

THE RUNNING SHED – A LOCOMOTIVE DISPLAY DIORAMA IN 0 GAUGE



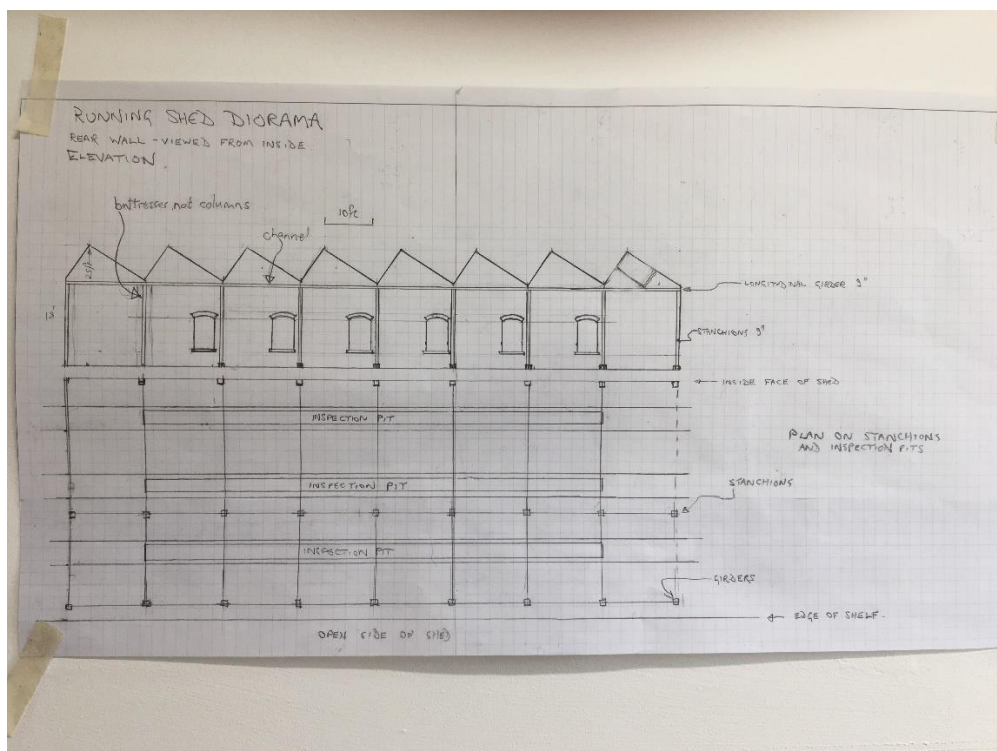
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Overzealous locomotive building on my part has led to far more models than my layout could possibly accommodate. Rather than put them in boxes half forgotten in a cupboard I decided they should go on display. But display cases are, for me anyway, rather sterile and in order to give the locos some context I decided upon a running shed - with one side omitted of course so the locos inside could be seen – a concept inspired by a project on [Paul Bambrick's website](#).

First, it was necessary to fix on a construction style. I had no interest in faithfully modelling a prototype but I did need some inspiration and guidance to come up with a reasonably authentic looking, generic design. There are plenty of images of engine sheds on the internet and I quickly fixed on a simple 'north light' style, as illustrated for example by Aylesbury shed. However, my model bears only a passing resemblance to Aylesbury; having three roads not two and generally being larger.



Having decided on the generic form I drew a simple scale plan and elevation.



This is a vital first step. Working solely from imagination leads to lots of difficulties that are impossible to foresee without a definite plan.

The model build was divided into the following steps:-

- Baseboard
- Rear shed wall
- Shed floor, inspection pits and roads
- Girder superstructure
- Roof bays and smoke hoods/vents
- Lighting

Baseboard – the baseboard was constructed from 6mm MDF with a plinth of sufficient depth to accommodate the inspection pits. The baseboard is 1080mm x 380mm and the plinth is 45mm deep. The shed itself is 896mm x 360mm, which scales to 128' x 51'6" in 0 gauge, divided into 8 x 16' bays. Three slots were cut through the baseboard to the internal width of the inspection pits. I used mitre glue to fix the plinth to the board (several companies make this; Screwfix do a 'no nonsense' version at a reasonable price) which is a viscous cyanoacrylate glue used in conjunction with a spray on activator. This gives sufficient time to locate and accurately position the pieces and then quickly sets to an extremely strong bond.



Rear shed wall – the rear wall was constructed and completely finished as a first stage because, once the superstructure was in place it would be almost impossible to paint it. The wall is made

from Foamex (NOT foamboard!). Foamex is widely used by professional sign printers for external signs and is much stronger and more durable than foamboard. You can buy it on line but it is quite expensive. However, I obtained enough from a friendly sign making company to build a garden shed – not 0 gauge, full size! – for £10. Buttresses were added at the junctions of the roof bays and then the profile was clad in Slater's Plastikard English bond brick, fixed with contact adhesive. Of course you only need to finish one side because the rear of the shed cannot be seen. The windows were supplied by Invertrain, though there are many companies marketing ready made windows and doors. The paint finish to the rear wall is simply aerosol matt white primer 'dirtied' with several very thin washes of acrylic black and an occasional smudge of green to represent algal growth. Areas of paint were then scratched and rubbed through to represent areas where the paint had flaked off the crumbly brickwork. The lower part of the wall was painted dark green, in common with many engine sheds to conceal dirt. An ASA plastic U channel strip was fixed horizontally above the buttresses to receive the superstructure girders (see below). The finished wall was fixed to the baseboard (mitre glue) leaving a 30mm gap behind to allow for an exterior scene and lighting to simulate what you would expect to see through the windows.



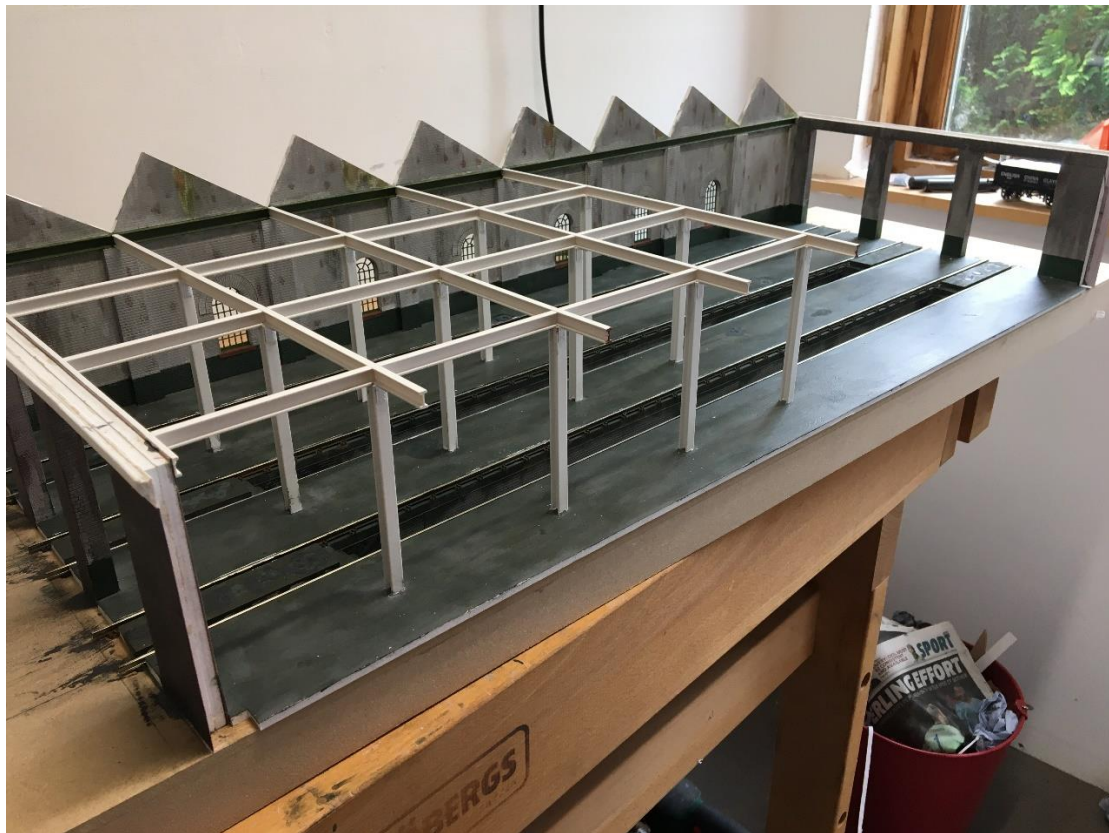
Shed floor, end walls, inspection pits and roads –the next stage was to fix the shed floor. This was made from Foamex, with the inspection pit slots cut through to match those in the baseboard. Note that these slots are wider, to allow for a shelf each side of the pit to carry the chairs and rails.



Foamex has a better finish and is more robust than mdf. The inspection pit sides and base are also Foamex, clad in Plastikard brick and painted in the same way as the rear wall. The roads were then added to the shelves alongside the inspection pits, using Peco rail sections and chairs, fixed again with mitre glue. The end walls, constructed using similar techniques to the rear wall, were then glued in place, tight up against the floor.

At this point it is necessary to decide whether the finished model is to be a static display or whether it will be incorporated into a working layout as a 'drop in' module. If it is to be part of a working layout it will be necessary to be careful to get the gauge exactly right and also to clean the rails carefully after painting the floor. My model is a static display so I did not need to be too fussy about the gauge (to the nearest mm or so) and I could also apply lots of grime, rust and gunge to the rails to add realism. Now is the time to paint the floor of the shed and inspection pits, adding as much grime and oil spills as you like!

Girder superstructure – the columns and beams forming the shed superstructure were cut from 1000mm long ASA plastic H sections supplied by 4D Model Shop. This is a very useful supplier, stocking a wide range of modelling materials and with a very prompt service. The columns were cut to a scale length of 12'6" and then glued using EMA solvent weld onto a horizontal H section equal to the width of the shed. A simple jig was used to ensure the columns were correctly positioned and square to the horizontal beam. These assemblies were then glued in place onto the shed floor with mitre glue. It is important to mark out accurately the column positions before fixing in place. Longitudinal beams were added as construction proceeded. Riveted plates were added at the beam and column junctions for extra strength and to add some detail. The plates were made from thin plastikard strips, and a riveting machine was used to make the rivet impressions. On completion the girders were painted.



Roof bays and smoke hoods/vents – the roof bays and smoke hoods are constructed from black plastikard sheet. Angle girder roof trusses, 4 per bay, were scratch built from ASA plastic section and strips of thin plastikard; that's 32 girder trusses. It is worth mentioning here that the repetitive nature of the girder trusses and also the smoke hoods and north light window frames described below, lend themselves to laser cutting and you might think of drawing up patterns and sending them off to be professionally cut. Personally, I prefer to scratch build, even though (and perhaps because) the result is not quite so precise. The smoke hoods are loosely modelled on what can be seen on historic photos but they are set higher to make positioning of the locos inside the shed easier. The exterior finish of the roof sections is slate, cut from strips of stiff paper, overlapped and painted.



The roof sections are loose fitted and can be removed, just in case the lighting should need attention. Each section rests on U channel gutters between the bays.



Lighting - the lights consist of 3mm warm light 12volt (so no resistor needed) LED's sourced from New Modellers Shop. They were mounted in lamp shades sourced from EMA. It was necessary to ream out the shades to take the LED's, which were then mounted onto plastic tubes with one wire inside and the other outside the tube for insulation. The lights are wired in parallel in groups of 4, on U channels which carry the wires through to the rear shed wall to connect to a 12 volt supply.



The U channels rest on the roof girder sections and are loose fitted.

In addition to the interior lights there is also exterior lighting behind the rear wall. A backboard fixed to the rear of the plinth carries photos of an exterior scene that might be seen through the windows and a thin strip LED light (courtesy of B and Q) illuminates the 30mm gap between the back board and the rear of the shed. The exterior light is wired to the same 12 volt supply as the interior lights.

Detailing – this is where the fun starts. Various details and figures have been added to create atmosphere and a sense that something is going on in the shed. Most of the figures and some of the details come from Modelu and these are by far the most realistic, for obvious reasons. But not all; I am particularly fond of the work benches and the welding gear and welder, which were sourced via Invertrain. Health and Safety and Factories Act posters on the shed wall were downloaded from the internet.



