Academy of Model Aeronautics

5161 East Memorial Drive
Muncie, Indiana 47302
(765) 287-1256 – Business
(765) 289-4248 – Fax
(800) 435-9262 – Membership Services
http://www.modelaircraft.org

TIPS FOR NEWCOMERS

WELCOME to the exciting world of miniature aviation. Questions and answers are an important part of any new undertaking, and to make your entry into this sport/hobby a little easier, here are some simple suggestions to consider once you've decided to take the "big step."

Beyond any recommendations offered here, your best advice on what to buy and how to use it will be available through local hobby shops and model, airplane clubs. Each modeler has certain likes- and dislikes in beginners equipment. Local availability of products and repair services should play an important part in helping you choose your first projects. A good hobby dealer or AMA club should be happy to share its knowledge of what might work best for you.

There are three primary categories of model aircraft, and within each category are several sub-types. Each one has something unique to offer you in terms of skill development and personal satisfaction. Read on, get familiar with the basic types, and try to decide which direction you want to go.

FREE FLIGHT (FF) models are designed to be flown with no "piloted" means of control. They can be powered by rubber-band motors, CO2 motors, electric motors, internal combustion engines, or no motor or engine at all. Once airborne, the Free Flight (FF) model takes its direction from subtle angles built into the airframe during its construction. These angles usually will cause the model to fly in a circular path, to keep it from flying out of sight.

FF can be an inexpensive, "fun" way to learn the basic construction skills and flight/trim characteristics of model aircraft.

CONTROL LINE (CL) models are designed to be flown on a line or lines in a circular path around the pilot. Basic control is relatively simple since the models will usually only be controlled around the up and down (pitch) axis. The pilot holds a handle with the lines from the aircraft attached to it, and by moving his/her arm or wrist upward or downward, he/she controls the altitude of the airplane. Once the pilot's skill in basic flight is developed, he/she can learn to perform many graceful maneuvers.

If you prefer the slightly larger CL models because they tend to "fly" more accurately, rather then "whip" through their commands/motions. Smaller models are also more prone to windy-day problems than their bigger brothers.

RADIO CONTROL (RC) models can be divided into two categories: POWERED and NON-POWERED (GLIDERS). Both are guided by electronic equipment inside the aircraft that responds to signals the pilot sends from a handheld device called a transmitter. Because the RC airplane flies by the same principles of flight as a full-scale airplane, it is more complex in design and operation. It is strongly recommended that the beginner enlists the services of a qualified RC instructor/pilot who will help him/her learn to fly. Few people in this sport are self-taught. A qualified instructor can save you time, money, and heartaches.

Let's look first at a powered RC model. An engine, or motor if it is electric powered, will probably be on the front of the airplane. It will turn a propeller that pulls the airplane through the air while the pilot controls the craft's direction (and sometimes the engine speed) from the handheld transmitter. Many, types of powered R/C aircraft are available, but since you are a beginner, let's discuss only "trainer" types of airplanes.

Just as a full-scale pilot does not learn to fly in a combat-ready jet fighter, neither should the student RC pilot attempt to learn basic skills with a "hot" model that is far beyond his/her undeveloped capabilities. A primary trainer will be much easier to deal with as you keep your trials and accomplishments on an even level. You might like a trainer to be in the .20 - .40 engine (displacement) range. This way, you will probably be able to progress through many skill levels of flight before you feel you want to purchase a different size engine.

The nonpowered (or glider) type of RC aircraft will take a bit more of an explanation since your, first question will almost certainly be, "How can it fly without an engine?" Imagine an automobile parked at the top of a hill with the parking brake set. You release the brake and the car begins to roll down the hill. The steering works, the brakes work, and except for the fact that the engine is not powering the car, you are driving down the hill. The principle is called gravity, and the glider flier uses it to make his/her model proceed through the air. The control systems (which steer or direct the model) do exactly the same things they would do on a similar type of powered model. Only the absence of an engine makes them different. The simplest launch method, called a "start," can be compared with a 500-foot slingshot with the far end staked to the ground. The pilot attaches the model to a ring on his/her end of the line, stretches it back, and releases. When the launch tension slackens, the glider simply flies off the line, free to search for rising air current (called "thermal").

Most primary nonpowered trainers are slower than their powered counterparts, and for this reason, you might like to use the RC glider as the first experience in flight for the beginner. Slower speeds allow increased reaction times, and this means better results in a shorter period of time. It should make you aware that not all RC flying clubs are equipped to handle gliders, so it would be in your best interest to check with your instructor before deciding on this type of trainer setup.

RADIO CONTROL SYSTEMS are the lifeline of the RC airplane. Your system is the control line between your aircraft and you. A good-quality system is a must if you plan to enjoy the time and money you spend in the sport. Your club or hobby shop will give you a good idea of brands that give satisfactory service in your area.

Buy a system with a minimum of four channels (a channel is a function - UP/DOWN being one function, RIGHT/LEFT being another, etc.). Some airplanes may be built to fly using as few as one, two, or three channels. However, to save money in the long run, plan for your potential future growth with a four-channel setup. You will also increase your chances of good flight instruction because of the standard arrangement of the control sticks on most four (or more)-channel systems.

Engines are relatively easy to select. Your dealer will be able to tell you which brand is easiest for which to get parts. He/show or your local AMA club can make recommendations the best performance value for your dollars. Select an engine that is (in displacement) on the higher side of the engine range for your particular model. It is easier to throttle back a larger engine, than it is to try to make an airplane fly with an engine that is too small and does not have any "cushion" of power available.

There you have it. Three basic categories of model airplanes and a bit of advice to guide you along the road. AMA hope this will help you. Get in touch with your local AMA flying club. See the folks at the local hobby shops. Don't be afraid to ask questions, because one day YOU will be the expert whom some beginner will turn to for the right answers.

Q:\WP_FILES\MARKET.WP\MISC\NEWCOMER.TIP;032808