

Fly a Gyro !

Autogyros are fast moving from fringe to mainstream aviation. Try one and be surprised.

NEW AUTOGYROS continue to arrive on the register every few months as more people discover the fun behind what is almost a well kept secret of recreational aviation. Although these aircraft have enjoyed something of a rise in popularity in recent years, their sight is still rare enough to attract plenty of attention. Owners of two-seat gyros are regularly asked to provide introductory flights and passengers inevitably walk away with a big grin.

Moving on from history

Why then, aren't there more around? The gyro movement suffers to some degree from a history of misunderstanding amongst other aviation disciplines. Unfortunately, misconceptions abound regarding their operation and safe flight envelope. While some of these may have been justified in the past due to poor aircraft designs, suspicious home construction and risky pilots, the misconceptions are in no way valid in today's era of well designed factory built machines and professional training. Gyros are actually still banned from Ardmore Airfield (along with hot air balloons, parachutes and gliders), even

though gyros operate on a daily basis without any issues at other airports as busy as Tauranga, Nelson, Fielding, and many more.

Manoeuvrable and Safe

Autogyros are highly manoeuvrable aircraft and flying one is often likened to

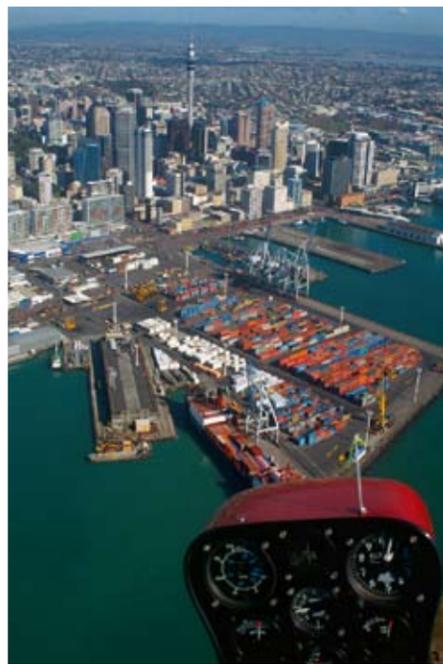
plus. At zero airspeed, a gyro will simply enter a vertical descent which can be fully controlled, though some airspeed will need to be re-acquired before flaring for a landing. Most gyros will maintain straight and level flight at an airspeed of between 15 and 25kts giving the opportunity to entertain oneself by "hovering" whenever there is sufficient wind available.

Safety also comes from simplicity. Gyro's have nowhere near the complexity of helicopter control systems. Most gyros use a semi-rigid two blade rotor system without individual flapping or lead-lag hinges. Neither is there a requirement for a swash plate, pitch links, or feathering hinges. Because gyros fly continuously in autorotation, there is no special pilot reaction required in the event of an engine failure other than the maintenance of airspeed and selection of a place to land. Even this task is made easier due to the gyro's ability to flare to a spot landing with little or no ground roll.

Autogyro flight control is straight forward and relatively easy to master. Most modern gyros are designed to be dynamically stable, though unfortunately this has not always

riding a motorcycle in the sky. Gyros are also very resilient to turbulence and can be a great deal of fun to fly in conditions which would ground other microlight aircraft.

By definition, the autogyro is a very safe aircraft. They cannot stall and can be flown through a wide performance envelope from zero airspeed all the way to 120mph



Gyro's in the City: The view of Auckland from the open frame tandem Dominator RAQ. You can just see the pilot's foot at bottom right of picture.



Gyro's in the Country: Magni RCR over Hawera.



Gyro's in the Mountains: The RAF2000 RAE is fully enclosed, providing obvious advantages for aviating in the mountains south of Nelson.

Nelson Gyro Training



Introductory Flights
Theory Assistance

Learn to Fly a Gyro in the sunshine capital of Nelson

Contact Lloyd Heslop
on 027 442 4500
or email:
j.ahart@heslops.co.nz



Contact: **Stephen Chubb**
Phone: (06) 272 6717
s.chubb@infogen.net.nz

World Leading Magni Gyros are available to order in NZ. They arrive fully assembled and test flown by the factory in Italy. Choose Italian Style, Speed, and the Proven Reputation of many hundreds flying worldwide.



been the case and novice pilots do need to understand the stability characteristics of their machine if they are to avoid handling problems, both airborne and on the ground.

With dynamically stable designs, gyros may seem deceptively easy to fly, however there are some fundamental differences in pilot reactions required compared to other aircraft. Proper training is a must, even moreso for pilots having experience on other aircraft.

Access to aircraft and training

Although gyro pilots and aircraft are dotted around the country, training and intro flights are currently only available at Tauranga and Nelson. This situation will hopefully change over coming years as more people discover the fun and safety that can be had from these aircraft.

A modern two seat gyro is actually perhaps the perfect aircraft for a Club to purchase and make available for its members to take either for a quick buzz around the patch, or on a cross country expedition. Clubs are about creating and sharing the fun of flying – and there is a lot of fun to be had in gyro flying. The NZ Autogyro Association encourages existing Instructors to consider obtaining a gyro rating and helping to both spread the word and increase the availability of instruction around the country.

With new factory built machines available to order on a turn-key basis, the scope is there to compare a gyro favourably with any other ready-to-fly microlight. Syndicate ownership is just as practical for gyros as it is for other aircraft.

Capable cross country or patch flying

For many years, gyros were the domain of solo patch flyers and used simply for the pleasure of "going for a fly" – there's not much better than looking down at the ground between your feet in an open frame gyro on a warm summer's day.

Since the advent of the RAF, Dominator, Magni, Eagle and Xenon designs, gyros have become practical cross country aircraft and flights up and down New Zealand are now being made with some regularity. In countries such as Australia and South Africa, gyros are regularly put into commercial work such as mustering and spraying, roles for which their simplicity, manoeuvrability and low operating cost makes them ideally suited.

For more information

Contact any of the advertisers on this page. Note also the NZ Autogyro Association annual fly-in is to be held at Dannevirke starting 24th January. Many enthusiasts are expected to attend and there will be aircraft available for introductory flights throughout the weekend.



Membership of the NZ Autogyro Association is open to everyone interested in our sport and only costs \$35 per year.

Dannevirke Fly-In
24-26 January 2009

Meet fellow enthusiasts, see a range of single and two seat aircraft, learn about our sport and come for a fly. We'll see you there!

For more information, check the website or contact our Secretary, Karen on (06) 327 8876

www.autogyro.org.nz

Autoflight

Geared Reduction Drives

Subaru EA & EJ engines
Universal geared drive unit for airmotive engines up to 160hp
Choice of ratios
Offset up or down



Dominator Autogyros

Single and Tandem Autogyros
Centreline thrust
Dragon Wings Rotors
Autoflight engine options
Nose or instrument pods



Contact **Neil Hintz** Ph./ Fax (07) 824 1978 email: nckm@wave.co.nz
Mob: 027 271 0602 www.autoflight.co.nz

Propeller Balancing and Digital Vibration Analysis



CENTRAL AERO
ENGINEERING
KEEPING YOU FLYING

Hangar 1, Steele Road
Hamilton Airport

admin@centralaero.co.nz
www.centralaero.co.nz

Ph. Norm on 021 418 677
Ph. Paul on 021 743 033

SCENIC TRIAL FLIGHTS - FLIGHT TRAINING - GYROPLANE SALES

FLY A GYRO!

FLY TOPLESS!



THE EAGLE

FLY IN STYLE!



THE XENON

Trial Flights from \$95

Price subject to change without notice.



GYRATE
NEW ZEALAND LIMITED

16 Dakota Way (behind Bunnings)
Tauranga Airport

MOBILE: 64 (0) 21 038 0760
WEBSITE: www.gyrate.co.nz

SCENIC TRIAL FLIGHTS - FLIGHT TRAINING - GYROPLANE SALES