

# "Big is Good" - Flying Large Models

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**MOST** avid aero modellers start with a basic and docile small trainer aircraft and then progress to more challenging and agile planes as they hone their flying skills. Many are content to then continue flying and enjoying this type of model. There are others however, who relish the challenge of building and flying large model aircraft. Generally this category has a minimum wingspan of 2 metres.

Claiming to be the biggest model aircraft in the world in 2007, the Belgium based B29 "Dina Might" has a wing span of 8.9 m. This plane weighs in at 210kg and is powered by four 160cc engines. Built as a 1/5 scale, by anybody's stretch of the imagination – it is impressive!

On a local level we have the fine example of a Piper J3 Cub owned and flown by Maurice Astill of Tauranga. Maurice is a regular at model flying events all over the North Island and his large Cub is always a talking point and well photographed by spectators. Completed in 2006, with a wing span of 5.49m and weighing in at 42kg, this plane dwarfs other aircraft on the flight line.

## Safety and certification

Bigger aircraft require bigger components and control mechanisms. The larger surface areas and resistance on the control surfaces require bigger servos with the capacity to handle heavier loads. Safety is paramount with all categories of model flying but more so with big models as the potential for serious damage to persons and property is greater with larger craft. To minimise the potential for equipment failure there are mandatory safety standards such as the requirement of dual flight batteries.

Large aircraft are also subject to an inspection and certification process (by designated large model inspectors) to ensure adequate safety levels are achieved and maintained throughout the building phase and flying life of the aircraft. Under the umbrella of Model Flying New Zealand, the three stage certification process as follows:

- Stage 1) Registration of your project and Appointment of an Inspector.
- Stage 2) Certification of Design and



Peter Richardson's fine 1/3 scale Extra.



Maurice Astill's 1/2 scale Piper J3 Cub



No problems losing sight of this Tiger Moth.



85" TigerCat with twin 26cc petrol engines

Construction. This involves three separate inspections during the construction phase to ensure compliance.

Stage 3) Approval of Flight Testing and Issue of a Permit to Fly at Public Sites. This stage must be completed within one year of the Stage 2 certificate issue.

## Construction support

Miniature Aircraft of New Zealand (MANZ) is the main body responsible for the promotion and governing of non-competitive flying of large model aircraft nationally. The aim of MANZ is to guide and support builders and to ensure that large models are constructed and flown to the required level of safety standards. To

become a member of MANZ you must already be a financial member of a model aero club. Visit [www.manz.org.nz](http://www.manz.org.nz) for more information.

For many large model flyers, the whole process of bringing a model from the single dimension concept on a plan to the actual, three dimensional, completed model can be a long and arduous labour of love. A lot of time and effort is spent on perfecting authentic detailing to ensure that the plane is as close to the real thing as possible.

Fortunately for those of us that don't have time or patience to build from scratch, there are now available a range of large Almost Ready to Fly (ARF) models.

## In-flight behaviour

Many model flyers aspire to owning and flying a large model but may be daunted by the size of these aircraft when compared to the sports models they are used to flying.

Large aircraft flyers I have spoken to say that their aeroplanes are very easy to fly. Being big, they are very stable and not so prone to the vagaries of the wind and unstable air conditions. Big aircraft are also more visible, making manoeuvres easier to follow in the flying circuit. There is less potential for losing perspective on what direction your craft is flying in if doing large circuits and aerobatics. On the negative side, there can be issues with transporting such large planes. In many cases a trailer is necessary to ensure damage free transport to flying locations.

## Envious friends

Prospective large model owners shouldn't be put off by the belief that a large model equals a large price. Shop around and you are sure to find something that fits your budget and specifications whether you want to go with the scratch build option or ARF. Get yourself a large model and you will be the envy of your fellow flyers.