

*the
Airbrush
& the
Photograph*

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Sám Richards

**the Airbrush
&
the Photograph**

.....

Sam Richards

A book for both the beginner and the professional — artist and photographer.

Enabling the owner to create for him or herself an original work of art from any photograph by adding any subject matter or removing any unwanted feature from that photograph.

Containing practical, easy-to-apply techniques in the use of the airbrush, combined with additional extra-to-airbrush artwork.

The book is arranged in step-by-step procedures. Starting with studio layout, mounting the photograph, masking, etc., through to cut-aways, additions and artwork of your own choice, which can, with ease and confidence, be added to the surface of the photograph.

At no stage need the photograph suffer damage, either from colour impregnation or from score marks following mask cutting. Should it be necessary, the removal of *all* added artwork — no matter how extensive — can be achieved by using only clean water. The surface of the photograph will be restored to its original immaculate condition.

This book offers the reader, at the very least, an absorbing and fascinating hobby.

ISBN 0-9511162-0-7



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*Air-Brush
and
the Photograph*

RICHARDS, SAM
AIR-BRUSH AND THE PHOTOGRAPH .

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the Airbrush
&
the Photograph

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Sam Richards



Isle of Wight

My thanks to...

- Doris Cox for editing my text.
- The three stalwarts at Biltmores for all the photo-copies.
- Della Woodman and Pam Smith for the typesetting.
- Bob Trevallion, who told me all about dragons and demons.
- My model — who didn't show her face.
- My grandchildren — who did.
- Ron Trowell for the technical prints.
- Mike Penman for his superb step-by-step photographs.
- Jack Whitehead for the sunset and figurehead photos.
- And lastly — but most of all — to Freda, my wife.
For the ever-so-many years of constant encouragement.

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Text © 1986 Sam Richards

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ISBN 0 9511162 0 7

Printed in England by Silvara Print Ltd., Rayleigh, Essex, England.

Colour separations by Silvara Print Limited, Rayleigh, Essex, England.

Published by Studio Lith-Art, Isle of Wight, England.

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ED30749

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Author's Introduction

Words from the immortal song 'Do you love me?' from Fiddler on the Roof are so applicable to myself and the Airbrush . . .

"Do I What!!?"

"Do you love me . . . ?"

"Do I love you . . . "

"Well!!?"

"For 25 years I've lived with you,
fought with you, — starved with you . . .
. . . if that's not love what is . . . ??"

And like every long and lasting relationship it has its mixture of tears, heartache and joy.

So it has been with myself and the Airbrush, and still she has the gutsy spirit to spit back at me if I take her for granted.

.....

You, the owner, or the would-be owner of an Airbrush will, as I did experience an emotional reaction when faced with its obvious potential when linked to your own talent. And like me will come the immediate question, "Where can I learn to use it?" and doubtless you will plunge into the world of literature in pursuit.

This publication — although specifically slanted at photo-retouching, is one such manual — the result of: —

Thirty years of heart-break, frustration and downright refusal to accept the limitations which haunt all users of the Airbrush. Thirty years from the days when there were no books on the subject — no tips — just a tight-lipped closed shop from the existing world of retouching artists and illustrators.

So, this is my contribution — a book to help you overcome some of the problems you will encounter in attempting to master this 'Airbrush'. And, of course, its vital rôle in the absorbing profession of photograph retouching.

Sam Richards

Photograph Retouching

A photograph is retouched to make the subject matter more striking, more appealing and more eye-catching when it appears in print.

When retouching, it is normal practice to work on an enlarged print. This is the first important step for you the would-be retoucher to appreciate. For no matter how meticulous your work, the reality is constant — enlarge your completed retouched photograph three or four times and every slight blemish will be accentuated. Reduce it accordingly and the definition sharpens — the blemishes dramatically lessened.

Therefore obtain from your client the approximate finished size (when printed) and order your photographic print oversize. A good size for both handling and competent results is 12" x 9½" or 10" x 8". (30.5 x 24cm or 25.4 x 20.3cm).

Matt or glossy — it doesn't matter at all.

If I had to emphasise one facet of retouching above all else, it would have to be the importance of working in good daylight. I stress this in the 'Do's and Don'ts' overleaf. Nevertheless for practice and personal enjoyment one can use artificial light and a desk lamp fitted with a 100 watt bulb gives a nice concentration — But do remember — your shade of colour and your depth of tone is extremely difficult (if not impossible) to gauge when using artificial light.



..... and Materials

Your greatest financial expenditure will occur when you purchase your airbrush and your compressor (or footpump and pressure cylinder). Need I state the obvious? You will get what you pay for when buying these, so I hope you will be able to buy the best.

Obviously an electric compressor with pressure cylinder does away with the physical effort required when using its alternative — foot pump and pressure cylinder. But — there is no other advantage — 30 lb/square inch of pressure will emerge from both (the normal for airbrush spraying).

Every other necessity for your retouch is inexpensive when compared with other professionals' "Tools of Trade" — so don't cut corners. Buy the best brushes, the best art boards. Shop around — get brochures of graphic art materials — find the quality, it pays every time.

As a guide I have illustrated not only the materials I use but also the 'convenience-of-position' to suit my requirements, my layout of working area. Find yours and adapt. And while I think of it (the word adapt reminds me) — All I have written. All I have illustrated. All the techniques I use and describe are the result of my own experience, my own adaptations and my own inspiration born of necessity.

Always experiment — Always be curious — Take from my experience that which YOU need and add to it — I don't know it all!



A combination of Airbrush & hand painting was needed to remove caravans & cars.

Working Conditions

*This layout is personal — It happens to suit MY needs
Adjust it to suit yours*

The materials appear to be numerous —
They are but, airbrush apart, they're cheap
and will enable you to work with ease and efficiency.

Do's and Don'ts

Be sure you are comfortable — not hunched or cramped.

Slope your drawing board or table. (It's hard working on a flat horizontal surface).

Don't attempt mask cutting or anything intricate immediately following any continuous manual job, like gardening.

Let everything be clean and tidy.

Have more than one scalpel to hand — they have secretive habits and like hiding under papers, etc.

Have two glass jars of water — 1 lb. honey jars with broad bases and screw tops are admirable — they tend not to fall over so often.

Never let one jar of your water be anything but clean. Your colours must not be polluted by dirty rinsing water during use.

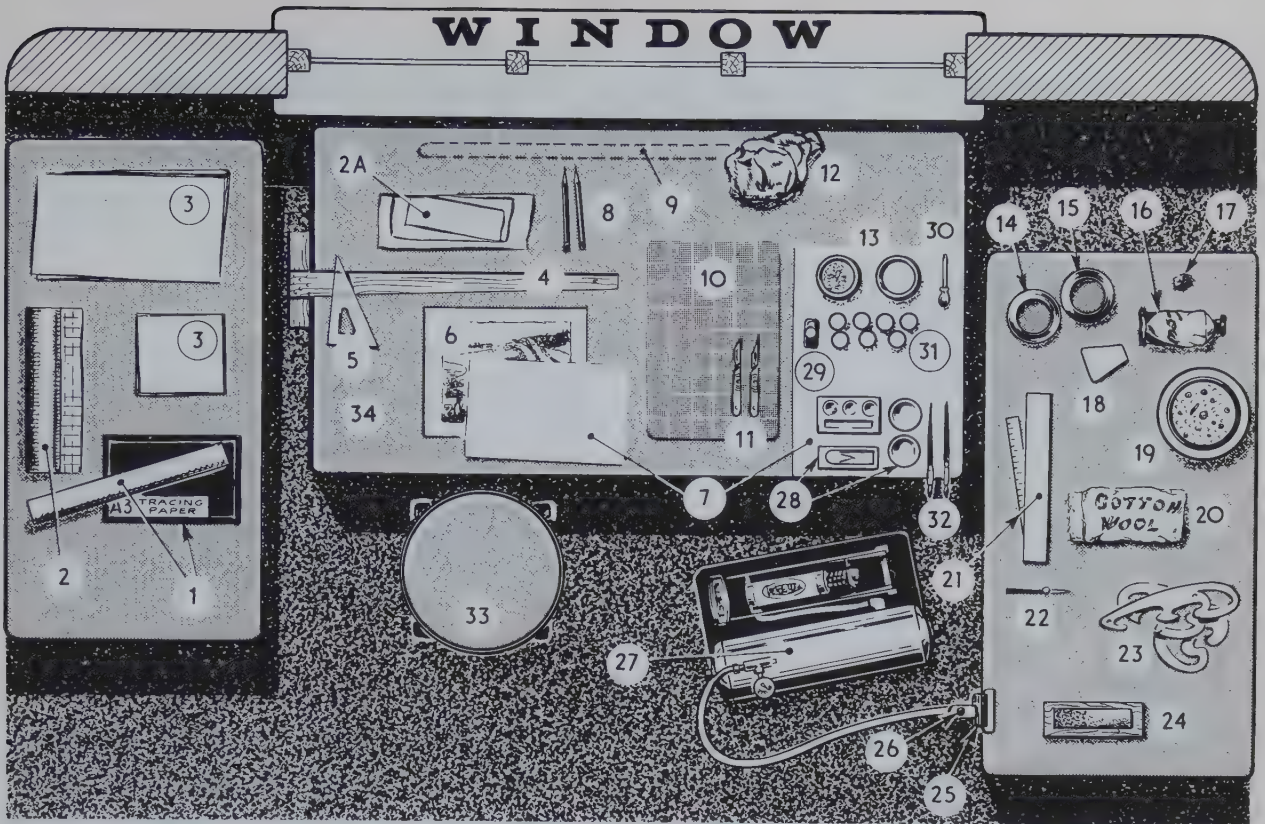
Be constant in rinsing brushes and airbrush first in the 'used' water, following with the clean water rinse.

Cloudy days are not ideal for retouching, the light is diffused. Ideal is bright and sunny (though not direct onto your working area).

Never retouch under artificial light.

A regular tea or coffee maker and supplier is worth cultivating.

WINDOW



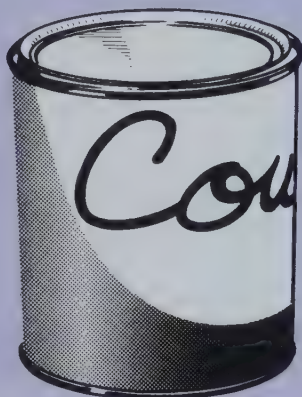
- 1 Tracing Paper and Drafting Film (e.g. Permatrace).
- 2 Clear masking film (roll or sheets).
- 2A Clear masking film — pieces.
- 3 Scrap paper — assorted sizes.
- 4 Tee-square.
- 5 Small setsquare.
- 6 Mounted photograph.
- 7 White blotting paper. (Sheet form preferable).
- 8 Pencils — B and 2H.
- 9 Radiator beneath drawing board.
- 10 Cutting board.
- 11 Scalpels.
- 12 Duster.
- 13 Water jars.
- 14 1 inch wide masking tape.
- 15 2" wide Sellotape.
- 16 Cow Gum (tube or tin)
- 17 Cow bogey — (lump of congealed Cow Gum)
- 18 Cow Gum spreader
- 19 Broad based paint brush holder, jar or vase. (Brushes vertical in roll of corrugated paper).
- 20 Fine cotton wool.
- 21 Steel and perspex straight edges or rulers.
- 22 Draughtsman's ruling pen.
- 23 French curves.
- 24 Oil stone. (Ensures constantly sharp scalpels).
- 25 Clip to hold airbrush when not in use. (Large bull-dog clip I find ideal).
- 26 Airbrush and flexible hose.
- 27 Compressor — foot pump, or electrically operated.
- 28 Assorted palettes. (China for quality).
- 29 Gum Arabic
- 30 Pipette. (Water to palettes).
- 31 Paints, and Process White / Process Black
- 32 2 - past-their-prime brushes (size 6 approx.)
- 33 Stool or chair.
- 34 Table or drawing board. (5 ft. long illustrated).

Mounting the Photograph

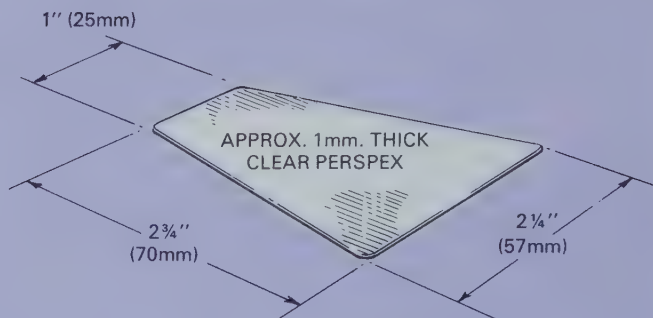
Before Retouching

What with?

Cow Gum and Spreader



(OR TUBE)



Make all edges and corners rounded:  with glass paper or file

SECTION THROUGH SPREADER

What on?

Top Quality Line Board

NEVER Mounting Board or soft surface board.

The board on which you mount your photograph will need to be larger than the photograph by at least 1 inch (25mm) margin all round. Try to imagine that you will ultimately be framing your picture and that your line board is your backcloth without the frame.

The reason for using a hard, durable surface board becomes apparent during retouching. Constant handling and spraying makes for grubbiness on the mount. Line board is easily cleaned with a cotton wool pad and water — or soft rubber. Also during retouching, Sellotape or masking tape will be attached to it and when these tapes are removed they must not take off the board surface, as they will if attached to mounting board or similar surface.

And finally — your finished artwork is enhanced by its surround. Line board does this.

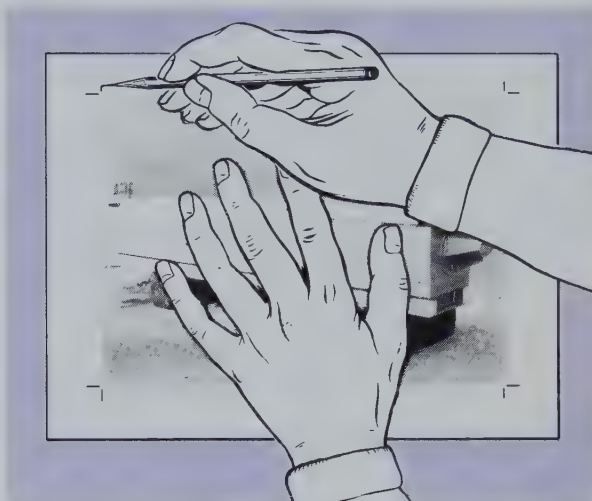
How?

With one coat of Cow Gum on back of print (photo) and one coat of gum on surface of board.

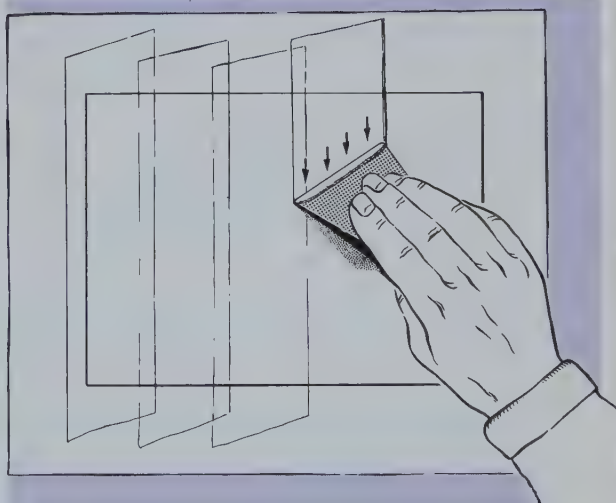
But it can be a very messy and unsatisfactory operation.

I find it worth the effort to proceed as follows:

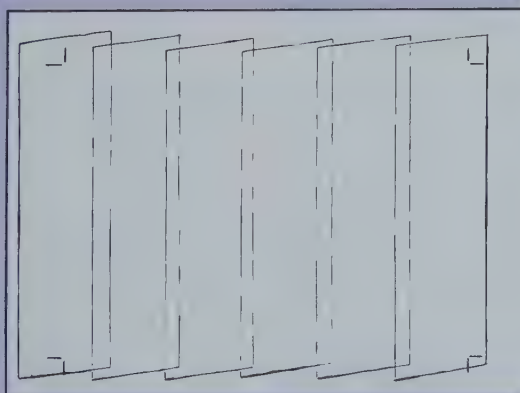
Having cut your line board to the required size, position your photograph in the desired position and mark with a 'B' pencil the four corner positions.



Place the photo. face downwards onto a piece of paper larger than your photo. and squeeze a small quantity of Cow Gum onto the back.

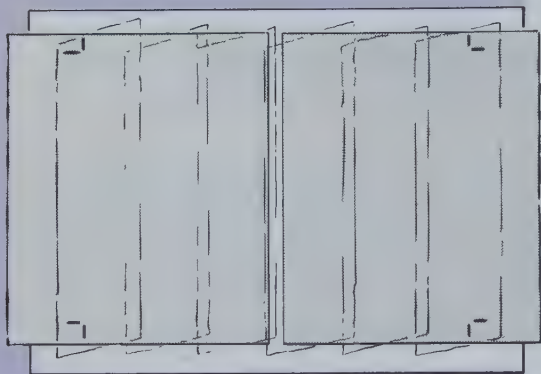


With a series of overlapping vertical downward strokes apply a thin coat of Cow to the surface. Hold the spreader diagonally during the downward stroke. This prevents an excess of gum from exuding on the left hand side.



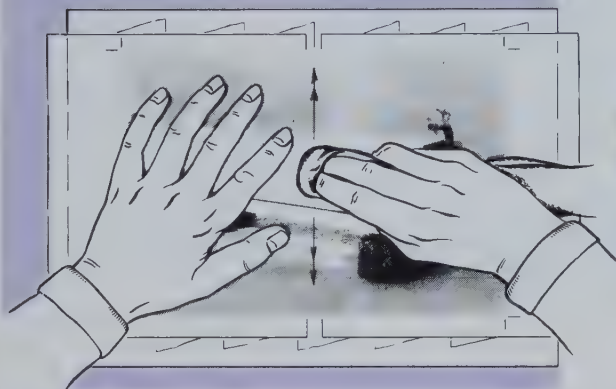
Repeat the same procedure when applying Cow Gum to the surface of the line board, using diagonal strokes and taking care not to leave any raised gum either in line or lump as this will show through when your photograph is stuck down.

In a short while (2 - 3 mins.) each of the gummed surfaces will be dry enough to bring together but before doing so, check that there is no foreign body adhering.



Now take a piece of tracing paper a little larger than your photograph and cut it in two — placing each half over the board to leave a central gap of approx. $\frac{1}{4}$ inch (6mm).

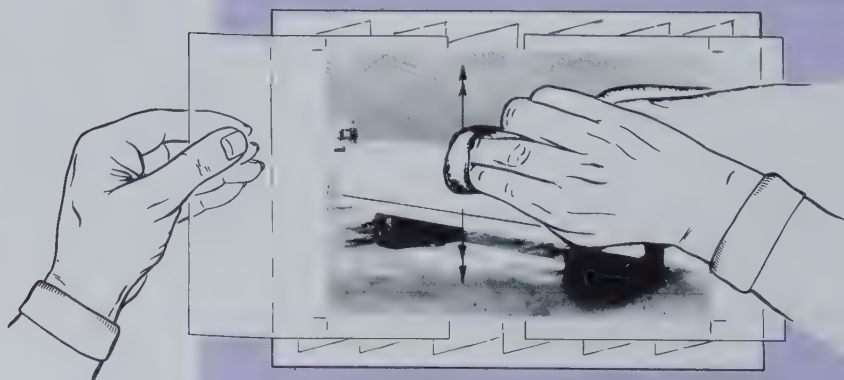
The tracing paper acts as a barrier between the gummed surfaces of both the photograph and the line board thus enabling you to position the photograph in the desired mounting position as you are able to clearly see the 'corner locations' through the tracing paper.



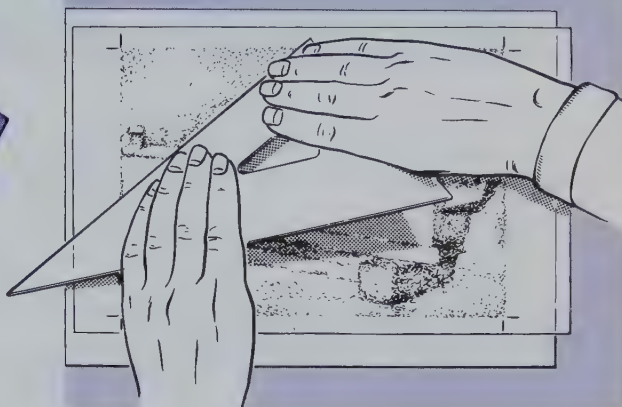
With the photograph held in this position, press down with a soft cloth the central gap between the two halves of the tracing paper.

Having now secured the photograph by tacking down, carefully slide out one half of the tracing paper, and as you do so, with vertical strokes, press down that half of the photo. — again using the soft cloth.

Remove tracing paper and repeat for the other half.

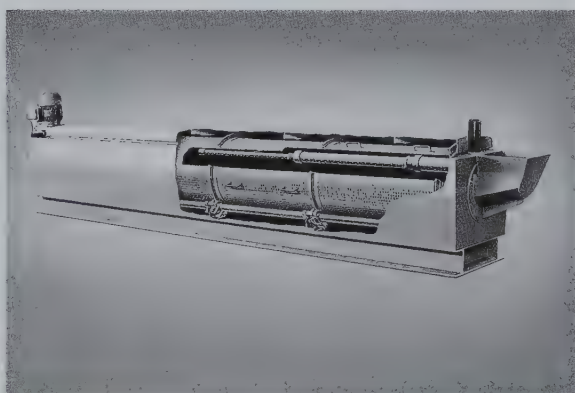


With the photograph now mounted in its correct position, place a sheet of tracing paper over the whole area and burnish down with a set-square — working towards the corners.



All that now remains is to remove the excess dried Cow Gum adhering to the surface of the line board.

Using a lump of solidified Gum this is easily achieved, leaving your photograph perfectly flat and now ready to be retouched in whichever medium you choose — colour or tone.



The technique used to create this type of cut-away is fully explained later.

The procedure eliminates both the cutting of masks on the surface of the photograph and the use of masking fluid.



Paints

Here is a vast field for experiment and the variety of paints available is almost bewildering.

I have my favourite — which I will elaborate on — but before doing so I would strongly advise caution when making your own selection, because your paint has not only to pass through the airbrush, — it has to be easily soluble.

Emulsion paint for example I would never use. Knowing the difficulty of removing it from any surface once it has dried is reason enough for me to side-step. The very action of the airbrush has a paint drying effect at the nozzle when spraying takes place.

Paint, whether it be applied by brush or spray to the surface of a photograph in order to alter it has, in the vast majority of cases to be opaque — it has to replace completely the image which was there originally. Thus the choice of 'which paint' is narrowed.

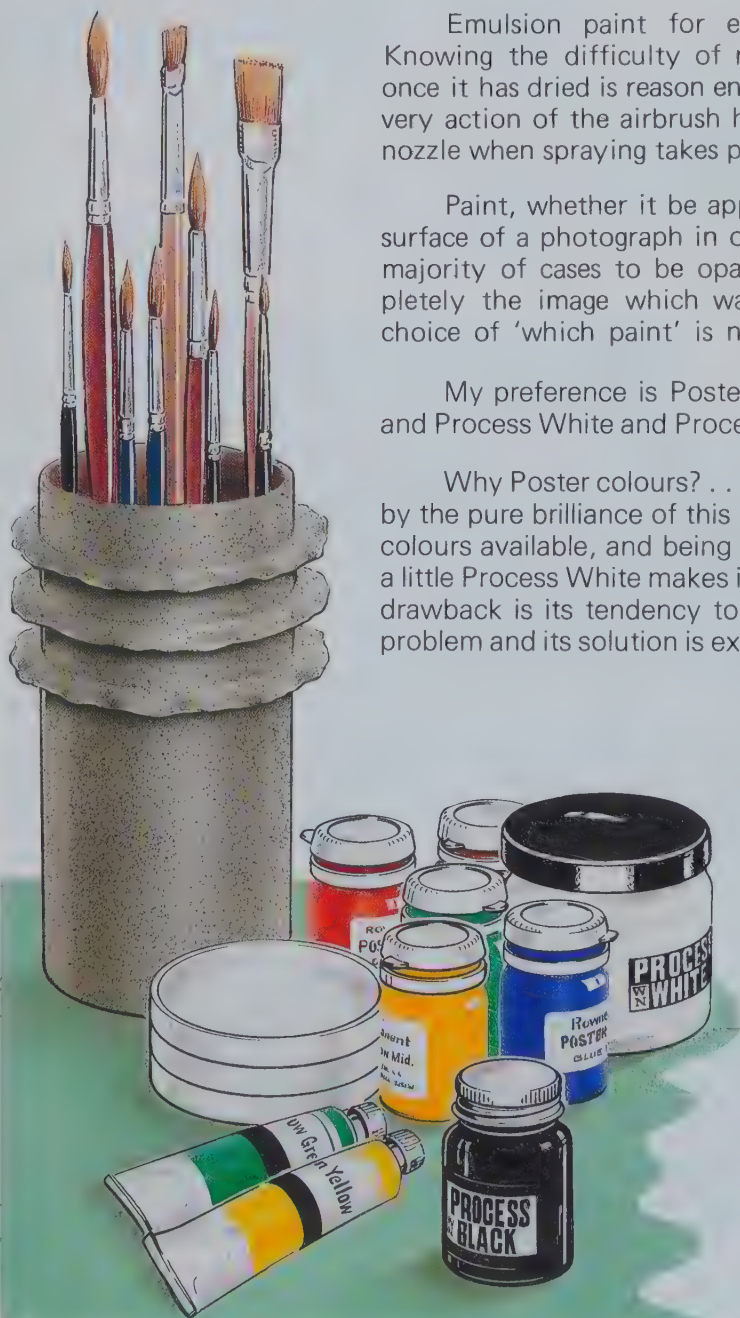
My preference is Poster Paint for colour retouching and Process White and Process Black for monochrome.

Why Poster colours? . . . I have always been attracted by the pure brilliance of this paint, plus the great range of colours available, and being semi-opaque, the addition of a little Process White makes it perfect for covering. Its one drawback is its tendency to smudge when dry, but this problem and its solution is explained later.

Also poster paint is usable until the last — providing a little water is added to the jar after use.

And lastly, the containment of pigmentation in poster paint is of great importance.

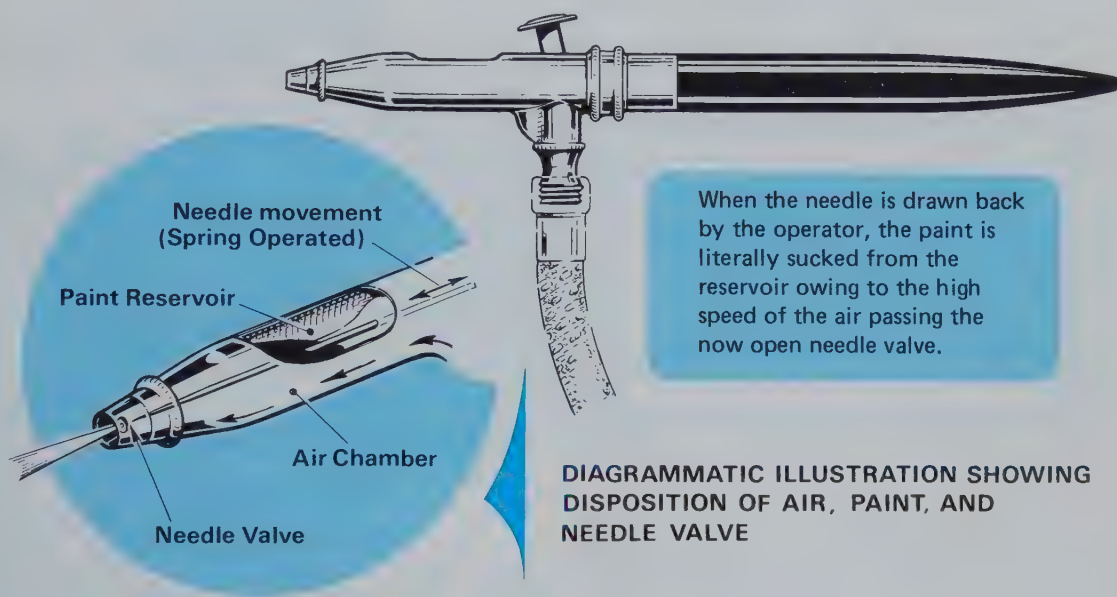
An ink or dye applied to the surface of a photo impregnates the 'skin' and is permanent. Poster colour if applied wrongly can be wiped off the surface with no trace remaining.



Your Airbrush

Will be similar to the airbrush shown.

Reduced to the simplest terms it can best be described as a tool designed to produce a refined spray of liquid. A paint spray!



And like all paint sprays it operates when a jet of air passes (at a given speed) over an aperture, behind which is a reservoir of liquid paint. The air jet causes a vacuum at the aperture which draws the liquid paint through to mix with the air. It then atomizes and emerges from the nozzle of the airbrush in spray form.

Obviously the airbrush will be used in a variety of art fields and its performance when used to retouch photographs must leave nothing to chance. It must not clog—it must not spit — and above all else its jet must be faultless.

These requirements are difficult to achieve in photo retouching as the very consistency of the paint, needed to obliterate an existing image, makes for problems while spraying.

To achieve this goal, the airbrush—which is a 'tool-of-trade'—must be treated like all tools and kept clean. More than all else is this needed and you will observe the strict procedure I adhere to when describing 'usage' of the airbrush.

And finally a few words concerning the needle and its seating — the 'Needle Valve'.

This is the heart of the airbrush — the place where liquid and high speed air come together to form the jet/spray. Should there be the slightest flaw in this valve — seating and needle — the jet will be affected, be sub-standard.

The maintenance and care I extend to this needle valve at the conclusion of each period of usage has resulted in the jet (or spray) being as near perfect as I can achieve, and **my** airbrush — now over 20 years old — operates entirely to my satisfaction. Still with its original needle!

Basic Masking

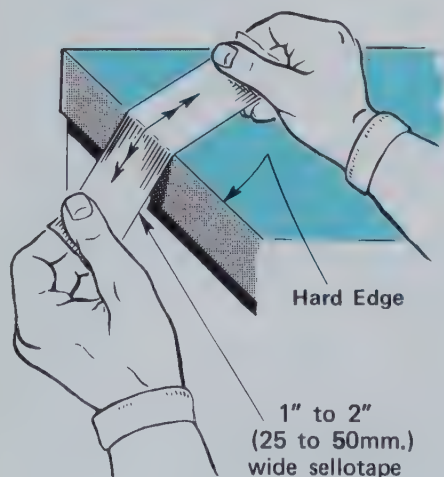
This chapter deals only with basic masking. In the section 'Additions' the technique I have developed to overcome cutting through masking film laid on the actual surface of the photograph is described in full. This technique you will find to be no more difficult than normal mask cutting as both require meticulous concentration, but it removes the ever present fear of damaging the print, which could result in hours of wasted effort.

Masking, or covering the whole of your photograph or artwork which is to remain unsprayed, and the type of mask you use will vary according to the desired effect required.

Masking materials for the airbrush user — like every other art aid — are constantly improving, and one of the latest products, thin clear film with a non-setting adhesive, is far removed from the days of struggling with orange coloured 'frisket' paper, lead weights, etc.

You will see that with the masking film being in direct contact with the surface, the sprayed area will have sharp edged definition when the mask is removed.

A soft line effect is obtained by using a mask raised slightly from the surface of the picture. This type of mask is normally constructed from thin stiffish card, or by using a ruler, steel rule, set square etc.



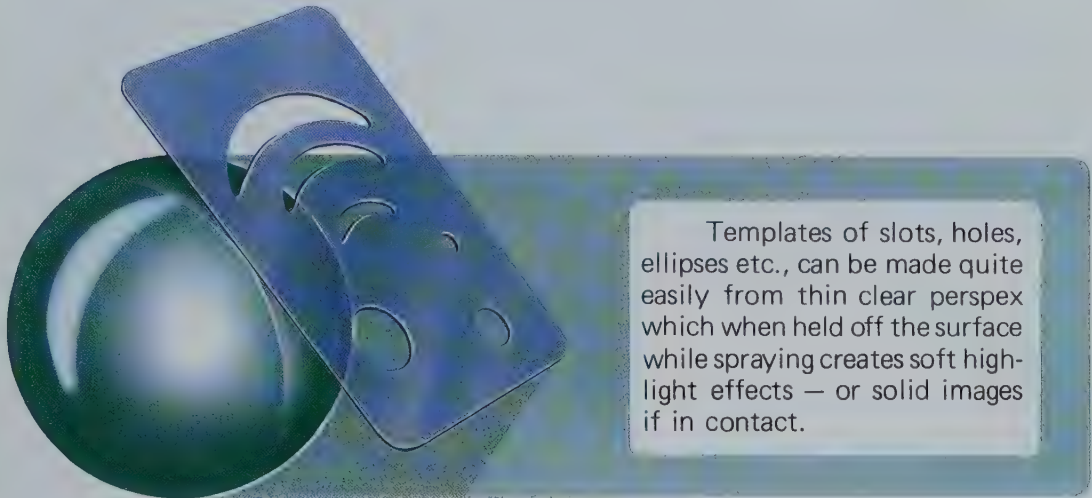
Alternatively a substitute for the film-mask is rubbed-down Sellotape — 'Rubbed down' because to use Sellotape straight from the roll would have disastrous results on the average surface to which it was applied — the adhesive power is far too strong.

2" (50mm.) wide Sellotape drawn up and down across the edge of a hard material effectively reduces the stickability by approximately 50% and can be used with credible results, as like the film, it is easy both to see through and cut with the scalpel.

The disadvantage of Sellotape masking is twofold. The first being the need to overlap if the area to be masked exceeds 2" (50mm.) — (Sellotape wider than 2" is tougher in substance and unsuitable) and to cut

through two thicknesses due to overlap is also difficult. Secondly, Sellotape cockles when water is applied to the back — as in spraying water-based paint — allowing the paint spray to creep under the mask.

Adhesive coated clear film makes life infinitely easier for the retouching artist. There is no cockling while spraying and large areas can be covered with film, if necessary. This masking film can be purchased either in flat sheets or in rolls 6" to 24" wide (152 to 610mm) and will suffice for 99% of all the retoucher's needs.



I cannot leave the subject of masking without stressing the main masking material that the retoucher needs, i.e. flat sheets of scrap paper — large and small. Large enough to cover the whole area of both picture and its mounting — small for all else.

This scrap paper will save you both time and money, for usually the portion of the photograph you are working on is only a small area of the whole photograph and only that small portion needs film over it. A hole cut in the scrap paper a little larger than the area to be retouched, together with its masking film overlay, gives you this working area and the surrounding scrap paper prevents excess spray going where it shouldn't. You will quickly discover the need to be generous with your scrap paper to allow for this.

I wouldn't use newspaper, it's too thin. Ceiling paper is O.K. and there's lots of it on a roll.



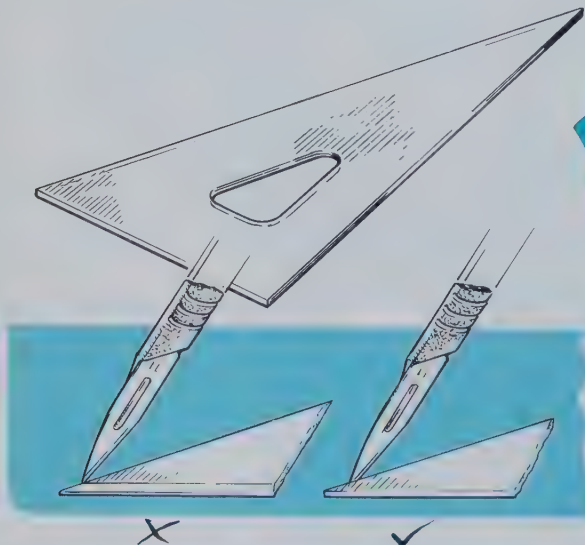
..... and Scalpels



There are two types of scalpel available: flat handled and round handled. Both have a choice of dispensable blades — delicate, which are ideal for mask cutting and heavier blades, suitable for cutting boards and card.

Scalpel blades are inexpensive, but even so I strongly recommend your sharpening them on an oilstone. This is a skill quickly acquired and ensures a constantly sharp cutting point, (for that is the only part of the blade used when cutting masks). The alternative creates the irksome necessity to be constantly changing the blade, for working with a semi-sharp blade is not only irritating — it will not produce the best results owing to the automatic increased pressure.

It has always seemed logical to me that a round handled scalpel, just by its very shape, would be superior to the flat handled type when cutting intricate shapes. I can't explain why I am more competent with the latter — perhaps it is the constant use over the years which has conditioned me.



Not all your cutting will be free-hand and straight lines are infinitely easier to cut when using a ruler or set square.

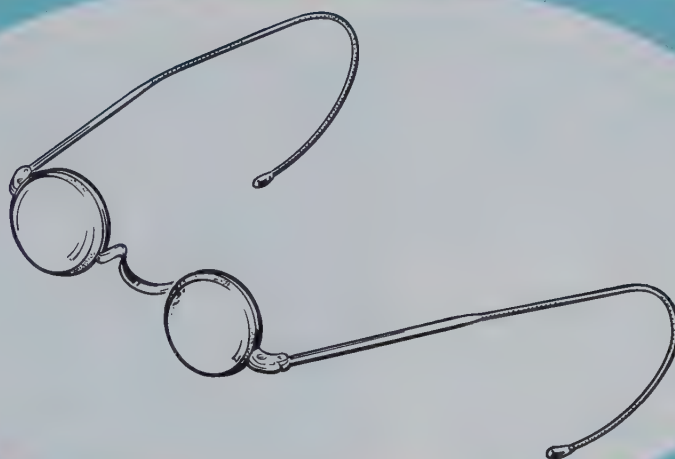
I find that a 10" (254mm) 60° plain-edged set square to be ideal for the majority of straight line cutting. Most art shops stock only bevel edged set squares but they will order 'plain' for you.

I stress plain (or square edge) because there is less likelihood of cutting the set square when drawing your blade along the edge — for having once snicked that edge it will always have an imperfection at that point.

One tip for the not-so-young student, or the student with less than perfect eyes, is to magnify the image during cutting. A magnifying glass on a flexible stand is the norm., but it is irritating by its being between your hand holding the scalpel and your vision.

This was solved for me when I sat in my dentist's chair. I was aware that he was wearing two pairs of specs — those he always wore and another pair with small thick lenses perched on the end of his nose. A surprised dentist was halted before he began his inspection of my teeth and to my delight I had found the perfect answer to my own impaired sight.

The addition of these specs. to my retouching equipment has restored to me the clarity of vision I had as a teenager and has taken a lot of the chore out of mask cutting.



My final word on masking and cutting is to stress its importance.

Retouching is an art — and like all art is hazardous — it can be ruined at any time during its creation.

The finished retouched photograph, be it a face-lift or a complicated engineering cut-away demands constant meticulous precision and care. At no stage can you afford to be casual.

Mask cutting can lull you into becoming careless — because like spraying it is laborious and demanding.

The ultimate personal satisfaction plus the beautiful result which can be obtained when using the airbrush is achieved by sheer hard concentrated slog, and many many weary hours of 'mask-cut-and-spray' are sustained only by the sober knowledge of the second rate job which will certainly result should you slacken off.

The Airbrush – Application

You have your mounted photograph, your paints, your scalpels and materials. Your working conditions are just right. Where do you begin?

Exercises leading to competence in any subject must surely be attractive and have a pleasing end-product. We will keep it that way with photo-retouching.

In actuality a little more background or a little less accentuation on a particular feature is all that is required in most photo-retouches and experience makes decisions almost automatic. How you attain this alteration must be similarly automatic, and for me the removal of a background or the accentuation of a background is an exercise in the use of the airbrush, which not only establishes a correct 'usage routine' but gives a dramatic change to your photograph and for you, the retoucher, job satisfaction. –The illustrations on pages 24, 25 and 26 are examples of 'effect'.

In all cases except landscape, photography is dealing with a double issue – subject matter and background – and this applies throughout the whole of art presentation.

So there is a limitless range of subject matter to choose from in background alteration.

This collection of Point-of-Sale material for J & B Rare Scotch Whisky was arranged deliberately on a fairly light background, so that deleting the support aids and adding the neck band of the apron is more easily achieved. Similarly less time and effort is expended to produce the desired backcloth.



A comprehensive range of colour graduations is very helpful for selecting background effects. I would suggest a similar colour chart be added to your collection of materials.

Having selected your colour, mix with water and a brushful of Process White the estimated amount of paint you think you will require — AND MAKE IT 50% MORE. Nothing is more irritating than to run out of a special mix.

You will quickly find the viscosity of paint and water which will not clog your airbrush and yet still have the necessary opacity. (Usually a creamy consistency).

Earlier I commented on the tendency of Poster Paint to smudge when dry. If you are using this type of paint, add to your mix one brushful of gum arabic — it bonds the paint. Try it without! One brushful of gum arabic to a tablespoon (15ml) I find to be adequate.

Cut out from large scrap paper an area equivalent to your mounted print plus ½" (13mm) all round.

Using 1" (25mm) 'rubbed-down' Sellotape, stick scrap paper with its cut-out portion to the mounting board — allowing part of the Sellotape to adhere to the surface of the print.

Cut and carefully remove Sellotape from print surface.



Place over print surface sufficient masking film to cover the subject matter. Carefully cut your masks and remove excess to leave only the background area of your photograph unmasked.

Your airbrush — immaculately clean — you now load with paint, using a 'not-so-new' brush of suitable size (approx. No. 6) and with the pressure at 30 lb. per square inch lightly test for spray on the scrap paper frame.

Brush loading the airbrush I find both easy and adequate when compared to pipette loading. In retouching, such a small quantity of paint is used that refilling and cleaning is routine and automatic. Having to reload and clean out a pipette is to me, an unnecessary chore. The argument against brush loading, i.e. the danger of loose hairs from the brush clogging the airbrush, is almost eliminated when using old brushes as mostly, hair-shedding occurs when brushes are new.

With continuous horizontal strokes, pass over your background area, making sure that each stroke finishes on the protective scrap paper, NEVER on your retouching surface.



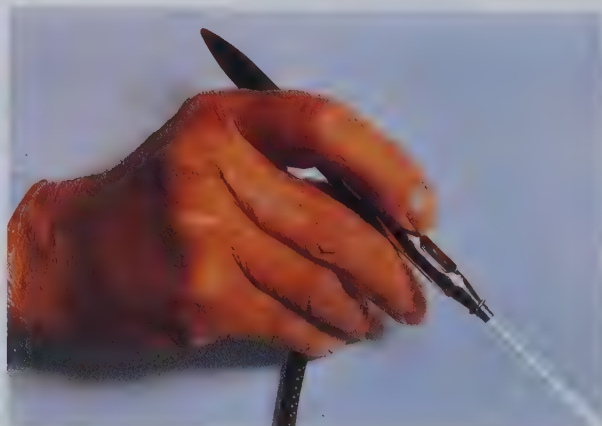
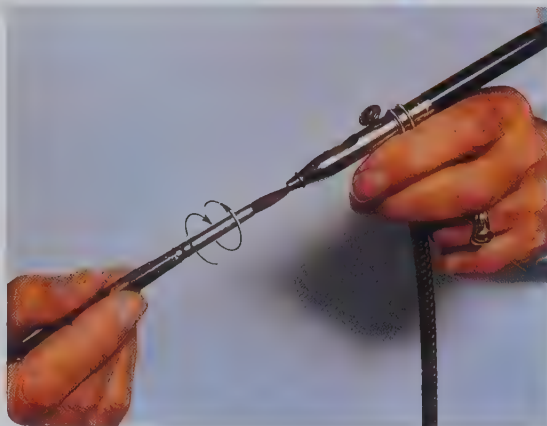
Spraying

You will experiment therefore I give no rules concerning the actual spraying. Be guided by your own experience.

Very quickly will you learn not to be too close, too far away — too light etc.

Much more important is the need to constantly clean the airbrush. Always when the paint reservoir is empty, there will be a deposit of dried paint at the nozzle and should you load with more paint and use again without cleaning, it will almost certainly clog and blobs of paint on your spraying area will result.

I cannot emphasise too strongly that it is the finished result you are aiming for. Using the airbrush is to work with a tool capable of giving you that desired result — but it is a tool needing constant cleaning and laborious though this is, it is essential to clean thoroughly with your second brush both reservoir and nozzle, finishing with a spray of clean water.



You are now almost ready to re-load the airbrush and repeat the operation. But before doing so, check that your air pressure gauge reads 30 lb/sq inch, hold your airbrush vertically with the nozzle in contact with a piece of scrap paper. Compress and draw back the trigger fully (as you could well do when spraying).

You will find that in so doing, a small quantity of water will be forced from the nozzle. This is 'splatter' and the method I describe to remove it must be routine during the 'loading — spraying — cleaning' cycle.

Neglect this last procedure and your apparently perfectly clean airbrush will, without warning, suddenly eject water droplets onto your artwork — completely wrecking the effect you have been striving to achieve.



As you continue to build up your background turn your print through 90° after each spraying cycle. This will help to keep a constancy of flat application rather than a slightly wavy finish.

When the original background has been eliminated or covered sufficiently to your approval, remove masking film and rubbed-down Sellotape — but do be sure that the print is thoroughly dry. A desk lamp suspended above your still damp print will help considerably in the drying process, but . . . NOT TOO CLOSE.





Background
& additions



Background
only



Background
and retouch

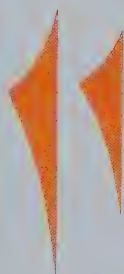


Jack Whitehead & Norman Gaches

Figureheads



The
Warrior



The
Gladiator





Her origin is
shrouded in antiquity
but her appeal is ageless.
See her in the
Cutty Sark's collection
of figureheads at Greenwich.

Removals and Alterations



The caravans did nothing for this picture.
Their removal involved both airbrush and handwork.

Stage 1



Each caravan was oversprayed with a colour matching the darkest area of bushes. The air pressure lowered to give more localised control.

Masking was hand held to limit excess spray — that was removed with clean water and a fine sable brush.

Stage 2



The foreground wedge-shaped strip of grass on which the caravans stood was sprayed in. For this procedure a mask was cut from adhesive film to prevent spread of colour.

Stage 3



The final effect was achieved by stippling (with a fine sable) the lighter shades in the bushes and the hard edges where grass met bush. The gable end of the shed added to complete.

Martyn

A dog
scarred this lad.

In time plastic
surgery will correct
the blemish.



Meanwhile

Additions



I have found that the potential of the airbrush can be of enormous value to the manufacturing world. The car industry — probably more than any other — exploits this not only to enhance illustrations of the finished model but to illustrate in their after-sales and back-up manuals splendid cut-aways of component parts, engines, etc., where the airbrush is used to maximum advantage.

Strangely, however, there is still in the vast majority of industry an unawareness or inability to grasp what should be so obvious. That a retouched photograph of any manufactured article which results in more 'eye appeal' can only benefit the product it portrays.

Additions or alterations, executed professionally, to accentuate or improve the photograph of a given product have limitless potential in a competitive world.

This chapter will explain in detail the procedure I now use to 'add to a photograph'. I stress 'now use' because like every retoucher I have experienced years of frustration during the transfer of the required 'addition' — from a transparent overlay attached to the photograph — to the surface of the photograph. To be faced with the daunting prospect of cutting masks on the print surface, for in the process of producing, say, a cut-away illustration — or the addition of extras — several masks will be needed.

The following procedure will enable you, the retoucher, to achieve these additions or alterations (no matter how complicated) without marking or scoring in any way the surface of your photograph.

In fact should it be necessary to restore your retouched photograph to its original state, you will need only to remove the paint from the print surface with a damp cloth. IT WILL BE UNMARKED IN ANY WAY.



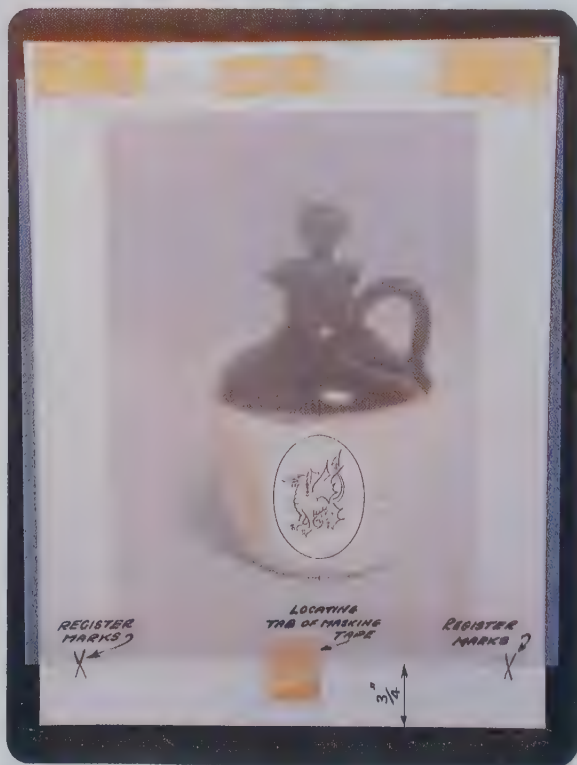
Procedure

Mount your photograph and cover the whole area (including the board on which the photograph is mounted) with either tracing paper or drafting film, but leaving a gap of approx. $\frac{3}{8}$ " (10mm) from the top of the board to the top of the paper/film and attach the paper to the board with masking tape.

In the position you wish it ultimately to appear on the photograph, draw or attach your intended diagram — or whatever — to the surface of the overlay material (paper or film). I have chosen to add the stylized dragon to the jar shown. For this example the dragon was drawn approximately three times larger, inked in and photographically reduced to the size needed.



Note:— Most printers using lithographic print machines will reduce or enlarge your artwork for a small fee and supply excellent prints on photographic paper. Black on white or white on black.



Place a piece of protective card between the mounted photograph and the overlay and trim $\frac{3}{4}$ " (20mm) off the bottom edge of the overlay (tracing paper or drafting film). Secure the now shortened length of overlay to the mounting board with a tab of masking tape.

Now make two register marks — as indicated — with a soft pencil, half on the overlay and half on the exposed mounting board.

Your overlay is now hinged at the top and you may lift it from the bottom with the tab and replace at will in the original position by lining up the register marks.

The shortened hinged overlay allows you to secure to the bottom of the mount a stiffish piece of scrap paper or thin card. In this case its dimensions are the same as the original overlay but the hinges (masking tape or Sellotape) are at the bottom — $\frac{3}{8}$ " (10mm) up, while at the top there will need to be a $\frac{3}{4}$ " (20mm) margin from the edge of the mount to the scrap paper/card.

Allow a slight overlap at the sides.



You now have two hinged overlays, either of which may be laid in direct contact with the surface of the photograph. Both hinged on the line-board photo-mount, i.e. the transparent overlay with its drawn on artwork, (or with artwork attached to the surface) is hinged at the top, the opaque overlay of stiffish paper or thin card is hinged at the bottom.



It will be obvious that the dragon motif will need two separate maskings to complete. — First the ellipse, secondly the dragon. The latter can be applied direct onto the ellipse as the colours used are opaque.

The orange scrap paper overlay will form the framing for the masks during this exercise.

With the scrap paper in contact with the print and the transparent overlay with its image in the top position, draw on the paper (with a 'B' pencil) an area larger than the ellipse — say $\frac{1}{4}$ " to $\frac{3}{8}$ " (6 to 9mm) all round.



Cut from the scrap paper overlay the area marked, but before doing so, slip a piece of thin card underneath to protect the print surface.

Hinge back scrap paper and place transparent overlay in contact with print. Line up with register marks on mount and tack down with lifting tab.



When the hinged scrap paper is replaced on the transparent overlay the motif will be revealed through the 'window' you have cut from the scrap paper.

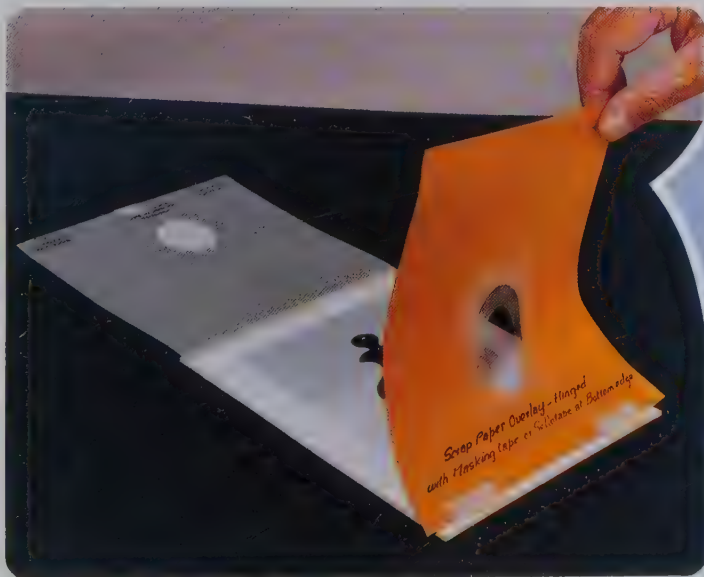
Take a piece of masking film capable of covering the window and having an adhesive 'all-round' margin of approx. $\frac{1}{2}$ " (12mm) to stick to the scrap paper.

Place over the window, lightly press down onto dragon motif, cut the ellipse from the masking film and remove.



NOTE: In the case illustrated the dragon motif is clearly visible, being an opaque print which is stuck on the overlay surface.

When the image to be transferred is drawn directly onto the tracing paper or drafting film, slip a piece of thin white card beneath before cutting. This not only accentuates the drawn image but also protects the photo/print surface from being scored while cutting the mask.



When you have completed your cutting, carefully lift the scrap paper overlay and allow the masking film which is adhering to the motif to break free.

Hinge back the transparent overlay with its motif.

The ellipse 'cut-out' within its mask window can now be replaced direct onto the surface of the photograph.

COLLEGE LIBRARY
COLLEGE OF TECHNOLOGY
CARMARVON ROAD
SCOUTHENDON-ON-SEA, ESSEX

Your scrap paper overlay now covers the whole print area.

Your mask is adhering to the print and you are ready to spray paint onto the exposed surface.

Always have your paints ready before mask cutting. I like to keep the time period of 'mask-to-print' to a minimum as some masking film seems to increase its adhesive with the time of contact.



NOTE: When spraying a small area — as in this case — it is very easy to flood the surface even though one is deliberately spraying beyond the image area to avoid this.

Pick up the mounted photo and slant it until the daylight is reflected back from your intended spray area. Holding the print in this position as you spray will enable you to see instantly the beginning of 'flooding'.

Another tip is to force-dry the area; with the trigger of your airbrush fully depressed, allow only air to emerge from the nozzle on to the wet surface. It dries immediately.

Check before fully lifting mask away from the surface that the effect you are after has been achieved to your satisfaction.

If not — and it appears impossible to alter without a build-up of paint — wipe the whole lot off with cotton wool and clean water. Obviously not too wet!

Use the 'AIR-SPRAY' (as mentioned previously) to dry the print surface and do it again — get it right!

Finally, remove the masking film from the window area of your scrap paper and dispose of it immediately — it still has paint adhering to its surface and wet or dry it is always a threat to your artwork. It can transfer to your fingers with infinite ease and somehow get where it shouldn't.

In our case the original window on the scrap paper overlay will be suitable for the 'dragon' spray. When necessary replace the scrap paper overlay and cut new window area to suit.



2nd. Stage

Which is to repeat the exercise and spray the dragon onto the ellipse.

I have deliberately chosen to embellish the dragon motif, for more telling than any words will be the assessment (your own) of your endeavours when removing the mask/stencil after completing your cutting, positioning and spraying.

But before this: take a good look at your subject matter. Will you be able to complete the spraying with just one mask/stencil cut from the adhesive film? Or will it be easier to achieve by cutting masks for the tongue, far side wing, far side leg and the tail? Your choice.

One difficulty with such a complex mask is to separate it from the surface of your artwork after cutting, and then placing it onto the print prior to spraying.



To keep such a mask stable, place strips of rubbed down Sellotape across the areas in need of stabilising. Lift the mask carefully and constantly check while doing so that the mask continues to stick to the Sellotape as you lift — your scalpel is an ideal tool for this procedure.

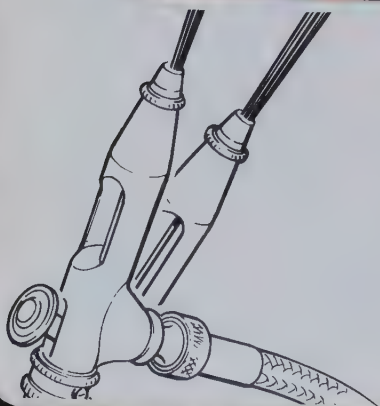
You will experience very little difficulty in removing the Sellotape once your mask is in position on the print surface.

Lastly, you have only to add to your sprayed areas the extra 'lining-in' to finish. A fine sable brush is best for this — but not too wet.

Should you experience difficulty in painting this 'lining-in', an alternative is to carefully remove the red where needed with clean water, a fine brush and spotless blotting paper.



Saucer over Hawaii



Jack Whitehead took this photograph whilst working on his figurehead for 'The Falls of Clyde' – a 4 masted sailing ship moored off Oahu, Hawaii.

An enlarged section of the photograph (12" x 10") (305 x 254mm.) provided the ideal back-cloth for the Saucer/Airbrush illustration.



Retouching

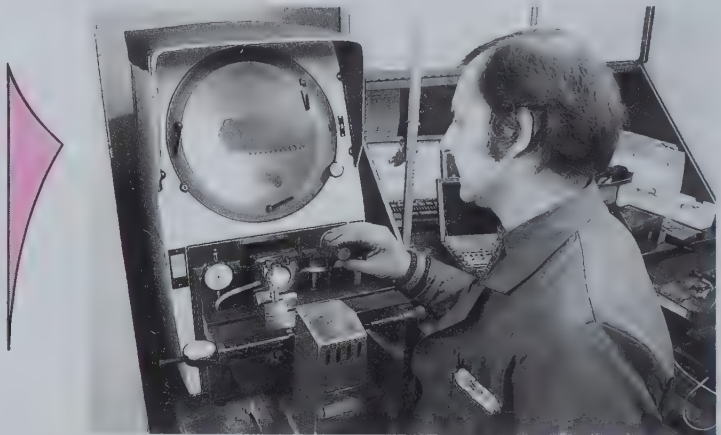
This, as the word implies, is the terminology used to describe an alteration to a photograph — be it colour or monochrome, (black and white).

The airbrush is used extensively in re-touching for it is a tool capable of graduating one tone to another and can obliterate partially or wholly an unwanted feature.

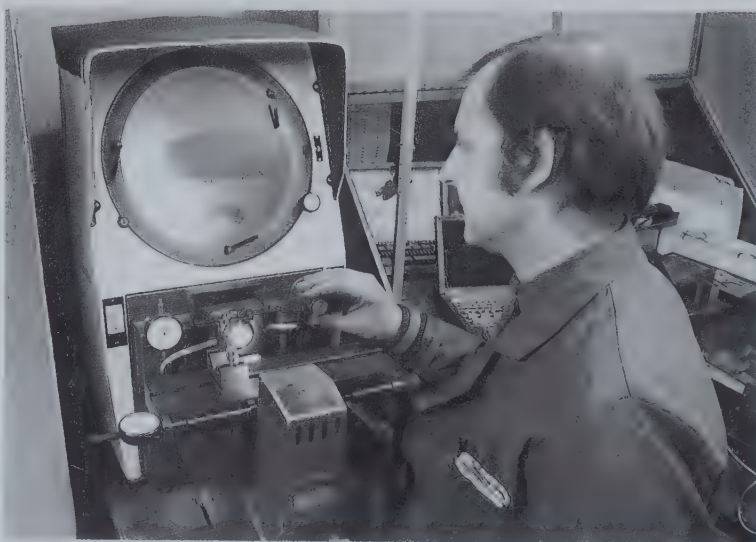
Ninety per cent of all the retouching I do is in black and white. The reason for this is that to reproduce a photograph in black and white requires only one run through the normal print machine. Colour printing needs four runs; red, blue, yellow and black, and again, for colour reproduction the print machine has to be capable of controlling the register with much more accuracy. In consequence of these extras, expense is very much the decider.

Cost apart, there is for the re-toucher very little difference between colour re-touching and monochrome re-touching. Obviously, to work with colour is more attractive, but matching a tone by mixing black and white requires as much skill as matching a colour.

This photograph is typical. Reproduction will give the basic requirements, but the white areas at the edges will tend to merge with the white of the paper on which it is printed.



The small amount of time taken to darken these areas is well rewarded. The photograph is improved and the 'merging into the whiteness of the page' is prevented.



Procedure

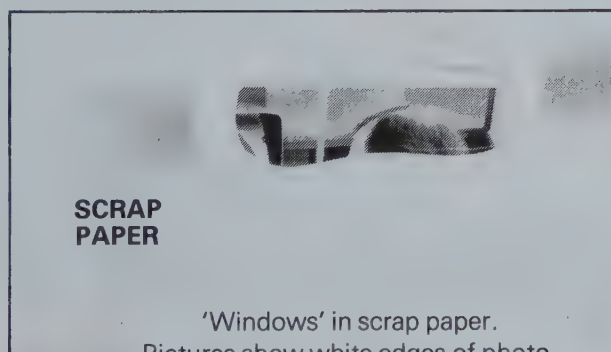
Paints

For all black and white re-touching I use Process White and Process Black. These are available at most art shops.

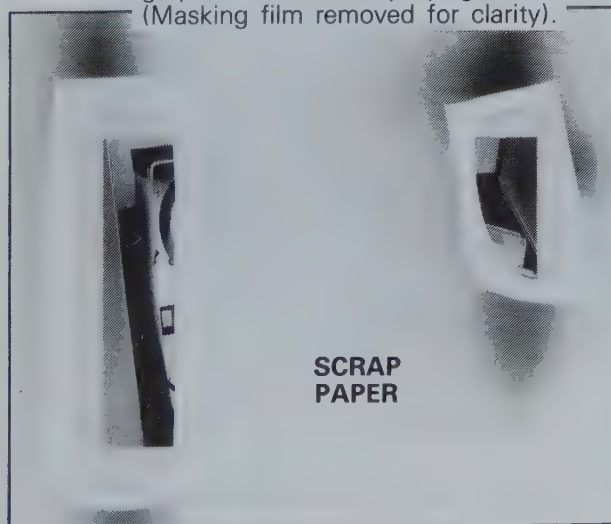
The tones I mix as needed, try out on scrap paper and force dry to gauge the finished tone.

As mentioned previously, add a small quantity of gum arabic to your mix. It works wonders by 'fixing' your paint as you proceed and allows much more freedom of movement — your areas of paint will not smudge during subsequent masking.

Equally important is that you have no necessity to 'fix' your retouched photograph with either gum-and-water or aerosol fixative at the conclusion of the retouching, because fixing at this stage will darken the sprayed areas if applied too heavily and can ruin the whole effect strived for. Also there is the hazard of 'blobbing' from a nearly empty can.



'Windows' in scrap paper.
Pictures show white edges of photograph after re-touch spraying.
(Masking film removed for clarity).



Masking

Using the 'window in scrap paper' technique, cut masks for the areas you intend to spray. As you will be cutting only once on each particular area it is acceptable to cut direct onto the photograph surface.

It is essential to have a constantly sharp blade for you must exert only minimal pressure during the cutting of your mask — for obvious reasons.

Try to obtain a graduated shade effect rather than the dead flat spray. This can be achieved by toning as you spray (more paint at one point) or by lightening an area with white after spraying flat areas of tone.

NOTE: Looking through a green filter glass at your finished re-touch will cancel out the bluish tinge of the sprayed areas and show the photograph — tone-wise — as it will appear in print.

Retouching: Airbrush & Handwork

This photograph, although excellent in quality, will be seen to be in need of a good 'clean-up' before publication.

The re-touch — shown below — included airbrush work on the face of the building, removal of pipes, lessening of background and darkening of sky to prevent white-on-white effect and tidying up of fore-court.

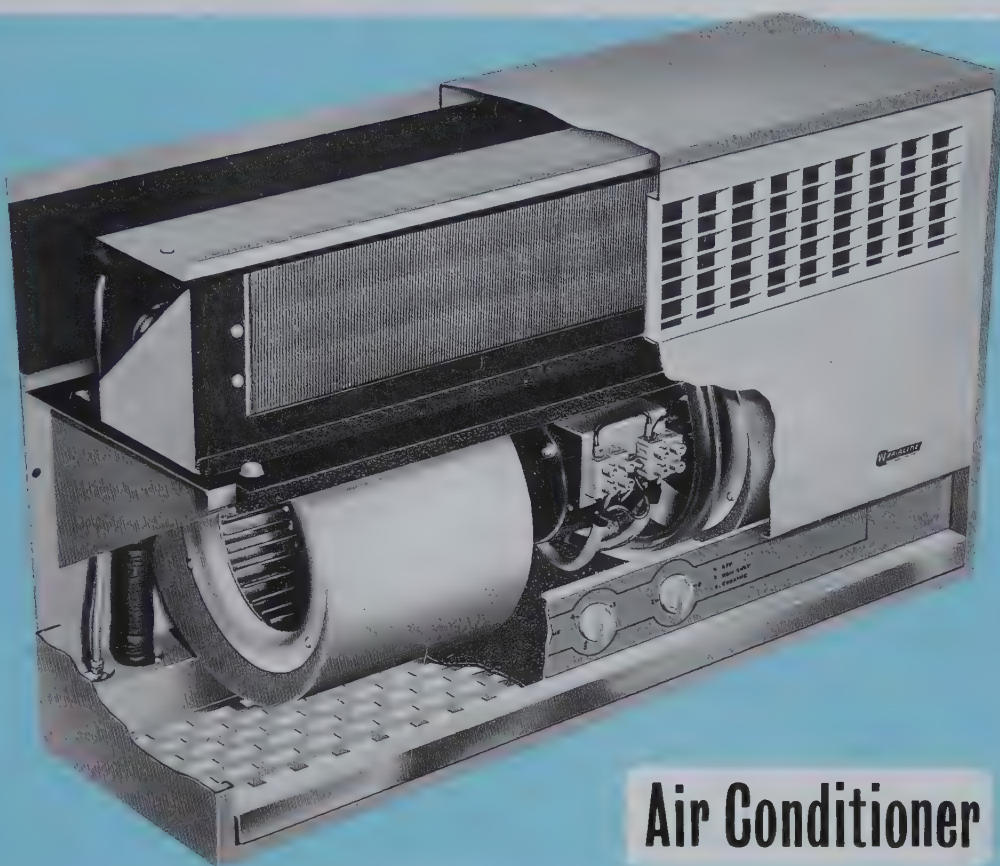
The remainder was finished by hand-treatment. Spotting out road blemishes and stonework in order to retain mottled effect and lining in highlights at doors and windows.



The logo was added to the face of the building by using the technique described in the chapter 'Additions'.

The white and shade lining-in was added with brush and drafting pen.

Cut-aways



Air Conditioner

To embark upon a cut-away of this complexity is surely too much for the student or newcomer to attempt.

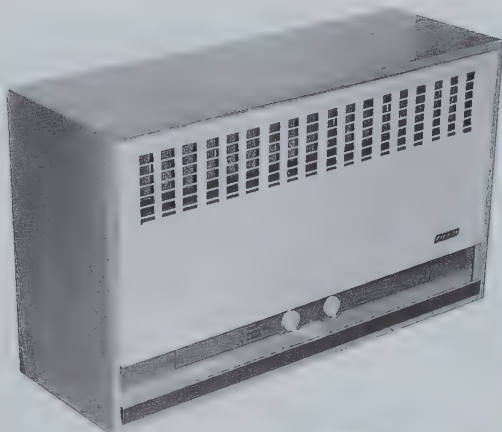
But is it? — there **is** a lot to it, but the secret is in the word 'consistency'. For any big job is, (as my father first told me) "only a lot of little jobs put together" so it is with this type of cut-away.

The mystery of the mechanics could understandably daunt the individual when attempting any technical illustration type of cut-away. Don't let it. I myself quickly realised that I didn't need to understand the workings of that which I was illustrating, and the dozens of air conditioner cut-aways which have been produced by myself have in no way made me familiar with how they work.

I am able to illustrate it because it exists and because it can be photographed and so can you.

The following pages will take you step by step through the procedure and techniques I have used to achieve this particular cut-away. Although it is written for black and white, the same methods would be applicable for colour.

Procedure



At the photographing of the Unit to be 'cut-away', be in attendance to obtain one overall exterior view at the angle you consider most suitable. And from exactly the same view-point, (the camera mounted on a tripod will ensure this) obtain a second photograph with the cover removed.

Note: For clarity I have airbrushed out the background material on these photographs shown. Under normal working conditions this background removal is the final job.

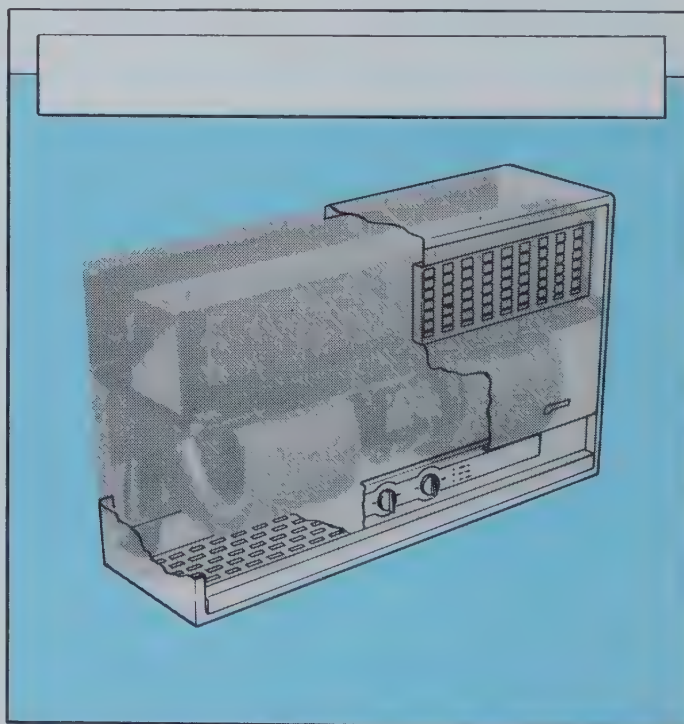
To recap — try to obtain prints (photos) of a size well in excess of the intended finished printed area in the leaflet or book in which it will ultimately appear.

Mount both your prints, for although you will be working only on the interior photograph, you will be constantly handling the exterior print for reference during the production of your cut-away.

Trace in pencil, onto either drafting film or tracing paper, the exterior view and place over the interior photograph in its correct position. As mentioned previously, hinge your overlay drawing to the top of the mounting board to fix its permanent position during masking.

Now adapt your line drawing for your intended cut-away which will have to include part of the base and other details which will now be in view. These 'extras' will involve some sketching from the actual Air Conditioner.

Finally ink in your proposed overlay sketch in thin lines and remove all traces of pencil.



Add to your mounted photograph, with its hinged overlay, a sheet of stiffish scrap paper hinged at the bottom.

You now have your line picture and your scrap paper for 'window areas' as separate overlays.

Now refer to, and follow as described, the procedure for mask cutting and spraying in 'Additions'. Page 33 onwards.

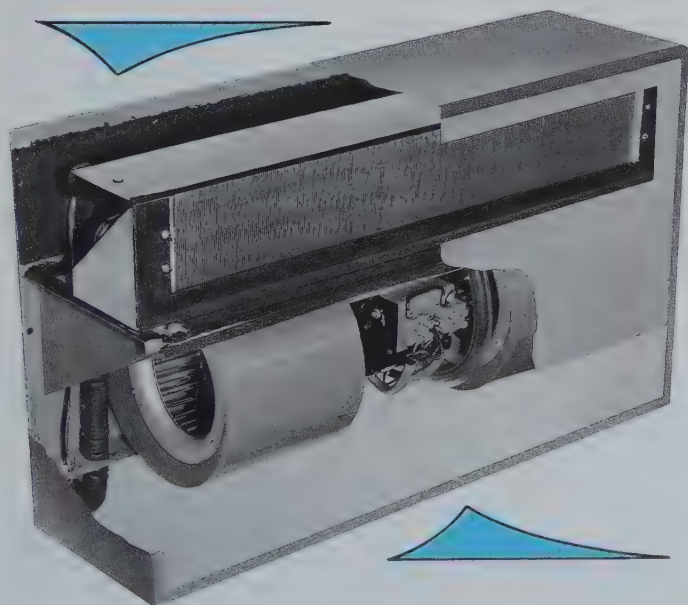


Paints. I find it sufficient to have about four mixes of white-to-black ready in separate palettes, — white, grey, heavy grey and black. (Add a little white in the solid black for extra body). Don't forget your gum arabic.

For a fairly dramatic effect, make your first stencils (mask cut-outs) for the top, front and end outer casing. (This will certainly give you the incentive for the 20 or so further masks you will need to complete). Experience has taught me that although the addition of gum arabic to a colour or tone mix will bond a paint to an unbelievably

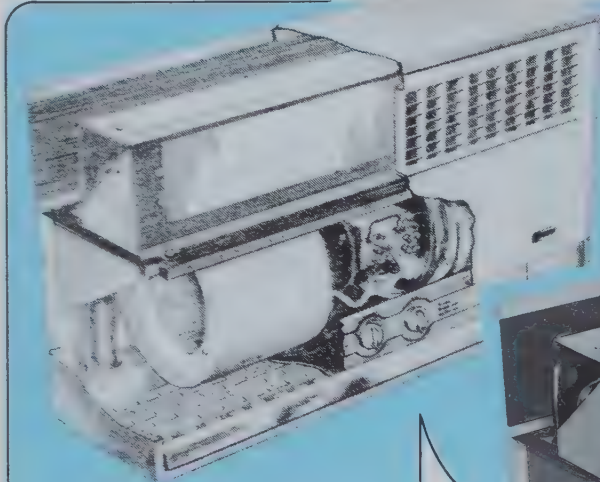
'heavy-handling' potential, the hard sharp edge of say a careless fingernail can mark your sprayed area. With this in mind I therefore leave the largest areas until last. Should damage occur, however, you have two remedies; either spot it out or re-mask the area, wipe it clean and when dry, re-spray.

Continue with mask, cut and spray, renewing your scrap paper overlay to accommodate new areas. I advocate no particular sequence other than mentioned. I only hope that you will experience — as I do — a great satisfaction in watching the picture build up.



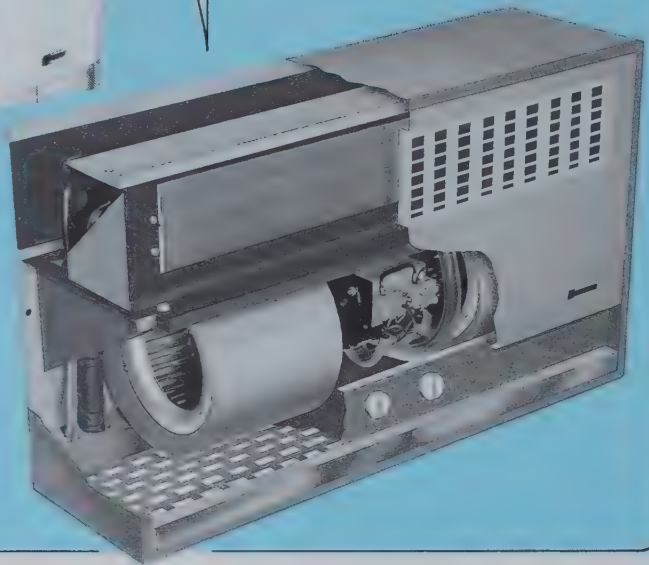
NOTE: To save double-masking for tone graduation, try to include 'light-to-dark' shading (or vice versa) while you are working on an area. As a general rule, cover the whole area on which you are working, with a tone sufficient to completely obliterate what is beneath. That achieved, overspray with white or black to get your desired effect.

To help make the decision of where to shade and where to lighten, use your overlay drawing to construct a pencilled artist's impression of the finished job — shade it accordingly and use it as your guide.



Pencilled
Artist's Impression

Airbrush work
Completed



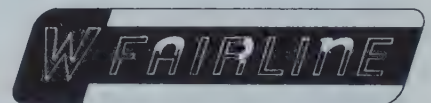
The final stage is to bring your cut-away to life with hand-brushwork and highlights. In this chapter I will elaborate on some 'easy ways' — but to avoid mental indigestion, I have, in the pages following this chapter, included a few tips and techniques, some of which will be relevant to this type of illustration.

Lettering. The size of lettering will determine the method used for the best finished results.

Draw your intended lettering onto either tracing paper or drafting film and transfer same to the re-touched surface of the print.

Warning — do not use carbon paper. It is permanent when applied to such a surface. Chalk is O.K., as is pencil. Both can be rubbed onto the reverse side of your overlay with its lettering on.

Obtainable now is a 5 colour set of transfer papers. These are excellent for letter and line transference. Rub a little french chalk over the area of your transferred lettering. This will leave you with a superb surface on which to work.

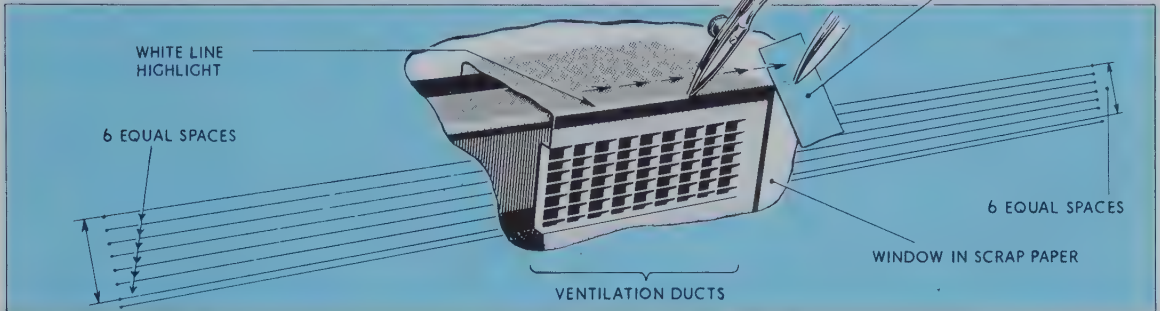


The logo and Panel lettering on your cut-away are small enough to warrant using only a handbrush. For larger, the straight letters and parts of letters which are straight I would line in with a draughtsman's drawing pen — a very adequate tool for all 'lining-in' — finishing off the rounded letters with a suitable size sable brush. The sable is a must. Try sizes 2, 3 or 4.

Lining in. Use the drawing pen, with process white, for sharp highlights.

Two
Tips:

1. To avoid finishing with a blob of paint, let your line continue onto the masking tape placed at the end of your highlight.
2. A little soap in your 'white mix' will stop the line breaking during application.
Too much soap and the line will 'spread'.



If these Vent. Ducts are not drawn accurately, they will stand out like a sore thumb.

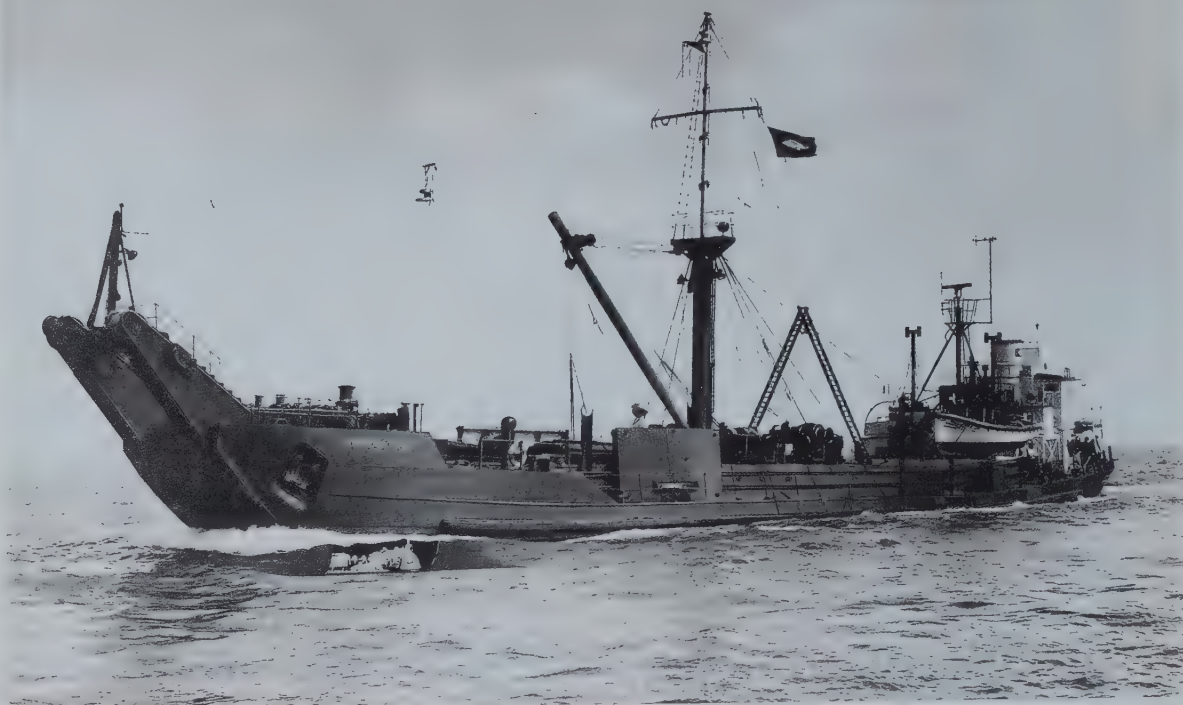
To obtain this accuracy, place your 'window' of scrap paper over the area and parallel with the top of the top vent. Continue a line onto the scrap paper either side of the window area. Similarly, at the bottom of the six vents, another line, plus a separate line for the slim bottom vent.

Mark on the scrap paper — as shown — the six equal pitches at the extremities of your lines and use them as guides when drawing the shade lines.

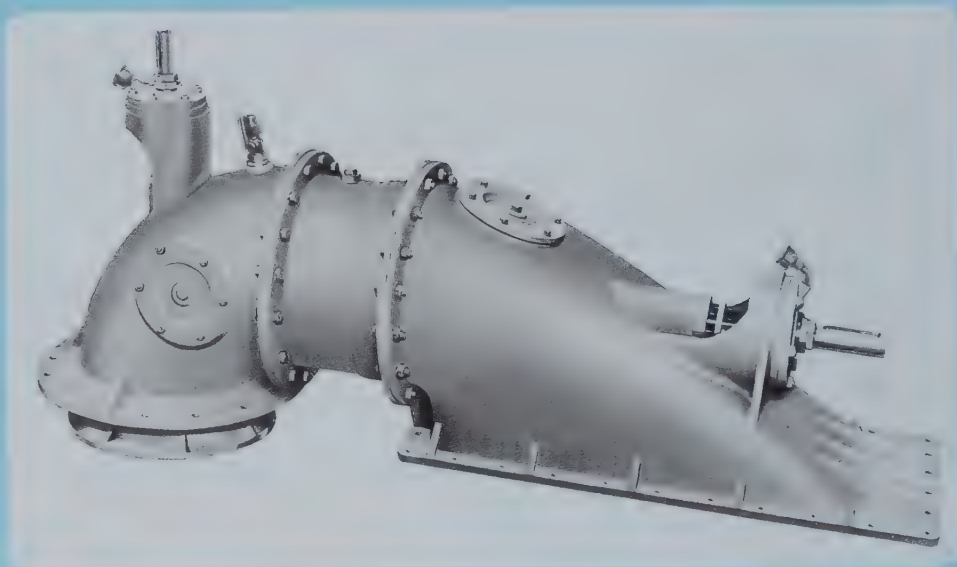


Lastly: your cut-away — your artwork. It is finished. It is attractively mounted. Complete the exercise. Cover it wholly with clear film, hinged at the top with white sellotape. If you need a title, prepare one with a suitable type-face from a sheet of dry transfer lettering onto white paper and Cow Gum it to your picture.

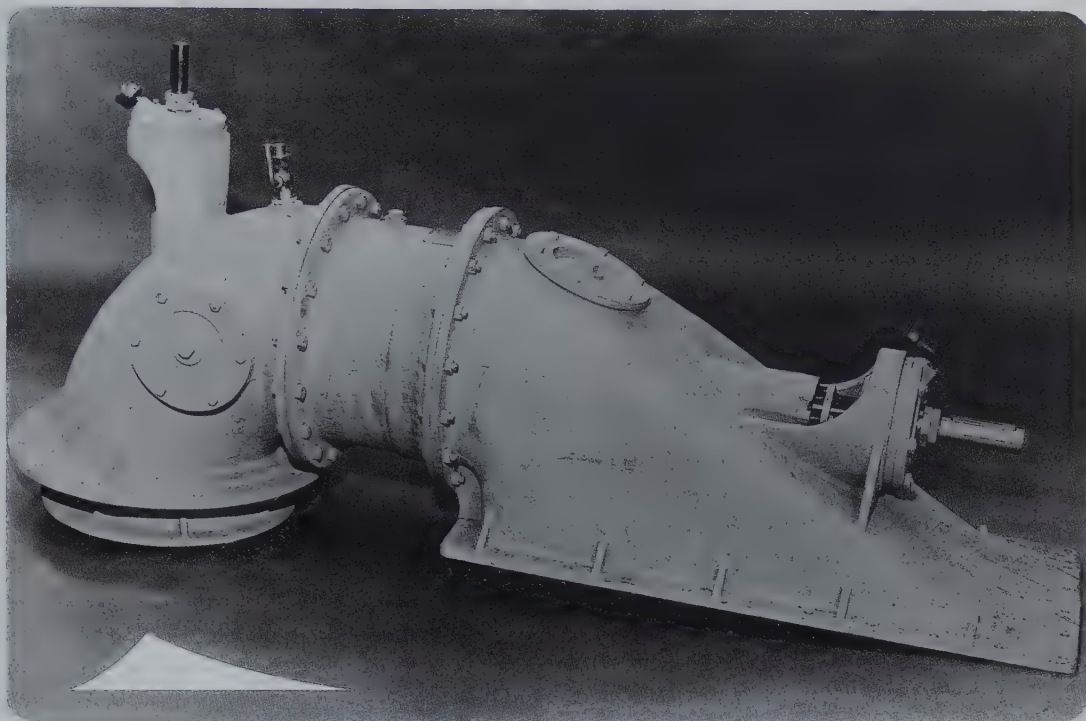
Presentation is professionalism — most important.



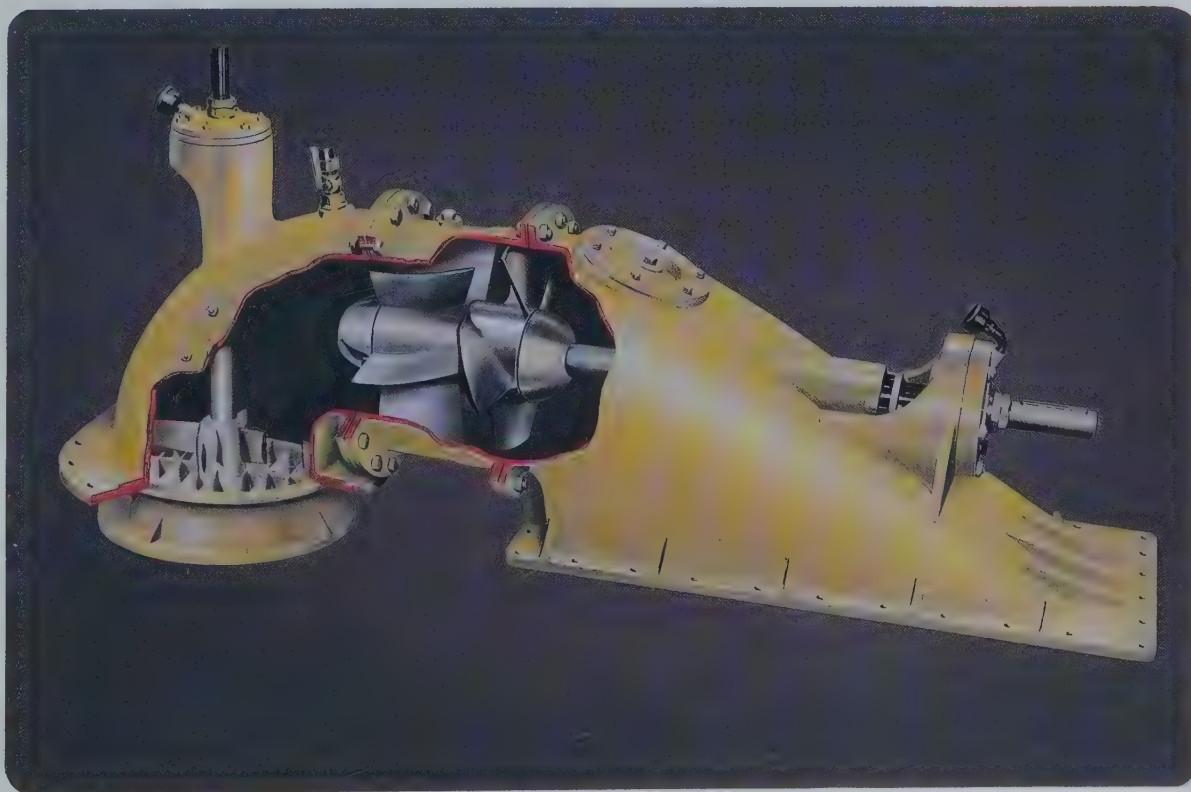
JET BOW THRUST AND PROPULSION UNIT



Water is drawn in at one end of the Unit and discharged at the other through a rotatable deflector equipped with vanes designed to discharge the water as near to a horizontal jet as possible. This produces a thrust in any given direction, enabling the vessel to manoeuvre precisely when in adverse or congested conditions.



The external finish of the Thrust Unit is not expected to be of the highest possible quality. In consequence it lends itself admirably to a face-lift retouch, and the cutaway shows how colour can improve its appeal.

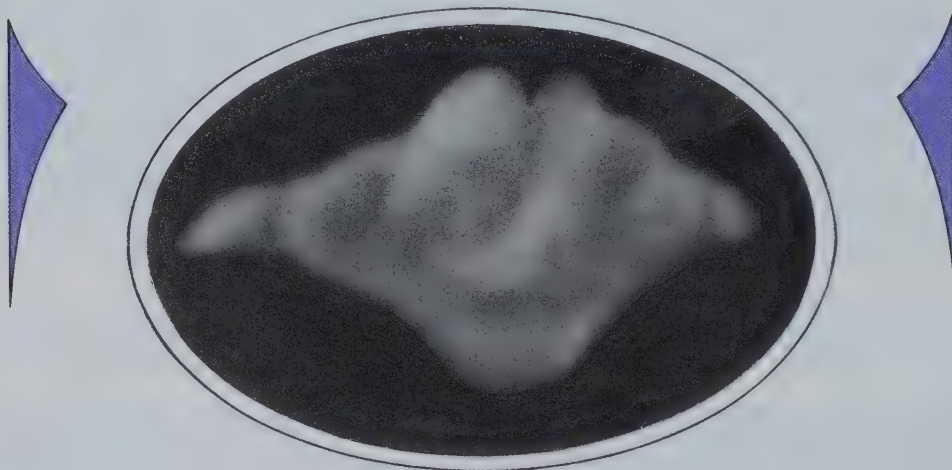


Tips – and Techniques

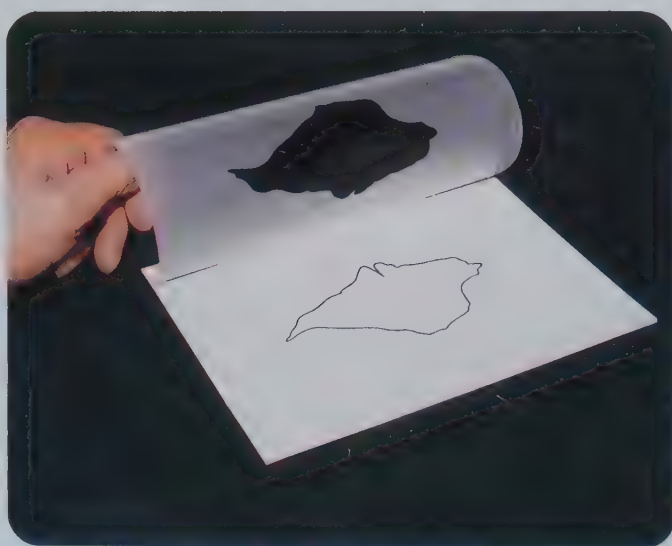
The following pages are devoted to ways of achieving a desired finish.
Keep in mind one rule. — If the effect you are striving for is not automatic, if it can only be achieved laboriously, then think about it and experiment.
You could be a trend setter.

Soft effects

Cloud — shaped to represent the Isle of Wight.



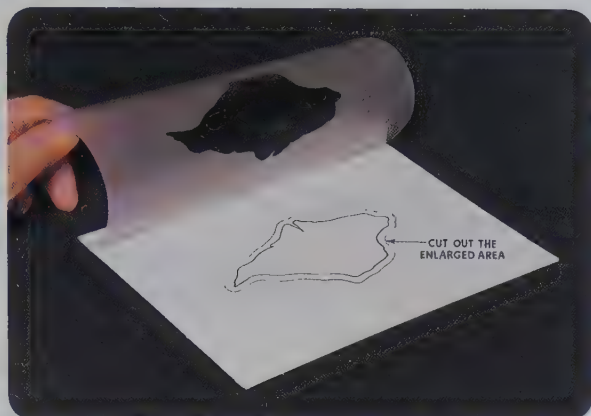
Artwork produced on thin black card.



Procedure:

Draw on white board, 1.5 mm. thick (approx.) the outline of the Isle of Wight.

Attach to the top of this board a piece of stiffish drafting film and from this film cut out the I.o.W. shape leaving — as shown — the line drawing and the film with the area removed.



Now draw on your board a second Isle of Wight outline. Make this second shape approx. 6mm. larger all round. (This does not have to follow the original contours precisely).

Cut from the board the enlarged area and replace the film overlay. You now have a stencil capable of giving you a soft line as the stiffness of the drafting film is sufficient to keep the stencil fairly rigid while spraying.

Spray softly, from edge to centre, with your colour mix (in this case white) onto a black surfaced card. Finish with process black to obtain cloud shapes.



The soft edge effect needed for the children's hair, in 'alteration to background' was obtained by using the foregoing techniques. Clothes to background being hard edged.

Highlighting

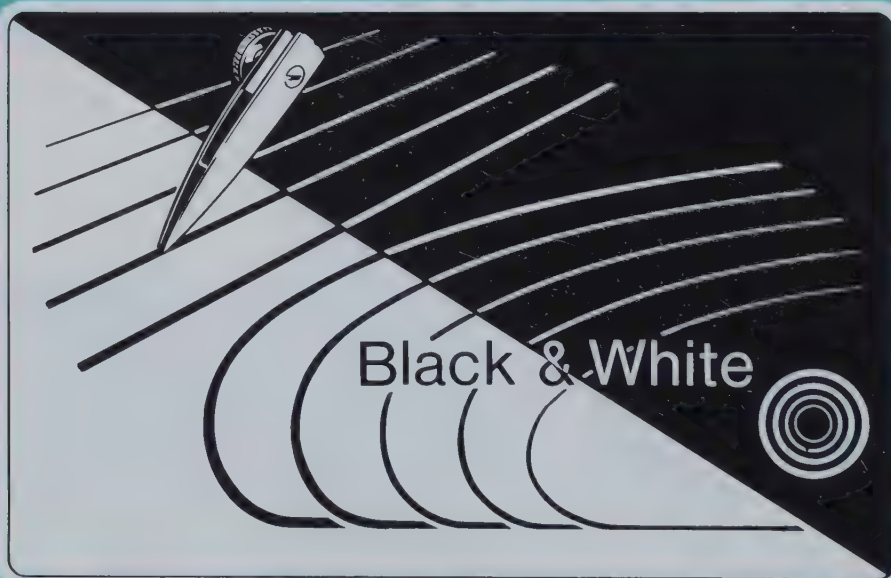
Highlighting — and equally defined dark lining, will enhance any material subject involving airbrush work. I use three methods to achieve the desired after effect:

1. Drafting Pen.
2. Brush — sable.
3. Airbrush.

Drafting Pen

The drafting/drawing pen has suffered a decline in the field of graphic arts inasmuch as the plunger type pen has superseded it.

I personally use both, but for work on photographs the drafting pen is superb. It can be loaded with colour, black or white, gives a free flowing line and of equal importance, enables the user to determine the line thickness.



A drafting pen having etched numbers on the knurled wheel automatically determines the thickness of line.

Artist's Brush

Invaluable for intricate handwork, lettering, shading, finishing and spotting.

It is the only remedy I know, other than re-spraying an area when, from a careless cough or sneeze, a droplet assumes a crater-like blemish on your finished artwork. It can usually be 'blended' by spotting with a fairly dry brush, using white and the existing colour or tone (mixed or separate). Once again — experiment.

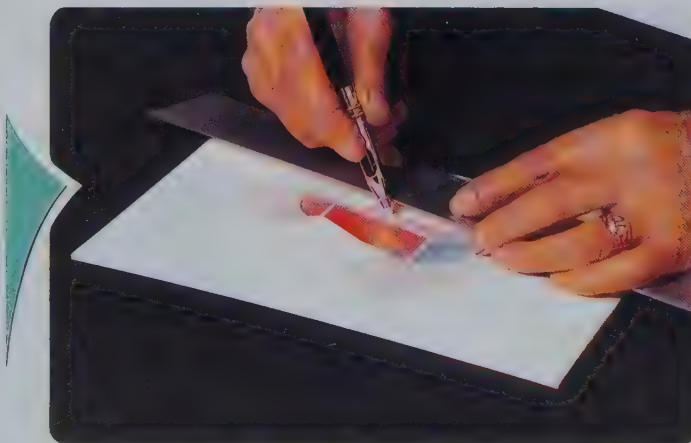
Soft lines are able to be drawn using a straight-edge guide. But it is difficult to keep a constancy of line width and density of colour/tone.

Use (as mentioned previously) a piece of adhesive film, masking tape or rubbed-down sellotape to prevent blooming at the finish of your line.



The Airbrush

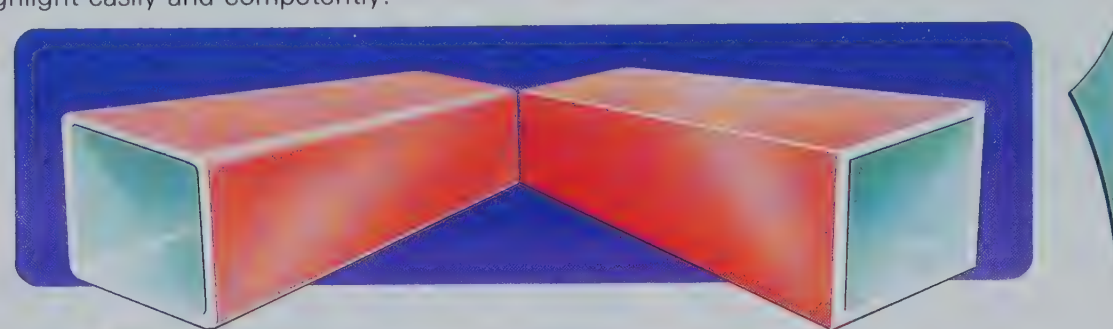
Using the straight-edge guide method it is possible to obtain a straight soft line by using the knurled protrusion on the cap of your airbrush to hold your distance from your artwork while spraying.



But you have no second chances with this approach and even with acquired skill due to usage with the airbrush, it remains hazardous.

I personally don't like taking risks with artwork which has taken a combination of concentration, effort and ability to attain. So in the vast majority of 'lining with the airbrush' I use the following method:

Do keep in mind, that hard edges of cabinets, boxes, tables, etc., will reflect an equally hard highlight and that using the drafting/drawing pen will simulate this highlight easily and competently.



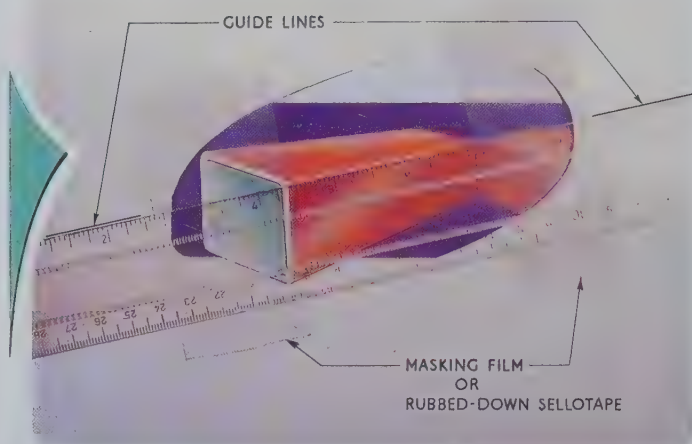
Rounded edges reflect soft highlights

To obtain this soft rounded highlight:

Cut from scrap paper large enough to cover your photograph a 'window' to reveal the area which you intend highlighting.

Place two pieces of either rubbed-down Sellotape or masking film at the extremities of your intended highlight. These will also tack the scrap paper to the surface of the photograph.

Now place a setsquare or ruler along the intended position of your highlight and draw on the scrap paper two well defined guide lines.

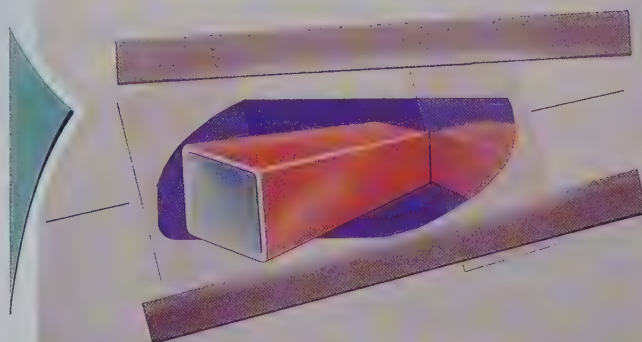


Either side of these guide lines place two straight edges and while pressing them firmly to the surface of the photograph, spray 'Process White' along the gap between the straight edges.

Do not overspray. You do not need a hard, defined line.

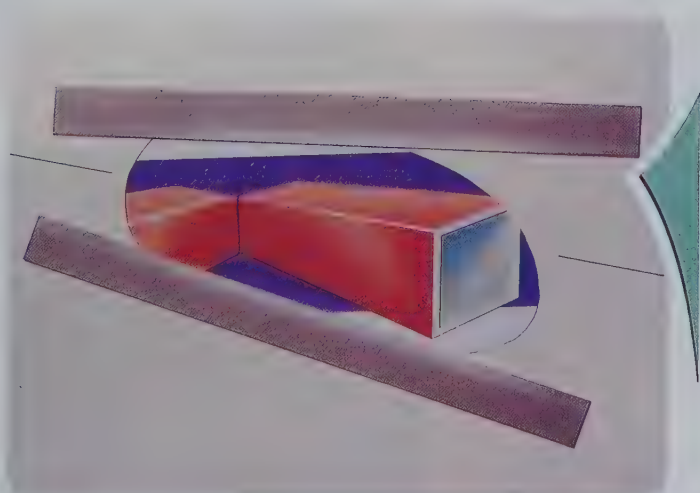
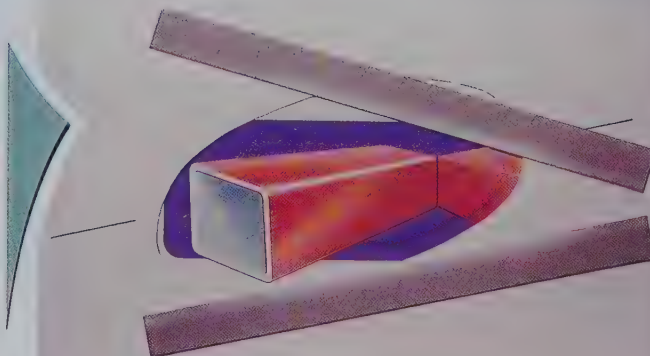


The initial placing of the straight edges should (if necessary) allow for the narrowing of the soft highlight at the far end due to the perspective foreshortening.



Repeat the exercise, but slightly increase the space between your straight edges (either side of the guide lines).

Three or four sprayings at increased widths will result in the soft radiussed highlight strived for.



Should you have no drafting/drawing pen available for highlighting a sharp edge, place your straight edges either side of the guide lines to the thickness of line you need and spray two or three times to achieve the hard line. Be careful to allow drying time between sprays.

Textures & Mottling

One result from working with photographs and the airbrush is the tendency to automatically observe textures and effects of light and shade. You become caught up in the absorbing challenge not only to reproduce an effect, but to exaggerate, to go for more eye-appeal.

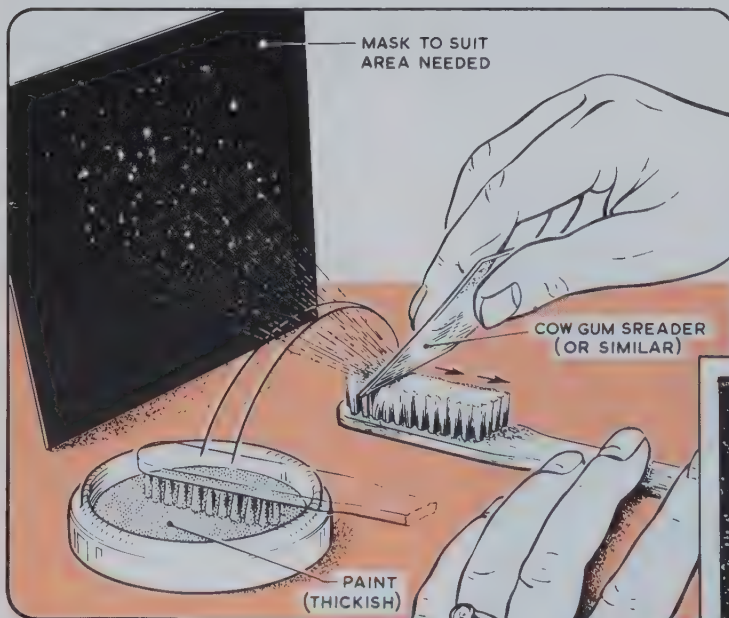


Mottled effect

At sometime during my professional life I was introduced to mottling with the aid of a toothbrush — or similar with hard bristles. — At the time I was laboriously spotting white highlights onto a pile-of-coal illustration.

Once introduced, the coal highlighting problem was solved.

I think, since then, I have always looked for the simple solution.



With the brush held horizontally (or pressed flat) and with paint adhering to the surface of the bristles, draw a hard flat edge along the bristle length to spatter your illustration.



ACTUAL SIZE ►►►

The Spray Diffuser

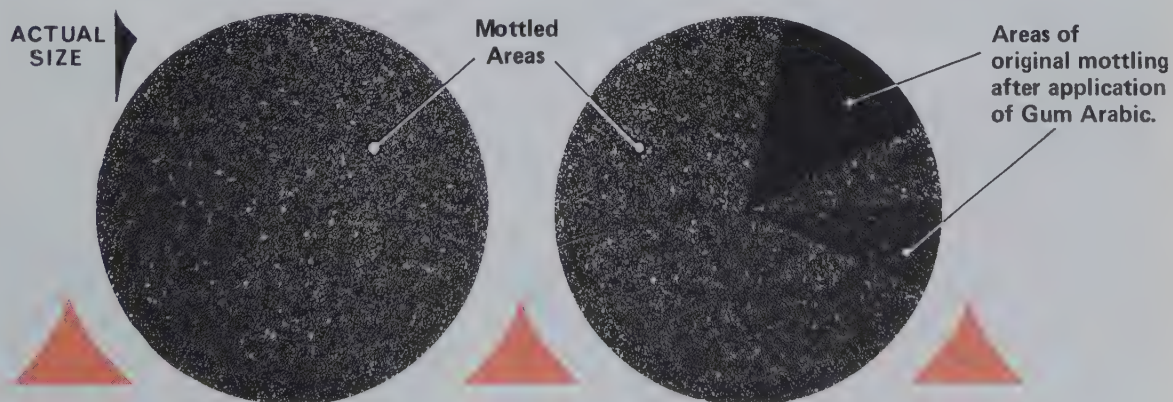


This gadget can be purchased from most art shops. It works on exactly the same principle as your airbrush — atomising liquid with a jet of air. But . . . you need strong lungs!



Try this: — Mix two parts of water to one part of gum arabic. Spray this mixture with your airbrush onto a mask-prepared portion of your 'mottling'.

You will see the potential. — You have, to a large extent, tone control following the somewhat hit-and-miss 'diffuser' procedure.



When compared to the brush spots you will see the refinement. Both ways are useful.

Wood Grain

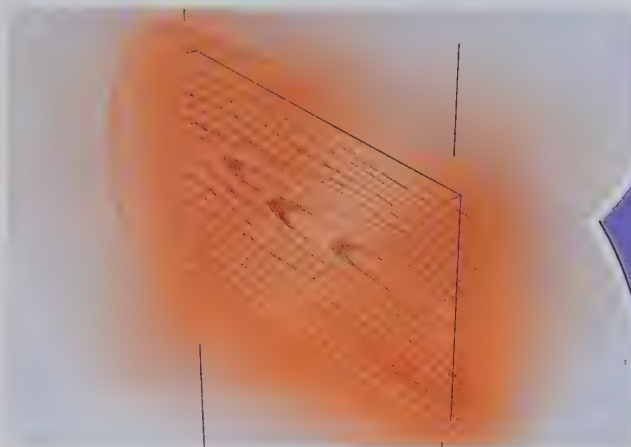
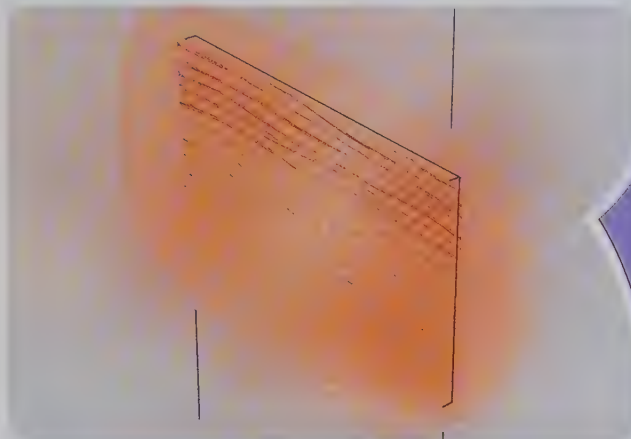
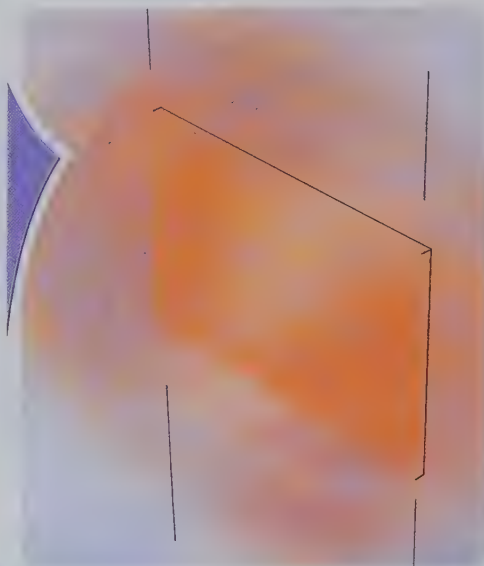
More and more are we presented with man's adaptability to create substitutes for nature's limited commodities. Nowadays it requires almost an expert to tell the real from the manufactured and wood grain on a plastic base is typical.

So, we artist's are obliged to extend our range accordingly and become equally versatile. Following, is the method I use to simulate wood grain.

The panel illustrated could well be part of your photograph needing either accentuation or addition.

Procedure: Over the 'Window-in-scrap-paper' area place masking film and cut your stencil. Allow an extra $\frac{1}{8}$ " (3mm.) at each end of the panel and mark on your scrap paper guide lines which will define the correct length.

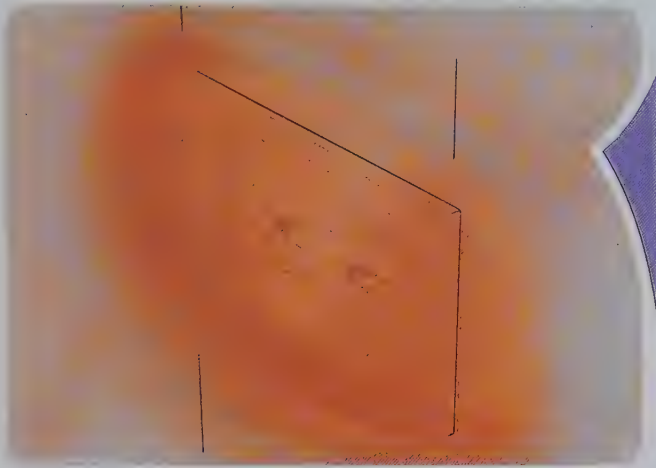
Spray the exposed area with your base colour, (the colour on which you intend drawing the wood grain). The base colour should include process white. Use tone graduation to stop the 'all flat no reflection' effect.



If you feel competent to pencil your grain onto the panel at this stage, go ahead. Otherwise pre-prepare on tracing paper and transfer to the panel. Mix your grain paint and using a number 3 or 4 sable brush, apply to the surface.

Start your grain-line at the extreme edge and finish at the far end without breaking off — except for the 'squiggles'.

Having completed your brush-work, do not be surprised if it appears too hard — too dominant. This is especially so when using only black and white.

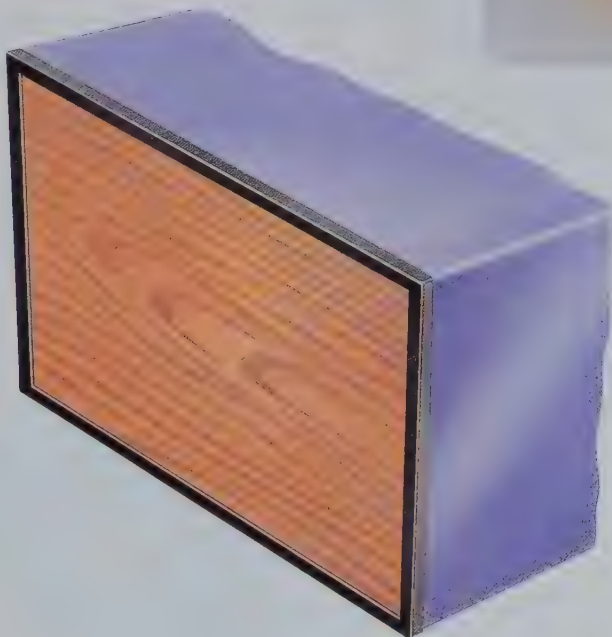


If this has happened, soften the grain lines with an additional spray of your base colour plus its process white.

A little more white is sometimes advantageous.

Now dispose of the masking film forming your stencil, but keep your scrap paper in its original position.

Take two strips of straight masking film and carefully place each adjacent to the guide lines. You now have the correct width of the panel between these two strips. — Remove, with a pad of moist cotton wool the excess of 3mm. of graining. Your panel should now be crisp and clean all round.



Depending on your particular handling of this exercise you could well not need the edge stripping technique described. Try using the exact area enclosed by the original masking and see how crisp your edges are when, after the hand painting, you remove the masking film.

Maintenance and Care... of Your Airbrush

With your new airbrush should come instructions and a cut-away drawing detailing parts should you need re-placements. This is the manufacturer's field.

I am concerned for you to keep your airbrush in 'perfect-spray' condition.

Maintenance procedure

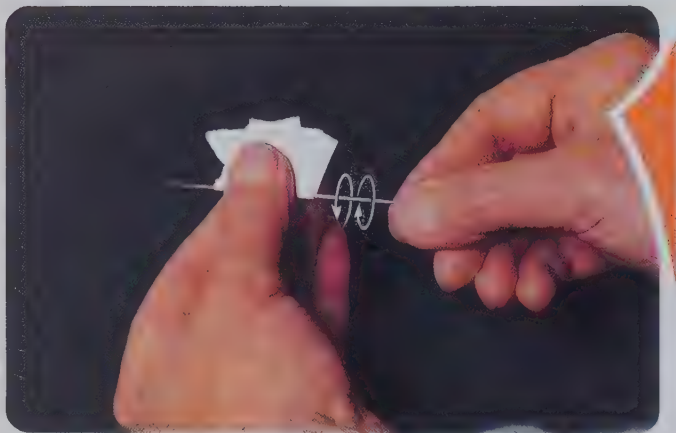
At the conclusion of every job or session, during which you have scrupulously followed the clean-after-every-spray method, your airbrush — owing to the constant washing-out — will be, or appear to be in mint condition.

But is it?

Before putting it away . . .



Remove the needle from your airbrush.

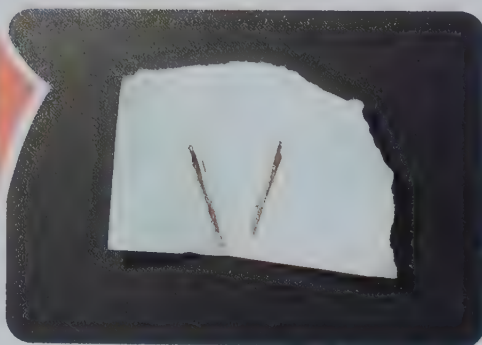


Take a small piece of soft scrap paper, wet it, and using finger and thumb encase the needle between the now folded wet paper.

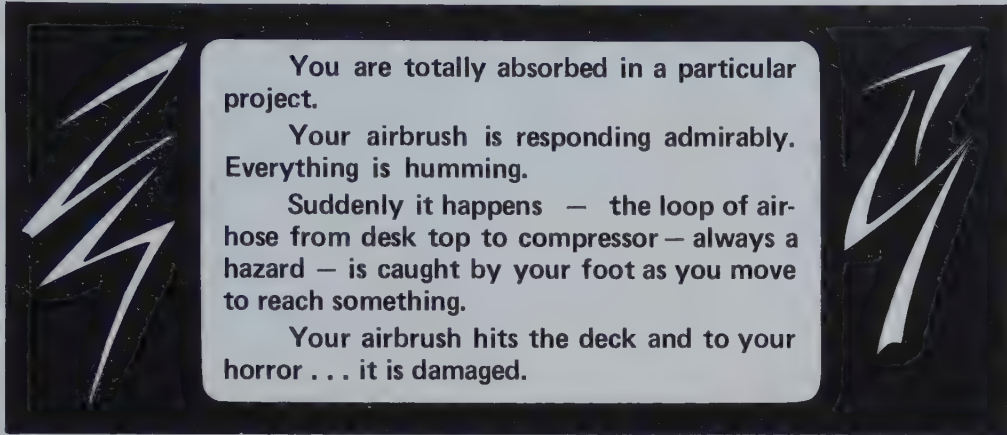
Hold the paper firmly, and twisting the needle clockwise and anti-clockwise gradually pull the needle free from the scrap paper — finishing at the sharp-end.

Be sure to maintain a firm hold of the needle encased in the wet paper until it finally emerges.

Take a look at the inside of your wet paper. Two things have happened. One, the needle is now perfectly clean, and secondly, you have honed it. The needle is beautifully smooth including the tapered end, which when assembled into the nozzle gives you, the operator, a near perfect needle valve with a correspondingly controllable jet of spray.



Care.....and Careful



Two things I have incorporated in my equipment list in the attempt to minimise this occurrence and lessen the damage.

The first

A large bull-dog clip. The holes enlarged to take the barrel of my airbrush.

It is not a fixed clip, I can attach it to any position on the edges of my drawing board.

OUT OF HARM'S WAY



The second

A large, deep-piled rug.

Mine is the home-made sort, 2' 3" x 4' 6" (686 x 1372mm). This is worth its weight in gold. Not only is it comfortable to stand on, (I can't use an airbrush sitting down) but on the rare occasion of the airbrush 'horror accident' its softness has cushioned the blow and reduced the likelihood of damage.

More Removals



Put them on



Take them off



*Do proceed with care.....
The Airbrush
unleashes
limitless potential*

Acknowledgements

The author wishes to thank the following companies
for their kind permission to reproduce material in this book.



- **Justerini & Brooks Ltd.**
Reproductions of photographs from their Point-of-Sale Brochure.
- **The Cutty Sark**
Use of figurehead for Cover photograph.
- **The Patrick Engineering Co. Ltd.**
Reproductions of brochure photographs.
- **Elliott Turbo Machinery Ltd.**
Reproductions of photographs showing Elliott White Gill Thrusters.



My thanks especially to
The DeVilbiss Company Ltd.,
in appreciation of their superb air brushes.

Sam Richards

Born in the Elephant & Castle district of South London between the wars.

Started his working life at fourteen as a clerk in a bacon warehouse at the Lambeth Walk.

Four years later (thanks to evening classes) realised personal ambition and became a draughtsman at Woodall-Duckham, a large construction company, and later was appointed head of a new publicity drawing office. The airbrush — essential for top quality technical artwork — was part of the equipment used.

In 1954, debilitated by the infamous London smog of 1952, he moved with his wife and family to the Isle of Wight to fill the post of assistant site engineer during the construction of a new gasworks, which would supply gas to the whole of the Island. The contract lasted four years and during this period, with health restored, he was appointed Clerk-of-Works for the entire coal-to-gas -making project.

At the conclusion of the contract, and not wishing to return to the mainland, he took a job as an illustrator in the Technical Publications department of Saunders-Roe (aircraft manufacturers), leaving five years later to lead a design and print team for another engineering company.

In 1966 he started his own agency, specializing in graphics, both technical and commercial.

It was while teaching graphic design and airbrush techniques that the idea for *'the Airbrush & the Photograph'* was conceived.

Sam Richards has lived on the Isle of Wight for more than thirty years with Freda, wife and poet. They have one son, one daughter and three grandchildren.

Published by:

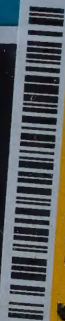
STUDIO LITH-ART,
Draycot,
Gravel Pit Road,
Wootton Bridge,
Isle of Wight,
England. PO33 4RB.

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KT-216-129