

# **Balloon Federation of America**



## **Simplified Competition Rules (for “scores-only” events)**

# **2022**

BALLOON FEDERATION OF AMERICA  
P.O. BOX 400, 1601 N. JEFFERSON  
INDIANOLA, IOWA 50125

# Table of Contents

<b>INTRODUCTION</b>	<b>1</b>
<b>DISCLAIMER</b>	<b>1</b>
<b>RULE CHANGES FOR 2018</b>	<b>1</b>
<b>SECTION I – GENERAL EVENT DETAILS</b>	<b>2</b>
1.1 PARTICIPATION	2
2.1 ACKNOWLEDGEMENT OF RESPONSIBILITY AND ASSUMPTION OF RISK	2
3.1 INSURANCE	2
<b>SECTION II – COMPETITION DETAILS</b>	<b>3</b>
1. 1 NAMES OF EVENT PERSONNEL	3
2. 1 DESCRIPTION OF CONTEST AREA	3
3. 1 OUT OF BOUNDS DESCRIPTION	3
4. 1 PZ LIST	3
5. 1 LIST OF RED ROAD PZs	3
6. 1 DESCRIPTION OF COMMON LAUNCH AREA(S)	3
7. 1 COORDINATES AND ALTITUDE IN FEET MSL FOR COMMON LAUNCH POINT(S)	3
8. 1 EXPECTATIONS REGARDING PUBLIC PROPERTY AND LANDOWNER'S PERMISSION	3
10.1 RECALL PROCEDURE	3
11.1 LOCATION OF OFFICIAL NOTICE BOARD	3
12.1 LOST MARKER FEE	3
13.1 BALLOON SIZE	3
14.1 ALTITUDE	3
15.1 SCORING FORMULA	4
16.1 2D AND 3D SCORING ALTITUDES	4
17.1 MAP COORDINATES	4
18.1 COMPETITION DETAILS	5
<b>SECTION III – RULES</b>	<b>6</b>
<b>CHAPTER 1 - OBJECTIVES</b>	<b>6</b>
1. 1 OBJECTIVES	6
1. 2 DEFINITION OF CHAMPION	6
1. 3 INTERPRETATION OF ENGLISH WORDING	6
1. 4 DOCUMENTATION	6
1. 5 CLARIFICATION STATEMENT	6
<b>CHAPTER 2 – ENTRY CONDITIONS</b>	<b>7</b>
2. 1 COMPETITOR	7
2. 2 COMPETITOR'S RIGHTS OF REPRESENTATION	7
2. 3 QUALIFICATION	7
2. 4 NOT USED	7
2. 5 ENTRY	7
2. 6 NOT USED	7
2. 7 ACCEPTANCE OF RULES AND REGULATIONS	7
2. 9 LIABILITY TO THIRD PARTIES	7

<b>CHAPTER 3 - BALLOON QUALIFICATIONS</b>	<b>9</b>
3. 1 DEFINITION OF BALLOON	9
3. 2 FUEL	9
3. 3 DESIGNATION OF BALLOON	9
3. 4 AIRWORTHINESS	9
3. 5 DAMAGE	9
3. 6 AUTOMATIC FLIGHT CONTROLS	9
3. 7 ALTIMETER	9
3. 8 COMPETITION NUMBERS	9
3. 9 BASKET	9
3.10 RETRIEVE	9

<b>CHAPTER 4 - ORGANIZATION OFFICIALS</b>	<b>10</b>
4. 1 EVENT DIRECTOR	10
4. 2 STEWARDS	10
4. 3 JURY DUTIES AND COMPOSITION	10
4. 4 SCORING OFFICER	10
4. 5 SAFETY OFFICER	10
4. 6 TECHNICAL SUPPORT OFFICERS	10

<b>CHAPTER 5 - COMPLAINTS &amp; PROTESTS</b>	<b>11</b>
5. 1 ASSISTANCE	11
5. 2 COMPLAINT	11
5. 3 NOT USED	11
5. 4 PUBLICATION	11
5. 5 PROTEST	11
5. 6 TIME LIMITS	11
5. 7 TREATMENT OF PROTESTS	12
5. 8 RETURN OF DEPOSIT	12
5. 9 JURY APPROVAL OF SCORES AND PRIZE GIVING	12
5.10 APPEAL OF DECISION OF THE PROTEST JURY	12
5.11 OFFICIAL NOTICE BOARD	12

<b>CHAPTER 6 –LOGGERS</b>	<b>13</b>
6. 1 COMPETITION STRUCTURE	13
6. 9 GPS-LOGGERS	13
6.10 HANDLING	13
6.11 FLIGHT REPORT FORM (FRF)	13
6.12 RESPONSIBILITY	13
6.13 GPS-LOGGER FAILURE	13

<b>CHAPTER 7 - MAPS</b>	<b>14</b>
7. 1 CONTEST AREA	14
7. 2 OUT OF BOUNDS (OFB)	14
7. 3 PROHIBITED ZONES (PZ's)	14
7. 4 PZ's IN FORCE	14
7. 6 MAPS	14
7. 7 EARTH TO BE FLAT	14
7. 8 MAP COORDINATES	14
7. 9 DEGREE REFERENCE	14

<b>CHAPTER 8 – PROGRAM, BRIEFINGS</b>	<b>15</b>	<b>CHAPTER 12 – GOAL, TARGET, MARKER, TRACK POINT</b>	<b>23</b>
8.1 TASK PROGRAM	15	12.1 GOAL	23
8.2 VALID TASK	15	12.2 GOAL SELECTED BY A COMPETITOR	23
8.3 TASK SELECTION	15	12.3 DECLARATIONS BY COMPETITORS	23
8.4 MULTIPLE TASKS	15	12.5 TARGET	24
8.5 MODIFICATION OF RULES	15	12.6 MARKER (MKR)	24
8.6 GENERAL BRIEFING	16	12.7 NOT USED	24
8.7 TASK BRIEFING	16	12.8 MARKER RELEASE	24
8.8 TASK DATA	16	12.9 GRAVITY MARKER DROP (GMD)	24
8.9 SUPPLEMENTARY BRIEFING	16	12.10 FREE MARKER DROP (FMD)	24
8.10 ENTRY FOR TASKS	16	12.11 MARK	24
8.11 LATE ENTRY	16	12.12 NOT USED	24
8.12 OFFICIAL TIME	16	12.13 INTERFERENCE WITH MARKER	24
<b>CHAPTER 9 - LAUNCH PROCEDURES</b>	<b>17</b>	12.14 SEARCH PERIOD	24
9.1 COMMON LAUNCH AREA(S) (CLA)	17	12.15 LOST MARKERS (in events with logger scoring)	25
9.2 INDIVIDUAL LAUNCH AREAS (ILA)	17	12.17 SCORING PERIOD (SCP)	25
9.4 VEHICLES	17	12.18 SCORING AREA (SCA)	25
9.5 COLD INFLATION	17	12.19 SCORING AIR SPACE	25
9.6 SIGNALS POINT	18	12.20 MARKER MEASURING AREA (MMA)	25
9.7 LAUNCH SIGNALS	18	12.21 VALID MARK	25
9.8 PUBLIC ADDRESS	18	12.22 TRACK POINT	26
9.9 LAUNCH PERIOD	18	12.23 VALID TRACK POINT	26
9.10 OBSTRUCTION	18	12.24 TARGET OFFICIALS	26
9.11 ADEQUATE TIME	18	<b>CHAPTER 13 - PENALTIES</b>	<b>27</b>
9.12 EXTENSION OF TIME	18	13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOR	27
9.13 LAUNCHING ORDER	18	13.2 UNSPECIFIED PENALTIES	27
9.14 LAUNCH DIRECTORS	18	13.3 DISTANCE INFRINGEMENTS	27
9.15 PROCEDURES WHEN LAUNCH DIRECTORS ARE COMPULSORY	18	13.4 PENALTY POINTS	27
9.16 PROCEDURES WHEN LAUNCH DIRECTORS ARE OPTIONAL	19	13.5 PROOF OF RULES VIOLATION	27
9.17 LOSS OF CONTROL	19	13.6 FARs	27
9.18 TAKE-OFF (T/O)	19	<b>CHAPTER 14 - SCORING</b>	<b>28</b>
9.19 VALID TAKE-OFF	19	14.1 RESULT	28
9.20 ABORTED TAKE-OFF	19	14.2 SCORE	28
9.21 CLEARING LAUNCH AREA	19	14.3 PUBLICATION OF SCORES	28
<b>CHAPTER 10 - FLIGHT RULES</b>	<b>20</b>	14.4 RANKING ORDER	28
10.1 MIDAIR COLLISION	20	14.5 POINTS FORMULA - PROPORTIONAL SCORING	29
10.2 DANGEROUS FLYING	20	14.6 POINTS FORMULA - POSITIONAL SCORING (Used for National Eligibility List System);	29
10.3 CLEARING GOAL/TARGET AREA	20	14.7 PRECISION	30
10.4 DROPPING OBJECTS	20	14.8 MEASURING (for events without logger scoring)	30
10.5 BEHAVIOR	20	14.10 TOTAL SCORES	30
10.6 LIVESTOCK AND CROP	20		
10.7 LANDOWNER	20		
10.8 COLLISION	20		
10.9 PERSONS ON BOARD	20		
10.10 GROUND CREW	20		
10.11 DRIVING	20		
10.12 DISEMBARKATION	21		
10.13 ASSISTANCE	21		
10.14 AIR LAW	21		
10.15 RECALL PROCEDURE	21		
<b>CHAPTER 11 - LANDINGS</b>	<b>22</b>		
11.1 LANDINGS	22		
11.2 LANDING AT WILL	22		
11.3 CONTEST LANDING	22		
11.4 GROUND CONTACT 1	22		
11.5 GROUND CONTACT 2	22		
11.6 PERMISSION TO RETRIEVE	22		

<b>CHAPTER 15 - TASKS</b>	<b>31</b>	<b>APPENDICES</b>	<b>36</b>
15. 1 PILOT DECLARED GOAL (PDG)	31	<b>APPENDIX A - CODE OF CONDUCT</b>	<b>36</b>
15. 2 JUDGE DECLARED GOAL (JDG)	31	<b>APPENDIX C – PROPANE REFUELING</b>	<b>37</b>
15. 3 HESITATION WALTZ (HWZ)	31	<b>APPENDIX D – COMPETITION POLICIES, RULES AND REGULATIONS (SEE HADC WEBSITE FOR THIS DOCUMENT.)</b>	<b>38</b>
15. 4 FLY IN (FIN)	31	<b>APPENDIX E - U.S. NATIONALS ELIGIBILITY RULES (SEE HADC WEBSITE FOR THIS DOCUMENT.)</b>	<b>38</b>
15. 6 HARE AND HOUNDS (HNH)	32	<b>APPENDIX F – ALLOWABLE DAMAGE ON BALLOON ENVELOPES AND BASKETS</b>	<b>38</b>
15. 7 WATERSHIP DOWN (WSD)	32	<b>APPENDIX G– GPS-LOGGER DISTANCE MEASUREMENTS AND SCORING BANDS</b>	<b>40</b>
15. 8 GORDON BENNETT MEMORIAL (GBM)	32	<b>APPENDIX H – GOAL DEFINITIONS</b>	<b>41</b>
15. 9 CALCULATED RATE OF APPROACH TASK (CRT)	32	<b>APPENDIX I - ABBREVIATION LIST</b>	<b>42</b>
15.10 RACE TO AN AREA (RTA)	33	<b>INDEX</b>	<b>43</b>
15.12 LAND RUN (LRN)	33		
15.13 MINIMUM DISTANCE (MDT)	33		
15.14 SHORTEST FLIGHT (SFL)	33		
15.15 MINIMUM DISTANCE DOUBLE DROP (MDD)	34		
15.16 MAXIMUM DISTANCE TIME (XDT)	34		
15.17 MAXIMUM DISTANCE (XDI)	34		
15.18 MAXIMUM DISTANCE DOUBLE DROP (XDD)	34		
15.19 ANGLE TASK (ANG)	34		
15.20 NOT USED	34		
15.21 LEAST TIME TASK (LTT) (for events with logger scoring)	35		
15.22 MOST TIME TASK (MTT) (for events with logger scoring)	35		

## INTRODUCTION

This booklet contains the Simplified Competition Rules used by the Balloon Federation of America Hot Air Competition Division (BFA/HACD) for events desiring to submit scores to be included in the National Eligibility List system. Appendices A, B, C, and F from the complete Competition Rules, Regulations, Policies and Procedures document, are included here for reference.

All documents pertinent to BFA/HACD sanctioned competitive flying are included on the BFA/HACD website. In addition, general information regarding a variety of safety issues and topics designed to make your competitive flying experience a better one is included there.

### History of the National Eligibility List System

The BFA/HACD Sanctioned Competition Regulations and Policies were initially inaugurated in August 1974 with a vote of the general membership of the BFA. Prior to that time, open participation in the Nationals competition had been a simple matter, considering that from 1970 through 1973 there were less than 100 competitors registered at the US National Hot Air Balloon Championship. By 1974, however, with 450 pilot members on the BFA roster and 168 registering to compete, the logistics of continued open competition posed potential problems.

The need to establish a fair method of evaluating pilot skills to determine eligible entrants in the Nationals competition automatically created a mandate for the BFA to develop a **Nationals Ranking System**. In autumn of 1974, the Events Committee was authorized to produce such a system and the nucleus of the present Competition Regulations and Policies and National Eligibility List System was born. The system became operable in January 1975 and has been the criterion for the selection of those pilots who are eligible to compete for the title of US National Hot Air Balloon Champion since then.

To more accurately describe the use of this system, the HACD changed the name to the **National Eligibility List (NEL)**.

## DISCLAIMER

The Balloon Federation of America offers this set of competition rules for aeronauts who are interested in competitive ballooning. These rules are designed to afford balloonists and balloon organizations the opportunity to participate in competitive hot air ballooning activities while observing the principles of sportsmanship and the mandates of the Federal Aviation Regulations (FAR's).

These rules are only examples to be used by persons or organizations who are interested in exploring the world of competitive hot air ballooning. While these rules have been developed by the BFA over years of competition, they are no substitute for well-reasoned pilot decision making by pilots in command of lighter-than-aircraft. Likewise, they are not intended as a substitute for the Federal Aviation Regulations with which competing pilots should be totally familiar.

Many of the tasks referenced in these rules could potentially involve flight which would be below the minimum safe altitudes mandated by FAR 91.119 (b) and (c) (14 C.F.R. § 91.119(b), (c)). **These competition rules do not grant participating pilots the right to contravene FAR's, including minimum safe altitudes.** Limited operational airspace waivers may be available. However, the applicant must comply with the requirements of the Federal Aviation Administration in order to obtain such a waiver. Applications for waivers must be submitted on FAA Form # 7711-2 which can be found on the FAA Website at [www.faa.gov](http://www.faa.gov). ***Organizers should not attempt to stage a competitive event without contacting their local Flight Service District Office (FSDO)***

***THESE RULES ARE OFFERED BY THE BALLOON FEDERATION OF AMERICA, WITHOUT CHARGE TO THE USER, ONLY AS A SERVICE TO HOT AIR BALLOON PILOTS AND ORGANIZATIONS. NO PERSON OR ORGANIZATION MAY, WITHOUT THE WRITTEN PERMISSION OF THE BALLOON FEDERATION OF AMERICA PRESIDENT, MAKE ANY USE OF THE BFA NAME OR LOGO OR IN ANY WAY, EXPRESSLY OR IMPLIEDLY REPRESENT THAT THE USER HAS ANY CONNECTION WITH OR SANCTION FROM THE BALLOON FEDERATION OF AMERICA.***

## RULE CHANGES IN 2019

In this version of the rules, much of the content of Sections I and II of the complete Rules and Regulations document is moved to the rules in Section III, deleted, or provided to pilots at registration or the General Briefing as per Section II. There are also some substantive changes from previous rules. Pilots are advised to carefully read all sections pertinent to their flights.

## **SECTION I – GENERAL EVENT DETAILS**

### **1.1 PARTICIPATION**

- 1.1.1 Participation in BFA Hot Air Competition Division Sanctioned State and Regional Championships, and the National Eligibility List system is governed by the Competition Rules, Regulations, Policies and Procedures of the BFA HACD. Participation in Scores-only events is governed by these Simplified Competition Rules.
- 1.1.2 The Event is open to pilots who are members of the HACD in good standing and others who qualify under conditions detailed in the event registration materials.
- 1.1.3 HACD correspondence is to be addressed to:
  - Al Nels, HACD Chairman
  - E-mail: al@nels.us
  - Phone: (937) 429-4229

### **2.1 ACKNOWLEDGEMENT OF RESPONSIBILITY AND ASSUMPTION OF RISK**

- 2.1.1 A competitor, by entering the event, acknowledges awareness of, and agreement with, the responsibility legally transferred to the pilot in command under the Federal Aviation Regulations (FAR's) as regards the personal decision to fly his balloon and any bodily injury or property damage resulting therefrom is solely the pilot's liability.
- 2.1.2 The competitor acknowledges that none of the flights are mandatory and that all flights will be made at the sole discretion of the competitor. Competitor's decisions as pilot in command may affect his standings in competitive events and any compensation to which the competitor might otherwise be entitled if choosing not to fly.
- 2.1.3 The balloon and other property of a competitor shall be at risk of the competitor at all times. By entering the Event a competitor agrees to waive all claim for injury to himself or loss or damage to his property.

### **3.1 INSURANCE**

- 3.1.1 Unless additional amounts are required by the organizer, each competitor shall be insured against all claims by third parties to a minimum of \$100,000 per passenger, \$100,000 property damage and a minimum limit of combined single limit coverage on the operation of their balloon. When asked, 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

The following information is to be provided by the organizer at Registration or the General Briefing. **(The form in section 18.1 can be used to provide information for items 1-17 below.)**

### 1.1 NAMES OF EVENT PERSONNEL.

Event Director:  
Safety Officer:  
Scoring Officer:  
Weather Officer:  
Landowner Relations:  
Others as determined by organizers:

### 2.1 DESCRIPTION OF CONTEST AREA

Competitors will be provided a paper copy of the competition map. It will include relevant information such as map datum, grid system, variation and other data appropriate for the map. Whenever possible, the Organizer should try to also provide a digital version of the competition map, accessible via the Internet, and instructions on how to download it.

A description of the contest area in relation to the competition map is also to be provided. Any changes will be published on the Official Competition Map and posted on the Official Notice Board.

### 3.1 OUT OF BOUNDS DESCRIPTION

The detail of any out of bounds area(s) will be printed on the Official Competition Map. Any subsequent changes will be posted on the Official Notice Board.

### 4.1 PZ LIST

The details of Prohibited Zones will be printed on the Official Competition Map and/or distributed on a separate sheet to competitors. Changes will be posted on the Official Notice Board and supplementary information will be provided at task briefings as changes occur.

### 5.1 LIST OF RED ROAD PZs

In order to maintain a safe operating distance from major highways, selected roads may be identified as red PZs. The altitude limit from the centerline, expressed as a tunnel, will be provided.

### 6.1 DESCRIPTION OF COMMON LAUNCH AREA(S)

### 7.1 COORDINATES AND ALTITUDE IN FEET MSL FOR COMMON LAUNCH POINT(S)

### 8.1 EXPECTATIONS REGARDING PUBLIC PROPERTY AND LANDOWNER'S PERMISSION

If applicable, provide information for the circumstances under which balloons may take off and/or pack up without prior permission, such as yards and fields with white sheets. Public areas, such as public parks and schools, are considered as places without need for permission for take-offs or landings. Competitors are to be provided with specific guidance if this is not the case.

### 9.1 AIR LAW

Provide information on restrictions or special requirements included in the FAA Waiver, if applicable. See Rule 10.14.

### 10.1 RECALL PROCEDURE

Specify the recall procedure to be used, e.g. car radio, pagers, radio frequencies, group calling systems, etc.

### 11.1 LOCATION OF OFFICIAL NOTICE BOARD

### 12.1 LOST MARKER FEE

If the Event is assessing competitors a charge for lost markers the amount of the fee should be announced at the General Briefing.

### 13.1 BALLOON SIZE

If there is a maximum size balloon for the event, it must be announced at the General Briefing.

### 14.1 ALTITUDE

State which altitude measurement method is used in the Event competition, i.e. GPS or barometric.

## **15.1 SCORING FORMULA**

Specify which scoring formula will be used for the event scoring: Proportional (14.5) or Positional (14.6). Sanctioned State and Regional Championships must use Proportional scoring. All events are encouraged to calculate overall event results using Proportional Scoring.

## **16.1 2D AND 3D SCORING ALTITUDES**

If logger scoring is used, provide the separation altitude at which 3D scoring begins. (See Appendix G for the explanation and diagram. Generally, the separation altitude will be approximately 500' to 750' AGL.)

## **17.1 MAP COORDINATES**

Officials will inform competitors how points on the map are to be identified. If a standard UTM grid is used specify competition map grid system and datum used. For example

32K (Zone reference, where 32=zone and K=latitude band)

458565 (6-digit Easting)

5552261 (7-digit Northing)

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

6-7 format: this complies with the standard UTM grid format. First six digits easting and second seven digits northing. (e.g. 458565-5552261 alternatively 0458565-5552261)

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.

A target list number according to the list provided for the competition at hand.

Coordinates may be written in one of the following formats:

If the competition area is completely in one zone, the zone reference may be omitted.

Easting may be written with a leading 0 (zero) making it 7 digits.

Easting 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's first.



## 18.1 COMPETITION DETAILS

### HACD Simplified Competition Rules

Section II of the **Simplified Competition Rules** for **Scores-Only Events** requires that this information be provided to competitors at Registration and/or the General Briefing.

1. Event Personnel:
  - a. Event Director ALLEN YOST
  - b. Safety Officer MICHAEL EMICH
  - c. Scoring Officer PATTY CRAMER
  - d. Weather Officer JAMES CUSICK
  - e. Landowner Relations KEN CRAMER
2. Contest Area description: Entire Competition Map
3. Areas (if any) that are out of bounds: N/A
4. PZs: (attach separate list if needed) Printed on competition map
5. Red roads: (description and altitude limit) N/A
6. Common Launch Area description(s): Coshocton Co. Fairgrounds
7. Common Launch Point coordinates and elevation: 2715/5737 785'MSL
8. Landowner permission expectations: Required on private property. Schools, Parks, Churches are considered public but keep vehicles on hard surfaces.
9. Special restrictions from FAA Waiver: Posted on Official Notice Board
10. Recall procedure(s): REMIND
11. Location of Official Notice Board: WatchMeFly.net
12. Lost marker fee (if any): N/A
13. Maximum balloon size (if any): N/A
14. Logger altitude measurement method: **GPS**
15. Scoring formula to be used: Proportional (14.5)
16. Separation altitude for 2D and 3D scoring (if used): N/A
17. Method for identifying map points: 4/4 Easting/Northing

## 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 a comparison of performance of pilots and aerostats.
- To reinforce friendship among aeronauts.
- To provide task opportunities for pilots interested in qualifying for the US National Hot Air Balloon Championship through the National Eligibility List System.

#### 1.2 DEFINITION OF CHAMPION

1.2.1 The Champion shall be the competitor who has the highest aggregate score at the end of the event.

1.2.2 For a Champion to be declared for State or Regional Championships, at least three tasks must be completed.

#### 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 shall be available for inspection when competitors register on arrival at the Event:

- a) Pilot Certificate
- b) Pilot Log Book
- c) Balloon Log Book
- d) Certificate of Airworthiness
- e) Certificate of Registration
- f) Certificate of Insurance

#### 1.5 CLARIFICATION STATEMENT

The terms “**he**”, “**his**”, “**pilot**”, or “**competitor**” shall mean a person of either gender that is registered and participating in the Event as it may pertain to these rules and/or task sheets and briefings.

## CHAPTER 2 – ENTRY CONDITIONS

### 2.1 COMPETITOR

Pilot entered and competing in the event.

### 2.2 COMPETITOR'S RIGHTS OF REPRESENTATION

Members in good standing and not on probation with the BFA/HACD are eligible to compete in the BFA National Eligibility List System (NEL)

### 2.3 QUALIFICATION

Each pilot-in-command shall meet the requirements of the organizer and the BFA/HACD regulations.

### 2.4 NOT USED

### 2.5 ENTRY

The completed entry form and entry fee for each competitor must reach the organizers by the closing entry date, except in the case of extra places offered by the organizers. The entry fee may or may not be refundable.

### 2.6 NOT USED

### 2.7 ACCEPTANCE OF RULES AND REGULATIONS

All entrants and competitors are expected to know, understand, and abide by the Competition Rules and Regulations for this event. By entering, pilots are deemed to accept the Rules and Regulations without reservation. Competitors and crews are expected to conduct themselves in a manner that promotes the sport of hot air ballooning.

All pilots and their crews will conduct themselves in such ways as their actions will be a credit to and in the best interests of hot air ballooning and the Event, its officials and staff, and its Event sponsors.

All participants will treat fellow pilots, crews, officials, sponsors, etc. with respect at all times.

Pilots will be responsible for operating within both the letter and spirit of the Event Competition Rules.

Pilots registering for and attending events are expected to be present for the General Briefing and attend all flight briefings. In circumstances requiring a participating pilot to miss a briefing or flight, the pilot is responsible to notify the organizer and Event Director of their situation. Violations of normally accepted conduct will result in a warning and possible expulsion from the Event.

### 2.8 RELEASE OF LIABILITY

2.8.1 The competitor, by entering the event, agrees that the organizers and sponsors of this event, competition officials, Balloon Federation of America, BFA/HACD, officers, trustees, agents and/or members of these entities are providing the competitor with the facilities and means for participation in this event and in no way do they supersede the responsibility of the pilot in command as stated in the FAR's, or otherwise.

2.8.2 The competitor releases the aforementioned from liability for their actions or inactions in relation to the event which may arise out of or result from or in any manner be connected with the balloon flight or activity in which the competitor participates as a pilot in command.

### 2.9 LIABILITY TO THIRD PARTIES

By entering the 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

2.10.1 All meteorological reports, forecasts, and other safety or navigational information is provided in good faith for the guidance of competitors. The event assumes no responsibility for the completeness or accuracy of such information. It is the competitor's decision whether to rely on that information or acquire additional information.

2.10.2 Officials may be appointed to regulate the inflation and launching of balloons. However, nothing shall diminish the responsibility of each pilot under this chapter.

### 2.11 RESPONSIBILITY

Entrants and competitors have full and complete authority over the balloon and are responsible for all decisions to be made associated with the balloon on the ground and in the air. Competitors must ensure that his crew, his equipment, and his own level of skill and experience are suitable for the conditions in his own judgment. A competitor is responsible for all the actions of his crew during the event.

## **2.12 CONDUCT**

Entrants and competitors and their crews are required to behave in a sportsmanlike manner, follow the Code of Conduct in Appendix A, and comply with the directions of Event Officials. Inconsiderate behavior, profanity, or unsportsmanlike conduct, or any violation of the FAA Waiver will be penalized up to 1000 competition points by the Event Director and may be grounds for expulsion of a pilot.

## CHAPTER 3 - BALLOON QUALIFICATIONS

### 3.1 DEFINITION OF BALLOON

3.1.1 Aerostat: a lighter-than-air aircraft.

Free Balloon: an aerostat supported statically in the air, with no means of propulsion by any power source.

3.1.2 Sub-class AX: free balloons which obtain their buoyancy solely as a result of heating air. The envelope may contain no gasses other than air and the normal products of combustion.

### 3.2 FUEL

Each balloon shall carry an adequate fuel supply to ensure completion of the flight with an adequate reserve. The lack of adequate fuel to complete a task shall not be grounds for protest.

### 3.3 DESIGNATION OF BALLOON

Each competitor shall designate 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. Event organizers may set a maximum size category for entered balloons.

### 3.4 AIRWORTHINESS

Aerostats flown in the Event must have current certificates of registration and airworthiness, or in place of the later, an equivalent document from the FAA. All required instruments under the guidelines of the aircraft operations manual must be on board. The organizers/officials are empowered to visually inspect and/or reject any aerostat which in their opinion is not of a reasonable standard of airworthiness.

### 3.5 DAMAGE

3.5.1 If a balloon is damaged during the Event, it may be repaired. Damaged components may be replaced or repaired, except that a complete envelope may be replaced only at the discretion of the Event Director.

3.5.2 The pilot of a balloon damaged while in flight, to the extent affecting its airworthiness (according to the individual balloon's flight manual), is prohibited from continuing in the task(s) and must land at the first practical opportunity. The damage must be reported to the Safety Officer per rule 3.5.3

3.5.3 Any damage to a balloon affecting its airworthiness must be reported to the Safety Officer before it is entered for a further task and the balloon may only be flown after appropriate repairs have been made and proper evidence and documentation of such has been provided to the Safety Officer. 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.

### 3.7 ALTIMETER

Each balloon shall carry a serviceable altimeter.

### 3.8 COMPETITION NUMBERS

If utilized by the Organizer, basket banners provided will be displayed on opposite sides of the basket during tasks. In addition, all crew vehicles shall be clearly identified on opposite sides with competition numbers, if provided. Penalty is up to 200 competition points applied to the first task of the flight(s).

### 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 Marker Measuring Area (MMA) or within 100m radius of a target except with permission and in the presence of an official. Crews are not allowed to make permanent marks on an intersection (temporary marks are permitted, e.g. paper, chalk).

3.10.2 All vehicles used to aid the retrieval of a balloon shall be marked with the competition number, if provided.

3.10.3 Retrieve vehicles shall not be parked within 100m of a goal/target set by the Director, unless specifically authorized in the briefing, e.g. to submit a competitor's FON declaration.

## **CHAPTER 4 - ORGANIZATION OFFICIALS**

### **4.1 EVENT DIRECTOR**

- 4.1.1 The Event Director will be in overall charge of balloon operations of the event. He may have an assistant director and technical officials to assist him.
- 4.1.2 The Event Director is responsible for the good management, smooth, and safe running of the competition. He shall make operational decisions in accordance with the rules of the Event. He may penalize or disqualify a competitor for misconduct or infringement of the rules. He, or his designee, shall attend meetings of the jury and give evidence if requested.
- 4.1.3 In the rules the word "Director" may be used instead of "Event Director."
- 4.1.4 The responsibility of the Event Director is limited to competition operations, and does not include any other activity within the event not related to competition operations

### **4.2 STEWARDS**

- 4.2.1 Stewards are advisors to the Director and, if used, shall:
  - Watch over the conduct of the event and report any unfairness or infringement of the regulations or behavior prejudicial to the safety of other competitors or the public or in any way prejudicial to the sport.
  - Investigate protests and assemble information and facts concerning matters to be considered by the Jury.
  - Advise on the interpretation of the rules and regulations and to advise on penalties.
- 4.2.2 A steward has no executive powers; he must not be a member of the organizing committee. A steward may attend a meeting of the Jury as an observer or witness.

### **4.3 JURY DUTIES AND COMPOSITION**

- 4.3.1 Matters of advice, arbitration or rule interpretation shall be the responsibility of the Jury having been appointed in accordance with 4.3.3.
- 4.3.2 During the event, the Jury deals with protests made by competitors. A Jury member must possess a thorough knowledge of the rules and regulations for the Event. At least one Jury member is to be on site during the competition operations.
- 4.3.3 In the event of a protest, the Scoring Officer shall serve as Jury Chairman and select two or more BFA/HACD competitors from the pool of competitors chosen after the general briefing. Selected jurors must not have a conflict of interest with the protest to be heard. In the event that the Scoring Officer has a conflict of interest, the Safety Officer or other designee shall serve as jury Chairman. In the event of a subsequent protest, the Scoring Officer shall make a new selection of jury members. In the event that all members of the pool should have a conflict of interest with the current protest, the Scoring Officer and the Safety Officer shall serve as jury members and shall select one additional member from the competition staff. The Event Director may not serve as a juror. The Chairman reserves the right to eliminate competitors from consideration for jury pool at their request.
- 4.3.4 The Scoring Officer, in his role as Jury Chairman, has the right to require the Organizer to abide by the published rules and regulations for the Event. If the Organizer fails to do so, the Scoring Officer has the power to stop the Event until a jury meeting has considered the situation.

### **4.4 SCORING OFFICER**

The Scoring Officer shall be responsible for collecting results and producing scores using the BFA Scoring Software or some other valid method.

### **4.5 SAFETY OFFICER**

The Safety Officer shall give advice to the Event Director on any matters regarding safety and will be in consultation on weather forecasts and briefings. Operational procedures for the safety officer are contained in the BFA Safety Officer's Handbook (SOH).

### **4.6 TECHNICAL SUPPORT OFFICERS**

Technical Support Officers are competition officials who are responsible to the Scoring Officer. If utilized, they are responsible for the computer's mapping software and verifying the records of each pilot's flight track. Their duties include the downloading of the GPS tracks and they will be responsible for verifying each pilot's recorded track and recording relevant information regarding their flight and performance during the task for the Chief Scorer.

## **CHAPTER 5 - COMPLAINTS & PROTESTS**

### **5.1 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.

### **5.2 COMPLAINT**

- 5.2.1 The purpose of a complaint is to obtain a correction without the need to make a formal protest.
- 5.2.2 A complaint is a request by a competitor to the Director, or his delegated official, to investigate any matter in which the competitor is dissatisfied.
- 5.2.3 A complaint must be submitted in writing and will receive a written reply.
- 5.2.4 Complaints shall be handed or transmitted by the competitor to the Director, or his designated official, who will acknowledge receipt and record the time of receipt.

### **5.3 NOT USED**

### **5.4 PUBLICATION**

The Director may at his discretion publish the text of any formal complaint together with his reply. If requested by the competitor, the Director must do this.

### **5.5 PROTEST**

- 5.5.1 If dissatisfied with the Director's decision on a Complaint made during the Event, a competitor has the right of protest.
- 5.5.2 Declarations of intention to protest and protests with protest fees shall be handed or transmitted by the competitor to the Event Director, or his designated Official, who will acknowledge receipt and record the time of receipt.
- 5.5.3 A competitor who has made a protest has the right to make a verbal presentation of his case to the Jury. He may be assisted by an advisor of his choice during this meeting.
- 5.5.4 The text of all protests and the decisions of the Jury shall be posted on the Official Notice Board.

### **5.6 TIME LIMITS**

#### **5.6.1 TIME LIMITS FOR COMPLAINTS**

- 5.6.1.1 Complaints must be submitted as soon as possible after the event giving rise to the complaint and must be dealt with expeditiously.
- 5.6.1.2 Complaints concerning scoring must be made to the Event Director or Scoring Officer within eight (8) hours of publication of the official scores for a task. The rest hours of 10:00 PM to 08:00 AM will be disregarded for the purpose of the time limits.
- 5.6.1.3 Publication of a new version of official scores will only extend the complaint time in the matter concerned.

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

- 5.6.2.1 A competitor intending to protest shall, within one (1) hour of the reply to his complaint, declare his intention to protest to the Event Director, or his designated Official.
- 5.6.2.2 Within eight (8) hours of the reply to his complaint the competitor shall submit his protest in writing accompanied by the protest fee of \$100 cash. The rest hours of 10:00 PM to 08:00 AM will be disregarded for the purpose of the time limits.

#### **5.6.3 SHORTENED TIME LIMITS FOR COMPLAINTS AND PROTESTS**

- 5.6.3.1 Complaints made on or after the last day of the Event must be submitted to the Director within one (1) hour of publication of the official scores.
- 5.6.3.2 Protests made on or after the last day of the Event must be submitted within one (1) hour of the reply.
- 5.6.3.3 The Event Director shall announce the publication times for all task scores on the last flying day.
- 5.6.3.4 Time limits applying to scores published after 13:00 on the day before the last flying day will also be reduced to one hour on or after the last flying day of the event.

## **5.7 TREATMENT OF PROTESTS**

- 5.7.1 The Event Director must present any protest to the Jury Chairman without delay. The Jury Chairman will call a meeting of the Jury within 24 hours of receiving a protest.
- 5.7.2 The jury will hear both sides of the matter of any protest, applying the relevant rules for the event.
- 5.7.3 The Chairman 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 Chairman's report.

## **5.8 RETURN OF DEPOSIT**

- 5.8.1 Normally the deposited fee is returnable only if the protest is upheld or is withdrawn prior to the hearing by the Jury.
- 5.8.2 All non-refunded deposit fees from protests will be sent by the Jury to the BFA/HACD.

## **5.9 JURY APPROVAL OF SCORES AND PRIZE GIVING**

- 5.9.1 The scores of the event shall be final only after all protests have been dealt with by the Jury and the Jury has ceased its functions. The final scores must be made public before the prize giving is held.
- 5.9.2 The Jury Chairman shall verify and sign the final total scores before they are made public.

## **5.10 APPEAL OF DECISION OF THE PROTEST JURY**

- 5.10.1 The decision of the Jury, or disqualification, may be appealed to the HACD Board, provided:
  - a) The competitor initiated a complaint and formal protest in accordance with the above rules and in accordance with time limits at the event level.
  - b) The appeal is in writing.
  - c) The appeal includes all written material related to the original protest and the name of the Jury President, Event Director and Scoring Officer involved in the original decision as well as any material relating to any disqualification, if applicable. Only the original protest and materials presented to the Protest Jury will be considered.
  - d) The appeal includes information on the selection of the Jury members along with the names of jurors involved in the decision.
  - e) The appeal is sent to the Chairman of the HACD within 72 hours of the decision of the Jury or the disqualification decision.
- 5.10.2 The appeal will only consider questions and concerns that impact scores being submitted to the National Eligibility List System.
- 5.10.3 The Scoring Officer and Event Director shall be immediately informed that an appeal has been filed.
- 5.10.4 The decision of the HACD Board shall be rendered within 30 days of the receipt of the appeal.
- 5.10.5 The decision will be relayed by telephone, US mail or e-mail to persons directly affected and the decision will be published to the BFA/HACD web site.

## **5.11 OFFICIAL NOTICE BOARD**

- 5.11.1 The Event Director will announce at the General Briefing the place where the Official Notice Board is located. This should be marked OFFICIAL NOTICE BOARD and is the place where all results, scores, replies to complaints and protests, and other official communications directly relating to the Event will be published. All information shall be signed, dated, and timed. Postings to an official web site implies the required signature and shall display the date and time.
- 5.11.2 If an Electronic Notice Board is used, the details including a backup procedure in case of electronic failure will be announced in the General Briefing.



## CHAPTER 6 –LOGGERS

### 6.1 COMPETITION STRUCTURE

The competition will be conducted using markers with limited scoring and/or loggers.

### 6.2-6.8 NOT USED

### 6.9 GPS-LOGGERS

6.9.1 The use of GPS-loggers is optional. Rules 6.9 through 6.13 only apply to events utilizing GPS Data Loggers.

6.9.2 A GPS Data Logger is a device, issued by the organizer, which logs the track and altitude of a balloon. The track points of the log will specify the position (latitude/longitude), the altitude (barometric or GPS altitude as specified in the General Briefing, see II.13.1), and a time stamp. 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 must comply with the operational instructions on their use (see 6.13).

### 6.10 HANDLING

6.10.1 The GPS-logger will be handed out to the competitors together with the markers at briefing time.

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

6.10.3 After landing, the competitor will detach the logger, turn it off, and return it to the Operations Center or other location designated by the Director in the briefing.

6.10.4 Each pilot is responsible for the safe and undamaged return of the GPS logger as supplied by the Organizer. Damage to, or loss of, an Organizer provided GPS may result in the pilot being assessed a charge. If a charge is assessed, it must be paid prior to another official logger being provided.

6.10.5 At no time is the competitor allowed to modify the logger's critical settings (see 6.13.3) or interfere with its operation other than specifically instructed by the Director.

### 6.11 FLIGHT REPORT FORM (FRF)

6.11.1 A Flight Report Form (FRF) stating the take-off and landing place and time, estimated task results, landowner related issues and other relevant data may be provided by the officials. If provided, it shall be completed and signed by the competitor.

6.11.2 The competitor will return the:

- FRF
- Logger
- Unused markers

to the designated Official(s) at a location designated by the Event Director during the General Briefing. Any undue delay in returning the above objects may result in a penalty.

### 6.12 RESPONSIBILITY

The competitor is responsible for any loss or damage between handing over at briefing and return of the logger after the flight.

### 6.13 GPS-LOGGER FAILURE

6.13.1 In the case of logger malfunction, the officials may ask the competitor to provide his GPS equipment to substitute the missing track information. Not carrying the official logger in the basket or not turning it on does not constitute logger malfunction.

6.13.2 If the official logger is not carried in flight or turned on or turned on after launch, but an approved GPS (see 6.9.2) with a usable track is provided, the competitor will receive a penalty of 200 task points on the first task of the flight for a first offense. Offenses on subsequent flights will be penalized by no result on logger results and up to 200 task points on marker results. Application of this penalty shall not bring result less than Group B results.

6.13.3 In case both the official logger 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. Marker results will be penalized up to 200 task points when no official or approved track log is available. 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 in accordance with settings given at the General Briefing and use the same set-up (sampling time interval, map datum, minimum track point memory, etc. as the official logger.

## 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 (PZ's)

7.3.1 The Director may define airspace or other areas as prohibited. A mark or track point inside a 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.

7.3.3 There are three classifications of PZ's: Red, Yellow, and Blue.

7.3.4 A Red PZ is restricted airspace and will include an altitude limit which a competitor shall not fly below. Ground contact of the inflated balloon is not permitted. No inflation and deflation is permitted

7.3.5 A Yellow PZ is a restricted area where no take-offs, landings or ground contact of the inflated balloon 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. The Blue PZ is considered OFB and infractions will be penalized under Rule 10.14.2

7.3.7 NOT USED.

7.3.8 Red Road PZ identifies restricted airspace surrounding major roadways or Interstates. It is measured from the centerline (expressed as a dome around the axis) of an interstate or other major highway identified as red roads.

### 7.4 PZ's IN FORCE

At each task briefing PZ's 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 penalized by up to 1000 competition points, proportionally to the offense.

### 7.6 MAPS

A competitor is required to carry a paper or electronic competition map in the basket. All published PZ's, whether or not in force for the task, and all out-of-bounds areas shall be clearly and accurately marked on the map. 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 penalized up to 250 competition points.

### 7.7 EARTH TO BE FLAT

For scoring purposes, the earth is flat, and calculations based on the competition map will be taken as accurate.

### 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 General Briefing information. For goal declaration of pre-defined goals, the complete goal number of the published list may be used. Penalty for inappropriate but unambiguous declarations is 100 task points.

### 7.9 DEGREE REFERENCE

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

## CHAPTER 8 – PROGRAM, BRIEFINGS

### 8.1 TASK PROGRAM

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

### 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. 50% or more of the competitive field must launch for a valid task. In order for task scores to qualify for submission for inclusion in the NEL, both of the following conditions must be met:

- 1) A minimum of six (6) HACD cardholders must be registered, present and participating in the event.
- 2) The greater of 50% of the total pilots registered or six (6) pilots must launch.

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

### 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 (or best positional score per 14.6.2) 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. Order is determined by the final marker or track point mark of each task.

8.4.3 When markers are used, dropping the final marker of a task inside the set MMA indicates the completion of that task and the start of the following task, if applicable. Ground contact penalties of Rule 11.5 within an MMA will be assessed to the task of the MMA.

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 after achieving their best track point result or if they cross the boundary line (area, grid line, arc, etc.) or boundary time of the follow-on task.

8.4.5 NOT USED

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 If not otherwise stated in the task data, the minimum distance from the launch point to a goal/target applies as well to all other goals/targets on that flight.

8.4.8 Task order: unless track points are used, the task data shall specify for each task the marker(s) to be used. If no competitive advantage is gained, the penalty for releasing the wrong marker is 25 points per task. If more than the allowed number of physical markers is released in a task, the competitor will be scored by the least favorable mark.

### 8.5 MODIFICATION OF RULES

8.5.1 No further modification, after approval by the BFA/HACD Board, shall be permitted during the Competition Year unless approved by three-quarter majority of the HACD Board. No such rule addition or modification shall be retroactive.

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

8.5.3 Variations to task rules shall be provided individually to each competitor and/or posted in writing if feasible.

## **8.6 GENERAL BRIEFING**

A General Briefing on the rules, regulations and all major aspects of the Event will be held before the start of the Event. Attendance at the General Briefing is compulsory for all entrants and Officials. The official competitors list, compiled from the roll call of the entrants taken at the General Briefing, shall be published as soon as practical 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 the publication of the first scores. Section II lists information that is to be provided at the General Briefing or at Registration.

## **8.7 TASK BRIEFING**

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

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

8.7.2 Where written information is supplied, adequate study time should be allowed before the briefing proceeds.

## **8.8 TASK DATA**

8.8.1 At task briefings the task data, preferably in writing, shall be given to competitors. The task data sheets (TDS) will 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) Launch period
- f) Minimum distance from ILP to all goals/targets set by the director (if applicable)
- g) Provisional time and place of next briefing
- h) Solo flight (if directed)
- i) Search period

8.8.3 Individual task data:

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

## **8.9 SUPPLEMENTARY BRIEFING**

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

## **8.10 ENTRY FOR TASKS**

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

## **8.11 LATE ENTRY**

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

8.11.2 In tasks where competitors select their own launch areas, late entries must be made by contacting an official and making arrangements on where to be briefed and receive a task sheet, GPS-logger, weather sheet, and markers.

## **8.12 OFFICIAL TIME**

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

## CHAPTER 9 - LAUNCH PROCEDURES

### 9.1 COMMON LAUNCH AREA(S) (CLA)

- 9.1.1 One or more areas defined by the Organizer and used when the task requires all pilots to launch from a common area. A competitor taking off outside the prescribed common launch area (CLA) will not achieve a result for any 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.
- 9.1.3 The Director may establish an improvised CLA by a radius around a coordinate or clearly bordered area. Competitors will select their own launch positions within this area. The use of launch directors and relevant rules is at the Director's discretion. Competitors must take-off within the set launch period or, if signals are used, within the period indicated by the flag signals. The Director will declare the CLP used for the CLA at the task briefing. The Director may also apply this procedure to the CLA.

### 9.2 INDIVIDUAL LAUNCH AREAS (ILA)

- 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 individual launch point.
- 9.2.2 Competitors must ensure permission has been obtained from the landowner or occupants before driving onto, or launching from, any land which is enclosed or cultivated, or apparently private, or used for agricultural purposes. Landowner permission is not required if the basket and retrieve vehicle are on a public road or driveway and the envelope is laid out in a field which is not fenced and not cultivated, and no damage is done. Traffic may not be obstructed. Church property may also be used in this manner as long as no basket or retrieve vehicle is on grassy areas. (These provisions are subject to change before or during the event any time by announcements by the Event Director.) Penalty for infringement is up to 250 task points.
- 9.2.3 Landowner's permission must be obtained for each launch/landing and if several competitors launch/land at the same location, each competitor must ask for permission.
- 9.2.4 In tasks where competitors select an individual launch area, the Individual Launch Point (ILP) is the position of the basket at take-off.
- 9.2.5 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.
- 9.2.6 Individual launch areas shall not be selected outside the contest area. Penalty: no result in the first task of that flight.

### 9.3 LAUNCH PROCEDURES

- 9.3.1 The launch director 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 in 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 common 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 Launch Directors may bar from the area any vehicle that is driven inconsiderately.
- 9.4.3 No vehicle may enter the common launch area after the advance yellow warning flag has been raised except by permission of a Launch Director or other official. Penalty: 100 task points.

### 9.5 COLD INFLATION

Burners may be briefly tested, and cold air may be induced into the 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 color has been raised. This rule does not apply to ILA.

## 9.6 SIGNALS POINT

One or more points at the launch area where flag signals may be 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 Colored flags shall have the following meanings when displayed at the signals point:

RED	No inflation or take-off permitted. Previous permission to take-off cancelled.
GREEN	General 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 at signals point.
BLACK	Task cancelled.
VIOLET	(Reserve) Meaning as notified at task briefing for a particular task.

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 task 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 partial minute early or late. The yellow warning flag will be raised five or more minutes before the end of the launch period (for launches from a CLA)

## 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 has been given permission to begin hot inflation 20 or more minutes before the end of the announced 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 Launch Director. The Launch Director may grant an extension if he is satisfied that the competitor was delayed by the action of officials or other competitors, or by 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 is hoisted or when given individual permission by the Launch Director.

## 9.14 LAUNCH DIRECTORS

9.14.1 Launch directors are officials designated by the Director to regulate the operation of all balloons and vehicles in the launch area and to assist in launching of balloons from CLAs.

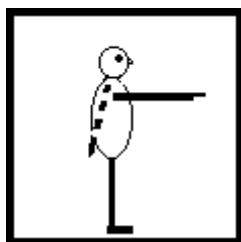
9.14.2 The Director can make the use of launch directors compulsory for all competitors or optional.

## 9.15 PROCEDURES WHEN LAUNCH DIRECTORS 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 launch director. When the launch director 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 launch director will, as far as possible, launch balloons in the order of signaling their readiness. Competitors should equip themselves with a suitable white flag about 50 cm square (handkerchief) 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.

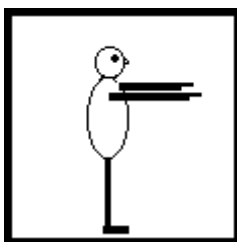
9.15.3 The launch director will give each competitor permission to take-off according to the signals as published. The competitor may then take-off at will, subject to any instructions from the launch director at the time.



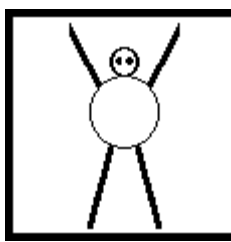
I acknowledge your white flag.



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 penalized 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 launch director.

#### 9.16 PROCEDURES WHEN LAUNCH DIRECTORS 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 director or official 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 (T/O)

The point and/or time at which all parts of an aerostat and its crew cease to be in contact with or connected to the ground or water.

#### 9.19 VALID TAKE-OFF

A balloon is considered to have taken off and to be flying the task(s) if a mark has been achieved or if the balloon passes over the boundary of any launch area. Unless stated otherwise, only one valid take-off per flight is permitted.

#### 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-off(s) 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 Launch Director, 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 must have passed over the boundary of the launch area or shall have climbed to 500 feet AGL, regardless of the end of the launch period. He shall not re-enter the launch field below 500 ft. AGL before the end of the launch period or until after all balloons have taken off, whichever is earlier.

## CHAPTER 10 - FLIGHT RULES

### 10.1 MIDAIR 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.
- 10.1.2 Competitors shall not initiate or maintain a vertical speed exceeding 300 ft./min unless they are certain that no balloon is in their flight path.
- 10.1.3 Competitors causing a collision will be penalized by up to 1000 competition points. A repeated offense will be penalized at least 1000 competition points 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.

### 10.2 DANGEROUS FLYING

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.

### 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 objects may be dropped from the balloon except for official markers, or small pieces of paper or similar lightweight materials for navigational purposes.

### 10.5 BEHAVIOR

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

### 10.6 LIVESTOCK AND CROP

Balloons must not fly closer than 500 ft. from livestock or buildings containing livestock, unless permitted by an FAA waiver. Competitors and crews must not damage crops unless given permission by the landowner or person responsible for the crop. Penalty for infringement of this rule is 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 lines or their supports at any time between inflation and completion of final landing will be penalized up to 500 competition points. Collisions may additionally be penalized under the rule for reckless 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 NOT USED
  - 10.9.3 If the Event is operating under a standard FAA Waiver, flight crew are required to sign 'designated flight crew' forms.
  - 10.9.4 Competitors may be required to perform a particular flight "solo" as specified in the task data. Penalty: the competitor will not receive a result.
- ### 10.10 GROUND CREW
- Each competitor will ensure that he has sufficient crew to operate his balloon and retrieve vehicle. He will 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 completion of the final task of that flight.

**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**

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

10.14.2 Infringement of the FAA Event Waiver will be penalized up to 1000 competition points and if repeated violations occur may result in disqualification from the event.

**10.15 RECALL PROCEDURE**

The organizer's recall procedure is to be announced at the General Briefing.

## 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 All pilots must have landed by sunset as published or announced at the task briefing. Penalty for infringement of this rule is 100 task points per minute or part thereof.

11.2.3 Unless otherwise stated in the task data, a landing at will is not permitted within a MMA or limited scoring area where a target is displayed or within 200 meters of any physical mark of the competitor (penalized under Rule 13.3.4 Distance Infringements).

### 11.3 CONTEST LANDING

11.3.1 In tasks where a competitor is required to produce a mark (physical or electronic) but elects not to do so, his landing will be deemed a contest landing. The scoring position for a contest landing is the final resting place of the basket. Published scoring periods and search periods apply.

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

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

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

### 11.4 GROUND CONTACT 1

After passing over the boundary of any launch area, no part of the balloon or anything attached to it may contact 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 competition points.

- Note: Incidental contact with grass or leaves will not be penalized

### 11.5 GROUND CONTACT 2

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

- Note: Incidental contact with grass or leaves will not be penalized

### 11.6 PERMISSION TO RETRIEVE

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

## CHAPTER 12 – GOAL, TARGET, MARKER, TRACK POINT

### 12.1 GOAL

- 12.1.1 A place defined by grid reference on the competition map, set by the Director or chosen by the competitor.
- 12.1.2 A competitor arriving at an expected goal that was rebuilt or removed should aim for the closest replaced goal within 100 meters. If the goal has ceased to exist and no similar goal is seen within 100 meters, the competitor should aim for the coordinates. These coordinates will also be taken to calculate/measure any other related tasks of that flight.
- 12.1.3 The Director may provide a list with predetermined goals. The goals will be numbered and followed by the map coordinates.
- 12.1.4 The center point of the intersections of roads will be the intersection of the projected centerlines of the roads. Additional information is described in APPENDIX B – GOAL DEFINITIONS and APPENDIX G - COMPETITOR DECLARED GOALS IN GPS-LOGGER EVENTS, of the complete Rules and Regulations document.

### 12.2 GOAL SELECTED BY A COMPETITOR

- 12.2.1 Unless otherwise allowed in the task data, e.g. any point on the competition map, a surface-based goal 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 or a road and a railroad. 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.
- 12.2.2 Measurements will be made from a target or marked point as indicated in the TDS. In the remote case that an unmarked intersection is used or allowed to be chosen by a competitor, measurements will be made from the center of the intersection as specified in the competition details. If the intersection shown as a crossroad on the map turns out to be a staggered tee-intersection or other irregular intersection, then the goal will be as described in APPENDIX B – Goal Definitions of the Competition Rules and Regulations.
- 12.2.3 The following types of goals are permitted for the purpose of goals selected by competitors:
  - a) List of preapproved goals, if applicable
  - b) Intersection of two roads
  - c) Intersection of a road and a railroad.
  - d) Any point not in violation of Rule 12.2.3 a, b, and c below.

No goal selected by a competitor shall be:

- a) Within a built-up area (designated areas on competition map)
- b) Within a blue PZ
- c) Within 200 meters of:
  - i. A Red PZ.
  - ii. A red road measured from the outer edge as shown on the map.
  - iii. A power line shown on the competition map.
- d) Out of bounds

These instructions are subject to change before or during the event anytime by announcements by the Event Director.

- 12.2.4 In the case of goals selected by competitors measured by track log, all logger measurements will be made to the published intersection coordinate. Competitors should be advised that this coordinate might not be the exact center of the intersection and that they should fly to the coordinate provided. Measurements involving markers will be made from the center of the intersection as specified above.
- 12.2.5 In the case of goals allowed by the TDS that do not require predetermined goals or the use of intersections, competitors must identify their goal by methods enumerated in Section II, 17..1.

### 12.3 DECLARATIONS BY COMPETITORS

- 12.3.1 A competitor shall identify his goal by map coordinates. For goal declaration of pre-defined goals, the goal number may be used.
- 12.3.2 A goal declaration violating the restrictions of 12.2 above 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.
- 12.3.3 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 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/official 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.

- 12.3.4 Penalty for late declarations that must be made 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.

- 12.3.5 If a declaration may be made in flight - before a defined time, point or boundary - and the competitor fails to do so, he will not achieve a result.

Goals not meeting distance limitations will be scored according to the rule on distance infringements

12. 4 NOT USED

## **12. 5 TARGET**

A prominent cross intended to be displayed within 100 meters of a goal or at a specified coordinate. Where a target is displayed, any measurements are made from the target, not from the goal. A competitor reaching a goal where an expected target is not displayed should aim for the goal coordinate.

## **12. 6 MARKER (MKR)**

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

## **12. 7 NOT USED**

## **12. 8 MARKER RELEASE**

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

## **12. 9 GRAVITY MARKER DROP (GMD)**

12. 9.1 In a Gravity Marker Drop, 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.

- 12.11.2 An electronic mark is a track point 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. If no electronic mark is found in the recorded track the competitor will be scored to his nearest mark or landing position, whichever is best.

## **12.10 FREE MARKER DROP (FMD)**

The marker must be completely unrolled prior to coming to rest on the ground. 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 infringement with no competitive advantage: 50 task points. Otherwise 250 task points for a competitive advantage.

## **12.11 MARK**

- 12.11.1 A physical mark is the point on the ground vertically below the weighted part of the official marker where it comes to rest after falling from the balloon. If the marker is displaced after coming to rest or disappears subsequently from view (e.g. beneath water level), the earliest position an official has seen the marker in ground contact or having come to rest, will be taken with the accuracy available. Same applies if the marker is carried on top of another balloon, automobile, train, etc.

## **12.12 NOT USED**

## **12.13 INTERFERENCE WITH MARKER**

No person other than an official may touch or interfere with a marker on the ground. Any marker moved must be replaced to its original position based on the best evidence available.

## **12.14 SEARCH PERIOD**

- 12.14.1 Competitors have a specified period from the actual start of the launch period in which to find their marker(s).

12.14.2 The choice between searching for the marker and first recovering the competitor rests with the competitor or his crew.

#### **12.15 LOST MARKERS (in events with logger scoring)**

12.15.1 A marker, dropped within the Marker Measuring Area, is considered lost if it is not found and in possession of Officials within the time limit specified. Competitors may inquire with the measuring officials at a target or goal if they have doubt that their marker will be found. Competitors will not be allowed to search for markers in the MMA without the presence of an official. If a marker dropped, or allegedly dropped, in the MMA is considered lost, then the competitor will be scored by track point as if the competitor had missed the MMA.

12.15.2 If the marker has earlier been seen by an official on the ground and is estimated within the Marker Measuring Area then the official's evidence, together with the logger's data, will be used to determine the competitor's result based on the least advantageous interpretation of evidence available.

12.15.3 Competitors may be required to pay for any marker damaged, not reusable, lost or not brought back in time. Charges for lost or damaged markers are stipulated at the General Briefing. Competitors are responsible for returning markers dropped outside the MMA.

#### **12.16 NOT USED**

#### **12.17 SCORING PERIOD (SCP)**

12.17.1 When defined by the Director in the task briefing, the scoring period is the time limits, within which a goal/target or scoring area is valid.

12.17.2 A competitor will only score if his marker is found or seen falling to the ground (except as noted in Rule 15.9) by officials or he has landed, within the set time limit (except as noted in Rule 15.9). Otherwise, he will be scored by track point.

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

12.17.4 Under all circumstances scoring within the last fifteen (15) minutes prior to official sunset is prohibited.

#### **12.18 SCORING AREA (SCA)**

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

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

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

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

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

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

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

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

#### **12.21 VALID MARK**

12.21.1 A physical mark is considered valid if it is within the MMA and scoring area and within the scoring period if set.

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

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

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

## **12.22 TRACK POINT**

- 12.22.1 A track point is defined by recorded date/time, coordinates, and altitude of a point of the track of a GPS-logger.
- 12.22.2 When goals or targets are used, results based on track points will be the 2D-distance from the goal/target, or 3D-distance from the separation altitude point above the goal/target, to the track or electronic mark. The separation altitude will generally be approximately 1000' AGL. The separation altitude is to be specified in the general briefing information, II.15. (See APPENDIX F for details.)
- 12.22.3 A competitor's result based on a track point cannot be better than the worst possible result in the MMA.
- 12.22.4 In tasks without goals or targets, the horizontal distance (2D-distance) between points will be used to calculate results.

## **12.23 VALID TRACK POINT**

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

## **12.24 TARGET OFFICIALS**

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

## **CHAPTER 13 - PENALTIES**

### **13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOR**

- 13.1.1 Serious infringements include dangerous or hazardous actions or repetitions of lesser infringements and will be penalized according to the appropriate rule.
- 13.1.2 Cheating or unsporting behavior, including deliberate attempts to deceive or mislead officials, willful interference with other competitors, falsification of documents, use of forbidden equipment or prohibited drugs, or repeated serious infringements of rules should, as a guide, result in disqualification from the event.

### **13.2 UNSPECIFIED PENALTIES**

- 13.2.1 A competitor infringing any rule for which a penalty is not specified in the rules 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 will normally receive a warning in the first instance.
- 13.2.3 A competitor may not be penalized for infringing a rule for which the penalty is not specified, if he has already been penalized 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 limit at any time, the competitor will be penalized.
- 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 Where the penalty relates to landing too close to a goal/target or mark, the competitor will only receive a result penalty for the greater infringement. The result 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).
- 13.3.4. 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 penalized up to 200 task points.
- 13.3.5 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 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 (0). Competition point penalties are also subtracted from a competitor's task score and may result in a negative score, which will be set against his total score in the Event.

### **13.5 PROOF OF RULES VIOLATION**

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.

### **13.6 FARs**

It is the responsibility of competitors to follow the requirements of the Federal Aviation Regulations and any waiver for the event. In all cases involving air traffic rules and air safety, the Director or his delegated official will act in consultation with the FAA Monitor.

## CHAPTER 14 - SCORING

### 14.1 RESULT

- 14.1.1 A competitor's result is the achieved outcome in a task including result penalties. Results should be expressed in meters, square kilometers, feet, minutes, or degrees with an accuracy of two decimal places.
- 14.1.2 For tasks with goals and targets, 2D logger measurements will only be valid below the lower level of the Modified 3D band as specified in the General Briefing information.
- 14.1.3 For tasks with goals and targets, Modified 3D logger measurements will be used for altitudes above the 2D measurement altitude and below the 3D measurement altitude, and 3D measurements will be utilized at altitudes above the Modified 2D band. Lower and upper altitudes for the Modified 3D band will be provided at the General Briefing.

### 14.2 SCORE

A competitor's score in the Event is the total of all the 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.
- 14.3.2 Task score sheets shall include:
- a) Event name, task date and time, task sequence number, task name and rules reference.
  - b) For each competitor his: rank, competition number and name, result, score, and, if applicable, penalties followed by the kind of penalty, a rule reference, and a brief description.
  - c) The fixed data used in the Scoring Formulas (P, A, M, RM, W, and SM) and the checksum
  - d) Publication date and time, version number and signature of the Event Director or his designee.
  - 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 automatically 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 penalties. Competitors will be ranked in the following groups for each task:
- |         |   |
|---------|---|
| GROUP A | Competitors whose results have been measured or have been 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 using Formula Two, whichever is the higher. |
| GROUP C | Competitors not making a valid launch or disqualified in the event, all scoring 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 competitor's final task scores will be ranked again before being published.



#### 14.5 POINTS FORMULA - PROPORTIONAL SCORING

14.5.1 Each competitor will 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 can be awarded up to 1000 points before deduction of any penalty points.

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 entered in the competition.

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 POINTS FORMULA - POSITIONAL SCORING (Used for National Eligibility List System);

14.6.1 Positional scoring is the formula used for all individual tasks used in the BFA National Eligibility List System. All tasks entered into the Ranking System whether originally scored under Proportional Scoring or Positional Scoring are converted to Positional Scoring for entry into the National Eligibility List System.

14.6.2 Scores of competing pilots entered in each Sanctioned Task shall be computed by the following formula:

$$\text{SCORE} = \frac{(P - N + 0.5)}{P} \times 1000$$

P = number of competitors entered in the competition **Competitive Field**.

N = numerical position of competitor among the **Competitive Field** when competitors are numbered in sequence according to their standing in the task results. Scores will be rounded to the nearest whole number. In the event of a tie in a task, tied competitors shall each be awarded the average score of the tied places.

## 14.7 PRECISION

14.7.1 Results will be established with the highest precision available.

14.7.2 The following standards will be used:

Result Method	Precision	Example (m)
Tape / surveying	Centimeters	1.23 m
Map coordinate	Decameters	1250.00 m
Track point - GPS	Meters	1231.00 m

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.

14.7.3 Results are considered tied when the outcome is the same after applying the 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.

14.7.4 The altitude used in the Event is specified in information provided at Registration or the General Briefing.

## 14.8 MEASURING (for events without logger scoring)

14.8.1 Measurements by the measuring officials take precedence.

14.8.2 Within 200 meters, tape/surveying, should be used. If there is reason to believe that a GPS measurement may be more accurate or safer for officials/crew than the tape/surveying, a GPS measurement shall be recorded.

14.8.3 NOT USED

14.8.4 All marks outside 200 meters shall be recorded by GPS. In case of a goal selected by the competitor, the coordinates of the goal shall also be recorded by GPS.

## 14.10 TOTAL SCORES

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

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

## CHAPTER 15 - TASKS

### 15.1 PILOT DECLARED GOAL (PDG)

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

15.1.2 Task Data:

- a) Method of declaration (also see 12.3)
- b) Number of goals permitted
- c) Goals available for declaration
- d) Minimum and maximum distances of goal(s) from CLP or ILP as per TDS
- e) Minimum distance of goal from any subsequent goals or targets, if applicable

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

### 15.2 JUDGE DECLARED GOAL (JDG)

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

15.2.2 Task Data:

- a) Position of set goal/target

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

### 15.3 HESITATION WALTZ (HWZ)

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

15.3.2 Task Data:

- a) Position of various set goals/targets

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

### 15.4 FLY IN (FIN)

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

15.4.2 Task Data:

- a) Position of set of goal/target

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

### 15.5 FLY ON (FON)

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

15.5.2 Task Data:

- a) Method of declaration (also see 12.3)
- b) Number of goals permitted
- c) Goals available for declaration
- d) Declaration point requirement
- e) Minimum and maximum distances between declaration point and declared goal(s)
- f) Minimum and maximum distances of declared goal(s) from any other targets noted on TDS.

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

15.5.4 Procedures governing the declaration methods are in Rule 12.

## **15.6 HARE AND HOUNDS (HNH)**

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

15.6.2 Task Data:

- a) Description of hare balloon
- b) Intended flight duration of hare balloon

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

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

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

15.6.6 The hare balloon 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 or valid track point close to a target displayed by the hare no more than two meters upwind of the basket after landing.

15.7.2 Task Data:

- a) Description of 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
- e) Minimum and maximum distances of ILP from hare launch point, if applicable

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

15.7.4 If the hare balloon does not take off within five minutes after the set time then this task is considered cancelled.

15.7.5 Variation from the intended flight duration of the hare shall not be grounds for complaint.

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

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

## **15.8 GORDON BENNETT MEMORIAL (GBM)**

15.8.1 Competitors will attempt to achieve a mark or closest valid track point within a scoring area(s) close to a set goal.

15.8.2 Task Data:

- a) Position of goal/target
- b) Description of scoring area(s)

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

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

15.9.1 Competitors will attempt to achieve a mark 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. Smallest result is best.

15.9.4 A competitor who does not achieve a mark (marker on the ground) inside a scoring area during the 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 for timing
- b) Description of Scoring Area(s)

15.10.3 The result is the elapsed time from the initial timing point to the mark-or first valid track point. Shortest time is best.

15.10.4 Timing ends at the moment the marker is released, falling, or on the ground as seen by the officials, 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 point "A"
- b) Description of point "B"
- c) Description of point "C"

15.11.3 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 ABC.

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 common 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 2D 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 within a set scoring area(s) close to the common reference point.

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 2D 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 the scoring areas

15.15.3 The result is the distance between the marks or track points. Smallest 2D 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 common 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 2D result is best.

### **15.17 MAXIMUM DISTANCE (XDI)**

15.17.1 Competitors will attempt to achieve a mark or valid track point within a set scoring area(s) far away from the common reference point

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 common reference point. Greatest 2D distance 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 Scoring Area(s)

15.18.3 The result is the distance between the marks or farthest valid track points. Greatest 2D result is best.

### **15.19 ANGLE TASK (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 points "A" and "B"
- b) Set direction (degrees)
- c) Minimum and maximum distances from "A" to "B"

15.19.3 The result is the angle between the set direction and the line "A-B". Greatest result is best.

### **15.20 NOT USED**

**15.21 LEAST TIME TASK (LTT) (for events with logger scoring)**

15.21.1 Competitors will attempt to fly across a given scoring area in the least amount of time.

15.21.2 Task Data:

Boundaries of scoring area

15.21.3 Result is elapsed time to cross the scoring area, measured from initial point of entry to exit point of scoring area.  
Least time is best.

**15.22 MOST TIME TASK (MTT) (for events with logger scoring)**

15.22.1 Competitors will attempt to fly across a given scoring area in the most amount of time (slowest speed).

15.22.2 Task Data:

Boundaries of scoring area

15.22.3 Result is elapsed time to cross the scoring area, measured from initial point of entry to exit point of scoring area.  
Greatest amount of time is best.

## APPENDICES

### APPENDIX A - CODE OF CONDUCT

All **OFFICIALS, PILOTS/COMPETITORS AND CREWS** are required to comply with the Code of Conduct. In addition to the excerpts from the Competition Rules shown below, competitors and crews are expected to conduct themselves in a manner that promotes the sport of hot air ballooning.

#### 2.12 CONDUCT

Entrants and competitors and their crews are required to behave in a sportsmanlike manner, follow the Code of Conduct, and comply with the directions of Event Officials. Inconsiderate behavior, profanity, or unsportsmanlike conduct, or any violation of the FAA Waiver will be penalized up to 1000 competition points by the Event Director and may be grounds for expulsion of a pilot.

#### 10.5 BEHAVIOR

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

#### 13.1 SERIOUS INFRINGEMENTS, UNSPORTING BEHAVIOR

Cheating or unsporting behavior, including deliberate attempts to deceive or mislead officials, willful interference with other competitors, falsification of documents, use of forbidden equipment or prohibited drugs, or repeated serious infringements of rules will be penalized up to 1000 competition points and may be disqualified from the task or Event. Pilots/crews found to misappropriate propane during the event would be penalized and/or disqualified.

#### EVENT ETIQUETTE

Pilots registering for and attending events are expected to be present for the General Briefing and attend all flight briefings. In circumstances requiring a participating pilot to miss a briefing or flight, the pilot is responsible to notify the organizer and Event Director of their situation. Violations of normally accepted conduct will result in a warning and possible expulsion from the Event.

Penalty for violation, regardless of NEL standing, may include DQ from State, Regional and National and International competition for the next year.

All pilots and their crews will conduct themselves in such ways as their actions will be a credit to and in the best interests of hot air ballooning and the Event, its officials and staff, and its Event sponsors.

All participants will treat fellow pilots, crews, officials, sponsors, etc. with respect at all times.

Pilots will be responsible for operating within both the letter and spirit of the Event Competition Rules.



## APPENDIX B- LANDOWNER RELATIONS

All competitors and crews are reminded of the importance of Landowner Relations and that the countryside is the farmer's livelihood. It is important to remember that good rural relations are essential to our sport. Grass is a crop, cattle, pigs and horses are easily frightened and farmers depend on electric power for many purposes not the least of which is for their milking plant.

Please remember these guidelines when dealing with our landowners:

1. Always be COURTEOUS and respectful of the fact that you are trespassing unless invited onto the property.
2. Select a landing site that will cause the least possible inconvenience to the farmer. Select a field FREE OF CROPS and be particularly CAREFUL OF ANIMALS on the approach and on possible overshoot.
3. After landing, DISCOURAGE ONLOOKERS from coming onto the land unless the owner is there, and they have his permission.
4. ALWAYS obtain permission BEFORE you bring the retrieve vehicle into the field.
5. Ensure farm FENCES are NOT DAMAGED and gates are left as you find them.
6. DO NOT let anyone LITTER the property.
7. If damage is caused, or the farmer wishes to take further action, exchange names and addresses and report the facts to race officials upon your return.
8. Remember not to use the "ran out of fuel" excuse if you do damage. It is a violation of the FARs to run out of fuel.

## APPENDIX C – PROPANE REFUELING

When refueling, please follow these guidelines:

1. Have your refueling adapters hooked up prior to entering the fueling area. After completing refueling, leave the area to complete the covering of your balloon and any other housekeeping that may be required.
2. No more than two from each balloon crew may be in the refueling station area. Persons involved in refueling must be experienced in refueling propane tanks.
3. Pilots are responsible for proper filling of tanks.
4. Disarm strikers and remove from basket.
5. Leave cell phones in the chase vehicle.
6. No nylon jackets in the refueling area.
7. Only tanks used in flight will be refueled.
8. Pilot lights in campers, chase commanders, etc., must be turned off.
9. All vehicles must be turned off.
10. No persons are permitted inside the balloon basket or vehicle passenger compartment during refueling.
11. No refueling of tanks in enclosed trailers or vans.
12. Absolutely no smoking in the area.

### Emergency Procedures

In the event of a fire during refueling, it is recommended to leave your keys in your vehicle, either in the ignition or on the dash.

Fire is not involving your balloon system:

1. Stop all refueling operations.
2. Shut all valves, including liquid and vapor.
3. Leave your equipment connected.
4. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
5. Leave the refueling area and report to check-in location.
6. Do Not attempt to remove your vehicle from the refueling area.
7. Stand by for further instruction from Public Safety Officials.

Fire involving your balloon systems:

1. Shut all valves, including liquid and vapor, if conditions will allow.
2. Notify propane operator of fire.
3. Confirm with propane operator the "Emergency Shut Off" on propane vehicle is activated.
4. Report all injuries to Public Safety Officials if not injuries are not noticeable.

## **APPENDIX D – COMPETITION POLICIES, RULES AND REGULATIONS** (See HACD website for this document.)

## **APPENDIX E - U.S. NATIONALS ELIGIBILITY RULES** (See HACD website for this document.)

## **APPENDIX F – ALLOWABLE DAMAGE on Balloon Envelopes and Baskets**

The following is provided only for general guidance to event officials to quickly evaluate the effect of envelope and/or basket damage during a balloon event. In all cases, the manufacturer's manuals for continued airworthiness for each particular aerostat MUST be consulted when evaluating any situation of 'allowable damage. Refer to Rule 3.5 for further guidance.

<b>Manufacturer</b>	<b>Allowable Damage Limitations</b>
ADAMS	No allowable damage is listed
AEROSTAR	<p>For fabric with less than 100 hours and less than 3 years old:</p> <ul style="list-style-type: none"><li>• Above 1ST horizontal band below the equator: 1 inch.</li><li>• Below 1ST horizontal band and above 6 feet above mouth: 2 inches.</li><li>• Envelope within 6 feet of mouth: 18 inches</li></ul> <p>For fabric with greater than 100 hours and greater than 3 years old:</p> <ul style="list-style-type: none"><li>• Above 1ST horizontal band below the equator: 3/8 inch.</li><li>• Below 1ST horizontal band and above 6 feet above mouth: 1 inch.</li><li>• Envelope within 6 feet of mouth: 12 inches</li></ul> <p>Envelope skirt or Dipper: no more than 10%.</p>
AVIAN	<p>½" long tear, hole or wear area from equator to top of envelope; 1-1/2" long tear, hole or wear area from 10 feet above mouth to equator; 12" long tear, hole or wear area from mouth to 10 feet up envelope No load tape may be damaged</p>
FIREFLY AND GALAXY	<p>Fabric: holes, tears or areas of damaged fabric of 1 cm (3/8 inch) in maximum dimensions are acceptable above the equator and of 2.5 cm (1 inch) below the equator and a maximum of 30.5 cm (12 inches) in bottom panel no.1 if:</p> <ol style="list-style-type: none"><li>1. They are more than 30.5 cm (12 inches) apart and more than 30.5 cm (12 inches) away from a seam.</li><li>2. There are no more than four in any one panel.</li></ol> <p>Basket wicker: Holes up to 25cm (10 inches) may be considered acceptable providing the damage does not endanger passenger safety or fuel system components.</p>
CAMERON	<p>In lowest 10', holes need not be repaired provided load tapes are undamaged; above 10' ≤3/4" in longest dimension.</p> <p>Basket damage – horizontal &lt;3/4" in floor; &lt;1/4" of thickness gone</p>
LINDSTRAND BALLOONS	<p>No damage to envelope fabric which is above the lower two nylon panels may be larger than ¾" in any one direction. No damage is permissible to load tapes, control lines or parachute valve rigging.</p> <p>No damage to the basket that exceeds more than five strands of a basket wire broken, more than six broken consecutive strands in the woven floor is permissible. No damage to a plywood floor that is more than 10", visible from both sides, or the floor has separated from the lower stainless-steel frame is permissible.</p>
HEAD	<p>Maximum damage near mouth 12"; more than 72" from bottom of envelope, but below equator, not greater than 1"; above equator not greater than ½".</p> <p>No damage listed for basket.</p>
PICCARD	<p>The manual only lists damage above the lower horizontal load tape. This damage must be less than 1". No damage limitations are given below the lower horizontal load tape.</p> <p>No broken wicker allowed on basket which might affect passenger safety.</p>
THUNDER & COLT	<p>No damage to envelope may be greater than 1"</p> <p>Damage to basket is acceptable if "hand or foot size."</p>

NATIONAL	No damage limitations listed.
KUBICEK	Any damage of the envelope fabric below the third horizontal load tape is permitted. The maximum size of an unrepaired tear or damage to the envelope fabric above the third horizontal load tape is 5mm (0.2 in).
ULTRAMAGIC	Damage to the fabric in the lower third of the envelope must be limited to an area affecting no more than 3 panels, though they may be completely damaged, and panels may be adjacent. Holes no greater than 10mm in diameter (e.g. cigarette burn) are permitted elsewhere on the envelope. These holes must not be within 25mm of a load tape, with no more than 5 in any one panel and no closer than 50 mm to each other. No more than 3 panels in the upper two-thirds of the envelope may have these small holes. No damage is permitted to any part of the burner, fuel or load suspension system.

## APPENDIX G– GPS-LOGGER DISTANCE MEASUREMENTS AND SCORING BANDS

Exhibit 1 below is a graphic demonstration of 3D and 2D measurement techniques if the separation altitude is 1500' MSL. All logger-based scoring will be based on the best valid 2D or 3D track point. 2D measurements will be used within a scoring altitude band (see Exhibit 2) from the surface up to 1500' MSL. 3D measurements will be utilized at altitudes  $\geq 1,500'$  MSL. The scoring program is designed to analyze track results and select the method providing the best result given these and the constraints of the TDS.

Exhibit 1

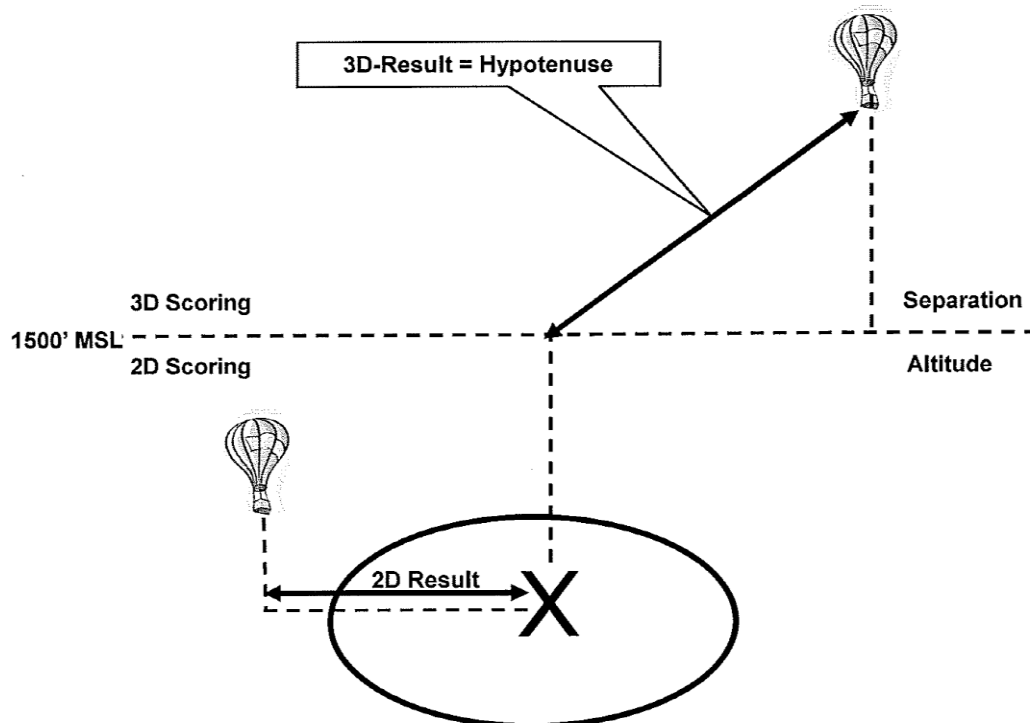
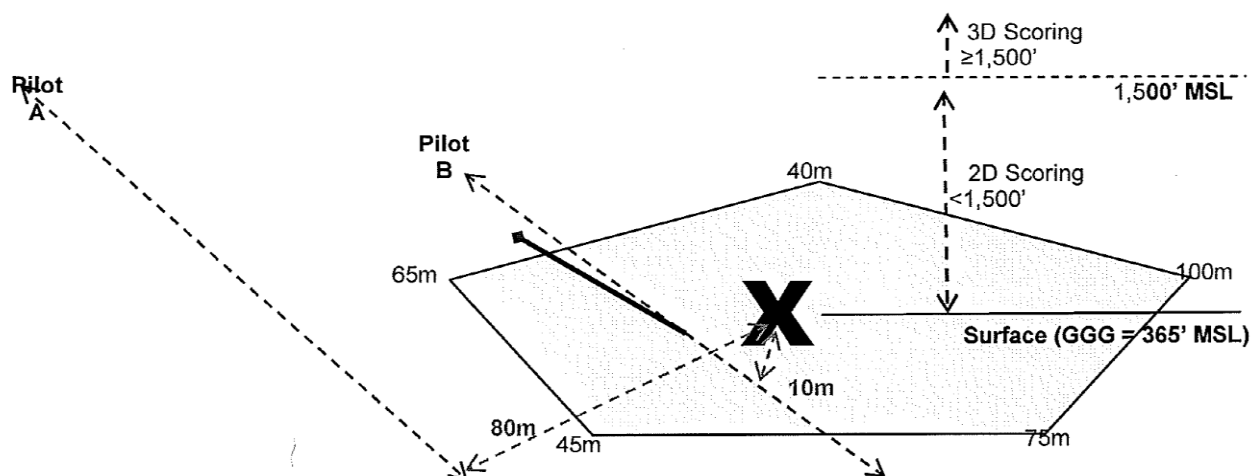


Exhibit 2 (EXAMPLE ASSUMES GROUND ELEVATION OF 365 FEET)

The graphic below demonstrates how the various rules for logger-based scoring will be implemented at a Marker Measurement Areas (MMA) as well as at pilot declared goals. Pilots not achieving a marker drop in the MMA will be scored using 2D scoring from the surface up to 1,500' MSL; and 3D scoring will be used for track points  $\geq 1500'$  MSL.

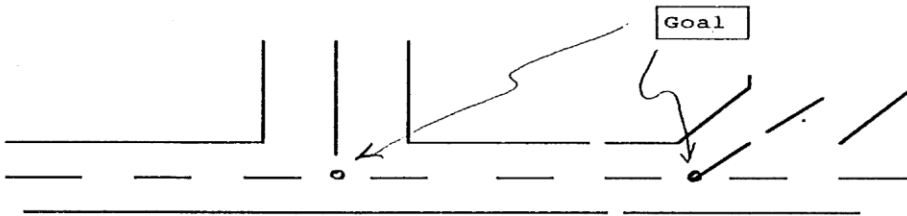
Using Rule 12.22.4, Pilot A and B in this example would receive a measurement of 100m (worst possible marker score) assuming they are below 1500' MSL at the track point.



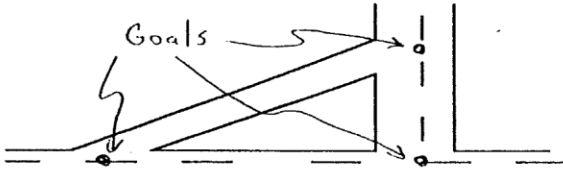
## APPENDIX H – GOAL DEFINITIONS

### GOAL DEFINITIONS:

A goal is the intersection of the projected road centerlines:

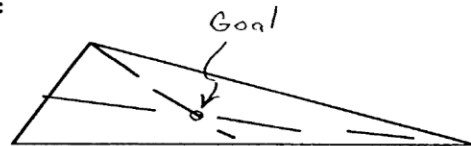


If the intersection is shown on the map, measure to the intersection.

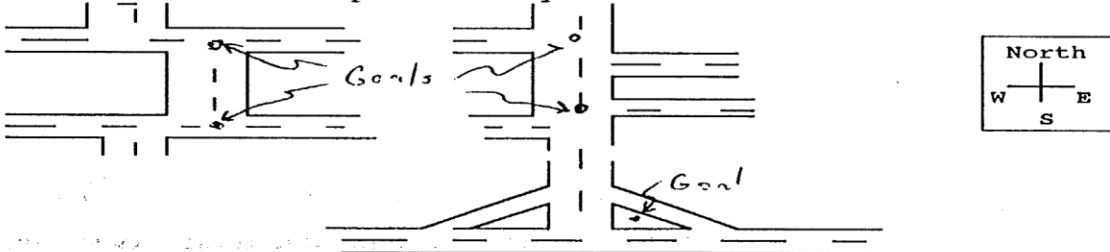


If the actual intersection is different than it appears on the map, then use the following rules:

The centerline of a grass triangle is the intersection of any two lines drawn between a corner and the midpoint of the line between the other two corners:



If the goal is ambiguous (i.e. two grass patches or a cross which does not intersect) the goal is the eastern most and the northern most possibility:



## APPENDIX I - ABBREVIATION LIST

Abbreviation		Rule
ANG	ANGLE (ANG)	15.19
CLA	COMMON LAUNCH AREA(S) (CLA)	9.1
CLP	COMMON LAUNCH POINT(S) (CLP)	9.1.2
CRT	CALCULATED RATE OF APPROACH TASK (CRT)	15.9
CTA	CONTEST AREA (CTA)	7.1
ELB	ELBOW (ELB)	15.11
FIN	FLY IN (FIN)	15.4
FMD	FREE MARKER DROP (FMD)	12.10
FON	FLY ON (FON)	15.5
FRF	FLIGHT REPORT FORM	6.11
GB	GENERAL BRIEFING	8.6
GBM	GORDON BENNETT MEMORIAL (GBM)	15.8
HNH	HARE AND HOUND (HNH)	15.6
HWZ	HESITATION WALTZ (HWZ)	15.3
ILA	INDIVIDUAL LAUNCH AREAS (ILA)	9.2
ILP	INDIVIDUAL LAUNCH POINT(S) (ILP)	9.2.2
JDG	JUDGE DECLARED GOAL (JDG)	15.2
LRN	LAND RUN (LRN)	15.12
LTT	LEAST TIME TASK	15.21
MD	GRAVITY MARKER DROP (GMD)	12.9
MDD	MINIMUM DISTANCE DOUBLE DROP (MDD)	15.15
MDT	MINIMUM DISTANCE (MDT)	15.13
MKR	MARKER (MKR)	12.6
MMA	MARKER MEASURING AREA (MMA)	12.20
MTT	MOST TIME TASK	15.22
OFB	OUT OF BOUNDS (OFB)	7.2
PDG	PILOT DECLARED GOAL (PDG)	15.1
RTA	RACE TO AN AREA (RTA)	15.10
SCA	SCORING AREA (SCA)	12.18
SCP	SCORING PERIOD (SCP)	12.17
SFL	SHORTEST FLIGHT (SFL)	15.14
SRP	SEARCH PERIOD (SRP)	12.14
T/O	TAKE-OFF (T/O)	9.19
TAS	TASK SCORE SHEET	14.3.2
TDS	TASK (DATA) SHEET	8.8
TOS	TOTAL SCORE SHEET	14.3.4
WSD	WATERSHIP DOWN (WSD)	15.7
XDD	MAXIMUM DISTANCE DOUBLE DROP (XDD)	15.18
XDI	MAXIMUM DISTANCE (XDI)	15.17
XDT	MAXIMUM DISTANCE TIME (XDT)	15.16

# Index

<b>2</b>		CREW, GROUND	20
		CREW, PERSONS ON BOARD	20
2D, MODIFIED 3D AND 3D SCORING ALTITUDES	4	<b>D</b>	
<b>A</b>		DAMAGE, to a balloon	9
ABBREVIATION LIST	42	DECLARATIONS BY COMPETITORS	23
ACCEPTANCE OF CODE OF CONDUCT, RULES AND REGULATIONS	7	DEGREE REFERENCE	14
ACKNOWLEDGEMENT	7	DEPOSIT, return of	12
ACKNOWLEDGEMENT OF RESPONSIBILITY AND ASSUMPTION OF RISK	2	DISCLAIMER	1
AIR LAW	21	DISEMBARKATION	21
AIRWORTHINESS	9	DISTANCE INFRINGEMENTS	27
ALLOWABLE DAMAGE	38	DOCUMENTATION	6
ALTIMETER	9	DRIVING	20
ALTITUDE	3	DROPPING OBJECTS	20
ANGLE TASK (ANG)	34	<b>E</b>	
APPEAL OF DECISION OF THE PROTEST JURY	12	EARTH TO BE FLAT	14
ASSISTANCE, Complaints & Protests	11	<b>ELBOW (ELB)</b>	33
ASSISTANCE, from persons on the ground	21	ENGLISH WORDING, interpretation of	6
AUTOMATIC FLIGHT CONTROLS	9	ENTRY	7, 16
		EVENT DIRECTOR	10
<b>B</b>		<b>F</b>	
BALLOON SIZE	3	FARs	27
BALLOON, definition of	9	FLIGHT REPORT FORM (FRF)	13
BALLOON, designation of	9	FLY IN (FIN)	31
BASKET	9	<b>FLY ON (FON)</b>	31
BEHAVIOR	20	FUEL	9
BRIEFING, GENERAL	16	<b>G</b>	
BRIEFING, SUPPLEMENTAL	16	GOAL, definition	23
BRIEFING, TASK	16	GOAL, SELECTED BY A COMPETITOR	23
<b>C</b>		GOAL/TARGET <i>See</i> CLEARING GOAL/TARGET AREA	
CALCULATED RATE OF APPROACH TASK (CRT)	32	GORDON BENNETT MEMORIAL (GBM)	32
CHAMPION, definition of	6	GPS LOGGERS, handling of	13
CLARIFICATION STATEMENT	6	GPS-LOGGER, failure of	13
CLEARING <i>See</i> LAUNCH AREA CLEARING		GPS-LOGGERS	13
CLEARING GOAL/TARGET AREA	20	GROUND CONTACT	22
CODE OF CONDUCT	36	<b>H</b>	
COLD INFLATION	17	HARE AND HOUNDS (HNH)	32
COLLISION	20	HESITATION WALTZ (HWZ)	31
COMMON LAUNCH AREA(S)		<b>I</b>	
Description	3	INSURANCE	2
Launch Procedures	17	<b>J</b>	
COMMON LAUNCH POINT(S)	3	JUDGE DECLARED GOAL (JDG)	31
COMPETITION NUMBERS	9	JURY APPROVAL OF SCORES AND PRIZE GIVING	12
COMPETITION STRUCTURE	13	JURY DUTIES AND COMPOSITION	10
COMPETITOR	7		
COMPETITOR'S RIGHT TO COMPETE	7		
COMPETITOR'S RIGHTS OF REPRESENTATION	7		
COMPLAINT	11		
CONTEST AREA	3, 14		
CONTROL <i>See</i> LOSS OF CONTROL			

<b>L</b>	
LAND RUN (LRN)	33
LANDING, AT WILL	22
LANDING, CONTEST	22
LANDINGS	22
LANDOWNER	<i>See</i> PERMISSION TO RETRIEVE
LANDOWNER, definition	20
LANDOWNER'S PERMISSION	3, 17
LAUNCH AREA, CLEARING	19
LAUNCH, DIRECTORS	18
LAUNCH, PERIOD	18
LAUNCH, procedures when directors are optional	19
LAUNCH, procedures with compulsory directors	18
LAUNCHING, ORDER	18
LEAST TIME TASK (LTT)	35
LIABILITY TO THIRD PARTIES	7
LIVESTOCK AND CROP	20
LOCATION OF OFFICIAL NOTICE BOARD	3
LOSS OF CONTROL	19
LOST MARKER	3

<b>M</b>	
MAP COORDINATES	4, 14
MAPS	14
MARK, definition of	24
MARK, VALID	25
MARKER MEASURING AREA (MMA)	25
MARKER, definition	24
<b>MARKER, FREE DROP</b>	24
MARKER, GRAVITY DROP	24
MARKER, INTERFERENCE WITH	24
MARKER, LOST	25
MARKER, RELEASE	24
MAXIMUM DISTANCE (XDI)	34
MAXIMUM DISTANCE DOUBLE DROP (XDD)	34
MAXIMUM DISTANCE TIME (XDT)	34
MEASURING	30
MIDAIR COLLISION	20
MINIMUM DISTANCE (MDT)	33
MINIMUM DISTANCE DOUBLE DROP (MDD)	34
MODIFICATION OF RULES	15
MOST TIME TASK (MTT)	35

<b>N</b>	
<b>National Ranking System</b>	1, 6, 29

<b>O</b>	
OBJECTIVES	6
OBSTRUCTION	18
OFFICIAL NOTICE BOARD	12
OFFICIALS	<i>See</i> TARGET OFFICIALS
OUT OF BOUNDS	3, 14, 42

<b>P</b>	
PENALTIES	<i>See</i> DISTANCE INFRINGEMENTS
PENALTIES, SERIOUS INFRINGEMENTS	
UNSPORTING BEHAVIOR	27

PENALTIES, UNSPECIFIED	27
PENALTY POINTS	27
PERMISSION TO RETRIEVE	22
PERSONS ON BOARD	<i>See</i> CREW
PILOT DECLARED GOAL (PDG)	31
POINTS FORMULA, POSITIONAL SCORING	29
POINTS FORMULA, PROPORTIONAL SCORING	29
POSITIONAL SCORING	<i>See</i> POINTS FORMULA
PRECISION	30
PROOF OF RULES VIOLATION	27
PROPANE REFUELING	37
PROPORTIONAL SCORING	<i>See</i> POINTS FORMULA
PROPORTIONAL VS. POSITIONAL SCORING	41
PROTEST	11
PUBLIC ADDRESS	18
PUBLICATION, of a complaint	11
PZ LIST	3
PZ's, in force	14
PZ's, infringement	14

<b>Q</b>	
QUALIFICATION	7

<b>R</b>	
RACE TO AN AREA (RTA)	33
RANKING ORDER	28
RECALL PROCEDURE	3, 21
RECKLESS FLYING	20
<b>RELEASE OF LIABILITY</b>	7
RESPONSIBILITY	2, 7, 13
RESULT	28
RETRIEVE	9
RULES	<i>See</i> MODIFICATION OF RULES

<b>S</b>	
<b>SAFETY</b>	7, 10
SAFETY OFFICER	10
SCORE, Definition of	28
<b>SCORE, PROVISIONAL, OFFICIAL, FINAL</b>	28
SCORE, PUBLICATION OF	28
SCORES, TOTAL	30
SCORING AIR SPACE	25
SCORING AREA	25
SCORING FORMULA	4
SCORING OFFICER	10
SCORING PERIOD	25
SHORTEST FLIGHT (SFL)	33
SIGNALS, LAUNCH	18
SIGNALS, POINT	18
STEWARDS	10

<b>T</b>	
TAKE-OFF, ABORTED	19
TAKE-OFF, point	19
TAKE-OFF, VALID	19
TARGET	24
TARGET OFFICIALS	26
TASK, DATA	16



TASK, PROGRAM	15	TREATMENT OF PROTESTS	12
TASK, SELECTION	15		
TASK, VALID	15	<b>V</b>	
TASKS, MULTIPLE	15		
TECHNICAL SUPPORT OFFICERS	10	VEHICLES	17
TIME LIMITS	11		
TIME, ADEQUATE	18	<b>W</b>	
TIME, EXTENSION OF	18		
TIME, OFFICIAL	16	WATERSHIP DOWN (WSD)	32
TRACK POINT, definition of	26		
TRACK POINT, VALID	26		