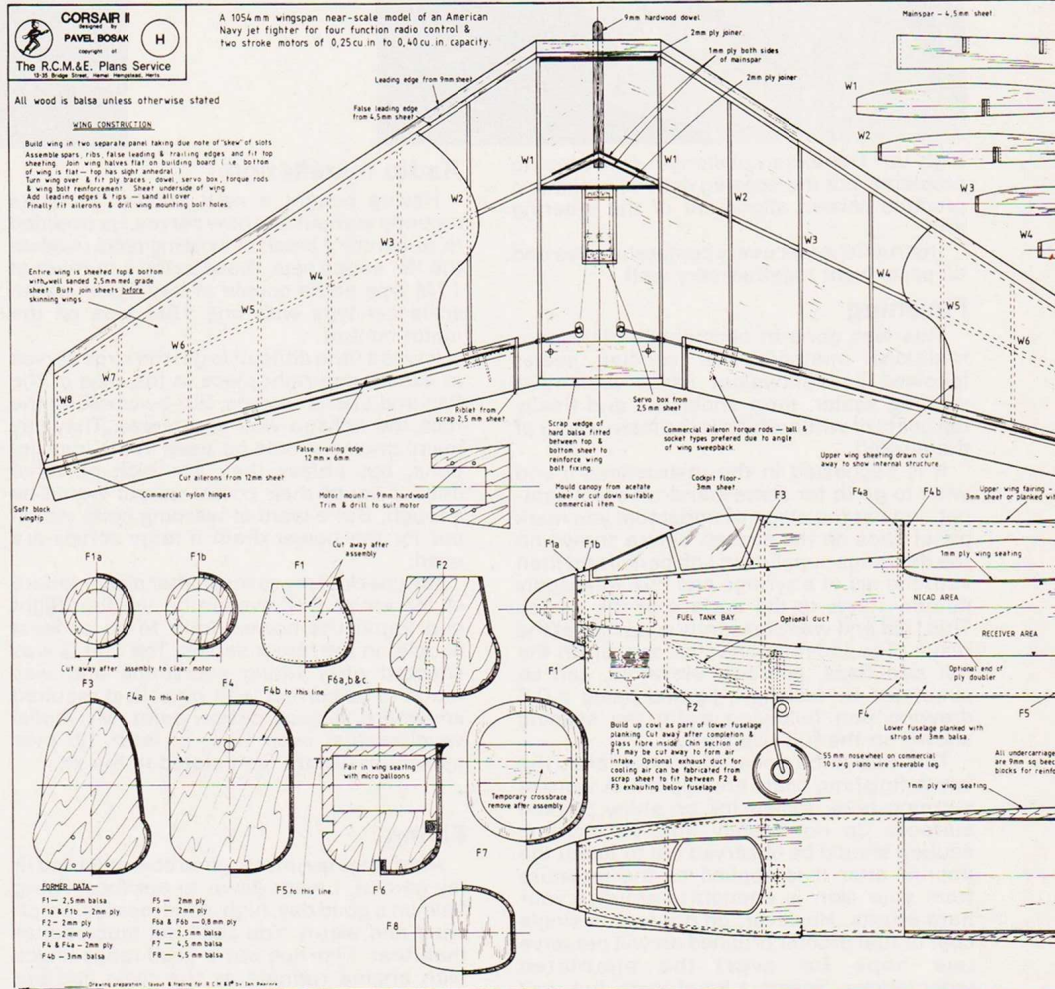


CORSAIR II

**SPORT
SCALE
US NAVY
JET**

**4 FUNCTION R/C
'40' MOTOR
41 1/2 in. SPAN**

**DESIGNED BY
PAVEL BOSAK**



The A-7 Corsair II is one of those unique aircraft that will go down in history, its concept stemming from the US Navy's desire to replace its ageing A-4 "Skyhawks", themselves one of the world's most outstanding naval light attack aircraft. Calling for a vastly improved war load/radius of action, the specification led the Vought organisation to produce a design based upon its earlier, equally successful F-8 'Crusader'. However, despite family resemblances, of the A-7 (later to be dubbed 'Corsair II' out of respect for the renowned F-4U 'Corsair') to the F-8 are largely skin deep, for the A-7 was a different kettle of fish! With a weapon load in excess of 10,000lb, subsonic speeds and a radius of between 550 miles and 2,800 miles (dependent upon the mission requirements) it produced a marked step forward for the navy. So much so that the 'SLUF' (nicknamed by the pilots and standing for 'short little ugly fella') was soon to be adopted by the US Air Force for tactical attack roles.

The first pre-production A-7A flew on 27th September 1965, an incredible 18 months from contract signature, and some 25 days ahead of schedule. The improved A-7D for the Air Force appeared on 26th September

1968 and was the first subsonic aircraft to be acquired by the Air Force for some 15 years. The armament and avionics differed and saw the introduction of the 6,000 round per minute M61 cannon.

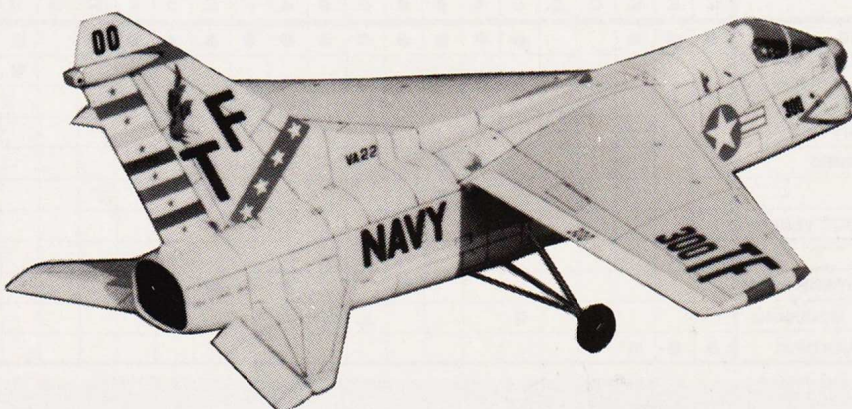
So successful was the 'D' variant that the US Navy ordered its own version of it under the code A-7E. Today nearly 300 A-7Es still serve with the US Navy and almost as many 'D' variants with the US Air Force. A further development is the proposed A-7X ground attack aircraft that could still 'happen' for the future.

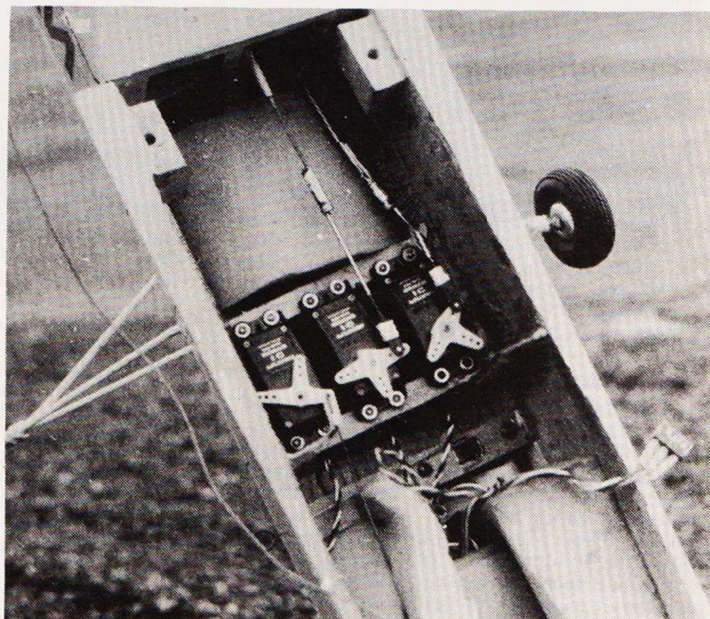
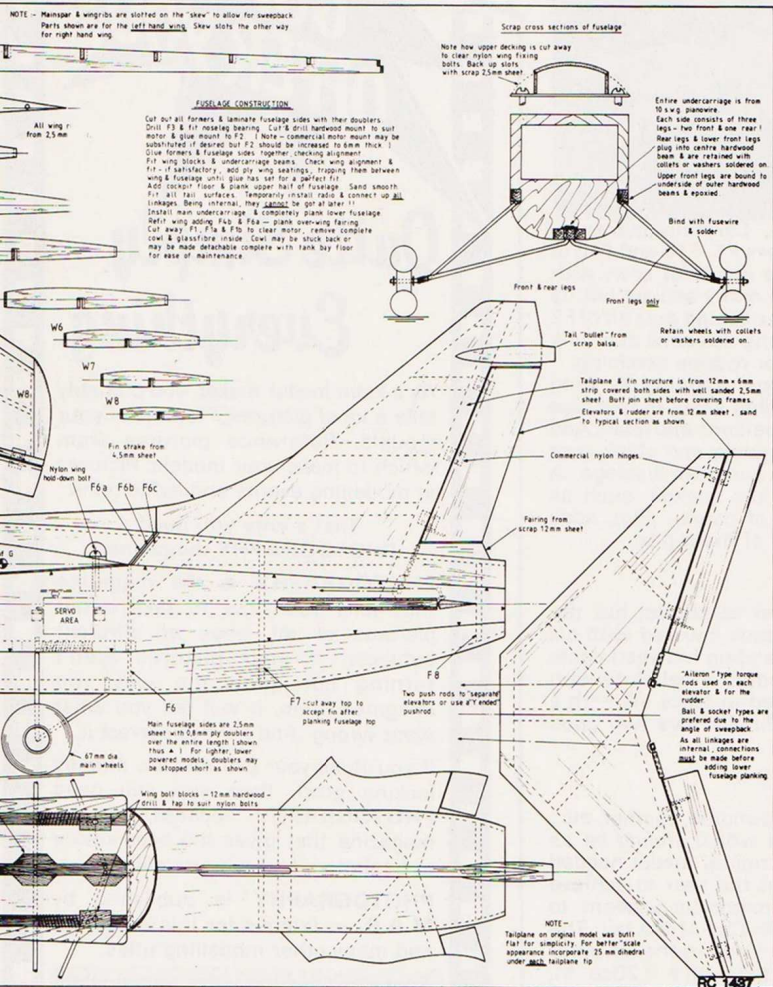
From the modellers' point of view the 'Corsair II' has a lot to commend it. The high, swept wing and low set tailplane make a particularly stable model and it might well be

assumed that a 'near scale' first aileron trainer really is to hand. Furthermore the nose mounted radar affords the modeller with the ideal compromise in terms of a 'propeller and spinner' arrangement for those not wishing to venture into the realms of ducted fans. Even the massive chin intake (used to feed the fuel miserly Allison TF-41-A-1 turbo fan — a licensed built Rolls-Royce 'Spey') provides a neat solution to the fully cowled inverted motor. A short sturdy undercarriage (a *must* for carrier operation) absorbs rough field model operation with ease, the high wing making hand launching that bit easier and safer.

From the eye appeal point of view, the majority of US Navy A-7s were gull grey and white, but sport quite vivid squadron codes making for an attractive colour scheme. For the airbrush aficionados the US Air Force have applied many and varied low conspicuity soft edged schemes, not to mention the 'standard' South East Asia colours of two tone green and brown upper, pale grey belly. Reference to any of the current crop of books on modern jet aircraft will result in a mind boggling array of colours from which to choose.

It should be stated that severe liberties have been taken with this design on the





Above: adequate space for Author's Simprop R/C equipment, equipment bay is cavernous, no excuse for inadequate shock protection.



grounds of simplicity, probably the most noticeable being the tailplane which is shown flat where in fact the real 'Corsair II' has a small amount of dihedral. It should not be beyond anyone seeking to improve the model to incorporate this feature. Similarly, twin nosewheels, M61 cannon, laser range-finder, flight refuelling probe, can all be added to capture the real tough character of the 'SLUF'. Indeed the right external weapon points could well be included (Sidewinders on each side of the fuselage under the wing L.E. and three hard points under each wing!) giving the model the air of the full size when fully loaded. However, it might be advisable to make the underwing ordnance detachable for flight for one has little idea on the effect



that they might have on flight performance.

There is little to say about the model's structure, most of which is adequately covered on the plan, but a few constructional notes might not come amiss.

Construction

It is traditional to build the wing first, and this is assembled as two separate panels. Assemble all ribs onto the spars noting how the slots are 'skewed' to allow for sweepback angle. Add false L.E. and T.E. and fit top sheeting. (It is helpful if sheeting is butt jointed first). Join wing panels with bottom flat onto building board (i.e. all taper is on the top surface of the wing!) The full size has a greater amount of anhedral and more experienced modellers may wish to follow this feature.

Turn wing over and fit all ply braces, dowel and reinforcement for wing fixture bolts. Fit torque rods using proprietary items of the 'ball and socket' variety due to the sweep back angle. Assemble servo box from scrap balsa and sheet the undersurface. Fit wing tips, leading edge and ailerons and sand smooth.

Make up tail assemblies from strip as shown, facing both sides with balsa sheet, sand and put aside.

Fuselage structure comprises a series of formers with balsa/ply laminated fuselage sides. Care needs to be taken to align this properly, until the adhesive is fully set.

Laminating the fuselage sides can be tricky, but the judicious use of water can curve both the balsa and the ply in the right areas. Using contact cements will produce a quick job and assist in keeping the correct curves.

Plank the upper front and rear of fuselage with strip balsa and sand smooth. Cut relevant slots and fit tail assemblies. Note that all tail surfaces employ the same type of torque rods as used for the ailerons.

This is the time to fit the R/C gear and set up all the push-rods, for being internal they cannot be reached when the model is finished. Be satisfied with nothing less than perfection — they cannot be adjusted later!

Fit U/C blocks and U/C in place and plank

underside of fuselage. Carefully cut away cowl and cut out formers F1, F1a and F1b to clear motor. Reinforce inside of cowl with glassfibre. Options are many and are left up to the individual but an exhaust duct aft of F2 is advisable as is making the cowl and tank bay floor detachable for routine servicing.

Fit wing onto fuselage, trapping ply wing seats in place. Glue wing seats to fuselage and fair in with micro-balloons and resin. Add half formers to top of wing and plank over wing to fair into front and rear fuselage. A few bits and bobs in the cockpit, such as dashboard, seat, and of course pilot, adds much to the character of the model.

Finishing

Finishing is a matter of choice, but the original model was tissue covered with six coats of clear dope, sanding between coats. Top colours were automotive cellulose with all panel lines produced in black ink with a draughtsman's pen. Finally give two good coats of fuel proofer.

Flight tests

Re-install R/C and fit engine, spinner, etc., and check for C of G *which should be as shown on plan*. The original model needed considerable weight at the rear to achieve this balance and it might be prudent to relocate the receiver Ni-Cad at the tail. The original model had no vices in the air other than that of speed. Fitted with a 0.20cu. in. motor, it had the performance of the average Piper, Cessna or Auster. However, re-engined with a Schneurle ported '40' (hence the need for weight at the tail) it performs much more like a jet fighter should be. Take off is usually within 9-12 yards! Airborne the model is reasonably docile whilst retaining good aerobatic performance. However due to the rather limited wing area, landing approaches are at somewhat higher speed than one might be used to (in keeping with the jet fighter image) and one should allow room for this. That really sums it up. I hope that many happy hours are afforded to those wishing to build the A-7, and many successes to those entering stand-off scale competitions with it.



Left: Pavel Bosak fires up his prototype for another successful flight. Pavel reports sprightly performance with a '40'.