

BOOMERANGS SPORTS AIRCRAFT ASSOCIATION Inc.

The What, How, Do's and Don'ts of Getting Started in Flying Radio Controlled Aircraft.

At the Model Aircraft Sports Centre, located in Whiteman Park, we have several clubs that share our facility. Boomerangs are (at this point in time) the largest club and meet here every Saturday. Several other clubs also use the facility which is open to all clubs 7 days a week, 8am until dusk, with the exception that it may be closed on Extreme Fire Danger Days. We are a family friendly club and encourage junior members. Check out the Web Site for W.A Model Aircraft Sports Centre on www.wamasc.org.au

At the centre we cater for Fixed Wing, Helicopter and Control Line Aircraft.

As a visitor, you may attend 2 (two) times free to use the facilities if accompanied by a financial member of one of the associate clubs that are registered to fly at The Sports Centre. After this time, if you decide to pursue one of the avenues of flying model aircraft, you will be required to join one of the associate clubs.

Why join a club?

First of all, the types of aircraft that we fly must be flown in accordance with C.A.S.A. (Civil Aviation Safety Authority) regulations. This is the same authority that controls the air space around the Nation.

Not to observe the regulation is a criminal act against criminal code 6.1.

The only model aircraft that you can fly in the local park are the plastic and foam type that are called Park Fliers for that very same reason.

You must be insured against Personal Injury and Public Liability unless you are prepared to lose everything.

These miniature aircraft can cause serious injury, even death, if not controlled at all times both on the ground and in the air. Accidents do happen and without insurance it could cost you that new car, the family home or everything you ever owned to pay legal fees or compensation to the injured party. It's just not worth it and you have been warned. When you join a registered MAAA affiliated club you are automatically fully insured for almost any event, providing you are operating legally, almost anywhere in the world.

We at Boomerangs have a number of qualified MAAA instructors for both fix wing and helicopters. The instruction is free so why try and do it alone?

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Your instructor will take you through the following;

- Safety aspects
- Conduct at the field
- The use of the Frequency Compound
- The structural integrity of your Aircraft
- Setting up of the controls
- Checking the balancing points
- Starting and setting up and running of the Motor

Oh yes, the one that interests you most! Teaching you to fly and land in a safe manner. Most people gain their wings in about 10 to 12 weeks, some take longer and others less.

On the completion of a simple test to prove that you can get the model up and down safely, you will be awarded a set of Bronze Wings which will allow you to fly solo without an instructor. The Bronze Wings is the first step, then on to Silver and Gold if you wish to develop your skills further. You may even wish to instruct other flyers yourself one day. It's progressive, but to fly solo all you need is your Bronze Wings. Remember, once you have taken off, landing is compulsory and our instructor will teach you how to do this safely.

O.K., before you go out and commit yourself, why not have a go with the club trainer on the Buddy Box System?

The trainer, together with the buddy box, allows you to try your hand at flying with the assurance that if you don't feel comfortable or you lose control, your instructor can take over instantly. This system is the safest way to learn. Your control box is attached to the instructors main control transmitter by a 2 metre long cable that connects the two units.

At anytime that your instructor needs to take over the controls it's only a matter of releasing the button on the master control transmitter.

Now the what's,

What Model, What Motor and Radio Equipment do you purchase?

What about Package Deals?

What Model?

First of all to train with, you need a model that is easy to fly and robust enough to take a few knocks and hard landings and not cost a fortune. A "Trainer" sounds about right.

What Trainer?

On the market there are a number of good trainers called A.R.F.'s (Almost Ready to Fly). This means that just a few hours work with some glue and install the motor and radio equipment and you are about ready to go.

A.R.C. (Almost Ready to Cover). These models require a little more work in as much as the structure of the aircraft which is already built. All that is required is to cover and finish off as with the A.R.F.'s.

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Kits:

Requires some model making hand skills in cutting out individual components, sanding, shaping, drilling and general marking out.

Plans:

Take some time to produce the model in transferring details from the plan to the material to make the individual components as for the kits. This system is for the more dedicated and experienced modeller.

What Motor?

On the market there are as many manufacturers as there are grains of sand on the beach. Well, maybe not, but which one is the best for you?

A good motor is one that is reliable in starting, running and you can obtain spares from the local model shops. A good choice would be an OS 46 FX glow motor. As most trainers are designed for 40 to 46 cu. inch size motors this will fit the bill. The glow motor runs on methanol with oil and other additives to make up the fuel. It is started initially by connecting an electric current to the glow plug on top of the motors cylinder head and spinning the prop over by hand or an electric starter. Once running, the electric current is removed from the glow plug.

These are the commonest motors used in the model radio controlled aircraft due to their flexibility and reliability in running.

Some other types of motors used are diesel, electric, gas turbine and pulse jets which have their own place in aero modelling.

What Radio Equipment?

Again a number of manufacturers are on the market but J.R. and Futaba seems to be the favourites, with good reason. It's a must for safety reason that this equipment operates in the 36 MHZ band which can only be used at this site. As previously mentioned a buddy box system can be made up by connecting two like-equipment manufacturers eg J.R. to J.R. by a 2 metre cable for training purposes. A further good reason for choosing J.R. equipment is that we at Boomerangs have a J.R. buddy box system that can be used for training purposes without the need of you purchasing a buddy box of your own, which is a cost saving.

You may hear the mention of Computer Radio equipment. This, put simply, is a method of storing information about individual models control characteristics in terms of travel, direction and movement. A number of model and types of models can be stored separately in the transmitter to be called up when required.

A further consideration to look at is how you want to control your model; this is referred to as "Mode". The Mode is the way the two sticks or gimbals are set up for primary controls of the aircraft. The primary controls are what makes the aircraft climb and descend and bank left and right.

In Mode 1 the elevator that makes the aircraft climb and descend is control by the left stick. Moving this stick towards you the model will climb and descend when pushed forward. The right stick moved to the right will bank the aircraft to the right and the opposite with a movement to the left. The left stick also operates the rudder which yaws the aircraft sideways like a crab and also steers the model whilst on the ground. Left and right with the stick correspond with the same direction as the model will yaw or turn on the ground. The right stick also control the motors throttle on a

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ratchet so you can set the throttle and govern the speed of the motor. Pushing the stick forward increases the motor's power and likewise pulling it back will put the motor into idle.

Mode 2 is more like the controls of a full size aircraft flown with a "Joy Stick". The right stick controls the primary controls up, down left and right. The left stick controls throttle and rudder for yaw and ground control. It's a personal choice and the arguments will go on which is the best. But if you have never flown before it does not really matter which ever you feel comfortable with. Your choice of instructor may also influence the mode you choose.

What about Package Deals?

You must realise that they are put together with one thing in mind - cost. But what do you get? Well! Models, motor and radio equipment have been mentioned with some manufacturers indicated to give you an idea. But you pay your money and take your choice.

Now for the "How"

How do I get started?

First of all you approach one of the instructors and ask for a fly with the club trainer as previously mentioned. You may have 2 free visits to the facility and try out which mode suits you. Next stage, purchase an A.R.F. trainer for a 40 to 46 cu. inch size 2 stroke motor. These are cost effective and get you started quickly. An OS 46 FX is good choice of motor for around \$200.00. With engines, you get what you pay for. Generally speaking, cheap engines can be less reliable and have a shorter life. An unreliable engine can cost you a model.

The radio equipment should be in the mid price range - that is, 6 Channels with rechargeable batteries (Ni-Cads) both in the Transmitter and Receiver that are contained in a Block (not loose batteries that clip into a battery carrier).

A Computer Type System on the Mode you have chosen with your free training flights is the system to look for if the budget allows, as with other hobbies as you progress you will be looking for added features, you may wish to expand the controls like Flaps and Landing Gear to that new model after the trainer.

Ask other members what they think of your choice and their advice. You can do this while you are sitting down having a drink and a burger at the BBQ. This is another good reason why you should join a club. We all have the same interests and the knowledge that can be shared is endless. It is a good idea to ask your questions before buying anything. This will allow you to buy wisely, in terms of price, quality and warranty backup. It will save you a lot of money and hassle, as well as minimising your training time.

COME ON DOWN, HAVE FUN AND DREAM OF THAT NEXT MODEL!!!!!!!

Some Do's and Don'ts

Don't try and do it alone in the back paddock, you have a better chance at winning "Lotto" than you have to teach yourself how to fly an aircraft or helicopter. You will probably crash your model and jeopardize everyone around you. Should you succeed, you will have learned bad habits and not know the correct way of doing things.

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Don't fly at any site on your own – do take a friend. You will note I have not called these aircraft “Toy Planes”. They are miniature aircraft and operate with powerful motors that at the first chance will bite, giving you the first look at how the inside of your hand works. They can inflict dreadful injuries. Today's electrically powered models are also very powerful and can start without warning, so please, respect that spinning thingy ma jig at the front.

Don't adjust the motor setting from the front leaning over the arc of the prop. Always adjust from the rear and if possible have a helper or have it tethered pointing away from other models or observers.

Don't fly without being a member of a club and do have up-to-date insurance.

Don't forget that compensation costs more than being a member of a club.

“IT'S NOT JUST WORTH IT”

Do's

Do try and keep that receiver antenna away from the battery pack, servos, wiring and metal push rods and wires.

Do keep the antennas wire in one piece don't cut it, bend it back on itself or bunch it up. It will affect the range.

Do use plastic clevises on the motor throttle if the throttle arm is a metal type. This can cause interference problems to the equipment.

Do use metal clevises on other control surfaces as some plastic types that are supplied with some of the kits can and do fail.

THIS IS A SAFETY ISSUE!

Do put pins into the hinges of the control surface by drilling a small hole through and gluing in a toothpick then trimmed off flush. A dress making pin can also be used by first cutting the pin to length, so it does not pass all the way through the control surface. Then, make the hole through the plastic hinge with a hot pin held in pliers. This is a safety requirement and ***MUST BE DONE***.

Do mount the receiver on / off switch the opposite side to the motor exhaust to stop the residue from the motor getting into the switch. If the switch is the slide On/Off type try and mount the switch so that it is “On” when the switch is pushed backwards. Installing the switch inside the model with a push / pull wire that when pushed in switches the receiver “ON” is a better idea. A small crocodile clip put in place between the end of the push wire and the fuselage side, stop it from getting accidentally push in on transit of the model to and from the field.

Do wrap the receiver up with some foam held in place with tape or rubber bands. The receiver is the most sensitive piece of equipment inside the model and relies on a device called a quartz crystal, to keep it on frequency. This relies on its own internal vibration to keep the receiver in tune. Other vibrations will cause the delicate device to fail.

Do use at least 8 good sized rubber bands, if this is the method that holds the wings on your model. Use 4 in a diagonal pattern to form a cross in the centre and 2 either side in line with the fuselage.

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Do change the rubber bands regularly as they do perish with fuel and sunlight.

Do try and place the fuel tank centre between the top and bottom of the tank 10mm lower than the main needle valve on the motor.

Do use a fuel filter in line to the motor and one on the fuel tube from your fuel container. The holes in the carburettor are very small and soon get blocked.

Do put an air cleaner on the intake of the motor as our local sand loves to damage motors. This can be purchased from the local model shops or you can make your own from a small square of panty hose material held in place with a number 6 "O" ring that are used on your sink water tap obtained from the local hardware shops.

Do ask other members around the field and observe some of the advertising boards around the site for model shops near to location.

All our Members will be pleased to give their assistance and advice to get you going down the path of this fantastic hobby of flying miniature aircraft.

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