FAI Ballooning Commission CIA

Fédération Aéronautique Internationale

C I A SAFETY OFFICER HANDBOOK

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2 INTRODUCTION

The definition of "The SAFETY OFFICER" in the Sporting Code Section 1, Version January 2013, reads as follows.
In Chapter 5 for First Category Sporting Events:

5.11	**SAFETY OFFICER**
5.11.1	The Safety Officer shall be approved by the CIA.
5.11.2	The Safety Officer shall give advice to the Event Director on any matters regarding safety. Operational procedures for the Safety Officer are contained in the "***Safety Officer Handbook***" approved by the CIA

In Chapter 7.1 for CIA Sporting Events:

7.1.16	THE SAFETY OFFICER
7.1.16.1	The Safety Officer shall be approved by the organising NAC.
7.1.16.2	The Safety Officer shall give advice to the Event Director on any matters regarding safety. Operational procedures for the Safety Officer are contained in the "***Safety Officer Handbook***" approved by the CIA.

As a reminder, a section from Chapter 4 of the Sporting Code General Section.

4.3.4.1	<u>The Event Director</u>
4.3.4.1.1	The Event Director shall be in overall operational charge of the sporting event. He shall have a Deputy Director and Technical Officials to assist him. The Event Director and Deputy shall be approved by the relevant FAI Air Sport Commission.
4.3.4.1.2	The Event Director is responsible for good management and the smooth and safe running of the event. He shall make operational decisions in accordance with the rules of the Sporting Code and competition rules. He can penalise or disqualify a competitor for misconduct or infringement of the rules. He shall attend meetings of the International Jury and give evidence if requested.

As can be seen from the above references, the Safety Officer is an integral and important member of the Technical Staff of any Category One Event and Premier Sporting Event.

The Safety Officer, in concert with Event Director, is responsible for the safety of flight operations, refuelling facilities, on site activities before and during the event.

The Safety Officer shall normally exercise authority by advising the Event Director and other responsible officials on action, which he/she feels, should be taken to ensure the safety of flight operations, on site activities or refuelling concerns.

2.1 QUALIFICATION LEVELS AND CRITERIA

The objective is to identify potential Safety Officers for international competitions of Free Balloons and Airships

- Must be a member in good standing of his NAC.
- Must have piloting experience in aerostats.
- Must have gained some experience in national or international competition in aerostation as a competitor or official.
- Must have a basic technical understanding of how an aerostat is working.
- Must have a basic understand of emergency procedures and first-aid.
- Must have a comprehensive understanding of meteorology.
- Must have strong knowledge of the competition rules.
- Must be able to communicate in English and the official language of the event (if necessary with a qualified translator).

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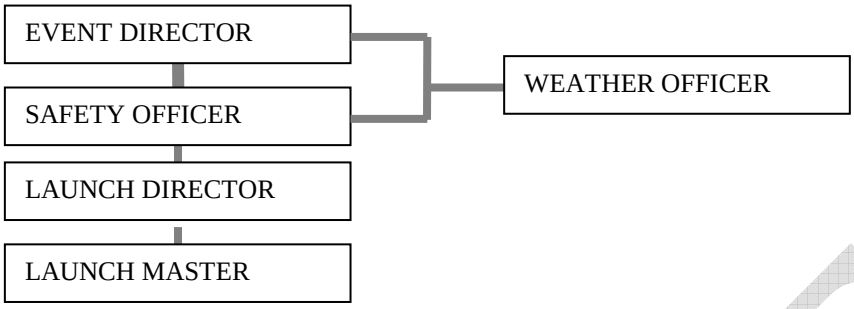
3 ORGANISATIONAL CHART



This is a sample organisational chart, which shows the direct relationships for all the parties involved with the Safety Officer.

It can be seen that the Safety Officer reports to the Event Director and has a relationship with the Weather Officer. Also it should be noted that the Launch Director and Launch Master report to the Safety Officer in this example

It is important to emphasise that the Event Director has **the final decision** on whether it is safe to fly or whether an un-airworthy balloon will be grounded. This is reinforced in the organisational chart.

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4 DUTIES AND RESPONSIBILITIES OF A SAFETY OFFICER

The Safety officer shall normally exercise authority by advising the Event Director and other responsible officials of actions, which he feels, should be taken to ensure the safety of operations.

The Safety Officer is the eyes and ears of the Event Director in the areas of safety. He should have extensive weather knowledge, familiarity with balloon systems, strong knowledge of the competition rules and pilot experience.

A top rated Event Director will also have extensive weather knowledge and experience. At large events it is normal to have a professional Meteorologist on staff to advise the Director and Safety Officer and to give weather briefings.

The Safety Officer may assist officials, pilots, sponsors or the general public in any way that will make the event safe, successful and enjoyable.

The Safety Officer shall give advice so that the Event can be organised and provide the safest possible physical environment for the flying activities, while absolutely minimising the pressures on the individual pilots to meet goals beyond their own flying capabilities.

The result of this effort will be a lessening of the physical danger to pilots, passengers, spectators, crews, organisers, sponsors, landowners, etc.

A SAFE event today will ensure another event to be held in the same location tomorrow.

4.1 PRE-EVENT RESPONSIBILITIES

4.1.1 REVIEW RULES AND DOCUMENTS

You shall review all rules and regulations, which apply to the event. These include CIA rules, The Sporting Code General Section and Section One, Government Aviation Regulations and local Government Regulations. Acquire copies of all pertinent regulations.

4.1.2 REVIEW POTENTIAL DANGER

You shall with local officials or personnel review any potential dangerous areas that may be in the competition area or in its proximity. Any restricted airspace, large power distribution areas, power stations should be reviewed and pilots advised.

4.1.3 REVIEW LANDOWNER PROBLEMS

You shall together with local resident review any potential landowner problems.

4.1.4 FAMILIARISE WITH THE AREA

You shall familiarise yourself with the flying area by a flight by balloon or light aircraft, if possible. It also would be prudent to be familiar with the terrain within the competition area and to spend some time driving around to assess unsafe areas, potential target problems and local road conditions and traffic.

4.1.5 CREATE AN EMERGENCY AND CONTINGENCY PLAN

The Safety Officer shall together with the Event Director and the organisers create an emergency and contingency plan. See chapter 5.

4.1.6 RECALL PROCEDURES

You shall together with the Event Director and the Organisers find out the most suitable recall procedure for the Event. You shall check that the Event Director can reach all participants with this recall procedure.

4.1.7 ESTABLISH CONTACT WITH EMERGENCY AND ELECTRICITY SERVICES

Establish friendly contact. Make sure they are aware of the Event. Inform them of unlikely but possible scenarios; multi-trauma, electrical damage, burns. How should a seriously injured person be transported home if necessary? What to do if there is a power cut. Establish friendly contact with doctors attending the Event, get their phone numbers.

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Establish contact with medical and veterinary services.

4.1.8 ANTIDOPING AND ALCOHOL POLICY

WADA rules concerning doping including alcohol abuse will be applied.
Intoxicated crew (including pilots) should be ordered to stop whatever ballooning activity they are currently participating in. The Safety officer can take whatever action he feels appropriate and should immediately inform the Event Director. If there is need of independent documentation local medical or – if deemed necessary - police services should be asked for help.

When satisfied you are familiar with the above items, review with the Event Director, the proposed flight activities to ensure that none of the planned activities is inherently unsafe. As Safety Officer you must be alert for any local conditions that may have been missed. It would be best if this consultation were to be well in advance of the event starting date.

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4.2 EVALUATE ALL POSSIBILITIES FOR INCIDENTS

The Safety officer shall together with the Event Director try to find all possible situations that can cause incidents or accidents. This evaluation should be done with the location, where the event is to be held, in mind.
They shall make an Emergency and Contingency Plan.
They shall look into what can happen (the following points are a few examples of points to look into, remember that local variations always exist):

4.2.1 DURING LAUNCH

What can cause an incident at the common launch areas?

- Collisions between a balloon that have launched and a balloon on the ground?
- Two balloons in the air?
- Balloon flying into spectators/obstacles/wires?
- Propane accident?
- Sudden changes in the weather situation.

4.2.2 DURING THE FLIGHT

What can cause an incident during flight?

- Collisions between balloons?
- Collision with power lines or other objects?
- Flying into spectators?
- Dropping objects on spectators?
- Propane accident?
- Sudden changes in the weather situation.

4.2.3 AT CONGESTED AREAS

What can cause an incident at congested areas?

- Collisions between balloons at a target?
- Collision with power lines/obstacles?
- Flying into spectators?
- Dropping objects on spectators?

4.2.4 DURING LANDING

What can cause an incident during landing?

- Collisions between balloons at landing?
- Collision with power lines at landing?
- Collision with other objects at landing?
- Flying into spectators?
- Dropping objects on spectators?
- Propane accident?

4.2.5 IN TRAFFIC

What can cause a car incident in traffic during a task?

- Involved in collision with other car?
- Crew/officials hit by a car?
- Run into spectators or other people on the road?

4.2.6 AT REFUELLING

What can cause an incident at refuelling?

- Gas leakage?
- Traffic jam?

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- Crew behaviour?

4.3 EVENT RESPONSIBILITIES

The following items are the basis for co-ordinated and efficient duties that should be performed by a Safety Officer during an event.

It should be noted however that additional duties and areas of responsibilities may be included to increase and enhance Safety Officers duties.

It is of great importance that a Safety Officer is in constant contact with the Event Director and other officials. This should be achieved with reliable and serviceable communication equipment, radios, cellular phone or other such devices.

An additional benefit of good communication equipment is that it allows freedom to monitor launches, propane re-fuelling facilities, flight operations, off site weather conditions and other important concerns.

The Safety Officer shall inspect baskets for sharp objects that can make damages to other balloon envelops. This can be done during the first mass inflation from a common launch field. When required he shall order sharp objects to be covered to avoid risk to other balloons. When using nylon straps (Zip Tie Straps) are used to attach basket banners must they be set (closed) from the inside of the basket!

4.3.1 MONITOR THE WEATHER

If the weather is excellent or completely unflyable, the job of weather analysis is easy. If conditions are uncertain or marginal, the Safety Officer must ensure that the highest degree of skill and knowledge is used in interpreting the weather.

Some hints on how to accomplish this is:

a. Make an independent check on the weather. If there is a weather office on site you can use it, if you have online weather services you can use it as well as calling an aviation briefer or professional forecaster.

   Unless you actually have a weather office on site, you must remember that the weather observations and forecasts will usually be for many kilometres away from where you are actually located.

   You should discuss the special requirements of balloons or airships with the Event Director.

b. Use internet sources to get a second opinion of the weather information you received from the weather officer on site.

   As Safety Officer shall you continuously monitor the weather developments using online weather radar if it is available for the competition area.

c. Remember that you are concerned with forecasts. You must consider that the weather information you are obtaining is for use several hours after you obtain it.

   The flight must be planned by the Director based on the weather data available. This is particularly difficult if you are working at a Gas Balloon event, where weather data is required for flights of long duration.

   You must always be concerned with weather at the start of the flight as well as the weather at the termination of the flight.

d. It is mainly true that aviation forecasters have little information available on low level winds. For this reason, pibal readings at the launch field are invaluable to make decisions on tasks and many other safety considerations.

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e. Discuss any weather concerns with the Event Director during the planning period for each flight. Keep a constant watch on marginal weather conditions throughout the day to be able to assess any deterioration or improving trends that were not forecast.

f. If conditions are marginal prior to any mass launch, it is suggested the Safety Officer or his delegate, proceed to potential targets or landing areas to assess local conditions, which may not be known at the launch site. Advise the Event Director of low ceilings, limited visibility or gusty winds.

g. If the competitors shall launch from individual launch areas the Safety Officer must be out in the same area to have an "on-site" understanding of the weather. If he then sees deterioration in the weather, he must advise the Event Director.

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4.3.2 PILOT BRIEFINGS

During each pilot briefing, be sure the following is adequately covered:

a. Weather - it is very important that the best possible weather briefing is given.

b Airspace restrictions, such as local airports or special airspace.

c Power lines, telephone wires or other hazardous obstacles in the launch or target areas.

d. Any other available information concerning hazards in the local flying area or any area the balloons may transit.

e. Ensure pilots and crews are provided with the lost balloon and recall information, phone number and/or radio frequency.

4.3.3 MASS INFLATION

The period before mass inflation's presents an ideal opportunity for a random inspection and monitoring of balloons, crews and equipment. Take time to note any deficiencies or rule violations. If immediate action to ensure safety is required then advise the pilot of the corrective action necessary.

a. Ensure balloons that appear to be damaged are in airworthy condition. Pilots of un-airworthy balloons will be asked not to fly by the Event Director in consultation with the Safety Officer. The local Aviation Authorities may be notified, if necessary, to prevent operations of un-airworthy aerostats.

b. The Safety Officer, in consultation with the Event Director, has **the right and responsibility** to prevent a balloon from taking off, as part of any event, if they believe that the flight could be unsafe due to the visible condition of the balloon.

c. If there is an unanswerable question concerning the airworthiness of a balloon, **it should not be allowed to fly** until you are satisfied the balloon is in fact airworthy.

d. Not only in mass inflation, but always, be sure balloon and basket are tied up with proper knots or/and karabiners, not to the trailer, but directly to the retrieve vehicle. The tie-off points shall be as close to each other as possible and especially on the side of the car that facing the basket.

e. It goes without saying that the pilot must be sober, free from drugs and in good health.

4.4 REFUELLING - PROPANE SITE

a. The Safety Officer should monitor the propane-refuelling site, before, and during the Event. This will help ensure propane rules and procedures are being followed by all pilots, crew, volunteers and propane suppliers.

b. If the Safety Officer finds the installation of the refuelling site is against the safety requirements, he may, in concert with the Event Director, request implementation of changes, always according to the local regulations.

c. It is of great importance that safety equipment; proper gloves, fire equipment and an emergency shutoff are present. Also ensure that proper fire extinguishers or fire vehicles are present at all refuelling times.

d. For refuelling, propane cylinders must always be taken out of the basket. In some brands of basket, it is very difficult to take out the cylinders; in those cases the basket must always be taken out of the retrieve vehicle.

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5 EMERGENCY AND CONTINGENCY PLAN

The objective with a Safety programme is to avoid balloon accidents and to minimise the potential for damage for people and property. This goal can only be achieved by an understanding of the principles of flight safety and the conscious elimination of unsafe acts and conditions.

The object of an emergency and contingency plan is to control an emergency situation involving a balloon, multiple balloons or retrieve vehicles.
A briefing will be held prior to the General Briefing with all people involved with the Emergency Plan. This emergency plan meeting will usually be held immediately after the officials briefing. There are many considerations when formulating the emergency plan for YOUR event. These include:

1. Who is in the communications loop during an emergency?
2. What is each person responsibility?
3. Use of code words for minimum disclosure.
4. Managing the crowd (if applicable).
5. Managing the press.
6. Managing the other pilots and crews.
7. Managing the Organiser/Sponsor.
8. Post emergency meetings.
9. Post emergency statements.

5.1 PLAN OF ACTION

The Event Director, or his assigned assistant, will take command of an emergency situation. This is understood and agreed upon with the organiser/host/sponsor, etc. before the start of the event.

Emergencies will occur in the vicinity of the launch field or in the countryside. When an emergency occurs in the countryside the event spectators, generally speaking, know nothing of the occurrence until they see it on TV or read about it in the papers.

If, at a large event, with a public address personality, it is essential that he/she be briefed on what to do in the event of a disaster at the launch field. Nothing could be worse than giving a graphic blow by blow description of the disaster to the spectators.

There are basically four types of emergencies that may have to be dealt with.

1. Landowner problem
2. Accident with injuries
3. Accident with fatalities
4. Refuelling accident

Upon report of an emergency, the Director will make, or arrange for, the necessary announcement and/or phone calls to enable assigned people with the flight operations staff and the organisers staff to be called together to be briefed and sent to their respective positions to handle the situation.

If an announcement has to be made, it is better done in code. Several codes can be used, either a straight message such as "The Red Fox is Home" or code numbers such as "Code 18". If you have several codes, make sure they are different enough that no one will confuse them.

Upon the prearranged command or announcement, the following people will meet in the Event Director's office or other designated place as instructed:

Event Director
Safety Officer
Land Owner Relations Officer
Event Organisers Representative
Public Relations / Media Representative
Police Dept. Representative
Others as instructed.

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The Director or his assistant will take charge of the emergency plan.

The Safety Officer will go to the scene of the accident.

If the Safety Officer is off-site he may receive instructions from the Director on the telephone.

The public relations/media representative will communicate with the media to name the emergency situation spokesperson and advise when and where the news conference will take place. It is very important to talk to the press as quickly as possible, and to keep them informed. Tell them all you know but **DO NOT SPECULATE**. The press will do their best to get from you, in the form of speculation, more information than you have. Be polite and firm, tell them only the facts as you know them. Remember the press can be very cruel, try not to give them any information that will cause pain or anguish to a pilot's or crew member's family.

At large events, a Government Aviation representative may be on the technical staff. At most events, the Safety Officer performs this function. The Aviation Authorities may, or may not, have a monitor on site. The Aviation Authorities must be kept informed by the appropriate person on the technical staff.

After an emergency, there will be rumours. The Director must keep this under control by deciding what to tell, and when, at future briefings. The goal is to "get on with the event", without dwelling on the past during pilot briefings.

A good Event Director is **ALWAYS** available, 24 hr. a day. Someone knows where, he can be reached at any time should there be an emergency. He should not be off flying the task and unavailable if he is needed at a moment notice.

The Director is to be advised of all emergencies. He will then consult the appropriate personnel and decide the course of action. A meeting will be called as appropriate. The people concerned will be called over the telephone or by announcement on the **PA** system depending on the circumstances. (An example of such announcement is: MR ANDERSSON TO THE HQ.)

When this announcement is made, all persons will meet in the Director's office. Depending on the type and extent of the emergency the Director may have already dispatched members of the team to the scene to get an up to date report during the meeting. All personnel will be given their assignments for the particular situation at hand and the Director will advise of time and place of any further meetings.

The director shall forward information about incidents/accidents to pilots and officials during subsequent task briefing, as detailed as he can. This prevents rumours during the event and gives competitors an understanding of the incident/accident and the eventual impact on the competition.

5.2 SAFETY OFFICER AT AN EMERGENCY

The Safety Officers duties at an emergency or an accident:

a. Report all accidents, incidents or emergencies immediately to the Event Director

b. Render assistance at the scene, if you are nearby or present.

c. If not at the scene of the accident proceed to the scene when directed. If you are the first at the accident scene, evacuate all persons and public and inform the necessary rescue services.

d. Take down and note all relevant information or evidence that may help the Director or the authorities, in any investigation. Insure no evidence is removed or tampered with before the Aviation Authorities arrival. If possible assign to a responsible person the duties of listing of eyewitnesses photos, videos etc.

e. Remember you may represent the Event Director, Officials, the CIA and the FAI at the accident scene. Be professional, helpful and honest to forward a positive relationship with all authorities involved.

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ADDENDUM:

When more than one balloon is to be launched, it is good safety practice to have people regulating the launches.

It is desirable to have a Launch Director a rated LTA pilot, although if properly trained a non-rated pilot can perform this duty.

Launch Masters do not have to be rated pilots although this is always desirable, it is not always practical.

Launch Masters must be well-trained and able to work as a team with the Launch Director and the Safety Officer.

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6 AFTER THE EVENT

The Safety Officer shall submit a report, within 28 days of the conclusion of the event, to the Event Director and to the Chairman of the Safety Subcommittee (See Appendix 1). The address can be found on CIA web page (http://www.fai.org/ballooning/organization).

This report shall consist of all safety related matters that occurred during the event.

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REPORT FROM THE SAFETY OFFICER

EVENT DETAILS

1. **Title**: *<Official Name of the Event>*
2. **Dates**: *<Date of the Event>*
3. **Organising NAC**: *<NAC>*
4. **Location**: *<Place, Country>*
5. **Event personnel**:

Event Director:	*<Name, Country>*
Deputy Director:	*< Name, Country >*
Stewards:	*< Name, Country>*
Jury President:	*< Name, Country >*
Jury members:	*< Name, Country - Name, Country>*
Safety Officer:	*< Name, Country >*
Assistant Safety Officer:	*< Name, Country >*

6. **Number of competitors**: *<XX>* competitors and *<XX>* non-competing official pilots
7. **Number of flights**: *<XX>* Number of tasks: *<XX>*

SAFETY PARAMETERS

1. **Briefings**:
<Short description on briefing set-up and standard>

2. **Weather**:
<Description on weather briefings and presentations. >

3. **Weather on field**:
<Description about additional weather information>

4. Recall Procedure

5. **CLP**:
<Number, Comment>

6. **Launchmasters**:
<Comment>

7. **Crowd control**:
<Comment>

8. **Refuelling area**:
<Comment>

9. **Flights/tasks**:
<Comment>

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10. PZ
<*Comment*>

11. Safety notes
<*Comment*>

12. **Emergency Plan**
<*Comment*>

13. **Antidoping and alcohol policy**.

<*Comment*>

ACCIDENTS

<*Description, Comments*>

INCIDENTS

1. Before the Event

<*Comment*>

2. Incidents during the Event

<*Description, Comments*>

Flight 1:

<*Description, Comments*>

Flight 2:

<*Description, Comments*>

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GENERAL COMMENTS

<General comments about the event from the Safety Officers view>

OTHER

<*Description, Comments*>

RECOMMENDATIONS

<*Recommendations, Comments*>

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<Place>, <Date>

<Name Safety Officer>

Attachments: *<List of Attachments – handed out documents – accident reports/information etc.>*

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GUIDELINES FOR LAUNCH DIRECTORS AND LAUNCH MASTERS

The Launch Director could be considered an Assistant Safety Officer whose primary duty is the safety of the launch.

The Launch Director has control the launch during a **”mass ascension”** and is usually assisted by Launch Masters.

It is normal for all people involved with the launch to wear bright vests, or some other type of distinct apparel that is easily recognised.

It is usual for Launch Masters to have dual roles at most events. They may be measurers, debriefers, or spare observers.

PRE-FLIGHT

The Launch Director should prepare the layout of the launch field for mass ascensions. Balloon positions should be indicated with some kind of markers, for example, survey flags, banners, cement blocks, tyres etc. A map of the field layout should be given to all pilots at the pilot briefing.

The Launch Director will be available for all pilot briefings to assist the Event Director with questions regarding the launch and the launch field.

All Launch Masters should be introduced at the General Briefing and a description of their apparel given.

Safety and good communications are essential at all mass launches. Any sources of potential problems should be immediately reported to the Launch Director, who will be in constant communication with the Safety Officer and Event Director.

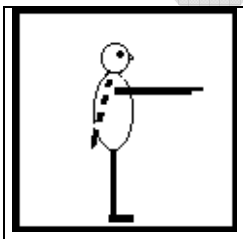
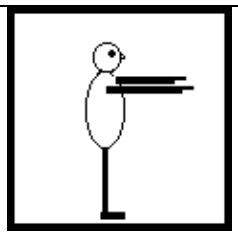
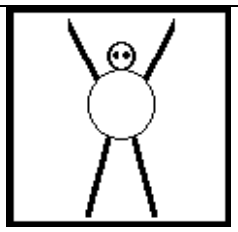
Inexperienced pilots should not launch during peak launch times but should be held, **if practical**, until there is less congestion. During competitive events, competitors should only be held for orderly and safe launch conditions.

Each Launch master will be assigned to specific balloons for the launch. This prevents confusion on the launch field. Specific cases sometimes require the Launch Director to assist a Launch Master or to put an experienced person next to a ”first time” Launch Master for assistance.

FIELD COMMUNICATION

It is very important that when a pilot signals the Launch master that he/she is ready to launch, he/she is completely ready...at full equilibrium. The Event Director will usually make this point several times during pilot briefings.

At sight of white flag, the Launch Master should use signals below to communicate with the pilot.
The rules 9.17.1 says: *“The launchmaster will give each competitor permission to take-off according to the signals as published. The competitor may then take-off at will, subject to any instructions from the launchmaster at the time.”*

				
I acknowledge your white flag.	Stay on ground, follow instruction of my right hand.	I'm going to clear you for take-off.	Clear for take-off	Cancel all previous Instructions wait.

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Launch Master must be at the perimeter of the Balloon to verify the position of other balloons in the area, both arms starched out and with the palm down. When he wants the balloon to take off, he raises both hands above his head, pointing upwards.

The procedure is to be explained at the general briefing.

It is often possible to inform the Pilot where the closest balloon is to him. The worst possible scenario is to launch the balloon while standing alongside the basket. It is impossible to see what is above you when standing at the basket.

Give the pilot confidence to launch when you tell him to go be sure to exhibit a positive and clear command, showing you are confident of launching him safely.

(Small hand-held radios can be useful for communications between launch personnel before the actual start of the launch period. Ensure the radios to be used do not have any kind of delay feature included with them.)

LAUNCH SEQUENCE AND SPACING

An area of at least 30 meters square should be allowed for each balloon (40 m.sq. is best).

There are basically two ways to launch balloons, and, to some extent, it depends on the type of event as to which of the two ways you use. The first is to launch all downwind balloons' first. The second is to launch balloons at random as they are ready to go. Both methods are used, successfully and safely.

It is more common to launch at random if there is competition involved. Competitors want to launch when they are ready, not when balloons downwind of them have been launched.

It must be clearly understood that for random balloon launching, a Launch Master's job becomes more difficult. Both Launch Director and Launch Master must work closely together to ensure that no balloon is launched up into a balloon passing overhead. It is also important to be sure that once they have launched, balloons climb to a minimum of 500 feet to clear the launch area.

If there is competition in your event, speed in launching may be important, but **with great care**, it is often possible to allow a second wave of balloons to layout as each balloon launches.

Co-operation between pilots, crews and officials is an important factor on a busy launch field to enhance safety.

These are all recommendations...not fixed rules.

Every launch area will vary in size, shape, prevailing wind, tree cover and obstacle location. The most important thing for launch personnel to keep in mind is too always having control over the safety of the launch.

Always be aware of the overall picture.

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BALLOON AND FLIGHT OPERATION

CODE OF CONDUCT (ref. Rule 2.12)

It is the pilot's responsibility to ensure that your balloon is properly rigged, in accordance with the manufacturer's flight manual in terms of good safety practices.

Make sure that there are no sharp edges on the basket. Banners and competition numbers shall be attached with any sharp ends of the fasteners on the inside of the basket

The fuel system and fittings should be checked to assure they meet the manufacturer's requirements.

GUIDE LINES (ref. Rule 2.11)

1) Check that all karabiners are properly attached and properly closed.

2) Check for damaged or burnt envelope fabric and ensure it does not exceed the allowable damage requirements of the balloon manufacturer's manual.

3) Check that there are no sharp objects outside the basket. (Examples on this are nylon straps (Zip Tie Straps) used to attach the basket banners, objects on map boards, etc.)

4) Check that all fuel hoses meet the manufacturer's specifications and are properly secured within the basket.

5) Check that the fuel hoses from the burners are correctly routed and cannot be trapped by persons or equipment on board.

6) Check that there are no objects, which compromise safety, on top of tanks. Ensure that equipment on board is properly stowed.

7) Check that nothing is attached to the fuel hoses.

8) Inflation cylinders must be secured inside the basket.

9) For any incident or accident, a report should be made and a copy given to the Event Director.

10) Pilots who have concerns about the airworthiness of any balloon should contact the Safety Officer, or the Event Director.

11) When you approach the goal or make a landing, a competitor shall make a controlled descent, based on his experience and the balloon performance.

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RULES FOR REFUELLING

1. PROPANE – AIR mix CAN BE EXPLOSIVE! All possible sources of ignition must be kept away from the refuelling area.
2. No nylon clothing, banners, flags, etc., allowed in the refuelling area.
3. No loose strikers in the basket. They must be properly stored and disarmed.
4. Only two persons per vehicle in the refuelling area.
5. Baskets and/or propane cylinders must if possible be removed from enclosed trailers or vehicles.
6. Only experienced persons (pilot or crew chief) will be allowed to refuel.
7. No consumption of alcoholic drinks in the refuelling area.
8. Persons who appear to be intoxicated will not be allowed access to refuelling.
9. No dogs or other pets in vehicles during refuelling.
10. No radios, cellular phones, pagers, cameras or other electronic items in use during handling of propane.
11. The vehicle lights and engine must be turned off during refuelling.
12. No loitering in the refuelling area after refuelling
13. Always wear gloves in the refuelling area
14 Follow the instructions of the refuelling personnel
15. ABSOLUTELY - NO SMOKING!

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SAFETY ON GROUND

1) Observers working on the road.

Whenever the observer is measuring, for example on the roadside or in an intersection, the Crew MUST help the Observer by watching the traffic and give warnings to avoid traffic accidents or incidents. It is especially important to be careful during the morning rush hour when there are many cars and during evening task flight when darkness comes quickly.

2) Stopping on road and causing traffic jams.

Please take care and keep people and vehicles at the roadside while you are waiting. Do not park your car in front of private houses or entrances. And take special care when working in the road to measure, etc.

3) **Driving**

The crew shall observe all relevant local traffic laws (traffic lights, speed limits etc.).

4) **Alcohol and other drugs**

Use of alcohol and drugs do not belong in Balloon competitions. The Pilot and the crew shall obey all laws regarding this. WADA rules concerning doping including alcohol abuse will be applied.

5) Marker drop

DO NOT drop your marker in front of moving cars on the ground. As a competitor you have full responsibility for your marker drop or anything attached to your balloon, including GPS logger.

6) Landing

When you make a final landing, you have to pay attention to the public. If you land on private land, you have to request permission to retrieve the balloon. If you use the public road, you, MUST pay attention to others using the road. Do not interfere with others on the road.

6) No Smoking in the launch site area

8) Quick-release tie-offs

Quick-release tie-offs must be used for all balloons inflating in a common launch area and are recommended in individual launch areas. The rope of the quick-release shall be tied to a secure point of the vehicle (not at a trailer). Tie-offs must be no longer than 5m.

9) **Any gas cylinders and other heavy items, transported in the car must be properly secured.**

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WADA rules concerning doping including alcohol abuse will be applied.

Intoxicated crew (including pilots) should be ordered to stop whatever ballooning activity they are currently participating in.

The Safety officer can take whatever action he feels appropriate and should immediately inform the Event Director.

If there is need for independent documentation, local medical, or if deemed necessary - police services will be asked for help.

FAI Sporting Code, General Section 3.11.2.4 Competitor responsibilities.

3.11.2.4	Competitor responsibilities. All competitors entering sporting events under FAI rules shall accept that they may be required to submit to, and co-operate with, doping control measures. Entrants with a documented medical condition requiring the use of a Prohibited Substance or a Prohibited Method must before the event concerned have obtained a Therapeutic Use Exemption (TUE) in accordance with FAI Anti-Doping rules. In addition, for reasons arising during or immediately before the event, a competitor taking any drug or medication, or suffering from a medical condition, illness or injury, which might either compromise safety or invalidate a licence, must inform the Contest Director in writing before competing.

If you are using a drug that is on the WADA list of forbidden substances but is prescribed by a medical doctor, you must have a Therapeutic Use Exemption (TUE). Normally you apply through your NAC. Procedures and application form are available here:

http://www.fai.org/cimp-anti-doping-programme/therapeutic-use-exemptions

The 2014 WADA list of forbidden substances

https://www.wada-ama.org/en/resources/science-medicine/prohibited-list#.VFq2dvmG-So

More information is available at: http://www.wada-ama.org/

The list is also available in other languages. Please contact your National Sport Federation for more info.

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INCIDENT AND ACCIDENT REPORT

No:_____

SUMMARY OF INCIDENT or ACCIDENT

1. Date & Time: *<Date>, <Time>*

2. Place: *<Place>*

3. Cause of Incident:

Lay out	☐
Inflation	☐
Take Off	☐
In Flight	☐
Approaching Target	☐
At Target	☐
Approach-Landing	☐
Landing	☐
Other	☐ Specify: *<Description>*

4. Summary of Incident: _____

_____

_____

PILOT

PIC:	Name:	*<Name>*
	Country:	<Country>
	Phone number:	*<Number>*
	E-mail address:	*<Address>*
	Licence No.:	*<Number>*
	Issue Date:	*<Date>*
	Validity Date:	*<Date>*
	Total Flight Time:	*<Hours : Minutes>*
	Total PIC Time:	*<Hours : Minutes>*
	PIC Time Last 12 months:	*<Hours : Minutes>*

BALLOON

Balloon:	Registration No.:	*<Registration>*
	Volume:	*<Volume>*
	Class:	*<Class>*
	Airworthiness Certificate No:	*<Number>*

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Date Exp.:	*<Date>*
Total Flight Time	<hour> h <minute> min.
Number of flights	<number>
Publicity:	<description>
Manufacturer and type of Envelope:	<name>
Manufacturer and type of Burner:	<name>
Manufacturer and type of Basket:	<name>
Number of propane cylinders:	<name>

FLIGHT

No. of Persons in Basket	*<Number>*
Take Off Time	*<Time>*
Landing Time	*<Time>*
Total Flight Time	*<Hours : Minutes>*
Total Take Off Weight	<Kg> Kg.
Fuel Weight	<Kg> Kg
Maximum Altitude	<height> Ft.
Estimated Wind speed:	
At Take Off	<speed> Kt
During flight	<speed> Kt (at <height> Ft)
At Landing	<speed> Kt

General weather conditions _____

_____

_____

INJURIES

Pilot: _____

Passengers _____

_____

Others _____

DAMAGE

Envelope _____

Basket _____

Burner _____

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Instruments _____

Equipment _____

Other _____

COMMENT:

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EMERGENCY PROCEDURES

To all pilots and officials

In case of emergency or accident, call ……..…, Emergency Service centre

Take action to limit the risk of more people getting into danger.

Inform about the art and status of the incident/accident

- What has happened
- Location (street or place and position with co-ordinates if possible)
- What phone number you are calling from
- If calling from an International cellular phone do not forget the country code
- How many people are injured
- What kind of injuries
- Competition number if possible

Start to take care of injured persons

If you have time, call any of the following persons and give the same information

Event Director	……..	Phone: ……
Safety Officer	…….	Phone: ……
Competition centre	…….	Phone: ……

If you are contacted by the press or other media:

DO NOT SPECULATE

The press will do their best to get from you, in the form of speculation, more information than you have. Please refer them to the Press Officer (phone: ……)

Be polite and firm, tell them only the facts as you know them.
Remember that the press can be very cruel, try not to give them any information that will cause pain or anguish to a pilot's or crew member's family.

<signed by the Safety Officer>

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Safety Officer Checklist

Pre Event:

- ❑ Collect all relevant documentation
- ❑ Prepare hand-out documents together with the Event Director

After arrival at site:

- ❑ Introduce yourself to relevant people at site. (Such as Police, Fire brigade, Air Traffic Controller, etc. This can be different depending on the event.)
- ❑ Introduce yourself to the Refuelling People
- ❑ Check the Refuelling Station
- ❑ Check Common Launch areas
- ❑ Check Recall procedure
- ❑ Evaluate all possibilities to incidents

Check that the following points are covered on General Briefing:

- ❑ Recall procedure
- ❑ Launching procedure

During the Event:

- Check the weather situation with the metrological officer before each task briefing
- Be close to the Event Director during task setting, to be able to give him advice concerning safety maters.
- Be at common launch field to get the overall picture
- Be at targets, when possible, to get the picture at congested areas
- If possible be at launch sites and landing sites
- Monitor the refuelling site

After the Event:

- ❑ Collect all relevant information to the report.
- ❑ Sending the Safety Officer Report to the CIA Safety Subcommittee

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