



RULES AND PROCEDURES

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The following rules and guidelines are produced by the Great Britain R/C Aerobatic Association and provide local variations on FAI rules, as used by the GBR/CAA in its own competitions. Competitors are also advised to read BMFA Contest Rules, Section 5, R/C Power, Book One, Aerobatics, which provides full information on current FAI schedules & rules.

GREAT BRITAIN R/C AEROBATIC ASSOCIATION

The Great Britain Radio Control Aerobatic Association was founded in 1979 to promote F3A flying in the UK and is a specialist body of the BMFA. The GBR/CAA is required to conform to Specialist body requirements and guidelines, hold a series of centralised events, select a team and Team Manager to compete at World , European & Triple Crown events.

The GBR/CAA also organises a series of domestic comps, usually on club sites and run by a member of the host club. Trophies or certificates are presented to the winners of the comps and scores from domestic and centralised events are placed in separate league tables to determine league trophy winners for each class at the end of the season. BMFA Nationals and GBR/CAA Champs also have their own trophies. The Association has designed and developed its own series of aerobatics schedules from a basic Clubman schedule (formerly Sportsman), designed to appeal to a beginner to aerobatics through Intermediate (formerly Standard) and Advanced (formerly Senior) schedules to Masters. The FAI schedule flown in competitions is the current FAI Preliminary (P) schedule, with the Finals (F) schedule flown in selected events.

Beginners are encouraged to join the Association in a flying class which suits their abilities and progress upwards through the classes through the promotion scheme. A flier is required to achieve at least 60% of maximum score in two comps in any 12 month period to achieve promotion to the next class. All schedules are flown at domestic comps, but FAI schedules only are flown for team selection purposes at centralised or other team selection events.

The GBR/CAA is bound by its own constitution which sets out the aims and objectives of the Association. The rules and constitution of the Association are freely available in paper and electronic form to all members.

All competitors in BMFA or GBR/CAA domestic competitions must hold a BMFA “B” certificate & have current BMFA or SAA insurance. A Contest director may require a competitor to show his BMFA/SAA membership card prior to the start of a competition.

Members are advised to read & understand the competition rules, the C.D’s and their own responsibilities during a competition. Latest updates to these rules & procedures are will be made available on the website, GBR/CAA.org.

The GBR/CAA also agrees to BMFA policy on ‘the promotion of welfare and care of children and vulnerable adults in model flying’. Procedures and guidelines may be found on BMFA website, resources section: ‘Care and Welfare of Children.’

AGM

The constitution also sets out the requirement for an AGM, usually held at the end of the season. The Treasurer prepares accounts by 31st October each year, prior to the AGM & based on the report, fees are decided for annual subscriptions, comp fees for centralised, domestic & Nationals. Proposals for subs & comp fees are usually made by the committee based on the Treasurers report, but may be amended by the members present. Nominations are received for C.D’s for Centralised, Nationals, GBR/CAA Champs and Triple Crown.

Members may send in individual proposals to be discussed and voted on by the members present. Any proposal requires a seconder from the floor of the meeting before a vote can take place. Procedures, time limits, agenda & all proposals are posted on the GBR/CAA member’s forum.

Committee

Committee members are elected for a 2 year minimum period. To retain continuity, posts can only be challenged in odd or even years but members can retire by choice at the end of any year. For election purposes, nominations & a seconder for committee posts need to be received within prescribed time limits prior to the AGM. Job descriptions for all committee posts are available.

All serving members of the committee are entitled to free membership of the Association.

The Rules & Procedures are divided into 4 sections:

Section 1 GBR/CAA Constitution

Section 2 BMFA Specialist body requirements.

Section 3 C.D. Guide

Section 5 Competition Rules.

SECTION 5.

COMPETITIONS

Disclaimer

The GBR/CAA Committee or organising officials will accept no responsibility whatsoever for any personal loss, accident or theft arising from any GBR/CAA competition or BMFA competition organised by the GBR/CAA no matter how caused.

5.1.2 BMFA VARIATIONS ON F3A AEROBATICS

5.1.2.1 General

The following rules and guidelines are taken from documentation produced by the Great Britain R/C Aerobatic Association and provide local variations on FAI rules, as used by the GBR/CAA in its own competitions. Full details can be obtained from the GBRCAA or the GBR/CAA website, GBRCAA.ORG. A contact address is also available from the BMFA's Leicester office.

5.1.2.2 BMFA CENTRALISED EVENTS

Centralised Events are split into separate open competitions :-

5.1.2.2.1. Team Selection Competitions

An open, priority Team selection comp – to count towards the UK Team & Triple Crown English Team, centralised league (Sid Allen Trophy) & individual comp trophies. This comp to comprise 2 P - rounds, followed by 1 compulsory F round. Full scrutinising of models to be carried out according to FAI rules. Best 2 from 3 rounds to count.

5.1.2.2.2 Domestic Open Competition

A secondary, domestic open comp. comprising all GBR/CAA schedules to count for domestic league points. FAI comp to be P schedule only & count towards a place in Triple Crown International Team. Competition to be run to GBR/CAA domestic rules.

"Open" means that any BMFA or GBR/CAA member can enter either competition provided that they show BMFA/GBRCAA/SAA membership or can show that they have the minimum of £5,000,000 third party public liability insurance to cover model flying. In addition, a BMFA 'B' certificate or equivalent is required (see the BMFA Members handbook for details). Each comp is scored separately. In the event of over subscription to the event, priority will be given to entrants in the Team selection comp.

5.1.2.3 GENERAL RULES FOR CENTRALISED EVENTS

Rules for Centralised comps are based on FAI rules taken from current BMFA Contest Rules, Section 5; R/C Power, Book 1, Aerobatics. Where necessary, FAI rules have been modified/abbreviated for use in one day competitions. Reference should be made to the above rules in all cases. 'Shall, will, must, cannot' indicate mandatory requirements; 'should & may' are recommendations but can be decided at the C.D's discretion.

5.1.2.3.1 Number of Centralised events

Under BMFA rules the GBR/CAA is required to organise a minimum of 3 centralised events per year. For any given year, the actual number of Centralised Events to be held will be decided at the annual GBR/CAA Interested Parties Meeting or AGM. Unless decided otherwise, the number shall be 4. Although the GBR/CAA has chosen to use the Centralised events for Team selection, the Association may at its own discretion determine any method for Team selection provided adequate notice is given to the BMFA. Centralised events must be scheduled to take place between April and October.

5.1.2.3.2 Interested Parties Meeting

Method of Team Selection is decided annually at an 'Interested Parties Meeting'. The meeting is open to any BMFA member who may make proposals for changes to the current method of Team selection. Proposals are received within prescribed time limits & voted on at the meeting for implementation the following year. If no proposals are received, no I.P. meeting is held & existing Team selection procedures continue for the following year.

5.1.2.3.3 Process for deciding Centralised Competition Venues

Preferred location of events is currently based on early pre entry to the full series of (4) competitions Early pre-entry is required to allow the Competition Secretary to select venues based on the distribution of pre entries & the potential viability of a comp. *The above requirement can only be invoked by an I.P. meeting prior to the year in question.*

Normal cancellation rules still apply & pre entry does not preclude pilots from entering normally up to 7 days before the event, provided the comp is not fully subscribed. Time limits for early pre-entry will be published on the GBR/CAA website.

GBR/CAA Committee will work with members in selected areas to select a suitable location to meet the criteria defined above & ensure that the necessary compliment of qualified support staff – especially Judges and Scorers can be made available.

5.1.2.3.4 Competition Entries

Under BMFA rules the Comp. Sec. will submit details of entry requirements & time limits to the BMFA to be published in BMFA News.

All entries for Centralised Competitions are to be submitted to the Competition Secretary and entries will be accepted up to 7 days before the competition, unless the conditions attached to the use of the venue (e.g. security requirements for an MOD base) require a longer lead time.

Unless site requirements dictate otherwise, late entries may be accepted up to the date of the comp. at the discretion of the CD. In such cases the CD's judgement in allowing any late entries shall be final. The Comp Sec shall ensure that regular updates to the status of entry lists are published in the Competition Section of the GBR/CAA Web Site Forum. Pilots wishing to participate in Team Selection, but not wishing to have their location factored into [any](#) process for deciding competition venues, will be able to submit their entries in accordance with the normal timescales.

5.1.2.3.5 Entry Limitations

Entry to BMFA Centralised events is open to all BMFA members who hold a "B" certificate. Max number of entries that can be accepted may depend on access to the site, starting & finish times outside the control of the C.D & Comp Sec. Not withstanding other restrictions a finish time of 5.00pm should be used to determine entry level.

Non-FAI Classes will be invited to submit entries to Centralised Events. In the event of over subscription, priority will be given to those pilots competing for Team Selection.

5.1.2.3.6 Competition Entry Fees

Fees for Centralised Competitions are set at the GBR/CAA AGM and shown on the Competition Entry Form.

[There are no refunds of competition entries once received, either by cheque, cash or other means.](#)

5.1.2.3.7 Contest Direction

The GBR/CAA Competition Secretary is responsible for organising the annual programme of Centralised Competitions and is for the appointment of Contest Directors for BMFA centralised events. The Comp. Sec. shall also ensure that details of entry requirements & time limits are published in BMFA News.

5.1.2.3.8 Role of Chief Judge

The Chief Judge decides on suitable judges for Centralised comps & produces a list of suitably qualified judges by the end of February each year.

5.1.2.3.9 Financial Viability

Financial viability of all events is paramount i.e expenses for a given comp cannot exceed income. It shall be the responsibility of the CD to ensure that each competition is financially viable.

5.1.2.3.10 Number of Judges

A minimum of 2 qualified judges will judge at centralised competitions and Domestic competitions. More judges can and should be employed provided the comp still remains financially viable.

Note – in the case of disagreement between the CD & Chief Judge the final decision shall be made by the C.D. after consultation with the committee.

5.1.2.3.11 Other Rules for Team Selection

At any Centralised event, FAI Pilots may fly in only one competition. (either Team selection or Open domestic) However over the course of a season, FAI Pilots may change which category they choose to fly in. In the event that a selected pilot should find himself unable to attend the International event for which he has been selected, or unable to prepare properly, he should inform the Team Manager or the GBRCAA Committee at the very earliest opportunity in order to give a reserve Pilot as much time as possible to arrange to take his place.

5.1.2.3.12 Triple Crown

A competition for the RCM&E Trophy held annually by England, Scotland or Ireland.

The English (& UK team) & English International team member is decided by procedures detailed elsewhere in the rules.

Members of Scotland & Irish teams are decided by their own Aeromodelling Associations.

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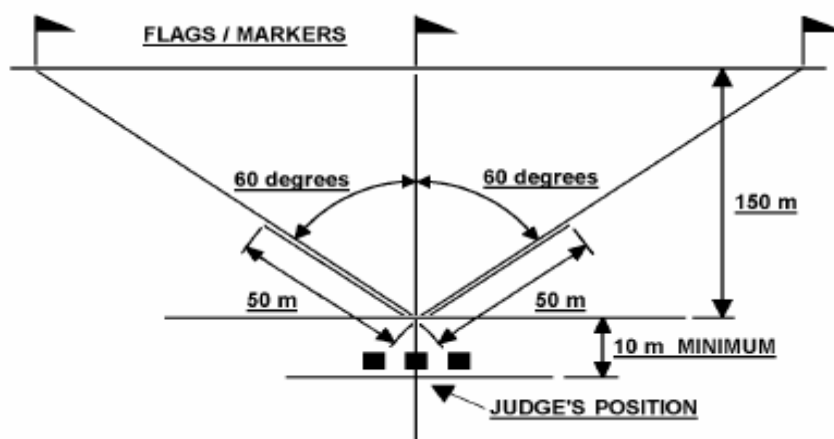
5.1.2.4 TEAM SELECTION COMPETITIONS from Jan 2012

Competition Rules For selection of World, European & English Triple Crown Teams

5.1.2.4.1 Rules In Force At The Competition.

5.1.2.4.2 Site Layout

The site should be set out as shown below. 'Start' and 'Ready' boxes shall be provided for the competitors, the size of which shall be adequate for the model, pilot, helper and field support equipment. The boxes should be positioned so as not to hinder flight line operations downwind of the judges. The preferred landing and take off zone may be designated by a circle of 50 metres radius or lines across a standard runway spaced 100 metres apart where the runway is at least 10 metres wide. If poles & marker flags are not available, at the Pilots briefing the C.D. must identify useable distant land marks to pilots & judges.



5.1.2.4.3 Pilots Briefing

The C.D. should outline the rules applicable to the Team Selection and Domestic Open comp, flight order, start time, positioning of box markers, any local restrictions or special requirements of the site. Announce arrangements for processing of models in Team Selection comp; introduce judges & time keepers, scorers & other officials. Liase with Senior Judge to determine judging breaks & lunch break. Check that all competitors are BMFA/GBRCAA/SAA or that they hold a minimum of £5,000,000 third party public liability insurance for model flying & that they hold a BMFA 'B' certificate or equivalent.

5.1.2.4.4 Mobile 'Phones

No mobile 'phones shall be used on a flight line at any competition or used in the vicinity of competitor's transmitters.

5.1.2.4.5 Transmitter Compound & Ready box

A Transmitter compound & peg off system for 35 MHz equipment must be provided. Competitors must obtain the correct 35mH frequency peg before switching on their transmitter.

2.4GHz equipment is exempt from this rule. All BMFA Safety rules apply. Security of transmitters & other equipment during the competition is the responsibility of the owner. If 35mHz transmitters need to be retrieved from the compound, say for bad weather, the competition must not restart until all 35mHz transmitters are returned to the compound.

5.1.2.4.6 Permitted models:

Maximum Overall wing span 2000mm
Maximum Overall Length 2000mm
Maximum Overall Weight 5000g without fuel, (but including propulsion battery)

Propulsion device limitations: Any suitable power source may be utilised. Propulsion devices that are not permitted are those requiring solid propellants, gaseous fuels (at room temperature and atmospheric pressure) or liquefied gaseous fuels, Electric powered models are limited to a maximum of 42.56 volts for the propulsion circuit, measured off load, and prior to flight while the competitor is in the ready box.

The propulsion device(s) must automatically shut off or fully idle at the moment a R/C failure occurs.

5.1.2.4.7 Scrutinising of Models

All models will be scrutinized for size & weight prior to the start of the competition. In the case of electric models, the weight of all battery packs to be used in the competition should be checked beforehand. A tolerance of 1% will be allowed for possible inconsistencies in measuring instruments for size, weight & voltage i.e :-

Max. permitted wing span & length as measured by a commercial steel tape – **2020mm**

Max. permitted weight measured with calibrated scales – **5050g**

Max. permitted voltage of checked flight battery measured with a digital voltmeter – **42.99 volts**

If the measured voltage is above 42.99 volts a check will be made with a second digital voltmeter. If the second meter also shows an over-voltage, the battery pack may not be used for an official flight. Scrutinizing of models will take place, weather permitting at all Team selection events.

The C.D. will be responsible for effective scrutinising of models, but the onus will be on the competitor to make his model(s) available for processing before the start of the comp. and for noise checking prior to each flight. Failure to present the model prior to the start of the competition and for noise checks may result in lack

of processing & subsequent disqualification. Should a permanent failure of any scrutinising equipment occur before all models are processed, models already processed cannot be disqualified from the competition.

5.1.2.4.8 Schedules

The competition will comprise 3 rounds, 2 initial FAI preliminary (P) schedules & 1 Finals (F) schedule; Preliminary schedules to be flown first. A result can only be declared when at least 1 round has been completed and a normalized score obtained. Each round is normalised to 1000. Maximum available score for the competition is 2000. A round is defined as follows:- Where 1 flightline is in use, 1 judged flight is required by each competitor to complete the round.

5.1.2.4.9 No of counting flights

NO OF ROUNDS IN COMPETITON	NORMALISED SCORES TO COUNT
1	Single
2	Best 1 out of 2
3	Best 2 out of 3

5.1.2.4.10 Attempts

Competitors are allowed 1 attempt at each official flight. There is an attempt when the competitor is given permission to start. **If the propulsion device fails after the take off has begun, the attempt will be deemed complete.**

An attempt can be repeated at the contest director's discretion only when any unforeseen reason beyond the control of the competitor, causes the model aircraft to fail to start (eg there is radio interference). Similarly, in a flight that is interrupted by any circumstance beyond the control of the competitor, the competitor is entitled to a reflight, with the entire schedule (or part schedule as agreed with the C.D.) being flown, but only the affected manoeuvre and the unscored manoeuvres that follow will be judged and tabulated. This reflight should take place within 30 minutes of the first flight. The result of the reflight will be final.

5.1.2.4.11 Official Flight

If the frequency is clear the competitor will collect the frequency peg & transmitter from the transmitter pound. If there is a frequency conflict, the competitor must be allowed a maximum of one minute for a radio check before the start of **the 2 minute starting time.**

For electric powered models, the electric power circuit(s) must not be physically connected before the starting time has begun and must be physically disconnected immediately after landing.

A competitor is allowed **2 minutes** of starting time and **8 minutes of flying time** for each flight. The timing of the flight starts with the starting time when the C.D. or timekeeper gives an instruction to the competitor to start. The clock will be stopped when the competitor is ready to take the sound measurement. The helpers who place the model must ensure that the model is positioned as per paragraph 5.1.2.4.12 below. If the model is not placed correctly for the sound test before/at the 2 minute mark, the C.D./timekeeper will advise the competitor and helper that the flight may not proceed. The flight shall score zero points. When the C.D./sound steward is satisfied that he has obtained a reading from the S.L.M, he will indicate this to the competitor, and the timing device will be re-activated **to start the 8 minute flying time.** With the expiry of the 8 minute flying time, the scoring will cease except for the in flight sound assessment, which is judged after the model has landed, irrespective of the time.

The C.D./time keeper will advise the pilot, helper and the judges of the expiry of the 8 minute flying time. The clock will be stopped when the wheels of the model touch the ground for landing, as proof to the competitor of the recorded time.

The direction of the first manoeuvre or the landing may be different from that of take off. After take off, only turn round manoeuvres, and not more than two (2), are allowed before starting the first manoeuvre of the schedule.

5.1.2.4.12 Noise Check

The maximum sound/noise level of the model aircraft and its propulsion device shall be 94* dB(A) measured at 3m from the centre line of the model aircraft with the model aircraft placed on the ground over concrete, macadam, grass, or bare earth at the flight line.

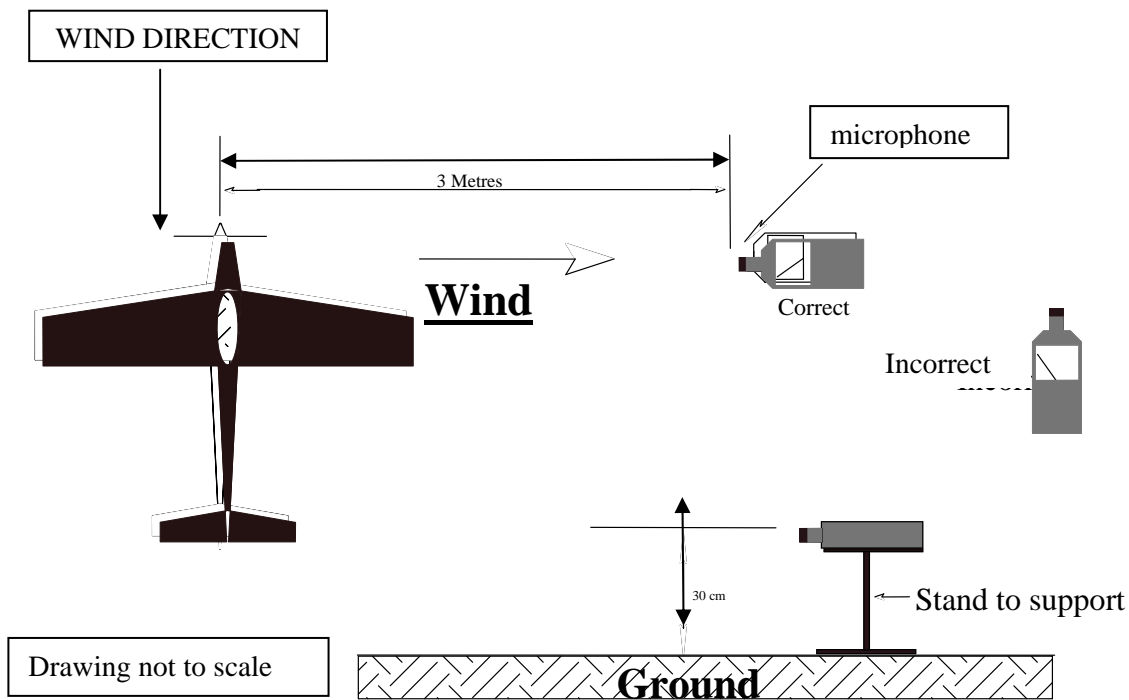
* The tolerance of the sound/noise level measurement is the specified tolerance of the manufacturer of the measuring equipment. If the meters in use have a manufacturer's tolerance of +/- 1.5dB(A), the max. permitted noise level of a model checked using either of these meters is $94 + 1.5 = 95.5\text{dB(A)}$.

With the propulsion device running at full power, measurement will be taken 90 degrees on the right-hand side with the nose of the model aircraft pointing into wind. The Class 1 SLM (Sound Level Meter) microphone will be placed on a stand 30 cm above the ground in line with the propulsion device. Other than the helper restraining the model aircraft and the sound steward, no sound reflecting or [sound/noise reflecting](#) or [sound](#) absorbing objects, shall be nearer than 3m to the model aircraft or the microphone. The noise measurement shall be made immediately prior to each flight. [The sound test area must be located in a position that does not create a safety hazard to officials and other competitors.](#)

The flight time will be interrupted while the noise check at the flight line is being made. The competitor shall not be delayed more than 30 seconds for [this sound test.](#)

In the event of a model failing the noise test, no indication of the result or the reading shall be given to the competitor, [or his team](#) or the judges prior to the flight, and both the transmitter and the model aircraft shall be impounded by the flight line official immediately following the flight. No modification or adjustment to the model aircraft shall be permitted (other than refuelling or battery recharging). [The competitor and his equipment shall remain under the supervision of the flight line director while the propulsion battery is fully charged.](#)

The model [aircraft](#) shall be retested within 90 minutes by a second noise [steward](#) using a second SLM and in the event that the model fails the retest, the score for the preceding flight shall be zero. [The score for the flight may be tabulated but not made public until the result of the re test is communicated to the tabulators.](#)



5.1.2.4.13 Rotation of flight order

Second & third round flights the flight order should start 1/3 & 2/3 down the flight order respectively.

5.1.2.4.14 Protests and Appeals

- (a) Any competitor wishing to register a protest must do so at the event to the Contest Director (CD).
- (b) If not satisfied with the CD's decision the competitor must, at the event, hand him the protest in writing together with a fee of double the standard entry fee. The CD will then immediately empanel a jury of three impartial persons to deal with the protest.
- (c) The jury's decision is final, subject to the right of the competitor to appeal to the BMFA Council.
- (d) Notification that an appeal is pending must be sent by the competitor to the BMFA Competition Secretary to arrive not later than 2 weeks from the date of the event.
- (e) The appeal itself, together with any supporting evidence, must be sent to the BMFA Competition Secretary to arrive not later than two months from the date of the event.
- (f) If the written protest or appeal is upheld, the protest fee will be returned.

5.1.2.5 OPEN DOMESTIC COMPETITION

1. Competition to be open to all BMFA/GBRCAA/SAA members and anyone else with a minimum of £5,000,000 third party public liability insurance covering model flying. All competitors must hold a BMFA 'B' certificate or equivalent.
2. Rules of this competition to be based on GBR/CAA domestic events.
3. Event to run at same venue & time as Team selection event.
4. Domestic League points to be available to GBR/CAA members only.
5. All GBR/CAA classes to be flown; raw scores to be used to determine result.
6. FAI class to be 3 rounds of FAI Preliminary (P) schedule only.
7. Weighing, processing & noise testing of models is by request of the entrant only & will not affect result.
8. FAI class to be judged only by same judges as Team Selection event.
9. FAI results to be used to determine Triple Crown International team member
10. Max wt of models allowed to be same as domestic comps – 7kg.
11. Entry fee to be same as domestic comps.

5.1.2.6 Summary of Centralised Events

Team Selection Competition

1. Competition to be open to all BMFA members.
2. FAI/BMFA rules as specified in GBR/CAA Rules & procedures document.
2. All models to be processed in accordance with above rules prior to start of comp.
3. Competition will be used to select U.K. Team & English Triple Crown Team.
4. Winner of comp will receive relevant BMFA/GBRCAA trophy.
5. 4 events will be used to determine team places, with the best 3 events to count.
6. Scores from comps used to contribute to Centralised League only.
7. Team Selection events used to determine winner of Sid Allen trophy.
8. Entry fee for event to be normal centralised fee.
9. Priority entry to competition over open domestic competition.

Open Domestic Competition

1. Competition to be open to all BMFA members.
2. Rules of this competition to be based on GBR/CAA domestic events.
2. Event to run at same venue & time as Team selection event.
3. Domestic League points to be available to GBR/CAA members only.
4. All GBR/CAA classes to be flown.
5. FAI class to be FAI Preliminary schedule only.
6. Weighing, processing & noise testing of models is by request of the entrant only & will not affect result.
7. FAI class to be judged only by same judges as Team Selection event.
8. FAI results to be used to determine Triple Crown International team member
9. Max wt of models allowed to be same as domestic comps – 7kg.
10. Entry fee to be same as domestic comps.

5.1.2.7 PROCESSING RESULTS OF TEAM SELECTION & OPEN DOMESTIC COMPETITION

5.1.2.7.1 Centralised League

A Centralise league table will be compiled & results tabulated based on the Centralised competitions. The league table will be used to select the World, European and English Triple Crown Team members.

5.1.2.7.2 LEAGUE TABLE

1. A League Table will be compiled based on the first 4 centralised events in the qualifying period which "provide a result" or, if less than 4 are held in the qualifying period, then based on the number held. (together called "the Events").
2. The qualifying period shall be from 1st January to 31st December of the year preceding the year of the relevant World or European Championships.
3. The results from each Event will be renormalised to 1000 and used to form a league table.
4. Any centralised events (including any which are rearranged) used for the League Table must be held between 1 April and 31 October inclusive in any one year and located in the central area of the UK.
5. If a centralised event is cancelled or postponed it may at the Committee's absolute discretion be rearranged for a later date provided that at least 4 weeks notice of the rearranged date is given to the BMFA and GBRCAA membership.
6. Results will be determined from the best 3 of 4 normalised centralised results.

Maximum score obtainable is 3000 normalised points.

7. Although the league table is based on 4 Events the best renormalised scores for each competitor as set out below will be used to determine the placings in the League Table:

NO OF EVENTS THAT PROVIDE A RESULT	NO OF NORMALISED SCORES USED TO DETERMINE TEAM PLACINGS
4	3
3	2
2	2
1	1

5.1.2.7.3 Ties in the Team Selection event

In the event of a tie where only 2 flights are flown – each competitor carries forward 1000 normalised points to the team table. The *competition* winner is determined by adding the final normalised scores.

5.1.2.7.4 Team Selection for World and European Championships

The top 4 competitors from the League Table who have by no later than 30 days from the date of the last event confirmed in writing on the appropriate form to the then Team Manager (or if there is no Team Manager to the then Association Power Technical Representative or the then Association Chairman) that he is willing to represent the UK at the WC or EC (as appropriate) shall be submitted to the BMFA by the Association Power Technical Representative at the required time for ratification purposes. The first 3 of such 4 competitors shall be the Team and the 4th shall be the reserve.

5.1.2.7.5.1 Team Selection for Triple Crown

The GBRCAA Committee will use the results from the team selection process to select the best team available for the Triple Crown English Team.

5.1.2.7.5.2 Selection of Junior Team Members for World and European Events.

N.B. –A junior is defined as an entrant aged under18 in the year of the relevant championships.

1. Junior must be under 18 in the year of the Championships.
2. Junior must compete in recognized U.K. team selection events.
3. Inclusion in team subject to parent or guardian approval who must accompany junior team member to championship event in accordance with BMFA guidelines.
4. To qualify for a team place, a junior must achieve 85% of the centralised league winner's total normalised counting score.

i.e. 1st place score = 3000 normalised points; min. qualifying score for team place = 2550 points.

e.g. 1st place score = 2000 normalised points; min. qualifying score for team place = 1700 points

e.g. 1st place score = 1000 normalised points; min. qualifying score for team place = 850 points

5.1.2.7.6 Events Clashing with World or European Championships

1. No Centralised event shall count as an event if it takes place in whole or in part within the period starting 14 days before the UK team properly departs for, and ending 14 days after the UK team properly returns from, a World or European Championship.
2. No team selection Event shall be arranged (or rearranged) to clash with any event, either at home or abroad, at which team members would normally take part.

3. In deciding the dates of team selection Events the Committee shall consider the dates of international F3A contests in Europe e.g. the Bavarian Cup but this shall not prevent an Event being held on such date.

In the event that it is not possible to select a team from pilots in this category, consideration will be given to FAI Pilots flying P schedules only, in accordance with their finishing position in the *P Only Domestic league*.

5.1.2.7.7. Disputes

If there are any disputes regarding these procedures or its application, then the matter shall be decided by the Committee for the time being whose decision shall be final and binding. The decision of the Committee need only be a majority. The Chairman shall not have a casting vote and if there is equality of votes the matter in dispute shall be referred to the Chairman for the time being of the BMFA for a final and binding decision. Any member of the Committee who in the reasonable opinion of the Association Chairman has a direct and material interest in the decision of the Committee eg because it may affect his place in a team shall not be entitled to attend the Committee meeting or to vote on the matter.

5.1.2.7.8 English International Triple Crown Team Member

'The English International Team Member will be selected from the Centralised 'open domestic' results. The domestic league table (5.1.2.7.8.10) procedure shall be used to form a English International Team Member League Table. In the event a team member still cannot be determined, the team member may be selected from the normal domestic FAI league table.'

5.1.2.7.8.1 Domestic Competitions, BMFA Nationals, GBRCAA Championships

5.1.2.7.8.2 Domestic Competitions

Domestic competitions are run to GBRCAA rules, (based on FAI Rules) although declaring a fair winner is vital to the success of the competition. Models are not normally weighed or noise tested, but model weight is restricted to 7kg in line with BMFA rules. Noise, positioning of flight lines and safety requirements are more likely to be related to existing club rules, although judges may still apply the appropriate noise penalty for the flight.

Potential new members are allowed to enter 1 official comp before joining, but pay normal competition entry fee for the class flown.

5.1.2.7.8.3 Procedure for entering Domestic Competitions

The competition calendar is published on the GBR/CAA website before the start of the season or as soon as practicable. No competition entries will be accepted by the C.D. before the calendar is published. Entries will be accompanied, preferably by cheque, but cash is acceptable. The C.D. may start a list of provisional entries, but no entries will be confirmed until cheques have been received. Competition entry cheques will be dealt with in the order they are received. [There are no refunds of competition entries once received, either by cheque, cash or other means.](#)

5.1.2.7.8.4 Other rules

1. Non-flying C.D.'s are entitled to free membership of the Association.
N.B - If a C.D. flies at his own competition he pays the normal entry fee, may claim expenses, and is entitled to free "non-flying" membership of the Association. (To fly at other competitions normal fee-paying full membership is required.)
2. Weight limit for domestic comps is 7kg.
3. All competitors must hold a 'B' certificate [and either have BMFA/GBRCAA/SAA membership or can show that they have the minimum of £5,000,000 third party public liability insurance to cover model flying.](#)
4. All GBR/CAA classes* and schedules to be flown

*Finals (F) schedules can be flown at domestic comps as follows: An entrant must indicate on the entry form that he wants to fly F schedules - this may be 1 or all of his flights, but only P schedules are used for the competition result and domestic league table.

5. A Transmitter compound & peg off system for 35 MHz equipment must be provided. Competitors must obtain the correct 35mH frequency peg before switching on their transmitter. 2.4GHz equipment is exempt from this rule. All BMFA Safety rules apply. Security of transmitters & other equipment during the competition is the responsibility of the owner. If 35mHz transmitters need to be retrieved from the compound, say for bad weather, the competition must not restart until all 35mHz transmitters are returned to the compound.
6. The scoring method to find the winners in all classes can use either raw or normalised scores. Scores will be processed & tabulated in the Domestic League table to determine league trophy winners.
7. In the event of a tied result, the winner will be determined from the *next highest scoring* flight.
e.g. in a best 2 from 3 round comp., highest scoring 3rd flight determines the winner
in a best 3 from 4 round comp., highest scoring 4th flight determines the winner
if only 2 rounds are flown, best 1 of 2 determines winner
8. No mobile 'phones shall be used on a flight line at any competition or used in the vicinity of competitor's transmitters.
9. Certificates, trophies or other prizes may be awarded to the winners at the C.D's discretion.
10. Trophies for all classes and League winners are awarded annually at the GBR/CAA AGM.
11. All competitions must be self financing.

5.1.2.7.8.5 BMFA Nationals

The British Nationals is an annual 3 day event (usually August Bank Holiday) organised by the BMFA and all Specialist bodies including the GBR/CAA are represented. The GBR/CAA organises the F3A aerobatic event on behalf of the BMFA. Winners of the various events are declared 'British Nationals Champion', provide there are at least 3 entrants. Trophies are available for all GBR/CAA classes. The FAI trophy (S.M.A.E. Trophy) is the property of the BMFA & presented at the BMFA AGM. FAI competition may be Preliminary schedule only or may include finals schedules at the discretion of the GBR/CAA AGM.

The Nationals is an 'open' competition. Anyone can enter any flying class provided they hold a BMFA 'B' certificate and have either BMFA/GBRCAA/SAA membership or can show that they have the minimum of £5,000,000 third party public liability insurance to cover model flying. The Nationals is exempt from BMFA noise regulations & is run to GBR/CAA Domestic competition rules. An entry form is provided in the relevant issue of BMFA news, detailing fees and classes flown.

5.1.2.7.8.6 Role of GBR/CAA

1. Nominate Contest Director; Decide on schedules to be flown; Agree entry fee (Competition must be self financing under BMFA and GBR/CAA rules*)
* in the event of expenditure exceeding income, expenses for all organising officials to be reduced in accordance with committee's decision.
[Submit details of entry fees to relevant BMFA committee.](#)
2. C.D. to :
liaise with Chief Judge for the provision of suitably qualified judges. (Minimum of 2 judges per class)
Ensure nominations for scorers, line controller & other support.
Return equipment hire & pass forms to BMFA within specified time limits.
Compile entry lists, flight order, pilots briefing.
Ensure provision of score sheets, clipboards & stationary.
Mark out position of flight 'Box' on runway prior to comp.
[Run competition in accordance with rules](#)
Attend BMFA on site safety briefings & for safe running of competition & brief pilots accordingly.
To collect and be in possession of supplied BMFA radio at all times.
Ensure relevant trophies and BMFA certificates are available for presentation.

Complete BMFA license form & send results to BMFA in electronic format in good time after event

Issue expense forms, to sign & submit to Treasurer.

5.1.2.7.8.7 Role of BMFA

Entry forms are normally published in BMFA news approx 3 months before the Nationals and competitors return forms to the BMFA with competition fees. A copy of completed forms will be sent to the C.D. immediately before the event so that entry lists & flight order etc. may be compiled.

The BMFA provides all necessary infra-structure for the event & provides equipment available for hire to the GBR/CAA, including tents, tables & chairs. A form listing available equipment for hire & other information will be sent to the C.D. approx 2 months before the event, although the GBR/CAA may use its own equipment. The BMFA also provide free passes to organising officials & an order form will also be included.

After the event the BMFA will deduct costs of license fees, equipment hire, etc from the sum of total entry fees & any surplus will be returned to the GBR/CAA when BMFA accounts have been finalised.

5.1.2.7.8.8 GBR/CAA Championships

The GBR/CAA Championships is normally a 2 day competition and is also run to Domestic rules.

Schedules flown are all GBR/CAA schedules & separate trophies are available for all classes.

Schedules are decided at the AGM. The FAI event may comprise Preliminary rounds, F rounds & an unknown schedule flown on the second day. Competitors may fly P schedules only, but the winner of the event will be determined from all 3 schedules.

5.1.2.7.8.9 New GBR/CAA Schedules

Any schedule changes, except FAI, should be agreed at the AGM in the year before it is to be flown with full manoeuvre descriptions and judge's notes available. If the judge's notes and full manoeuvre descriptions are not available at the AGM the previous schedule is used through the coming year.

5.1.2.7.8.10 Domestic League Table

A separate Domestic League will be compiled of all domestic competitions. The winner of the league in each class will be based on the best 5 scoring competitions.

Points will be awarded according to the following formulae and a league trophy will be awarded to the competitor in each class scoring the highest number of points in the year.

Winner of the competition will receive 10 points. Points for other placings are based on the winners score & actual scores achieved, as follows:

Winning score say, 350.0 - 10 points

2nd place – Actual score/winning score x 10 = 345.5/350 x 10 = 9.87 points

3rd place - 125.5/350.0 x 10 = 3.59 points

And so on

In addition competitors will receive added bonus points based on their scores as a % of the maximum available, from a maximum of 20 points to minimum of 2. See table below.

Score	Bonus Points
0 - 40%	2
40.001% - 42.5%	3
42.5001% - 45%	4
45.001% - 47.5%	5
47.501% - 50%	6
50.001% - 52.5%	7
52.501% - 55%	8
55.001% - 57.5%	9
57.501% - 60%	10

Score	Bonus Points
60.001% - 62.5%	11
62.501% - 65%	12
65.001% - 67.5%	13
67.501% - 70%	14
70.001% - 72.5%	15
72.501% - 75%	16
75.001% - 77.5%	17
77.501% - 80%	18
80.001% - 100%	20

Qualifying competitions are: any GBR/CAA Domestic competition, Domestic 'Open' competition held at Centralised events, GBR/CAA Championships, B.M.F.A. Nationals.
Two & 3 day competitions count as 1 score only for the league table.

5.1.2.7.8.11 Ties in Domestic League Table

The winner is the competitor with the highest average total counting score of the 5 counting competitions.

5.1.2.7.10 Trophies

BMFA NATIONALS	
Comp	Trophy
FAI	SMAE Trophy*
Masters	GBR/CAA Trophy #
Advanced	Ray Brotherston Cup #
Intermediate	Yvonne Weller Bowl #
Clubman	GBR/CAA Trophy #

CENTRALISED COMPS	
Comp	Trophy
First Centralised	Taplin trophy *
Second Centralised	Bill Harrop Trophy
Third Centralised	No Trophy
Last Centralised	Aeromodeller Trophy *
Centralised League	Sid Allen Trophy *

DOMESTIC LEAGUE	
Comp	Trophy
FAI	GBR/CAA Trophy
Masters	GBR/CAA Trophy
Advanced	GBR/CAA Trophy
Intermediate	GBR/CAA Trophy
Clubman	GBR/CAA Trophy

GBR/CAA CHAMPIONSHIPS	
Comp	Trophy
FAI	Mike Birch Trophy #
Masters	GBR/CAA Trophy #
Advanced	Skyleader Trophy #
Intermediate	Macgregor Trophy #
Clubman	GBR/CAA Trophy #

* Trophy awarded by BMFA & presented at BMFA Annual Dinner.

Trophy awarded by GBR/CAA and presented at the appropriate comp.

5.1.11 FAI CLASS AEROBATICS (GBRCAA)

5.1.11.1 2012 FAI Class

For 2012, all FAI class events run by GBRCAA will fly the FAI P-13 Schedule

5.1.3 MASTERS CLASS AEROBATICS (GBRCAA)

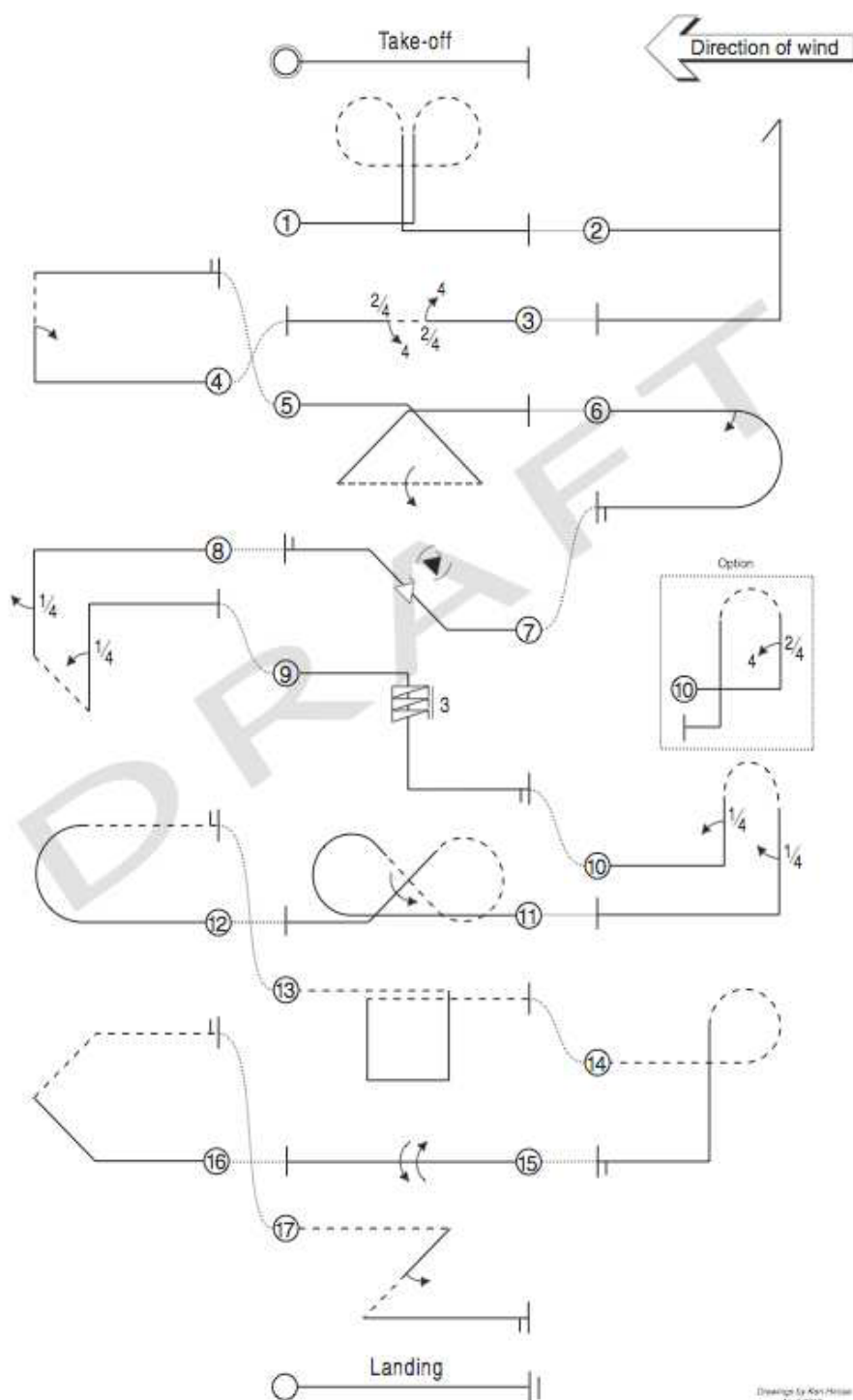
5.1.3.1 2012 Masters Class Manoeuvres

K

1.	Take off	2
2.	Half Clover Leaf	3
3.	Stall Turn	3
4.	Roll Combination with consecutive two ¼ rolls, two ¼ rolls in opposite direction	4
5.	Half Square Loop with ½ rol..	3
6.	Triangle with roll	4
7.	Split S with ½ roll	2
8.	45° Upline with 1 snap roll	5
9.	Reverse Top Hat with ¼ roll down, ¼ roll up.....	4

10.	Spin with 3 turns.....	4
11.	Pull-Push-Pull Humpty-Bump with ¼ roll up, ¼ roll down (Option: Two ¼ rolls up).....	3
12.	Cuban 8 with roll.....	5
13.	½ Loop.....	1
14.	Square Loop	5
15.	Figure 9	3
16.	Roll Combination with consecutive two rolls in opposite directions.....	4
17.	Half Square Loop on corner.....	3
18.	Figure Z with ½ roll	4
19.	Landing.....	2
	Total K 60	

5.1.3.3 2012 Masters Class Manoeuvre Diagram



5.1.3.4 GBR/CAA Masters Class 2012 Manoeuvre Descriptions (Based on FAI A-12 schedule)

1. Take Off Sequence

2. Half Clover Leaf

From upright, pull through a $\frac{1}{4}$ loop into a vertical upline, push through a $\frac{3}{4}$ loop into a horizontal line, push through a $\frac{3}{4}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

3. Stall Turn

From upright, pull through a $\frac{1}{4}$ loop into a vertical up line, perform a stall turn into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

4. Roll Combination with two $\frac{1}{4}$ rolls, two $\frac{1}{4}$ rolls in opposite direction

From upright, perform two $\frac{1}{4}$ rolls followed by another two $\frac{1}{4}$ rolls in opposite direction, exit upright.

5. Half Square Loop with $\frac{1}{2}$ roll

From upright, pull through a $\frac{1}{4}$ loop into a vertical up line, perform $\frac{1}{2}$ roll, push through a $\frac{1}{4}$ loop, exit upright.

6. Triangle with full roll in base line

From upright, push through a $\frac{1}{8}$ loop into a 45° down line, push through a $\frac{3}{8}$ loop into a horizontal line, perform a roll, push through a $\frac{3}{8}$ loop into a 45° up line, push through a $\frac{1}{8}$ loop, exit upright.

7. Split S with $\frac{1}{2}$ roll

From upright, perform a $\frac{1}{2}$ roll and immediately pull through a $\frac{1}{2}$ loop, exit upright.

8. 45° Up line with 1 snap roll

From upright, pull through a $\frac{1}{8}$ loop into a 45° up line, perform 1 snap roll, push through a $\frac{1}{8}$ loop, exit upright.

9. Reverse Top Hat with $\frac{1}{4}$ roll down, $\frac{1}{4}$ roll up

From upright, push through a $\frac{1}{4}$ loop into a vertical downline, perform a $\frac{1}{4}$ roll, push through a $\frac{1}{4}$ loop into a horizontal line, push through a $\frac{1}{4}$ loop into a vertical upline, perform a $\frac{1}{4}$ roll, push through a $\frac{1}{4}$ loop, exit upright.

10. Three turn Spin

From upright, perform a spin with 3 turns, perform a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

11. Pull-Push-Pull Humpty-Bump with $\frac{1}{4}$ roll up, $\frac{1}{4}$ roll down (Option: Two $\frac{1}{4}$ rolls up)

From upright, pull through a $\frac{1}{4}$ loop into a vertical upline, perform a $\frac{1}{4}$ roll, push through a $\frac{1}{2}$ loop into a vertical downline, perform a $\frac{1}{4}$ roll, pull through a $\frac{1}{4}$ loop, exit upright.

Option: From upright, pull through a $\frac{1}{4}$ loop into a vertical upline, perform two $\frac{1}{4}$ rolls, push through a $\frac{1}{2}$ loop into a vertical downline, pull through a $\frac{1}{4}$ loop, exit upright.

12. Cuban 8 with Full roll.

From upright, pull through a $\frac{5}{8}$ loop into a 45° down line, push through a $\frac{3}{4}$ loop into another 45° down line, perform a full roll, pull through a $\frac{1}{8}$ loop, exit upright.

13. Half Loop

From upright, pull through a $\frac{1}{2}$ loop, exit inverted.

14. Square Loop

From inverted, pull through a $\frac{1}{4}$ loop into a vertical down line, pull through a $\frac{1}{4}$ loop into a horizontal line, pull through a $\frac{1}{4}$ loop into a vertical up line, pull through a $\frac{1}{4}$ loop into a horizontal line, exit inverted.

15. Figure 9

From inverted, push through a $\frac{3}{4}$ loop into a vertical down line, pull through a $\frac{1}{4}$ loop, exit upright.

16. Roll Combination with Full Rolls in Opposite Directions

From upright, perform a full roll followed by a full roll in opposite direction, exit upright.

17. Half Square Loop on Corner

From upright, pull through a $\frac{1}{8}$ loop into a 45° up line, pull through a $\frac{1}{4}$ loop into a 45° up line, pull through $\frac{1}{8}$ loop, exit inverted.

18. Figure Z with Half Roll

From inverted, pull through a 3/8 loop into a 45° downline, perform 1/2 Roll, pull through a 3/8 loop, exit upright.

19. Landing Sequence

5.1.10 ADVANCED CLASS AEROBATICS (GBRCAA)

5.1.10.1 Objective

To provide an intermediate aerobatic competition to be run in conjunction with the GBRCAA Masters, Intermediate and Clubman classes.

5.1.10.2 Manoeuvres

The schedule of manoeuvres flown and the ‘K’ factor for each individual manoeuvre are:

**Manoeuvre
K Factor**

(1)	Takeoff Sequence.....	2
(2)	Fig M 1/4 Rolls Up & Down Exit Inverted.....	4
(3)	Stall Turn 1/2 Roll Down.....	2
(4)	Four Point Roll.....	3
(5)	Half Square Loop 2/4pt Roll On Exit	2
(6)	Cuban Eight From The Top With 1/2 Roll in exit line Exit Inverted.....	4
(7)	Half Loop.....	1
(8)	Cobra Roll With 1/2 Roll Up & Down	4
(9)	Top Hat 1/4 Roll Up & Down.....	2
(10)	1 Positive Snap With 1/2 Roll opposite	5
(11)	Push. Push Pull. Humpty Bump 1/2 Roll Up 1/2 Roll Down	3
(12)	One + One Rebound Roll.....	4
(13)	Fig 9 1/2 Roll Up	2
(14)	Vertical Eight Mid Entry Top First.....	4
(15)	Split S To Bottom	2
(16)	Slow Roll	3
(17)	Immelman Turn	2
(18)	Two + Two Spins Opposite	4
(19)	Landing Sequence.....	2

5.1.10.3 Noise

At the conclusion of the flight each judge will independently consider if the in-flight noise level of the model is too noisy. If a majority of the judges consider the model too noisy the flight score will be penalised 10 points for each counting judge.

5.1.10.4 Promotion

The maximum score attainable is 500 points. The promotion score is 60% of that total i.e. 300 points. Any competitor who achieves this score in two competitions within a period of 12 months will automatically be promoted to Master class.

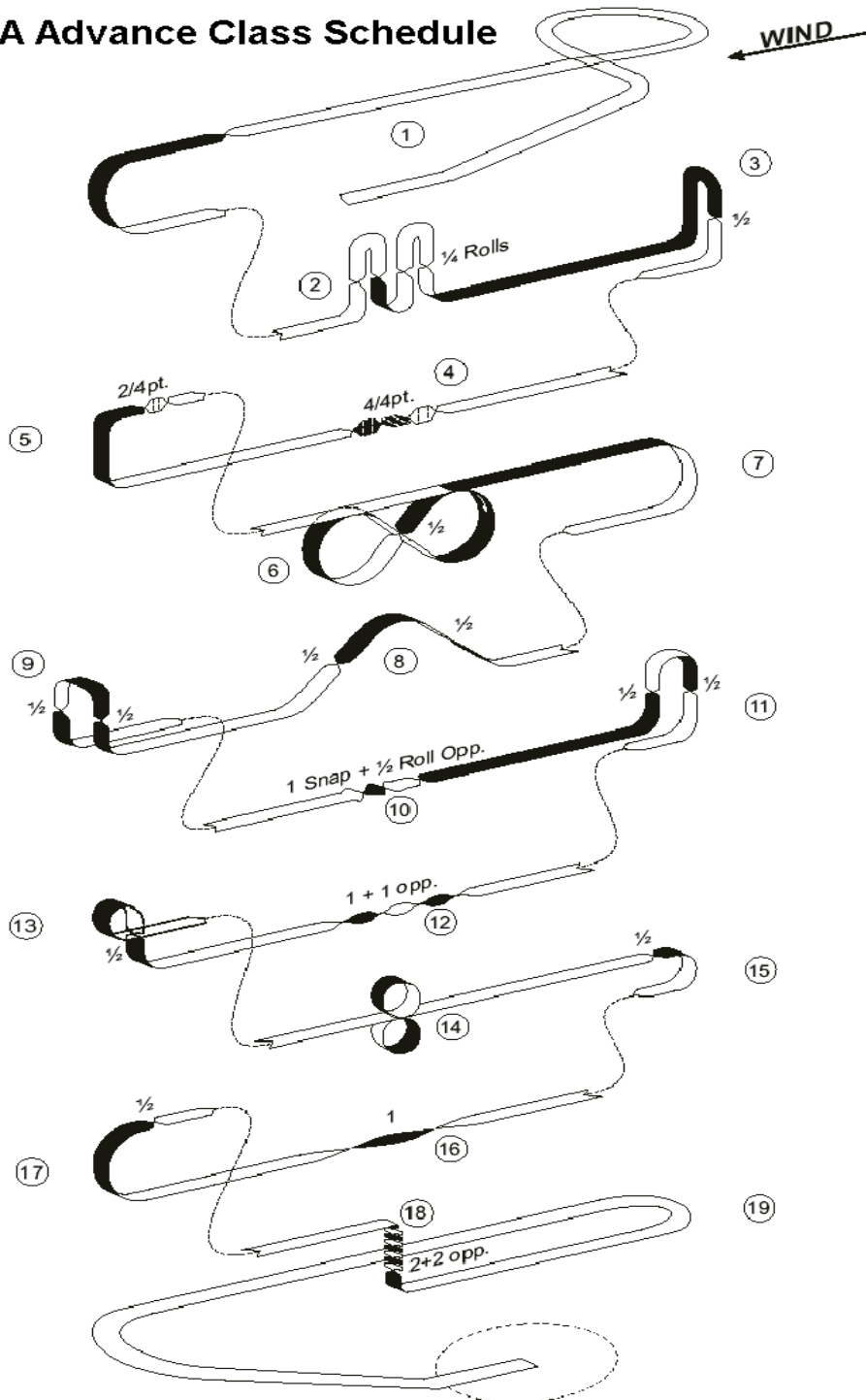
5.1.10.5

All other competition regulations shall be as GBRCAA rules section 5.1.2.

For guidance on the judging criteria for all the manoeuvres it is essential that you should study Section 5B, TECHNICAL RULES FOR RADIO CONTROL AEROBATIC MODELS, CLASS F3A - JUDGES GUIDE

No manoeuvre descriptions supplied by GBRCAA

GBRCAA Advance Class Schedule



5.1.4 INTERMEDIATE CLASS AEROBATICS (GBRCAA) (formerly Standard)

5.1.4.1 Manoeuvres

The schedule of manoeuvres and the 'K' factor for each manoeuvre is as follows:

Manoeuvre Factor	'K'
(1) Takeoff Sequence	2
(2) 45 Degree Up with ½ Roll, Exit Inverted	2
(3) Half Loop	1
(4) Slow Roll	2
(5) Stall Turn	2
(6) Square Loop with ½ Rolls in legs 1 and 3	3
(7) Immelman Turn with Half Roll	2
(8) Two Outside Loops	2
(9) Split S	2
(10) Cuban Eight with Half Rolls	3
(11) Humpty Bump with Options	2
(12) Four Point Roll 4 12 Four Point Roll	4
(13) Half Square Loop, Half Roll Up	2
(14) Three Turn Spin	4
(15) Landing Sequence	2

Max. Score = 350 Promotion = 210 (60%)

5.1.4.2 Noise

At the conclusion of the flight each judge will independently consider if the in-flight noise level of the model is too noisy. If a majority of the judges consider the model too noisy the flight score will be penalised 10 points for each counting judge.

5.1.4.3 Promotion

Any competitor who achieves a score of 210 marks in two competitions within a period of 12 months will automatically be promoted to Advanced class.

5.1.3.4 All other competition regulations shall be as for Masters class, see rule section

5.1.3.5 Execution of Manoeuvres

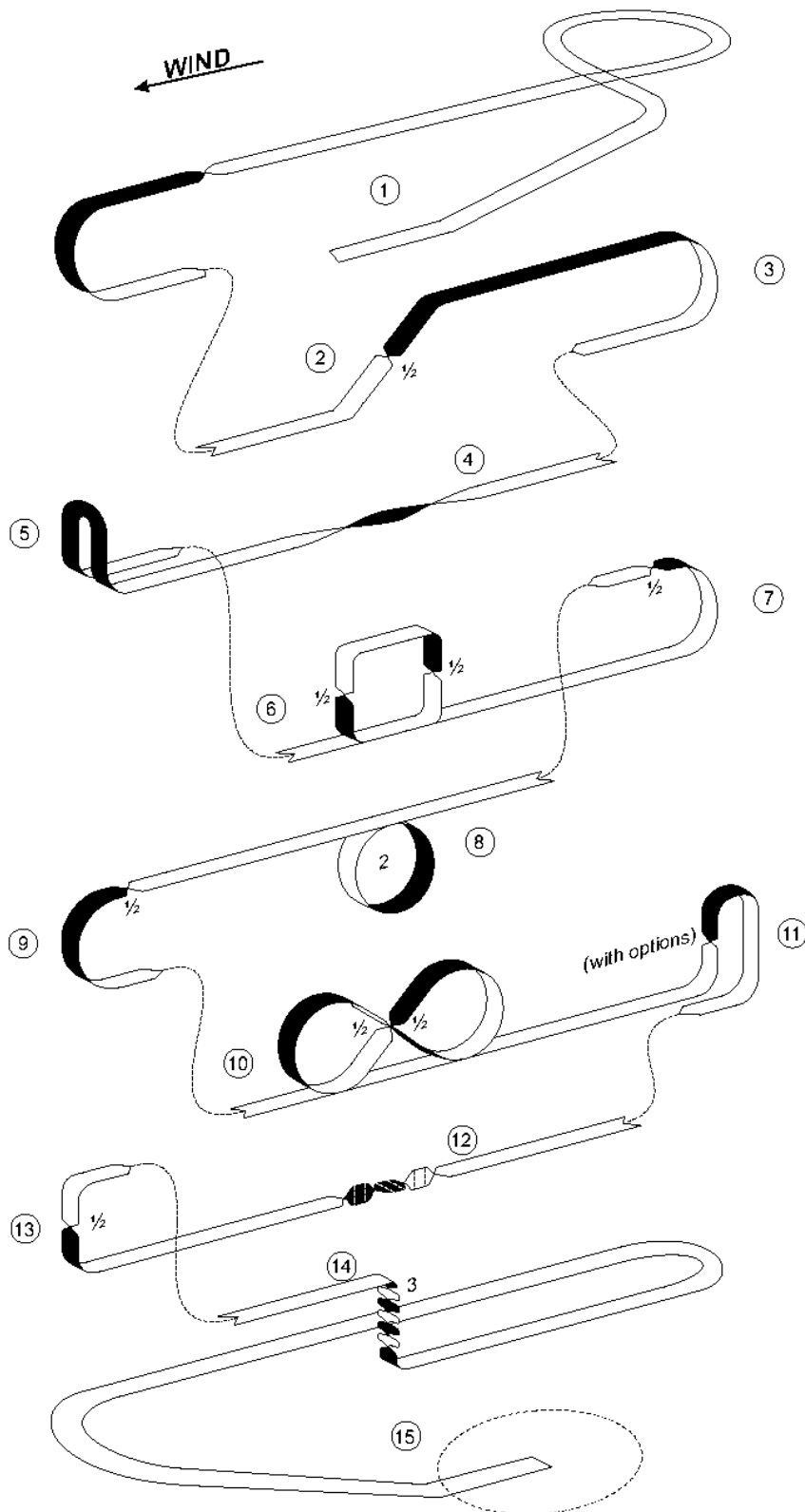
(a) **In the case of any discrepancy between the drawing of a manoeuvre and its written description, the written description shall be taken as being correct.**

(b) All manoeuvres will start and finish in straight and level flight. Centre manoeuvres will start and finish on the same heading while turnaround manoeuvres will finish on a heading 180° to the entry. Unless noted, entry and exit will be at the same altitude.

(c) All manoeuvres which have more than one loop will have the loops at the same diameter and placing. Similarly, all manoeuvres which have more than one roll will have the same roll rate. All consecutive rolls will be at the same altitude and heading.

- (d) All manoeuvres with half and quarter rolls will have short pauses of equal length before and after the rolls unless noted otherwise.
- (e) Any violation of the above will be reason for downgrading

GBRCAA Intermediate Schedule



5.1.5 CLUBMAN CLASS AEROBATICS (GBRCAA) (formerly Sportsman)

5.1.5.1 Objective

To provide an aerobatic competition suitable for use at club level, as an introduction to competition aerobatics.

5.1.5.2 Manoeuvres

The schedule of manoeuvres and the 'K' factor for each manoeuvre is as follows:

Manoeuvre	'K' Factor
(1) Rectangular Takeoff Sequence	2
(2) Two Loops	3
(3) Immelman Turn	1
(4) One Outside Loop	2
(5) Split S 1	
(6) Cuban Eight	3
(7) Stall Turn	1
(8) Slow Roll	3
(9) Half Square Loop, ½ Roll on Exit	2
(10) Two Turn Spin	3
(11) Rectangular Landing Sequence.....	2

Models will be checked by a responsible person before being allowed to compete.

5.1.5.7 Attempts

If a competitor has difficulty in starting an engine, the CD may allow them to try again further down the flying order.

5.1.5.8 Execution of Manoeuvres

Competitors will take-off and complete any manoeuvre of their choice to bring their model on a downwind pass to the end of the designated flying area. They will then perform another turn-around manoeuvre of their choice, bringing their model back into wind to the centre of the flying area where they must then commence the schedule.

Manoeuvres must be completed in the order given in the schedule.

5.1.5.9 Marking

All manoeuvres will be marked from 0 to 10. The mark given will then be multiplied by the 'K' factor (the degree of difficulty of the manoeuvre) This will give a maximum total possible score of 250 points.

5.1.5.10 Promotion

Any competitor who achieves a [promotion](#) score of 150 marks in two competitions within a period of 12 months [may apply for promotion to Intermediate class](#).

5.1.5.11 CLUBMAN CLASS - DESCRIPTION OF MANOEUVRES

- In the case of any discrepancy between the drawing of a manoeuvre and its written description, the written description shall be taken as being correct.

- (b) All manoeuvres will start and finish in straight and level flight. Centre manoeuvres will start and finish on the same heading while turnaround manoeuvres will finish on a heading 180° to the entry. Unless noted, entry and exit will be at the same altitude.
- (c) All manoeuvres which have more than one loop will have the loops at the same diameter and placing. Similarly, all manoeuvres which have more than one roll will have the same roll rate. All consecutive rolls will be at the same altitude and heading.
- (d) All manoeuvres with half and quarter rolls will have short pauses of equal length before and after the rolls unless noted otherwise.

Any violation of the above will be reason for downgrading.

1 Take-off Sequence

The model is placed on the runway, takes off, then turns 90° towards the line defined by the upwind and downwind marker. When approximately over this line the model turns 270° for a downwind trim pass. When approximately even with the downwind marker the model performs a 180° turn, reversal, or other turn-around manoeuvre of the pilot's choice.

Judging Notes

Model does not follow the take-off sequence, zero points

2 Two loops

Model pulls up and performs two superimposed loops and recovers in level flight.

Downgrades:

- (1) Loops not round
- (2) Loops not superimposed
- (3) Wings not level during loops.
- (4) Changes in heading during loops

3 Immelman turn

Model performs half a loop, immediately followed by a half roll to exit upright at a higher altitude than entry

Downgrades:

- (1) Changes in heading during half loop or roll
- (2) Half roll not immediately after loop

4 One outside loop

Model pushes down to complete 1 outside loop, to recover at same point as entry.

Downgrades:

- (1) Loop not round
- (2) Wings not level during loop
- (3) Changes in heading during loop

5 Split S

Model executes ½ roll and immediately performs ½ an inside loop to recover in level flight.

Downgrades:

- (1) ½ roll not exactly 180°
- (2) Loop not constant radius
- (3) Changes in heading during half loop or roll

6 Cuban Eight

Model performs $\frac{3}{4}$ inside loop, dives inverted at 45° to entry height, executes $\frac{3}{4}$ inside loop, dives at 45° to entry height and pulls to level flight.

Downgrades:

- (1) Loops not round
- (2) Dives not at 45°
- (3) Changes in heading
- (4) Loops not equal radius

7 Stall Turn

Model pulls to vertical flight path, stall turns through 180° , dives vertically, and recovers in level flight.

Downgrades:

- (1) Model not vertical in climb and dive
- (2) Stall turn not exactly 180°
- (3) Entry and exit not at same height

8 Slow Roll

Model rolls through one complete revolution in either direction.

Downgrades:

- (1) Changes in heading during roll
- (2) Changes in altitude
- (3) Roll rate not constant
- (4) Model does not roll exactly 360°

9 Half Square Loop, Half Roll on Exit

Model pulls into a vertical climb, pulls to inverted level flight, executes $\frac{1}{2}$ roll and exits in upright level flight.

Downgrades:

- (1) Climb not vertical
- (2) $\frac{1}{2}$ roll not exactly 180°
- (3) Corners not equal radius

10 Two Turn Spin

Model establishes a heading and with reduced power, the model is held in a slightly nose high attitude until it stalls and commences to spin. The model then rotates through 2 complete turns, pauses in a nose down attitude, and pulls into $\frac{1}{4}$ inside loop, recovering on the same heading, but at a lower attitude.

11 Landing sequence

At reduced power, the model executes a 180° level or descending turn to a downwind heading, flies a downwind leg then turns 180° into the wind. The model flies a descending approach to the runway, to touch down in landing zone. The landing sequence is complete when the model has either rolled 10 metres or comes to rest.

Judging Notes

- (1) Model does not follow landing sequence, scores zero points.
- (2) If any landing gear leg retracts on landing, scores zero points.
- (3) If model lands outside the landing zone, scores zero points.

The landing zone may be designated by a circle of 50 metres radius or lines across a standard runway spaced 100 metres apart where the runway is at least 10 metres wide.

GBR/CAA Clubman Schedule
From Jan 2003

