

**FEDERATION AERONAUTIQUE INTERNATIONALE**



# **World and Continental Helicopter Championships**

## **Rules and Regulations**

Approved by the FAI Rotorcraft Commission (CIG) on 26 March 2004

**Secretariat of FAI**

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# **World and Continental Helicopter Championships**

## **CHAPTER 1**

### **General Rules and Regulations**

#### **1.0 AIMS**

- 1.1 To determine a World or Continental Champion team, a World or Continental Champion crew and event Champions.
- 1.2 Popularisation and further development of helicopter sports.
- 1.3 To improve pilot's flying skill.
- 1.4 To improve aeronautical relationship between participating countries.

#### **2.0 ORGANIZER**

- 2.1 The World or Continental Helicopter Championships are organized by NAC's under the control of FAI - CIG and in full accordance with the FAI Sporting Code and Regulations.
- 2.2 The NAC may delegate to another Organisation in its country part of its sporting power, but this does not detract from the NAC's responsibility to the FAI.

#### **3.0 PARTICIPANTS**

- 3.1 Teams and individual crews, Members of National Aero Clubs affiliated to the FAI may take part in the World or Continental Championships. The delegation of each country may include: Chief Delegate, Team Manager, FAI Judges and Assistant Judges, Mechanics, Pilots and Crew Members, Interpreter. A participant may only act in a single capacity ( except Chief Delegate and Team Manager ). There shall be a maximum of 10 judges ( including Assistant Judges ) per country.
- 3.2 The World or Continental Helicopter Championships for team and individual crews will be held if there are at least 5 competing countries.
- 3.3 Each country may enter a maximum of 7 crews. Each crew may compete for the individual title of "Helicopter World or Continental Champion".
- 3.4 An additional 3 crews over those in 3.3 may be included in the national delegation from the organizing country to compete for the individual title.
- 3.5 Up to 3 " all female crews " may be also included in addition to 3.3 and 3.4 above. If there are more than 3 countries participating, an individual World or Continental Female Title will be awarded.
- 3.6 Each national team will be composed of a minimum of 3 crews and a maximum of 5 crews. Team crews have to be declared and published before the competition. Their results will count for both the country team result and individual result. In addition to 3.3, 3.4 and 3.5 a National Team may include an un-limited number of pilots to compete in Event No. 5 ( Free Style ) only.

- 3.7 Each crew member must be in possession of a valid FAI Sporting License, issued by his own National Aero Club.
- 3.8 A National Aero Club being unable to enter a team of 3 crews, required for team classification, may enter individual crews.
- 3.9 Crews must participate in all Championship events, except No. 5 – Free Style. Participation means having passed the departure line.
- 3.10 The Championship Director can permit a change of a crew member in a National Team. No change is permitted later than 12 hours before the first event flight, and the change must be published. In case of a mechanical breakdown in a helicopter before the competition or before an event, the Championship Director may permit the competitor to fly another helicopter of the same type.
- 3.11 The Organizer will pay the Sanction Fee to the FAI - CIG account, being a sum equal to 50 Swiss Francs per entrant to include pilot, crewman and all other delegation members, except the judges. The payment is to be received by FAI not less than 30 days prior the start of the Championship.
- 3.12 Any outstanding fees owed for late entrants must be paid to the FAI - CIG President or his nominated official prior to the commencement of the Championship. Any overpayment of Sanction Fees will be refunded to the organizer within 30 days of the end of the Championship and the publication of the results.
- 3.13 In the event of non payment or dispute the CIG President, together with International Jury will decide an interim payment to be made prior to the Commencement of the Championship. The FAI - CIG will ratify this at the next Plenary Meeting. The Championship will not commence until this payment has been made.

#### 4.0 TYPES OF HELICOPTER AND DOCUMENTATION

- 4.1 Helicopters of any type with sufficient characteristics to execute World or Continental Helicopter Championship events will be allowed to compete in the meeting. If there is any doubt, the flight manual will be used as reference. The crew consists of 2 persons, except if the Flight Manual requires a minimum crew of 3 in the helicopter. In this case the crew must provide onboard facilities for a Judge to monitor the third person's activities.
- 4.2 A valid "Certificate of Airworthiness" or equivalent document issued by an appropriate Authority must be produced to the organizer for every competing helicopter.

## 5.0 INSURANCE

- 5.1 It is compulsory for each competing helicopter to have third party insurance policy for an amount of a minimum of USD 1,000,000,- ( or equivalent ),for the whole duration of the meeting and for the flights over foreign territory to the competition site. Personal insurance of pilots and insurance of helicopters will also be covered by their nation. All members of a national delegation must carry individual health and accident insurance. Copies of insurance policies with confirmation in English of validity will be submitted by each competitor.
- 5.2 Country Regulatory Authorities may have compulsory higher limits. Therefore, the minimum cover specified in Rule 5.1 will be increased to meet government requirements but in no case be lower than stated in Rule above.

## 6.0 ENTRIES AND ENTRY FEE

- 6.1 An entry will be accepted if made on an official entry form and received by the specified closing date. Late entries may be accepted at the discretion of the Organizer only when there is a good reason.
- 6.2 The official entry form can be submitted to the Organizer through postal services, e-mail and fax.
- 6.3 The amount of the entry fee will be calculated by the organizer and approved by FAI - CIG. The entry fee covers the costs for accommodation in twin rooms and food plus organized events and transportation throughout the duration of the Championship for all delegation members. There shall be a higher amount for competing crews.
- 6.4 The entry fee will be paid 3 months before the Competition. Late entry fees may be accepted at the discretion of the Organizer only when there is a good reason.
- 6.5 Entry fees will be refunded if the World or Continental Helicopter Championship does not take place.
- 6.6 If any delegation arrives at the Championship with incomplete or missing documentation the entry fee will not be refunded.
- 6.7 The entry fee does not include personal expenses.
- 6.8 The organizer will announce to all participating NACs in a bulletin the following details:
  - Amount of the entry fee for crews, delegation members, judges and additional personnel
  - Extra fee for single rooms
  - Bank account
  - Dates and Agenda of the Championship
  - Details about Check- in, Initial briefing and proposed programme.

## 7.0 PROGRAMME OF EVENTS

7.1 Competitors will be required to perform the following:

- Event 1: Long Navigation with Timed arrival and Load drop Off
- Event 2: Precision Flying
- Event 3: Fender Rigging
- Event 4: Slalom and Skill

7.2 Event 5: Individual Freestyle is optional.

7.3 The sequence of the Championship tasks will be announced during the initial briefing.

7.4 The sequence of flights will be given by the Championship Director the previous day and confirmed at the daily briefing. The sequence will have been determined taking into account the following factors:

- Maximization of time spacing for shared helicopters in Event No.1.
- Avoidence of unnecessary weight changing for a shared helicopter in Event No.2
- Speeds of consecutive helicopters to avoid overtaking and bunching in Event No1.
- Maximizing separation between helicopters of a national team such that no two team crews are airborne at the same time in Event No.1
- Avoidence of the same running order for consecutive Events.

## 8.0 FLIGHT SAFETY

8.1 During the competition all competitors must observe and adhere to the rules of the air and special regulations in force in the Host country. The Organizer must supply to the participating delegations all relevant regulations, documents und NOTAMS in force concerning the competition flight area. Any violation of flying or safety regulations in force may lead to the exclusion of the offender from the contest. No responsibility can be undertaken by the Organizer for any violation of air safety by competitors or others.

8.2 A competitor taking drugs or medication or suffering from any illness or injury which might invalidate his licence or insurance, or in any way affect his performance, must inform the Championship Director before flying.

8.3 All personnel participating in the competition area during events ( judges and assistants, officials, stewards ) must be clearly marked. All safety steps will be taken to prevent any dangerous situation in the vicinity of helicopters and to prevent foreign object damage either to helicopters or personnel.

- 8.4 Team managers and all other non-judging personnel will not be allowed into the competition area during events. Media personnel and VIP - visitors are only allowed into the competition area during events if they are at all times strictly supervised by Organizers personnel and remain in marked areas approved by the Chief Judge.
- 8.5 Due to weather conditions or for safety reasons, the Chairman of the Jury and / or the Chief Judge can vary the length of the course, dimensions of the search box and the location of dropping zone for the Event No. 1.
- 8.6 Mandatory Fly Over ( MFO ) points are to be clearly marked on the ground and the position to be identified to the crews prior to the first event. MFO points do not form part of the competition but are to be used to provide required routing and separation at the discretion of the Organizer.

## 9.0 WORLD OR CONTINENTAL CHAMPIONSHIP BODIES

- 9.1 The International Jury will be responsible for dealing with protests. It monitors the Championship in accordance with the Sporting Code, General Section.
- The International Jury, the Organizer or Judges must not change any Rules or penalties approved by CIG.
  - All members of the International Jury shall be present at the Championship location during contest flying. The Chairman of the Jury will make his whereabouts known so that he may receive protests during the appropriate period. In case of a protest the Jury will meet as soon as possible but may defer their deliberations to more convenient time within the Championship.
  - The International Jury is composed of a Chairman and 2 members who must represent different countries and be members of CIG.
  - The International Jury is appointed by the FAI - CIG. No Jury Member is allowed to be connected in any way with their national team or crews or participate in any way in the running of their national team during the competition. The Jury members travel expenses and entry fees are to be borne by the Host NAC.
  - The Jury shall interpret rules, judgments, and scores in term of the Sporting Codes of the FAI.
  - The Jury shall be responsible for monitoring the competition and notifying the Organizer of any errors or omissions that could lead to a protest.
  - The Jury President is also a CIG member. In that capacity the President is responsible for producing the variable parts of Events 2, 3 and 4. The Jury President may inform the Organizer of the details of Event 2, 3 and 4 up to three days before registration day but must ensure that these details are not made public until registration day.
- 9.2 The Chief Judge is nominated by FAI - CIG. He has the responsibility to organize the work to be carried out by the International Judges and Assistant Judges and to report results to the Championship Director. He is also responsible for dealing with complaints concerning rules or judging matters. The Chief Judge's accommodation and reasonable travel costs are borne by the Organizer.

9.3 The Championship Director is appointed by the Organizer and approved by the FAI - CIG. He bears full responsibility for the Organisation of the contest and the smooth operation, timing and safety of the flights on the competition site.

- Before the start of the contest he will advise the team manager of the national delegations, the members of International Jury and the Judges, on the flight conditions within the Championship programme, as well as other problems which could result from the interpretation of the General Rules.
- In accordance with the General Section of the Sporting Code Chapter 5 the Championship Director may disqualify a competitor for the reasons stated below:
  - Unsafe flying and violation of airspace
  - Refusal to abide by a decision by the technical official
  - Repeated serious infringement of competition rules
  - Use of forbidden equipment, alcohol or drugs

In those cases the entry fee is not returnable.

Sporting License is withdrawn and will be returned to the Competitor's National Aero Club with a report.

9.4 A Technical Adviser Team will be composed of 3 to 5 engineers and mechanics appointed by the Organizer. This team is responsible to the Championship Director for the inspection of the required documents and the helicopters.

- The Technical Adviser Team will inspect all helicopters and will seal the instruments which could assist the pilot to fly the helicopter and provide an unfair advantage over other competitors.
- A competitor removing any seal will be excluded from the Championship.

9.5 The President of the Jury and the Chief Judge should be at the competition site at least three days before the competition to ensure that the organizers have complied with the rules and details of the competition.

## 10.0 JUDGING

10.1 Judging during the World or Continental Championship will be carried out by an International Board of Judges, the members of which must meet the standards laid down in Appendix C, and be approved by FAI - CIG.

10.2 All participating NAC's have right to be represented on the Board of Judges by FAI International Judges previously approved by CIG.

10.3 The Board of Judges will be composed of:

- A Chief Judge
- International Judges
- Assistant Judges



- 10.4 Assistant Judges are nominated by the Head of each participating delegation from the delegation membership and have to be registered with CIG before the Championship starts. An Assistant Judge may perform all tasks not involving subjective judgment. Likely tasks include timing, scoring boundary line violations, and duties associated with preparation and departure lines and any other tasks assigned by the Chief Judge consistent with basic restriction. Experience as an Assistant Judge at National and International Championships shall be considered by the National Aero Club when determining qualifications for International Judge status.
- 10.5 Under exceptional circumstances during the contest, the Chief Judge may allow a change in the Board of Judges.
- 10.6 The Judges and Assistant Judges will be placed by the Chief Judge at appropriate places for observing and evaluating contest flights, including places that require the use of technical equipment, as determined by the Judge Allocation and briefing notes. No more than 3 FAI Judges and/or Assistant Judges are permitted at any one judging point. Each judge must be from a different country.
- 10.7 The scoring sheets of Judges may be collected intermittently during an event. Immediately after completion of an event and its marking by Judges, the score sheets must be given to the Chief Judge or his designated nominee. If a Judge disagrees with the judgement of other judges on his judging point, he must make his appropriate remarks on the scoring sheet and bring this to the attention of the Chief Judge immediately.
- 10.8 The preliminary results of each competitor for every event and the scoring in detail will be published as soon as possible after each flight. The preliminary results of each event with the crew's placing will be published on the information board. The final results with the placing will be published not later than the next day following the task concerned.
- 10.9 If a FAI Judge notices a mistake in the preliminary results for his judging point, the error should be immediately drawn to the attention of the Chief Judge. The Chief Judge will clarify the matter together with the Championship Director and scoring personnel. The Chief Judge will inform the Judge about the findings.
- 10.10 The deliberations of the Board of Judges and the International Jury are always confidential.
- 10.11 The Chief Judge may suspend a Judge in the case of repeated failure to carry out his/her duties. A Report will be forwarded to his/ her NAC.
- 10.12 Prior to the start of the Championships, the Chief Judge will undertake a briefing conference which is compulsory for all Judges to attend. This conference will take place the day before the first flying event of the Championship at a time decided by the Chief Judge.

## 11.0 DETERMINATION OF WORLD CHAMPIONS

- 11.1 To compete in the Championships all competitors must compete in Event 1-4. The scores of Event 5 do not count toward individual or team World or Continental Championship.
- 11.2 The “ Team Champions “ will be the best 3 crews of an country team. The 3 crews having the highest number of points compared to all other groups of 3 crews from each country.
- 11.3 The “ Overall Champions “ will be the crew having the highest score of all other crews.
- 11.4 Event Champions in Events 1, 2, 3 and 4 are determined by the highest number of points obtained in each of these events.
- 11.5 The determination of the results of Event 5 are based on the highest score being declared the Champion.

## 12.0 AWARDS AND PRIZES

- 12.1 Both members of the first 3 crews will be awarded FAI medals and Diplomas in the individual classification.
- 12.2 Both members of each three team crews of the winning country will be awarded FAI Diplomas. Each crew winning an Event will also be awarded an FAI Diploma.
- 12.3 The crew with the highest overall score will become “ Overall World or Continental Champions “.
- 12.4 The team with the highest overall score nominated as “ World or Continental Team Champions“.
- 12.5 There will be an award for the female crew with the highest overall score nominated “ Overall World or Continental Ladies Champions“.
- 12.6 There will be an award for the crew with highest Fender Rigging score nominated “ Fender Rigging Champions “.
- 12.7 There will be an award for the crew with the highest Navigation Exercise score nominated “ Navex Champions “.
- 12.8 There will be an award for the crew with the highest Precision Flying score nominated “ Precision Flying Champions “
- 12.9 There will be an award for the crew with the highest Slalom score nominated “ Slalom Champions “.

- 12.10 There will be an award for the Pilot with the highest Freestyle score nominated “ Freestyle Champion “.
- 12.11 There will be an award for the crew with the highest overall score where the pilot has less than 250 hours total time, nominated “ Best Novice Crew “.
- 12.12 The three individual winners of Event 5 will be awarded FAI Diplomas.

### 13.0 COMPLAINT AND PROTEST

- 13.1 The purpose of a complaint is to obtain a correction without the need to make a protest.
- 13.2 A competitor or a team who is dissatisfied on any matter during the Championship should first ask the appropriate official for assistance. If still dissatisfied, a complaint in written form may be made by the team leader to the Championship Director or his designated official. All judging matters will be passed by the Championship Director to the Chief Judge for determination. If the findings of an inquiry do not satisfy the competitor, his team manager may then lodge a protest.
- 13.3 There will be a time limit of 2 hours from the time the preliminary results are officially published during which a complaint may be lodged. Once the Chief Judge has reached a determination of the complaint and communicated it to the relevant team manager, there will be a time limit of 2 hours in which a protest may be lodged.
- 13.4 Protests must be accepted in accordance with the FAI Sporting Code and are accepted from a competitor via his team manager only. Protests are only possible against an issue which affects the competitor himself. All protests will be written in English and forwarded together with the deposit of 600,- Swiss Francs ( or equivalent ) to the Championship Director, who will in turn pass it to the International Jury. The deposit is reimbursed if the protest is upheld. The jury may order a protest fee to be reimbursed in total or in part even though the protest is denied.
- 13.5 Where one issue affects several crews of the same delegation they may all submit the same protest for one fee of 600,- Swiss Francs. However, the deposit is reimbursed only if the protest is upheld for all crews submitting the protest.
- 13.6 The International Jury must allow the protesting competitor to give evidence.
- 13.7 No complaint or protest will be allowed regarding the method, accuracy, or use of measuring equipment which has been approved as per 15.6. Judgements made without the use of approved equipment, or where no equipment is used at all, are not subject to this restriction.

## 14.0 MANAGEMENT OF THE WORLD CHAMPIONSHIPS

14.1 The Management of the contest consists of:

- The Championship Director
- The Chief Judge

## 15.0 OPERATIONAL REGULATIONS

15.1 Competition flights are performed under the following weather conditions:

- Event 1 and 5: Minimum cloud height of 300 metres and minimum horizontal visibility 2 kilometres or the minimum legal flying conditions of the host country whichever is the greater.
- Event 2, 3 and 4: maximum wind speed of 15 knots unless all team managers unanimously agree otherwise at the event briefing.

15.2 A common VHF frequency will be provided to all competitors. All other frequencies will be sealed off. However, in the event of an emergency, the seal could be broken to facilitate radio transmissions.

15.3 All pilots will be briefed on Flying Rules in the Competition area for any away flight conducted outside the official contest programme. All pilots must be acquainted with the area where the flights are allowed. Transit maps of the region will be distributed to all pilots at the first briefing.

15.4 The Competition maps approved by CIG ( at its meeting prior Championship ), will be supplied to each NAC in sufficient quantity for each competing crew 4 weeks before the Championship together with the field sketches indicating parking, refueling and the location of Events 2, 3, 4 and 5. A list of numbers will be preallocated to each country.

The Competition map should be a map of 'rules' relevant scales ( 1:200.000 or 1:250.000 ) and normally used in Organizer's state as an aeronautical map.

15.5 Only designated pilots will fly during competition except in the case of an emergency. The crew member / co-pilot is restricted from handling the flying controls during events and infringement will result in disqualification.

15.6 The details of all measuring equipment to be used during Championship are to be submitted to the FAI - CIG for consideration. It is the organizers responsibility to ensure that the equipment or its technical description, user instruction or user handbooks and certification of worthness is available at the annual CIG meeting prior the Championship. Stopwatches are exempt from this requirement but methods for determining Start / Finish and measuring distance are not unless previously approved.

- 15.7 The method of measurement of the data listed in Appendix B must also be submitted to the FAI - CIG for consideration as per 15.6.
- 15.8 To ensure good media coverage, competing aircraft can be required to carry a television or film camera. These will be mounted in ways compatible with airworthiness requirements at the discretion of the Championship Director.
- 15.9 Up to three crews may share any one helicopter in any one event.
- 15.10 Helicopter Types will be given a competition speed based on 80 % of the maximum safe sustainable cruise speed in straight and level flight with two average weight persons and 1,5 hours fuel on board. The maximum competition speed shall not exceed 90 knots. The FAI - CIG will determine speeds for all currently operating helicopter types after consultation with experts on each type and maintain a list. The list will be maintained in Appendix A of these rules and may vary from time to time.
- 15.11 Standard fuel sufficient for the Championship tasks ( AVGAS 100 LL and JET A1 ) will be provided by the Organizer. The organizer will not supply oil or lubricants. Wherever non-standard fuel has to be used, their supply will be the participant's responsibility. Fuel, oil or lubricants are not covered by the entry fee.

## 16.0 COMPETITION RULES

- 16.1 It is the responsibility of crews to ensure a proper understanding of the Competition and Events Rules.
- 16.2 Any change in the schedule due to weather etc. will be posted on the information board and announced at briefing.
- 16.3 Crews will be given " lift off " times for each event and it will be their responsibility to be ready at the preparation line. The Championship Director may announce changes to lift off times just prior to or during an event.
- 16.4 Late arrival at Line P will normally be penalized by 5 points for each minute of delay or part thereof to a maximum of 25 points. After 5 minutes delay the competitor will be required to fly last. In the event of a proven technical problem, the Championship Director may authorize a change in departure time.
- 16.5 If a competitor interrupts his flight after crossing the departure line for any technical reason including low fuel during an event, he will not be allowed to repeat it.
- 16.6 Except where another penalty is specifically provided for, the penalty for infringement for any rule is 35 points.

- 16.7 Use of special equipment, such as auto stabilizing equipment, auto pilot and certain radio aids is not permitted, unless it is listed in the Operator Flight Manual as necessary to conduct normal safe flight. Radar and Radio Altimeters are not permitted for the 4 events of the competition. The use of mobile telephones by crews is not permitted during all events. Any infringement will result in disqualification. The Championship Director will choose crews and helicopters for relevant inspections during the competition.
- 16.8 Practice is prohibited during the Championship and will incur a penalty of 50 points per occurrence. Competitors will be allowed to check the height of the weights during fitting in Event 2 and will be allowed a left and right turn on the " P " Line to check aircraft performance. Private flights will only take place with special permission from the Championship Director.
- 16.9 A contest number must be clearly seen on the left and right sides and under the front part of the helicopter during the whole Championships. The minimum size of the numbers will be 30 by 30 cm, or as large a size as is reasonable possible and will be black numbers on a white background. Provision of the contest numbers is the responsibility of the Organizer. Numbers will be fixed by each crew before the first day. The Chief Judge or his delegated Official will confirm the compliance prior to the first event.
- 16.10 Each competing helicopter must comply with its own National Flight Regulations, and must be equipped with a VHF radio and normal standard equipment.
- 16.11 A black flag shown to a competitor means he is disqualified for the Event. " Black flags " are explained in some score events and will be detailed during briefing.
- 16.12 All Judges and Assistant Judges will bring a stopwatch with them to the Championship. Judges and Assistant Judges must not use private mobile telephones during their duties in all events.
- 16.13 All times are to be measured to an accuracy of at least one tenth of a second and to one hundredth of a second where possible. The organizer responsible for calculating and collating scores will round the scores to the nearest tenth of a second before allocating penalty points. Times from 0.01 to 0.04 of a second will be rounded down to the previous tenth of a second whereas times from 0.05 to 0.09 of a second will be rounded up to the next tenth of a second.
- 16.14 Any lines or markings, fixed equipment such as the slalom course, the fender rigging course or the dog house, must be in place and available for inspection by competitors and officials at least one hour prior to the departure of the first competitor. A plan of how the course is to be laid out should be given to the Jury President at least 24 hours prior to the first departure.

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Appendix A – Competition Speeds

HELICOPTER TYPE	COMPETITION SPEED ( KTS )	COMPETITION SPEED ( KPH )	CRUISE SPEED ( KTS )
Robinson R22 – HP	64	118	80
Robinson R22 – Alpha	64	118	80
Robinson R22 – Beta	64	118	80
Robinson R22 – Mariner	56	104	70
Robinson R22 – Astro	80	148	100
Bell 47	56	104	70
Bell 205 (UN-1H)	80	148	100
Bell 206 I Jet Ranger	80	148	100
Bell 206 II Jet Ranger	80	148	100
Bell III Jet Ranger	80	148	100
Bell 206 Long Ranger	80	148	100
Bell 212	80	148	100
Bell 214	90	166	115
Hughes 300A	60	111	75
Hughes 300B	60	111	75
Hughes 300C	60	111	75
Schweizer 300	60	111	75
Schweizer 300CB	56	104	70
Schweizer 330	72	133	90
Hughes 500HS	80	148	100
Hughes 500C	80	148	100
Hughes 500D or MDHC 500D	90	166	120
Hughes 500 or MDHC 500E or F	90	166	120
Hughes 500 or MDHC 530N or F	90	166	120
Aerospatiale Gazelle	90	166	140
Aerospatiale Ecureuil or ASTAR AS350B	90	166	115
Aerospatiale Ecureuil or ASTAR AS350B2	90	166	120
Aerospatiale Dauphin (HH-65)	90	166	140
Mil Mi – 2	72	133	90
Enstrom F28A	56	104	70
Enstrom F28C or F	64	118	80
Enstrom F280C	64	118	80
Enstrom 280 FX	72	133	90
Alouette II	64	118	80
Alouette III	72	133	90
Eurocopter EC 120	80	148	100

Helicopter competition speed will be 80% of the maximum safe sustainable cruise speed in straight and level flight with two average weight persons and 1.5 hours fuel on board.  
The maximum competition speed will be 90 kts (166 kph)

## **Appendix B - Measuring Equipment**

### **B-1. GENERAL :**

As stipulated in 15.6 and 15.7 of the Chapter 1, all measuring equipment must be submitted to the FAI - CIG for approval prior to the Championship.

The following lists the judgments in the competition that may require the use of equipment. In some cases such as time, the use of equipment, in this case a clock or watch, is mandatory.

In other cases such as judging speed, height or distance, the organizer may use technical equipment in addition to the judgment of the judges.

If equipment is being used for a particular measurement, it must be described in full to the FAI - CIG according Chapter 1 para 15.6, or, the organizer must state that no equipment will be used.

In this case measurement will be taken by the skill and judgment of the judges.

### **B-2. Long Navigation with Timed Arrival**

#### **Mandatory Equipment**

Master Clock, Start Line Clock, TP1 Clock, TP2 Clock, TP3 Clock, Search Box Exit Clock, Gate A Clock. The organizer must demonstrate that the timepieces will be of sufficient quality and that they can be synchronized to the Master Clock to an accuracy of 0.01 seconds.

#### **Optional Equipment**

For Measurement of height at targets in the dropping zone and Line A and F.  
For measurement of speed and 30 degree variation on final leg.

To avoid potential complaints and protests, the organizer should ensure that there is some clear indication of the last 2 km to the judges.

### **B-3. Events 2, 3 and 4**

No special equipment required.



## **Appendix C - Criteria for International Judge Status**

This document describes the standard, which must be met by individuals who wish to be granted or maintain the qualification of International Judge as awarded by the FAI - CIG.

### **Authority**

The National Aero Club is responsible for submitting a complete list of individuals who are to be granted or confirmed as International Judges at the scheduled CIG meeting prior to a World Helicopter Championship.

Each CIG delegate is responsible for confirming the standard of each of the Judges submitted on the NAC's list along with a brief description of the national training and endorsement procedure. The delegate should not endorse an individual who does not meet the qualifications.

Should it be found that a Judge does not meet the standards set by the CIG then the proposing delegate may be liable to censure at the next FAI - CIG meeting.

### **Duration**

The validity of International Judge status will be from one CIG meeting prior to a World Helicopter Championship to the next, This will give a validity from two to three years depending on the frequency of Championships.

It is in order for the CIG to convene a special meeting at a World Championship to appoint more International Judges provided the Judges are approved by their NACs and its delegate as well as meeting CIG standards.

### **Standard**

The Judge must be able to demonstrate the following ability:

Rules: A full knowledge of the current version of the CIG World and Continental Championship Rules.

Physical capability:

Fit state:

A Judge and Assistant Judge must be capable of remaining out in the field for at least 8 hours. They must also be sufficient mobile to move within the competition area.

Corrected Eyesight:

To be able to read two numbers each 30cm x 30cm as described in 16.9 of the Chapter 1, from a distance of 15 Meters or 50 feet.

Corrected Hearing:

To be able to hear a helicopter approaching in still air conditions from a distance of 1 NM.

A holder of a valid aviation medical of any class will be assumed to meet the criteria.

Stopwatch Usage:

To be able to demonstrate familiarity with a stopwatch of his choice, or the approved NAC stopwatch and to be able to measure a time to an accuracy of 0.25 of a second.

Clock Usage:

To be able to synchronize a clock to a Master Clock to an accuracy of 0.1 of a second and to time an event to an accuracy of 0.25 of a second.

Speed, Height, Course judgment.

To be able to determine a course change of over 30 degrees, a ground speed of less than 30 kph (16 kt), and a height of 10 meters (33 feet).

Experience:

The Judge must have been a major Official (Organizer, Chief Judge, Jury Member), Crew, or have judged at any National, World or Continental Championship within the last two years of the deciding CIG meeting. The CIG may exercise its discretion on this point.

Any Judge not meeting any of the above criteria may be appointed an Assistant Judge at the discretion of the CIG.