

## GETTING STARTED

*Some random thoughts on the matter by Norm Mitchell.*

Most of us start our model railway adventure these days with some form of starter kit. In other words an up market train set. This box of wonders usually contains a well-made scale loco and rolling stock, sharp radius curves, a form of cheap power source and a voltage controller. Many of us use the children as the reason the set is originally purchased. It's when we are having a great time showing the kids how it all works, but they have all gone back to their Ipods, that is when we know our plan has worked!

Once the charm of watching our little train chasing its tail around our tight circle of track wears thin, we all get that empire-building glaze in our eyes! Most of us rush out and buy more tracks and at least a couple of sharp radius points to suit the track that arrived in the starter set. Be it indoors or out in the yard no matter what gauge you have chosen, the search for a suitable space for your little empire now begins.

What about the tool shed? Not big enough. What about the gazebo? Too political. Looks like the garage or the yard. This is where the choice of gauge is the dominating factor. If it's in the garage anything larger than 'H.O.' means the car parks out in the sun and rain for the rest of its life.

Many a successful railroad empire has grown and flourished under the house. In some cases life beneath the floor joists can be cold and windy, it's also an ideal place to socialize with the occasional bewhiskered fury creature and the spiders.

However if the correct amount of planning and insulation is forthcoming it can be the ideal solution.

The colder countries of the world necessitate cellars in most buildings. This solves the problem for many an erstwhile model railway builder.

The content of this article deals mainly with the creation, the design and preparation of the railroad itself. Dozens of books and other articles concentrate on buildings, locos, rolling stock, etc, and will prove an asset as you make progress.



Above is an example of two ovals of track on different levels with an operating water feature. This little "G" gauge layout was a trouble free exhibition railway for over two years. It occupied a space of 2.5mtrs by 6mtrs proving that a model railway can be both simple and successful

The first thing you must understand is that most model railways eat up every millimeter of space they can find in your shed. In your backyard when she who must be obeyed has no room to hang out the washing it's time to have a long hard look in the mirror. The very first step is to make your loved one President of the future railway kingdom you plan, because that's just what it is. A mythical land where little people live in little houses and work in little motor garages offices and factories. The empire you create whether it is large or small can be the extension of ideas gained from your entire family.

Let us imagine for the purpose of this exercise that we are going to try to proceed along the best possible lines.

It is truly amazing just how many segments of other folk's trades and occupations you will start to understand when you begin your railway empire. That's the fun of it!

## Different Gauges

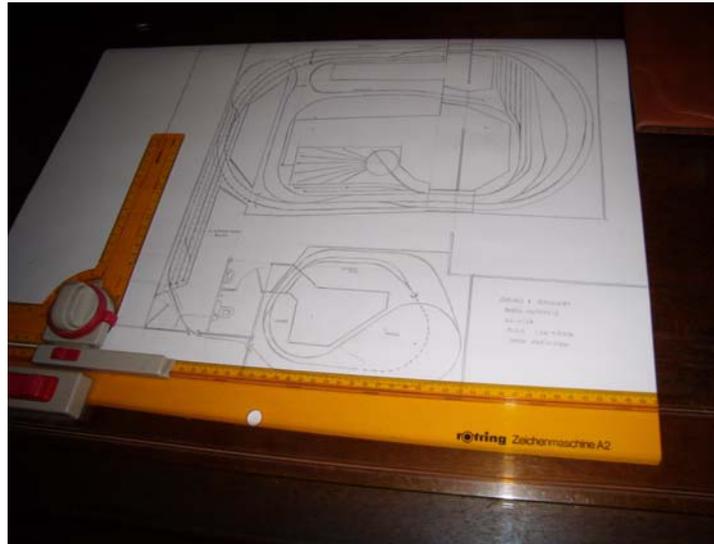


The above photo shows examples of 'N', 'HO', 'O', '3.5' and 71/4 Gauges. I have had the opportunity to build locomotives and railway systems in all these scales including 'g' gauge and 12-inch gauge. I can assure you that It matters little how fortunate you may be to own and operate the larger scales, most of the advice given herewith will apply.

'N', and 'H.O.' gauges are strictly indoor empires. 'O' and 'G' or gauge1 are the smaller sizes, which can be happily adapted to run either indoor or outdoor.

When we venture into the 5-inch, 71/4-inch, 12 inch gauges well, that's a completely new bag of headaches! But let me point out that most of the basic principles outlined in these pages would still apply.

## Planning



Draw up a plan of the area you have available and then sketch in your tracks. It is wise to take note that this is the time when pencil and rubber can make massive changes at no cost to you whatsoever. Visit a stationary shop and purchase a large pad of squared pages. You will find that transposing your measurements and ideas to these pages much easier than to a plain page. Be aware at this stage to allow for future expansion of your little empire as time goes by. It is also the time to take a step back and ask yourself just what it is you are out to achieve. Remember track for tracks sake is not always the answer to the building of a successful railroad. Some of the best model railroads have a minimum of track, but a wealth of detail and scenery makes them winners. Try at this stage to establish what aspect of railroading you wish to follow. If your interests lie in small passenger, industrial or logging railways stay with the small radius curves. But if you have any future ambitions to run main line stock or those large locos visitors may bring, draw into your plan now the largest radius curves possible

Try to incorporate different levels as you plan. A railway with gradients and tunnels is much more like the real thing.

Tunnels are fun, watching your prize investment disappearing into that void and hoping it comes out the other side can be most exhilarating.

Ask yourself at this stage what aspect of the hobby interests you the most. Is it buildings? Is it scenery? Is it the wiring and electrics? Is it running to timetables, or do you want to just sit there with a cool drink in your hand and watch the trains go by?

Where ever possible incorporate a little tram system in your plans. Mothers and children love them and they will go around the most impossible curves you can imagine.

The best model railways usually serve some purpose, such as carrying coal, timber, food or livestock from one point to another. Let your railway tell a story. In my book "Happiness Is A Model Train" I tell the story and illustrate a salesman visiting the village of Lakeview County and the dozens of people he meets along the way there. It can be great fun to let your imagination run wild. This is where you begin to detail your empire to tell its story.



Whatever your desire may be, remember that it is your little empire where you and your loved ones are the ones to please, so don't be bullied by so called experts into what you should or should not do. Follow your dreams not theirs!

One great idea about this stage is to dream up a name for your intended mythical railroad land.

Don't be disappointed if your design doesn't work the first time, my recent gauge one railroad plan has been changed seven times since we started running trains and still could be improved on. If you are really upset have the intestinal fortitude to tear the whole thing up and start again.

One of my most embarrassing moments happened years ago when visiting a close friends layout. He asked me to make suggestions to improve his railroad. It was a very large specially built room with a very well constructed train kingdom occupying all of the space available. To my eye however the large mountain in the very centre of the layout was a monstrosity, it blocked the view of over half of the railroad and looked anything but real. I wasn't there to denigrate his efforts and refused to comment, but he kept asking me so I finally relented. I told him that if it were my layout I would do away with the mountain and build a harbour with all its interesting additions to take its place. To my horror he picked up a hammer and smashed the mountain into tiny pieces."I never liked that mountain and just wanted someone else to say it ", was all he said.

Don't be afraid to make mistakes, you will never know what you can achieve until you try! Those times will always occur when your best efforts don't seem to be working; that's the time to leave it and soldier on with some other part of your railroad. You will probably find that when you return to that task it will seem altogether easier. Read all the books you can find and ask for advice from those already in the hobby, but don't be forced into ideas that don't fit into your perception of what you want to achieve. If your efforts are frowned on by some know all type, show them the door!

Although I will now deal with indoor and outdoor systems separately, many of the rules and suggestions apply across the board.

### **'G' Gauge Indoors**

Those fortunate enough to have space for an indoor layout can start to think of scenic effects in detail. It allows you the fun of operating in all weathers and not worry about the ravages of nature. It has been said to me often that the larger gauge does not lend itself to this. I beg to differ and on my latest "G" gauge layout we have gone to great lengths to prove this theory absurd. All buildings have been made from scratch and modeled in detail inside and out.



Supporting scenery has been generated to back up the detail of the buildings, making the entire effect most pleasing. Placing the track on bench work is a great advantage. This of course does away with the broken back/sore knee syndrome. A word of advice here; Make your bench work as strong as possible, it is staggering just how heavy track, ballast, scenery and an all metal locomotive and its train can be.

Use modern battery operated screwdrivers and suitable speed screws, not nails, mistakes in construction can be easily rectified and material used over again in some cases.



When you build mountains and scenery make sure to engineer access points or sections that lift out to enable you to fully service your track or clean down sections when the dust invades. With careful planning a mountain can hide most of these work areas. Don't forget room for your head inside mountains, for if anything is going to derail or come apart, that is where it will happen! A lift out square of say 60cm can be a farm house surrounded by lines of trees and fencing to hide where the square fits into the layout.

Never place a set of points or crossovers inside a tunnel that is really asking for trouble.

Try to build into your baseboard provision for a valley where may be a future waterfall can plunge or a river can wind under a bridge.



Leave access wide around the layout for visitors to view or photograph your work. If possible, paint the walls a sky blue colour first. Unless you are already a gifted artist leave the painting of scenery on your walls to an expert. It can make or break your railway! May I say here, by all means try yourself out on all the various aspects of model railroading first. You may be amazed at what you can achieve.



A very realistic effect can be achieved where the track stays level and the scenery rises and falls.



If you intend to incorporate gradients, make them as long as you can allow and keep them constant. I find a maximum upgrade of 20:1 or 5% quite satisfactory.



A way of keeping your gradients constant can easily be achieved by the following method; Set up a piece of timber at the gradient you wish to achieve, say 5%. Place a spirit level along its length with a block at one end wide enough to bring the bubble to the level position. Now, tape that block to the end of the level and from then on whenever you wish to check the gradient, a level with the bubble at centre is your 5%



When you have the track laid, select your largest and longest piece of rolling stock and place it on each curve; hold a pencil vertically at the outside then inside centre of the car. Trace a line on your baseboard to give you a guide as to the minimum amount of clearance you will need. This gives you your station platform and scenery clearances.

Paint the surface of the baseboard a brown colour before you lay any track it will save a great deal of messing around later on.

Screw the track to the baseboard, I can guarantee you will want to make changes as time goes on, it makes it so simple when changing or replacing track. Along some straight sections of your track leave the gaps wide; the resulting noise of those steel wheels 'clickity clacking' is music to the ears.



Complete any bridge abutments as your track progresses, then place temporary bases across the gap to allow track laying to continue. Bridge building takes time and remember we want to get things running don't we?

Hook up some temporary wiring and get some trains running as soon as possible. It's the quickest way of proving whether or not your plans will work as you imagined.

Do some shunting into the sidings you have built and establish whether they all work in conjunction with the remainder of your layout. If possible, all trains should back into their sidings. Where your design permits have as many drive through sidings as possible. Now is the time to eliminate any nasty joints or bends that are too sharp. Try to have your curves sweep gracefully out from the straight section in what are known as transition curves.

A great way to test your entire track laying skills is to reverse a medium size train at a medium speed around the complete layout. If it all stays in one piece, congratulations! If it doesn't, keep working on that spot till it does.

Next time you see old carpet in reasonable condition being thrown out; grab it with both arms. Painted carefully it creates great mountains.

The wise thing to do when you are first getting started is to buy a heavy duty transformer with more than sufficient voltage and amperage to suit any future expansion you may make to your railroad. Make sure the unit you choose has both AC and DC current outlets. The same rule applies when purchasing your controllers; make sure they are the best you can buy!

## Basic Principals

- Track Wiring

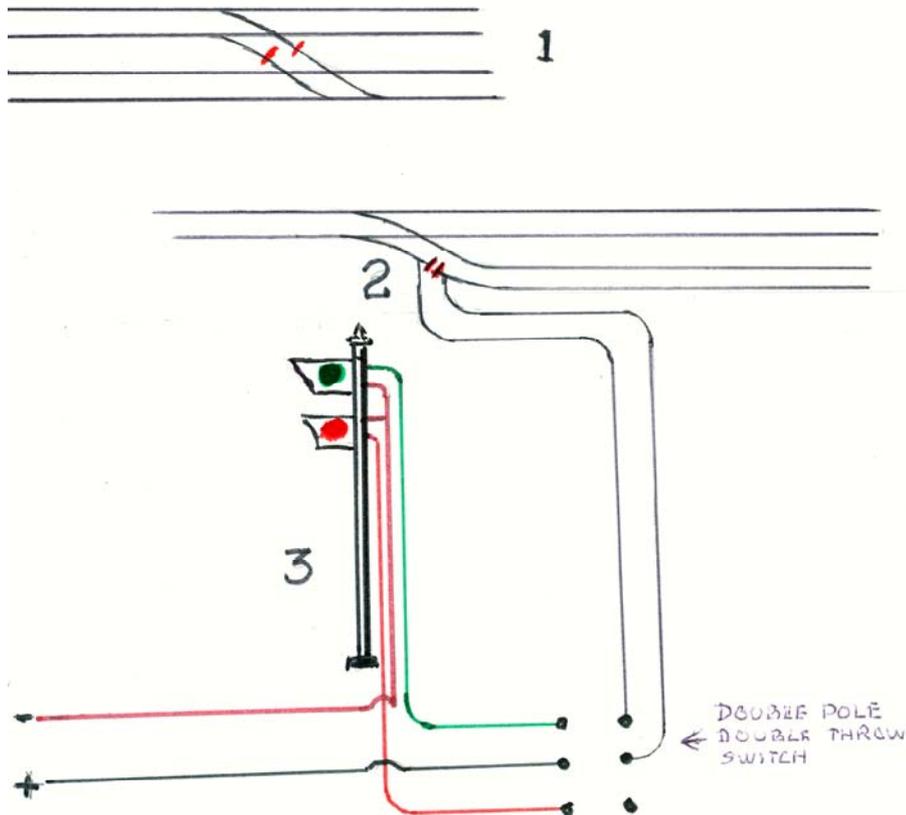
If you wish to run double track from two separate

Controllers and incorporate a change over set of points, you must insulate both tracks at their junction. Refer figure 1.

- Sidings

Figure2 shows a simple way to isolate each siding. It's great to incorporate a ground signal to indicate whether a particular siding is dead or alive. On my layout we wired things up as shown in figure 3.

When you have run through sidings with points at each end, don't forget to insulate that siding at both ends if you wish it to be completely isolated.



- Reverse Loops

When you want your train to turn in a circle of track and resume its run on the same single track, you encounter the problem of reverse polarity. My advice at this stage is to reach back into your pocket and buy enough extra tracks to run double lines to both ends of your layout. You can then have your reverse curves without the drama of complicated wiring and switching.

- Illumination



Whether indoors or outdoors the more lights you have on your railway the better it looks. Who doesn't want to hear those ooze and rrrrs when Mr. Smug turns of the main lighting and switches on a little kingdom glowing with light?

- Buildings

Most plastic or thin walled buildings allow the glow from a bulb to penetrate the wall material. The result is most unrealistic. Add extra thickness where necessary, or better still, paint the inside walls with flat black.

- Special Effects

Either inside or out don't be afraid to experiment with direct or indirect lighting. A down light pointed at a particular spot can bring that area alive as never before.

- A Hot House



A few pieces of clear plastic cut to size and carefully glued together can make an attractive hot house for your farm or nursery. Thin automotive pin striping tape will give the impression of the metal frame supporting your glass house.

Glue some scale brick or stone paper to pieces of thin m.b.f. Then attach them around the base of the structure inside and out to represent the foundation.

Don't forget the door, a typical swing or a sliding door both look great.

Have a careful study of the photo shown of one such building from my railway and you will get the general idea.

- Flower Pots

In the flower and shrub section of my model nursery partly shown in the photo there are several potted plants.

Save the screw tops from any ointment or medical sunscreen tubes. They make ideal pots for miniature flowers or plants.

Modeling in 'G' gauge indoors has been a great deal of fun and sheer satisfaction as to just what can be achieved. The only drawback I can find is HOW BIG EVERY THING IS WHEN YOU TRY TO SQUEEZE IT INTO A SHED!

I would need an aircraft hanger to even start to model some of the projects buzzing around in my head right now!

*So lets take our trains out in the yard and see what we can achieve out there.*