

Flight Verification Committee *and* Flight Instruction Program



Program Description and
Operating Guidelines

March 20, 2005

Acknowledgement

This update to the Flight Verification Committee and Flight Instruction Program guidelines is based on the original MCRCF Verification and Instruction Program published on December 30, 1992. The original version was produced at a time when there was a critical need for a Flight Verification Program that could be used to certify solo pilots. The Verification Program as described in the original document has worked well since its inception.

This latest revision of the document contains new material including a more complete description of the Flight Instruction Program and references to additional resource material that is available. The new material has been put together by Ray Capobianco, John Parisi and Jim Orsborn and is based on the current Flight Instruction Program.

Summary of Changes

Feb 20, 2005 – Original, revised edition. Clarified the role of the MCRCF Flight Verification Committee (appointed by the President) and the relationship of the Flight Verification Committee to the Flight Instruction Committee (Qualified Instructor Pilots, tested and approved by the FVC).

Mar 5, 2005 – Version 2. Added a new description of the revised flight qualification standards as approved by the MCRCF Board in 2004. The basic Flight Instruction program provides initial training suitable to approve a new pilot for their “Trainer Pilot” certificate. As such, the individual will be approved for unsupervised flight in a High Wing, Flat-bottom Trainer style aircraft. At this point, the pilot will be issued a special “Unstamped” frequency pin. Subsequent training and a second Flight Qualification test is required before the pilot will be issued a “Solo Pilot” certificate. Not until then will the individual be given a “Stamped” frequency pin that grants the individual unrestricted flight permissions to include semi-symmetrical and low wing aircraft.

March 20, 2005 – Version 3. Added a new version of the Waiver of Liability statement. Clarified that Instructor Pilots need to have at least 2 years experience past their Solo flight before they can take the test. Added some minor text regarding pre-flight checks during the Instructor Pilot examination.

M.C.R.C.F. FLIGHT VERIFICATION COMMITTEE and FLIGHT INSTRUCTION PROGRAM

Section I – Flight Verification Committee; Purpose:

The purpose of the MCRCF Flight Verification Committee and Flight Instruction Program are to ensure that the club maintains a consistent and fair program for measuring the proficiency of all pilots who have requested permission to use the field. The Flight Verification Committee is responsible for establishing and maintaining a minimum flight proficiency standard that all Solo Pilots must meet to demonstrate that they are capable of safe operation and handling of model aircraft. Furthermore, the Flight Verification Committee is responsible for overseeing the Club's Flight Instruction Program including the process for certifying Flight Instructor Pilots and training new pilots.

Section II – Flight Verification Committee; Membership:

The Flight Verification Committee will operate as a standing committee of the Club. The Committee will accept resignations and vote to approve new members in a manner so as to maintain their own membership. The objective will be to ensure that the committee is comprised of a minimum of three current club members with a maximum of seven members. Members may remain on the committee as long as they are a member of the Club and continue to provide service and support towards committee objectives. The committee should have an odd number of members in order to avoid tie votes on committee business.

A committee chairman may be elected if so desired and voted on by a majority of the committee members. The committee will notify the Club President when there are changes to the committee membership.

The Flight Verification Committee will certify all Flight Instructors who are the only individuals authorized to conduct flight training activities at the club field. Flight Instructors are not limited to committee members and new Flight Instructors DO NOT automatically become a member of the Flight Verification Committee. Members of the Verification Committee are not required to serve as Flight Instructors, but they should be proficient flyers capable of evaluating the proficiency of other pilots.

Section III – Flight Verification Committee; Responsibilities:

Members of the MCRCF Flight Verification Committee are charged with establishing and maintaining a program that meets the objectives stated in Section I – Purpose. Committee activities will typically include the following actions:

- Annual review and update all Documentation and Training Materials associated with the MCRCF Verification and Flight Training Program. Updated material should be submitted to the membership for review and comments. Any changes to the approved Verification Program will require Club approval. Updated material should be provided to the Club Secretary for distribution as needed.
- Review and update the Flight Instruction Program and administer the Instructor Qualification program. Submit any changes to the membership for approval.

- Administer the Flight Verification Exam(s) to all new members requesting permission to use the Club field.
- Administer the Flight Instructor Qualification Exam for individuals seeking permission to serve as a Flight Instructor.

Section IV – Flight Verification Exam Description:

1. In order to expedite Flight Verification Exam(s) (*either for members in good standing or members of another club wishing to join our club*), the committee will have the power to declare (rubber-stamp) approvals for those pilots that are known to the committee members and have demonstrated proficiency in the safe operation and handling of aircraft and abide by the rules governing the club.
NOTE: Approvals granted in accordance with this paragraph require a majority vote of the Flight Verification Committee members.
2. As a minimum, two committee members are required to perform a Flight Verification Exam. Upon successful completion of a Flight Verification Exam the lead examiner for the test is responsible for notifying the Club Secretary and providing the candidate's Name, Frequency, AMA Number and the date/time when the test was administered. The Club Secretary will then issue a new Frequency Pin indicating completion of the test.
3. The Flight Verification Committee will maintain an information package that describes the requirement for a Flight Verification Exam. The Club Secretary will provide this information to new members along with a list of committee member's names and phone numbers so the new member can set up an appointment for their Flight Verification Exam. It is the responsibility of the new member to set up an appointment (time and day) for flight check out.

Section V – Flight Instruction Program Description:

1. The Flight Verification Committee will administer a Flight Training Program designed to help new or inexperienced members learn how to fly Radio Controlled models. The program will encourage safe operation and handling of model aircraft and cover all of the rules governing operation at the club field.
 - a. In 2004 the MCRCF Board approved a two step process for granting new pilots unrestricted flight permissions. The initial step (based on the original Solo Flight Examination) will grant the individual a "Trainer Pilot" Certificate with permission to fly solo (unsupervised flight) with a high wing, flat bottom style trainer aircraft – specifically prohibiting unsupervised flight with low wing aircraft. This level of Flight Qualification will be denoted by an "unstamped" frequency pin issued by the Club Secretary.
 - b. The second step will require further training and flight experience. A second Flight Qualification Exam has also been prepared. After passing the second exam, the individual will be given a "Solo Pilot" certificate and granted

completely unrestricted, solo flight permissions. This level of Flight Qualification will be denoted by a “stamped” frequency pin issued by the Club Secretary.

2. The Flight Training Program will include provisions for a Flight Instructor Qualification Exam which all instructors must pass before they are authorized to conduct training classes on behalf of the club.
3. The Flight Verification Committee will maintain and approve all Information Flyers, Student Information Packets, Student Training Manuals and Flight Instructor Manuals that are used as a part of the Flight Training Program. The Club Secretary will provide this information to new members along with a list of Flight Instructor’s names and phone numbers so the new member can set up an appointment for flight training is needed.

STUDENT TRAINING LOG Instructor's Copy

Instructors should use the following Student Training Log as a permanent record of their training activities with each student. The log is a useful tool for maintaining contact information as well as a means for tracking progress with each student.

Student's Name: _____ AMA No. _____

Contact Number: _(_____)_____-_____

Emer. Contact: _____ Phone: _(_____)_____-_____

Dates: Initial Contact: _____ First Flight: _____ Solo: _____

Status	Training Objective	Comments
<input type="checkbox"/>	Safety / Acft. Familiarization	
<input type="checkbox"/>	Radio & Field Procedures	
<input type="checkbox"/>	Initial Flight	
<input type="checkbox"/>	Basic Flight Familiarization	
<input type="checkbox"/>	Accuracy Maneuvers	
<input type="checkbox"/>	Stalls	
<input type="checkbox"/>	Emer. Procedures	
<input type="checkbox"/>	Take-offs	
<input type="checkbox"/>	Orientation Maneuvers	
<input type="checkbox"/>	Approach to Landing	
<input type="checkbox"/>	Supervised Solo	
<input type="checkbox"/>	More Emer. Procedures	

Training Notes:

FLIGHT VERIFICATION TEST PROCEDURE (Initial Examination – “Trainer Pilot” Certificate)

When conducting a Flight Verification Exam, the examination should ensure that the candidate is knowledgeable about and capable of performing the following procedures. Safety should be a paramount concern, and the examination should be stopped immediately if the candidate initiates an unsafe action. Individual procedures may be repeated if there is any doubt as to the candidate’s ability.

1. **“Perform your pre-flight safety check.”**
Note: A radio range check may not be required, but the candidate should at least verify that all control surfaces operate correctly. See the following page for a sample pre-flight check list.
2. **“Prepare your plane for flight and start the engine.”**
3. **“Carry your plane to the runway area.”**
Note: It is safer to carry the plane rather than taxi the plane out of the pit area.
4. **“Position your plane on the runway ready for take off.”**
Note: The Candidate should be able to determine which direction to use for take-off without consulting others for help.
5. **“Take off when ready.”**
6. **“Trim your plane for level flight.”**
Note: It may not be necessary to trim the plane, but the candidate should be able to demonstrate how.
7. **“Circle the field at least once in both directions.”**
Note: You may want to specify either a Figure 8 pattern or a rectangular pattern. Also check that the candidate is observing proper boundary limits.
8. **“Setup and land your plane.”**
Note: The candidate should again determine which direction to use for landing. If conditions permit, the examination may include instructions to perform a take-off and landing from the alternate direction.
9. **“Without stopping the engine, take off and land two more times.”**
Note: Additional flight maneuvers may be requested, but the basic Solo Pilot Exam does not include any aerobatic maneuvers.
10. **“Stop your engine and return to the pit area.”**
At this point the Lead Examiner should be able to indicate whether or not the candidate has passed the examination or what areas require further training before a Solo Certificate can be issued.

NOTE: During the flight proficiency test only the pilot being tested is allowed to be airborne.

Candidates who successfully pass this Flight Verification Test will be granted a “Trainer Pilot” certificate. As noted elsewhere, this “Trainer Pilot” certificate grants the pilot permission to conduct solo (unsupervised) flight operations at the club field as long as they are flying a High Winged, Flat Bottom, **Trainer style** aircraft. The Club Secretary will issue an “unstamped” frequency pin as a designation of this Flight Qualification. (See the last page for an example.)

FLIGHT VERIFICATION TEST PROCEDURE (Second Examination – Unrestricted “Solo Pilot” Certificate)

When conducting a Flight Verification Exam, the examination should ensure that the candidate is knowledgeable about and capable of performing the following procedures. Safety should be a paramount concern, and the examination should be stopped immediately if the candidate initiates an unsafe action. Individual procedures may be repeated if there is any doubt as to the candidate’s ability.

1. Proficiency and Practice Log Check

Initial pilots are encouraged to spend a period of time (after obtaining their initial Trainer Pilot certificate) flying their Trainer aircraft. This time should be used to gain flight time and proficiency with the basic flight operations. The examiner may ask the candidate to explain how much flight time and experience has been acquired since the initial exam.

2. “Prepare your plane for flight and then demonstrate your knowledge of flight operations.”

Basically the student should be able to perform ALL necessary operations required to get the aircraft ready for flight, and then fly the plane and demonstrate all of the basic flight maneuvers. Where possible, the flight examiner should witness the pilot’s ability to take off and land in both directions (using the proper flight pattern) and handle cross wind conditions. The pilot should be completely comfortable with all flight operations and there should be no infractions of the Club’s Safety Code.

3. “Takeoff and prepare to handle an in-flight emergency when instructed.”

During this second flight, the Primary Flight Examiner should direct the pilot to handle one or more specific emergency conditions. Typical emergencies might include any of the following:

- a. Out of Trim aircraft,
- b. Engine Failure, or
- c. Inverted flight recovery.

NOTE: During the flight proficiency test only the pilot being tested is allowed to be airborne.

Candidates who successfully pass this Unrestricted Solo Flight Verification Test will be granted full unrestricted Solo Flight permissions. The Club Secretary will issue a new “stamped” frequency pin as a designation of this Flight Qualification. At this point, the pilot is free to experiment with new aircraft configurations.

SAMPLE PRE-FLIGHT CHECK LIST

- Elevator & rudder pushrods - no binding, rubbing or sticking
- Motor & nose wheel pushrods operating properly
- Check direction & operation of throttle
- Servos free running, no binding or loading
- Controls move correct distance and direction
- Check trims for correct setting
- Check for no play in control surfaces
- Check for tight wheel collars, clevises, wing bolts etc.
- Check engine mount and prop nut for security
- Check prop for nicks and cracks
- Check airplane balance (with tank empty)
- Check for safety collars on clevises
- Transmitter and flight pack batteries fully charged
- Reliable engine idle and return to high throttle check
- Check for lean or rich engine setting
- Fuel feed and foaming check (air bubbles in fuel line)
- Check for control surface flutter with engine running
- Range check radio
- Transmitter antenna fully extended

SAMPLE FLIGHT TRAINING LOG

Flight No. _____ Date: ___/___/___ Time: _____

Lesson No. _____ Instructor: _____

Maneuvers performed: _____

Instructor comments: _____

Student comments: _____

SAMPLE FLIGHT TRAINING LOG

Flight No. _____ Date: ___/___/___ Time: _____

Lesson No. _____ Instructor: _____

Maneuvers performed: _____

Instructor comments: _____

Student comments: _____

FLIGHT INSTRUCTOR QUALIFICATION PROGRAM

A. Purpose

The MCRCF has identified competent and standardized flight instruction of non-proficient pilots to be of extreme importance for the safety of all club members, spectators and neighbors of the field. Toward this end, a Flight Instructor Qualification Program has been developed by the Flight Verification Committee to ensure a minimum level of safety awareness and competence of certified Flight Instructors.

An additional function of the Flight Verification Committee will be as a resource for aspiring instructor pilots to receive information and help develop the skills needed to successfully pass the Instructor Qualification Exam. Flight instruction by individuals who have not passed the Certified Flight Instructor Qualification Exam will be putting the club in unnecessary jeopardy and are therefore strictly forbidden from giving flight instruction to students and will be subject to actions described in Article XII of the Club By-Laws.

B. Flight Instructor Requirements

The Flight Verification Committee has determined that Certified Instructor Pilots shall be at least two years past their Solo Qualification Exam with the club, need to be proficient flyers, but they also need to be knowledgeable in several other areas as well. As a result, the Committee has determined that Certified Instructor Pilots should meet all of the following requirements:

- I. **Airworthiness and Flight Safety:**
MCRCF Certified Flight Instructors shall be knowledgeable in the inspection, flight, and handling of model aircraft. Certified instructors will have a working knowledge of the safety requirements and associated rules of the club.
- II. **Flight Boundary Limits:**
MCRCF Certified Flight Instructors must have an accurate understanding of the flight boundary limits as set forth in the club rules.
- III. **Frequency Rules:**
MCRCF Certified Flight Instructors must have a firm understanding of the club rules governing the frequency or channels that may be used at the same time.
- IV. **Pit Operating Rules:**
MCRCF Certified Flight Instructors must be familiar with the rules governing operation of aircraft in the pit area as outlined in the club rules.
- V. **Flight Training:**
MCRCF Certified Flight Instructors must be familiar with and agree to conduct all flight training in accordance with the MCRCF's current version of the "PRIMARY FLIGHT TRAINING MANUAL" authored by Richard C. Lindberg.

VI. Verbal Test:

MCRCF Certified Flight Instructors must participate in a verbal test that involves spot questions on all phases of model construction, flight instruction and field safety.

VII. Flight Demonstration:

MCRCF Certified Flight Instructors must demonstrate to another member of the Flight Verification Committee (the Qualification Flight Examiner) their ability to perform various maneuvers as follows:

- > Inverted flight
- > Loops
- > Rolls
- > Dead Stick
- > Trim plane in flight
- > Other Maneuvers

VIII. Flight Instructor Qualification Exam:

MCRCF Certified Flight Instructors must demonstrate, through a simulated training exercise, ones ability to remove a transmitter from the student's control and regain flight control of the aircraft **both** with a training-cord system (e.g. Buddy Box) if available and with a single transmitter.

INSTRUCTOR PILOT FLIGHT EVALUATION AND CERTIFICATION

Pilot's Name: _____ AMA Number _____

This checklist will serve as a permanent record of your flight evaluation and certification as an **Instructor Pilot**. This checklist, when signed off, will be turned over to the club secretary. Your "**Instructor Pilot** certificate" will be presented at the next meeting.

Instructor Pilot certification consists of verbal portion and two separate flights, each with a specific piloting skill to be demonstrated. You will be judged not on how well you perform each requirement, but on your simple ability to safely demonstrate your aptitude in each of these areas.

A. Verbal Examination

1. Flight Boundary Limits
2. Frequency Rules
3. Pit Operating Rules

B. First Flight Demonstration (Individual Piloting Skills)

1. Take-Off (*Preceded by a ground safety check with the examiner*)
2. Basic Flight Skills
(Flight pattern, turns, loops & rolls)
3. Introductory Aerobatic Skills
(Inverted flight, Cuban-8, Split-S, Stall Turn)
4. Landing

C. Second Flight (Teaching Skills)

1. Untrimmed Take-off and Flight (*May also include 2nd ground safety check*)
(Flight Examiner will "de-trim" the aircraft (using the transmitter trim controls) and return the transmitter to the candidate. The candidate will takeoff, climb to altitude without re-trimming the plane, then trim the plane as needed.)
2. Instructor Demonstration (at altitude)
(Using a Buddy Box, the Flight Examiner will take the role of student pilot and ask the candidate to instruct the "Student" in the skills required for a specific procedure.)
3. Instructor Demonstration (Difficult Student)
(With the plane at altitude, the Flight Examiner (on the Buddy Box) will maneuver the aircraft in a variety of manners that could result in a crash – e.g. low speed stall, right aileron instead of left to recover from a right turn, fly away out of range; and the candidate instructor's obligation is to prevent the crash or loss of control.)

CERTIFICATION

We hereby certify that _____ has successfully demonstrated the minimum skills required for safe radio controlled flight and is hereby designated an **Instructor Pilot** of the Middlesex County R/C Fliers.

Primary Examiner's Signature and Date

Second Examiner's Signature and Date

ACKNOWLEDGEMENT

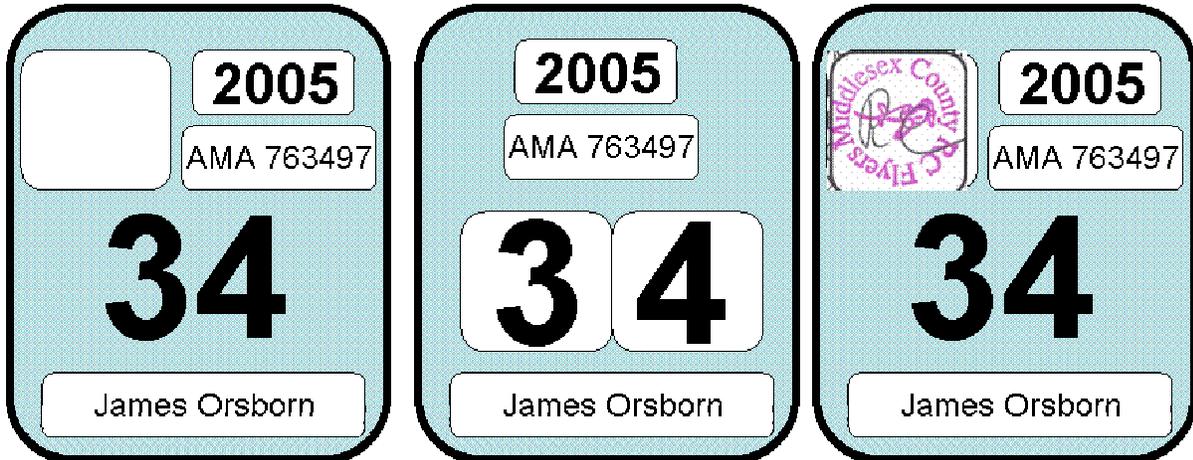
I hereby agree to abide by the AMA Safety Code and the rules of The Middlesex County R/C Fliers and promise to fly my aircraft in a safe manner at all times and teach others to do the same. I understand that this **Instructor Pilot** Certificate grants permission to instruct new pilots.

Pilot's Signature and Date

C. Certified Instructor Pilot Qualification Exam Procedure

1. A minimum of three (3) members of the Flight Verification Committee will qualify candidate instructors. One of these members will be designated as the Lead Examiner and will be responsible for all direct communications with the Candidate; the other two members will serve as observers only. The Lead Examiner must have passed the flight instructor's test using the current flight test procedures and been approved by the Flight Verification Committee as a Lead Examiner.
2. Candidate instructors being tested must supply their own flight worthy plane that will be used during all flights.
3. At the discretion of the Flight Verification Committee, a member of the Committee will either provide a plane that will be used for the preflight portion of the test or they will use the plane provided by the candidate. If the candidate's plane is used, the lead examiner will take an opportunity to airworthy adjustments to the plane that the candidate will be expected to discover during the pre-flight examination. If the candidate does not discover the problem(s), the chief examiner WILL NOT allow the candidate to take off without notifying the candidate of the undiscovered problem.
4. The non-flying portion of the instructor qualification examination will include a review of the Flight Instructor requirements as outlined in sections I through VI above. This portion may or may not include a written test administered by the examiner.
5. The flying portion of the instructor qualification examination will include a review of the Flight Instructor requirements as outlined in sections VII and VIII above. The Lead Examiner will conduct a pre-flight briefing to the candidate and observers which will cover the areas to be addressed in each flight. Once the briefing is over, the Lead Examiner will assume the role of a novice student pilot with the candidate taking the role of Flight Instructor.
6. FOR SAFETY REASONS; during the actual in-flight portion of the Flight Instructor qualification test, only the pilot being tested is allowed to be airborne. All other flight operations at the field should be suspended.
7. Prospective instructors must contact a member of the current Flight Verification Committee to make arrangements and schedule a date for their qualification flight test. Committee members are available at regular club meetings or by phone.
8. The current members of Flight Verification Committee will review the list of certified instructors annually and will reinstate, retest or rescind certification on a case by case basis.

Sample Frequency Pins



Student Pilot

This pilot is not permitted to fly at the Club field unless accompanied by a Certified Flight Instructor.

Trainer Pilot

This pilot is allowed to fly alone at the Club field without a Flight Instructor, but is restricted to High Wing, Trainer style aircraft.

Solo Pilot

This pilot has been granted unrestricted flight privileges.

FLIGHT VERIFICATION COMMITTEE MEMBERS

Raymond Capobianco
28 Griffin Drive Wakefield, MA 01880

(617) 944-6056

Jerry Crowley
75 Judith E. Drive Tewksbury, MA 01876

(508) 851-2057

John Parisi
27 Woodcliff Dr. Billerica, MA 01821

(978) 663-0232

Jim Orsborn
43 Charme Road Billerica, MA 01821

(978) 667-4510

Waiver of Liability

Student's Name _____

AMA Number _____

Address _____

Phone Number (____) _____

The above named individual hereby understands that the Middlesex County R/C Flyers (MCRCF) assumes no liability or responsibility in regards to the material herein, or any resulting action thereof. All information was compiled in good faith from printed materials, past experience and general knowledge of the model aviation hobby.

Safety, safe practices and procedures, have been emphasized throughout this manual. Participants are expected to comply with these guidelines at all times as a member of the Middlesex County R/C Flyers.

The Middlesex County R/C Flyers flight training program is provided free of charge, by experienced model aircraft pilots who volunteer their time. There are no guarantees as to results. Participants must exercise their own good judgment and common sense in determining their abilities and limitations. The Middlesex County R/C Flyers assumes no liability or responsibility for any action taken, past, present, or future, by any participant in this program.

Participants further attest they are members in good standing with the Academy of Model Aeronautics. Should the possibility of conflict exist with club procedures, guidelines, etc. and A.M.A rules, A.M.A. rules will take precedence.

If you do not find these terms agreeable to your situation, please do not ask to participate in the program.

Previous model aircraft flying experience:

- I have never flown a model aircraft before
- I have a few flights before with an experienced instructor
- I have flown several times before, but have not soloed
- I am an experienced flyer

(Student's Signature)

(Date)

This form needs to be signed and turned into your instructor at the first lesson.

