

# VELI *Nice* VOLE



**Clifford Kershaw's  
enlarged Vintage  
classic is ideal for**

*48in canard is surprisingly elegant for a Vintage subject. Fit two or three-function radio and fly! Ideal for up to 1.5cc motors.*

**O**NE of the more foolish things I did in my sadly distant youth was to sell my Keil Kraft Bandit, complete with Mills 1.3 Mk.I and Snip timer for thirty bob – er, £1.50. If that doesn't convince you I'm daft, I confess my Southerner Mite went, same price, same day, complete with Mills .75. That was in the early Sixties when I'd just bought my R/C licence and was trying to save. Radios cost twenty times more then than now in real terms. It was about that time I replaced the Webra Mach I in my Dixielander with one of the new-fangled Cox Babe Bees and sold it as a Sunday Flier's pussy cat for a similar price. I soon came to regret these impulses and spent the next twenty years trying to replace my lost engines. By 1970 I'd landed a rodless .75 for 3/9d and in July '71 added a 1.3 Mk.II, but my old 1947 Mk.I, the second engine I ever bought, remained irreplaceable...

Until two years ago when a friend passed on an old engine he'd been given – not just a 1.3 Mk.I but a Mk.I Series I, No.10, no less! There was a string attached; he wanted to see it fly, preferably in something of appropriate vintage. He suggested Velivole, a design he knew I'd admired since seeing one fly forty years previously. Now Velivole is a very strange bird indeed; it not only flies backwards but upside down as well. Furthermore, since it leapt out of the cover of my June 1946 Aeromodeller I had never met anyone who could pronounce it with certainty. In 1946 I'd seen photos of such exotica as the Kyushu Shinden or Curtiss Ascender but I'd certainly never met a canard, let alone seen one fly. Marvellous!



*Which way? Velivole will arouse much debate on the flying field...*

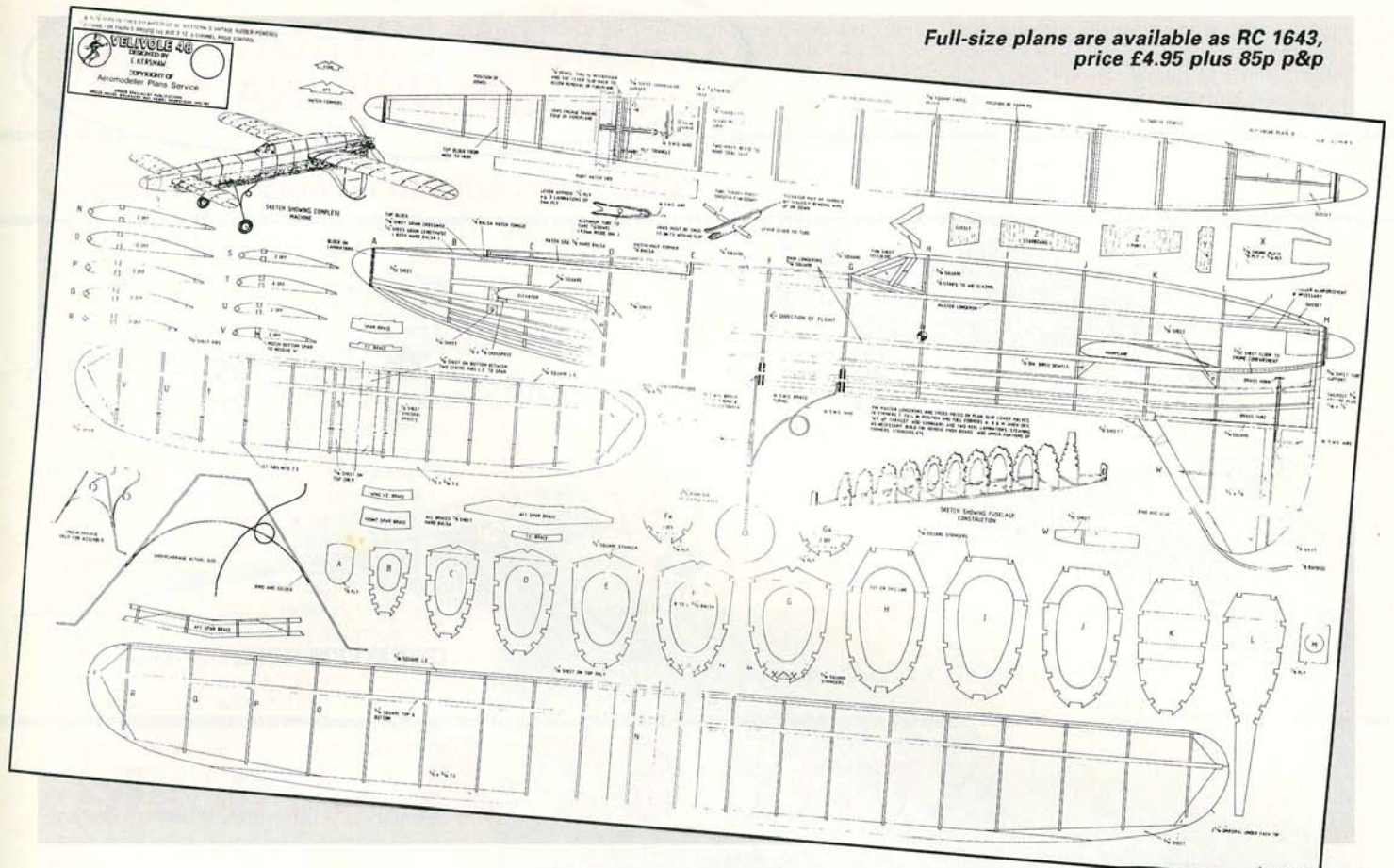
Not that Velivole's flights lasted very long, as rubber suitable for motors remained unobtainable for us lads, as it had been through the war; some kits included it but these we could rarely afford. We occasionally got our hands on 'synthetic rubber' which I think you were supposed to boil before use, whereupon it should swell like weird, black noodles. No doubt when expertly prepared and handled it worked well enough but we found it one of the least elastic things on earth. You got one flight, after which it remained stretched out in the fuselage bottom like a dead snake or, worse still, bunched up at one end or the other with predictable results. We preferred to buy or scrounge household electrical flex as in those days the insulation was not plastic but rubber. This we carefully slit and peeled away from the wire; four strands gave around thirty seconds run – who said electric free flight was new? In his article 'Talking of Canards' which accompanied the Velivole plan in 1946 Mr. Laidlaw-Dickson claimed that for a canard,

'stalling is impossible', bad trimming producing solely 'a curious pitching movement'. This comforted us yet didn't fully prepare us for Velivole's odd gait: when over-elevated or tail heavy she didn't pitch so much as porpoise smoothly along, a flying sine wave. Observing this in 1946 didn't prepare me for my 1989 versions antics either, but I'm jumping ahead.

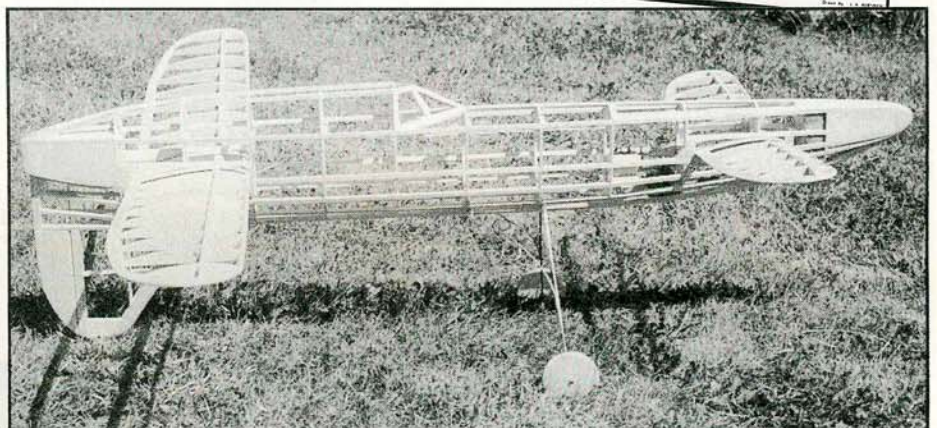
## **So then...**

I scaled the original Aeromodeller plan up one-and-a-half times as this gave a span and area typical of contemporary Mills-powered models and I thought I could keep the wing loading reasonable at that. Even so the wings look unusually small compared with the huge fuselage. Keeping weight down had first priority from the outset because when I had added 'radio assist' to my Keil Kraft Outlaw it ended up over twice the design weight, which spoiled the glide and overstressed the balsa wing structure. The 1946 Velivole was mostly made from 1/8in balsa, square and

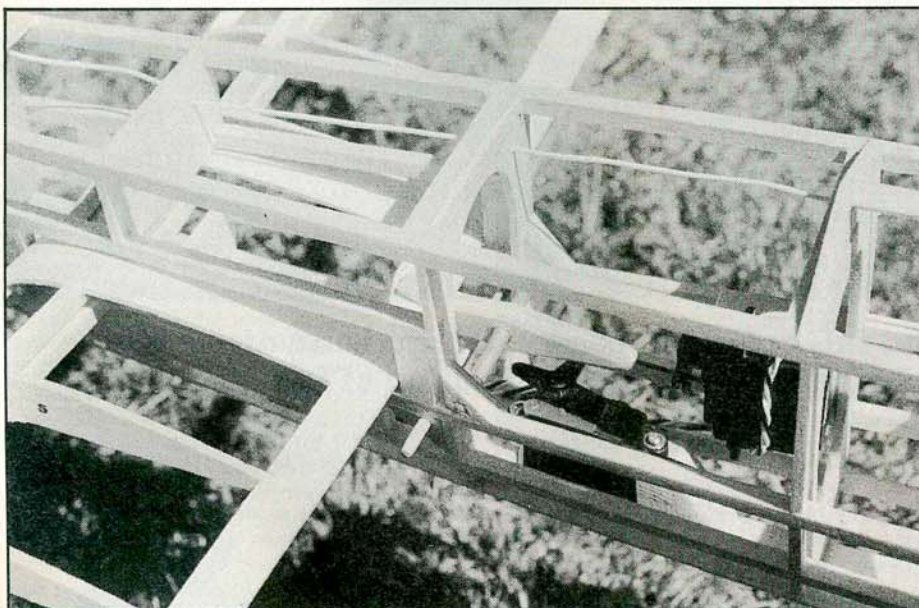




sheet, which at 1.1/2 times translates conveniently into 3/16in. Of course, this yields more than double the cross sectional area – over three times the volume of wood. Furthermore, the four 3/32in stringers turned into an unobtainable 9/64in which I rounded up to 3/16in. To avoid overkill and possible overweight I used only medium-soft, producing adequately strong fuselage fin and foreplane. For the wing, which lacks the now almost universal sheeted leading edge 'D' box I reserved my hardest, but still no more than medium. If you buy two or three hard sheets and cut all components from these, as I did, you will get (by magic!) medium spars, stringers, trailing edges and so on –



Structure is uncomplicated. Note nicad pack in nose.



Foreplane linkage is totally enclosed. Neat!

cheaply. My only deviations from the original structure of both flying surfaces was to allow the dihedralled panels to continue to the centre instead of having flat centre sections, adding a couple of braces, and fitting 1/16in sheet flush with the upper surface instead of on top. The wings bend without so far breaking but I have not performed any violent manoeuvres other than the vertical descent I'll describe later. If you are uneasy about wing strength I suggest substituting spruce for the upper mainplane spar, but no more. These surfaces also appear vulnerable because they pass through the fuselage and have no 'knockoffability' or indeed scope for movement at all; you might prefer to accept a slight weight (and authenticity?) penalty and build separate plug-in halves. Me, I try to *vola cum cura*. Building the flying surfaces is so straightforward instructions would be superfluous.