



# VARMS' High Flyer Project

Do you want to find out how to really apply your science, technology, engineering and maths AND build a flying, radio-controlled sailplane that can fly for hours and carry a micro video-camera?

The Victorian Association of Radio Model Soaring (VARMS) has been in Wantirna, located behind the State Basketball Centre for the past 30 years. In that time, it has become the go-to club for people in Victoria interested in flying radio-controlled sailplanes and VARMS members have even been World Champions and Australian Champions. Many past junior members have used their skills and learning from this sport to shape their future careers, studying Engineering or Aerodynamics at places like Monash University.

**Top Picture:** Training gliders can fly up to 1000m high and stay up for hours if the pilot is good enough.

**Below:** Tuition involves two linked transmitters so the instructor can take over any time the learner feels uncomfortable. Crashes when training are rare.



This year VARMS is celebrating its 50<sup>th</sup> anniversary and as part of our celebrations, we are trying something different with a youth engagement project. We're trying to put back something into the Knox community that has supported us for so long and we want to attract new, young members to our club.

For the first time ever, VARMS is running a five-day build and fly program, which will be offered first to Knox secondary school students, and then to other select secondary schools. This program will run in the first five working days of the September school holidays (24-28 September). We hope to find six to ten 13-16-year-old students in Knox secondary schools who want to learn how to build and fly their own radio-controlled model gliders and find an enjoyable and practical application for their Science, Technology, Engineering and Mathematics knowledge.

You'll get practical, hands-on experience with different adhesives, assemble the electronics, learn basic transmitter programming, discover how aerodynamics works, the basic maths behind it all and what really makes a plane fly. You'll use hand-tools, learn materials-science, engineering of composite structures, make in-flight video's, use flight simulators and learn to fly your own electric-powered sailplane!

Each day you will get expert advice and tuition from skilled and experienced builders, who will help you make your model in our clubhouse. At the same time as the building is happening, you will also have some of the most skilled flier's in the club teach you how to fly radio control gliders, every day the weather allows. By the end of the program we hope that you will be flying the model you have made and even participate in the 50<sup>th</sup> anniversary fly-in the following weekend!

We know that as a beginner it is hard to know what equipment is worth getting and no-one likes wasting money, so we have used our experiences to source high-quality equipment that you will need for this project including: CNC-cut foam and plywood building materials, an excellent 16 channel QX7 Taranis radio control transmitter and matching receiver, lightweight servos, brushless electric motor and electronic speed control, 1600mah Lithium-Polymer battery, folding propeller, carbon fibre etc. All the best bits needed for this project, including the glue!



To make sure that you can have a plane that is just yours, we have developed three totally different, excellent flying, electric-powered model sailplanes that you can choose from and customise. All have been developed with an especially rugged, fast-build construction technique developed just for program participants to build and learn to fly.

VARMS wants all participants in the program to succeed and enjoy what they are doing for a long time, so we will give a free year's membership to any participant of the program and we will also pay half of your mandatory MAAA insurance fee for the first year!

This means as a full and insured member of the club you can come and fly at the VARMS field any time you like. You can also continue to get 1:1 tuition and free training every weekend until you get your Bronze Wings rating. You can even use your plane and equipment to enter club competitions!

Finally, to make sure that this experience is not a one-off, all participants in the program can choose to build any of the other models, purchasing the kits of parts through the club at a subsidised cost, as well as make future models within the youth group at materials cost only!

Daily up-dates of all participants in the High Flyers program will be posted onto social media for family and friends to check out.

We all were new in this sport once and we know that one of the biggest barriers for young people in this hobby is cost. As a result, the program is heavily subsidised by VARMS. The final cost to participants will be \$250 for the five days

If you're interested in having a go at the actual flying before committing to the High Flyer program, you can come to the VARMS field every second Sunday and sign up for our free 'Come and Try' lessons. The dates for these are on the VARMS website, go to [varms.org.au](http://varms.org.au) and look at 'Events' and you'll see the dates on the calendar. Mums, dads, anyone is welcome to come and have a go and see our clubrooms.

If you just want to go for it, application forms for the Youth High Flyers program will be provided to your school. Print one out, fill it in and follow the directions to send it in. Places are strictly limited, and applicants will be accepted on a first received basis.

**Top Picture: Landing where you want to is one of the trickiest parts of learning to fly and takes lots of practice. Here the plane misses the rope marker, but it will meet it's shadow!**

**Below: Colour on the bottom stops the plane disappearing from sight when flying under clouds!**

