Baseboard Choices and Construction Methods

This article is not a 'how to' build a baseboard – there are plenty of YouTube videos that cover that. Look also at web forums like RM Web. Rather, this is aimed at getting you to think carefully what you need so you can make the right choices early on.

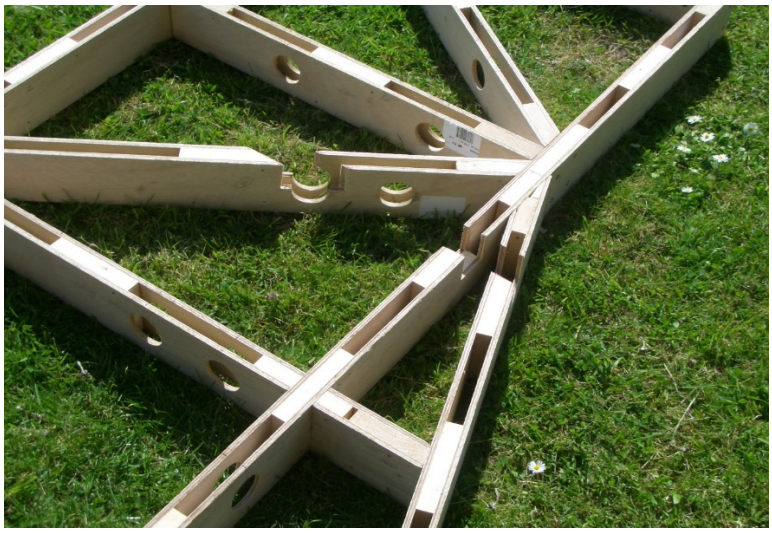
Essential to a well functioning model railway layout is a sound foundation. A stable base that doesn't warp is essential. If more than one board is being used, then a means of accurately aligning them and then keeping them securely together will need to be considered. Lastly, some means of support will be required. However, before jumping in let's consider a couple of basic questions first.

Firstly, is your layout going to be moved for exhibition purposes or is it going to be static in a room at home (or shed, or loft etc). If the former, then lightness of construction will be the order of the day whilst still maintaining rigidity. If the latter, weight is less of an issue and several alternatives present themselves.

Let's consider the home layout first. At its most basic, an 8'x4' sheet of 9mm ply, 12mm MDF, chipboard or Sundeala board braced underneath with a lattice of 2"x1" softwood at 12" centres will be where a lot of us started with our trainsets. With the board supported on a batten on one wall and some makeshift legs for the free edge and we were away. The more adventurous had a hole in the middle from which to operate. However, there are some more sophisticated options that create a stronger board, allow different shapes other than rectangles to be constructed and yet remain light enough to handle so suitable for both home and travelling layouts.

Ply beam Boards

These rely on a system of beams constructed from 100mm deep strips of 4mm ply sandwiched around blocks of softwood. The depth of the beam can be chosen to allow underboard point motors to be protected and conceal all the wiring.



Here you can see the ply beams which are screwed and glued together so no need for fancy woodwork. Holes have been cut in the beams to allow wiring looms to be run through and as you can see this is not a plain rectangle. Other slots have been cut to allow a subway to be fitted which will be viewed along its length from the edge of the board. This does require some forethought so that point motors don't fall foul of the cross bracing.

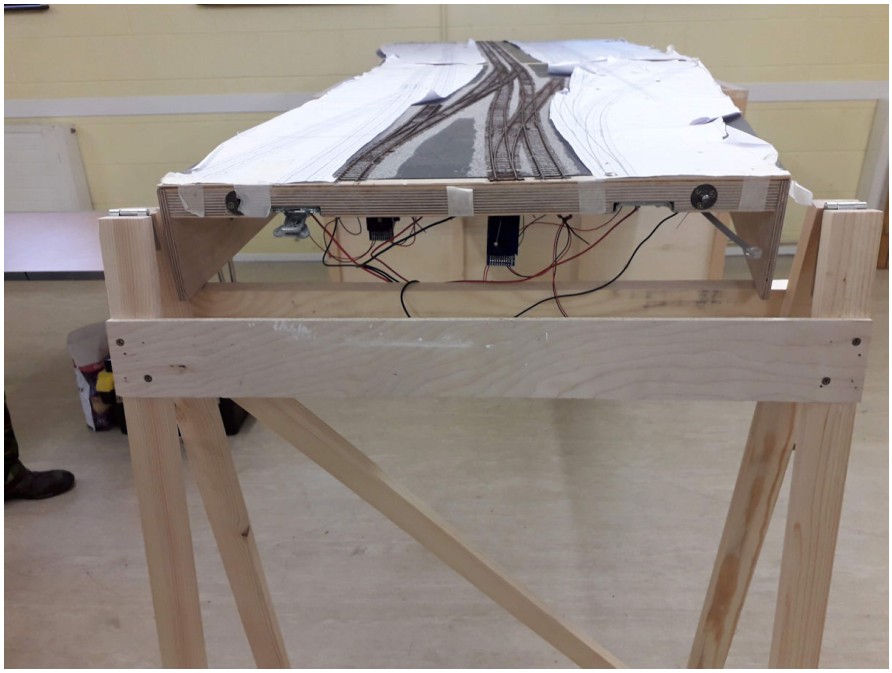
This framework can then have a 6mm ply top screwed to it and track then laid. Another option is for an open top baseboard. In this instance, narrow strips of ply for the trackbed are supported on uprights screwed to the ply beams only where you want to lay track. This obviously requires a deal more pre-planning but has the advantage of being able to build scenery both above and below track level. This can be achieved to a certain extent with the first method when part of the base board top can be cut away and if necessary, the supporting beams cut back as well, but this can only be taken so far before weakening the structure.

Here you can see several boards assembled together, with legs from 2" square softwood braced with strips of 9mm ply. All screwed together with no fancy joints involved. The ends of the boards are paired and then drilled together to take steel pattern makers dowels and bolted together with pronged tee nuts that bite into the wood – available from Screwfix. Keep the matching pairs of ends labelled so as you assemble the boards so they match up when you come to put the boards together.

Insulation Foam Boards

These are extremely light weight and are very suitable for an exhibition layout. They are very rigid but do require more sophistication in the build. We have used a 25mm board of styrofoam insulation (NOT expanded polystyrene) and this is sandwiched between a layer of 6mm ply on each side. A means must be found to weight this uniformly while the glue sets

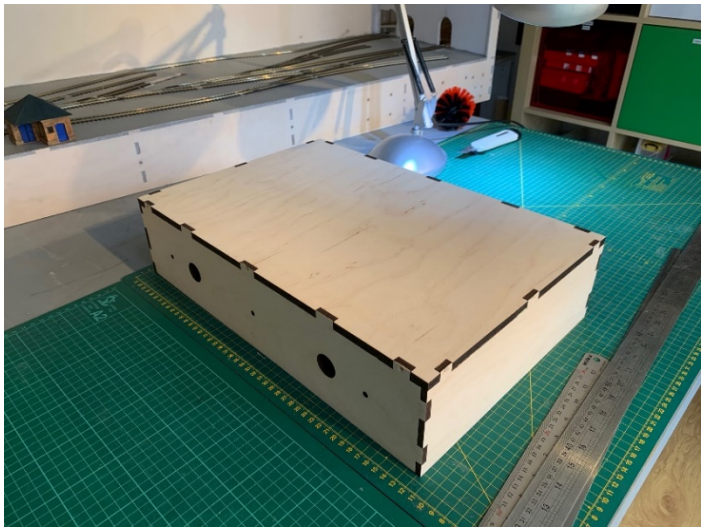
to ensure proper adhesion. We used specialist glue (polyurethane) that was not cheap. Embedded into the end is a 25mm ply portion for strength and to take aligning dowels.

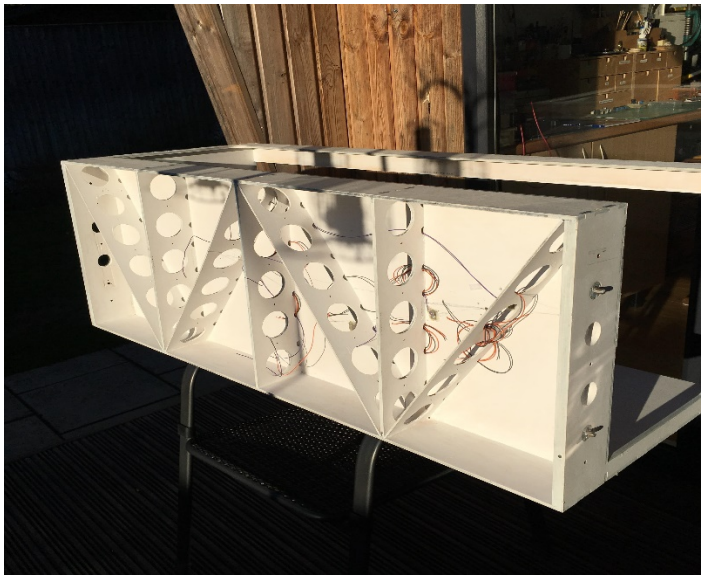


There are 9mm ply sides that give extra strength and rigidity. No other bracing is required. The photo shows the simplicity of the board, the A frame legs built from softwood and ply and illustrates how the point motors are fully protected.

Bought Options

If woodwork is not your area of expertise, then fear not. With the advent of laser cutting technology, a number of options exist to buy your base board as a bespoke or standard kit of parts. See Tim Horn baseboards https://tim-horn.co.uk/





Summary

Flat top sheet material with bracing – modest price. Heavy. Little layout preplanning required. Some woodworking skill required.

Ply Beam. Cheap, fairly lightweight and minimal skill required. Some layout pre-planning advisory.

Open top. Cheap, fairly lightweight. Modest skill required. A lot or pre-planning needed. Allows for much better vertical dimensions.

Foam. Very lightweight. Slightly more expensive. More skill and patience required

Kits. More expensive. Some layout planning required. Minimal skill to assemble.

So now you have some baseboards you can get down to some serious layout design. It must be said however, that having a pretty good idea of what your layout is going to look like should have informed your choice of baseboards – especially size and shape.

But for lots of ideas try and get hold of any of the following

Designs for Urban layouts by Iain Rice. Atlantic Publishing ISBN 1 902877 08 2

Mainlines in Modest Spaces by Iain Rice. Atlantic Publishing ISBN 1 902827 11 2

Designing a Layout by Barry Norman. Wild Swan Books. ISBN 1 874103 39 9

An Approach to Model Railway Layout Design by Iain Rice. Wild Swan Publications ISBN 0 906867 85 1

Layouts for Limited Spaces by Nigel Adams. Silver Link Publishing ISBN 1 85794 055 5

Simple Model Railway Layouts. Silver Link Publishing ISBN 1 85794 226 4

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