FAI Sporting Code

Fédération Aéronautique Internationale

Section 7 – Class O
Guidelines and Templates
Hang Gliders and Paragliders
Classes 1 to 5

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1 FAI Statutes, ... Chapter 1, ... para. 1.6
2 FAI Sporting Code, Gen. Section, ... Chapter 4, ... para 4.1.2
3 FAI Statutes, ... Chapter 1, ... para 1.8.1
4 FAI Statutes, ... Chapter 2, ... para 2.1.1; 2.4.2; 2.5.2 and 2.7.2
5 FAI By-Laws, ... Chapter 1, ... para 1.2.1
6 FAI Statutes, ... Chapter 2, ... para 2.4.2.2.5
7 FAI By-Laws, ... Chapter 1, ... paras 1.2.2 to 1.2.5
8 FAI Statutes, ... Chapter 5, ... paras 5.1.1, 5.2, 5.2.3 and 5..2.3.3
9 FAI Sporting Code, Gen. Section, ... Chapter 4, ... para 4.1.5
10 FAI Sporting Code, Gen. Section, ... Chapter 2, ... para 2.2.
11 FAI Statutes, ... Chapter 5, ... para 5.2.3.3.7
12 FAI Statutes, ... Chapter 6, ... para 6.1.2.1.3

Editors Note:
The FAI Sporting Code for Hang Gliding (hang gliders and paragliders) consists of the General Section and Section 7 combined. In cases of doubt, consult the General Section to establish the principles before applying the specific rules which appear in this Section 7.

Hang gliding (hang gliding and paragliding) is a sport in which both men and women participate. Throughout this document the words 'he', 'him' or 'his' are intended to apply equally to either sex unless it is specifically stated otherwise.

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1 GENERAL SAFETY BRIEFING

1.1 General

A safety meeting attended by all pilots is required. Only by presenting the safety matters relating to the specific site and conditions can there be reasonable assurance that all pilots will have access to the important local safety information. It is mandatory for all pilots to attend such a meeting.

The meeting could be scheduled at two different times before the competition starts, to allow some flexibility in individual schedules. In exceptional circumstances, the Safety Director may brief a pilot individually, providing it is before the opening of the first task window.

1.2 Safety Meeting Topics

The following outline consists of items that should be covered in a safety meeting. The potential topics are not limited to this list and should be tailored to the site, the discipline and the conditions involved.

1.2.1 Equipment

1.2.1.1 Gliders

Present a discussion of gliders appropriate for the site and conditions. If, for example landing fields are few and far between or a long way out from the mountain, pilots flying gliders with lesser performance may be cautioned to leave the mountain before getting below a given point. Any type of disallowed gliders for safety reasons should be announced.

Remind pilots to preflight their gliders carefully and inspect them for overall integrity before the meet begins. Remind pilots that shipping damage is common enough and sometimes hidden.

1.2.1.2 Harnesses

Remind pilots to inspect their harnesses and parachute attachment. Review the ballast rules and possibly suggest ballast limits if the site presents a challenging take-off.

1.2.1.3 Parachutes

Pilots should be reminded to inspect their parachutes and informed of any parachute repacking services available. A review of the parachute emergencies should be presented. The dangers of landing under canopy should be reviewed followed by the procedures once the pilot has landed.

1.2.1.4 GPS units

Pilots should be reminded and walked through the procedures for setting their GPS units to the proper meet settings (map coordinate system, coordinate decimal placement, time, etc.)

1.2.2 Communications

1.2.2.1 Numbers & Frequencies

Pilots should be given the cell phone numbers and radio frequencies for reporting emergencies as well as retrieve and reporting in that they are safe.

1.2.2.2 Rescue Procedures

Review the necessity for a downed pilot to move or bundle up his or her glider immediately if they are uninjured. Pilots should be informed what to do as a victim in the case that they can communicate. A safety card with the meet numbers and what a rescuer should do must be given to all pilots and must be in his or her possession during flight. It should be written in the local language.

1.2.2.3 Procedures for pilots observing an accident.

These should be presented; review the Section 7 rules concerning aiding an injured pilot and inform pilots of the policy on awarding points. Discuss the desirability of remaining aloft above an injured pilot to aid communication and guide ground vehicles, with consideration to the possible arrival of a helicopter.

1.2.3 Site Requirements and Conditions

Most of the above matters are fairly uniform from meet to meet. The real things that can change at different venues are the nature of the terrain and weather factors as presented below. The most important topic at some sites will be the weather factors.

1.2.3.1 Physical Aspects

Review any particular matters that present challenges or greater risks due to the nature of the site. These may be (but are not limited to) the presence of water, antennas, power lines, cable cars, microwave towers, known turbulent areas, regions with few or hilly landing areas, regions with venturi effects (high winds).

1.2.3.2 Launch Procedures

If launches present a particular challenge (flat, or treacherous in a crosswind, etc.) discuss the limits of safe launching. Review the Launch Director's signal to allow launch and the intended method to avoid too much crowding above launch (such as stopping launches or a mandatory clearing of launch by pilots in the air).

1.2.3.3 Conditions

Certain areas are notorious for changing conditions and such expected changes should be reviewed to inform pilots what to expect, what the general timing is and how to best handle the conditions. The general daily variation of conditions should be presented so pilots can be prepared. A short discussion of the necessity to launch earlier rather than later can perhaps reduce last minute scrambling (and thus reduced safety) to get off within the launch window.

1.3 Personal Health Matters

Since 1st Category events typically run over consecutive days for a week or more, many pilots will be flying longer than they are used to. Thus they may run out of energy somewhere in the middle of the meet. When accumulated fatigue sets in, pilots have poorer judgment and may make random errors. Safety is greatly compromised in this case.

1.3.1 Rest and Nutrition

Although it may be futile, it is our duty as organisers to remind pilots to get ample sleep each night. Furthermore, proper nutrition goes a long way towards maintaining energy levels.

1.3.2 Hydration

Finally, one of the biggest factors in aviation accidents is dehydration. Pilots must be reminded to drink adequate liquids throughout the morning of the flight, just before the flight and during the flight. Also hydration after the flight is critical. Mention the dehydrating effects of all alcoholic drinks, and coffee or tea as well as sodas containing caffeine. Meet organisers are advised to have adequate water available at launch for pilots as well as staff. Naturally, desert areas require double attention to these important matters.

1.4 Airspace and Other Hazards

Pilots should be presented with a map clearly delineating the prohibited airspace (including the pertinent altitudes) and other areas that must be avoided (such as congested areas or irate landowners). Non-landable areas due to landowner hostility or lack of adequate fields should be presented.

2 ASSISTANCE TO A PILOT IN DANGER

All pilots must pack their gliders immediately after landing: a glider lying open on the ground means 'I need help!'
A pilot witnessing any kind of accident must try to inform the Competition Organiser as soon as possible using the safety radio frequency.
It is recommended that all pilots have first aid qualifications.

Calling procedure: 'MAYDAY, MAYDAY, MAYDAY'. Give details of:

- Nature and location of the accident.
- Position of the victim.
- Name of pilot reporting the accident.
- Description of pilot/glider in trouble.

2.1 Rescue Actions in Competition

2.1.1 The Objective:

- To propose to the pilots a list of things to do when they are giving assistance to a pilot.
- To propose to the Competition Organiser an idea for a procedure for the rescue service.
- To push the pilots to assume their responsibilities in case of an accident, avoiding the possibilities of an excess of zeal, which could generate an excess of extra points.

This list could be used by the Meet Director and/or the Jury in order to attribute compensation points to the pilots who gave assistance.

2.1.2 Organisation Duties:

- A radio arrangement that covers the whole course.
- To make clear & precise decisions with the injured pilot and/or with the pilot who is giving assistance.
- If possible, put the rescue aid in touch with the accident area.
- Transmit all information to the rescue aid (general state of the injured, location, etc.).
- Cancel the rescue action (if needed) if it was asked by some persons external to the competitions.

2.1.3 Obligations of the Injured Pilot

If he is physically able, the pilot must:

- Take some landmarks in order to facilitate the location of the accident zone and the altitude of the accident and the GPS co-ordinates.
- Make contact with the organisation from the air by radio or by mobile phone (better radio contact).
- Alert message like My name is … number…

2.1.4 Obligations of Pilots Witnessing an Accident

If at all possible, the pilot must:

- Contact control and state that: I am a witness of an accident at such place.
- The injured has a glider of such construction……, such colour…
- I can/can't land close to him.
- What must I do? If possible, His name is……his number is ……. Can he speak, can he move?

2.1.5 Waiting for the Organisation Decision and then

Land nearby, or stay in the air, close to the accident for a better localisation, or go on with the task.

2.1.6 If Radio Contact with the Organisation is Impossible

- Throw a flare.
- If there is another pilot nearby, or in radio contact with you ask him to contact the organisation landing near a telephone, stay in an area that allows the maximum contact with the pilot in order to give information about how the rescue is progressing.
- If you are alone, you have to judge according to the area, the impact, the presumed state of the pilot, whether you would do better to land nearby the injured pilot or land near to a telephone.

2.1.7 Further Information to give to Organisation on Reaching the Injured Pilot

- Accessibility of the injured, distance of the 1st road, trees, slope, cliffs, etc.
- State of the injured pilot: conscious/unconscious, pulse, breathing, mobility, opened fracture/closed fracture, internal/external haemorrhage etc.

2.1.8 Protect & Rescue the Injured Pilot

- Avoid injuring yourself, land only if you can do so in total security.
- Approach calmly to the injured pilot. If possible approach from the side or from below in order to avoid falling stones.
- Secure the zone.

2.1.9 Once Discovered

Once the rescue team have the location of the injured pilot, prepare the area for the arrival of a helicopter (fold up the gliders) and protect the injured pilot:

- Do not move him.
- Cover him if he is cold.
- Speak to him even if he is unconscious.
- Find out if his vital functions (pulse, breathing) are efficient and do not intervene if you are not competent.
- If you have no choice, intervene medically (for example CPR).

3 THERMALLING RULES AND TECHNIQUES

It is apparent from the experience of many pilots and officials at category 1 events that quite a few pilots do not know how to thermal effectively and safely with a large group of pilots. Despite the CIVL qualification requirements for the entry of these events, not all countries teach proper technique and etiquette, or may not know the universally accepted procedures. In order to enhance the safety of competitions, these rules are presented, which must be read and understood by all pilots entering CIVL sanctioned competitions.

3.1 Aggressiveness

One of the biggest problems in competitions with many pilots is the over-aggressiveness of certain individuals. Over-aggressiveness in crowded skies can lead to mid-air collisions, which can lead to fatalities. Nearly every pilot in a crowded thermal would like to circle tighter to better use the core, but it is impossible to do so without a great disruption of the entire circling group. A pilot that makes close passes to others or avoids clearing all turns endangers everyone, and risks the anger of his fellow pilots which may cause later confrontations. An overly aggressive pilot ultimately hurts his or her own long-term competition results.

Meet Directors are required to deal with overly aggressive and unsafe pilots in the following manner: The pilot should be given a warning as soon as a confirmed report of the pilot's dangerous behaviour is presented. If the pilot doesn't stop the dangerous behaviour immediately, the pilot must be removed from the competition.

3.2 Entering a thermal

3.2.1 First rule

The first rule of entering a thermal is to turn in the same direction as the pilots already in the thermal (either clockwise or counter clockwise). This rule holds strictly even if the thermal is entered well above or below the previous pilot(s). The reason for this last point is that often, lower gliders will climb more quickly and may eventually be at the same level as the higher gliders. Also, in crowded skies it is common for many pilots to join a thermal and pilots coming in between two pilots turning different directions will not know which way to turn. Often this factor results in several groups of pilots at different levels turning in different directions. When these groups merge, chaos and endangerment occur.

So it must be stressed: Always enter the thermal in the same direction as a previous pilot no matter what the height separation. Often pilots have a turn direction preference, which induces them to turn opposite to the direction already established. Pilots with such strong preferences should not enter a competition until turning to the undesirable side is practiced to the point that the pilot is able to automatically turn in either direction.

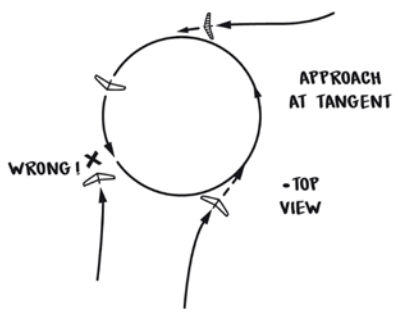


FIGURE 1. – ENTERING A THERMAL

Which way should a pilot turn when entering a thermal in which pilots are turning in opposite directions? This problem is common enough and difficult. If the pilot is closer to one group (above or below), it's best to turn in the direction of that group. A pilot approaching a thermal with other pilots at a similar height must circle in the same direction as the first pilots that reach the thermal.

In general, if a pilot is midway between an upper and lower group it is best to circle in the same direction as the upper group, as these gliders cannot be seen well. If the lower group climbs more quickly, these gliders can be easily seen and the turn direction reversed if required. Do not wait until they are at your level to reverse, since it may result in a mass confusion as some pilots change direction and others don't. Besides, the reason they are climbing up to you may be that their turn direction is more efficient due to a rotating thermal.

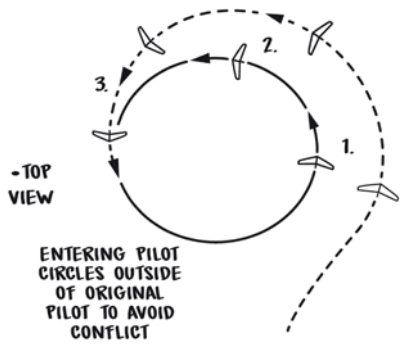
3.2.2 Second rule

The second rule for entering a thermal is to approach the thermal tangentially to the other glider's circle on the side where he or she is flying away from you. This procedure allows a simple turn to be made to follow the previous pilot's circling path even if both pilots are at the same level (see figure 1).

Approaching a thermal circle at any point other than the tangent (where the joining pilot's flight path just touches the circle diameter) is *extremely dangerous*. Pilots doing so are guilty of inducing confrontations and possible mid-air collisions.

Never fly through the middle of a thermal circle.

It is ideal to arrive at a thermal circle when the pilot already circling is on the opposite side of the circle. The pilot who has established the circle must be watched to see where the tangent point is on the side of the circle being entered. By watching the pilot for two or more 360-degree turns as the thermal is approached, a suitable entry point can be determined and the entering pilot can safely join the circling pattern.



Sometimes the circle is reached when the circling pilot is on the entry side of the thermal. In this case, the approaching pilot should circle on the normal side, but further out from the centre to give the other pilot room to continue to circle with no variation in the established pattern. The entering pilot should then start circling in the same direction with a bigger radius as shown here, which will soon allow room behind the other pilot so that the ideal path can be joined by tightening up the turn. Naturally, the pilot already circling should maintain a regular circle, both so the other pilot can judge where to be, and to maintain the core position. Cooperating in this manner is what the top pilots do in order to fly more efficiently and assure safety.

3.3 Multiple Cores

Quite often multiple thermal cores exist in close proximity to one another. This feature presents a real problem in crowded skies, because these cores often merge as the thermal rises higher. In this instance, when a good core is encountered as a thermal climb is approached, which way is it best to turn? There are benefits and problems relating to turning in either direction. If the turn direction of the nearby circling pilot is adopted, it is possible to enter the established circle simply by making a wider turn as the other core comes closer. On the other hand, the turning gliders will be approaching head-on at the near part of the circle as the cores merge (see figure 3).

If the approaching pilot chooses to circle in the opposite direction, there is not as much head-on confrontation, but the pilot must do a full turn reversal to join the other circle as the cores merge. If other pilots have joined the new circle, this turn reversal can create great confusion and potential conflicts. For the latter reason it is recommended to turn in the same direction as other pilots in a nearby core.

Often thermals can be broken with light multiple cores appearing for a few turns then disappearing. This situation may be a result of weak heating, wind or an inversion layer. When a group of pilots are trying to work such conditions, conflicts can result. Generally, the only safe policy is to use common courtesy and good airmanship. If the cores are short-lived, it doesn't make sense to rush around like crazy towards each pilot that tightens up in a better core. All this does is create conflict with other gliders and the erratic pilot will usually miss the core while knocking out the original pilot or lower ones coming up.

PILOTS CIRCLING IN CLOSES MULTIPLE CORES MAY MEET HEAD-ON. AT THIS POINT BOTH PILOTS SHOULD WIDEN THEIR CIRCLES TO JOIN IN ONE CIRCLE

FIGURE 3 – MULTIPLE CORES.

The best policy is to wait until the climbing pilot is clear and enter the core without conflict. That way the entering pilot can tighten up successfully and gain the best climb. Blundering through the group trying to grab everything that is marked will just anger the other pilots who then won't cooperate and will do everything they can to block you're the offending pilot's progress. Remember, overly aggressive pilots ultimately hurt themselves psychologically.

In broken thermals, all pilots should orbit in the lifting area and allow a pilot that hits a surge of lift to tighten up and climb above. That way the crowding becomes less and everyone will have a better chance of getting up. Remember, in such conditions all pilots are your helpers, at least until you get close to goal. The weaker and more rare the lift, the more you need other gliders around to cover more area to find thermals. If you play the game of forcing others out of the lift you find yourself alone in an often fruitless hunt for lift.

3.4 General Rules

When a pilot is thermaling in a crowd, the main rule is to maintain constant awareness. That means looking around continuously to avoid conflicts. You must look to the outside of your turn as well as inside, for often gliders outside of you get forced inward or circling path get offset. Do not get confused by the mass of gliders above or below you. Focus on the ones at your level and a bit above and below.

The second important rule is to maintain a regular, predictable turning circle. Try to keep the same radius turn without varying it so other pilots know where you are going to be as they come around each time. Some pilots get fearful as the crowd increases and they flatten out their turns. This results in a reduce climb rate for everyone and even more crowding as more pilots end up at the same level. Maintain as tight a turn in the core as possible for maximum climb so pilots get spread out vertically, not horizontally.

Two pilots on the same level can work together very nicely at quite steep banks. To do this, maintain a constant bank and remember, as long as you can't see the other pilot he or she has either climbed above you or is on the exact opposite side of the circle and you will not hit. If you flatten out you may end up with a conflict. Three pilots can also work together in this manner if each pilot is very careful to keep a regular circle and the lift is smooth. Four pilots at the same level are too many for the efficient use of most cores.

Be aware of the fact that it always appears that the other pilot is going around your circle. This visual mirage makes you think that the other pilot is turning flatter than you. Don't make this perception error and flatten out or you'll cause conflicts. The only way to tell who is turning flatter is to see who catches up to whom. If you are catching up to the other pilots, you are turning more steeply, and vice versa.

Many pilots use techniques of quickly altering their turns when surges of lift pass through. This practice is overly aggressive in very crowded situations and will eventually get reported with a subsequent penalty. No pilot has the right to endanger others for his or her gain. Pilots should study available publications regarding thermal techniques and thermal procedures.

4 NOTES ON AIRSPACE DEFINITION FOR PILOTS AND ORGANISERS

Controlled and restricted airspace altitudes can be defined relative to mean sea level, or by standard pressure (Flight Level) altitude.
All over the world, by international agreement the airspace is defined in feet. So expect the airspace definition to be round numbers of feet in 500 ft intervals. Thus altitudes in meters will be rounded to the nearest meter. For example 7500 ft will be 2286 m.
The openair files that define airspace for competitions include defining the altitude as flight level (FL, QNE) or above mean sea level (MSL, QNH).
Above a locally defined transition altitude, airspace is defined in Flight Level, and below in altitude above mean sea level.

Transition altitude varies from country to country.
Generally the transition level is placed well above the surrounding terrain.
Many pilots will expect, from their experience in the countries they have flown in, that they need not consider flight level airspace as they have only encountered airspace at a fixed altitude. But depending on where a championship is held flight level airspace may well need to be considered.
It is not safe to simplify flight level to altitude, as in low pressure the airspace will be violated.

Effect of meteorological pressure on flight level airspace.
In high pressure a flight level airspace ceiling will move up, in low pressure it will move down.
It might be expected, that low cloud and poor weather associated with low pressure and high pressure associated with good weather might mean it is safe to assume flight level will 'always' be at the equivalent altitude or higher, but depending on weather and location this is not a safe assumption.

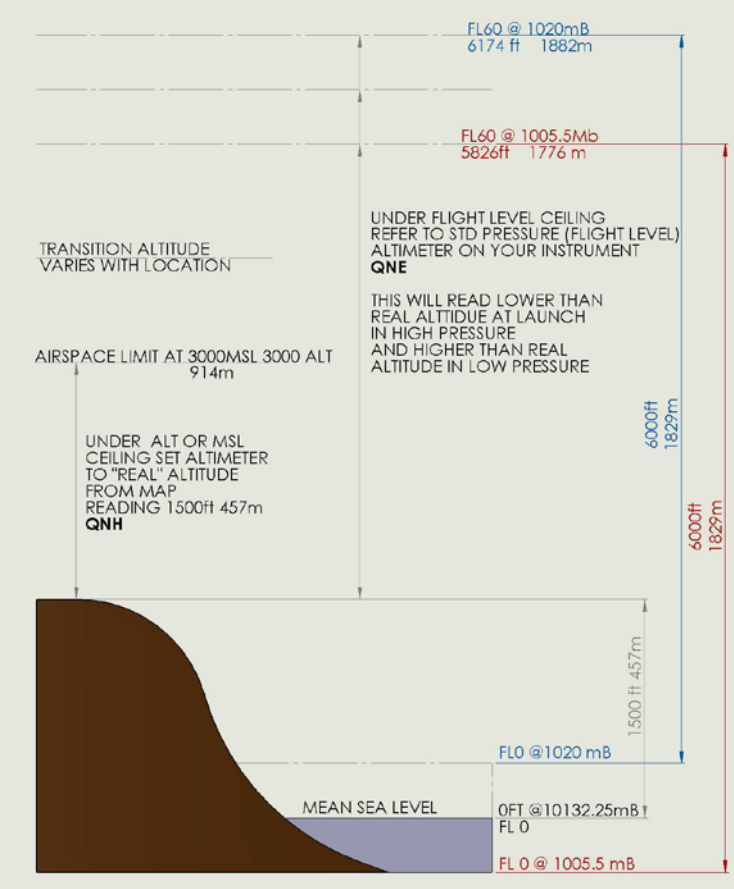


Fig 1 Effect of air meteorological pressure on Flight Level

Instruments

All decent flight instruments are able to display a standard pressure QNE altimeter. This is independent of the QNH altimeter, reading altitude above sea level, that is used for the calculation of arrival heights at goal.

Instruments that offer warnings of approaching airspace from reading the openair airspace files can interpret the airspace definition from the open air file which contain the FL (flight level) or MSL (above sea level) definition.

The competition organisation takes no responsibility for the correct operation of the pilots instruments in this regard.

If the igc track shows evidence of airspace violation but the pilot did not "see" they were too high on their instrument due to malfunction or incorrect setting, penalties will be applied.

Airspace Definitions

Airspace can be drawn through a series of points, or using arcs and circles.

If possible the airspace should be tested for correct display on some sample instruments.

Creation of complex shapes "dot to dot" (for a national boundary for example), should be avoided as many instruments cannot cope with too much complexity.

Examples from openair text files.

A zone from the Preworlds in Brasilia:

AC R	*airspace classs R restricted*
AN ESPLANADA AUT	*airspace name*
AL 9000MSL	*airspace lower altitude 9,000 ft QNH*
AH 29000MSL	*Airspace upper limit, 29,0000 ft (not relevant)*
DP 15:47:34 S 047:52:17 W	*series of points describing the airspace polygon corners.*
DP 15:48:04 S 047:52:31 W	*dd:mm:ss South ddd:mm:ss West always WGS84*
DP 15:47:48 S 047:53:34 W	
DP 15:44:47 S 047:54:10 W	
DP 15:37:39 S 047:43:40 W	
DP 15:44:02 S 047:39:55 W	

A zone from the Brazilian nationals in Brasilia:

AC P	
AN BRASILIA PROIBIDO	
AL FL90	airspace lower altitude FL090 9,000ft QNE e.g. 9,270 ft @1022mB
AH FL290	
DP 15:53:58 S 047:48:33 W	
DP 15:52:09 S 047:54:40 W	
DP 15:47:24 S 047:57:38 W	
DP 15:39:10 S 047:58:24 W	
DP 14:57:29 S 047:02:35 W	
DP 15:22:18 S 046:47:12 W	

Examples of local transition altitude.

From a brief internet search (unverified, UK is correct).

Hong Kong:	9,000 ft
Australia:	10,000 ft
Belgium:	4,500 ft
New Zealand:	13,000 ft
Netherlands:	3,500 ft
United Kingdom:	6,500 ft
USA	18,000 ft
CANADA:	18,000 ft
Italy:	6,000 ft
South Africa:	fixed and to be at least 1,000 ft above the highest ground within 25 nm radius of an airfield

France: 5,000 ft unless otherwise stated on chart.
Slovakia: 10,000 ft
Austria: 10,000 ft
Hungary: 10,000 ft
Brasil: Depends on terminal airspace, in the case of airspace for the area around Brasilia we must take care to check if the definition is Flight Level or altitude above mean sea level.

QNE – std pressure
QNH – real altitude above mean sea level, altimeter set correct for local pressure.

5 NOTES ON GAP

5.1. How High am I? Notes for Altitude settings by Mitch Shipley Ph.D.

The title isn't a question from the 60's, but rather a reaction to last year's Brasilia Cat 1 test event where ten pilots violated the vertical airspace limits and were zeroed for the day. In talking to a sampling of pilots, it became clear that there was some confusion about how the whole altitude/scoring thing worked, how accurate our instruments are and what the errors in the system may be. That's understandable, as many pilots don't often deal with controlled airspaces in their local flying, but it is becoming increasingly common in competitions.

For those competition pilots that don't want to wade through all the technical info below, here is the short story. Set your instrument to the proper launch altitude each day before you fly, give yourself a 100 foot buffer to the penalty altitude and you are good to go! For those that want to get closer to the limit, we need to talk about QNH, International Standard Atmosphere (ISA), Flight Level (FL), QNE and instrument bias error to better understand just what the heck these terms are and how they relate to our instrument altitude errors, with the goal of learning what we can do to minimize these errors (i.e. not get a zero for the day!).

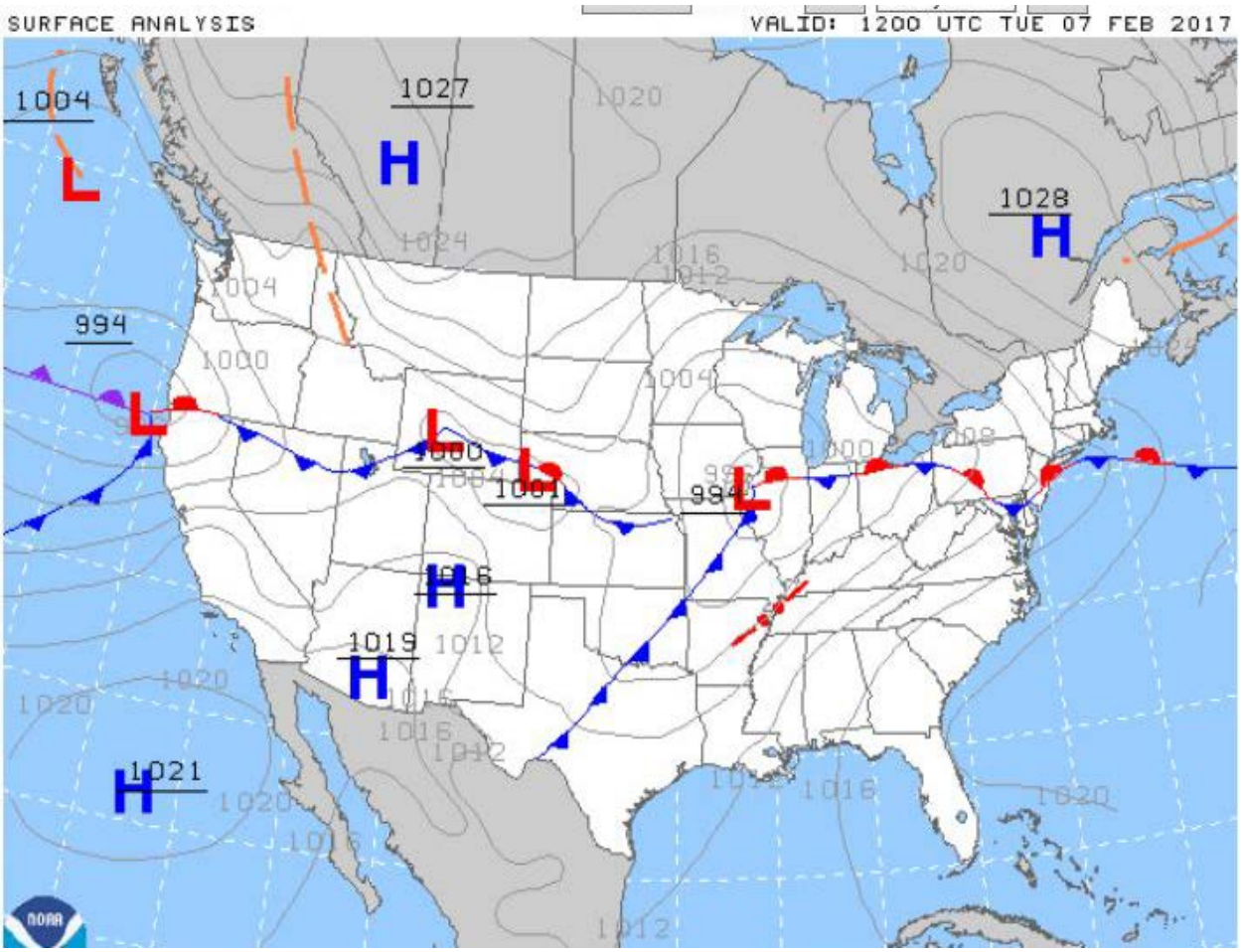
All pilots have a general understanding about how barometric pressure altimeters work to tell how high we are. It is truly amazing how these little instruments can detect the tiny pressure changes of just a few feet and do it so well. This sensitivity may give you the impression that they can very accurately tell how high you are, but that is only true if the instrument is setup each day properly and even then, it may be tens of meters off for reasons we will discuss below. When those tens of meters are the difference between getting your score or a zero for the day, it's worth taking the time to understand a bit more about what's involved.

The first major effect to understand (and most pilots do) is that the pressure we fly in changes with the weather. High pressure systems make our favorite launch altitudes read lower and low pressure systems the opposite. Because of these pressure changes, most pilots adjust their instrument's main altitude display (typically called A1) to read the established Mean Sea Level (MSL) altitude of launch. This does a good enough job for most circumstances to get the A1 accuracy required for the flight.

QNH

What adjusting A1 does in our instruments is adjust the QNH pressure term. QNH is a Q code (see https://en.wikipedia.org/wiki/Q_code) for the barometric pressure under the current weather conditions adjusted to sea level (see https://en.wikipedia.org/wiki/Flight_level#Transition_altitude). Using QNH, the instrument calculates (using a formula most probably don't want to see, but you can go here if you want to https://en.wikipedia.org/wiki/Atmospheric_pressure) the MSL altitude based on the barometric pressure the instruments pressure sensor measures.

You can look at the isobars numbers on the US national weather map below to get a feel on the magnitude of the pressure changes between the typical high and low pressure areas shown. There is around 20-30 millibar (mb) difference between the high and low pressure systems. Of more interest to us is the 5-10 mb difference between the high pressure systems, as we typically don't fly around in the low pressure systems. With a one mb pressure change being equivalent to about 8 meters, not adjusting your A1 for the current pressure of the day (or doing it improperly) can easily result in errors in the 50-100 meter range. Note that the isobar numbers shown are not the pressures measured at the location, but rather the measured pressures adjusted by the formula mentioned above to the equivalent pressures that would exist under the current weather conditions at zero MSL – which you might suspect by now is the QNH for that location!



ISA

Now let's talk about the International Standard Atmosphere (ISA), probably the easiest term to understand and the shortest conversation. The QNH discussion made clear that we know our atmosphere changes with the weather patterns. To have a common starting point with which to talk about our changing atmosphere, the ISA is the agreed to "average weather condition" atmosphere (see https://en.wikipedia.org/wiki/International_Standard_Atmo for more). If you have an ISA weather day, the atmospheric pressure at zero MSL (the QNH) is 1013.25 millibars (mb). As you may have already noticed, the weather map above shows high pressure areas with QNHs above 1013.25 mb and low pressure areas less. Based on the defined ISA, 1013.25 mb is the QNH dividing line between high and low pressure systems and is also a common ground (or rather weather) that allows us to define our next term.

FL and QNE

From the QNH discussion above, it is clear that in order to have all pilots flying around with the same MSL reference altitudes (and know how high they are over the terrain below!) each has to be reset their QNH as they travel around. As the concern over terrain clearance goes down (i.e. we get really high) and the flight distances get very long, it makes more sense to fly by Flight Levels (FL). FLs are what the altimeter reads when you set the reference pressure (QNH) to the ISA of 1013.25 mb. What is good about this is it is easy (no resetting the altimeter as you fly along) and everyone is flying with the same reference altimeter setting, which makes vertical separation schemes more effective. Flying by FL is done by aircraft flying above what is called the transition altitude, which is typically in the 10K to 18K foot MSL range and is where most commercial airline flights spend most of their time.

The bad thing about flying by FL is you don't know how high you are above the ground unless somebody tells you more info. That is where QNE comes in. QNE is also Q code that sounds kind of close to QNH, but they are a quite different! QNH is a pressure term value (i.e. 1023 mb) that pilots set their altimeters to and that changes day to day and from place to place depending on weather. QNE, however, is the pressure altitude of an airport runway (i.e. 1534 meters) your A1 would read if you set QNH to the ISA value of 1013.25 mb on your altimeter (i.e. flying by FL). Note that the QNE value (the pressure altitude of the runway) changes with weather conditions.

Although the above is the precise definition of QNE, it is more often used to talk about any pressure altitude determined by setting the altimeters QNH term to 1013.25 mb. So being a little lose with the definition, QNE is the pressure altitude used in flying by Flight Level (FL) and is what most all our flight instruments record in the IGC file format track log for pressure altitude. This last point is why it is worth having in this discussion. The IGC file format specification requires the QNE pressure altitude to be recorded because this provides "the level playing field" from which QNH can then be used to adjust the altitude calculations for the variable weather conditions of each task. It would be much harder to evaluate track log pressure altitudes if what was recorded was everyone's properly (or improperly) QNH adjusted A1 pressure altitudes. The way your altitude is evaluated for possible airspace violations is by correcting the QNE pressure altitude recorded in the IGC file format track log for the QNH pressure of the flying day, unless of course if the airspaces are defined by FLs.

OK, so now you have the reasons our comp rules require the task board to have both the MSL altitude of launch and the QNH for the day that will be used by the scorekeeper to evaluate each pilot's track log. See Sporting Code Section 7A Edition 2016 section 6.3.2 Altitude Verification (available here http://www.fai.org/civl-documents) for the current task board requirements and know that these words will become even more specific when recent changes agreed to in February 2017 become effective in May 2017. With this task board information, you can properly set A1 at launch and, if you have followed all the discussion above, get a feel for your instrument's bias error and/or validate the bias error you measured.

Instrument Bias Error

With QNH, ISA, FL and QNE defined (are you still with me?) it is time to talk about instrument bias error. This is an effect very few pilots I know either determine or take into consideration. While our instruments are crazy accurate and exceptionally linear at measuring relative altitude changes (i.e. I've gone up ten feet), the absolute accuracy of the pressure sensor often have a calibration error (a high or low bias), which can drift over time as the instrument gets older and banged around. A recent survey of the instruments in a competition showed these errors to be in the +/- 20-ish meter range. That said, the error should not change quickly over time (unless you are really hard on your equipment) and its relatively straightforward to figure out what your instrument error is.

On a low wind, high pressure day (i.e. the pressure is the same over a wide area) call (or even better, go to) a local airport or google the local weather resources and get the QNH for the day. Set (or least display) that QNH in your instrument at a place where you precisely know the MSL altitude (again, going to an airport is nice for this). You can then get your instruments error offset for both the QNH bias in mb or the altitude bias in meters or in feet. The pictures below show you how this looks on a 6030 at an airport reporting station. Setting the precise QNH (at this station, QNH was in inches of mercury (inHg) and is on the top left of the reporting station display) and comparing the resulting A1 altimeter reading to the known altitude (7523 ft MSL in this case, as shown on the bottom right of the reporting station display) gives the bias error in feet (27 feet low for the 6030 pictured). Setting A1 to the precise altitude gives you the QNH bias error (0.03 inHg high for the 6030 pictured). The astute will figure out that 0.01 inHg equates to about 10 feet of altitude change.

Figure 1: Instrument set to precise QNH

Figure 2: Instrument set to precise field altitude

Known Bias Error – What to Do?

I'd like to tell you it is a simple matter to understand how to deal with your instrument bias error, but I'm afraid it is not. Consider the case of an instrument with a pressure sensor that has a low bias error. A low reading pressure sensor results in the instrument reporting a higher altitude, both in the recorded QNE and the QNH adjusted A1 if QNH is set to the accurate QNH for the day. In this low bias error case, if you set the correct QNH, you would notice that your A1 would be reading a bit higher than the actual launch MSL elevation. Noticing this, you could then set the correct launch MSL elevation by setting your QNH a bit low. If during the subsequent flight you fly right to the altitude limit based on your A1 reading (with all the other comp pilots that go right to the edge), you all would be precisely at the altitude limit because of how accurate our instruments are at sensing relative changes. Because of your instruments low bias error, however, the recorded a QNE pressure altitude in your track log, when adjusted for the correct QNH of the day by the scorekeeper, would have you violating the airspace by the altitude difference corresponding to your instruments bias error and you risk a penalty.

If instead, you set your instrument up for the task board QNH, your A1 would read a bit high at launch. Then during the flight when all the other pilots without bias errors go right to the limit, you would be below them looking at your A1 indicating that you were at the limit and thinking they were cheating. The good news about this case is that when you set the task board QNH and keep your A1 below the limit you will avoid a penalty. To complete the mind bending exercise, it will be "left to the student" to go through the opposite case to see the similar issues, only the other way around.

The good news is that our instrument manufacturers are pretty darn good at what they do and build, so we are talking about +/- 10-ish meters here, not a hundred. That said, for those comp pilots that want to be right on the edge of what instrument accuracy allows, many instruments can be calibrated by the factory. CIVL is also considering ways the scoring system software can determine and account for instrument bias errors and automatically apply the bias error to the track logs, but that is still a ways away.

Summary

All that was discussed above boils down to just one or maybe two things for you to do. 1) Adjust your A1 correctly at launch for the known MSL altitude and, if necessary because of your bias error, 2) Adjust the A1 reading considering the calibration error of your instrument or get the manufacturer to recalibrate the pressure sensor. Doing those two things should get your A1 altimeter to read as close as you can get it to keep you out of trouble with the scorekeeper. If you can keep your eye on A1, your fellow pilots and avoid the cloud suck if the airspace limit is near cloud base (as it was in Brasilia - dealing with that problem is another good topic!) you'll be a steely eyed killer of a competitor while avoiding getting a zero for the day.

A last word to those pilots who may want to say this is too complicated and we should change the rules to be more lenient about air space violations. If you want to fly around restricted airspaces, learn how to be a pilot! As much as I like flying with the bare minimum of rules (that is a big reason why I fly hang gliders), if we want to be allowed to fly in and around the restricted airspaces that "the real pilots" use, it is our obligation to know how to fly our craft in accordance with the rules. There also is a very easy answer on how to avoid an airspace violation penalty. Have a big buffer zone below the airspace– say 100 meters– and you'll be fine just setting your instrument to launch altitude and having at it!

P.S.

Another effect to consider in the accuracy of your A1 display is that the pressure of the day will change as the weather changes or as we fly into different areas on the task and hence the QNH setting required for A1 to read accurately changes. Since we typically fly in nice weather that isn't super windy (higher winds mean more pressure change with distance – that's why the wind blows hard!) or over weather fronts, pressure changes over our task days are only on the order of a millibar or two or three. With one millibar pressure change being equivalent to about 8 meters, our A1 might develop as much as a 25 meter error if it is windy or the weather is changing. This is only a "P.S." since your altitude is evaluated based on the single QNH posted on the task board, as it is not (yet?) reasonable to have pilots adjust for changing QNHs as they fly along during the task. What "the real pilots" do is fly by Flight Level when they are high and have transition altitudes below which they switch to real time QNH adjusted altitudes that they get by several means.

6 PARTICIPANT INCIDENT POLICY

6.1 Policy

This policy provides guidelines for censuring the conduct of competition participants with respect to their behaviour towards CIVL representatives, officials or other competitors at CIVL sanctioned meets.
These participants are competitors, Team Leaders and ground crew. The CIVL representatives are Stewards, Jury members or Technical directors. In addition, other meet officials may be considered CIVL representatives under this policy.
In general, practical rulings and other decisions adversely affect the scores of one or more pilots. These pilots, their Team Leaders or team members may be angered by these decisions.
It is reasonable to expect argument and disagreement on the part of these individuals but abusive language and excessively loud delivery are not acceptable
In addition physical abuse / threats / (hitting, kicking or spitting) is totally intolerable.
The guidelines below are provided for such abusive behaviour.

6.2 Procedure

A full report of the incident must be delivered to the CIVL Bureau as soon as possible after the event. The report should be accompanied by the names and addresses of witnesses if any. The Bureau or a specially appointed committee will review this report, make enquiries and where necessary choose a procedure from the following options.

6.3 Lesser Offences

These offences consist of the use of moderately abusive language or hitting an official with an object not causing physical damage (liquids, paper, dirt, etc.).
Punishment (in order of severity):

- The offending individual and his/her Aero club receives a letter of reprimand from the CIVL
- The offending individual is required to send a letter of apology to the offended official before he is allowed to participate in another CIVL sanctioned event.

6.4 Serious Offences

These offences include the use of excessively abusive language, hitting an official with fists feet or other body parts as well as hitting with solid objects (sticks, rocks, etc.) or otherwise causing bodily abuse (tripping, pushing, etc.)

6.4.1 Punishment

in order of severity:
Note. The punishments in the lesser offences may be invoked as well as the following:

- The offending individual may get a point reduction from his or her score. If the offender is a Team Leader, the point reduction may be for the entire team overall score.
- The offending individual may be banned from CIVL sanctioned events for a specific period of time including a lifetime ban.

The Meet Director has the power to immediately ban or disqualify a pilot for physical attack on any official.

Abusive behaviour is considered unsportsmanlike like conduct and should be treated as such. Likewise abusive behaviour on the part of CIVL official is considered unprofessional conduct and will be dealt with in a similar manner as above.

Punishment will be elimination of the official from the roster of acceptable Steward, Jury, Judge or Technical Directors.

7 PREPARING A PROTEST

The current version of the FAI Jury Handbook and CIVL Jury Annex contains comprehensive instructions on the procedures involved when a protest is submitted at a 1st Category Championship. These notes are intended as a guide to Team Leaders or individuals preparing protests.

7.1 Hierarchy of Rules

The hierarchy of rules will be:

- FAI General Section.
- Section 7, i.e. this book and relevant subsections and Annexes.
- The Local Regulations.
- Any supplementary notices issued subsequently which may have had an effect upon the published rules.

7.2 Procedure

Prior to submitting a protest you must have sought redress of the problem by means of a complaint to the Meet Director. If your complaint is resolved the procedure stops there, if it is not you may proceed to a Protest and the deadlines for these are specified in the Local Regulations, together with the protest fee. The Meet Director should note the time that a protest is presented to him and pass it to the Jury President without delay.

Protests are submitted by a pilot's Team Leader on his/her behalf. This is the case even where a Team Leader may not agree with the protest. If the pilot has no separate Team Leader, he/she may submit the protest personally.

Each protest must be in writing, in English and be accompanied by the protest fee. If the protest is upheld the fee will be returned. It should be headed with the Championship title and the name and nationality of the protestor.

It should be clear what the protest is against e.g. against a decision that the pilot infringed a rule (or rules) or against the penalty awarded for that infringement (points deduction, zero score, DSQ etc. It may not be just a general complaint against the organisers.

It may be that both of the above are protested e.g. "I protest against the decision that I infringed Rule ##. In addition, I believe the penalty awarded to be too severe if I had infringed that rule".

The protest should state what redress the protester wants and which rules he/she believes are relevant.

The protest should finish with signature, date and time.

If the protest is against more than one thing the reasons, explanations, etc. should be kept separate so as to assist the Jury. For each element of the protest the following should be stated (where applicable):

- The reason you believe the decision or penalty is wrong (quoting Rule numbers if they support the case). E.g. it may be that you believe another pilot has been treated differently in similar circumstances.
- Any witnesses you believe will support your version of events.
- Any mitigating factors.

Where possible you should submit written evidence from any supporting witnesses with your protest.

7.3 Jury Action

The Jury should deal with the protest as soon as possible. This may involve interviewing witnesses, obtaining evidence form the Meet Director, other officials and the Steward. Since the competition has to continue while this is going on people may be seen separately. The Jury may announce their decision at the end of hearing the evidence or may consider matters further on their own before reaching a decision. When a decision has been made it will be put in writing, signed by all Jury members and copies made for the Jury members, the Meet Director, the protestor and for posting on the official notice board together with the protest.

8 LOCAL REGULATIONS FOR CROSS COUNTRY EVENTS (Template)

FAI Logo
Championship logo
Official title of the championship
Place and date
Not yet approved/Approved by CIVL

To be sent to CIVL President 8 months before the competition.
To be approved, published on CIVL website and sent to the delegates 6 months before the competition.

Organised by … on behalf of …

(Club, NAC, Federation…)

These local regulations are to be used in conjunction with the most recent versions of:

- General Section of the FAI Sporting FAI Sporting Code.
- Common Section 7 of the FAI Sporting FAI Sporting Code.
- Section 7A of the FAI Sporting FAI Sporting Code.
- CIVL Competition Class (CCC) – Paragliders permitted in FAI Category 1 Cross country events.
- CIVL GAP – Centralised cross-country competition scoring for hang gliding and paragliding.

1 - Contacts

Organising NAC:
Competition organiser:
Official website:

2 - Officials

Event organiser:
Meet director:
Safety director:
Rescue coordinator:
Livetracking coordinator:
Weather forecast:
Transport and Retrieval:
Scorer:
Doctor:
Headquarters Coordinator:
Host/Hostess:
Take-Off Marshal:
Goal Marshal:
Air Marshals:
Public and Press Relations:
Photographs, videos:
Social events:
…
FAI Steward:

FAI Jury President:
FAI Jury Members:
(Give nationalities of Jury and Steward)

3 - Programme

Official Registration: Date – Hour – Place.
Opening ceremony/Parade: Date – Hour – Place.
Mandatory Safety Briefing: Date – Hour – Place.
1st Team leader meeting: Date – Hour – Place.
Welcome Dinner: Date – Hour – Place.
Official training day: Date.
Contest flying days: Date.
Prize-giving & Closing Ceremony: Date – Hour – Place.

The hours are subject to change. Any changes before the start of the competition will be posted on the website.
After the start of the competition, changes will be announced by the Meet Director at the Team Leaders briefing and posted on the official board at headquarters.

Daily Schedule
On training and competition days:
Hour: Headquarters open
Hour: Team Leader meeting
Hour: Transportation to take off
Hour: Task and Safety Committee meetings
Hour: Pilot briefing /Task briefing
Hour: Take-off window opens:
Hour: Scoring office opens
Hour: Provisional results

The daily schedule is subject to change.
Any changes to the schedule before the start of the competition will be posted on the website.
After the start of the competition, changes will be announced by the Meet Director at the Team Leaders briefing.

4 - Entry

The maximum number of pilots in the championship is xxx.
The maximum number of pilots that may be entered by a NAC is xx total (and xx of one gender).
The maximum number of pilots constituting a national team is xx total (and xx of one gender).

For Continental championships
Pilots from other continents
As per Common Section 7-2.
If any spots remain available, the organiser may accept entries from pilots from other continents.

5 - Eligibility to compete

Eligibility to compete and exceptions to pilot qualification requirements
According to Section 7A-2.
The ranking reference date for qualification criteria, nation priority table and allocation is month/year ranking published on day/month/year.
(3 calendar months before the championship starts)

6 - Application to compete

Applications must be made through (link to the official website registration page) starting from day/month/year and finishing on day/month/year.

NAC's are invited to submit applications for pilots in high enough numbers, so they can be included in case of extra allocation rounds.

Screening Committee
According to Section 7A-2.
Members: Xx, Xx and Xx (names and nationalities).

7 - Allocation and payments

Allocation will be done according to Section 7A-2.
The first allocation round will be made and results published on the official website on day/month/year.
(Suggested : the day after the period for applications is finished – Absolutely not before 3 calendar months before the championship starts.)

The entry fee payment process will start on day/month/year. (Suggested: same day as just over)
Confirmation of payment transfer must be sent to the organisers by email before day/month/year.
Applications with fees paid, but not received or confirmed by the deadline will be refused.

After the first payment deadline the team allocation table will be updated. Any unpaid places will be reallocated.
The final allocation will be made on day/month/year (60 days before the first planned flying day) until a total of (150) pilots are reached or no more applications remain.

The deadline for the final payment will be day/month/year.
For any late payment, a supplementary fee of xx euros will be applied.

Between the (day/month/year of final allocation) and the beginning of the competition, if any spot becomes open because of cancellation or for any reason, the spot will be offered:
– First to a European pilot of the same NAC.
– Second to a European pilot of another NAC (in the order of the WPRS nation ranking, starting where the second allocation round finished).
– Third, to a non-Continental pilot. (For Continental championships)

8 - Entry Fee

The Entry fee will be:
- xxx Euro per pilot.
- xxx Euro per team leader / assistant.
Team leaders who are also pilots in the competition will pay only the pilot entry fee.

The Entry fee includes:
As a minimum:
- Colour map of task area showing take-off, turnpoints, landing fields and restricted airspace and areas, with clearly visible grid matching the GPS coordinates used for the competition.
- ID card & safety/contact information.
- Contest numbers.
Also…

- Transport to take-off and retrieve on the main routes for all competition days.
- Upload of turn-points with GPS coordinates.
- GPS track-log download.
- Live tracking.
- Competitor and glider identification.
- Daily snack package, water.
- Competition souvenirs.
- Free access to all championship events and parties.
- Free internet (Wi-Fi) access at the HQ.
- Discount for accommodation.
- Emergency rescue and first aid medical service.
- …

Entry fees for the top nation – name of the nation – are to be paid to the following account:
FAI CIVL bank account details:
Address: Crédit Suisse Private Banking
Rue du Lion d'Or 5-7
Case postale 2468
CH- 1002 Lausanne
Switzerland
Account name: FAI-CIVL Fédération Aéronautique Internationale
Account Number (Euro): 0425-457968-32-6
IBAN Code: CH63 0483 5045 7968 3200 6
SWIFT/BIC Code: CRESCHZZ80A

Please indicate that the payment is the entry fee for the (name of competition) and state the member NAC.

All other entry fees are to be paid to following bank account
Account Name:
Bank Name:
Swift Code:
Account Number:
Current account.

Please indicate CIVL IDs of all the pilots you are paying for.

Refund policy
In the event of pilot withdrawing from the competition before day/month/year and who cannot be replaced by a qualified NAC-nominated pilot from that nation, a full refund will be offered (less xx Euro for administration costs). Cancellations received after this date will not be eligible for refund.

9 - Registration

Registration according to Common Section 7-5.2 and Section 7A-2.

Suggested…
Entry forms will be completed, checked and signed.
In order to speed-up the process of registration, the Team leaders can prepare and communicate the required documents to the organiser before the official registration.

10 - Insurance

The organisers require documentary proof in English of valid:
- Insurance covering public liability risk to the value of minimum xxx Euro (in letters euro) must be presented to the organisers at registration.
- State any other insurance required or recommended.

The organiser will offer at the HQ prior to registration:
- Insurance covering public liability risk at a price of xx Euro (specify amount and duration).
- Medical/accident insurance at a price of xx Euro (specify amount and duration).

11 - Equipment

All equipment must comply with Section 7A-4 and 8, and CIVL GAP.

(In addition pilots are required to fly with:
State here additional equipment: telephone, etc.)

Radio
According to Section 7A-4.
(Specific rules if any.)

Contest number
According to Common Section 7-5.
(Specify if numbers are requested, their size and where they are to be placed.
It is not allowed to have a second number on the glider beside the official competition number.

12 - Committees

Task Advisory Committee
It will include the steward and xx pilots (2 minimum) (see Common Section 7-4).

Safety Committee
It will include xx pilots (3 minimum) (see Common Section 7-4).

13 - Take-off sites

Give references to the official website pages with description of take-off.
(Specific rules if any.)

14 - Flying days

Organisers are asked carefully consider the conditions of the competition, the nature of the site and craft a suitable definition of a 'flying day', using the examples below, if appropriate.
The Local Regulations are to be defined with in collaboration with the Steward and are approved by the Bureau and by the Plenary.

Examples of flying days definitions:

—A flying day is defined as a day when a team leader briefing is held and pilots travel to the 1take-off regardless of whether any pilot starts a task.
(Can be used in situations where take-off is a significant distance from HQ, hotels, etc).

—A flying day is defined as a day when a team leader briefing is held, pilots travel to the takeoff, a task is set and at least one pilot takes-off to start the task.
or
—A flying day is defined as a day when the launch window has been opened
(Can be used in situations where the take-off is very close to HQ and travelling to the take-off doesn't take very long).

15 - Launch

Specify which launch system will be used in reference to Section 7A-3.
If towing, specify number of tugs, tow rope length, weak link strength, aero tow release height etc.

Wind speed at launch.
The maximum wind speed in which a task shall be flown is xx km/h, measured at launch altitude.
(Specific rules if any.)

Relaunch
(Specific rules if any.)

Launch window
For the task to be valid, the launch window must be open for at least xx minutes.

16 - Airspace and other restrictions

(Specific rules if any.)

17 - Goal

(Specific rules if any.)

18 - Pre-Flyers and Free flyers

According to Common Section 7-7.
(Specific rules if any, like: They will not be allowed to launch from xx minutes before the window open until xx minutes after the window close time.)

19 - Safety Issues

(Specific rules if any.)

20 - Live-tracking

According to Section 7A-4.
(Specific rules if any.)

21 - Scoring

According to Section 7A-4.

Scoring will use the ..... (specify name and version) scoring program, using CIVL GAP scoring formula ..... (specify which version).

The GPS map datum is WGS 84 and the coordinate format to be used is ….. (e.g. hddd0mm.mmm').

As per Centralised Cross-Country Competition Scoring for Hang-Gliding and Paragliding document.

- GAP parameters will be set at:
- Nominal launch: (default value = 96%).
- Nominal distance: xx km
- Minimum distance: xx km
- Nominal goal: xx %
- Nominal time: xhxx
- Score back-time in case of stopped task: xx (default value : PG= 5 min. HG=15min.)
- Early start in hang gliding (jump the gun): maximum of X seconds. Penalty of Y points per second. (By default, maximum is 300s. and penalty 2 points per second).

GAP parameters will be discussed at the first Team Leaders' briefing.

The primary source of scoring is (Live-tracking logs / GPS logs).
Any other source can be used as back-up.

22 - Penalties

According to Section 7A-6.
Specify if Pilots' nominal weight will be checked at registration and/or where scales will be available.
(Specific other penalties if any.)

23 - Complaints and protests

As per General Section and Section 7A-7.
Team Leaders are advised to read Common Section 7-14 before making a complaint or a protest.
The fee for protest will be ….. (see Section 7A-7 for maximum amount).
(State here if deadlines for complaint and protest are different from the ones defined in Section 7A-7)FAI Logo

9 LOCAL REGULATIONS FOR AEROBATIC EVENTS (Template)

FAI Logo
Championship logo
Official title of the championship
Place and date
Not yet approved/Approved by CIVL

To be sent to CIVL President 8 months before the competition.
To be approved, published on CIVL website and sent to the delegates 5 months before the competition.

Organised by … on behalf of …
(Club, NAC, Federation…)

These local regulations are to be used in conjunction with the most recent versions of:

- General Section of the FAI Sporting FAI Sporting Code.
- Common Section 7 of the FAI Sporting FAI Sporting Code.
- Section 7B of the FAI Sporting FAI Sporting Code.

Contacts and programme

Organising NAC:
Competition organiser:
Official website:
Registration:

Officials
Event organiser:
Meet director:
Safety director:
Chief Judge:
Weather forecast:
Scorer:
Doctor:
Headquarters Coordinator:
Host/Hostess:
Take-Off Marshal:
Public and Press Relations:
Photographs, videos:
Social events:
…
FAI Jury President:
FAI Jury Members:
(Give nationalities of Jury and Steward)

Programme
Practice Period:*Date – Hour.*
Registration: *Date – Hour – Place.*

Opening ceremony/Parade: *Date – Hour – Place.*
Mandatory General Briefing: *Date – Hour – Place.*
Welcome Dinner: *Date – Hour – Place.*
Official training day: *Date and hours.*
Contest flying days: *Date.*
Prize-giving & Closing Ceremony: *Date – Hour – Place.*

The programme is subject to change with CIVL approval. Any changes before the start of the competition will be posted on the website.
After the start of the competition, changes will be announced by the Meet Director at the daily briefing and posted on the official board at headquarters.

Daily schedule
On competition days:
Hour: Headquarters open
Hour: Daily meeting

The daily schedule is subject to change.
Any changes to the schedule before the start of the competition will be posted on the website.
After the start of the competition, changes will be announced by the Meet Director at the daily briefing.

Entry
The maximum number of Solo pilots is *xx*.
The maximum number of Solo pilots that can be entered by a NAC is xx.
The number of solo pilots that constitute a nation team is xx.
The number of scores per run that count for the team score is xx.
The maximum number of Synchro pairs is *xx*.
The maximum number of Synchro pairs that may be entered by a NAC is *xx*

Eligibility to compete
According to Section 7B.
The Screening Committee shall consist of (name) representing the Bureau, (name) representing the Aerobatics Committee, and (name) representing the Judges.

Application to compete
Applications must be made through *(link to the official website registration page)* starting from *day/month/year* and finishing on *day/month/year*.

Payments
The entry fee payment process will start on *day/month/year*.
Confirmation of payment transfer must be sent to the organisers by email before *day/month/year*.
The deadline for the final payment will be *day/month/year*.
For any late payment, a supplementary fee of *xx euros* will be applied.

Entry Fee
The Entry fee will be:
- *xxx Euro* per pilot.
- *xxx Euro* per team leader / assistant.
Team leaders who are also pilots in the competition will pay only the pilot entry fee.

The Entry fee includes:

- Colour map of task area showing take-off, landing fields and restricted airspace and areas.
- ID card & safety/contact information.
- Transport to take-off.
- Daily snack package, water.
- Competition souvenirs.
- Free access to all championship events and parties.
- Free internet (Wi-Fi) access at the HQ.
- Discount for accommodation.
- Emergency rescue and first aid medical service.
- …

Entry fees for the top nation – *name of the nations* – are to be paid to the following account:
FAI CIVL bank account details:
Address: Crédit Suisse Private Banking
Rue du Lion d'Or 5-7
Case postale 2468
CH- 1002 Lausanne
Switzerland
Account name: FAI-CIVL Fédération Aéronautique Internationale
Account Number (Euro): 0425-457968-32-6
IBAN Code: CH63 0483 5045 7968 3200 6
SWIFT/BIC Code: CRESCHZZ80A

Please indicate that the payment is the entry fee for the *(name of competition)* and state the member NAC.

All other entry fees are to be paid to following bank account
Account Name:
Bank Name:
Swift Code:
Account Number:
Current account.

Please indicate CIVL IDs of all the pilots you are paying for.

Refund policy
In the event of pilot withdrawing from the competition before *day/month/year* and who cannot be replaced by a qualified NAC-nominated pilot from that nation, a full refund will be offered *(less xx Euro for administration costs).* Cancellations received after this date will not be eligible for refund.

Insurance

The organisers require documentary proof in English of valid:
- Insurance covering public liability risk to the value of minimum *xxx Euro (in letters euro)* must be presented to the organisers at registration.
- State any other insurance required or recommended.

The organiser will offer at the HQ prior to registration:
- Insurance covering public liability risk at a price of xx Euro (specify amount and duration).
- Medical/accident insurance at a price of xx Euro (specify amount and duration).

Take-off site

Give references to the official website pages with description of take-off.
(Specific rules if any.)

Launch System

Specify which launch system will be used.
If towing, specify, number of tugs, tow rope length, weak link strength, aero tow release height etc.
If helicopter drop, specify D-bag rules if any.

Airspace and other restrictions

(Specific rules if any.)

Safety issues

Distance to closest care centre for minor injuries.
Distance to closest hospital for serious injuries.
Rescue boats (number, crew, equipment)
Ambulance availability and response time.
Helicopter availability and response time.
(Specific rules if any.)

Elimination runs

(Specify criteria and possible refunds, as relevant)

Rest day

(Specify if necessary)

Protests

As per General Section and Section 7B-7.
Team Leaders are encouraged to read Common Section 7-14 before making a complaint or a protest.
The fee for protest will be ….. *(see Section 7B-7 for maximum amount).*
(State here if deadlines for complaint and protest are different from the ones defined in Section 7B-7.)

10 LOCAL REGULATIONS FOR PARAGLIDING ACCURACY EVENTS (Template)

FAI Logo
Championship logo
Official title of the championship
Place and date
Not yet approved/Approved by CIVL

To be sent to CIVL President 8 months before the competition.
To be approved, published on CIVL website and sent to the delegates 6 months before the competition.

Organised by … on behalf of …
(Club, NAC, Federation…)

These Local Regulations are to be used in conjunction with the most recent versions of:
General Section of the FAI Sporting FAI Sporting Code.
Common Section 7 of the FAI Sporting FAI Sporting Code.
Section 7C of the FAI Sporting FAI Sporting Code.

1. **Contacts**

Organising NAC:
Competition organiser:
Official website:
Registration:

2. **Officials**

Event organiser:
Meet director:
Safety director:
Chief Judge:
Event Judge:
Target Judge
Launch Marshal:
Scoring
Transport:
Doctor:
Headquarters Coordinator:
Host/Hostess:
Public and Press Relations:
Photographs, videos:
Social events:
…
FAI Steward:
FAI Jury President:
FAI Jury Members:
(Give nationalities of Judges, Jury and Steward)

3. **Programme**

Official Registration: *Date – Hour – Place.*

Opening ceremony/Parade: *Date – Hour – Place.*
Mandatory Safety Briefing: *Date – Hour – Place.*
1st Team leader meeting: *Date – Hour – Place.*
Welcome Dinner: *Date – Hour – Place.*
Official training day: *Date.*
Contest flying days: *Date.*
Reserve day: *Date*.
Prize-giving & Closing Ceremony: *Date – Hour – Place.*

The programme is subject to change. Any changes before the start of the competition will be posted on the website. The changes are subject to CIVL Bureau approval.
After the start of the competition, any programme changes will be announced by the Meet Director at the Team Leaders' briefing and posted on the official notice board at headquarters.

4. **Daily schedule**

On training and competition days:
Hour: Headquarters open
Hour: Team Leader meeting
Hour: Transportation to take off
Hour: Start of rounds:

The daily schedule is subject to change.
Any changes to the schedule before the start of the competition will be posted on the website.
After the start of the competition, changes will be announced by the Meet Director at the Team Leaders' briefing and posted on the official notice board at headquarters.

5. **Entry**

The maximum number of pilots in the championship is *xxx*.
The maximum number of pilots that may be entered by a NAC is *xx* total (and *xx* of one gender).
The maximum number of pilots constituting a national team is *xx* total (and *xx* of one gender).

For Continental Championships…
If more than xxx (European, Asian…) pilots are pre-registered, an allocation system will be implemented (see Section 7A-2.3 for similar system).
Guest pilots from other continents are welcome to compete as per Section 7C if the number of pre-registered (European, Asian…) pilots is less than xxx.

6. **Entry Fee**

The Entry fee will be:
- *xxx Euro* per pilot.
- *xxx Euro* per team leader / assistant.
Team leaders who are also pilots in the competition will pay only the pilot entry fee.

The Entry fee includes:
- *ID card & safety/contact information.*
- *Competitor and glider identification.*
- *Transport to take-off and retrieve on the main routes for all competition days.*
- *Daily snack package, water.*
- *Competition souvenirs.*
- *Free access to all championship events and parties.*
- *Free internet (Wi-Fi) access at the HQ.*
- *Discount for accommodation.*
- *Emergency rescue and first aid medical service.*

7. **Payments**

Entry fees for the top nation – *name of the top nation* – are to be paid to the following account:
FAI CIVL bank account details:
Address: Crédit Suisse Private Banking
Rue du Lion d'Or 5-7
Case postale 2468
CH- 1002 Lausanne
Switzerland
Account name: FAI-CIVL Fédération Aéronautique Internationale
Account Number (Euro): 0425-457968-32-6
IBAN Code: CH63 0483 5045 7968 3200 6
SWIFT/BIC Code: CRESCHZZ80A

Please indicate that the payment is the entry fee for the *(name of competition)* and state the member NAC.

All other entry fees are to be paid to following bank account
Account Name:
Bank Name:
Swift Code:
Account Number:
Current account.

Please indicate CIVL IDs of all the pilots you are paying for.

Payment deadline
The deadline for the final payment will be *day/month/year*.
For any late payment, a supplementary fee of *xx Euro* will be applied.

Refund policy
In the event of pilot withdrawing from the competition before *day/month/year* and who cannot be replaced by a qualified NAC-nominated pilot from that nation, a full refund will be offered *(less xx Euro for administration costs).*
Cancellations received after this date will not be eligible for refund.

8. **Pre-registration**

Pre-registration must be made through (link to the official website registration page) starting from day/month/year and finishing on day/month/year.

For Continental championships.
Participation for pilots of other continents will be confirmed on day/month/year.

9. **Registration**

According to Common Section 7-5 and Section 7C-2.
State specificities if any.

10. **Insurance**

The organisers require documentary proof in English of valid:
- Insurance covering public liability risk to the value of minimum *…. Euros*. It must be presented to the organisers at registration.
- *State any other insurance required or recommended.*

The organiser will offer at the HQ prior to registration:

- Insurance covering public liability risk at a price of …. Euro (specify amount and duration).
- Medical/accident insurance at a price of …. Euro (specify amount and duration).

11. **Equipment**

All equipment must abide by Section 7C-8.
In addition, pilots are required to fly with:
(State here additional equipment: telephone etc.)
(Towing: specify if tow release will be available for rent or buy)

Contest number
According to Common Section 7-5.
(Specify if numbers are provided, their size and where they are to be placed.
Specify if it is forbidden to have a second number on the glider beside the official competition number.)

Radio
(State the types of radio which can legally be used, the frequencies reserved for the organisers, emergency services etc. and the frequencies allocated to individual teams.)

12**. Safety committee**

It will include *xx pilots (2 minimum)* (see Common Section 7-4).

13. **Competition site**

Location
Give references to the official website pages with description of take-off, landing etc.
(Specific rules if any.)

Take-off method
Describe.

Flight boundaries
Specify controlled airspace or other areas where flights by competing gliders are prohibited or restricted, if any. Such areas shall be precisely marked on published maps.

14. **Number of rounds**

According to Section 7C-5.
(State here if less than 12 rounds are programmed)

15. **Rest day**

According to Section 7C-3.7.
(Specific rules if any.)

16. **Wind speed**

According to Section 7C-3.
The maximum permitted wind speed,as measured at the target during the final 30 seconds of a competitor's flight, will be …. per second.
(Specify any special or different equipment or set-up for wind speed indicators and wind speed recording.)

17. **Scoring**

Target radius is x metres.
The Nation's team score for each round shall be the aggregate score of the best x pilots in the Nation's team.

18. **Guest pilots**

If appropriate, in Continental championships.
For flying order purpose, guest pilots will be organised by the Meet Director in teams of maximum 12.
Scoring of guest pilots according to Common Section 7.

19. **Amateur video evidence**

Amateur video evidence will / will not be accepted.
(If so under what conditions. Suggested…
The Organisers will provide video recording of landings. In the case where amateur video evidence is available when an official complaint is made, the Competition Director and Chief Judge reserve the right to choose whether and when to view that video evidence. The decision will be made on a case to case basis.
Further information regarding the policy on video evidence will be provided at the first pilot briefing.)

20. **Penalties**

According to Section 7C-6.
(List specific penalties if any.)

21. **Complaints and protests**

As per General Section, Common Section 7 and Section 7C-7.
Team Leaders are encouraged to read Common Section 7-14 before making a complaint or a protest.
The fee for protest will be ….. *(see Section 7C-7 for maximum amount).*
(State here if deadlines for complaint and protest are different from those defined in Section 7C-7)

22. **Emergency procedures**

Specify response time for evacuation by ambulance to hospital (state location(s) and any specialist centres).
Specify helicopter response time if available.

23. **Safety issues**

(Specify if any.)

24. **Other information**

(Specify if any.)

11 ENTRY FORM (Template)

NAC CHAMPIONSHIP ENTRY FORM

Name of Event, Location, Dates

All pilots must be validated by their NAC and registered in the online FAI Sporting Licence Database prior to the start of the Championship.
NACs should nominate the pilots they wish to enter in the Championship on the form below by *(date)*, with the pilot's CIVL ID number. An authorised NAC representative must sign this form, with official stamp if applicable.
Please see Local Regulations for further information. Please note that individual pilots will be required to complete an additional online entry form providing all the personal details required.
Send completed form to: *(organiser email and/or mailing address)*

Name of National AeroClub _____
Address _____
_____ Tel/email _____

We wish to enter the following competitors who qualify under the FAI Nationality or Residence Rules (General Section 3.1.3):

Family Name/First Name	Nationality/Res	Age	Gender	CIVL Pilot ID n° (WPRS)
1.				
2.				
3.				
4.				
5.				
Etc.				

The maximum number of pilots that may be nominated is *(xx – spaces in form above).* The maximum number of each gender that may be entered by a NAC is stated in the Local Regulations. The maximum number of pilots constituting a national team is stated in the Local Regulations. If an allocation system is used, pilots will be accepted in the order stated above (gender permitting). Accepted pilots may be substituted with eligible pilots validated by the NAC up to the start of the Championship.

Name and email of Team Leader (ifappointed) _____
Names/number of Assistants (ifknown) _____

ENTRY FEES. For each pilot (amount and currency)
For each assistant (amount and currency)
For the Team Leader (amount and currency)
Total _____

Deadline for payment of pilot fees is: *(date)* See Local Regulations for payment details.

I/We declare that the above information is true, and that all the pilots meet the required qualifications for entry to this competition as per Section 7 and the Local Regulations.

Signed _____

Name _____ _____ Position in NAC _____

Date _____

12 WAIVER FORM (Template)

RELEASE OF LIABILITY, WAIVER OF LEGAL RIGHTS

Please read carefully. This is a release of liability, waiver of legal rights ***:***

1. I am a participant in the …… Championships held at …… from …….. to ……..201_ "the Championships"). I acknowledge that participating in the Championships or any other activity related thereto (collectively, the "Events") involves INHERENT DANGERS, may be HAZARDOUS and involves RISK OF PHYSICAL INJURIES OR DEATH. I expressly assume all risks associated with participating in the Events, including, without limitation to direct participation in the Championships or in training sessions, accessing restricted areas, sharing area facilities with people not directly involved in the Events and travelling in and between the Events' venues. Despite all the risks, I voluntarily choose to take part in the Events. (Initials:……..)
2. In consideration of receiving permission to take part in the Events, I agree to release and hold harmless the contest organisers, the …… National Aeroclub, the property owners of the operation areas (including launch and landing areas), the Federation Aéronautique Internationale and its Hang Gliding and Paragliding Commission , their respective affiliates, agents, officers, directors, owners, commission or jury members, contractors, volunteers, employees and insurers (collectively, the "Released Parties") from any and all claims I might make as a result of physical injury, including death, or property damage sustained in connection with the Events. I promise not to sue the Released Parties and agree that if anyone is physically injured or property is damaged while I am engaged in the Events, I will have no right to make a claim or file a lawsuit against the Released Parties. The provisions of this paragraph 2 shall not apply to misconduct determined to have been undertaken intentionally or recklessly. (Initials:……..)
3. This Release of Liability, Waiver of Legal Rights supersedes any other agreements or representations by or between the parties and is governed by the laws of …… …….. I intend this document to be interpreted as broadly as possible. I agree that exclusive jurisdiction and venue for any legal action shall be in ……..courts and such courts have personal jurisdiction. (Initials:……..)
4. If any part of this agreement is determined to be unenforceable under the applicable law, all other parts shall still be given full force and effect and the agreement shall be completed in respect of the aspects covered by the part which is declared unenforceable as to give effect to the intent herein expressed to the fullest extent permissible by law. (Initials:……..)

I HAVE CAREFULLY READ THIS DOCUMENT AND FULLY UNDERSTAND ITS CONTENTS. I AM AWARE THAT THIS IS A RELEASE OF LIABILITY, WAIVER OF LEGAL RIGHTSAND I SIGN IT OF MY OWN FREE WILL.

Signed on this date:

Signature of Participant — Printed name of Participant

Signature of Witness — Printed name of Witness

13 PARAGLIDER PILOT XC EXPERIENCE DECLARATION (Template)

All competing pilots (irrespective of their glider class) must complete the Pilot Experience Declaration form outlining their general flying experience and specific experience and skills with their current glider. The form should be completed online in the pilots' WPRS profile. Completed forms will be provided to the organiser prior to physical registration.

This information is not intended to be used as part of a qualification or selection process. Its purpose is to make pilots aware of their skill levels (or lack thereof).

This data will not be made public, but may be used in case of incidents.

NACs should make sure that the pilots they register have reached the 'basic' level of skills listed below, for the glider they are flying.

Pilot Name:
CIVL ID:
Team (Nation):
Championship:

A. Pilot skills

The basic skills necessary to fly in a 1st Category competition are the ability to:
- Take off and land safely.
- Fly in a crowded environment, with respect for the rules and other pilots.
- Navigate a safe path through the air, avoiding areas of turbulence and rotor.
- Handle the wing correctly in the air to avoid spins and stalls.
- Feel the wing and use correct inputs to avoid collapses, even in extreme turbulence.

Once the minimum level of competence has been reached, the pilot must further improve his safety by acquiring the skills below:

- Controlled management and recovery from asymmetric and symmetric collapses: managing correct collapse proportions and recovering without cascading events.
- Developed collapses: ability to cope with auto rotational G forces and disorientation, and show good recovery.
- Dealing with riser twists: untwisting.
- Controlled entrance and recovery from full stall; symmetric full stall entrance whilst keeping the span (without the tips touching); controlled full descent without rotation and clean recovery by building the span completely before flight.
- Effective recovery from tip cravats.
- Appreciation of spin point; show the ability to reach the point of spin and react immediately.

Regular SIV trainings are recommended.

B. Pilot experience

1. Approximate total flight time in hours:

2. Approximate thermal flight time during the last 12 months:

3. How many competition tasks have you flown in last 5 years:

4. What has been your best WPRS ranking?

5. What is your current WPRS ranking?

6. How familiar are you with the following manoeuvres or incidents?
It is strongly recommended that manoeuvres are practised above water and in a safe or supervised conditions (boat, life vest, etc.).

N = Never tried
O = tried Once or more times
P = Proficient

☐Search for the spin point
☐Frontal collapse
☐Asymmetric collapse
☐Parachutal stall
☐Full Stall
☐Fast descent (> 6 m/s)
☐Other (please specify)

7. Have you visualised doing the above manoeuvres?
(it can be very useful at low cost and risk).

8. Flight time in hours with your paraglider:

9. Main reserve parachute
Make:
Model:
Max Certified Load:
Last Repack Date:

10. Second reserve parachute
Make:
Model:
Max Certified Load:
Last Repack Date:

Pilots should check and repack their reserves regularly and get used to throwing them while in flight simulators.

Signed (at physical registration): Date:

14 CERTIFIED GLIDER STATEMENT – XC HANG GLIDERS (Template)

I, the undersigned, declare that the Class ___ glider _____ (make) _____ (model) I will fly in the _____ (Name of event) _____ Championship, from _____ to _____ (dates) is a model certified by one or more of the internationally recognized certifying bodies (namely the DHV, HGMA or the BHPA). Furthermore I declare that I have not altered the configuration of the glider since purchase, in a manner that would take it out of certification, and as far as I know and as far as I am aware it is in certified configuration and I undertake not to alter this configuration during the championship. I understand that I am the sole individual responsible for the integrity of my glider and to the best of my knowledge it is damage free and airworthy.

Date

Signature of Participant Printed name of Participant

Signature of Witness Printed name of Witness

If your glider is not a certified model or is not in certified configuration
DO NOT SIGN THIS STATEMENT

15 CERTIFIED GLIDER STATEMENT – XC PARAGLIDERS (Template)

I, the undersigned, declare that the Class 3 glider (paraglider)

(make and model) …….

that I will fly in the (Name of event) …….

from … to … (dates)

is certified by one of the CIVL recognised certifying bodies (Test Houses). Furthermore I declare that it is in certified configuration and I undertake not to alter this configuration. I understand that I am the sole individual responsible for the integrity of my glider.

Date

Signature of Participant Printed name of Participant

Signature of Witness Printed name of Witness

If your glider is not a certified model or is not in certified configuration
DO NOT SIGN THIS STATEMENT

16 CERTIFIED GLIDER STATEMENT – AEROBATIC PARAGLIDERS (Template)

I, the undersigned, declare that the paraglider

(make and model)

that I will fly in the (Name of event)

from

to (dates)

is certified for shock and load tests by one of the CIVL recognised certifying bodies (Test Houses) according to EN 926-1 or LTF 91-09,

Date

Signature of Participant Printed name of Participant

Signature of Witness Printed name of Witness

17 CERTIFIED GLIDER STATEMENT – ACCURACY PARAGLIDERS (Template)

I, the undersigned, declare that my glider

(name, make and model)

is EN certified.

Furthermore, I declare that it is in certified configuration and I undertake not to alter this configuration.

I understand that I am the sole individual responsible for the integrity of my glider.

Date:

Printed name of Participant Signature of Participant

Printed name of Witness Signature of Witness