

STUDENT REFERENCE GUIDE



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Fredericksburg Aeromasters Model Airplane Club

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This is an abbreviated list of the lessons and the objectives that the instructors will be undertaking during your instruction in the operation of radio control model aircraft. These lessons will be conducted as many times necessary in order to help the student reach the end level result that is described next. Each of you learn at a different rate, therefore the time required to reach the end will vary with ability and time available. Above all remember that this is an exciting hobby that will give many years of enjoyment and personal satisfaction.

"GOOD LUCK AND HAPPY FLYING"

END LEVEL RESULT

To be considered fully qualified the student must be proficient in the following areas:

Takeoff and Landing (left and right hand patterns)
Dead Stick Landing
Ground Handling (taxi)
Touch and Go
Traffic Pattern (left and right) Aborted Takeoff
Go Around

This end level result will produce a modeler with the necessary skills to fly and return home with a complete airplane. This will also be the basic building block on which the modeler can go onto a higher level of flying as his or her talent and resources dictate. As was mentioned earlier in this guide we have our own set of unique problems to overcome. Part of this end level result will include building the model, radio operation, theory of flight, and the basic safety items that we observe on an AMA field.

LESSON NO 1

Objective: To introduce the student to the basics of model aircraft operation. These areas will include:

- a. Pre-Flight (radio check and frequency pin procedure, range check and model airworthiness)
- b. Engine start
- c. Engine check
- d. Taxi demonstration
- e. Takeoff demonstration
- f. Air work demonstration
- g. Landing demonstration
- h. Taxi-in demonstration
- i. Shut down
- j. Post-Flight
- k. Instructor comments and student questions

Since this is the first introductory lesson there is no completion standards, only the desire to continue with the flight training process.

Notes:

LESSON NO 2

Objective: To start the student on his or her first dual instruction period and allow the student the feel of the model and how it reacts to control input.

- a. Review of previous lesson (since previous lesson is introductory this may be brief)
- b. Review of pre-flight check
- c. Engine start practice (start of safety awareness)
- d. Engine operational check practice
- e. Taxi practice
- f. Takeoff demonstration (instructor only at the controls)
- g. Hands on air-work practice (level turns, left and right with emphasis on orientation of model with transmitter controls)
- h. Orientation demonstration (distance vs. knowledge of aircraft attitude, may be combined with the above air-work practice)
- i. Gliding (reduced power demonstration)
- j. Traffic pattern demonstration
- k. Landing demonstration
- l. Taxi-in practice
- m. Shut-down practice
- n. Post-Flight
- o. Critique of the lesson and preview of next lesson

Completion Standards: This lesson will be completed when the student has grasped the basics of level turns and the items covered in lesson one. Proficiency is not required in this lesson, only progress and the desire to continue.

Notes:

LESSON NO 3

Objective: To continue basic air-work and introduce climbing and descending turn practice. Student will be introduced to stalls and air-speed control if time and proficiency permit.

- a. Review of previous lesson
- b. Pre-Flight practice
- c. Engine start and run-up practice
- d. Taxi practice
- e. Takeoff practice (several takeoff runs to be aborted to teach the student how to keep the model straight on the ground during the takeoff roll)
- f. Assisted takeoff (only if trainer cord is available or without if student proficiency and instructor takeover procedure are covered)
- g. student proficiency and instructor takeover procedure are covered)
- h. Level turn practice
- i. Introduction to climbing and descending turns
- j. Introductions to airspeed control
- k. Assisted traffic pattern practice
- l. Landing demonstration (student participation as proficiency determines)
- m. Taxi practice
- n. Engine shutdown and post flight practice
- o. Critique and preview of next lesson.

Completion Standards: This being a rather lengthy lesson, the student may have been exposed to much more than can be absorbed, therefore this lesson may be repeated many times. Normally the student will have demonstrated knowledge of level turns and make progress in orientation relative to the position of the model to the flyer. Engine start, run up, taxi and post flight procedures have been mastered at this time. Safety procedures should also have been mastered at this time.

Notes:

LESSON NO 4

Objective: Completion of basic air work is the foundation of this lesson. Emphasis will be put on mastery of level, climbing and descending turns. Airspeed control will be practiced and level flight as well as turns. Stalls and stall recovery will be practiced until mastery is gained.

- a. Review of previous lesson
- b. Pre-Flight (student only)
- c. Engine start and run-up (student only)
- d. Taxi to takeoff position (student only)
- e. Assisted takeoff (with trainer cord or closely supervised by instructor as proficiency determines)
- f. Complete air work practice including all turns airspeed control and altitude maintenance in level turns
- g. Traffic pattern practice
- h. Approach to landing practice
- i. Instructor assisted landing (with trainer cord or closely supervised by instructor as proficiency determines).
- j. Taxi-in (student only)
- k. Shutdown and post-flight (student only)
- l. Critique and preview of next lesson (intermediate review and evaluation)

Completion standards: Student will have mastered level, climbing and descending turns, airspeed control, stalls and their recovery, and all pre and post flight activities.

Notes:

LESSON NO 5 (EVALUATION)

Objectives: This lesson will be an evaluation by another instructor on the student's progress to this point. After successful completion of this lesson the student will progress to the next phase of training, which will place emphasis on the takeoff and landing.

- a. Pre-Flight evaluation
- b. Start and run-up evaluation
- c. Instructor assisted take off (with trainer cord or closely supervised by instructor as proficiency determines)
- d. supervised by instructor as proficiency determines)
- e. Air work evaluation
- f. Instructor assisted landing (with trainer cord or closely supervised by instructor as proficiency determines).
- g. supervised by instructor as proficiency determines).
- h. Taxi in evaluation
- i. Shut down and post flight evaluation
- j. Critique and preview of next lesson

Completion standards: Student will have demonstrated mastery of all the items required to operate and fly a model aircraft except for the takeoff and landing.

Notes:

LESSON NO 6

Objective: This lesson will be repeated as often as necessary to gain proficiency in the area of takeoff and landings. Consistency will emphasize along with common in flight emergencies that will cause a forced landing and how to properly deal with them.

- a. Pre-Flight
- b. Start and run up
- c. Taxi out
- d. Assisted takeoff to climb out (gradually giving total control to student)
- e. Assisted approach to landing and rollout (gradually giving total control to student)
- f. Touch and go practice
- g. Forced landing practice
- h. Taxi-in
- i. Shutdown and post flight
- j. Critique and review

Completion standards: Student will be in his or her most difficult phase and proficiency in this area and could take some time to accomplish. The basic objective is to instruct the student to the solo check flight, which will be the end of the basic flight training that this guide is intended for.

Notes:

