

MIRAMAR FLYERS

MCAS Miramar Radio Control Flyers Student Training Handbook



Student Name: _____

INTRODUCTION

The function of this handbook is to provide you with an outline to the basic knowledge and skills that your instructor will teach you at the flying field. The purpose of this flight training course is not only to teach you to fly, but to teach you to fly safely with a basic understanding of your equipment and its limitations. This course is designed to provide an organized and progressive series of lessons that will enable you to gain insight and understanding in easy steps so that by the time you are ready to solo, it will be just another flight in the course because you will be prepared for it.

Don't be afraid to ask for help. At one time every club member was a beginner and knows that you will have questions and problems. They're more than willing to help. And don't worry about how long it will take to solo. Concentrate on how well you learn before you solo.

The following contains a summary of what your instructor will be teaching you in each lesson. A lesson may take more than one session, depending on your ability and the phase of flight training. If your progress and time permit, several lessons may be combined in one flying session. By the time you finish this course, you will be armed with the basic knowledge and skills to become a responsible and safe flier who we will all be proud of and enjoy as a fellow club member.

It's equally important to learn proper procedures and traffic patterns. You must also learn to operate your plane in conjunction with other fliers, to adjust to the noise and movement of other planes and how to minimize the chance of a mid-air collision.

Each lesson contains a space for your instructor to sign off that particular phase of flight training after completion. This will enable the next instructor to know what lesson you are working and what areas need review. No time will be wasted and no part of the course missed. Make sure your instructor signs off each successive lesson, before proceeding on to the next lesson.

LESSON 1: AIRCRAFT MAINTENANCE.

In this first lesson, your instructor will show you how to pre-flight your model and identify any deficiencies that could cause malfunction (crash) or safety hazards. He will show you how to fill out the enclosed pre-flight checklist, and sign off your aircraft as safe to fly. He will test-fly the aircraft for you, in case it has never been flown before, or he is not familiar with your particular type of aircraft. He will also teach you how to start and adjust the engine.

Aircraft Type: _____

Pre-flight Check OK: _____

Test Flight OK: _____

Lesson 1 Complete: _____ Date: _____

Instructor Comments: _____

PRE-FLIGHT CHECKLIST

Radio

- Are all servo's securely mounted?
- Are pushrods and servo arms secure and adequate?
- Are all connectors secure?
- Are batteries fully charged?
- Is receiver securely mounted and protected?
- Is battery securely mounted and protected?
- Is Receiver antenna in good condition?
- Is servo attachment firmly attached to fuselage?
- Perform range check (USE THE PIN)

Wing

- Is covering tight with no visible signs of damage?
- Does wing fit fuselage adequately?
- Is aileron servo firmly mounted?
- Is there any play in aileron movement?
- Is the wing straight and un-warped?
- Is wing attachment adequate?
- Are aileron hinges firmly attached?
- Are the control horns adequate and firmly attached?
- Do ailerons move freely?

Horizontal Stabilizer

- Is the stab firmly attached?
- Are the control horns adequate and firmly attached?
- Is the tail structure soundly constructed?
- Are the elevator hinges firmly attached?
- Is the elevator pushrod adequate and secure?

Vertical Stabilizer

- Is the stab firmly attached?
- Is the control horn adequate and firmly attached?
- Are the rudder hinges firmly attached?
- Is the rudder pushrod adequate and secure?

Landing Gear

- Is the landing gear firmly attached to the Fuselage?
- Does the aircraft roll without obvious pull to one side?
- Are the wheels held on adequately?

Engine

- Can the engine be killed from the transmitter?
- Is the propeller firmly attached?
- Is the engine securely mounted?
- Does the engine have a spinner or safety nut?
- Is the propeller undamaged?
- Does the engine operate properly in the full range?

General

- Is the overall aircraft structurally sound?
- Do controls move freely?
- Check ailerons for correct movement again!!!
- Does the aircraft have the owners name and contact information included?
- Do controls move in the right direction?
- Is the Center of Gravity within limits?

TRIM REQUIREMENTS

AILERONS _____ FLAPS _____

RETRACTS _____ RUDDER _____

ELEVATOR _____ THROTTLE _____

INSTRUCTOR COMMENTS: _____

LESSON 2: RADIO AND FIELD PROCEDURES

This lesson will consist of acquainting you with your radio, normal and abnormal operation, interference and conducting a range check. Your instructor will also explain the field facilities for the models and radios along with field procedures and field rules for safe operation, please read the copy of the safety rules posted at the field.

Lesson 2 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 3: FLIGHT FAMILIARIZATION

During this lesson your instructor will fly your model to verify its air worthiness and handling qualities. He will then explain the controls and what kinds of reactions you can expect from them. He will have you take the controls after the model is at a safe altitude. Don't worry about losing control during this flight. That's what the instructor is there for. He will keep you out of trouble. Just relax and get the feel of the controls. If you get nervous, which happens occasionally, tell your instructor and he will take the controls. Remember, all you want to do during this lesson is get the feel of flying the model.

Lesson 3 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 4: TAXIING

In this lesson, you will be given the opportunity to get your left hand into the act, by learning to taxi around the runway. Practice will be given in steering with your left thumb, throttle control and taxi techniques.

Lesson 4 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 5: FLIGHT MANEUVERS

After you have gotten the feel of flying your model, your instructor will teach you the four basic maneuvers required to get around the sky. They are:

- 1. Level flight
- 2. Climbs
- 3. Level turns
- 4. Glides

Your instructor will also explain disorientation. This is a problem that everyone experiences sooner or later in flying models. Basically, disorientation occurs when the model does something your senses don't anticipate. For example, when the model is coming toward you and you start a left turn, the model will turn to the left. But it will move to your right. Your hands have told your brain: Left; but your eyes are telling your brain: Right. Result -- disorientation. Experience will teach you how to respond to this problem. It's like learning to balance when riding a bicycle. Your instructor will help you.

Lesson 3 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 6: ACCURACY MANEUVERS

Now that you can fly around and do the basic maneuvers, it's time to start learning how to control your model so that it will do exactly what you want it to do. Again, you will be working with four basic maneuvers, but now any old turn will have to be a turn of 90 or 180 degrees. And you will have to maintain altitude during the turns. The whole idea of this lesson is to develop your skill and ability as a flier.

Lesson 6 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 7: ORIENTATION MANEUVERS

During this lesson your instructor will have you fly a figure 8 pattern, a procedure turn, and a rectangular pattern. The purpose of these maneuvers is to discipline your reflexes and judgment.

Lesson 7 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 8: STALLS AND SLOW FLIGHT

You will learn how to slow your airplane, fly maneuvers at low speed and how to detect and avoid stalls. There's an old axiom in aviation, "*If you pull back on the stick the airplane goes up. pull back some more and the airplane goes down!*" That's a stall. But there's a little more to it and in this lesson you will learn how to recognize and recover from stalls. More important, you will learn how to avoid unintentional stalls.

Lesson 8 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 9: TAKEOFFS AND ABORTS

Crashes most frequently happen during take-off and landing. That's not said to scare you. It's just a fact, because the model is near the ground and if it's not properly controlled, there is very little time to correct the situation. So, during this lesson your instructor will explain the forces that affect a model during take-off and will assist you in making your first take-off.

Lesson 9 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 10: APPROACHES TO LANDING

In this lesson your instructor will discuss how to land your model. You will fly a rectangular pattern again, and this time you will learn how to make a descent for landing. You'll get to practice this maneuver up high and as you become comfortable with it, the altitude will get lower. When both you and your instructor are satisfied with your progress, you will get to make your first landing. After you have demonstrated mastery of power-on landings, your instructor will kill the engine in the pattern and you will demonstrate a dead-stick landing.

Lesson 10 Complete: _____ Date: _____

INSTRUCTOR COMMENTS: _____

LESSON 11: SOLO FLIGHT TEST

You will conduct a flight starting when you begin preflight preparation, and ending after you land. Your instructor will monitor this lesson and assist you when necessary. All you have to do is demonstrate good judgment, observe the field rules, and conduct your flight in a safe manner.

Lesson 11 Complete: _____ Date: _____

CONGRATULATIONS! YOU'RE NOW A PILOT.