

**Approved Competition Rules  
for the  
23<sup>rd</sup> Australian National Hot Air Ballooning  
Championships 2023**



Sanctioned by the



Competition Rules based on AXMER Version 2023

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## ANNEX 1 - ABBREVIATION LIST

Related Documents (latest version):

GS	Sporting Code, General Section
S1	Sporting Code, Section 1
SOH	Safety Officer Handbook
COH	Competition Operation Handbook

Note: Guidelines for software developers and scoring officials are provided in the COH. Furthermore, the Penalty Guide in the COH provides formulas to quickly calculate penalties for PZ infringements.

## **SECTION I - EVENT DETAILS**

### **I. 1 TITLE**

The Event shall be known as the 23<sup>rd</sup> Australian National Hot Air Ballooning Championships 2023.

### **I. 2 SANCTION**

The Event is sanctioned by the Australian Ballooning Federation (ABF).

### **I. 3 ORGANIZATION**

The Event is organised by Northam Ballooning Events Inc.

### **I. 4 CORRESPONDENCE**

All official correspondence should be addressed to:

Northam Ballooning Events Inc.

[northamballooningevents@gmail.com](mailto:northamballooningevents@gmail.com)

Pilot registrations should be addressed to :

Registrar, Northam Ballooning Events Inc.

[nbe.pioltrego@gmail.com](mailto:nbe.pioltrego@gmail.com)

### **I. 5 PERSONNEL**

Event Director : Gary Lacey

Safety Officer : John Wallington

Jury President Gren Putland

### **I. 6 PLACE**

The Event will be held at Northam, Western Australia

### **I. 7 DATES**

The Event will run from Friday 05 May 2023 until Saturday 13 May 2023. The first competition flight will be the morning of Monday 08 May 2023. The last competition flight will be the afternoon of Friday 12 May 2023 unless the minimum tasks under rule 1.2 have not been achieved, in which case the last competition flight will be the morning of Saturday 13 May 2023. The General Briefing is scheduled for 14:30 hrs on Sunday 14 May 2023 at the Shire of Northam Recreation Centre, 44 Peel Terrace, Northam.

### **I. 8 DEPOSIT FEE FOR PROTEST (S1 An3 8.3)**

THE AMOUNT OF THE DEPOSIT FEE TO ACCOMPANY A PROTEST SHALL BE 100 Australian dollars.

### **I. 9 LANGUAGE (GS 4.8.5 part)**

I. 9.1 THE RULES, REGULATIONS AND INFORMATION CIRCULATED TO COMPETITORS OR ISSUED DURING THE EVENT SHALL BE IN ENGLISH.

I. 9.2 Printed material (e.g. Task Data, Meteorological information etc) shall be in English. The language used verbally during briefings shall be English.

I.9.3 In the rules the masculine form is used as a standard. Wherever you find the masculine form, it is implied that the feminine form is included.

**I. 10** (NOT USED)

**I. 11 CLOSING ENTRY DATE**

The closing entry date for the Event was 31 January 2023.

Entries may be accepted after this date if the organizer can and wants to accommodate additional positions.

**I. 12 RISK**

The use of a balloon and other property of a competitor shall be at the risk of the competitor at all times.

**I. 13 INSURANCE**

Each balloon shall be insured against all claims by third parties to a minimum of 2,000,000 Australian dollars. The competitor shall produce documentary evidence of this insurance valid for the period of the Event covering any balloon that he may fly.



**SECTION II - COMPETITION DETAILS****II. 1 CONTEST AREA (7.1)**

The competition map will be published by the Event Organiser. The map datum is Geocentric Datum of Australia 1994 (GDA94). For the purposes of this event, and as documented by the Australian Government, GDA94 and WGS84 coordinates are considered to be the same. UTM coordinates are applied with 1 km grids.

The contest area is the entire competition map. Changes to the competition area may be made by the Event Director at the General Briefing or during the event.

The competition map will consist of a single sheet one copy may be supplied free of charge to each competitor. An electronic version of the map will be available. Extra maps may be available at a cost from the Event Organiser.

**II. 2 OUT OF BOUNDS (7.2)**

Any Out of Bounds areas will be announced at the General Briefing.

The Event Director may make changes during the event.

**II. 3 PZ LIST (7.3)**

A list of PZs will be provided at or prior to the General Briefing.

The Event Director may make changes to the PZ List at the General Briefing or during the event.

**II. 4 COMMON LAUNCH AREA(S) (9.1.1)**

This information will be provided at the General Briefing.

The Event Director may make changes during the event.

**II. 5 COMMON LAUNCH POINT(S) (9.1.2)**

This information will be provided at the General Briefing.

The Event Director may make changes during the event.

**II. 6 LANDOWNER'S PERMISSION (9.2.2)**

A genuine effort must be made to obtain Landowner permission before driving onto or launching from private property. Any complaint by a Landowner will be penalized under Rule 9.2.2.

In addition to Rule 9.2.2 the following applies: Public areas, such as public parks, squares and river sides, are considered as places without need for permission for take-off and landings. Furthermore a take-off without permission may be made from minor roads or tracks if the balloon envelope can be laid out in the adjacent field provided it is freshly harvested and/or not cultivated and no damage is done. The road traffic may not be obstructed.

These instructions maybe subject to change, before or during the event at anytime by announcement of the Event Director.

**II. 7 LIVESTOCK AND CROP (10.6)**

Balloons shall not fly closer than 500 ft from livestock or buildings containing livestock. Competitors should avoid all standing crop and ploughed and sown fields.

**II. 8 DRIVING LAW (10.11)**

The driving laws of Western Australia apply.

**II. 9 AIR LAW (10.14)**

Specific restrictions will be announced at the General Briefing, Task Briefings or by the Event Director at anytime.

All competitors are required to comply with the Air Display Permit issued by the Civil Aviation Safety Authority for this Event.

**II. 10 RECALL PROCEDURE (10.15)**

The recall procedure will be announced at the General Briefing.

**II. 11 VERTICAL SPEED (10.2)**

Any reports by Officials or Pilots of “dangerous flying” will be investigated and penalties may be applied having regard to the Competition Operations Handbook (2023). Please note Rule 10.2.1 regarding vertical speed.

**II. 12 GOALS SELECTED BY A COMPETITOR (12.2)**

A list of waypoints will be published before the Event. A competitor must use a waypoint from this list, unless another method is stated in the task data.

**II. 13 LOCATION OF OFFICIAL NOTICE BOARD (5.10)**

An on-line Official Notice Board (ONB) will be used; it will be at [Watchmefly.net](http://Watchmefly.net) Electronic notifications of postings to the ONB may be made using a text messaging system. A location of a fall-back paper Official Notice Board will be announced at the General Briefing.

**II. 14 COMMUNICATION TIMES (5.3)**

Replies to general inquiries or notification of replies to complaints will be posted immediately as available on the ONB. An electronic notification may be made using a text messaging system. Timing requirements of 5.6.2 will start at the time of the ONB posting.

**II. 15 PUBLICATION TIMES ON THE LAST FLYING DAY (5.6.3)**

All scores, complaints, responses to complaints, protests and jury reports will be posted immediately as available. Electronic notification of postings to the ONB may be made simultaneously using a text messaging system.

**II. 17 DETAILS FOR THE USE OF GPS LOGGERS (6)****a) Logger:**

The Logger used in this Event is the FAI “Balloon Live” app with a connected Balloon Live Sensor. The Australian Ballooning Federation will provide each competitor with a Balloon Live Sensor at check-in. This must be returned in good working order at the end of the event.

The app is available for iOS and Android and must be installed by each competitor beforehand on his own recording device (smartphone or tablet).  
Details and instructions on how to purchase and use can be found on [balloonlive.org](http://balloonlive.org)

**b) Training and Competition Mode:**

Start the app “Balloon Live” > Menu > Change mode  
Select Application Mode

***Training Mode***

To test the app in training flights, the mode “TRAINING” must be used to familiarise with the use of the app. In this mode, no competition data (tracks, declarations and marker drops) is stored.

Press the red button to start a new flight.

**Competition Mode**

To enter this mode you must have paid the required “entry fee” for the relevant competition. When entering competition mode, the latest competition data is retrieved from the server. The device must be online to do this. It is recommended to load the competition data during flight preparation.

The connection of a Balloon Live sensor is mandatory for all flights. Please make sure the sensor is connected using bluetooth before entering competition mode.

To start the flight, the latest flight data must also be loaded from the server. This flight data is valid for 5 hours only. Therefore it is recommended to be online within the last 5 hours before the start of the recording, or just before start, to load the flight data.

Press the red button to start a new flight and transmit the track data to the server.

**c) Preconfigured setup for this competition:**

- Competition name: Australian National Hot Air Ballooning Championships 2023
- Logging interval (seconds): 1
- UTC offset (seconds): 28800
- Allow multiple marker drops: Not allowed
- Allow multiple goal declarations: Allowed
- Declaration format: 4/4
- Altitude mode: Barometric Feet
- GPS Source: Balloon Live Sensor (fallback internal)
- Geodetic system: UTM WGS84

Multiple recording devices may record the flight at the same time. The first started recording will be considered as the primary recording and will be used for scoring.

**d) Handling by competitor:**

- Throughout the event the competitor is responsible for storing, charging, handling as well as the proper functioning of the devices used (phone, tablet, sensor...).
- The Balloon Live app must be started 5-10 min before the intended take-off to allow proper GPS initialization. The recording must also be started at the same time by pulling down the red label.
- The competitor is considered entering the competition flight according to the selected TDS with the start of the track recording and the take off.
- During flight the recording device must remain attached to the basket (uprights or

basket edge) to ensure optimum GPS reception.

- Declarations must be made in 4/4 format unless otherwise stated in the TDS.
- Altitudes do not need to be declared unless otherwise stated in the TDS. Altitudes must be indicated with the minimum needed digits.
- Goal declarations are registered at the time when the DECLARE button is pushed.
- Electronic marker drops are registered at the time when the DROP button is pushed.
- 5-10 minutes after landing track recording must be stopped by pulling down the green label in the Balloon Live app.

For the transfer of the data, please see under point f) below.

**e) Scoring:**

- Unless otherwise stated in the TDS, an electronic mark is mandatory for each task where no valid mark has been achieved by physical marker.
- In case the same logger-goal is declared more than once the last valid declaration will be used.
- If an electronic mark is used more than once, the first mark will be used.

**f) Track data:**

The track data is transferred to the server automatically if a data connection is available during flight or when made available after the flight. To resume the data transfer later after the flight, reopen the app and the transmission will start within a minute. Make sure all track points are sent before closing the app or disconnecting the internet connection of the device. The number of unsent track points is shown at the top right (number next to the cloud with the arrow) and will show 0 when all points are transferred.

The track data remains the property of the competitor but may be made available to the public for live tracking. In such case, explicit permission must be given by the competitor and the publication should have a minimum of 10 min delay.

**g) Recommendations:**

- Only use recording devices in online mode as the accuracy of the recording is increased and the data transferred immediately.
- Use a powerbank to avoid problems with the battery capacity of your device.

Failure to follow the instructions 'Details for the use of GPS Loggers' may be penalized without warning.

**II. 18      DETAILS FOR TIME LIMITS (rest hours) (5.6)**

The hours between 21:00 and 08:00 local time will be disregarded for the purpose of the time limits of complaints and protests. The total rest period per day shall be a minimum of 8 hours and may be divided into two parts, depending on the daylight period.

**II. 19      BALLOON SIZE (3.3)**

The maximum size category for this event is AX8 (3,000 m<sup>3</sup>/105,000 ft<sup>3</sup>).

**II. 20      ASSESSED MARK (12.15.2) (see section IV events with observers)**

Not Used

**II. 21      ALTITUDE (14.6.4)**

Altitude will be measured using barometric altitude corrected for QNH.

**II. 22 2D/3D SCORING METHODS (12.22.2) (for events with logger scoring)**

The separation altitude between 2D and 3D scoring in this event is 1200ft AMSL unless otherwise stated on the TDS.

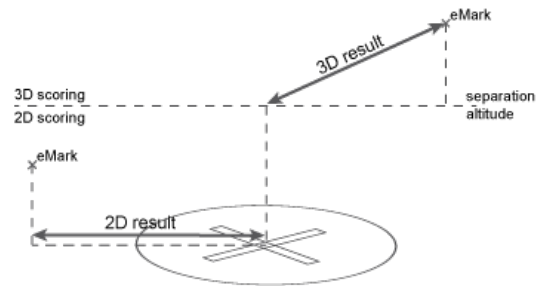
When goals or targets on the ground are used, results based on track points will be the:

- 3D-distance to the point at the separation altitude above the goal/target if the track point or electronic mark is above the separation altitude

or

- 2D-distance to the goal/target if the track point/electronic mark is at or below the separation altitude.

When goals/targets above the ground are used, results based on track points will be the 3D-distance \*>

**II. 23 COMPETITION STRUCTURE (6.1)**

The competition will be conducted using loggers and physical markers. Observers will not be used.

**II. 24 MAP COORDINATES (7.8)**

The basic map coordinate of a UTM map with GDA94 datum is: 50J (Zone reference, where 50=zone and J=latitude band)

478452 (6 digit Easting) 6489081 (7 digit Northing)

To identify a point on the competition map, the coordinates must be written in the following format:

4-4 format: this format uses two times four digits created by removing the first digit from the easting and the first two digits from the northing and leaving out the 1 m digit. (e.g. using the above example 7845-8908).

## **SECTION III - RULES**

### **CHAPTER 1 - OBJECTIVES**

#### **1.1 OBJECTIVES (S1 5.2)**

THE OBJECTIVES OF THE EVENT ARE:

- To determine the Australian National Champion:
- TO STIMULATE THE DEVELOPMENT OF AEROSTATION BY A COMPARISON OF PERFORMANCE OF PILOTS AND AEROSTATS;

#### **1.2 DEFINITION OF A CHAMPION (S1 5.8)**

1.2.1 THE WINNING COMPETITOR SHALL BE THE COMPETITOR WITH THE HIGHEST AGGREGATE SCORE AT THE END OF THE EVENT.

1.2.2 The Australian National Champion shall be a holder of an FAI Sporting Licence issued by the Air Sport Australia Confederation.

1.2.3 FOR A CHAMPION TO BE DECLARED, AT LEAST THREE TASKS MUST HAVE BEEN COMPLETED ON NOT LESS THAN TWO SEPARATE FLIGHTS.

#### **1.3 INTERPRETATION OF ENGLISH WORDING**

1.3.1 **Shall** and **Must** mean the application is mandatory. Failure to comply will normally lead to a penalty, disadvantageous interpretation or other disadvantages.

1.3.2 **Should** means that the application is recommended. Failure to comply may lead to penalties, disadvantageous interpretation or other disadvantages.

1.3.3 **May** means that the application is optional.

#### **1.4 DOCUMENTATION**

If not provided to the Organisers before the Event, the following documents will be inspected when each competitor registers on arrival at the Event.

- a. Pilot Licence (current ABF PPC)
- b. Pilot Log Book showing pilot currency
- c. Balloon Log Book (showing current annual/100 hourly inspection)
- d. Certificate of Airworthiness
- e. Certificate of Registration
- f. Certificate of Insurance
- g. FAI Sporting Licence
- h. CASA Flight Radiotelephone Operator Licence or ABF Radio Operators Certificate
- i. Proof of current ABF membership
- j. Proof of \$2,000,000 AUD aviation insurance policy (minimum).

**CHAPTER 2 - ENTRY CONDITIONS****2.1 COMPETITOR (GS 4.5.2 part, S1 5.5.5)**

2.1.1 A PERSON ENTERED AND COMPETING IN A SPORTING EVENT.

2.1.2 AFTER THE BEGINNING OF THE GENERAL BRIEFING NO CHANGE OF COMPETITOR IS PERMITTED.

**2.2 COMPETITOR'S RIGHTS OF REPRESENTATION (GS 4.7.1, S1 5.1.1)**

2.2.1 A COMPETITOR REPRESENTS THE NAC THAT ISSUED HIS FAI SPORTING LICENCE, UNLESS HE BELONGS TO AN INTERNATIONAL TEAM.

2.2.2 A flight crew and/or passenger flying in the basket, must represent the same NAC as the competitor, or if not holding a sporting license, may not have represented a different NAC in any previous national, continental or world championship or WAG in the previous 5 years.

**2.3 QUALIFICATION (S1 5.6.4.1)**

PILOTS-IN-COMMAND SHALL HAVE BEEN AUTHORIZED TO ACT AS PILOT-IN-COMMAND OF THAT SUB-CLASS OF AEROSTAT FOR WHICH THE EVENT IS HELD, AT LEAST TWELVE MONTHS PRIOR TO THE START OF THE EVENT. EACH PILOT-IN-COMMAND SHALL HAVE ACCUMULATED AT LEAST 30 HOURS AS PILOT-IN-COMMAND OF AEROSTATS OF THAT SUB-CLASS BY THE CLOSING ENTRY DATE.

**2.4 SPORTING LICENCE**

A competitor entering the event must hold a valid FAI sporting licence. He represents the FAI member that issued his FAI sporting licence.

**2.5 ENTRY**

The completed entry form and entry fee for each competitor must reach the organisers by the closing entry date, except in the case of extra places offered by the organisers.

**2.6 ACKNOWLEDGEMENT**

A competitor who has not received an acknowledgement of his entry within seven days after the closing entry date should make inquiries of the organisers.

**2.7 ACCEPTANCE OF SPORTING CODE, RULES AND REGULATIONS (GS 4.10.1)**

THE ENTRANTS AND COMPETITORS ARE REQUIRED TO KNOW, UNDERSTAND, ACCEPT AND ABIDE BY THE SPORTING CODE AND THE RULES AND REGULATIONS FOR THE EVENT, AND BY ENTERING ARE DEEMED TO ACCEPT THEM WITHOUT RESERVATION. THEY SHOULD APPRECIATE THAT THEY REPRESENT THEIR NAC AND THAT THEY SHOULD COMPETE IN A SPORTING MANNER AND THAT THEIR BEHAVIOUR MUST BE BEYOND REPROACH.

**2.8 WAIVER**

By entering the Event, a competitor waives any right of action against the organiser, the owner of any site and their respective members, employees or personnel for any loss or damage sustained by him in consequence of any act or omission on their part, or on the part of other competitors.

**2.9 LIABILITY TO THIRD PARTIES**

By entering an Event a competitor assumes all liability for injury, loss or damage to third parties or their property caused by himself or his crew.

**2.10 SAFETY**

Any meteorological report or forecast, or other safety or navigational information, is provided in good faith for the guidance of competitors. Officials may be appointed to regulate the inflation and launching of balloons. However, nothing shall diminish the responsibility of competitors under this chapter.

**2.11 RESPONSIBILITY (S1 An3 3)**

ENTRANTS AND COMPETITORS REMAIN COMPLETELY RESPONSIBLE FOR THE SAFE OPERATION OF THEIR AEROSTATS AT ALL STAGES OF INFLATION, LAUNCH, FLIGHT AND LANDING. THEY MUST ENSURE THAT THEIR EQUIPMENT, THEIR CREW AND THEIR OWN LEVEL OF SKILL AND EXPERIENCE ARE SUITABLE FOR THE CONDITIONS IN THEIR OWN JUDGEMENT. A COMPETITOR IS RESPONSIBLE FOR ALL THE ACTIONS OF HIS CREW DURING THE EVENT.

**2.12 CONDUCT (S1 An3 4)**

ENTRANTS AND COMPETITORS AND THEIR CREWS ARE REQUIRED TO BEHAVE IN A SPORTSMANLIKE MANNER, AND TO COMPLY WITH THE DIRECTIONS OF EVENT OFFICIALS. INCONSIDERATE BEHAVIOUR OR AIRSPACE VIOLATIONS SHALL BE PENALISED BY THE EVENT DIRECTOR.



**CHAPTER 3 - BALLOON QUALIFICATIONS****3.1 DEFINITION OF A BALLOON (S1 2.1.1.2)**

- 3.1.1 Aerostat - an aircraft lighter-than-air.  
Free balloon - an aerostat supported statically in the air, with no means of propulsion by any power source.
- 3.1.2 SUB-CLASS AX - FREE BALLOONS WHICH OBTAIN THEIR BUOYANCY SOLELY AS A RESULT OF HEATING AIR. THE ENVELOPE MAY CONTAIN NO GASES OTHER THAN AIR AND THE NORMAL PRODUCTS OF COMBUSTION.
- 3.1.3 The use of vents which are designed to propel a balloon is prohibited. Turning vents may only be operated in flight for the purpose of orienting the basket. Prolonged or excessive use of the turning vents is prohibited. Penalty 250 to 500 task points.

**3.2 FUEL**

Each balloon shall carry sufficient fuel to complete the flight with an adequate reserve. Lack of fuel to complete a flight shall not be grounds for protest.

**3.3 NOMINATION OF BALLOON**

Each competitor shall nominate the balloon he is to fly during the Event. No change of balloon may be made after the start of the first task briefing, except as provided in these rules. The maximum size category is AX8 (3000cbm/105000cft).

**3.4 AIRWORTHINESS (S1 5.5.3)**

AEROSTATS FLOWN IN THE EVENT MUST HAVE CURRENT CERTIFICATES OF REGISTRATION AND AIRWORTHINESS, OR IN PLACE OF THE LATTER, AN EQUIVALENT DOCUMENT FROM THE RECOGNIZED AUTHORITY OF THE NATION CONCERNED. THE ORGANIZERS ARE EMPOWERED TO REJECT ANY AEROSTAT WHICH IN THEIR OPINION IS NOT OF A REASONABLE STANDARD OF AIRWORTHINESS.

**3.5 DAMAGE**

- 3.5.1 If a balloon is damaged during the Event, it may be repaired. Damaged components may be replaced or repaired, except that a complete envelope may be replaced only at the discretion of the Director.
- 3.5.2 Any damage to a balloon affecting its airworthiness must be reported to the Director before it is entered for a further flight, and the balloon may only be flown after approval of any repairs. Penalty: up to 1000 competition points.

**3.6 AUTOMATIC FLIGHT CONTROLS (S1 5.9.2)**

ANY DEVICE DESIGNED TO ACT AS AN AUTOMATIC FLIGHT CONTROL IS PROHIBITED, REGARDLESS OF THE SPECIFIC NATURE OF THE DEVICE.

**3.7 ALTIMETER**

Each balloon shall carry a serviceable altimeter.

**3.8 COMPETITION NUMBERS**

The organiser will provide two banners (as specified in the COH) which will be displayed on opposite sides of the basket during tasks. All crew vehicles shall be clearly identified on opposite sides with competition numbers.

**3.9 BASKET**

The term "basket" includes any crew or passenger compartment, regardless of its construction.

**3.10 RETRIEVE**

- 3.10.1 Retrieve Crew shall not be within any MMA or within 100 m radius of a target except with permission and in presence of an official. Crews are not allowed to make permanent marks on an intersection (temporary marks are permitted, e.g. paper).
- 3.10.2 All vehicles used to aid the retrieval of a balloon shall be marked with the competition number.
- 3.10.3 Retrieve vehicles shall not be parked within any MMA or within 100m of a goal/target set by the Director or selected by the competitor.

**CHAPTER 4 - ORGANIZATION OFFICIALS****4.1 EVENT DIRECTOR (GS 5.5.1)**

- 4.1.1 THE EVENT DIRECTOR SHALL BE IN OVERALL OPERATIONAL CHARGE OF THE EVENT. HE SHALL HAVE TECHNICAL OFFICIALS TO ASSIST HIM. THE EVENT DIRECTOR SHALL BE APPROVED BY THE ABF.
- 4.1.2 THE EVENT DIRECTOR IS RESPONSIBLE FOR THE GOOD MANAGEMENT, SMOOTH AND SAFE RUNNING OF THE EVENT. HE SHALL MAKE OPERATIONAL DECISIONS IN ACCORDANCE WITH THE RULES OF THE SPORTING CODE AND COMPETITION RULES. HE CAN PENALISE OR DISQUALIFY A COMPETITOR FOR MISCONDUCT OR INFRINGEMENT OF THE RULES. HE SHALL ATTEND MEETINGS OF THE JURY AND GIVE EVIDENCE IF REQUESTED.
- 4.1.3 In these rules the word "Director" may be used instead of "Event Director".

**4.2 STEWARDS (GS 5.5.2)**

- 4.2.1 STEWARDS ARE ADVISORS TO THE DIRECTOR. THEY WATCH OVER THE CONDUCT OF THE EVENT AND REPORT ANY UNFAIRNESS OR INFRINGEMENT OF THE RULES AND REGULATIONS OR BEHAVIOUR PREJUDICIAL TO THE SAFETY OF OTHER COMPETITORS OR THE PUBLIC OR IN ANY WAY HARMFUL TO THE SPORT. THEY ASSEMBLE INFORMATION AND FACTS CONCERNING MATTERS TO BE CONSIDERED BY THE JURY.
- They advise the Director on interpretation of the rules and regulations and on penalties
- 4.2.2 A STEWARD HAS NO EXECUTIVE POWERS. HE MUST NOT BE A MEMBER OF THE ORGANISING COMMITTEE. A STEWARD MAY ATTEND A MEETING OF THE JURY AS AN OBSERVER OR WITNESS.

**4.3 DUTIES OF THE JURY (GS 5.2.4.1.1, 5.2.4.2.4, 5.2.4.2.5. S1 5.10 part)**

- 4.3.1 MATTERS OF ADVICE, ARBITRATION OR RULE INTERPRETATION, SHALL BE THE RESPONSIBILITY OF THE JURY President, ACTING ON BEHALF OF THE ABF AND HAVING BEEN APPOINTED BY THE ABF.
- 4.3.2 IN ADDITION TO BEING CHAIRMAN AT JURY MEETINGS, THE PRESIDENT HAS THE RIGHT TO REQUIRE THE ORGANISERS TO ABIDE BY THE FAI SPORTING CODE AND THE PUBLISHED RULES AND REGULATIONS FOR THE EVENT. IF THE ORGANISERS FAIL TO DO SO, THE PRESIDENT OF THE JURY HAS THE POWER TO INTERRUPT THE EVENT UNTIL THE SITUATION HAS BEEN REVIEWED BY THE JURY.
- 4.3.3 IF THE SITUATION REMAINS UNSATISFACTORY, THE JURY President HAS THE RIGHT TO REQUEST THE CANCELLATION OF THE EVENT AND GIVE ADVICE ON THE RETURN OF THE ENTRY FEES.
- 4.3.4 A JURY MEMBER MUST POSSESS A THOROUGH KNOWLEDGE OF THE RELEVANT SPORTING CODE AND THE RULES AND REGULATIONS FOR THE EVENT. AT LEAST ONE JURY MEMBER IS TO BE ON SITE DURING COMPETITION OPERATIONS.

**4.4 SAFETY OFFICER (S1 5.11.1)**

- 4.4.1 THE SAFETY OFFICER SHALL BE APPROVED BY THE ABF.
- 4.4.2 THE SAFETY OFFICER SHALL GIVE ADVICE TO THE EVENT DIRECTOR ON ANY MATTERS REGARDING SAFETY. MANDATORY OPERATIONAL PROCEDURES FOR THE SAFETY OFFICER ARE CONTAINED IN THE SAFETY OFFICER HANDBOOK.

**CHAPTER 5 - COMPLAINTS AND PROTESTS****5.1 ASSISTANCE (GS 6.1.3 S1 An3 7.1)**

AT ANY TIME DURING THE EVENT, A COMPETITOR WHO IS DISSATISFIED ON ANY MATTER SHOULD FIRST ASK THE APPROPRIATE OFFICIAL FOR ASSISTANCE.

HE MAY ASK FOR HIS RESULT OR POINTS SCORE TO BE CHECKED, OR THE CALCULATION TO BE EXPLAINED.

IF STILL DISSATISFIED, THE COMPETITOR MAY THEN COMPLAIN TO THE EVENT DIRECTOR OR, WHERE APPLICABLE, DIRECTLY TO THE OFFICIAL CONCERNED.

**5.2 COMPLAINT (GS 6.1.1, S1 An3 7)**

5.2.1 THE PURPOSE OF A COMPLAINT IS TO OBTAIN A CORRECTION WITHOUT THE NEED TO MAKE A FORMAL PROTEST.

5.2.2 A COMPLAINT IS A REQUEST BY A COMPETITOR TO THE DIRECTOR TO INVESTIGATE ANY MATTER IN WHICH THE COMPETITOR IS DISSATISFIED.

5.2.3 A FORMAL COMPLAINT MUST BE SUBMITTED IN ENGLISH IN WRITING AND WILL RECEIVE A WRITTEN REPLY.

5.2.4 COMPLAINTS SHALL BE HANDED OR TRANSMITTED BY THE COMPETITOR TO THE EVENT DIRECTOR OR HIS DESIGNATED OFFICIAL, WHO WILL ACKNOWLEDGE RECEIPT AND RECORD THE TIME OF RECEIPT.

**5.3 COMMUNICATION AND PUBLICATION (S1 An3 7.7)**

REPLIES TO COMPLAINTS SHALL BE POSTED ON THE OFFICIAL NOTICE BOARD AT FIXED TIMES, ANNOUNCED IN ADVANCE BY THE DIRECTOR. THE EVENT DIRECTOR SHALL PUBLISH THE COMPLAINT AND ITS RULING.

**5.5 PROTEST (S1 An3 8)**

5.5.1 IF DISSATISFIED WITH THE DECISION ON A COMPLAINT MADE DURING THE EVENT, A COMPETITOR HAS THE RIGHT OF PROTEST. NO PERSON IS PERMITTED TO PRESENT TWO CONSECUTIVE PROTESTS ON THE SAME INCIDENT. A PROTEST SHALL CONCERN ONLY ONE MATTER.

THE PROTEST MUST BE ACCOMPANIED BY THE PAYMENT OF A PROTEST FEE.

5.5.2 DECLARATIONS OF INTENTION TO PROTEST AND PROTESTS SHALL BE HANDED OR TRANSMITTED BY THE COMPETITOR TO THE EVENT DIRECTOR OR HIS DESIGNATED OFFICIAL, WHO WILL ACKNOWLEDGE RECEIPT AND RECORD THE TIME OF RECEIPT.

5.5.3 A COMPETITOR WHO HAS MADE A PROTEST HAS THE RIGHT TO MAKE A VERBAL PRESENTATION OF HIS CASE TO THE JURY. HE MAY BE ASSISTED BY AN INTERPRETER OR ADVISOR OF HIS CHOICE DURING THIS MEETING.

5.5.4 THE TEXT OF ALL PROTESTS AND THE DECISIONS OF THE JURY SHALL BE POSTED ON THE OFFICIAL NOTICE BOARD.

**5.6 TIME LIMITS (S1 An3 7)****5.6.1 TIME LIMITS FOR COMPLAINTS**

5.6.1.1 COMPLAINTS MUST BE SUBMITTED AS SOON AS POSSIBLE AFTER THE EVENT GIVING RISE TO THE COMPLAINT AND MUST BE DEALT WITH EXPEDITIOUSLY.

5.6.1.2 Complaints concerning scoring must be made to the Director within eight hours of publication of the official scores for a task. The rest hours defined in the competition details will be disregarded for the purpose of the time limits.

5.6.1.3 Publication of a new version of official scores will only extend the complaint time in the matter concerned.

#### **5.6.2 TIME LIMITS FOR PROTESTS**

5.6.2.1 A competitor intending to protest, SHALL, within one hour of the reply to his complaint, DECLARE HIS INTENTION TO PROTEST TO THE EVENT DIRECTOR.

5.6.2.2 Within 8 hours of the reply to his complaint THE COMPETITOR SHALL SUBMIT HIS PROTEST IN ENGLISH AND IN WRITING ACCOMPANIED BY THE PROTEST FEE. The rest hours defined in the competition details will be disregarded for the purpose of the time limits.

#### **5.6.3 SHORTENED TIME LIMITS FOR COMPLAINTS AND PROTESTS (S1 An3 7.6, 8.6 part)**

5.6.3.1 COMPLAINTS MADE ON OR AFTER THE LAST DAY OF THE EVENT, MUST BE SUBMITTED to the Director within one hour of publication of the official scores.

5.6.3.2 PROTESTS MADE ON OR AFTER THE LAST DAY OF THE EVENT MUST BE SUBMITTED within one hour of the reply.

5.6.3.3 The Director shall announce the publication times for all task scores on the last flying day.

5.6.3.4 Time limits applying to scores published after 1300 on the day before the last flying day will also be reduced to one hour on or after the last flying day of the event.

#### **5.7 TREATMENT OF PROTESTS (GS 6.4)**

5.7.1 THE EVENT DIRECTOR MUST PRESENT THE PROTEST TO THE JURY PRESIDENT WITHOUT DELAY. THE PRESIDENT SHALL CALL A MEETING OF THE JURY WITHIN 24 HOURS OF RECEIVING A PROTEST.

5.7.2 THE JURY SHALL HEAR ALL INVOLVED PARTIES ON THE MATTER OF ANY PROTEST, APPLYING THE RELEVANT FAI REGULATIONS AND THE RULES FOR THE EVENT.

5.7.3 THE PRESIDENT OF THE JURY SHALL REPORT THE RESULT AND A SUMMARY OF ANY RELEVANT CONSIDERATIONS IN WRITING TO THE EVENT DIRECTOR WITHOUT DELAY, WHO SHALL MAKE PUBLIC THE PRESIDENT'S REPORT.

#### **5.8 RETURN OF DEPOSIT (GS 6.3.8)**

5.8.1 THE PROTEST FEE IS RETURNABLE ONLY IF THE PROTEST IS WITHDRAWN PRIOR TO THE BEGINNING OF THE EFFECTIVE TREATMENT OF THE PROTEST, OR IF IT IS DECIDED THAT THE PROTEST IS WELL FOUNDED.

5.8.2 ALL NON-REFUNDED DEPOSIT FEES FROM PROTESTS WILL BE SENT BY THE JURY TO THE ABF.

#### **5.9 JURY APPROVAL OF SCORES & PRIZEGIVING (GS 5.4.2.7.2, 4.16.1)**

5.9.1 THE LAST ACTION OF THE JURY President IS TO VERIFY AND APPROVE THE COMPETITION RESULTS OF THE EVENT AND DECLARE THE EVENT VALID PROVIDING IT HAS BEEN CONDUCTED IN ACCORDANCE WITH THE RULES AND THE DECISIONS OF THE JURY.

5.9.2 THE scores OF THE EVENT SHALL BE FINAL ONLY AFTER ALL PROTEST HAVE BEEN DEALT WITH BY THE JURY AND THE JURY HAS CEASED ITS FUNCTIONS. THE FINAL scores MUST BE MADE PUBLIC BEFORE THE PRIZE-GIVING IS HELD.

5.9.3 The Jury President shall verify and sign the final total scores before they are made public.

**5.10 OFFICIAL NOTICE BOARD**

- 5.10.1 The Official Notice Board (ONB) is the place where all results, scores, replies to complaints and protests, and other official communications directly relating to the event will be published. It should be marked OFFICIAL NOTICE BOARD. All information posted shall be dated and timed.
- 5.10.2 The ONB will either be on-line or in paper format.
- 5.10.3 All information posted on the paper ONB will be additionally signed.
- 5.10.4 In case of unavailability of the on-line ONB, a fallback paper ONB will be installed and competitors shall be notified. In case of conflict between the on-line ONB and the paper ONB the paper ONB will prevail.

**CHAPTER 6 – LOGGERS (and Observers)**

**6.1 – 6.8** (see section IV events with observers)

**6.9 GPS LOGGERS**

A GPS logger is a device that logs track and altitude of a balloon. The track points of the log will specify the position (latitude/longitude), the altitude (barometric or GPS altitude) and a time stamp. Devices enabling competitor's input may additionally be available depending on the type of logger. GPS loggers may be used in competition as an observation tool to monitor compliance with the rules, for task setting and for achieving a score or result. Competitors shall comply with the operational instructions on their use.

**6.10 HANDLING**

6.10.1 Rules on the handling of loggers are specified in Section II.

6.10.2 The competitor will take the logger with him after briefing, switch it on and attach it to his balloon before take-off on the appropriate spot.

6.10.3 After landing he will detach the logger, switch it off and return it to the competition centre.

6.10.4 At no time is the competitor allowed to open or interfere with the logger or its operation other than specifically instructed by the Director.

**6.11 FLIGHT REPORT FORM (FRF) (in events without observers)**

6.11.1 A flight report form (FRF) stating the take-off and landing place and time, estimated task results, landowner related issues and other relevant data shall be completed and submitted by the competitor.

6.11.2 Any undue delay in submitting the FRF may be penalised up to 100 task points.

**6.12 RESPONSIBILITY**

The competitor is responsible for any loss or damage between handing over and return of the Balloon Live Sensor.

**6.13 GPS-LOGGER FAILURE**

6.13.1 Reported malfunctions are considered failures only when they can be reproduced after flight. When a failure is found, the officials may ask the competitor to provide his GPS equipment to substitute the missing track information.

6.13.2 In case both the official track log and the competitor's GPS-equipment are not providing the necessary information to establish a result, the competitor will not receive a result based on track points. It is therefore in the competitor's interest to equip himself with a GPS that provides track information usable for scoring (position, altitude and time) and use the same set-up (time interval etc.) as the official logger.

6.13.3 An electronic mark recorded by a competitor's GPS-equipment can only be used if the equipment has been approved by the Director before the flight or specific rules under Section II have been followed. Otherwise the competitor will be scored to his nearest electronic mark of the official logger, nearest physical mark or landing position, whichever is best. A score to a track point will not be made.

**CHAPTER 7 - MAPS****7.1 CONTEST AREA**

An area defined by reference to the Official Competition Map, published at the start of the Event. Tasks will not be set, and results will not be measured, outside this area.

**7.2 OUT OF BOUNDS (OB)**

The Director may define areas or airspaces as out of bounds. Take-Offs or contest landings in OB Areas are prohibited and the competitor will achieve no result in the relevant task. Goal declarations in OB areas or airspaces will be considered invalid. Competitors cannot achieve a valid mark, valid track point or result in OB areas or airspaces.

**7.3 PROHIBITED ZONES (PZs)**

7.3.1 The Director may define airspace or areas as prohibited. A mark or track point inside red, yellow or blue PZ is valid unless the area is defined as OB. The boundaries and, if applicable, the altitude limits in feet AMSL, shall be published in writing for each PZ.

7.3.2 Circular PZs (cylinder or dome shape) shall be defined by the centre point map reference and radius in meters. PZs with natural boundaries shall be defined by marked copies of the competition map to each competitor individually.

7.3.3 There are three classifications of PZs, Red, Yellow and Blue.

7.3.4 A RED PZ is a restricted airspace and will include an upper altitude limit which a competitor shall not fly below. Ground handling is not permitted.

7.3.5 A YELLOW PZ is a restricted area where no take-offs, landings or ground handling are permitted.

7.3.6 A BLUE PZ is a restricted airspace and will include a lower altitude limit which a competitor shall not fly above.

**7.4 PZs IN FORCE**

At each task briefing PZs will be published as in force or not in force for competition purposes in that flight. This does not necessarily describe their operational activity or status for other aviation purposes.

**7.5 PZ INFRINGEMENT**

A competitor violating a PZ in force will be penalised by up to 1000 competition points, proportionally to the offence.

**7.6 MAPS**

A competitor is required to carry a competition map in the basket. All published PZs, whether or not in force for the task, and all OB areas shall be clearly and accurately marked on these maps. An adequate map of aeronautical restrictions must be carried, unless these are also marked on the competition map. A competitor violating this rule will be penalised up to 250 competition points.

**7.7 EARTH TO BE FLAT**

For scoring purposes the earth is flat. Calculations based on the map datum and grid system as specified in section II will be taken as accurate without rounding. Distance calculations will be made in 2D, except for results explicitly defined otherwise.



**7.8 MAP COORDINATES**

To identify a point on the competition map, the coordinates must be written in eight-digit format (First four digits west/east and the second four digits south/north. Easting then Northing) or one of the formats as defined in Section II. For goal declaration of pre-defined goals, the complete goal number of the published list may be used. Penalty for inappropriate but unambiguous declarations is 100 task points.

**7.9 DEGREE REFERENCE**

Unless otherwise stated, directions are expressed in degrees referenced to the grid system printed on the competition map.

**CHAPTER 8 - PROGRAM, BRIEFINGS****8.1 TASK PROGRAM**

The Event will consist of a series of tasks. The number and frequency of the tasks and rest periods are at the discretion of the Director. At the first task briefing on the day before the last planned flying day, the Director shall publish the remaining flying program.

**8.2 VALID TASK (S1 5.9.1)**

8.2.1 A VALID TASK IS DEFINED AS ONE IN WHICH ALL ENTERED COMPETITORS WERE GIVEN A FAIR OPPORTUNITY TO MAKE A VALID TAKE-OFF, UNLESS THEY HAD WITHDRAWN OR HAD BEEN DISQUALIFIED.

8.2.2 The Director has the authority to cancel a task(s) for safety reasons at any time before the official status task scores are published.

8.2.3 Tasks are not valid if less than 50% of the competitors take off.

**8.3 TASK SELECTION**

The Director shall select tasks from those described in Chapter 15. Particular tasks may be set more than once or not at all.

**8.4 MULTIPLE TASKS**

8.4.1 The Director may set more than one task to be performed on one flight. The tasks will be scored separately, with a winning score of 1000 points before penalties for each task. The combination of tasks should aim at the possibility of winning each task independently.

8.4.2 Unless otherwise specified, tasks in a multiple task flight shall be flown in the order indicated in the task data, penalty up to 1000 task points in each task.

8.4.3 When markers are used, dropping the marker(s) of a task inside the set MMA indicates the completion of that task and the start of the follow on task, if applicable.

8.4.4 Competitors missing the MMA or choosing not to drop their marker(s) or when scoring by track points is indicated, are considered flying in the follow on task if they cross the boundary line (area, grid line, arc, etc.) or boundary time of the follow on task.

8.4.5 If electronic marks are used to determine the transition point from one task to another, then their use is mandatory as specified in Section II and/or the General Briefing.

8.4.6 Penalties related to the take off will normally be applied in the first task. Penalties related to the landing will normally be applied in the last task. Other penalties should be applied in the task in which they were incurred unless this is impossible, in which case they will be divided equally over more than one or all tasks.

8.4.7 Unless track points are used, the task data shall specify for each task the marker(s) and/or electronic marks to be used. If no competitive advantage is gained, the penalty for releasing the wrong marker or dropping the wrong electronic mark is 25 task points per task.

8.4.8 If more than the allocated number of physical markers is released and achieve a valid mark in a task, the competitor will be scored by track point. If an electronic mark is dropped more than once, the 1<sup>st</sup> electronic mark in time will be scored.

**8.5 MODIFICATION OF RULES (GS 4.9.1 part)**

8.5.1 COMPETITION RULES FOR A PARTICULAR EVENT SHALL NOT CONFLICT WITH THE RULES IN THE SPORTING CODE. THEY SHALL BE APPROVED IN ADVANCE BY THE ABF AND MUST NOT BE CHANGED THEREAFTER.

8.5.2 The task rules of Chapter 15 are defined as variable rules and changes to those may be made without authorisation.

8.5.3 Variations to task rules shall be notified individually to each competitor in writing.

#### 8.6 GENERAL BRIEFING (GB) (S1 An3 6)

A GENERAL BRIEFING ON THE RULES, REGULATIONS AND MAJOR ASPECTS OF THE EVENT SHALL BE HELD BEFORE THE START OF THE EVENT. ATTENDANCE AT THE GENERAL BRIEFING IS COMPULSORY FOR ALL ENTRANTS, OBSERVERS AND OTHER OFFICIALS. THE OFFICIAL COMPETITORS LIST, COMPILED FROM THE ROLL CALL OF THE ENTRANTS TAKEN AT THE GENERAL BRIEFING, SHALL BE PUBLISHED AS SOON AS PRACTICABLE AFTER THE GENERAL BRIEFING BUT BEFORE THE FIRST TASK BRIEFING. WHERE A JUSTIFIABLE REASON EXISTS, A LATE ENTRY MAY BE ACCEPTED BY THE DIRECTOR IN CONSULTATION WITH THE JURY President, BUT BEFORE PUBLICATION OF THE FIRST SCORES.

#### 8.7 TASK BRIEFING

8.7.1 Task briefings will be called by the Director at times published on the official notice board. Alternative methods may be used as announced in the General Briefing. At the briefing the following information will be given verbally, by written circular or by posted notices.

- a. Meteorological information
- b. Air traffic and safety information (if any)
- c. Task data

8.7.2 Where written information is supplied, adequate study time should be allowed before briefing proceeds (as specified in the COH).

#### 8.8 TASK DATA

8.8.1 At task briefings the task data, preferably in writing, shall be given to competitors. They shall contain flight data related to all tasks and individual task data.

8.8.2 Flight data:

- a. date
- b. official sunrise/sunset
- c. PZs in force
- d. launch area
- e. minimum distance from ILP to all goals/targets set by the director (if applicable)
- f. launch period
- g. provisional time and place of next briefing
- h. solo flight (if directed)
- i. search period
- j. QNH (if needed for logger scoring)

8.8.3 Individual task data:

- a. Marker(s) colour to be used (if used)
- b. Task/Marker order (if other than normal)
- c. Dropping method (if gravity drop directed)
- d. Marker Measuring Area (MMA)
- e. Scoring period, scoring area and/or scoring airspace (if set)
- f. task data as per task rule

#### 8.9 SUPPLEMENTARY BRIEFING

If it should be necessary to publish additional or revised information to competitors at the common launch area, a pink flag will be raised at the signals point. The competitor should attend in person or send a responsible crew member to the signals point. The information will be given verbally and a written copy may be displayed. All competitors will be deemed to have proper notice of the information. Alternatively, an official may circulate a written notice to each balloon and obtain the signature of the competitor or crew member.

**8.10 ENTRY FOR TASKS**

A competitor shall enter a task by answering his name or competition number at the roll call at the task briefing. Alternative methods of checking the competitor's attendance may be used.

**8.11 LATE ENTRY**

8.11.1 A competitor may make a late entry at the signals point with a penalty of 50 task points up to five minutes before the start of the launch period, or 100 task points thereafter. Officials will not be available to give a personal briefing except for Air Traffic, safety matters and PZs.

8.11.2 In tasks where competitors select their own launch areas, late entries shall be made at the Competition Centre.

**8.12 OFFICIAL TIME**

The official time is GPS time corrected for the local time offset.

**CHAPTER 9 - LAUNCH PROCEDURES****9.1 COMMON LAUNCH AREA(S) (CLA)**

- 9.1.1 One or more areas defined by the organiser and used when the task requires all competitors to launch from a common area. A competitor taking off outside the prescribed common launch area will not achieve a result in all tasks of that flight. Once his balloon is inflated a competitor may not move his balloon on the CLA except for safety reasons and only after approval from a responsible official.
- 9.1.2 The COMMON LAUNCH POINT (CLP) is a point in or near the launch area, from which all angles and distances are measured, irrespective of the take-off points of individual balloons.

**9.2 INDIVIDUAL LAUNCH AREAS**

- 9.2.1 Individual launch areas are selected by the competitors. The boundary of the launch area is a circle of 100 meter radius from the position of the basket at the start of hot inflation.
- 9.2.2 Competitors must ensure permission has been obtained from the landowner or occupiers before driving onto, or launching from, any land which is enclosed or cultivated or apparently private or used for agricultural purposes. Penalty for infringement is up to 250 task points.
- 9.2.3 In tasks where competitors select an individual launch area, the INDIVIDUAL LAUNCH POINT (ILP) is the position of the basket at take-off. Unless otherwise stated in the TDS only one take-off is permitted.
- 9.2.4 In tasks where multiple take-offs are allowed, unless the balloon is deflated, the landing position of the discontinued flight is considered the ILP for the next take-off.
- 9.2.5 Individual launch areas shall not be selected outside the contest area. Penalty: no result in the first task of that flight.
- 9.2.6 A balloon inflated in an individual launch area shall not be moved and take off outside of it unless it is deflated, moved to another launch area and re-inflated. Penalty: no result in the first task of that flight.

**9.3 LAUNCH PROCEDURES**

- 9.3.1 The launchmaster may allocate to each competitor a space in which to prepare and inflate his balloon. He has the authority to regulate the operation of all balloons and vehicles on the launch area. Penalty is up to 200 task points.
- 9.3.2 Quick-release tie-offs must be used for all balloons inflating in a common launch area and are recommended in individual launch areas.

**9.4 VEHICLES**

- 9.4.1 Not more than one vehicle per balloon may be present in the launch area during the launch period. Penalty 100 task points.
- 9.4.2 Vehicles must be driven at suitably reduced speeds within the launch area. The Safety Officer and the launchmasters may bar from the area any vehicle that is driven inconsiderately.
- 9.4.3 No vehicle may enter the launch area after the advance yellow warning flag has been raised except by permission of a launchmaster. Penalty 100 task points.

**9.5 COLD INFLATION**

Burners may be briefly tested and cold air may be introduced into envelopes for rigging and inspection, but before permission for hot inflation has been given, there must be no hot inflation, no use of powered fans, and no part of the envelope fabric may be more than two meters off the ground. Fans may be tested or used before the launch period until a flag of any colour has been raised. This rule does not apply to ILA.

**9.6 SIGNALS POINT**

One or more points at the launch area at which flag signals are displayed and competitor's task declarations, late entries and supplementary briefings take place. Competitors are responsible for keeping observation on the signals point, and its obscuring shall not be grounds for complaint.

**9.7 LAUNCH SIGNALS**

9.7.1 Coloured flags shall have the following meanings when displayed at the signals point:

RED	No take-off permitted. Any previous permission to take-off cancelled.
GREEN	Permission to all balloons to begin hot inflation.
BLUE	Permission to 'blue' wave (odd numbered balloons) to begin hot inflation.
WHITE	Permission to 'white' wave (even numbered balloons) to begin hot inflation.
YELLOW	Five minute warning.
PINK	Supplementary or amended briefing information available.
BLACK	Task cancelled.
VIOLET	Reserve: meaning as declared at task briefing.

9.7.2 An audible signal may be given to draw attention to changes of flag signals.

**9.8 PUBLIC ADDRESS**

Unless the Director has specified at the flight briefing that the public address system will be used, any information given over the public address system is of no effect for competition purposes.

**9.9 LAUNCH PERIOD**

Take-off may not be made before or after the launch period. Any take-off made outside the launch period, except under rule 9.12, will be subject to a penalty of 50 task points per minute or part minute early or late. The yellow warning flag will be raised 5 or more minutes before the end of the launch period.

**9.10 OBSTRUCTION**

Once his balloon is fully inflated a competitor may not unnecessarily remain in position where his balloon obstructs another.

**9.11 ADEQUATE TIME**

A competitor who is given permission to begin hot inflation 20 or more minutes before the end of the launch period is deemed to have adequate time, even if the launch period is curtailed for any reason.

**9.12 EXTENSION OF TIME**

A competitor may request an extension of time from the launchmaster. The launchmaster may grant an extension if he is satisfied that the competitor was delayed by the action of officials or other competitors, or by other causes outside his control (equipment malfunction excluded).

**9.13 LAUNCHING ORDER**

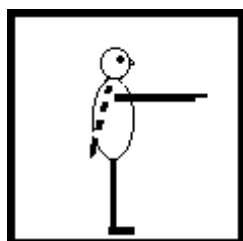
Balloons may be allotted an order of priority for inflation, which will be rotated from one task to the next. Competitors may commence hot inflation according to the flag signal or when given individual permission by a launchmaster.

**9.14 LAUNCH MASTERS**

- 9.14.1 Launch masters are officials designated by the Director to regulate the operation of all balloons and vehicles on the launch area and to assist in launching of balloons from CLAs.
- 9.14.2 The Director can make the use of launch masters compulsory for all competitors or optional.

**9.15 PROCEDURES WHEN LAUNCH MASTERS ARE COMPULSORY**

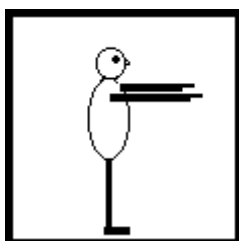
- 9.15.1 When a competitor is completely ready for take-off, and has positive buoyancy, he should wave a white flag to indicate his readiness to the launchmaster. When the launchmaster has acknowledged this signal, the competitor should leave the flag displayed on the edge of the basket and await further instructions while maintaining his readiness to take off. The launchmaster will, as far as possible, launch balloons in the order of signalling their readiness. Competitors should equip themselves with a suitable white flag about 50 cm square for this purpose.
- 9.15.2 To avoid congestion, extension of time will not be granted when competitors wave their white flag within the last ten minutes of the launch period.
- 9.15.3 The launchmaster will give each competitor permission to take-off according to the signals as published. The competitor may then take-off at will, subject to any instructions from the launchmaster at the time.



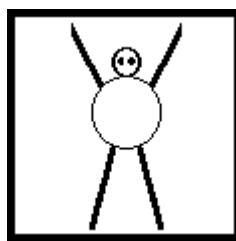
I acknowledge your white flag.



Stay on ground; follow instruction of my right hand.



I'm going to clear you for take-off.



Clear for take-off



Cancel all previous instructions. Wait.

- 9.15.4 This permission does not relieve the competitor of complete responsibility for his take-off, including adequate lift to clear obstacles and other balloons, and to continue safely in flight. A competitor taking off without permission, whether due to loss of control or any other reason, may be penalised up to 500 competition points
- 9.15.5 If the balloon does not take off within 30 seconds, permission to take off may be cancelled by the launchmaster.

**9.16 PROCEDURES WHEN LAUNCH MASTERS ARE OPTIONAL**

When a competitor is completely ready for take-off, he should have an experienced crew member advise him when the airspace above and upwind is clear for launch. Alternatively he may ask an available launch master to clear him for launch.

**9.17 LOSS OF CONTROL**

A competitor losing control of his balloon shall deflate immediately or take appropriate action.

**9.18 TAKE-OFF (S1 3.2, 3.3)**

THE POINT IN POSITION AND TIME AT WHICH AN AEROSTAT FIRST BECOMES AIRBORNE.

AN AEROSTAT IS AIRBORNE WHEN ITS ENVELOPE, GONDOLA, CREW AND ALL SUBSTANTIAL PARTS OF ITS EQUIPMENT AND PAYLOAD HAVE NO CONTACT WITH THE GROUND OR WATER SURFACE OR ANYTHING ATTACHED OR RESTING ON THE GROUND OR WATER.

**9.19 VALID TAKE-OFF**

A balloon is considered to have taken off and to be flying the task(s) if a mark has been achieved or if the balloon passes over the boundary of any launch area.

**9.20 ABORTED TAKE-OFF**

9.20.1 A competitor may abort his take-off for safety reasons but must avoid the obstruction of other balloons. He may attempt further take-offs inside the Launch Period.

9.20.2 At a common Launch Area he must inflate in his originally allocated space, except by permission of the launchmaster, and must again obtain permission to take off.

**9.21 CLEARING LAUNCH AREA**

Within three minutes of his basket first leaving the ground a competitor shall have passed over the boundary of the launch area or shall have climbed to 500 feet above ground level, regardless of the end of the launch period. He shall not re-enter the launch area below 500 ft before the end of the launch period or until after all balloons have taken off, whichever is earlier.



**CHAPTER 10 - FLIGHT RULES****10.1 BALLOON COLLISION**

10.1.1 When two balloons are converging in flight, both competitors are responsible to avoid collision. The competitor of the higher balloon shall give way and shall climb if necessary. A basket to envelope contact will be penalized regardless of vertical approach speed.

10.1.2 Competitors shall not initiate or maintain a vertical speed exceeding 1,5 m/s (300 ft/min) unless they are certain that no balloon is in their flight path.

10.1.3 Competitors causing a collision, in the air or on the ground, will be penalised by up to 1000 competition points.

The penalty will be doubled for each repeated offence in subsequent flights and the competitor may be grounded for the next flight(s).

10.1.4 Envelope to envelope contact in approximate level flight will generally not be penalized.

10.1.5 In case the competitor suffering the collision is not able to fly further tasks after the collision, the Director may award him points for the lost tasks in that flight. (COH)

**10.2 DANGEROUS FLYING**

10.2.1 Dangerous flying (e.g. any flying creating an unnecessary risk to other balloons, or people on the ground), not necessarily causing a collision, will be penalized up to disqualification from the event. The penalty will be doubled for each repeated offence in subsequent flights and the competitor may be grounded for the next flight(s).

10.2.2 Exceeding the vertical speed limits as defined in Section II will be penalized in accordance with the parameters published and may additionally be penalized under 10.2.1.

**10.3 CLEARING GOAL/TARGET AREA**

A competitor who has dropped his marker shall clear the vicinity of the goal/target as quickly as reasonably possible.

**10.4 DROPPING OBJECTS**

No object may be dropped from the balloon except for official markers, or small pieces of paper or similar lightweight materials for navigational purposes.

**10.5 BEHAVIOUR**

Competitors are required to fly with proper consideration for persons and livestock on the ground and to follow good landowner relations etiquette or code of conduct when provided. Inconsiderate behaviour by competitors or crew members, or endangering the public during flight, may be penalised by up to 1000 competition points.

**10.6 LIVESTOCK AND CROP**

Balloons shall not fly closer than defined in Section II from livestock or buildings containing livestock, and competitors and crews must not damage crops unless given permission by the landowner or person responsible for the crop. Penalty: up to 1000 competition points.

**10.7 LANDOWNER**

In these rules the term "Landowner" means the person who is responsible for any crop or livestock on the land, not necessarily the legal owner of the land itself.

**10.8 COLLISION**

A competitor whose balloon is in collision with power or telephone wires or their

supports, at any time between inflation and completion of final landing will be penalised up to 500 competition points. Collisions may additionally be penalised under the rule for dangerous flying.

#### **10.9 PERSONS ON BOARD**

- 10.9.1 Competitors may carry other crew during a flight, and they may perform any duties he wishes to assign to them, except to act as pilot-in-command.
- 10.9.2 The total number of persons on board (including competitor) shall not exceed 3.
- 10.9.3 Competitors may be required to perform a particular flight "solo" as specified in the task data. Penalty: the competitor will not achieve a result.

#### **10.10 GROUND CREW**

- 10.10.1 Crew are those persons associated with the launch and retrieval of the balloon and those providing the pilot with information about the tasks such as weather, position of other balloons during the competition. They can act for several balloons but must be registered with a particular pilot or group of competitors. Those registered for a group of competitors will then be considered a crew member of each team associated with that group.
- 10.10.2 Not Used.
- 10.10.3 Each competitor shall ensure that he has sufficient crew to operate his balloon and retrieve vehicle. He shall ensure that all those involved with his balloon are adequately briefed on safety.

#### **10.11 DRIVING**

Vehicles must be driven safely during the retrieve and comply with local driving laws. Penalty up to 500 competition points

#### **10.12 DISEMBARKATION**

No person may enter or leave the basket between take-off and final landing.

#### **10.13 ASSISTANCE**

The use of handling lines or any handling assistance from persons on the ground is forbidden during flight.

#### **10.14 AIR LAW**

Infringements of air law which do not contravene the rules of the Event or provide competitive advantage will not be penalised by the Director except in cases of damage, disturbance or reasonable complaint from persons not connected with the Event.

#### **10.15 RECALL PROCEDURE**

The organiser may introduce a recall procedure to be defined in the competition details.

**CHAPTER 11 - LANDINGS****11.1 LANDINGS**

A competitor may land at will when he has completed all tasks during flight.

**11.2 LANDING AT WILL**

11.2.1 When a competitor makes a landing at will, the landing point is the final resting place of the basket after landing.

11.2.2 Unless otherwise stated in the task data, a landing at will is not permitted within a MMA where a target is displayed or if no MMA is set, within 200 meters of any goal/target set by the Director or selected by the competitor or any physical mark of the competitor (for penalty see distance infringements).

**11.3 CONTEST LANDING**

11.3.1 The scoring position for a contest landing is the final resting place of the basket. Published scoring periods and search periods apply.

11.3.2 No handling assistance may be received from anyone on the ground and no one of the flight crew may leave the basket before the basket has reached its final resting place.

11.3.3 Any retained marker must be handed over to an official at the earliest opportunity.

11.3.4 Unless otherwise stated in the task data, a contest landing is not permitted within 200 meters of any goal/target set by the Director or selected by the competitor or within a MMA (for penalty see distance infringements).

**11.4 GROUND CONTACT 1**

After passing over the boundary of any launch area, no part of the balloon or anything attached to it may make solid contact with the ground or water surface or anything resting on or attached to the ground, until the last task has been completed. Penalty for each contact is 200 task points.

**11.5 GROUND CONTACT 2**

No part of the balloon or anything attached to it may make contact with the ground or water surface or anything resting on or attached to the ground (marker excepted), within the Marker Measuring Area, if set, or within 200 meters of any goal/target set by the Director or selected by the competitor. Penalty for each contact is 100 task points if light or 500 task points if solid. The penalty is applied to the task of the goal/target involved.

**Notes:**

- Competitors will not be penalised under both rules for any single contact.
- A contact is solid if it is prolonged or results in a change of motion of the basket or the envelope.

**11.6 PERMISSION TO RETRIEVE**

Competitors must ensure that permission has been obtained from the landowner or occupier before driving onto any land which is enclosed or cultivated or apparently private or used for agricultural purpose. Penalty up to 250 task points.

**CHAPTER 12 - GOAL, MARKER, TRACK POINT****12.1 GOAL**

- 12.1.1 A place defined by grid reference to the competition map, set by the Director or chosen by a competitor.
- 12.1.2 A competitor arriving at an expected goal that was rebuilt or moved, should aim for the closest replaced goal within 100 m. If the goal has ceased to exist and no similar goal is seen within 100 m, the competitor should aim for the coordinates. These coordinates will also be taken to calculate/measure any other related tasks of that flight.
- 12.1.3 The Director may provide a list with predetermined goals. The goals are numbered by a 3-digit list number followed by the map coordinates.

**12.2 GOAL SELECTED BY A COMPETITOR**

The types of goals allowed for goal declarations by competitors must comply with the TDS and Section II.

**12.3 DECLARATIONS BY COMPETITORS**

- 12.3.1 A competitor shall identify his goal by map coordinates. He shall add descriptive detail to distinguish between possible goals located close together near his coordinates. For goal declaration of pre-defined goals the 3-digit goal number may be used.
- 12.3.2 In case of ambiguity between more than one valid goal within 200 m of the coordinates, the goal achieving the least advantageous result will be placed upon a competitor's declaration. If there is no valid goal shown on the map within 200 m of the coordinates, the competitor will not achieve a result
- 12.3.3 A goal declaration violating the restrictions of Section II or the TDS will be considered invalid and the competitor will not achieve a result. In case the competitor is allowed to declare more than one goal in a task and one or more goals are invalid, the competitor will be scored to the nearest valid goal if any.
- 12.3.4 In tasks where a competitor is required to declare his goal(s) or other declarations according to the TDS, he shall do so in writing and his declaration shall be deposited before declaration time at the place of the declaration box specified in the briefing data, clearly identified with his name and/or competition number. If more goals or declarations are made than permitted, the competitor will be scored to the least advantageous valid goal.  
A competitor who wishes to revise his declaration may deposit a further declaration, within the declaration time, provided that it is clearly marked to distinguish it from any previous declaration(s).  
The timekeeper will close the declaration box precisely at the declaration time, and will accept late goal declarations, writing the time in minutes and seconds on each.
- 12.3.5 Penalty for late declarations that have to be made by a specified time before take-off is 50 task points per minute or part minute late.  
If the competitor fails to declare before take-off, he will not achieve a result.
- 12.3.6 If a declaration may be made in flight - before a defined time, point or boundary - and the competitor fails to do so, the declaration will be invalid.
- 12.3.7 Goals not meeting distance or relative altitude limitations will be scored according to the rule on distance infringements. Declarations not meeting boundaries or absolute altitude limits will be invalid.
- 12.3.8 If the competitor doesn't have a valid declaration he will not achieve a result.
- 12.3.9 All declarations made before TO will be assumed at TO, in time, position and altitude for any limit verifications.

**12.4** (NOT USED)

**12.5 TARGET**

A prominent cross (as specified in the COH) displayed in the vicinity of a goal or at a specified coordinate. Where a target is displayed, any measurements are made from the target, not from the goal. A competitor reaching a goal where an expected target is not displayed should aim for the goal coordinate.

**12.6 MARKER**

Markers (as specified in the COH) supplied by the organizers will be used for scoring purposes to create a physical mark. Competitors are responsible for collecting the necessary marker(s) before the task. The marker must not be modified in any way. Penalty for modified or unauthorized markers is up to 250 task points.

**12.7** (NOT USED)

**12.8 MARKER RELEASE**

The marker may be thrown by hand, unless Gravity Marker Drop is specified at the task briefing.

**12.9 GRAVITY MARKER DROP (GMD)**

In a GMD, no horizontal motion shall be applied to the marker in relation to the basket and gravity shall be the only means for the marker to drop. The person releasing the marker must hold the unrolled marker by the tail. The person's hand holding the tail of the marker shall not be outside the basket.

Penalty for violating this rule, unless otherwise stated on the TDS:

- minor infringements with no competitive advantage: 50 task points
- infringements with competitive advantage: 50 meters will be added to the competitors result in the least advantageous direction

Unless otherwise stated on the TDS, a marker thrown into a MMA or a scoring area under limited area scoring will be regarded as a valid result and the penalty will be applied

**12.10 FREE MARKER DROP**

The marker must be completely unrolled when released. No mechanism may be used to propel the marker. The person releasing the marker must stand on the floor of the basket. Penalty for minor infringements with no competitive advantage: 50 task points. Otherwise 50 meters will be added to the competitors result in the least advantageous direction.

**12.11 MARK**

- 12.11.1 A physical mark is the point on the ground vertically below the weighted part of the marker where it comes to rest after falling from the balloon. If the marker has been moved after landing and there is indisputable evidence available showing its original position, measurements will be based on the evidence. If the marker is displaced after coming to rest or disappears subsequently from view (e.g. beneath water level), the earliest position an official or observer has seen the marker in ground contact will be taken with the accuracy available. Same applies, if the marker is carried on top of another balloon.
- 12.11.2 An electronic mark is a track point specially identified for scoring purposes. The technical details and procedures are defined in Section II. If the scoring criteria defined in the TDS are not met, the competitor will not achieve a result in the relevant task.
- 12.11.3 If no mark has been achieved the competitor will be scored to his next mark in time or landing position, whichever is best.

**12.12** (NOT USED)

**12.13 INTERFERENCE WITH MARKER**

No person other than an official may touch or interfere with a marker on the ground.

**12.14 SEARCH PERIOD**

- 12.14.1 Competitors have a specified period from the actual start of the launch period in which to find their marker(s).
- 12.14.2. The choice between searching for the marker, or first recovering the competitor rests with the competitor or his crew.

**12.15 LOST MARKER**

- 12.15.1 A marker, dropped within the Marker Measuring Area, is considered lost if it is not found and in possession of Officials within the time limit specified. Competitors may inquire with the measuring officials at a target or goal if they have doubt that their marker will be found. Competitors will not be allowed to search for markers in the MMA without the presence of an official. If a marker dropped or allegedly dropped in the MMA is considered lost, then the competitor will be scored by track point as if the competitor had missed the MMA.
- 12.15.2 If the marker has earlier been seen by an official on the ground and is estimated within the Marker Measuring Area then the official's evidence together with the logger's data will be used to determine the competitor's result, based on the least advantageous interpretation of evidence available.
- 12.15.3 Competitors may be required to pay for any marker damaged, not re-usable, lost or not brought back in time. Competitors are responsible for returning markers dropped outside the MMA.

**12.16 LOST MARKER** (in events with observers see Section IV events with observers)

**12.17 SCORING PERIOD**

- 12.17.1 When defined by the Director in the task briefing, the scoring period is the time limits, within which a goal/target or scoring area is valid.
- 12.17.2 A competitor will only score if his marker or any subsequent marker is found or seen falling to the ground by officials or he has landed, within the set time limit (except as noted in Rule 15.9). Otherwise he will be scored by track point.

12.17.3 A competitor who does not achieve a scoring position within the scoring period (if set) or within the search period (if no scoring period is set) will not achieve a result.

12.17.4 Under all circumstances scoring after official sunset is prohibited.

#### **12.18 SCORING AREA**

12.18.1 An area or areas, defined by the Director in the task data within which a valid mark or track point can be achieved. Unless otherwise stated in the task data the boundary will be the inner hard surface or gravel edge of a road, the inner bank of a river, or other defined marked area. Any part of the weighted bag that is on the inner edge will be considered valid.

12.18.2 A competitor who does not achieve a scoring position inside the scoring area(s) will not achieve a result.

#### **12.19 SCORING AIR SPACE**

An air space or spaces, defined by the Director in the task data within which a valid track point can be achieved. Unless otherwise stated in the task data the boundary will be defined by coordinate lines. The altitude limits are defined by altitude as recorded by the logger in accordance with rule II.21. Any recorded track point exactly on the line or altitude limit will be considered valid.

#### **12.20 MARKER MEASURING AREA (MMA)**

12.20.1 The MMA is an area defined by a radius around a goal/target or an otherwise clearly defined area within which results will be achieved by markers.

12.20.2 The MMA will be provided for each task in which markers are used.

12.20.3 Competitors not achieving a physical mark within the MMA will be scored by track point.

#### **12.21 VALID MARK**

12.21.1 A physical mark is considered valid if it is within the scoring area or marker measuring area (MMA) and within the scoring period if set.

12.21.2 An electronic mark is considered valid if the recorded track point meets all scoring criteria defined in the TDS.

12.21.3 A valid physical mark shall have precedence over any track point or electronic mark.

12.21.4 Measurements will be made to the closest point of the weighted bag portion of the marker.

#### **12.22 TRACK POINT**

12.22.1 A track point is defined by recorded date / time, coordinates and altitude of a point of the track of a GPS logger.

12.22.2 When goals or targets are used, results based on track points will be the 2D, modified 3D or 3D-distance from the goal/target to the track or electronic mark. Details to be specified in Section II.

12.22.3 A competitor's result based on a track point cannot be better than the worst possible result in the MMA.

12.22.4 In tasks without goals or targets the horizontal distance (2D distance) between points will be used to calculate results.

#### **12.23 VALID TRACK POINT**

12.23.1 A valid track point is a track point meeting all scoring criteria set in the task data like scoring area and/or scoring airspace and/or scoring period.

#### **12.24 TARGET OFFICIALS**

Target Officials are assigned to establish the competitor's results and possible rule violations. In general, in all tasks having set goals or targets, the Target Officials will measure the results by tape or surveyor equipment within the Marker Measuring Area (MMA).



**CHAPTER 13 - PENALTIES****13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOUR (sS1 An3 5)**

- 13.1.1 Serious Infringements includes dangerous or hazardous actions or repetitions of lesser infringements, and will be penalised according to the appropriate rule.
- 13.1.2 AN ENTRANT OR COMPETITOR WHO DELIBERATELY ATTEMPTS TO DECEIVE OR MISLEAD THE OBSERVERS, OFFICIALS OR STEWARDS OR WHO INTERFERES WITH ANOTHER ENTRANT OR COMPETITOR OR HIS PROPERTY, SHALL BE DISQUALIFIED FROM THE EVENT.

UNSPORTING BEHAVIOUR IS DEEMED AS CONDUCT BY A PARTICIPANT WHO VIOLATES THE GENERALLY ACCEPTED RULES OF SPORTSMANSHIP AND FAIR PLAY, FALSIFICATION OF DOCUMENTS, USE OF FORBIDDEN EQUIPMENT OR PROHIBITED DRUGS, BRINGING THE SPORT OR THE FAI INTO DISREPUTE. UNSPORTING BEHAVIOUR AND CHEATING MAY BE PUNISHABLE BY A DISQUALIFICATION FROM AN EVENT OF THE PARTICIPANT(S) CONCERNED.

**13.2 UNSPECIFIED PENALTIES**

- 13.2.1 A competitor infringing any rule for which the penalty is not specified may have a penalty (distance, angle or time) applied to his result or a deduction of points.
- 13.2.2 Where safety is not an issue, and no competitive advantage has been gained, he may receive a warning in the first instance.
- 13.2.3 A competitor may not be penalised for infringing a rule for which the penalty is not specified, if he has already been penalised under the same rule in a previous task, but has not been informed of the fact before the beginning of the task in question, except for follow-on tasks in the same flight.

**13.3 DISTANCE INFRINGEMENTS**

- 13.3.1 Where the individual launch point, a goal selected by a competitor, a mark, or a final landing infringes a distance or altitude limit at any time, the competitor will be penalised.
- 13.3.2 If a launch point infringes a natural set boundary, the infringement is the distance to the closest correct point.
- 13.3.3 Competitors landing in an MMA will not achieve a result in the related task. If no MMA is set, landing within 200 meters of goals/targets or any physical mark of the competitor will be penalised up to 200 task points.
- 13.3.4 Where the penalty relates to landing too close to a goal/target or mark, the competitor will only receive a penalty for the greater infringement.
- 13.3.5 The penalty will be waived if the competitor can show that he was unable to comply because of safety reasons, or because of light wind (unable to clear area within 10 minutes).
- 13.3.6 For competitors taking off too close to a goal or target, declaring a goal outside the limits specified in the TDS or otherwise abusing the set distance or altitude limits of a task, the penalty will be 2 task points per 0,1% infringement. Above 25% infringement the competitor will be scored in group B.  
For Elbow, Angle and Land Run Tasks, the percent infringements will be the sum of the percent infringements of each 'leg', unless otherwise defined in the TDS.  
A competitor penalized under this rule cannot achieve a score less than Group B as a result of the distance infringement penalty.

**13.4 PENALTY POINTS**

- 13.4.1 There are two kinds of point penalties: task points and competition points.

13.4.2 Task point penalties are subtracted from a competitor's task score, which cannot be reduced below zero. Competition point penalties are also subtracted from a competitor's task score and may result in a negative score, which will be set against his total score in the Event.

**13.5 PROOF OF RULES VIOLATION (S1 An3 8.9)**

THE PRODUCTION AND DEMONSTRATION OF EVIDENCE FOR ANY ALLEGED INFRINGEMENT BY A COMPETITOR ALWAYS RESTS ENTIRELY WITH THE EVENT OFFICIALS. RULES SHALL NOT BE WRITTEN IN ORDER TO OBLIGE THE COMPETITOR TO PROVE HIS COMPLIANCE WITH THE RULES OR HIS INNOCENCE IN CASE OF ALLEGED INFRINGEMENT.

**CHAPTER 14 - SCORING****14.1 RESULT**

A competitor's result is the achieved outcome in a task including result penalties. Results will be expressed in meters, square kilometers, minutes with an accuracy of two decimal places. Degrees will be measured to an accuracy of one or two decimal places depending on the distance defined in the TDS.

**14.2 SCORE**

A competitor's score is the number of points achieved in a task when applying the appropriate formulas. Task or competition penalties may be applied according to the rules.

**14.3 PUBLICATION OF SCORES (S1 5.9.4 part)**

14.3.1 THE scores OF EACH TASK SHALL BE PUBLISHED WITH THE MINIMUM OF DELAY on the Official Notice Board.

14.3.2 Task score sheets shall include:

- a. EVENT NAME, TASK DATE and time, TASK SEQUENCE NUMBER, TASK NAME AND RULES reference.
- b. for each competitor his: rank, competition number and name, result, score and if applicable, penalties followed by the kind of penalty, a rule reference and a brief description.
- c. THE FIXED DATA USED IN THE SCORING FORMULAS (P, A, M, RM, W AND SM) and the checksum
- d. Publication date and time and version number.
- e. IF MORE THAN ONE score SHEET VERSION IS PUBLISHED FOR A PARTICULAR TASK, THE CHANGES FROM THE PREVIOUS ISSUE SHALL BE MARKED AND THE DIFFERENT VERSIONS SHALL BE NUMBERED IN SEQUENCE.

14.3.3 Task score sheets will have the following status:

- |             |   |
|-------------|---|
| PROVISIONAL | Provisional scores are published for information only and have no validity for timing purposes.   |
| OFFICIAL    | Time periods for complaints/protests start from the publication of official scores.   |
| FINAL       | Official scores become final after all relevant time periods have expired. The jury may require a correction of the results and/or penalties prior to approving and signing the final scores. |

14.3.4 Total score sheets shall include:

- a. Event name
- b. for each competitor his: rank, competition number and name, total score and task scores
- c. task checksums

14.3.5 Total scores are for information only and will not carry a signature.

**14.4 RANKING ORDER**

- 14.4.1 Competitors will be ranked in order of performance according to the rules for each task, after adjustment for any result penalties. Competitors will be ranked in the following groups for each task:
- Group A Competitors whose results have been measured, or assessed under the rule for lost markers.
  - Group B Competitors flying the task, but not achieving a result. They will be scored equally using Formula Three, or share equally the remaining points available using Formula Two, whichever is the higher.
  - Group C Competitors not making a valid launch or disqualified in the event will not be ranked in all tasks of that flight.
- 14.4.2 After calculating the points score with the applicable formula, any penalty points will be subtracted to obtain the competitors final task score. The competitors final task scores will be ranked again before being published.

**14.5 POINTS FORMULA**

- 14.5.1 Each competitor will then be awarded a number of points according to his performance. The formula to be used will depend on the competitor's place in the ranking order for the Task.
- 14.5.2 The best result will be awarded 1000 points before points penalties.
- 14.5.3 The superior half of the results will receive a score between 1000 and approximately 500 points, in proportion to their performance using Formula One.
- 14.5.4 The inferior half of the results will receive a score between approximately 500 points and 0 points according to their relative position in the ranking order using Formula Two.
- 14.5.5 FORMULA ONE: (superior half of performances).  

$$1000 - [(1000 - SM)/(RM - W)] \times (R - W)$$
 FORMULA TWO: (inferior half of performances).  

$$1000 \times (P + 1 - L)/P$$
 FORMULA THREE: (competitors in group B).  

$$1000 \times [(P + 1 - A)/P] - 200$$
 P = number of competitors ranked in the flight.  
 M = P/2 (rounded to the next higher number) (Median Rank).  
 R = competitor's result (meters, etc.) if in the superior half.  
 RM = result achieved by the median ranking competitor.  
 L = competitor's ranking position if in the inferior portion.  
 W = the winning result of the task.  
 A = number of competitors in group A.  
 SM = rounded points score of the median ranking competitor, calculated under formula two.
- 14.5.6 If fewer than half of the competitors achieve a result in the task, the following changes in definition will apply:
- RM = lowest ranking result in group A.
  - SM = rounded score of the lowest ranking competitor in group A, calculated under Formula Two.
  - M = lowest ranking competitor in group A.
- 14.5.7 In tasks where no competitor achieves a result, all competitors in group B will receive a score of 500 points before any penalty points.
- 14.5.8 Points scores will be rounded to the nearest whole number.

**14.6 PRECISION**

14.6.1 Results shall be established with the highest precision at hand.

14.6.2 The following standards will be used:

Result method	Precision	Printout example [m]
tape / surveying	centimeters	1.23
map coordinate	decameters	1250.00
Track point/GPS	meters	1231.00

Any combination of result methods will revert to the lowest precision method used.

If positions can be determined relative to a common coordinate with a more accurate method, the precision of that method will be used.

Interpolation between track points may be used to establish the scoring position.

When establishing distances or positions, rounding should only be made at the end of calculations but not in intermediate steps.

14.6.3 Results are considered tied when the outcome is the same after applying above mentioned principles. Competitors whose results are tied will share equally between them the points which they would have received had they not been so tied.

14.6.4 The altitude used in competition is specified in Section II.

**14.7 MEASURING** (for events without logger scoring)

Not Used.

**14.8 TOTAL SCORES**

14.8.1 The Total Score is the addition of the individual task scores.

14.8.2 Where two competitors have equal total scores in the Event, the competitor with the smaller difference between his best and worst scores will be ranked higher.

**14.9 NATION RANKING**

Not Used

**CHAPTER 15 - TASKS****15.1 PILOT DECLARED GOAL (PDG)**

15.1.1 Competitors will attempt to achieve a mark or valid track point close to a goal selected and declared by him.

15.1.2 Task data:

- a. method of declaration
- b. number of goals permitted
- c. goals available for declarations
- d. minimum and maximum distances of goal(s) from CLP or ILP as per TDS

15.1.3 The result is the distance from the mark or closest valid track point to the nearest valid declared goal. Smallest result is best.

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**15.2 JUDGE DECLARED GOAL (JDG)**

15.2.1 Competitors will attempt to achieve a mark or valid track point close to a set goal.

15.2.2 Task data:

- a. position of set goal/target

15.2.3 The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.

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**15.3 HESITATION WALTZ (HWZ)**

15.3.1 Competitors will attempt to achieve a mark or valid track point close to one of several set goals.

15.3.2 Task data:

- a. position of various set goals/targets

15.3.3 The result is the distance from the mark or closest valid track point to the nearest target, if displayed, or goal. Smallest result is best.

---

**15.4 FLY IN (FIN)**

15.4.1 Competitors will find their own launch areas and attempt to achieve a mark or valid track point close to a set goal or target.

15.4.2 Task data:

- a. position of set goal/target

15.4.3 The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.

15.4.4 Only one scoring attempt (marker drop) may be made.

---

**15.5 FLY ON (FON)**

15.5.1 Competitors will attempt to achieve a mark or valid track point close to a goal selected and declared by them before take-off or during flight.

15.5.2 Task data:

- a. method of declaration,
- b. number of goals permitted
- c. goals available for declarations
- d. minimum and maximum distance between previous mark and declared goal

15.5.3 The result is the distance from the mark or closest valid track point to the nearest valid declared goal. Smallest result is best.

15.5.4 (see section IV events with observers)

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**15.6 HARE AND HOUNDS (HNN)**

15.6.1 Competitors will follow a hare balloon and attempt to achieve a mark or valid track point close to a target displayed by the hare no more than two meters upwind of the basket after landing.

15.6.2 Task data:

- a. description of the hare balloon
- b. intended flight duration of the hare balloon

15.6.3 The result is the distance from the mark or closest valid track point to the target. Smallest result is best.

15.6.4 Variation from intended flight duration of the hare shall not be ground for complaint.

15.6.5 The hare may deflate after landing and may be removed from the field.

15.6.6 The hare may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.

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**15.7 WATERSHIP DOWN (WSD)**

- 15.7.1 Competitors will fly to the launch point of a hare balloon, follow the hare and attempt to achieve a mark or valid track point close to a target displayed by the hare no more than two meters upwind of the basket after landing.
- 15.7.2 Task data:
- a. description of the hare balloon
  - b. location of the launch point of the hare balloon
  - c. set take-off time of the hare balloon
  - d. intended flight duration of the hare balloon
- 15.7.3 The result is the distance from the mark or closest valid track point to the target. Smallest result is best.
- 15.7.4 If the hare balloon does not take off within 5 minutes after the set time then this task is considered cancelled.
- 15.7.5 Variation from the flight duration of the hare shall not be ground for complaint.
- 15.7.6 The hare may deflate after landing and may be removed from the field.
- 15.7.7 The hare may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.
- 

**15.8 GORDON BENNETT MEMORIAL (GBM)**

- 15.8.1 Competitors will attempt to achieve a mark or valid track point within a scoring area(s) close to a set goal.
- 15.8.2 Task data:
- a. position of goal/target
  - b. description of scoring area(s)
- 15.8.3 The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.
- 

**15.9 CALCULATED RATE OF APPROACH TASK (CRT)**

- 15.9.1 Competitors will attempt to achieve a mark or valid track point within a valid scoring area close to a set goal. The scoring area(s) will have unique times of validity.
- 15.9.2 Task data:
- a. position of goal/target.
  - b. description of scoring area(s) and their validity times
- 15.9.3 The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.
- 15.9.4 A competitor who does not achieve a mark or track point inside a scoring area during its time of validity, will not achieve a result.
-



**15.10 RACE TO AN AREA (RTA)**

15.10.1 Competitors will attempt to achieve a mark or valid track point, as specified in the task data, in the shortest time within a scoring area(s) or airspace(s).

15.10.2 Task data:

- a. arrangements of timing
- b. description of scoring area(s)

15.10.3 The result is the elapsed time from the take off to the mark or first valid track point. Smallest result is best.

15.10.4 The timing ends at the moment the marker is released, falling or on the ground as seen by the officials, the electronic mark is dropped or at the moment of the first valid track point in the scoring area, if track points only was set.

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**15.11 ELBOW (ELB)**

15.11.1 Competitors will attempt to achieve the greatest change of direction in flight.

15.11.2 Task data: (If no markers are used)

- a. description of track point "A"
- b. description of track point "B"
- c. description of track point "C"

15.11.3 (see section IV events with observers)

15.11.4 The result is 180 degrees minus the angle ABC. Greatest result is best.

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**15.12 LAND RUN (LRN)**

15.12.1 Competitors will attempt to achieve the greatest area of a triangle "A", "B" and "C"

15.12.2 Task data:

- a. location of point "A"
- b. method of determining point "B"
- c. method of determining point "C"
- d. description of scoring area(s)

15.12.3 The result is the area of triangle ABC. Greatest result is best.

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**15.13 MINIMUM DISTANCE (MDT)**

- 15.13.1 Competitors will attempt to achieve a mark or valid track point close to the reference point, after flying a minimum set time or distance.
- 15.13.2 Task data:
- a. arrangements of timing
  - b. minimum set time or distance
  - c. reference point
- 15.13.3 The result is the distance from the mark or closest valid track point to the reference point. Smallest result is best.
- 15.13.4 The scoring position is the mark or best track point after the minimum time or distance has elapsed. Otherwise the scoring position will be the landing position, provided that the balloon has been seen by an official to be still airborne after the minimum time.
- 

**15.14 SHORTEST FLIGHT (SFL)**

- 15.14.1 Competitors will attempt to achieve a mark or valid track point close to the reference point within a set scoring area(s).
- 15.14.2 Task data:
- a. description of scoring area(s)
  - b. reference point
- 15.14.3 The result is the distance from the mark or best valid track point to the reference point. Smallest result is best.
- 

**15.15 MINIMUM DISTANCE DOUBLE DROP (MDD)**

- 15.15.1 Competitors will attempt to achieve two marks or valid track points close together in different scoring areas.
- 15.15.2 Task data:
- a. description of scoring areas
- 15.15.3 The result is the distance between the marks or track points. Smallest result is best.
- 15.15.4 Competitors will not achieve a result, unless they have valid track points or marks in different scoring areas as per the TDS.
-

**15.16 MAXIMUM DISTANCE TIME (XDT)**

- 15.16.1 Competitors will attempt to achieve a mark or valid track point far away from the reference point, within a maximum set time.
- 15.16.2 Task data:
- a. maximum set time
  - b. arrangements for timing
  - c. reference point
- 15.16.3 The result is the distance from the mark or furthest valid track point to the reference point. Greatest result is best.
- 15.16.4 (see section IV events with observers)
- 

**15.17 MAXIMUM DISTANCE (XDI)**

- 15.17.1 Competitors will attempt to achieve a mark or valid track point far away from the reference point within a set scoring area(s).
- 15.17.2 Task data:
- a. description of scoring area(s)
  - b. reference point
- 15.17.3 The result is the distance from the mark or valid track point to the reference point. Greatest result is best.
- 

**15.18 MAXIMUM DISTANCE DOUBLE DROP (XDD)**

- 15.18.1 Competitors will attempt to achieve two marks or valid track points far apart in the scoring area(s).
- 15.18.2 Task data:
- a. description of the scoring area(s)
- 15.18.3 The result is the distance between the marks or farthest valid track points. Greatest result is best.
- 

**15.19 ANGLE (ANG)**

- 15.19.1 Competitors will attempt to achieve the greatest change of direction from a set direction. The change of direction is the angle between the set direction and line "A-B".
- 15.19.2 Task data:
- a. description of point "A" and "B"
  - b. set direction
  - c. minimum and maximum distances from "A" to "B"
- 15.19.3 The result is the angle between the set direction and the line "A-B". Greatest result is best.
-

**15.20 3D Shape Task (3DT) (for events with logger scoring)**

15.20.1 Competitors will attempt to achieve the greatest distance within a set airspace.

15.20.2 Task data:

a. description of set airspace(s).

15.20.3 The result is the accumulated horizontal distance between valid track points in the set airspace(s). Greatest result is best

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## ANNEX 1 - ABBREVIATION LIST

Rule ref	Abbr.	Rule
5.10	<b>ONB</b>	OFFICIAL NOTICE BOARD (ONB)
6.11	<b>FRF</b>	FLIGHT REPORT FORM (FRF)
7.2	<b>OB</b>	OUT OF BOUNDS (OB)
7.3	<b>PZ</b>	PROHIBITED ZONES (PZs)
8.6	<b>GB</b>	GENERAL BRIEFING (GB)
9.1	<b>CLA</b>	COMMON LAUNCH AREA(S) (CLA)
	<b>CLP</b>	COMMON LAUNCH POINT(S) (CLP)
9.2.3	<b>ILP</b>	INDIVIDUAL LAUNCH POINT(S) (ILP)
12.9	<b>GMD</b>	GRAVITY MARKER DROP (GMD)
12.20	<b>MMA</b>	MARKER MEASURING AREA (MMA)
15.1	<b>PDG</b>	PILOT DECLARED GOAL (PDG)
15.2	<b>JDG</b>	JUDGE DECLARED GOAL (JDG)
15.3	<b>HWZ</b>	HESITATION WALTZ (HWZ)
15.4	<b>FIN</b>	FLY IN (FIN)
15.5	<b>FON</b>	FLY ON (FON)
15.6	<b>HNH</b>	HARE AND HOUNDS (HNH)
15.7	<b>WSD</b>	WATERSHIP DOWN (WSD)
15.8	<b>GBM</b>	GORDON BENNETT MEMORIAL (GBM)
15.9	<b>CRT</b>	CALCULATED RATE OF APPROACH TASK (CRT)
15.10	<b>RTA</b>	RACE TO AN AREA (RTA)
15.11	<b>ELB</b>	ELBOW (ELB)
15.12	<b>LRN</b>	LAND RUN (LRN)
15.13	<b>MDT</b>	MINIMUM DISTANCE (MDT)
15.14	<b>SFL</b>	SHORTEST FLIGHT (SFL)
15.15	<b>MDD</b>	MINIMUM DISTANCE DOUBLE DROP (MDD)
15.16	<b>XDT</b>	MAXIMUM DISTANCE TIME (XDT)
15.17	<b>XDI</b>	MAXIMUM DISTANCE (XDI)
15.18	<b>XDD</b>	MAXIMUM DISTANCE DOUBLE DROP (XDD)
15.19	<b>ANG</b>	ANGLE (ANG)
15.20	<b>3DT</b>	3D SHAPE TASK (3DT)
	<b>TDS</b>	Task (Data) Sheet
	<b>COH</b>	Competition Operation Handbook

**SECTION IV – RULES FOR EVENTS WITH OBSERVERS**

**(NOT USED)**