PERSONAL EXPERIENCES OF AIRBRUSHING

By Roy Harris.

Based on a talk given to the May 2016 meeting of the Calder Northern Division.

INTRODUCTION

I've only had an airbrush for 18 months, so this isn't going to be a masterclass. Just a few notes on a rather long journey to getting satisfactory results from airbrushing. It's principally aimed at somebody like I was a couple of years ago, wanting to have a go but not understanding what quality I could expect for my money and what difficulties I might encounter.

I have been a modeller for as long as I can remember. Until a couple of years ago I brush painted everything, getting quite reasonable results.

I was deterred from spraying for several reasons:

- A lot of my modelling was military vehicles, which did not require a good finish.
- Price - I have 1993 book quoting £100 for a compressor - almost £190 now.
- No internet to find out about suppliers or hints and tips.
- As we'll see, early attempts ended in failure.
- There seemed to be a lot of variables, not least mixing paint to correct consistency and obtaining a reliable air pressure.

HISTORY

Many years ago the first airbrush I purchased was a Humbrol external mix. These are still available on ebay. It consists of a glass jar with a nozzle on top over which the air jet passed. As far as I can remember it splattered paint in the general direction of one's model! I struggled mixing paint to an acceptable consistency, but think I was never going to get satisfactory results.

About 1994 I tried to paint my model of Duke of Gloucester with a Railmatch aerosol. Results were poor and I ended up squirting the paint into a tin and brushing it on.

Next attempt was this Humbrol Hobbicraft Airbrush. (Photo 1.) I purchased this second hand from the Gauge O Guild convention, assuming that anybody good enough to work in O gauge must have good equipment.

This was set up with an old car tyre to provide air pressure.

I had the performance of thinning the paint, filling the cup, only to find it was too thick/thin. By the time the consistency seemed right, the air pressure had fallen and I had to pump the tyre up. By which time the paint had dried a bit and so on. Additionally, the whole operation seemed to collect particles of dust.

The only major project I used this on was my class 17. (Photo 2.) This was made from a TechCad kit,

with a pre-assembled etched chassis and resin body. This was very rare and the most expensive thing I had bought on ebay at the time. We are of course a long time before the Heljan model. I carefully mixed the paint etc. Tested it on a piece of scrap card - perfect. Aimed it at my model. Splatter! Modelstrip came out. Cleaned, leaving one wet model. Wife had just put the oven on so placed model in there to dry. Bad idea. The oven had warmed more than I anticipated. Fortunately the body only had a slight curvature which I was able to reverse. Needless to say it was then carefully brush painted!! The grey roof is sprayed with a car aerosol, so justifies inclusion in a talk on airbrushing.

CURRENT EQUIPMENT

This was a set (Photo 3) purchased from Airbrush Heaven, based in Crewe, although I think their warehouse is in Manchester. They have their own website and also a presence on ebay. Usual disclaimer - in fact we asked them to attend to do a presentation but received no reply.

I bought my set for £65 when they came to one of the military events at Crewe Heritage Centre about 18 months ago. The set included two unbranded Chinese airbrushes and a compressor, together with a collection of hoses and connectors. Some say that they prefer compressors fitted with an air reservoir to even out the pulses generated by the compressor. Indeed even down 1m of hose one can still detect pulses, but this doesn't seem to detract from the painting.

The two airbrushes are:

One simply identified as BD-128. (Photo 4.) Seems ok, but trigger operation doesn't seem as smooth as it might be. The paint cup fits under the barrel at a strange angle. I assume it is intended for spray tanning. The position of the cup makes it difficult to hold the airbrush comfortably and it takes a comparatively large amount of paint to cover the tube coming out of the paint cup. As with the others it's dual action (press for air, pull back for paint), internal mix (paint and air mixed inside the body).

The other brush is a BD-134, with a side mounted cup, photo 5. This is much more comfortable to hold, the cup being well away from my hand and it will operate on literally a drop of paint. Useful for testing, small jobs or weathering where you want to keep feeding in a small amount of different colours.

Only problem is that if you load it with a fair amount of paint for a bigger job and suffer a blockage, the cup takes several turns to release. Rather than do this and cover yourself in paint, disconnect the air hose and rotate the brush around the paint cup.

For £20 I purchased an additional brush from a supplier at Manchester exhibition. (Photo 6,7.) The paint cup and barrel are one piece - you can see the needle running through the barrel. This type will also operate on small amounts of paint.

USEFUL ACCESSORIES

(Photo 8.) Paper towels or old serviettes. Plastic gloves. Eye dropper.

Painting handles. Rather like a large bulldog clip, but spring-loaded outwards so that they will fit inside a loco body to hold it while you paint.

Cotton wool buds and interdental brushes for cleaning.

3-way splitter, allowing 2 or 3 airbrushes to be connected.

Quick release valves. One piece screws onto the airbrush, the other into the hose. These simply push together and a pull on the knurled barrel releases the brush and seals the hose. A well as releasing the brush quickly without twirling it round, it saves switching off the compressor every time you have to remove a brush. Playing with the valve before I fitted it to the brush I found the spring is quite powerful and capable of launching half the connector across the floor into a pile of junk...

Cleaning bottle - usually about £15. Basically a plastic container with an inlet to accept your airbrush and a filter to restrict the fumes. You can fire the airbrush into it to collect unwanted paint and thinners during cleaning. Usually about £15 but I made one from an old juice bottle. The inlet is a grommet fitted to a hole in the side. The screw top has several holes drilled to let the air out with layers of paper towel trapped in the screw top as a filter. A fine mist comes through the filter, so I always use it in my spray booth.

Spray booth. Originally I used a big cardboard box fitted with a pipe running to an old vacuum cleaner. The outlet was covered with an offcut of cooker hood filter. Surprisingly effective judging by the discolouration inside the pipe when dismantled. Subsequently bought a spray booth. A couple of types widely advertised on ebay and elsewhere, one being a bit smaller and having LEDs with curved side pieces that fold down. Mine is a slightly larger version but with a built-in on/off switch. A good investment to prevent overspray on the workbench, not to mention sucking away atomised paint thinners.

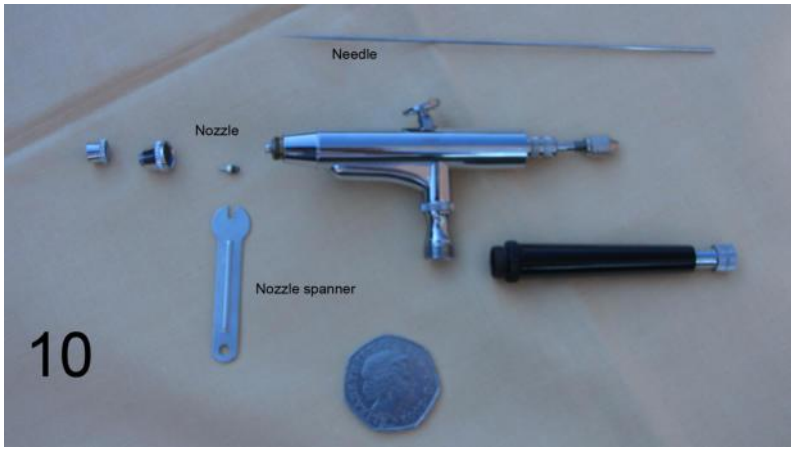
YouTube - lots of instructional videos

CLEANING THE AIRBRUSH

Instructions supplied with the brush are useless as regarding cleaning, so had to find this out for myself.

A lot of advice suggests running thinner through the brush until it sprays out clear. This is slow and ineffective, leaving paint in the main barrel. If you only clean like this and put a new colour in, it will be preceded by a substantial amount of the old colour when you start spraying.

(Photo 9.) First step to disassembly is to remove paint cup, wipe out excess paint and drop in a tray of thinners. Next unscrew the rear of the barrel. Loosen the needle locking nut. You could pull the needle out now, but it means pulling paint back through the rear compartment and trigger. Usually no need to undo the other knurled nut - it holds in a big spring and the trigger. Took ages to figure out how



to reassemble that lot. So undo the needle cap and nozzle cap from the front. In fact they frequently come off as one. Clean, especially rind of paint in nozzle cover.

(Photo 10.) Use spanner to remove nozzle. It's very small, essential and difficult to find on the floor! Clean and make sure you can see daylight through it. Pull needle out through the nozzle and clean. Treat gently as it's useless if bent. Do not use it as a cleaning implement. Also, it is *sharp*! There is no need to ascertain this for yourself. I have done it for you! Pour thinner through paint cup hole to run out through nozzle until clear. Use cotton wool buds or interdental brushes where paint cup fits. While you have the needle out, check the point by gently stroking away from the point. On of mine had a slight burr which could be removed with a couple of light strokes on an oilstone.

Reassemble in reverse order. Screw in the nozzle and *lightly* tighten with the spanner. You can easily apply enough pressure to snap the nozzle. This time you can feed the needle in from the rear so that it sits gently in the nozzle - you may have to press the trigger slightly as you pass the needle through. Do not force the needle or you could damage the point. Ensure the needle is going into the brush and is not experiencing resistance from your finger. (Voice of experience.)

PAINT

After so many problems with earlier air brushes, this set was easy to set up.

I set the air pressure to 15-20psi; the brushes are very tolerant.

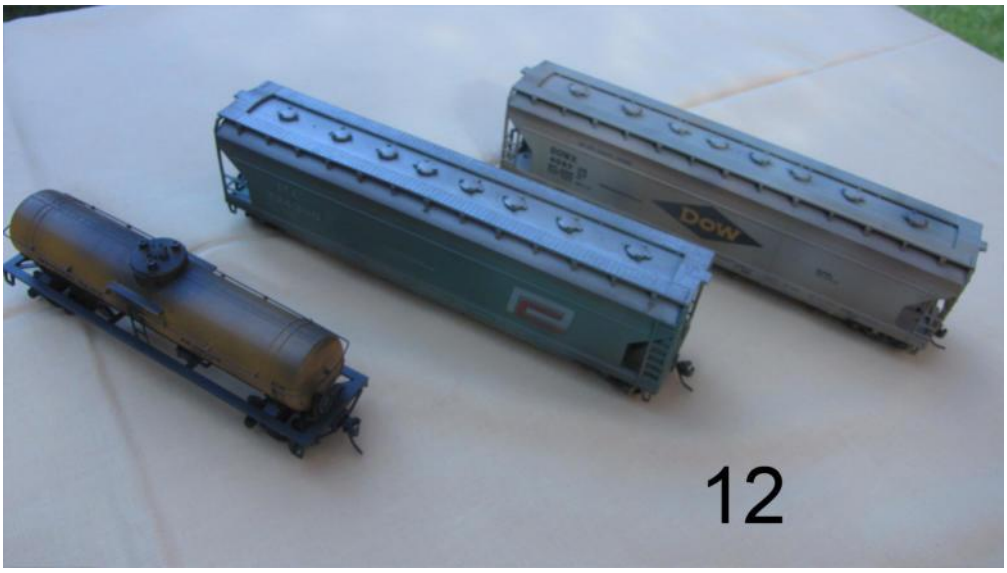
Ink served as a good test being plentiful and easy to rinse out. Next I tried a bottle of Vallejo Model Air acrylic paint. This comes in a plastic bottle with a built in eye dropper, so it is easy to put a small amount in the brush. It is at the correct consistency to use straight from the bottle, although I tend to add 1 drop of water to 5-10 drops of paint. Mix it in the cup by holding a finger over the nozzle while releasing air. This pushes air and paint backwards into the paint cup. The technique is also useful for blending different colours such as shades of brown for weathering.

I was so pleased with this paint that I subsequently bought this pack of 16 colours on ebay - think it's currently around the £30 mark. (Photo 11.) Biased towards military modellers with numerous shades of brown, grey and blue. Other types of paint are noted in the following examples.

Eventually the paint will start to dry and may block. Try to back-flow method to clear it or loosen the needle retaining nut and rotate the needle without removing it. Usually lets you carry on a little longer before a full clean becomes imperative.

EXAMPLES USING AIRBRUSH

These 3 cars (Photo 12.) were rather bright plastic and have been toned down with multiple shades of brown and grey. I have used paler browns at the ends to simulate track dirt having been thrown up.



An O gauge MR van. (Photo 13.) Not much you can say, a basic grey colour. Still needs the roof finishing and lettering.

An OO Shark brake van. (Photo 14.) A lovely model finished in an immaculate green which looked strange sitting at the end of a rake of weathered ballast wagons. With some trepidation (it was a present from my wife) I lightly sprayed a predominantly light grey to contrast with the green on the assumption this would be the colour of dust from ballast. The roof has a subtle mix of colours.

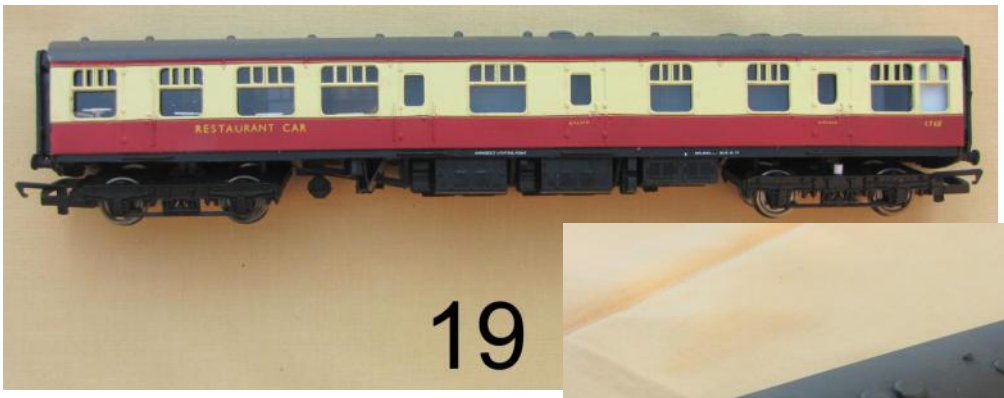
The seacows (Photo 15) were a set of 3 factory weathered examples and looked very uniform and had a yellowy tinge to the weathering. These have had quite a lot of different feint sprays in different shades, breaking up the monotony of the slab sides. Pale grey on the ballast chutes. Highlights around the verandahs.

Factory weathered Mk1 coaches. (Photo 16.) As with the seacows these had a very basic weathering applied along the sides, but not the ends. The colour underneath has been varied and weathering applied to the ends.

This 03 was repainted to match one in industrial use. (Photo 17.) The cab was deliberately poorly hand-painted - you may be able to see on the photo that the original blue livery and white markings are visible. Not sure if the deep yellow was brush painted. Had great difficulty getting a sharp dividing line between the deep yellow and black on the footplate...until I noticed the original didn't have one and I airbrushed dirt along there. Quite pleased with the black weathering on the bufferbeam.

This is an N-gauge 'B'set. (Photo 18.) Made by cutting and re-assembling parts from other coaches e.g. ends originally had corridors. Other windows were filled, so there's quite a bit to hide here. For the first time I used Vallejo primer. Bit of a disappointment as of course the pale grey primer revealed all sorts of blemishes which I started to sand down. Unfortunately, the primer is akin to a rubber skin and peels off leaving messy scabs. Nevertheless the coaches are my first completely airbrush painted models. I had purchased a pot of Humbrol acrylic maroon to paint them with but it simply wouldn't spray. Checking on the internet this seemed to be a known problem to do with the particle size. In the end it was painted with my own mixture of Vallejo paints...there seems to be a lot of different shades of red on early BR coaches judging by the photos I looked at.

The restaurant car (photos 19,20) started life as a gutted body with no bogies from Crewe Heritage Centre shop. Undercoated with Halfords aerosol white plastic primer which seems popular technique on internet. Soak the tin in *warm* water before use to build the pressure up. Intended to paint all over maroon for ease but challenged myself to do blood and custard. The first coat was the cream painted all over the side in 2 or 3 light coats. This came from the unlikely source of an unbranded glass jar bought 20-odd years ago, which sprayed straight out of the jar. After lots of careful masking the red colour was applied from a fresh tin of Precision Paint with little, if any, thinning. The masking left ragged lines which I was able to cover up with lining transfers from Replica. Applying 4 lines per side around coach board holders, hinges doors etc. is very "entertaining". The coach was finished with several coats of Precision ready thinned varnish. Figured it was worth the price as thinning something I couldn't see was going to be problematic.



The second coach (photos 21,22) was another bargain, originally in GWR colours but weathered by somebody using fawn paint and a hairy rag. The prototype was getting on in years by the time it received BR colours, but having got the finish so nice I daren't weather it!

Finally, this is nothing to do with airbrushing, but I was talking to someone you about it a couple of weeks ago. It's an old Tri-ang 16 tonner weathered as per Martyn Welch's book "The Art of Weathering". (Photos 23,24.) Firstly apply rust-coloured paint mixed with talcum powder for that bubbling rust look. When that's dry apply Maskol (or in this case Copydex rubber solution glue) in random patches. When that's dry, paint grey all over. Then pick away the Copydex, showing the rust colour underneath and leaving flaking edges to the grey. Touch up with washes of orange/brown and a thin wash of black to taste. Apply wording indicating it's only got one run left in revenue service.

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After the talk, several members showed off different makes of airbrush.

We compared spraying paint using one of my cheap airbrushes and an Iwata Neo. The latter is an economically-priced offering from a well-known manufacturer currently selling for £60-70 on ebay.

It was felt that the Neo had a slightly nicer feel, but that for the price, the unbranded models performed very well. Sheets of paper were sprayed with paint as a test and it was felt there was little to choose in the results. Examination under a magnifier at home revealed that one possibly had a more consistently fine spray. Sadly we didn't note which one. Hopefully it was the more expensive!

In conclusion, after many disappointments with inferior equipment, there is some good economical kit on sale now which will reliably provide good results. The cheap brushes have allowed me to buy a selection with different characteristics. If you are starting out there is less worry about breaking one of these while you're learning how to strip and clean it. I would opt for a gravity feed. Having the paint cup on top keeps it out of the way of your fingers when holding the brush. The position of the cup allows you to use very small amounts of paint virtually directly into the brush, saving waste on small jobs and allowing blending of different shades during weathering.