

US Team National Championship



COMPETITION RULES

June 8 – 13, 2021
Shreveport, Louisiana

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SECTION I – EVENT DETAILS

I. 1 TITLE

The event shall be known as: ***The US Team National Hot Air Balloon Championship.***

I. 2 SANCTION

The event is sanctioned by the **Balloon Federation of America Hot Air Competition Division (BFA/HACD).**

I. 3 ORGANIZATION

The event is organized by the ***Shreveport-Bossier Sports Commission, Shreveport, Louisiana.***

I. 4 CORRESPONDENCE

All entries and official correspondence should be addressed to:

***Nick Kopka
629 Spring Street
Shreveport, LA 71101
nkopka@sbsports.org***

Competition Division correspondence should be addressed to:

***Balloon Federation of America
1601 N Jefferson
PO Box 400
Indianola, IA 50125
Bfaoffice@bfa.net***

I. 5 PERSONNEL

Event Director <i>Balloonmeister</i> Deputy Director Meteorologist Safety Officer Assistant Safety Officer	Maury Sullivan Andy Baird Brad Temeyer Dave Bair Paul Suttle	Steward & Asst. Scoring Officer Chief Scoring Officer Jury President Off-Site Jury Member Chief Measurer Assistant Chief Measurer	Lynn Sullivan Mike Gilligan Pat Cannon Debbie Spaeth Sheri Berry Rob Wise
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I. 6 PLACE

The event will be held at ***Shreveport, Louisiana.***

I. 7 DATES

The Event will run from ***June 8-13, 2021.***
The Event will end after the morning flight on ***June 13.***

I. 8 PROTEST FEE

The protest fee to accompany a protest is \$100.00 cash.

I. 9 LANGUAGE

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

I.10 PARTICIPATION

The Event is open to **BFA/HACD member pilots who have met the US Team Nationals eligibility requirements or the sponsor's exemption rule as detailed in the registration materials provided.**

I.11 CLOSING ENTRY DATE

The closing entry date for the Event is ***March 31, 2021.***

I.12 **ACKNOWLEDGEMENT OF RESPONSIBILITY AND ASSUMPTION OF RISK**

I.12.1 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.

1.12.2 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 awards or prizes to which the competitor might otherwise be entitled if choosing not to fly.

1.12.3 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.

I.13 **INSURANCE**

Each balloon shall be insured against all claims by third parties to a minimum of \$100,000.00 per passenger and a minimum limit of \$1,000,000.00 combined single limit coverage on the operation of their balloon. The competitor shall produce documentary evidence of this insurance and additionally insured endorsements valid for the period of the event covering any balloon which he may fly.

SECTION II – COMPETITION DETAILS

II. 1 CONTEST AREA (7. 1)

The competition map will consist of special editions of maps published by BalloonMaps.com. The map datum is WGS 84 and UTM coordinates are applied with one (1) km grids; magnetic deviation 1.1° (1°6') East. One paper map will be distributed at scheduled pre-registrations and final registration on Tuesday. Digital maps, target and goal data and PZ's will available for download via a provided link by **May 15, 2021**.

The contest area will be the entire competition map except for areas designated as out of bounds. Any changes will be published on the Official Competition Map and posted on the Official Notice Board. The contest area is as shown on the map and defined as:

- From the North the gridline 0700
- From the West, the gridline 1400
- From the South, the gridline 7400
- From the East, the gridline 4400

II. 2 OUT OF BOUNDS (7. 2)

All blue PZs are considered out of bounds airspaces. Ground contact and other penalties will be applied. Changes will be posted on the Official Notice Board.

II. 3 PZ LIST (II. 9, 7. 3)

No	Name	Address	Reason	Type	Coordinates
1	BAD – Weapons Storage	Do not land east of Easting grid line 3800	Military	Red 1,200' MSL	3700 / 9600
1A	BAD – Operating Air Force base	under any circumstance			
2	Harrah's Louisiana's Downs (318) 742-5555	8000 E Texas St Bossier City, LA 71111	Horses	RED 1200' MSL	4150 / 0150
3	Riverfront Racing & Eqstrn Center (318) 390-8130	1107 River Bend Rd Haughton, LA 71037	Horses	RED 1200' MSL	4250 / 0100
4	Calumet Lubricants (318) 636-2711	3333 Midway St	Chemical Refinery	Yellow	2550 / 9250
5		Approx. 1800 Leonard Rd Keithville	Buffalo & exotic animals	Red 500' MSL	3620 / 8140
6		114 Curtis Sligo Rd	Cattle & Experimental Crops	Red 700' MSL	3800 / 8600
7	General Electric	7000 W Bert Kuhn's Industrial Loop Rd	Sensitive Gov't Area	Yellow	1510 / 8950
8	Old Hickory Ranch David Billingsley 925-2348 or 925- 9501	3315 Barron Rd Keithville	Cattle	RED 500' MSL	2270 / 7950
9	Red River National Wildlife Preserve	150 Eagle Bend Point, Bossier City	Per AIM 7-4-6	Red 700' MSL	3700 / 8950
10	Old Hickory Ranch Farm David Billingsley 925-2348 or 925- 9501	5287 Keithville-Springridge Rd, Keithville	Crops	Yellow	0900 / 7900
11		600 Hamilton Rd Bossier City	Abandoned & Locked Property	Yellow	3210 / 9870
12		1397 Barron Rd Keithville		Yellow	2520 / 7910
13		6095 Keithville-Springridge Rd		Red 700' MSL	1777 / 7684

14		206 Key Ln Shreveport		Yellow	3486 / 8593
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The details of Prohibited Zones will be printed on the Official Competition Map and changes will be posted on the Official Notice Board.

II. 4 COMMON LAUNCH AREA (9.1.1)

More CLAs may be announced at the General Briefing. Changes to Common Launch Areas will be posted on the Official Notice Board and written supplements will be distributed at task briefings should changes occur.

CLA	Target Reference	Location	CLP
1	3488	LSU Shreveport Soccer Complex	3408 / 8838
2	3204	North Bossier Park	3211 / 0497
3	3098	Margaritaville Casino	3019 / 9883
4	2383	Old AT&T Plant, North End	2373 / 8400
5	2479	Blue Bird Airport	2475 / 7921

II. 5 COMMON LAUNCH POINT (9.1.2)

Changes to Common Launch Points will be posted on the Official Notice Board and written supplements will be distributed at task briefings should changes occur.

This data may be changed before the event and the final information will be published on the Official Notice Board and covered in the General Briefing.

II. 6 LANDOWNER'S PERMISSION (9.2.2)

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. Pilot must obtain landowner name, address and phone number and include on Flight Report Form.

Public areas, such as parks and schools, are considered as places without need for permission for take-offs or landings. Landowner permission is not required if the basket and retrieve vehicle is 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 and instructions are subject to change before or during the event any time by announcements by the Event Director.

II. 7 LIVESTOCK AND CROP (10. 6)

Balloons shall not fly closer than 200' from livestock or buildings containing livestock. Any special notes will be made available during the General Briefing and on the Official Notice Board.

II. 8 DRIVING LAW (10.11)

All participants are required to follow Louisiana laws and regulations. Items of specific interest include:

- Texting and driving is considered a moving violation and is a primary offense subject to a first time fine of \$500 fine and a second offense is subject to a \$1000 fine.
- It is illegal to drive or occupy a moving motor vehicle in possession of an alcoholic beverage open to consumption.
- Vehicle 10,000 lbs. or less, all occupants must have seat belt when vehicle is in motion.
- Children age 12 and under must be restrained in the back seat.
- All motorcycle operators and passengers must wear a motorcycle helmet.
- Less than 12 years of age may not ride in an open truck bed or trailer.

II. 9 AIR LAW (II. 3, 10.14)

When flying over congested areas, persons, livestock or property, competitors must follow the restrictions issued by the FAA in the Event Waiver. Violation of this rule will result in a penalty. ***The entire contest area will have 8,000' MSL as a maximum altitude (Blue PZ) during competition flights.*** This may be subject to change before or during the event by announcements of the Event Director.

II.10 RECALL PROCEDURE (10.15)

Primary recall will utilize text messaging using Remind. These text messages will utilize the phone numbers of the pilot and crew chief entered by them into the system. The system provides instantaneous communication to all. Additional or backup recall may use aircraft radios (121.4 frequency).

II.11 GOAL CENTER (12. 1)

If used, the center point of the intersections of roads will be the intersection of the projected centerlines. The Balloonmeister may provide graphical definition of unusual intersections or goals.

In the case of goals selected by competitors from a published intersection list and measured by track log, all logger measurements will be made to the published intersection coordinate. Measurements involving markers will be made from the center of the 'marked' intersection or goal.

II.12 GOALS SELECTED BY A COMPETITOR (12. 2, 15.1, 15.7)

II.12.1 Competitors will not be required to declare goals by reference to map features (junctions, etc.). Pilots are required to select goals as indicated on the TDS. A list of preapproved goals is provided in the Pilot Operations Manual. These goals are also printed on the competition map and are labeled with a three-digit identifier. If used, these goals may be identified using these three-digit identifiers using the Easting selection of the BalloonLive App, e.g., 0123/---

II.12.2 Declaration methods:

- a) Electronic declaration using the **BalloonLive App** as specified on the TDS
- b) A competitor who wishes to revise his declaration may do so using a subsequent declaration using the BalloonLive App within the declaration time and in accordance with additional TDS requirements.
- c) If no goal meeting the requirements of II.12 and II.26 is declared, the competitor will not achieve a result. If more goals are declared than are permitted, the competitor will be scored to the least advantageous valid goal.

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

II.13 LOCATION OF OFFICIAL NOTICE BOARD (5.10)

The Official Notice Board will be housed on-line at Watchmefly.net. Notifications of postings to The Official Notice Board will be sent using the Remind text messaging system. Should the Internet or electronic ONB fail, a fallback paper Notice Board will be located at the Shreveport Airport Marriott Courtyard. Notifications of results/scores and other information will be sent to all competitors directly via the Remind messaging system first and to all other locations at approximately the same time.

II.14 COMMUNICATION TIMES (5. 3)

Replies to general inquiries or notification of replies to complaints will be posted immediately as available on the ONB. Notifications of postings to The Official Notice Board will be sent using the Remind text messaging system. Timing requirements of 5.6.2 will start at the time of the ONB posting.

II.15 PUBLICATION TIMES ON THE LAST FLYING DAY (5. 6.3)

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

II.16 FLIGHT CREW (Section III, 10.9)

Flight crew carried on board may assist the competitor with any duties assigned by the pilot in command except manipulating the controls of the aircraft or throw markers

II.17 DETAILS FOR THE USE OF GPS-LOGGERS (See Chapter 6)

a) BalloonLive Logger and App:

The Logger used in this Event is the BalloonLive Sensor with Bluetooth connection to the BalloonLive App. Each competitor must provide their own BalloonLive sensor or one will be rented to you for \$50.

b) Configuration:

The logger sensor configurations will be automatically loaded when the competitor registers for the Event on Watchmefly.net. These settings will only be available for change by event staff throughout the event.

The setup for this event will be:

- Competition name US Team Nationals
- Logging time interval: 1 second
- UTC offset (seconds) -5h (-18000 seconds)
- Allow multiple marker drops deactivate
- Allow multiple goal declarations active
- Declaration format 4/4
- Altitude mode Barometric
- altitude unit: feet
- Geodetic system (position format) UTM
- Map datum: WGS84

Multiple recording devices may record the flight at the same time. The first started recording will be considered as the primary recording and will be used for scoring. Flight tracks are saved in three locations to help ensure accessibility: BalloonLive Sensor SD Card, BalloonLive App and Watchmefly.net once the phone or tablet is online.

To qualify as backup, a competitor's logger should be set up to a time interval of 5 seconds or less. The GPS should report position data using the WGS84 map datum and satellite-based augmentation (WAAS) should be enabled.

c) Operation Mode

Start the app "BalloonLive" > Menu > Change mode
Select Application Mode

Training mode

- To test the app in training flights, the mode "TRAINING" must be used to familiarize with the use of the app. In this mode, no competition data (tracks, declarations and marker drops) is stored.
- Pull down the red label to start a new flight.

Competition Mode

- When entering competition mode, the latest competition data is retrieved from the server. To enter this mode, you must enter the competition token sent to you once registered for the event. The device must be online to do this. It is recommended to load the competition data during flight preparation.
- The connection of a BalloonLive sensor is mandatory for all flights. Please make sure the sensor is connected using Bluetooth before entering competition mode.
- To start the flight, the latest flight data must also be loaded from the server. This flight data is valid for 5 hours only. Therefore it is recommended to be online within the last 5 hours before the start of the recording, or just before start, to load the flight data.
- Pull down the red label to start a new flight and transmit the track data to the server.

d) Handling by competitor

- Throughout the event the competitor is responsible for storing, charging, handling as well as the proper functioning of the devices used (phone, tablet, sensor, etc.)
- The BalloonLive app must be started 5-10 min before the intended take-off to allow proper GPS initialization. The recording must also be started at the same time by pulling down the red label.
- The competitor is considered entering the competition flight according to the selected TDS with the start of the track recording and the take off.
- During flight, the recording device must remain attached to the basket (uprights, bolster, or secure map board) to ensure optimum GPS reception. The competitor is responsible to ensure placement providing proper satellite reception.
- Declarations must be made in 4/4 format or 3-digit goal number/--- unless otherwise stated in the TDS.
- Altitudes do not need to be declared unless otherwise stated in the TDS. Altitudes must be indicated with the minimum needed digits.
- Goal declarations are registered at the time when the DECLARE button is pushed.
- Electronic marker drops are registered at the time when the DROP button is pushed.
- 5-10 minutes after landing track recording must be stopped by pulling down the green label in the BalloonLive app.

- After landing, the competitor must verify that their track properly uploaded to the Watchmefly.net server. If the track did not upload the competitor will have to use a phone hot spot or access Wi-Fi to finish the upload.
- Each pilot is responsible for the safe and undamaged return of a rented GPS sensor supplied by the HACD. Damage to, or loss of an HACD provided BalloonLive Sensor or related accessories will result in the pilot being assessed a charge of up to \$500. If a charge is assessed, it must be paid prior to another official logger being provided.

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

e) Scoring

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

f) Track data

The track data is transferred to the server automatically if a data connection is available during flight or when made available after the flight. To resume the data transfer later after the flight, reopen the app and the transmission will start within a minute. Make sure all track points are sent before closing the app or disconnecting the Internet connection of the device.

The number of unsent track points is shown at the top right (number next to the cloud with the arrow) and will show 0 when all points are transferred. The track must be transferred to the server by 10:00 or call for an extension. For tracks that are transferred later, the competitor will be penalized by 10 competition points per minute (or part) late in the last task.

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

g) Recommendations

- Only use recording devices in online mode as the accuracy of the recording is increased and the data transferred immediately.
- Use a powerbank to avoid problems with the battery capacity of your device.
- Run the BalloonLive App on a dedicated phone or tablet. Using a device with multiple tasks is not recommended.

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

II.18 DETAILS FOR TIME LIMITS (rest hours) (5. 6)

The hours between 10:00 PM and 08:00 AM local time will be disregarded for the purpose of the time limits of complaints and protests.

II.19 LOST MARKERS (12.15.3)

Competitors will be charged \$20 for each lost marker. Lost marker fees must be paid prior to the first briefing following the flight in which the marker was lost.

II.20 BALLOON SIZE (3.3)

The maximum size balloon permitted is AX8 (3000cbm/105000cft).

II.21 ASSESSED MARK (NOT USED)

II.22 ALTITUDE

The BalloonLive Sensor will use barometric altitude.

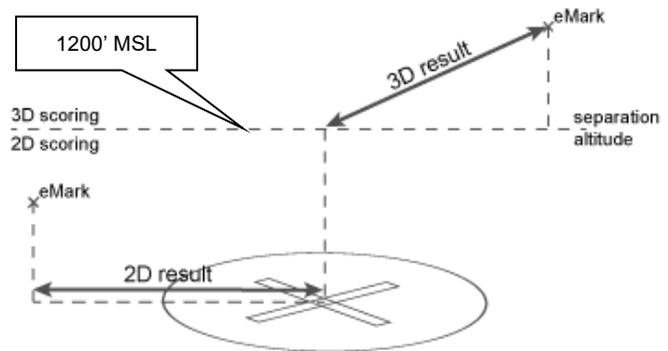
II.23 SCORING FORMULA (14.5 AND 14.6)

The Event will be scored using Proportional (14.5) scoring

II.24 2D / 3D SCORING ALTITUDES

The separation altitude between 2D and 3D scoring is 1200' MSL. When goals or targets on the ground are used, results based on track points will be the:

- 3D-distance to the point at the separation altitude above the goal/target if the track point is above the separation altitude
- 2D-distance to the goal/target if the track point/electronic mark is at or below the separation altitude.



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

II.25 COMPETITION STRUCTURE (6.1)

The competition will be conducted without observers utilizing logger scoring for all measurements other than direct measurements of marker drops inside MMA's or limited scoring areas.

II.26 MAP COORDINATES

The map datum is WGS 84 and UTM coordinates are applied with **one (1) km grids; scale 1:34,375; magnetic deviation 1.1° East and Grid N = 0.3° West of True North.**

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

- The competition area is completely in one zone; therefore, the zone reference may be omitted.
- Using the BalloonLive App: Easting and Northing entered as 4 by 4-digit unless entering a 3-digit goal or 4-digit target reference number in which case the Northing cell will be left blank.
- 4-4 format: this format uses two times four-digits. First four digits easting and the second four digits northing. (e.g. 2500-9000), leaving out the 1m digit.
- A 3-digit target list number according to the list provided for the competition at hand.

II.27 COVID-19 PROTOCOLS (APPENDIX E)

Your health and safety are our highest priority. The BFA/HACD and the Organizer's staff are working closely with the local Health Department and Fire Marshall to provide the safest environment for your visit to Shreveport-Bossier, LA. Detailed protocols approved by the Public Health District are established and will be monitored and enforced throughout the competition.

Inconsiderate behavior or failure to follow the published protocols by a competitor or team member will be penalized by the Event Director up to 1000 competition points and, with repeated violations, may lead to task disqualification or may be grounds for expulsion of a competitor.

SECTION III – RULES

CHAPTER 1 - OBJECTIVES

1.1 OBJECTIVES

The objectives of the Event are:

- To determine the US Team National Champions
- To stimulate the development of Team Aerostation by a comparison of performance of team pilots and team aerostats
- To reinforce friendship among aeronauts
- To provide individual sanction task opportunities for pilots interested in qualifying for the US Hot Air Balloon National Championship through the National Eligibility List

1.2 DEFINITION OF CHAMPIONS

1.2.1 The Team Champions shall be the team whose three competitors have the highest aggregate scores at the end of the event.

1.2.2 When two or more teams hold an equal number of points at the end of the Championship, the team with the smallest difference between the best and worst scores will be ranked higher.

1.2.3 To be recognized as a National Team Champions a minimum of three (3) tasks and two separate flights must be completed with at least one result from each task for the championship to be valid.

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 may be requested to be uploaded to a secure website for review by FAA officials prior to the event. FAA representatives will also inspect all documents or spot check 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

CHAPTER 2 – ENTRY CONDITIONS

2.1 COMPETITOR

Pilots entered and competing in the event.

2.2 COMPETITOR'S RIGHT TO COMPETE

2.2.1 Members in good standing and not on probation with the BFA/HACD are eligible to compete in the US Team National Championship.

2.3 QUALIFICATION

2.3.1 Each pilot-in-command shall meet the requirements of the organizer and the BFA/HACD Policies and Regulations. Each pilot-in-command shall have accumulated at least 50 hours as pilot-in-command of aerostats of that sub-class by the closing entry date.

2.3.2 The composition of each team must meet the criteria set forth in the event application information and entry conditions established by the BFA/HACD and the organizer.

2.4 SPORTING LICENSE (NOT USED)

2.5 ENTRY

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

2.6 ACKNOWLEDGEMENT

A competitor who has not received acknowledgement of their entry within fourteen days after the closing entry date should make inquiries of the organizer.

2.7 ACCEPTANCE OF CODE OF CONDUCT, RULES AND REGULATIONS

The entrants and competitors are expected to know, understand, accept, and abide by the competition Rules and Regulations for this event. In addition, the competitors are required to know, understand, accept, and abide by the Code of Conduct (See Appendix A) and, by entering are deemed to accept without reservation. They should appreciate that they should compete in a sporting manner and that their behavior must be beyond reproach. Violators will be penalized up to 1000 competition points and may lead to disqualification from the task or 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, owner of any site, 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.

2.10.3 Recall procedures will be used as described in 10.10 and 10.15.

2.11 RESPONSIBILITY

Entrants and competitors remain completely responsible for the safe operation of their aerostats at all stages of inflation, launch, flight, and landing. They must ensure that their crew, equipment, and their own level of skill and experience are suitable for the conditions in their 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 and Covid-19 safety protocols, and comply with the directions of Event Officials. Inconsiderate behavior, profanity, or unsportsmanlike conduct will be penalized by the Event Director and may be grounds for expulsion of a competitor. (See APPENDIX A for Code of Conduct.)

2.13 TEAM PILOT MEMBER

In cases of emergency or injury to a team member, the team can make a request for a replacement team member to the Event Director or Safety Officer. The Event Director, after consultation with the Safety Officer, can approve a replacement team member. A replacement team member must meet all qualifications of entry.

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.
- 3.1.3 The use of vents which are designed to propel a balloon is prohibited. Turning vents may only be operated in flight for the purpose of orienting the basket. Prolonged or excessive use of the turning vents is prohibited. Penalty 250 to 500 task points.

3.2 FUEL

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

3.3 DESIGNATION OF BALLOON

Each team pilot member 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. The Maximum size category is designated in II.20).

3.4 AIRWORTHINESS

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

3.5 DAMAGE

- 3.5.1 If a balloon is damaged during the Event, it may be repaired. Damaged components may be replaced or repaired, except that a complete envelope may be replaced only at the discretion of the 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 flight, 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 must carry a serviceable altimeter.

3.8 COMPETITION NUMBERS

The Organizer will provide two basket banners which will be displayed on opposite sides of the basket during tasks. All crew vehicles shall be clearly identified on opposite sides with competition numbers. 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. All sharp objects must be covered to avoid risk to other balloons. When using nylon straps (Zip Tie Straps) to attach basket banners, they must be set (closed) from the inside of the basket. Fuel tanks attached to the outside of the basket must be protected on the bottom ring to ensure there are no spurs or that the surface is covered to protect against any risk to other balloons.

3.10 RETRIEVE

3.10.1 No pilot or Retrieve Crew shall be within any MMA or within a 100m radius of a target except with permission and in the presence of an official. Penalty is up to 250 competition points.

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.

3.10.3 Retrieve vehicles shall not be parked within 100m of a goal/target set by the Director. Penalty is up to 100 competition points.

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 and ensure the operation of the event in accordance with the Code of Conduct. He may have a deputy 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 Event. 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 shall attend meetings of the jury and give evidence if requested.
- 4.1.3 In the rules the word "Director" or "Balloonmeister" 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.
 - Address competitor requests for assistance and inquiries, process complaints and discuss issues with appropriate officials and report findings to the competitor.
 - 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.

4.3 JURY DUTIES AND COMPOSITION

- 4.3.1 Matters of advice, arbitration or rule interpretation shall be the responsibility of the Jury President and 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 The Jury shall be composed of three members: an on-site Jury President and an off-site independent jury member both approved by the HACD and one competitor juror. The competitor member shall be selected from a pool of five potential jurors chosen by all the competitors at the General Briefing. In the event of a protest the Jury President shall select a competitor from this pool who has no conflict of interest, as determined by the President, with the protest to be heard. In the event of a subsequent protest(s) the President shall make a new selection for the competitor jury member. In the event that all members of the pool should have a conflict with the current protest, the Safety Officer shall complete the Jury. The Event Director shall not serve as a juror. The President reserves the right to eliminate competitors from the jury pool election at their request.
- 4.3.4 In addition to being Chairman at jury meetings, the Jury President 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 Jury President 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 will advise the Event Director on all matters of safety and will be in consultation on weather forecasts and briefings. Mandatory operational procedures for the Safety Officer are contained in the Safety Officer Handbook (SOH). If used, an Assistant Safety Officer shall work at the direction of the Safety Officer, Event Director or Deputy Director.

4.6 TECHNICAL SUPPORT OFFICERS

Technical Support Officers are competition officials who are responsible to the Scoring Officer. They are responsible for the computers with the mapping software and verifying the records of each pilot's flight track. Their duties include verification and review of 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 Scoring Officer.

CHAPTER 5 - COMPLAINTS & PROTESTS

5.1 ASSISTANCE

At any time during the event, a Team Captain who is dissatisfied on any matter should first ask the appropriate Official for assistance.

He may ask for his/team member result or points score to be checked or the calculation to be explained

If still dissatisfied, a complaint may be made by the Team Captain to the Event Director or his designated official.

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 Team Captain to the Director or designated official to investigate any matter in which the Team Captain is dissatisfied.

5.2.3 A formal complaint must be submitted in writing and will receive a written reply.

5.2.4 Complaints shall be handled or transmitted by the team captain to the Director or his designated official who will acknowledge receipt and record the time of receipt.

5.3 COMMUNICATION (II.14)

Replies to complaints will be posted on the Official Notice Board at fixed times announced in advance by the Director.

5.4 PUBLICATION

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

5.5 PROTEST

5.5.1 If dissatisfied with the decision on a Complaint made during the Event, a team captain has the right of protest, on behalf of himself or any member of his team.

5.5.2 Declarations of intention to protest and protests with protest fees shall be handled or transmitted by the team captain to the Event Director or his designated official who will acknowledge receipt and record the time of receipt. These declarations of intent or protests shall be handed in at the Operations Center to an official.

5.5.3 A team captain 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 (II.18)

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 within eight (8) hours of publication of the official scores (preliminary) for a task. The rest hours defined in the competition details (II.18) 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 (II.18)

5.6.1.4 A team captain intending to protest shall, within one (1) hour of the reply to his complaint, declare his intention to protest to the Event Director.

5.6.1.5 Within eight (8) hours of the reply to his complaint the team captain shall submit his protest in writing accompanied by the protest fee (I. 8). The rest hours defined in the competition details (II.18) will be disregarded for the purpose of the time limits.

5.6.3 SHORTENED TIME LIMITS FOR COMPLAINTS AND PROTESTS (II.15)

- 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 Director shall announce the publication times for all task scores on the last flying day if different from II.15.
- 5.6.3.4 Time limits applying to scores published after 1300 on the day before the last flying day will also be reduced to one (1) 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 as soon as possible upon receipt of 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 President of the Jury shall report the result and a summary of any relevant considerations in writing to the Event Director without delay, who shall make public the President's report.

5.8 RETURN OF DEPOSIT

- 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 PRIZEGIVING

- 5.9.1 The last action of the Jury President is to verify and approve the competition results of the Event and declare the Event valid providing it has been conducted in accordance with the rules and the decisions of the Jury.
- 5.9.2 The scores of the event shall be final only after all 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.
- 5.9.3 The Jury President shall verify and sign the final total scores before they are made public.

5.11 OFFICIAL NOTICE BOARD (II.13)

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

CHAPTER 6 – LOGGERS

6.1 COMPETITION STRUCTURE

The competition will be conducted as defined in Section II.25.

6.2 GPS-LOGGERS

A GPS Data Logger (BalloonLive Sensor) is a device that logs the track and altitude of a balloon. The track points of the log will specify the position (latitude/longitude), the altitude (barometric as specified in II.22), 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 II.17).

6.3 HANDLING (II.17)

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

6.4 FLIGHT REPORT FORM (FRF)

6.4.1 A Flight Report Form (FRF) stating the take-off and landing place and time, estimated task results, landowner related issues, and other relevant data shall be completed and submitted by the competitor.

The competitor will submit the FRF on Watchmefly.net. Any undue delay in returning the FRF may result in a penalty.

6.5 RESPONSIBILITY

The competitor is responsible for any loss or damage between handing over at briefing and return of the logger after the flight for any BalloonLive Sensor rented from the BFA/HACD.

6.6 GPS-LOGGER FAILURE

6.6.1 Reported malfunctions are considered failure only when they can be reproduced after flight. When a failure is found, the officials may ask the competitor to provide his GPS equipment to substitute the missing track information. Not carrying the official logger in the basket or not turning it on does not constitute logger malfunction.

6.6.2 In case both the official track log and the competitor's GPS 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 II.22) and use the same set-up (sampling time interval, map datum, minimum track point memory, etc. in accordance with II.17) as the official logger. A competitor's backup logger recording GPS altitude only is permitted. Results based on a backup logger using GPS altitude will not be grounds for protest.

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

CHAPTER 7 - MAPS

7.1 CONTEST AREA (II.1)

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 (II.2)

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) (II.2 and II.3)

7.3.1 The Director may define airspace or other areas as prohibited. A mark or track point inside red, yellow, or blue PZ is valid unless the area is defined as OFB. The boundaries, and if applicable, the upper limit 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. PZs with natural boundaries shall be defined by marked copies of the competition map to each competitor individually.

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

7.3.4 A RED PZ is restricted airspace and will include an upper altitude limit which a competitor shall not fly below. Ground handling of the inflated balloon is not 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 A Red Road PZ identifies restricted airspace surrounding major roadways or Interstates. It is measured from the centerline (expressed as a tunnel around the axis) of Interstates or other major highways 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. See COH for official guidance on calculation of PZ infringement penalty violations.

7.6 MAPS

A competitor is required to carry a competition map, paper or digital, 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 the restrictions 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 Section II. For goal declaration of pre-defined goals, the complete goal number of the published list may be used. Penalty for inappropriate but unambiguous declarations is 100 task points.

7.9 DEGREE REFERENCE

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

CHAPTER 8 – PROGRAM, BRIEFINGS

8.1 TASK PROGRAM

- 8.1.1 The Event will consist of a series of tasks flown by each team member individually, consecutively, collectively, or randomly, at the discretion of the Director. The number and frequency of the tasks and rest periods shall be at the discretion of the Director. At the first task briefing on the day before the last planned flying day, the Director shall publish the remaining flying program.
- 8.1.2 Each team member pilot will be responsible for certain task(s) during each flight, which may, or may not, be identical to his team members.
- 8.1.3 When team member pilots are required by the Director to perform a separate task, their individual results for the task will be scored with other team's individual pilots who have had the responsibility of performing the same identical task.
- 8.1.4 In an individual task which requires more than one mark to be established in order to achieve a result, the Director may, at his discretion, assign responsibility for those marks to separate competitors of the teams.
- 8.1.5 The Director, at his discretion, may combine more than one individual task to a single mark if used in conjunction with rule 8.1.4.
- 8.1.6 Every task must establish at least one mark that will be used in the scoring of that task only.

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.
- 8.2.2 The Director has the authority to cancel a task(s) due to safety reasons at any time before the official status task scores are published.
- 8.2.3 Tasks are not valid if less than 50% of the competitors take off.

8.3 TASK SELECTION

The Director will 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 (3000 per team) 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 per competitor in each task.
- 8.4.3 When markers are used, dropping the marker(s) of a task inside the set MMA indicates the completion of that task and the start of the 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 following task if they cross the boundary line (area, grid line, arc, etc.) or boundary time of the follow-on task.
- 8.4.5 When a task includes a competitor declared center point, (LRN in a circle, 3D shape, etc.), competitors are considered flying in the task if they cross the circumference of the circle or enter the air space defined by the declared center point. No further declarations can be made for the task.
- 8.4.6 If electronic marks are used to determine the transition point from one task to another, then their use is mandatory as specified in Section II and/or the GB.
- 8.4.7 Penalties related to 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.

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

8.4.9 If more than the allocated number of physical markers is released and achieve a valid mark in a task, the competitor will be scored by track point. If an electronic mark is dropped more than once, the first (1st) electronic mark in time will be scored.

8.5 MODIFICATION OF RULES

8.5.1 No further modification, after approval by the BFA/HACD Board, shall be permitted during the Event unless approved by the Jury President. 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 in writing.

8.6 GENERAL BRIEFING (GB)

A General Briefing on the rules, regulations and major aspects of the Event will be held before the start of the Event. Attendance at the General Briefing is compulsory for all competitors 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.

8.7 TASK BRIEFING

8.7.1 Task briefings will be called by the Director at times published on the official notice board. Alternative methods may be used as announced in the General Briefing. At the task 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 process proceeds (as specified in the COH).

8.8 TASK DATA

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

8.8.2 Flight data:

- a) Date
- b) Official sunrise/sunset
- c) PZs in force
- d) Launch area
- e) Minimum distance from ILP to all goals/targets set by director (if applicable)
- f) Launch period
- g) Provisional time and place of next briefing
- h) Solo flight (if directed)
- i) Search period
- j) QNH/Barometric Pressure

8.8.3 Individual task data:

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

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 crewmember 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 crewmember. Supplemental information may also be disseminated electronically via text messaging or special apps.

8.10 ENTRY FOR TASKS

A competitor will 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 shall be made at the competition center.

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 require all pilots to launch from a common area. A competitor taking off outside the prescribed launch area will not achieve a result for all tasks of that flight. Once his balloon is inflated a competitor may not move his balloon on the CLA except for safety reasons and only after approval from a responsible official.
- 9.1.2 The Common Launch Point (CLP) is a point in or near the launch area, physically marked on the ground before the beginning of the Event, from which all angles and distances are measured, irrespective of the take-off points of individual balloons.

9.2 INDIVIDUAL LAUNCH AREA(S) (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 position of the basket at the start of hot inflation.
- 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. Penalty for infringement is up to 250 task points.
- 9.2.3 In tasks where competitors select an individual launch area, the Individual Launch Point (ILP) is the position of the basket at take-off. Unless otherwise stated in the TDS only one take-off is permitted.
- 9.2.4 In tasks where multiple take-offs are allowed, unless the balloon is deflated, the landing position of the discontinued flight is considered the ILP for the next take-off.
- 9.2.5 Individual launch areas shall not be selected outside the contest area. Penalty: no result in the first task of that flight
- 9.2.6 A balloon inflated in an individual launch area shall not be moved and take off outside of it unless it is deflated, moved to another launch area and re-inflated. Penalty: no result in the first task of that flight.

9.3 LAUNCH PROCEDURES

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

9.4 VEHICLES

- 9.4.1 Not more than one vehicle per balloon may be present in the common launch area during the launch period. Penalty for infringement of this rule is 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 is 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 inflation 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 pilots' 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 displayed at the signals point will have the following meanings:

RED	No inflation or take-off permitted. Previous permission to take-off cancelled.
GREEN	General permission to all balloons to begin hot inflation.
BLUE	Not used.
WHITE	Permission to Fiesta wave 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 will 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 permitted launch period, except under rule 9.12, will be subject to a penalty of 100 task points for each minute or partial minute early or late. The yellow warning flag will be raised five (5) or more minutes before the end of the launch period.

9.10 OBSTRUCTION

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

9.11 ADEQUATE TIME

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

9.12 EXTENSION OF TIME

A competitor may request an extension of time from the 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 or when given individual permission by the Launch Director.

9.14 LAUNCH DIRECTORS

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

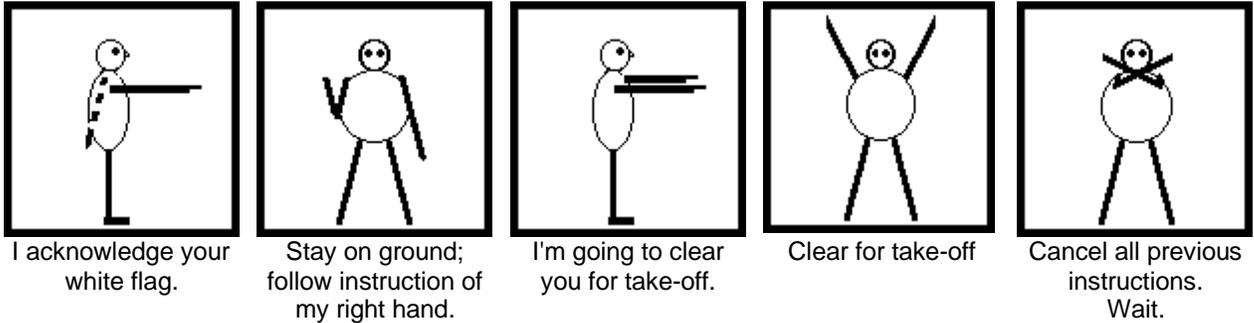
9.14.2 The Director can make the use of launch directors compulsory for all competitors or optional.

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 50cm square for this purpose.

9.15.2 To avoid congestion, extension of time will not be granted when competitors wave their white flag within the last ten minutes of the launch period.

9.15.3 The 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.



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 thirty (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 to clear him for launch.

9.17 LOSS OF CONTROL

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

9.18 TAKE-OFF

The point in position and time at which an aerostat first becomes airborne.

An aerostat is airborne when its envelope, gondola, crew and all substantial parts of its equipment and payload have no contact with the ground or water surface or anything attached or resting on the ground or water.

9.19 VALID TAKE-OFF

A balloon is considered to have taken off and to be flying the task(s) if a mark has been achieved or if the balloon passes over the boundary of any launch area. 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 a further take-off 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. He shall not re-enter the launch field below 500 ft. AGL before the end of the launch period or after all balloons have taken off, whichever is earlier.

CHAPTER 10 - FLIGHT RULES

10.1 BALLOON COLLISION

- 10.1.1 When two balloons are converging in flight, both competitors are responsible to avoid collision. The competitor of the higher balloon shall give way and shall climb if necessary. A basket to envelope contact will be penalized regardless of vertical approach speed.
- 10.1.1 Competitors shall not initiate or maintain a vertical speed exceeding 1.5 m/s (300 ft./min) unless they are certain that no balloon is in their flight path.
- 10.1.3 Competitors causing a collision, in the air or on the ground, will be 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.
- 10.1.5 In case the competitor suffering the collision is not able to fly further tasks after the collision, the director may award him points for the lost tasks in that flight. (COH)

10.2 DANGEROUS FLYING

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 object may be dropped from the balloon except for official markers, small pieces of paper, or similar light-weight materials for navigational purposes.

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 crewmembers or endangering the public during flight may be penalized up to 1000 competition points. Repeated violations may result in disqualification from the event.

10.6 LIVESTOCK AND CROP (II. 7)

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

10.7 LANDOWNER

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

10.8 COLLISION

A competitor whose balloon is in collision with power or telephone wires or their supports, at any time between inflation and completion of final landing will be penalized up to 500 competition points. Collisions may additionally be penalized under the rule for dangerous flying.

10.9 PERSONS ON BOARD (Section II.16)

- 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 and as specified in Section II.16.
- 10.9.2 The total number of persons on board (including competitor) shall not exceed two (2).
- 10.9.3 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

10.10.1 Crew are those persons associated with the launch and retrieval of the balloon and those providing the pilot with information about the tasks such as weather and position of other balloons during the competition. They can act for several balloons but must be registered with a particular pilot.

10.10.2 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 (II.8)

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

10.12 DISEMBARKATION

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

10.13 ASSISTANCE

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

10.14 AIR LAW

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 defined in Section II.10.

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 where a target is displayed or if no MMA is set, within 200 meters of any goal/target set by the Director or selected by the competitor or any physical mark of the competitor (for penalty see distance infringements).

11.3 CONTEST LANDING

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

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

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

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

11.4 GROUND CONTACT 1

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

- Note 1: A contact is solid if it is prolonged or results in a change of motion of the basket or the envelope.
- Note 2: 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 100 task points if light and 500 task points if solid. The penalty is applied to the task of the goal/target involved.

- Note 1: A contact is solid if prolonged or results in a change of motion of the basket or the envelope.
- Note 2: Incidental contact with grass or leaves will not be penalized.
- Note 3: Competitors will not be penalized under both rules for any single contact. If a landing occurs within an MMA, the competitor will be penalized under Rule 13.3.4 distance infringements.

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, TRACKPOINT

12.1 GOAL

- 12.1.1 A place defined by grid reference to 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 are numbered by a three-digit list number followed by the map coordinates.

12.2 GOAL SELECTED BY A TEAM OR COMPETITOR

- 12.2.1 Unless otherwise restricted in the TDS or Section II, any point on the competition map may be used for a competitor selected goal. 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 the properly formatted goal declaration to the competitor's mark as recorded in the BalloonLive App. (see Section II.11).

12.3 DECLARATIONS BY COMPETITORS

- 12.3.1 A competitor shall identify his goal by map coordinates (4/4 format). For goal declaration of pre-defined goals, the 3-digit goal number may be used.
- 12.3.2 A goal declaration violating the restrictions of Section II 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/team is required to declare his goal(s) or other declarations according to the TDS, he shall do so and his declaration shall be recorded using the BalloonLive App or manner as specified in the briefing data, clearly identified with his name and competition/team number. If more goals or declarations are made than permitted, the competitor will be scored to the least advantageous valid goal.

A competitor/team who wishes to revise his declaration may deposit/record a further declaration using the BalloonLive App or as specified in the TDS, within the declaration time, provided that it is clearly marked to distinguish it from any previous declaration(s).
- 12.3.4 Penalty for late declarations that have to be made by a specific 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.
- 12.3.6 Goals not meeting distance limitations will be scored according to the rule on distance infringements. Declarations not meeting boundaries or absolute altitude limits will be invalid.
- 12.3.7 If the competitor doesn't have a valid declaration, he will not achieve a result.

12.4 NOT USED

12.5 TARGET

A prominent cross ("X" as specified in the COH) 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 center of the target, not from the goal. A competitor reaching a goal where an expected target is not displayed should aim for the goal coordinates.

12.6 MARKER

Markers (as specified in the COH) 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 GMD task, no horizontal motion shall be applied to the marker in relation to its release, and gravity shall be the only means for the marker to drop. The person releasing the marker must hold the unrolled marker by the tail. The person's hand holding the tail of the marker shall not be outside the basket.

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

- Minor infringements with no competitive advantage: 50 task points
- Infringements with competitive advantage: 50 meters will be added to the competitor's result in the least advantageous direction.

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

12.10 FREE MARKER DROP

The marker must be completely unfurled when 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, 50 meters will be added to the competitors result in the least advantageous direction.

12.11 MARK

12.11.1 A physical mark is the point on the ground vertically below the weighted part of the official marker where it comes to rest after falling from the balloon. If the marker has been moved after landing and there is indisputable evidence available showing its original position, measurements will be based on the evidence. If the marker is displaced after coming to rest or disappears subsequently from view (e.g. beneath water level), the earliest position an official or observer has seen the marker in ground contact will be taken with the accuracy available. Same applies if the marker is carried on top of another balloon.

12.11.2 An electronic mark is an identifiable time stamp created by the competitor using the BalloonLive App. If no electronic mark is made or usable track file available in accordance with the scoring criteria defined in the TDS, the competitor will not achieve a result in the relevant task.

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

12.12 NOT USED

12.13 INTERFERENCE WITH MARKER

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

12.14 SEARCH PERIOD

12.14.1 Unless otherwise noted on the TDS, competitors have four (4) hours from the actual start of the launch period to return their unused markers and the GPS to the Operations Center.

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

12.15.1 A marker, dropped within the Marker Measuring Area, is considered lost if it is not found and in position 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 are required to pay for any marker damaged, not reusable, lost or not brought back in time. Charges for lost or damaged markers are stipulated in Section II. 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 or any subsequent marker is found or seen falling to the ground by officials or he has landed, within the set time limit (except as noted in Rule 15.12). 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 of gravel edge of a road, the inner bank of a river, or other defined marked area. Any part of the weighted bag that is on the inner edge will be considered valid.
- 12.18.2 A competitor who does not achieve a scoring position inside the scoring area(s) will not achieve a result.
- 12.19 SCORING AIR SPACE**
- An air space, or spaces, defined by the Director in the task data within which a valid track point can be achieved. Unless otherwise stated in the task data, the boundary will be defined by coordinate lines. The altitude limits are defined by altitude as recorded by the BalloonLive Sensor under Rule II.22 Any recorded track point exactly on the line or altitude limit will be considered valid.
- 12.20 MARKER MEASURING AREA (MMA)**
- 12.20.1 The MMA is an area defined by a radius around a goal/target or an otherwise clearly defined area within which results will be achieved by markers.
- 12.20.2 The MMA will be provided for each task in which markers are used.
- 12.20.3 Competitors not achieving a physical mark within the MMA will be scored by track point.
- 12.21 VALID MARK**
- 12.21.1 A physical mark is considered valid if it is within the scoring area or MMA and within the scoring period if set.
- 12.21.2 An electronic mark is considered valid if the recorded track point meets all scoring criteria defined in the TDS.
- 12.21.3 A valid physical mark shall have precedence over any track point or electronic mark.
- 12.21.4 Measurements will be made to the closest point of the weighted bag portion of the marker.
- 12.22 TRACKPOINT**
- 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 2D or 3D distance from the goal/target to the track point or electronic mark. Shortest distance is best. See Section II.24.
- 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, 2D-distance (horizontal 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 like scoring area, and/or scoring airspace, and/or scoring period.

12.24 TARGET OFFICIALS

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

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 Dishonesty 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 the penalty is not specified may have a penalty (distance, angle, or time) applied to his result or a deduction of points.
- 13.2.2 Where safety is not an issue, and no competitive advantage has been gained, he may receive a warning in the first instance.
- 13.2.3 A competitor may not be 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 (also see II.12 and 12.4)

- 13.3.1 Where the individual launch point, a goal selected by a competitor, a mark, or a final landing infringes a distance or altitude limit at any time, the competitor will be 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. Competitors landing in an MMA or limited scoring area 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.
- 13.3.4 Where the penalty relates to landing too close to a goal/target or mark, the competitor will only receive a penalty for the greater infringement.
- 13.3.5 The penalty will be waived if the competitor can show that he was unable to comply because of safety reasons, or because of light wind (unable to clear area within 10 minutes).
- 13.3.6 For competitors taking off too close to a goal or target, declaring a goal outside the limits specified in the TDS or otherwise abusing the set distance or altitude limits of a task, the penalty will be two (2) task points per 0.1% infringement. Above 25% infringement the competitor will be scored in Group B.

For Elbow, Angle or 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.

13.7 TEAM PENALTIES

In tasks where only one or two results or scores are used, penalties incurred by the team member(s) whose result or score is not used, will be deducted from the team's score.

CHAPTER 14 - SCORING

14.1 RESULT

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

14.2 TEAM SCORE

A teams' 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 TEAM SCORING METHODS

14.3.1 The Director will, at each flight briefing, indicate the method of scoring to be used for each task in the flight. He will also specify the method of calculating the results of individual pilots in the team. These may include the following:

- a) **BEST-TO-BEST** The Best-to-Best method sorts all the pilots into groupings so the pilots with the best results for each team are grouped together, those with the second-best results together, and those with the third best results together. These are all scored as groups with "P" equal to the number of teams. Once each members' score is determined, after application of penalties, the three scores are totaled for the team score.
- b) **BETTER TWO** **Like** Best-to-Best, except only the two top team member scores are added together for the team score. The resultant team score, after the application of penalties, is multiplied by one and one-half (1.5).
- c) **SUM-OF-ALL** This method is used only in marker-based tasks with logger scoring or a logger-only scored result, e.g., polygons and/or circles. The sum-of-all method differs significantly in that the results/measurements are added together (not the scores). Pilots with No Result or No Flight are given results of 250 meters beyond the worst achieved result of any pilot. The team score is calculated from the combined results with "P" equal to the number of teams. Penalties incurred by team members will be applied to the team score determined from the sum of results. The resultant team score, after the application of penalties, is multiplied by three (3).
- d) **SUM-OF-TWO** This method is used only in marker-based tasks with logger scoring or a logger-only scored result, e.g. polygons and/or circles. Like Sum-of-All except only the two top results from each team are used. The resultant team score, after the application of penalties, is multiplied by one and one-half (1.5).
- e) **COMBINED** The combined method scores all pilots in one group; "P" equals the entire field. Scores of each team member, after application of penalties, are added together for the team score.
- f) **BEST ONE OF THREE** The pilot in the team with the best result is used for scoring. "P" will be equal to the number of teams for this scoring method. The resultant team score, after the application of penalties, is multiplied by three (3).
- g) **3 IN 1** Each team member is assigned the task of achieving a unique mark in the completion of a task, e.g., ANG, ELB, LRN, TXDD or TMDD. Results are determined per the Task Data Sheet and scored with "P" equal to the number of teams. The resultant team score, after the application of penalties, is multiplied by three (3).
- h) **ABC** Each team must designate their "A", "B" and "C" member if not part of the entry criteria. The ABC method sorts all the pilots into groupings according to their ranking, e.g., "A", "B" or "C". These are scored as groups with "P" equal to the number of teams and the points from each, after application of penalties, are added together for the team score.

14.3.2 If not otherwise specified on the task briefing sheet, scoring method (a) in rule 14.3.1 would be used.

- 14.3.3 Any results that do not generate either 2000 or 3000 points may be weighted to reflect these points. Point penalties will be applied after similar weighting (multiplication).
- 14.3.4 The scoring method, as determined by the Director for any task or tasks, will not be grounds for protest.
- 14.4 PUBLICATION OF SCORES**
- 14.4.1 The scores of each task shall be published with the minimum of delay on the Official Notice Board. Scores will be published using the team number and name of individual pilots flying the task.
- 14.4.2 Task score sheets shall include:
- a) Event name, task date and time, task sequence number, task name and rules reference.
 - b) For each competitor and team 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.
 - 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.
- 14.4.3 Task score sheets will have the following status:
- PROVISIONAL:** Provisional scores are published for information only and have no validity for timing purposes.
- OFFICIAL:** Time periods for complaints/protests start from the publication of official scores.
- FINAL:** Official scores become final after all relevant time periods have expired. The Jury may require a correction of the results and/or penalties prior to approving and signing the final scores.
- 14.4.4 Total score sheets shall include:
- a) Event name
 - b) For each competitor and team his: rank, competition number and name, total score, and task scores
 - c) Task checksums
- 14.4.5 Total scores are for information only and will not carry a signature.
- 14.5 RANKING ORDER**
- 14.5.1 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.
- 14.5.2 After calculating the points score with the applicable formula, any penalty points will be subtracted to obtain the competitors/teams final task score. The competitors/teams final task scores will be ranked again before being published.
- 14.6 POINTS FORMULA – PROPORTIONAL SCORING**
- 14.6.1 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.
- 14.6.2 The best result can be awarded up to 3000 points (1000 per competitor) as specified on the task sheet or announced by the Director, before deduction of any penalty points.
- 14.6.3 The superior half of the results will receive a score between 1000 and approximately 500 points, in proportion to their performance using Formula One.

14.6.4 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.

14.6.5 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 lower 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

14.6.6 If fewer than half of the pilots 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

14.6.8 In tasks where no competitor achieves a result, all competitors in Group B will receive a score of 500 points before any penalty points.

14.6.9 Points scores will be rounded to the nearest whole number.

14.7 PRECISION

14.7.1 Results will be established with the highest precision at hand.

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 competition is specified in Section II.

14.8 NOT USED

14.9 TOTAL SCORES

14.9.1 The total score is the addition of the individual task scores for all team members.

14.9.2 Where two teams have equal scores in an Event, the team with the smaller difference between their best and worst task scores will be ranked higher.

CHAPTER 15 - TASKS

15.1 TEAM PILOT DECLARED GOAL (TPDG)

15.1.1 Each team will attempt to achieve a mark or valid track point close to a common goal selected by the team and declared by them before the flight.

15.1.2 Task Data:

- a) Method of declaration. (also see Section II.12 and 12.3)
- b) Number of goals permitted.
- c) Goals available for declaration, if applicable.
- d) Minimum and Maximum distances of goal(s) from CLP or ILP per TDS.
- e) Minimum distance of goal(s) 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 PILOT DECLARED GOAL (PDG)

15.2.1 Competitors will attempt to achieve a mark or valid track point close to a goal selected by him and declared by him before the flight.

15.2.2 Task Data:

- a) Method of declaration.
- b) Number of goals permitted.
- c) Goals available for declaration, if applicable.
- d) Minimum and Maximum distances of goal from CLP or ILP per TDS.
- e) Minimum distance of goal from any subsequent goals or targets, if applicable.

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

15.3 JUDGE DECLARED GOAL (JDG)

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

15.3.2 Task Data:

- a) Position of set goal/target.

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

15.4 HESITATION WALTZ (HWZ)

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

15.4.2 Task Data:

- a) Position of various set goals/targets

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

15.5 FLY IN (FIN)

15.5.1 Team competitors select their own launch areas and attempt to achieve a mark or valid track point close to a set goal or target.

15.5.2 Task Data:

- a) Position of set goal/target

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

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

15.6 TEAM CONVERGENT TASK (TCT)

- 15.6.1 Competitors select their own launch areas and attempt to achieve a mark or valid track point close to a set goal/target. All three pilots are scored to the same goal.
- 15.6.2 The three launch areas for the team members must be a designated distance from each other.
- 15.6.3 Task Data:
- a) Position of set goal(s)/target(s)
 - b) Minimum distance between team member's launch areas.
- 15.6.4 The result is the distance from the mark to the target, if displayed, or goal. Smallest result is best.
- 15.6.5 Only one scoring attempt (marker drop) may be made.

15.7 TEAM FLY ON (TFON)

- 15.7.1 Competitors will attempt to achieve a mark or valid track point close to a common goal selected and declared by them before take-off or during flight.
- 15.7.2 Task Data:
- a) Method of declaration. (also see Section II.12 and 12.3)
 - b) Number of goals permitted.
 - c) Goals available for declarations.
 - d) Declaration point requirement.
 - e) Minimum and Maximum distance between declaration point and declared goal.
 - f) Minimum distance of declared goal from any other targets noted on TDS.
- 15.7.3 The result is the distance from the mark or closest valid track point to the nearest valid declared goal. Smallest distance is best.

15.8 HARE AND HOUNDS (HNN)

- 15.8.1 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.
- 15.8.2 Task Data:
- a) Description of hare balloon
 - b) Intended flight duration of hare balloon
- 15.8.3 The result is the distance from the mark or closest valid track point to the target. Smallest result is best.
- 15.8.4 Variation from intended flight duration of the hare shall not be grounds for complaint.
- 15.8.5 The hare may deflate after landing and may be removed from the landing field.
- 15.8.6 The hare balloon may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.

15.9 TEAM HARE AND HOUNDS (THNH)

- 15.9.1 Each Team will designate a team member to fly as hare balloon for a given task or tasks. The Team Hare balloon will be defined as a "Friendly Hare." Team competitors will follow the "Friendly Hare" and attempt to achieve a mark or valid track point close to the final landing place of the hare. The Director may also designate which team member will be the hare balloon.
- 15.9.2 Task Data:
- a) Arrangements for declaring team hare. If not determined by Director on TDS, team hare must be declared to the designated official(s) prior to leaving the briefing/launch field.
 - b) Minimum and Maximum hare flight distance from CLP, ILP, or previous task goals.
- The result is the distance from the hound mark to the Friendly Hare landing place, identified by hare 'mark' and displayed target, if available. Smallest result is best.

15.10 WATERSHIP DOWN (WSD)

- 15.10.1 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.
- 15.10.2 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
- 15.10.3 The result is the distance from the mark or closest valid track point to the target. Smallest result is best.
- 15.10.4 If the hare balloon does not take off within five (5) minutes after the set time then this task is considered cancelled.
- 15.10.5 Variation from the intended flight duration of the hare shall not be grounds for complaint.
- 15.10.6 The hare may deflate after landing and may be removed from the landing field.
- 15.10.7 The hare may display a banner hanging below his basket. No competitor shall display any banner hanging below the basket during this task.

15.11 GORDON BENNETT MEMORIAL (GBM)

- 15.11.1 Competitors will attempt to achieve a mark or valid track point within a Scoring Area(s) close to a goal/ target.
- 15.11.2 Task Data:
- a) Position of goal/target
 - b) Description of Scoring Area(s)
- 15.11.3 The result is the distance from the mark or closest valid track point to the target; if displayed, or goal. Smallest result is best.

15.12 CALCULATED RATE OF APPROACH TASK (CRT)

- 15.12.1 Competitors will attempt to achieve a mark or valid track point within a valid Scoring Area close to a set goal. The Scoring Area(s) will have unique times of validity.
- 15.12.2 Task Data:
- a) Position of goal/target
 - b) Description of Scoring Area(s) and their validity times
- 15.12.3 The result is the distance from the mark or closest valid track point to the target, if displayed, or goal. Smallest result is best.
- 15.12.4 A competitor who does not achieve a mark (on the ground) or track point inside a scoring area during its time of validity will not achieve a result.

15.13 RACE TO AN AREA (RTA)

- 15.13.1 Competitors will attempt to achieve a mark or valid track point, as specified in the TDS in the shortest time within a scoring area(s) or airspace(s).
- 15.13.2 Task Data:
- a) Arrangements for timing
 - b) Description of Scoring Area(s)
- 15.13.3 The result is the elapsed time from the initial timing point to the mark or first valid track point. Shortest time is best.
- 15.13.4 The timing ends at the moment the marker is released, falling or on the ground as seen by officials or at the moment of the first valid track point in the scoring area if track points only were set.

15.14 ELBOW (ELB)

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

15.14.2 Task Data:

- a) Description of point "A"
- b) Description of point "B"
- c) Description of point "C"
- d) Minimum distance requirements, "A" to "B" and "B" to "C"

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

15.15 ANGLE TASK (ANG)

15.15.1 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".

15.15.2 Task Data:

- a) Description of points "A" and "B"
- b) Set direction (degrees)
- c) Minimum and Maximum distances from "A" to "B."

15.15.3 The result is the angle between the set direction and the line "A-B". Greatest result is best. A change in flight direction of 180° is best.

15.16 LAND RUN (LRN)

15.16.1 Competitors will attempt to achieve the greatest area of a triangle ABC.

15.16.2 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)
- e) Time limits, if any

15.16.3 The result is the area of triangle ABC. Greatest distance is best.

15.17 MINIMUM DISTANCE (MDT)

15.17.1 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.

15.17.2 Task Data:

- a) Arrangements for timing
- b) Minimum set time or distance
- c) Reference point

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

15.17.4 The scoring position is the mark or best track point after the minimum time or distance has elapsed.

15.18 SHORTEST FLIGHT (SFL)

15.18.1 Competitors will attempt to achieve a mark or valid track point close to the common reference point within a set scoring area(s).

15.18.2 Task Briefing Data:

- a) Description of scoring area(s)
- b) Reference point

15.18.3 The result is the distance from the mark or best valid track point to the reference point. Smallest result is best.

15.19 MINIMUM DISTANCE DOUBLE DROP (MDD)

15.19.1 Competitors will attempt to achieve two marks or valid track points close together in different scoring areas.

15.19.2 Task Data:

- a) Description of the scoring areas

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

15.19.4 Competitors will not achieve a result unless they have valid track points or marks in different scoring areas as per the TDS.

15.20 TEAM MINIMUM DISTANCE DOUBLE DROP (TMDD)

15.20.1 Competitors will attempt to achieve two team marks or two team valid track points close together in different scoring areas.

15.20.2 Task Data:

- a) Descriptions of the scoring areas
- b) Special instructions for each team member's marker drop(s) if any

15.20.3 The result is the difference between the marks or track points. Smallest 2D result is best.

15.20.4 Competitors will not achieve a result unless they have valid track points or marks in different scoring areas per the TDS.

15.21 MAXIMUM DISTANCE TIME (XDT)

15.21.1 Competitors will attempt achieve a mark or valid track point far away from the common reference point, within a maximum set time.

15.21.2 Task Data:

- a) Maximum set time.
- b) Arrangements for timing.
- c) Reference point.

15.21.3 The result is the difference from the mark or furthest valid track point to the reference point. Greatest 2D distance is best.

15.22 MAXIMUM DISTANCE (XDI)

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

15.22.2 Task Data:

- a) Description of scoring area(s).
- b) Reference point.

15.22.3 The result is the distance from the mark or valid track point to the common reference point. Greatest 2D distance is best.

15.23 MAXIMUM DISTANCE DOUBLE DROP (XDD)

15.23.1 Competitors will attempt to achieve two marks or valid track points far apart in the scoring area(s).

15.23.2 Task Data:

- a) Description of Scoring Area(s)

15.23.3 The result is the distance between the marks or farthest valid track points. Greatest result is best.

15.24 TEAM MAXIMUM DISTANCE DOUBLE DROP (TXDD)

15.24.1 Competitors will attempt to achieve two team marks or achieve two team valid track points far apart in the scoring area(s).

15.24.2 Task Data:

- a) Description of scoring area(s)
- b) Special instructions for each team member's marker drop(s)

15.24.3 The result is the distance between the marks or farthest valid track points. Greatest result is best.

15.24.4 Competitors will not achieve a result unless they have valid track points or marks in different scoring areas per the TDS.

15.25 CONSTELLATION TASK (CST)

15.25.1 This is a multi-part task. Competitors will fly from a launch area and choose several of a number of satellite goals during flight and attempt to achieve marks or achieve valid track points near those of his choice. No pilot may drop more than one marker at any single goal.

15.25.2 Task Data:

- a) Number of parts to task
- b) Position of various set goals/targets

15.25.3 Competitor's results are distances from his marks or closest valid track point to the goals. Shortest distance is best.

15.26 JUDGE DECLARED TEAM DIVERGENT GOALS (JDDG)

15.26.1 Competitors will attempt to achieve a mark or valid track point close to a set goal. All team members launch from the same launch area and fly to three separate goals. The goals are set by the Director. While all participating teams fly to the same three goals/targets, each team's members fly to a different goal.

15.26.2 Task Data:

- a) Method of declaration (also see Section II.12 and 12.3) by each team member
- b) Position of set goals/targets

15.26.3 Competitor's result is the distance from the mark or closest valid track point to the target/goal. Shortest distance is best.

15.27 TEAM DECLARED DIVERGENT GOALS (TDDG)

15.27.1 Competitors will attempt to achieve a mark or valid track point close to a set goal. All three team pilots launch from CLP or common team ILP and fly to three separate goals. The goals must be a stipulated distance apart. The goals must be declared as required prior to launch.

15.27.2 Launch area is either common team ILP choice or a CLP per TDS.

15.27.3 Task Data:

- a) Method of declaration (also see Section II.12 and 12.3) by each team member
- b) Minimum distance between team member goals
- c) Minimum and Maximum distance of goals from CLP/ILP

15.27.4 Competitor's result is the distance from the mark or closest valid track point to the target/goal. Shortest distance is best.

15.28 TEAM DECLARED IN-LINE GOALS (TDIL)

15.28.1 Competitors will attempt to achieve a mark or valid track point close to a set goal. All three pilots launch from CLP or common team ILP and fly to three separate goals. The goals must be within a scoring area corridor (reference point, direction, corridor width and minimum distance apart) as specified by the Director. The goals must be declared as required by the TDS prior to launch.

15.28.2 Launch area is either team choice or a CLP per TDS.

15.28.3 Task Briefing Data:

- a) Method of declaration (also see Section II.12 and 12.3)
- b) Width of scoring area corridor
- c) Minimum distance apart
- d) Minimum and Maximum distance of goals from launch area
- e) Reference point

15.28.4 Pilot's result is the distance from his mark or closest valid track point to the target/goal. Shortest distance is best

15.28.5 If one pilot declaration or result is outside the scoring area or scoring period that pilot will receive a no result.

15.29 3-D SHAPE TASK (3DT)

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

15.29.2 Task Briefing Data:

- a) Description of set airspace(s)

15.29.3 The result is the accumulated horizontal distance measured by valid track points in the set airspace(s). Greatest result is best.

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 Covid-19 protocols, 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 – ALLOWABLE DAMAGE on Balloon Envelopes and Baskets

Manufacturer	Allowable Damage Limitations
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"> • Above 1ST horizontal band below the equator: 1 inch. • Below 1ST horizontal band and above 6 feet above mouth: 2 inches. • Envelope within 6 feet of mouth: 18 inches <p>For fabric with greater than 100 hours and greater than 3 years old:</p> <ul style="list-style-type: none"> • Above 1ST horizontal band below the equator: 3/8 inch. • Below 1ST horizontal band and above 6 feet above mouth: 1 inch. • Envelope within 6 feet of mouth: 12 inches <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"> 1. They are more than 30.5 cm (12 inches) apart and more than 30.5 cm (12 inches) away from a seam. 2. There are no more than four in any one panel. <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 <3/4” in floor; <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 to 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 C – COVID-19 SAFETY PROTOCOLS

These protocols are current as of May 15, 2021. Due to the continually changing nature of CV-19, all protocols are subject to update, as required.

The CDC currently recommends the following:

If you are fully vaccinated, you can resume activities that you did prior to the pandemic. Fully vaccinated people can resume activities without wearing a mask or physically distancing, except where required by federal, state, local, tribal, or territorial laws, rules, and regulations, including local business and workplace guidance.

If not vaccinated, the CDC recommends that people wear masks in public settings, at events and gatherings, and anywhere they will be around other people. We ask that unvaccinated people wear masks at all pilot briefings.

All competitors and crew are reminded of the importance of needed health and safety protocols during the Championship. These Covid-19 protocols have been reviewed and approved by the Public Health District and the Fire Marshall and will be enforced throughout the Championship.

Indoor Events

The Baptist Collegiate Ministry is the primary venue for all competition event activities. The Courtyard Marriott currently requires wearing a facial mask while in the hotel's public areas, but they are optional for admittance to all scheduled meetings. Hand sanitizer stations will be located throughout the hotel and meeting rooms. We encourage their frequent and regular use along with hand washing. Specific protocols in place include:

Registration

- Face masks are optional during the registration process but we recommend that only the pilot and necessary crew enter the building.
- Observe reasonable distancing during the pilot registration process. Pilots will be asked not to congregate in large groups and extra crew or non-essential personnel will be asked to wait outside or in other areas where appropriate distancing can be achieved.
- The FAA IIC has agreed to review pilot and aircraft documents in advance via copies to be sent electronically. Ramp checks could still take place on a random basis.
- All staff working registration will be encouraged to wash hands frequently and use hand sanitizer any time there is contact with an individual.

General Briefing and all Flight Briefings

- While every pilot will be provided printed task sheets, supplemental task data and weather sheets, we intend to post these documents in preliminary form to the electronic ONB at least 15 minutes before each briefing. Official documents will be provided by staff as available before briefing start. Entry doors will be open 15 minutes in advance of any scheduled meeting to eliminate the large congregation of participants awaiting entry. The ONB will be updated with the final task data at the conclusion of the flight briefing should there be any changes.
- Only pilots, crew chiefs and essential event staff will be allowed in the meeting room.
- Pilots will be provided their supply of all event markers in a numbered plastic bag during the General Briefing.
- Each pilot's bag of recovered markers will be on the assigned space in the briefing room well in advance of any scheduled meeting.

Debriefing

- Flight Report Forms are to be completed and submitted on Watchmefly.net.
- While we don't expect the need for much in the way of face-to-face debriefings, pilots are welcome to call the event steward with any questions they may have or report problems. Only pilots are permitted in the operations area. Unused markers are maintained by the pilot.

Official Notice Board

- All notices will be posted to the Electronic Notice Board (ONB) at Watchme.fly.net.

Outdoor Activities

Landowner Relations

- Out of respect to landowners, we ask pilots and crew to approach landowners wearing a facial mask.
- Be willing to have a conversation with the landowner about all we are doing to keep pilots, crew, and locals safe from Covid-19.

Welcome Party

- Food will be served in pre-packaged containers or, if permitted, served from a serving line following Health Department guidelines.