



Building a Steam Powered Garden Railway

Why a Steam Powered Garden Railway.

Vanc Bass in his introduction to 'A Passion for Steam' (a book by Mark Horovitz about small scale steam locomotives) says it most eloquently...

'When a locomotive is shrunk down to a plastic scale model with an electric motor driving it, all that is captured is the likeness. The personality or soul of the machine is lost. An electric model has the same authenticity as a photograph: visually accurate but ultimately two dimensional. A working steam model, on the other hand, retains most of what gives a full-size locomotive its personality. The hands-on grooming and preparation, the rituals of care and feeding and cleaning, the individual behavioural quirks that distinguish one from another-these make a working steam model seem alive, too, just as with the full size kin'

Considerations

Your Garden

The size of the garden will affect your choice. Modelling mainline express railways will require substantially more area than a narrow gauge railway. The scale and gauge of the model railway will be influenced by the available space. A steam powered garden railway is best built level. A sloping garden can accommodate a level railway but will require some parts to be elevated while other parts are at ground level.

Your Experience

Will this be your introduction to steam and what are your technical and modelling skills? A loco and rolling stock can be purchased ready to run or they can be built from a kit or built from scratch using raw materials and a well-equipped workshop. Time and cost are factors here too.

Your Budget

Locos, rolling stock and track all require funds. Building your own is cheaper, buying a readymade railway is quicker but other considerations may influence your choice. You can start with just a loco and a small piece of track with the view to growing your railway as time passes.

Time

Planning, funding, purchasing and building a railway all take time. It is wise to spend time pondering the style and layout of a railway before starting to build it.



Purpose

Real railways were built for a purpose – to serve a community or an industry. Perhaps you may like to give your railway a history and a purpose to add to its reality and interest. Additionally, a railway can be an element of a beautiful garden as it meanders through it or it can be a functional thing that stands apart from or above the garden.

Radio Control

This is not the necessity that many new comers think. Many seasoned garden railway men and women choose not to have radio control on their models. A level railway with generous curves and good access is a delight to run manually. As you get to know your model controlling it manually is a joy worth experiencing. On the other hand, being able to drive and shunt your steam train remotely, adjusting the steam regulator to accommodate the many variables of track, load and steam production is another dimension again.

Support

The support of others will make a big difference to your enjoyment of the hobby. You may need to negotiate for funds, time and use of the garden. Also the support of others in the hobby will provide valuable assistance and comradery. There are conventions, exhibitions as well as clubs devoted to steam powered garden railways. A well informed supplier who can assist with the selection, supply and support of your model is also most valuable.

Evolution

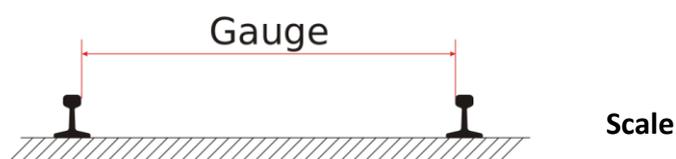
Your appreciation of and choice of models will change as your experience and knowledge grows. A garden railway is rarely a finished project.

Gauge and Scale

Designing a model railway to fit comfortably into a garden requires consideration of Gauge and Scale. Choosing a popular gauge and scale will expand the range of products available to you and the ability to operate on other people's railways.

Gauge

Gauge is the distance between the rails.



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Scale is the proportion of the size of the model to the real thing.



Main Line Railways

Commuter and country trains are referred to as Main Line trains. They are for carrying a lot of people quickly over longer distances. The curves and gradients are usually slight and the gauge is normally Standard Gauge (4' 8 ½" or 1,435 mm)

Narrow Gauge Railways

A narrow gauge railway is any gauge that is less than Standard Gauge.

Narrow gauge trains are usually slower and smaller than mainline trains. They were usually built to serve remote industries or communities that were difficult to access. They often had to negotiate difficult terrain, steep grades and tight curves. They were cheaper to build than main line tracks. The most common gauges for narrow gauge railways are:

- 2 foot (610mm)
- 2 foot 6 inches (762mm)
- 3 foot (914mm)
- 1 meter



Garden Railways

There are 3 gauges used in Garden Railways. Some are more popular than others. Some are used to model a particular kind of railway. Each gauge lends itself to a particular scale or scales.

'O' Gauge Track (32mm)

'O' gauge is a traditional size of track that was common in the post war years for early electric and clockwork models. Nowadays it is popular for modelling of 2' narrow gauge models in 1:19 scale.

'1' Gauge Track (45mm)

This gauge is now the most popular size of track for Garden Railways as it lends itself to modelling both narrow gauge and mainline model trains. Its popularity was accelerated in the 1960's when the German manufacturer 'LGB' adopted the term 'G Scale' and used the gauge of 45mm for its models.

Gauge '3' Track (63.5mm)

Although this gauge may be new to many, its history goes back over a hundred years.

Gauge 3 is not as popular as the preceding two gauges as it requires a much larger garden and a substantially larger investment in locos, rolling stock and track

(continued below)



Gauges and Scales used in Garden Railways.

'O' Gauge Track (32mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
2' Narrow Gauge Railway	1:19*	'16mm to the foot scale', '16 mil', SM32 http://16mm.org.uk	Very Small 600 mm

'1' Gauge Track (45mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
2' Narrow Gauge	1:13.7	'7/8 inch to the foot' or just '7/8 Scale' http://www.7-8ths.info	Small
2' 6" Narrow Gauge	1:19*	'16mm to the foot scale', '16 mil', SM45 http://16mm.org.uk	Small
3' Narrow Gauge	1:20.3*	USA Narrow gauge	Small
Meter Gauge	1:22.5*	'G Scale', LGB trains	Small
Standard Gauge	1:32	'Gauge 1' http://www.g1mra.com/	Large / 2m

Gauge '3' tracks (63.5mm)

Prototype of Railway	Scale	Other names for this scale	Min Area / Radius
Standard Gauge	1:22.5*	'Gauge 3' http://www.gauge3.org.uk/index.html	Very Large / 3m

* If models from these scales are displayed together they will appear to be of similar scale and are sometimes grouped together.

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