



42ND SOUTH AFRICAN HOT AIR BALLOON CHAMPIONSHIPS 2025



Competitive Flying

Hot air ballooning is popular with general public for its scenic views and typically calm rides, however, most people do not know that competitive hot air ballooning is quite demanding and complex. Even though it is not physically strenuous, professional ballooning demands a lot of knowledge, training, hard work and a set of sophisticated skills. Competitions take place at national, regional, international and world levels; World Championships are held every two years. Competitions are conducted using standard Fédération Aéronautique Internationale (FAI) rules that outline the tasks for pilots that can be used during a competition and define the parameters that determine the winner – champion pilot.

Ballooning competitions take several days. Commonly two flights are designated for one day and each flight consists of series of tasks selected by the Director before take off, after assessing the weather conditions and other relevant factors. Therefore, competition flights are not aimed at achieving fastest time, maximum distance or altitude, as in other sports. They require pilots to apply their skills of manoeuvring their balloons over a set course. They include goals, targets, scoring areas, time and distance limits, which a pilot must take into consideration to prove his flight planning, anticipation and managing balloon skills in the given weather conditions.

Good results in competition tasks are achieved by using a combination of good flight planning – choosing the appropriate take-off site, appreciation of winds at various altitudes, tactics to choose and determine the goal, good balloon managing and a bit of luck. By lifting and descending the balloon, the pilot tries to catch the right wind current that can take him to his goal or target. Balloons do not land on the target itself, but it is up to the pilot to drop markers (small sandbags with streamers attached) as close to the target as possible. The result is the distance between the marker and the centre of the target. The pilot whose marker lands closest to the target is awarded the highest score.

Important Factors in Hot Air Balloon Competitions

Catching the Wind

There is no direct mechanical means of controlling lateral movement for a hot air balloon, but a change in direction can be achieved by utilizing the wind currents at hand. Sometimes, at different altitudes, the wind will vary in general directions. By climbing or descending into these layers of air, the pilot is able to manoeuvre the balloon onto a preferred line of travel. Pilots must accurately gauge the speed, direction, and strength of the winds before the flight, and be able to predict changes during the flight.

Orientation in space

Spatial awareness and perception are the key to success once you are airborne. The pilots must have a good understanding of the competition area based on the rules of the competition: they have to be aware of their position in the air at every single moment, the position of their target in the area; where other balloons are and where they are heading; and what areas they should avoid regarding the flight regulations or competition rules. The basis for orientation is a topographic map that the pilot has traditionally in a hard copy, but most pilots also make use of navigation software, satellite navigation (GPS) and tablets.

Teamwork

There is only one person in command of the hot air balloons, but teamwork is an indispensable part of the competition. The ground crew helps pilot prepare for the flight and after the flight is completed. They help with instruments and equipment needed for the flight. They follow the balloon giving the pilot accurate information about weather conditions, which could be crucial for his success. The communication runs via radio or mobile phone. Quite often at international competitions the competitors from the same country help each other exchange information during the flight, prepare the tactics and flights together and thus try to gain some advantage over the other competitors.

Self-Control and Physical Ability

The only way to control a hot air balloon is by operating the burner and vent. Operating the burner seems very easy, but it requires concentration and precision so any nervousness or emotional tension resulting in over-control have an immediate effect on the flight. Pilots must control their emotions so they can demonstrate their abilities with an even temperament at all times. The preparation and accumulated flying experience are therefore of crucial importance for the pilots.

Scoring Points

The winner of each task will get 1,000 points, the others get less, calculated proportionally according to their achievement in the task. The winner is the pilot who gathers the most points during the competition. It is important that pilots do not fail by trying to score too many points in one particular task instead of achieving a good overall average, and that requires good tactics, adapting and anticipation skills.

Results

Results of competitors are calculated according to the task rules. It can be the distance between their markers and goals, targets in the air or on the ground – measured by meters or calculated in space (3D), greatest area, greatest distance within a set airspace, or angle. The task winner gets 1,000 points. Only the scores of the top 50% of pilots in the competition are calculated by comparing their results to those of the winning pilot. This means the following: if a competitor's result is close to the first placed pilot, he will be awarded points close to 1,000 points. The mid-fleet pilot will score about 500 points and pilots in the lower 50% of competitors will be scored by evenly dividing the remaining 500 points by their ranking order. The scoring system advantages pilots in the top half of the fleet.

EVENT TASKS

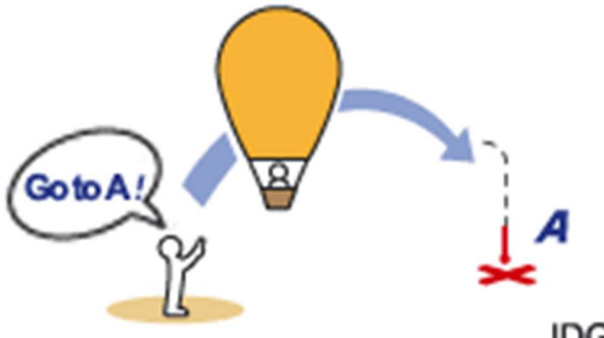
Pilot Declared Goal Rule 15.1

	<p>The pilots declare individual goals, usually road intersections, before take-off. This task tests the ability of the pilot to forecast wind speed and direction and navigate to a place of their own choice.</p>
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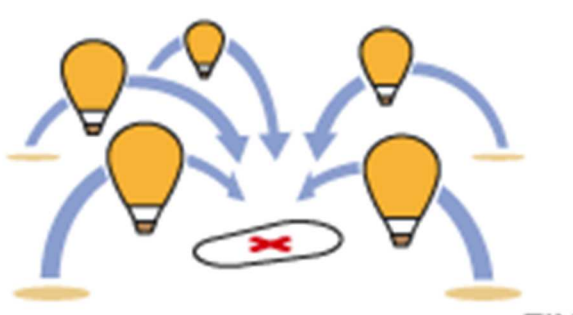
Judge Declared Goal (JDG) - Rule 15.2

	<p>The Championship / Competition Director (Tasksetter / Balloonmeister / Judge) declares a goal, usually a road intersection or other identifiable point. The balloons launch from a common launch site and try to drop a marker closest to a target located near the declared goal.</p>
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Hesitation Waltz (HWZ) - Rule 15.3

 A diagram illustrating the Hesitation Waltz (HWZ) task. It shows a yellow balloon with a pilot inside, positioned above a ground launch site. A speech bubble from the launch site says "Goto A!". A solid blue arrow points from the launch site to the balloon, and a dashed blue arrow points from the balloon to a target marked with a red 'X' and the letter 'A'. The label "JDG" is at the bottom right.	<p>The object of the Hesitation Waltz is for the pilot to select, in flight, and attempt to fly to one of several goals previously declared by the Championship / Competition Director. The pilot's decision on which target to select will be based on the available wind speed and direction.</p>
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Fly In (FIN) - Rule 15.4

 A diagram illustrating the Fly In (FIN) task. It shows five yellow balloons at different launch sites, each with a solid blue arrow pointing towards a central target marked with a red 'X' inside an oval. The label "FIN" is at the bottom right.	<p>The object of the Fly In task is for the pilot to select their own launch site that will allow them to fly to a nominated target. The launch site is required to be a set minimum distance from the target. This is often combined with a Fly-On task.</p>
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On (FON) - Rule 15.5

 A diagram illustrating the Fly On (FON) task. It shows a yellow balloon with a pilot inside, positioned above a ground launch site. A speech bubble from the launch site says "Goto B!". A solid blue arrow points from the launch site to the balloon, and a dashed blue arrow points from the balloon to a target marked with a red 'X' and the letter 'B'. A previous goal, marked with a blue 'X', is shown to the left. The label "FON" is at the bottom right.	<p>The object of the Fly On task is for each pilot to select a goal during flight a set minimum and maximum distance from their previous goal that can be flown to after completing the previous task.</p>
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Hare & Hounds (HNH) - Rule 15.6

 <p>The diagram illustrates the Hare & Hounds (HNH) task. It shows a yellow balloon (the Hare) on the left and a blue balloon (the Hounds) on the right. A solid blue arrow points from the yellow balloon to a red 'X' mark on the ground, which is the target. A dashed orange arrow points from the yellow balloon to the blue balloon, indicating the chase. The label 'HNH' is at the bottom right.</p>	<p>The Hare balloon, nominated by the Director takes off several minutes before the competitors, the Hounds. The Hare's role is to lead the Hounds on a merry chase for a set period of time. The Hare's landing site becomes the goal for the Hounds.</p>
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Watership Down (WSD) - Rule 15.7

 <p>The diagram illustrates the Watership Down (WSD) task. It shows a yellow balloon (the Hare) on the left and a blue balloon (the Hounds) on the right. A solid blue arrow points from the yellow balloon to a red 'X' mark on the ground, which is the target. A dashed orange arrow points from the yellow balloon to the blue balloon, indicating the chase. The label 'WSD' is at the bottom right.</p>	<p>A combination of the Fly In and Hare and Hounds tasks. Pilots select their own launch site a set minimum distance from the nominated launch point of the Hare balloon. The Hare balloon launches at a set time and flies for a set period. The hare's take-off point is the first goal for the Hounds and its landing site is the second goal.</p>
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Gordon Bennett Memorial (GBM) - Rule 15.8

	<p>Competitors attempt to drop their marker closest to a set target within a defined scoring area. To make the task more difficult the scoring area may be triangular or some other irregular shape with the target in a corner.</p>
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Calculated Rate of Approach (CRT) - Rule 15.9

	<p>The object of flying a CRAT task is to arrive at the target when the nearest or inner most scoring area is "open" as per the rules. If a pilot arrives early or late to the target they can only achieve a result based on the scoring area open at the time. There may be several scoring areas at varying distances from the target.</p>
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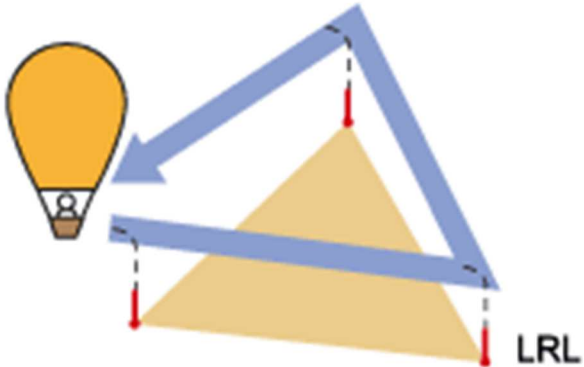
Race to an Area (RTA) - Rule 15.10

 The diagram shows a yellow hot air balloon at the top. A blue curved arrow indicates a path from the balloon to a yellow oval on the ground. A clock face is positioned between the balloon and the oval. A red vertical line marks the target area on the ground, labeled 'RTA'.	<p>The pilot attempts to drop their marker in the shortest time within a defined scoring area. This task replaces the Race to a Line in which timed take offs and line crossing times were used to calculate a competitor's result.</p>
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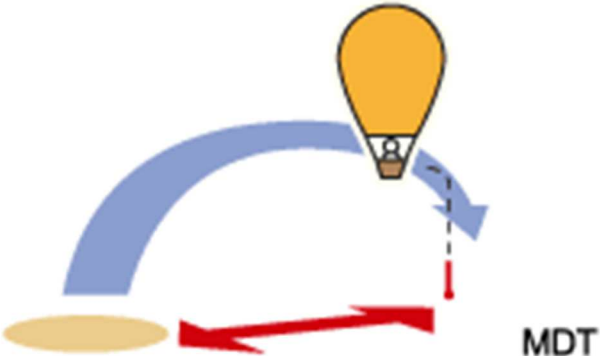
Elbow (ELB) - Rule 15.11

	<p>After taking off and flying for a specific period of time or distance the pilots drop their first markers. The pilots then attempt to fly a path that deviates the most from the direction they flew on the first leg. The greatest change in direction wins the task.</p>
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Land Run (LRN) - Rule 15.12

 The diagram shows a yellow hot air balloon on the left. A blue arrow points from the balloon to a red vertical line (Point B). Another blue arrow points from Point B to another red vertical line (Point C). A third blue arrow points from Point C back to the balloon. A yellow shaded triangle is formed by these points. The label 'LRL' is at the bottom right.	<p>After taking off and flying for a specific period of time or distance the pilot drops their first marker, Point B. This marker together with a point nominated by the director, Point A, forms the side A-B of a triangle. The pilot then flies on and drops a second marker, Point C, completing the triangle A-B-C. The pilot creating the triangle that contains the greatest area wins.</p>
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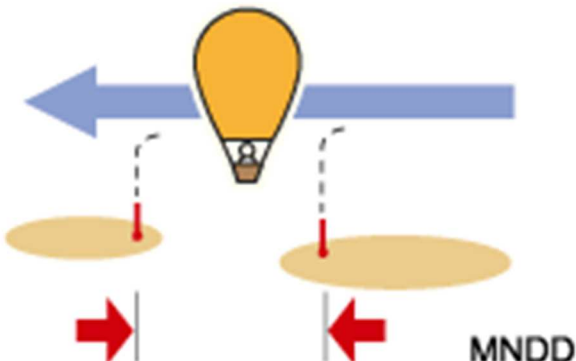
Minimum Distance (MDT) - Rule 15.13

 The diagram shows a yellow hot air balloon at the top. A blue curved arrow indicates a path from the balloon to a yellow oval on the ground. A red double-headed arrow is positioned between the balloon and the oval, labeled 'MDT'.	<p>The object of this task is the opposite to the maximum distance, to fly the shortest distance from the common launch site in a set period on time.</p>
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Shortest Flight (SFL) - Rule 15.14

 <p>The diagram illustrates the Shortest Flight (SFL) task. A yellow hot air balloon is shown at the top, with a blue curved arrow indicating its flight path. A red dashed line shows the path of a marker being dropped from the balloon. The marker lands in a yellow oval scoring area. A red arrow points from the launch point to the landing point. The label 'SFT' is at the bottom right.</p>	<p>The object of this task is for the competitors to drop a marker closest to the common launch point within a set scoring area.</p>
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Minimum Distance Double Drop (MDD) - Rule 15.15

 <p>The diagram illustrates the Minimum Distance Double Drop (MDD) task. A yellow hot air balloon is shown at the top, with a blue straight arrow indicating its flight path. Two red dashed lines show the paths of two markers being dropped from the balloon. The markers land in two yellow oval scoring areas. Red arrows point from the launch point to each landing point. The label 'MNDD' is at the bottom right.</p>	<p>Competitors drop two markers close as close as possible to each other in two different scoring areas.</p>
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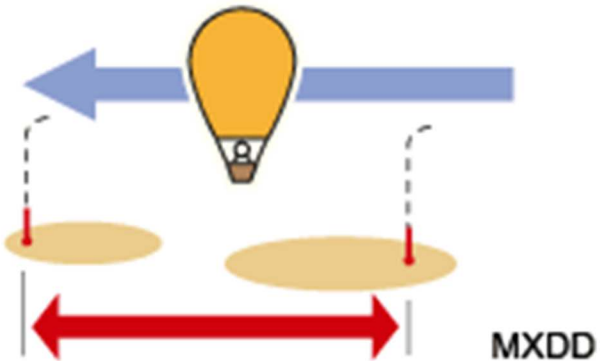
Maximum Distance (Time) (XDT) - Rule 15.16

 <p>The diagram illustrates the Maximum Distance (Time) (XDT) task. A yellow hot air balloon is shown at the top, with a blue curved arrow indicating its flight path. A red dashed line shows the path of a marker being dropped from the balloon. The marker lands in a yellow oval scoring area. A red arrow points from the launch point to the landing point. A clock icon is shown next to the balloon. The label 'MDT' is at the bottom right.</p>	<p>The object of this task is for competitors to travel the greatest distance from the launch point within the maximum time allowed before dropping the marker.</p>
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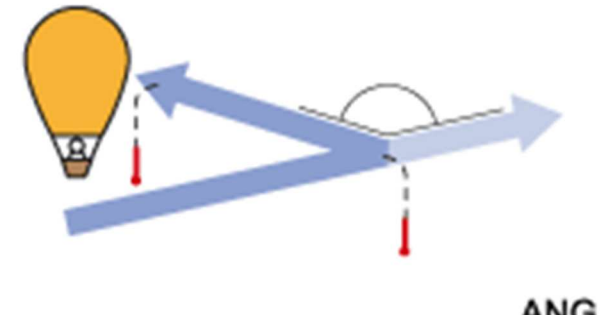
Maximum Distance (XDI) - Rule 15.17

 <p>The diagram illustrates the Maximum Distance (XDI) task. A yellow hot air balloon is shown at the top, with a blue curved arrow indicating its flight path. A red dashed line shows the path of a marker being dropped from the balloon. The marker lands in a yellow oval scoring area. A red arrow points from the launch point to the landing point. The label 'MXD' is at the bottom right.</p>	<p>The object of this task is to fly the greatest distance from the launch site within a set scoring area. The pilot achieving the greatest distance is the winner.</p>
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Maximum Distance Double Drop (XDD) - Rule 15.18

	Competitors drop 2 markers within one or more scoring areas. The greatest distance is best.
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Angle (ANG) - Rule 15.19

	Competitors will attempt to achieve that greatest change of direction from a set direction. The change of direction is the angle between the line A-B and the set direction. Where A is the launch point and B is the landing point of the marker or balloon.
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3D Shape Task (3DT) - Rule 15.20

	Competitors attempt to achieve the greatest distance within set airspace. The result is the accumulated horizontal distance between valid track points in the set airspace(s). Greatest result is best.
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