

Soaring Australian Thermals

The Collected Papers of
Garry Speight
from 1966 to 2015



The LAK-12 Re-visited

By Garry Speight

Originally published in Australian Gliding, November 1993

In the February issue of "Australian Gliding". Viv Drew gave her impressions on the LAK-12 which she flew in Sweden.

A LAK-12 is now in Australia and Garry Speight gives his opinion of the type.

I had the opportunity recently to do some cross-country flights in a brand new open class glider a Lithuanian LAK-12 "Lietuva". I thoroughly enjoyed flying it, and my impression is that it is an excellent aircraft.

My experience in open class gliders is very limited, because they have been beyond my price range, either to buy or rent. I have had only a few cross-countries in a Nimbus 2 and some dual in a Janus and a DG500.

The LAK-12 is unique in being a production open-class glider at a price of less than \$55,000.

That is cheaper than any standard class glider: a pilot looking to win the standard class nationals must spend a great deal more.

Anyone thinking of buying a new glider should consider whether the standard class is the proper choice. For less money you can get a glide ratio of 48:1, which will keep you airborne before the standard class gliders take off and after they have landed.

The LAK-12 is a 20.4m span glider with a two-piece wing, and with the tailplane mounted just above the fuselage. It has a single retractable main wheel and a tail skid. The flaps have six settings, and the ailerons deflect with them.

Integral water ballast tanks in the wings take 190 litres. The maximum wing loading goes right up to 45 kilograms per square metre and a realistic minimum is about 30 kilograms per square metre.



The LAK-12 Re-visited

The construction of the glider seems to be very sound and conventional. Although most stresses are carried by fibreglass and carbon fibre, there is a steel tube assembly carrying the wing mountings, the undercarriage and the main control bell-cranks. The finish is excellent.

In the cockpit I found I was very comfortable. and I was impressed by the visibility. The handle of the control stick is a little high, but the forces are light. The rudder pedals are pivoted at the instep. I mainly kept my heels on the floor rather than in the heel-rests.

The spring-trim for the elevator is on the left of the stick. It is copied from the Jantar and is not a good design. Fortunately it is not needed except when entering and leaving a thermal.

The flap handle, mounted high on the left side of the cockpit, is very convenient and smooth to operate. There are two negative flap detents for high speeds, one for zero flap, two positive flap detents for thermalling and another for the landing.

The airbrake lever is beside the seat below the flap handle. The airbrake doesn't do a great deal, but the landing flap causes a fairly steep approach anyway. The release handle and the rudder pedal adjustment are conveniently placed just ahead of the airbrake handle. The wheel brake lever is on the control stick.

The only control on the right wall of the cockpit is the undercarriage handle. This is mounted on a tube sliding along a rod that is fastened to the wall at the front end. The "up" and "down" locks are worked by the thumb. Frankly, the locks are a bit fiddly. For a new pilot it would pay to put the glider on a dolly and practice cycling the undercarriage up and down to get the hang of it.

The canopy mounting system is the very latest design. Research suggests that most canopies when ejected blow back into the cockpit, where

they are likely to injure the pilot, before they fly back and demolish the tail.

The LAK-12 canopy pivots forward in normal use, as on many modern gliders, but the ejection system is different. There is a red "canopy eject" handle on the panel. When this is pulled, a powerful spring throws the front of the canopy up into the airstream. The rear of the canopy remains momentarily held down by the main fastening pins until the airstream lifts the canopy right off. A large lug behind the pilot's head prevents the rear of the canopy from coming down and striking the pilot as it goes.

For normal use, the handles of the rear fastening pins are a bit flimsy. I found that I had to lift and lower the canopy by reaching back over my head to the canopy frame. (I detest people who put greasy finger marks on canopies!) When open, the canopy is held up. not by a gas strut, but by an over centre arm. To unlock the arm one pulls a white handle on the instrument panel. As to the moulding of the canopy itself, the manufacturers do not seem to have achieved the intended shape. Perhaps this will be rectified later.

The LAK-12 comes with a full panel of instruments, including an airspeed indicator in knots and an altimeter in feet. Also included is an electric variometer with speed command. This seems to be modelled on a Borgelt instrument, and works well.

I liked the calibrated zero adjustment for rate of climb in the "Vario" mode, which allowed me to set the vario zero to the MacCready threshold value. By pressing buttons you can change the response rate in steps from 1 to 5 seconds. (I prefer 3 seconds). I found that the sound of the instrument was sometimes hard to hear.

Two interchangeable batteries are supplied, each fitted in a neat box which clips securely in place. One fits in the nose, where it provides permanent ballast. The other fits in a compartment

The LAK-12 Re-visited

over the wheel. The batteries supplied each have ten wet cells making up twelve volts. If necessary the boxes will also take the gel cells that are commonly used in Australia.

Flying the glider is straight-forward. Control response is very good, in fact the rate of roll is like that of a standard class glider. Other pilots have also noted how easy this glider is to manoeuvre in comparison with similar aircraft, such as the Nimbus 2 and the ASW17. It is particularly remarkable since the wings are very like those of the Nimbus 2.

I flew the glider empty and with full water. With full water it seemed to thermal best at about 50 knots and 45 degrees of bank. That was in small rough winter thermals.

The glider provides luxury gliding at low cost. If such low-cost open-class gliders remain available there could well be a drift away from the standard class and the 15 metre class. Why not go for the best glide ratio per dollar?



I flew the LAK-12 during one of several visits to Waikerie, South Australia, to train young Japanese pilots.