

## History

One day in early 1985 I saw a large gas model helicopter fly at a nearby RC flying field and I became instantly hooked and fascinated with RC model helicopters.

That day's field experience and my desire to develop a small electric heli, that could be flown indoors, inspired me to start developing my own helicopters. My engineering and artistic background allowed me to draft some ideas and soon I embarked on a fascinating journey that has been my passion ever since that memorable day.

I started by making electric contraptions based on little information I had compiled from magazines and books on gas model helicopters. Initially these contraptions flew marginal, since I had little experience designing helis and only basic tools to work with. However, my desire and drive was so great that I devised creative ways of making parts using off-the-shelf materials with a basic Dremel tool and a small bench top drill press, reusing some standard RC car components such as ball bearings, motors and modified speed controllers.

With every attempt at making a successful small heli, my passion, interest and knowledge grew, and eventually I became more educated on the subject of helicopters in general and obtained better tools for making more precise parts. Learning from my own mistakes and prototypes was the best experience I had, improving on such with every next attempt. I never gave up, as I took every downfall as a learning experience and used such to refuel new ideas and design approaches which eventually paid off with success throughout the years.

In the process of making my own small electric heli, I developed a series of working prototypes which later were referenced in creating a line of rubber powered models kits I developed, marketed and distributed via mail order and through local hobby shops. These rubber powered models later on were food for thought in developing my RC micro helis, as technology was advancing and miniaturizing RC components.

Through the years, I designed and built several simple light weight helicopters using various types of electric motors and available small RC components for control. My direction was towards minimizing weight and finding creative ways of replacing some mechanical components for assembly simplicity and improved flight times.

I tried numerous mechanical configurations, direct drives, multi-stage gears, belt and pulley systems and even some setups that appeared far fetched but worked surprisingly well. By this time, two large electric helis had appeared on the hobby market, the Whisper and Concept EP. Others like the Honeybee had also appeared during this time but faded due to poor flight times. Although the Honeybee was a good attempt at introducing a micro helicopter with miniaturized standard model helicopter mechanics, it was still very heavy and lacked the finesse and design approach required for a successful flying micro helicopter.

My acquired electric heli design experience and experiments with rubber powered models told me that a light weight heli of 4 ounces was very possible and could be controlled with current technology, but it had to be designed creatively from scratch. I continued designing and building

cutting down weight as much as possible and using available off-the-shelf light weight materials and RC equipment.

One of the major breakthroughs in RC technology, in recent years, has been the miniaturization of receivers, servos and microprocessor motor controls allowing the design of lightweight models with less mechanical parts. I designed and built several designs to make use of this new technology simplifying many previous mechanical components. Going to simple pod and boom fixed pitch designs with single stage gear boxes and electrifying the tail end has been one of the simplest and most effective forms of making the micro helicopter possible.

I produced several working micro helicopter designs between 1996-1998, most notable the Robin 350 Electric Free Flight, for which I sold plans worldwide, and was a good reference for later RC personal developments like the Robin IR (Infra Red Controlled) , Mee-Kro and Robin 280 I RC controlled. These led to the development of the Sport LE which became the world's first 4 ounce micro heli I sold, fully assembled and in limited quantities, in 1998 and the Robin 280 kit in early 2000.

Ever since I started designing electric helis, and sharing my developments with the world, there has been a keen interest in such by commercial and non-commercial entities. In recent years, some companies contacted me with talks of mass producing one of my micro helis. A much tempting offer, I must say. At one point I considered such an offer only because I was not setup for mass manufacturing and it would have allowed me to concentrate on new development's. However, I felt such an agreement would hinder the original look, feel and support of my products, so I decided to set up my own small but dedicated manufacturing facility, developing custom tools and production methods to provide a total original and fully supported product.

Although this has been a slower process in terms of selling to the public, it has allowed me to retain full control and direct contact with my customers, something I hold dear, since it has taken a lot of hard work and dedication to produce and market my micro helicopter creations on my own. For this reason, I feel that my products stand on a level of their own as there is simply no match when compared with a larger company mass produced product.

MIA's current product line includes the docile yet acrobatic Robin 280 Kit, with optional parts and accessories to make the micro helicopter hobby experience truly enjoyable and fun. Other products, in the works to match the ever changing RC equipment technology, include micro helis designed for speed and intense flying action.

Electric experimental 1985 onwards



Astro 15 powered



Silhouette



Speed 400



Blue Knight

Various sizes of helicopters with different sized motors gradually getting smaller as experience was gained.

Rubber powered 1992



Bell 47



Feather

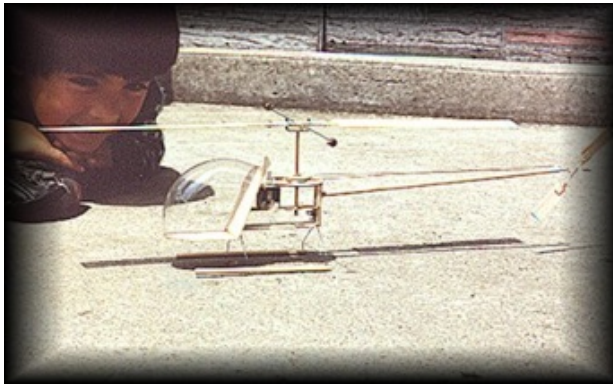


Hughes 500



Hughes 300

## Electric Free flight 1997



Prototype 1



Prototype 2



Prototype 3



Robin 350

Infra Red 1998



Mee-Kro



Mee-Kro 2



Robin IR



Sport LE