



# FAI Sporting Code

**Fédération  
Aéronautique  
Internationale**

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## **World and Continental Helicopter Championships**

### **Rules and Regulations 2011 Edition**

Approved by the FAI Rotorcraft Commission (CIG)  
on 04.March 2011 and 09.March 2012

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## **World and Continental Helicopter Championships**

## **Chapter 1 BIDDING**

**(to be read in conjunction with the General Section of the Sporting Code)**

### **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 of helicopter sports.
- 1.3 To improve pilot's flying skill.
- 1.4 To improve aeronautical relationship between participating countries.

### **2.0 ORGANISER**

- 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 OFFER**

- 3.1 A bid to host a World or Continental Championship must be submitted for consideration by a CIG Plenary Meeting no less than 2 years before the proposed date.
- 3.2 A draft bid must be submitted to the CIG Bureau at least 3 months before the Plenary Meeting.

### **4.0 DETAILS**

- 4.1 A bid must include:
  - Identity of the Organiser and Organisations involved
  - Prospective dates for the Championship
  - The site of the proposed Championship
  - Detailed maps of the Competition Area
  - Average local weather conditions of the site
  - Airspace restrictions
  - Characteristics of the location
  - Insurance requirements
  - An indication of the entry fee and what it includes
  - Hotel and catering information
  - Statement that all NAC's will be invited. This means that invitations, in writing, will be sent to all NAC's in the first instance
  - Advice on the possibilities of hiring helicopters and any national licensing requirements
  - Travel advice

### **5.0. FAI-CIG ORGANISER AGREEMENT**

- 5.1. Each bid must be accompanied by a signed Organiser Agreement. A bid without a signed Organiser Agreement will not be considered. Bids made by an unsuccessful bidder will be immediately returned.
- 5.2. In the event of the acceptance of a bid FAI and CIG will immediately sign the Agreement. Copies will be held by FAI, CIG and the successful NAC.
- 5.3. CIG may delegate full powers to its Bureau to clarify any 'agreed' provisional matters.

## **6.0. OFFICIALS**

- 6.1. A successful bidder, at the time of acceptance, may propose the officials to be approved by CIG. There may be substitutions at a later date.

# **World and Continental Helicopter Championships**

## **Chapter 2**

### **General Rules and Regulations**

**(to be read in conjunction with the General Section of the Sporting Code)**

#### **1.0. PARTICIPANTS**

- 1.1. 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, Pilots and Crew Members, Mechanics, Interpreter. A participant may only act in a single capacity (except Chief Delegate and Team Manager which may be combined in one person). There shall be a maximum of 10 judges (including Assistant Judges) per country.
- 1.2. Each country may enter a maximum of 7 crews. Each crew may compete for the individual title of "Helicopter World or Continental Champion". A crew can be all-male, all-female or male and female.
- 1.3. An additional 3 crews over those in 1.2 may be included in the national delegation from the organizing country to compete for the individual title.
- 1.4. Up to 3 "all- female crews" may also be entered in addition to those mentioned in 1.2 and 1.3 above. If there are more than 3 countries participating with all-female crews, an individual World or Continental Female Title will be awarded.
- 1.5. Each national team will be composed of a minimum of 3 and a maximum of 5 crews. Team crews must be declared and published not later than 12 hours before the competition starts. Their results will count for both the country team result and individual result. In addition to 1.2, 1.3 and 1.4 a National Team may include an unlimited number of pilots to compete in Event No. 5.5 (Free Style) only.
- 1.6. The defending Overall Champions and the defending Female Champions from the immediate previous championship have the right to defend their title. They are regarded as extra crews over and above the numbers set out in 1.2 – 1.4.
- 1.7. Each crew member must be in possession of a valid FAI Sporting Licence, issued by his own National Aero Club.
- 1.8. A National Aero Club being unable to enter a team of 3 crews, required for team classification, may enter individual crews.
- 1.9. Crews must participate in all Championship events 1 – 4 inclusive. Participation means having passed the departure line.

- 1.10. The Championship Director may permit a change of a crew member in a National Team. No change is permitted later than 6 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.

## **2.0. TYPES OF HELICOPTER, LICENCE AND DOCUMENTATION**

- 2.1. Helicopters of any type with sufficient characteristics to execute World or Continental Helicopter Championship events will be allowed to compete in the Championship. 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.
- 2.2. A valid "Certificate of Airworthiness" or equivalent document and a Certificate of Registration issued by an appropriate Authority must be produced to the Organiser for every competing helicopter.
- 2.3. Pilots must be in the possession of a valid Pilots Licence complete with Medical Certificate.

## **3.0. INSURANCE**

- 3.1. It is compulsory for each competing helicopter to have third party insurance policy for an amount of a minimum of 2,000,000 Swiss Francs (or equivalent), for the whole duration of the Championship 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 insurance. Copies of insurance policies with confirmation in English of validity must be submitted by each competitor.
- 3.2. Country Regulatory Authorities may have compulsory higher limits. Therefore, the minimum cover specified in Rule 3.1 will be increased to meet government requirements but in no case be lower than stated in Rule 3.1. above.

## **4.0. ENTRIES AND FEES**

- 4.1. 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 Organiser only when there is a good reason.
- 4.2. The official entry form can be submitted to the Organiser through postal services, e-mail or fax.
- 4.3. The amount of the entry fee will be calculated by the Organiser 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.

- 4.4. The entry fee will be paid 2 months before the Competition.  
Late entry fees may be accepted at the discretion of the Organiser.
- 4.5. All Entry fees will be refunded if the World or Continental Helicopter Championship does not take place.
- 4.6. If any delegation arrives at the Championship with incomplete or missing documentation the entry fee will not be refunded.
- 4.7. The entry fee does not include personal expenses.
- 4.8. The Organiser will announce to all participating NACs in a preliminary bulletin the following details:
- Amount of the entry fee for crews, delegation members, judges and additional personnel
  - Extra fee for single rooms
  - Bank account for payment of entry fees
  - Dates and Agenda of the Championship
  - Details concerning Check-in, Initial briefings and the proposed programme.
- 4.9 The Organiser will pay the Sanction Fee to the FAI-CIG account, being a sum equal to 100 Swiss Francs per entrant i.e. pilots, co-pilots and all other delegation members including supporters, but excluding judges. The payment is to be received by FAI not less than 30 days prior the start of the Championship.
- 4.10 Any outstanding fees owed for late entrants must be paid to the FAI - CIG President or the President of the Jury prior to the commencement of the Championship. Any overpayment of Sanction Fees will be refunded to the Organiser within 30 days of the end of the Championship and the publication of the results.
- 4.11 In the event of non payment or dispute the CIG President, together with the International Jury will decide on 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.

## 5.0. PROGRAMME OF EVENTS

- 5.1. Competitors will be required to perform the following:
- Event 1: Navigation
  - Event 2: Precision
  - Event 3: Fender Rigging or Postman
  - Event 4: Slalom
- Event 5 is optional. It will not count towards the overall Championship. Media events are also optional and will not count towards the overall Championship.
- 5.2. The sequence of the Championship events will be announced during the initial briefing.

- 5.3. 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:
- Maximisation 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.
  - Maximising separation between helicopters of a national team so that no two team crews are airborne at the same time in Event No.1
  - Avoidence of the same running order for consecutive Events.

## 6.0. FLIGHT SAFETY

- 6.1. The Organiser will appoint a 'Safety Officer'. He will assist the Championship Director to observe and guarantee the safety of the flights on the competition site.
- 6.2. The Safety Officer must, in addition to any National recommendations, be provided with a copy of the FAI's Recommendations.
- 6.3. 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 Organiser 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 Organiser for any violation of air safety by competitors or others.
- 6.4. A competitor taking drugs, alcohol, 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.
- 6.5. All personnel participating in the competition area during events must be clearly marked. All safety measures will be taken to prevent any dangerous situation in the vicinity of helicopters and to prevent foreign object damage either to helicopters or personnel.
- 6.6. 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 Organisers personnel and remain in marked areas approved by the Chief Judge.
- 6.7. Due to weather conditions or for safety reasons, the President of the Jury and / or the Chief Judge can vary the length of the course and the dimensions of the search box.
- 6.8. Mandatory Fly Over ( MFO ) points are to be clearly recognizable on the ground and the position to be explained to the crews prior to the first event. MFO points do not form part of the competiton but are to be used to provide required routing and separation at the discretion of the Organiser.

## 7.0. WORLD OR CONTINENTAL CHAMPIONSHIP BODIES

- 7.1. The International Jury is responsible for dealing with protests. It monitors the Championship in accordance with the Sporting Code, General Section.
- The International Jury is composed of a President 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 Championship Director 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 and 4, including the decision which sub-event will be flown as event 3 ( Fender Rigging or Postman ). The Jury President may inform the Championship Director of the details of Event 2 and 4 up to three days before registration day. The Championship Director must ensure that these details are not made public until registration day.
  - All members of the International Jury shall be present at the Championship location during competition flying. The President 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 during the Championship.
- 7.2. The Chief Judge and Deputy Chief Judge are nominated by FAI - CIG. Either the Chief Judge or the Deputy Chief Judge must be present in the competition area at all times during competition flying. They have 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. They are also responsible for dealing with complaints concerning rules or judging matters. The Chief Judge's and Deputy Chief Judge's accommodation and reasonable travel costs are to be borne by the Organiser.
- 7.3. The Championship Director is appointed by the Organiser 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 managers 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 arise 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 made by the technical advisers
    - Repeated serious infringement of competition rules
    - Use of forbidden equipment, alcohol or drugs
    - In cases of disqualification the entry fee is not returnable. The FAI Sporting Licence should be withdrawn and returned to the Competitor's National Aero Club with a report.

- 7.4. A Technical Adviser Team will be composed of 3 to 5 engineers and mechanics appointed by the Organiser. 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 disqualified from the Championship.

- 7.5 The Safety Officer will be present at all times during the competition events. For events 2 – 6 inclusive he will be present in the competition area. In the event of actual dangerous incident he must immediately inform the Chief Judge, or the Championship Director or the Jury.
- 7.6 The President of the Jury or a designated member of the Jury, the Chief Judge or the Deputy Chief Judge must be at the competition site at least three days before the start of the competition to ensure that the Organisers have complied with the rules and details of the competition.

## 8.0 JUDGING

- 8.1. 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 Chapter 4 and be approved by FAI - CIG.
- 8.2. All participating NAC's have right to be represented on the Board of Judges by FAI International Judges approved by CIG.
- 8.3. The Board of Judges will be composed of:
- A Chief Judge
  - Deputy Chief Judge
  - International Judges
  - Assistant Judges
- 8.4. Assistant Judges are nominated by each participating NAC and must have been registered with CIG before the Championship starts. An Assistant Judge may perform all tasks not involving subjective judgment. Tasks include timing, scoring boundary line violations, and duties associated with preparation and departure lines and other tasks assigned by the Chief Judge or the Deputy 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 upgrading to International Judge status.
- 8.5. Under exceptional circumstances during the contest, the Chief Judge may allow a change in the Board of Judges.
- 8.6. The Judges and Assistant Judges will be placed by the Chief Judge or Deputy Chief Judge at appropriate places for observing and evaluating competition 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 and will have a common language for purposes of communication.

- 8.7. 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 the Deputy Chief Judge.
- 8.8. If a Judge becomes aware of a breach of FAI Regulations or Championship Rules and is in possession of detailed evidence or he /she 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 or Deputy Chief Judge immediately.
- 8.9. If an FAI Judge notices a mistake in the preliminary results for his judging point, the error should be drawn immediately 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.
- 8.10. The deliberations of the Board of Judges and the International Jury are confidential. They must not be discussed with Delegation or crew members.
- 8.11. The Chief Judge may suspend a Judge in the case of failure to carry out his/her duties. A report will be forwarded to his/ her NAC.
- 8.12. Prior to the start of the Championships, the Chief Judge will undertake a briefing conference which is compulsory for all Judges and Assistant 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.
- 8.13. No Judge may raise questions of rules interpretation at briefings where participating crews are present.

## **9.0 DETERMINATION OF WORLD OR CONTINENTAL CHAMPIONS**

- 9.1. The “ Team World Champions “ will be the best 3 crews of a country team, having the highest number of points compared to all other groups of 3 crews from each other country.
- 9.2. The “Overall World Champions“ will be the crew having the highest score of all other crews.  
The “Female Champions” will be the all-female crew having the highest score of all other female crews.
- 9.3. Event Champions in Events 1, 2, 3 and 4 are determined by the highest number of points obtained in each of these events.
- 9.4. Event Champion in Event 5 is determined by the highest number of points obtained in the event.

- 9.5 There will be an award for the pilot with the highest overall score where this pilot has less than 250 hours total time, nominated “ Best Novice Pilot “.
- 9.6 The Organisers are responsible for the purchase of FAI Medals and Diplomas.

## **10.0 COMPLAINT AND PROTEST**

- 10.1 The purpose of a complaint is to obtain a correction without the need to make a protest.
- 10.2 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 should be made by the team leader to the Championship Director or his designated official, without delay. 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.
- 10.3 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.
- 10.4 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.
- 10.5 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.
- 10.6 The International Jury must allow the protesting competitor to give evidence.
- 10.7 No complaint or protest will be allowed regarding the method, accuracy, or use of measuring equipment which has been approved as per 12.6. Judgements made without the use of approved equipment, or where no equipment is used at all, are not subject to this restriction.
- 10.8 If a Team Manager becomes aware of a serious breach of FAI Regulations or Championship Rules and is in possession of detailed evidence he must bring it to the attention of the Chief Judge and the Championship Director. He must produce all the detailed evidence to support his allegation without which the allegation will be rejected. If an allegation is found to be unsubstantiated or mischievous FAI and the NAC will be informed.

## 11.0 MANAGEMENT OF THE WORLD AND CONTINENTAL CHAMPIONSHIPS

11.1 The Management of the competition consists of:

- The Championship Director
- The Jury
- The Chief Judge
- The Deputy Chief Judge

11.2 The International Jury, the Championship Director or Judges may not change any Rules or penalties approved by CIG.

## 12.0 OPERATIONAL REGULATIONS

12.1 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.
- Event 5 maximum wind speed of 8 knots.

12.2 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 may be broken to facilitate radio transmissions.

12.3 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.

12.4 The Competition maps approved by CIG (at its meeting prior to the 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, 5. A list of competitor numbers will be preallocated to each country.  
The Competition map should have a scale of between 1:200.000 to 1:250.000 and normally used in Organiser's country as an aeronautical map.

12.5 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.

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

- 12.7 The method of measurement of the data listed in Annex B must also be submitted to the FAI - CIG for consideration as per 12.6.
- 12.8 To ensure good media coverage, competing aircraft may be required to carry a television or film camera. These will be mounted in a manner compatible with airworthiness requirements at the discretion of the Championship Director.
- 12.9 Up to three crews may share any one helicopter in any one event.
- 12.10 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 Annex A of these rules and may vary from time to time.
- 12.11 Standard fuel sufficient for the Championship tasks ( AVGAS 100 LL and JET A1 ) will be provided by the Organiser. The Organiser 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.

### **13.0 COMPETITION RULES**

- 13.1 It is the responsibility of crews to ensure their proper understanding of the Competition and Events Rules.
- 13.2 Any change in the schedule due to weather etc. will be posted on the information board and announced at briefing.
- 13.3 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.
- 13.4 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.
- 13.5 If a competitor interrupts his flight after crossing the departure line for any technical reason including low fuel during the event, he will not be allowed to repeat it.
- 13.6 Except where another penalty is specifically provided for, the penalty for infringement of any rule is 35 points.
- 13.7 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. Any infringement will result in disqualification. The use of mobile telephones or any other communication devices (hand-held radios,

walkie-talkies etc.) by crews is not permitted during all events. If such a device is seen to be used the penalty will be disqualification from the event. The use must be stated at least by two officials (Judges, Assistant Judges, Delegation members, Organiser's personnel) who must be from different countries. They have to report to the Championship Director immediately. Carriage of a mobile phone or other communication devices during competition flying by a crew member will carry a penalty of 100 points.

- 13.8 The Championship Director will choose crews and helicopters for relevant inspections during the competition.
- 13.9 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 may only take place with special permission from the Championship Director.
- 13.10 A contest number must be clearly visible 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 or yellow background. Provision of the contest numbers is the responsibility of the Organiser. Numbers will be fixed by each crew before the first competition day. The Chief Judge or his delegated Official will confirm the compliance prior to the first event.
- 13.11 Each competing helicopter must comply with its own National Flight Regulations, and must be equipped with a VHF radio and normal standard equipment.
- 13.12 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. Black flags can only be shown by judges on the authority of the Chief Judge or the Deputy Chief Judge or by themselves.
- 13.13 All Judges and Assistant Judges will bring a stopwatch with them to the Championship. Judges and Assistant Judges may not use private mobile telephones during their duties in all events. The use of a mobile phone or other communication devices by a Judge at any time during competition flying will result in immediate withdrawal from the board of judges.
- 13.14 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 personnel 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.
- 13.15 Any lines or markings, fixed equipment such as the slalom course, the fender rigging/postman 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.

- 13.16 The preliminary results of each competitor for every event will be published not later than 3 hours after completion of flying. 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. Team Managers have the responsibility of obtaining this information and informing their crews within the appropriate time period.

# World and Continental Helicopter Championships

## Chapter 3

### Organisation and Venue Rules

#### 1.0 GENERAL

Prior to any National Aero Club offering to host a World or Continental Helicopter Championship, the National Aero Club must be able to satisfy FAI – CIG on the following points:

- 1.1 Sufficient experience exists in the Host Country to ensure a high standard.
- 1.2 There should be at least 4 officials experienced in the discipline who are able to provide their knowledge and experience in respect to organizing Championships.
- 1.3 It is advantageous but not compulsory that the Host Aero Club combine with their National Military or Government in their offer to host an event. FAI – CIG would give consideration to 2 National Aero Clubs offering to jointly host a Championship on their National Borders subject to the respective Government approval.
- 1.4 The Host National Aero Club must provide an airfield with limited traffic. An airfield with bi-lingual controlling at any time during practice or the championship must be avoided.
- 1.5 The Host National Aero Club must satisfy FAI – CIG that a championship can be run with regard to the reasonable cost of participation by individuals.
- 1.6 In selecting a venue the Host National Aero Club must be able to provide acceptable reasonable accommodation close to the airfield with facilities for adequate parking and local championship transportation.
- 1.7 The Host National Aero Club must develop a close working relationship from the time that approval is given with both the President of the International Jury and the Championship Chief Judge.
- 1.8 The Host National Aero Club must comply with the following Rules and Regulations. If any doubts exist to their interpretation the advice of the President of the Jury should be sought at an early stage.
- 1.9 The Host Country must not run other local competitions at the same time unless they are under identical rules. Practice time on the airfield or in the navigation area is reserved for Championship Events with spare time only for any local event practice.
- 1.10 Practice for display, demonstrations, etc. must not interfere with the Competition Practice Schedule, which must take priority.  
Any display, demonstration or show must not interfere with competition flying.
- 1.11 The Host National Aero Club may accept participants for outside the competition but without causing any interference to the Championships. Their results will not be shown on any competition list. Only individual results may be handed to them.

- 1.12 The Host National Aero Club will take out adequate insurance coverage for all personnel who for any reason have to be present, close or adjacent to the competition area, either in practice or in competition. This will include all Jury Members, Judges, operational officials, secretaries, team managers or other crews observing practice.

## **2.0 VENUE**

- 2.1. When choosing the location of a Championship site careful consideration should be given to the type of terrain readily available. Mixed terrain, both low lying and high ground is recommended, in an area that is neither too easy nor too difficult to navigate over.
- 2.2 It is preferable to have the sole use of an airfield or be able to adopt a dominant role in respect to air traffic movements.
- 2.3 The navigation area (Event 1), where competition traffic is relatively low, military low level flights through the area are unacceptable. Appropriate Notams must be issued in respect to low level helicopter flying especially for manoeuvring and searching.
- 2.4 For Event 1, the whole of the navigation course must be on one map.
- 2.5 For Event 1, there should be no prohibited areas or danger areas within 10 nautical miles of the navigation route. There should be no dangerous power cables within 3 NM of the airfield. Cables must be shown on local area but not competition maps.
- 2.6. The airfield should have a large open unrestricted grass area upon which the championship tasks can be carried out. Routing in and out of the airfield should be from different directions, pre-planned and marked on the ground for all events taking place on the airfield.
- 2.7 Seating areas (low level stands) should be available for spectators within reasonable distance of the competition area. Separate facilities must be provided for international press including TV and Sponsored video teams. A separate press centre should be made available by the Organiser.
- 2.8 The airfield must provide adequate full time air traffic control, fire and ambulance services, hangarage for special maintenance, fuel both for piston and turbine helicopters. A fast refuelling facility on the airfield is vital for the smooth running of a championship.
- 2.9. Catering facilities, for the sole use of those associated with the championship, must be provided. The Organiser should allow for staggered mealtimes i.e. running continuous buffet.
- 2.10 The airfield should be located not more than 20 minutes travel time from the residential accommodation provided for the participants.
- 2.11 The airfield should be available for full familiarisation 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 must adhere. In the event that a military base is used the Organiser must provide an alternative training airfield nearby to the navigation area in order that navigation training may take place in the week prior to the championship.

- 2.12 A detailed weather history within the competition area must be provided to FAI – CIG at the time that the bid is made.
- 2.13 Special attention should be given to the location and size of the briefing and rest room. This should not be used for catering purposes. Sufficient seating should be provided for a minimum 150 people with additional facilities for press and TV crews.

### **3.0 SPONSORSHIP**

- 3.1. The Host National Aero Club is encouraged to obtain sponsorship either for the whole or for individual events within the championship in order that the overall cost of the event for participants is reduced.
- 3.2 Hosting championships should not be taken by the National Aero Club as a means of making substantial profit at the expense of the participants.

### **4.0 PRESS AND TELEVISION (The Media)**

- 4.1. FAI – CIG will, in considering bids for hosting Championships, put considerable emphasis upon the quality and coverage given by International, Continental and Local Media. This is particularly important in the case of television.
- 4.2. Facilities must be available for international and local press, television and video crews. It is essential that there is wide coverage both nationally and internationally. Details of daily international and national programme coverage must form part of any bid.
- 4.3 The Organiser will provide facilities for press and television. This will include appropriate stands in the vicinity of the competition area on the airfield. Television crews must be escorted into the competition area but not the navigation area, but they cannot be accompanied by more than 2 others. (Maximum 3) They must be escorted at all times by a member of the Championship Director's staff whose duty will be to ensure that they do not interfere in any way with competition flying, judging or cause a hazard.
- 4.4 The Host National Aero Club will provide an experienced commentator who can provide an exciting, interesting and regular flow of information and results to be broadcast to the public enclosure and to the briefing area.
- 4.5 Facilities will be made available for the broadcast of music used during the freestyle event. It would be an advantage to have a practice prior to the championship to facilitate smooth running of the event. The position of loudspeakers must be placed so that competing pilots can clearly hear them.

### **5.0 ACCOMMODATION**

- 5.1 It is beneficial but not vital for all participants to be housed together in one complex. This will reduce the problems of communication and enables a central information centre to be set up. Competitors must have priority over supporters.

- 5.2 The cost of accommodation is of prime importance to participants. Expensive hotels are unwelcome. Participants require reasonable accommodation at an acceptable price.
- 5.3 The accommodation should provide for a running breakfast timings of which will be governed by the competition programme.
- 5.4 The residential site must be within easy reach of the competition airfield. The Competition Management must be sympathetic to pilots rest requirements.
- 5.5 It is essential that absolute quiet is given between the hours of 23.00 – 06.00 to give sensible sleep periods. Once participants have taken up residence, no parties will be held in the residential accommodation between these times until such time as the last competition event has been completed.
- 5.6 Alcohol will not be sold to competitors after 23.00 hrs in the residential accommodation.
- 5.7 National Team Managers must ensure that supporters do not interfere or disrupt the sleeping period 23.00 – 06.00 under any circumstance.
- 5.8 Two officials will be available between 06.30 and 23.30 throughout the Championships to assist with problems relating to accommodation and transportation. Their telephone numbers must be available to all participants.

## **6.0 CATERING**

- 6.1 Breakfast will be taken at the residential accommodation.
- 6.2 It is recommended that airfield catering is provided on the basis of a running buffet to cater for the staggered requirements of all participants in the championship. Regular hot and cold drinks should be available at all times. The catering area should be designed to provide seating accommodation of 150 at any one time.
- 6.3 Self service is recommended.
- 6.4 The Host National Aero Club will arrange for the Opening and Closing Ceremonies to be held on the airfield or other suitable place in front of the public. Opening and Closing Banquets may be held at other venues away from the airfield and may be separately sponsored. Any event away from the airfield or the residential area must have a transport service provided for all participants.
- 6.5 Consideration should be given to the provision of vegetarian or other special catering needs. The entry form should require the appropriate information to be given well in advance.

## **7.0 TRANSPORT**

- 7.1 The Competition Management must arrange suitable daily transport between the residential site and the airfield. Pick up points and timetables must be provided to every participant and must be published on an information board both at the residential site and in the briefing room.

- 7.2 It would be ideal for each team to be provided with separate transport. In the likely event that this is not feasible an adequate coach service must be provided.
- 7.3 The Jury, as well the Chief Judge and the Deputy Chief Judge must be provided with their own independent transportation.
- 7.4 Transportation must also be available to take teams of judges and assistant judges out to and return from the navigation area.

## **8.0 AIRCRAFT HIRE**

- 8.1 The Host National Aero Club must be prepared to initiate arrangements for the hire of helicopters for participants unable to bring their own competition aircraft.
- 8.2 Crews planning to hire helicopters should initiate a request at least 3 months before the event specifying type, length of time, hours to be flown, etc. They should furnish full details of their own licences and experience.
- 8.3 Helicopters for hire should be checked by the Host National Aero Club to ensure that they are of an adequate standard for competitive flight and that Certificates of Airworthiness and Third Party Liability Insurance are included.
- 8.4 Under no circumstances may the same helicopter be used in the navigation event by more than 3 competing crews.

## **9.0 TRAINING PRACTICE**

- 9.1 Practice and familiarisation of the navigation area should be available in the week prior to the week of the Championship.
- 9.2 Navigation practice should take place without affecting the normal airfield routine.
- 9.3 During practice it is essential that Airfield Routine Regulations are fully observed. It is also necessary for other non competitive traffic using the airfield, to be under similar guidance. Strict RT control will be necessary.
- 9.4 Daily flying should be restricted to 09.00 – 18.00.
- 9.5 Training practice must not be interrupted for display, show or exhibition flights.
- 9.6 The Host National Aero Club must provide a sample of the competition map for approval by FAI – CIG at least 6 months before the start of the championship.

## **10.0 BRIEFINGS**

- 10.1 General and event briefings must be attended by all concerned.

- 10.2 The Opening General Briefing must be attended by Judges, Operational Officials, Team Managers and Crews. The object is to explain the running of the championship, the programme to be adhered to including the social programme and channels of communication.
- 10.3 Event Briefings must be attended by Judges, Operational Officials, Team Managers and Crews. The Briefing will define operating procedures. Discussions on the Rules will not be allowed in briefings.
- 10.4 Daily Briefings must be attended by Team Managers the object being to define the day's programme.
- 10.5 Set Briefings will be attended by crews and team managers.

## **11.0 METEOROLOGY**

- 11.1 A meteorological service must be available, at least on phone or fax, throughout the Championship.
- 11.2 At the General Opening and the Event Briefings a competent person must give a detailed weather briefing.

# World and Continental Helicopter Championships

## Chapter 4

### CRITERIA AND APPROVAL OF JUDGES

- 1.0 This Chapter 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.
- 2.0 **Authority**
- 2.1 The National Aero Club is responsible for submitting a list of individuals who are to be granted or confirmed as International Judges at the scheduled CIG annual meetings.
- 2.2 Each NAC is responsible for confirming the training, experience and standard of each of the Judges submitted by the NAC's list together with a brief description of the national training and endorsement procedure. The NAC must not endorse an individual who does not meet the qualifications as laid down in 4.0.
- 2.3 Should it be found that a Judge does not meet the standards set by the CIG then the concerned NAC may be requested to explain at the next FAI - CIG meeting.
- 3.0 **Duration**
- 3.1 The validity of International Judge status will be from one CIG meeting prior to a Helicopter Championship to the next. This will give a validity of two to three years depending on the frequency of Championships.
- 3.2 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 complying with CIG standards.
- 4.0 **Standards**  
An International Judge must be able to demonstrate the following ability:
- 4.1 Rules: A full knowledge of the current version of the CIG World and Continental Championship Rules.
- 4.2 Physical capability:  
An International Judge and Assistant Judge must be capable of remaining out in the field for at least 10 hours. They must also be sufficient mobile to move fast within the competition area.  
Eyesight:  
To be able to read two numbers each 30cm x 30cm as described in 13.9 of the Chapter 2, from a distance of 15 Metres or 50 feet.  
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 these 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 metres (33 feet).

- 4.3 A Judge must have been a major Official i.e. Chief Judge, Deputy Chief Judge, Jury Member or have judged at least 3 of either National, World or Continental Championship within the last three years prior to the deciding CIG meeting.
- 4.4 A Judge not meeting any of the above criteria may be appointed an Assistant Judge at the discretion of the CIG providing an experience/training declaration (Annex C) has been submitted.

# World and Continental Helicopter Championships

## Chapter 5

### Event Rules and Regulations

#### Event 5.1 - Navigation

(to be read in conjunction with the General Section of the Sporting Code Annex A)

##### 5.1.0 Event Description:

The Event is a Navigation with Timed Arrival and Load Drop Off .

The Event will include a navigation course; en-route search zone on second or third leg; aerial drop zone between Departure line and MFO 1 or on the first leg of manoeuvring box; timed arrival at Line “A”; manoeuvring box between Line “A” and Line “F; a load drop off at Line “C”; and end-of-event landingzone.

##### 5.1.1 Navigational Course.

The navigation course will include 6 legs; three (3) Turning Points (TPs) and two (2) Mandatory Fly Over (MFO) points.

LEG	FROM	TO
1st Leg	Line “D”	MFO 1
2nd Leg	MFO 1	TP1
3rd Leg	TP 1	TP2
4th Leg	TP2	TP3
5th Leg	TP3	MFO 2
6th Leg	MFO 2	Line “A”

TP1, TP2 and TP3 will be identified on the ground by orange 2 x 2 metres triangular panels with black numbers on them. The competitor must identify each sign at its specific location. Intermediate time will be recorded at TP1, TP2 and TP3 for control purposes only.

The route, including identification of panels will be about 70 – 90 kilometres. The route length and the location of the targets for the bags will be announced at the event briefing.

##### 5.1.2 Flight Height:

The route and the MFOs will be flown at a height of about 250 metres AGL. Turning Points plus search zone entry and exit gates markers shall be overflown at a height of 50 metres.

##### 5.1.3 Flying Time:

Identical for all competitors of the same helicopter type. The flying time will be computed by the Organiser based on the speeds defined in para 12.10 of the Chapter 2 listed by type in Appendix A. For safety reasons and due to various weather conditions, an additional time of at least 3 minutes will be added to the calculated flying time for each competitor.

##### 5.1.4 Start Time:

Start times will be given in exact minutes and seconds.

There are penalties for early and late departure. During the event briefing each crew will receive the time the helicopter has to be at Preparation Line and the exact departure time the helicopter has to pass the Line D. Departure Time will be as appropriate to ensure proper aircraft separation.

#### 5.1.5 Preparation line:

Ten (10) minutes before departure time the helicopter will come to the preparation line (Line “P”). At the preparation line, the Organiser’s designated event official will give to the crew, the skittle with rope attached, and two (2) numbered fabric bags (filled with rice or sand, each weighing 1 kilo).

The Championship Director will ensure that the helicopter and its crew are searched for any prohibitive material (i.e. mobile phones or other communication devices) which must be surrendered. If these devices are required for safety reasons, they must be carried in the helicopter in a sealed envelope or box. The seals will be checked after landing. Infringement will incur disqualification.

#### 5.1.6 Departure line:

The helicopter will then move to and land in front of the Departure Line (Line “D”). A sealed envelope containing the Competition map and instructions will be given to the crewmember at Line “D” exactly 5 minutes before the scheduled departure.

The envelope must be retained for handing in results at the end of the event. All helicopter doors must be fitted.

The sealed envelope will contain the following information:

- + The flying time for the event from Line “D” to Line “A” will be stated on the outside of the envelope.
- + The calculated flying time from scheduled departure to arrival at the search zone exit in accordance with 5.1.3 and the distance.
- + The route heading to be followed from the departure line to the first MFO.
- + Geographical position of TP1 and TP3, in latitude and longitude.
- + Schematic of the search zone.
- + The Competition map with the following information indicated:
  - The position of MFO 1 and MFO 2
  - The position of TP 2
  - The search zone
  - The entry and exit gates of the search zone
  - Target panel locations

No other map than the competition map provided by the Organiser will be allowed on board during this event. Other maps should be surrendered. Infringement will incur a penalty of 100 points. In the interest of safety an ICAO 1: 500,000 map will be permitted in a sealed envelop or box (see also 5.1.5).

#### 5.1.7 Departure:

The helicopter will depart Line “D” on its given departure time. Early or late departures incur 100 penalty points.

#### 5.1.8 Search Zone.

The search zone will include ten (10) 3 x 2 metre orange panels, on which black letters or signs will be painted. The entry and exit gate will be marked on the ground by one metre wide and 15 m long white stripes, with the I (in) and O (out) orange panels in the centre space of five (5) metres. The competitor must identify each sign at its specific location. The elapsed time from the scheduled departure to the search zone exit will be stated in the envelope to ensure proper aircraft separation.

Penalty points will be incurred for not vacating the search zone on time, and for not entering or exiting the search zone correctly through the 35 metre entry and exit gates. The panels must be placed in such a manner that the distance covered to overfly all search zone panels is less than 10 nautical miles (18.5 km).

#### 5.1.9 Leg TP3 to MFO 2:

The helicopter will be flown from TP3 to MFO 2 in a straight line.

#### 5.1.10 Enroute Drop Zone:

In a determined drop zone (location as described in para 5.1.0), the crew will drop a bag on each of the two five (5) metre diameter target circles, which are marked on the ground and 100 metres apart in the direction of flight.

Dropping the bags will be performed at a height of not less than ten (10) metres AGL and at a minimum ground speed of 30 kph.

The time elapsed between the first and second bags touching the ground shall not exceed 12 seconds.

The compulsory target order is "Target One" then "Target Two".

Where the bag hits the ground first will be considered the impact point for scoring purposes.

#### 5.1.11 Leg MFO 2 to Line "A":

The helicopter will be flown from MFO 2 to Line "A" in a straight line.

The descent will start progressively in the last 3 kilometres, in order to pass vertically over Line "A" at a height of 30 +/- 15 metres AGL.

Any change in direction of more than 30 degrees, and / or ground speed less than 30 kph during the last two (2) kilometres to Line "A" will be penalized for each infringement. The landing light must be on for the final two (2) kilometres.

#### 5.1.12 Arrival Line "A":

Line "A" will be identified on the ground by one (1) metre wide and two 15 metre long yellow stripes, with a blank center space of five (5) metres.

#### 5.1.13 Determining Arrival Time:

The time will stop when the nose of the helicopter crosses Line "A" or its extensions to left or right side. Arrival time will be based on the corresponding flying time initially determined (prior to the event) for the helicopter category. (see 12.10 Chapter 2 and para 5.1.3).

#### 5.1.14 Manoeuvring Box Line "A" to Line "F":

After crossing Line "A", the helicopter will fly a rectangular box.

All competitors will perform turns in the box in the direction assigned during the pre-event briefing (see drawing, Annex 1.0).

This is a timed manoeuvre. Imposed flight time between line "A" and line "F" will be 1 minute. Time begins when the nose of the helicopter crosses Line "A" and stops as the nose of the helicopter crosses Line "F".

The descent will take place inside the manoeuvring box, including 3, nearly 90 degrees turns. Any hovering between Lines A and F will be penalized for each infringement.

#### 5.1.15 Line "F":

The helicopter will pass Line "F" at a height of 15, +/- 5 metres. Passing Line "F", the competitor will continue in a straight line to reach the target (Dog House) positioned 50 metres after line "F" ( see drawing, Annex 1.0 ) to put down the load.

#### 5.1.16 Dog House and Load Put Down.

The target (see drawing, Annex 1.1) is composed of two white 2 x 2 metre panels, assembled at an angle of 90 degrees, resting on the ground and forming two 45 degree angles. The load-receiving hole is a 0.4 x 0.4 metre square, the centre of which is one metre above the ground. Only the hole facing the arrival direction will be valid for scoring.

The crew member will, after crossing Line "F", deploy a rope (see drawing, Annex 1.1) seven (7) metres long, on the opposite side to the pilot, at the end of which a skittle will be attached.

This is a timed manoeuvre. Maximum time between Line "F" and releasing the rope is 20 seconds.

The rope must be fully extended and free of knots prior to crossing the line five (5) metres short of the dog house. Hovering between Lines "F" and the Dog House (Line "C") is permitted.

The rope must remain held at a grip at its end by the crewmember who must have both hands visible to the judges.

Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the upper ball.

The crewmember will remain fastened and seated on his seat at all times.

The crew must put the skittle into the square hole without touching the surface of the doghouse releasing the rope as soon as the exercise is finished. The doghouse open sides are not part of the roof. Time stops when rope is released.

If the skittle is dropped in the box, penalty points will be incurred for every tenth of a second above 20 seconds from Line "F". A skittle dropped outside box incurs 80 penalty points.

#### 5.1.17 Landing Zone:

A 10-metre landing zone next to the Dog House will be designated for the competitor to handover the envelope.

The Landing Zone is positioned at a safe distance from the Dog House (approx. 25 - 30 metres). Competitors who do not land in the Landing Zone receive 50 penalty points (see infringements).

Immediately after landing in the Landing Zone, the crew member hands to the Judge, the envelope containing the identification sheet for the ten panels and turning points and the competition navigation map. The competitor's competition number and name will be clearly featured on the outside of the envelope, on the map and on the identification sheet.

#### 5.1.18 Disqualification/Black Flag:

A competitor will be disqualified during the event if any of the following situations should occur:

- All communications with third parties before, during and after the task, will result in the disqualification of all crews involved. This will be enforced by Judges/Event Officials, especially for crews sharing the same helicopter.
- A black flag will be shown at Line "A" when a competitor is more than 200 seconds early or late on his given time of arrival. In such case the competitor may be waved off and should vacate the vicinity of Line "A" immediately to avoid conflict with the next aircraft, and return directly to the landing zone.

-If the rope is caught on the helicopter as it departs pulling or dragging the Dog House, this will be considered as unsafe flying.

-For any flight violation and/or unsafe flight manoeuvre / act during the event including aircraft movement to and from the aircraft parking area, i.e., parking area to the preparation line or from the landing zone to aircraft parking area.

5.119 Tie Breaker:

If there is a tie for a place, the crew with the most accurate arrival time at Line "A" will be the winner. Should these times be the same, then the shortest time between "F" and "C" will be used to determine the place.

5.120 Scoring:

$300 - P = \text{Score}$ . Score is determined by subtracting the Penalty Points from 300. The minimum score achievable is zero.

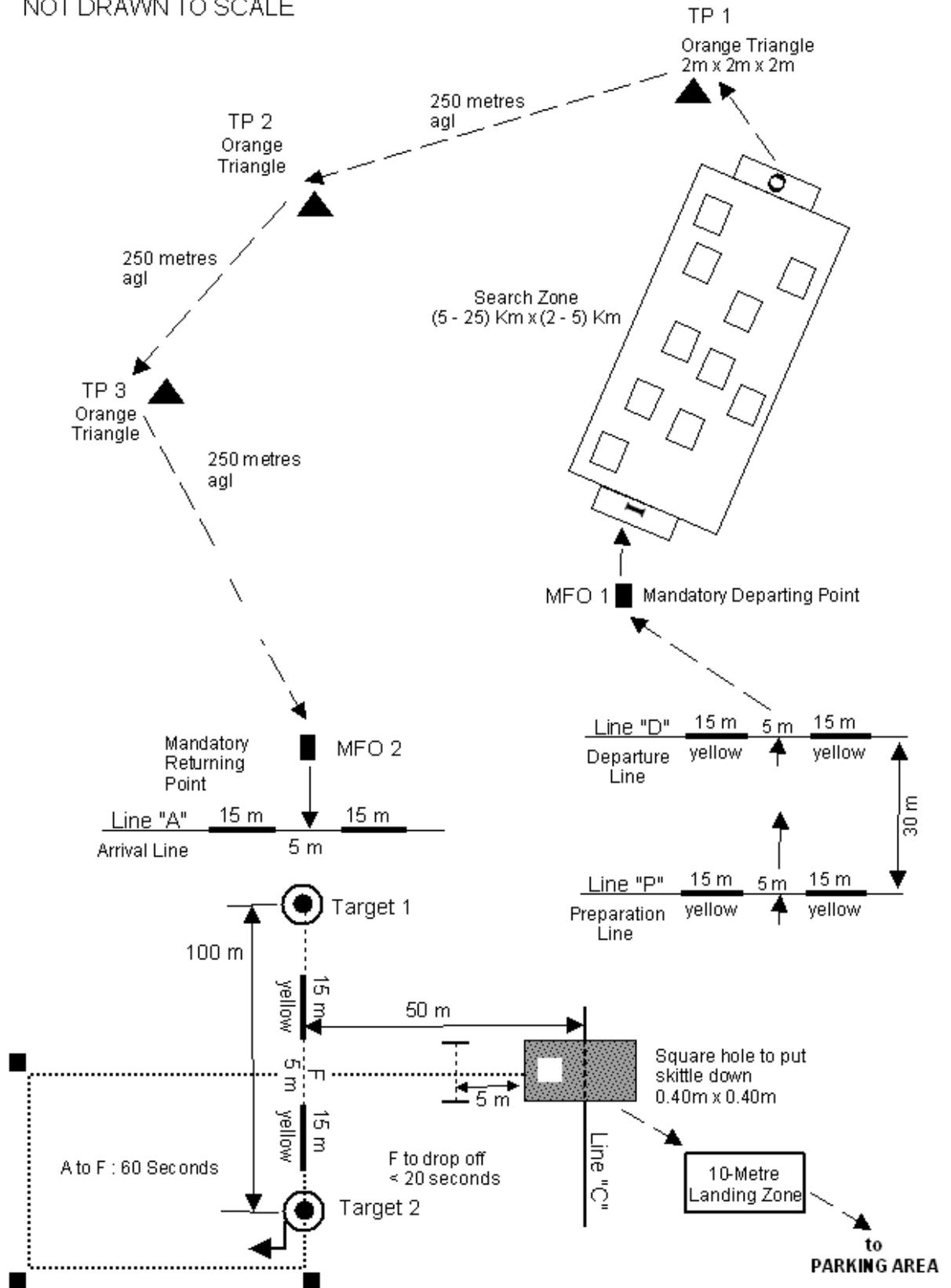
## SCORING – EVENT No. 1 (Navigation)

EVENT 1 INFRINGEMENTS	PENALTY POINTS
Early departure from Line “D”	100
Not departing Line “D” within 10 seconds of Departure Time	20
Not departing Line “D” within 15 seconds of Departure Time	100
Each missed, not correctly passed or not identified number of Turning Point	25
Entry outside the gate to the Search Zone (not using the Entrance Gate)	10
Exit outside the gate of the Search Zone (not using the Exit Gate)	10*
Each Target/Panel in Search Zone missed or incorrectly identified	10
Each tenth of a second late in exciting the Search Zone (maximum 60 points)	0.1*
Early exit from the Search Zone by more than 5 minutes (300 seconds)	50
Bag not hitting a target circle	20
Violation of the minimum dropping height	20
Violation of minimum dropping speed. More than 12 seconds between bag impacts.	20
Failure to drop a bag or bags dropped in the wrong order	20
Each change of course more than 30 degrees during the last 2 km before Line A	10
Ground Speed less than 30 kph during the last 2 kilometres before Line “A”	10
Missing Line “A”( crossing Arrival Line outside given dimensions of 35 metres )	10
No landing light “ON” during the last 2 kilometres before Line “A”	5
Hovering ( no visible or measurable forward motion ) during the last 2 kilometres before Line “A”	30
Each tenth of a second early or late on Line “A”	0.1
Early or late arrival over 200 seconds at Line “A” Disqualification	300
Each tenth of a second early or late on Line “F”	0.1
Each tenth of a second more than 20 seconds between Line “F” and Line “C”	0.1
Each hovering event ( no visible or measurable forward motion ) between Line “A” and “F”	30
Each contact of the skittle with the ground between Line “F” and Line “C”	15
Crew not remaining seated or fastened (both hands and legs not visible)	50
Rope shortened, or has knots, or handled below ball	30
Rope not deployed 5 metres before the dog house	20
Each touch of the skittle on the Dog House roof	3
Skittle dropped outside the Dog House Box	80
Unsafe flight manoeuvre, violation or act before, during or after the event	300
Not Landing in the 10 Metre Zone	50

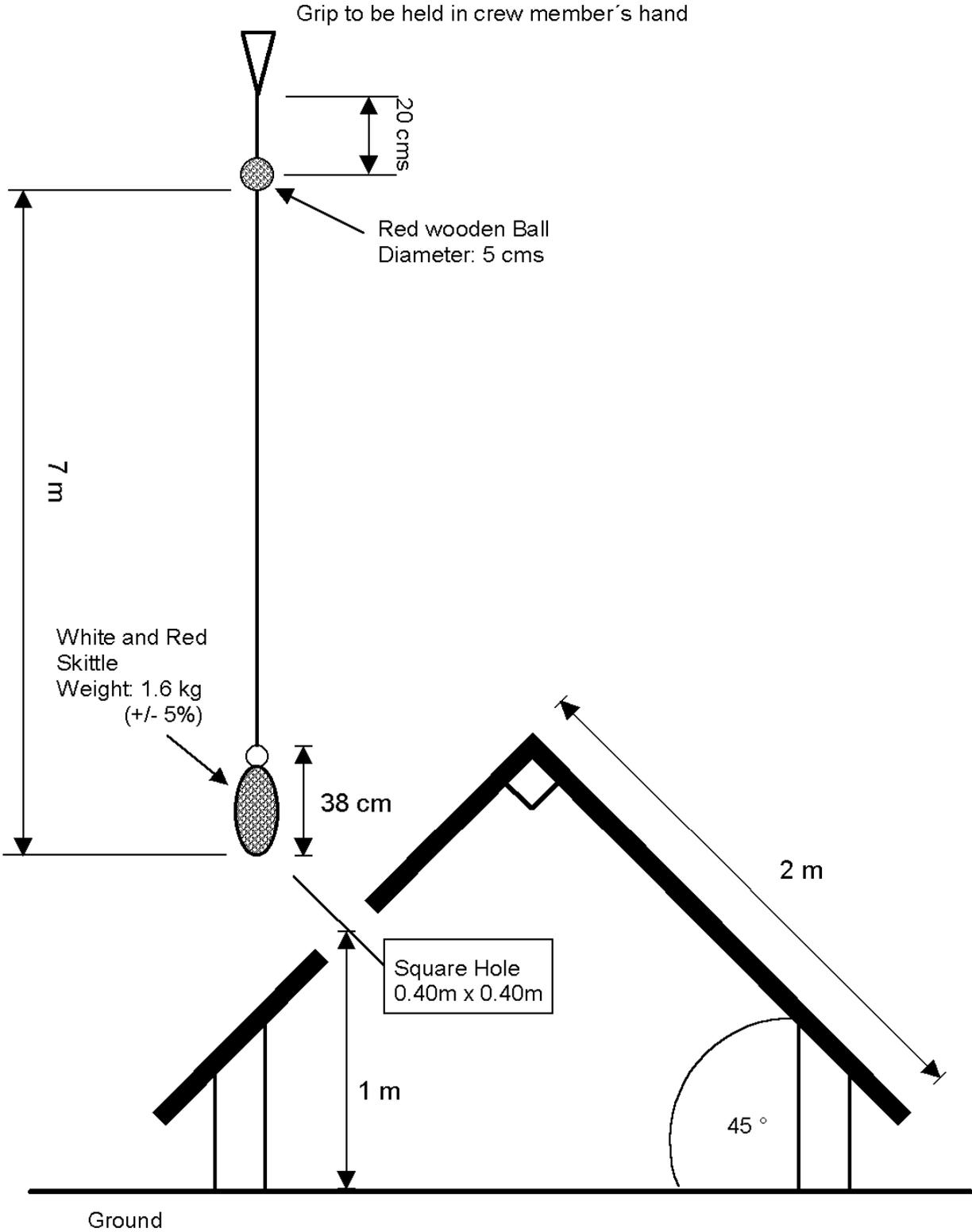
\* If the judges see a helicopter passing outside the 35 m exit gate they stop their watches when the helicopter crosses the extensions of left or right side of exit gate. If a helicopter exiting search zone is not seen by judges at exit gate the competitor will be penalized 60 points.

**Annex 1.0 - Event 1 Example of the Navigational Course**

NOT DRAWN TO SCALE

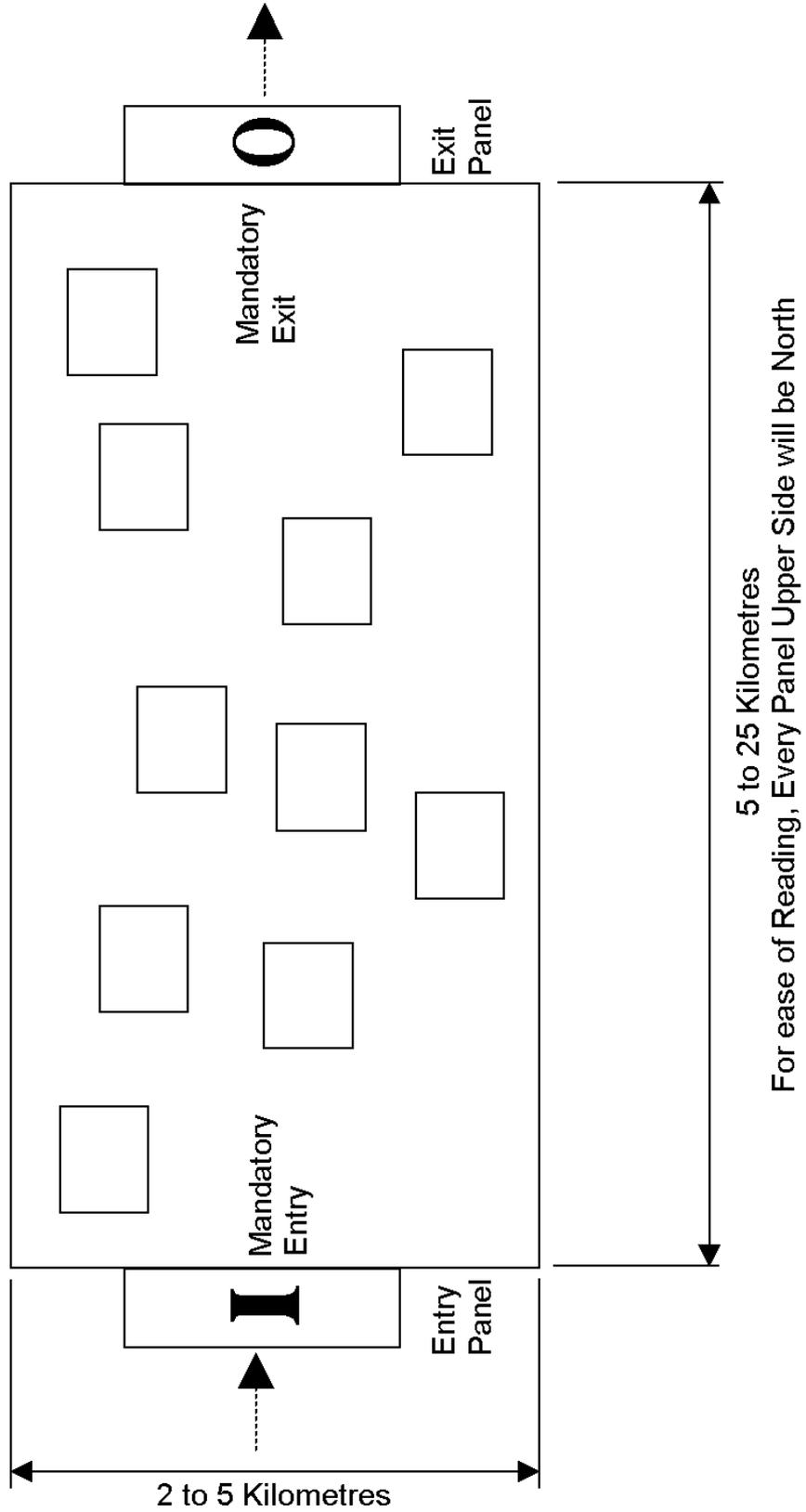


**Annex 1.1 - Event 1 Dog House and Load Put Down**



Annex 1.2 - Event 1 - Search Zone Details

Details of the Search Zone  
Examples of a Schematic given to the Competitors



**Annex 1.3 - Event 1- Type of Panel to be used**



Letters and Signs will be Black on Orange Panels.  
 Size, 3 Metres Wide and 2 Metres High.

## Event 5.2 - Precision

### 5.2.0 Event Description:

The event requires constant height, low level flying with manoeuvres on a course, of which the basic parameters are known with the details made public by the Organiser only on registration day and a flying time of 130 seconds. The course dimensions and turning corners are drawn randomly as described in Annex 2.0. The choices are listed in 5.2.9.

### 5.2.1 General Requirements:

The helicopter will be flown with all doors on and closed. Arched cockpit doors certified by the manufacturers may be used. Special window bubbles in cockpit doors are not allowed. The crew member must stay within the helicopter, on his seat and in the normal position. He will not be allowed to fly the helicopter except in case of absolute emergency which will result in disqualification.

The crew must install the attachment points for the ropes and the tape markings on both sides of the fuselage, skids or wheels before the competition.

These attachment points are such that when the helicopter is on the ground the ends of both attachment points are just touching the ground. There will be a loop at the end of each attachment point, and each attachment point strong enough to hold a weight of 5 kg.

The short rope attachment point must be clearly marked.

### 5.2.2 Composition of the course:

The course is composed of a rectangle with total distance of 200 metres, measured to and from the midpoints of the corridors, with a 70 metres long oblique extension at 45 degrees to Line A/B. The dimensions of the rectangle will be announced by the Organiser on registration day. (see drawing, Annex 2.0 and 5.2.9).

The rectangle will feature, on each side of the course, a corridor, having a width of 1 metre, identified by ground markings.

### 5.2.3 Flight Height Control:

Two ropes or suitable chains or a combination of both will be attached by judges/assistant judges, the shorter one attached to the aircraft fuselage under the pilot's seat, the longer attached to the rear end of the skid (wheel) opposite to the pilot side, as far as possible from the shorter rope/chain (see drawing, Annexes 2.2 and 2.3). The rope/chain lengths are exactly 2 metres for the first one and exactly 3 metres for the second one being measured from the lowest point of the undercarriage (skid or wheel) to the lowest end of the weights. The total length of the first one depends on the additional length required to fasten the rope/chain to the fuselage of the helicopter. For a better make-out the ropes/chains may be painted red or orange.

### 5.2.4 Preparation line:

The competitor will come to Line P (Preparation).

Judges will connect the ropes to attachment points provided by the competitor and will check the positioning of the two tape markings, as chosen by the competitor on both sides of the fuselage, or both skids or both wheels.

At the P Line, the crews are allowed to lift the helicopter into a hover with the crew member either inside or outside the helicopter to communicate to the pilot the height of the helicopter and the status of the weights. One 360 degree clockwise turn and one 360 degree anticlockwise turn is permitted to ensure the weights are attached safely.

The helicopter should then land again. Judges are not allowed to make any indications to competitors during this procedure.

#### 5.2.5 Departure line:

Once the start position is free, the responsible judge will call the next competitor from Line P forward to Line D. The helicopter will be landed on Line D. Upon an indication of ready from the pilot or crewmember and when the course is clear of the previous competitor, the judge will signal the start by dropping a flag or the use of a suitable indication system. (Such a system must be demonstrated to the competitors at the morning briefing). The competition time starts.

#### 5.2.6 Manoeuvring through the course:

After the start signal the competitor will take off from the departure line and fly the ground marked course, maintaining a constant heading and keeping the aircraft centreline parallel with Lines A/B and C/D and perpendicular to lines B/C and D/A, at a height ranging from 2 to 3 metres.

The course is flown keeping the bottom weight on the ground and the top weight off the ground.

At two corners ( B, C, D, or A ), the competitor will perform a 360 degree turn around the yaw axis, one turn will be clockwise and the other anti clockwise. The Organiser will announce on registration day at which two corners the turns will take place, and in which direction the turns will be made.

Each turn must take a minimum time of 15 seconds. If corner A is chosen, the turn will be performed after the rectangle has been flown.

After passing point A, the competitor will follow the exit corridor, still flying at a constant height and constant heading. At the end of the exit corridor markings and still parallel to reference Lines A/B and C/D the helicopter will land in one try exactly on the arrival line, which will be 5 cm wide and long enough to be visible on both sides of the helicopter by its crew. Slide and double landings will be penalized.

#### 5.2.7 Measurements:

Corridor and height violations will be recorded in cumulative tenths of a second. Final times will be rounded to the nearest tenth of a second as described in Chapter 2 para 13.14.

The violation of corridor limits is defined as when the attachment point of the shorter rope (2 meters long ) is outside the corridor limits marked on the ground.

The violation of height is defined as when either the shorter rope touched the ground or the end of the longer rope is off the ground from a height above 3 metres.

The measurement on the landing line will be from the forward limit of the tapes installed on the helicopter (skids or fuselage) to the nearest limit of 5 cm arrival line. A forward limit of the tape within the 5 cm arrival line counts as zero cm.

Should helicopter tapes be installed on the fuselage or above ground level, a plumb bob will be used to assist in accurate measurement.

#### 5.2.8 Timing:

The competition time starts when the start signal is given at departure line and stops when the first part of the helicopter landing gear touches the ground.

### 5.2.9 Variables:

Variables for establishing the rectangle size:

- 1) AB & CD = 30 metres, BC & DA = 70 metres
- 2) AB & CD = 35 metres, BC & DA = 65 metres
- 3) AB & CD = 40 metres, BC & DA = 60 metres
- 4) AB & CD = 45 metres, BC & DA = 55 metres
- 5) AB & CD = 50 metres, BC & DA = 50 metres
- 6) AB & CD = 55 metres, BC & DA = 45 metres
- 7) AB & CD = 60 metres, BC & DA = 40 metres
- 8) AB & CD = 65 metres, BC & DA = 35 metres
- 9) AB & CD = 70 metres, BC & DA = 30 metres

Variables for determining the Corners for 360° turns:

- 1) B & C
- 2) B & D
- 3) B & A
- 4) C & D
- 5) C & A
- 6) D & A

Variables for determining the Direction of 360 ° Turns:

- 1) First turn Clockwise, Second Turn Anti Clockwise
- 2) First turn Anti Clockwise, Second turn Clockwise

### 5.2.10 Tie Breaker

If there is a tie for a place, the winning crew is determined by the shortest flight time.

### 5.2.11 Scoring

300-P = score. Score is determined by subtracting the Penalty Points from 300. The minimum score is zero.

**SCORING - EVENT 5. 2 (PRECISION FLYING)**

<b>INFRINGEMENT</b>	<b>PENALTY POINTS</b>
Each tenth of a second above 2'10" of flight (130 seconds) between Lines D and A *	0.1
Violation of the corridor limits, of the short rope attachment per tenth of a second *	0.1
Each time the bottom weight is off the ground per tenth of a second *	0.1
Each time the top weight touches the ground per tenth of a second *	0.1
Duration of a hovering 360 degree turn shorter than 15 seconds ***	15
For omitting any of the manoeuvres	25
For each occurrence of a change of heading exceeding 30 degrees	10
Landing scale **	0-120
Double Landing ( after touching ground with any part – Time Stop – the helicopter rises completely free from the ground before next touch down )	25
Slide Landing ( visible and measurable forward motion or turn of the fuselage - skids , wheels - after first ground contact )	25

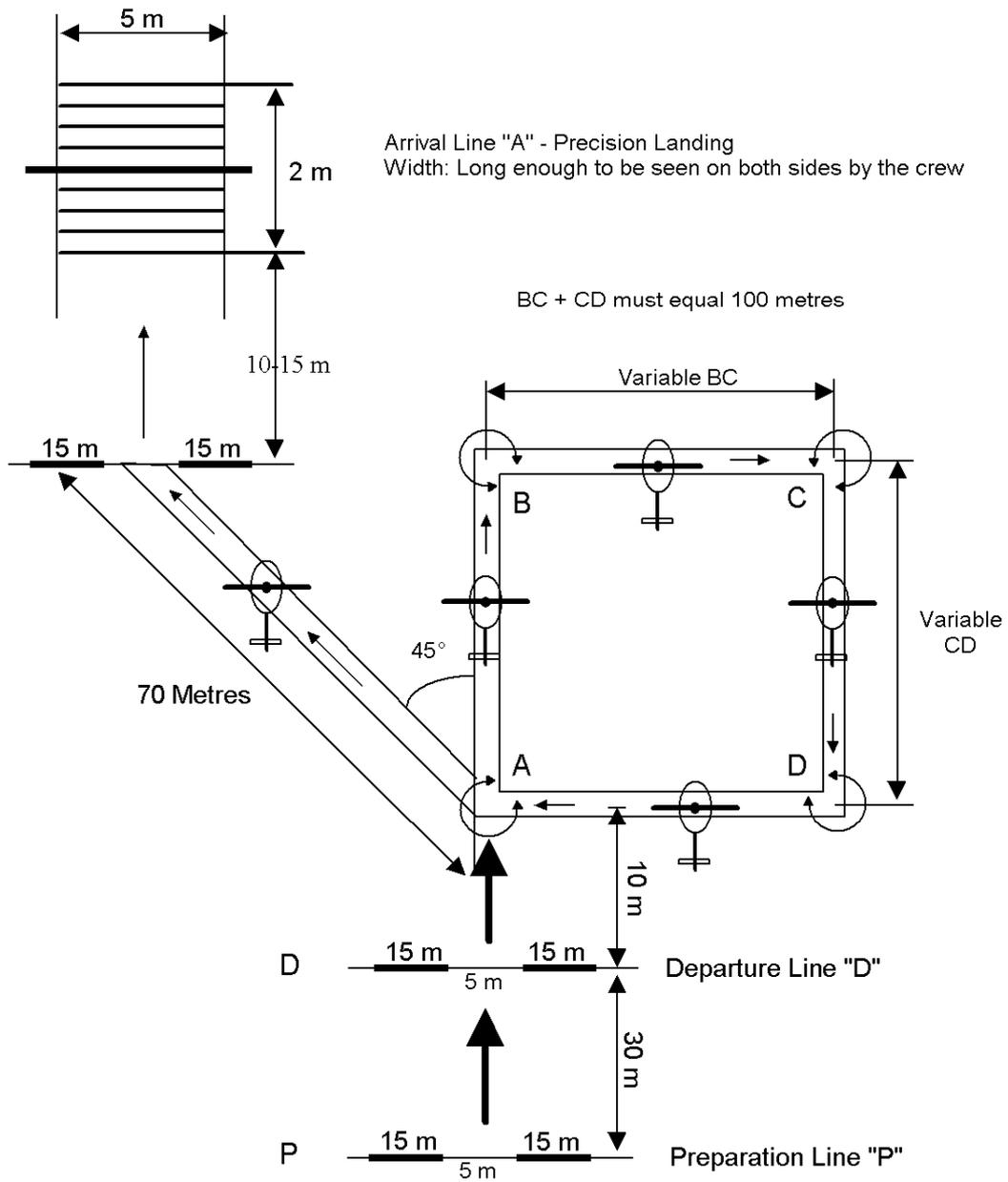
\* Rounded to the nearest tenth of a second as in para 13.14 of Chapter 2.

\*\* The distance of each skid from the nearest limit of the 5 cm arrival line is measured in cm and added together using 1 penalty point per cm. 120 points is the maximum penalty. Part of a cm should be rounded up to the next full cm.

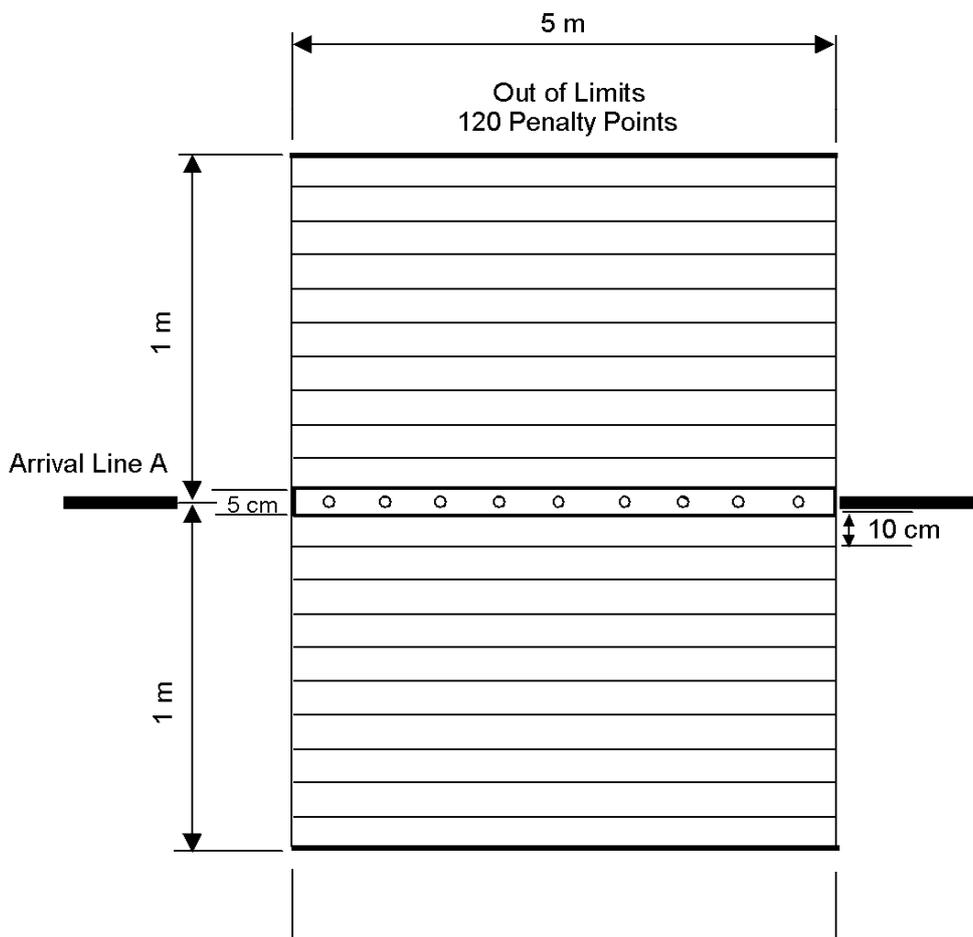
\*\*\* i.e., turn duration is 14.94 seconds or less.

**Annex 2.0 - Event 2 - Precision Flying**

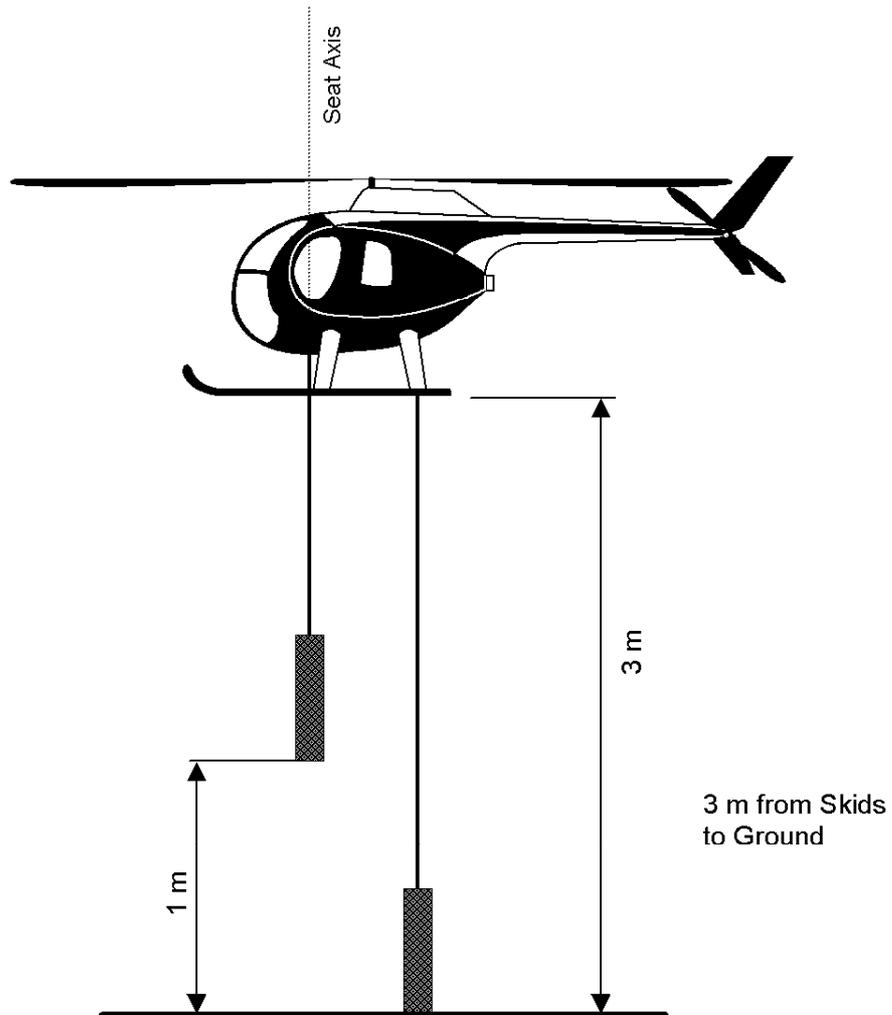
NOT TO SCALE



**Annex 2.1 - Event 2 - Precision Landing Area**



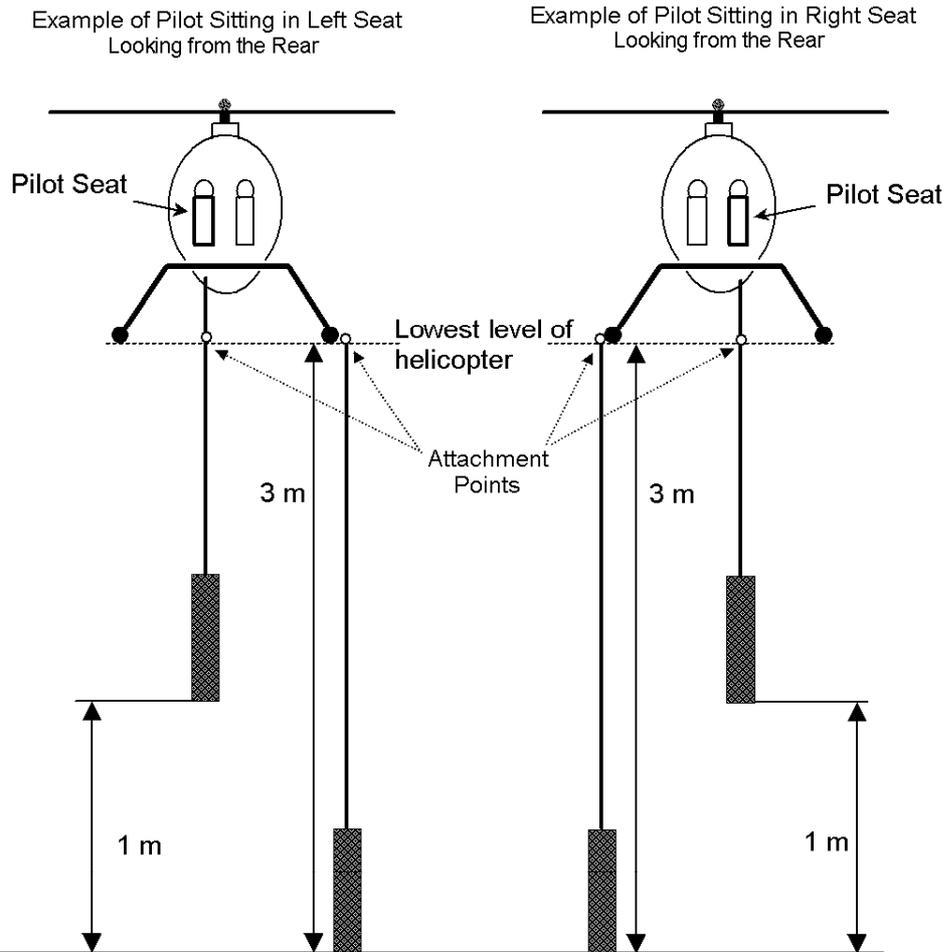
**Annex 2.2 - Event 2 - Length and Attachment of Ropes**  
**NOT TO SCALE**



It is essential to understand that from one helicopter to another, the short rope will differ in size. The objective is to have 1 metre difference between the bottom of the two weights.

The long rope will always be 3 metres. The short rope will vary in order to give one metre difference.

### Annex 2.3 - Event 2



The long rope will always be on the opposite side of the helicopter to the pilot.  
Attachment on skid or wheel.

The short rope will always be under the pilot's seat.  
Attachment on the fuselage.

The fixture for that attachment will be installed by the crew prior to arrival  
at the preparation Line.

## Event 5.3.1 – Fender Rigging

### 5.3.1.0 Event description:

This event requires precise flying with a load (fender) and rope lengths in a sequence of 4, 6 and 8 metres and a flying time of 50 seconds. The sequence for the containers will be decided by the Organiser and made public at the event briefing.

### 5.3.1.1 General requirements:

The helicopter will be configured with a closed door on the pilot's side. Special window bubbles in cockpit doors are not allowed. Outside mirrors and technical aid such as radio altimeters are not permitted and such use will result in disqualification.

The crew will be correctly harnessed. The crew member is in the normal seating position, both legs are to be kept within the cockpit.

During the morning briefing competitors will receive their start time at which the helicopter must be at the preparation line (line P).

### 5.3.1.2 Departure line:

Once the start position is free, the responsible judge will call the next competitor from the preparation line (line P) forward to the departure line (line D). The helicopter must land in front of the departure line. An assistant judge will hand the crew member the fender with its rope with 3 red painted balls fixed in distances of 4, 6 and 8 metres from the top of the fender. There are 2 additional wooden balls as handling aid, each 20 cm above the balls. At the end of the rope a grip 20 cm above the 8 m ball is fastened (see Annex 3.1). The fender will remain outside the helicopter on the ground. The crew member will hold the rope at the respective handling aid.

Upon an indication of ready from the pilot (or crew member), the judge will signal the start for the competitor by dropping a flag or use of a suitable indication system (Such a system has to be demonstrated to the competitors at the briefing). The competition time starts.

### 5.3.1.3 Manoeuvring through the course:

The pilot will take off and after passing the Gate "D" (marked by flags), fly to the entrance gate. The crew member must manoeuvre the fender through Gate "D" and the entrance gate and into the containers. If the fender misses either Gate "D" or the entrance gate and the crew decides on another attempt in order to avoid penalties, it must be taken back around the outside of the markings/poles before another attempt to correctly pass the gate is made.

The rope must be fully extended and free of knots prior to crossing the departure line (line D).

The pilot will fly in direction of the first container to drop the fender into it.

The rope will remain held at the handling aid above the relevant red ball by the crew member, who must have both hands visible. Manoeuvring of the rope is allowed provided the rope is not lengthened or shortened by any part of the body below the ball.

After dropping the fender into the first container, the crew member will deploy the rope to the appropriate length for the next container. He/she should then lift up the fender again out of the container. The pilot will proceed to the next container.

After dropping the fender into the third container and letting go of the rope, the helicopter must leave the competition area by passing the exit gate.

#### 5.3.1.4 Timing:

The time starts when the start signal is given at departure line and stops when the crew member has let go of the rope. The total time for this event is a maximum of 50 seconds.

#### 5.3.1.5 Tie breaker:

If there is a tie for a place, the winning crew is determined by the shortest flight time.

#### 5.3.1.6 Scoring:

$300 - P = \text{Score}$ . Score is determined by subtracting Penalty Points from 300. The minimum score achievable is zero.

### Scoring Event No. 5.3.1 ( Fender Rigging )

<b>Infringement</b>	<b>Penalty points</b>
For each tenth of a second flown over total times limits	0.1 *
Touching the external sides of the container with the fender: For each touch:	5
Touching the ground with the fender between D-line and containers: For each touch:	15
Fender not dropped into the container for each occurrence or lost en route	80
Fenders dropped in wrong sequence and/or wrong rope length for each occurrence	30
Crew not staying seated or harnessed:	50
Rope shortened or lengthened, has knots, or handled below the wooden ball or grip ( for each infringement )	30
Rope not deployed to full metres or has knots when flying over the Line D or lifting out of the containers ( for each infringement )	20
Overfly of the exit gate – helicopter nose is not first part of helicopter to pass the marked gate or the helicopter does not pass the gate at all :	10
Fender not passing the Gate “D”	10
Missing the Entrance-Gate by missing or fender over poles ( for each infringement )	25

\* Black flag if total time exceeds 4 minutes

**Measurements of competition area and equipment (see attached sketch):**

Preparation line “P“ : two 10 metre- long lines with 5 metres between the two lines

Departure line “D“ : two 5 metre-long lines with 3 metres between the two lines, to be positioned 30 metres after the line “P“.

Entrance Gate : Internal width 1 m, composed of two 2 m high poles, positioned on a line 20 metres after Line “D“, but not direct opposite of line “D“.

Competition square : 50 x 50 metre square, clearly marked, to be positioned 20 metres after the line “D“.

Three numbered containers : to be positioned in the competition square and filled with water or other heavy material to prevent moving. The amount of water or heavy material in the containers must not hinder the throwing in of the fenders.

Measurement of each container:

Height: less than 1.20 metre

Diameter of container opening: 48 cm +/- 2 cm

Measurement of fender: Diameter of the fender is 30 centimetres

Height: 0,8 metres – 1 metre

Weight of fender (to be achieved by filling with sand or water): 7 – 8 kg

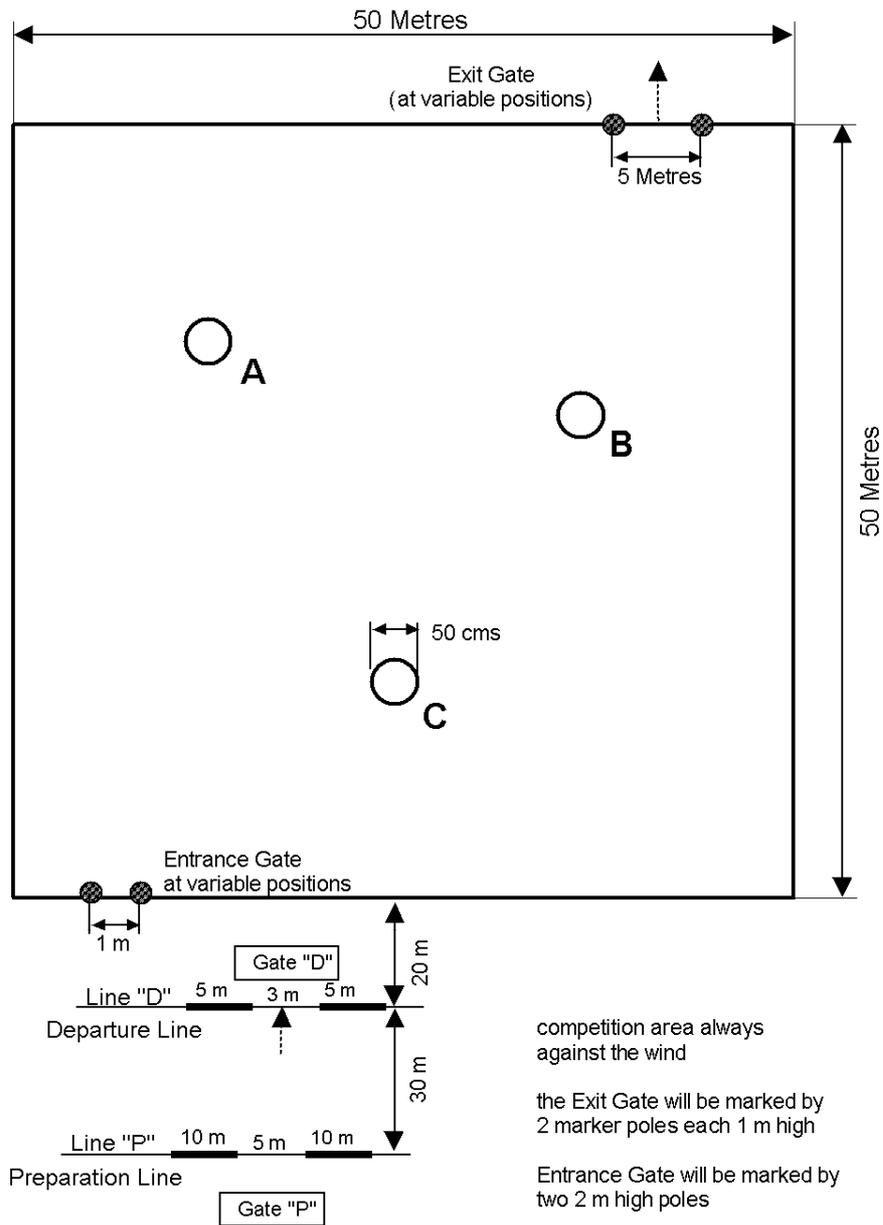
Length of rope: 8, 20 metres from the top of the fender to the grip.

Red painted balls at distances of 4, 6 and 8 metres from the top of the fender.

Wooden balls, 20 cm above the red balls at 4 and 6 metres.

The containers and fenders can be made of any material or colour, but must be uniform.

**Annex 3.0 - Event 3 - Fender Rigging**



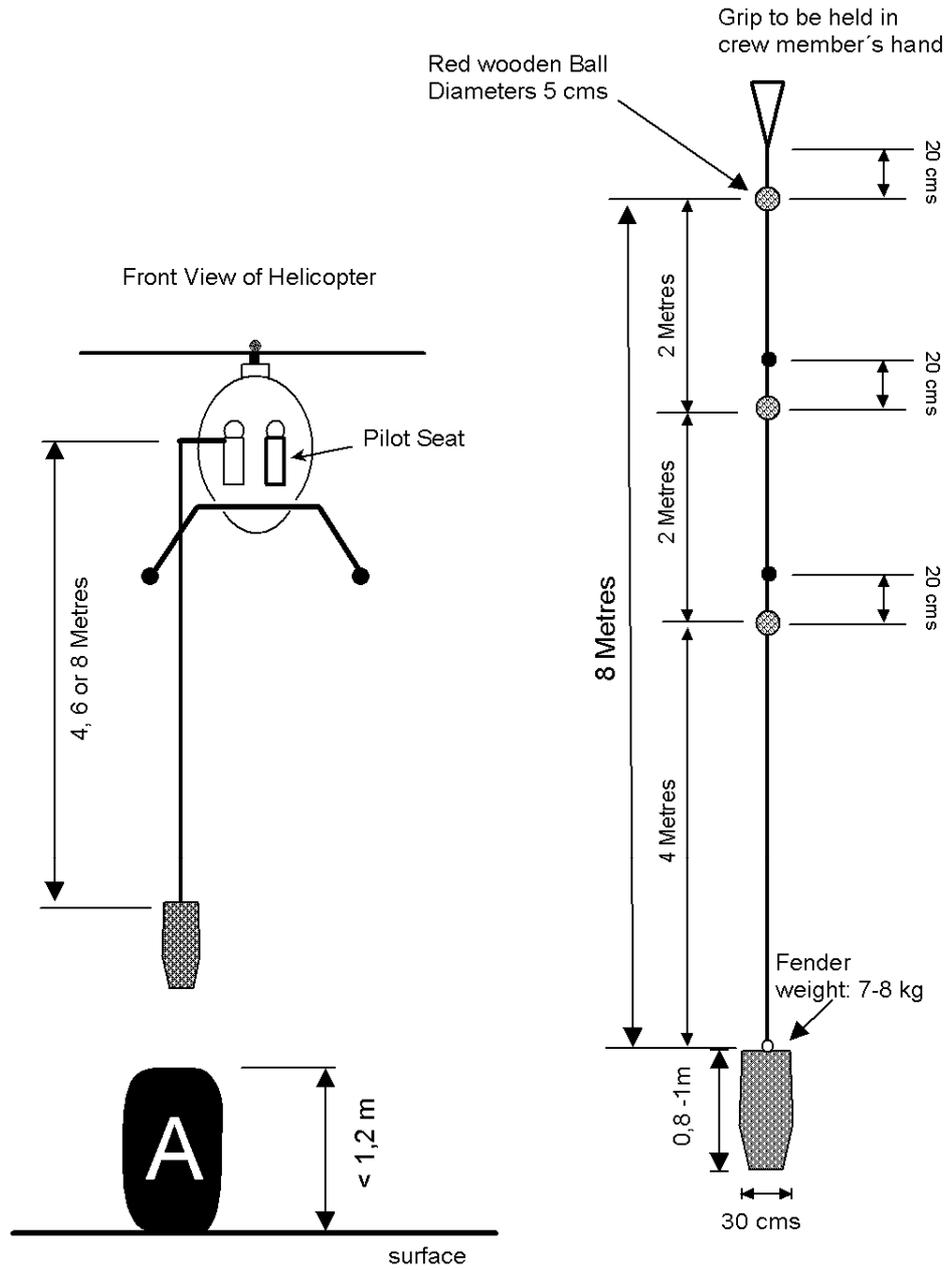
competition area always against the wind

the Exit Gate will be marked by 2 marker poles each 1 m high

Entrance Gate will be marked by two 2 m high poles

**Annex 3.1 - Event 3 - Fender Rigging**

NOT TO SCALE



## Event 5.3.2 – Postman

### 5.3.2.0 Event description:

This event requires precise flying with load drop-off ( skittle and rice filled bags ) at a minimum height of 5 metres, and a flying time of 120 seconds. The crew member has to manoeuvre 2 skittles with rope length of 7 metres, and to drop 3 rice bags into 3 containers. The sequence of dropping is at the crew`s discretion.

### 5.3.2.1 General requirements:

The helicopter will be configured with a closed door on the pilot`s side. Special window bubbles in cockpit doors may not be fitted. Outside mirrors and technical aid such as radio altimeters are not permitted and such use will result in disqualification.

A 20 cm long part of the landing skid or wheel opposite of the pilot`s side will be marked by tape for controlling the landing scale.

The crew will be correctly harnessed. The crew member is in the normal seating position, both legs are to be kept within the cockpit.

During the morning briefing competitors will receive their start time at which the helicopter has to be at the preparation line – Line P.

### 5.3.2.2 Departure line:

Once the start position is free, the responsible judge will call the next competitor from the preparation line (line P) forward to land in front of the departure line ( Line – D ). An assistant judge will hand the crew member 2 skittles with ropes and 3 fabric bags ( filled with rice each weighting 1 kilo).

Upon an indication of ready from the pilot (or crew member), the judge will signal the start for competitor by dropping a flag or use of a suitable indication system (Such a system has to be demonstrated to the competitors at the morning briefing). The competition time starts.

### 5.3.2.3 Manoeuvring through the course:

The pilot will take off, fly through the departure gate and enter the competition square through the entrance gate. The pilot will fly in direction of the first container to drop at the crew`s discretion a skittle or ricebag into it. Prior to dropping a skittle into a container the rope must be fully extended and free of knots.

The rope will remain held at the grip over the ball ( 20 cm below grip ) by the crew member, who must have both hands visible. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the ball.

After the crew member has dropped the first load into a container the pilot will fly to the next container.

The crew member has to drop one bag in every container, and the two skittles in 2 of the three containers. Every time after dropping a load the pilot must fly to a different container.

After dropping the last load the helicopter should leave the competition square by passing over the exit gate, and fly to the landing cross and will land on the 5 cm center circle with the skid or wheel opposite to the pilot`s side.

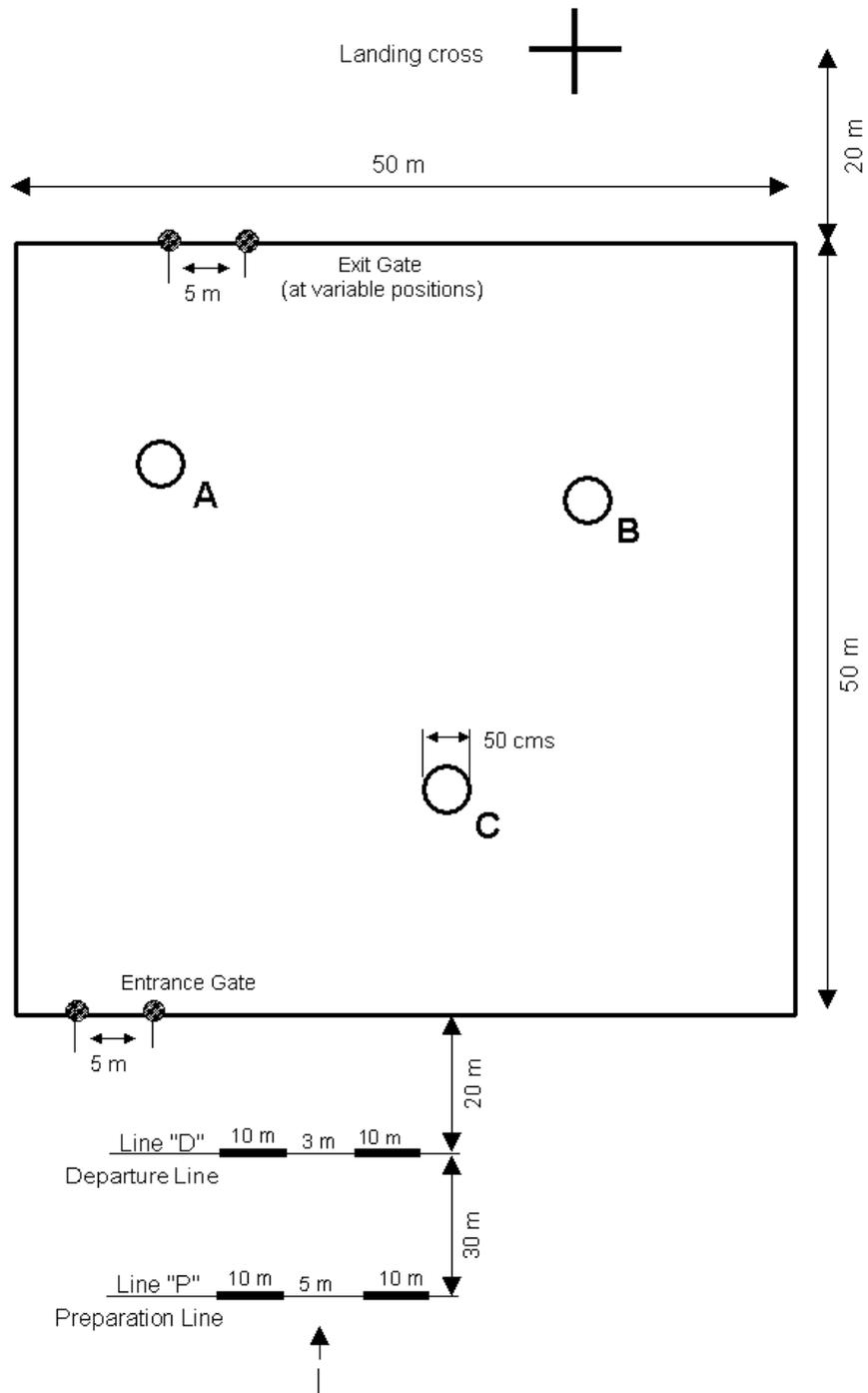
- 5.3.2.4 **Timing:**  
The time starts when the start signal is given at departure line and stops when the first part of the helicopter landing gear touches the ground.
- 5.3.2.4 **Tie breaker.**  
If there is a tie for a place, the winning crew is determined by the shortest flight time.
- 5.3.2.6 **Scoring**  
300-P = Score. Score is determined by subtracting Penalty Points from 300. The minimum score achievable is zero.
- 5.3.2.7 **Measurement of equipment:**  
Skittles with ropes and ricebags from Event 5.1, containers from Event 5.3.1.  
Competition area see attached sketch.

### Scoring Event No. 5.3.2 ( Postman )

<b>Infringement</b>	<b>Penalty points</b>
For each tenth of a second flown over total time limits	0.1
Touching the external sides of the container with the skittle: For each touch:	5
Touching the ground with the skittle between entrance gate and container: For each touch:	15
Each skittle not dropped into a container or lost en route	80
Failure to drop a bag into a container:	30
Violation of minimum dropping height ( 5 m for bag )	20
Crew not staying seated or harnessed:	50
Rope not extended to full metres, or has knots, or handled below the ball before dropping into container ( for each infringement )	30
Overfly the Gate D, entrance and exit gate – helicopter nose is not first part of helicopter to pass the marked gates or the helicopter does not pass the gates at all for each infringement:	10
Double and/or slide landing at landing cross	25
Landing scale *	0 - 120

\* The distance of the marked part of a skid or wheel opposite to pilot's side from the nearest point of the 5 cm landing cross` center. Part of a cm should be rounded up to the next full cm.

**ANNEX 3.0 - Postman**  
NOT TO SCALE



## Event 5.4 - Slalom

### 5.4.0 Event Description:

The Event requires precise flying to manoeuvre a bucket, attached to a rope, through 12 numbered gates and setting it down on a table target.

Flying time limited to 3 minutes and 20 seconds ( 200 seconds ).

### 5.4.1 Preparation:

The helicopter will be configured with the pilot's door on and closed.

The helicopter will come to the preparation line and wait for the previous helicopter to finish.

At a signal from judges, the helicopter will move to land on the Departure line. The Judges /Assistant judges will hand over the rope with the attached bucket, empty of water. The future water level is determined by 9 lateral holes. The 9 holes will each be of 1 cm diameter and the bottom of the holes will be 4 cm from the top of the bucket. (see drawing Annex 4.2).

The rope will be held by the crew member, sitting on a seat on the side opposite to the pilot, in a normal position and wearing the safety harness correctly. The crew must remain seated. The rope will be placed on the floor of the cabin, either inside or outside the skids where fitted.

### 5.4.2 Start:

Upon an indication of ready from the pilot or crew member the judge will signal the start by dropping a flag or use of a suitable indication system (which must be demonstrated to the competitors at the morning briefing). The time starts.

The helicopter will take off from the Departure Line with the bucket resting on the ground, the crew member holding the rope above the red flag. The pilot will fly to the container filled with water. The crew member will fill the bucket with water.

Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the red flag.

After filling the bucket with water, the pilot will increase altitude and the crew member will deploy the 5 metre rope.

The pilot will fly to the first gate and the rope will remain held by the crew member by Ball No.2. Both hands of the crew member must be visible.

### 5.4.3 Course and Gates:

Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the appropriate red painted ball or lengthened by holding the rope above the Ball No.2. It is not allowed to hold the appropriate red painted ball.

The 12 numbered gates will be placed as per Annex 4.0 and the gates will be flown consecutively from 1 to 12 without hitting the poles of the gates by the bucket. However, the direction of flight through the each gate will be drawn randomly as described in Chapter 2 para 7.1 and made public by the Organiser on registration day. The choices are listed in 5.4.7. Arrows will be marked on the ground, but no sketch map will be provided. To correctly pass a gate, the top of the bucket must pass below the top of the poles in the direction of the arrows. If the bucket misses the gate it must be taken back around the outside of the poles before another attempt is made. Multiple opportunities to pass a gate correctly will be allowed. The judge will score correct or incorrect gate passage when the bucket is flown to the next gate.

#### 5.4.4 Exit and Table:

After passing Gate 12, the crew member will deploy the 11 metre rope (Ball No. 3 ) and the pilot will increase altitude. The bucket must exit through the exit gate but the height of the bucket is not penalized. The rope must be fully extended and free of knots before reaching the 5 metre radius circle around the centre of the table.

The rope will remain held by the crew member at the grip at its end. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the upper ball. Both hands of the crew member must be visible.

The bucket must be put down as close as possible to the centre of the target table, in one try, then the rope must be dropped.

#### 5.4.5 Timing:

The time starts when the start signal is given at departure line and stops when the rope is released over the table.

#### 5.4.6 Measurements:

The reference point for calculating the distance of the bucket from the centre of the target will be the centre of the bucket base.

The water left in the bucket will be measured after the competitor has completed and water level below the holes will result in penalty points.

The measuring will be done on the table and the table wiped dry after the bucket is removed.

If the bucket falls down from the table, the measurement will be done from the bottom of the bucket to the center of the target by use of a plumb bob.

#### 5.4.7 Variables:

There will be 11 different gate directions determined by the Chief Judge and Jury President. The references of Up, Down, Left, or Right refer to the direction of flight through each gate with reference to Annex 4.0 with Up being the top of the page.

- 1) Gate 1 is always flown Up
- 2) Gates 4, 5, 6, 8 - Up or Down
- 3) Gates 2, 3, 7, 9, 10, 11, 12 - Left or Right

#### 5.4.8 Tie Breaker:

If there is a tie for a place, the winning crew is determined by the shortest flight time.

#### 5.4.9 Scoring:

$300 - P = \text{Score}$ . Score is determined by subtracting the Penalty Points from 300. The minimum score achievable is zero.

**SCORING - EVENT No. 4 (SLALOM AND SKILL)**

<b>INFRINGEMENTMENT</b>	<b>PENALTY POINTS</b>
Bucket touching ground before reaching container ( per each infringement)	5
Rope shortened when filling bucket with water	30
Rope not deployed to 5 metres between container and gate No.1.	20
Rope shortened or lengthened, has knots or handled below red ball on the course and overhead the table ( per each infringement )	50
Passing a gate in the wrong order or different direction than indicated on the ground	20
Failing a gate by missing or bucket over poles	10
Bucket hitting the poles, each infringement	5
Distance between the bucket and the centre of the target – per tenth of cm	0.1
The bucket exiting the slalom outside the designated area 200 x 120	10
Water level – per tenth of centimetre missing *	0.1
Each tenth of a second in excess of 200 seconds **	0.1
Placing the bucket outside the target table *	80
Losing the bucket during the course	200
Rope not deployed before the 5 metre radius circle around the table	20
More than one attempt putting the bucket down, per try	15
Crew not staying seated or fastened ( both hands and legs not visible)	50
Crew member's leg outside the cabin, per each infringement	20
Unsafe flight manoeuvres	300
Crew member handling the controls	300
Flight break-off	300

\* If the bucket is landed on the ground, any water left in it will be measured and will incur normal penalties.

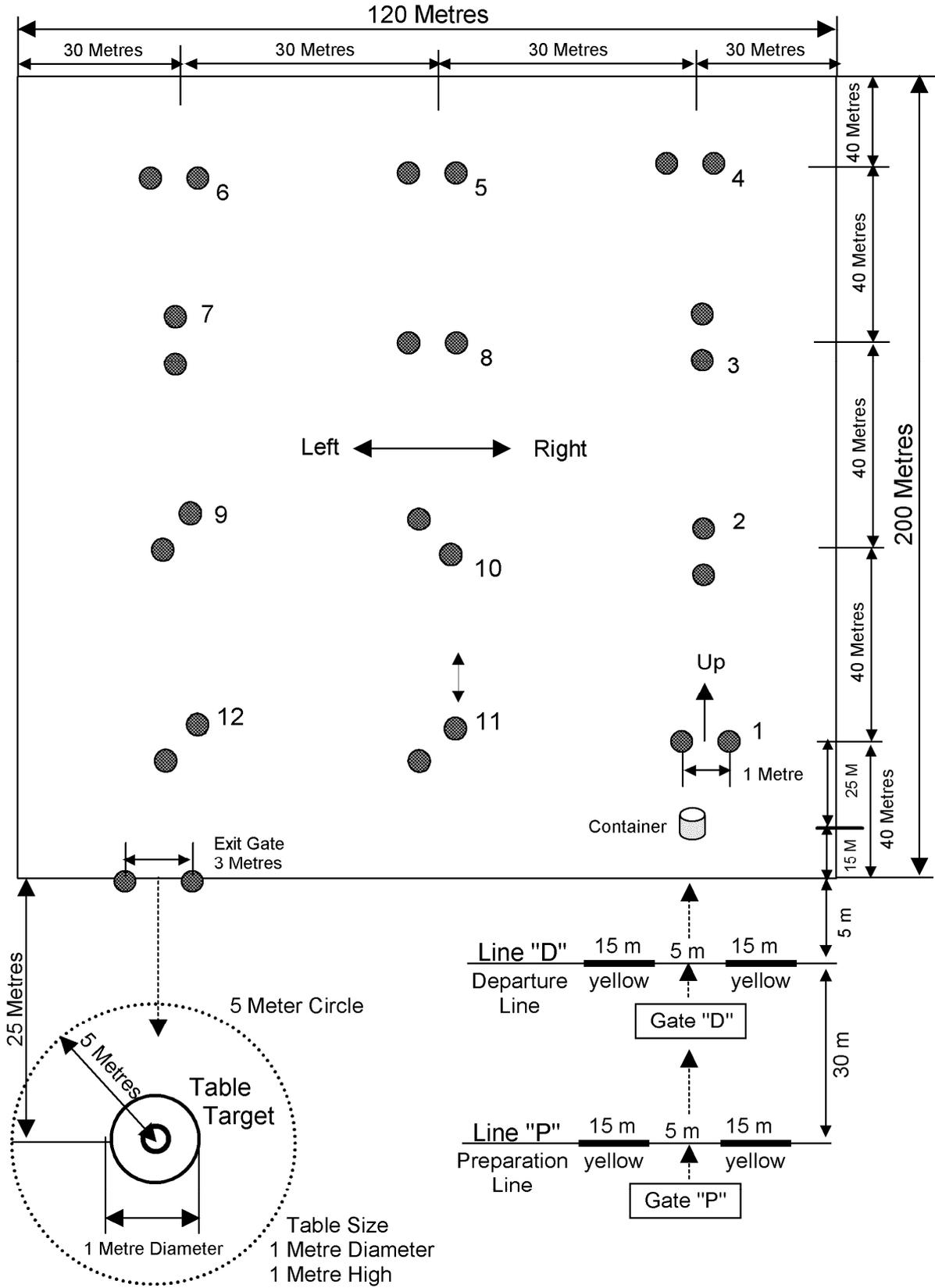
\*\* Disqualification (black flag) if total time exceeds 6 minutes.

**Measurements of competition area and equipment ( see attached Annexis )**

- 200 x 120 metres rectangular competition area (see drawing Annex 4.0).
- A 200 liters container, filled with water to a level of 10-15 cm below its upper edge, positioned 20 metres behind Line "D" and 25 metres in front of Gate No.1
- Twelve gates, internal width 1 m, each composed of two 2 m high poles. ( see drawing Annex 4.1 )
- A round table, 1 m diameter and 1 m high (concentric circles 5 cm apart will be painted black and white).The centre – circle must have the same diameter as of the bottom of the bucket.
- A rope, equipped with a red flag 3 m high, 3 balls, first 5 m high and red painted, second 20 cm over this ball to be a handling aid , third also red painted 11 metres high and a grip at its end ( 20 cm above the third ball ) (see drawing Annex 4.2)
- A bucket (see drawing, Annex 4.2) of breakproof material and cylindrical form, containing 6.5 litres +/- 2 % with a maximum total weight of 8,5 kg.

**Annex 4.0 - Event 4 -**

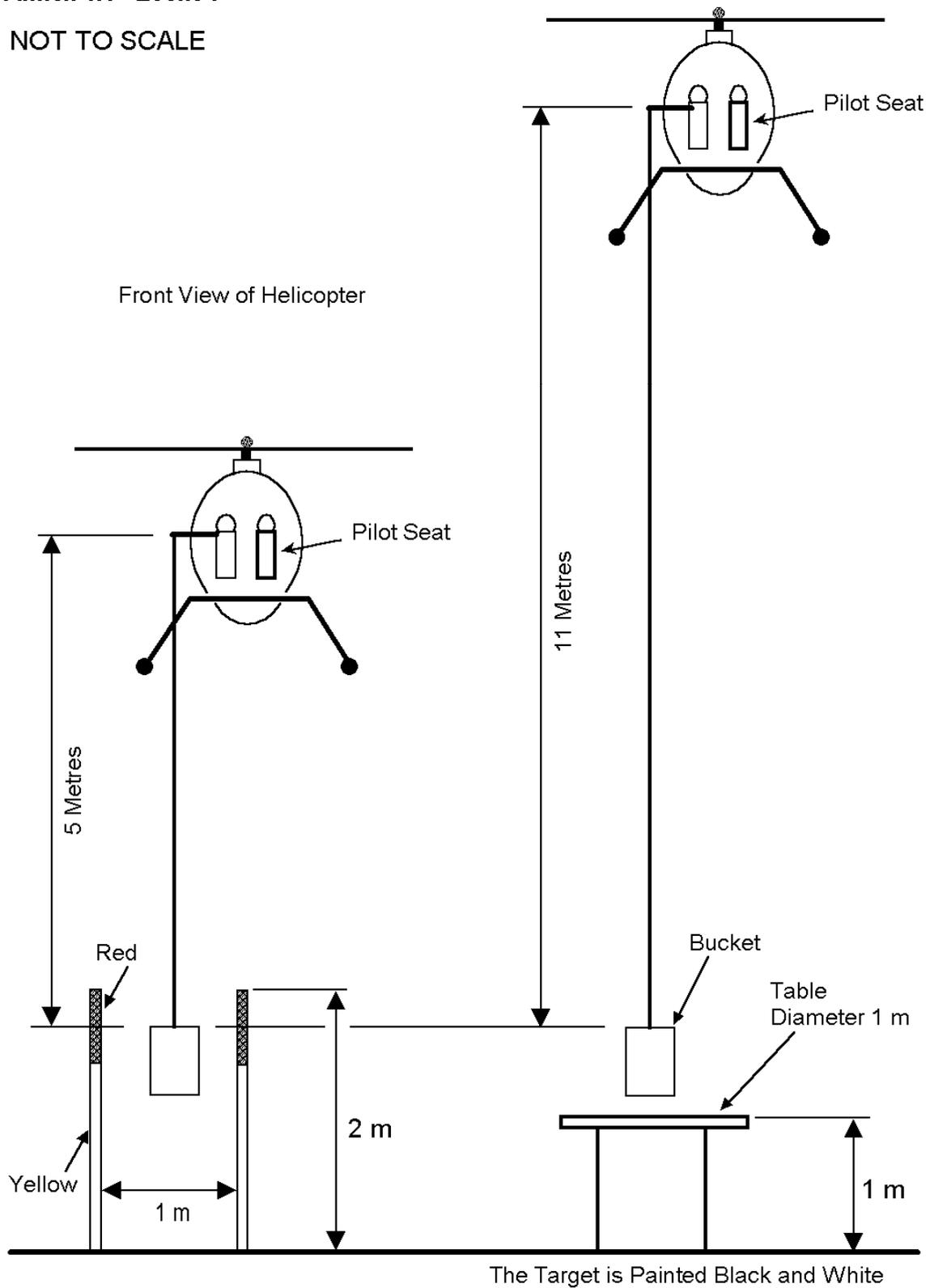
**Gates Position (NOT TO SCALE)**



Gate " D " and Exit Gate positions can be interchangeable

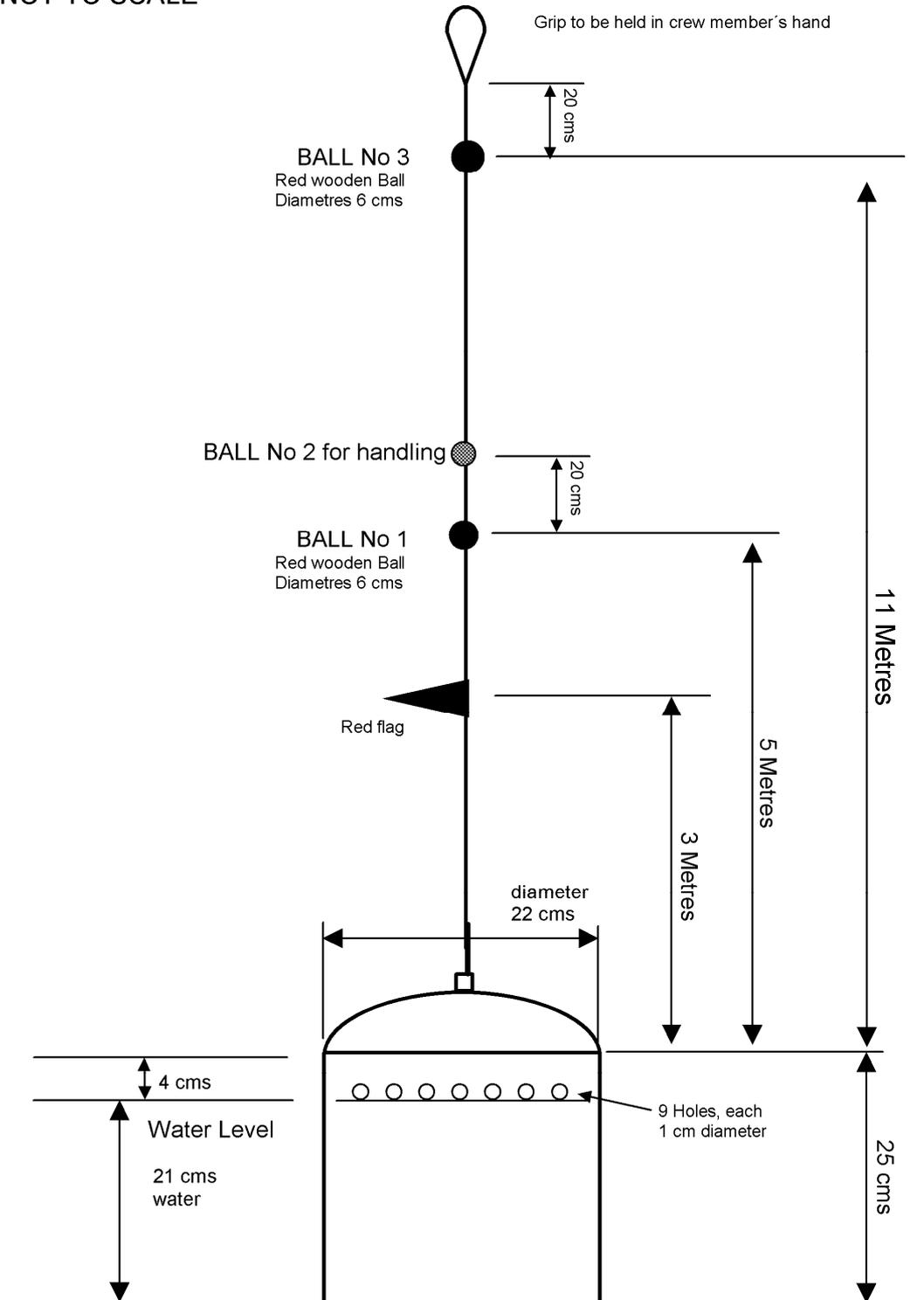
**Annex 4.1 - Event 4**

NOT TO SCALE



**Annex 4.2 - Event 4 - Rope Equipment**

NOT TO SCALE



## Event 5.5 - Individual Freestyle

- 5.5.0 The aim of the non-obligatory free style event will be to demonstrate the top level of the helicopter manoeuvrability and to display the highest level of pilots' skill.
- 5.5.1 Any type of helicopter may be used but all proposed manoeuvres will not exceed the helicopter limitations contained in its Flight Manual and in the C. of A. and in no way decrease the level of flight safety.
- 5.5.2 Competitors may make use of smoke and/or music to enhance their display.
- 5.5.3 Competitors will compile and provide a brief and accurate description to their set of manoeuvres to be submitted to the Judging Panel at least 48 hours before the event is scheduled to start.
- 5.5.4 The assessment of proposed manoeuvres will be made by the Judging Panel and the competitor will be informed of possible objections not later than 24 hours before the event starts. Competitors may be required to eliminate or alter any manoeuvre considered as unsafe by the Judges.
- 5.5.5 A briefing will be held prior to the event.
- 5.5.6 Each flight will be a maximum of 4 minutes and not less than 3 minutes 45 seconds.
- 5.5.7 The Freestyle event is open to any pilot or crew who paid the entry fee irrespective of whether they participated in events 1 - 4.
- 5.5.8 The Event will be flown within the display box, which is a defined area of **1000 metres** by **1000 metres** square marked by four edge panels and a centre square and below a height of **300 metres / 1000 feet**/ above ground level.
- 5.5.9 Each edge panel to be 5 metre long and 1 metre wide. The centre square with 5 metre sides.
- 5.5.10 Judges will be placed at each corner to record infringements of the display box. Two Judges will be available for timing purposes.
- 5.5.11 The Competitor may start, on the ground, anywhere within the display box.
- 5.5.12 Timing will commence from lift-off.
- 5.5.13 The competitor will finish, on the ground, in the centre square at the conclusion of his 4 minute program. Timing will finish at touch down of the helicopter in accordance with the submitted briefing.
- 5.5.14 Skilled Judges will be selected by the Chief Judge from the Panel of Judges and can include FAI CIG Delegates, but exclude Jury members.

**SCORING\* - EVENT No. 5 (INDIVIDUAL FREESTYLE)**

Degree of Program difficulty	0-70
Flying technique / skill	0-70
General Impressions	0-60
Infringement of box edge. Penalty/ each violation	20
Flight above audience	DQ
For the duration of performance longer than 4 minutes / 240 seconds/ or shorter than 3 minutes, 45 seconds / 225 seconds/ --- Each second over or under penalty	1

\*The highest and lowest scores will be eliminated. Of the remaining scores the arithmetic mean will be calculated, from which the penalty points will be subtracted.

## World and Continental Helicopter Championships

### Chapter 6 Additional Media Events

#### 6.0 General

The events described in this chapter should be used for World Air Games, National Championships at Organiser's discretion and other National or International Sporting Events. They should also be used for special air sports presentation or other contests organized by or on behalf of a National Organisation.

#### Event 6.1 Bottle Opening

- 6.1.1 The pilot will open bottles by a bottle opener.  
The crew will install the bottle opener on the helicopter before the event.  
(Annex 0 and 1)  
The skid type helicopter will have the bottle opener installed on the skid.  
The wheel type helicopter will have it installed on the fuselage in such a way that it is at least 30 cm from the fuselage for safety.
- 6.1.2 At a signal from judges, the helicopter will come to the departure line where, the installed bottle opener will be inspected by judges. If the judges consider the installation to be incorrect, the competitor will be disqualified and may not participate in the event.
- 6.1.3 The pilot will take off and fly through the entrance gate into the competition field, a rectangle measuring 200×120 metres (Annex 2).  
Timing will start when the nose of the helicopter passes over the entrance gate which will have an internal width of 5 metres, and be composed by two 2 metres high poles.
- 6.1.4 Bottles will be set in the competition field. Each bottle attached on the top of a 2 metres high pole. (Annex3)
- 6.1.5 To open the bottles, the pilot will use only the mouth of the bottle opener.(only the inside edge of the bottle opener)  
The bottles not opened correctly or broken will incur penalties.
- 6.1.6 The elapsed time within the competition field must be more than 3 minutes and less than 5 minutes. Any time less than 3 minutes and more than 5 minutes will incur penalties.
- 6.1.7 If the helicopter flies over the extensions of the competition field, penalties will be incurred.
- 6.1.8 The overall time will be taken when the nose of the helicopter passes over the exit gate, which will have an internal width of 5 metres, and is composed of 2 meter high poles.
- 6.1.9 After passing the exit gate, the helicopter will return to the parking area safely.
- 6.1.10 If the competitor has exceeded the overall time of 5 minutes by more than 200 seconds, he/she will be disqualified – indicated by a black flag – and the competitor must vacate the competition field immediately via the exit gate.

## 6.1.11

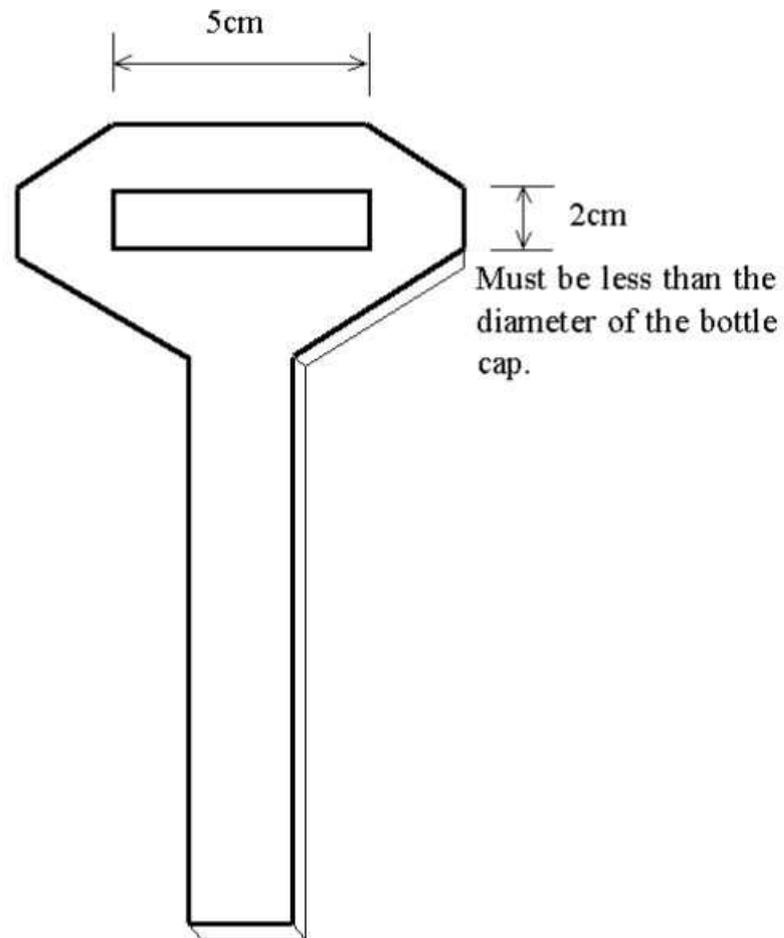
**Scoring the event (Bottle opening)**

INFRINGEMENT	PENALTY POINTS
Each tenth of a second less than 3 minutes and more than 5 minutes flight time between the entrance and exit gates.	0.1
Not passing over the entrance and exit gate between poles.	40
Each bottle not opened	40
Each bottle incorrectly opened	40
Each bottle broken	40
Body of the helicopter exiting the out side of the designated competition field.	10

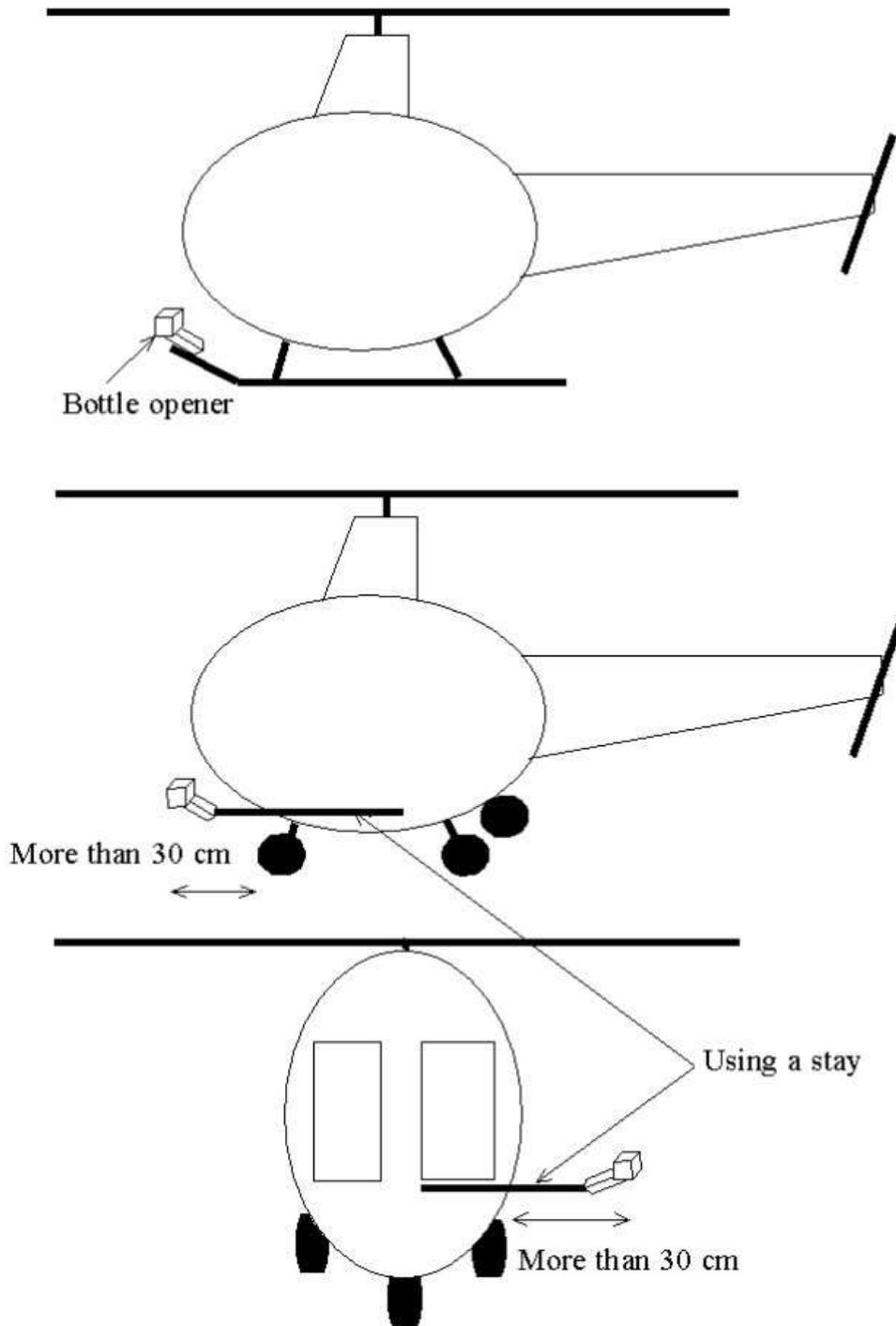
$200 - \text{Penalty points} = \text{Score}$ .

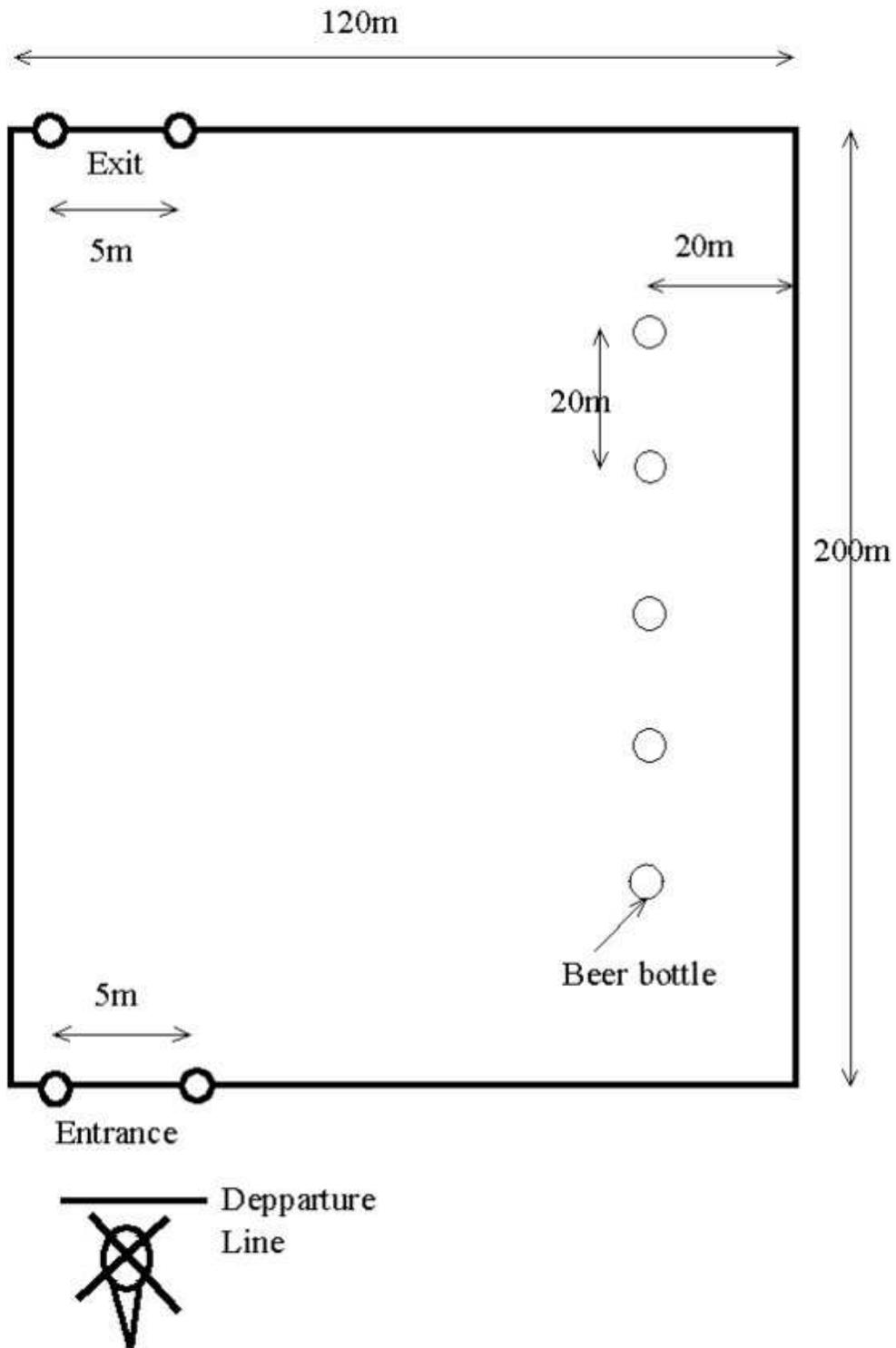
Score is determined by subtracting the penalty points from 200. The minimum score is zero.

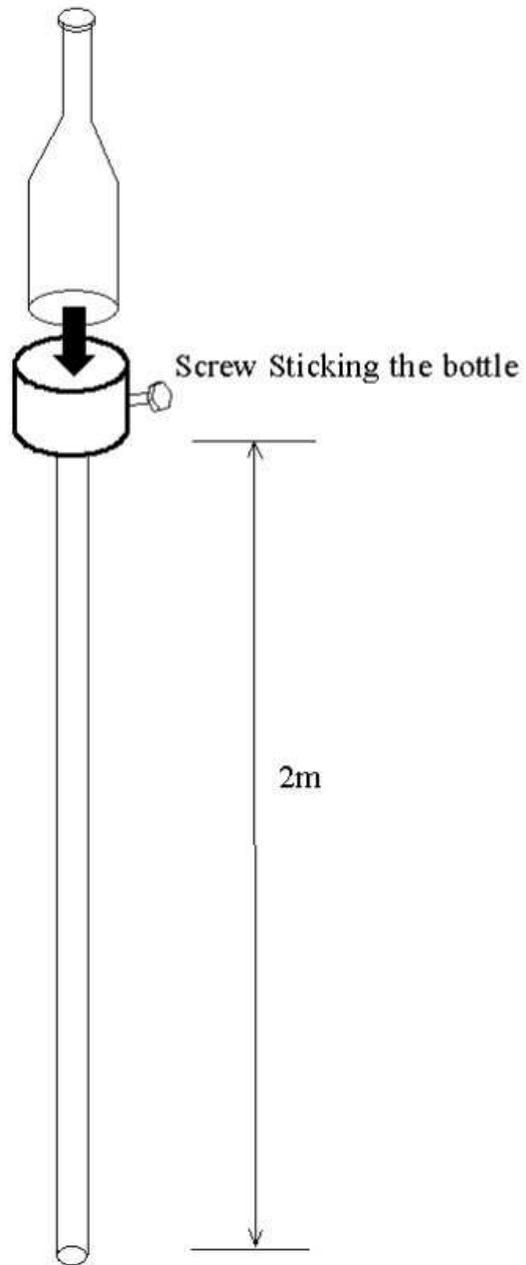
If there is a tie for a place the winning crew is determined by the shortest flight time.



We hope bottle openers and beer bottles will be sponsored and the company will give these away us.







## Event 6.2 – Parallel Precision

### 6.2.0 Event Description:

The event will be flown with two competitors at the same time on parallel courses. The event requires constant height, low level flying with manoeuvres on a course, of which the basic parameters are known with the details made public by the Organiser on competition day. The course dimensions and turning corners are as described in Annex 2.0. The choices are listed in 6.2.9.

The course should be layed out against the wind direction.

### 6.2.1 General Requirements:

The helicopter will be flown with all doors on and closed. Arched cockpit doors certified by the manufacturers may be used. Special window bubbles in cockpit doors are not permitted. The crew member must stay within the helicopter, on his seat and in the normal position. He will not be allowed to fly the helicopter except in case of absolute emergency which will result in disqualification.

The crew must install the attachment points for the ropes and the tape markings on both sides of the fuselage, skids or wheels before the competition.

These attachment points are such that when the helicopter is on the ground the ends of both attachment points are just touching the ground. There will be a loop at the end of each attachment point, and each attachment point strong enough to hold a weight of 5 kg.

The shorter rope attachment point should be clearly marked.

During the morning briefing, competitors will receive their start time at which the helicopters must be at the preparation line.

### 6.2.2 Composition of the course:

The course is composed of two parallel corridors, having a length of 50 metres and a width of 1 metre, identified by ground markings. The distance between the corridors is at least 50 metres. At both limits of the corridors, perpendicular corridors with a length of 10 metre to each side, are marked on the ground. These additional corridors are to assist the pilots to hold the helicopter in the 1 metre square at the corridors limits during turns.

The arrival lines “A” will be 20 metres from the end of the two corridors, and will both be 5 cm wide and long enough to be visible on both sides of the helicopter by the crews.

### 6.2.3 Flight Height Control:

Two ropes or suitable chains or a combination of both will be attached by judges/assistant judges, the shorter one attached to the aircraft fuselage under the pilot's seat, the longer attached to the rear end of the skid opposite to the pilot side, as far as possible from the first rope/chain (see drawing, Annexes 2.2 and 2.3). The rope/chain lengths are exactly 2 metres for the first one and exactly 3 metres for the second one, being measured from the lowest point of the undercarriage (skid or wheel) to the lowest end of the weights. The total length of the first one depends on the additional length required to fasten the rope/chains to the fuselage of the helicopter. For a better make-out the ropes/chains may be painted red or orange.

#### 6.2.4 Preparation line:

The competitor will come to Line P (Preparation).

Judges will connect the ropes to attachment points provided by the competitor and will check the positioning of the two tape markings, as chosen by the competitor on both sides of the fuselage, or both skids or both wheels.

At the Line P, the crews are allowed to lift the helicopter into a hover with the crew member either inside or outside the helicopter to communicate to the pilot the height of the helicopter and the status of the weights. One 360 degree clockwise turn and one 360 degree anticlockwise turn is permitted to ensure the weights are attached safely. The helicopter should then land again. Judges are not allowed to make any indications to competitors during this procedure.

#### 6.2.5 Departure line:

The helicopter will be landed on Line D. Upon an indication of ready from both pilots or crew members and when the course is clear of the previous competitors, the judge will signal the start by dropping a flag or the use of a suitable indication system, which must be demonstrated to the competitors at the morning briefing. The time starts.

#### 6.2.6 Manoeuvring through the course:

The competitors will fly the ground marked courses, maintaining a height ranging from 2 to 3 metres, keeping the bottom weight on the ground and the top weight off the ground.

The corridors will be flown 5 times. First time from Line D forward with a 360 ° turn at the corridor's upper limit. Second time returning backwards to the first end with a 90 ° turn at the limit. Third time sideways with a second 360 ° turn at the upper limit. Fourth time returning sideways to the first end with a 90 ° turn at the limit. Fifth time forward passing over the limit of markings and landing exactly on the arrival line.

The landing must be performed in one try. Slide and double landings will be penalized.

The competitors will perform the 360 ° turns around the yaw axis, one turn will be clockwise and the other anti clockwise. Each turn must take a minimum time of 15 seconds.

The Organiser will announce on competition day in which direction the turns will be made.

Performing the 90 ° turns, the first turn will be in direction to the competition's area center so that after the turns the helicopters will face each other.

The second 90 ° turn will be different for each competitor, anti clockwise for the first and clockwise for the second.

#### 6.2.7 Measurements:

Corridor and height violations will be recorded in cumulative tenths of a second. Final times will be rounded to the nearest tenth of a second as described in Chapter 2 para 13.14.

The violation of corridor limits is defined as when the attachment point of the shorter rope (2 meters long) is outside the corridor limits marked on the ground.

The violation of height is defined as when either the short rope touched the ground or the end of the long rope is off the ground from a height above 3 metres.

The measurement on Arrival line A will be from the forward limit of the tapes installed on the helicopters (skids or fuselage) to the nearest limit of 5 cm arrival line. A forward limit of the tape within the 5 cm arrival line counts as 0 cm.

Should helicopter tapes be installed on the fuselage or above ground level, a plumb bob will be used to assist in accurate measurement.

#### 6.2.8 Timing:

The time starts when the start signal is given at the departure line and stops when the first part of the helicopter landing gear touches the ground.

6.2.9 Variables for determining the Direction of 360 ° Turn:

- 1) First turn Clockwise, Second Turn Anti Clockwise
- 2) First turn Anti Clockwise, Second turn Clockwise

6.2.10 Tie Breaker:

If there is a tie for a place, the winning crew is determined by the shortest flight time.

6.2.11 Scoring:

300-P = score. Score is determined by subtracting the Penalty Points from 300. The minimum score is zero.

## SCORING - EVENT 6. 2 (Parallel Precision)

### INFRINGEMENT

### PENALTY POINTS

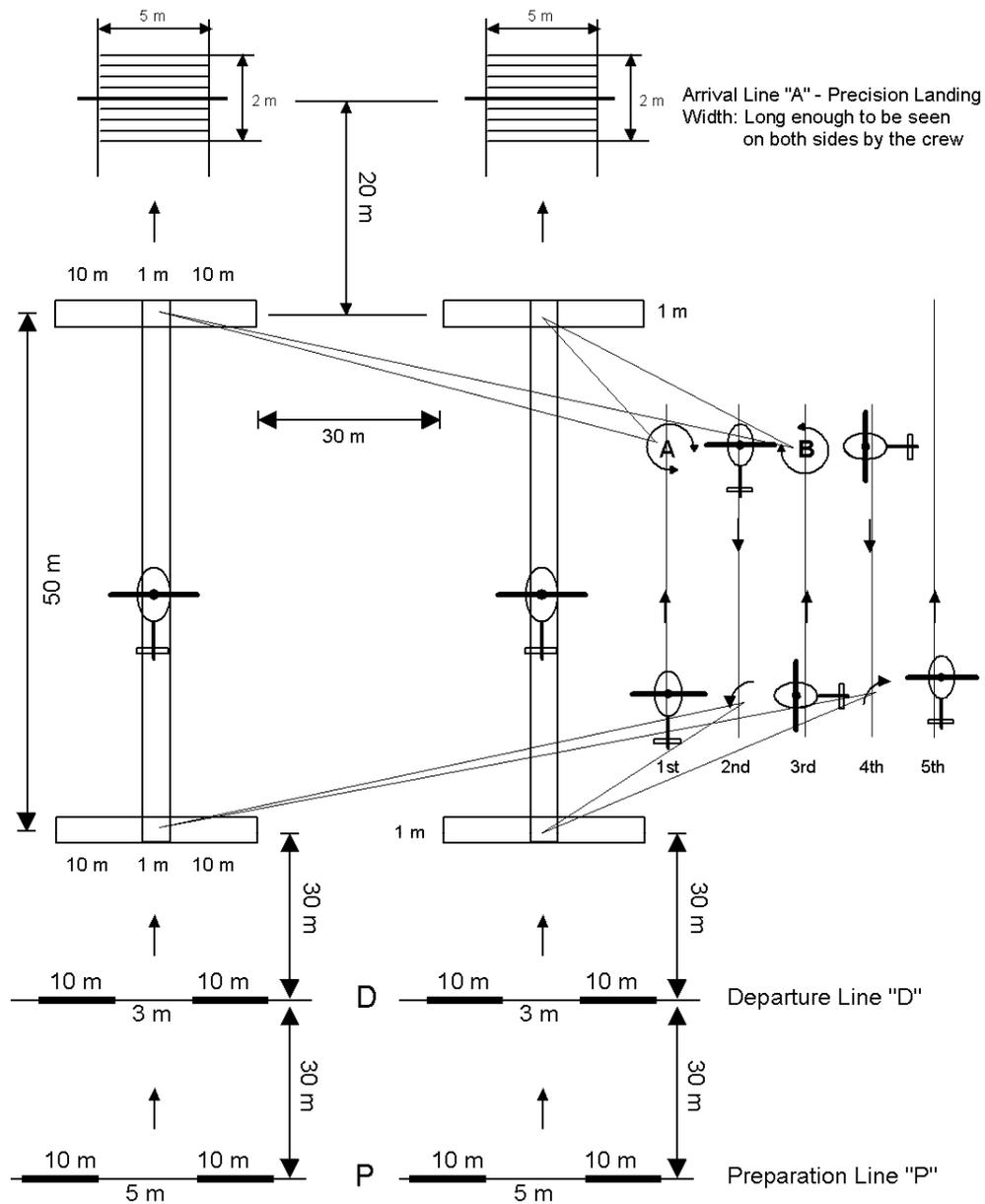
Each tenth of a second above 2' 15" of flight (135 seconds) between Lines D and A *	0.1
Violation of the corridor limits, of the short rope attachment per tenth of a second *	0.1
Each time the bottom weight is off the ground per tenth of a second *	0.1
Each time the top weight touches the ground per tenth of a second *	0.1
Duration of a hovering 360° turn shorter than 15 seconds ***	15
For omitting any of the manoeuvres	25
For each occurrence of a change of heading exceeding 30 degrees	10
Landing scale **	0–120
Double Landing ( after touching ground with any part – Time Stop – the helicopter rises completely free from the ground before next touch down )	25
Slide Landing ( visible and measurable forward motion or turn of the fuselage - skids , wheels - after first ground contact )	25

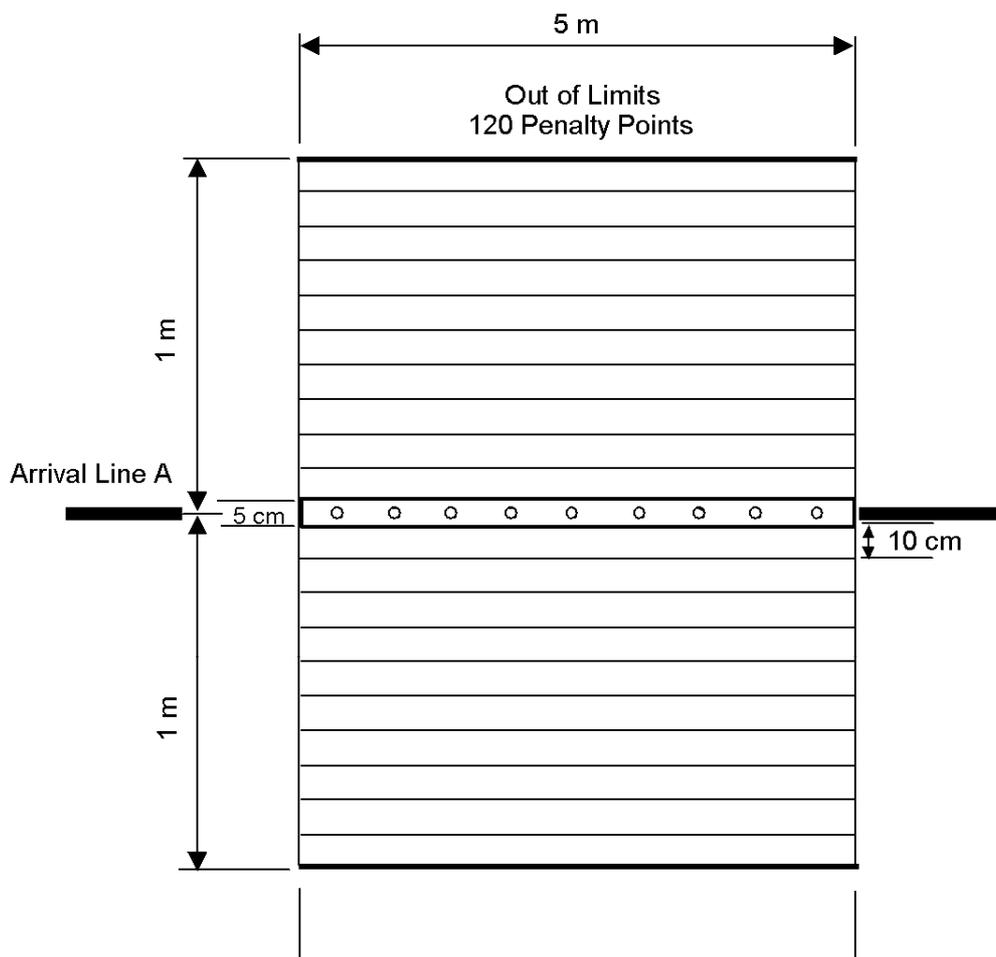
\* Rounded to the nearest tenth of a second as in para 13.14 of Chapter 2.

\*\* The distance of each skid from the nearest limit of the 5 cm arrival line is measured in cm and added together using 1 penalty point per cm. 120 points is the maximum penalty. Part of a cm should be rounded up to the next full cm.

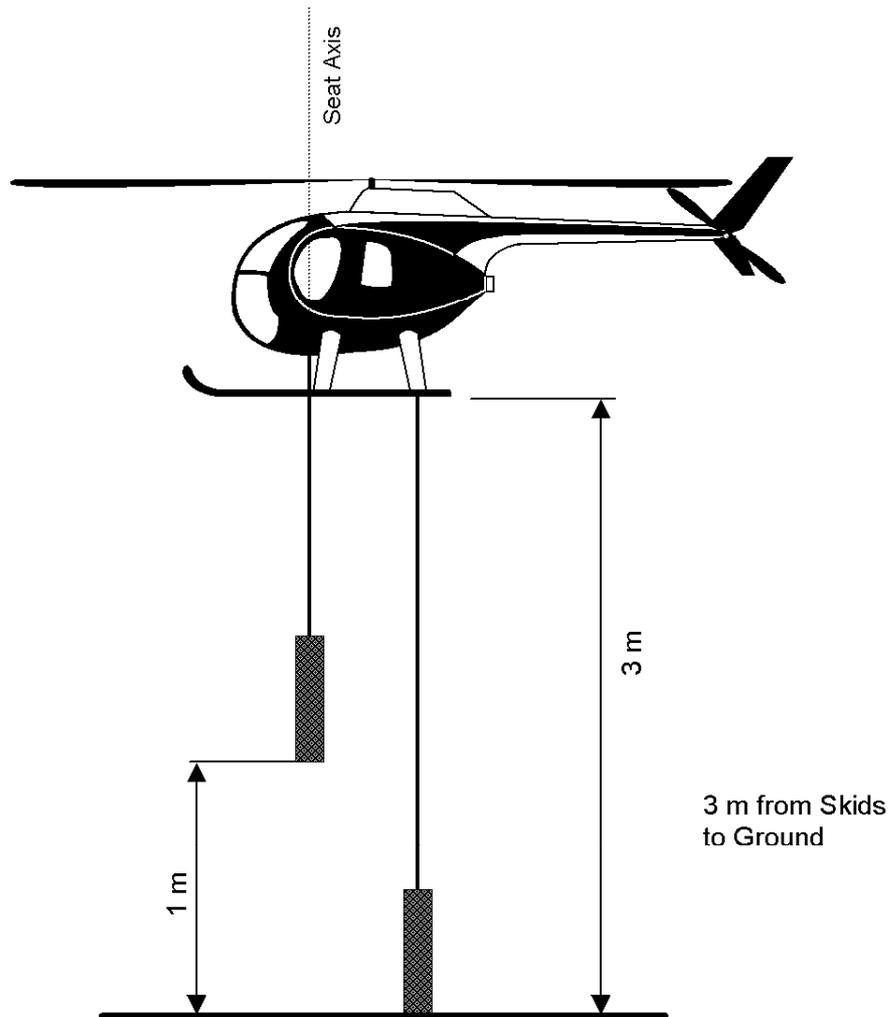
\*\*\* i.e., turn duration is 14.94 seconds or less.

**ANNEX 2.0 - Parallel Hover Parcours**  
 NOT TO SCALE



**Annex 2.1 - Event 2 - Precision Landing Area**

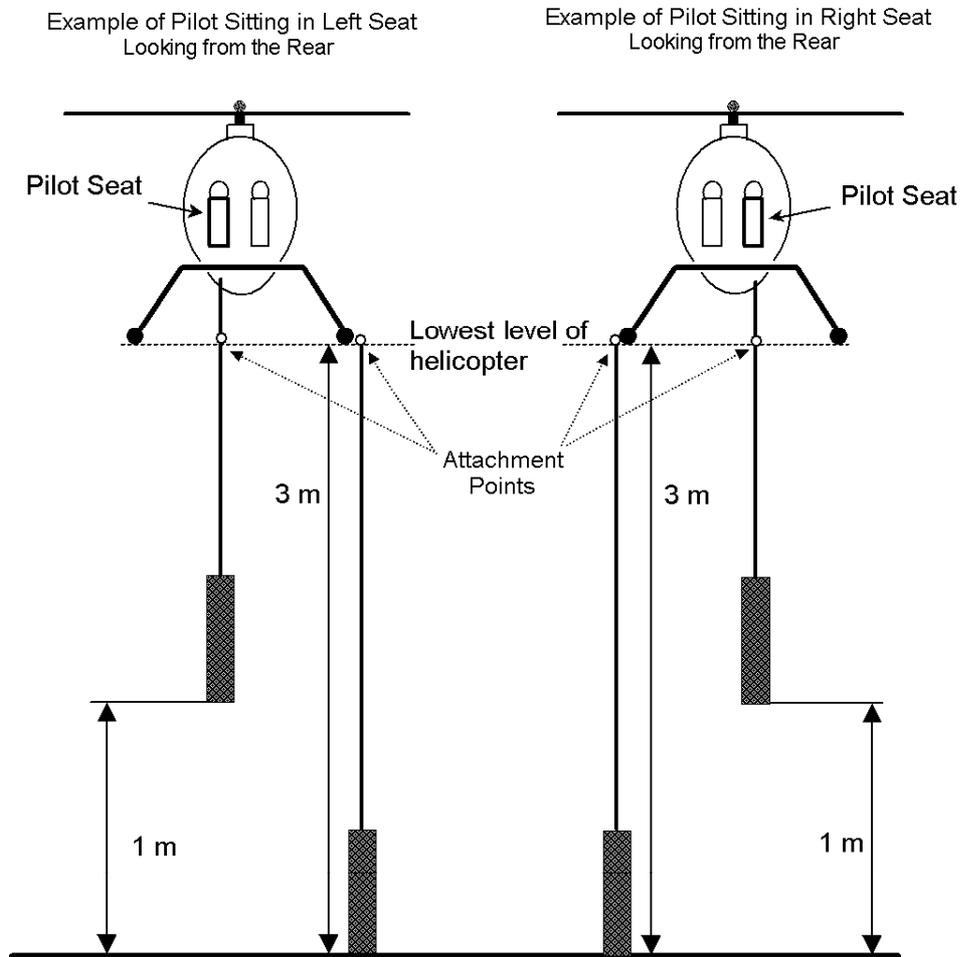
**Annex 2.2 - Event 2 - Length and Attachment of Ropes**  
**NOT TO SCALE**



It is essential to understand that from one helicopter to another, the short rope will differ in size. The objective is to have 1 metre difference between the bottom of the two weights.

The long rope will always be 3 metres. The short rope will vary in order to give one metre difference.

## Annex 2.3 - Event 2



The long rope will always be on the opposite side of the helicopter to the pilot.  
Attachment on skid or wheel.

The short rope will always be under the pilot's seat.  
Attachment on the fuselage.

The fixture for that attachment will be installed by the crew prior to arrival  
at the preparation Line.

## Event 6.3 – Parallel Fender Rigging

### 6.3.0 Event Description:

The event will be flown by two competitors at the same time on parallel courses. The event requires precise flying with a load ( fender ) and rope lengths in a sequence of 4, 6 and 8 metres, and a flying time of 60 seconds. The direction of flight through each entrance gate is decided by the Organiser and made public at the event briefing.

### 6.3.1 General requirements:

The helicopter will be configured with a closed door on the pilot's side. Special window bubbles in cockpit doors are not permitted. Outside mirrors and technical aid such as radio altimeters are not permitted and such use will result in disqualification.

The crews will be correctly harnessed. The crew members are in the normal seating position, both legs are to be kept within the cockpit.

During the morning briefing competitors will receive their time at which the helicopters must be at the preparation line –line P.

### 6.3.2 Departure line:

Once the start positions are free, the responsible judge will call the next competitors from the preparation lines (P-line) forward to the departure lines. The helicopters must land in front of the departure lines. Assistant judges will hand the crew members the fenders with their ropes, each with 3 red painted balls fixed in distances of 4, 6 and 8 metres from the top of the fender. There are 2 additional wooden balls as handling aid, each 20 cm above the balls. At the end of the rope a grip 20 cm above the 8 m ball is fastened. The fender will remain outside the helicopter on the ground. The crew member will hold the rope at the respective handling aid.

Upon an indication of ready from the pilots (or crew members), the judge will signal the start for competitors by dropping a flag or use of a suitable indication system (Such a system has to be demonstrated to the competitors at the briefing). The competition time starts.

### 6.3.3 Manoeuvring through the course:

The pilots will take off and after passing the Gate "D" (marked by flags), fly to the entrance gate. The crew member must manoeuvre the fender through Gate "D" and the entrance gate and into the containers. The rope must be fully extended and free of knots prior to crossing the departure line (D-line). The pilot will fly to the first area, and the crew member will drop the fender into the first container.

The rope will remain held at the handling aid above the relevant red ball by the crew member, who must have both hands visible. Manoeuvring of the rope is allowed provided the rope is not lengthened or shortened.

After dropping the fender into the first container, the crew member will deploy the rope to the appropriate length for the second container and lift up the fender again from the container.

The pilot must proceed to the next container area for dropping the load into the second container. The crew member must manoeuvre the fender through the entrance gate and into the second container.

This procedure is to be repeated for the third container area and container.

After dropping the fender into the third container and letting go of the rope, the helicopter must leave the competition area by passing the exit gate.

## 6.3.4 Timing:

The time starts when the start signal is given at the departure line and overall time for each crew is stopped when the crew member has let go of the rope  
The total time for this event is a maximum of 60 seconds.

## 6.3.5 Tie breaker.

If there is a tie for a place, the winning crew is determined by the shortest flight time.

## 6.3.6 Scoring

300-P = Score. Score is determined by subtracting Penalty Points from 300. The minimum score achievable is zero.

## Scoring Event No. 6.3 ( Parallel Fender Rigging )

<b>Infringement</b>	<b>Penalty points</b>
For each tenth of a second flown over total times limits	0.1 *
Touching the external sides of the container with the fender For each touch	5
Touching the ground with the fender between D- line and containers: For each touch:	15
Fender not dropped into the container or lost en route for each occurrence	80
Fender dropped with wrong rope length, rope shortened or lengthened ( for each infringement )	30
Crew not staying seated or harnessed:	50
Rope not deployed to full metres or has knots when flying over the D-line or lifting off from containers ( for each infringement )	20
Overfly of the exit gate – helicopter nose is not first part of helicopter to pass the marked gate or the helicopter does not pass the gate at all for each infringement:	10
Fender not passing the Gate “D”	10
Missing the Entrance-Gate by missing or fender over poles ( for each infringement )	25

\* Disqualification (black flag) if total time exceeds 5 minutes

**Measurements of competition area and equipment (see attached sketch) :**

The competition area is composed of two parallel courses with a space of 30 metres between them.

Each competition course consists of:

Preparation lines "P" : two 10 metre- long lines with 5 metres space between the two lines.

Departure lines "D" : two 10 metre-long lines with 3 metres between the two lines, to be positioned 30 metres after the "P" lines.

Three Entrance Gates : Internal width 1 m, composed each of two 2 m high poles.

Three container squares : 40 x 40 metre square, clearly marked, the first to be positioned 20 metres after the "D" line.

Three containers : each to be positioned in a container squares and filled with water or other heavy material to prevent moving.

Measurement of each container:

Height : less than 1.20 metre

Diameter of container opening: 48 cm +/- 2 cm

Measurement of fender:

Diameter of the fender is 30 centimetres

Height : 0,8 metres – 1 metre

Weight of fender (to be achieved by filling with sand or water): 7 – 8 kg

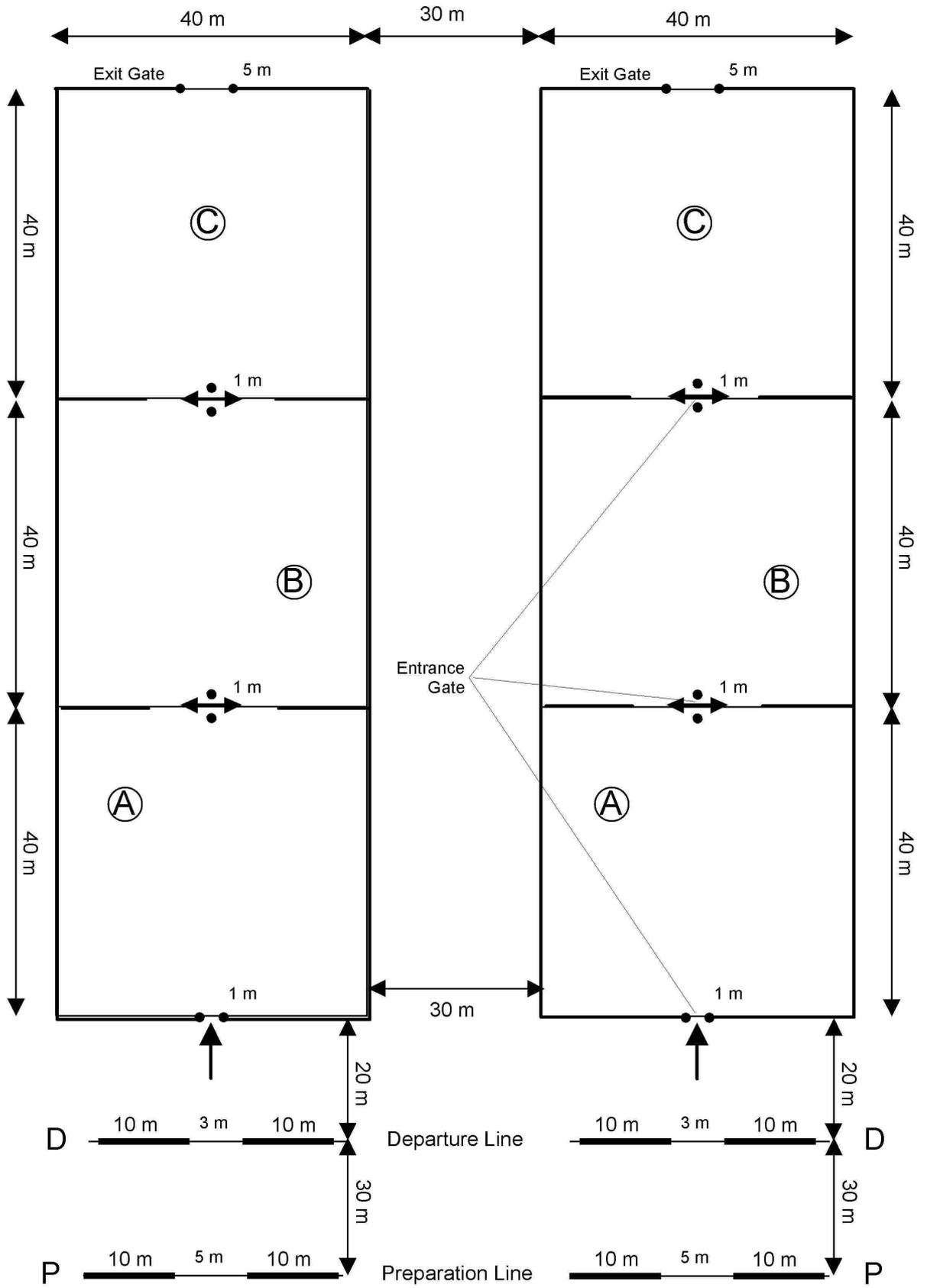
Length of rope 8,20 metres from the top of the fender to the grip.

Red painted balls at distances of 4, 6 and 8 metres from the top of the fender.

Wooden balls, 20 cm above the red balls at 4 and 6 metres.

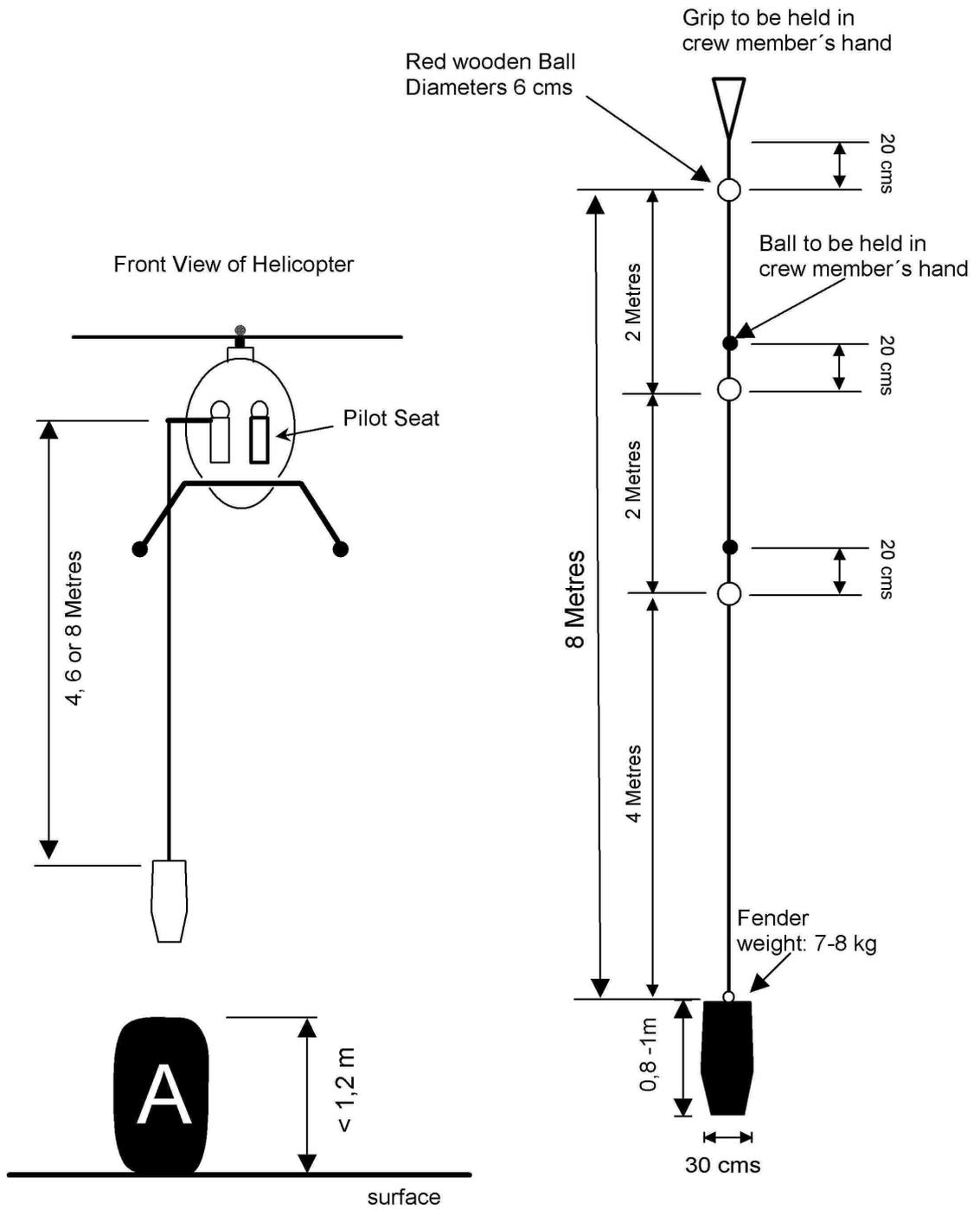
The containers and fenders can be made of any material or colour, but must be uniform.

**ANNEX 2.0 - Parallel Fender Rigging**  
 NOT TO SCALE



**Annex 2.1 - Event 2.2**

NOT TO SCALE



## Event 6.4 - Parallel Slalom

### 6.4.0 Event Description:

The Event will be flown by two competitors at the same time on parallel courses.

The Event requires precise flying to manoeuvre a bucket, attached to a rope, twice through 6 numbered gates and setting it down finally on a table target. The helicopter will be configured with the pilot's door on and closed.

The flying time is limited to 2 minutes and 15 seconds (135 seconds).

### 6.4.1 Preparation:

The helicopters will come to the preparation line and wait for the previous helicopters to finish.

At a signal from the judges, the helicopters will move to land on the Departure line. The Judges / Assistant Judges will hand over the rope with the attached bucket filled with water up to a level determined by 9 lateral holes. The 9 holes will each be of 1cm diameter and the bottom of the holes will be 4 cm from the top of the bucket. ( see drawing Annex 4.2)

The rope will be held by the crew member, sitting on a seat on the side opposite to the pilot, in a normal position and wearing the safety harness correctly. The crew must remain seated. The rope will be placed on the floor of the cabin, either inside or outside the skids where fitted.

### 6.4.2 Start:

Upon an indication of ready from the pilots (or crew members), the judge will signal the start by dropping a flag or use of a suitable indication system (Such a system has to be demonstrated at the briefing). The helicopters will take off from the Departure Line at the sign of the judge with the bucket resting on the ground, the crew member holding the rope by Ball No. 2.

The rope will remain held by the crew member who must have both hands visible.

Manoeuvring of the rope is allowed provided the rope is not lengthened or shortened by any part of the body below the appropriate red painted ball. The crew member is not allowed to hold the appropriate red painted ball.

### 6.4.3 Course and Gates:

The 6 numbered gates will be placed as per Annex 4.0 and the gates will be flown consecutively from 1 to 6 and back to 1 without hitting the poles of the gates with the bucket. The direction of flight through the each gate will be as described in Annex 4.0.

To correctly pass a gate, the top of the bucket must pass below the top of the poles. If the bucket misses the gate it must be taken back around the outside of the poles before another attempt is made. Multiple opportunities to pass a gate correctly will be allowed. The judge will score correct or incorrect gate passage when the bucket is flown to the next gate.

### 6.4.4 Exit and Table:

After passing Gate 1 the second time, the crew member will deploy the 11 metre rope (Ball No. 3) and the pilot will increase altitude. The rope must be fully extended and free of knots before reaching the 5 metre diameter circle around the centre of the table.

The rope will remain held by the crew member at the grip at its end. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the upper ball. Both crew member`s hands must be visible.

The bucket must be put down as close as possible to the centre of the target table, in one try, then the rope must be dropped.

- 6.4.5 **Timing:**  
The time starts when the start signal is given at the departure line and stops when the rope is released over the table.
- 6.4.6 **Measurements:**  
The reference point for calculating the distance of the bucket from the centre of the target will be the centre of the bucket base.  
The water left in the bucket will be measured after the competitor has completed.  
The measuring will be done on the table and the table wiped dry after the bucket is removed.  
Any difference of water level between departure and table will result in penalty points.  
If the bucket falls down from the table, the measurement will be done from the bottom of the bucket to the center of the target, by use of a plumb bob.
- 6.4.7 **Tie Breaker:**  
If there is a tie for a place, the winning crew is determined by the shortest flight time.
- 6.4.8 **Scoring:**  
 $300 - P = \text{Score}$ . Score is determined by subtracting the Penalty Points from 300. The minimum score achievable is zero.

## Scoring - Event No. 6.4 (Parallel Slalom)

INFRINGEMENT	PENALTY POINTS
Passing a gate in the wrong order or different direction	20
Failing a gate by missing or bucket over poles	10
Bucket hitting the poles, each infringement	5
Distance between the bucket and the centre of the target – per tenth of cm	0.1
The bucket exiting the designated area 185 x 50 m	10
Water level – per tenth of centimetre missing *	0.1
Each tenth of a second in excess of 135 seconds **	0.1
Placing the bucket outside the target table *	80
Losing the bucket during the course	200
Rope not deployed before the 5 metre circle around the table	20
More than one attempt putting the bucket down, per try	15
Crew not staying seated or fastened (both hands and legs not visible)	50
Rope lengthened or shortened, has knots or handled below red ball (per each infringement)	50

\* If the bucket is landed on the ground, any water left in it will be measured and will incur normal penalties.

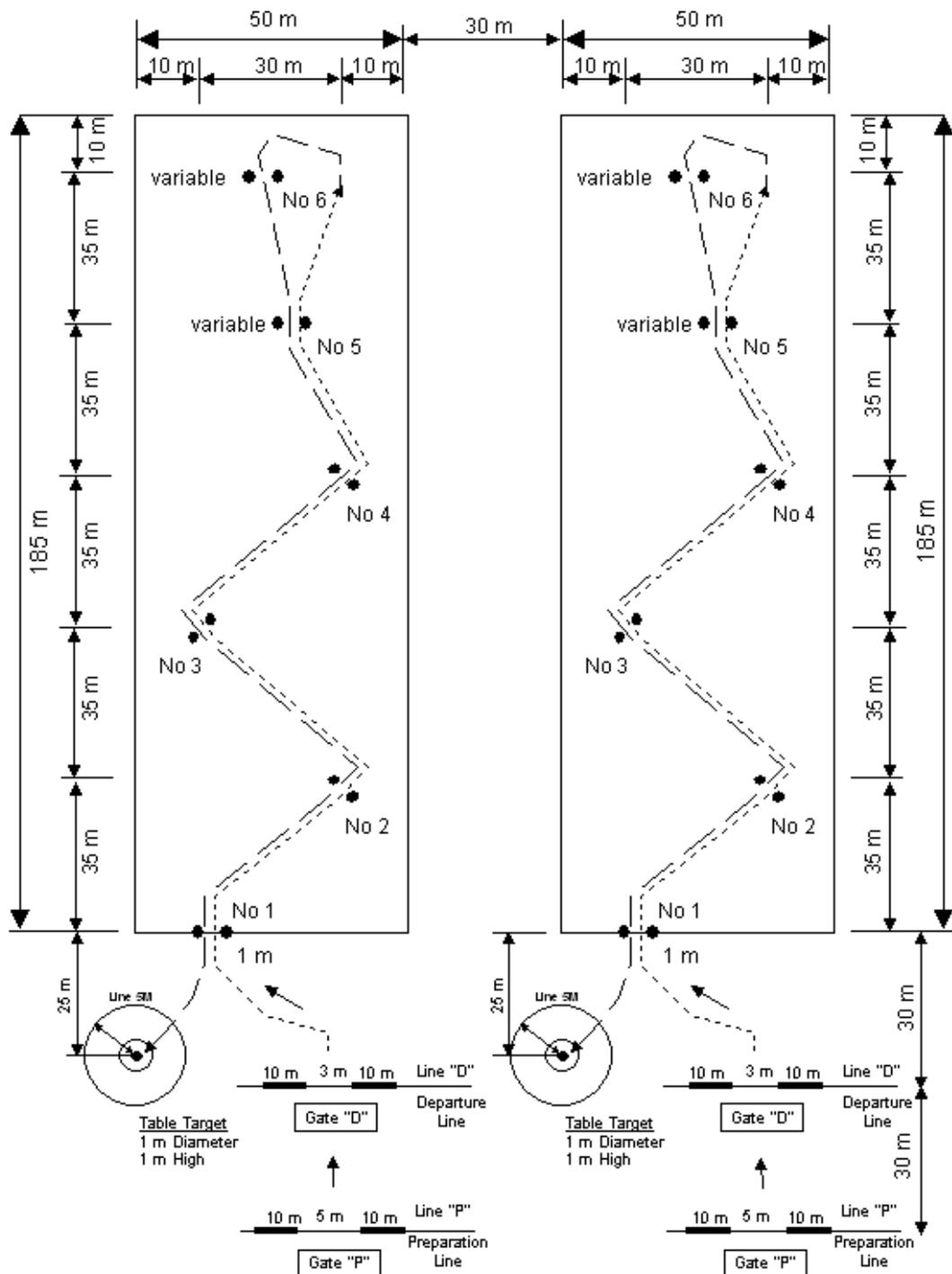
\*\* Disqualification (black flag) if total time exceeds 4 minutes.

### Measurements of competition area and equipment ( see attached Annexis )

- 185 x 130 metres rectangular competition area, including two courses (see drawing Annex 4.0).
- Twelve gates, internal width 1 m, each composed of two 2 m high poles.  
( see drawing Annex 4.1 )
- Two round tables, 1 m diameter and 1 m high (concentric circles 5 cm apart will be painted black and white). The centre – circle must have the same diameter as of the bottom of the bucket.
- Two ropes, equipped with 3 balls, first 5 m high and red painted, second 20 cm over this ball to be a handling aid, third also red painted 11 metres high and a grip at its end  
(20 cm above the third ball, see drawing Annex 4.2).
- Two buckets (see drawing, Annex 4.2) of breakproof material and cylindrical form, containing 6.5 litres +/- 2 % with a maximum total weight of 8,5 kg.

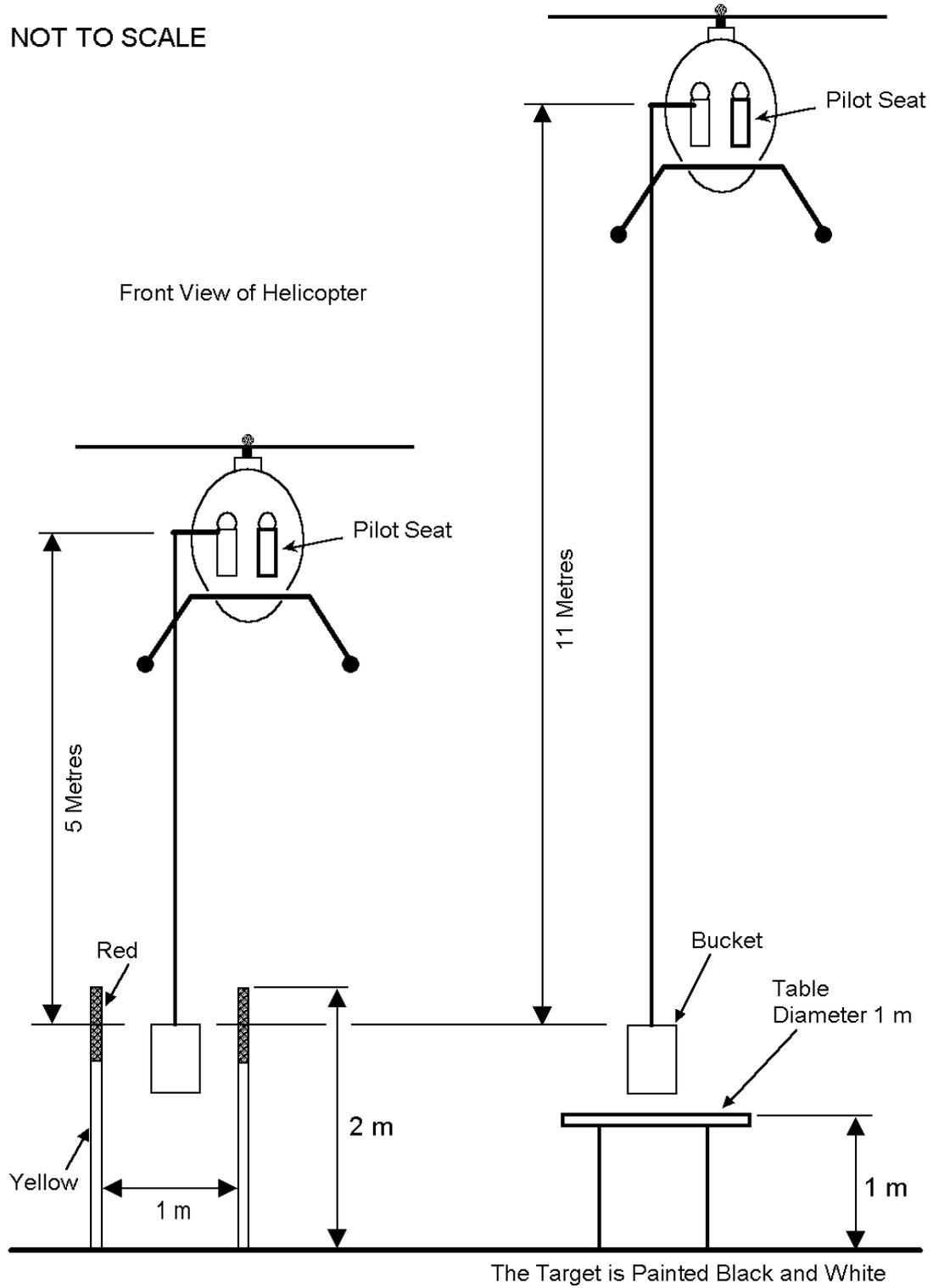
### ANNEX 4.0 - Parallel Slalom

NOT TO SCALE



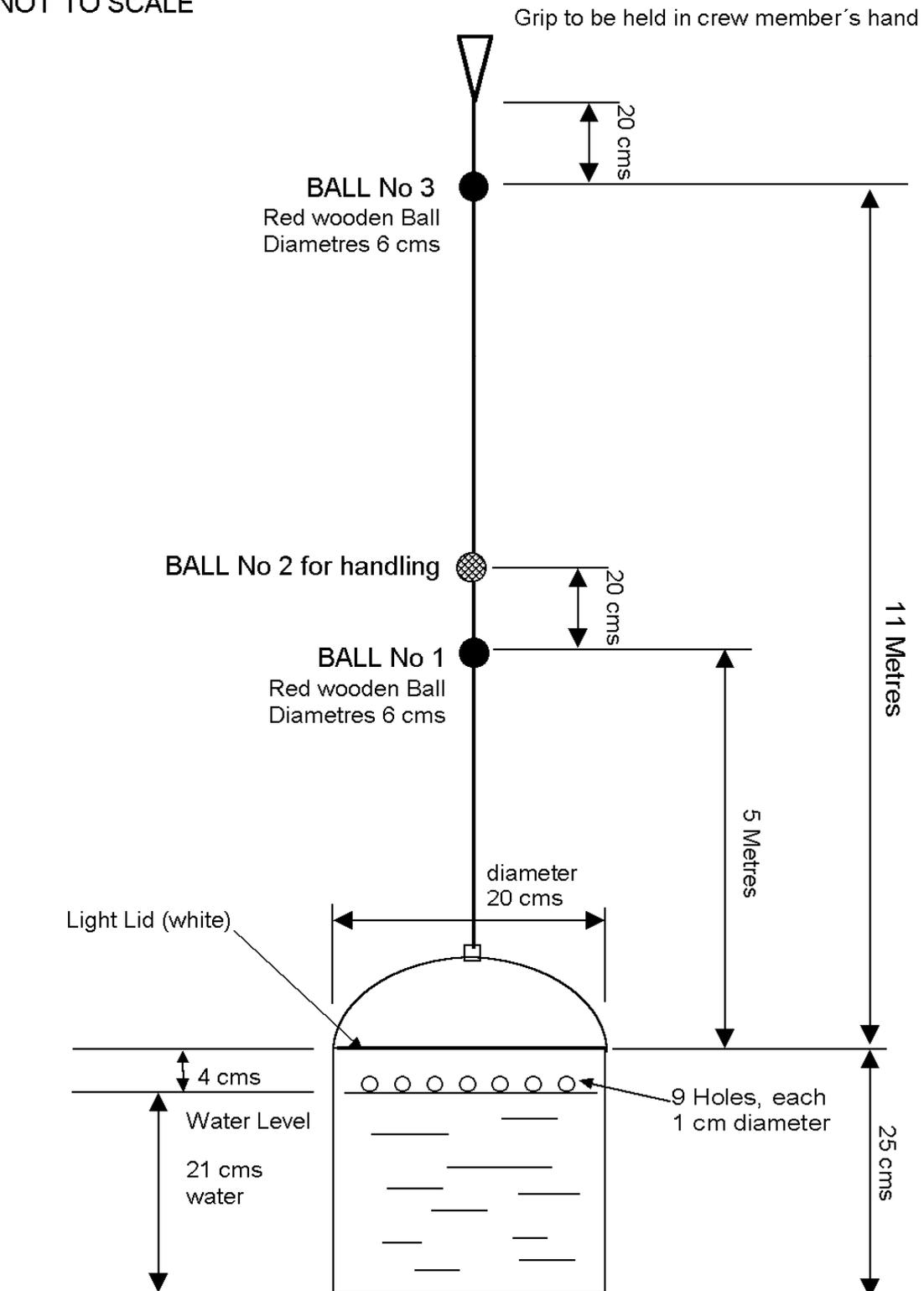
**Annex 4.1 - Event 4**

NOT TO SCALE



**Annex 4.2 - Event 4** - Rope Equipment

NOT TO SCALE



## World and Continental Helicopter Championships

### Chapter 7 Trophies and Awards

#### 7.0 General

All medals, diplomas and prizes shall be presented at the official prizegiving. Diplomas and prizes for event-winners shall be presented not later than at the event following day.

#### 7.1 Individuals Overall

The crew with the highest overall score will become “Overall World or Continental Champions“.

The members of the crews placed first, second and third will be awarded gold, silver and bronze FAI medals. The crews placed first to 10<sup>th</sup> will be awarded with FAI diplomas. Additional prizes should be awarded at the Organiser’s discretion.

#### 7.2 Teams

The team with the highest overall score will be called “World or Continental Team Champions“.

The team managers of the teams placed first, second and third will be awarded gold, silver and bronze FAI medals. Smaller FAI medals can be awarded to all members of the teams. All members of the teams placed first, second and third will be awarded FAI Diplomas. Additional prizes can be awarded at the Organiser’s discretion.

#### 7.3 Event Winners

Each crew winning an Event will also be awarded an FAI Diploma and called “Navex Champions “, “Precision Champions “, “Fender Rigging Champions “, “Postman Champions” or “Slalom Champions “.

Additional prizes can be awarded at the Organiser’s discretion to the crews placed first, second or third in each event.

#### 7.4 Females

There will be an award for the all-female crew with the highest overall score and called “Overall World or Continental Ladies Champions“.

The members of the all-female crews placed first, second and third will be awarded gold, silver and bronze FAI medals. The female crews placed first to 5<sup>th</sup> will be awarded FAI diplomas.

Additional prizes can be awarded at the Organiser’s discretion.

#### 7.5 Freestyle

There will be an award for the Pilot with the highest Freestyle score called “Freestyle Champion “.

The pilots placed first, second and third will be awarded FAI diplomas and Organiser’s prizes.

#### 7.6 Novice Pilots

The pilots placed first, second and third in the junior category will be awarded FAI diplomas and additional prizes at the Organiser’s discretion.

**ANNEX A****HELICOPTER TYPE AND COMPETITION SPEED**CIG World and Continental Championship  
Rules and Regulations

<b>HELICOPTER TYPE</b>	<b>COMPETITION SPEED ( KTS )</b>	<b>COMPETITION SPEED ( KPH )</b>	<b>CRUISE SPEED ( KTS )</b>
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	77	143	96
Robinson R 44-Astro	80	148	100
Robinson R 44-Raven I	80	148	100
Robinson R 44-Raven II	90	166	117
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	90	166	122
BO 105	90	166	120

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)

## **ANNEX B**

### **Measuring Equipment**

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

As stipulated in 12.6 and 12.7 of Chapter 2, all measuring equipment must be submitted to the FAI - CIG for approval prior to the Championship.

The judgments in the competition that may require the use of equipment are listed below. In some cases such as time-keeping, the use of equipment, in this case a clock or watch, is mandatory.

In other cases such as calculating speed, height or distance, the organiser 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 in accordance with Chapter 2 para 12.6, or, the organiser 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. Navigation**

##### **Mandatory Equipment**

Master Clock, Start Line Clock, Search Box Exit Clock, Gate A Clock.

The Organiser must demonstrate that the timepieces are of sufficient quality and that they can be synchronized to the Master Clock to an accuracy of 0.01 seconds. GPS-based Data Loggers for measurement of the track, times and speed on the course. Loggers will be provided by the Organiser.

##### **Optional Equipment**

For measurement of height at targets in the dropping zone and at Line A and F.

For measurement of speed and 30 degree variation on final leg.

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

TP1 Clock, TP2 Clock, TP3 Clock

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

No special equipment required.

**ANNEX C  
Judge`s Qualification Declaration**

**FAI-CIG JUDGES INFORMATION**

**Name ( in full )**.....

**NAC**.....

**International Judge (since)**.....**Assistant Judge (since)**.....

<b>Year</b>	<b>National Competition or Category 2 Event Status</b>	<b>World Championship Status</b>
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**2005**

**2006**

**2007**

**2008**

**2009**

**2010**

**2011**

**Attendance at National Judges Training: 2005 2006 2007 2008 2009 2010 2011**

**Identity and qualification of trainer:**

**I confirm that the above represents the active experience in judging of helicopter events run in accordance with the relevant FAI-CIG World and Continental Championship Rules**

**Signature of Judge:**

**Certified that the above is correct:**

**( Representative of National Aeroclub )**