



German Open Helicopter Championship 2021

Rules and Regulations

Airfield Jena-Schöngleina



General Rules and Regulation

1. Participants

Crews must participate in all Championship events 1 – 4 inclusive. Participation means having passed the departure line.

2. Types of helicopter, Licence and Documentation, Insurance

Helicopters of any type with sufficient power characteristics will be allowed to compete in the Championship. The crew consists of 2 persons.

A valid "Certificate of Airworthiness" or equivalent document and a Certificate of Registration issued by an appropriate Authority must be provided to the organiser for every competing helicopter.

Pilots must be in the possession of a valid Pilots Licence complete with Medical Certificate.

It is mandatory for each competing helicopter to have third party insurance policy for an amount of a minimum of 1.850.000 € (Euro or equivalent) and the insurance must be provided to the organizer. Personal insurance of pilots and insurance of helicopters also has to be covered by their nation.

3. Entries and Fees

An entry will be accepted only if made on an official entry form.

The official entry form can be submitted to the organizer through postal services, e- mail or fax.

All Entry fees will be refunded if the German Open Helicopter Championship does not take place. In case of disqualification, the Entry fee will not be refunded.

4. Programme of events

Competitors will be required to perform the following:

Event 1: Navigation

Event 2: Precision Hover

Event 3: Fender Rigging

Event 4: Slalom

The sequence of the Championship events will be announced during the initial briefing. The starting list for the order of flights is published by the Championship Director every previous day and confirmed at the briefing.

5. Flight Safety

The organizer will appoint a 'Safety Officer'. He will assist the Championship Director to observe and guarantee the safety of the flights on the competition site.

During the competition all competitors must observe and adhere to the rules of the air and special regulations applicable in the Host country. Any violation of applicable flying or safety regulations may lead to the exclusion of the offender from the contest. No responsibility can be undertaken by the organizer for any violation of air safety by competitors or others.

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.

All personnel participating in the competition area during events must be clearly recognisable (e.g. by a reflective vest). 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. Complaint and Protest

The purpose of a complaint is to obtain a correction without the need to make a protest.

A competitor 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 competitor to the Competition Director, without delay. All judging matters will be passed by the Competition Director to the Chief Judge for decision. If the findings of an inquiry do not satisfy the competitor, he may file a protest.

There will be a time limit of 1 hour from the time the preliminary results are officially published during which a complaint may be filed. Once the Chief Judge has come to a decision regarding the complaint and communicated it to the crew, there will be a time limit of 1 hour in which a protest may be filed.

Protests are only possible against an issue which affects the competitor himself. All protests will be written in German or English and forwarded together with the deposit of 200, - € (Euro or equivalent) to the Competition Director, who will in turn pass it to the 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.

The Jury must allow the protesting competitor to give evidence.

No complaint or protest will be allowed regarding the method, accuracy, or use of measuring equipment.

7. Operational Regulations

Competition flights are performed under the following weather conditions:

Event 1: Minimum cloud height of 300 meter (1000ft) AGL and minimum horizontal visibility 2 kilometer.

Event 2, 3 and 4: maximum wind speed of 15 knots incl. gusts unless the competitors unanimously agree otherwise at the event briefing.

A common VHF frequency will be provided to all competitors.

The Competition map has a scale 1:250.000

Up to three crews may share a helicopter in one event. The Championship Director can permit exceptions.

8. Competition Rules

Mobile phones or other communication techniques or devices are not allowed for use, during and after the events. Their use will result in the disqualification for the event of crew.

No external image and video recordings will be allowed for the evaluation.

The use of special equipment such as stabilization devices, autopilot, certain radio navigation aids and external mirrors as well as **additional harness extensions are not allowed**, unless they are listed in the flight manual as necessary for normal safe flight performance. Radar and radio altimeters are not allowed for any of the 4 events of the championship. Any violation will result in disqualification.

Curved doors, approved by the manufacturer, may be used. Special "bubble windows" may not be installed in the cabin doors.

Any change in the schedule due to weather etc. will be posted on the information board and announced at briefing.

Crews will be given lift-off times for each event and it is 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.

In case of a proven technical problem, the Championship Director may allow a change in lift-off times.

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.

Practice flights during the Championship are prohibited and will incur a penalty of 50 points per occurrence. Private flights may take place with special permission from the championship director. Competitors are allowed to check the height of the weights after fitting in Event 2 and check helicopter performance by performing a full left- and right turn at the "P"- line to check aircraft performance.

Contest number must be clearly visible on the left and right sides of the helicopter during the whole Championship.

Each competing helicopter must comply with its own National Flight Regulations, and must be equipped with a VHF radio and normal standard equipment.

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 timing calculate and collate scores round the times 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.

Any lines or markings, fixed equipment such as the slalom course, the fender rigging course or the dog house, must be in place early enough before first departure to be inspected by competitors and officials. If competitor unanimously agree otherwise diversions may be announced at briefing.

Exclusively the provided competition material of the organiser is to be used for the competitions.

Event Rules and Regulations

1. Event - Navigation

1.1 Event description

The event consists of a navigation course with a timed arrival at line “A”, another timed arrival between lines “A” and “F” with a load drop off, a second load drop off at line “C” and an end-of-event landing zone. All helicopter doors must be installed.

1.2 Navigational Course

The course includes 10 orange panels, three (3) turning points (TP) (Pictures) and two (2) mandatory-fly-over (MFO) points (see annex 1.0).

The orange panels are 3 x 2 meter which depict black symbols or letters (see annex 1.3).

Competitors identify each sign at its position and has to be noted on the enclosed sheet (see annex 1.2).

TPs 1, 2 and 3 are pictures.

Length of the total route is 50 – 80 km.

1.3 Flight height

The route and the MFOs will be flown at a height of about 250 meter AGL.

1.4 Flight time

The flight time is calculated for every helicopter by the organiser on the basis of the list in the annex A. For reasons of flight safety and variations in weather conditions a minimum of 3 minutes is added to the calculated flight time.

1.5 Starting time

Starting times will be given in exact minutes and seconds.

Early or late departure is penalized. During the briefing every crew receives their time to be at the preparation line and the exact starting time at which their helicopter has to pass line “D”. Departure times are calculated for sufficient separation between two consecutive competitors.

1.6 Preparation line

Ten (10) minutes before departure time the helicopter will come to the preparation line (line “P”). At the preparation line a skittle with rope attached and two (2) numbered bags (each 1 Kg of weight) are handed to the crew.

1.7 Departure line

Once the departure position at “D” is clear, the responsible judge signals the next competitor to hover from “P” to land in front of line “D”. A sealed envelope containing the compe-

tition 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.

The sealed envelope will contain the following information:

- The flight time from lines "D" to "A" is depicted on the outside of the envelope.
- A sheet with following information:
 - The true course from line "D" to MFO1.
 - Geographical coordinates of TP1 and TP3; latitude and longitude in degrees, minutes and seconds.
 - Pictures of the TP's with the objects to be identified
 - A sheet with a scheme of the approximate position of the panels where the identified symbols should be noted on.
- The competition map with the following depicted information:
 - The position of MFO 1 and MFO 2
 - Target panel locations and TP's
 - The position of TP 2

During the competition only the map provided by the organizer is allowed on board.

Infringement is penalized by 100 points.

In the interest of safety an ICAO map 1: 500.000 is permitted in a sealed envelope.

1.8 Departure

The helicopter will cross line "D" on its given departure time. Early or late departures are penalized.

1.9 Leg Line "D" To MFO 1

The route from line "D" to MFO1 will be given as true course.

1.10 Leg MFO 1 To MFO 2

On this leg there will be the visual signs and pictures (TP's)

1.11 Leg MFO 2 To Line "A"

The helicopter shall be flown from MFO 2 to line "A" in a straight flight. The descent should be commenced within the last 3 Km and flown in a constant angle till passing line "A" at a height of 30 +/- 15 meter AGL vertically above.

Any reduction of groundspeed to less than 30 km/h during the last two (2) kilometer to line "A" will be penalized for each infringement.

The landing light must be on for the final two (2) kilometer.

1.12 Arrival line "A"

Line "A" is identified on the ground by two white stripes, one (1) meter wide and 15 meter long with a gap of five (5) meter in between.

1.13 Determining arrival time

The time is stopped when the nose of the helicopter crosses line "A" or its extensions to left or right side.

1.14 Flight time between line “A” and line “F”

After crossing line “A”, the helicopter has to fly a pattern given by the organizer.

This is a timed maneuver and lasts one minute between lines “A” and “F”. The course of the pattern is published during briefing.

The time starts when the helicopter’s nose is crossing line “A” and stops when it’s crossing line “F”. Each hovering between lines “A” and “F” will be penalized for each infringement.

1.15 Drop zone

In a determined drop zone (location will be announced during briefing), the competitor drops a bag on each of the two five (5) meter diameter target circles which are marked on the ground. They will be 100 meter apart in the direction of flight.

The height for dropping is not less than ten (10) meter AGL. The elapsed time between the first and second bag touching the ground shall not exceed 12 seconds. The compulsory target order is “target one” then “target two”.

Reference for timing and position is the first impact of each bag on the ground.

1.16 Line “F”

The helicopter will pass line “F” at a height of 15 +/- 5 meter. Passing line “F” the competitor continues straight ahead to the line “C” (dog house) positioned 50 meter onto line “F” (Annex 1.0) to put down the load. Line “F” is identified on the ground by two yellow stripes, one (1) meter wide and ten (10) meter long with a gap of five (5) meter in between.

1.17 Dog house and load put down

The target is composed of two white 2 x 2 meter panels, assembled at an angle of 90 degrees, resting on the ground and forming two 45 degree angles (“dog house”). The load-receiving hole is a 0.4 x 0.4 meter square, the center of the hole is one meter above the ground. Only the hole facing the arrival direction will be valid for scoring.

The crew member opposite the pilot deploys the seven (7) meter rope, after crossing line “F”. A skittle is attached at the end (see Annex 1.1).

This is a timed maneuver 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 a line five (5) meter short of the dog house. Hovering between lines “F” and the dog house (line “C”) is permitted.

The rope must be held at the grip at its end by the crewmember. Both hands must be visible to the judges. Manoeuvring of the rope is allowed provided the rope is not shortened by any part of the body below the red ball.

The crew member must remain in his seat with his seat belt fastened.

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. Penalized is every tenth of a second later than 20 seconds after passing line “F”. Putdown of the skittle beside the roof hatch is penalized by 30 points.

1.18 Landing zone

A 10-meter 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. Immediately after landing in the landing zone, the crew member hands the envelope containing the identifi-

cation sheet for the panels, turning points and the competition navigation map to the Judge. The competitor's contest number and/or name should be clearly featured on the outside of the envelope, on the map and on the identification sheet.

1.19 Disqualification/Black flag

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

- 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 other helicopters and return directly to the landing zone.
- If the dog house is dragged or lifted by a caught (skittle-) rope on the helicopter it is rated as unsafe flying.
- For any flight violation and/or unsafe flight maneuver / act during the event, including aircraft movement to and from the aircraft parking area.

1.20 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.

1.21 Scoring

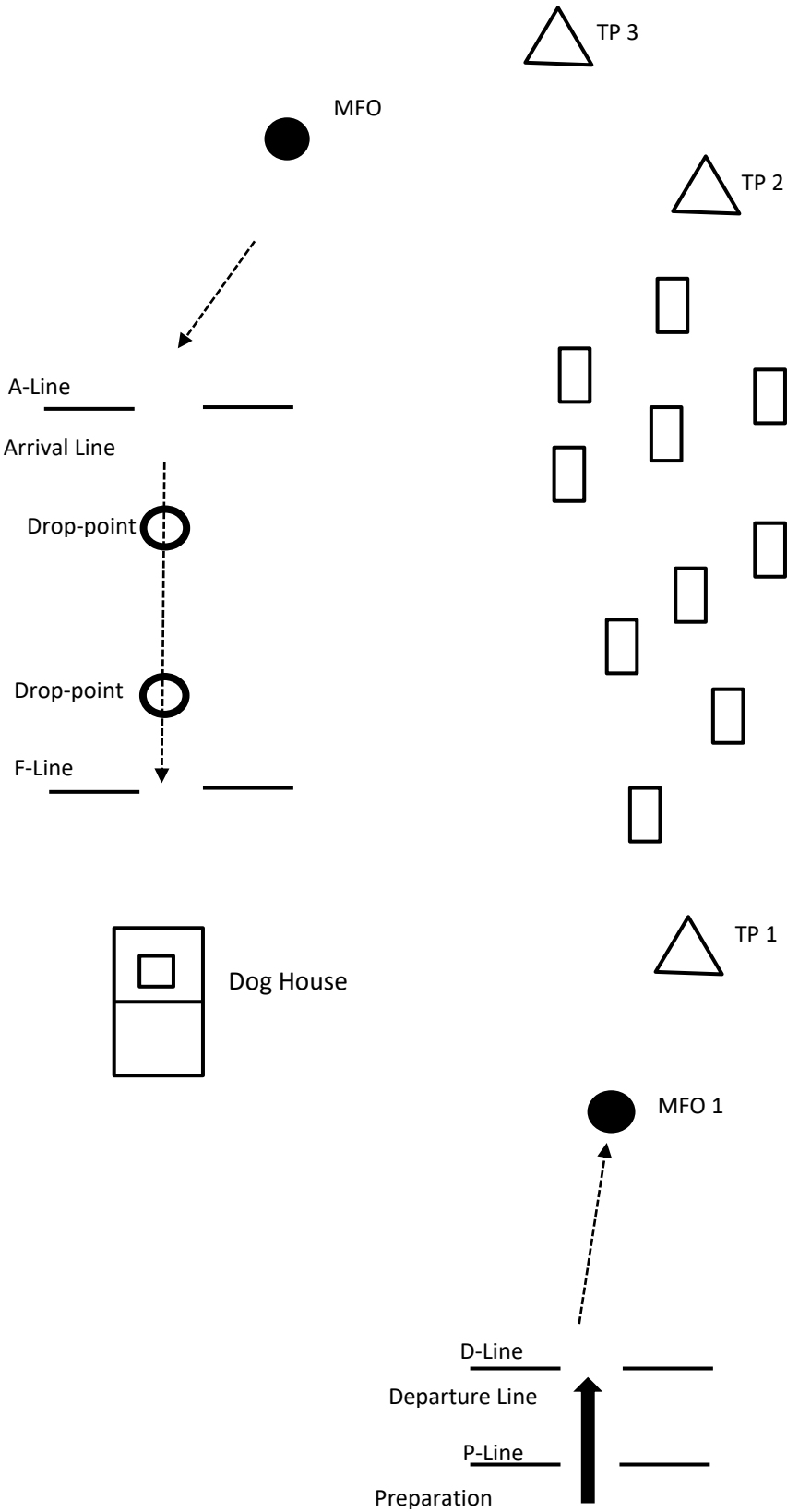
$300 - P = \text{Score}$. Score is determined by subtracting the Penalty Points from 300. The minimum score achievable is zero.

SCORING EVENT 1 – Navigation

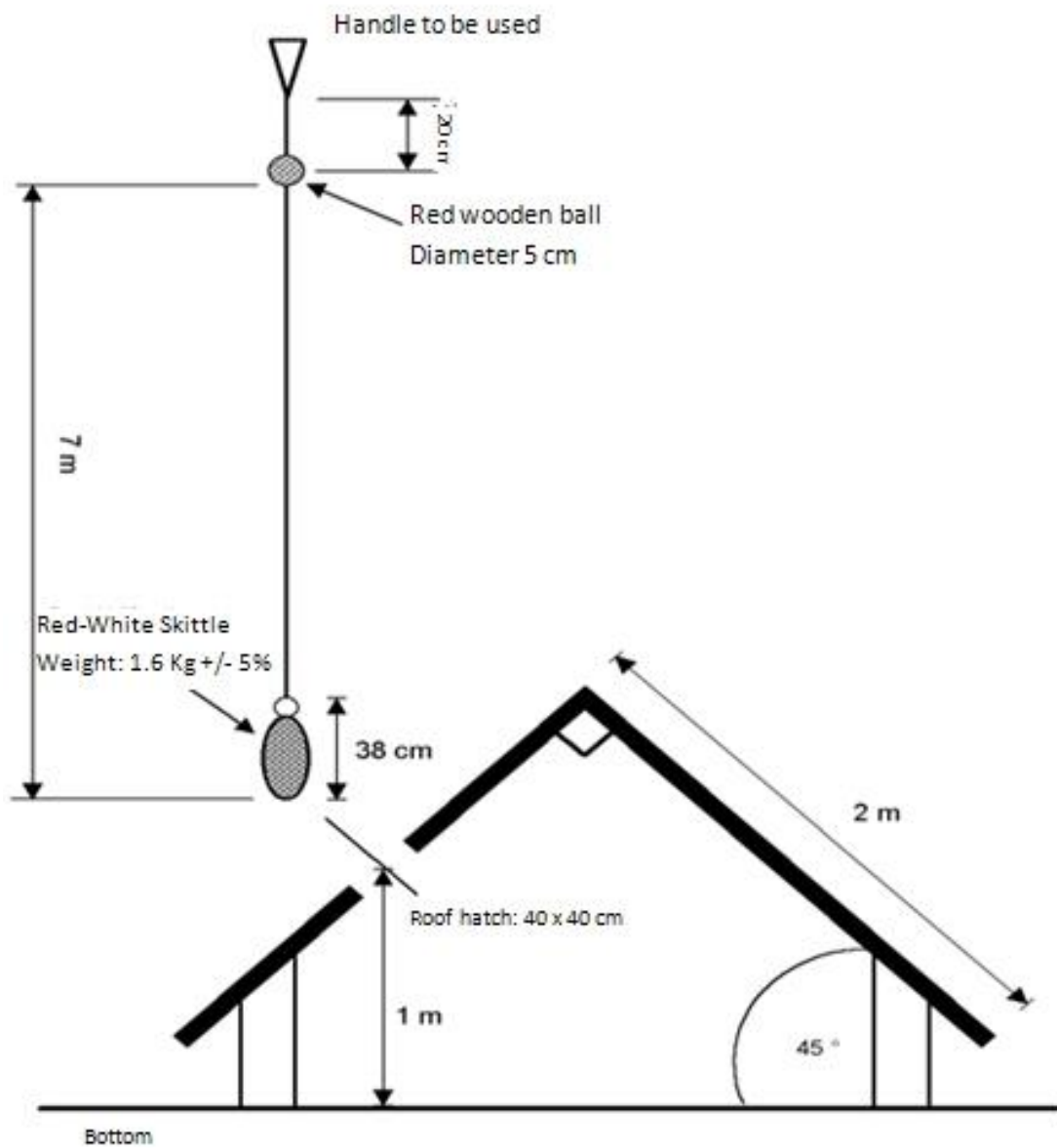
INFRINGEMENTS	PENALTY POINTS
Early departure from line “D”	100
Not departing line “D” within 15 seconds of Departure Time	30
Each missed or not identified number of Turning Point	20
Each missed or not identified panel signs	10
MFO not overfly within a radius of 250m	10
Bag not hitting a target circle	5
To fall below the minimum dropping height for the bags	10
To fall below dropping separation time of 12 seconds between bag impacts	10
Failure to drop a bag or bags dropped in the wrong order	5
Ground Speed less than 30 km/h during the last 2 kilometer before line “A”	10
Missing line “A” (crossing Arrival line outside given dimensions of 35 meter)	10
No landing light “ON” during the last 2 kilometer before line “A”	5
Each hovering event (no visible or measurable forward motion) during the last 2 kilometer before line “A”	30
Each tenth of a second early or late on line “A”	0.1
More than 200 seconds late or early 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”	5
Crew not remaining seated or seatbelt fastened (not both hands visible)	30
Rope shortened has knots or touched below red ball	30
Rope not fully deployed 5 meter before the dog house	10
Each touch of the skittle on the Dog House roof	2
Skittle dropped outside the Dog House roof hatch	30
Unsafe flight maneuver, violation or act before, during or after the event	300
Landing outside landing zone	30

Annex 1.0 - Navigation

Navigation track - Example

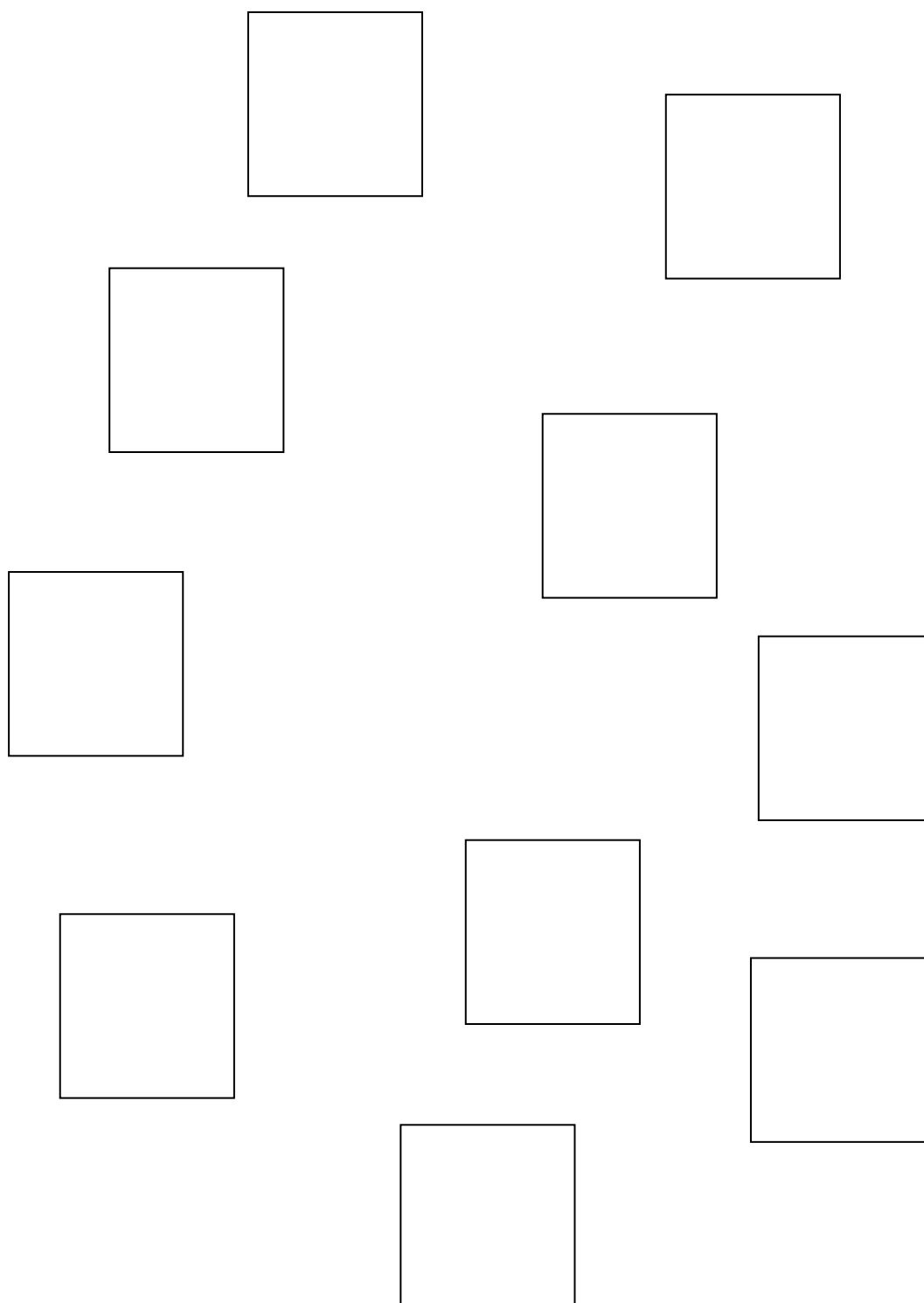


Annex 1.1 – Navigation Dog-House, load dropping



Annex 1.2 – Navigation

Example of a scheme to enter the panel signs





Letters and Figures are colored black on orange Panels.
Size: 3 Meter width, 2 Meter height

2. Event – Precision Hover

2.1 Event description

The event requires a constant height hovering along a parcours with two variable maneuvers. The variations are being published at first briefing. Flight time is 130 seconds. The course dimensions and positions for the variable turns are depicted in Annex 2.0. The possible variations are listed in 2.10. The course should be set against the wind.

2.2 General requirements

During flight all doors must be fitted and kept closed.

The crew member must stay within the helicopter, on his seat in the normal position. Except in an emergency she/he is allowed to fly the helicopter which results in disqualification.

The crew is responsible to install suspension arrangement for the ropes and the tape markings on both sides of the fuselage, skids or wheels ahead of the competition.

The attachment points for the chains/ropes must just touch the ground when the helicopter is on ground. A loop/ring at the end of the attachment points is necessary which can bear at least 5 Kg weight. The attachment point for the short rope is to be clearly marked.

2.3 Composition of the course

The course is made of a corridor, having a length of 50 meters and a width of 1 meter, identified by lines on the ground. To assist the pilot holding the helicopter in the 1 meter square above the corridors during turns at both ends perpendicular corridors are laid down with a length of 10 meters to either side.

The landing line is located 20 meters ahead the end of the corridor. The width of the line is 5 cm and long enough to either side to be visible by the crews. Slide- and double landings are penalized. (see Annex 2.0 and 2.1).

2.4 Flight height control

Two ropes or suitable chains or a combination of both are attached by judges. The shorter device is fitted at the attachment point below the pilot's seat. The longer at the rear attachment point opposite the pilot's seat at the skid or wheel (depiction Annexes 2.2/2.3).

The device lengths are 2 meter for the front one and 3 meter for the rear one. It is measured from the lowest point of the undercarriage (skid or wheel) to the lowest end of the weights. For a better detection the ropes/chains may be painted red or orange.

2.5 Preparation line

The competitor flies to the preparation line ("P").

Judges connect the ropes to attachment points and check the correct application of the two tape markings. The position of the markings is chosen by the competitor on both sides of the fuselage, skids or 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.

2.6 Departure line

Once the departure position at "D" is clear, the responsible judge signals the next competitor to hover from "P" to land in front of line "D". Upon an indication of ready from the pilot or crewmember the judge signals the start by dropping a flag. The competition time starts.

2.7 Maneuvering through the course

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

The corridors will be flown 5 times (Annex 2.0)

First from line "D" in a forward hover towards the upper end plus a 360° turn over the corridor's upper end. Second time in a backward hover to the start end and a 90° turn overhead the start end. Third time a flight in a sideward hover again to the upper end and another 360° turn overhead. Fourth flight is a sideward hover again back to the start end with a 90° turn overhead. Last flight is a forward hover passing the corridor's upper end to land exactly on the landing line. The landing is performed in one attempt. Slide- and double landings are penalized. The 360° turns are performed around the yaw axis. One turn is flown clockwise and the other anti-clockwise. Each turn must take a minimum time of 15 seconds. The directions of the turns are published during the briefing.

2.8 Measurements

Corridor and height violations are recorded in cumulative tenths of a second. Final times will be rounded to the nearest tenth of a second as described in Chapter 9.10.

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 touches the ground or the end of the longer rope comes off the ground.

The landing is measured from the forward limit of the attached tapes to the nearest limit of the landing line (arrival line „A“). If the forward limit of the tape is positioned within the 5 cm width arrival line the landing is without objection. If the tapes are stuck somewhere above ground level, a plumb bob will be used to assist in accurate measurement.

2.9 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.

2.10 Variables

Variables for determining the Direction of 360 ° and 90° Turn:

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

2.11 Tie breaker

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

2.12 Scoring

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

SCORING EVENT 2 – Precision Hover

INFRINGEMENT	PENALTY POINTS
Each tenth of a second exceeding 2'10" of flight (130 seconds) between lines "D" and „A"	0.1
Violation of the corridor limits, of the short rope per tenth of a second	0.1
Bottom weight lifts off the ground per tenth of a second	0.1
Top weight touches the ground per tenth of a second	0.1
Fall below 15 seconds duration of a hovering 360° turn *	15
Omitting any of the maneuvers	25
Heading changes exceeding 30°, each occurrence	10
Accuracy of landing **	0–120
Double Landing***	25
Slide Landing****	25

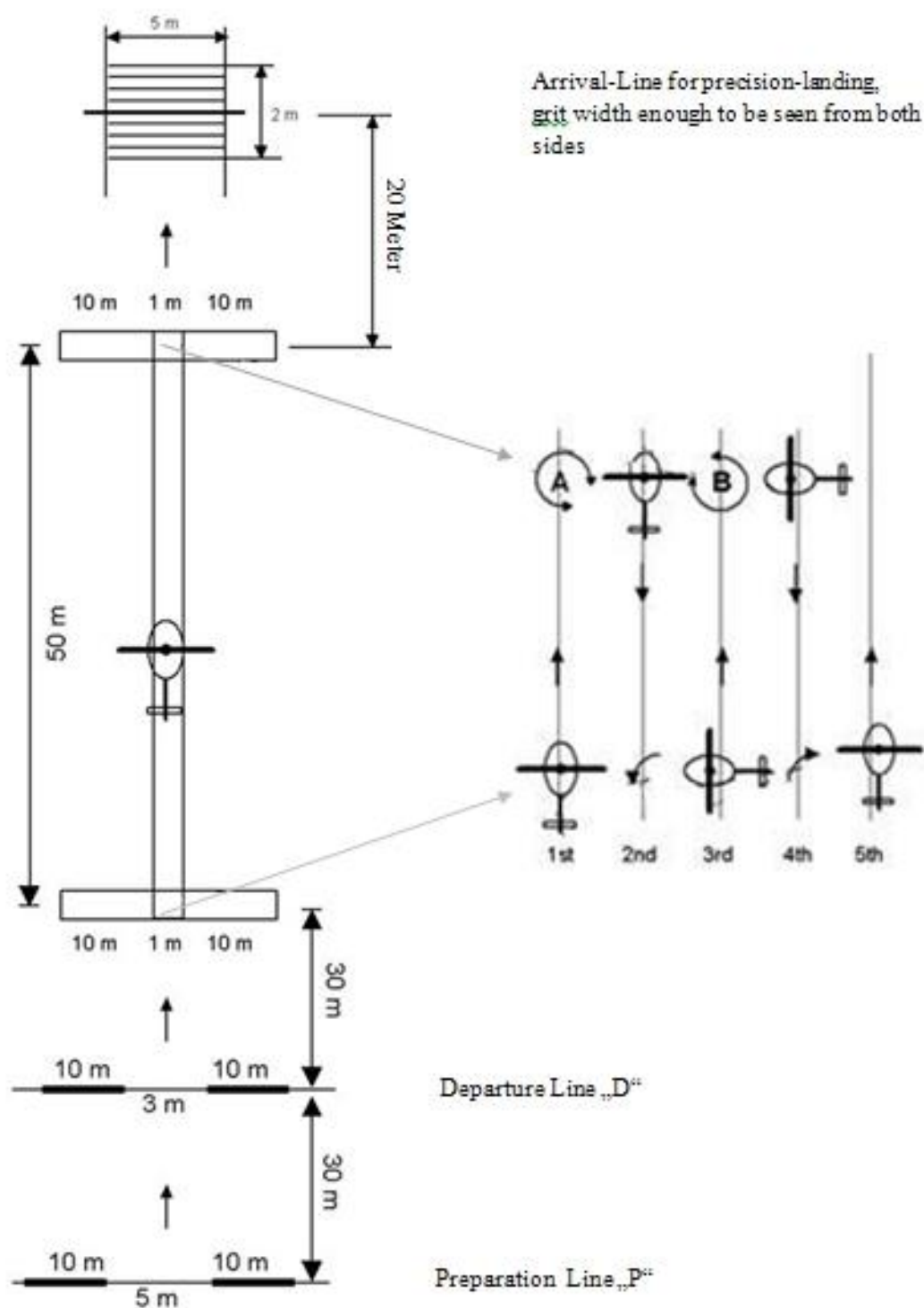
* i.e., turn duration is 14.94 seconds or less.

** 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. Part of a cm should be rounded up to the next full centimeter.

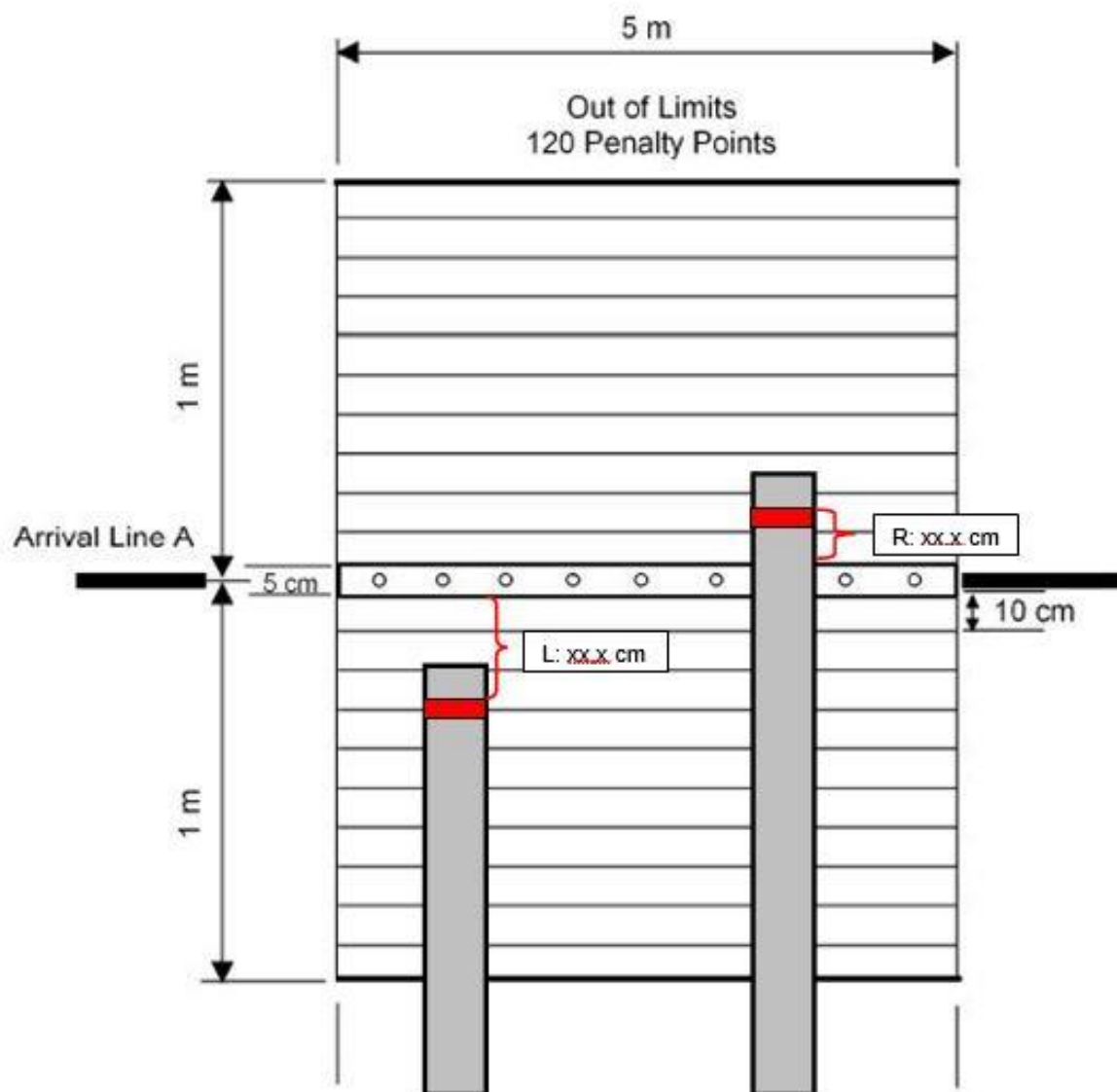
*** After first touching ground with any part – Time Stop – the helicopter rises completely free off the ground before next touch down

**** Visible and measurable forward motion or turn of the fuselage – skids, wheels – after first ground contact

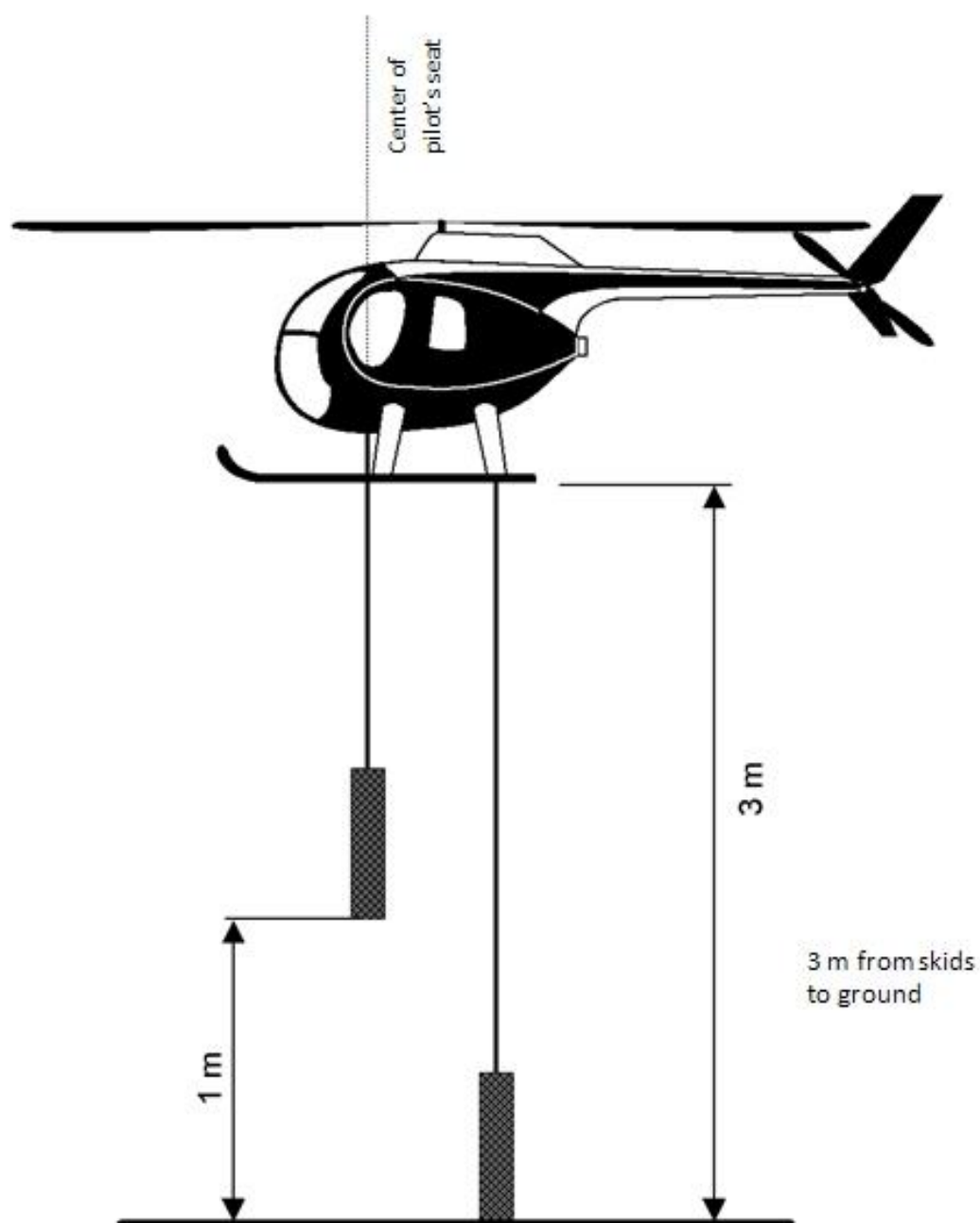
Annex 2.0 - Hover Parcours



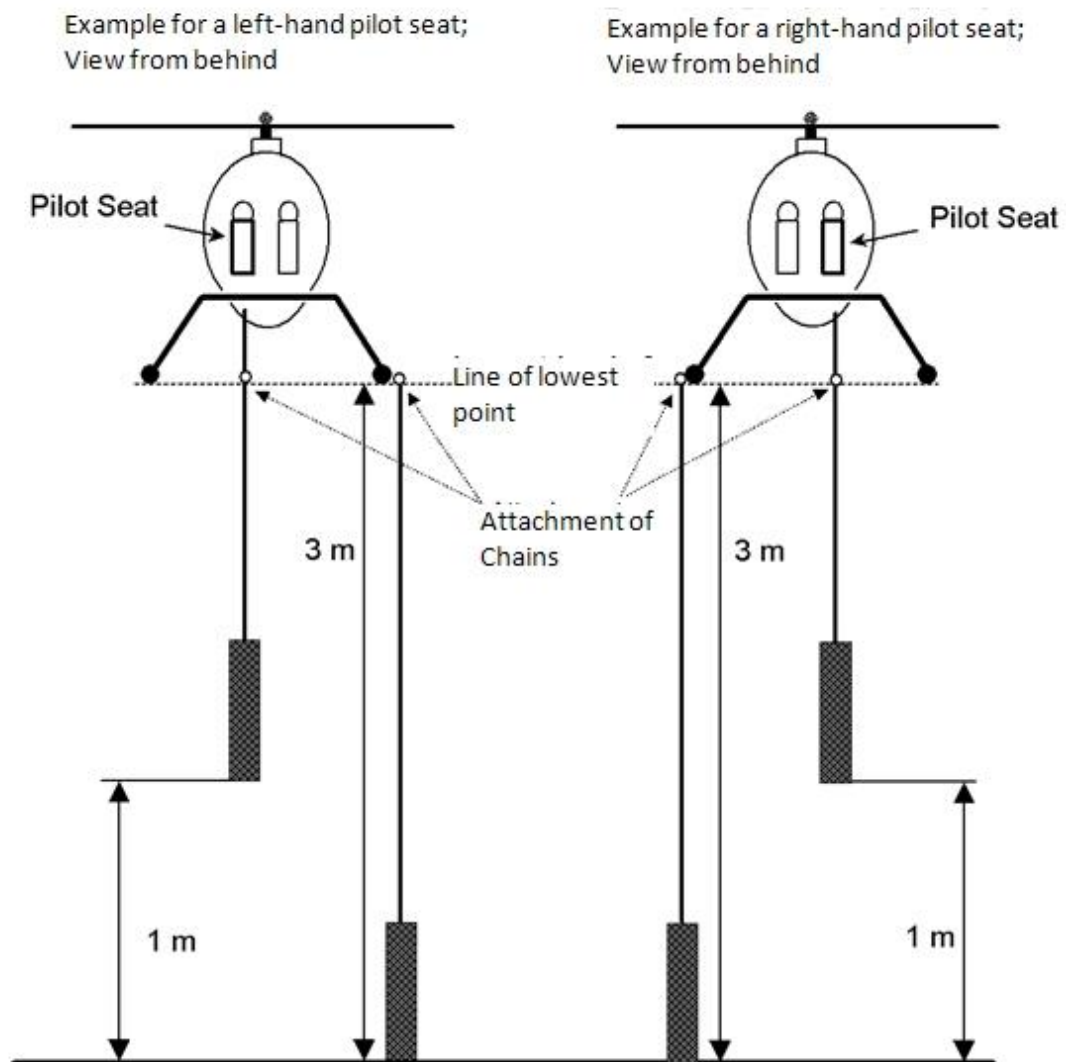
Annex 2.1 Hover-Parcours Landing Line



Annex 2.2 Hover-Parcours Standard length and position of chains



Annex 2.3 Hover-Parcours Attachment of Chains



The long chain is attached on the opposite of pilot seat

It may be attached to the skid or wheel.

The short chain will be attached below the pilot's seat. The attachment-device will be fitted by the crew before event.

3. Event – Parallel Fender Rigging

3.1 EVENT DESCRIPTION

The competition requires precise flying with a load (fender) and a rope length of 4, 6 and 8 meters within a specified flight time and a subsequent lowering of the skittle into the "doghouse". The course consists of an entry gate, three container, an exit gate and a doghouse (see Appendix 3.0). The exact flight times for the first timing up to the hole-in of the fender as well as the order of the tons to be approached and the flight time for the hole-in of the skittle will be announced at the opening briefing.

3.2 GENERAL REQUIREMENTS

The helicopter is flown with the door closed on the pilot's side. The crew must be properly buckled up. The crew member has to assume the normal sitting position and remain buckled in his seat. Both feet must be inside the cabin. At the briefing, the competitors will be given their estimated starting time.

3.3 DEPARTURE LINE

When the starting position is free again, the respective judge waves the next competitor from the preparation line (line P) to the departure line (line D). The helicopter must settle down in front of the departure line. An assistant judge gives the crew member the fender with the rope and a skittle with rope. The fender must first be held on the ground outside of the helicopter. The crew member has to hold the rope by the holding aid above the red flag, whereby both hands must be visible to the judges. When the pilot (or crew member) gives a clear signal "ready to start", the judge gives the competitor the start signal by lowering a flag. The pilot takes off and brings the helicopter to hover height. When the altitude is reached the pilot starts independently. The time for the competition starts when the fender passes gate "D" or its extensions (D-line). A sketch of the parcours can be found in Appendix 3.

3.4 MANEUVERING THROUGH THE COURSE

The crew guides the fender through gate "D" and the entrance gate and then lowers the fender completely into the first container. Before passing line "D", the rope must be completely left out to the correct length and without knots. Maneuvering with the rope is permitted, provided that the rope is not shortened / touched with any part of the body at or below the red flag. After the fender has been lowered into the first container, the crew member has to extend the rope to 6 meters and maneuver it to the second container. There the fender is lowered completely into the second container. The rope has to be extended to 8 meters and maneuvered to the last container, lowered there and let go off the rope. Then the 7 meter long rope with the skittle attached must be completely let out through the exit gate and lowered into the opening of the "doghouse" (see Appendix 3.2). The crew member must hold the handle at the end of the rope so that both hands are visible to the judges. The rope may be maneuvered, provided that the rope is not shortened by a part of the body below the red flag.

3.5 TIMING

The first timekeeping begins when the fender passes gate "D" or its extensions and ends when the crew member has lowered the fender into the last container. Then the second timekeeping begins and ends when the skittle is lowered into the roof opening.

3.6 TIE BREAKER

In the event of a tie, the crew with the most accurate flight time wins.

3.7 SCORING

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

Scoring – Event 3 Parallel Fender Rigging

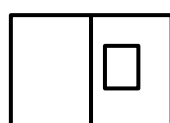
Infringement	Penalty points
For each tenth of a second flown over or under total times limits	0.1 *
Touching the external sides of the container with the fender (each touch)	3
Touching the ground with the fender behind line “D” (for each touch)	10
Fender not fully dropped into the container (for each occurrence)	20
Fender in wrong sequence or wrong rope length lowered (for each occurrence)	20
Rope shortened, or handled below the red flag (for each occurrence)	20
Rope not fully deployed or has knots when passing line “D”	20
Fender misses gate “D”	20
Missing a gate with fender or skittle or too high above poles (each occurrence)	15
Skittle touches the ground (for each occurrence)	5
Skittle touches the roof of the doghouse (for each occurrence)	2
Dropping the skittle beneath the roof	30
Crew not in normal seating position or not harnessed:	50
Fender lost on the course	300

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

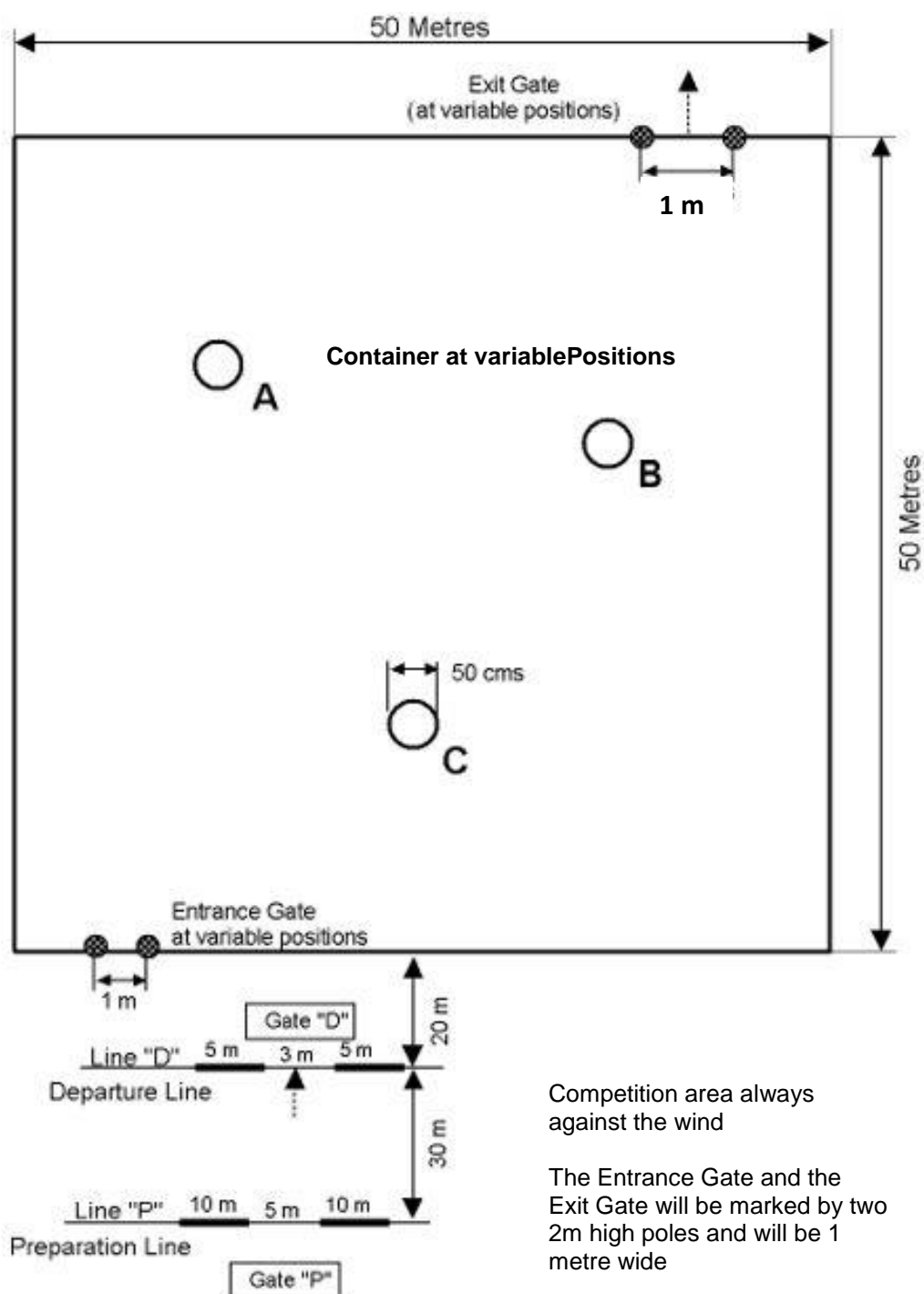
Annex 3.0 Fenderrigging

Not right to scale

Course of Fenderrigging – Example



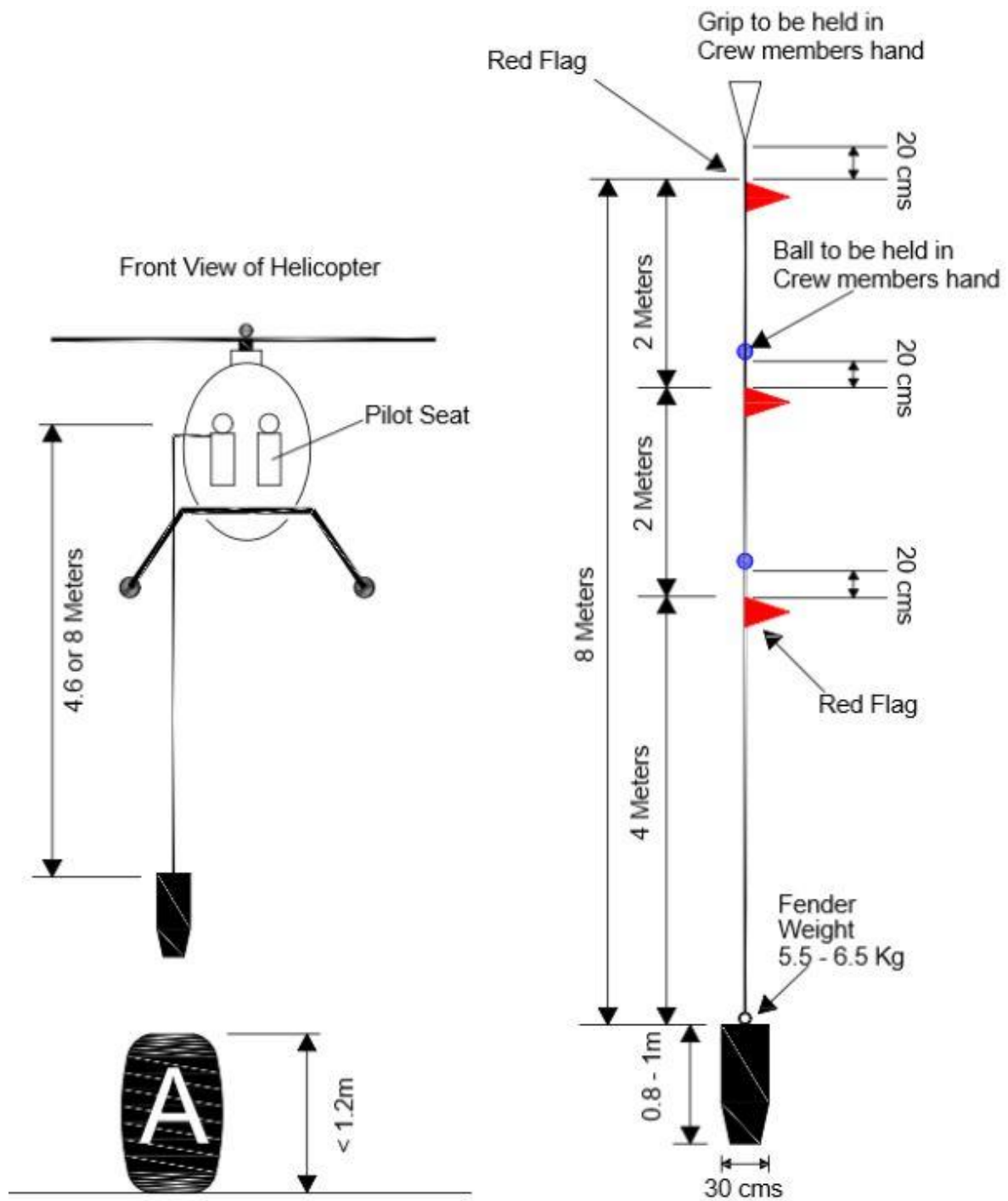
Doghouse
(at variable positions)



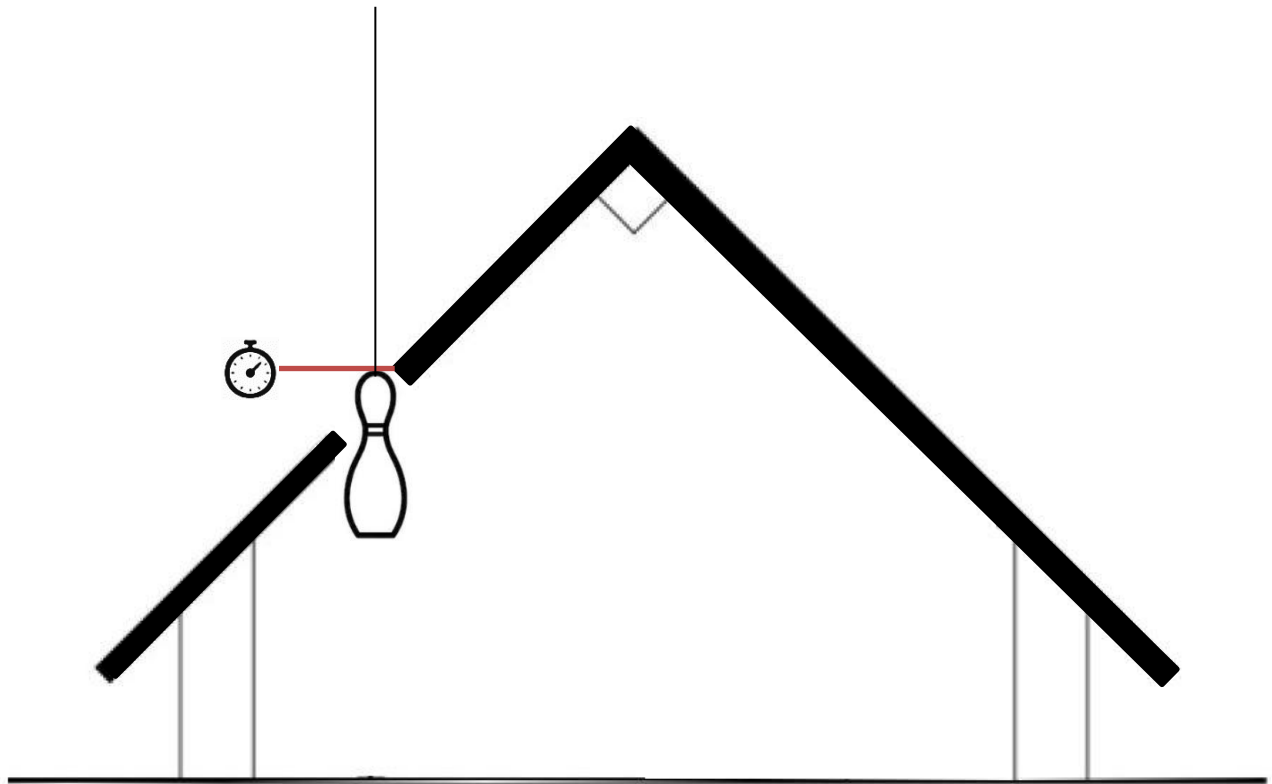
Competition area always
against the wind

The Entrance Gate and the
Exit Gate will be marked by two
2m high poles and will be 1
metre wide

Not to scale



Annex 3.2 Fenderrigging - Doghouse



timing at the Doghouse (Fenderrigging)

4.0 Event - Slalom

4.1 EVENT DESCRIPTION

The competition requires precise flying with a bucket attached to a rope. There are 2 flags on the rope, one at a distance of 3 m above the top edge of the bucket and a second at 5 m. At the end of the rope there is a handle 20 cm above the second red flag. The bucket is maneuvered through 6 gates and back again in reverse order through the first 5 gates and then placed on a table. Gate 6 is only flown through once. The position of gates 2 to 6 is variable. The position of the gates, the exact flight time and the direction of flight through the gates will be announced at the opening briefing. The helicopter is to be flown with the door closed on the pilot's side.

4.2 GENERAL REQUIREMENTS

The helicopter is flown with the door closed on the pilot's side. The crew must be properly buckled up. The crew members have to assume the normal seating position and both legs have to be inside the cabin. At the morning briefing, the competitors are given their time at which the helicopter must be on the preparation line (P-line).

4.3 DEPARTURE LINE

Once the departure position at "D" is clear, the responsible judge signals the next competitor to hover from "P" to land in front of line "D". Assistant-judges hand over the rope with the attached empty bucket. The 9 holes have a diameter of 1 cm. The lower boundaries of the holes are located 4 cm from the top of the bucket (annex 3).

The rope is to be held by the crew member seated opposite to the pilot. The crew must remain seated. The rope will be placed on the floor of the cabin, either inside or outside the skids where fitted.

4.4 START

Upon an indication of ready from the pilot or crewmember the judge will signal the start by dropping a flag. The helicopter takes off from the departure line with the bucket resting on the ground. The rope is to be held above the 3-meter-flag. Next the team flies to the water-container to fill the bucket with water. Any maneuvering of the rope is allowed as long as the rope is not shortened by any part of the body or touched below the red flag. Both hands of the crewmember are to be visible.

After filling the bucket with water the helicopter climbs and the rope is to be lengthened and held at the wooden ball above the 5-meter-flag. Then the team starts to fly the gates.

4.5 COURSE AND GATES

The 6 gates shall be flown in the given order and back to gate 1. The order and direction to fly the gates are published at the event briefing. Arrows on the ground indicate the direction to fly the gates. Gate 6 is flown only once.

A gate is correctly passed, if the upper edge of the bucket passes below the upper end of the poles/gates. If the bucket misses a gate it must be taken back around outside of the poles before another attempt is made. Multiple opportunities to pass a gate correctly are allowed. The judge will score correct- or incorrect gate passage when the bucket is flown to the next gate.

4.6 EXIT AND TABLE

After passing gate 1 the second time the pilot will set course direct to the table. The rope is held by the crewmember at the grip/handle at its end above the red flag. Both hands of the crewmember must be visible. Maneuvering of the rope is allowed provided the rope is not shortened by any part of the body below the upper red flag. The bucket should be put down into the 20 cm centre circle of the target table, in one try, and then the rope is to be dropped.

4.7 TIMING

The Competition time starts when the bucket passes the departure gate and stops when the bucket is placed on the table and the rope is dropped.

4.8 MEASUREMENTS

The water left in the bucket will be measured after the competitor has completed. The measuring will be done on the table. The table is wiped dry after the bucket is removed. Any difference of water level between Departure and Table and the difference of the bucket to the center of the table will result in penalty points.

4.9 TIE BREAKER

If there is a tie for a place, the winning crew is determined by the more accurate flight time or if the time is equal, the higher water level.

4.10 Scoring:

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

SCORING EVENT 4 - SLALOM

INFRINGEMENT	PENALTY POINTS
Each tenth of a second over or under the determined flying time*	0.1
Passing a gate in the wrong direction	10
Missing a gate or bucket over poles	10
Bucket touching the poles, each infringement	3
Rope shortened, has knots or handled below red flags (per each infringement)	15
Bucket outside centre of the target (for each tenth of a cm)	0,1
Water level – per tenth of centimeter missing **	0.1
Placing the bucket outside the target table **	80
Losing the bucket during the course	200
More than one attempt putting the bucket down, per attempt	20
Crew not staying seated or fastened (both hands and legs not visible)	50

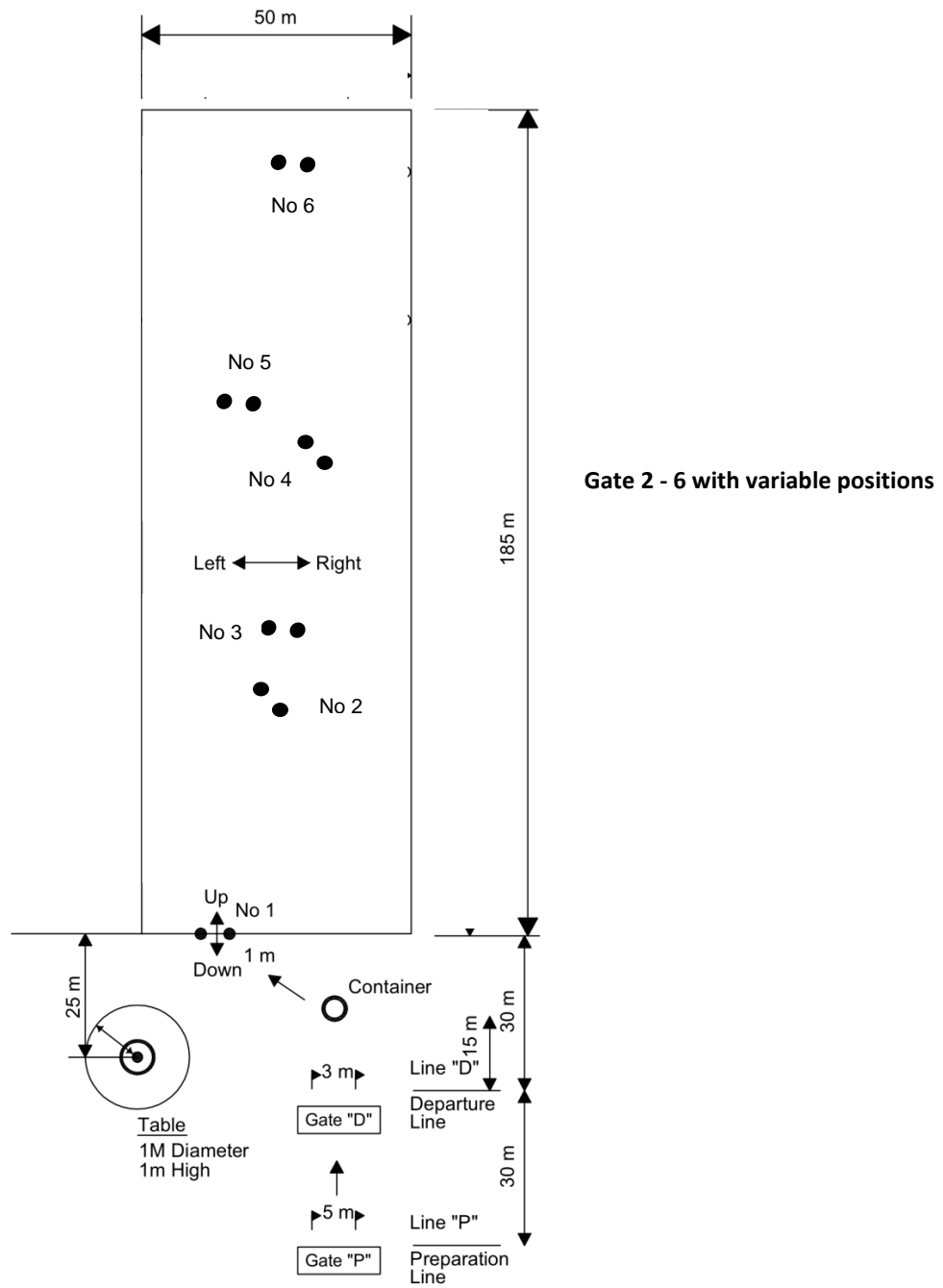
* Disqualification (black flag) if total time exceeds 5 minutes.

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

Measurements of competition area and equipment (see attached annexes)

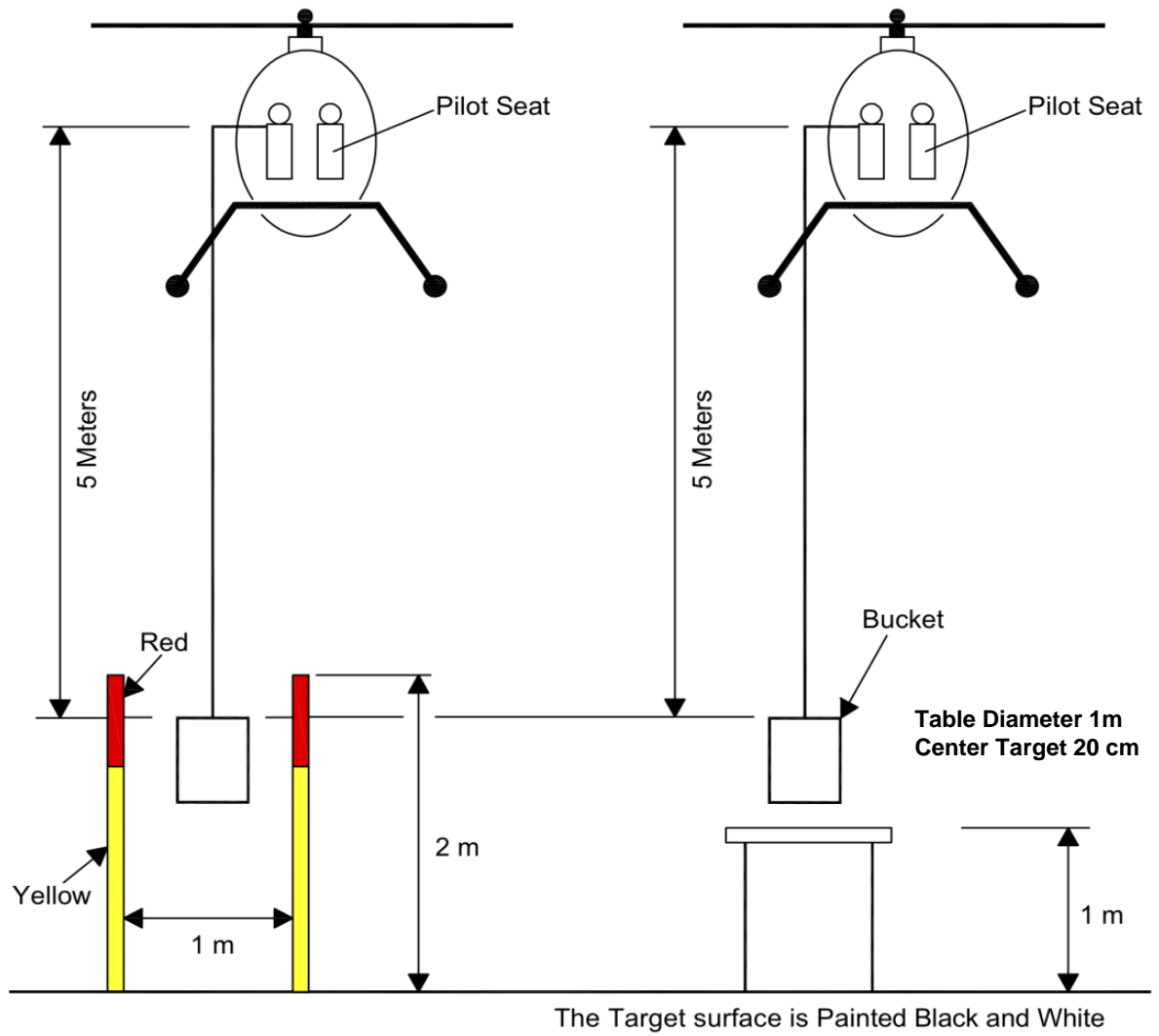
- 6 gates, internal width 1 m, each composed of two 2 m high poles. (annex 4.1)
- A round table, 1 meter diameter and 1 m high. The centre-circle has got a 20 cm diameter.
- A rope which is attached to a bucket is equipped with two red flags. One each flag 3 meter and 5 meter above the bucket. 20 cm above the 5-meter-flag a wooden ball/handle serves as holding aid.
- A bucket (annex 4.2) of break proof material and cylindrical form, containing 4.0 litres +/- 2 % with a maximum total weight of 7.0 kg. Diameter of bucket: 20 cm.

Annex 4.0 Slalom

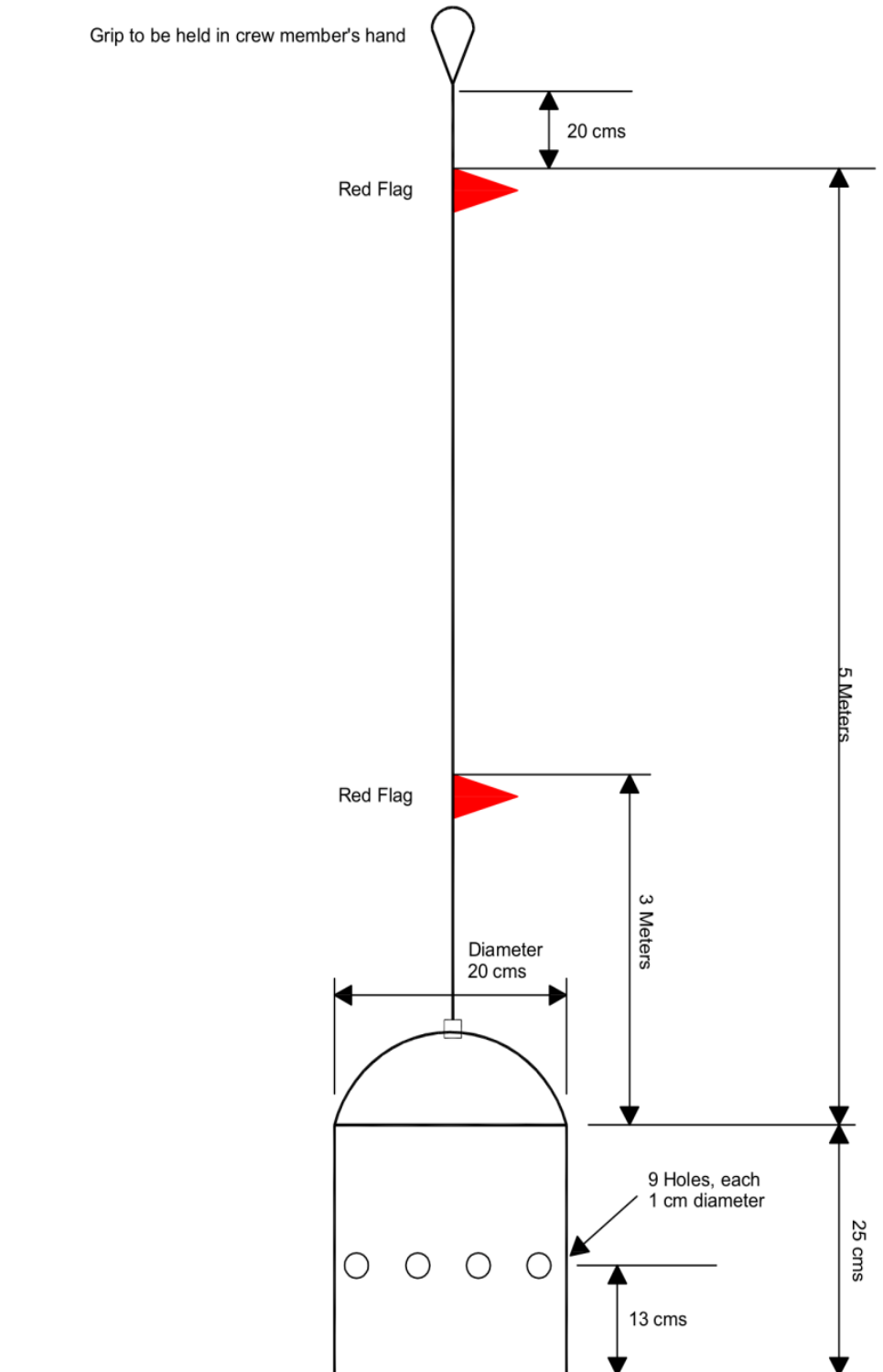


Annex 4.1

Front View of Helicopter



Annex 4.2 Bucket and Rope



ANNEX A

HELICOPTER TYPE AND COMPETITION SPEED

CIG World and Continental Championship
Rules and Regulations

HELICOPTER TYPE	COMPETITION SPEED	COMPETITION SPEED	CRUISE SPEED
	(KTS)	(KPH)	(KTS)
Robinson R22 – HP	64	118	80
Robinson R22 – Alpha	64	118	80
Robinson R22 – Beta	64	118	80
Robinson R22 – Mariner	56	104	70
Robinson R22 – Astro	77	143	96
Robinson R 44-Astro	80	148	100
Robinson R 44-Raven I	80	148	100
Robinson R 44-Raven II	80	148	100
Bell 47	56	104	70
Bell 205 (UN-1H)	80	148	100
Bell 206 I Jet Ranger	80	148	100
Bell 206 II Jet Ranger	80	148	100
Bell III Jet Ranger	80	148	100
Bell 206 Long Ranger	80	148	100
Bell 212	80	148	100
Bell 214	90	166	115
Hughes 300A	60	111	75
Hughes 300B	60	111	75
Hughes 300C	60	111	75
Schweizer 300	60	111	75
Schweizer 300CB	56	104	70
Schweizer 330	72	133	90
Hughes 500HS	80	148	100
Hughes 500C	80	148	100
Hughes 500D or MDHC 500D	90	166	120
Hughes 500 or MDHC 500E or F	90	166	120
Hughes 500 or MDHC 530N or F	90	166	120
Aerospatiale Gazelle	90	166	140
Aerospatiale Ecureuil or ASTAR AS350B	90	166	115
Aerospatiale Ecureuil or ASTAR AS350B2	90	166	120
Aerospatiale Dauphin (HH-65)	90	166	140
Mil Mi – 2	72	133	90
Enstrom F28A	56	104	70
Enstrom F28C or F	64	118	80
Enstrom F280C	64	118	80
Enstrom 280 FX	72	133	90
Alouette II	64	118	80
Alouette III	72	133	90
Eurocopter EC 120	80	148	100
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)

Anhang B

[illegible]

