

R/C Proficiency Programme

The “Wings” Programme for R/C Flight qualification.

1. Aim

- 1.1. To provide certification of a basic proficiency level for Radio Control model pilots enabling them to operate unsupervised. Pilots achieving the required level are entitled to hold the MFNZ ‘Wings’ qualification.
- 1.2. To meet the requirements of Civil Aviation Rule 101.205 for flying within 4km of aerodromes.
- 1.3 To provide a way of demonstrating a higher level of skill by completing an advanced test.

2. Method

- 2.1. MFNZ encourages all clubs to ensure that members follow this proficiency scheme and to ensure that all Radio Control pilots to obtain their “Wings”.
- 2.2. Many club flying sites, rallies and contests are on or near aerodromes and this qualification is essential to fly at those sites. The qualification provides ready proof of the holder’s skill level.
- 2.3. Within 4km of an aerodrome all pilots must operate under direct supervision (of a wings qualification holder or an approved Instructor), away from aerodromes trainees should not be considered safe to fly on their own until they have reached the wings standard.
- 2.4 The Wings Qualification is compulsory for:
 - (a) all new members joining MFNZ are obliged to attain the qualification.
 - (b) all members who fly at sites within 4km of an aerodrome.Members are to be encouraged to gain wings qualifications at the earliest time.
- 2.5.Clubs should keep records of the members holding wings qualification certification and forward to the MFNZ membership secretary the name of members attaining the certification and the completed test paper.

3. Examiners and Instructors

3.1 Instructors

Instructors will be proficient Wings qualification holders as appointed by the club. Clubs will forward the name and MFNZ number of each appointed instructor to the MFNZ membership secretary for recording in the Associations database and issue of an Instructor’s endorsement. Instructors should be.

- (a) Experienced proficient flyers who exhibit well-disciplined flying and operate in a safety conscious manner and are committed to training students to Wings standard.
- (b) Be willing to spend considerable time training without letting their own skills suffer.
- (c) Have empathy with the student and be able to guide the student through the learning process.

Further information on instructing is available in the Training Manual available from on the MFNZ web site or from the secretary.

A Training Manual for the student is available on the MFNZ web site. This manual is structured to guide students through training to Wings standard and also acts as a prompt to instructors and has a check list for the student to keep as a record of training progress. All students should be issued with one.

3.2 Examiners

Examiners will be Basic Wings qualification holders. It is not required for the Examiner to be proficient in the skill being tested but they should be familiar with the requirements of the qualification being tested and may conduct “dummy tests” with a qualification holder to understand the manoeuvres fully. Clubs will assess their membership and select their examiners and instructors to meet the above criteria. Clubs should keep a register of Approved examiners and forward to MFNZ on an annual basis. To ensure a common standard among Examiners, Area Representatives will conduct Examiner workshops whereby methods and ideas can be exchanged. The membership secretary will issue an Examiner’s endorsement.

4. Qualification

4.1 There are 10 categories of Qualification

Basic Fixed wing powered (BP)	Advanced Power (AP)
Glider (GD)	Advanced Glider (AG)
Helicopter (HP)	Advanced Helicopter (AH)
Multirotor (MR)	Advanced Multirotor (AM)
Basic Jet Turbine (BJ)	Advanced Jet Turbine (AJ)

There are additional specialist qualifications for the following categories

Large fixed wing powered, (LP)
First Person View (FP)
High Speed (HS)

5. Certification

5.1 The proficiency qualification gained will be issued by MFNZ in the form of an endorsement on the membership card. Applications should be made through Club Secretaries on the official form, signed by the examiner. Annual membership cards will show the details of all qualifications held. Members attaining a new qualification within the membership year may request the issue of a replacement membership card.

5.2 A pilot must be a current financial member of MFNZ to be the holder of a Wings qualification and issue / retention of a wings qualification is at the discretion of the MFNZ Council.

5.4 Qualifications may be withdrawn by a club if the pilot is considered to be no longer able to satisfactorily meet the required standard. The Wings qualification will be reissued upon the satisfactory passing of a full wings test.

Testing Procedure

5.5 There are four parts to each basic proficiency wings test:

- a) Pre-flight inspection of model.
- b) Oral Test.
- c) Pre-flight procedures test.
- d) Flight Test.

5.6 Each part is marked on a competent/not yet competent basis and total mastery is required to qualify.

5.7 Retesting is permitted. The examiner may decide if a retest can be carried out on the same day or if there needs to be some retraining or consolidation before the retest.

5.8 A full guide to each test as well as test sheets and oral questions are included elsewhere in this manual

6. General test guidance

6.1 The Proficiency Scheme is run by the MFNZ as a National Scheme and it is open to all model flyers.

6.2 The "Basic" Certificate is a measure of flying ability and safety which "may be equated to a safe solo standard of flying" and an increasing number of clubs use it as their 'solo' test. The level of competence expected of a candidate should be based on that criterion; that is 'is this person fit to be allowed to fly unsupervised'.

6.3 A candidate wishing to take the 'Advanced' must already have passed the 'Basic' in that discipline.

6.4 The candidate should have studied the MFNZ member's manual, any local site rules (if applicable) and be familiar with the MFNZ Safety Guide. Besides being an excellent guide to the safe flying of model aircraft, most of the questions asked at the end of the test will be from these sections of the member's manual.

6.5 Also, Examiners may ask questions on any local site rules that the candidate should be aware of and these may form an important part of the test questions.

7. Buddy Box Systems

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

8. Hand Launching

8.1 The Member's Members manual states '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 clear implication of this is that the candidate must turn up for the test with a model that is capable of taking off on its own undercarriage or from a dolly. If they bring a model that cannot take off from the ground then they may not take the test under the 'suitable model' requirements.

8.2 Note also that the examiner 'may' permit a hand launch. It's just as likely that they 'may not', in which case the test will have to be postponed and taken in better circumstances.

9. Height and Speed

9.1 The 'Basic' certificate candidate should be a reasonably confident pilot, even though they may only have been flying for a few months. Flying too high is not the mark of a confident pilot. The test should be flown at a height of between 100 and 150 feet; any higher could be a sign of lack of confidence.

9.2 Intelligent use of the throttle is an important factor in confident flying and the examiner should watch out for this. A pilot who flies at take-off power throughout the whole flight should not pass; they are not thinking.

10. Consistency

The combination of reasonable height and good use of the throttle should mean that the model will be flying at constant height throughout most of the test and it should be noted if the height flown varies significantly.

It is a requirement that "all manoeuvres are carried out in front of the pilot" with the implication that the model will be crossing in front of the pilot just beyond the take-off and landing area on several occasions during the flight. Care should be taken by the pilot that the line of approach each time is consistent.

Slightly varying height and somewhat inconsistent lines are not necessarily reasons to fail the candidate but they do give a good indication of the pilot's general level of competence and could influence the final decision. Very poorly flown height or lines are a sure sign that the pilot has not practised the test and are a legitimate reason to fail them.

11. Continuity

Although the manoeuvres are set out in such a way that they can be flown one after the other as a schedule, this is **NOT** what is expected. The normal flight will have at least one positioning circuit between each manoeuvre and the examiner should discuss this with the candidate before the flight. He, of course, should be watching any extra circuits just as carefully as the rest of the flight as they can tell a lot about the competence of the flyer. A pilot who transitions directly from one manoeuvre to the next is attempting to fly to a higher standard than required. This is quite acceptable if they are competent but watch out for the pilot who hasn't practised enough. Trying to fly the test in this way can get them into some very awkward positions.

12. Trim

12.1 It is expected that the candidate will start the test with a model that has been trimmed out previously but they should be able to trim the model out in the air if necessary. If there are obvious signs that the model is out of trim and the candidate does not make any attempt to rectify the matter the examiner should seriously question their basic competence.

12.2 On the other hand, if they do need to re-trim and are making attempts to do so, allowances should be made for a short time of flight with a somewhat erratic flight path. This should not be penalised unless it puts the model in any danger or unless the model flies behind the pilot or in any other unsafe area.

13. Nerves

Quiet competence is what is required during the flight but most candidates will be nervous and allowance should be made for this. If the flyer is very nervous the examiner should seriously consider abandoning the test for the time being and offering the candidate a coaching flight or two to settle them down before re-taking the test. This can be done on the same day and can really help those candidates who have trouble with nerves when flying in a test situation.

14. Repeating Manoeuvres

14.1 At 'Basic' certificate level the manoeuvres are simple and the candidate should be competent to fly them with very few errors. If there are any major faults the test should be taken again. It may be, however, that the candidate will make a **minor** mistake on a manoeuvre and if the examiner is not fully satisfied, he may consider asking for the manoeuvre to be repeated.

14.2 Some judgement is called for here. A major mistake is grounds for failing the candidate, especially if loss of control has occurred or a dangerous situation has arisen. The examiner should definitely not let them have multiple attempts at each manoeuvre until they get it right but must give themselves the best chance of assessing the competence of the pilot being tested. Examiners should be extremely careful about using this option, however, as it could very easily be degrading the worth of the test. It must not, under any circumstances, degenerate into a series of 'practice' manoeuvres.

15. Repeating the Test

The rules allow two attempts at the test in a day. If the candidate fails the first of these the examiner must consider their performance in deciding what to do next. Many failures will be reasonably good pilots or they could be borderline cases. In these circumstances it might be appropriate to offer one or two coaching flights and then a repeat of the test. Remember that many of the candidates will be unfamiliar with flying under pressure and might do very well on the second test.

On the other hand, it will probably be obvious that on many occasions that the pilot being tested is simply not ready for the test they are taking. In this situation it is better that to tell them so quite clearly. It could then be extremely useful to offer to fly a demonstration test for them so that they can gain an idea of the standard of flying required, especially if they have shown a lack of understanding of the manoeuvres and positioning. This, possibly along with a little coaching, is far more useful to everyone than simply telling the candidate that they have failed.

16. Interruptions to the Test

16.1 A possibility that may occur during a test is an engine failure part way through which could very well lead to a damaged model. If this is the case then the test obviously cannot continue and the examiner should invoke the rule that the test should be performed in one flight and count the flight as one of the two attempts allowed during the day.

16.2 Genuine engine trouble or even engine-out situations during the test may be dealt with in one of three ways.

16.3 If the test was being generally flown in a satisfactory manner and the problem can be rectified quickly then the candidate may be allowed to continue the test from the start of the manoeuvre in which the problem occurred.

16.4 If the problem cannot be rectified quickly but it is considered that it was a genuine unforeseen occurrence, the examiner may annul the test and not count it as one of the two attempts.

16.5 If the test up to the point of failure was not satisfactory, the examiner has the option to cancel the rest of the test and count the flight as one of the two attempts allowed during the day. Obviously, the examiner will have to use judgement on this matter as there will rarely be black and white situations but how they handled the emergency should be of great interest when reviewing the candidate's overall standard of flying.

17. Designated Landing Area

17.1 Both the power-on and the deadstick landing have to be performed on the 'designated landing area'. The exact definition of this landing area must be left to the examiner as it will obviously depend on the flying site and possibly the weather conditions at the time of the test. Normally, the area for landing will be directly opposite the point where the pilot is standing and within a set distance either side of an imaginary line across the runway.

17.2 A point to bear in mind is that the fixed wing 'Advanced' certificate test requires that the power on landing be performed with the 'wheels to touch within a pre-designated 20 metre boundary'. Any decision made on the landing area for the 'Basic' test must obviously not be more restricted than this but if it is felt that the site and conditions warrant some relaxation of this distance then it can certainly be allowed. However, the '20 metre boundary' does give a useful starting point.

17.3 At the examiners discretion they may allow a larger 'designated landing area' for the simulated deadstick landing than for the power on landing. If in doubt, it should be remembered that

it is not the intention to put the candidate's model in any danger but a good, controlled, into wind landing must be demonstrated. From 200 ft above the strip, however, it shouldn't be in the next field. It is very important that this is discussed with the candidate before the test begins so that both in no doubt where and how big the designated landing areas are for both landings.

18. Intermediate Landing

18.1 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.

18.2 Full pre and post flight checks are not normally required during an intermediate landing and take-off unless the model suffered a hard landing. However, the candidate should give the model at least a quick visual examination whilst on the ground.

19. Helpers for Disabled Candidates, Young Candidates and Others Who have Requested Help During the Test

19.1 When disabled or young candidates present themselves for the test it may be that they will not physically be able to perform all the actions that most candidates can. At times, other candidates may also request help with certain physical aspects during the test (they may, for instance, have an injured finger). There will be times when the Examiner, will think 'how much can the test requirements be relaxed for this person'.

19.2 Some Examiners make the decision to make no allowances at all but this effectively bars many people from attempting the tests. If we think of the Proficiency scheme as a true national scheme then we must consider how we can accommodate candidates, not how we can stop them from participating.

19.3 The answer, of course, is that the Examiner, must make on-the-spot decisions about what will be allowed during the test and, in such cases, the examiner is within their authority to take such decisions. The guidelines set out below may help but at all times the two items at the end of this section must take precedence. They are not negotiable and mean that, whoever the candidate is, they have to convince the examiner that they know what they are doing or what is happening for the full duration of the test.

19.4 For instance, a disabled flyer may have difficulty handling the model and may not be able to carry it out to the strip, release it for launch or retrieve it after the flight. The sensible use of a helper is certainly allowable in such cases but it is essential that they only do what the candidate asks them to do. Pre-flight checks and engine starting may be another problem area that can be overcome by a helper but the candidate should be expected to do as much of the work as possible themselves and they should be able to talk through anything that the helper does for them. Examiners should be sure to discuss all this with the candidate before starting the test.

19.5 All of these comments can apply to younger flyers too but there is an added complication with engine starting. Many parents are very unhappy about letting their children near a running engine and will not allow them to start their own engines. This is a perfectly valid view and, again, is a case where a helper can be used. If this situation does occur with the younger candidates, however, the examiner should insist that they do all the pre-flight and preparation work themselves, up to applying the starter to the engine. If they cannot do this then they should not pass.

19.6 After engine start, the helper can adjust engine controls and carry the model but only on the instructions of the candidate.

In all cases:

(1) If, at any time, the helper takes over the decision making process from the candidate then the candidate must fail.

(2) The Examiner can make no allowances whatsoever for anyone during the flying of the test. The candidate can either perform the flight manoeuvres as specified or they can't. If they can't then they must not be passed.

Make sure in the briefing that both the candidate and the helper are fully aware of both of these points.

List of Annexes

Annex A	Basic Fixed Wing Power (BP)	and Advanced Fixed Wing Power(AP)
Annex B	Basic Glider (GD)	and Advanced Glider (AG)
Annex C	Basic Helicopter (HP)	and Advanced Helicopter (AH)
Annex D	Basic Multirotor (MR)	and Advanced Multirotor (AM)
Annex E	Basic Jet Turbine (BJ)	and Advanced Jet Turbine (AJ)
Annex F	First Person View	(FP)
Annex G	Large Model	(LP)
Annex H	High Speed	(HS)
Annex I	Oral Questions	

20. Administration notes for Examiners

There are specific forms for Examiners to use during the tests, and if you do not have one then a call to the MFNZ Secretary will have some in the post to you by return or you can download one from the website. Completed forms should be sent to the Club Secretary within seven days of the test and, whilst they must be filled in by the Examiner, they may be sent in to the office by either the Examiner or the Candidate. You should take great care that all the details are filled in correctly, especially the successful candidates **NAME** and their **MFNZ number** (this can save a great deal of confusion).

This is very important as what is seen on the pass form is what will appear on the final certificate. It is embarrassing for you to have to send one back to be re-done and it gives the candidate a definite impression of sloppy work by someone.