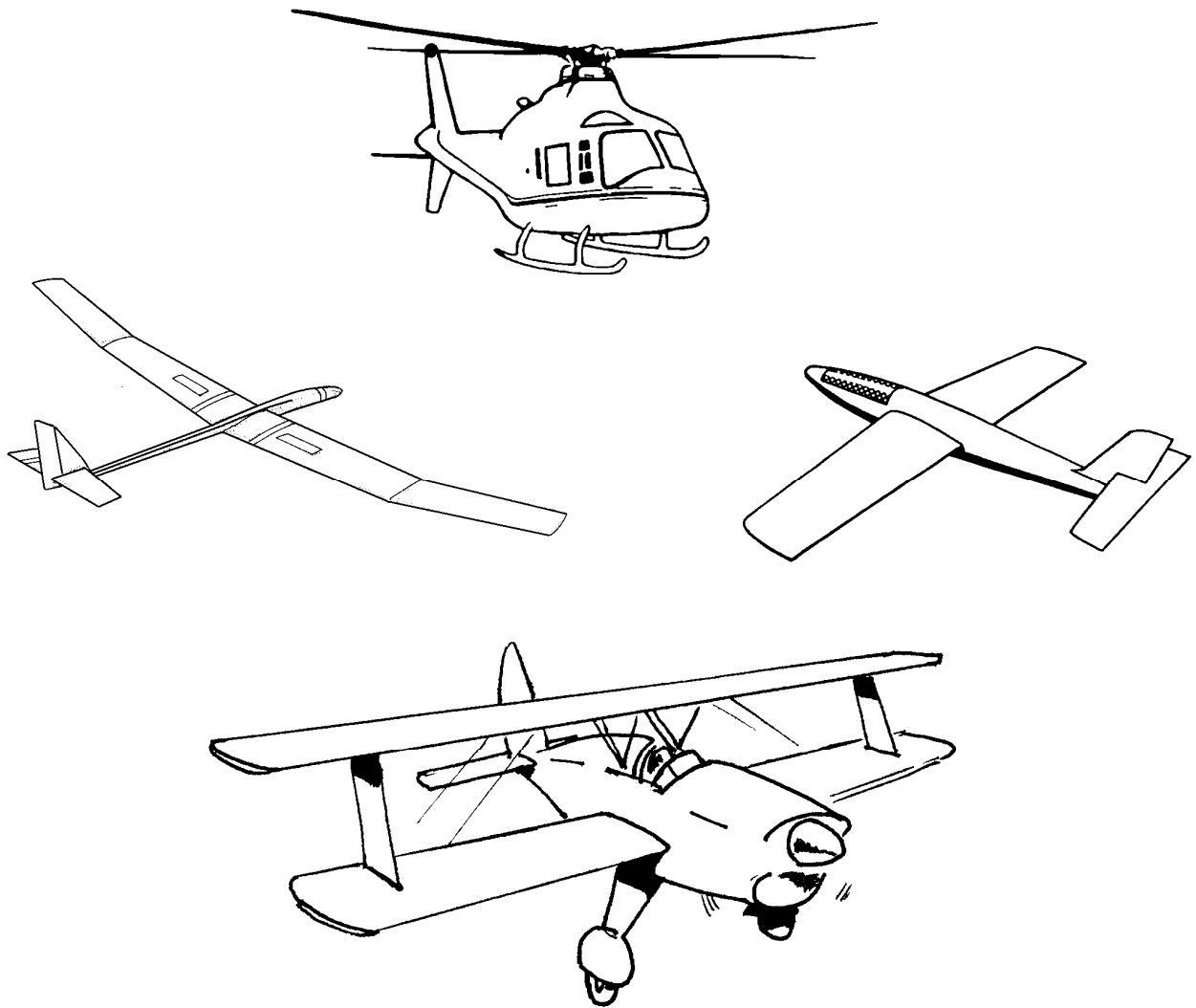


# THE RADIO CONTROL ACHIEVEMENT SCHEMES

January 2011 ISSUE



***British Model  
Flying Association***



## PLEASE NOTE CAREFULLY

This booklet is an extract of all Achievement Scheme Information from the 2010 Member's Handbook.

Some changes have been made to the Scheme since the Handbook was published and these will be issued in the 2011 Handbook Addendum sheet as normal.

However, to make this document accurate to January, 2011, these changes have already been incorporated into the text and will be highlighted by the usual sidebar.

## THE RADIO CONTROL ACHIEVEMENT SCHEMES

### General

The main aim of the R/C Achievement Schemes is to encourage model flyers to reach a given standard of flying ability and safety and to prove that standard to an Examiner. There are two grades;

(a) The 'A' Certificate which may be equated to a 'safe solo' standard of flying.

(b) The 'B' Certificate which is designed to recognise a more advanced pilot's increased ability and knowledge and a demonstrated high level of safety.

**A candidate presenting himself for a 'B' test must already hold the 'A' certificate in the discipline being tested.**

In addition, there are endorsements available to the 'B' Certificate in various disciplines for those flyers who wish to take their personal flying standards and achievements further. At the time of writing, these are,

The 'C' Certificate, Aerobatics.

The Gold, Diamond and Diamond Star Silent Flight Thermal Certificates (run by BARCS).

The Gold, Diamond and Diamond Star Silent Flight Slope Certificates (run by BARCS).

The Achievement Scheme is run by the BMFA as a National Scheme and it is open to all model flyers. However, non-members of the BMFA must produce evidence of Third Party insurance in the sum of not less than £5,000,000.

The scheme may also be used by any model flying group or club, whether it is BMFA affiliated or not and all applications from clubs who wish to participate in the scheme are welcome.

**National Standards and Advice to Area Chief Examiners, Club Examiners and Candidates.**

## The Achievement Scheme Standards Leaflets

Leaflets are available to Club Examiners setting out the nationally agreed standards for the testing of candidates taking all of the available 'A' and 'B' certificates and 'C' Aerobatics.

These leaflets are also available to test candidates, either from your club examiner or on request from the Leicester office, on receipt of a SAE. They are available for download from the BMFA website.

**Candidates are very strongly advised to make every effort to obtain a copy of the relevant standards leaflet as it explains every aspect of the test they will be taking in great depth.**

### Testing of Club Examiner Candidates

Area Chief Examiners are supplied with a leaflet detailing the nationally agreed standards that they should employ in testing candidates for Club Examiner. This leaflet is also available to examiner candidates and may be obtained from your Area Chief Examiner or from the Leicester office.

### How the Achievement Scheme is Run and Administered

#### The Scheme Controllers

The Achievement Schemes are administered by a national Power Scheme Controller and a national Silent Flight Scheme Controller acting for the Areas Council .

Contact details for The addresses of the Power and the Silent Flight Scheme Controllers may be found in the address directory at the back of this handbook. Contact details for Area Co-ordinators may be obtained from the BMFA Leicester office by telephone or e-mail.

#### The Area Achievement Scheme Co-ordinators

Each of the fourteen BMFA Areas has appointed an Achievement Scheme Co-ordinator whose job is to oversee the running of the schemes in their Area and to liaise with their local Area Chief Examiners and Club Examiners as well as with the overall Scheme Controllers.

If your club does not have any Registered Examiners, does not have enough Examiners or has any problems with co-ordinating the work of your existing Examiners, then it is essential that your club committee contacts the local Area Achievement Scheme Co-ordinator who will be able to help.

Contact your Area Secretary or the BMFA Leicester office for more details.

## **Area Chief Examiners**

### **(Fixed Wing, Helicopter and Silent Flight)**

The Achievement Scheme is run at Area level by Area Chief Examiners who are persons nominated by Area Committees and ratified by Areas Council as Area Chief Examiners.

A sufficient number of Area Chief Examiners should be maintained by each Area to ensure good geographic coverage for their clubs.

The principal duty of an Area Chief Examiner is to test applicants for the post of Examiner and to promote and maintain the standards of the R/C Achievement Schemes by example and by visiting clubs that require their services.

They are also non-voting officers of their Area Committee and are required to liaise with their Area Scheme Co-ordinator and to submit an annual report to the Area AGM.

It is important to note that Area Chief Examiner status is an appointment, not a qualification and is subject to annual re-ratification.

### **Area Chief Examiner Eligibility**

Area Chief Examiners must be senior members of the BMFA and may be appointed for fixed-wing, helicopter, silent flight or any combination of the three and all Area Chief Examiner ratings will be shown on the individual's BMFA membership card.

They must have long term knowledge and experience of any discipline for which they are appointed for and must also have full knowledge of the BMFA Safety Codes

All Area Chief Examiner candidates must have held an Examiner rating in the discipline for which they are to be appointed for at least two years.

The initial Areas Council ratification ends on December 31<sup>st</sup> of that year. After that, Area Chief Examiner appointments are for a period of one year only, from January 1<sup>st</sup> to December 31<sup>st</sup>. The appointment may be renewed by the appropriate Scheme Controller annually at the request of the appropriate Area Committee.

### **How an Area Appoints an Area Chief Examiner**

The first step is for the Area to decide that an Area Chief Examiner is needed and then to decide on a suitable candidate.

Before the presentation of a potential candidate to an Area meeting for ratification, a consultation with the appropriate Scheme Controller is required by the Area Achievement Scheme Co-ordinator so that the candidate's experience within the Achievement Scheme can be properly appraised by the Area.

The vote to put the candidate forward is then taken at an Area meeting and, for the candidate to be successful, the voting **MUST** show at least two thirds of those present and eligible to vote to be in favour of the candidate. The Area should note that there is a requirement that the candidate provide a CV to go with the proposal.

The proposal form raised by the Area is then passed to the BMFA office, usually by an Area Achievement Scheme Co-ordinator.

Immediately on receipt, the BMFA Office will check the proposal form to see that the Area voting was correct, that the required CV is present, that the candidate has been an Examiner in the requested discipline for the required length of time and that the required consultation with the Scheme Controller has taken place.

If all is correct, the proposal will be added to the agenda of the next available Areas Council meeting and a copy will be sent to the appropriate National Controller.

The National Controller will pass to the BMFA Leicester Office for inclusion with the proposal any comments about the candidate's record of activity within the Scheme and any recommendations to Council on the suitability of the candidate that he feels are necessary. This must be done by the National Controller as soon as possible after receiving his copy of the proposal.

At the Areas Council the proposal is voted on and, if successful, the candidate becomes a full Chief Examiner for his Area.

### **Retaining Area Chief Examiner Status**

There are two conditions for remaining an Area Chief Examiner which must be fulfilled each year.

One of these is that you are a current BMFA member.

The other is that you are ratified by your Area each year at the Area's AGM and then confirmed by the appropriate National Scheme Controller.

If either of these is not done then you will lose your Chief Examiner appointment and your status on the membership database will be changed.

If your membership lapsed then you will be credited a 'B' certificate.

If you are not ratified by your Area then your status will depend on whether you are accepted by a club as an Examiner. If so then you will be credited with an 'E'. If not then you will be credited with a 'B'.

Regaining Chief Examiner status on re-joining or being re-ratified by your Area is not automatic and will be subject to the normal process of ratification by Areas Council.

## Area Chief Examiner's Area Of Operation

Chief Examiners operate within the Area for which they are ratified.

If a Chief Examiner is

- (a) requested to operate in another Area as a Chief Examiner for any reason or
- (b) asked to test Examiner candidates from a club in another Area

He **must** obtain prior agreement from that Area's Achievement Scheme Co-ordinator before taking any further action.

However, an Area Chief Examiner may operate without permission outside of their own area at any time but only with Club Examiner status (e.g. they operate by invitation and they may take 'A' Certificates or stand as one of the two Examiners for a 'B'. They cannot take a 'B' test on their own).

## Club Examiners

### (Fixed Wing, Helicopter and Silent Flight)

The Achievement Schemes are run at local level by Club Examiners who will be tested and appointed by an Area Chief Examiner, arranged by their local Area Achievement Scheme Co-ordinator.

The principal duty of a Club Examiner is to test applicants for 'A' and 'B' Certificates and to maintain the standards of the Achievement Scheme, both in their club environment and further afield.

Examiners are appointed specifically to clubs and may not operate unless initially appointed by a club and then ratified annually by at least one club.

It is important to note that Club Examiner status is an appointment, not a qualification and is subject to annual re-ratification.

A Club has the sole right to specify which Examiners may test their members on their own flying fields. The Examiners may be those ratified annually by the Club or they may be Examiners who are invited by the Club Committee to visit the Club to test members.

This does not restrict the right of model flyers to be tested at a venue and with an Examiner of their choice but it should be noted that any Club may insist on satisfying themselves regarding the flying proficiency of any member or visitor who has been tested away from the Club and not by their own Examiners.

## Club Examiner Eligibility

Club Examiners will be categorised as 'Fixed-wing', 'Helicopter', 'Silent Flight' or any combination of the three. Separate certificates will be issued for Fixed-Wing, Helicopter and Silent Flight Examiners and all

Examiner ratings will be shown on the individual's BMFA membership card.

Club Examiner appointments are for a period of one year only. After this time the appointment may be renewed by the BMFA Leicester office on receipt of the annual club affiliation form or a letter from the club committee.

Candidates for the post of Club Examiner must be senior members of the BMFA (i.e. over the age of 18 years) and must have held a 'B' Certificate in the relevant discipline for a minimum of 6 months (Fixed Wing 'B' for Fixed Wing Examiner, Helicopter 'B' for Helicopter Examiner and either Thermal, Slope or Electric 'B' for Silent Flight Examiner).

They will be asked to fly by the Area Chief Examiner and will be expected to demonstrate a high standard of flying and flight safety, based on the relevant 'B' Certificate test.

In their interview with the Area Chief Examiner, prospective examiners must also show a long-term knowledge of R/C flying, particularly in the discipline for which they are being tested, and a full knowledge of the BMFA Safety Codes and local club rules.

## How a Club Appoints an Examiner

To request the appointment of a Club Examiner, the candidate's club must apply to their BMFA Area Achievement Scheme Co-ordinator (Area ASC) in writing, asking that the candidate be tested and giving, in advance, written acceptance of the candidate as a Registered Club Examiner should the test be successful.

If the Club is not certain who the local Area ASC is then they should contact the BMFA Leicester office who will provide contact details. Requests for Examiner tests actually sent elsewhere, such as to an Area Chief Examiner or to the BMFA office, will be forwarded to the appropriate Area ASC but this may introduce a delay.

On receipt of the written request, the Area ASC will arrange for an Area Chief Examiner to contact the candidate and make arrangements for the test to take place.

If this procedure is not followed then any Examiner test undertaken will be ruled invalid. The Area ASC must be involved in the process and an Area Chief Examiner cannot be approached directly to take tests.

If the candidate is successful, the Area Chief Examiner will report to the BMFA Leicester office where the appointment will be registered and the relevant operating paperwork will be sent to the new Examiner.

The Achievement Scheme is run by the BMFA as a National Scheme and so requests that Examiner candidates be tested will be welcomed and

accepted from both BMFA affiliated and non-affiliated clubs.

### **Retaining Club Examiner Status**

One of these is that you are a BMFA member. If your membership lapses then you will lose your Examiner status. This will be followed through near the end of the lapsed membership year when your status on the membership database will be changed and you will be credited 'B' certificate. Regaining Examiner status on re-joining is not automatic and will be subject to certification by an Area Chief Examiner.

The other condition is that you are ratified by at least one club each year and if this is not done then your status on the database will eventually be changed to show a 'B' certificate. As with lapsed membership, regaining Examiner status on being appointed or re-ratified by a Club is not automatic and will be subject to certification by an Area Chief Examiner

### **The two conditions for remaining a Club Examiner must be fulfilled each year.**

The BMFA Achievement Schemes are intended to operate as National Schemes and not just within BMFA. Club Examiners may therefore be registered by both BMFA affiliated clubs and by non-affiliated clubs.

## **ACHIEVEMENT SCHEME ADMINISTRATION**

### **Number of Registered Examiners**

A register of BMFA Examiners will be maintained by the BMFA Leicester office on behalf of Council and only those whose names appear on the register are authorised to conduct examinations

The number of Examiners in a club will vary but, as an approximate guideline, a club should have at least two Examiners plus an additional Examiner for every 25 members. This will vary, of course, and some clubs will have more Examiners than this.

As an example, if a club runs the Fixed Wing, Helicopter and Silent Flight schemes, it will almost certainly need more Examiners than the guidelines suggest.

Clubs should make every effort to ratify enough Examiners for their needs and the local Area Achievement Scheme Co-ordinator will be able to help. Contact them via the BMFA office.

### **Examination Fees**

No examination fees will be charged to either BMFA members or non-members.

## **Displays And Competitions**

CAP 658, the Civil Aviation Authority's guide to the flying of Model Aircraft requires that all display organisers verify the competence of pilots flying in the display.

The BMFA's recommendation, as stated in the Safety Code for Model Flying Displays, is that the organisers should require that pilots produce evidence of holding a valid 'B' Certificate or equivalent qualification.

Competitors in BMFA contests for radio controlled powered model aircraft must, however, produce evidence of holding a valid 'B' Certificate or equivalent as a condition of entry.

## **Penalties**

### **Withdrawal of Certificates**

Where an 'A' or 'B' Certificate holder or an Examiner consistently disregards the requirements of the Safety Codes or local Club rules, his Club is empowered to take the following action:

- (a) In the first instance, a verbal warning to the offender by an officer of the club.
- (b) In the second instance, a written warning from the club committee.
- (c) Where these warnings fail to have the necessary effect, the club committee may formally request that the Areas Council withdraw the offender's Certificate or Examiner qualification.

In exceptional circumstances, a BMFA Area may formally propose to Areas Council that a certificate or qualification be withdrawn directly.

Once a certificate or qualification has been withdrawn by Areas Council, the offender will not be permitted to re-take the test for a period of 6 months from the date of withdrawal.

Note: The removal of a 'B' certificate will automatically mean that any endorsements to the 'B' will also be lost (for instance the 'C' Aerobatics). This is because you must have a 'B' certificate to take and hold a 'C'.

### **'A', 'B' and 'E' Certificate Re-Tests**

Where a Club or Area has concerns about the standards of flying or behaviour of any individual but do not wish to take the matter to Areas Council, a re-test procedure is in place as follows:

- (1) Any Club or Area may apply to their local Achievement Scheme Co-ordinator (ASC) to have any member re-tested for 'A', 'B' or 'E' certificates. Requests from a Club must be on Club headed notepaper and must be signed by at least two current Club Committee members. Requests from an Area must be on Area headed Notepaper and signed by at least two current Officers of the Area.

(2) The ASC will pass on any such requests to the appropriate National Scheme Controller who will arrange for a Chief Examiner (CE) from an a different Area to conduct the re-test by arrangement with the candidate.

(3) Any costs involved with travelling will be borne by the organisation that requests the re-test.

(4) If the candidate fails the re-test, the CE will be authorised to revoke the candidate's certificate or appointment and re-grade the candidate as required. For instance, a candidate who failed a 'B' test could be re-graded as an 'A' certificate. These actions will be ratified by the Scheme Controller after receiving the report of the CE.

(5) If the candidate for the re-test does not co-operate with the designated CE then he will be deemed to have failed the re-test.

(6) If a candidate fails a re-test and is re-graded, they will not be allowed to re-take the test for six months from the date of the failed re-test.

Note: The removal of a 'B' certificate will automatically mean that any endorsements to the 'B' will also be lost (for instance the 'C' Aerobatics). This is because you must have a 'B' certificate to take and hold a 'C'.

## **Equivalent Qualifications**

### **BMFA and SAA**

There is a reciprocal agreement between BMFA and the SAA to jointly recognise some of the various Achievement Scheme qualifications in the case of members moving between the Associations. This recognition will result in the automatic granting of a qualification in some cases and will work whichever way the member moves.

The equivalent qualifications agreed are:

The BMFA 'A', Fixed Wing and the SAA Bronze, Fixed Wing.

The BMFA 'A', Helicopter and the SAA Bronze, Helicopter.

The BMFA 'B', Helicopter and the SAA Silver, Helicopter.

### **Competition Entry**

For the purposes of competition entry only:

The SAA Silver Certificate, Fixed Wing and the LMA Certificate of Proficiency are accepted as equivalent to the BMFA 'B' Certificate, Fixed Wing.

The SAA Silver Certificate Helicopter is accepted as equivalent BMFA 'B' Certificate, Helicopter.

## **BMFA and BARCS**

The Achievement Schemes for Silent flight beyond the 'A' and 'B' Certificates, are run by BARCS. The levels achieved are recorded on the BMFA database and the BMFA membership card as endorsements to the 'B' Certificate. Therefore:

Any holder of a BMFA or BARCS Silent Flight Thermal Gold, Diamond or Diamond Star prior to 2005 will be assumed to hold a 'B' Certificate, Silent Flight Thermal.

Any holder of a BMFA or BARCS Silent Flight Slope Gold, Diamond or Diamond Star prior to 2005 will be assumed to hold a 'B' Certificate, Silent Flight Slope.

## **Badges**

Badges in a wings design are available for all grades and disciplines of the Achievement Scheme. They may be obtained direct from the BMFA Leicester office (call the office or check the BMFA website for the latest prices). Orders must include evidence of qualification by quoting your certificate number.

## **BMFA Membership Cards**

Details of a member's Achievement Scheme qualifications will be shown on his membership card.

## **THE TEST QUESTIONS**

In general, most of the test questions will be based on the BMFA safety codes.

In this edition of the BMFA Member's Handbook, the BMFA General Safety Code sections run from page 17 to page 37.

Pages 38 to 47 cover specific disciplines within model flying and you should read at least those sections that apply to the test you are taking.

The section on Legal Controls over Model Flying which is on pages 15 and 16 is also worth studying as it contains considerable information on how the Air Navigation Order may affect your flying.

The Radio Control Technical section on pages 76 to 79 is also an area that you should study for general information.

For 'B' Certificate tests, some questions may be based on the BMFA Safety Code for Model Flying Displays that run from page 47 to 51.

The test for Examiner or for the 'C' Fixed Wing requires that the Chief Examiner interviews the candidate to form an impression of the person's depth of knowledge of model flying in general and, in particular, the discipline in which they are being tested.

Specific questions, as for the 'A' and 'B' tests, might not be asked but if you don't have a good knowledge of these handbook sections you are not likely to impress during the interview.

### Buddy Box Leads

Buddy leads and other dual control training aids must not be used during any achievement scheme tests.

## THE 'A' CERTIFICATE (FIXED-WING)

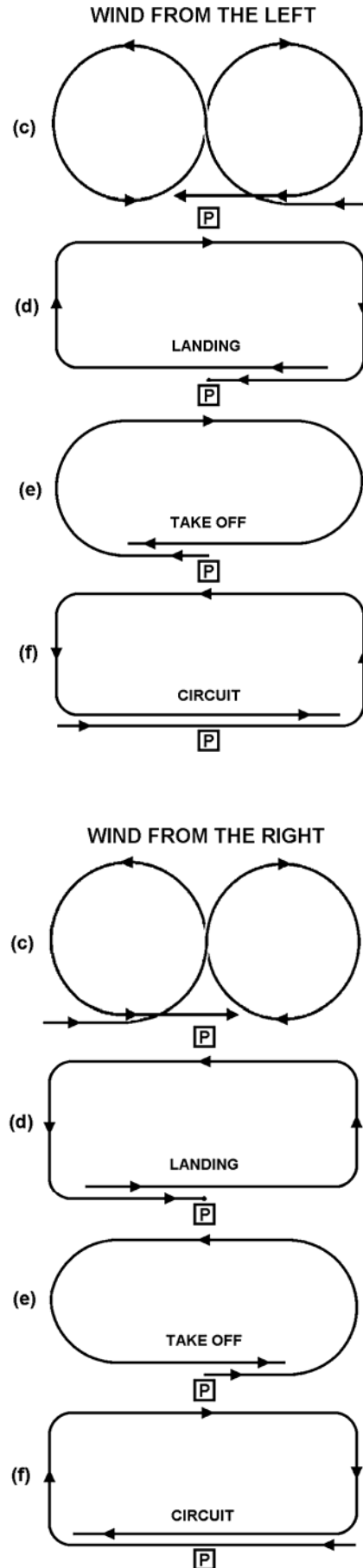
The examination for an 'A' Certificate may be taken on application to any Registered Club Examiner or Chief Examiner. The candidate must successfully carry out the following flying test and reference to the Guidance Notes is very strongly recommended:

- (a) Carry out pre-flight checks as required by the BMFA Safety Codes.
- (b) Take off and complete a left (or right) hand circuit and overfly the take-off area.
- (c) Fly a 'figure of eight' course with the cross-over point in front of the pilot, height to be constant.
- (d) Fly a rectangular circuit and approach with appropriate use of the throttle and perform a landing on the designated landing area.

If the engine stops during the landing the model may be retrieved and the engine restarted to enable the remaining parts of the test to be completed.

- (e) Take off and complete a left (or right) hand circuit and overfly the take-off area
- (f) Fly a rectangular circuit at a constant height in the opposite direction to the landing circuit in (d).
- (g) Perform a simulated deadstick landing with the engine at idle, beginning at a safe height (approx. 200 ft) heading into wind over the take-off area, the landing to be made in a safe manner on the designated landing area.
- (h) Remove model and equipment from take-off/landing area.
- (i) Complete post-flight checks required by the BMFA Safety Codes.

All manoeuvres must be carried out in front of the pilot and, depending on the wind direction, (c), (d) and (f) may be flown as shown in the accompanying drawing.



The above schedule is treated as one test flight and must be completed in one attempt. Two attempts per examination will be allowed in any one day.

You must turn up for the test with a model that is capable of taking off on its own undercarriage or from a dolly. However, if, in the opinion of the Examiner, the surface of the flying area is such that a rolling take-off would not be possible, hand launches may be permitted.

The minimum weight of the model used for taking the test will be 1kg (2.2 lbs).

In addition to the flying schedule, the candidate must answer correctly a minimum of five questions on safety matters, based on the BMFA Safety Codes for General Flying and local flying rules.

## THE 'B' CERTIFICATE (FIXED-WING)

The examination for a 'B' Certificate may be taken on application to a Registered Examiner. The examination may be carried out by:

- (a) Two Registered Examiners (the 'lead' must be a Fixed Wing Examiner).
- (b) A Fixed Wing Chief Examiner

If your club does not have any Registered Fixed Wing Examiners, you should contact your local Area Achievement Scheme Co-ordinator who will be able to help. Names and telephone numbers of Area Co-ordinators are available from the BMFA Leicester office.

The candidate must successfully complete the following flying tests and reference to the Guidance Notes is very strongly recommended:

- (a) Carry out pre-flight checks as required by the BMFA Safety Codes.
- (b) Take off and complete a left (or right) hand circuit and overfly the take-off area.
- (c) Fly a 'figure of eight' course with the crossover point in front of the pilot, height to be constant. This manoeuvre must be flown more accurately than the similar manoeuvre in the 'A' certificate test.
- (d) Fly into wind and complete one inside loop.
- (e) Fly downwind and complete one outside loop downwards from the top (i.e. a bunt).
- (f) Complete two consecutive rolls into wind.
- (g) Complete two consecutive rolls downwind using the opposite direction of roll rotation to that used in (f) above.
- (h) Complete a stall turn either left or right.
- (i) Gain height and perform a three turn spin, the initial heading and the recovery heading must be

into wind and the model must fall into the spin (no 'flick' spin entry).

(j) Fly a rectangular landing approach and overshoot from below 10 ft. Note that this manoeuvre is an aborted landing, not a low pass.

(k) Fly a rectangular circuit in the opposite direction to that in (j) at a constant height of not more than 40 feet.

(l) Fly a rectangular landing approach and land (wheels to touch within a pre-designated 30 metre boundary).

(m) Complete post-flight checks as required by the BMFA Safety Codes.

Parts (d),(e),(f),(g),(h) and (i) must be performed in airspace designated by the examiner prior to the test flight. The schedule must be completed in one flight.

Exceptionally, at a pre-determined point in the flight an intermediate landing may be permitted for the sole purpose of either refuelling or the fitting of a freshly charged flight battery. This landing may only be made with the prior consent of the Examiners. The pre-determined point may be either after a specific manoeuvre or at a specific time of flight, whichever is requested by the candidate and agreed by the Examiners.

Two attempts per examination will be allowed in any one day.

All manoeuvres must be carried out in front of the pilot.

Depending on the wind direction, (j), (k) and (l) will be flown as EITHER left hand overshoot circuit, right hand rectangular circuit, left hand landing circuit OR right hand overshoot circuit, left hand rectangular circuit, right hand landing circuit.

The minimum weight of the model used for taking the test will be 1kg (2.2 lbs).

In addition to the above flying schedule, the applicant must answer satisfactorily a minimum of eight questions on safety matters based on the BMFA Safety Codes for General Flying and Model Flying Displays and local flying rules.

## The 'C' CERTIFICATE (AEROBATICS)

The examination for a 'C (Aerobatics)' Certificate may be taken on application to your Area Achievement Scheme Co-ordinator. The examination will be carried out by either one Area Chief Examiner and One Club Examiner, both of whom must be Fixed Wing Qualified, or two Chief Examiners, one of whom must be Fixed Wing qualified.

To apply to take the 'C(AE)' Certificate, the candidate must already hold the 'B' Certificate (Fixed Wing).

The applicant may use any type of model capable of performing the manoeuvres set out in the following schedule. Reference to the appropriate Test Standards Booklet is very strongly recommended.

(a) Carry out pre-flight checks as required by the BMFA safety Codes, including fail-safe operation if appropriate.

(b) Take off and join the circuit in whichever direction is appropriate for the conditions.

(c) Perform a slow roll in either direction.

(d) Fly Inverted straight flight for a minimum of 5 seconds at approximately 30 feet with one roll from inverted to inverted.

(e) Perform an inverted 2½ turn spin, exit to inverted.

(f) Perform a square loop with ½ roll on both vertical legs.

(g) Stall turn with ¼ rolls on the ascent and descent, exit upright. Stall turn to be done with underside of model towards the pilot.

(h) The candidate will then select and perform seven manoeuvres from the list below. The manoeuvres and the order in which they are flown must be agreed with the examiners prior to the test.

(1) Knife-edge flight in either direction, below 30 feet, for at least 4 seconds or longer at the discretion of the examiner.

(2) Cuban 16 with half and full rolls.

(3) Hourglass with half roll in top line.

(4) Two consecutive outside square loops, from the bottom.

(5) Double stall turn, entry and exit inverted.

(6) Inverted rectangular figure of eight at a constant height of no more than 50 feet.

(7) Pull to vertical, one vertical roll up, push to vertical down, one vertical roll down, pull to upright level flight.

(8) Double avalanche. Two consecutive inside loops, each with positive snap roll at the top.

(9) Knife edge 45 degree climb with one positive snap roll from knife edge to knife edge in either direction.

(10) Rolling Circle.

(i) Perform a landing circuit appropriate to the site and conditions.

(j) Perform a landing, wheels to touch within 5 metres of a pre-designated point.

(k) Complete post flight checks as required by the BMFA Safety Codes.

(l) At least once during the test the examiner will call an emergency and this may happen at ANY time during the assessment. The candidate will be expected to respond in a way appropriate to the emergency called. Note that this may involve an intermediate landing and take-off. If the emergency is called part way through a manoeuvre, the manoeuvre must be repeated after the emergency has been dealt with.

(m) Exceptionally, at a pre-determined point in the flight an intermediate landing may be permitted for the sole purpose of either re-fuelling or the fitting of a freshly charged flight battery. This landing may only be made with the prior consent of the Examiners. The pre-determined point may be either after a specific manoeuvre or at a specific time of flight, whichever is requested by the candidate and agreed by the Examiners.

(n) Two attempts per examination will be allowed in any one day.

(o) All manoeuvres must be carried out in front of the pilot.

(p) In addition to the above flying schedule, the applicant will be interviewed by the examiners and must display a satisfactory depth of knowledge of model flying in general and, in particular, of safety matters based on the BMFA Safety Codes for General Flying and Model Flying Displays.

## THE 'A' CERTIFICATE (HELICOPTER)

The examination for a helicopter 'A' Certificate may be taken on application to any Registered Club Examiner or Chief Examiner. The candidate must successfully carry out the following flying test:

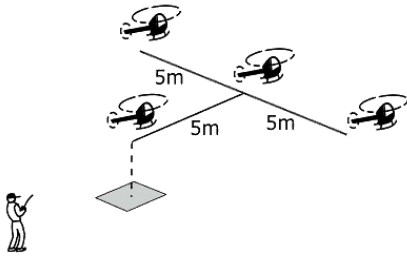
(a) Carry out pre-flight checks as required by the BMFA Safety Codes.

(b) Take off and hover tail in over the take off point, with the helicopter skids at eye level, for about twenty seconds.

(c) Hover the helicopter slowly forwards for approximately five metres, stop, and hover for about five seconds.

(d) Hover the helicopter slowly sideways for approximately five metres, stop, and hover for about five seconds.

(e) Hover the helicopter slowly sideways in the opposite direction for approximately ten metres (five metres past its original position in front of the pilot), stop, and hover for about five seconds.

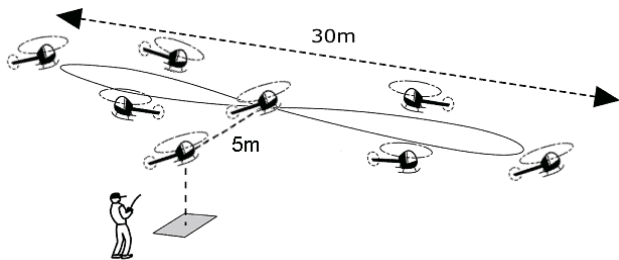


(f) Hover the helicopter slowly sideways in the first direction to bring it back to its original position in front of the pilot, stop, and hover for about five seconds.

(g) Fly slowly backwards, bringing the helicopter back to its original position over the take off point, stop, hover for about five seconds and land.

(h) Take off and fly forward for approximately 5 metres to a point over the centre marker, stop and hover for about five seconds. Turn 90 degrees either left or right and fly forward to perform two 'lazy eights', each at least 30 metres in length. Each time the helicopter passes in front of the pilot it must be sideways on to the pilot and throughout the manoeuvre the model must be flying forward, not sideways.

(i) At the conclusion of the two 'lazy eights', bring the helicopter to a halt sideways-on over the centre marker, turn the model tail-on to the pilot and hover for about five seconds. From this point fly the model to a landing on the original take off point.



(j) Complete post-flight checks as required by the BMFA Safety Codes.

The above schedule must be completed within one flight and two attempts per examination will be allowed in any one day.

The test must be taken outdoors.

The use of helicopters with coaxial contra-rotating main rotors is not allowed.

Where a fly bar is fitted no other artificial stabilisation of the helicopter is allowed other than a tail rotor gyro.

If the helicopter has no fly bar fitted it is acceptable to use an electronic fly bar system, however the extra electronics must only be acting as a fly bar

replacement system and must not take over control from the pilot or achieve automated flight.

In addition to the above flying schedule, the candidate must answer correctly at least five questions from the BMFA Safety Codes for General Flying and local flying rules.

## THE 'B' CERTIFICATE (HELICOPTER)

The examination for a helicopter 'B' Certificate may be taken on application to a Registered Examiner. The examination may be carried out by:

- (a) Two Registered Examiners (the 'lead' must be a Helicopter Examiner)
- (b) A Helicopter Chief Examiner

If your club does not have any Registered Helicopter Examiners, you should contact your local Area Achievement Scheme Co-ordinator who will be able to help. Names and telephone numbers of Area Co-ordinators are available from the BMFA Leicester office.

The candidate must successfully complete the following flying tests.

- (a) Carry out pre-flight checks as required by the BMFA Safety Codes.
- (b) Perform one hovering 'bow tie'
- (c) Perform one 4-point pirouette
- (d) Perform one 'Top Hat'.
- (e) Take off and climb to a safe altitude.
- (f) Fly a left hand rectangular circuit.
- (g) Fly a right hand rectangular circuit.
- (h) Fly a 'figure of eight' course with the crossover point in front of the pilot, height to be constant (note that this is not a hovering manoeuvre).
- (i) Perform one twenty second nose-in hover.
- (j) Perform one double stall turn. Note that the stall turns must be performed with opposite rotation i.e. first one to the left, second one to the right or vice-versa.
- (k) Perform an approach at 45° to the vertical, landing within a predetermined two metre square.
- (l) Complete post-flight checks as required by the BMFA Safety Codes.

All manoeuvres must be carried out in airspace and orientations pre-determined by the Examiner and Candidate prior to the commencement of the test flight. The schedule must be completed in one flight.

The test must be taken outdoors.

The use of helicopters with coaxial contra-rotating main rotors is not allowed.

Where a fly bar is fitted no other artificial stabilisation of the helicopter is allowed other than a tail rotor gyro.

If the helicopter has no fly bar fitted it is acceptable to use an electronic fly bar system, however the extra electronics must only be acting as a fly bar replacement system and must not take over control from the pilot or achieve automated flight.

Exceptionally, at a pre-determined point in the flight an intermediate landing may be permitted for the sole purpose of either refuelling or the fitting of a freshly charged flight battery. This landing may only be made with the prior consent of the Examiners. The pre-determined point may be either after a specific manoeuvre or at a specific time of flight, whichever is requested by the candidate and agreed by the Examiners.

Two attempts per examination will be allowed in any one day.

In addition to the above flying schedule the candidate must answer satisfactorily at least eight questions from the BMFA Safety Codes for General Flying and Model Flying Displays and local flying rules.

## **THE 'A' CERTIFICATE (SILENT FLIGHT - THERMAL)**

The examination for the thermal 'A' Certificate may be taken on application to any Registered Club Examiner or Chief Examiner. The candidate must successfully carry out the following test.

(a) Carry out pre-flight checks as required by the BMFA Safety Codes. Particular attention should be given to airframe, tow hook, launching aids, control linkages and surfaces.

(b) Check that any launching equipment is laid out correctly, securely and safely with respect to the field layout. Depending on the launch method, ensure that towlines are in good condition, that the bungee is securely anchored to the ground, that winches and turnaround pulleys are secure and a master on/off switch is fitted to the winch or that, if aerotow is to be used, the tug pilot is aware of the model he will be towing and that a launch plan is agreed.

(c) Check that the launch area and landing area are clear both on the ground and in the air and, after complying with the site frequency control system, prepare the model for launch. If a helper is used to launch the model they should be fully briefed as to what is required.

(d) Clearly announce "launching" and launch the model under full control, any deviation from the expected launch path must be corrected smoothly and quickly. Complete the launch by releasing the model from the launch line cleanly, if applicable, and level the model into wind without stalling.

(e) Fly the model straight and level for at least 15 seconds while pilot and Examiner clear the launch area. This does not apply to Hand Launched Gliders.

(f) At the Examiners call the model should be stalled into wind and recovered smoothly with minimum loss of height, heading into wind.

(g) Perform 3 consecutive 360 degree thermal turns to the right or left with minimum loss of height, ending on the same heading as the entry. The model must show no tendency to stall or enter a spiral dive.

(h) Perform 3 consecutive 360 degree thermal turns in the opposite direction to above with minimum loss of height, ending on the same heading as the entry. The model must show no tendency to stall or enter a spiral dive.

(i) Fly the model up wind to prepare the model for the landing phase. The model should be flown with no tendency to stall and with minimum loss of height.

(j) Call "landing" and fly a down wind leg, followed by a crosswind leg and final approach. The crosswind leg may be a continuous turn if preferred and it may be stretched past the centre line of the landing approach to allow control of height but the model must be flown back to the centre line for the final approach. The whole approach should be flown smoothly with no stalling and the turns should have a reasonably large radii.

(k) Land the model into wind within 20 metres of a predetermined spot.

(l) Retrieve the model from the landing area, informing other pilots that the landing area is clear.

(m) Complete post-flight checks required by the BMFA Safety Codes.

(n) Repeat the above schedule twice more, giving a total of three flights.

(o) Answer at least 5 questions on safety matters from the BMFA Safety Codes.

If insufficient height is achieved at launch or very bad sink is encountered that will not allow the completion of the entire test schedule the Examiner may allow an additional flight. If in the opinion of the Examiner a poor launch height is due to pilot ability the test is failed. Note that this applies to Hand Launched Gliders too and they are not allowed multiple attempts to obtain good launches.

All manoeuvres must be carried out in airspace pre-determined by the Examiner and Candidate prior to the commencement of the test flights.

Aerotow release height will be determined by the Examiner during the launch and should be approximately the same as a bungee, towline or winch launch.

The above complete multi-flight schedule is treated as one test attempt. Two attempts per examination will be allowed in any one day.

## **THE 'B' CERTIFICATE**

### **(SILENT FLIGHT - THERMAL)**

The examination for a the Thermal 'B' Certificate may be taken on application to a Registered Examiner. The examination may be carried out by:

(a) Two Registered Examiners (the 'lead' must be a Silent Flight Examiner).

(b) A Silent Flight Chief Examiner

If your club does not have any Registered Silent Flight Examiners, you should contact your local Area Achievement Scheme Co-ordinator who will be able to help. Names and telephone numbers of Area Co-ordinators are available from the BMFA Leicester office.

The candidate must successfully carry out the following test.

(a) Carry out all relevant pre-flight checks as required by the BMFA Safety Codes. Particular attention should be given to airframe, tow hook, control linkages and surfaces.

(b) Check the launching equipment is laid out correctly, securely and safely with respect to the field layout. Depending on the launch method, ensure that towlines are in good condition, that the bungee is securely anchored to the ground, that winches and turnaround pulleys are secure and a master on/off switch is fitted to the winch or that, if aerotow is to be used, the tug pilot is aware of the model he will be towing and that a launch plan is agreed.

(c) Check that the launch area and landing area are clear both on the ground and in the air and, after complying with the site frequency control system, prepare the model for launch. If a helper is used to launch the model they should be fully briefed as to what is required.

(d) Clearly announce "launching" and launch the model under full control, any deviation from the expected launch path must be corrected smoothly and quickly. Complete the launch by releasing the model from the launch line cleanly and level the model into wind without stalling.

(e) Fly the model straight and level for at least 15 seconds while pilot and Examiner clear the launch area.

(f) Fly the model through either a half loop or half roll to inverted, hold straight, controlled inverted flight for a minimum of five seconds and then half loop or half roll back to level flight.

(g) Fly the model on a thermal search pattern. The model is to pass over three points, agreed with the Examiner prior to the start of the flight (e.g. corners of the field).

(h) Fly the model through consecutive 360 degree thermal turns to a position a minimum of 100m down wind of the pilot. The model should gain height if in lift or be flown with minimum loss of height if no lift is found.

(i) Fly the model a minimum of 150m up wind of the pilot with minimum loss of height.

(j) Gain speed and perform a stall turn into wind.

(k) Fly the model across wind and stall, recover with minimum loss of height, still heading across wind.

(l) Turn the model down wind and stall, recovering with minimum loss of height on the same heading down wind.

(m) Call "landing" and fly a down wind leg, followed by a crosswind leg and final approach. The crosswind leg may be a continuous turn if preferred and it may be stretched past the centre line of the landing approach to allow control of height but the model must be flown back to the centre line for the final approach. The whole approach should be flown smoothly with no stalling and the turns should have a reasonably large radii.

(n) Land the model into wind within 10 metres of a predetermined spot.

(o) Retrieve the model from the landing area, informing other pilots that the landing area is clear.

(p) Complete post-flight checks required by the BMFA Safety Codes.

The pilot must perform three flights and all sections (f) to (l) must be completed sometime during those three flights, nominating before each launch which parts will be attempted. Sections (a) to (e) and (m) to (o) apply to each individual flight.

If the pilot has completed all tasks in 1 or 2 flights they must still perform the total of three flights. In this case the Examiner may ask for any of tasks (f) to (l) to be repeated in the third flight. The cumulative flight time for three flights is to be more than 12 minutes.

Answer at least 8 questions on safety matters from the BMFA Safety Codes.

If insufficient height is achieved at launch or very bad sink is encountered that will not allow the completion of the test schedule the Examiner may allow an additional official flight. If in the opinion of the Examiner a poor launch height is due to pilot ability the test is failed.

All manoeuvres must be carried out in airspace pre-determined by the Examiner and Candidate prior to the commencement of the test flights.

Aerotow release height will be determined by the Examiner and should be approximately the same as a bungee, towline or winch launch.

The above complete multi-flight schedule is treated as one test attempt. Two attempts per examination will be allowed in any one day.

## **THE 'A' CERTIFICATE (SILENT FLIGHT - SLOPE)**

The examination for the Silent Flight Slope 'A' Certificate may be taken on application to any Registered Club Examiner or Chief Examiner. The candidate must successfully carry out the following flying test:

- (a) Carry out pre-flight checks as required by the BMFA Safety Codes.
- (b) Launch the model and gain height.
- (c) Fly for ten seconds straight and level across wind.
- (d) Fly for ten seconds straight and level across wind in the opposite direction to (c).
- (e) Perform one 360 degree left hand turn.
- (f) Perform one 360 degree right hand turn.
- (g) Perform two consecutive 360 degree 'thermal' turns, either left or right.
- (h) Fly into wind and perform a straight stall and recovery.
- (i) Fly a rectangular circuit in front of the slope in the opposite direction to that chosen for the landing approach.
- (j) Fly a rectangular landing circuit opposite to that flown in (i) and land within 20 metres of a pre-designated spot.
- (k) Remove model from landing area.
- (l) Complete post-flight checks required by the BMFA Safety Codes.

All manoeuvres except the landing must be carried out in front of the slope.

The above schedule is treated as one test flight and must be completed in one attempt. Two attempts per examination will be allowed in any one day.

In addition to the flying schedule, the candidate must answer correctly a minimum of five questions on safety matters, based on the BMFA Guidelines and Safety Codes for Model Flying and local flying rules.

## **THE 'B' CERTIFICATE (SILENT FLIGHT - SLOPE)**

The examination for a 'B' Certificate may be taken on application to a Registered Examiner. The examination may be carried out by:

- (a) Two Registered Examiners (the 'lead' must be a Silent Flight Examiner).
- (b) A Silent Flight Chief Examiner

If your club does not have any Registered Silent Flight Examiners you should contact your local Area Achievement Scheme Co-ordinator who will be able to help. Names and telephone numbers of Achievement Scheme Co-ordinators are available from your Area Secretary or from the BMFA Leicester office.

The candidate must successfully carry out the following flying test:

- (a) Carry out pre-flight checks as required by the BMFA Safety Codes.
  - (b) Launch the model, gain height and complete one horizontal circuit (either left or right hand) in front of the pilot.
  - (c) Fly a horizontal figure eight with the crossover point in front of the pilot
  - (d) Fly two consecutive loops across wind.
- Fly crosswind left to right and complete a stall turn away from the slope.
- Fly crosswind right to left and complete a stall turn away from the slope.
- (g) Complete 10 seconds straight and level inverted flight across wind.
  - (h) Perform one axial roll across wind, either from the left or right.
  - (i) Perform one axial roll across wind in the opposite direction to (h), rotating in the opposite direction to (h).
  - (j) Perform a three turn spin with exit in the same direction as the entry.

(k) Fly a left hand rectangular landing approach and overshoot.

(l) Fly a right hand rectangular landing approach and overshoot.

(m) Fly a rectangular landing approach either left or right hand and land within 15 metres of a pre-determined spot

(n) Remove model from landing area.

(o) Complete post-flight checks required by the BMFA Safety Codes.

If the geography of the slope and/or safety procedures in force only allow landings and overshoots from one direction then (k) or (l) may be

modified at the discretion of the Examiner and flown as a rectangular circuit out from the slope, opposite hand to the required landing circuit.

All manoeuvres except the overshoots and landing must be carried out in front of the slope.

The above schedule is treated as one test flight and must be completed in one attempt. Two attempts per examination will be allowed in any one day.

In addition to the flying schedule, the candidate must answer satisfactorily a minimum of eight questions on safety matters, based on the BMFA Guidelines and Safety Codes for Model Flying, the Safety Code for Model Flying Displays and local flying rules.

## **THE 'A' CERTIFICATE**

### **(SILENT FLIGHT - ELECTRIC)**

The examination for the electric 'A' Certificate may be taken on application to any Registered Club Examiner or Chief Examiner. The candidate must successfully carry out the following test and it is expected that you will take the test with a glider type model.

(a) Carry out pre-flight checks as required by the BMFA Safety Codes. Particular attention should be given to airframe, control linkages and surfaces.

(b) After complying with the site frequency control system, prepare the model for launch. The motor start and stop switch/speed controller sequence must be demonstrated to the examiner

(c) Check that the launch area and landing area are clear both on the ground and in the air. If a helper is used to launch the model they should be fully briefed as to what is required.

(d) Clearly announce, "launching" and launch the model under full control. Any deviation from the expected launch path must be corrected smoothly and quickly. Climb to approximately 100m. Switch off power and transition to glide without stalling.

From this point on, power must not be used.

(e) Stall the model into wind and recover smoothly with a minimum loss of height.

(f) Perform 3 consecutive 360 degree thermal turns to the right or left ending on the same heading as the entry with minimum loss of height. The turns should be under control with no tendency to stall or enter a spiral dive.

(g) Perform 3 consecutive 360 degree thermal turns in the opposite direction to above ending on the same heading as the entry with minimum loss of height. The turns should be under control with no tendency to stall or enter a spiral dive.

From this point on, power should be used as required.

(h) Fly the model up wind to prepare the model for the overshoot/landing phase. The model should be flown with no tendency to stall and with minimum loss of height.

(i) Call "landing" and prepare the model for a landing with a down wind leg, followed by a base leg and final approach.

(j) Overshoot from below 10 ft and climb back to circuit height. Note that this manoeuvre is an aborted landing, not a low pass.

(k) Again, call "landing" and prepare the model for a landing with a down wind leg, followed by a base leg and final approach.

(l) Land the model into wind within 20 metres of a predetermined spot.

(m) Retrieve the model from the landing area, informing other pilots that the landing area is clear.

(n) Complete post-flight checks required by the BMFA Safety Codes.

(o) Repeat the above schedule a second time, giving a total of two flights.

In addition to the flying schedule, the candidate must answer correctly a minimum of five questions on safety matters, based on the BMFA Safety Codes for General Flying and local flying rules, at least two of which must be specific to electric flight.

All manoeuvres must be carried out in airspace pre-determined by the Examiner and Candidate prior to the commencement of the test flights.

The above complete two flight schedule is treated as one test attempt. Two attempts per examination will be allowed in any one day.

## **THE 'B' CERTIFICATE**

### **(SILENT FLIGHT - ELECTRIC)**

The examination for the Electric 'B' Certificate may be taken on application to a Registered Examiner. The examination may be carried out by:

(a) Two Registered Examiners (the 'lead' must be a Silent Flight Examiner).

(b) A Silent Flight Chief Examiner.

If your club does not have any Registered Silent Flight Examiners, you should contact your local Area Achievement Scheme Co-ordinator who will be able to help. Names and telephone numbers of Area Co-ordinators are available from the BMFA Leicester office.

The candidate must successfully carry out the following test and it is expected that you will take the test with a glider type model.

(a) Carry out pre-flight checks as required by the BMFA Safety Codes. Particular attention should be given to airframe, control linkages and surfaces.

(b) After complying with the site frequency control system, prepare the model for launch. The motor start and stop switch/speed controller sequence must be demonstrated to the examiner

(c) Check that the launch area and landing area are clear both on the ground and in the air. If a helper is used to launch the model they should be fully briefed as to what is required.

(d) Clearly announce, "launching" and launch the model under full control. Any deviation from the expected launch path must be corrected smoothly and quickly. Climb to approximately 100 metres. Switch off power and transition to glide without stalling.

From this point on, power must not be used.

(e) Fly the model on a thermal search pattern. The model is to pass over three points, agreed with the Examiner prior to the start of the flight (e.g. corners of the field).

(f) Fly the model through consecutive 360 degree thermal turns to a position a minimum of 100m down wind of the pilot. The model should gain height if in lift or be flown with minimum loss of height if no lift is found.

From this point on, power may be used as required

(g) Fly the model through either a half loop or half roll to inverted, hold straight, controlled inverted flight for a minimum of five seconds and then half loop or half roll back to level flight.

(h) Fly the model a minimum of 150 metres up wind of the pilot, gain speed and perform a stall turn into wind.

(i) Fly into wind and complete one inside loop.

(j) Fly the model across wind and perform an unpowered stall, recover with minimum loss of height, still heading across wind.

(k) Turn the model down wind and perform an unpowered stall, recovering with minimum loss of height on the same heading down wind.

(l) Fly the model up wind to prepare the model for the overshoot/landing phase.

(m) Call "landing" and prepare the model for a landing with a down wind leg, followed by a base leg and final approach.

(n) Overshoot from below 10 ft and climb back to circuit height. Note that this manoeuvre is an aborted landing, not a low pass.

(o) Again, call "landing" and prepare the model for a landing with a down wind leg, followed by a base leg and final approach.

(p) Land the model into wind within 10 metres of a predetermined spot.

(q) Retrieve the model from the landing area, informing other pilots that the landing area is clear.

(r) Complete post-flight checks required by the BMFA Safety Codes.

(s) Repeat the above schedule a second time, giving a total of two flights.

In addition to the flying schedule, the candidate must answer correctly a minimum of eight questions on safety matters, based on the BMFA Safety Codes for General Flying and local flying rules, at least four of which must be specific to electric flight.

All manoeuvres must be carried out in airspace pre-determined by the Examiner and Candidate prior to the commencement of the test flights.

The above complete two flight schedule is treated as one test attempt. Two attempts per examination will be allowed in any one day.

## **THE SILENT FLIGHT PERSONAL ACHIEVEMENT SCHEMES**

The Thermal Soaring and Slope Soaring Personal Achievement Schemes are aimed at giving flyers the satisfaction of achieving set levels of proficiency beyond the 'A' and 'B' Certificates and at their own flying fields without having to take part in contests.

They are administered by BARCS in conjunction with BMFA.

The schemes are voluntary, are open to all model flyers and there will be no charge to either BMFA or BARCS members or non-members wishing to register their claims

### **THERMAL SOARING GLIDER**

Once having passed the Silent Flight Thermal 'A' and 'B' Certificate, three further achievement levels are available and the flyer is required to attain these in sequence, from the lowest level to the highest. As of 1st January, 2002, you cannot enter for these achievement levels unless you have passed the appropriate BMFA 'B' Certificate. On passing the 'B' Certificate you will receive details of the next stage in the scheme.

Log books for the scheme are available free of charge from the Leicester office and from BARCS. And no charge is made for each claim registered.

To participate you simply have to attain the required tasks, obtain a confirming signature and send the appropriate part of the claim form together with an SAE to BARCS Achievement Co-ordinator or to the BMFA's Leicester office. Each level must be notified before the next is attempted.

## General Rules

Towline length not to exceed 150 metres.

High-start 150 metres max. unstretched.

Aerotow release at approximately 150 Metres.

Flights should be made on reasonably level terrain to exclude the possibility of slope lift.

Before each launch, the pre-flight checks required by the BMFA Safety Codes should be carried out.

Precision landings must terminate with the nose of the model with 12.5 metres of a nominated target.

Each task within a level may be attempted on different days over any period of time.

## Achievement Levels

### Thermal Gold

One flight of 15 mins. duration, plus

One flight of 20 mins. duration, plus

One flight of 25 mins. duration, plus

Precision landings on all flights

### Thermal Diamond

One flight of 45 mins. duration, plus

Five consecutive flights of 10 minutes duration in a 150 minute period

One flight of one lap over an equiangular course of 300 metres, the pilot to visit two corner points of the course, plus

Precision landings on all flights

### Thermal Diamond Star

One flight of at least 60 minutes duration, plus

Five consecutive flights of 15 min duration within a 180 min period, plus

One flight of four laps over an equiangular course of 300 metres, pilot to visit two corner points of the course, plus

One goal and return flight over a 1.5km course i.e. distance covered 3km (approx. 2 miles), plus

Precision landings on all flights

## SLOPE SOARING GLIDER

Once having passed the Silent Flight Slope 'A' and 'B' Certificate, Three further achievement levels are available and the flyer is required to attain these in sequence, from the lowest level to the highest. As of 1st January, 2002, you cannot enter for these achievement levels unless you have passed the appropriate BMFA 'B' Certificate. On passing the 'B' Certificate you will receive details of the next stage in the scheme.

Log books for the scheme are available free of charge from the Leicester office and from BARCS.

To participate you simply have to attain the required tasks, obtain a confirming signature and send the appropriate part of the claim form together with an SAE to the BARCS Achievement Co-ordinator or the BMFA's Leicester office. Each level must be notified before the next is attempted.

The purpose of this personal achievement scheme is to provide a varied series of tests at different levels of complexity to satisfy graded levels of slope soaring ability beyond the Silent Flight Slope 'B' certificate. Most of the tasks are to be conducted by BMFA Silent Flight Examiners although certain of the flights, as detailed on the scheme leaflet you will receive, may be witnessed by an appropriate BMFA or BARCS member.

Each task within a level may be attempted on different days over any period of time.

## Achievement Levels

### Slope Gold

Carry out pre-flight checks as required by BMFA Safety code on every flight

A Slope Soaring flight of 20 min maximum duration to include the following manoeuvres

3 consecutive axial rolls across wind

One double Immelman

3 consecutive outside loops

A vertical eight

A Cuban eight

Landing pattern – rectangular

3 spot landings, from a maximum of 10 consecutive attempts, within 15 metres of a pre-determined spot., measured from the model's nose

1 spot landing, from a maximum of 3 consecutive attempts, on the slope side within the slope lift area, within 20 metres of a pre-determined spot., measured from the model's nose

A flight of 1600 m, within 2 minutes, over a closed circuit course - turn points to be 80m apart

A slope duration flight of 45 minutes minimum duration

### Slope Diamond

Carry out pre-flight checks as required by BMFA Safety code on every flight.

A Slope Soaring flight of 30 min maximum duration to include the following manoeuvres

Slow axial roll across wind to left immediately followed by slow axial roll to right.

3 consecutive axial rolls across wind

Four turn spin.

Four point axial roll across wind

Figure M.

Horizontal 8.

Vertical 8.

3 minutes inverted flight.

4 consecutive inside loops across wind.

4 consecutive outside loops across wind.

One double Immelman.

Landing pattern – rectangular

3 spot landings, from a maximum of 6 consecutive attempts, within 8 metres of a pre-determined spot., measured from the model's nose.

1 spot landing, from a maximum of 2 consecutive attempts, on the slope side within the slope lift area, within 15 metres of a pre-determined spot., measured from the model's nose

A flight of 1600 m within 90 secs, over a closed circuit course - turn points to be 80m apart

A slope duration flight of 60 minutes minimum duration

### **Slope Diamond Star**

Carry out pre-flight checks as required by BMFA Safety code on every flight.

A Slope Soaring flight of 45 min maximum duration to include the following manoeuvres

One slow axial roll across wind to left in not less than 5 secs.

One slow axial roll across wind to right in not less than 5 secs.

One 4 point axial roll across wind in not less than 5 secs

4 consecutive axial rolls across wind

Six turn spin.

Figure M.

Horizontal 8.

Vertical 8.

One double Immelman.

6 consecutive inside loops across wind.

6 consecutive outside loops across wind.

3 minutes minimum duration inverted flight including one left hand and one right hand 3600 horizontal circle of minimum 50m diameter

Landing pattern – rectangular

3 spot landings, from a maximum of 5 consecutive attempts, within 5 metres of a pre-determined spot., measured from the model's nose

1 spot landing, from a maximum of 1 attempt, on the slope side within the slope lift area, within 10 metres of a pre-determined spot., measured from the model's nose

A slope duration flight of 90 minutes minimum duration

A goal and return flight of 2.5 km to goal, nominated before launch, total distance flown 5 km – landing to be within 25m of launch point.

## **THE RADIO CONTROL INSTRUCTOR SCHEME**

The R/C instructor scheme is an important step towards safer flying in several ways:

(a) Clubs participating in the scheme will be able to offer new pilots an approved flying training course leading to 'A' certificate qualification.

(b) The BMFA Approved Instructors and the BMFA Registered Club Instructors in the club will, of necessity, have to maintain a high standard of personal flying in order to retain the respect due to their status.

(c) By training new R/C pilots in a safe and professional manner right from the start of their flying.

It is to the advantage of every club to participate fully in the instructor scheme and to enable the scheme to be easily available to all who need it.

### **Up And Away Manuals**

BMFA supplies a copy of either the Fixed Wing or Electric Up-and-Away manual to all new members free on request. A voucher is supplied with the first membership card which simply has to be filled in and returned to the Leicester office.

### **The Four-Tier Scheme**

The BMFA R/C Instructor Scheme is made up of four types of instructor,

- (1) The BMFA Registered Club Instructor
- (2) The BMFA Approved Instructor
- (3) The BMFA Qualified Instructor
- (4) Area Chief Instructors

### **BMFA Registered Club Instructors**

The Registered Club Instructor (RI) is simply put forward by his club for registration with the BMFA. There is no limit on the number of instructors a club may put forward and a registration form is sent to all clubs each year.

In return the instructor will receive a 'BMFA Registered Club Instructor' sticker and the

registration will be entered on his membership record at the Leicester office.

Registered Club Instructors are not tested by a Chief Instructor and will only operate within the club that puts them forward. The intention of the scheme is to give recognition to the many hundreds of dedicated club flyers who give freely of their time to instruct newcomers to model flying but who do not wish to take the step of becoming BMFA Approved Instructors.

### **BMFA Approved Instructors**

The BMFA Approved Instructor (AI) is the second stage in the Instructor Scheme.

He must be a current member of the BMFA and initially be put forward by a club to be tested by an Area Chief Instructor, in much the same way that a Club Examiner is tested by an Area Chief Examiner.

He must also have held a relevant 'A' certificate for a period of six months.

He is free to move between clubs or to operate as country members and is expected to take the lead in maintaining the standard of instruction at club and individual level.

### **BMFA Qualified Instructors**

Ratification as a Qualified Instructor (QI) is automatic and there is no test to take but you must comply with two conditions:

(1) You must hold an Approved Instructor rating and have held it for a minimum of one year,

And

(2) You must hold the relevant 'B' certificate and have held it for at least six months.

You will get the new rating automatically if you already meet or if you attain these criteria.

Note that the QI rating depends on your retaining both the AI rating and the 'B' Certificate. If either of these is lost, in the AI case for instance, by not renewing your membership or by not being re-ratified by a club as and when required, the QI ratification will also be lost.

### **Area Chief Instructors**

The Scheme will be run at Area level by Chief Instructors (ACI) who are persons nominated by Area Committees and ratified by Areas Council as Area Chief Instructors.

An Area may request that the Scheme Controller appoints a Chief Instructor for a probationary period of up to six months prior to their ratification. During this period the nomination must be submitted to

Areas Council as the probationary period may not be extended.

A sufficient number of Chief Instructors should be nominated by each Area to ensure good geographic coverage for their clubs.

Area Chief Instructor appointments are for a period of one year only. After this time the qualification may be renewed by the Scheme Controller at the request of the appropriate Area Committee

Area Chief Instructors must be senior members of the BMFA and will have held a 'B' Certificate and been an Approved Instructor for at least twelve months. Their principal duty is to test applicants for the post of Approved Instructor and to promote and maintain the standards of the BMFA Instructor scheme by example and by visiting clubs that require their services.

### **Selection of Instructors**

The first step for a club wishing to participate in the BMFA Registered Club Instructor scheme is to recognise which of its members are already acting as instructors and who are willing to take part in the scheme.

The club then simply submits those persons' details to BMFA on the form provided to the club at the start of each membership year. If you don't have the form then a copy can be obtained from the BMFA's Leicester office.

If a club wishes to put forward members to become BMFA Approved Instructors, they should first select from its members those pilots who are both willing to act as Approved Instructors and who are sufficiently skilled in R/C flying.

A typical nominee will have considerable background of R/C model flying, be able to communicate flying skills, have a sound knowledge of simple aerodynamics and be highly safety conscious. He must be willing to accept the Training Manual as the syllabus he will use to train new pilots and to follow its guidelines.

To request the appointment of an Approved Instructor the candidate's club must apply to its BMFA Area Achievement Scheme Co-ordinator (Area ASC) in writing, asking that the candidate be tested.

If the club is not certain who their local Area ASC is then they should contact the BMFA Leicester office for contact details. Requests for Approved Instructor tests actually sent elsewhere, such as to an Area Chief Instructor or to the BMFA office, will be forwarded to the appropriate Area ASC but this may introduce a delay.

On receipt of the written request, the Area ASC will arrange for an Area Chief Instructor to contact the candidate and make arrangements for the test to take place.

### **Limits of Approved Instructor Qualification**

Approved Instructors must be current members of BMFA. Lapsed members will have their Approved Instructor status removed after one year.

From time to time, Areas Council may request that a re-ratification of Approved Instructors be carried out. This will apply only to those Approved Instructors not being regularly re-ratified by their clubs.

### **Area Chief Instructors' Area of Operation**

Area Chief Instructors operate within the Area for which they are ratified. If an Area Chief Instructor is

(a) requested to operate in another Area for any reason or

(b) asked to test Approved Instructor candidates from a club in another Area,

he must liaise with that Area's Achievement Scheme Co-ordinator before taking any further action.

### **Withdrawal Of Approved Instructor Qualification**

It may be felt at some point, for a variety of reasons, that Approved Instructor status should be removed from an individual. This may be done by Areas Council on the recommendation of the Area Committee concerned (either on the request of a Club or on their own behalf). The affected Approved Instructor has the right of appeal to Areas Council, via the BMFA Hon. Secretary.

Once the Approved Instructor qualification has been withdrawn by Areas Council, the Instructor concerned will not be permitted to re-take the test for a period of 6 months from the date of withdrawal.

### **Approved Instructor Re-Tests**

Where a Club or Area has concerns about the standards of flying or behaviour of any Approved Instructor but do not wish to take the matter to Areas Council, a re-test procedure is in place as follows:

(1) Any Club or Area may apply to their local Achievement Scheme Co-ordinator (ASC) to have any Approved Instructor re-tested. Requests from a Club must be on Club headed notepaper and must be signed by at least two current Club Committee members. Requests from an Area must be on Area headed Notepaper and signed by at least two current Officers of the Area.

(2) The ASC will pass on any such requests to the appropriate National Scheme Controller who will arrange for an Area Chief Instructor (ACI) from an adjoining Area to conduct the re-test by arrangement with the candidate.

(3) Any costs involved with travelling will be borne by the organisation that requests the re-test.

(4) If the candidate fails the re-test, the ACI will be authorised to revoke the candidate's qualification. This action will be ratified by the Scheme Controller after receiving the report of the ACI.

(5) If the candidate for the re-test does not co-operate with the designated ACI then he will be deemed to have failed the re-test.

(6) If a candidate fails a re-test he will not be allowed to re-take the test for six months from the date of the failed re-test.

## **BRITISH MODEL FLYING ASSOCIATION**

**SMAE Ltd**

**Chacksfield House, 31 St Andrews  
Road, Leicester, LE2 8RE**

Telephone - 0116 2440028

Fax - 0116 2440645

E-Mail - [admin@bmfa.org](mailto:admin@bmfa.org)

Website - <http://www.bmfa.org>