

FEDERATION AERONAUTIQUE INTERNATIONALE

COMMISSION D'AEROSTATION DE LA FAI

FAI BALLOONING COMMISSION

CIA



**UNIFORM
OBSERVERS HANDBOOK**

3rd Edition

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FAI - 93 boulevard du Montparnasse, 75006 PARIS, France

ROLE OF THE OBSERVER

The main objectives of a balloon championship are to rank the competitors according to their skill in flying the tasks, and to reinforce friendship among aeronauts. An observer is responsible to the chief observer and works for the Event Director and helps him in reaching those objectives. If the standard of observers is not high and uniform, the competition will end with unreliable ranking and diminished respect and friendship. The role of the observer (rules 6.1 - 6.7) is defined in the competition rules.

Rule 6.1 Observers

An Observer is a competition official, responsible to the Chief Observer. His duties are primarily the impartial recording of particulars of positions, times, distances etc. achieved during a task. He also has the duty to report any apparent infringement of these rules or of air law, and any case of inconsiderable behaviour towards landowners or the public by any competitor or crew member.

Rule 6.2 Appointment

At the task briefing an observer will be appointed to each balloon pilot. An observer will not be appointed to the same pilot more than once and will not be of the same nationality as the pilot.

Rule 6.3 Assistance

An observer may not assist the competitor with advice at any time. He should not attempt and is not qualified to amplify, explain or interpret the rules to a competitor.

He may not handle the marker or any controls of the balloon during a task.

If he wishes and if invited by the competitor, he may assist in the ground handling and inflation, and if flying, may assist with the final landing under the competitor's direction.

Rule 6.4 Request to Witness

If an observer is asked by a competitor to record or witness any particular piece of information during a task, he shall so do.

Rule 6.5 Observer on Retrieve

When the observer is not flying, he will occupy a seat with a window in the retrieve vehicle and the crew must do their best to keep visual contact with the balloon until the final marker has been dropped. The observer may not drive the vehicle. He may assist with the map reading during the retrieve, if asked to do so by the crew, at their responsibility.

It is the duty of the pilot and crew to convey the observer to the launch area and to return him promptly to the competition centre after measurement of results and recovery of the balloon.

Rule 6.6 Photography

An observer may not take a camera on board or engage in photography while flying except by permission of the competitor or if required by his duties.

Rule 6.7 Observer Report

The competitor must read and sign the observer's report sheet after completion of the task. If the pilot disagrees with any information on the sheet, it should be noted at the time of signing.

As part of your responsibility to record without interpreting, you must remember that perceived infractions might not be penalised or might be modified by a Jury ruling. You must provide data which would be required for scoring under those circumstances. For example, if a competitor drops a substitute for a marker at a target, you must measure and record it *as if it were a legal marker*, in addition to noting the infraction under Rule 10.1.4 "Dropping Objects".

DUTIES

Observers must *observe, record and report all relevant facts*. In order to know what facts are relevant, they must *know and understand the actual competition rules completely*. Reporting the relevant facts involves usually *measuring positions* and quite often *searching for the marker*. Observers must also *help the pilot and crew to remain in good terms with farmers and landowners*.

Observers *must not influence the facts* they are to record. They must not interfere with decisions that belong to a pilot or his crew. It is not their job to give or deny permissions, they must not help with advice and they should not be a handicap to the competitor, as they would be if they are talkative or slow or incompetent.

An observer *must record the facts on the basis of evidence he observes*. The word of a competitor or his crew does not count, but it points to the direction where evidence might be found. The observer must never let himself be bullied.

QUALITIES REQUIRED

An observer must be *impartial and scrupulous*. He must not identify himself with the competitor and he is not allowed to overlook rule infractions for any reason. Pilots are able to live with mistakes they make, hard as it may be to some of them. Observers are only required to live with mistakes other people make.

An observer must be *open minded and flexible*. If, for instance, a competitor points out that the observer has made a mistake in map reading, the observer must consider the claim and find out the truth. If the competitor wants the measuring done in a certain way, go ahead and do it. However, if you do not agree with the result, do it your way, and report to the debriefer.

Observers must be *independent and firm*. In case a competitor claims that the observer has not recorded the facts as they are, the observer should do everything possible in order to resolve the disagreement on the spot. In the rare case that an agreement is not reached the observer must remember, and remind the pilot, that for the time being only the observer's word counts. The matter will be settled by the Event Director or his

delegated officer, or ultimately by the Jury, in case the competitor proceeds to seek justice as the rules provide. The observer must do everything that helps the possible inquiry (paint marks on ground etc.) and he should report the disagreement at debriefing.

A good observer is *quietly effective*. He does not draw attention to himself, he stands back and lets the pilot and his crew concentrate on the task. When there is a lull in the activity, he gives final touches to the drawings he has made so far. When the crew packs the balloon, the observer completes his report sheet. If the crew ever has to wait for him, it is only because of something that must be done right there and then.

SKILLS REQUIRED

An observer must at all times know where he is on the map. It is not a difficult feat to accomplish as long as the observer gives most of his attention to map reading while in a moving vehicle and marks the spot on the map every time the vehicle stops. It is a good practice to check with other observers, if there is the slightest chance that you are mistaken.

Debriefers are very happy with observers who make clear and detailed sketch maps. If a debriefer must complete or revise the sketch, the observer has failed to do his job properly and should remember this before the next debriefing.

Observing takes place in an atmosphere that is sometimes intense and hectic, sometimes loaded with nervousness or frustration. One might think that observers need special interpersonal skills in order to stay calm and to do their work well. It is not so. Only two things are necessary: the observer must know the rules and he must be dedicated to deliver impeccable service.

If he knows the rules, he knows what goes with his role and what does not, he also knows when it is time for him to call the shots and when for the pilot or crew chief. If an observer wants to do his job well, there is no way he can fail, because his duties are easy enough. If pilots or crews blow out steam now and then, it happens because their capacity is taxed to the limit and over. Their job is so difficult they are bound to fail. That is as it should be, otherwise they would all get the same rank. But observers must all be the best.

Pilots and crews are usually so busy during a competition that they hardly have time to make new friendships. There is one time, however, when they could learn to know one more person involved in ballooning and that is when all measuring is done and you are driving back to the competition centre. There is normally no need for the observer to be taciturn at that time, or to wait for the pilot or crew to initiate a friendly conversation.

Observers are the only people in a balloon competition who are actively involved with several competitors and crews, often of many nationalities. Thus it is the observer who has an excellent chance to spoil the competition for many participants, or to promote good competition atmosphere and friendship among balloonists. The good things he does best by showing active interest in other people and competence in his own job.

EQUIPMENT

NECESSARY	GOOD TO HAVE
<ul style="list-style-type: none"> • The competition map and the rules (supplied by the Chief Observer) • A tape measure (50 meter preferred) • A grid • A hand compass (directional 360 degrees) • Paper, pens (black or blue)*, pencils, erasers <ul style="list-style-type: none"> * not green (green colour is reserved for debriefers) * not red (red colour is reserved for Event Director) • A scale ruler • A calculator • A clipboard, A4 • A can of spray paint • A piece of chalk • A flashlight • A plastic bag for soiled markers • A reliable watch showing also seconds. 	<ul style="list-style-type: none"> • Clothes and shoes that let you search for a marker in thickets and in wet places, in mud and dirt • A pair of strong gloves • Spare glasses (for observers who wear glasses) • Binoculars • A magnifying glass • A pair of compasses for drawing circles • Scissors, glue, tape and highlighter markers for preparing your map • A bag for carrying the above • A stapler • Eat, drink, visit the toilet

CHECK-IN, BRIEFINGS

Check-in

When you arrive at the Event, the first thing to do is to register at the Observer's check-in desk. You will receive a number of items to help you during the Event. These include a set of rules, a competition map, other information, social tickets and more.

At check-in all observers have to measure their pace factor for the competition.

Observer briefing

Next you will attend the Observer Briefing. At the Observer Briefing, the Chief Observer will introduce the Event Director and you will be briefed on your duties during the event.

If you have any questions concerning duties of observers please ask at the Observer Briefing.

General Briefing

You will also be required to attend the General Briefing where the Event rules will be discussed.

Task briefing

There is a separate task briefing for each flight. Arrive 15 minutes early and check on the notice board which pilot you will be observing. You must sit next to that pilot during the briefing. You will receive a copy of the tasks data sheet and your blank Observer Report Sheet. A time check will be given. At the end of the briefing, it is the responsibility of your pilot to take you with him and introduce you to his crew chief and to provide you with transportation to the launch field.

MAPS

Your map reading skills will play an important part in your role as an observer. Study the competition maps very carefully and make sure you are completely familiar with them. It helps you a lot if you cover your map with plastic.

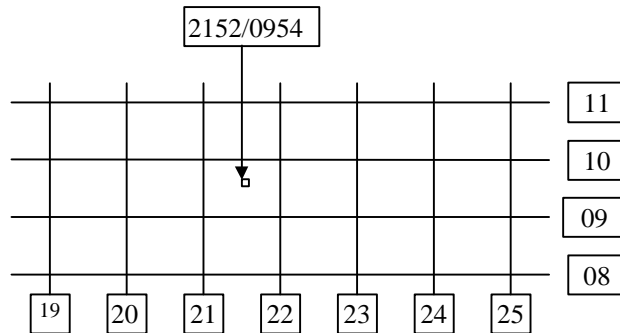
The scale of the maps that will be used is "1:50 000". This means that on the map 1 cm = 500m on the terrain it depicts.

Differences between competitor's results may be very small, so it is of prime importance that map co-ordinates are accurately recorded. Eight figure grid references are required.

EASTING THEN NORTHING:

Results are in two groups of four digits

- | | | | | | |
|---|-----------|---|-------|---|-------|
| 1 | Eastings | : | West | → | East |
| 2 | Northings | : | South | → | North |



Do **NOT** calculate the pilot's map co-ordinates for him. That would constitute assistance in the competition which is not permitted. Occasionally, you may find you are a better map reader than the pilot, but do not be tempted to assist or criticise him. Map reading is, after all, part of his skill as a competitor.

PZs or PROHIBITED ZONES (7.2.1 - 7.2.3)

A PZ is airspace or a landing area that has been defined as prohibited.

7.2.1 Prohibited Zones (PZs)

The director may define airspace or areas as prohibited for competition purposes. The boundaries and, if applicable, the upper limit in feet AGL or MSL, shall be published in writing for each PZ.

Circular PZs shall be defined by the centre point map reference and radius in meters. PZs with natural boundaries shall be defined by marked copies of the competition map to each pilot individually.

There are two classifications of PZs:

A red PZ is restricted airspace and will include an altitude limit.

A yellow PZ is a restricted area where no take-off or landing is permitted.

7.2.2 PZs in Force

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

7.2.3 PZ Infringement

A competitor flying, taking-off or landing within a PZ in force will be penalised by 500 to 1000 competition points, proportionally to the offence.

At the beginning of the Event make sure that you mark all the PZs on your map. If there are any additions during the competition, be sure to include these also on your map.

If you are flying with a pilot and are near or over a PZ, make sure that you check and record the altitude (including both the altimeter reading and the air pressure setting).

When following in the retrieve vehicle, it is important that you are physically in or adjacent to a PZ when reporting a possible violation. It is impossible to judge accurately whether a pilot is in violation of a PZ if you are half a kilometre or so from it. Remember that any PZ penalty is proportionate to the offence, so accurate reporting is essential.

If you are following in the retrieve vehicle and your assigned balloon, or any other balloon, approaches a PZ very low, the best way to measure its altitude is to visualise the number of balloons that would fit between the ground and the basket. Report this estimated number as "balloon's height".

ALTIMETER

Rule 3.7 Altimeter

Each balloon shall carry a serviceable altimeter which shall either be digital or be scaled with one complete revolution per 1000 feet (or 1000 meters), and be adjustable for pressure setting. Any other altimeter must be of a similar type and approved by the Director. The altimeter must be positioned such that it may easily read by an observer in the basket.

An altitude measurement consists of both the altimeter reading and the barometric pressure setting. You must record both these readings whenever you record the altitude, whether it is before take-off or in flight.

If you are flying with the pilot, you should read and record his altitude whenever you are near a Prohibited Zone.

AIR LAW (13.5)

13.5 Air Law

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

Flight after the time limit indicated on the task sheet is penalised by 100 task points per minute or part minute of delay.

Observers are the essential witnesses of any infringements and must, therefore, be aware of the basic regulations in the applicable air laws. You must note that there are two types of rules originating from Air Laws. First there are general rules pertaining to the entire Event, and second there may be rules or modifications in the general rules which will be introduced during task briefings.

Competing balloons fly generally under “VFR day” conditions (Visual Flight Rules Day). VFR conditions are mainly defined by a minimum visibility and/or clearance from clouds.

“Day” conditions are defined by sunrise time and sunset time. These times will be shown on the daily Task Data Sheets. Remember that on evening flights it is important that you record an accurate landing time, as the pilot may be penalised if this time is after the declared sunset time. It is very important that your watch be set daily (best is at each briefing) to exact time as shown on the official clock during the briefing.

LAUNCH AREA/SITES (9.1 - 9.13)

On your Observer's Report Sheet you will see a number of times to be recorded. Mark these times down as they happen. The pilot and crew will be busy. Stay near the basket and be ready and alert.

If you have a camera with you, make sure that your photography does not interfere with your observing or impede the pilot in any way. Do not forget to mark your map. Write any items down that you are not sure of and ask the debriefer about them when you return.

Rule 2.2.2 Rights or Representation limits the status of passengers on competitive flights. You may be asked to record the names of any passengers flying with your pilot. If so, this will be clarified at the master briefing.

Under **Rule 12.4.2 Marker to be Visible** your competitor's markers must be visible in the basket at take-off. If you cannot see them, ask your pilot to show them to you.

9.10.1 Take-Off Procedures

The launchmaster will give each competitor permission to take-off with the words "Number clear to take-off". The competitor may then take-off at will, subject to any instructions from the launchmaster at the time. This permission does not relieve the competitor of complete responsibility for this take-off, including adequate lift to clear obstacles and other balloons, and to continue safely in flight. If the balloon does not take-off within 30 seconds, permission to take-off may be cancelled by the launchmaster.

Make sure that the launchmaster puts a small sticker (meaning launch is OK) on the upper right corner of your report sheet. The use of this procedure will be announced at the observers briefing.

GOAL DEFINITIONS (12.1 - 12.2.1)

ROADS

Competition measurements are invariably made from the centre line of the roads, never from the kerb or fence.

GOALS AT INTERSECTIONS

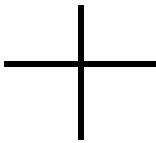
A goal at a road junction is at the intersection of the centre lines of the two roads. It is a good practice to fix and mark the exact point before starting to make any measurements - preferably even before the balloon has reached the goal. Observers waiting at a goal for their respective balloons to arrive should work together to establish the exact centre point in advance and mark it with a paint spot. Do not assume that a painted traffic line marks the true centre line - instead measure it for yourself.

VALID GOALS

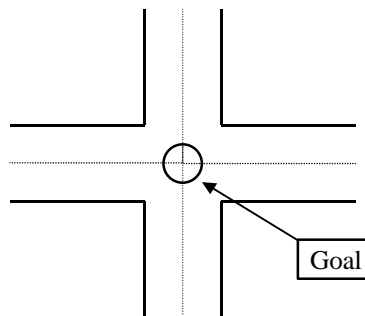
The event officials will publish the definitions of valid goals at the general briefing as well as all information concerning measuring (measuring team, information to observers ...).

1. A goal is the intersection of the projected road centre lines.

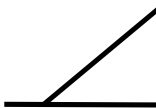
As shown on map



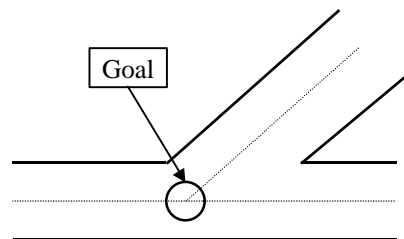
Actual



As shown on map

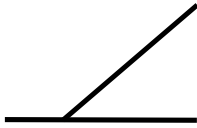


Actual

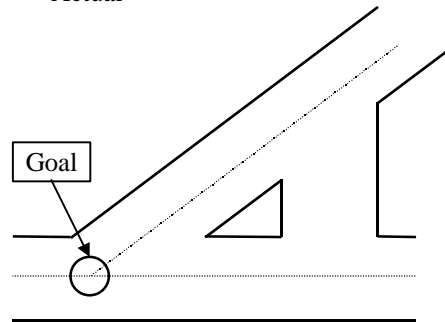


2. If the goal is ambiguous (i.e.: not actually as shown on the Competition Map), the goal is the intersection of the projected centre lines of the roads shown on the map.

As shown on map

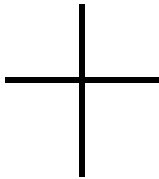


Actual

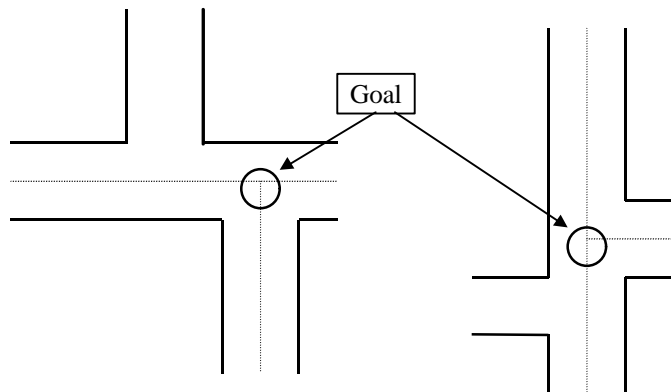


3. In the event that an intersection shown as a cross roads on the map turns out to be a “Staggered T” intersection, then the goal will be the eastern-most or northern-most point defined by the centre line intersections.

As shown on map



Actual



MARK, MARKER and SEARCH PERIOD (12.6.2/12.7/12.8.1)**12.6.2 Observer Mark**

A mark which has been measured by an official or observer. It is the duty of the crew to assist the observer to locate the marker and measure its position. The observer may not be left unaccompanied to search for a marker.

12.7 Interference with Marker

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

12.8.1 Search Period

Pilots have 5 hours (unless otherwise stated on the task sheet) from the actual start of the launch period in which to find their marker(s).

A marker is considered lost if it is not found and returned to the appointed observer within this time limit, except that the Director or his delegated official may grant an extension of this time limit if there is sufficient reason to believe that the marker(s) may be found. Pilots must return their observer to the competition centre as quickly as possible. Penalty for infringement of this rule is up to 200 task points.

Decisions on when and where to conduct the search rest with the pilot and crew. It is important that the observer be returned to the Competition Centre as soon as possible after completing his Report Sheet.

You must bring back your competitor's marker(s), unless you have confirmation that specific markers were retrieved by the measuring team. In this case the surveyors will bring them back.

MEASURING THE MARKER

The most important part of your observing duties is the measuring of the marker (sometimes it is the position of the basket that is measured instead).

- a) If **FLYING** in the basket, keep track of the balloon's flight path : put small pencil markers on your map to indicate a series of "fixes", i.e. points where you are certain the balloon was exactly above a feature on the map.

Note the position of the marker in relation to nearby buildings, hedges, etc., so that you can locate it easily on the ground. Make a quick sketch to help your memory. Remember that the pilot is to be given an estimated result. Mark the point on your map.

- b) If you are **FOLLOWING** with the crew, it is their duty to do their best to keep the balloon in sight until the marker has been dropped. Watch carefully for the marker drop, and note the time.

When you **ARRIVE AT THE MARKER**, first check its number and mark its position with chalk or a patch of paint. If it is a multi-task flight also check the colour of the marker. Note co-ordinates if it is a fly-on marker.

It is up to the crew to decide whether you should measure the marker immediately or go with them to collect the pilot.

Normally, you should not pick up the marker until all measurements have been done. However, markers may be a danger to cattle and must be collected immediately (after marking the spot) if there are any animals in the field where it lands. Markers may also be looked on as souvenirs by spectators, and should be collected if they are likely to be removed by unauthorised personnel.

Remember that no one, except an official or observer, is authorised to pick up a landed marker. (Rule 12.7). When you eventually pick up the marker, put it in an envelope or plastic bag and keep it in your possession. Do not attempt to clean it or mark it in any way.

MEASURING TEAM

If there is a measuring team at the target:

- a. Make sure they have listed your marker.
- b. Ask them whether you should pick up your marker or leave it where it lies.
- c. Check the distance yourself if you can do so without interfering with the operations and record it on your report sheet.
- d. Further instructions may be given at the pre-event observer meeting, the pilots' general briefing or at pre-flight observer meetings.

DIRECT MEASUREMENT TO THE GOAL OR TARGET

This is the observer's best method of measuring results. Measure the distance in a straight line from the marker's bag to the centre of the target. Use your measuring tape whenever possible, otherwise pace the distance off.

Measure the distance between the part of the marker's bag which is *closest* to the target, and the *centre* of the target (sign marker with a simple cross and number),

INDIRECT MEASUREMENT

When the marker is too far from the goal for direct measurement, the pilot's result will be calculated from a position plotted on the map. This means that you must establish its exact location so that you can prepare accurate co-ordinates.

In any situation where the identity of the goal may be questioned - for example on pilot declared goals - this procedure should be included *in addition* to direct measurements.

- a. Draw a sketch of the nearest features ***WHICH ARE SHOWN ON YOUR MAP*** in the vicinity of the marker.
- b. Take suitable measurements and mark them on your sketch. At least two measurements preferably taken at right angles to each other are needed. Compass bearings are also valuable.
- c. Show the units of measurements - metres, paces, etc. - on your dimensions.
- d. Note the relative positions of any other markers near your own and show approximate distances if possible.
- e. Indicate the direction of the goal, if know, as well as North.

TAPE MEASURING A DISTANCE

This can be done quickly provided that you have a crew member to assist you. The most frequent errors are:

- a) misreading the tape graduations, ***especially if the tape has metric units on one side and imperial units on the other,***
- b) losing count of the number of times you have set off the full length of the tape. It always is a good plan to get a crew member to confirm your figures, but never allow anyone to persuade you that you are mistaken without proof. If there is any doubt, measure again until you reach agreement.
- c) Make sure the pilot or his crew holds the "Zero" end of the measuring tape while you are recording the measured distance.

3.4. PACING A DISTANCE

This is a quick method for measuring distances but it is less accurate than tape measures especially over rough ground. Some rules will help reducing the problems:

- a) You will be asked to pace around a measured course before the competition, to establish your "pace factor". Do it in a way you can repeat reliably under other circumstances.

- b) Never allow another person to walk along with you, this may distort the length of your pace.
- c) Pace each distance in both directions and record both results.
- d) Count carefully. Another person can do a check count of your pacing, if asked to watch from a distance.
- e) Record paced distances on your sketches in the original units i.e. paces, then you and the debriefer can check the conversion to metres together.

OBSERVER REPORT SHEET

For each competitive flight, you will be expected to record the facts of that flight on the Observer Report Sheet. Each part of this sheet is designed either to measure the competitor's result or to give evidence that infractions were or were not committed. If you have trouble understanding the meaning of a question or what answer to give try to picture what infraction of the rules it might be intended to reveal.

INTRODUCTORY INFORMATION

- a) **Pilot Name/Number** will be found on the Observers Assignment list and/or the Competitor List.
- b) **Task Number**. There may be from 1 to 5 tasks during a flight. Tasks are numbered sequentially from the start of the competition. Task numbers will be found on the Task Data Sheet handed out during the briefing.
- c) **Balloon Registration Number** - locate the registration number on the balloon envelope and record it after viewing.
- d) **AM/PM and Fly/Follow** - draw a circle around the appropriate answers.

LAUNCH INFORMATION (9.1.1 - 9.13)

- a) **Public Property and Permission Obtained** - Whenever a pilot launches or retrieves from private property, he must have the landowner's permission. It is not always easy to determine whether land is publicly or privately owned, but in general anything that is fenced, cultivated or used for any agricultural purpose including pasturing animals, is private.

Doubtful cases, such as school playgrounds, parks etc., can be discussed at the general briefing.

Permission to launch or retrieve must be sought by the pilot or crew in the presence of an observer. Procedures in cases where many pilots seek permission from the same landowner may vary - questions always arise whether each crew must obtain individual permission, or whether "blanket" permission may be granted and witnessed by a single observer who then passes it on to all the others. Again, this may be discussed at the master briefing. In any case, co-operate with your pilot and crew, and record events as they occur.

When private property is used and permission is obtained, the landowner's or tenant's name, address and telephone number must be recorded on the back of the form under "[C] Launch and Landing".

- b) **Launch Permission Time** - refers only to permission from official Launchmasters during mass launches from the common launch site.
- c) **Take-off procedures** (see on page <* page # *>, Rule 9.10.1)

- d) ***Take-off time and crew departure time*** - must be recorded regardless of whether the launch is from the common launch site or from private launch sites. Take-off time is particularly important during timed tasks (such as Minimum Distance) and near either the start or finish of the official launch window. Crew departure time is recorded to indicate the crew's willingness to keep the observer within sight of the balloon. It is not required if the observer flies with the pilot.

FLIGHT INFORMATION (10.1.1 - 10.8)

If you observe any possible rule violations or irregular events by your assigned balloon or any other competitor, indicate "yes" and record details on the right side of the form under "Observed Infractions". You must be very specific about your observation, including the identity of the competitor(s) or balloon(s) involved, the time of the event, the location of both the event and the reporting observer, and the exact details of the observation.

If the event reported refers to a balloon other than your assigned balloon, you will be asked during debriefing to complete a "Supplementary Observer Report Sheet". This is required so that your event report can be filed with the Report Sheet completed by the observer assigned to the offending competitor.

MARKER INFORMATION (12.1 - 12.9)

- a) ***Goal Co-ordinates*** - may be declared by the Event Director or the pilot, depending on the task. Copy them here for a cross-reference.

During a Fly On Task, the pilot may declare a provisional goal to protect himself against loss or damage to his official goal declaration. To do this, he must write the goal co-ordinates himself on your observer sheet. He is not allowed to show the point on the map and ask you to determine the co-ordinates, nor may he just tell you the co-ordinates and have you write them on your sheet. Ideally, you should ask him to initial the co-ordinates he has written on your sheet.

- b) ***Drop Co-ordinates*** - should be the co-ordinates for the marker you have measured. This may be calculated by determining the co-ordinates of the map feature to which you have measured, then adjusting by the amount and direction of your measurements.
- c) ***Did you see the marker land / Are you satisfied the marker had not been moved*** - ideally, you should see the marker actually hit the ground to answer "yes" to these questions. However, if the terrain is such that this is not possible, you may answer "yes" if you see the marker fall from the basket, and later locate it on the ground where you expect logically to find it. Otherwise, you must answer "no" and provide details on the right side of the form under "Details of Drops" or on the Supplemental Observer Report Sheet. This is of extreme importance during some tasks, for example during a Minimum Distance Task when the pilot did ***not*** invite you to fly in the balloon.

12.5 MARKER RELEASE

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

12.5.1 GRAVITY MARKER DROP

The completely unfurled marker shall be held by the unweighted tail and released. The marker shall be allowed to fall from the top edge of the basket. Gravity shall be the only means for the marker to drop. No horizontal motion shall be applied to the marker in relation to the basket. Penalty for violation of this rule is 250 task points.

12.5.2 THROWN MARKER

The marker must be completely unfurled when thrown. The tail may be loosely collected in the hand of the person throwing the marker. No mechanism may be used to propel the marker. The person throwing the marker must stand on the floor of the basket. Penalty for violation of this rule is 250 task points.

If you do not see the marker hit the ground, then Rule 12.8.1 “Search Period” must be considered. The actual time you find the marker must be recorded. Report this information under “Details of Drop”.

- d) *Was marker measure by survey crew* - if it was, you are not required to sketch the position of the drop, but may just write “**SURVEYED**” in the sketch block.
- e) *Time of Drop* - is only to be recorded if you actually saw the marker drop. Again, this is particularly important in timed tasks (such as Minimum Distance).
- f) *Sketch of drop* - note that “North” is indicated in the block. Please orient your drawing so that it corresponds with the arrow. Your sketch should be as neat and legible as possible. It should indicate clearly the map features to which you have measured, the position and competition number of the marker(s) being measured, the distances measured in each direction, and the units of measurement (paces, meters etc.). If compass bearings are used, please specifically confirm that the readings are to Magnetic North, and whether you are reading **TO** or **FROM** the marker.

LANDING INFORMATION (11.1 - 11.5)

- a) *Co-ordinates* - you must record the co-ordinates of the landing point of the basket. This may become particularly important in cases where the landing point becomes the competitor's mark, as happens in contest landing or in situations where a competitor's marker has been lost or stolen before its landing point was observed.

In the case of a contest landing, treat the landing point as a marker drop and record it with a sketch block. Measure from the centre of the standing basket.

- b) ***Nature of landing*** - record details of the landing, including landowner data and the status of permission. If rule infractions occurred, mention them here and outline the details on the right side of the form or on the Supplementary Observer Report Sheet.

CONCLUDING INFORMATION

- a) ***Pilot's Signature*** - on completion of your report sheet, you must present it to the pilot for his review, and must request his signature. His signature is proof that he has had the opportunity to read your report, and does not necessarily signify agreement with the data you have recorded. If he wishes to review or verify your data, you should co-operate with him and complete your discussions before reporting to debriefing. If he wishes to add his own comments on your report sheet, ensure that he initials or signs those comments. Do not permit him to change data you have recorded unless you agree with the change. Above all, do not get involved in arguments with him if you are unable to reach agreement. If he wishes to dispute your observations, ask him to accompany you to debriefing, to discuss his concerns with the senior officials personally.
- b) ***Operations Check-in Time*** - record the time you finally reported to the debriefing waiting room with your completed report form.
- c) ***Observer's Signature*** - do not forget to sign your own form when it is completed.
- d) ***Debriefing Completed Time, Debriefers' Signature and Markers Returned*** will be filled in by your Debriefers.

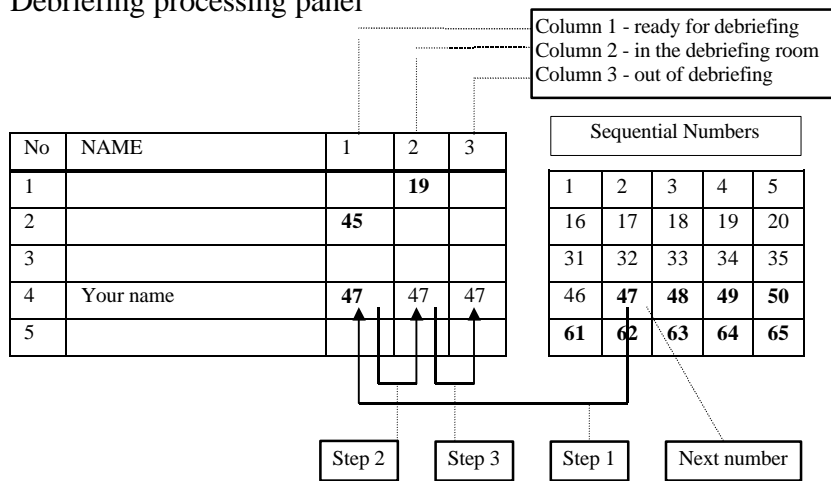
BACK AT THE OPERATIONS ROOM

When you return to the competition Centre, you must check in at the Debriefing Room and take a sequenced number so that those who arrive first, will be debriefed first.. When it is your turn, a debriefer will ask you questions about the flight. Any comments you have as well as information you give on the measurements or map references will be used to compute the pilot's result for the task.

The debriefing procedure is helped by well-prepared report sheets.

1. Bring back your pilot's marker's unless it was recovered by the measuring team. Do not write anything on the marker, or clean it. If it is wet or damaged, seal it in a *plastic bag*. If it is in good condition, you must *fold it so that the competitor number is visible and fasten with an elastic band*. Additional plastic bags and elastic bands will be available from the debriefers or from the Chief Observer.
2. While waiting for the debriefing, verify that your report sheet is complete. But **NEVER** guess or insert figures for completeness. Instead, write down, " Did not see" or "Don't know" if you are missing data.

3. Debriefing processing panel



Procedure: Step 1: in order to be debriefed pick up next free number and stick it onto column 1 behind your name. This tells the debriefer that you are ready to be called as soon as possible.

Step 2: before you enter the debriefing room move the number to column 2 behind your name. This informs all concerned that you are in the room

Step 3: after leaving the debriefing room, move the number to column 3, again behind your name. This informs all concerned that you are out of debriefing.

4. The Debriefer will go through your report, recalculating your map co-ordinates and doing any pace conversions, etc. He is trying to arrive independently at the same conclusions as you did so that you both agree on the meaning of the facts you have recorded. Therefore, do not automatically accept that his calculations are correct if they are different from yours - you must also be satisfied.
5. Ask the debriefer about anything you are not sure of even if you feel it may be trivial.
6. After debriefing, check out of the Debriefing Room.

OBSERVERS DUTIES - SUMMARY

- 1 Know and understand the rules and instruction in this handbook thoroughly.
- 2 Attend the General Observers Briefing before the event.
- 3 Arrive before the pilots task briefing for a specific pre-flight observer information briefing at the requested time and pick up the markers for your assigned pilot if so requested.
- 4 Attend all task briefings.
- 5 Study task details (you will receive a copy of the task briefing).
- 6 Be present at the launch to record information.
- 7 Either fly or follow on the ground with the retrieve vehicle, as requested by the pilot. You must NEVER drive the vehicle.
- 8 Measure and mark the position of the marker.
- 9 Report any flying incidents or possible infractions by any balloon in your vicinity.
- 10 Help the pilot and crew to deal with farmers and landowners.
- 11 After the flight, report back to the debriefing room as soon as possible with your completed Report Sheet.
- 12 Fold the marker.
- 13 Debriefing processing (as shown on page <* page # *>, Paragraph 3).

OBSERVER CHECKLIST**1. After arriving at the event and registration**

- Prepare your map (see chapter 7 of Competition Rules - Maps)
- Mark the contest area
- Mark out of bounds areas
- Mark red and yellow prohibited zones (airspace or areas as prohibited for competition purposes)
- Mark other limited areas (airspace)
- Find out where the Official Notice Board is located
- Become familiar with local places
- Check before the event your pace factor on the local course
- Check the time and place of the observers briefing and the general briefing

2. Before briefing

- Check the time of the observer briefing before the task briefing
- Arrive at briefing place as requested by the chief observer, pick up pilot's marker(s) if so required
- Make sure nothing prevents you from following your pilot straight from the briefing (i.e.: have tools of the trade, food, drink, visit toilet, etc.)
- Check number of the pilot to whom you have been allocated

3. At briefing

- Wear your observer identification clothing
- Find your seat
- Collect the report sheet and task sheet
- Update your map
- Read rules for given task(s)
- Check your watch
- Be sure to check which method of marker drop is allowed
- Be sure to note the search time announced at the briefing

4. After the briefing

- Follow your pilot to launch site

5. At the launch site

- Landowner's permission, name, telephone, address (if applicable)
- Note altimeter barometric pressure setting
- Pilot agrees you have place the launch site correctly on the map (if applicable)
- Markers on board?
- Note times on report sheets

6. In the vehicle

- Never drive the car
- Take a seat at the window
- Keep the talking to minimum
- Follow route on your map at all times
- Watch for the marker drop, PZs, cattle, buildings, altitude limits, ground contacts
- Write down details of the marker drop

7. In the basket

- Keep the talking to a minimum
- Mark the flight path on your map but do not navigate for the pilot
- Watch for PZs, cattle, buildings, altitude limits, ground contacts
- Pinpoint marker drops, ground contacts, PZ and altitude violations on your map, note the time
- Have paper ready for quick sketches
- Point out all nearby powerlines and nearby balloons to the pilot

8. Measuring the mark

- First observer on intersection marks the goal
- Check number and colour of the marker
- Write down the time when found
- Paint the marker position and competitor number on ground (use chalk on driveways)
- Do you have to pinpoint the co-ordinates or just measure the distance from the goal?
- Be sure of procedure if there is a measuring team
- Measure from the closest corner of the marker bag to the goal or target. Direct measurement is always preferred
- Have one or two crew members to help you with measuring but always read the numbers yourself
- Put the marker(s) in your bag

9. When to make a sketch map

- If exact co-ordinates of the launch, mark or landing area are needed for scoring
- If the launch, mark or landing violates or almost violates the distance limit given in task data or rules

10. How to make a sketch map

- Show co-ordinates of a feature that is shown both on the competition map and your sketch
- Always measure to features that are shown on the competition map, show distance and units. All measurements should be taken at right angles.
- Show north and direction of goal
- Show co-ordinates of launch, mark or landing
- Label everything (road, ditch, mark, goal, landing, etc.)
- Show angle or bearing when needed
- Show nearby marks and other balloons on ground

11. Before debriefing

- Complete your report and drawings
- Ask your pilot to check your co-ordinates and read and sign the report

12. At debriefing

- Make sure the debriefer does not make mistakes
- Only report what you saw yourself
- Resolve all ambiguities before you leave debriefing (ask and tell)

13. Cardinal sins

- Not knowing the rules inside out
- Discussing the rules with the pilot or crew
- Not knowing where you are on the map
- Talking when it is not time to talk
- Playing part of the crew
- Interfering with decisions that belong to the competitor
- Not standing your ground
- Making debriefers do your work

OBSERVER REPORT SHEET (Appendix A)

not included with Handbook

SUPPLEMENTARY REPORT SHEET (Appendix B)

not included with Handbook