

**P. P. AEROPARTS
MODEL
ACCESSORIES**

REMEMBER THAT ORDERS FOR P.P. AEROPARTS CAN BE SENT BY FREEPOST, SO NO STAMP REQUIRED! USE THE PRE-ADDRESSED ENVELOPE INCLUDED WITH YOUR DELIVERY. WE WOULD OF COURSE BE DELIGHTED TO RECEIVE YOUR SUGGESTIONS FOR FUTURE RELEASES, THESE & OTHER ENQUIRIES CAN BE SENT DIRECTLY TO

**P.P. MODELS
STUDIO 2
9 BATH BUILDINGS
MONTPELIER
BRISTOL, U.K. BS6 5PT
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HAVE YOU EVER SPENT HOURS TRYING TO MAKE AN ACCESS LADDER FOR YOUR LATEST MODEL MASTERPIECE? TRICKY, AREN'T THEY? WELL, NOW YOU CAN FORGET BURNING YOUR FINGERS STRETCHING SPRUE & PUT AWAY THE STYRENE STRIP.

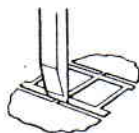
P.P. MODELS (HAMBROOK) HAVE SOLVED YOUR PROBLEMS WITH THIS NEW RANGE OF LADDER KITS, DESIGNED TO PRODUCE ACCURATE REPLICAS OF THE REAL EQUIPMENT FOR YOUR DIORAMAS. PHOTO-ETCHED IN TUN BRASS SHEET, THESE EXCITING NEW AIDS FOR THE MODEL AIRCRAFT ENTHUSIAST HAVE A REALISM & FINESSE IMPOSSIBLE TO ACHIEVE EVEN WITH MODERN INJECTION MOLDING.

COMING COMPLETE WITH A FULLY ILLUSTRATED INSTRUCTION SHEET, YOU WILL FIND THAT WITH A LITTLE CARE THESE MODELS CAN BE QUICKLY & EASILY CONSTRUCTED & WHEN HOOKED ONTO YOUR MODEL JET PLANE, YOU WILL BE DELIGHTED WITH THEIR TRUE-TO-LIFE APPEARANCE.

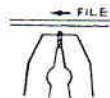
P.P. MODELS (HAMBROOK) WILL BE CONTINUOUSLY EXPANDING THE RANGE OF LADDERS & OTHER ACCESSORIES, SO WATCH OUR ADVERTISEMENTS FOR NEW RELEASES.

CUTTING OUT:

FIRSTLY, USE A FIRM CUTTING SURFACE, FOR EXAMPLE SCRAP PERSPEX OR THICK PLASTICARD. THE SURFACE MUST NOT DISTORT WHEN A CUT IS MADE OR THE BRASS WILL BE DISTORTED TOO! THEN, USING EITHER A SHARP HAIRPIN OR STANLEY KNIFE, CUT AS CLOSE TO THE REQUIRED PART AS POSSIBLE

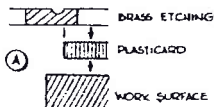


ANY TAG SCARS ON PARTS CAN BE CAREFULLY FILED AWAY WITH A SWISS FILE, HOLDING THE PART FIRMLY IN A PAIR OF PLIERS, SUPPORTING THE BRASS RIGHT UP TO THE TAG.



FOLDING:

SEVERAL METHODS OF FOLDING THE ETCHINGS CAN BE USED, BUT ALL WORK ON THE SAME PRINCIPLE, THAT THE BRASS IS FULLY SUPPORTED RIGHT UP TO THE LINE OF THE FOLD. THE FOLDS MUST BE MADE IN ONE GO. ANY ATTEMPT TO WORK ALONG THE FOLD BY BIT WILL DISTORT THE PART BEYOND REPAIR.

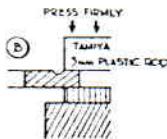


METHOD FOR STEPS:

① PRESS THE LADDER ON A THICK PIECE OF PLASTICARD NEAR THE EDGE OF YOUR WORK SURFACE, FOLD GROOVES UPPERMOST ALIGN THE STEP WITH THE EDGE OF THE CARD, THE PORTION TO BE FOLDED OVER-HANGING THE EDGE.

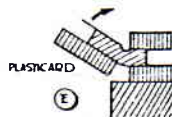
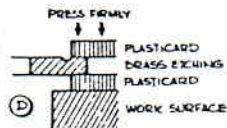
② USING A PIECE OF TAMMYA 3mm SQUARE SECTION ROD, GRIP THE RUNGS AGAINST THE PLASTICARD, PRESSING VERY FIRMLY!

③ FROM THE UNDERSIDE USING A FINE SCREWDRIVER, CAREFULLY PUSH THE FOLDING SECTION UPWARDS, FOLDING ALONG THE GROOVE TO THE DESIRED ANGLE.



LONG FOLDS.

TRAP THE PART ALONG THE LINE OF THE FOLD USING TWO PIECES OF THICK PLASTICARD. ALIGN THE EDGES OF THESE PIECES EITHER SIDE OF THE FOLD LINE. PRESS THIS ASSEMBLY DOWN ONTO YOUR WORK SURFACE & SLIP A THIRD PIECE OF PLASTICARD UNDER THE PROTRUDING ETCHING & LIFT TO FOLD TO THE REQUIRED ANGLE. ④ ⑤



SMALL PARTS.

SMALL PARTS CAN BE FOLDED BY HOLDING THE BRASS WITH TWEEZERS OR PLIERS UP TO THE FOLD GROOVE, USING A SCREWDRIVER TO FOLD OVER TO THE REQUIRED ANGLE.

ASSEMBLY.

THE EASIEST & NEATEST WAY TO ASSEMBLE THESE KITS IS TO USE SUPERGLUE. APPLY WITH A PIN OR A SCALPEL BLADE, RATHER THAN DIRECTLY FROM THE TUBE. EPOXY GLUES CAN ALSO BE USED, OR THE PARTS CAN BE SOLDERED TOGETHER. REMEMBER TO DE-FLUX THE ASSEMBLED ETCHING BEFORE PAINTING. WASHING-UP LIQUID CAN BE USED FOR THIS, RINSED OFF WELL BEFORE PAINTING.

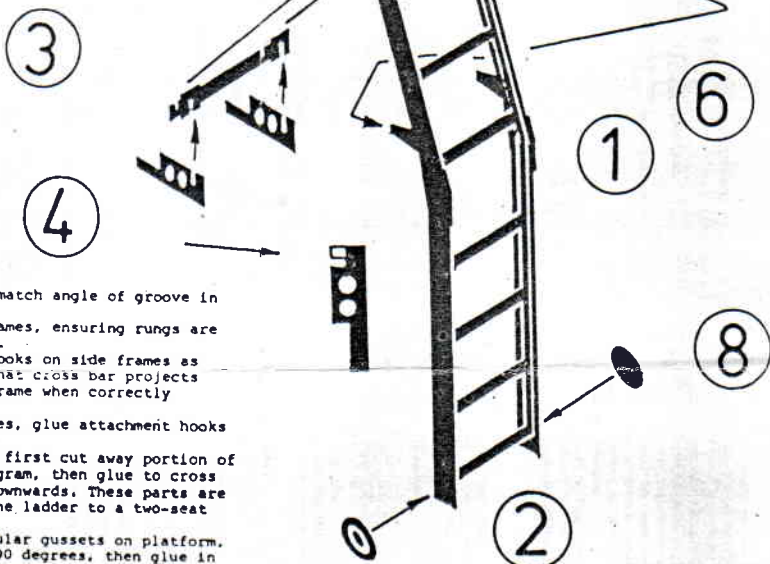
PAINTING

IDEALLY THE BRASS SHOULD BE PRIMED USING SELF-ETCHING PRIMER, BUT AN UNDERCOAT OF WHITE OR GREY ENAMEL WILL DO AS WELL. FINAL COLOURING SHOULD BE CHECKED AGAINST YOUR REFERENCES, VARIATIONS ARE FAR TOO DIVERSE TO GO INTO DETAIL ON THIS SHEET, HOWEVER, LADDERS ARE USUALLY YELLOW OR RED, OFTEN WITH THE SERIAL NUMBER OF THE AIRCRAFT TO WHICH IT

BELONGS, STENCILED IN A PROMINENT POSITION. TREADS ON RUNGS & STEPS ARE USUALLY RUBBER. EQUIPMENT IN USE IN COMBAT ZONES IS OFTEN PAINTED CAMOUFLAGE GREEN, CHECK YOUR REFERENCES! BECAUSE OF THE HARD LIFE THESE LADDERS LEAD, WEAR ON THE PAINTWORK IS OFTEN EVIDENT, THIS CAN BE SIMULATED BY DRY-BRUSHING WITH ALUMINUM COLOURED PAINT. SEE INDIVIDUAL INSTRUCTION FOR LADDER PLACEMENT ON AIRCRAFT. WHILE PARKED, THE LADDERS ARE OFTEN PLACED BESIDE OR UNDER THE NOSE OF THE AIRCRAFT, READY FOR USE. USEFUL REFERENCES INCLUDE THE "DETAIL & SCALE" SERIES, "SQUADRON/SIGNAL" SERIES, IN ALLEN'S "MODERN COMBAT AIRCRAFT" SERIES, AVIATION MAGAZINES SUCH AS "SCALE AIRCRAFT MODELLING", "FLIGHT INTERNATIONAL" AMONGST MANY OTHERS.

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AL718 BAE Lightning

1. Fold rung etching to match angle of groove in side frame.

2. Glue rungs to side frames, ensuring rungs are fully located in grooves.

3. Glue cross bar into hooks on side frames as shown in diagram. Note that cross bar projects beyond right-hand side frame when correctly located.

4.a) for single-seat types, glue attachment hooks to cross bar as shown.

b) for two-seat types, first cut away portion of hooks shown white in diagram, then glue to cross bar hanging vertically downwards. These parts are not used when locating the ladder to a two-seat Lightning!

5. Cut away small triangular gussets on platform, fold remaining sides to 90 degrees, then glue in place. Platform gussets rest against cross bar and behind rung etching for correct location.

6. Carefully adjust arrowed lower frame bar to obtain a snug fit between brackets on side frames. Fold upper bars, trim to suit (We have found about 1mm needs removing, although this may vary slightly.) Then glue frame in place, upper arms resting against platform gussets and cross bar hooks, lower frames between brackets as shown.

7. Bend upper portions of side frames as shown.

8. Glue wheels in place if required. These are optional so check your references.

Colours. Current aircraft use ladders painted in a dark green, but in the days of Natural Metal finishes, a mid-blue was used. British Standard Colour No 169, Traffic Blue, is the official designation, Humbrols Semi-Matt No 89 being close.

Fitting to Model. For single seat versions, holes for the hooks must be drilled using a 0.7mm drill. To obtain correct location, dab a spot of black paint on the hooks, carefully place ladder in position so that the paint marks the fuselage, then drill! See diagram for correct location. For Two-seaters, glue ladder directly in position, at platform rear edge and lower frames.

Our grateful thanks to Mr David Kamiya at BAE Warton for kindly supplying invaluable help with the design of this kit.

