



# CIG Competition

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*Fédération  
Aéronautique  
Internationale*

**Helicopter Pen  
Challenge  
Rules and Information  
2010 Edition**

Approved by the FAI Rotorcraft Commission (CIG)

In February 2010

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## **FAI on-line helicopter competition**

### **Event 1 - Helicopter Pen**

#### 1.1.0 Event description

The event requires precise flying to manoeuvre a bucket, attached to a 5 metre rope through 3 gates and a "pen". The helicopter will be configured with the pilot's door on & closed, dual controls and crewman's door removed.

Flying times:

- 120 seconds (2 minutes).

#### 1.1.1 Preparation:

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

At a signal from the judges, the helicopter will move and land at the departure line.

The loader will hand over the rope with the attached bucket.

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 maintained on the floor of the cabin, either inside or outside the skids where fitted.

#### 1.1.2 Start:

Upon an indication of ready from the pilot (or crewmember), the starter will signal the start by dropping a flag. The helicopter will take off from the departure line with the bucket resting on the ground, the crewmember holding the rope by the handle. 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 shortened by any part of the body below the red painted ball.

#### 1.1.3 Composition of the course:

The course comprises of a departure gate, an entrance gate, a pen and an exit gate.

The course will be placed as per **Annex 1**; the direction of flight will be indicated in **Annex 1**.

To correctly pass the entrance gate, the top of the bucket must pass below the top of the poles. If an attempt of passing the gate fails, the bucket must go backwards around the outside of the poles before another attempt is made. Multiple opportunities to pass a correctly will be allowed.

The course will be flown in the following order – departure gate to entrance gate to exit gate via the pen.

#### 1.1.4 Pen and Exit Gate

After passing the entrance gate, the bucket will be lowered into the pen and 4 tasks will be performed:

1. 360° turn of the aircraft to the left ( minimum 15 seconds)
2. Lifting the bucket clear of the pen on completion of task 1
3. Lowering the bucket into the pen
4. 360° turn of the aircraft to the right (minimum 15 seconds).

Each turn must take a minimum of 15 seconds

For the purpose of timing, the timing will start at the beginning of the turn and it will be timed from when the top of the bucket is first lowered into the top of the pen.

To complete the course, the bucket must pass through the exit gate.

#### 1.1.5 Timing

The competition time starts with lowering of a flag by the starter at the departure line and the time stops when the bucket passes the exit gate.

#### 1.1.6 Tie Break

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

#### 1.1.7 Scoring

Score is determined by subtracting the Penalty Points from 300. The minimum score achievable is zero. Scores will be posted on the FAI CIG website.

#### 1.1.8 Awards

Annually the winner of the event will be awarded a trophy.

#### 1.1.9 Fees

25 CHF per scored entry per crew.

#### 1.1.10 Competitor requirements.

Crews are to hold valid FAI sporting licences.

### 1.1.11 Challenge organisation & frequency.

All challenges have to be witnessed and scored by an International Judge or NAC CIG representative.

Organisers can hold an unlimited number of challenge events in a calendar year.

The number of scored attempts a crew can make at a challenge event in the same day is 3.

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

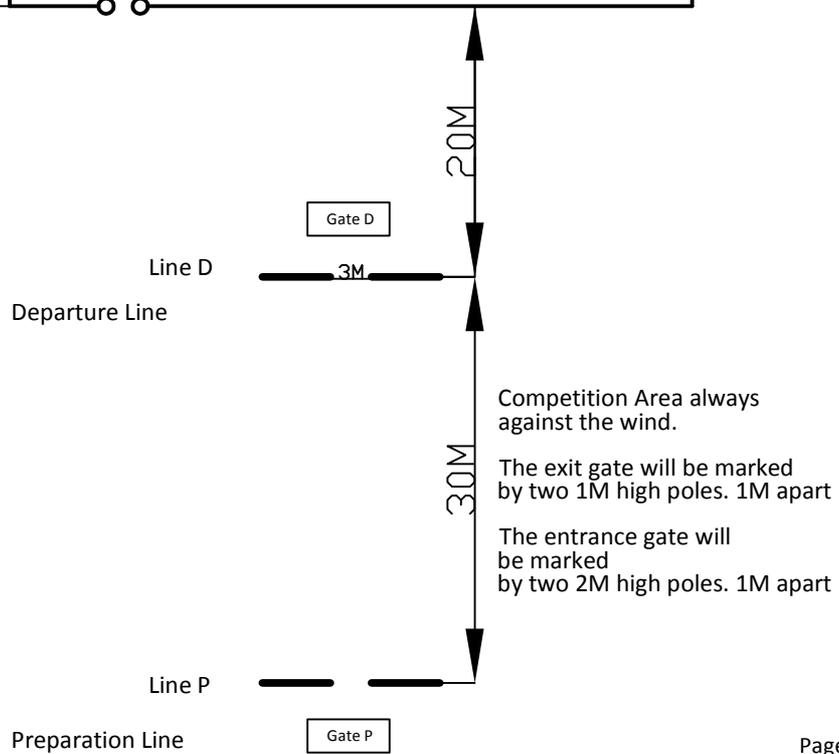
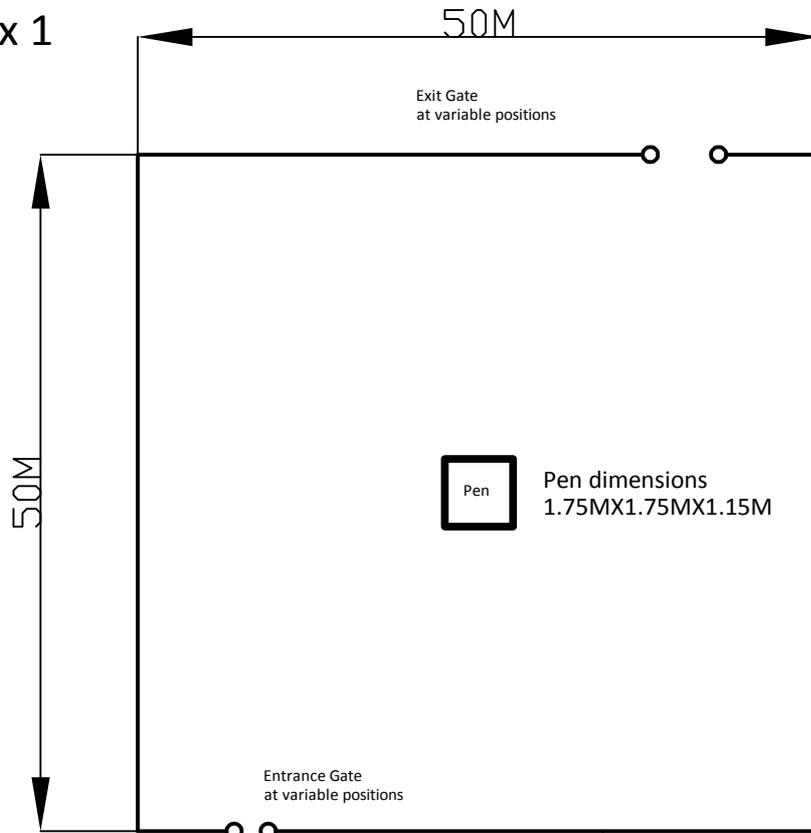
- 50 x 50 metres competition area. **See Annex 1.**
- One departure, gate internal width 3 metres.
- One entrance, gate internal width 1 metre.
- One pen, dimensions 1.75 metre x 1.75 metre x 1.15 metre high. **See Annex 2.**
- One exit gate, internal width 5 metres
- One 5 litre bucket full of water made from break proof material complete with handling aids. **See Annex 3.**

### Penalties

| Infringement  | Penalty points |
|---|----------------|
| Departure before starting signal is given                                   | <b>20</b>      |
| Missing a gate  | <b>20</b>      |
| Each second in excess of 120 seconds  | <b>1</b>       |
| *Missed pen   | <b>100</b>     |
| <b><i>In the pen</i></b>  |                |
| Bucket or rope in contact with tape, per second                             | <b>10</b>      |
| Grounding the bucket, per second  | <b>10</b>      |
| Lifting the top of the bucket above the top of the tape, per second         | <b>5</b>       |
| Rope shortened, has knots or handled below red ball (per each infringement) | <b>50</b>      |
| Turn completed in less than 15 seconds                                      | <b>15</b>      |
| Bottom of bucket not clear of pen between turns                             | <b>30</b>      |
| Crew not staying seated or fastened (both hands and legs not visible)       | <b>50</b>      |

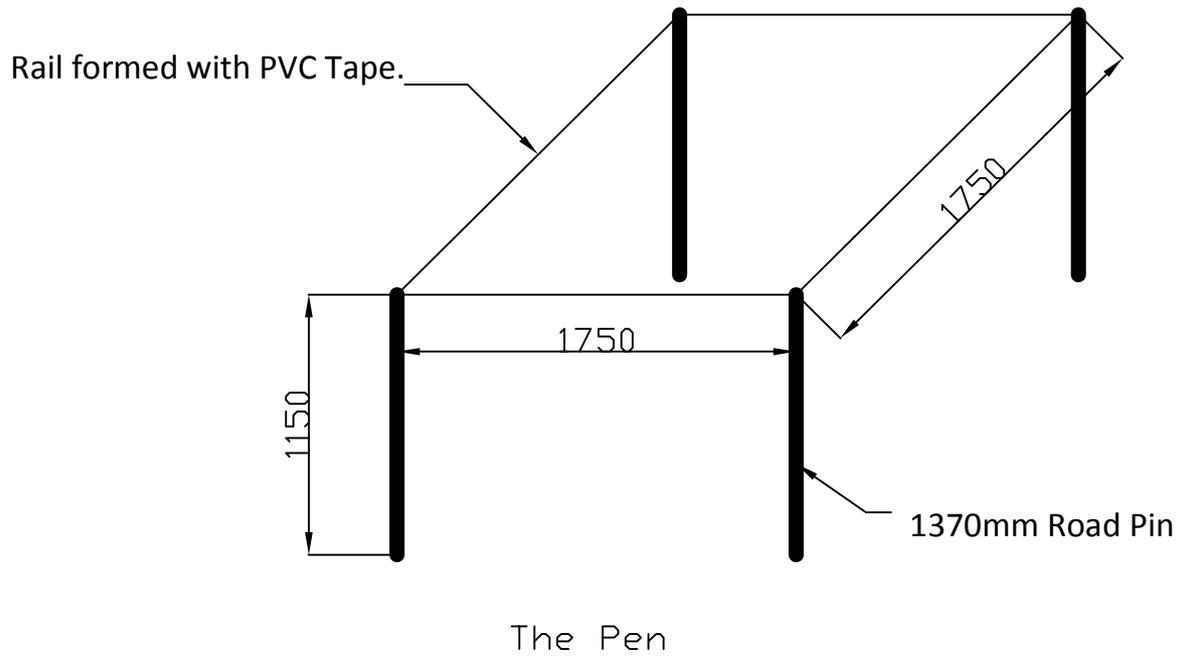
*\*the pen will be deemed as missed if the bucket is grounded, lifted above the tape for more than 180 degrees of a turn.*

# Annex 1

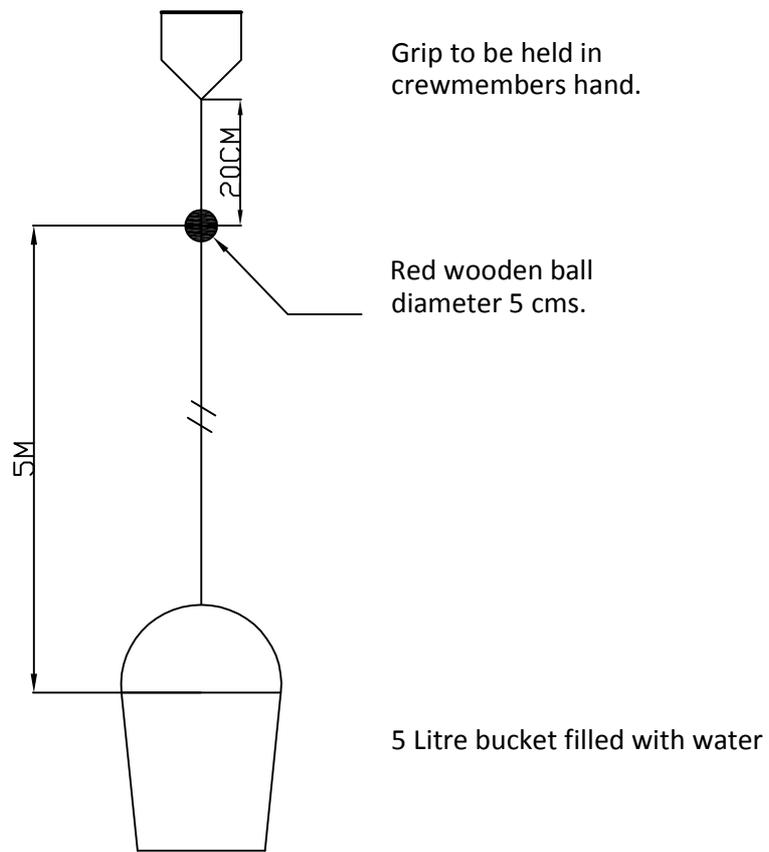


## Annex 2

All Dimensions in mm.



# Annex 3







**FAI ROTORCRAFT COMMISSION (CIG)**

**HELICOPTER PEN CHALLENGE**

**CREW ENTRY FORM**

**1. Pilot Name and Title** .....

FAI. Licence Number .....

Nationality .....

**2. Crewmember Name and Title** .....

FAI. Licence Number .....

Nationality .....

**3. Name of National Aero Club** .....

**4. Contact email address** .....

**5. Location of event** .....

**6. Proposed date of event** .....

***Entrance fees: to be paid to FAI-CIG 25 CHF per crew to be paid in advance.***