



GENERAL RULES FOR THE CONDUCT OF AEROBATIC CONTESTS & EVENTS

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Please note: Where any reference to gender is made in this document that reference shall be deemed to be gender non-specific, unless gender is specifically defined in accordance with regulations affecting international air sports.

1. SAFETY RULES AND PROCEDURES

1.1 SAFETY LEGISLATION

1.1.1 The primary consideration at all aerobatic contests is the **safety of participants** and equally that of **any members of the public**.

1.1.2 **Article 86 of the Air Navigation Order 2016** deals with civil Flying Displays and special events within the United Kingdom, while **CAP 403** details both safety and administrative arrangements for such events. Whilst aerobatic contests, whether part of a Flying Display or not, are specifically exempt from the requirements of Article 86 of the ANO, the rules and procedures implemented by the British Aerobatics are intended to create an equivalent or higher standard of safety for all.

1.1.3 Where the public has access to the host airfield the officials and competitors should comply with those parts of **CAP 403** relating to public safety, especially in relation to minimum separation distances between aircraft, in flight and on the ground, and the public.

1.2 SAFETY RESPONSIBILITIES

1.2.1 The British Aerobatic Association (**British Aerobatics**) places responsibilities on its own officials and the participating pilots to uphold the policies, procedures, Code of Conduct and General Rules of British Aerobatics at all British Aerobatics events and to ensure that safety always remains paramount. The **British Aerobatics Operations Manual** provides detailed guidelines for all contest officials and co-operating personnel whilst engaged in contest related duties.

1.2.2 The British Aerobatics must be satisfied that a person is fit and competent to act as a contest official, having regard to his previous conduct, experience, and ability to safely execute the office. Contest Directors must ensure that responsibility for aspects of contest administration is only delegated to people with relevant experience and, if applicable, licences.

1.2.3 A pilot must satisfy the British Aerobatics that he is a fit person to compete at an aerobatic contest and is qualified by reason of his knowledge, experience, skill, physical and mental fitness.

1.2.4 Where the public has access to a contest site the host venue has the responsibility to ensure public safety at the event and, where appropriate, to comply with those parts of **CAP 403** relating to public safety.

1.3 OFFICIALS

1.3.1 **The Chairman of British Aerobatics (Chairman)** is ultimately responsible for the safe conduct of all activities undertaken by British Aerobatics. He is responsible for establishing and maintaining all the rules and procedures that might reasonably be expected of British Aerobatics in the furtherance of its aims and objectives.

1.3.2 **Head of Contest Organisation (HCO)** is the executive officer responsible for scheduling, management, and oversight of the British Aerobatics annual programme of events, including the appointment of suitably experienced Contest Directors, Chief Judges, and other Contest Officials. He is responsible for the overall implementation of the safety rules and procedures and reports to the directors of the British Aerobatics on the results for the contest season. The HCO is selected by the directors of British Aerobatics based on his safety consciousness, extensive experience of contest operations, management, and communication skills.

1.3.3 **Contest Directors (CD)** are selected by the HCO, after discussion with the Chairman.

1.3.3.1 The CD for each event is responsible for pre-contest liaison with the host venue and for ensuring that appropriate plans are in place to enable the event to proceed safely and efficiently.

1.3.3.2 The **CD** is responsible for running the event from the start of the first briefing on the first day of the contest and exercises overall control in all matters connected with the administration, organization, conduct

and financial arrangements for the duration of the actual contest, except for managing control of, or facilities for the public which is the responsibility of the host venue.

1.3.3.3 The **CD** must not take any other part in the contest, especially as a competitor or commentator.

1.3.3.4 The **CD** has authority over all other contest officials. He reports a précis of the event to the directors of the British Aerobatics via the HCO.

1.3.3.5 The **CD** is responsible to the directors of British Aerobatics for the maintenance of safety at all times during the running of a contest. Any action by a contestant or official, whether in the air or on the ground, which is detrimental to the principle of safety may endanger the continuation of the contest and could bring the British Aerobatics into disrepute. All personnel, whether contestants or not, are required to act in the safest possible manner during the running of aerobatic contests.

1.3.5 **The Chief Judge (CJ)** is responsible to the CD for the judging of the programmes, and for air safety during any flight directly related to the contest. The **CJ** has the authority to forbid a pilot to make a contest flight or to continue with a contest sequence for reasons of safety. Chief Judges will be selected by the HCO from judges with at least two years of regular judging experience.

1.3.6 **The Contest Jury**

1.3.6.1 The **CD**, the **CJ**, and any other persons that the CD may appoint shall, if necessary, form a Contest Jury responsible for deciding all protests, disciplinary matters, exclusions, disqualifications, and any other matters related to the running of the contest.

1.3.6.2 The **CD** shall chair and speak for the Contest Jury, whose decision in all matters shall be final.

1.3.6.3 The **CD and CJ** shall be active and available, and shall both monitor flying standards, throughout the contest.

1.4 **CONTEST PERFORMANCE ZONES**

1.4.1 The performance zone is the area designated by the HCO in consultation with the CD and where all contest sequences will be flown. The performance zone will be defined in collaboration with the airfield operators according to the procedures described in the British Aerobatics Risk Assessment and Safety Analysis document and the British Aerobatics Operations Manual. The HCO/CD may also wish to consult with the CJ when designating the performance zone for a contest.

1.4.2 The HCO shall approve the designated performance zone in advance of each event.

1.4.3 The performance zone must be clear of congested areas, which is any area in relation to a city, town or settlement which is substantially used for residential, industrial, commercial, or recreational purposes. It must not be located over any major road or railway and, as far as is practicable, should be over uninhabited terrain. If the performance zone should sit above any isolated dwellings, the CD, through the local airfield operator, should take steps to ensure that the occupants are made aware of the planned contest in a timely manner before the start of the event. The performance zone must not be located over public gatherings (for example, fetes, sporting events) scheduled for the same time as contest flights.

1.4.4 The performance zone shall be located **at least 150 metres laterally** from any part of the host airfield that is open to the public for viewing, as a car park or for any other reason.

1.4.5 The CD shall ensure that the location of the chosen performance zone for the event is published, using a detailed aerial photograph, on British Aerobatics pilot briefing web site not later than the closing date for entry to the contest. Pilots must use this information to become familiar with the detailed layout of the performance zone prior to arrival at a contest.

1.4.6 All competitors will be expected, to the best of their ability, to fly the programme within the limits of the Performance Zone. A suitably qualified pilot will delineate the axes and height limits of the zone to the

judges prior to commencement of judging. If at any stage the CD or CJ suspect that a contest pilot is at immediate risk of flying over a congested or public area outside the 'box', he shall take immediate steps to try to prevent any unsafe situation arising, following the procedure outlined in **Rule 3.11.1.6** below.

1.4.7 The layout of the standard Performance Zone is shown in **Rule 19.1.2**.

1.5 MINIMUM HEIGHTS

1.5.1 The minimum height at which pilots are authorised to perform aerobatic manoeuvres at any event are detailed in the Operational Rules for each skill level and aircraft type (power or glider), **see Rules 3.7 and 11.1**. Any pilot contravening these safety heights will be liable to disqualification from the programme concerned or from the event. The decision to disqualify a pilot will be made by the CJ after discussion with other judges and the CD. The decision of the CJ will be final.

1.5.2 Neither a UK Display Authorisation nor any dispensation from a foreign Authority, National Airport Control or other aerobatic governing body that specifies different height minima shall excuse any pilot from compliance with the minimum heights specified in the British Aerobatics or CIVA rules in force at a contest.

1.6 WEATHER LIMITS

1.6.1 Safe aerobatic flight within the performance zone requires actual weather conditions to be above certain specified minima, which vary depending on the qualification level of the pilots taking part. Full details of these weather minima are included in **Rule 3.9**.

1.6.2 Measurement of these conditions shall be by direct observation by suitably experienced contest participants, by appropriate instrumentation installed at the host airfield or by current actual reports available from the Meteorological Office Aviation service or equivalent.

1.6.3 The CD will permit contest flights only when the local weather conditions meet, or are better than, these limits.

1.7 AIRMANSHIP AND OPERATION OF AIRCRAFT

1.7.1 Pilots are always expected to exercise the highest standards of airmanship. Flagrant abuse or disregard of any requirement of this section may lead to a pilot's exclusion from the event in accordance with **Rule 1.12**.

1.7.2 The pilot in command of the aircraft is responsible for operating the aircraft legally and for observing the Rules of the Air, especially those for avoiding aerial collisions.

1.7.3 Pilots must be always mindful of the need to act in a way that protects not only their own safety, but also that of other contest participants and the public.

1.7.4 Special consideration must be given to operating the aircraft in a way that protects public safety during refuelling, start-up, and taxiing. Smoking is not permitted in aircraft parking or refuelling areas.

1.7.5 The runway(s) shall be kept available as much as possible for emergency landing purposes.

1.7.6 No aerobatic flights at the contest site during an event, and that are not part of the contest, shall be permitted without prior authorisation by the Contest Director.

1.7.7 Only the competitor and a safety pilot currently approved by the HCO (if required) shall be on board an aircraft during a competitive aerobatic flight at a contest.

1.8 QUALIFICATION OF PILOTS

1.8.1 All UK pilots must hold a valid UK pilot's licence together with any required rating(s) and must comply with any restrictions placed on the licence by the accompanying medical certificate. They must be a current Member of the British Aerobatics, and will be required, at contest registration, to warrant their physical and

mental fitness to fly in the contest or event and that they are in current practice at the Class of contest they have entered and flying the aircraft type they will use at the contest.

1.8.1.1 Membership of British Aerobatics will be deemed to be valid when the requested personal details have been provided to Membership Secretary and the published membership fee has been received.

1.8.1.2 Membership of British Aerobatics will be deemed to have lapsed when the published membership fee remains unpaid 30 days after a notification that the fee is due. This will normally be on the 31st of January in each year.

1.8.2 To enter a competition solo you must hold a valid pilot's licence with an aerobatic rating (where this is required to undertake solo aerobatics). Without an aerobatic rating, unless specifically stated, you may take part in Club/Club+, or in the Sports class (Hors Concours only) accompanied by a flying instructor (FI or CRI) authorised to give aerobatic instruction who himself meets the entry qualifications and has valid membership.

1.8.3 All pilots in any Class must hold a British Aerobatics proficiency sign-off endorsed for the appropriate Class by a **Flight Evaluator** approved by British Aerobatics, who is also a valid member of British Aerobatics at the time of the sign-off. For specified **Club only** events you may take part without a sign-off, if accompanied by a flying instructor (FI or CRI) authorised to give aerobatic instruction who themselves meet the entry qualifications and have valid membership. If the instructor is also a Flight Evaluator, this flight may count towards a successful sign-off for Club class, providing all other elements of the sign-off are completed at that time.

1.8.4 Any pilot who has not competed in a national contest at the appropriate class **within the last 24 months** must gain a further proficiency sign-off prior to entering a contest. Guidance on the operation of the proficiency sign-off scheme and the qualifications of Flight Evaluators is given in **Section 23**.

1.8.5 The personal documents referred to must be made available for inspection by the CD or a delegated Registrar either prior to the contest or at the contest venue prior to the commencement of the first contest briefing. Pilots with incomplete or invalid documentation will be refused entry.

1.8.6 **Foreign Pilots (see Rule 2.8)**

1.8.6.1 A foreign pilot is a pilot not holding a valid UK passport or residency. The participation of foreign pilots will always be welcomed, subject to their holding a valid pilot's licence issued by an authority recognized by the UK CAA and valid for use in the UK. They must also comply with any restrictions placed on the accompanying medical certificate, which must be current. They must be a current member of British Aerobatics.

If intending to fly a UK registered aircraft please note this may now require a skills test with an examiner, ground examinations and a UK medical examination, depending on the type of licence held and the duration of flying intended in that calendar year. The UK certification process may take some time and should be completed well in advance of the contest entered.

1.8.6.2 Foreign pilots will also have to show evidence of their aerobatic skill level issued by an aerobatic governing body from their state of residence or nationality or, for Advanced or Unlimited pilots, a record of achievement of safe participation at a World or Continental or European Open FAI Championship **within the previous 24 months**. Failing this, they shall be required to make a demonstration flight to seek approval by a British Aerobatics Flight Evaluator.

1.9 **QUALIFICATION OF AIRCRAFT**

1.9.1 Piston, turbine or electric powerplant (single or twin) aircraft or gliders under 12,500 lbs (5,700 kg) MTOW may compete. Pilots flying powered aircraft in Glider contests must stop their engines in level flight at tugging speed before starting their sequence.

1.9.2 All competing aircraft must have a valid Certificate of Airworthiness, Permit to Fly, or an equivalent document issued by a competent authority and must be approved for aerobatic flight.

1.9.3 Aircraft registered outside of the UK must comply with all the CAA's certification requirements or be exempted therefrom by the CAA in writing and for the purpose of competing at an aerobatic contest in the UK.

1.9.4 All competing aircraft should employ a duplex harness system **or** a single harness and parachute.

1.9.5 All competing aircraft must be equipped with a properly functioning air-band transceiver radio able to communicate on 8.33kHz VHF channels.

1.9.6 All competing aircraft must also carry a third-party liability insurance meeting the requirements of Article 7 of Regulation (EC) No. 785/2004, or the required Ministry of Defence minimum if different when the contest takes place at a Ministry of Defence airfield.

1.9.7 The insurance cover must clearly state that it is valid for aerobatic contests.

1.9.8 The aircraft documentation listed above must be available for inspection by the CD or a delegated Registrar prior to the contest or at the contest venue prior to the commencement of the first contest briefing.

1.9.9 Entry will be refused to pilots without the required aircraft documentation, unless the pilot has presented the documentation at a previous contest in the same calendar year, the information is recorded in the British Aerobatics registration records and the documentation validity is still current.

1.9.10 In case of doubt over its serviceability, or in the event of a defect occurring that requires immediate rectification, the CD may require a competing aircraft to undergo a technical inspection by a suitably qualified technician.

1.9.11 Pilots must ensure that their aircraft, if powered, carries enough fuel and oil to enable a safe landing to be made after their flight at the contest airfield or on a suitable alternate runway, should one runway at the host airfield become unavailable for any reason.

1.9.12 All pilots will be required, at contest registration, to warrant that the aircraft in which they will compete is free from any known defect that might affect its safe operation during the contest and is approved for the type of flying to be undertaken.

1.10 FLIGHTS WITH A SAFETY PILOT

1.10.1 At the discretion of the CD, and in accordance with **Rule 1.8.2** a pilot may fly a contest programme accompanied by a safety pilot. In this situation, the following conditions shall apply:

1.10.1.1 Except in the Club/Club+ class, the participating pilot shall be considered Hors Concours. Such pilots must declare their status at the briefing prior to flying, and shall normally fly last in each relevant programme, unless the multiple use of an aircraft renders an alternative order of flight more practical.

1.10.1.2 Pilots flying Hors Concours must meet all the competency requirements for competing.

1.10.1.3 The safety pilot must be flying instructor (FI or CRI) with aerobatic privileges and be a current British Aerobatics Member, with a valid pilot's licence and rating(s) and with a current proficiency sign-off endorsed at the relevant Class or higher. Unless the competing pilot has a licence which complies with Rule 1.8.1 then the safety pilot must have the necessary privileges to conduct the flight as a training flight. The safety pilot shall not be a competitor in the same Class at the same contest.

1.10.1.4 The participating pilots' scores should be included in the statistical analysis process and in the final standings. In published listings, "H/C" shall be annotated next to their names, and they will not be included in the ranking positions.

1.11 USE OF BANNED OR INAPPROPRIATE SUBSTANCES

- 1.11.1 The British Aerobatics is resolved to ensure that competitors neither seek nor gain any advantage by using banned or inappropriate substances, and that all pilots thus can compete in a fair and open contest.
- 1.11.2 The British Aerobatics has adopted the UK Anti-Doping Rules published by the UKAD (or its successor), as amended from time to time, as well as FAI Anti-Doping Rules valid 1.1.2015 (or any subsequent amendments) and associated Procedures.
- 1.11.3 If there is a conflict between the rules of the FAI and the UK Anti-Doping Rules the rules of the FAI will prevail.
- 1.11.4 Competitors should familiarise themselves with these Rules and Procedures, which are available online.
- 1.11.5 All participants will be required to sign an Acknowledgement and Agreement of these rules on their contest entry form.
- 1.11.6 All competitors may be subject to in-competition testing. Competitors selected for a 'Registered Testing Pool' will be subject to out-of-competition testing and will have to provide 'whereabouts information'.

For further information on anti-doping, follow these links:

Detailed information and guidance on all anti-doping and WADA matters and application for Therapeutic Use Exemptions (TUE's) are given by the FAI web page at <https://www.fai.org/anti-doping>.

This UK site provides a mechanism to check on specific drugs that a competitor may need to take for medical reasons. <http://www.globaldro.com/uk-en/search/default.aspx>

1.12 EXCLUSION

- 1.12.1 Other than as described in 'Penalties' (**see Section 4.6**) a contestant will be excluded if in the opinion of the CD and the Chief Judge his/her actions are prejudicial to the safe conduct of the contest.
- 1.12.2 Discipline of competing pilots and other British Aerobatics members at a specific contest shall be the responsibility of the CD nominated by the British Aerobatics. Competitors must respect the authority of the CD.
- 1.12.3 Any protests about the operation of the contest must be made in accordance with the procedure given in **Rule 2.2**.
- 1.12.4 Gross misconduct or persistent dissent shown towards the CD, or any other contest official shall result in a competitor being disqualified from a contest.
- 1.12.5 If in the opinion of the majority of the directors of the British Aerobatics a competitor has been guilty of gross misconduct at a National or International contest, the Chairman of the British Aerobatics may withdraw the pilot's British Aerobatics membership and FAI Sporting Licence for a period of up to 24 months. *Examples of gross misconduct would include but are not limited to wilfully unsafe conduct; serious verbal or physical abuse of contest officials or other participants; serious breach of any of the British Aerobatics Ethical Policies (which are published on British Aerobatics website).*

1.13 SUPPLEMENTARY RULES AND REGULATIONS

- 1.13.1 It may be necessary to issue additional, complementary, or temporary rules and regulations from time to time if in the opinion of the directors of the British Aerobatics these are required on the grounds of safety, to meet local requirements or are for the improvement of the aerobatic contest. Where practical, these will be published on British Aerobatics website and notice of their publication circulated through the British Aerobatics membership email systems.

1.14 SUPERVISION OF PUBLIC ACCESS

1.14.1 British Aerobatics contests and events are private and are not open to attendance by the public. Contestants' family and friends are permitted to attend to observe and support competitors, subject to appropriate supervision.

1.14.2 If the host airfield decides to make the contest venue open to the public during the contest and expects significantly more visitor numbers than could be accommodated within the airfield's usual facilities for handling the public, they shall consider the following:

- They should detail experienced staff to supervise the parking of aircraft and cars, to operate any public-address system and to control messengers and other staff. Enough marshals must be available to control members of the public, to ensure that emergency vehicle access is kept clear, to be available in the case of emergency and to prevent public access to airside.
- They should only use persons trained and experienced in flight line ground handling of aircraft in aircraft movement areas.
- Their officials must be thoroughly briefed in the duties expected of them and provided with some means of identification, such as armbands.
- The host airfield shall be responsible for compliance with all relevant regulation and shall be responsible for obtaining any permissions or exemptions required in advance of the event.

2. ADMINISTRATIVE RULES AND PROCEDURES

2.1 INTERPRETATION OF RULES AND PROCEDURES

2.1.1 The interpretation of all rules and regulations at a contest is ultimately the responsibility of the CD, after consultation with the Chief Judge and, if appropriate, the Contest Jury.

2.2 PROTESTS

2.2.1 All protests must be made to the CD **within one hour of the occurrence** and must be accompanied by a protest fee equivalent to half the entry fee. The CD or Contest Jury will consider the protest. If the protest is upheld, then the protest fee will be returned.

2.3 THE YEARLY CONTEST PROGRAMME

2.3.1 The yearly contest programme will be published via the British Aerobatics web site which will contain details of contests and venues together with the Known Compulsory and Default Free Known Programmes. The URL of British Aerobatics website is: www.aerobatics.org.uk

2.4 CONTEST INFORMATION

2.4.1 The web page for each contest shall include at least the following information:

- The location, date, and planned duration of the contest, with briefing times;
- Other operational and administrative information;
- The class(es) to be flown at the contest, and details of trophies and awards to be given;
- The programme(s) to be flown in each class.
- The location of the performance zone will also be published on British Aerobatics website in advance of the contest.

2.5 CLARIFICATION OF CONTEST INFORMATION

2.5.1 Contestants requiring clarification of any matters connected with the organization of a particular contest should refer them to the HCO or, on the day, to the CD.

2.6 VALIDITY OF A CONTEST

2.6.1 A valid contest requires a minimum of two entrants, except for National Championships which normally require a minimum of 3 entrants before the National Title and trophy are awarded. In circumstances

where only 2 entrants have registered for a National Championship, the British Aerobatics directors will decide if this constitutes a valid contest no later than 1 day after the closing date for entries.

2.6.2 Gold, silver and bronze awards will normally be made even if there are only 2 or 3 contestants in a particular class but may be withheld at the CD's discretion if the pilot's performance is less than 60% of possible marks or less than 80% of the winning score.

2.7 PILOT ELIGIBILITY

2.7.1 A pilot shall not be permitted entry to a contest in a specified Class of contest if, during the previous season, he has:

- won a contest in a higher class; or
- placed second in a contest in a higher class, in which there were six or more competitors; or
- placed third in a contest in a higher class, in which there were nine or more competitors.

2.7.2 Any pilot qualified in the Advanced or Unlimited Classes and who has been selected to be a member of the UK team at an International Contest in that class in the current year or the previous year, shall not be eligible to fly in any lower class contest organized by the British Aerobatics.

2.7.3 Notwithstanding the restrictions described above, any pilot may enter any contest Hors Concours in a class lower than that determined thereby, for the purposes of practise.

2.7.4 An Unlimited pilot may fly in an Advanced contest for the sole purpose of obtaining points toward Advanced Team Selection when he is eligible under CIVA Rules to fly in an international Advanced contest. In this event his scores will be treated as Hors Concours.

2.7.5 Pilots competing in the Tiger Trophy must enter in the highest class at which they have previously competed at a British Aerobatics or International event. The intent of this requirement is that pilots should fly in the class which challenges the full extent of their aerobatic capability and hence puts all pilots on an equal footing. In some circumstances, pilots may have been inactive at contests for several years or may have chosen to compete in a lower class of contest. In such instances, the HCO may exempt a pilot from this requirement. An exemption will not be given if the pilot has competed in a higher class within the previous five years. Pilots who wish to obtain an exemption to this rule and fly in a lower class, must contact the HCO for approval before the entry deadline for the contest and receive written confirmation of the exemption.

2.8 FOREIGN PILOTS

2.8.1 British National Championships

The title "British National Champion" and its corresponding trophy will always be awarded to the highest-placed British pilot or a foreign pilot who is a full-time resident of the UK and does not hold a current FAI Sporting Licence issued by a foreign National Airsport Control.

2.8.2 Should the top scoring pilot in any class be a non-resident foreign pilot, their position in rank order would be recognized but the National title and trophy would be awarded to the highest placed qualifying pilot.

2.8.3 Other Contests

At other contests where the winner is a foreign pilot, he would be publicly presented with the trophy, but this would then be returned to the British Aerobatics for engraving and safe keeping. British Aerobatics may also present the winner with a special trophy for retention.

2.9 ENTRY FORMS

2.9.1 Entrants should use the British Aerobatics online Contest Entry system, providing all requested information and pay the appropriate fee.

2.9.2 Late entries (entries submitted after the advertised closing date for the contest) will be subject to a **50% increase** in the published entry fee.

2.9.3 Free Known Programmes, where required, shall be submitted in digital form **only** (using CIVA approved sequence drawing software) no later than the advertised closing date for entry, otherwise the appropriate Default Free Known shall be flown. ***Hand drawn or PDF sequences are not acceptable.***

2.9.4 By signing the entry form the contestant agrees to be bound by all the General Rules of the British Aerobatics and the British Aerobatics Code of Conduct. It is the responsibility of the pilot to ensure that he is aware of these rules and code.

2.9.5 All official participants must provide contact details (telephone and postal address) for the person or persons to be notified in the event of accident, sickness, or injury.

2.10 REFUSAL OF ENTRY

2.10.1 A contestant may be refused entry if he or his aircraft or its documentation does not satisfy the conditions of entry for the contest or on grounds of safety. The HCO and the CD also reserve the right to refuse entry on any other reasonable grounds. **The decision of the CD is final.**

2.11 ENTRY FEES

2.11.1 British Aerobatics will determine and publish an entry fee, or fees, for each contest.

2.11.2 The entry fee of a contestant whose entry is refused shall be refunded.

2.11.3 The entry fee of a contestant who withdraws from a contest **at any time prior to the closing date for entries** will normally be refunded unless it is donated to British Aerobatics. This does not apply to National Championships where entry fees will not usually be refunded.

2.11.4 A contestant who has paid in advance but who withdraws **after the closing date** or is otherwise unable to enter the contest will **forfeit** their entry fee.

2.11.5 If a contest is cancelled by British Aerobatics or the host airfield, entry fees will usually be carried forward to the rescheduled event.

2.12 LATE ENTRIES

2.12.1 Entries received after the closing date but before the contest starts may exceptionally be accepted at the discretion of the CD.

2.12.2 All entry fees received after the closing date will be subject to a **surcharge of 50%.**

2.12.3 No entries will be permitted after the start of the main briefing of a contest.

2.13 FAMILIARISATION AND PRACTICE FLIGHTS

2.13.1 Practice flights at the contest site in the 7 days before the contest are generally discouraged to avoid noise nuisance to neighbours. Where permitted by the host airfield, they may be authorized by the CD in agreement with the Airfield Operator to allow airfield familiarisation. At certain events practice days may be nominated before the contest and these will be conducted in accordance with local flying rules.

2.13.2 Any practice flights departing from the contest airfield on contest days, must be to locations agreed with the Airfield Operator.

2.13.3 No practice flights will be permitted for a competitor after the first contest flight at the competitor's Class has taken off.

2.14 REGISTRATION DECLARATION

2.14.1 During the registration process at the host airfield, each competitor will also be required to complete and sign an additional declaration certifying:

- His fitness for flight.
- The serviceability of the aircraft to be used.
- His understanding of the anti-doping rules and procedures.

Copies of the Registration Declaration may be downloaded from the British Aerobatics web site or obtained from the Registrar during registration.

2.15 PUNCTUALITY AT BRIEFINGS

2.15.1 The CD will gather available contestants and officials at the original briefing time published by British Aerobatics and carry out a roll call. If the weather is expected to meet contest minima in one hour or less, or if all the contestants are present, the briefing will be given in full. If neither of these criteria is met, the CD will declare an appropriately delayed briefing time, based on the forecast weather conditions.

2.15.2 At the rearranged time, the CD will again review the weather forecast and carry out a further roll call. He will give the full briefing at this new time should either of the above criteria be met. Continued bad weather should lead to further delays in the briefing time until and unless an alternate solution becomes necessary.

2.16 LATE ARRIVAL OF CONTESTANTS

2.16.1 A contestant who is not present at the roll call is deemed to be a Late Arrival and will only be allowed to fly in the contest if all the following conditions are met:

- the contestant contacted the CD personally before the original published briefing time to explain his absence.
- the reason for the Late Arrival was the result of bad weather en-route or a genuine mechanical aircraft defect beyond the control of the contestant.
- British Aerobatics received a valid contest entry from the contestant prior to the day of the briefing.
- the contestant made all reasonable efforts to arrive at the contest site in time for the original, published briefing time.

Note that contestants may arrive by road for the briefing and subsequently travel to collect their aircraft if they live suitably near to the host airfield.

- the contestant arrives at the contest site before the first contest flight in the class being entered by the competitor has taken off.
- the contestant receives a full personal briefing from the CD prior to his contest flight.

2.16.2 In all matters of judgment regarding Late Arrivals, the CD's decision shall be final.

2.17 EXPENSES

2.17.1 All contestants are responsible for paying charges relating to their aircraft levied by the operators of the host airfield. The British Aerobatics has no power to act as an intermediary in such matters.

2.17.2 The British Aerobatics cannot be held liable for any costs incurred by pilots flying at contests, even if a pilot has had to abort a flight on instruction by the CJ or CD.

2.17.3 If a contestant has unpaid debts to either the British Aerobatics or operators of host airfields, the British Aerobatics may suspend the pilot's membership until the debt has been paid.

2.17.4 British Aerobatics will, on request, reimburse expenses incurred by contest officials, if they hold current membership of the British Aerobatics, in the categories listed below on the following basis:

2.17.4.1 **The day preceding a contest:**

British Aerobatics structures events to allow competitors and officials enough time to travel to contests on the morning of the first contest day. Unless an official lives more than 50 miles (postcode to postcode per AA Route Planner) from the contest, no expense claims will be met for accommodation for the day preceding a contest. If an official does live more than 50 miles away, then they may claim for accommodation the night before the contest up to a maximum of £70.

2.17.4.2 Contest days:

Officials may claim for accommodation costs incurred for each scheduled flying day, other than the last day, up to a limit of £70 per day. Alternatively, if they wish to commute to the contest, they may claim mileage incurred for each contest day at a rate of 45p per mile up to a limit of £70 per scheduled flying day. Mileage claims should be made on a postcode-to-postcode basis using AA Route Planner.

2.17.4.3 Composite accommodation and mileage claims are not permitted. The primary purpose of British Aerobatics expenses policy is to reimburse accommodation costs. Mileage claims are designed for officials who choose to commute instead.

2.17.4.4 "Weathered off" contests and non-refundable accommodation costs:

Very occasionally, a contest may be "weathered off" at the discretion of the CD. Officials should seek to book accommodation with a flexible refund policy. Where this is not possible, non-refundable accommodation costs up to a £70 per day limit will be met if accompanied by a note to the Treasurer from the CD confirming that this is reasonable in the circumstances.

2.17.4.5 **Eligible categories of official.** Officials in the following categories are eligible to claim expenses, providing that they are a Member of British Aerobatics at the time when the relevant duty was undertaken:

- The CD and CJ.
- The Judges and Judges' Assistants (subject to approval by the CJ)
- The Registrar/Scorer
- The Video Operator

2.17.5 Approvals for Expenses

Claims **must** be made on the prescribed Claim Form which can be found at <https://www.aerobatics.org.uk/publications>, submitted in arrears to British Aerobatics **Treasurer** and shall be supported by valid invoices or receipts where appropriate.

2.17.6 Other expenses related to British Aerobatics activity may be refunded subject to prior approval by the Chairman.

3. OPERATIONAL RULES AND PROCEDURES

3.1 INTERNATIONAL BODIES AND REGULATIONS

3.1.1 The sport of aerobatics is governed globally by the Fédération Aéronautique Internationale (FAI) and its Aerobatic Commission (CIVA). Where appropriate in these Rules, reference is made to CIVA Regulations which is set out in the FAI Sporting Code. These are available by download from <https://www.fai.org/civa-documents> and <https://civa-news.com/page/the-civa-document-store>.

3.2 CONDUCT OF PARTICIPANTS

3.2.1 These rules provide a technical framework for the operation of Aerobatic Contests. In **Section 22** to these rules, the British Aerobatics also publishes a Code of Conduct which details the behaviour expected of its members and host airfield officials alike.

3.3 THE AEROBATIC CLASSES

3.3.1 Four contest classes of aerobatic contest exist, giving programmes of increasing degrees of difficulty. An additional class, Club/Club+, is included to provide non-competitive, introductory events for pilots not yet qualified for Sports Class contests. The classes allow pilots to progress from the basic figures to complex sequences at international levels.

Club/Club+

See Section 5

The four contest classes are:

CLASS	SECTION 13 SHORT CODE
Sports	[S]
Intermediate	[I]
Advanced	[A] }
Unlimited	Prescribed in CIVA Regulations, Section 6 Parts 1 (power) and 2 (glider).

3.3.2 **Section 13** shows the manoeuvres from which figures for the Unknown programmes for Sports and Intermediate classes, in both power and glider categories, will be composed. *Reference to these will give the contestant an idea of the difficulty of each class.*

3.3.3 Additionally, the directors of the British Aerobatics may sanction other events of a specialist nature, for example, classic aircraft, or one-design contests. In these cases, additional rules will be published by the British Aerobatics to ensure safe and proper conduct of the event.

3.4 AEROBATIC PROGRAMMES

3.4.1 There will be at least one Known Compulsory sequence for each class. Compulsory sequences (Club/Club+, Sports) or Compulsory figures (Intermediate and above) will be announced at the beginning of each year and apply throughout the season. In Sports class, this sequence may be extended at certain contests by the addition of extra figures nominated by each pilot. Such additions will be notified in the Contest Information.

3.4.2 In Intermediate and higher classes, pilots shall combine Free figures with the nominated, Compulsory figures to create their own "Free Known" sequence.

3.4.3 Unknown Compulsory sequences may be given in Sports and higher classes. Free Unknown programmes may be employed in Intermediate and higher classes.

3.4.4 An Apprentices Programme may be included in power Intermediate and a master's Programme in power Advanced. For details see **Section 10**.

3.4.5 A Final Freestyle Programme may be included in the power Unlimited Class.

3.4.6 Aerobatic flights that are impromptu, ad hoc, or unplanned shall never be attempted at a British Aerobatics contest and may result in exclusion in accordance with **Rule 1.12**.

3.5 CONTEST BRIEFING

3.5.1 The CD and CJ shall conduct a **main briefing** for all pilots **not less than one hour** before the start of contest flying, usually on first day of the contest unless there are weather delays. The briefing may be held online before the contest, in which case a shorter briefing will be held before the commencement of flying to review key safety information and permit participants to ask questions to clarify proceedings. There will be a **safety briefing** on each subsequent day of a multi-day event, covering essential safety, weather, operational and contest information.

At each briefing a **roll call** will be recorded to establish those present.

The **main briefing** shall cover the following items:

- Introduction of the contest and host airfield officials;

- The importance of maintaining safety of competitors, participants and third parties as the primary concern, including outlining the key pilot responsibilities for safeguarding safety:
 - confining aerobatic sequences to the performance zone;
 - observing the appropriate height minima;
 - ensuring that they do not compete unless they are physically and mentally fit;
 - that their aircraft is airworthy;
 - The need for all strictly to observe the British Aerobatics Rules (CIVA Rules for Advanced and Unlimited), the Code of Conduct and the Air Navigation Order/Rules of the Air Regulations;
- Weather forecast and method for determining weather limits;
- Description of the airfield facilities and operating regulations, including local airspace restrictions, and any facility fee payable per aircraft to the host airfield operator;
- Description of the initial Emergency Response planned for the event. The names of the Deputy CD and Public Relations Officer where these have been so designated;
- Location and contact details for emergency diversion airfield(s).
- Description and location of the aerobatic performance zone and the direction of the contest axis, any emergency landing area(s), and no fly zone(s) (including public car parks); a detailed drawing should be used to show the location of the performance zone; crowd and display lines must be shown if in use at the contest;
- Start-up, taxi, take-off and airborne holding procedures;
- Use of the safety frequency;
- Safety rules and minimum heights;
- Any special procedures for flying the aerobatic programmes, for example, additional figures in Sports class, including clarification of judging criteria if required;
- The method to be used to determine the order of flying for each programme and class; any hors concours competitors must be identified and the CD will describe how H/C flights will be incorporated into the flying order;
- Selection of figures for Free Unknown programmes if required;
- Clarifying the contest timetable;
- Sufficient review of any matters connected with the contest to ensure a complete understanding by all;
- Publish a running order;
- Time check.

3.6 TECHNICAL DEFECTS

3.6.1 Whenever a contestant declares a technical fault that affects the timing or completion of a contest flight, the CD will investigate the circumstances. The CD may call on anyone else present with appropriate technical expertise. If the CD is satisfied that the fault was beyond the pilot's control (running low on fuel for example is not considered grounds for re-flying), he will direct when the pilot should fly/re-fly his programme.

3.6.2 If the fault occurs before the aircraft has taken off then, provided the fault can be rectified, the contestant may fly later at the discretion of the CD.

3.6.3 If a fault during a contest flight causes the contestant to interrupt his programme, he must immediately land and report the circumstances to the CD before any rectification work is undertaken on the aircraft. The pilot must fulfil the conditions of **Rule 2.14** before the aircraft is flown again at the contest.

3.6.4 In a re-flown sequence, the marking will recommence with the figure deemed by the CJ to have caused the termination. If the termination occurred before the first figure has been flown, then the whole re-flown programme will be marked.

3.7 HEIGHT LIMITATIONS

3.7.1 The height limitations, above aerodrome level, for each class are as follows:

Class	Upper	Lower	Exclusion
Club/Club+	None	1500 ft	1300 ft
Sports	None	1000 ft	800 ft
Intermediate	None	1000 ft	800 ft
Advanced ¹	1100m (3608 ft) ¹	200 m (656 ft) ¹	150 m (500 ft) ²
Unlimited ¹	1000m (3280 ft) ¹	150 m (500 ft) ²	150 m (500 ft) ²
<i>1 Height limitations are taken from CIVA Sporting Code Section 6-1 except as modified by 2</i> <i>2 Flight below 150m (500 ft) can only be allowed with an exemption from the CAA to the low flying regulations SERA.5005 (f)</i>			

3.7.2 Upper height restrictions may be imposed if local airspace rules do not permit upper limits to be unrestricted in Club/Club+, Sports, and Intermediate classes. In such cases, un-penalized breaks at specific points should be allowed for safety reasons.

3.7.3 The lower height limitations may be increased by the CD if deemed necessary by local operating conditions or obstructions at the host airfield.

3.8 THE ORDER OF FLYING

3.8.1 The order of flying for a programme will normally be determined by the drawing of lots or by randomised computer selection.

3.8.2 Other methods may be used at the discretion of the CD.

3.8.3 The resultant order of flying may be altered by the CD if the multiple usage of aircraft will cause delays in the completion of the programme.

3.8.4 Contestants whose flights have been interrupted if allowed to re-fly the programme, will fly at a time decided by the CD.

3.9 WEATHER LIMITS

3.9.1 The scheduling, suspension or postponement of contest flying and any change to the contest axis and/or direction of flight to meet prevailing weather conditions shall be at the discretion of the CD in conjunction with the CJ.

3.9.2 By accepting the opportunity to fly, a contestant implicitly confirms that he has sufficient training and experience to fly the planned sequence safely in the prevailing conditions.

3.9.3 Flying of the **Club/Club+** class will normally be suspended if the cloud base is **below 3400 feet**, or the **visibility falls below 8km** from this altitude. The CD and CJ may however allow flying to resume following a separate additional briefing provided that the prevailing cloud base is at or **above 2800 feet** and contestants are accompanied by a Safety Pilot.

3.9.4 In Club/Club+, Sports and Intermediate classes flying will be suspended **if visibility falls below 8km at 3400 feet** or at the principal cloud base if this is at a lower altitude.

3.9.5 Flying of the **Sports and Intermediate** classes will normally be suspended if the **principal cloud base is below 2800 feet**, unless the cloud is so scattered as to allow contestants to achieve a start height of 2800 feet in gaps that are large enough to expect at least 50% of the sequence figures to be completed without a weather induced break. In such circumstances the CD and CJ must during their briefing make particular emphasis to minimum altitude requirements and the option to take un-penalised breaks to regain height, to ensure that pilots always maintain promulgated safety standards.

3.9.6 When the **Sports and Intermediate** classes are operating with the **principal cloud base below 3,000 feet**, unknown sequences containing intentional **spins** shall **not** be used. In this situation the CD and CJ must during their briefing advise the contestants to be mindful of the reduced cloud base and may replace the spin with another figure.

3.9.7 In the **Intermediate** class, if the cloud base is above these minima but still less than 3,400 feet, then the CJ will allow the contestant to interrupt his programme once to regain height without incurring any penalty.

3.9.8 Additionally, in the Intermediate class, if the headwind component exceeds 24 knots or the crosswind component exceeds 16 knots then the CD and the CJ will allow one unpenalised break to be taken at the pilot's discretion.

3.9.9 In Club/Club+ and Sports classes any number of unpenalised breaks may be taken at the pilot's discretion.

3.9.10 Flying in the **Advanced** and **Unlimited** Classes should conform to the weather criteria set out in **CIVA Sporting Code Section 6-1**.

3.9.11 At any time prior to or during the sequence flight, if a contestant considers that the weather has deteriorated to a point where he will be unable to complete the programme in safety or within the rules, he may abort his flight. Upon landing he should report his reasons to the CD. The CD and the CJ will review the contestant's reasons, and if they consider them valid then the programme may be re-flown if conditions improve. Otherwise, a weather check flight will be made within 15 minutes, after which, if the reasons are not considered valid, the programme will not be re-flown, and the contestant will only be marked on the part that was completed.

3.9.12 In the case of a re-flown sequence, the whole sequence must be re-flown, but marks awarded for figures flown prior to break in the first attempt will stand unaltered.

3.10 TIMING OF PROGRAMME

3.10.1 Programmes will not be timed except as required by CIVA Regulations for Intermediate, Advanced and Unlimited Classes.

3.11 AIRBORNE PROCEDURES (POWERED AIRCRAFT)

3.11.1 **AIRBORNE HOLD**

To maximize the flying rate during large Programmes, the CD may require contestants to maintain an airborne holding pattern. In this event, a hold area will be designated at a safe distance from the performance zone and clear of restricted or sensitive areas. Pilots must arrange their take-off time so that they are in the airborne hold at their starting height before the preceding contestant has completed his sequence. At all times, the pilot must ensure his/her aircraft stays within sight of the judging position and clear of other aircraft and the performance zone.

3.11.1 **RADIO PROCEDURE**

The standard radio procedure will be:

3.11.1.1 Pilots should make the usual radio calls on the airfield frequency until airborne. Once airborne, the pilot should call on the airfield frequency that he is switching to the safety frequency.

3.11.1.2 The safety frequency is a declared "silent frequency" used by the Chief Judge to communicate with the competing pilot. All exchanges are normally initiated by the CJ. The pilot should thus listen-out until invited by the CJ to enter the performance zone.

3.11.1.3 The pilot should listen for the preceding contestant to call **“(callsign) – box vacated”** as a clear indication that a call from the CJ inviting entry to the box may be expected. Pilots should note however that unavoidable judging panel discussions may lead to unexpected delays.

3.11.1.4 Should the pilot experience an unusual delay indicating that circumstances may have led to the CJ being unaware of his/her presence at the hold point then, after visually determining that the preceding pilot has in fact departed the box en-route to joining the circuit, the pilot may make a brief call to check the CJ's awareness of the situation – for example: **“Chief Judge (callsign) is waiting in the hold”**.

3.11.1.5 On receipt of a call from the CJ to confirm that the box may be entered at the pilot's discretion, the pilot must reply to confirm that the message has been received and understood. Typical exchanges are thus:
CJ to Pilot: **“(callsign) – Chief Judge, you may enter the box at your discretion”**
Pilot to CJ: **“Chief Judge – roger (callsign) is entering the box”**

Unless and until this two-way communication has been established the pilot MUST remain clear of the performance zone. Failure to comply with this Rule may lead to disqualification from that Programme or from the contest or event, at the discretion of the CJ.

3.11.1.6 Should the need arise, the CJ may transmit calls of the following three types during the box flight:

“Break, break, break” indicates that the CJ requires the pilot immediately to interrupt his sequence, attain level flight and then discuss the situation with the CJ before resuming the sequence.

“Box, box, box” indicates that the CJ believes that safety is compromised because the competitor is flying outside of the designated performance zone and should reposition within the box before continuing with the contest flight, by taking a break if necessary. The break will be recorded as a penalised break. If a pilot ignores the “Box, box, box” call and fails to reposition promptly, the CJ may instruct the pilot to land without completing the sequence. In these circumstances a re-flight will not be permitted. The call “Box, box, box” may also be made on the safety frequency by the CD, in which case it shall have the same authority as that call made by the CJ.

“Land, land, land” indicates that the CJ requires the pilot to cease flying the sequence immediately and expedite landing. The CJ will explain the circumstances to the pilot as required by the situation.

3.11.1.7 It is not necessary for pilots to make RT calls regarding mid-sequence breaks, wing-rocks, re-entering the box etc. Such transmissions are acceptable but may receive no acknowledgement.

3.11.1.8 Upon completion of the sequence the pilot should call **“(callsign) box vacated”**, before changing to the airfield frequency and resuming normal radio procedures. An initial call on that frequency such as **“Airfield (callsign) box vacated, request join ...”** etc. will help to advise others on that frequency of the pilot's contest flight completion.

3.11.1.9 If an airborne aircraft has a radio failure before being called into the box, the pilot should land immediately and report to the CD. In the event of a radio failure during or after the sequence, the pilot should complete his flight, land in accordance with standard non-radio procedures and immediately report to the CD. The aircraft must have a serviceable radio before flying again at the contest.

3.11.1.10 After leaving the hold for the performance zone, or during the initial climb to height if there is no hold, in the Club/Club+ and Sports classes, the pilot may perform aileron half-rolls in level flight, for the purposes of confirming the serviceability of systems for inverted flight. These manoeuvres should ideally be completed inside the performance zone.

3.11.1.11 If any other aerobatic manoeuvre is flown before the opening wing rocks, the competitor will be liable to a penalty equivalent to one low penalty.

3.11.1.12 **SAFETY MANOEUVRES (Rule 3.13)**. In the Advanced and Unlimited classes, the safety manoeuvres specified in CIVA Regulations may be flown. Where an Intermediate contest is being run in accordance with

CIVA Regulations, the prescribed safety manoeuvres may be performed, unless otherwise briefed by the CD or CJ.

3.11.1.13 Notwithstanding any radio calls exchanged with a ground station, the responsibility for seeing and avoiding other air traffic rests entirely with the pilot at all times.

3.11.1.14 No pilot should take off until he is sure that the hold, if in operation, will have been vacated by the time he reaches it.

3.12 AIRBORNE PROCEDURES (GLIDERS)

3.12.1 The safety principles outlined in **Section 3** above also form the basis for airborne procedures in Glider aerobatic contests. However, the following differences may apply:

3.12.2 To avoid radio frequency changes whilst on tow, the glider pilot should select the safety frequency before take-off. Routine box clearance messages will be exchanged between the Chief Judge and the tug pilot, and monitored by the Flight Director, on the airfield frequency.

3.12.3 Once the glider/tug combination is on final approach to the box, any urgent calls from the Chief Judge to the glider pilot will be made on the safety frequency. The glider pilot must acknowledge receipt and understanding of these calls by responding appropriately to the Chief Judge. After release, the tug pilot will vacate the performance area expeditiously and continue in accordance with local procedures.

3.12.4 After completion of the sequence, the glider pilot should call **“(callsign) box vacated”** on the safety frequency. This will inform the next competitor of the situation. Thereafter, the glider pilot should comply with procedures briefed by the host airfield.

3.12.5 Notwithstanding any radio calls exchanged with a ground station, the responsibility for seeing and avoiding other air traffic rests entirely with the tug and glider pilots at all times.

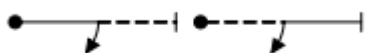
3.13 SAFETY MANOEUVRES

3.13.1 Before the wing-rocking at the start of the judged section of each contest flight in any Programme, it is recommended that all pilots perform safety manoeuvres as prescribed below.

3.13.2 PERMITTED SAFETY MANOEUVRES

3.13.2.1 Safety Figures

All pilots in all categories may perform the following two safety figures:



These figures are flown to check the aircraft's inverted fuel and oil systems are operable, there are no loose articles in the aircraft and to ensure that the pilot is properly harnessed in.

The pilot may perform any number of these figures (1.1.1.3 & 9.1.3.2; 1.1.1.4 & 9.1.3.2), separately or continuously, before the wing rocking signalling the start of the competition sequence.

3.13.3 **IN THE INTERMEDIATE WHERE CIVA RULES ARE BEING APPLIED AND IN ADVANCED AND UNLIMITED AT ALL TIMES PILOTS MAY ALSO PERFORM THE FOLLOWING:**

3.13.3.1 Warm up turns

Pilots may perform any number of turns (erect or inverted, but not rolling turns) as warm up manoeuvres, separately or in one continuous turn.

These warm up manoeuvres are flown to help prepare the pilot for the upcoming g-loadings and to help reduce the risk of g-loc.

3.13.3.2 Warm up Push/Pull manoeuvres

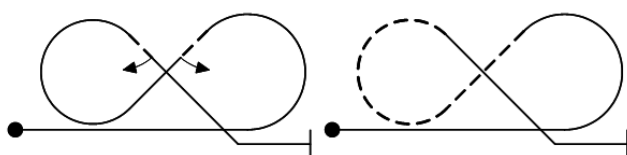
As additional safety checks, pilots may perform push/pull stick inputs (in any order and number, in erect or inverted flight).

These warm up manoeuvres are flown to create instant g-loading and hence an additional check of the harness and absence of loose articles in the aircraft.

3.13.3.3 Practice figures

The pilot may then perform up to **three** of the following practice figures:

- a) 2-line stall turns (all figures in family 5.2.1) **without rotations**;
- b) Humpty bumps starting vertical up (all figures in family 8.4 rows 1 to 4, columns 1 and 2), **without rotations**;
- c) Horizontal 8's as follows: 7.8.4.1 with **two half rolls only**; 7.8.1.1 **without rotations**.



These optional figures provide additional preparation for g-loadings and allow the pilot to assess the wind direction and drift in the performance zone. They may be flown only once, in any order.

3.13.3.4 Programme 1 **ONLY**

Additionally, before commencement of the Free Known sequence (Programme 1), each pilot may practice, consecutively, up to the first **3** figures of that sequence in addition to and after the manoeuvres/figures described by 3.13.3.1 to 3.13.3.3.

3.13.4 **ALL CATEGORIES**

3.13.4.1 All Safety, Warm up and Practice manoeuvres/figures **must** be flown inside the performance zone above the minimum height for the Class. Any low flying observed will be penalised as though it were in the judged sequence.

3.13.4.2 For the avoidance of doubt all Safety, Warm up and Practice manoeuvres/figures as well as the full aerobatic sequence **must** be completed within the time allowance for the Programme being flown.

3.14 **WING ROCKING/SIGNALLING**

3.14.1 A competitor must signal the start and finish of each programme, and any break, by distinctly rocking the wing three (3) times by more than 45 degrees. For timing purposes, the programme is deemed to start on the return of the wings to level after the third wing rock; and is deemed to finish on their return to level after the third of the final wing rocks.

3.14.2 The aircraft may start and/or finish the wing rocks either inside or outside the aerobatic zone. They may be in normal or inverted flight, on any flight path angle. The flight path angle may change between the wing rocks. The return of wings to 'level' therefore does not necessarily refer to the aircraft being 'in level flight'.

3.14.3 If the first figure in a programme or the first figure after a break begins in inverted flight, the authorized starting procedure is either: a) a half roll prior to the first wing rock, and all wing rocks performed in inverted flight; b) a vertical line established from flight in a direction parallel to the starting axis, with the exit in inverted flight; in this case the wing rocks may be performed partly or totally on the vertical line, or after levelling-off in inverted flight.

3.14.4 A horizontal flight path is required at the start of the first figure. This horizontal may be started inside the aerobatic zone or, provided that it is clearly seen to continue inside, it may be started outside the zone.

3.14.5 Violations of signalling procedures, determined by simple majority of judges, will be penalized in accordance with **Rule 4.6.6**.

4. JUDGING RULES AND PROCEDURES

4.1 JUDGES

4.1.1 The function of the contest judges will be the marking of the contest programmes.

4.1.2 There will be a minimum of three, except at a Club/Club+ event for which one or two judges shall suffice.

4.1.3 The CJ may be a scoring or non-scoring judge.

4.1.4 The judges will be helped by assistants, timekeepers and other officials as deemed necessary by the CJ who shall normally have two assistants. One shall mark the CJ's score sheet, the other will gather the previous flight's score sheets and ensure that no anomalies exist before their dispatch to the scorer. It is recommended that a third person should assist the CJ by taking responsibility for making radio calls on the safety frequency as instructed by the CJ.

4.1.5 Prior to commencement of flying, the CJ will brief pilots and judges on:

- Description and location of the aerobatic performance zone and the direction of the main axis, to include identification of no-fly areas and display/crowd lines (where appropriate);
- Safety rules and minimum heights;
- The judging criteria applicable to the programmes to be flown. Any special procedures for flying the aerobatic programmes, for example, additional figures in Sports class;
- Selection of figures for Unknown Compulsory sequences if appropriate.

4.1.6 The judges should be positioned in the judging area not less than 15 metres apart, although smaller distances may on occasion be acceptable.

4.1.7 The function of any timekeepers will be to measure the time taken for the Final Freestyle programme and any other times required by CIVA Rules. They shall also help the CJ to record whether wing-rocking regulations have been properly observed.

4.1.8 Immediately upon completion of a contestant's programme each judge will complete the relevant judging sheet. The sheets will then be collated by the CJ's assistant and checked for errors, anomalies, zeroes, and omissions etc. He/she will bring these to the attention of the CJ for resolution and completion of the Flight Summary Sheet by the CJ before the sheets are passed to the scorer.

4.2 SCORING OF CONTEST PROGRAMMES

4.2.1 The method that will be adopted in the marking of contestants' programmes is dependent on the classes being run at the contest and is covered in the individual class rules.

4.3 ASSESSMENT OF PROGRAMMES

4.3.1 In the determination of the scores for a figure or programme flown by a contestant the following criteria will apply:

- The mark for an individual figure will be determined by the accuracy with which it is flown.
- The mark for the positioning (defined as the positioning and symmetry of a competitor's sequence within the performance zone, as seen by the judges) of the programme will reflect how the contestant positions the sequence in front of the judges. For example: a programme flown to one end of the contest area or in an area where it is difficult for the judges to observe it will be marked down.
- In the Final Freestyle programme, the detailed judging criteria specified in CIVA Regulations shall apply.

4.4 CALCULATION OF OVERALL SCORES

4.4.1 In all classes the total of all judges' scores will be computed using a statistical analysis system approved by the British Aerobatics directors.

4.4.2 The CD will arrange to make score sheets available for examination after their preliminary computation. This allows reasonable time for pilots to check their scores and protest within the appropriate timescale – usually 1 hour from the time printed on the sheet.

4.5 DEDUCTIONS TO MARKS FOR FIGURES (OTHER THAN IN THE FINAL FREESTYLE)

4.5.1 It is assumed by a judge that a contestant is going to fly a perfect figure; therefore, he starts with a grade of 10 and proceeds to downgrade this mark by fixed values and in conformity with the Judging Criteria at **Section 14**.

4.5.2 Once a horizontal flight path is established at the end of a figure, the beginning of the next figure is considered to have occurred.

4.5.2.1 The absence of a distinct **horizontal** start or finish to a figure will reduce the mark by 1 point in each case for each figure affected.

4.5.3 At the completion of a figure, any deviation from the correct attitude and flight path will attract a reduction of 1 point per 5° of deviation in increments of 0.5 points.

4.5.4 Per **Rule 4.5.2** as soon as one figure stops, the next one starts. Therefore, any reduction made under **Rule 4.5.3** will also be applied at the start of the next figure.

4.5.5 **ERRORS OF GEOMETRY**

4.5.5.1 For all deviations from the correct geometry (plane of flight, direction of flight, angle of bank), and for deviations from the proper flight path or the proper attitude (as appropriate), the mark will be reduced by 1 point per 5° deviation in 0.5-point increments. If a single error reaches 90°, then a hard zero is awarded.

4.5.5.2 Over-rotating or under-rotating a roll will be penalized at the 1 point per 5° rate, even if the correct geometry is resumed afterwards, no matter how quickly the correction is made. The same provisions apply when, at the end of a loop or part-loop, the aircraft's nose is pitched beyond the desired line and then brought back again.

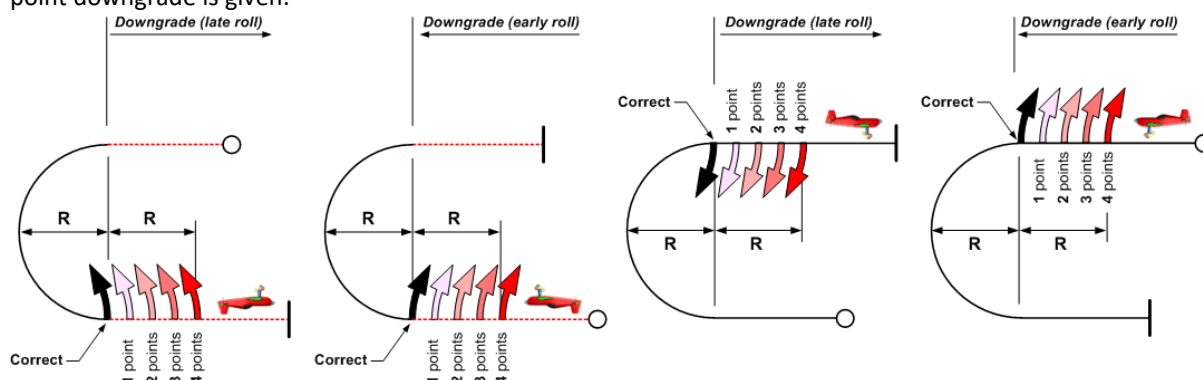
4.5.5.3 If within a figure two or more lines must be of the same length, an observed variation must be penalized by reducing the marks in the following way, based on the length of the first line:

- any visible variation - 1 point;
- if the lengths vary in the ratio 1:2 - 2 points
- if the lengths vary by a ratio greater than 1:2 - 3 points
- No visible line before **or** after the roll – 4 points
- No visible line before **and** after the roll – 2 points

4.5.6 Slow rolls flown in combination with a turn (family 2.3 - 2.20) or loop (family 7) must be smoothly continuous: that is there must not be any change in the rate of roll or turn from beginning to end. For each recognizable variation in the angular velocity about the longitudinal axis, there will be a reduction of the mark by 1 point. For each stoppage in roll or turn the deduction is 2 points.

4.5.7 Marking criteria for combinations of rolls with turns or loops will include the even integration of the rolls within the figure. If the total pre-stated number of rolls is completed before the appropriate point in the figure, the mark will be reduced by 1 point for every 5° of the remaining segment of the turn or loop.

4.5.8 Many figures contain instances of level rolls immediately before or after a looping segment of 180° or more. In such cases, there should be no perceptible horizontal line separating the start, or end, of the closest rolling element from the adjacent looping element. If such a line is detected, a downgrade of 1 to 3 marks shall made as illustrated below. If the length of this line is greater than the radius (R) of the looping element, a 4 point downgrade is given.



4.5.9 Should a competitor fly a figure at a location, inside or outside the performance zone, such that the accuracy of the flight path or attitude cannot reasonably be determined, then 2 points should be deducted for each element not capable of assessment. Considerations for Hard Zeros shall not change in these circumstances.

4.6 PENALTIES

4.6.1 A contestant will only be penalized or excluded on a simple majority decision of the panel of judges, except regarding matters of safety when the CD or CJ can decide to exclude a contestant from a programme or the contest. Where there is no majority among the panel of judges, the CJ will have the casting vote.

4.6.2 HEIGHT PENALTIES

Except in Advanced and Unlimited class there is no upper height limit, although in Sports and Intermediate classes the individual marks for positioning may be adversely affected by excessive height. For flying below the lower height limit the following penalties shall apply:

Class	Penalty
Club/Club+	50 points per judge for each excursion below 450m but above 300m. Below 300m the contestant will be excluded from that Programme.
Sports and Intermediate	50 points per judge for each excursion below 300m but above 200m. Below 200m the contestant will be excluded from that Programme.
Advanced	As per CIVA.
Unlimited	As per CIVA.

4.6.3 TIME PENALTIES

4.6.3.1 Time penalties will only be given in Advanced and Unlimited classes in accordance with CIVA rules.

4.6.4 DANGEROUS FLYING

4.6.4.1 In addition to penalties for infringement of the height regulations, any flying deemed by the CD or CJ to be dangerous will result in disqualification from the programme during which the incident occurred and

possible exclusion from the contest as deemed appropriate by the CD and CJ. The CD should inform the HCO of the incident in accordance with **Rule 1.12**.

4.6.5 **BREAK IN THE SEQUENCE**

4.6.5.1 A break in the sequence to change direction by more than 90 degrees or to regain height other than for reasons of weather previously agreed by the CJ will be penalized as follows:

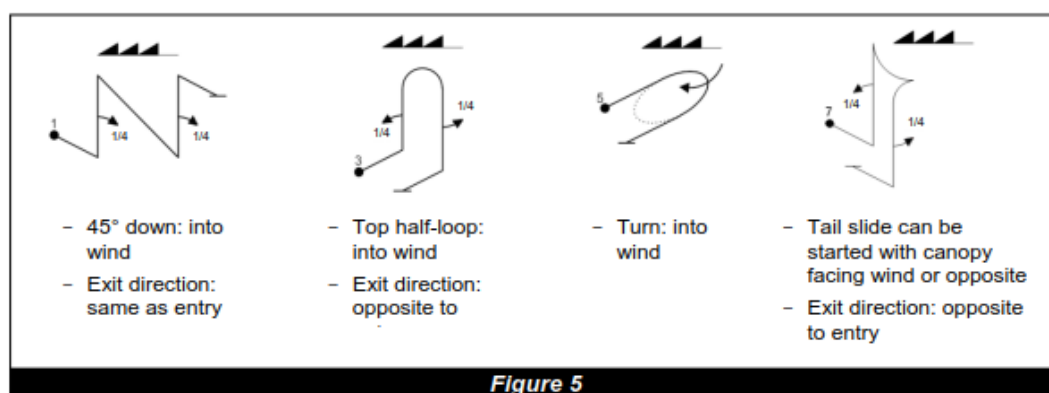
Club/Club+	There is no penalty for a break, and the mark for positioning will not be affected
Sports	There is no penalty for a break, but the mark for positioning may be affected
Intermediate	30 marks per judge per break
Advanced	As per CIVA
Unlimited	As per CIVA

4.6.6 **VIOLATIONS OF SIGNALLING PROCEDURES**

A penalty of **30 marks** (all categories) will be given in case of violation of signalling procedures set out in **Rule 3.14**

4.6.7 **DIRECTIONALITY**

4.6.7.1 Any figure with both entry and exit lines aligned on the secondary axis **MUST** be flown with the exit direction relative to the entry direction as drawn on the sequence Forms B and C (respectively R and L) that is, in the same or the opposite direction, otherwise the figure will be marked HZ (Figure 5).



4.7 **MARKS OF ZERO**

4.7.1 **NUMERICAL ZERO**

4.7.1.1 A valid mark of **0.0** (a Numerical Zero) must be given to a figure if the deductions reflecting the imperfection of the execution of the figure lead to a value lower than 0.5.

4.7.2 **PERCEPTION ZERO (DISCONTINUED FROM 2023)**

4.7.3 **HARD ZERO**

4.7.3.1 A mark of “Hard Zero” (**HZ**) must be given if the Judge considers that the figure is incorrectly flown in respect of a geometrical error, as listed below, that is clearly verifiable as a matter of fact. A mark of HZ must be given to a figure if:

- any figure is flown which does not conform to the drawing held by the judges for marking purposes (Form B, C, L or R);
- when rolls are superimposed on a turn or loop and the roll is finished but 90° or more of the turn or loop remains to be flown, or the turn or loop is finished but 90° or more of the roll remains to be flown;

- when rolls are superimposed on a turn or loop the roll is finished but 90° or more of the apex remains to be flown, or the apex is finished but 90° or more of the roll remains to be flown (the apex being the symmetric top or bottom arc defined by the start of the roll);
- any deviation from the prescribed direction reaches 90°;
- any deviation in geometry/flight path/attitude/rotation reaches 90°;
- the pre-stated figure or any part of it is omitted;
- any part of the figure was not visible as it was flown in or behind cloud. If the figure was visible to a majority of judges, then the CJ should instruct unsighted judges to revise their mark from HZ to A (Average)
- A flick roll was not started with the proper autorotation
- A spin was not started with proper autorotation
- A rolling turn included a flick roll
- A rolling turn where more than 45 degrees of roll is executed to bring the wings level after the turn is completed

4.7.3.2 During a repetition flight the figures before the break must all be flown correctly. If a competitor omits or flies such a figure incorrectly, to gain an unfair advantage, the grade awarded for that figure during the first flight will be reduced to a HZ.

4.7.3.3 When awarding a Hard Zero, Judges are to write down the nature of the error and must not give a “reserve” mark.

4.7.3.4 When difficulties occur in interpreting the correct application of the HZ mark, the CJ may call for a discussion on the spot by the Judges. The official video may be used in these discussions to help determine matters of fact, but not of perception. Such discussions shall not interfere with the subsequent flights. The Scoring Sheet shall be retained until the final decision is made at the next possible break.

4.7.4 **MIX OF ZEROS**

4.7.4.1 The British Aerobatics computer software programme will handle a mix of Hard Zeros or “A” grades. For this to function correctly, the CJ, if necessary, after a conference, must tick the Confirmed Hard Zero (CHZ) field on the Flight Summary Sheet (FSS) if a hard zero was in fact flown. If the CJ decides the figure to have been correct, the CHZ box must be left open.

4.7.4.2 When a mix of hard zeros, non-zero marks and/or “A” grades exists, the following resolution will take place in the computer scoring programme:

- “A” grades will first be set to an average of the non-zero judges’ grades, to the nearest half mark
- If the CHZ box on the FSS has been filled, then all other grades will be changed to HZ
- If the CHZ box is open, then the HZ grades will be set to “Missing”. After normalisation, the “Missing” grades will be replaced with Fitted Values determined by the computer

4.7.4.3 At the end of each flight, the CJ should ascertain whether any of the Judges has recorded a Hard Zero (HZ) mark, height penalty, break penalty or insertion penalty. This will be done by perusal of the score sheets collected from the judges, prior to entry into the scoring system.

4.7.4.4 In the event of a difference of opinion between the Judges concerning a Hard Zero (HZ) mark, insertion penalty or break penalty, the CJ may, at his own discretion, either call a conference as soon as possible or follow procedure in **Rule 4.7.5.3** at his workstation without further reference to the Judges.

4.7.4.5 When awarding a Mark of Zero, whether numerical or Hard Zero, Judges are to write down the reason for giving a Mark of Zero and must not give a “reserve” mark.

4.7.5 **HANDLING HARD ZEROS**

4.7.5.1 The awarding of Confirmed Hard Zero marks is determined by the CJ, if necessary, after a judging conference. When a Judge’s vote is over-ruled, upward correction of a Hard Zero will be to a Fitted Value determined by the scoring software.

4.7.5.2 The CJ will record Confirmed Hard Zeros and any other penalties on the FSS.

4.7.5.3 The procedure for handling hard zeros and penalties on the judging line can be broken down as follows:

4.7.5.3.1 HARD ZEROS GIVEN BY THE MAJORITY OF JUDGES

The score sheets go to the scorer unchanged, the CJ having checked the Confirmed Hard Zero (CHZ) box on the FSS, unless a conference to confirm the facts is demanded by any judge(s). The computer system changes the minority grades to HZ.

4.7.5.3.2 HARD ZEROS GIVEN BY 50% OR LESS OF THE JUDGES

The CJ first determines by means of conferencing whether the Hard Zero is correct or not. If correct, the CJ will check the "CHZ" box on the FSS, if not he will leave it blank. The judges must not change their score sheets as a result of the discussion. The score sheets together with the FSS will then go to the scorer and the computer system will then change the incorrect grades.

4.7.5.3.4 MIXTURE OF HARD AND NUMERICAL ZEROS

When a figure has been given a majority of zeros (including Hard and Numerical Zeros) the CJ may instruct individual judges to change their mark from Hard to Numerical Zero, or vice versa, should the CJ believe this is necessary to ensure that an individual judge's Ranking Index is not affected by the way zeros were described for this figure.

4.8 INSERTIONS

4.8.1 A penalty equal to the penalty for a break will be applied to any figure that is added to the order of the programme in the Intermediate, Advanced and Unlimited classes.

4.8.2 In the Sports class, where there is no break penalty, the insertion penalty will be **20 marks**.

4.8.3 If a pilot is awarded a mark of zero for a figure, takes a break and then repeats the previously zeroed figure, this repetition will not be treated as an insertion.

4.8.4 If a pilot adds a figure into a sequence that is not shown on the sequence card, the added figure replaces the figure shown at that point in the sequence on the diagram, which is zeroed.

For example, if the pilot should have flown a stall turn, loop, and humpty, but performs a stall turn, slow roll, loop and humpty, then the stall turn is marked, the slow roll is counted as the loop so is zeroed, the loop has already been zeroed so is not judged and the humpty can be graded as usual. In this case no insertion penalty is incurred. If the same pilot had flown a stall turn, a half Cuban, realised that he was now in the wrong direction, so inserted a 180 degree turn to get the right way (without breaking) then flew the loop and the humpty, the stall turn would be marked, the loop zeroed (because the pilot flew a half Cuban instead), the insertion of the 180 degree turn would be penalised (because the pilot gained an advantage from using the 180 turn instead of taking a break), the loop is not marked (its treated as a repeated previously zeroed figure) and the humpty is marked.

4.9 RADIO

4.9.1 The unauthorized use of radio or any other communication device for the purpose of communication with a ground observer in connection with the contest programme will result in exclusion from the contest.

4.10 SMOKE SYSTEMS

4.10.1 The use of smoke systems during Programmes 1 to 4 will result in exclusion from the Programme. However, their use is permitted for Masters, Apprentices and Final Freestyle programmes.

4.11 POSITIONING

4.11.1 There will be no specific use of any Boundary Judging procedures for assessing box boundary line outs.

4.11.2 All classes will be expected to fly the programme within the limits of the Performance Zone. The boundary and lower/disqualification height limits of the zone will be demonstrated where possible, prior to commencement of judging and, if possible, by a non-competing pilot.

4.11.3 Judging of positioning is described in **Section 16**.

4.12 THE FINAL FREESTYLE PROGRAMME

*Judging of this programme is described in **Section 15**.*

5. THE OPERATION OF THE CLUB/CLUB+ CLASS

5.1 ENTRY RESTRICTIONS

5.1.1 Each pilot must be a Member of the British Aerobatics, complete a normal entry form and comply with all personal and aircraft documentation requirements.

5.1.2 Once a pilot has entered a Sports class contest, he/she shall not again be eligible to enter a Club/Club+ event.

5.2 TYPES OF PROGRAMME

5.2.1 Pilots will be expected to fly the published Known Compulsory Programme in the Club/Club+ class, which will contain no more than six figures (8 figures for Club+), published at the beginning of the season, at least two months prior to the starting date of the first event. This programme will be used as the Programme 1 for all Club/Club+ events throughout the season.

5.3 METHOD OF SCORING

5.3.1 A mark from 0 to 10 in intervals of 0.5 will be given for each figure flown in the programme by the entrant. The mark will be multiplied by the published K factor for the figure to give the score. For example:

Positive Loop (Figure 7.4.1.1) K = 10 Mark = 7 Score = 70
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5.3.2 A separate mark from 0 to 10 in increments of 0.5 will be given for positioning. This mark will be multiplied by a K factor of 10 in both power and glider events.

5.4 AIRMANSHIP AND SAFETY

5.4.1 The base height for Club/Club+ is **1500' aal**. Disqualification height is **1300'aal**.

5.4.2 The Club/Club+ Class has been arranged specifically as an entry level event for inexperienced aerobatic pilots. The principal aim of the event is not competition, but to introduce newcomers to flying under simulated contest conditions and to quantitative assessment in accordance with normal judging criteria.

5.4.3 The primary concern during any Club/Club+ flight is **safety**, and the minimum height rule is paramount. There are **NO PENALTIES** for breaks to reposition gain height etc, nor will such instances be subject to a downgrading of the score for positioning.

6. THE OPERATION OF THE SPORTS CLASS

6.1 ENTRY RESTRICTIONS

6.1.1 For entry restrictions see **Section 2**.

6.1.2 A competitor may fly both the Club/Club+ and Sports classes at a contest subject to the following conditions:

- Any pilot may only do this once
- The pilot must only have flown no higher than Club/Club+ class at previous contests.
- The normal Proficiency sign-off process must have been followed for both Club/Club+ and Sports class before the pilot arrives at the contest site.

6.2 TYPES OF CONTEST PROGRAMME

6.2.1 Contestants will be required to fly the published Known Compulsory (Programme 1) in the Sports class, which will contain a minimum of 9 and a maximum of 11 figures, with aggregate K between 100 and 125. The programme will be published at the beginning of the season, at least two months prior to the starting date of the first contest. This programme will be used as the Programme 1 for all Sports contests throughout the season.

6.2.2 The CJ may also set one or more Unknown Compulsory Programme(s), containing a minimum of 6 and a maximum of 10 figures chosen from the list catalogued [S] in Appendix II **[Section 13]** (taking into account the limitations of the aircraft competing). The figures in each sequence must aggregate to 125 K or less. The first such Programme will be announced immediately after the first briefing, after which no further practice flights will be allowed.

6.2.3 A contestant who considers that any figure is outside the limitations of his/her aeroplane may request its removal. The CJ will decide on the protest, and if it is upheld, he will substitute a different figure. If the protest is not upheld, then the contestant may omit the figure. The omitted figure may be replaced by a break if a 90° or 180° heading change is involved.

6.2.4 For some contests competitors may be required to perform additional figures of their own choice at the end of the Known Programme. These figures shall have an aggregate difficulty factor specified in the published contest details and will be scored in the normal way. The extra figures must be chosen from the Aresti System (Condensed) and may include manoeuvres flown in the Known Programme but must not within themselves contain any repetition. Any break made immediately before the additional figures will be unpenalized, but there will be only one positioning mark for the whole flight.

6.3 METHOD OF SCORING

6.3.1 A mark from 0 to 10 in intervals of 0.5 will be given for each figure flown in the programme by the entrant. The mark will be multiplied by the published K factor for the figure to give the score.

for example: Positive Loop	Figure 7.4.1.1	K = 10	Mark = 7	Score = 70
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6.3.2 A separate mark from 0 to 10 in increments of 0.5 will be given for positioning. This mark will be multiplied by a K factor of 15.

6.4 AIRMANSHIP AND SAFETY

6.4.1 The base height for the Sports class is **1000' aal**. The disqualification height is **800' aal**.

6.4.2 Pilots are permitted to take unpenalized breaks for any reason.

7. THE OPERATION OF THE INTERMEDIATE CLASS

7.1 ENTRY RESTRICTIONS

7.1.1 For entry restrictions see **Section 2**.

7.2 TYPES OF CONTEST PROGRAMME

7.2.2 Contestants will be required to fly at least one of the following types of aerobatic programme:

- A Free Known Programme in the Intermediate class.
- A Compulsory Unknown Programme.
- A Free Unknown Programme composed in accordance with CIVA Regulations
- An Apprentices Programme.

7.3 COMPOSITION OF THE PROGRAMMES

7.3.1 The Free Known Programme

7.3.1.1 The Free Known Programme will be compiled individually by each competitor and will contain 10 figures. Five of the 10 figures will be compulsory, and these will be published by British Aerobatics at the beginning of the season, at least two months prior to the starting date of the first contest. The other 5 figures will be the free choice of each pilot, subject to meeting the complexity and versatility requirements below. The compulsory and free figures may be placed within the sequence in any order.

7.3.1.2 The sum of K Factors for all 10 figures must not exceed 200K. The manoeuvres must be chosen from the Aresti System (Condensed) and subject to the following rules on versatility:

Family	Intermediate	Advanced	Unlimited
1	Not Required	At least one figure	
2	At least one from either 2.1.2 to 2.1.3, or 2.2.2 to 2.2.7, or 2.3.2 to 2.3.6, or 2.4.2 to 2.4.8		At least one from either 2.2.3 to 2.2.7, or 2.3.2 to 2.3.6, or 2.4.2 to 2.4.8
5	At least one figure		
6	Not required		At least one figure
7	At least one figure		
8	At least one figure		
9.1 to 9.8	At least one from each sub-family		Not specified
9.9 & 9.10	At least one	At least two, no sub-family specified	At least two from each sub-family
9.11 & 9.12	At least one figure from either		
Opposite Rolls	At least one instance with elements from Families 9.1 to 9.10		

- No single catalogue number may be repeated.

7.3.1.3 Contestants should complete Forms A, B, C, L and R (**see Section 17**) and send them, in digital form (Open Aero), to the person nominated in the Contest Information, to arrive by the published contest closing date.

7.3.1.4 Contestants who fail to meet the submission deadline may be required to fly the Default Free Known Sequence published for this class.

7.3.1.5 The accuracy of Forms A to R is the responsibility of the contestant alone.

7.4 THE UNKNOWN COMPULSORY PROGRAMME

7.4.1 The Unknown Compulsory Programme(s) will contain a minimum of 8 and a maximum of 12 manoeuvres. These will be chosen from the published list of manoeuvres in **Section 13** denoted [S] and [I]. The figures in each sequence must aggregate to 175 K or less. The programme will be announced at least one hour before it is due to be flown.

7.4.2 A contestant who considers that any figure is outside the limitations of his/her aeroplane may request its removal. The CJ will decide on the protest, and if it is upheld, he will substitute a different figure. If the protest is not upheld, then the contestant may omit the figure. The omitted figure may be replaced by a free break if a 90° or 180° heading change is involved.

7.4.3 One or more Free Unknown Programmes may be included in the contest schedule, providing this is publicised in advance of the contest entry deadline. The composition, selection and conduct of these flights will be in accordance with CIVA Regulations.

7.4.4 The Apprentices Programme will be of up to 8 compulsory figures, not taken from the Aresti Catalogue.

7.4.5 Figures specified may include wingovers and quarter clovers in all Programmes (including Unknowns).

7.5 METHOD OF SCORING

7.5.1 Programmes 1, 2 and 3 will be scored as follows:

A mark from 0 to 10 in increments of 0.5 will be given for each figure flown in the programme by the entrant. The mark will be multiplied by the published K factor for the figure to give the score. for example:

Stall turn push out	Figure 5.2.1.3	K = 18	Mark = 7	Score = 126
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7.5.2 A separate mark from 0 to 10 in increments of 0.5 will be given for positioning. This mark will be multiplied by a K factor of 30.

7.6 AIRMANSHIP AND SAFETY

7.6.1 The base height for the Intermediate class is **1000'aal**. (*Note that this differs from the height limitation for the Intermediate Class published in the CIVA Sporting Code Section 6-1*). The disqualification height is **800' aal**.

8. THE OPERATION OF THE ADVANCED CLASS

8.1 ENTRY RESTRICTIONS

8.1.1 For entry restrictions see **Section 2**.

8.2 OPERATING REGULATIONS

8.2.1 Except as described here and in **Sections 1 to 5** of these regulations, the operation of the Advanced Class will be in accordance with **CIVA Regulations Section 6 Part 1**.

8.2.2 However, negative flick rolls may be included in Unknowns.

8.2.3 When Advanced pilots fly a Known Sequence in competition with lower classes and the result is determined by percentage of possible marks, an extended version of the Known sequence may be flown as specified in the published Contest Information.

8.2.4 The Free Known Programme will be counted towards the final results in all contests where it is flown.

8.2.5 The Unknown Programme(s) may be composed as Compulsory sequences by British Aerobatics, or as Free Unknowns following CIVA Regulations.

8.2.6 A contestant who considers that any figure is outside the limitations of his/her aeroplane may request its removal. The CJ will decide on the protest, and if it is upheld, he will substitute a different figure. If the protest is not upheld, then the contestant shall omit the figure. The omitted figure may be replaced by a free break if a 90° or 180° heading change is involved.

8.2.7 In the event of the number of competitors being less than 10, the selection of figures for the Free Unknown Programmes may be simplified at the discretion of the CJ. However, the resulting versatility shall not be less, nor the number of flick rolls more, than that allowed by the full procedure. Similarly, the total K for the programme should not be significantly less than that which would typically have resulted had the full procedure been used.

8.2.8 At least two sequences must be flown, to determine the British National Champion in the Advanced Class. In the event of weather curtailing the contest, the Champion may be determined from the Free Known and one other Programme.

8.2.9 All available time, including weather reserves, will be used at National Championships to try to complete the full schedule of Unknown Programmes.

8.2.10 The Masters Programme will be composed of up to 8 figures, not taken from the Aresti System (Condensed). For more detailed information see **Section 10**.

9. THE OPERATION OF THE UNLIMITED CLASS

9.1 ENTRY RESTRICTIONS

9.1.1 For entry restrictions see **Section 2**.

9.2 OPERATING REGULATIONS

9.2.1 Except as described here and in **Sections 1 to 5** of these rules, the operation of the Unlimited Class will be in accordance with **CIVA Regulations Section 6 Part 1**.

9.2.2 When Unlimited pilots fly a Known Sequence in competition with lower Classes and the result is determined by percentage of possible marks, an extended version of the Known sequence may be flown as specified in the Contest Information.

9.2.3 The Free Known Programme will be counted towards the final results in all contests where it is flown.

9.2.4 The Unknown Programme(s) may be composed as Compulsory sequences by British Aerobatics, or as Free Unknowns following CIVA Regulations.

9.2.5 In the event of the number of competitors being less than 10, the selection of figures for the Free Unknown Programmes may be simplified at the discretion of the CJ. However, the resulting versatility shall not be less, nor the number of flick rolls more, than that allowed by the full procedure. Similarly, the total K for the programme should not be significantly less than that which would typically have resulted had the full procedure been used.

9.2.6 At the National Championships in the Unlimited Class, the Champion will normally be decided by aggregation of the results of the Free Known and Unknown Programmes.

9.2.7 The Final Freestyle programme will be treated as a separate contest for the David Perrin Trophy.

9.2.8 At least two sequences must be flown to determine the British National Champion in the Unlimited Class. In the event of weather curtailing the contest, the Champion may be determined from Free Known and one other Programme.

9.2.9 All available time, including weather reserves, will be used at National Championships to try to complete the full schedule of Unknown Programmes.

10. MASTERS AND APPRENTICES PROGRAMMES

10.1 GENERAL

10.1.1 Masters and Apprentices programmes are established to provide a structured approach to non-Aresti contest flights. They therefore provide a graduated training development system to prepare pilots for the 4 Minute Freestyle format in the Unlimited Class.

10.2 ELIGIBILITY

10.2.1 Entry to Masters contests is restricted to pilots qualified to fly in the Advanced Class. Apprentices contests are open to pilots qualified to fly in the Intermediate Class.

10.2.2 Pilots entering for Masters or Apprentices Programmes must have completed the Proficiency sign-off with a specific proficiency sign-off for this Programme.

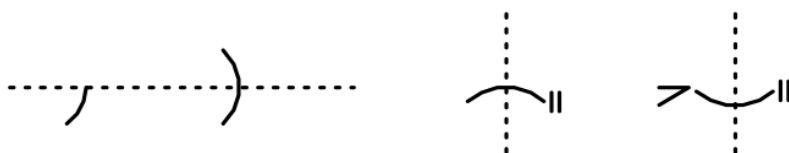
10.3 FORMAT

10.3.1 Each contestant will fly a series of compulsory figures. The figures will be different from those included in the CIVA catalogue, but with readily recognizable and definable elements.

10.3.2 The direction of flight for each figure will be specified. The basic geometry of each shape must be flown as drawn so that it is recognisable to the judges. Each figure must start and finish in the prescribed directions. Pilots must demonstrate the correct execution of the basic manoeuvre elements (for example, tail slide, stall turn) that are specified as an integral part of a figure.

The figures will be annotated with symbols to indicate:

- where specific nett amounts of rotation are required, for example, 180°
- where optional rotations may also be added, always nett 360°
- where vertical rolls in multiples of 90° may be added or may be necessary to conform to the basic geometry.



10.3.3 The symbols denote where the rotations are located, and show the nett rotation required. Pilots are expected to use the rotations to demonstrate the breadth of their imagination and flying skills; rotations may comprise aileron rolls with or without hesitations, flick rolls and other “embellishments”, provided throughout that the basic figure shape is preserved.

10.3.4 No rolls or embellishments are permitted between figures.

10.3.5 Apprentices programmes will normally comprise 8 compulsory figures, the figures themselves forming a continuous sequence.

10.3.6 Masters programmes will normally comprise 6 compulsory figures, with additional designated locations where pilots are encouraged to add voluntary Freestyle figures of their own design; in these cases, only the direction and attitude of entry and exit will be specified.

10.3.7 Apprentices and Masters Known Sequences will be published by British Aerobatics before the start of the season. Sample Apprentices and Masters figures are shown in **Section 18**. This Appendix is not exhaustive but is illustrative. Figures may be specified that are similar in concept to those shown but which are different in some respects.

10.3.8 A special briefing shall precede the Masters and Apprentices contests. This shall take the form described in **Rule 3.5.2** with emphasis being given to the explanation by the CJ of the judging criteria for each figure.

10.3.9 The CJ will brief on the location of the performance zone, define any safety line and crowd line that must not be infringed.

10.3.10 Any pilot that breaks a safety line or crowd line shall be disqualified from the programme.

10.4 HEIGHT MINIMA

10.4.1 The minimum height for Masters contests shall be as for Advanced, and for Apprentices as for Intermediate, as listed at **Rule 3.7**.

10.4.2 Penalties for flight below these minima shall be as for conventional Aresti sequences in Advanced and Intermediate classes, including **disqualification** for flight lower than 500 feet aal or 50% of the lower base height specified if the appropriate regulatory exemptions are in place.

10.5 METHOD OF SCORING

10.5.1 Scoring of the flight shall be in three parts:

10.5.1.1 **MARKS FOR COMPULSORY FIGURES:** Firstly, a mark from 0 to 10, in increments of 0.5, will be given for each compulsory figure. Assessment of this mark will be based on the grace and accuracy with which the figure is flown. Grace in this context refers to the harmony of the internal elements of the figure, whilst strict adherence to fixed-rate downgrading, as used in Programmes 1 to 3, is inappropriate. The mark for each figure shall be multiplied by a K factor of 20 and the scores aggregated.

10.5.1.2 **POSITIONING:** The second part of the marking system shall be concerned with the overall Positioning of the flight. Each judge will award a single mark from 0 to 10, in increments of 0.5, for positioning. The mark for Positioning shall be multiplied by a K factor of 40 and added to the scores for the compulsory figures.

10.5.1.3 **TECHNICAL MERIT & ARTISTIC PRESENTATION (WOW FACTOR):** In Masters programmes, pilots can create their own Freestyle figures. In both Apprentices and Masters programmes there is opportunity for the pilot to “embellish” each figure. The impact of these pilot added embellishments shall be assessed for:

10.5.1.3.1 **TECHNICAL MERIT:** one mark awarded, from 0 to 10, in increments of 0.5, multiplied by a K factor of 30, and added to the other scores.

10.5.1.3.2 **ARTISTIC PRESENTATION:** one mark awarded, from 0 to 10, in increments of 0.5, multiplied by a K factor of 30, and added to the other scores.

10.5.1.4 The winning pilot shall be the one with the highest aggregate of scores.

11. SUPPLEMENTARY RULES FOR GLIDER CONTESTS

11.1 APPLICABILITY

11.1.1 Almost all the rules and procedures in the previous sections also apply to gliders. Therefore, this section simply identifies those portions which do not apply (or apply with simple modifications) and introduces some additions. Paragraph numbers refer to those of earlier sections:

1.8.1	Participating glider pilots must hold an appropriate certificate recognised by the BGA.		
1.9.4	Also applies to tug aircraft.		
1.9.5	Also applies to tug aircraft.		
1.9.6	Also applies to tug aircraft.		
1.9.7	Fuel & oil systems are not relevant.		
2.13	Familiarisation and practice flights at the contest site are allowed at Glider contests, subject to prior approval of the CD.		
3.3	Glider classes are: Club/Club+, Sports, Intermediate, Advanced and Unlimited.		
3.4	The Aerobatic Programmes are:		
	Club/Club+	Known,	
	Sports	Known, Unknown	
	Intermediate	Free Known, Unknown	
	Advanced	Free Known, Unknown, Free Unknown	
	Unlimited	Free Known, Unknown, Free Unknown	
In Club/Club+ and Sports classes there may be more than one Known sequence.			
3.11.1.9	No figures permitted prior to starting the sequence. After completion of the sequence the glider must be landed expeditiously without performing further figures.		
3.9	Split programmes shall be flown from a launch height of 2500 feet.		
3.14	The penalty for omitting the wing-rocks at the start or finish of a programme, for Intermediate, Advanced and Unlimited only, shall be 35 points. The pilot shall not rock the aircraft's wings before or after a break in the programme. Once a sequence has started wing rocking indicates the conclusion of the programme.		
4.3.2	The 4 Minute Freestyle programme is not applicable.		
4.4.1	In glider flights the "horizontal" lines linking two figures may be slightly ascending or descending, and such flightpath may be different at the beginning and end of a figure.		
4.4.1.6	The placement of flick rolls on lines need not be central.		
4.6.2	For exceeding the lower height limit a penalty of 70 points will be applied for each low figure. Flying figures below the safety height will result in a pilot's exclusion from that programme. Height limits in feet above aerodrome level are:		
		Lower (ft)	Safety (ft)
	Club/Club+	1500	1000
	Sports	1000	700
	Intermediate	1000	700
	Advanced	700	500
	Unlimited	700	500
	Flight below 500ft (150m) can only be allowed with an exemption from the CAA to the low flying regulations.		
4.5.5	The penalties for each break in a programme shall be:		
	Club/Club+	No penalty	
	Sports	No penalty	
	Intermediate	40 points	
	Advanced	70 points	
	Unlimited	70 points	
4.5.1	A glider pilot will be excluded from the programme if he/she gains height through intentional use of thermals.		

4.6.5	If a pilot is compelled to change their direction after a mistake or after an abandoned figure to resume the predetermined direction and has already received a Hard Zero mark for that figure, no penalty points for an insertion will be subtracted. This correction of direction or orientation must not be more than a heading change of 180 degrees or attitude change of more than one half roll or half loop. In glider aerobatics there are NO breaks with wing rocking before and after. Wing rocking indicates the conclusion of the programme.
6.2.1	The maximum total K for Sports Known and Unknown sequences will be 135K.
6.3.2	The K factors for Positioning shall be 15K for compulsory and Free programmes, except in Club/Club+ where it shall be 10K.
7.3.1	The maximum total K for the Intermediate Unknown sequences will be 140K. Sequences will be designed to be flyable in a K21.
7.3.1.2	The Intermediate Free Known programme must include at least one manoeuvre from each of Families 2 (turns), 5 (stall turns), 7 (loops) and 9.1(slow rolls). It must start and finish in erect level flight (but see 5.4.2). Repetition of base figures is allowed. Maximum Total difficulty of the figures is 140K.
8.2.1	The Advanced Free Known Programme must include at least one figure from each of Families 5 (stall turn), 6 (tail slide), 7 (loop) and 8 (combinations), plus at least one figure from sub-families 2.1 or 2.2, optionally Cat No 2.1.3.1 may be flown and at least ½ aileron roll and 2 consecutive elements of a hesitation roll. Super-slow rolls and spins are not required. British Aerobatics non-CIVA Aresti figures are not allowed. Programmes should be 10 figures and total K 175 (178+ floating point correction allowed).
	The figures for the Unlimited Unknown programmes will be chosen in accordance with CIVA Regulations.
Note:	The basis for the Advanced glider class may be summarised as follows:
	All figures from the Aresti Glider Aerobatic Figures may be flown, except for the following restrictions.
	Loops and Part-Loops
	No full negative loops.
	No high-speed negative part-loops of more than 45° (max. 1/8 loops)
	Family 2
	No rolling turns, except Cat. No. 2.1.3.1 which is optional in the Free Programme.
	Family 9
	No rolls vertically up.
	No more than 1/4 roll vertically down.
	No flick rolls, positive or negative.
	No inverted spins.
	K factors will be: -
	Free Known Programme: 160 max.
	Unknown Programmes: 130 to 145
	For Advanced Unknowns, all figures from Chapter 9 of CIVA Regulations, with the above restrictions, may be selected.
	CIVA Rules (Section 6 Part 2) give a full description of the way that judges should assess positioning and the treatment of figures flown outside of the box limits.

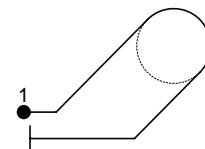
11.2 FIGURES:

11.2.1 Glider aerobatic sequences are composed of manoeuvres and figures taken from the Aresti System (Condensed). Not all K Factors are the same as in the powered aircraft catalogue, nor are the listed figures identical.

11.2.2. The following non-Aresti additions should be noted. They may also be incorporated in Sports class sequences for powered aircraft.

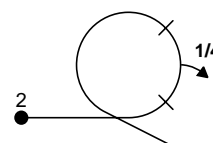
11.2.2.1 The Wingover (Family 0.0)

The wingover requires a 180° turn placed at the apex of 45° climbing and descending sections. The bank angle at the apex should be exactly 90° (powered aircraft at least 90°) with the fuselage axis horizontal. The normal 1 point off per 5° of error applies. Variations and stops of the turn rate are penalized by 1 and 2 points off respectively. The K factor for a wingover is 8.



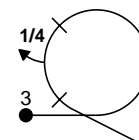
11.2.2.2 The Up-Quarter Clover (Family 0.1)

The upward quarter clover is a loop with a quarter roll symmetrically placed about the 90° point to change the direction of flight by 90°. Normal scoring conventions apply. The K factor is 16.



11.2.2.3 The Down Quarter Clover (Family 0.2)

The downward quarter clover is a loop with a quarter roll symmetrically placed about the 270° point so as to change the direction of flight by 90°. Normal scoring conventions apply. The K factor is 13.



BRITISH AEROBATIC ASSOCIATION

APPENDIX I TO BRITISH AEROBATICS GENERAL RULES

EXPLANATION OF THE LIST OF MANOEUVRES AND GUIDELINES FOR THE BUILDING OF COMPOUND FIGURES

12. EXPLANATION OF THE PUBLISHED LIST OF MANOEUVRES AND GUIDELINES FOR THE BUILDING OF COMPOUND FIGURES

12.1 THE ARESTI SYSTEM

12.1.1 A full explanation of the complete published list of manoeuvres and guidelines for the building of compound figures will be found in the Aresti System (Condensed) published by Aresti System SL, Madrid, Spain. see <http://www.arestisystem.com/>. The purpose of this Appendix is to enhance and clarify some aspects of the Aresti System. It is not intended to replace it, and all competitors are recommended to acquire their own copy of the Aresti System (Condensed). This Appendix is intended to aid the construction of Free Programmes, and to enable pilots to understand the figures they may be called upon to perform in Unknown Compulsory sequences.

12.1.2 The manoeuvres illustrated at Appendix II are a subset of figures extracted from the Aresti System. They are shown annotated with their unique reference number, difficulty (K) factor and appropriate level of proficiency. This last characteristic is a subjective national judgement, whilst the 2 former numbers are internationally agreed.

12.2 BASIC FIGURES

12.2.1 Families - There are 9 families of figures, denoted in Appendix II by the first digit of the Catalogue reference number, for example, 5.1.1.1.

The families illustrated are:

1. Lines and Angles
2. Turns and Rolling Turns
3. Combinations of Lines
4. *No longer in use - used to be Spins*
5. Stall Turns
6. Tail Slides
7. Loops, S's, and Eights
8. Combinations of Lines, Loops and Rolls
9. Rolls and Spins

In addition, the following may be seen:

0. Non-Aresti Figures (Gliders and Sports Power)

12.3 BASIC SHAPES

Each basic shape is unique and appears only once in the Aresti System, though some are repeated in Appendix II for ease of reference. Basic shapes are drawn from Families 1 to 8 only, NOT Family 9. The schematic of the shape is generally that the line shows the flight path of the aircraft during a manoeuvre. Dotted lines indicate periods of inverted flight, or, at least, of negative angle of attack. Thus Figure 5.2.1.1 is a stall turn in which the aircraft is always positive, or neutral, while Figure 5.2.1.3 shows a similar figure but with a negative, pushed instead of pulled, recovery.

Most basic shapes include some part-looping segments. When such a segment effects a pitch, attitude change of less than 180°, it is conventionally drawn with a sharp-angled corner. The sharpness of such corners is schematic only and does not indicate the need to pull the wings off your aeroplane! All looping segments must be flown with a smooth, constant radius.

12.3.1 Turns and Rolling Turns

Plain turns are usually included in sequences in Club/Club+ and Sports classes to give cross-wind correction or to position a figure on the cross-wind axis. These turns must be flown with a constant bank angle of at least

60°; angles less than this are downgraded by 1 point per 5°. The K factors for these figures are low and their prime significance is to facilitate good positioning. In Intermediate and higher classes, rolling turns are introduced to meet these aims but with a higher difficulty factor.

12.3.2 Stall Turns (Hammerheads)

Stall turns are primarily defined by whether the entry line is erect or inverted, and this condition is assumed to persist throughout the up-line. The down-line is assumed to have a zero angle of attack. Recovery to level flight can be pulled or pushed.

12.3.3 Tail Slides

There are two essential variants of the tail slide, canopy up (wheels down) shown by a solid 3rd line in the schematic, or canopy down, shown by a dotted line. As in stall turns, the up-line carries the loading of the entry line, positive or negative, while the down-line is assumed neutral. Tail slides occur only in the Advanced and Unlimited Classes.

12.3.4 Loops and Eights

Plain loops should be flown to present a perfect circle as seen by the ground observer, regardless of wind conditions. This shape should not change when rolls are superimposed in the top section. Square, diamond, and octagonal loops are best considered as "hesitation" loops. Unlike hesitation rolls however, the pauses are of different time periods to ensure lines of equal lengths at differing airspeeds. In horizontal eights, the two looping elements should be the same size and at the same height above the ground.

12.3.5 Humpty Bumps, Bananas, and Double Humpties

These are the figures of Family 8.4. In these shapes, the radius of the "internal" 180° looping element may be different from the entry and exit radii.

12.3.6 Rolls and Spins

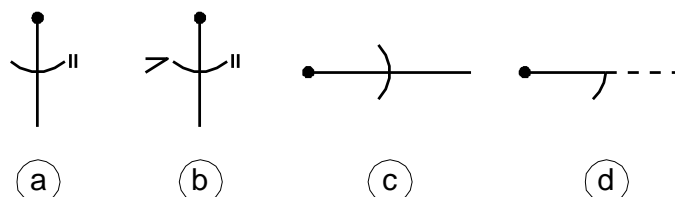
Rolls and spins, Family 9, are excluded from the heading of Basic Shapes. They consist of rotations that can be added as complementary elements to the Basic Shapes. Some very basic shapes, for example, Figure 1.1.1.1, cannot be flown unless part of a rotation is included. Nevertheless, most basic shapes can be flown as drawn without embellishment, and as such attract the K-factor shown in the illustrations. Thus, a 45° up line, 1.1.2.1, carries a K of 7 and can be flown purely as shown in the third shape of row 2, without the optional roll. Alternatively, it could be flown with a climbing roll, as shown by the shape below. In this latter case, the K of the basic figure is still 7, but an extra 10K will be added by the roll, and the figure will be allowed at Intermediate class. In this case, the manoeuvre has become a compound figure, the concepts of which are described in the next section. No figures including a rolling element, except rolling turns in Family 2, are considered Basic Shapes.

Spins, Families 9.11 and 9.12, fall into 2 categories, by the dint of their angle of attack during rotation (positive or negative). Positive spins are always entered from erect flight, negative spins from inverted.

12.3.7 *Compound Figures*

Formation

Compound Figures are formed by the superimposition of rotational elements, where permitted, onto basic shapes. The positions where rolls or spins can be added are shown by arcs on the basic shapes, as follows: The vertical optional roll symbol, (a) above, is confined to vertical up or down lines and indicates a rolling element that may be any multiple of 90°. The optional spin symbol, (b) above, is confined to vertical down



lines and implies the same as (a) but with the added possibility of a spin rotation. The optional roll symbol, (c) above, is used on horizontal or 45-degree lines and indicates where a full roll may be inserted. The compulsory half-roll symbol, (d) above, is also used on horizontal or 45-degree lines and indicates that a half-roll must be added here to maintain the shape of the figure. The half roll may be two-quarters, four eighths, a half-flick or any combination leading to a net 180° attitude change.

12.3.8 *Quarter and Three-quarter Rolls*

Quarter and three-quarter rolls are usually performed in vertical flight and result in a heading change of 90°. When the exit from such a figure is onto the secondary, crosswind, axis, the roll can be carried out to left or right, facilitating positioning correction for any crosswind component. When a subsequent quarter (or three-quarter) roll, turn or spin results in flight reverting to the main axis, the direction of roll or turn is crucial to the need to finish the figure in the correct direction.

12.3.9 *Half Rolls*

Where half rolls of any type are indicated, they are compulsory, or the shape could not be flown as drawn. However, such rolls can be performed to left or right without fear of affecting the direction of flight on completion of the figure.

12.3.10 *Full Rolls*

Full 360° rolls are generally termed "optional" as they do not affect the basic shape on which they are superimposed, which can be flown as drawn even if the roll is omitted. Again, direction of roll is unimportant, save for considerations of engine torque assistance etc.

12.3.11 *Types of Rolls*

Full aileron rolls are shown by an arrow straddling the shape's line, fractions by a half-arrow on one side of the line only. A similar convention applies to flick rolls, using an isosceles triangle symbol, open for positive and solid for negative. For spins, a right-angled triangle is used. Quarters and three-quarters are specified by the appropriate numbers, whilst halves are assumed to be the default and are unmarked. Continuous rolls of over 360°, multiple and opposite rolls are not covered here as they will not be included in Unknown sequences but are fully described in the Aresti System. In all rolls, roll rate is not a judging criterion, except that whatever rate is chosen should be maintained steadily throughout the roll. So "slow" rolls can be quite fast!

12.4 COMMON MISTAKES.

Common mistakes in early Free sequence construction include:

- forgetting that a "simple" slow roll comprises a basic shape (1.1.1.1) and a roll (9.1.3.4) for a total K of $2 + 8 = 10$
- repeating a basic shape, for example, 1.1.1.1, with different types of rolls superimposed
- repeating an identical half-roll element at two points on a horizontal eight.

BRITISH AEROBATIC ASSOCIATION
APPENDIX II TO
BRITISH AEROBATICS GENERAL RULES

FIGURES FOR THE CONSTRUCTION OF
UNKNOWN SEQUENCES

13. FIGURES FOR THE CONSTRUCTION OF UNKNOWN SEQUENCES

13.1 This Appendix is primarily concerned with figures which may occur in Sports and Intermediate class (Power) and Sports and Intermediate class (Glider) sequences.

13.2 For figures permitted in Unlimited and Advanced Unknowns, see **CIVA Rules Section 6 Part 1**.

13.3 Each block in the following diagrams shows a basic figure and, if appropriate, the complementary rotational elements that may be added in the Sports [S], Intermediate [I] or Advanced [A] classes.

13.4 If a basic shape can be flown without additional rolls, it is allocated to a class. When rolls or spins are added, the class of the combined figure is shown alongside the rotation.

13.5 The difficulty factors are shown in circles, contest classes in square boxes. When calculating the total difficulty of a complex figure, the separate K factors for all its individual components must be added.

13.6 Catalogue Numbers are shown as digits separated by dots. These are derived from the Aresti System (Condensed), Family, Sub-Family, Row and Column numbers.

13.7 FIGURES FOR THE CONSTRUCTION OF UNKNOWN SEQUENCES - TABLES

Powered Aircraft 1 of 7 [*Wingovers and Quarter Clovers are deleted for Club/Club+ and Sports 2023*]

From 2023 the following figures are no longer valid for Sports programmes:

Powered Aircraft 3 of 7

5.2.1.1 with 9.1.5.1 Quarter roll on the downline after a Stall Turn

Powered Aircraft 7 of 7

8.6.4.3 $\frac{3}{4}$ loop with roll after spin

8.6.5.1 $\frac{3}{4}$ loop with vertical downline (P-loop)

<p>1.1.1.1 (2) + </p> <p>9.1.3.4 (8) S </p> <p>9.2.3.4 (9) S </p>	<p>9.4.3.4 (11) S </p> <p>9.8.3.4 (15) I </p> <p>9.9.3.4 (11) I </p>	<p>1.1.1.2 (3) + </p> <p>9.4.3.4 (11) I </p> <p>9.1.3.4 (8) I </p> <p>9.2.3.4 (9) I </p>	<p>9.10.3.4 (13) A </p>
<p>1.1.1.3 (2) + </p> <p>9.1.3.2 (4) I </p> <p>9.4.3.2 (5) I </p>	<p>9.8.3.2 (7) I </p> <p>9.9.3.2 (11) I </p> <p>9.9.3.1 (8) I </p> <p>9.9.3.3 (8) I </p>	<p>1.1.1.4 (2) + </p> <p>9.1.3.2 (4) I </p> <p>9.4.3.2 (5) I </p> <p>9.9.3.1 (8) I </p> <p>9.9.3.3 (8) I </p>	<p>9.10.3.2 (13) A </p>
<p>1.1.2.1 (7) S </p> <p>9.1.2.4 (10) I </p>	<p>1.1.2.3 (7) S </p> <p>9.9.4.4 (11) I </p>	<p>1.1.3.1 + </p> <p>9.1.2.2 (6) I </p> <p>9.4.2.2 (7) I </p>	<p>1.1.3.3 (8) + </p> <p>9.1.4.2 (4) I </p> <p>9.9.2.2 (13) I </p>
<p>1.1.3.4 (7) + </p> <p>9.1.4.2 (4) I </p> <p>9.4.4.2 (5) I </p>	<p>1.1.6.1 (10) I </p> <p>9.1.1.1 (6) I </p>	<p>1.1.6.3 (10) I </p> <p>9.1.5.1 (2) I </p>	<p>9.11.1.4 (5) S </p> <p>9.11.1.5 (4) S </p> <p>9.11.1.6 (3) S </p> <p>9.11.1.7 (3) I </p>
<p>1.1.7.1 (9) I </p> <p>9.1.1.1 (6) I </p>	<p>1.1.7.4 (9) I </p>	<p>9.1.5.1 (2) I </p> <p>9.12.1.4 (7) I </p> <p>9.12.1.6 (5) I </p>	<p>1.2.1.1 (13) I </p> <p>9.1.2.4 (10) I </p> <p>9.1.5.1 (2) I </p>
<p>1.2.1.3 (13) I </p> <p>9.1.1.1 (6) I </p>	<p>1.2.2.3 (12) I </p> <p>9.1.1.1 (6) I </p>	<p>1.2.3.1 (12) + </p> <p>9.1.5.1 (2) I </p>	<p>9.1.2.2 (6) S </p> <p>9.4.2.2 (7) I </p> <p>9.9.2.2 (13) I </p>
<p>1.2.3.4 (12) + </p> <p>9.1.4.2 (4) I </p>	<p>1.2.4.4 (13) + </p> <p>9.1.4.2 (4) I </p>	<p>1.2.5.1 (14) I </p> <p>9.1.1.1 (6) I </p>	<p>1.2.5.4 (14) I </p> <p>9.12.1.4 (7) I </p>

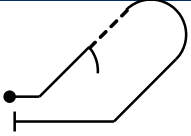
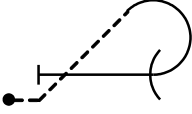
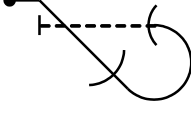
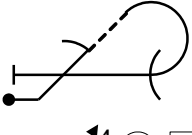
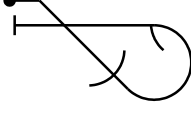
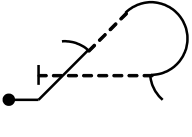
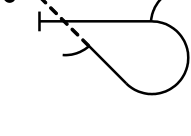
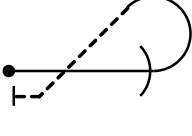
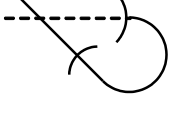
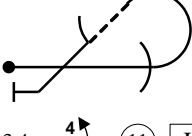
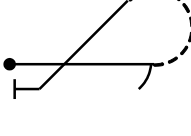
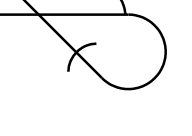
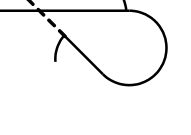
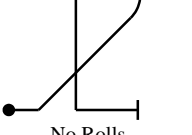
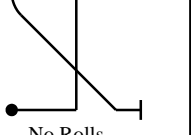
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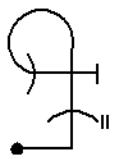
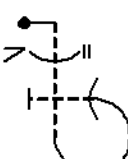
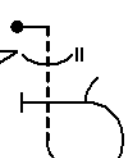
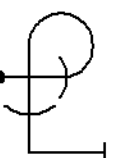

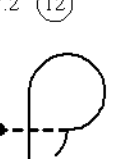
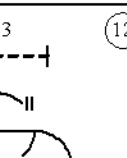
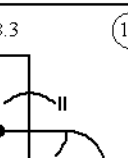
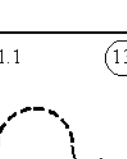
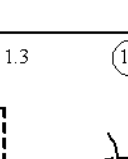
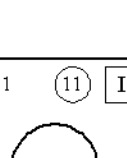
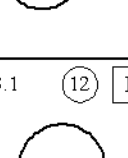
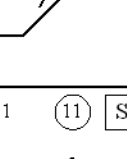
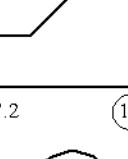
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1.2.7.4 (11) + 9.1.2.1 (6) I 9.1.2.2 (6) I 9.1.2.2 (6) I 		1.2.8.1 (15) + 9.1.1.1 (6) I 9.1.4.2 (4) I 9.1.4.2 (4) I 		1.2.8.3 (15) + 9.1.2.2 (6) I 9.4.2.2 (7) I 9.1.1.4 (5) I 9.1.1.6 (3) I 9.1.5.1 (2) I 		1.3.2.1 (18) + 9.1.2.2 (6) I 9.4.2.2 (7) I 9.1.2.4 (10) I 			
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5.2.1.3 (18) I + 9.1.1.1 (6) I 9.1.1.2 (8) I 		5.3.1.1 (18) I + 9.1.5.1 (2) I 		6.2.1.1 (15) A 		6.2.2.1 (15) A 			

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<p>7.5.2.1 (15) +</p> <p>9.2.4.4 (4) I 9.1.3.4 (8) I 9.2.3.4 (9) I</p>	<p>7.5.2.4 (15) +</p> <p>9.2.2.4 (6) I 9.1.3.4 (8) I 9.2.3.4 (9) I</p>
<p>7.5.5.3 (15) +</p> <p>9.1.3.2 (4) S 9.2.2.4 (6) S 9.1.3.2 (5) I</p>	<p>7.5.7.1 (15) +</p> <p>9.2.4.4 (4) S 9.1.3.2 (4) S 9.1.3.2 (5) I</p>
<p>7.8.3.1 (19) +</p> <p>9.1.4.2 (4) I 9.4.4.2 (5) I</p>	<p>7.8.3.4 (19) +</p> <p>9.1.2.2 (6) I 9.4.4.2 (5) I</p>
<p>7.8.4.1 (19) +</p> <p>9.1.4.2 (4) I 9.4.4.2 (5) I</p>	<p>7.8.6.3 (18) +</p> <p>9.1.4.2 (4) I 9.4.4.2 (5) I</p>
<p>7.8.8.1 (19) +</p> <p>9.1.2.2 (6) I 9.4.2.2 (7) I</p>	<p>7.8.8.4 (20) +</p> <p>9.1.4.2 (4) I 9.4.4.2 (5) I</p>
<p>8.4.1.1 (13) S</p> <p>9.1.1.1 (6) I 9.1.5.1 (2) I</p>	<p>8.4.2.1 (14) I</p> <p>9.1.1.1 (6) I</p>
<p>8.4.3.1 (15) I</p> <p>9.1.1.1 (6) I 9.1.5.1 (2) I</p>	<p>8.4.14.1 (12)</p> <p>9.1.4.2 (4) I 9.4.4.2 (5) I</p>

<p>8.4.15.1 (12) +</p>  <p>9.1.2.2 (6) I 9.4.2.2 (7) I 2x4</p>	<p>8.5.1.2 (10) I +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I 9.4.3.4 (11) I</p>
<p>8.5.1.3 (10) I +</p>  <p>9.9.4.4 (11) I 9.1.3.4 (8) I 9.2.3.4 (9) I</p>	<p>8.5.2.1 (10) +</p>  <p>9.1.2.2 (6) S 9.4.2.2 (7) I 9.1.3.4 (8) S 9.4.3.4 (11) I 9.2.3.4 (9) S</p>
<p>8.5.3.3 (10) +</p>  <p>9.4.3.2 (5) I 9.1.3.2 (4) S 9.9.4.4 (11) I</p>	<p>8.5.4.1 (10) +</p>  <p>9.1.2.2 (6) I 9.1.3.2 (4) I 9.4.3.2 (5) I 2x4</p>
<p>8.5.4.4 (11) +</p>  <p>9.1.4.2 (4) I 9.4.4.2 (5) I 9.1.3.2 (4) I 9.4.3.2 (5) I 2x4</p>	<p>8.5.5.1 (10) I +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I 9.4.3.4 (11) I</p>
<p>8.5.5.4 (10) +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I 9.1.2.4 (10) I</p>	<p>8.5.6.1 (10) +</p>  <p>9.1.4.2 (6) S 9.4.4.2 (7) I 9.1.3.4 (8) I 9.2.3.4 (9) I</p>
<p>8.5.7.1 (12) +</p>  <p>9.1.4.2 (4) I 9.4.3.2 (5) I 2x4</p>	<p>8.5.7.3 (10) +</p>  <p>9.1.3.2 (4) S 9.4.3.2 (5) I 9.1.2.4 (10) I</p>
<p>8.5.8.3 (10) +</p>  <p>9.1.3.2 (4) I 9.1.2.2 (6) I</p>	<p>8.5.9.1 (12) I</p>  <p>No Rolls</p> <p>8.5.17.1 (12) I</p>  <p>No Rolls</p>

<p>8.6.1.1 (11) I + 9.1.1.1 $\frac{1}{4}$ (6) I</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I 9.4.3.4 (11) I</p>	<p>8.6.3.3 (13) I +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I</p>
<p>8.6.4.3 (13) +</p>  <p>9.11.1.4 (5) S 9.11.1.6 (3) S 9.1.3.2 (4) S 9.4.3.2 (5) I</p>	<p>8.6.5.1 (11) S + 9.1.3.4 (8) S 9.2.3.4 (9) I 9.4.3.4 (11) I 9.1.5.1 $\frac{1}{4}$ (2) I</p> 
<p>8.6.5.1 (11) +</p>  <p>9.1.3.4 (8) I 9.9.3.4 (11) I 9.1.5.1 $\frac{1}{4}$ (2) I</p>	<p>8.6.7.2 (12) +</p>  <p>9.1.3.2 (4) I 9.4.3.2 (5) I</p>
<p>8.6.7.3 (12) +</p>  <p>9.1.3.2 (4) I 9.4.3.2 (5) I 9.1.1.1 $\frac{1}{4}$ (6) I</p>	<p>8.6.8.3 (12) +</p>  <p>9.1.3.2 (4) I 9.4.3.2 (5) I 9.1.1.1 $\frac{1}{4}$ (6) I</p>
<p>8.6.11.1 (13) +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I</p>	<p>8.6.11.3 (13) +</p>  <p>9.11.1.4 (5) I 9.11.1.6 (3) I 9.1.3.4 (8) I 9.2.3.4 (9) I</p>
<p>8.7.1.1 (11) I +</p>  <p>9.1.3.4 (8) I 9.2.3.4 (9) I 9.4.3.4 (11) I</p>	<p>8.7.3.1 (12) I +</p>  <p>9.1.3.2 (4) I 9.4.3.2 (5) I</p>
<p>8.7.5.1 (11) S +</p>  <p>9.1.3.4 (8) S 9.2.3.4 (9) I 9.1.3.4 (8) I 9.9.3.4 (11) I</p>	<p>8.7.7.2 (11) +</p>  <p>9.1.3.2 (4) I 9.4.3.2 (5) I</p>

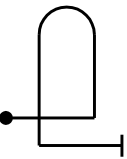
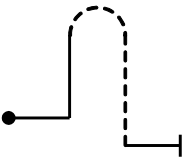
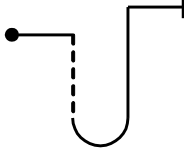
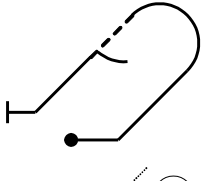

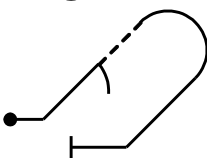

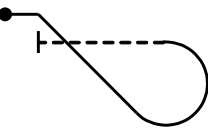
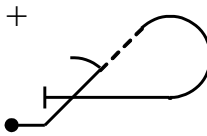

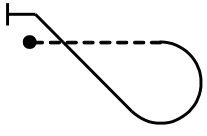
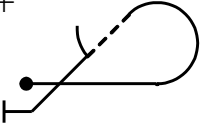

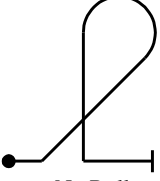
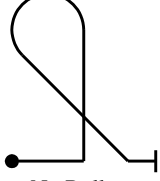
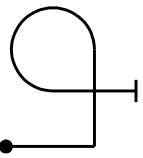
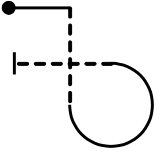
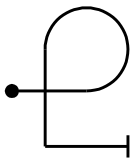
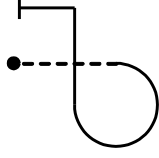
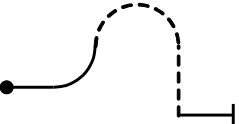
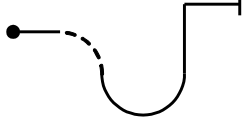
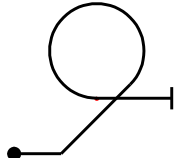
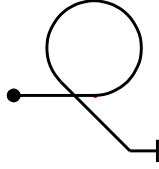
Glider Aircraft 1 of 3

0.0 (8) S 	0.1 (16) S 	1.1.1.1 (2) + 9.1.3.4 (12) I 9.2.3.4 (14) I	1.1.1.1 (2) + 9.1.3.2 x2 (12) I
1.1.1.2 (3) + 9.1.3.4 (12) I 9.2.3.4 (14) I	1.1.1.3 (2) OR 1.1.1.4 (2) + 9.1.3.2 (6) I 9.1.3.6 (15) I		
1.1.2. (7) S 	1.1.2.3 (7) S 	1.1.6. (10) S 	1.1.6.3 (10) S
1.2.1.1 (13) S 	1.2.1.3 (13) S 	1.2.3.1 (12) + 9.1.2.2 (9) I	1.2.6.1 (14) S
1.2.6.3 (15) S 	1.2.7.1 (13) + 9.1.4.2 (6) I	1.3.2.1 (18) + 9.1.2.2 (9) I	1.3.3.3 (18) + 9.1.4.2 (6) I
2.1.1.1 (3) S 	2.1.1.2 (4) I 	2.2.1.1 (4) S 	2.3.1.1 (5) S
5.2.1.1 (17) S 	5.3.3.1 (18) I 		

Glider Aircraft 2 of 3

<p>7.2.1.1 (6) I</p> <p>No Rolls</p>	<p>7.2.1.4 (6) I</p> <p>No Rolls</p>	<p>7.3.2.1 (14) +</p> <p>9.1.2.2 (9) I</p>	<p>7.3.3.3 (14) +</p> <p>9.1.4.2 (6) I</p>
<p>7.4.1.1 (10) S</p> <p>No Rolls</p>		<p>7.8.3.4 (19) +</p> <p>9.1.2.2 (9) I</p>	
<p>7.8.4.1 (19) +</p> <p>9.1.4.2 (6) I</p>		<p>7.8.6.3 (18) +</p> <p>9.1.4.2 (6) I</p>	
<p>7.8.8.1 (19) +</p> <p>9.1.2.2 (9) I</p>		<p>7.8.13.1 (23) +</p> <p>9.1.2.2 (9) I</p>	
<p>7.8.15.3 (23) +</p> <p>9.1.4.2 (6) I</p>			

Glider Aircraft 3 of 3

8.4.1.1 (13) S  No Rolls	8.4.3.1 (15) S  No Rolls	8.4.3.3 (15) S  No Rolls	8.4.14.1 (12) +  9.1.4.2  (6) I
8.4.15.1 (12) +  9.1.2.2  (9) I	8.5.1.3 (10) I  No Rolls	8.5.2.1 (10) +  9.1.2.2  (9) I	8.5.5.4 (10) I  No Rolls
8.5.6.1 (10) I +  9.1.4.2  (6) I	8.5.9.1 (11) S  No Rolls	8.5.17.1 (12) S  No Rolls	
8.6.1.1 (10) S  No Rolls	8.6.3.3 (13) I  No Rolls	8.6.5.1 (11) S  No Rolls	8.6.6.4 (13) I  No Rolls
8.6.13.1 (13) I  No Rolls	8.6.13.3 (13) S  No Rolls	8.7.1.1 (11) S  No Rolls	8.7.5.1 (11) S  No Rolls

BRITISH AEROBATIC ASSOCIATION

APPENDIX III TO BRITISH AEROBATICS GENERAL RULES

CRITERIA FOR JUDGING AEROBATIC FIGURES AND FREESTYLE PROGRAMMES

14. CRITERIA FOR JUDGING ARESTI FIGURES

14.1 The following notes are based on the criteria at Appendix 1 to **CIVA Rules, Section 6 Part 1**. In cases of dispute or for further clarification of these abbreviated criteria the latest version of the CIVA document should be consulted.

14.1 DEFINITIONS

14.1.1 Angle of Attack

The angle at which the wings meet the relative airflow.

14.1.2 Angle of Incidence

The angle at which the wing is attached to the aeroplane relative to the "fuselage axis".

14.1.3 Figure

Each individual component of a sequence, which may comprise one or more manoeuvres in combination; it starts and ends with a horizontal line.

14.1.4 Manoeuvre

Any one of the basic aerobatic movements, which may be combined to make a figure.

14.1.5 Score/Mark/Point

Marks are assigned by judges and may be devalued by various point values. The score is calculated by multiplying the judges' marks by the coefficients (K factors) and adding the products.

14.1.6 Flightpath & Attitude

14.1.6.1 The Flightpath

This is the aircraft's **centre of gravity track (CGT)**.

14.1.6.2 Vertical Attitude

When an aircraft's flight path in zero wind conditions is vertical, there is an axis through the aircraft's centre of gravity that is also vertical. This is called the **Zero Lift Axis (ZLA)** and is the proper datum for judging vertical attitude.

When the ZLA is vertical, the fuselage axis in some aeroplanes may not appear to be vertical (except for aircraft with a symmetrical aerofoil and zero angle of incidence). Therefore, the judge must determine the proper vertical attitude for each aircraft type according to its ZLA.

14.1.6.3 The 45° Attitude

This is the ZLA vertical attitude plus or minus 45°. In view of the difficulty in judging 45° lines accurately, devaluations should be applied with care. The devaluation is 0.5 points per 2.5° deviation (1 point per 5°).

14.1.7 MARKING

14.1.7.1 Standard Deductions

In grading a contestant on the performance of a figure, the perfect mark of 10 must be reduced by 1 point (in 0.5-point increments) for every 5° of deviation from the prescribed geometry. For example, a perfect stall turn performed with a climbing line of 75° (15° error) can only receive a mark of 7.

It follows that if an error is considered to be greater than 45 degrees, the resulting grade comes to zero. The total length of a line can be dictated by the performance of the aircraft and should not be considered in the grading of a figure. Also, all transitions from one plane of flight to another should have a reasonable and constant radius: higher marks are not to be given to "square" high-G corners.

14.1.7.2 Numerical and Hard Zeroes (See Rule 4.7)

14.1.7.2.1 When a single error is of more than 45 degrees (less than 90 degrees), or when several smaller errors aggregate to something more than 45 degrees, then a **Numerical Zero (0.0)** must be awarded.

14.1.7.2.2 When a single error of geometry reaches 90°, then a **Hard Zero (HZ)** must be awarded. All judges should detect an error of this magnitude, but in cases of uncertainty, video may be used to confirm or deny the error. A Hard Zero must also be awarded if the judge believes that a figure has been omitted or if the wrong figure has been flown or if part of the figure has been obscured by cloud or if the figure was started behind the judging line.

14.1.8 WIND CORRECTION

14.1.8.1 There are two kinds of wind correction. The first is to keep the shape of a looping manoeuvre accurately round for a ground observer. The second is wind correction to keep the aircraft in the contest box.

For example, a loop started against a moderate headwind has a higher groundspeed at the top than the same loop performed in still air conditions. Thus, to appear circular, such a loop will require a higher pitch rate at the top than the one in still air conditions.

In a crosswind a pilot may choose to crab sideways while flying the main axis. This will present an angular heading error that should be downgraded at the usual rate of 1 point per 5°. Another pilot may use level sideslip to counter the effects of such a crosswind, thereby not presenting the heading error and not receiving the downgrading.

14.1.9 LINES AND LOOPS

14.1.9.1 Lines

14.1.9.1.1 All lines are judged in relation to the horizon and the contest main axis. For horizontal lines, with varying speeds and angles of attack, the flight path of the aircraft is the criterion. Climbing and descending flight paths must be downgraded at 1 point per 5°.

14.1.9.1.2 All figures begin and end with a horizontal line. A contestant who rushes from one figure to the next without this well-recognized line will receive a downgrade of 1 point from both the preceding and subsequent figures.

14.1.9.1.3 All lines that occur inside a figure, that is, lines other than the level flight at start and finish of the figure, have a beginning and an end which define their length. They are preceded and followed by part-loops. Often the length of this line is not a value that should be marked, for example, the lengths of the vertical lines in a stall turn which may finish at a different height from that at which it started. Sometimes, however, the length of these interior lines should all be the same, for example, in a square loop, if the prescribed geometry is to be maintained.

14.1.9.1.4 Whenever any kind of roll is placed on an interior line, it is divided into two parts. The lengths of these two parts should appear to be the same.

14.1.9.1.5 Any variation in line lengths described in the two paragraphs above must be penalized in the following way, based on the first line as datum:

a visible variation	1 point
if the ratio of lengths varies by 1:2	2 points
If the ratio of lengths varies by 1:3	3 points

14.1.9.1.6 The absence of one of these lines before OR after a roll must be penalized by an additional point. If there are no lines before AND after the roll the total downgrade is two points only.

14.1.9.1.7 For 45° and vertical lines the criterion for judgement is aircraft attitude (zero lift axis) not flight path as for horizontal lines.

14.1.10 LOOPS AND PART-LOOPS

14.1.10.1 The loop is a figure from family 7, but parts of them are involved in many families. A looping segment must have, by definition, a constant radius as seen by the ground-based observer and be flown in the same vertical plane throughout.

14.1.10.2 In the Aresti notation, part-loops of 180° or more are depicted as round segments, smaller 'corners' as sharp angles. Any sharp 'corner' angle drawn in the pictograms is always to be flown as a part-loop and must have a distinct and constant radius.

14.1.10.3 **'Round Segments'** For any one figure having more than one internal part-loop depicted in the Aresti catalogue as round elements, all such part-loops shall have the same radius – with exception for all of Family 8.8 figures (double humpty bumps) for which the radius of the second half-loop is not required to match the radius of the first one.

14.1.10.4 **'Sharp Angles'** For any one figure having more than one internal part-loop depicted in the catalogue as corner angles, all such part-loops may have different radii, and none of them is required to match the radius of any part-loop depicted as a round element in the same figure – except for:

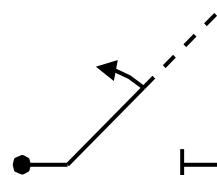
- Family 3 (combinations of lines) and -
- Family 7: 7.4.3.x to 7.4.6.x (whole / hesitation loops)

These figures must all keep a regular geometrical shape, and therefore their part-loops are all required to have the same radius.

14.1.11 FAMILY 1 - LINES AND ANGLES

Families 1.1.1 to 1.1.11 have been fully covered in the preceding section. Note that the figures in family 1.2.1 to 1.2.4 are NOT performed as "Reverse Half Cubans".

Rolls may be performed on the 45° line or the vertical line, with the part-lines before and after each roll being of equal length. The start and finish horizontal lines may be flown at different heights.



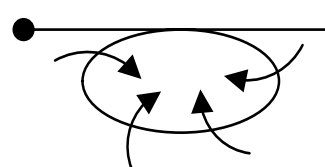
14.1.12 FAMILY 2 - TURNS

All turns should be performed at a constant bank angle of at least 60° and with a constant rate of turn. For any deviation of more than 5° below the 60° angle there will be a downgrade of 1 point. Bank angle should be established first, then the turn accomplished. Wings should be returned to level after the turn has stopped.

If all the proper elements of the turn are correct and there is any kind of wind, the turn will not have a constant radius, therefore a 360° turn will not be a perfect circle. This must not be downgraded. Glider bank angle should be exactly 60°, so 1 point should also be deducted for each 5° deviation above this fixed angle.

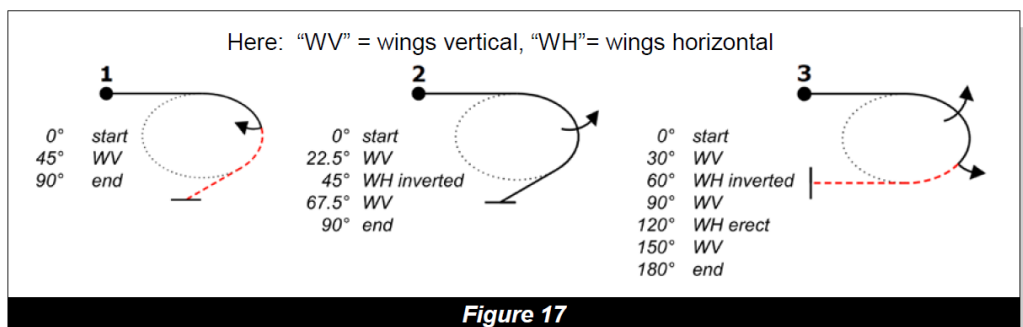
14.1.13 FAMILY 2 - ROLLING TURNS

The rolling turn combines a level of turn of a prescribed amount with a roll or rolls evenly integrated throughout the turn. The term 'evenly integrated' means that from start to finish the figure should display a constant rate of turn with a constant rate of roll. As seen from the ground, rolls in the same direction as the turn are referred to as 'rolls in' or 'rolling inwards'.



Rolls in the opposite direction to the turn are described as 'rolls out' or 'rolling outwards'.

Between the start and the end of a rolling turn one or more intermediate points occur when the aircraft wings are momentarily either vertical or horizontal. A simple interpretation is that the intermediate points occur at the half, quarter, or one-third positions in each 90 degrees of turn. Examples are shown in Fig. 17 of the CIVA Part 6 Section 1 Regulations reproduced here:



When the rolling turn has rolls of alternating directions, the aircraft must change the direction of roll with the wings level. At this point the roll should reverse direction with only a short pause; a longer pause must be downgraded.

For example, imagine an aircraft performing a 180-degree rolling turn with one roll inwards and one roll outwards from upright:

- The figure starts with horizontal flight with the wings level and the aircraft longitudinal axis aligned with the prescribed box axis
- The pilot simultaneously initiates the turn and commences the roll in the same direction as the turn.
- The judge should expect the aircraft wings to be vertical or horizontal at precisely each intermediate point in the turn.
- Throughout the figure the judge should note any detectable variations in the rate of roll, the rate of turn and the horizontal flight path.
- The roll direction should be reversed from inwards to outwards with only a short pause when the angle reaches 90 degrees. The rate of roll before and after the reversal should remain constant.
- The turn is not wind corrected and for this reason may not follow a circular flight path.
- The figure ends when the aircraft longitudinal axis reaches alignment with the prescribed box axis, with the flight path horizontal at the moment the wings become level.

When considering downgrades, there are nine rules to apply in judging rolling turns, as follows:

- 1) The aircraft must commence the figure with wings level, in horizontal flight and with the longitudinal axis aligned with the correct box axis. Errors are deducted using one point for every five degrees of error;
- 2) Each variation from the required horizontal flight path is deducted using one point for every five degrees of error upwards or downwards;
- 3) Each variation in the rate of turn is a one point deduction;
- 4) Each unscheduled stoppage of the rate of turn is a deduction of two points;
- 5) Constant rate of turn (1 point per variation observed); Each variation in the rate of roll is a one point deduction. Each unscheduled stoppage of the rate of roll is a deduction of two points;
- 6) At a roll direction reversal there must only be a short pause, with wings level. A longer pause is a one point deduction. Errors in the roll angle from wings level are deducted using one point for every five degrees of error;

- 7) Each time the wings are vertical or horizontal, a deviation between the aircraft axis and the correct amount of turn at this point is a deduction of one point per 5°;
- 8) All rolls in a rolling turn are aileron or slow rolls. If a flick roll is performed, the figure is graded HZ;
- 9) Performing more or fewer rolls than the catalogue stipulates or incorrectly rolling either inwards or outwards must be graded HZ.

The figure is completed when the aircraft stops rolling, or its longitudinal axis reaches the prescribed box axis. Errors when the exit point is reached are penalised as follows:

- Where the turn angle is less or more than required and/or the flight path is above or below horizontal the deduction is one point per five degrees.
- Where continued rolling is seen to bring the wings level after the turn is completed the following deductions must be applied:

Less than 15 degrees roll is executed	1 point
Between 15 degrees and 30 degrees of roll is executed	2 points
Between 30 degrees and 45 degrees of roll is executed	3 points
More than 45 degrees of roll is executed	HZ

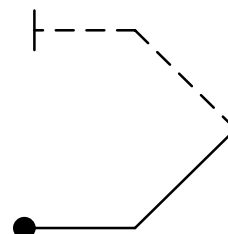
Detailed explanations of the judging criteria are given in **CIVA Regulations Section 6 Part 1 Appendix B.9.3 and Part 2 B.9.3**

14.1.14 FAMILY 3 - COMBINATIONS OF LINES

The transition from level to the 45° lines should be at a constant and reasonable radius.

All lines within the manoeuvre should be the same length.

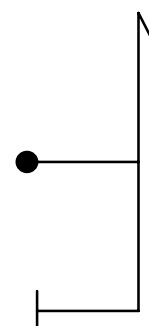
The 90° transitions in family 3.3.1 should have a constant and reasonable radius and not (as drawn) a sharp corner – **see 14.1.10.4.**



14.1.15 FAMILY 5 - STALL TURNS

The vertical climbing attitude must be clearly recognizable and be flown at 90° to the horizon throughout.

1. The lines before and after any rolls must be of equal length.
2. As the aircraft nears the point at which it would stop, it must pivot in the vertical plane around an axis that is not further from its centre of gravity than the wingtips.
3. The aeroplane should not slide backwards a visible amount.
4. The rate of turn is not a criterion. The wings must maintain the same plane throughout the turnaround.
5. The aircraft's attitude before and after must be perfectly vertical.
6. There should be no rolling or pitching during the turnaround; any such deviation must be downgraded by 1 point per 5° of error.



7. If the pivot point of the turn is beyond the wingtip, the downgrade should be 1 point per half wingspan beyond the wingtip.
8. If the wings are not level during the vertical parts, the downgrade shall be 1 point per 5° deviation.
9. The radii of entry and exit should be reasonable and constant but do not need to be the same size.
10. The horizontal lines at start and finish need not be flown at the same height.

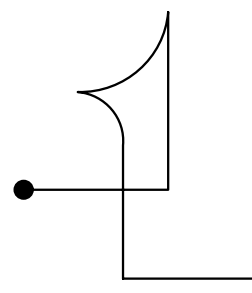
Stall turns with added 45 degree lines are assessed using the following additional criteria:

- Vertical and 45 degree lines are judged in the usual way. Any deviation will result in a deduction of one (1) point per five (5) degrees of error.
- Any rolls must be centred on their underlying lines.
- The lines may all be of differing lengths.

14.1.16 FAMILY 6 - TAIL SLIDES

On the vertical lines the normal rate of downgrading applies: 1 point per 5° of pitch error.

1. At the point when the aircraft stops, it must slide backwards at least half a fuselage length. If there is no such slide there is a 4 point downgrade.
2. The aircraft must tip over and fall through to a vertically diving position, without yaw or roll. Any other attitude errors must also be penalized at the rate of 1 point per 5° deviation.
3. The nose may swing through the vertical, or "tuck under", before returning to the vertical. The extent of this is not important or gradable.
4. During the fall, the attitude, canopy up or canopy down, is critical. Falling the wrong way from that prescribed must be graded hard zero (HZ).
5. The radii of entry and exit should be reasonable and constant, but do not need to be the same size. The lines either side of any rolls should be of equal length.

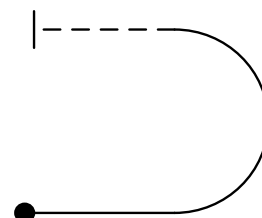


14.1.17 FAMILY 7 - LOOPS, S'S AND 8'S

14.1.17.1 Family 7.2 and 7.4 - Half Loops and Loops

All full loops must begin and end at the same height and be flown with the fuselage always aligned with the starting axis.

Loops must be wind corrected to appear perfectly round when viewed from the side, but crosswind correction is not required.



When a half-loop begins with a roll, the looping flight must begin immediately after the roll, with no line between. For showing a line, the downgrade shall be as described in **Rule 4.4.8**.

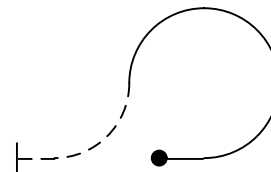
Any half-loop followed by rolls is to be performed in the same way and subject to the same downgrade if a line is drawn.

Where optional or compulsory rolls are shown in round loops, these rolls must be centred on the exact top or bottom of the loop.

Square, diamond, and octagonal loops are to be flown as hesitation loops and not with sharp corners as drawn in the catalogue symbols. In these loops, all lines must appear to be of equal length, and all radii reasonable and constant but do not need to be the same size.

14.1.17.2 Families 7.4.7 to 7.4.14 "Reversing Whole Loops"

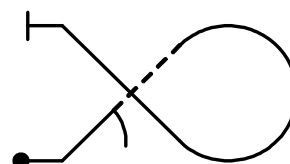
They incorporate a change in direction of the loop from positive to negative, or vice-versa. Where this reversal takes place, there should be no straight line visible. A straight line must be penalised with a deduction of at least 2 points. Both looping segments must be the same radii and start/finish at the same height.



14.1.17.3 Family 7.3.1 to 7.3.4 - Goldfish.

In these figures, all the looping segments must be of constant radius but do not need to be the same size and any rolls must be centred on the 45° lines.

There are no special requirements relating to the start or finish heights, nor the size of the loop in relation to these heights.



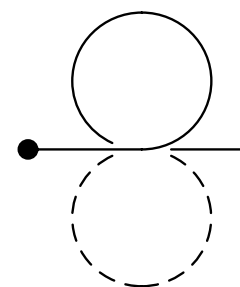
14.1.17.4 Family 7.5.9, 7.5.10, and to 7.8.17 to 7.8.22 Vertical S's & 8's.

Vertical S's.

Both half-loops in vertical Ss should be of the same radius.

The semi-circles should be placed directly above each other, except when an intervening rolling manoeuvre will displace them by the length of the roll.

No horizontal line is to be drawn between the half-loops and, if presented, will be subject to a 2-point downgrade.



Vertical 8's.

These figures may be combined with various types of rolls. There should be no line either side of the roll, which should be performed in horizontal flight.

The figures are to be graded on the same basis as normal loops, but in addition, both loops should be of the same radius and directly above each other unless displaced by an intervening roll.

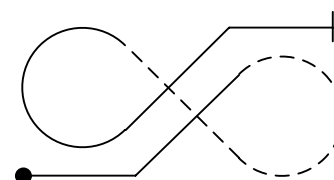
The figures should begin and end at the same height.

14.1.17.5 Families 7.5.1 to 8 and 7.8.1 to 16 - Horizontal S's & 8's

The loops should both begin and end at the same height and be of the same radii.

The aircraft's attitude on the lines between must be at 45° to the vertical.

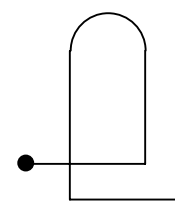
The initial or final 45° line may extend above or below the looping portions only if it carries multiple rolls, and the entry/exit radii should be constant but need not be the same size.



14.1.18 FAMILY 8 - COMBINATIONS OF LINES, LOOPS, AND ROLLS

All the previous criteria apply, including the requirement for all part-loops in a figure to have the same radius, EXCEPT:

In Families 8.4.1 to 8.4.28 (Humpty-Bumps & 45° Humpty-Bumps [Bananas]) each of the three part-loops must be of constant radius but none needs to be the same radius as any other.



The horizontal lines at beginning and end of the figures may be flown at different heights. Whenever, inside a figure, a straight line connects two looping portions and there is a rotation on that line, the rotation must be performed in the centre of the line. All part loops must have a reasonable and constant radius.

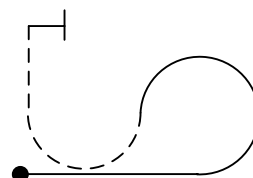
In Families 8.8.1 to 8.8.8 (Double Humpties) none of the radii need match another, but each must be internally constant.

14.1.18.1 Family 8.6.9 to 16 and 8.10 - Multiple Looping Combinations

When quarter, half or three-quarter loops join each other in these families, their radii must be the same with no intervening straight line.

The quarter loop return to horizontal flight should have a reasonable radius, but it need not be the same as the other radii in the figure.

In other respects, all the criteria stated above for family 8 are applicable.



14.1.19 FAMILY 9 – ROLLS AND SPINS

General

Rotations may be up to 720° in extent, in 90° increments. In all cases the rate of roll must be constant throughout.

When rolls are in continuous rotation, a small line links the tips of the symbols. Multiple rotations of different types may be unlinked or opposite.

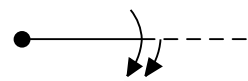
In unlinked rolls, no line links the symbols, though their tips are drawn pointing in the same direction. They must have a brief but perceptible pause between them.

Unlinked rolls must be of different types, for example, one aileron roll and one flick roll, one spin and one aileron roll etc.

In opposite rolls, the tips are drawn pointing in opposite directions. The brief check between opposite rotations should be minimal, as in a hesitation roll.

14.1.19.1 Family 9.1 - Slow Rolls

Any stoppage in a slow roll, 90° or more off the prescribed stopping attitude, that could result in its being considered a hesitation roll will receive a mark of hard zero (HZ).



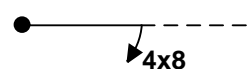
Each variation in the rate of roll should be a downgrade of 1 point.

In a slow roll the actual rate of rotation is not important, but it should be constant throughout the roll.

The finish of the roll must be as crisp and precise as possible. Coming to a slow finish represents a change in the rate of rotation.

14.1.19.2 Family 9.2 to 9.8 - Hesitation Rolls

These rolls are judged on the same criteria as the slow roll, only the aircraft ceases to rotate during the roll for a pre-stated number of times.



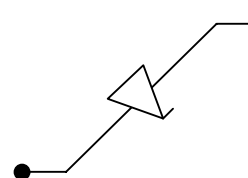
The rate of roll and the rhythm should be constant throughout.

The pauses should be of identical duration and the degree of rotation should be correct between each pause. Each pause must be clearly recognizable in every case, or the figure will be graded hard zero (HZ).

14.1.19.3 Family 9.9 - Positive Flick Rolls

The main axis must be in the correct plane and direction of flight. However, the kind of movement around the main axis can differ between aircraft types.

Flick rolls have the same criteria as other rolls so far as the length of part-lines before and after the rotation.



For the aeroplane to flick roll it must have at the beginning a near-critical angle of attack. This means that the tail must move "down" to generate this angle. At the same time, the aeroplane must yaw around its vertical axis. Each aeroplane will have its own particular manner of flicking. For all types, the criteria for stopping the flick must be that the attitude must return to that immediately before the flick started.

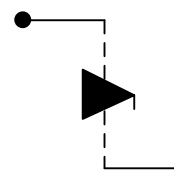
The nose must definitely break the line of flight or the figure is marked as Hard Zero (HZ).

If the flick stops early, and the roll is finished with aileron, a downgrade must be applied of 1 point per 5° early.

If the nose breaks the line in the wrong direction, a Hard Zero (HZ) will be given.

14.1.19.4 Family 9.10 - Negative Flick Rolls

The criteria stated for positive flick rolls are to be used, except that the angle of attack, and nose movement, is negative.



14.1.19.5 Family 9.11 and 9.12 – Spins

To spin the aircraft must be stalled. When the aircraft stalls, the nose will fall toward the horizon and the inside wing should simultaneously drop in the direction of the spin. After the required number of turns, the aircraft must stop spinning precisely on heading. Then a vertical down attitude must be flown before continuing to the next portion of the figure.

- If the aircraft does not stall, it cannot spin and a Hard Zero (HZ) must be given.
- If the spin is entered by "flicking" at higher than stall speed, the nose will rise and a Hard Zero (HZ) must be given.
- If rudder is applied before the stall, a large heading change and some rotation may occur before true autorotation starts. Any such errors should be downgraded at the normal rate of 1 point per 5°
- No account should be taken of the pitch attitude of the aircraft while spinning.

15. CRITERIA FOR JUDGING PROGRAMME 5 THE FINAL FREESTYLE

*the FAI/CIVA criteria for judging this programme have changed from 2019. Please see **CIVA Sporting Code Section 6 Part 1 B.11***

16. CRITERIA FOR JUDGING POSITIONING

16.1 OVERVIEW

16.1.1 Positioning is scored in one of two ways: mechanically, by means of a tracking device; or by the individual judges.

16.1.2 Positioning refers to the optimal placement of the figures in relation to the boundaries of the performance zone and range from the judges, considering the height of the aircraft and the nature of the individual figure being flown.

16.2 PERFORMANCE ZONE BOUNDARIES

16.2.1 Boundary Judges are no longer used at contests. A much higher K factor is now applied to the positioning score and judges must make additional reductions to the grades given when a pilot flies figures in a position that is clearly outside the confines of the performance zone.

16.2.2 The K factor is specifically chosen so that one less mark for the positioning grade equates to two figures being flown outside the performance zone. Thus, if a judge considers in these circumstances that four figures have been flown outside the zone, a deduction of 2 marks should be made from the positioning grade, in addition to any deductions made under the terms of the following paragraphs.

16.3 OPTIMAL PLACEMENT OF FIGURES (POSITIONING)

16.3.1 Even though figures are flown within the performance zone, judges must still consider their positioning in relation to an optimum 3D position, where clarity of execution and geometry are at their greatest. This optimum position will vary depending on the aircraft's height and the nature of the figure.

16.3.2 Consistently accurate flying is best assessed when the elevation of the judge's sight line from the horizontal is reasonably constant. This means that when an aircraft is at the greatest height, it should be also at its furthest distance away from the judging position along the secondary axis. Consequently, when an aircraft is lower, then it should be closer to the judges to give the same viewing perspective.

16.3.3 In even the best positioned sequence, however, some variations in the judge's sight line elevation are inevitable. These different viewing angles also affect the optimum position for figures of different kinds. For example, looping shapes and 45-degree climbing or descending lines are much easier to judge accurately if the sight angle in relation to the horizon is small. Conversely, such figures are difficult to assess if flown high up and close to the front of the performance zone.

16.3.4 Further, such fine points as the accuracy of hesitations in an 8-point roll are much easier to judge when the figure is close to the judges and low, rather than over a kilometre away at the rear of the performance zone – let alone outside it.

16.3.5 Consideration of all the parameters in the few short paragraphs of this section will enable a judge to make a clear decision about any figure that is clearly flown in other than its optimum position. Judging of the figure will be difficult, and such bad presentation should be reflected in the positioning grade for the sequence. It would be appropriate to deduct between 0.5 and 1 mark for any such misplaced figure, depending on the severity of the difficulty incurred.

16.3.6 Judges should record the poor positioning of individual figures in comparison to their 'optimal' 3D position within the context of the sequence by asking their scribe to annotate the relevant figure in the Scoring Sheet Remarks column with for example "L" if the figure is too far to the left, "R" for right, "N" for too near and "F" for too far away, or "LL" if extremely left, "FF" if extremely far away etc.. Reviewing these annotations post-flight provides a reliable structure upon which to base the positioning mark, for example a half-mark downgrade for each "L", "F" and one mark for "LL", "FF" etc.

16.3.7 Consistent use of this system for assessing the positioning of each figure obviates the need for the judge to assess the balanced symmetry of the sequence as is required as part of the Positioning grade for Freestyle sequences.

16.3.8

Summary

16.3.8.1 The judge's final decision on a grade for positioning is not a simple one. It must take into account deductions for non-optimal placement of individual figures and assess figures clearly flown outside the performance zone. Whilst a particularly well designed and positioned sequence might still merit a grade of 10, a sequence with poorly positioned figures could well deserve a very low grade from 0 to perhaps 2 or 3.

16.3.8.2 This extra burden placed on the judging panel deserves as much consideration as the grading of individual figures if the differences between good and bad flights are to be fairly assessed.

16.3.8.3 Detailed criteria for the Marking of Flight Positioning and Symmetry are given in **CIVA Regulations Section 6 Part 1 Para 4.1.5 and Section 2 Para 4.1.5.**

16.3.8.4 In particular, attention is drawn to the **Para 4.1.5.7** entitling the Judge to revise his final positioning mark up or down by 1 point if he considers that there were other relevant factors, beyond the numerical calculation of the marks based on the subtraction of half and full marks calculated from the notations of L, R, N, F, LL, RR, NN and FF.

Note that boundary infringements at CIVA regulated events may now only be assessed using electronic position recording equipment, otherwise they are not recorded.


BRITISH AEROBATIC ASSOCIATION

APPENDIX IV TO BRITISH AEROBATICS GENERAL RULES

SAMPLE CONTEST FORMS

17. SAMPLE CONTEST FORMS

17.1 FORM A – JUDGING SHEET









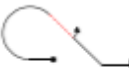

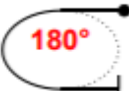

**BRITISH
AEROBATICS**

Pilot ID

BAeA Sports Known

Form A

Flight #

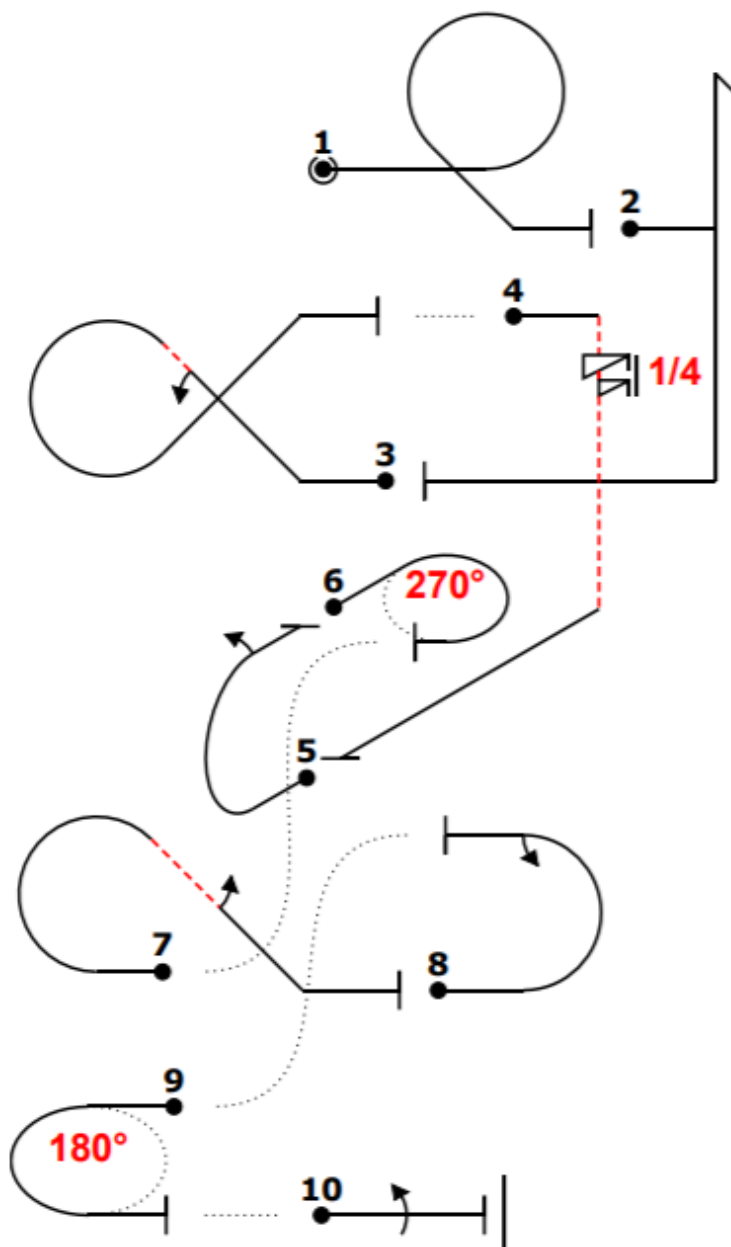
No	Symbol	Cat. No.	K	Total K	Grade	Pos	Remarks	Item	K	Grade
1		8.7.5.1	11	11	.			Pos.	15	
								Harm.	0	
2		5.2.1.1	17	17	.			Fig K	115	Total K 130
3		7.3.2.1 9.1.2.2	14 6	20	.			Penalties Too Low Too High Interruptions Insertions Trg Violation Wing Rocks Disqual Fig Other(note...)		
4		1.1.6.3 9.11.1.5	10 4	14	.			Final Freestyle Duration Min Sec		
5		7.2.2.1 9.1.3.2	6 4	10	.			Judges Details Signature Name Number		
6		2.3.1.1	5	5	.					
7		8.5.6.1 9.1.4.2	10 4	14	.					
8		7.2.2.1 9.1.3.2	6 4	10	.					
9		2.2.1.1	4	4	.					
10		1.1.1.1 9.1.3.4	2 8	10	.					

Pilot
A/C

17.2 FORM B – SEQUENCE, WIND FROM RIGHT



		Form B
Pilot ID	BAeA Sports Known	Flight #

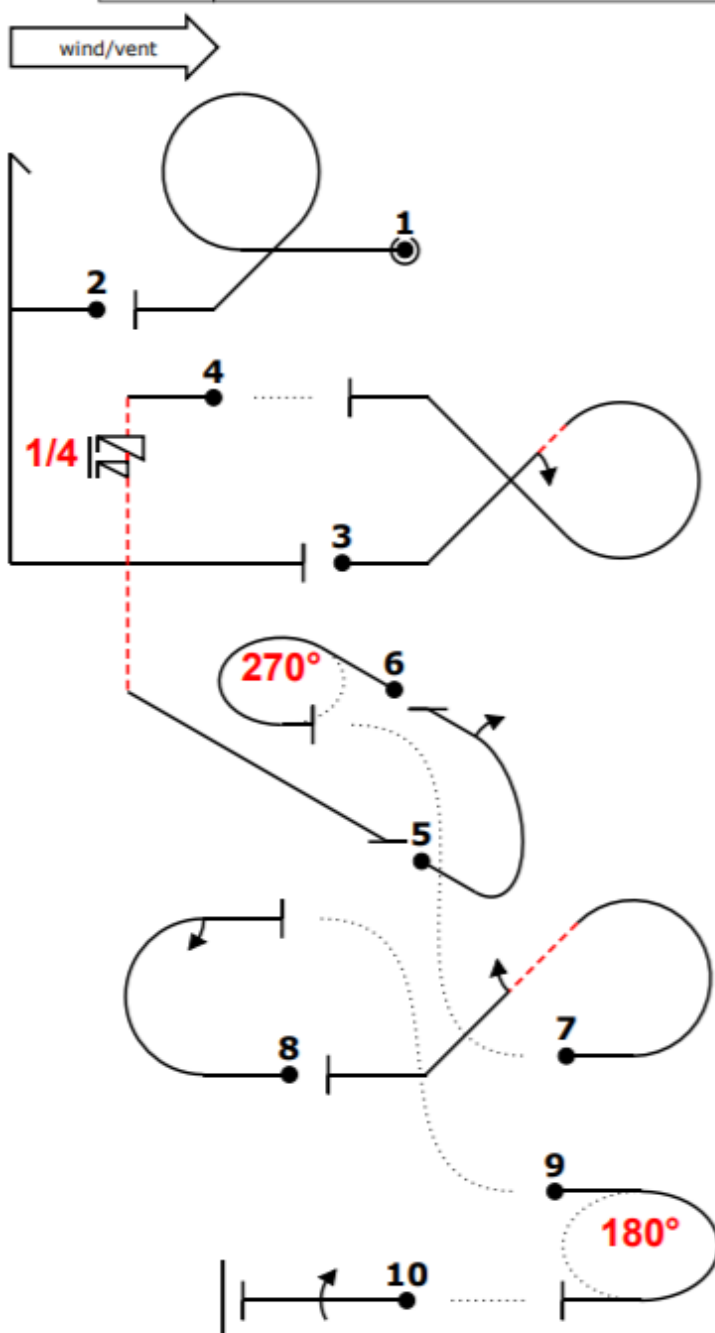


Power			
Fig	Aresti	K	
1	8.7.5.1	11	11
2	5.2.1.1	17	17
3	7.3.2.1 9.1.2.2	14 6	20
4	1.1.6.3 9.11.1.5	10 4	14
5	7.2.2.1 9.1.3.2	6 4	10
6	2.3.1.1	5	5
7	8.5.6.1 9.1.4.2	10 4	14
8	7.2.2.1 9.1.3.2	6 4	10
9	2.2.1.1	4	4
10	1.1.1.1 9.1.3.4	2 8	10
Total K = 115			





		Form C
Pilot ID	BAeA Sports Known	Flight #



17.4 FORM R – JUDGING SHEET WIND FROM RIGHT



BAeA	Sports
Known	

Figure K	Judges Name	Flight #
115		
Total K	Signature	Number
130		

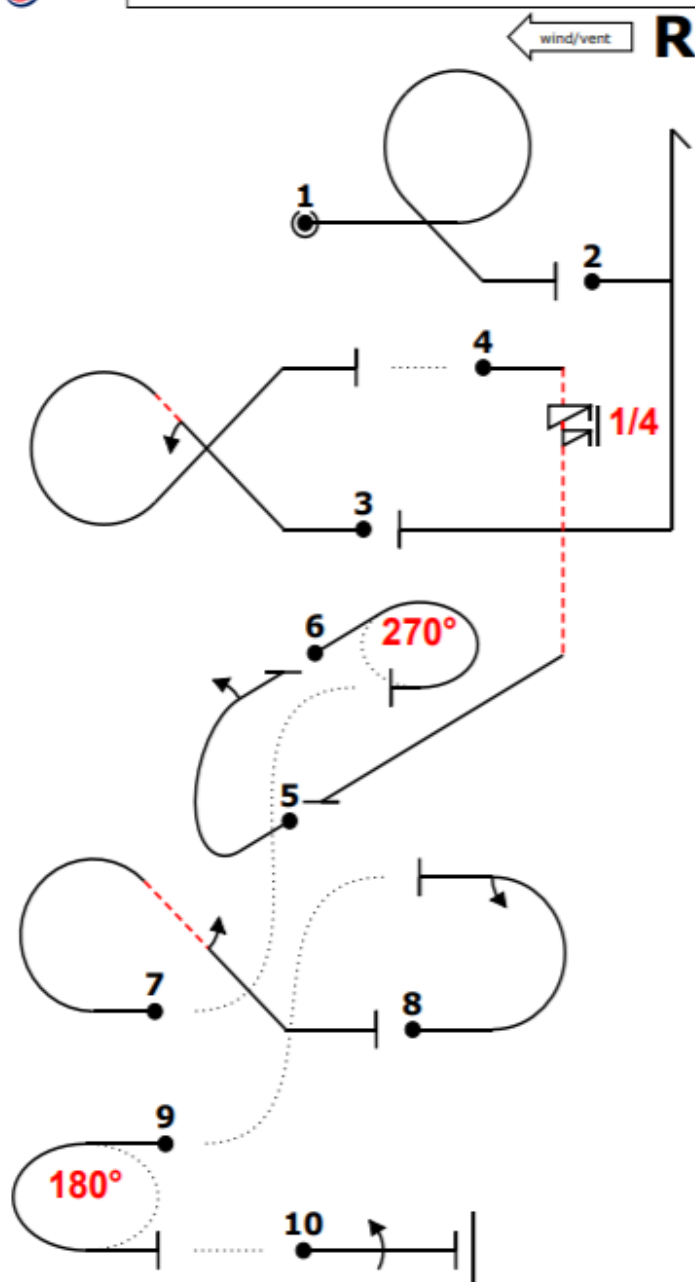


Fig	Grade	Pos	Remarks
1	.		
2	.		
3	.		
4	.		
5	.		
6	.		
7	.		
8	.		
9	.		
10	.		

Positioning	.
15	


Too Low		Trg Violation	
Too High		Wing Rocks	
Interruptions		Disqual Fig	
Insertions		Other(note...)	

Fig 1	K	Fig 2	K	Fig 3	K	Fig 4	K	Fig 5	K	Fig 6	K	Fig 7	K	Fig 8	K	Fig 9	K	Fig 10	K
8.7.5.1	11	5.2.1.1	17	7.3.2.1	14	1.1.6.3	10	7.2.2.1	6	2.3.1.1	5	8.5.6.1	10	7.2.2.1	6	2.2.1.1	4	1.1.1.1	2
				9.1.2.2	6	9.1.1.5	4	9.1.3.2	4			9.1.4.2	4	9.1.3.2	4			9.1.3.4	8
	11		17		20		14		10		5		14		10		4		10

Pilot:

A/C:

17.5 FORM L – SEQUENCE, WIND FROM LEFT

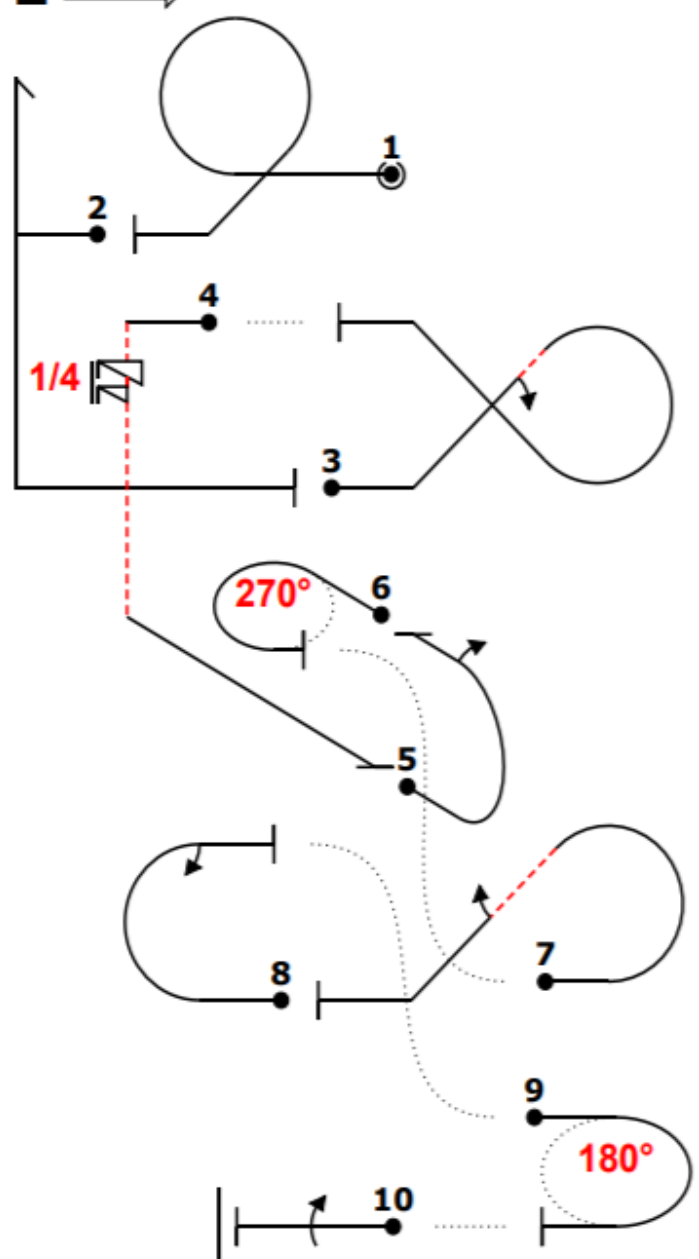


BAeA	Sports
Known	

Figure K 115	Judges Name
Total K 130	Signature
Flight #	

L

wind/vent



The diagram shows a sequence of 10 figures. Figure 1 is a circle. Figure 2 is a horizontal line. Figure 3 is a horizontal line. Figure 4 is a horizontal line. Figure 5 is a horizontal line. Figure 6 is a 270° turn. Figure 7 is a horizontal line. Figure 8 is a horizontal line. Figure 9 is a horizontal line. Figure 10 is a 180° turn. The sequence is connected by solid and dashed lines, with arrows indicating the direction of flight.

Fig	Grade	Pos	Remarks
1	.		
2	.		
3	.		
4	.		
5	.		
6	.		
7	.		
8	.		
9	.		
10	.		

Positioning 15	.
--------------------------	---

Too Low	Trg Violation
Too High	Wing Rocks
Interruptions	Disqual Fig
Insertions	Other(note...)

Fig 1	K	Fig 2	K	Fig 3	K	Fig 4	K	Fig 5	K	Fig 6	K	Fig 7	K	Fig 8	K	Fig 9	K	Fig 10	K
8.7.5.1	11	5.2.1.1	17	7.3.2.1	14	1.1.6.3	10	7.2.2.1	6	2.3.1.1	5	8.5.6.1	10	7.2.2.1	6	2.2.1.1	4	1.1.1.1	2
				9.1.2.2	6	9.1.1.5	4	9.1.3.2	4			9.1.4.2	4	9.1.3.2	4			9.1.3.4	8
	11		17		20		14		10		5		14		10		4		10

Pilot:
A/C:

BRITISH AEROBATIC ASSOCIATION

APPENDIX V TO

BRITISH AEROBATICS GENERAL RULES

SAMPLE FIGURES FOR MASTERS AND

APPRENTICES UNKNOWN SEQUENCES

18. SAMPLE FIGURES FOR MASTERS AND APPRENTICES UNKNOWN SEQUENCES

18.1 APPRENTICES NON-ARESTI FIGURES

	6-point roll on normal erect line.		3-point roll on normal inverted line.
	Opposition rolls. Pauses between rolls as in hesitations.		Knife-edge between quarter roll for 5 seconds minimum. Straight and level.
	No straight portion between turns. Must pass inverted during roll (Derry turn)		As at left, but roll is through 60° or less and does not pass through inverted.
	Two 90° turns in opposition with rolls in the same direction; no straight portion between turns.		As at left, but with both rolls into turns. i.e. opposite rolls.
	All lines equal length. Radius at top small; no heading deviations. Opposite quarter rolls.		As left, but same direction rolls to finish inverted.
	Knife-Edge Bridge. All line lengths the same. Finish at start height.		Hump-Back Bridge. All radii the same. Finish at start height.
	Hump-Back Loop. All radii the same. Finish at start height.		"Chicken Loop", change of elevator on vertical down. Start and finish heights same.
	Hump-Back Roll. All radii the same. Finish at start height.		"Turkey Loop", change of elevator on vertical down. Start and finish heights same.
	Start and finish same height; all radii the same.		Stall turns, one left rudder and one right rudder, with quarter rolls.
	Stall turn with 45° degree approach lines. Start and finish same height; all lines same length.		Stall turn with 45° degree approach lines and inverted recovery. Start and finish same height; all lines same length.
	Quarter up clover. Half loop up with 90° heading change (half barrel roll), half loop down.		Quarter down clover. Half loop up, half loop down with 90° heading change (half barrel roll).
	On Y-axis, two 1/4-clover shapes, rolling up then down, to be on X-axis at mid-point. No straight line between the 2 clovers. End at start height		Two opposite direction half barrel rolls, each with 90 degree heading change, resulting in turn-around figure.
	Barrel roll. Start and finish with same height and heading. 90° heading change inverted. If hesitations are specified, figure becomes "M".		Aircraft should fall into spin from 45° attitude. Otherwise as normal for Aresti figures.

18.2 MASTERS NON-ARESTI FIGURES

As Apprentices, plus...

	Outside barrel roll. Start and finish with same height and heading. 90° heading change when upright half way through figure.		Two opposite direction half outside barrel rolls, each with 90 degree heading change, resulting in turn-around figure.
	Outside half loop, half roll, half inside loop with 90° heading change. Start and finish at same height		Opposite direction half barrel rolls, outside/inside, with a half aileron roll separating them, resulting in turn-around figure.
	Barrel roll with same direction flick at highest point as in an avalanche. Finish on axis at start height		Inverted to erect, changeover spin. Change direction of yaw after 540°; direction of roll stays same (change feet and pull).
	Spins in opposite directions; rapid change with no line between; 360° in each direction.		Aircraft should fall into spin from 45° nose-up attitude. Otherwise as normal for Aresti figures.
	"Hero Loop", change of elevator on vertical up. Start and finish heights same.		"Comet": Two half vertical rolls, embedded in the looping sections, with a minimum of straight lines, preferably none.
	"Turkey Avalanche", change of elevator on vertical down. Start and finish heights same.		On Y-axis, two loops inclined at 45° to vertical, right and left. Loops same size and height top and bottom.
	"Horizontal 8", change of elevator on vertical down. All radii the same. Start and finish heights the same.		"Horizontal 8", change of elevator on vertical up. All radii the same. Start and finish heights the same.
	3/4 quarter positive flick roll to knife. Length of line after flick must be substantial.		Knife portion should be substantial and controlled. 3/4 roll opposite to inverted.
	All lines equal length. Radius at top small; no heading deviations.		As left, but finish inverted.
	Reverse stall turn. Yaw 45 degrees against engine, roll 180 degrees with engine, yaw 135 degrees with engine.		"Krysta Loop": Half positive, half negative flick rolls at top of loop (change feet and elevator). 90 degree heading change during rotation.
	Stall turn with 1½-turn flat spin entered from the yawing turn.		Hesitation stall turn. Turn must stop every 60 degrees of yaw, then start again.

BRITISH AEROBATIC ASSOCIATION

APPENDIX VI TO BRITISH AEROBATICS GENERAL RULES

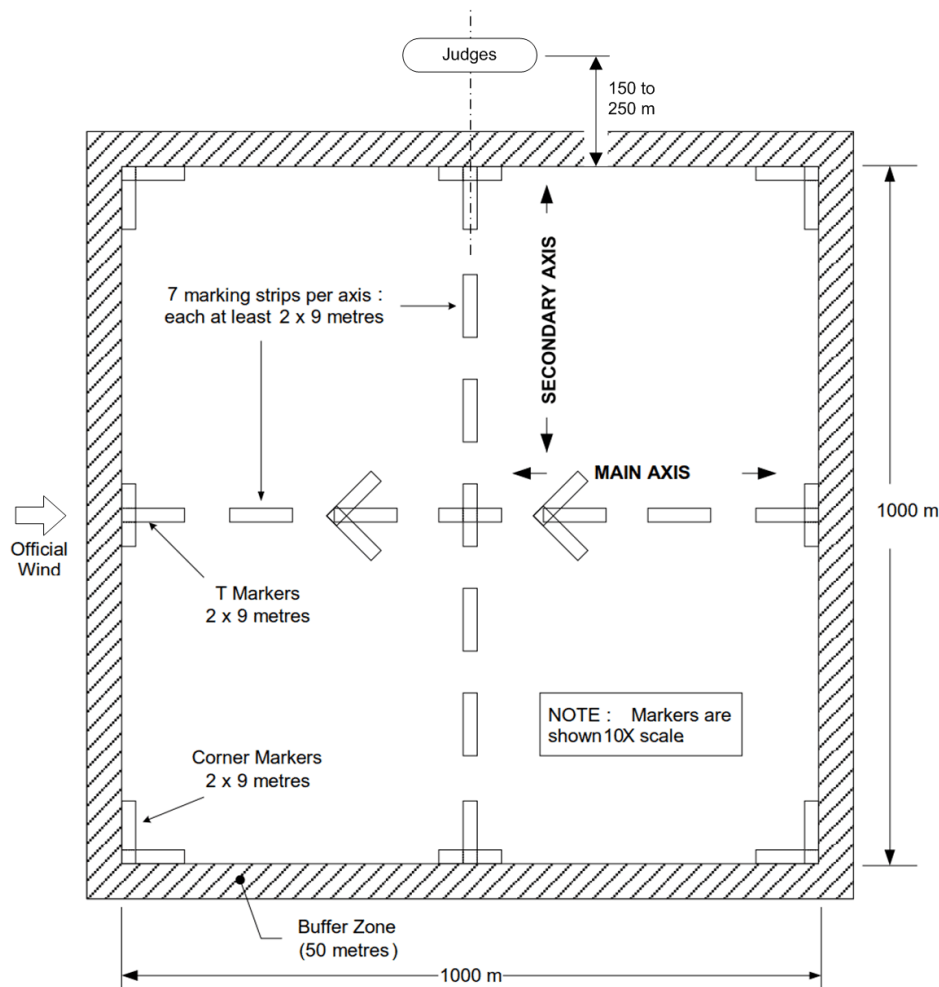
THE INTERNATIONAL STANDARD CONTEST BOX (PERFORMANCE ZONE)

19. THE PERFORMANCE ZONE

19.1 THE STANDARD CONTEST BOX (PERFORMANCE ZONE)

19.1.1 At British Aerobatics events box markers may be positioned in accordance with international practice where possible, though local topography and lack of access to private or farmed areas can make this impossible.

19.1.2 An international box diagram is shown below as a guide to best box marking practice.



BRITISH AEROBATIC ASSOCIATION

APPENDIX VII TO BRITISH AEROBATICS GENERAL RULES

ADMINISTRATION OF JUDGING AND SCORING

20. ADMINISTRATION OF JUDGING AND SCORING

20.1 AIM

The aim of these procedures is to ensure that all judges' marks and comments are properly recorded on appropriately identified score sheets, and that the Scorer (that is, the computer operator running the British Aerobatics results program) is able promptly to provide the CD and competitors with the results service expected.

20.1.1 These procedures are therefore designed to ensure that:

- Each judge receives sufficient correctly identified score sheets and Aresti diagrams prior to the commencement of each programme to carry out his duties effectively.
- Score sheets are collected frequently during the programme, checked and all discrepancies resolved promptly.
- Collated sets of score sheets are released by the CJ and reach the Scorer in a timely fashion.
- Any queries from the Scorer are promptly resolved.

20.2 RESPONSIBILITIES

20.2.1 The CJ is responsible for the correct execution of these procedures.

20.2.2 He should appoint two experienced assistants who will be responsible to him for effectively carrying out his instructions. One assistant will be the CJ's "writer" (scribe) and the other will administer the collation and checking of all judges' score sheets.

20.3 DISTRIBUTION AND IDENTIFICATION OF JUDGING SHEETS

20.3.1 The CJ must ensure all judges are provided with correctly identified score sheets (Forms A) for all competitors in each programme, together with Aresti diagrams (Forms B & C) for each sequence to be judged.

20.3.2 As each aircraft takes off, or enters the performance zone, the judge's assistant should enter the flight number, aircraft type, registration, and the pilot's name (if known) on the Scoring Sheet.

20.4 COMPLETION OF SCORE SHEETS

20.4.1 Each judge, (NOT his assistant), is responsible for the proper completion of his score sheets.

20.4.2 When completed, signed, and returned to the CJ, the score sheets must include:

- A MARK from 0 to 10 in steps of 0.5 for every figure in accordance with British Aerobatics or CIVA judging criteria. **(See Notes 1 to 3 at end of this Appendix).**
- As much COMMENT as possible against each imperfect figure flown, to indicate the reasons for which marks have been deducted. The reason for a Hard Zero or a numeric zero (0.0) must always be given.
- A mark for POSITIONING.
- Annotations of any PENALTIES awarded, for example, low figures, breaks etc.

- The AIRCRAFT TYPE, and, if known, its REGISTRATION and the PILOT'S NAME. If some details are not known, the CJ's Assistant should complete them.
- A FLIGHT NUMBER indicating the order of flights in a particular programme.
- The judge's SIGNATURE and printed NAME in the boxes provided. The judge's signature is his guarantee that the sheet is fully and properly completed.

20.5 CHECKING AND RELEASING SCORE SHEETS

20.5.1 The CJ, through his administrative assistant, is responsible for ensuring that all score sheets fully comply with the requirements before they are collated (preferably stapled IN JUDGE ORDER) into pilot sets with their FSS on top and released from the judging line.

20.5.2 Errors or omissions must be resolved promptly and recorded on the FSS before the sheets are released.

20.6 CONVEYING RELEASED SHEETS TO THE SCORER

20.6.1 The CD should appoint a Runner to convey collated sets of released score sheets to the Scorer.

20.6.2 The Scorer is responsible for entering the figure grades promptly and issuing raw-score assessment sheets attached to the score sheets for each pilot.

20.6.3 Pilots normally have one hour after their raw scores are published to raise a protest.

20.6.4 Where there is a minor question of the correct information for a competitor the Scorer should use the CJ's sheet as the authoritative indicator of the:

- AIRCRAFT TYPE
- PILOT'S NAME
- PENALTIES

20.6.5 In the event that the Scorer has a query about some aspect of a score sheet, which he is unable to resolve by reference to the CJ's sheet, the Runner should immediately return ALL the sheets in that set to the CJ for prompt resolution of the problem.

20.7 PUBLISHING OF RESULTS

20.7.1 Information should flow back to the pilots as quickly as possible. Score sheets should be made available to pilots for their inspection and retention as soon as the sheets have been processed.

20.7.2 Interim results should be posted at convenient intervals, say every 10 pilots, whilst the contest is in progress.

20.7.3 Results should not be held back from publication to create a surprise or other form of tension.

20.8 HANDLING OF NUMERICAL AND HARD ZEROES

Refer to **Section 4.7** for full description.

20.9 HANDLING OF FIGURES NOT SEEN BY A JUDGE

20.9.1 If a Judge does not adequately observe a figure, then the assistant should write "NOT SEEN" in the comments column and "AVERAGE" or "AV" for the mark itself.

20.9.2 The Scorer will insert an "A" grade, and for Judges' RI purposes the computer will use an average of the other judges non-"A" marks, corrected to the nearest half or whole mark; FPS results calculations will use a statistical Fitted Value of the scoring judges.

BRITISH AEROBATIC ASSOCIATION

APPENDIX VIII TO BRITISH AEROBATICS GENERAL RULES

PROCEDURE FOR BRITISH TEAM SELECTION

21. PROCEDURE FOR BRITISH TEAM SELECTION

21.1 AIM

21.1.1 The aim of these procedures is to select pilots and officials, up to the maximum allowed, for the World, European or Continental plus Championships in Unlimited, Advanced, and Intermediate classes.

21.2 NOMINATED CONTESTS

21.2.1 The British Aerobatics will schedule qualifying contests and a National Championship in each calendar year.

21.2.2 The results of these contests will be used for quantitative considerations as part of the team selection process.

21.2.3 A minimum of one contest will be so designated for Unlimited, and a minimum of three for Advanced and Intermediate, if possible, in the published Contest Information.

21.2.4 Percentage scores (after Statistical Analysis) achieved by pilots at nominated contests in all sequences, including Programmes Q, will be combined to achieve a ranking system.

21.2.5 In the Advanced class, each pilot's best three contests will be aggregated.

21.2.6 A pilot wishing to be considered by the Panel for selection should so advise the HCO on his/her entry form or separately in writing before the contest is commenced and include sufficient information regarding availability and background to allow the Selection Panel to reach their decision.

21.3 SELECTION PANEL

21.3.1 The directors of the British Aerobatics should appoint a Selection Panel.

21.3.2 The Selection Panel shall consist of no less than 2 and no more than 5 persons. These persons may be directors or co-opted individuals who have first-hand knowledge of the demands of international championships.

21.3.3 The Selection Panel for the Unlimited Team should include (when the positions are filled) the Chairman of the British Aerobatics, Unlimited Team Manager, Unlimited Team Trainer, and other members as thought appropriate by the directors of the British Aerobatics.

21.4 PILOTS

21.4.1 The Selection Panel shall select Team pilots based primarily on the results of the nominated contests described above, although more emphasis will be placed on contests completed later in the contest year.

21.4.2 Pilots wishing to be considered for a place in the British Teams should attend these events.

21.4.3 The Selection Panel may also select pilots based on other results, for example Unlimited results may be used for Advanced Team pilots subject to the pilot's eligibility in accordance with CIVA regulations.

21.4.4 Results from International contests may also be considered.

21.4.5 A pilot is not normally eligible to be considered for selection unless he/she exceeds the guideline minimum figure given to the Panel (presently 60% of possible points calculated over all the sequences considered).

21.4.6 When selecting the Advanced and Intermediate Teams, pilots will be graded in rank descending order starting with the first qualifying position.

21.4.7 Pilots who could numerically fill any vacant positions but who do not reach the required minimum standard will only be selected in exceptional circumstances.

21.4.8 When selecting the Unlimited Team, the Selection Panel will select pilots based on performance at nominated contests, previous results from International contests and potential as assessed by the Team Trainer.

21.4.9 The aim of the selection process will be to identify pilots who have most potential to excel at international contests, build a stable squad and support the continued development of individual pilots and the team.

21.4.10 The Selection Panel is not obliged to fill all vacant team positions.

21.4.11 The foregoing criteria also apply to the selection of a reserve pilot who may be offered a team place in the event of the withdrawal of a higher-placed pilot.

21.4.12 In the event that a selected pilot relinquishes his/her place, only the nominated reserve will automatically be eligible to take that place and the Selection Panel may select a new reserve pilot.

21.4.13 If the place remains unfilled, the Selection Panel will establish an alternative selection and offer the place accordingly.

21.4.14 To become a Team member a pilot must confirm his/her acceptance of the place offered in writing and deposit with the British Aerobatics Treasurer the sum of £50, all within one month of the date of selection.

21.4.15 Persons selected agree to act as an integral part of the Team and to participate fully as Team members before and during the relevant championship, including participation at training camps and media events.

21.4.16 If after the end of two calendar months following selection the deposit has not been received, and oral and written requests have been ignored, the pilot will automatically forfeit his/her place.

21.4.17 In such circumstances the place will be offered to the next qualified pilot in accordance with the above Rules.

21.4.18 A Team member who is subsequently unable to comply with his/her commitment to the Team will forfeit his/her deposit unless the directors of the British Aerobatics, in exceptional circumstances, agree to refund it.

21.5 OTHER TEAM POSITIONS

21.5.1 The Selection Panel will also consider nominations for other official Team positions. Persons selected should write to confirm their acceptance of the position, and their agreement to act as an integral part of the Team and to participate fully as Team members before and during the relevant championship.

21.5.2 A deposit will also be required from officials, which will normally be forfeit if the candidate is subsequently unable to comply with his/her commitment to the Team by the final entry date or withdraws following the above agreement.

21.6 CONDUCT OF TEAM MEMBERS

21.6.1 The conduct of Team Members must always be beyond reproach.

21.6.2 Any Team Member whose actions do harm to the international reputation of the British Aerobatics shall be subject to disciplinary action by the directors on the recommendation of the Selection Panel. This action may include suspension of selection for British Teams and revocation of an International Sporting Licence if held.

21.7 NO-CONTEST PROCEDURES

21.7.1 In the event that no data is available for selection to be made based on domestic contest results, and there is a requirement to select a team, the Selection Panel shall select pilots and other members of the Team.

21.7.2 The Selection Panel should consider availability and that the pilot is in current practice and has a record of achieving the required percentage.

21.7.3 The Selection Panel should select pilots principally on the probability that they will survive the first unknown cut. To this end the results of previous international contests may be taken into account.

21.7.4 In the event that the selection panel decides to select pilots who have not recently achieved the required percentage they should only do so subject to a qualification flight in front of at least two members of the Selection Panel.

21.7.5 Other team members should be selected based on competence and suitability to fit in to the overall team.

21.8 RECOMMENDATIONS

21.8.1 The Selection Panel shall make their selection recommendations to the directors of the British Aerobatics, who will normally accept them without change.

BRITISH AEROBATIC ASSOCIATION

APPENDIX IX TO BRITISH AEROBATICS GENERAL RULES

CODE OF CONDUCT

22. CODE OF CONDUCT

22.1 Every year the British Aerobatic Association (British Aerobatics) organizes events (often at a weekend) when flying takes place at host airfields. The intention of such weekends is that they are beneficial, not only to the British Aerobatics and its members, but also to the groups and individuals who normally operate from the airfields in question.

22.2 The arrival at the host airfield of many visiting aircraft, pilots, officials, and supporters can be disruptive, and a long series of contest flights throughout the day can easily spoil the operating routine at the host airfield. There is therefore a real need for understanding and co-operation on all sides if the aims of the contest weekend are to be met.

22.3 AIM

The aim of this code of conduct is to provide a framework within which contest organizers, competing pilots and the authorities at host airfields can work together to ensure a mutually beneficial relationship.

22.4 THE PURPOSE OF CONTESTS

The main purposes of contests are:

- To provide pilots and the public with an opportunity to learn more about aerobatics in general.
- To encourage novice aerobatic pilots to experience the benefits of friendly competition via the Get into Aeros events, Club/Club+ events and special events.
- To enable competing pilots to pit their aerobatic skills one against the other in safe, fair, and open contest.
- To provide groups and individuals at host airfields with an interesting and beneficial annual event.
- To further the sport of aerobatics at host airfields.
- Where practicable, to give the public the opportunity to watch and learn about contest aerobatics.

22.5 GENERAL PRINCIPLES

22.5.1 The prime consideration at aerobatic contests shall always be safety.

22.5.2 Once safety has been established, sportsmanship, good manners and camaraderie should always prevail.

22.5.3 Discipline of competing pilots and other British Aerobatics members shall be the responsibility of the CD nominated by the British Aerobatics. Competitors must respect the authority of the CD.

22.5.4 Any protests about the operation of the contest must be made in accordance with the procedure given in the General Rules.

22.5.5 Persistent dissent shown towards the CD or other contest officials shall result in a competitor being disqualified from a contest.

22.5.6 This code is complementary to the **General Rules for the Conduct of Aerobatic Contests** published by the British Aerobatics.

22.6 THE CONDUCT OF CONTEST OFFICIALS

22.6.1 Prior to the issue of contest briefing papers, the HCO shall establish close liaison with appropriate persons at the host airfield to ensure local requirements are included in published material.

22.6.2 Copies of contest briefing papers should always be sent to the host airfield at the time of general circulation.

22.6.3 To ensure clear, unambiguous communication, a single point of contact shall be established between the British Aerobatics and the host airfield. Initially when planning the annual schedule of events this shall be the Airfield Liaison Officer for the British Aerobatics; when planning the contest itself this shall be the CD.

22.6.4 The CD will agree special operational procedures with the responsible authority at the host airfield to ensure that local flying may continue with as little disruption as is compatible with achieving a valid contest result.

22.6.5 The CD will agree the location of the aerobatic performance zone with the responsible authority at the host airfield in accordance with the procedure described in the British Aerobatics Risk Assessment and Safety Analysis document and the Operations Manual.

22.6.6 The CD will also review the major incident plan with the host airfield to ensure that emergency response procedures and the responsibilities of British Aerobatics and host airfield staff are defined clearly ahead of the contest.

22.6.7 At all contest briefings, the appropriate local official shall be invited to address competing pilots on local procedures and sensitivities.

22.6.8 When considered appropriate, the contest organizer will agree in advance of the contest, any fees, or other costs to be paid by the British Aerobatics or its members to the host airfield authorities.

22.6.9 Whenever possible, and to promote a better understanding of the sport, contest officials and competing pilots should make themselves available for informal consultation by local people.

22.6.10 Where appropriate, the CD will make arrangements for the briefing of the media and the public as to the conduct and progress of the contest.

22.6.11 After the contest is complete, the CD will review the conduct of the event with host airfield officials.

22.6.12 High-visibility clothing will be made available for key organising personnel to wear at their discretion or in accordance with local requirements.

22.7 THE CONDUCT OF COMPETING PILOTS

22.7.1 Competing pilots shall always display exemplary airmanship. Attendance at, or participation in, a British Aerobatics contest in any class does not imply that it grants to the pilot under any circumstances exemption from any aspect or clause of the Air Navigation Order, the Rules of the Air Regulations nor any other statutory instrument, nor from any local regulations.

22.7.2 Pilots should remember that the aim of contests is to promote friendly rivalry and good sportsmanship.

22.7.3 Arrival at and departure from the host airfield shall be in the normal manner prescribed for visiting aircraft.

22.7.4 Aerobatic practice flights at the host airfield during the week leading up to the contest are to be kept to a minimum for airfield familiarisation and should be authorized by both the Airfield Operator and the CD.

22.7.5 Competing pilots shall always understand that they are guests of the host airfield and act accordingly.

22.7.6 When not actively preparing for a contest flight, pilots shall endeavour to encourage and inform local individuals and groups about the practice of contest aerobatics.

22.7.7 Pilots shall ensure that all outstanding fuel bills, landing fees etc are paid before departure. Contravention of this rule may lead to exclusion from future contests.

22.8 THE CONDUCT OF HOST AIRFIELD OFFICIALS

22.8.1 The host airfield authorities shall nominate one individual to be the single point of contact with the British Aerobatics.

22.8.2 The hosting authority will endeavour to ensure that all relevant local conditions and operating practices are brought to the attention of visiting pilots through formal briefings.

22.8.3 Host airfield authorities will, on request, advise pilots on local sites suitable for aerobatic practice flights, bearing in mind that, unless otherwise specifically agreed with an official of the British Aerobatics, practice within 10nm of the airfield is prohibited to British Aerobatics pilots.

22.8.4 Where appropriate and practicable, the host airfield authority will endeavour to provide controlled public access to the contest site. The host airfield authority has responsibility for control of the public and provision of appropriate facilities to host spectators, considering the requirements of CAP 403 as being indicative of best practice in these respects.

22.8.5 The host airfield will make a parking/hangarage area available for competing aeroplanes and, where possible, restrict access to this area by the public.

22.8.6 The hosting authority should brief local groups and individuals, as appropriate, on the need to respect the privacy and concentration of pilots directly preparing for contest flights.

22.9 PERSONAL SAFETY FOR PILOTS

22.9.1 The Code of Conduct emphasizes the prime importance of safety at aerobatic contests. The British Aerobatics directors and other contest officials are charged with monitoring and always maintaining safety standards.

22.9.2 Competing pilots are also urged to always consider their personal safety as paramount and should pay particular attention to their choice of personal safety equipment and protective clothing. In particular, the wearing of a protective helmet has proven to be of prime survival value in aircraft accidents. Pilots should also consider the installation of an approved parachute system, where permitted for their aircraft.

22.10 OTHER EVENTS

22.10.1 All the provisions of the Code of Conduct shall apply to participants in Special Events, Training Events and Association meetings and social gatherings.

BRITISH AEROBATIC ASSOCIATION

APPENDIX X TO BRITISH AEROBATICS GENERAL RULES

THE PILOT PROFICIENCY SYSTEM

23. PILOT PROFICIENCY SYSTEM

23.1 AIM

23.1.1 The primary aim of the Proficiency System is to ensure safety at British Aerobatics contests. The secondary aim is to provide pilots with recognition of their progress in aerobatics.

23.2 FLIGHT EVALUATORS

23.2.1 **Flight Evaluators (FE)** are British Aerobatics members with an extensive experience of competition aerobatics, who are authorized by the HCO to act on behalf of British Aerobatics to implement the Pilot Proficiency System. They must be a current member at the time the evaluation takes place.

23.2.2 A current list of Flight Evaluators, their locations and telephone numbers will be published on the British Aerobatics web site and reviewed annually by the HCO.

23.2.3 A Flight Evaluator's authority may be suspended by the HCO or withdrawn after consulting the directors of British Aerobatics and with their agreement.

23.3 OPERATION

23.3.1 Applicability

23.3.1.1 The Proficiency System applies to all competing pilots, in both Power and Glider categories.

23.3.2 Initial Proficiency sign-off

23.3.2.1 All new pilots must undertake an evaluation flight and must send in the completed evaluation form to the British Aerobatics office before the closing date of the contest. As part of this sign-off they will be required to provide documented evidence that adequate aerobatic training has been completed.

23.3.4 Promotion to a Higher Class

23.3.4.1 Before promotion to a higher class, each pilot must again undertake a flight evaluation and must return a completed, successful evaluation form prior to entering a contest in the higher class.

23.3.5 Lapsed Proficiency sign-off

23.3.5.1 If a pilot does not compete for a period of 24 months, his proficiency sign-off is considered to have lapsed.

Before he can compete again in a previously endorsed Class, he must obtain a new evaluation report from a Flight Evaluator.

23.3.6 Revocation of Proficiency sign-off

23.3.6.1 In the event that a pilot flies at a contest to a standard considered by the CD (CD) or the CJ (CJ) to be below that expected at a contest for that class the CD and CJ will discuss the incident and forward details to the HCO. The HCO may then revoke the pilot's proficiency sign-off for that Class. In this case, the pilot will be advised to gain more contest experience in a lower Class, or to undertake more training outside the contest arena, before re-submitting himself to a different Flight Evaluator for proficiency sign-off in the previously un-safe Class.

23.3.6.2 Following revocation of his proficiency sign-off by the HCO, a pilot may make an appeal, in writing, to the Chairman who will consult the directors to discuss the case and make a final judgement.

23.3.7 Evaluation Flights

23.3.7.1 Completed flight evaluation forms must normally be received by the Membership Secretary **no later than the closing date for the contest.**

23.3.7.2 The pilot can arrange for the evaluation flight to be undertaken dual, with the Flight Evaluator accompanying the pilot in a multi-seat aircraft, or solo with the Flight Evaluator observing from the ground and in contact by radio. The minimum height for an evaluation flight must be agreed in advance and must be no lower than that specified in these Rules for the Class of contest concerned.

23.3.7.3 The pilot must fly the Known or Free Known sequence for the Class and year in question, plus any additional figures specified by the Flight Evaluator. These additional figures will normally be flown individually and will be chosen from those which may be included in Unknown sequences in the relevant Class. It is particularly important that the Flight Evaluator ensures that the pilot demonstrates the ability to recover from the full range of intentional spins introduced in the higher Class.

23.3.7.4 The Flight Evaluator will discuss with the pilot his experience, planning required for contest flights and other issues the Flight Evaluator believes are important to assessing the pilot's competency. Detailed guidance about how the Flight Evaluator should conduct the evaluation is provided in the British Aerobatics Operations Manual, including a Flight Evaluator Checklist.

23.3.7.5 The Flight Evaluator must complete a Flight Evaluation Form on which is recorded the outcome of the assessment (pass or fail) and reasons why the applicant failed. This form must be sent to the Membership Secretary no later than the closing date for the contest.

23.3.7.6 If the applicant fails the assessment, they must be re-evaluated by the same Flight Evaluator after they have undertaken appropriate remedial training. If this will present logistical difficulties, then the HCO shall be consulted in all instances before any further Flight Evaluation takes place.

23.3.8 Standards

23.3.8.1 To be eligible for proficiency sign-off, the pilot must fly the sequence and additional figures in a safe and confident manner. The pilot must also demonstrate an appropriate degree of skill in positioning the sequence in the prevailing wind conditions.

23.3.8.2 Small errors of geometry, nor even hard zeroes for turning the wrong way, will not be used as reasons for denying the proficiency sign-off. The Flight Evaluator must be convinced, however, that the pilot is always in proper control of the aeroplane and has sufficient spare mental capacity to cope with the stress of contest flying, especially during Unknown sequences, in the higher Class.

BRITISH AEROBATIC ASSOCIATION

APPENDIX XI TO BRITISH AEROBATICS GENERAL RULES

PROCEDURE IN THE EVENT OF A SERIOUS ACCIDENT OR CASUALTY

24. PROCEDURE IN THE EVENT OF A SERIOUS ACCIDENT OR CASUALTY

24.1 OVERVIEW OF PROCEDURES

24.1.1 In the event of a serious accident or casualty at a British Aerobatics contest or event, the host airfield's emergency response plan will be activated.

24.1.2 British Aerobatics officials will support the host airfield staff to provide an appropriate response to the incident.

The procedures invoked to deal with such aviation related incidents are based on the principles described in the FAI Guidelines document "In the event of a casualty or a serious accident at FAI Air Sports".

24.2 PLANNING MEETING WITH HOST AIRFIELD

24.2.1 The CD must liaise with the host airfield management team (Airfield Manager, CFI, or other appropriate person) before the event to discuss arrangements for the contest, to include:

- Flight Operating Procedures
- Emergency Response Procedures (including Major Incident Plans)
- Location and procedures for use of the aerobatic box. *The CD and airfield management team should work together to agree an appropriate location for the aerobatic box, considering keeping aerobatic contest flights clear of occupied buildings, significant public areas, or facilities, local villages, and noise sensitive areas. The British Aerobatics Risk Analysis and Safety Assessment document provides guidance on these issues.*
- Designation of an Incident Control Centre. *A room or office should be designated for use as the Incident Control Centre. The CD and the airfield management would use this room as the central point from which to co-ordinate the response to the incident. Ideally, this should be close to ATC so that use can be made of air band radio facilities.*

24.3 BRITISH AEROBATICS INCIDENT RESPONSE TEAM

24.3.1 A response to a serious accident or casualty will be co-ordinated by the CD and the Airfield Manager or other appropriate person.

24.3.2 The CD may appoint other British Aerobatics volunteers to help with the management of the incident response as he feels appropriate. These roles may include:

- Deputy CD assigned to be the CD's representative at the incident site and elsewhere on the airfield as and when required.
- Public Relations Officer assigned to deal with Press and Media enquiries.

24.4 IMMEDIATE RESPONSE TO AN INCIDENT

24.4.1 Participants should report the occurrence of an incident to a contest official, to the member of any local staff responsible for managing air traffic, or to another member of the airfield staff, whichever is quicker, who must immediately contact the local air traffic management personnel to inform them of the incident.

24.4.2 The local air traffic management personnel will alert the emergency services (fire, ambulance, and police) and activate the airfield's emergency response and major incident plan as appropriate.

24.4.3 Further management of the situation will be co-ordinated by the airfield staff, supported by the British Aerobatics CD.

24.5 ROLE OF PARTICIPANTS

24.5.1 Once the alarm has been raised, if a victim involved in the incident needs help and the rescue team has not arrived on scene, participants must consider the danger they and other participants may be exposed to if a rescue is attempted. The professional incident response teams will have the training and equipment

needed to respond to the incident appropriately and in most cases, it is best to let the professional team handle the situation.

24.5.2 A participant must not attempt to move a victim unless asked to do so by the rescue team, under their supervision, except if the victim is in imminent mortal danger and the rescue team has not arrived on scene. However, participants must be aware that any intervention in these circumstances could place both the victim and the participant in grave danger.

24.5.3 In circumstances where it has been established that no further assistance can be given to the pilot (or any other people involved in the incident) and that a fatal incident has occurred, the accident site must be secured, and measures implemented to ensure that the area remains undisturbed until the Police and Air Accident Investigators arrive on scene. An effort should be made to shield the accident site from view if possible.

24.5.4 Witnesses to the accident should be requested by the CD or his deputy to remain on-site until the police have said they can leave.

24.5.5 Participants should not watch video footage of the incident until given permission to do so by the police or AAIB but should hand any photographs or video footage of the incident to the CD.

24.5.6 When the contest participants next meet (morning briefing, or a special briefing), the CD should inform them of the incident's basic facts, of the action taken and decisions made regarding the future continuation of the contest.

24.5.7 There will almost certainly be media and public enquiries or presence at the event site and/or the site of any major accident (which may be off the event site). Opinions, assumptions, and the names of individuals involved should not be passed to the media. A properly constructed announcement will be released to the public and media by the CD on behalf of the British Aerobatics.