Competitor** (International Championships, minimum of 3 required)

Year:..... Venue:.....

Year:..... Venue:.....

Year:..... Venue:.....

**4. Participation as a Judge Observer** (International Championships minimum of 1 required)

Year:..... Venue:.....

I confirm that I have detailed and thorough knowledge of the Rules and Regulations of Air Navigation Race  
Flying.

I have a working knowledge of English.

Signed:.....

The National Aero Club of..... confirms, that the information given above is correct.

Date:..... Name of NAC official (printed):..... Signature:.....

Position in NAC:..... NAC Address:

Tel.:..... Fax:.....

## **E. BIDS, FINAL DECISION AND APPROVAL OF LOCAL RULES FOR WORLD OR CONTINENTAL CHAMPIONSHIPS.**

### **E.1 PRELIMINARY BID.**

A preliminary bid (or letter of interest) to host a World or Continental Championship may be made to GAC at any time (unrestricted number of years) prior to the date when the planned event shall take place. This preliminary bid shall contain: Type of competition (Air Navigation Race) if it is a World or Continental Championship and the year for the event. Other information is welcome but not necessary. The preliminary bid shall be noted in the minutes of the first GAC meeting after GAC has received the bid. The bidding NAC shall then confirm the bid at all coming GAC meetings (by letter or orally at the meeting) until the final bid is presented.

### **E.2 FINAL BID.**

The final bid to host a World or Continental Championship, containing all required information, shall be sent to GAC no later than six (6) months prior to the GAC meeting when the decision will be made. The bid shall be forwarded to the Chairman of the relevant Sub-Committee. The relevant Sub-Committee shall examine all bids and shall make their recommendations to the GAC meeting.

### **E.3 CONTENTS IN A FINAL BID.**

E.3.1 A final bid to host a World or Continental Championship shall contain the following information to be considered as valid:

- a) Name and address of the bidding National Aero Club (NAC).
- b) Name and address of organisation delegated by the NAC to organise the event (if any).
- c) Experience in organising the relevant type of competition.
- d) Name, address and relevant experience of the Competition Director appointed by the organizer.
- e) The proposed dates of the event.
- f) The site (name of city and airfield).
- g) Airfield infrastructure that will be available for the competition (runway length and condition, elevation, equipment's, buildings, facilities, ATC, other traffic, etc.). The venue at the airfield must have the following facilities within walking distance of the apron where the competition aircraft are parked:
  1. Flight planning/briefing room
  2. Team managers post boxes for information distribution
  3. Shop that sells drinks, and snacks
  4. Adequate toilet facilities.
  5. Covered area where pilots waiting to enter the flight planning room.
- h) Weather history of the area at the relevant time of the year (air temperature, wind, thunderstorms, etc.).
- i) Describing the landscape in the area to be used for navigation flights (flat land, hills or mountains, lakes or rivers, wooded area or open fields etc. in general terms).
- j) Type and scale of the competition map. (At least two samples of the map to be used in the competition must be appended to the bid.)
- k) Condition and any restrictions of airspace.
- l) Any special insurance requirements.
- m) Type of accommodation and distance between accommodation and airfield.
- n) An indication of the amount of the entry fee and what the entry fee includes.
- o) Any conditions concerning admission of participants to the country or location of the event.
- p) Signed by the President or the Secretary General of the National Aero Club who is a valid member of FAI.

## **E.4 FINAL DECISION ON BIDS.**

- E.4.1 The GAC meeting will make the final decision of which NAC will be given the right to host a World or Continental Championship three (3) years prior to the date when the event shall take place.
- E.4.2 If there is no final and valid bid to host a particular championship three years in advance, the decision may be made at the meeting two (2) or even one (1) year prior to the event. *(To be able to make a decision only one year prior to the event, the final bid together with the proposed local rules shall be in the hands of the Chairman of the relevant Sub-Committee no later than six (6) months prior to the GAC meeting.)*

## **E.5 LOCAL RULES**

- E.5.1 Proposals for local rules for the Championship shall be sent to the Chairman of the relevant Sub-Committee no later than six (6) months prior to the GAC meeting that will approve the rules. The relevant Sub-Committee shall examine the proposed local rules and make their recommendations to the GAC meeting.
- E.5.2 The GAC meeting shall approve the Local Rules for a Championship at a regular GAC meeting held at least eight (8) months prior to the event.

## **F. APPENDIXES**

|                    |   |
|--------------------|---|
| <b>APPENDIX A1</b> | Example of a Competition Map                            |
| <b>APPENDIX C1</b> | Example of a Kick-Off System                            |
| <b>APPENDIX D1</b> | APPLICATION FORM FOR APPOINTMENT AS INTERNATIONAL JUROR |
| <b>APPENDIX D2</b> | APPLICATION FORM FOR APPOINTMENT AS INTERNATIONAL JUDGE |

## **G. REFERENCES**

- [1] Landing Appendix GAC (2024 Edition)

## H. DOCUMENT - HISTORY

| Version | Date       | Author         | History   |
|---------|------------|----------------|---|
| 1       | 2010-10-10 | Maurice Ducret | ANR 2014 formatted and converted into new Word format   |
| 2       | 2016-11-05 | Maurice Ducret | <ul style="list-style-type: none"> <li>• AIMS FOR AIR NAVIGATION RACE (ANR) FLYING COMPETITIONS; 3. Basic some changes</li> <li>• A.0.1.2 competitor number deleted, maximum of four</li> <li>• A.0.1.4 implementation of qualification process</li> <li>• A.1.2.11 precision usage of NB</li> <li>• A.2 adoption to precision rules</li> <li>• A.3 adoption to precision rules</li> <li>• A.4.3.1 &amp; A.4.4.1 implementation of a third option (c)</li> <li>• A.8.2 adoption to precision rules</li> <li>• B.4 changes in accommodation</li> <li>• B.6.10 16 A/C changed to necessary number</li> <li>• B.9.4 scoring team added</li> <li>• B.9.7 start numbers drawn by the pilots</li> <li>• B.10 adoption to precision rules</li> <li>• B.13 Results update of the procedure (master map deleted)</li> <li>• C.6.1 Name change to Navigator</li> <li>• C.6.3 ICAO Map included</li> </ul>   |
| 3       | 2017-11-11 | Maurice Ducret | <ul style="list-style-type: none"> <li>• A.0.1.5 In case of more than one gate all the corridors must be flown by each crew -&gt; <i>implemented</i></li> <li>• A.1.2.7 The used race speed has to be declared in the local rules. -&gt; <i>implemented</i></li> <li>• A.1.2.11 NB line -&gt; <i>deleted</i></li> <li>• A.1.2.13 1:150'000 &amp; The used map scale has to be declared in the local rules. -&gt; <i>implemented</i></li> <li>• A.3.3 The Air Navigation Race test includes at least two navigation rounds -&gt; <i>implemented</i></li> <li>• A.4.5 Before adding the landing penalties they will be multiplied with a factor of 10. -&gt; <i>implemented</i></li> <li>• A.8.1.6 Maximum penalties 300 -&gt; <i>deleted</i></li> <li>• B.6.10 no sharing -&gt; <i>deleted</i>; The Competition Management must provide the necessary number of aircraft and those aircraft will be made available to all pilots. -&gt; <i>rephrased</i></li> <li>• B.9.7 Start numbers at the qualification round to be drawn by the pilots -&gt; <i>deleted</i>; The Competition Management can declare an isolation area for the pilots before / after flying. In the isolation area only a screen without a map will be shown and all kinds of electronic devices are forbidden. -&gt; <i>implemented</i></li> <li>• B.13.4 The individual results with all maps and flight plans will be returned to each competitor as soon as a qualification round is declared as closed. -&gt; <i>implemented</i></li> <li>• C.16 ANR Checklist -&gt; <i>implemented</i></li> </ul> |



| Version | Date       | Author         | History  |
|---------|------------|----------------|--|
| 4       | 2021-10-20 | Maurice Ducret | <p>Landings will be kept as a separate document and will only be referenced (Landing Appendix GAC) and the following other adjustments:</p> <ul style="list-style-type: none"> <li>• A.0.1.6 Added: clarification qualification process</li> <li>• A.1.1.4 Deleted: two (landings)</li> <li>• A.1.2.6 Changed: ANR parcours length; Deleted: ANR parcours accuracy 2%</li> <li>• A.2 Deleted: Landing Test, separate document Landing Appendix GAC</li> <li>• A.3.1 Deleted: General rules Landings; Added: Separate document Appendix GAC</li> <li>• A.4.2 Changed: Top ANR into Combined</li> <li>• A.4.3 Scoring specified more precisely</li> <li>• A.4.4 Scoring specified more precisely</li> <li>• A.4.5 Renaming and rephrasing of Scoring Combined trophy</li> <li>• A.5.4 and A.7.4 Changed: Reference Landing Appendix GAC</li> <li>• A.8.1.3 Timed point: limit changed from 1 to 2 seconds</li> <li>• A.8.2 and Appendix A1 Deleted: Landing penalty table and landing distance drawings, separate document Landing Appendix GAC</li> <li>• B.6.3 Deleted: Landing practice; Added: Separate document Appendix GAC</li> <li>• B.8.8 Wind conditions specified more precisely</li> <li>• B.9.4 Route planner must consider wind speed and direction while planning</li> <li>• B.9.7 Isolation area specified more precisely</li> <li>• B.10.1 Deleted: Landings; Added: Separate document Appendix GAC</li> <li>• B.11 Added: Live Tracking section</li> <li>• C.13.1 Added: Specification of qualification process</li> <li>• C.13.2 Added: Specification of landing process</li> <li>• C.14 Added: Competition Map section</li> <li>• C.15 Added: ANR Parcours section</li> <li>• C.18 Deleted: ANR Checklist and paragraph section</li> <li>• Appendix A1 Exchanged: Competition map</li> <li>• Appendix A2 Added: Example of KickOff System</li> </ul> |
| 5       | 2024-03-09 | Maurice Ducret | <ul style="list-style-type: none"> <li>• A.0.2 Entire document: "GPS" generalized in "GNSS"</li> <li>• A.8.1.4 Added: (each time / buffer 100 ft). It's up to the organizer to apply a technical margin of minimum 100 ft.</li> <li>• A.1.2.15 Changed: in regards of the usage of GNSS devices</li> <li>• A.1.2.16 Added: Competitor has to declare the type of equipment mentioned in A.1.2.15</li> </ul>  |
| 5a      | 2024-06-02 | Maurice Ducret | <ul style="list-style-type: none"> <li>• A.1.1.5 Deleted: is already covered with A.1.2.15</li> </ul>  |

|   |            |                |   |
|---|------------|----------------|---|
| 6 | 2025-03-01 | Maurice Ducret | <ul style="list-style-type: none"><li>• B.9.4 Added: The distance for each Air Navigation Race tests will not be less than 15 Nm and not more than 35 Nm (A.1.2.6). The ANR parcours must contain a sufficient amount of turning points. "Rule of thumb": The mean distance between turning points should be 2.5NM. As a supplement to legs, curve elements can also be implemented.</li><li>• B.15.6 Added: It's up to the organizer if he would like to introduce other trophies, e.g. Junior trophy, Team trophy, etc.</li><li>• B.6.10 Deleted: The Competition Management must provide the necessary number of aircraft and those aircraft will be made available to all pilots.</li><li>• B.8.5 Changed: from 3 to 5 km (VMC)</li></ul> |
|---|------------|----------------|---|