

ANNEX 2 A GUIDE FOR THE ORGANISERS OF FAI CONTESTS IN THE OUTDOOR FREE FLIGHT CLASSES

This issue is based on the Guide approved in 1999 with modifications to reflect changes to the FAI Sporting Code Section 4 up to the 2015 edition **and revised in 2016**.

3.A2.1. Objective

This document is intended to specify guidelines for the organisation of outdoor free flight international contests, for the benefit of both the organisers and the competitors. It is emphasised that recommendations are given and these do not have the same status as the binding regulations in the FAI Sporting Codes. However, since it is widely distributed and should be regarded as the standard for international competitions, organisers should avoid confusion by announcing in advance any changes from this guide such as may be necessary to suit local circumstances. These changes should be approved by the CIAM Bureau for a Championship or by the appointed FAI Jury for an Open International event.

This guide is applicable to World and Continental Championships in classes F1A, F1B, F1C and for Junior Championships at which F1P is flown in place of F1C. Organisers of Championships should note the administrative advice given in the CIAM volume ABR on the organisation of Championships. For organisers of FAI Open International events, appendix A gives changes and comments appropriate to Open Internationals for classes F1A, F1B, F1C, F1P and also F1G, F1H, F1J, **F1Q, and F1S**.

Where this guide refers to the FAI Sporting Code Section 4 the relevant paragraph is quoted in brackets.

3.A2.2. Site

A good flying site and suitable weather conditions are of primary importance to any free flight contest. The field should be flat and as large and as unobstructed as possible. A grass surface is best and there should be a minimum of dusty or rocky surfaces which can damage models. Its adequacy should be measured in terms of the likely distance which will be flown by models making good flights in thermals in the range of weather conditions to be expected for the contest. It should be noted that in a steady wind of 9 m/sec a model will travel over 3.5 km in a flight of 6 minutes and a flight of this duration may result from a 3 minute maximum flight taken high in a thermal or a fly-off flight to a longer maximum. However, weather patterns should be such that these high winds are unlikely. Where it is possible that some flights might leave the field, consideration must be given to the feasibility of retrieving models from the surrounding terrain.

Other aspects affecting the suitability of a site include (not in order of priority):

- a) the model retrieving conditions on the field;
- b) the ease of access for competitors arriving by road or by public transport and via international ports and airports;
- c) the availability of adequate accommodation for all competitors, team managers, officials, and at least some supporters and helpers;
- d) the time taken to travel between the official accommodation and the flying site (desirably this should be less than 30 minutes);
- e) the availability of local hotels and camp sites for additional supporters;
- f) the possibility of parking vehicles on the field;
- g) local practice facilities if the field is unavailable prior to the start of official practice.

When proposing a site in a Championships proposal to the CIAM, the National Aero Club must give a detailed description of all the aspects discussed above. The accommodation and camping facilities must be described and the entry fee stated, split into an obligatory part and a part for food and accommodation (B.7.4). These fees should be justified to CIAM by including an estimated income and expenditure budget for the Championship (Annex A1 to volume ABR). CIAM should be given a detailed summary of weather conditions at the time and place of the proposed event, compiled by the official meteorological organisation of the country and covering such aspects as the distribution of wind speed and direction throughout the day, range of

temperatures, sunshine and rainfall. Note that the decision on the location of a Championship is normally decided two years in advance of the event (B.6.1).

cont/...

It should be arranged for a CIAM representative from another country to visit the flying site and facilities (preferably at the same time of year as the Championships); this official may be a member of the CIAM Bureau, or the Chairman or a member of the CIAM Free Flight Subcommittee, a CIAM Delegate, or a member of the FAI Jury at a recent Free Flight Championships. In the case of CIAM Delegates or CIAM Bureau members the chosen representative should have recent free flight knowledge. The CIAM representative should discuss the site with internationally known and respected modellers who fly FAI classes and regularly use the proposed site.

Well in advance of the event information should be sent to National Aero Clubs and members of the FAI Jury including a description of the site and any special features. Maps should be given showing the location **and coordinates** of the flying field, the accommodation and arrival registration point relative to roads and local towns and also a detailed map of the flying field with its entrances and any restricted access areas.

3.A2.3. Timetable

The time of year for the contest should be chosen so that the flying conditions, ground surface conditions, temperature and weather may be expected to be agreeable for the majority of competitors. Times of year in which intense thermal activity or strong winds are probable should be avoided, or alternatively there should be adequate daylight available to allow contest flying to be suspended during the part of the day when thermals and wind are at their strongest (B.14.1).

The first day of a championships is for arrival and registration. The location of the registration office should signposted and be indicated on a map included in the bulletin. At registration the participants should be given all relevant information, such as maps, schedules, lists of participants, competitors' numbers, meal tickets and accommodation details.

It is required (B.8.4) that at least one practice day be provided before the contest. Model processing must be carried out according to B.17.13 for the number of models (B.17.1) allowed for each competitor. Specific measurement of the model characteristics is not required before the event (B.17.13) but competitors have the right to have official checking of launching cables, rubber motors, swept volume of piston motors, and model minimum weight. To facilitate the smooth running of processing a schedule should be established with equal slots available for each team. During registration teams may choose their preferred slot from the times remaining available on the schedule. During processing the competitors will have to give the certificates of the four models entered in the competition. The organiser will mark these four models with a unique stamp or sticker. If a stamp is used it is essential that it is with a permanent ink which does not wipe off under the effect of rain, model fuel or lubricants. The organiser should record the identification of the models entered and this should be marked on the score card to be used for that competitor. If a competitor wants to replace one of these four models, he will have the right to do so up to one hour before the start of the contest (B.17.10.). In this case, he must present to the organiser the corresponding certificate for the new model. The time and place should be clearly indicated for any additional model checking which a competitor may request.

The normal schedule for Championships is for one day to be allotted to each class F1A, F1B, F1C/P. The order is no longer specified by the Sporting Code. Consideration should be given to the numbers involved in each class and the likelihood of flyoffs which could extend to the following day. F1A usually has the largest number of competitors and the day when the organisers consider it will be more convenient to have the maximum number of timekeepers available is one factor in deciding the order. ~~Longer flyoffs are more likely for F1B and F1C and it could be advisable to have these early in the order, particularly if the schedule includes an intermediate reserve day before the 3 classes have been flown.~~

On each day time is required during the daylight hours for the **seven-basic** rounds plus any fly-off rounds. It is possible to commence the contest before sunrise in order that there may be an interruption during the part of the day having most wind or thermal activity (B.14.1). The starting time chosen may be constrained by the catering and accommodation facilities and also the need to avoid making the hours too rigorous for all participants, but these are secondary constraints compared with the requirement to hold the flights during the best possible conditions. It is indeed a formal requirement that at least two rounds take place when wind and thermal activity are expected to be at a minimum (B.14.1). The normal round duration is one hour and there should be a short break of at least 10 minutes between each round, to allow for the time taken by

competitors moving to new launch poles and by the administration of timekeeping. A longer break should be allowed if wind direction changes may require moving the starting line during the day.

For the fly-off rounds adequate time should be allowed between rounds for the preparation and recovery of models in the expected range of meteorological conditions; the gap between successive fly-off rounds should be at least 30 minutes on even the best flying site. If daylight time may be too short to allow completion of the fly-off process in one evening, contingency plans should be established for completing the process during the following day. To cater for delays in the competition due to the weather, long fly-offs or other reasons, it is essential to allow at least one free day after the scheduled end of flying and before the conclusion of the Championships (before presentation of prizes and departure of competitors).

An alternative timetable that has been used to suit local weather patterns is to hold the rounds during the morning of one day followed by the flyoff on the next morning. No other flights are made that day and the next class starts on the following day. This gives a relaxed schedule with flying in good conditions followed free afternoons each day, but it does increase the number of days required for the championship.

The published timetable should include the starting and finishing times of the rounds and also the fly-off rounds for each class. Besides the schedule for flying, the timetable should also include the time and place of:

- a) a meeting of the organisers with the team managers after arrival and also in the evening before each contest flying day;
- b) model processing,**
- b)c) briefing meetings for the timekeepers for each class;
- e)d) an opening ceremony, at a time not infringing upon model checking or practice periods
- d)e) an awards presentation ceremony for the award of FAI Trophies and Diploma to the winners.

It is important that at least some members of the FAI Jury are invited to and are present at each of these functions, that is: each team managers' meeting, **model processing**, each timekeeper briefing, the opening and the awards ceremonies.

Copies of the timetable should be distributed at least 2 months in advance to National Aero Clubs, with points of detail supplied if necessary in hand-outs to all participants upon arrival at the event.

3.A2.4. Flying Site Organisation

This section of the guide concerns the running of the flying site on contest days. While split into a number of headings here, it is essential that all aspects of the organisation work closely together.

3.A2.4.1. Officials

Separate spheres of duty require a contest director, a chief timekeeper and a site organiser. The contest director takes overall control and is responsible for contact between the team managers, chief timekeeper, the model processing staff, other officials and the FAI Jury. He should arrange for contacting the Jury in the event of a protest being received. The chief timekeeper is in charge of all aspects of timekeeping and recording and displaying scores, discussed in section 5 of this guide. The site organiser takes care of administrative and logistic matters not immediately impinging on the contest flying.

The organisers must provide timekeepers for each launch position (two per position for Championships, at least one per position for Open Internationals). An additional timekeeper must be provided at each position for fly-offs (B.9.2). If foreign timekeepers are available, they will be used as a priority and should provide their own equipment (tripod, stopwatches and binoculars) (B.13.1).

Interpreters must be available at all stages of the Championships to allow communication between the main officials, team managers and the FAI Jury. An essential minimum is to ensure that these three categories of peoples are able to communicate via the official languages specified for the Championships; the smooth running of the event is aided by also supplying interpreters for teams which are unable to converse in any of the official languages.

3.A2.4.2. Starting Line

It is necessary to make a draw to determine the starting position of each team in the first round (B.9.1.b). It is usually most convenient to make the draw by a random electronic

ordering of the nations entered in the championship in the presence of the FAI Jury. The list of starting poles can then be printed and distributed at a team managers meeting. Since the defending champion does not have a team manager, it is customary to adjust the draw so that the defending champion is on a pole next to that of the national team from his country.

The Sporting Code specifies the spacing between launching positions on the starting line (B.9.1). These positions should be clearly marked in a secure way, but in such a way that it is possible to move the line to allow for wind changes. One successful solution is to have ground markers for each starting position attached to a cable at the correct spacing: the complete cable can then be towed to a new launch position when required and without any additional need to recheck the spacing.

A good way to facilitate line changes due to wind shifts is to have a spare cable with ground markers attached, in order to prepare the new starting line before the end of the running round. This gives the possibility to save time to move the line, the new line being ready before the end of the previous round.

The only other items required to be kept at the starting line are the timekeepers' equipment and containers for impounded accessories (fuel).

3.A2.4.3. Launching Area

There should be clear markings to keep spectators at least 25m away from the starting line (B.9.1) in the directions upwind, downwind and across wind from each end of the line. In the case of F1A the upwind limit should be at 75m to allow for the towline length. No substantial fixed structures should be permitted within this area, neither those erected by the competitors nor the organisers, and anything higher than 2 metres should be quickly collapsible. Competitors should place their model boxes, winding supports, starters, etc, at least 10m from the line (downwind of the line for F1A, or upwind of the line for F1B, F1C and F1P). An official should be designated by the contest director to monitor obstructions and the number of people in the launch area. Under rules 3.1.10, 3.2.10, 3.3.10 a competitor is allowed one helper at the launching pole, plus the team manager **and assistant team manager.**

During the rounds test flying is not allowed near the starting line or upwind of the starting line. The Organiser shall specify an area to be used for test flying during the rounds. (B.9.1)

3.A2.4.4. Retrieving

Advance literature should specify the aids which competitors may use when chasing and returning models. Limits should be specified as to where mechanical aids, such as cycles, motor cycles, cars, may be used and parked. They should not be allowed in the launching area nor should they be left in a position where they may obstruct the timekeepers' view of models. For safety reasons it should be forbidden for people to chase models in flight with motorised vehicles unless there are at least two people (one to drive and one to observe the model). Some teams usually employ radio aids when retrieving models and it should be specified in advance which frequencies will be available.

3.A2.4.5. Equipment

An official clock, reading to the nearest second, should be used to time the rounds. It should be accurate throughout the day and should not be adjusted after the start of the contest. The clock should be available for reference by competitors and defines the timetable as published, unless changes have been announced. The start and finish of rounds should be marked by audible and visible signals, such as flares. The form and exact timing of these signals must be defined in advance (for example, the round starts or finishes at the moment the flare bursts). A public address system is helpful for communications from the organisers, calling for the Jury, making additional announcements on round times, time remaining in the round and such like. If used for communications for competitors it must be audible at all points on the starting line and announcements must be made in all official languages.

A meter should be available to measure wind speed and preferably should have calibration confirmed by a recognised agency or procedure. The meter should be held or mounted at 2m above the ground and should be monitored throughout the contest. The Jury must be informed if the wind speed approaches the advisory limit (B.15.1.a).

The equipment required for timekeeping is described in section 5, but note that the organisers have a responsibility to ensure that all timekeepers are fully equipped - either by providing them with the equipment or confirming that they have and will bring adequate equipment of their own. Particularly note the requirements for electronic stopwatches (B.8.10 and B.13.4) and tripods (B.9.2 and B.13.7.a). The organisation must have equipment necessary for processing the times

recorded by the timekeepers. A scoreboard is essential for displaying the latest results and should be large enough to be read by a group of people at any one time. It is desirable to have an internet connection to allow uploading latest scores to an internet web site. Processing requires separate facilities for spot checking models and checking new towlines or rubber motors - see section 4 of this guide. The containers for fuel must be kept at the starting line under the control of the timekeepers.

The organisers shall provide fuel for F1C, at cost for practice flying and free for use in the competition (B.5.6). The fuel must be requested in advance (at the time of entry). Fuel supplied by organisers shall be mixed from top quality material. Methanol shall be at least commercial grade without additives. Castor oil, when used, shall be first pressing castor oil. **It is recommended that a small container is used for combining the oil and methanol (such as 2 litres of fuel in a 3 litre container), this should be thoroughly mixed then transferred to a large container, repeating until enough fuel is available. The fuel mixes most easily if the temperature is at least 20C and humidity should be low to avoid the methanol absorbing water. The fuel should be transferred to small bottles for sale to competitors for testing or for use at the competition. The means of distributing the fuel to competitors must be arranged.**

The organisers must be able to transport all the equipment to and across the flying field, with vehicles suitable for the terrain and able to transport it to any position on the field which may be required according to wind direction.

The organiser must have available a suitable stamp or stickers for identifying the models after registration (B.17.13.a).

The organisers should make available small stickers for competitors to place on their models to give instructions in the local language of action to take if finding a model, these to be available at the time of registration. **To aid competitors who are training before registration, early availability of the stickers is helpful, or alternatively the text of the stickers could be published in a bulletin before the event to allow competitors to prepare their own stickers.**

3.A2.4.6. Facilities

Refreshment, toilet, and first aid are desirable facilities on the flying field and should be kept well away from the launching area and from the areas in which models may land. The provision of fire-fighting equipment may be appropriate if the field has a high fire risk, and in any case a means of contacting the local fire service must be defined. Arrangements should be made to supply food and drink during the day to competitors and the arrangements for this must be announced in advance. Any meals during the competition should be light meals and easy to distribute, such as packed lunches. Car parking should be designated so as not to interfere with flying but with regard to easy access to the starting line for competitors. ~~If required and arranged in advance, a transport service may be provided to take competitors between the official accommodation and the flying site, with the bulk of this required well before the scheduled start of contest flying and after the close of flying, but with a less intensive service required during the day.~~

3.A2.5. Model Checking

There are four phases to this operation with the following requirements:

- 1) The first phase involves checking the competitors and their model certificates on arrival, entails:
 - a) check that the competitor holds a valid FAI Sporting Licence issued by his National Airports Control in accordance with the Sporting Code (B.3.2 and General Section Chapter 8). The General Section requires checking that licences are recorded on the FAI licence database. If the Sporting Licences are impounded during the event, plans should be drawn up for returning them at the end of the competition.
 - b) check the FAI Model Specification Certificates for up to the maximum number of models which may be submitted by each competitor (B.17.1, B.17.7)
 - c) in the case of models not correctly processed the organisers must carry out this processing (B.17.8).
 - d) check that there is an FAI sticker on each model and equivalent markings on every main part of each model in agreement with the corresponding certificate and identifying each model with a unique code with the letters or numbers of the required size (B.17.6.a.ii). Confirmation of this check should be shown by marking across the edge of the sticker and the model with an indelible special symbol or stamp of the organisation

(B.17.13.a). The identifying letters or number (unique code) on the four models of each competitor should be recorded on the score sheet which will be used for recording the flight times for that competitor. This helps the timekeepers to check and record the identifying code of the model used for each flight.

- e) check that the Olympic identification and FAI national licence number or FAI Unique ID number of the competitor appears on the wing of the model and is of the correct size (B.17.6.a.i).
 - f) allow competitors to measure model characteristics on the official processing equipment (B.8.3.)
- 2) The second phase involves allowing competitors to check on towline length, rubber motor weight, piston motor swept volume and model minimum weight on the official processing equipment (B.8.3 and B.17.13). The team managers should be informed of the arrangements for carrying out this checking, which may be made both according to a schedule and also at any other time requested by the competitor (but possibly subject to more delay in that case).
- 3) The third phase of checking requires that during the competition the organiser should:
- a) process the important characteristics of at least 20% of the models (B.17.11), including the towline length for F1A and the rubber motor weight for F1B. The models checked should be chosen at random and it should be done in a manner so as not to inconvenience or hinder competitors; it is best to briefly impound and check a model immediately after it has made an official flight. Advance notice of the check should not be given. **The competitor and/or the team manager should be present during the processing.** The results of these checks should be recorded.
 - b) provide facilities for checking extra towlines and rubber motors in addition to those checked under (2). This may be required for the convenience of competitors at any time.

Note that these checks are in addition to the model identification checks which the timekeepers make before each flight

- 4) The final phase comes after provisional results have been achieved. It requires checking of all the characteristics of each model used by competitors placing first, second and third (B.17.12). It is prudent to impound at least the fourth place models as well, for processing in case of any disqualification in the first three. It is possible that the rechecking be carried out at the flying site if good facilities are available there for accurate measurements; alternatively, the models should be impounded at the flying site and taken for processing at the chosen site.

The equipment required for processing thus includes:

FAI model certificates and stickers, item (for item 1.c above);

A means of marking registered models

Means of accurately weighing models and rubber motors ~~and measuring models and computing the projected area.~~ **Scales should have been calibrated and digital scales should read to at least 0.1g for model weighing and 0.01g for weighing motors , items (1.c), (2), (3.a), (3.b), and (4);**

Means of measuring models and computing the projected area, both on and off the flying site, items (1.c), (3.a), (3.b), and (4);

A measure for accurate determination of the 50m maximum towline length and a means of applying the specified tensile load when checking the towlines, (1.c), (2), (3.a), (3.b), (4);

Accurate instruments for measuring motors and calculating the motor capacity, items (1.c), (2) and (4);

Official fuel for class F1C, needed for practice and the competition (3.3.2, B.5.6);

A means for dispensing the official F1C fuel to competitors during the competition ~~and containers for impounding the receptacles used by the competitors to hold their working supply of fuel.~~ Fuel bottles should be clearly marked to indicate their contents, not to be confused with drinks.

3.A2.5.1 Motor volume

To determine motor swept volume the stroke and bore of the motor must be measured accurately with precision engineering tools. Note that (1.4.16) defines that the swept piston area is calculated from measurements of the bore of the liner at the top dead centre. **One recommended technique is to:**

- a) Rotate propeller to be at top dead centre position and keep in this position
- b) Remove head and measure distance from top of head to piston, zero calliper reading
- c) Rotate propeller 180° to bottom dead centre position
- d) Measure distance from top of head to piston, calliper reading now gives stroke
- e) Rotate propeller to top dead centre and measure diameter at top of piston
- f) Repeat all measurements and confirm consistent results

The swept volume is then found by multiplying the swept piston area by the stroke. These calculations to determine capacity must use the full accuracy of the measured dimensions.

When the swept volume has been determined (1.4.16) specifies that the calculated volume must be truncated to two decimal places. This means that the figures in third and later decimal places are deleted and the result compared to the maximum of 2.5cc specified in (3.3.2) or 1cc in 3.6.2. The following examples are given to clarify the procedure:

calculated volume	2.496	2.5004	2.5084	2.5102
truncated volume	2.49	2.50	2.50	2.51
within specification?	yes	yes	yes	no

3.A2.6. Timekeeping

This is a most important aspect of any free flight competition. The people chosen for duty as timekeepers should have good eyesight and have some experience of the task, preferably being active free flight aeromodellers. They should be familiar with the rules of the event; to reinforce this, a detailed briefing meeting should be held on the evening before each event and the timekeepers should be issued with copies of the rules and a briefing sheet, such as presented in Appendix B.

The best method of allocating timekeepers is for a pair to be assigned to each starting line position and to time all flights at that position during the entire competition. In conjunction with this the competitors move from one pole to another between rounds (B.9.1) and thus each pair of timekeepers take duty for a different team for each round.

The timekeepers retain custody of impounded items (fuel and **any** receptacles used by the competitors to hold their working supply of fuel) at their pole for the duration of a round and at the end of the round they should ensure safe and prompt transfer to the timekeepers responsible for that team in the next round. Competitors must be allowed free access to their impounded items at all times but the timekeepers must watch that no possibility of tampering arises. The organisers should regularly communicate with their timekeepers, so that they do not need to leave their position during rounds for such things as transmitting results or collecting refreshments. A few spare timekeepers should be available to cover for any timekeeper who must unavoidably leave his position during the day. It is most important that all timekeepers should be in position before the start of each round. Arrangements must be made to ensure custody of impounded items in the event of long breaks in the flying, such as during poor weather or over a lunch break.

Equipment required for each timekeeper includes: a pair of binoculars meeting FAI specifications (B.13.7), at least one stopwatch of specified type and accuracy (B.8.10, B.13.4), results cards on a board with pens, briefing sheets, a means of identification to competitors and team managers, and a chair (for comfort when possible to relax between flights during a long day). Note that a second stopwatch is required for each timekeeper in F1C and F1P to time motor runs **or lap split timing should be used.** A tripod for supporting binoculars is an advised additional item of equipment.

The timekeepers should write down the results in exactly the form in which it is recorded on the stopwatch (for example, as minutes and seconds) to avoid conversion errors. The results sheets may include a second copy facility so that a copy of the recorded result for each flight may immediately be given to the team manager, or a box for the team manager to sign to indicate agreement with the time. In the event of any question about the recorded time, the timekeepers should write down the exact readings of all watches (to hundredths of seconds). This will be used for the CD and Jury to check the official time. After the results have been recorded the sheets should be collected by a runner and taken to a central scoring office. Here any appropriate conversions should be made (for example, into seconds) and the score recorded on a master sheet. If a computer is being used for processing the results, the scores should be entered into it after recording them on the master sheet and programs should obviously be carefully checked and regular copies of data made to safeguard the smooth and accurate preparation of the results.

A public scoreboard should be updated to show latest individual and team scores and positions as soon as possible (B.8.6). A coloured (red) dot on the scoreboard in place of a maximum (or writing the number in red) simplifies seeing those with full scores. The latest scores and positions should be uploaded to the internet if possible. Written copies of the results should be prepared at the close of the event; these must be sent to the FAI and National Aero Clubs (B.5.5) and should also be handed out at the awards ceremony to the FAI Jury, team managers, competitors, supporters and press representatives.

3.A2.7. Organisation of flyoffs

There may be pressure of time to prepare for flyoffs, particularly subsequent flyoffs quickly following the first flyoff. A simple way to undertake the draw for the flyoff is to group together all the score cards of the eligible competitors face down and have the jury draw cards from the pack to determine the competitor at pole 1, pole 2, etc.

A group flyoff system described in 3.1.8.f has been introduced for 2016 to aid running large flyoffs which might have exceeded the number of timekeepers available. The rule defines the process for running a group flyoff, but particular points to observe are:

The draw for the start positions and group is a single process, selecting competitors in order, the first half going in group one and the second half in group two.

The final result cannot be determined by a group flyoff. There must always be a final flyoff when the highest placed competitors fly against one another at the same time.

For classification of the competitors, the flight times in the group flyoff are used to determine the order for all those competitors eliminated in a group flyoff.

Competitors proceeding to the next round will have their times in the group flyoff disregarded for classification purpose. Their classification will be determined by the later flyoffs.

The following example demonstrates the process for a small example with 8 people in a group flyoff. 3 people in group 1 achieve the maximum and go to the next flyoff. Under the group system then 3 people also go through from group 2 including 2 people with scores less than the 360 maximum. The 2 people eliminated in the group flyoff finish in positions 7 and 8 determined by their group flyoff times. The 6 people in the final flyoff have their order determined solely by the final flyoff time. The times achieved in the group flyoff have no influence on the final classification.

<u>position</u>	<u>Group flyoff</u>		<u>Final flyoff time</u>
	<u>group</u>	<u>time</u>	
<u>1</u>	<u>1</u>	<u>360</u>	<u>285</u>
<u>2</u>	<u>2</u>	<u>324</u>	<u>281</u>
<u>3</u>	<u>2</u>	<u>360</u>	<u>233</u>
<u>4</u>	<u>1</u>	<u>360</u>	<u>221</u>
<u>5</u>	<u>1</u>	<u>360</u>	<u>207</u>
<u>6</u>	<u>2</u>	<u>341</u>	<u>186</u>
<u>7</u>	<u>2</u>	<u>284</u>	
<u>8</u>	<u>1</u>	<u>229</u>	

If a second group flyoff is required then the same process is repeated, so that those eliminated in the second group flyoff have their classification determined by their times in that second flyoff, and those continuing to the final flyoff have their classification determined on their final flyoff flight only.

3.A2.7.3.A2.8. Opening and Closing Ceremonies

It is desirable to keep all ceremonies short and readily understood in all languages. See the definition B.16.4.

The key elements of an opening ceremony are introduction of the teams and welcoming remarks by the organisers and the president of the FAI Jury. Depending on the number of teams it may not be desirable to play the anthem of each country. If requested the team managers should have brought recordings of their national anthem. For any country not bringing an anthem it is recommended that the FAI anthem be played in their case.

At the beginning of the opening ceremony, as soon as the teams are at their places, the FAI anthem is played, and the FAI flag raised. At the end of the ceremony, the President of the FAI Jury declares the Championship open, and the national anthem of the organising country is played.

The prize-giving should be separate from any closing banquet, so that it may be attended by all participants independent of whether they buy tickets for the meal. The key preparation for the prize-giving is to have all the trophies, medals and diploma available for presentation, with the diploma completed with the winners' names. There should be a rostrum or other central area or stage for presentations to the winners which allows suitable views for photographers. After presentation of the awards in each category, the national anthem of the victor should be played while the flags of the top three nations are raised or displayed. Closing remarks by the organisers and the president of the FAI Jury complete the prize-giving.

At the end of the ceremony, the FAI anthem may be played, and the FAI flag presented, as a symbol, to the team manager of the next organising country.

In planning any closing banquet it should be remembered that the main enjoyment of participants is meeting one another and talking together. To assist in this, it is not desirable to provide major special performers or speeches or loud music for the dinner. **At any Championship, if alcohol is free of charge, soft drinks should also be free of charge. At Junior Championships high percentage alcohol must not be free of charge.**

ANNEX 2, APPENDIX A

A GUIDE FOR THE ORGANISERS OF FAI OUTDOOR FREE FLIGHT OPEN INTERNATIONALS

There is a degree more freedom possible in the organisation of Open Internationals than there is for Championships, but this does not diminish the organiser's responsibility to run an event according to FAI regulations. There is a greater need to ensure fair arrangements for all competitors since they are not assisted by the formal representation through the team manager that they have at a Championships.

Many of the points given in the Guide for Championships organisers are still appropriate to Open Internationals and in the following Guide emphasis is placed on the differences.

3.A2A.1. Site

A good flying site is as important for an Open event as it is for Championships. The major point of difference is that there is no requirement to supply official accommodation and catering. This places increased emphasis on the need for hotels and camp sites near to the flying site.

The inclusion of an event on the FAI Contest Calendar does not require a detailed presentation to CIAM, but general information together with the entry forms should be sent to National Aero Clubs and to any individual requesting them. Detailed maps showing the location of the flying field and the registration office should be sent to all competitors. If competitors will be required to assist in timekeeping then this must be explained in the advance information bulletins. Entry forms should give the possibility to identify the junior competitors, in order to identify them in the general classification and make a special junior classification if the number of juniors participating in each class is greater than three (B.3.4.c.).

Score cards should be similar to the ones used for World or Continental Championships, with a special place for timekeepers to record the code of the model flown at each round by each competitor.

3.A2A.2. Timetable

It is equally necessary to choose a time of year which is likely to give good flying conditions and to arrange the timetable to avoid periods of strong winds or intense thermal activity.

The best schedule is to follow the Championships style, with a practice day followed by one contest day for each class and with a free day available for completion of the event if there have been any delays. However, there is usually pressure to follow a shorter timetable than this and two possible arrangements for fitting events F1A, F1B and F1C into two days are now suggested:

- a) Flying F1A on one day and F1B plus F1C on the other day. The popularity of F1A means that there is a similar total number of competitors on each day. However, it is preferable not to have F1B and F1C models flown together. ~~Separation may be achieved by scheduling short rounds for each class in succession or by setting up separate~~ Separate starting lines **should be established** for each class.
- b) Flying all classes in rounds at the same times. This requires three separate starting lines for the three classes and a large number of timekeepers. It is difficult for competitors and helpers involved with different classes, but it allows a competition to be completed in one day.

As well as the times of all rounds, the timetable should include the time and place of competitor registration and the awards presentation ceremony, together with any model checking and opening ceremony that may take place. Copies of the timetable must be sent out with entry forms.

Note that under World Cup rules (Volume F1 Annex 1 para1) F1P models may be flown alongside F1C in World Cup Open Internationals. The F1P models are flown to their class rules except that the maximum flight time must be the same as the F1C flights. The F1P results are included with the F1C results for F1C World Cup scoring and also count for F1P Junior World Cup for junior flyers.

3.A2A.3. Flying Site Organisation

The comments under this heading in the Championships Guide are equally applicable to Open Internationals.

3.A2A.4. Model Checking

All of the comments on model checking for Championships remain valid for Open Internationals, but it is usual to place greater emphasis on checking having been carried out in advance by the competitors' National Aero Clubs. To back up this it is important that the competitors have access to any official processing equipment (B.8.3), the spot checks are carried out (B.17.11) and the models of the top three placing competitors are checked in detail (B.17.12).

3.A2A.5. Timekeeping

This is often a most difficult part of an Open International. The timekeepers should be experienced free flight aeromodellers with good eyesight and be familiar with the rules of the event. They should be issued with copies of the relevant rules and a briefing sheet on the style of Appendix B.

Supplying an adequate number of timekeepers for an Open International is often more difficult than for a Championships - there may be a much greater number of competitors and the organisers may have smaller resources of manpower available. Starting pole positions should be allocated by draw for the first round, but with the possibility of constraining the draw to select people able to speak the same language at each pole as far as possible. Competitors at a pole fly one at a time in an order preferably established by mutual agreement of the competitors for each flight; in the event of disagreement at a pole, the official timekeeper at that pole may impose a flying order, subject to appeal to the FAI Jury.

It is preferable that the organisers supply at least one official timekeeper at each starting position in order to retain custody of the score cards, to observe that correct procedures are followed and to act as a contact point at that position. At least one official timekeeper at each position should be able to converse in one of the official languages of the event. Two timekeepers are required for each official flight; in the event of the organisers not supplying both timekeepers per position, then the required timekeepers should be other competitor(s) flying from that position or a helper of the other competitors. The official timekeeper at the position should ensure that all competitors undertake their fair share of help in the timekeeping and that there is always someone ready to help him time the next flight. Any dispute in undertaking timekeeping help should be referred to the FAI Jury and the organisers should be able to call upon a small number of additional timekeepers to allow timekeeping to continue at the pole during a dispute.

It is not permissible to reduce the timekeeper requirement by increasing the number of competitors at each starting position. Sufficient positions should be established to allow each competitor at least ~~45~~10 minutes to fly if the round time is evenly distributed between all the competitors. The official timekeeper should draw the attention of the FAI Jury to any competitor taking a significantly longer time to fly than his fair allocation of round time.

Since the official timekeeper at each pole may be more actively involved in organising activities at his position than is the case at a Championship, it is even more important that the contest director arranges good communications with the timekeepers. There should be a frequent runner service between all the timekeepers and the contest director and clear audible or visual signals should be available for the timekeeper to call the contest director and hence the FAI Jury in the event of any difficulty.

The requirements for processing scores and for timekeeping equipment are the same for Open Internationals as described previously for Championships. It is important that when competitors assist in the timing of flights they should be correctly equipped with stopwatches and binoculars according to the FAI specifications. Familiarity of operation is important with these devices and so they should supply their own stopwatches and binoculars if these are acceptable, otherwise they should observe a flight with spare equipment supplied by the organiser and held by the official timekeeper.

ANNEX 2, APPENDIX B

OUTDOOR FREE FLIGHT TIMEKEEPER BRIEFING INSTRUCTIONS

The duty of timekeepers is to fairly observe and record the times of flights by the competitors. In the course of this they must follow the rules of the FAI Sporting Code and also must ensure that the flights are made in accordance with the Sporting Code. To achieve true sporting results it is essential that the timekeepers act so as to give the competitors the greatest possible opportunity for making their flights.

On a day prior to the competition, the organisers should hold a meeting to brief the timekeepers, to discuss the rules and explain the logistics and operating procedures to be followed during the event. A list of timekeepers allocated to each starting pole should be distributed.

There follow some detailed points on the task of timekeeping, specifically aimed at timing in Championships but also applicable to Open Internationals (see the closing note).

3.A2B.1. Start of Competition

The timekeepers must be present at their specified starting line position (pole) at least 10 minutes before the start of the first round. They should have collected - or have been brought by the officials - stopwatches, binoculars, tripod (one per position), score cards, pens, impounded equipment, chairs and any other personal needs.

3.A2B.2. Impounded Equipment

In class F1C standard fuel must be kept under the control of officials at all times but competitors should be given access before the start of each round. This is to enable them to be prepared and ready to fly at the start of the round: F1C fuel may be taken, the fuel tank rinsed and filled.

More than one competitor may access the impounded equipment at any one time during the competition provided that the timekeepers retain supervision of the items. Between rounds one timekeeper should take a team's impounded equipment to that team's next pole while the other timekeeper waits at his pole for delivery of the equipment of the next team to fly at that pole.

3.A2B.3. Preparing to time a flight

When a competitor is ready to make a flight the timekeepers must check his name and number on their score card. The identification number or letter on the model must be checked, compared with those shown on the score card and recorded as the identification of the model used for that flight. Timekeepers must check that the model has been identified (stamped or marked) by the organisers at Championships. Timekeepers must check that the Olympic identification of the country of the competitor is written on the wing of the model, as well as the FAI licence number (or national number) of the competitor. This is particularly necessary, even at open World Cup Contests.

Timekeepers must study the shape and colour of the model to aid recognition. They should check the focus of their binoculars and zero their stopwatches.

3.A2B.4. Timing a flight

The timekeepers must check that the flight is launched after the start and before the finish signal for the relevant round. They should also check that the model is launched within 5m of the launch position (note that the model may be taken further away before launching but must return within 5m of the pole at the moment of launch).

The model should be watched carefully and continuously during the flight. Special attention should be given to the flight counting as an attempt for any reason or to detecting a collision; if either of these arise then the team manager must be informed immediately.

In the case of F1A the team manager should be informed if the model is too far away for the moment of release to be seen. Likewise, in F1C, a motor run that is too long should be reported immediately to the team manager. It is difficult to accurately time motor runs; timekeepers should endeavour to make their best judgement of the moment when the motor stops, **usually by listening to the sound of the motor and** not being influenced by model attitude or. **If the noise of other motors running nearby mean that an accurate motor run time cannot be measured, then this should be acknowledged and the benefit of doubt given to the competitor rather than recording an inaccurate long time.**

The Sporting Code directions for using binoculars during a flight should be followed as appropriate. It is important that the binoculars are used early enough in the flight that there is no

difficulty in picking out the correct model. A tripod should be used to support the binoculars if available, this is particularly helpful when timing a long fly-off flight or when the wind is strong.

If there is the chance of a model being lost from view behind a local obstruction then the timekeepers should move as far as allowed (10m radius) in order to keep the model in sight for as long as possible (B.13.5). Any distraction of looking at the stopwatch to check progress of the flight should be avoided, since this implies looking away from the model itself.

Timekeepers should stand up for timing before obstacles or persons might obstruct the view of low flying models.

3.A2B.5. Recording a flight

If the flight was an attempt then this should be recorded on the score card. At the end of an official flight the mean of the time recorded on the two stopwatches should be calculated and recorded to the nearest whole second. If the score card allows, the time should be recorded directly in minutes and seconds as shown on the watches and also as converted to seconds. In a Championship the team manager should be shown the time recorded and he should sign to indicate that he has seen the time. The flight should be recorded as quickly as possible if there are other competitors waiting to fly. The completed score cards should be collected from the timekeepers by an official for taking to the central scoreboard and recording position.

3.A2B.6. Disputes

A dispute that cannot be resolved between the timekeepers and the team manager must be referred to the contest director or the FAI Jury. The timekeepers should not leave their post during a dispute but should continue to time as required by other competitors at the pole. If a dispute is not resolved during a round and the competitor could be entitled to a reflight if his protest is upheld, then the timekeepers should time a reflight. The time should be recorded separately in case it is required when the dispute has been settled. This must be done before the end of the round.

3.A2B.7. Open Internationals

Duties of timekeepers are similar to those at Championships. There may be only one official timekeeper at a pole and the other timekeeper must then be drawn from the competitors waiting to fly, etc. Score cards should be kept by the official timekeeper and it is he who settles any dispute between competitors at his pole, such as concerning the flying order or the time taken to fly.