

# TÄVLINGSREGLER FÖR VARMLUFTSBALLONGER



## Svenska Mästerskapen 2024

Baserade på AX MODEL EVENT RULES version 2024  
(Effective date April 1<sup>st</sup>, 2024)  
Godkända av SBF TRU 2024-04-03

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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: Ballong-SM 2024.

**I. 2 SANCTION**

The event is an approved national championship sanctioned by SBF TRU.

**I. 3 ORGANIZATION**

The Event is organised by:

Dalslands ballongklubb.

**I. 4 CORRESPONDENCE**

All entries and official correspondence should be addressed to:

Eva Olsson [eva@dalslandsballongklubb.se](mailto:eva@dalslandsballongklubb.se)

**I. 5 PERSONNEL**

Event Director :	Poa Ekeblad
Safety Officer :	Peter Olsson
Jury President	Bengt Stener

**I. 6 PLACE**

The Event will be held at:

Högsäter, Dalsland.

**I. 7 DATES**

The Event will run from 2024-04-27.

The last flying day will be 2024-04-30 unless the minimum tasks under rule 1.2 have not been achieved, in which case the last flying day will be 2024-05-01.

**I. 8 PROTEST FEE**

THE AMOUNT OF THE PROTEST FEE TO ACCOMPANY A PROTEST SHALL BE SEK 1000.

IN CASE OF A JOINT PROTEST, EVERY PROTESTING PERSON MUST PAY THE PROTEST FEE. (S1 An3 8.3)

**I. 9 LANGUAGE**

I. 9.1 THE RULES AND INFORMATION CIRCULATED TO NACS AND COMPETITORS OR ISSUED DURING THE EVENT SHALL BE IN ENGLISH AND, AT THE DISCRETION OF THE ORGANISER, THE LANGUAGE OF THE HOST COUNTRY. IN ALL INTERPRETATIONS THE ENGLISH-LANGUAGE VERSION SHALL PREVAIL. (GS 4.5.4)

Officiellt språk för kommunikation under tävlingen är svenska.



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

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 CLOSING ENTRY DATE**

The closing entry date for the Event is 2024-04-26. Observera att du dock måste anmäla dig senast 2024-04-05, för att kunna få stödet för svenska SM-tävlande från SBF.

**I. 11 RISK**

The balloon and other property of a competitor shall be at the risk of the competitor at all times. By entering an Event a competitor agrees to waive all claim for injury to himself or loss or damage to his property.

**I. 12 INSURANCE**

Each balloon shall be insured against all claims by third parties to a minimum amount as required by Swedish and EU legislation (e.g. EU regulation 785/2004).

The competitor shall produce documentary evidence of this insurance valid for the period of the Event covering any balloon which he may fly.

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

The competition map will consist of a paper map printed for the event, covering the contest area.

The contest area is defined by these four corners.

Corner	SWEREF99/WGS84		4-4 format (E-N)
NW	E: 308000	N: 6522000	0800-2200
NE	E: 365000	N: 6522000	6500-2200
SE	E: 365000	N: 6484000	6500-8400
SW	E: 308000	N: 6484000	0800-8400

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

No areas are out of bounds.

However, the Great Lake Vänern is particularly wet this time of the year. It is strongly recommended not to land in there.

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

PZ-list will be posted on the Official Notice Board.

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

Will be communicated at general briefing or at task briefings.

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

Will be communicated at general briefing or at task briefings.

**II. 6 LANDOWNER'S PERMISSION (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 or landing without permission may be made from / on minor roads or tracks, if the balloon envelope can be laid / packed on the road.

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

Balloons shall not fly closer than 500 ft from livestock or buildings containing livestock.

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

Swedish law and traffic rules apply.

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

Swedish air law and EASA rules apply.

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

May be specified at general briefing or task briefing.

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

All logger tracks will be checked using the Balloon Safety Analyzer. Competitors exceeding the limits of vertical speed below will be penalized:

Limit	3D Proximity	Relative Vertical Speed
Limit 1	25 m	3 m/s
Limit 2	50 m	5 m/s
Limit 3	75 m	8 m/s

Limit 4: Exceeding the absolute vertical ascent speed of 8 m/s will be penalized.

**II. 12 GOALS SELECTED BY A COMPETITOR (12.2, 12.3), GOAL CENTER (12.1)**

Goal defined by coordinates: To identify a goal on the competition map, the competitor must declare it by coordinates to be written in eight-digit format (First four digits west/east and the second four digits south/north. Easting then Northing.)

Intersections selected from a map:

A goal on the ground selected by a competitor shall appear from the map to be easily accessible to vehicles on the ground and precisely identifiable for measurement. Unless otherwise allowed in the task data, the goal shall be the intersection of two roads. According to the task data competitors may be required to choose one or more goals from the list of predetermined goals or as listed in the TDS.

Measurements will be made from a target or marked point as indicated in the TDS. In the case that an unmarked intersection is used, measurements will be made from the center of the intersection as specified below. If the intersection shown as a crossroad on the map turns out to be a staggered tee-intersection, then the goal will be the midpoint between the points defined with the method mentioned in the competition details.

The centerpoint of the intersections of roads will be the intersection of the centerlines of the roads.

The Director may provide a graphical definition of unusual intersections.

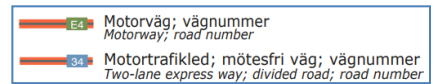
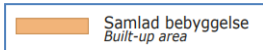
The competitor shall add descriptive detail to distinguish between possible goals located close together near his coordinates.

The following types of roads are permitted for the purpose of goals selected by competitors: Roads shown with at least one solid line on the map (see example to the right.) However, it is not permitted to select goals on roads 166, 172 and 173.



No goal selected by a competitor shall be:

- a. within a built-up area
- b. within a blue PZ
- c. within 200 meters of:
  - 1. a red PZ
  - 2. a motorway (motorväg) or a road designated to be of motorway status (motortrafikled) (200 m measured from the outer edge as shown on the map).  
At SM 2024, E45 is defined to be of motorway status.
  - 3. a power line or electrified railway or electrified tram track shown on the competition map
  - 4. vindkraftverk



**II. 13 LOCATION OF OFFICIAL NOTICE BOARD (5.3.3)**

An on-line Official Notice Board (ONB) is used, it will be at Watchmefly.net, Electronic notifications of postings to the ONB may be made using a text messaging system. The fallback paper Official Notice Board will be located at Högsätters församlingshem.

**II. 14 COMMUNICATION TIMES (5.1, 5.2)**

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 (5.1.6)**

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. 16 FLIGHT CREW (2.2.2)**

Rule 2.2.2. does not apply.

**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 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) Change the operation 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.

Pull down the red label to start a new flight.

**Competition Mode**

When entering competition mode, the latest competition data is retrieved from the server.

To enter this mode, you must enter the competition token send to you once registered to the event. 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.

Pull down the red label to start a new flight and transmit the track data to the server.

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

- Competition name: Svenska Mästerskapen 2024
- Logging interval (seconds): 1
- Live tracking interval (seconds): 30
- UTC offset (seconds): 7200
- Multiple marker drops: Not allowed
- Multiple goal declarations: Allowed
- Declaration format: 4/4
- Altitude mode: Barometric Feet
- GPS Source: Balloon Live Sensor (Fallback Internal)
- Geodetic system: Swedish SWEFER 99 TM

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 10-5 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 and safe balloon handling, the track recording should 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 must be transferred to the server latest 6 hours after the flight has been started. For tracks that are transferred later, the competitor will be penalised by 10 competition points per minute (or part) late in the last task.

The track data remains the property of the competitor but may be made available to the public for live tracking. Tracks where competitors have given explicit permission will be published. The publication will have a minimum of 10 min delay. No publication of a track should be made before the end of the launch period.

**g) Recommendations:**

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

**II. 18 DETAILS FOR TIME LIMITS (rest hours) (5.1.5, 5.2.5)**

The hours between 22:00 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)**

Max 120 000 cu ft

**II. 20** Not used**II. 21 ALTITUDE (14.6.4)**

Barometric altitude will be used for scoring purposes.

**II. 22 2D/3D SCORING METHODS (12.18.2)**

The separation altitude between 2D and 3D scoring in this event is 2 000 ft MSL.

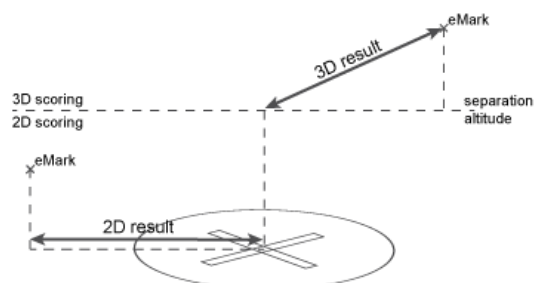
When goals or targets on the ground are used, results based on track points will be the:

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

or

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

When goals/targets above the ground are used, results based on electronic marks will be the 3D-distance.

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

The competition will be conducted using loggers for scoring.

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

SWEREF99 (map datum WGS84) will be used for map coordinates.

To identify a point on the competition map, the coordinates must be written in 4-4 format.

This format uses two times four-digits. First four digits easting and the second four digits northing. (e.g. 5857-5226), leaving out the 1m digit.

Easting's may be separated from Northing's by a carriage return (= new line), by a blank space, by the minus character or the slash character. In all cases the parts of the coordinates shall be clearly separated and with Easting first.

**II. 25 SVENSKA MÄSTERSKAPEN, DEFINITION OF A CHAMPION AND RANKING**

The Swedish Champion shall be the competitor holding a Swedish FAI sporting license with the highest aggregate score at the end of the event. (1.2.1)

The ranking in the Svenska Mästerskapen shall be the ranking among the competitors holding a Swedish FAI sporting license on the overall ranking of the open competition.

**II. 26 QUALIFICATION (2.3)**

For Svenska Mästerskapen, the experience requirement is at least 30 hours as pilot in command, at the beginning of the general briefing.

**II. 27 COMPETITION NUMBERS (3.8)**

Competition number banners for the basket will not be used. All crew vehicles shall still be clearly identified on opposite sides with competition numbers.

**SECTION III - RULES****CHAPTER 1 - OBJECTIVES****1.1 OBJECTIVES**

THE OBJECTIVES OF THE EVENT ARE:

- TO DETERMINE THE CHAMPION PILOT;
- TO STIMULATE THE DEVELOPMENT OF AEROSTATION BY AN INTERNATIONAL COMPARISON OF PERFORMANCE OF PILOTS AND AEROSTATS;
- TO REINFORCE FRIENDSHIP AMONGST AERONAUTS OF ALL NATIONS.  
(S1 5.2 part)

**1.2 DEFINITION OF A CHAMPION**

1.2.1 THE WINNING COMPETITOR SHALL BE THE COMPETITOR WITH THE HIGHEST AGGREGATE SCORE AT THE END OF THE EVENT. (S1 5.8.1)

1.2.2 The winning nation shall be the NAC with the best Nation Ranking at the end of the event.

1.2.3 TO BE RECOGNIZED AS A FIRST CATEGORY SPORTING EVENT AND FOR A CHAMPION TO BE DECLARED, AT LEAST THREE TASKS MUST HAVE BEEN COMPLETED ON NOT LESS THAN TWO SEPARATE FLIGHTS. (S1 5.8.3)

**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**

The following documents will be inspected when each competitor registers on arrival at the Event.

- a. Pilot License
- b. Pilot Log Book
- c. Balloon Log Book
- d. Certificate of Airworthiness
- e. Certificate of Registration
- f. Certificate of Insurance
- g. FAI Sporting License
- h. Passport or Identity Document



**CHAPTER 2 - ENTRY CONDITIONS****2.1 COMPETITOR**

- 2.1.1 A PERSON ENTERED AND COMPETING IN A SPORTING EVENT. (GS 4.2.1 part)
- 2.1.2 AFTER THE BEGINNING OF THE GENERAL BRIEFING OF A FIRST CATEGORY SPORTING EVENT, NO CHANGE OF COMPETITOR IS PERMITTED. (S1 5.5.5)

**2.2 COMPETITOR'S RIGHTS OF REPRESENTATION**

- 2.2.1 A CITIZEN OR A RESIDENT OF A COUNTRY WHO IS ISSUED A FAI SPORTING LICENCE BY A NAC REPRESENTS THE COUNTRY OF THE NAC IN FAI SPORTING EVENTS. (GS 3.5.1 part)
- 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.
- 2.2.3 WORLD CHAMPIONSHIPS, CONTINENTAL REGIONAL CHAMPIONSHIPS AND SPECIAL INTERNATIONAL SPORTING EVENTS can be held in the following categories:
- GENERAL: WITH NO GENDER OR AGE LIMITATION.
- FEMALE: WHERE ALL PERSONS ON BOARD OF THE AEROSTAT, EXCEPT FOR COMPETITION OFFICIALS, MUST BE FEMALE.
- JUNIOR: WHERE ALL PERSONS ON BOARD OF THE AEROSTAT, EXCEPT FOR COMPETITION OFFICIALS, MUST BE AGED LESS THAN the age limit defined in S1.
- (S1 5.1 + 5.1.1 part)

**2.3 QUALIFICATION**

PILOTS-IN-COMMAND SHALL HAVE BEEN AUTHORIZED TO ACT AS PILOT-IN-COMMAND OF THE SUB-CLASS OF AEROSTAT FOR WHICH THE FIRST CATEGORY EVENT IS HELD FOR AT LEAST TWELVE MONTHS PRIOR TO THE START OF THE EVENT.

EACH PILOT-IN-COMMAND SHALL HAVE ACCUMULATED AT LEAST 50 HOURS AS PILOT-IN-COMMAND OF AEROSTATS OF THE SUB-CLASS BY THE CLOSING ENTRY DATE, EXCEPT FOR THE JUNIOR EVENTS WHERE IT SHALL BE AT THE START OF THE GENERAL BRIEFING. (S1 5.6.4.1)

Pilots shall have a 'Respectful flying score' above 0% at the time of the General Briefing.

**2.4 SPORTING LICENCE**

COMPETITORS MUST HAVE A VALID FAI SPORTING LICENCE.

NAC COMPETITORS REPRESENT THE NAC AND THE COUNTRY THEY BELONG TO. (GS 4.2.1 part)

**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**

COMPETITORS ARE REQUIRED TO KNOW, UNDERSTAND, ACCEPT AND ABIDE BY THE SPORTING CODE, THE RULES FOR THE EVENT AND THE FAI CODE OF ETHICS. BY ENTERING THE EVENT, THEY ARE DEEMED TO ACCEPT THEM WITHOUT RESERVATION. THEY SHALL ACT IN A SPORTING MANNER AND THEIR BEHAVIOUR MUST BE BEYOND REPROACH.

IN FIRST CATEGORY SPORTING EVENTS, THEY SHOULD APPRECIATE THAT THEY REPRESENT THE NATIONAL TEAM OF THEIR NAC OR, FOR FAI COMPETITORS, THE FAI. (GS 4.4.1 part)

**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**

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. (S1 An3 3)

**2.12 CONDUCT**

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. (S1 An3 4)

**CHAPTER 3 - BALLOON QUALIFICATIONS****3.1 DEFINITION OF A BALLOON**

- 3.1.1 Aerostat - an aircraft lighter-than-air.  
FREE BALLOONS CLASS A, - AN AEROSTAT, SUPPORTED STATICALLY IN THE AIR, WITH NO MEANS OF PROPULSION BY ANY POWER SOURCE. (S1 2.1.1 part)
- 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. (S1 2.1.1.2)
- 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). For specific events e.g. alpine balloon events, other categories may be specified in Section II.

**3.4 AIRWORTHINESS**

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 COUNTRY CONCERNED. THE ORGANIZERS ARE EMPOWERED TO REJECT ANY AEROSTAT WHICH IN THEIR OPINION IS NOT OF A REASONABLE STANDARD OF AIRWORTHINESS. (S1 5.5.3)

**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**

ANY DEVICE DESIGNED TO ACT AS AN AUTOMATIC FLIGHT CONTROL IS PROHIBITED, REGARDLESS OF THE SPECIFIC NATURE OF THE DEVICE. (S1 5.9.2 part)

**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**

- 4.1.1 THE EVENT DIRECTOR IS IN OVERALL OPERATIONAL CHARGE OF THE EVENT, RESPONSIBLE FOR ITS GOOD MANAGEMENT AND ITS SMOOTH AND SAFE RUNNING.  
THE EVENT DIRECTOR shall HAVE A DEPUTY DIRECTOR AND TECHNICAL OFFICIALS TO ASSIST HIM. (GS 5.2.5.1 part).  
EVENT DIRECTOR AND DEPUTY EVENT DIRECTOR SHALL BE APPROVED BY THE CIA. (S1 5.11 part)
- 4.1.2 THE EVENT DIRECTOR MAKES 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 ATTENDS MEETINGS OF THE FAI JURY AND GIVE EVIDENCE IF REQUESTED. (GS 5.2.5.1 part).
- 4.1.3 In these rules the word "Director" may be used instead of "Event Director".

**4.2 STEWARDS**

- 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 INTERNATIONAL JURY. THEY MAY ATTEND A MEETING OF THE INTERNATIONAL JURY AS AN OBSERVER OR WITNESS. (GS 5.2.2 part)  
They advise the Director on interpretation of the rules and regulations and on penalties
- 4.2.2 STEWARDS MUST NOT BE MEMBERS OF THE ORGANISING COMMITTEE. THEY MAY HAVE EXECUTIVE POWERS AS DEFINED IN THE SPECIALISED SECTION OF THE SPORTING CODE. (GS 5.2.2 part)

**4.3 DUTIES OF THE INTERNATIONAL JURY**

- 4.3.1 MATTERS OF ARBITRATION OR RULE INTERPRETATION SHALL BE THE RESPONSIBILITY OF THE FAI JURY MEMBERS.  
FAI OFFICIALS ARE APPOINTED BY THE CIA AND ARE ACTING ON BEHALF OF THE FAI. (GS 5.2.1 part)
- 4.3.2 IN ADDITION TO BEING THE CHAIRMAN AT JURY MEETINGS, THE JURY PRESIDENT HAS THE RIGHT TO REQUIRE THE ORGANISER TO ABIDE BY THE FAI SPORTING CODE AND THE PUBLISHED RULES AND REGULATIONS FOR THE EVENT. IF THE ORGANISER FAILS TO DO SO, THE PRESIDENT OF THE JURY HAS THE POWER TO INTERRUPT THE EVENT UNTIL THE SITUATION HAS BEEN REVIEWED BY THE JURY. IF THE SITUATION REMAINS UNSATISFACTORY, THE JURY HAS THE RIGHT TO REQUEST THE CANCELLATION OF THE EVENT AND GIVE ADVICE ON THE RETURN OF THE ENTRY FEES. (S1 5.10.3 part)
- 4.3.3 JURY MEMBERS MUST POSSESS A THOROUGH KNOWLEDGE OF THE RELEVANT SPORTING CODES AND THE RULES FOR THE EVENT. AT LEAST ONE JURY MEMBER IS TO BE ON SITE DURING COMPETITION OPERATIONS. (GS 5.2.4.4)

**4.4 SAFETY OFFICER**

- 4.4.1 THE SAFETY OFFICER SHALL BE APPROVED BY THE CIA. (S1 5.11 part)

- 4.4.2 THE SAFETY OFFICER SHALL GIVE ADVICE TO THE EVENT DIRECTOR ON ANY MATTERS REGARDING SAFETY. OPERATIONAL PROCEDURES FOR THE SAFETY OFFICER ARE CONTAINED IN THE "SAFETY OFFICER HANDBOOK". (S1 5.11.1 part)

**CHAPTER 5 - COMPLAINTS AND PROTESTS****5.1 COMPLAINTS (as per S1 An3 7)**

A DETAILED DESCRIPTION OF THE COMPLAINT REQUIREMENTS CAN BE FOUND IN G.S.6.2.

**5.1.1 ASSISTANCE**

A COMPETITOR WHO IS DISSATISFIED ON ANY MATTER SHOULD FIRST ASK THE APPROPRIATE OFFICIAL TO ASSIST HIM. HE MAY ASK FOR HIS RESULT OR POINTS SCORE TO BE CHECKED, OR THE CALCULATION TO BE EXPLAINED.

**5.1.2 COMPLAINT**

THE PURPOSE OF A COMPLAINT IS TO OBTAIN A CORRECTION WITHOUT THE NEED TO MAKE A FORMAL PROTEST. A COMPLAINT IS A REQUEST BY A COMPETITOR TO THE DIRECTOR TO INVESTIGATE ANY MATTER IN WHICH THE COMPETITOR IS DISSATISFIED. A COMPLAINT SHALL CONCERN ONLY ONE MATTER. IN CASE OF DIFFERENT MATTERS, SEPARATE COMPLAINTS MUST BE MADE.

**5.1.3 COMPLAINT FORM**

COMPLAINTS SHALL BE MADE IN WRITING IN ENGLISH OR IN A LANGUAGE AUTHORISED FOR THE EVENT.

A JOINT COMPLAINT MUST BE SIGNED BY ALL THE COMPLAINANTS

**5.1.4 COMPLAINT PROCEDURE**

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.

**5.1.5 TIME LIMITS FOR COMPLAINTS**

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

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.

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

**5.1.6 SHORTENED TIME LIMITS FOR COMPLAINTS**

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

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

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.

**5.1.7 COMMUNICATION AND PUBLICATION**

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.

WHEN THE RESULTS OF AN EVENT MAY BE AFFECTED BY THE RULING OF A COMPLAINT, THEY SHALL NOT BE CONSIDERED AS FINAL UNTIL THE COMPLAINT HAS BEEN RULED UPON.

**5.1.8 COMPLAINT AFTER AN EVENT**

ARE NOT PERMISSIBLE FOR ANY CIA SANCTIONED EVENT.

**5.2 PROTESTS (as per S1 An3 8)**

A DETAILED DESCRIPTION OF THE PROTEST REQUIREMENTS CAN BE FOUND IN G.S.6.3.

**5.2.1 PROTEST**

IF DISSATISFIED WITH THE DECISION ON A COMPLAINT MADE DURING THE EVENT, A COMPETITOR HAS THE RIGHT OF PROTEST. A PROTEST SHALL CONCERN ONLY ONE MATTER. IN CASE OF DIFFERENT MATTERS, SEPARATE PROTESTS MUST BE MADE.

**5.2.2 PROTEST FORM**

WITHIN one hour OF THE REPLY TO HIS COMPLAINT, THE COMPETITOR SHALL DECLARE HIS INTENTION TO PROTEST TO THE EVENT DIRECTOR. A PROTEST SHALL ONLY DEAL WITH ONE SINGLE MATTER.

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.

**5.2.3 PROTEST FEE**

THE AMOUNT OF THE PROTEST FEE TO ACCOMPANY A PROTEST SHALL BE EUR 100 OR ITS EQUIVALENT IN ANY LOCALLY RATED CURRENCY. IN CASE OF A JOINT PROTEST, EVERY PROTESTING PERSON MUST PAY THE PROTEST FEE.

**5.2.4 PROTEST PROCEDURE**

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

THE EVENT DIRECTOR MUST PRESENT ANY PROTEST TO THE JURY PRESIDENT WITHOUT DELAY.

THE PRESIDENT SHALL SCHEDULE A MEETING OF THE INTERNATIONAL JURY WITHIN 24 HOURS OF RECEIVING A PROTEST.

THE JURY SHALL HEAR ALL INVOLVED PARTIES ON THE MATTER OF ANY PROTEST, APPLYING THE RELEVANT FAI REGULATIONS AND THE RULES FOR THE EVENT. (GS 6.3.2 part)

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. (GS 6.3.2 part)



**5.2.5 TIME LIMITS FOR PROTESTS**

DECLARATIONS OF INTENTION TO PROTEST AND PROTESTS MUST BE SUBMITTED WITHIN SET TIME LIMITS (see 5.2.2).

The rest hours defined in the competition details will be disregarded for the purpose of the time limits.

**5.2.6 SHORTENED TIME LIMITS FOR PROTESTS**

PROTESTS MADE ON OR AFTER THE LAST FLYING DAY OF THE EVENT, MUST BE SUBMITTED WITHIN one hour of the reply to a complaint.

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

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.

**5.2.7 PUBLICATION**

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

**5.2.8 RIGHT OF HEARING**

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.

**5.2.9 PROOF OF RULES VIOLATION**

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.

**5.2.10 PROTEST AFTER AN EVENT**

ARE NOT PERMISSIBLE FOR ANY CIA SANCTIONED EVENT.

**5.3 FURTHER RULES REGARDING COMPLAINTS AND PROTESTS****5.3.1 RETURN OF PROTEST FEE**

THE PROTEST FEE IS RETURNABLE ONLY IF THE PROTEST IS WITHDRAWN BEFORE PROCEEDINGS BEGIN OR IF THE PROTEST IS UPHOLD. (GS 6.3 part)

**5.3.2 JURY APPROVAL OF SCORES & PRIZEGIVING**

THE LAST ACTION OF THE JURY 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. (GS 5.2.4.7 part)

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. (S1 An3 9)

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

**5.3.3 OFFICIAL NOTICE BOARD**

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.

The ONB will either be on-line or in paper format.

All information posted on the paper ONB will be additionally signed.

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****6.1 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.

**6.2 HANDLING**

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

**6.3 FLIGHT REPORT FORM (FRF)**

6.3.1 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 by the competitor.

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

**6.4 GPS-LOGGER FAILURE**

6.4.1 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.

6.4.2 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.

6.4.3 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 (OFB)**

The Director may define areas or airspaces as out of bounds. Take-Offs or contest landings in OFB Areas are prohibited and the competitor will achieve no result in the relevant task. Goal declarations in OFB areas or airspaces will be considered invalid. Competitors cannot achieve a valid mark, valid track point or result in OFB 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 OFB. The boundaries and, if applicable, the altitude limits in feet MSL, shall be published in writing for each PZ.

7.3.2 Circular PZs (cylinder or dome shape) shall be defined by the center point map reference and radius in meters and/or feet. 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 out-of-bounds 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 up to 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**

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. (S1 5.9.1)

8.2.2 The Director has the authority to cancel a task(s) for safety reasons and for reasons out of the control of the director, 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 GB.

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 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 electronic mark. 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**

- 8.5.1 THE COMPETITION RULES FOR ANY SUB-CLASS IN CLASSES A AND B, AND FOR ANY TYPE OF EVENT, SHALL BE PUBLISHED BY THE CIA IN THE MODEL EVENT RULES. THEY SHALL NOT CONFLICT WITH THE RULES IN THE SPORTING CODE, SHALL BE REPRINTED IN THE EVENT RULES FOR THE RESPECTIVE EVENTS AND MUST NOT BE MODIFIED, EXCEPT WHERE VARIATIONS, PROPOSED OPTIONS OR LOCAL PARTICULARS ARE SPECIFICALLY ALLOWED IN THE MODEL EVENT RULES. (S1 5.7.1.2)
- 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)**

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, BUT BEFORE PUBLICATION OF THE FIRST SCORES. (S1 An3 6)

**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 GB. 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 before the start of the launch period. 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 SUPPLEMENTARY INFORMATION BY ELECTRONIC COMMUNICATION TOOLS**

For individual launch areas and as a further possibility for common launch area, electronic communication tools may be used to publish additional or revised information to competitors. At a common launch area competitors will be informed on the change by a method defined in the general briefing.

Safety related announcements (cancellations, danger warnings) can be made anytime using electronic communication tools.

Launch period delays and minor amendments to task data can be made up to 20 minutes before the start of the launch period at ILP and up to 10 minutes at a CLP.

Any other task changes must be made at in-person briefings or supplementary briefings.

#### **8.11 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.

#### **8.12 LATE ENTRY**

8.12.1 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.

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

#### **8.13 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, physically marked on the ground before the beginning of the Event, 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.

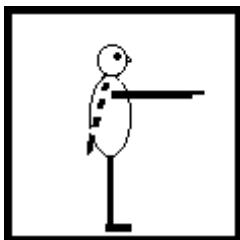
9.14.2 The Director can make the use of launch masters compulsory for all competitors or optional.

**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.

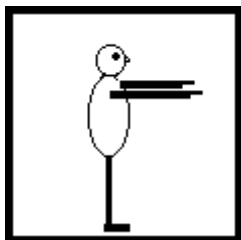
9.15.3 The launchmaster will give each competitor permission to take-off according to the signals as published. The competitor may then take-off at will, subject to any instructions from the launchmaster at the time.



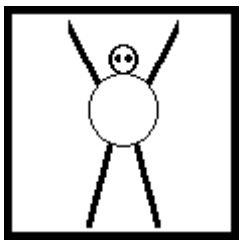
I acknowledge your white flag.



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**

THE POINT IN POSITION AND TIME AT WHICH AN AEROSTAT FIRST BECOMES AIRBORNE. (S1 3.3)

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. (S1 3.2 part)

**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. This penalty will be considered when calculating the Respectful Flying Score.
- 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.
- 10.2.3 Penalty points under this rule will also be considered when establishing the Respectful flying score.

**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 country. Those registered for a country will then be considered a crew member of each team associated with that country.

10.10.2 A country can nominate up to 2 National Team managers. These persons have to be nominated by competitors from that country. A seat at the briefings may be arranged and competition documents handed out.

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 50 m of an MMA 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 50 m of an MMA or if no MMA is set, 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 coordinate and altitude, set by the Director or chosen by a competitor.
- 12.1.2 If a target is not displayed at the given coordinate and no target is displayed within 100 m, the competitor should aim for the coordinates and make an electronic mark. The MMA rule 12.18.3 does not apply. 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 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.

**12.5 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.

**12.6 MARKER RELEASE**

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

**12.7 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

**12.8 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.

**12.9 MARK**

12.9.1 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.

12.9.2 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.

12.9.3 If no mark has been achieved the competitor will be scored to his next mark in time or landing position, whichever is best.

**12.10 INTERFERENCE WITH MARKER**

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

**12.11 SEARCH PERIOD**

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

**12.12 LOST MARKER**

- 12.12.1 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 electronic mark as if the competitor had missed the MMA.
- 12.12.2 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.
- 12.12.3 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.

**12.13 SCORING PERIOD**

- 12.13.1 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.
- 12.13.2 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 electronic mark.
- 12.13.3 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.
- 12.13.4 Under all circumstances scoring after official sunset is prohibited.

**12.14 SCORING AREA**

- 12.14.1 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.
- 12.14.2 A competitor who does not achieve a scoring position inside the scoring area(s) will not achieve a result.

**12.15 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 and under rule II.20. Any recorded track point exactly on the line or altitude limit will be considered valid.

**12.16 MARKER MEASURING AREA (MMA)**

12.16.1 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.

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

12.16.3 Competitors not achieving a physical mark within the MMA will be scored by electronic mark.

**12.17 VALID MARK**

12.17.1 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.

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

12.17.3 A valid physical mark shall have precedence over any electronic mark.

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

**12.18 TRACK POINT**

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

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

12.18.3 A competitor's result based on an electronic mark cannot be better than the worst possible result in the MMA.

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

**12.19 VALID TRACK POINT**

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.

**12.20 TARGET OFFICIALS**

Target Officials are assigned to establish the competitor's results and possible rule violations. In general, in all task 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**

- 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. (S1 An3 5)
- 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. (S1 An5 5 part)
- 13.1.3 If a penalty brings the competitor's Respectful flying score to 0%, the competitor will be grounded for all further flights in that event.

**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.

13.4.3 Some penalties will be considered when calculating the 'Respectful flying score'. They will be marked as such in the task results.

**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**

14.3.1 THE scores OF EACH TASK SHALL BE PUBLISHED WITH THE MINIMUM OF DELAY on the Official Notice Board. (S1 5.9.4 part)

14.3.2 Task score sheets shall include: (S1 5.9.4 part)

- a. EVENT NAME, TASK DATE, TASK SEQUENCE NUMBER, TASK NAME AND RULES reference AND OFFICIAL PUBLICATION TIME.
- 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, version number and signature of the Director.
- 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 and will receive zero points.

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 TOTAL SCORES

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

14.7.2 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.

#### 14.8 NATION RANKING

14.8.1 Nations will be ranked according to the average total score (before rounding) of all competitors of the relevant NAC.

14.8.2 The Nation Ranking requires a minimum of 4 NACs, each with at least 2 competitors scored in the event.



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

15.1.1 Competitors will attempt to achieve a mark 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
- e. minimum distance of goal(s) from any goal set by the director

15.1.3 The result is the distance from the mark 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 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 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 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 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 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 to the target, if displayed, or goal. Smallest result is best.

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

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**15.5 FLY ON (FON)**

- 15.5.1 Competitors will attempt to achieve a mark 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
  - e. minimum and maximum distance between declaration point and declared goal(s)
  - f. minimum and maximum distances of declared goal(s) from any goal set by the director
- 15.5.3 The result is the distance from the mark to the nearest valid declared goal. Smallest result is best.
- 

**15.6 HARE AND HOUNDS (HNH)**

- 15.6.1 Competitors will follow a hare balloon and attempt to achieve a mark 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 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.
-

**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 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 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 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 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 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 to the target, if displayed, or goal. Smallest result is best.
- 15.9.4 A competitor who does not achieve a mark 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.
- 

**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.
- 

**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.
-

**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.

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**15.20 3D Shape Task (3DT)**

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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**15.21 Altitude Profile Task (APT)**

15.21.1 Competitors will attempt to achieve the greatest time within a set airspace.

15.21.2 Task data:

- a. description of set airspace(s) (see sketch).

15.21.3 The result is the accumulated time in seconds in the set airspace(s). Greatest result is best.

## RULES 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>OFB</b>	OUT OF BOUNDS (OFB)
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)
15.21	<b>APT</b>	ALTITUDE PROFILE TASK (APT)
	<b>TDS</b>	Task (Data) Sheet
	<b>COH</b>	Competition Operation Handbook



**SECTION IV is not used**