Roll-up backscenes

Noel Leaver shares his experience with removable photographic backdrops.

Photographs by the author.

Most layouts have a backscene fixed to the back of each board. On two of our recent club layouts we have instead made a removable backscene that can be rolled up for storage and transport. This has many benefits:

- No joins (or corners) in the sky.

- Height not restricted by need to keep boards small for transport.

- Boards and covers need only be height of tallest scenery.

- Not in the way when working on the layout, less likely to get damaged or dirty.

- Fairly easy to replace if damaged.

Relatively minor disadvantages are:

- Additional operation to erect backscene, and something else to transport.

- Does not provide protection for scenery during work on layout. (We have considered a low ply board behind where the roll up backscene goes to help protect buildings and trees.)

One millimetre thick matt white PVC sheeting, also known as "Foamex", seems the ideal material. It is light, durable, fairly rigid but sufficiently flexible to roll up, takes paint well, and can have printed images bonded to it. It comes in 8' x 4' sheets costing under £20. It is easy to cut, and lengths can be joined. Most companies that print display signs will have stocks and will sell sheets, or you can get it delivered.

Our first club layout used wooden slats at intervals along the back attached with Velcro to support the backscene. However, I'll describe the more sturdy supports we used on our second layout. About every 12" along the back is a linen pocket into which a 4mm diameter stainless steel rod is inserted. The rod goes into a brass tube set into the baseboard and protrudes below into a block of wood glued beneath for further support (although if your baseboards were really chunky you might not need this). A strip of beading is glued to the top of the baseboard between each pair of brass tubes to form a channel into which the bottom of the backscene fits,

Above. *One of the linen pockets.*

Above. *Right half of the photographic backscene on our N gauge layout Wickwar.*

Below. *The brass tube in which one of the rods sits, and the beading to hold the base of the backscene.*

holding it in position between the rods. The top of the beading is angled to make it easier to slot the backscene into place. The beading is only needed on straight sections, not where it curves at the ends. In one place where the scenery is lower than the main baseboard surface a piece of channel has been let into the rear of the scenery.

The pockets are 3" wide strips of linen, an inch or two shorter than the backscene to allow access to the top of the rods for removal. Hems were sewn top and bottom to prevent fraying. To attach them, the backscene was put in place, the rods inserted behind, then the backscene was held tight in the correct position while the each rod was marked with a pencil on the backscene. It was then laid flat face down, rods placed in their positions, strips of glue put down each side (clear of the rod), and the linen pocket placed in position. The glue we used was MitreBond Aerosol (various suppliers including Screwfix), a cyano glue in a bottle with a separate aerosol activator which we sprayed over the back of the linen once it was in place.

Above. *The storage bin.*

To make a sufficiently long length of Foamex, two strips 8 ft long were butted together then a strip of Foamex about 3" wide was glued across the back of the joint.

To erect the backscene it is unrolled, lifted into position and eased into the slots – for one as long as ours, three people is the minimum and easier with more. The metal rods are then inserted. Taking it down is the reverse process.

For storage and transport we use a cylindrical fabric bin sold for laundry or garden waste. The garden one is 2 ft diameter, 2 ft high, and cost less than £10. The laundry ones are smaller, typically 18" diameter.

The backscene can be painted, or if you have a photographic image you can get it printed and stuck to Foamex at any number of print shops who do banners and signs.

Creating a photographic image for a backscene

You need a good photo editing package: Photoshop is the market leader and the one I used, while GIMP is an open source alternative. I started with a very old version of Photoshop that came free with a camera, but the image is so large it could not cope and I had to upgrade. You don't need the latest version CS6 – I am on CS4 which can be downloaded for free from some sites. The smaller Elements package may be sufficient. I was learning Photoshop as I went; someone more experienced would have been faster and probably produced better results. It is a massive package and even experts only use a small percentage of its features.

Obviously you need photographs, and you need them taken in appropriate light for what you are modelling. You may want to choose a day by the sky as well (clouds, clear, or overcast). What photos are needed depends on the topography. If everything on the backscene is hills a mile or more away then a panoramic shot from a suitable viewpoint is probably all that is needed (most modern cameras can take these). In our case Wickwar is in a narrow valley and the horizon is only about 400 yards. We found shots taken from just one position were fine for directly opposite, but the more you pan round the more of an angle there is and the image is compressed so the completed image is too short. Better was a series of shots as we walked along the opposite side of the valley taken with the camera pointing directly at the "backscene". To do this you need fairly constant light. The clouds will change

between shots so you will end up "drawing" most of them in Photoshop by copying clouds from other photos.

You don't want to have any buildings that will form part of the backscene close to the camera, as these look wrong unless viewed straight on. You can get away with buildings several hundred yards away. If your backscene is urban you will need to arrange that any buildings in the foreground can only be viewed from a narrow angle, for example, between two modelled buildings.

We had three attempts at getting suitable photos before we had a set we could use.

There is software to stitch photos together, but I found it did not work in all cases, and preferred to do it manually in Photoshop so I had complete control. I started with a canvas set to the correct size, initially 600 DPI but the print shop said this was more than needed: 300 DPI is plenty and 150 DPI makes little difference when printing onto vinyl. There is an advantage to a higher resolution while working, and you can reduce it when you have the final image. I started with the photos in the centre and added photos alongside, cropping them as needed. The photos needed sizing to occupy the correct area of the backscene. Often it was necessary to adjust the colours to compensate for different lighting or how the camera had chosen settings. A few needed resizing slightly to match the adjacent photo, or rotating by a small angle. When adjusting colours it is sometimes useful to use the marquee tool to define the area where the changes are to be made.

Sometimes the photos joined well, but usually some work was needed along the join to hide it, for example a hedge coming towards the camera might not join up precisely. I used the clone stamp tool a lot to touch up joins – this lets you copy a small circular area from one part of the picture to another: you copy more by moving the cursor around like a brush. Sometimes I would crop out an area from another photo and add it in. I did all this zoomed in a long way; if it looked about right like this it would be fine viewed normally.

There will be areas you need to "paint out" of the image: a building in front of the backscene that is modelled on the layout, or a modern structure that has to be removed (we were lucky that the view at Wickwar had hardly changed in 60 years!). I used the same clone stamp and copy tools to remove them.

An example is shown on the opposite page. This photo required the most editing of any: the brewery in the foreground had to be painted out; it was taken at an angle so a slice had to be duplicated and inserted to make the field wider; the trees in the left foreground had to be painted out; and the sky – fortunately plain blue – had to be extended upwards.

Usually the photos needed stretching to conform with the model – simply scaling up the whole could make the horizon too high, and indeed having it at the correct scale height looked wrong, probably because you usually view it from slightly above. I found you could stretch by about 15% without trees looking odd, but not much more. In places where this was not enough, for example where I had to use photos taken at an angle, I had to duplicate a slice of the photo to increase length. Provided you take an area without many distinguishing features this worked well, after I went over and edited any distinctive items so the duplication was not obvious, for example changing the outline of a tree.

During this process I repeatedly printed out A4 sections of the image, taped them together, and tried them out against the layout.

The sky was largely copied from other photos. For the left hand side I went for plain blue

Above. *Before and after: original photo and eventual appearance on the layout.*

sky. I did this using the "gradient tool" which lets you pick a rectangular area, colours for two opposite edges, and fills it with smoothly changing colour. The left had good cloudy sky, and I copied sections of this further across to extend the clouds, copying small and varied sections to avoid the duplication being obvious.

The whole process took several months, not helped by only being able to check against the model once a week.

When you find a printer they will tell you the formats that are acceptable and what colour representation they want – Photoshop can create output in almost any format.

Beware that the colours vary depending on print shop and materials used. I suggest getting an A4 sized sample of a key part of the image printed first, then if necessary you can adjust the brightness etc. of the image.

The cost for printing the 4.6m x 0.55m backscene was £102 all in (printing, Foamex board, self adhesive vinyl, and trimming).