





Produced by popular request  
– HAROLD TOWNER's specially designed

# AVRO LANCASTER

**CONTROL LINE SCALE MODEL FOR 1.5 c.c. ENGINES**  
**52 inch wingspan: 1/24th scale: simple, tough structure**

The Avro Lancaster found its niche in history as being the only bomber of World War II capable (when suitably strengthened) of carrying the 22,000lb. 'Grand Slam' bomb.

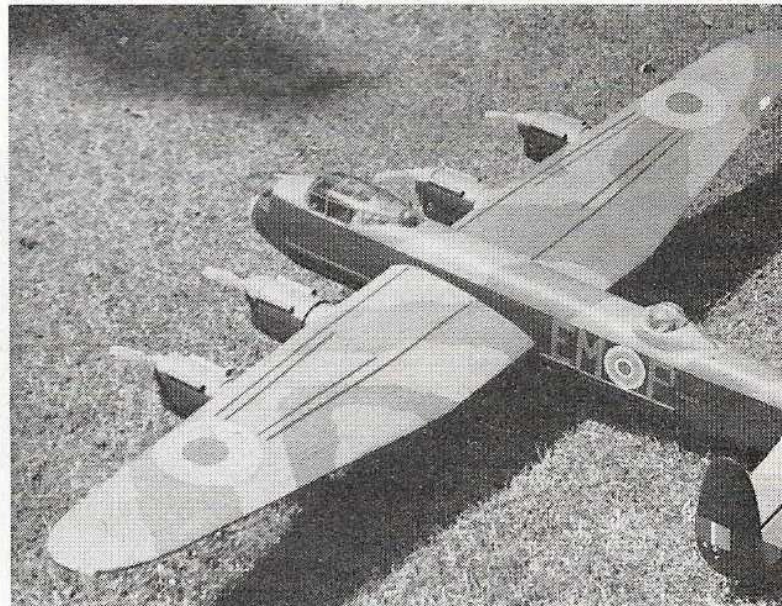
Designed by Roy Chadwick as a development of the Manchester III to accept four of the then new Rolls-Royce Merlin XX motors, it was extremely successful – total production running to 7,377. After the war, the Lancaster continued in service with Coastal Command until 1956, when it was replaced by the Shackleton M.R. Mk.2. The Lancaster retains a great affection from all who were associated with it, and as the article in SCALE MODELS, March 1970 described, there are many preserved in the U.K. and Commonwealth. It has been a popular modelling subject. There are several good plastic kits, but until we commissioned scale expert Harold Towner to produce a 1/24th 'simple' structure version for small engines, the demand for plans was unsatisfied. So here we have a 'mate' for the Halifax Plan CL 919 (10/–) and one which will please every builder. 'Simple' is of course a relative term, but the theme throughout has been to keep construction straightforward, and anyone with a little experience should have no difficulty in building this model.

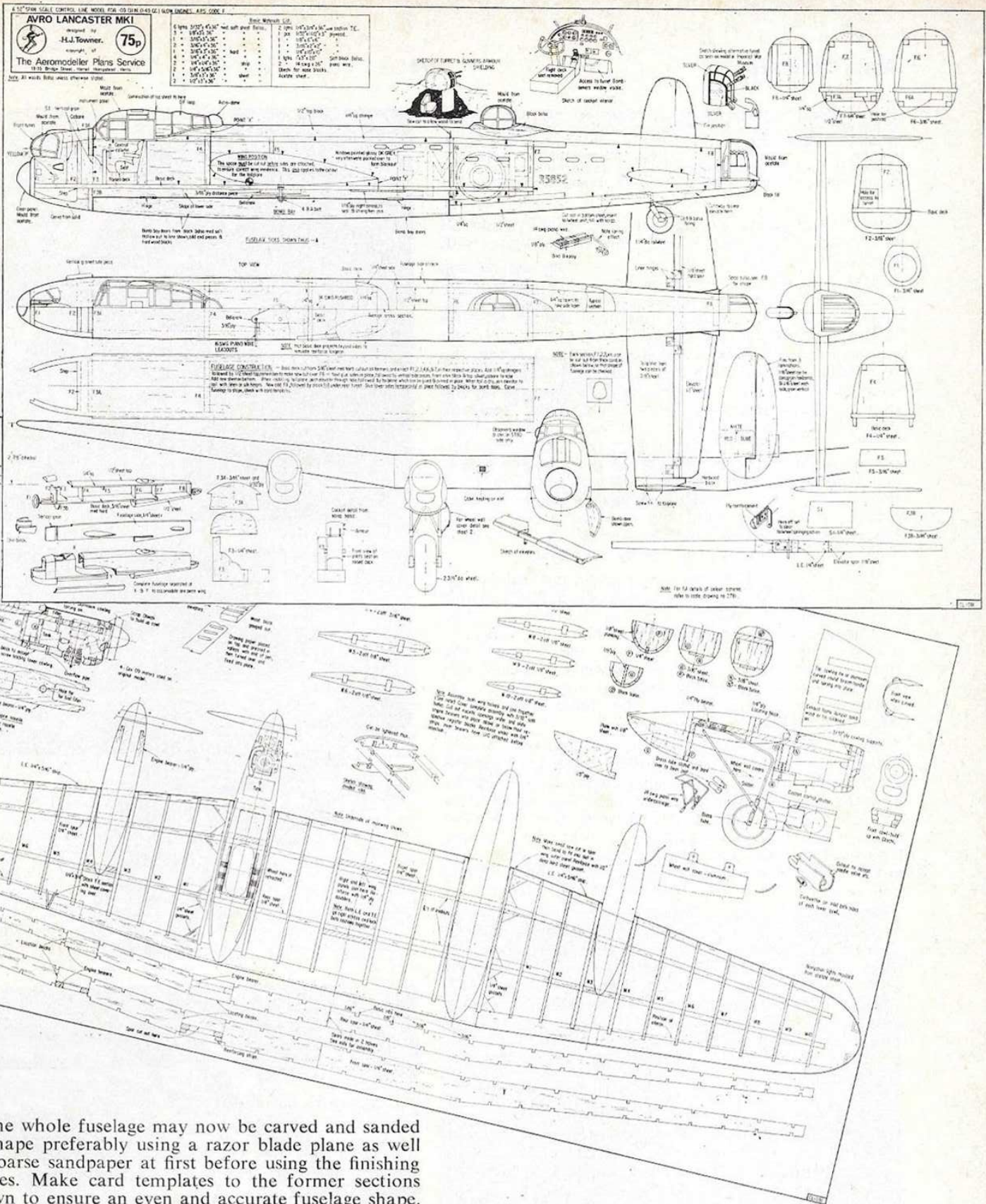
P.V.A. glue was used throughout on the original due to its high strength, low shrinkage and slower drying time – essential when glueing large areas.

Fuselage construction is clearly explained in the 'exploded' diagram. First cut-out the basic deck from 3/16 med. hard sheet, followed by all the formers. Cement these in their respective positions using a set square for accuracy. Now add the 1/4 in. sq. stringers and the soft 1/2 in. top sheeting – noting the saw cut

over F.6 to achieve the 'bend' in this block. Next cut out the fuselage sides to the outlines marked, and glue in position. The vertical side pieces, front chin block and top are then added, followed by the cabane sheeting.

Make up the tail wheel unit, then let it into the bottom sheet before glueing this in position. Mount the bellcrank on its platform, then glue in position. Add the lower fuselage sides below the basic deck, make up the undercarriage doors, and add the remaining block below the nose and beneath the rear turret.





The whole fuselage may now be carved and sanded to shape preferably using a razor blade plane as well as coarse sandpaper at first before using the finishing grades. Make card templates to the former sections shown to ensure an even and accurate fuselage shape.

The wings are built as two tip panels, and are then joined at the centre section. Cut out all the ribs, noting that they are split horizontally so as to form an immensely strong unit when bonded to the spars. Make the spars from medium hard 1/4 in. sheet, notching them to accept the ribs. Pin one half of the rear spar over the plan, then pin the front spar in position with 1/4 in. packing under it. Add half-ribs W1-10, and when dry, add the leading and trailing edges, followed by the laminated wing tips. Leave to

dry thoroughly, then remove from board and add the remaining rib halves. Repeat for the opposite tip.

When this is completed, assemble over the plan again and build the centre-section. The leading and trailing edges traverse the full length of the centre section, and the spars butt-joint at the centre-line with 1/4 in. plywood braces. Carefully epoxy the 1/4 in. plywood locating blocks for the engine mount in

## Aero Modeller

The designer, Harold Towner, displays his fine model equipped with four Cox .09 cu. in. motors. Below, the impressive appearance of the model is enhanced by the fitting of the static, three-bladed props and aluminium spinners. Canopies etc. are moulded from acetate sheet, and are much easier to make than it would seem at first glance!

position—accuracy is essential here. Finally, add all the gussets and sheet cover the entire wing with medium-soft 3/32in. balsa.

Make up the undercarriage units as shown on the plans, and attach them to the plywood, inner nacelle, engine bearers. Cut out the openings for the nacelles in the underside of the sheeted wing, and slide in the engine bearers—epoxying them above and below the respective plywood blocks. Repeat for the outer nacelles. Build up the nacelles by cutting out the plywood keels and balsa formers, gluing in position, then planking with medium soft balsa. Mount either small commercial fuel tanks or make them from tinfoil to suit the available space. The cowling fronts are laminated from obechi, and cut away to clear the engines, while the under cowls are made in three pieces, and are located by a wood screw into a block immediately behind the firewall. Top cowlings are cut from tinfoil, and spring into place.

With the nacelles etc. completed and sanded to shape, the fuselage may now be added. To do this, carefully cut the fuselage in two at the points 'X' and 'Y' as indicated, and epoxy the whole unit together, making sure that the wings are square with the fuselage and that the fuselage is straight. Leave this whole assembly carefully blocked up until it has quite set, then fill in any of the joints which show with body putty or similar filler.

Shape the tailplane from two laminations of 1/8in. sheet balsa and slot through the fuselage, then cement in position, checking for squareness. Make up the elevator leading edge from 1/8in. and 1/16in. sheet, then add one half of the 1/8in. elevators to this spar. Slot through the fuselage and add the other half before hinging the unit. The fins are laminated from 1/8in. and 1/16in. balsa and may be fixed to the tailplane with woodscrews so as to make them detachable, if required.

At this stage, interior detail may be added and the cockpit etc. painted. The mouldings are all made from .025in. acetate sheet, pressed over a suitably curved male mould through an appropriate cut-out in a piece of stout plywood. If the acetate is warmed in an oven, make sure that gloves are worn. Hot oil is a better method as it gives a more even temperature. Details of cockpit framing etc. can be shown by thin strips of adhesive tape, coloured, and simply pressed in position.

When satisfied that all gaps, dents, etc. have been properly filled, cover the entire model with lightweight tissue, and thoroughly seal the surfaces with sanding sealer and dope. This achieved, the colour may be applied. The original was finished in flat black and standard camouflage, and finally fuel proofed with Kingston Polyurethane Eggshell—which gives a realistic semi matt finish and is reasonably fuel proof. Alternative colour schemes are detailed on the *Aeromodeller Scale Drawing No. 2781*—price 5/6d. including postage.

With the bomb doors open, the bellcrank is easily accessible. Note how the leadouts pass through the inboard nacelles. It would not take much ingenuity to have those bomb doors opened by a third line—and just think of the possibilities that would then arise!

