A Special Report

7 Model Train Mistakes To Avoid

Legal Notice

You may give or forward this report to as many people as you like… As long as you do not alter it in any way.

Disclaimer

This special report is presented for informational purposes only. The content is of the nature of general comment, and neither purports, nor intends to give any advice. No guarantees or claims are made or implied. Readers should not act on the basis of any matter in this special report without first considering, and if appropriate taking, professional advice with due regard to their own particular circumstances. All the content represents the views of the author at the time of publication and is as accurate as is possible to ascertain. The author and publisher will not accept any responsibility for any errors or omissions.

What You're About To Learn

My name is Dan Morgan and thank-you for downloading this special report.

The idea behind this special report is to save you from the costly, time wasting and frustrating mistakes when starting this fabulous hobby of model trains.

There is absolutely no doubt that model trains is the greatest hobby in the world. There is no other hobby that allows you to:

1. Create your own little world to escape to.
2. Develop a large variety of skills - from hands-on cutting and drilling, to wiring and programming DCC controllers, to weathering your rolling stock, with so many other skills in between.
3. Enjoy some of the most rewarding and relaxing times you will ever experience

This hobby has no limits and no barriers… you can be any age, any gender and at any skill level.

Yes! This is the ultimate hobby and this special report will set you off in the right direction by explain the 7 common mistakes nearly every model train beginner makes.

Let's get started…

Mistake # 1 - Too Much Eagerness & Too Little Patience

You've probably seen the amazingly complex and well detailed model train layouts in the magazines, or at a model train show and thought… I want to build one of those!

Figure 1 – photo courtesy of Mr. Jan Nielsen

There is nothing more fulfilling than owning and operating a layout where the trains don't derail, multiple trains can run at once with sound and smoke effects, and the layout is interesting and realistic.

But… there is something you need to know!

Those amazingly complex and realistic looking model train layouts took a very long time to build with a huge amount of patience thrown in too!

Those intricate layouts did not happen overnight. Some of them may have taken hundreds of hours, but they were a labor of love! So the amount of hours it took to build the layout ultimately does not matter.

Most times the owner had to have 3 or 4 attempts at getting the scenery and structures looking exactly as they wanted.

Most model train layouts are never finished. They become never ending "works in progress".

That is because this hobby is about the adventure along the way.

Each small part of your layout will provide many memories for years to come. You will look at the tunnel you created and remember that it took you 3 attempts to shape the landscape and 9 coats of paint to perfect the look… but in the end it was all worth it.

This is the adventure the experienced model railroaders talk about. It is where the most enjoyment and fulfillment comes from… Tame that eagerness and find some patience!

Mistake # 2 – Trying To Grow A Model Train Starter Set Into Your Dream Layout

Most of us would have started our model train journey by being given, or buying, our first model train set.

Figure 2 - Marklin Freight Starter Set

It probably came with some track, a diesel or steam locomotive, a few carriages and a power pack.

Model train starter sets can range from $60 to $300 and upwards. They come with varying components from the very basic oval track to tracks with elevation and landscaping included. But, like most things, you get what you pay for.

These starter kits are designed to provide an introduction to the hobby. Some of the lower end starter kits have just enough power to send the train around the oval track it came with, and not much more!

Most beginners get bored very quickly with a train going around an oval track. So, they purchase new sections of track, and possibly a turnout or two, just to expand from the boring oval.

That seems a great idea until the locomotive keeps slowing down and sometimes stopping when it is at the other end of the track. This can be very frustrating… You've just paid for this extra track and now the train won't run properly.

The problem is that the transformer was designed to provide enough power for the oval track. It doesn't have the grunt to push the power all the way around the length of the new track when the locomotive demands it.

So to solve this problem a higher rated transformer is required…

Then there is the locomotive in the starter set. A good locomotive is one that has many pick-up wheels and is fairly heavy.

The pick-up wheels take the power from the track and provide it to the motor. Better quality locomotives have many pick-up wheels while starter set locomotives tend to only have one set.

Tracks get dirty (something we'll talk about later) which can provide a less than perfect conductor for the power from the track to the motor. A heavier locomotive will also provide an even better contact.

For more information on choosing the best locomotive click the link below, or if you are reading this offline go to:

http://modeltrainsforbeginners.com/a-good-quality-locomotive-is-essential

The lesson here is… Do your research!

In 9 cases out of 10, trying to grow a starter set into your dream layout usually ends up becoming an unwieldy mess of a layout. With some initial research and planning you will completely avoid this problem.

Mistake # 3 – Confusing Scale And Gauge

A common mistake for model train beginners is to confuse scale and gauge. Let me explain…

Scale is the proportion of the replica to the real thing or 'prototype'.

For example, HO (pronounced "aitch-oh") scale locomotives are 1/87 the size of the real life locomotive, or an HO scale locomotive is 87 times smaller than the real locomotive.

Model train gauge is the width between the inside running edge of the track.

Figure 3

Hopefully that explanation will demystify the scale and gauge differences and you won't make that mistake again...

Mistake # 4 – Choosing The Wrong Scale

Okay so you know that model trains are scaled down replicas of the real thing. Here is a list of the common model train scales and their minimum turning radius's (curves):

O scale 1:48 - Minimum Radius 24 inches

S scale 1:64 - Minimum Radius 22.5 inches

OO scale 1:76 - Minimum Radius 21 inches

HO scale 1:87 - Minimum Radius 15 inches

N scale 1:160 - Minimum Radius 7.5 inches

N Scale compared with HO Scale

Figure 4

Z scale 1:220 - Minimum Radius 5.75 inches

O scale is the largest scale, to Z scale being the smallest scale. An O scale model train set is 1/48 the size of the real thing, while a Z scale model train set is 1/220 the size of the real thing.

Therefore for your layout to look realistic all the trees, bridges, roads, buildings and other accessories should all be scaled to the relevant size.

HO scale has become the most popular scale which is known as OO gauge in the UK.

So which scale should you choose?

This comes down to 3 deciding factors –

1. How much space you have available for your model train layout. Be careful to not create curves that are too tight, gradients that are too steep and tunnels with small clearances.

2. The physical size of model train equipment you prefer working with. You may prefer working with a bigger scale as then weathering and applying details becomes a little easier than working with a fiddly Z scale model.

3. The accessories available for that scale. Demand usually dictates the variety of accessories that are available for the scale you are considering.

Choose carefully as it can be an expensive exercise to change scales after having collected one scale for any length of time.

If you decide to scratch build (building models from nothing) don't forget the scale you are modelling in. Often beginners to scratch building make the mistake of estimating what size the structure should be.

Usually when the structure is built, it either looks too small or too big. Incorrectly scaled structures don't look right and they usually end up getting thrown out.

Figure 5 - photo courtesy of Alex Erdei

A tip is to use an existing plastic model and go up or down in size by 2 times or 2 ½ times. This will give you a guide on size and proportions. Or if you have the real life sizes you could scale it down.

Another common scaling mistake is for beginners to use trees that are too small.

A good idea is to look at the pictures of the area you are modelling. Measure how big the trees are compared to the cars, people, and buildings. Then you can model the same height difference.

You will be amazed how big your trees actually have to be.

Figure 6

In HO scale your largest tree could be 12 to 14 inches tall!

For more information on choosing the best scale to suit you... Click the link below, or if you are reading this offline go to:

http://modeltrainsforbeginners.com/which-model-train-scale-is-best

Mistake # 5 – Steep Gradients And Tight Curves

Another common beginner mistake is creating gradients that are too steep and curves that are too tight.

Imagine… You have taken hours to painstakingly create the curves and gradient in your layout. The track has been pinned down, the ballast laid, the landscape created around the feature and it is looking superb.

Now for the first test run. So you load up your locomotive with a few passenger carriages and off it goes. It comes to the lovely curve you have created and the 2nd passenger carriage derails.

Oops! Maybe the locomotive was going too fast for the corner, so you try again and guess what? The passenger carriage derails again. Okay so you try it with freight carriages… with no problem they run through the curve.

Figure 7

So, what is the problem? The curve is too tight for the longer passenger coaches.

But what about the gradient you have created to allow your train to climb up to the 2nd level? Well, the train gets about 2/3rds of the way up and then it slows and stops… aargh!

The gradient is too steep for the train.

These are very common beginner mistakes and I can't remember how many times I've seen these mistakes made. It can be very frustrating, but once you make the mistake once you will never make it again.

The trick is to always work to scale (even on curves and gradients) and test run your fully loaded trains before pinning down the track and completing the landscape…

Mistake # 6 – Going Too Big Too Quickly

Probably the biggest mistake model train beginners make is going too big too quickly… This tends to put too much stress on your budget and the time you have available.

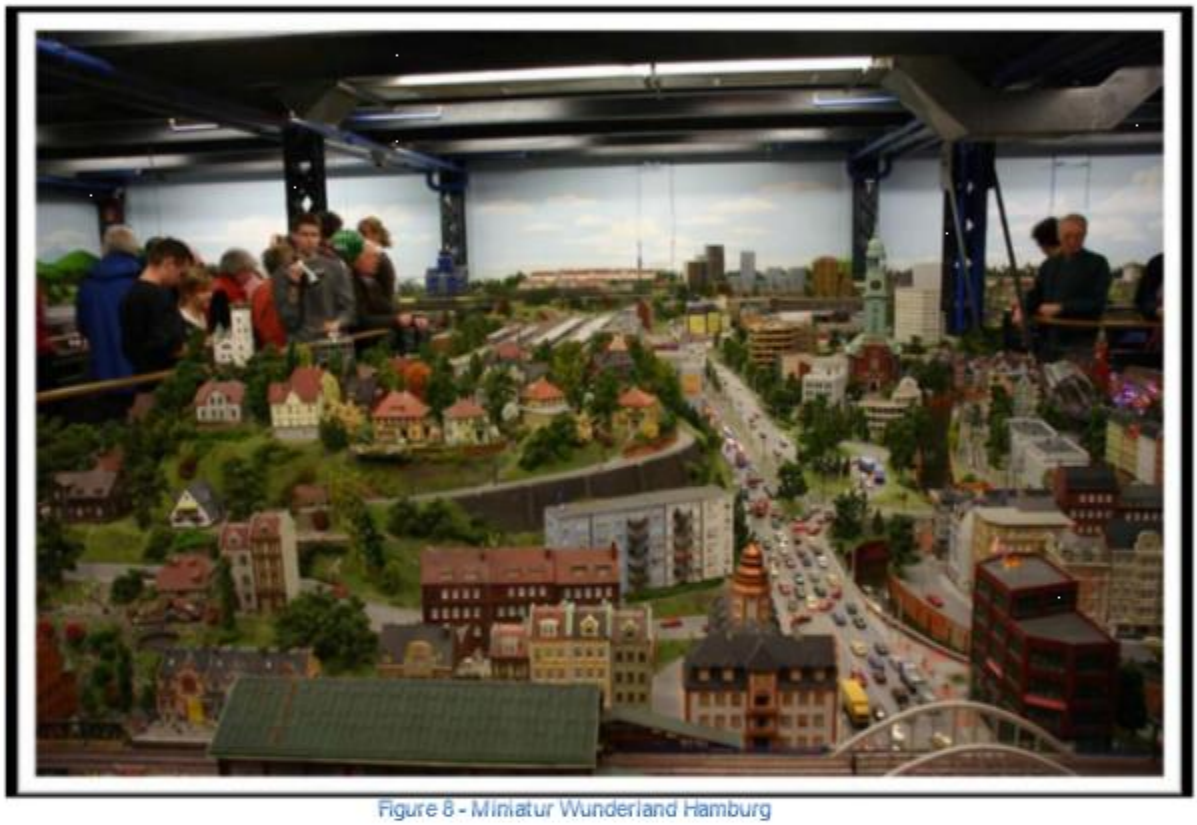


Figure 8 - Miniatur Wunderland Hamburg

The layout can tend to look like it is not getting close to being finished and you may lose interest!

The trick is to start with a small layout, like a shelf mounted layout or a 4 x 8 foot layout. It is fairly simple to build a 4 x 8 foot bench and won't break the bank or your time reserves.

It is relatively inexpensive to buy everything you need and will give you a great size layout to get you started. Most of the huge basement mega layouts started from a simple 4 x 8 foot layout and grew over

the years. Another 4 x 8 foot extension is added and then another and another.

For some great inspiration and to see what can be built over time, watch the video below...

Just click the image below to play the video, or you can watch it online at:

http://modeltrainsforbeginners.com/largest-model-railroad-in-the-world

Mistake # 7 – Electrically Underrating Your Layout

You've probably already experienced a locomotive that doesn't move, even though you have applied full voltage to the track. Then you give it a nudge and it takes off at high speed and falls off the track at the first corner.

Or your train runs well until it reaches a certain point in the track and then it just stops.

These problems can become very frustrating... But they can be easily solved.

Model trains are operated with a power pack. This power pack takes the electricity from your wall outlet and converts it into a safe low voltage. It then sends that low voltage along the rails of your track.

This voltage is then picked up by the pick-up wheels of your locomotive which powers the locomotive motor.

Figure 9 - typical power pack

In a DC (Direct current) installation the power pack's output voltage can be varied and the polarity reversed. This has the effect of making the locomotive move faster (higher voltage) or slower (lower voltage). If the polarity of the voltage is reversed the locomotive will reverse.

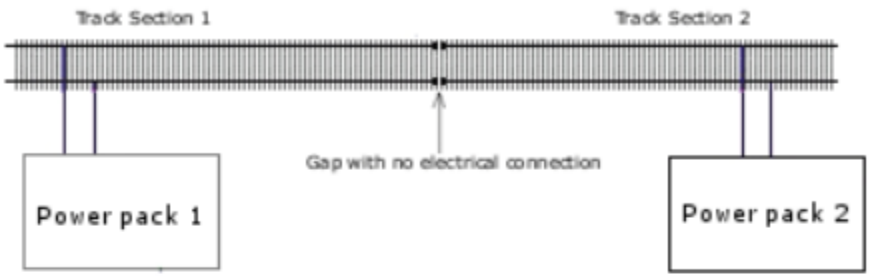
However, the efficient operation of your locomotive is dependent on:

- The power pack being rated high enough to deliver the required voltage along the entire length of the track,
- The best conductivity possible between the rails and the locomotive pick-up wheels and
- An efficient motor in the locomotive to make the best use of the voltage available.

There are many factors that can create electrical problems within your layout:

1. An underrated transformer that is not capable of "pushing" the voltage the required distance.
2. Installing electrical cable that is too small which results in excessive voltage drop.
3. Badly soldered joints, which creates a high electrical resistance.
4. Dirty or oxidised track which provides a high electrical resistance from the rails to the locomotive pick-up wheels.
5. A low quality motor in the locomotive which does not efficiently use the voltage available.

Of course if you want to start operating more than one locomotive on your DC layout then you will need to create isolated electrical sections with separate power packs. Toggle switches are then used to toggle between the power packs.



Creating Electrical Blocks To Run 2 Trains on 1 Layout

Figure 10

This can be very confusing for model train beginners, and could easily result in a short circuit with a burnt out power pack… an expensive mistake!

DCC (Digital Command Control) has eliminated this problem.

With DCC it's as simple as applying a constant voltage to the entire track. The locomotives are fitted with digital receivers which ignores the track voltage until the digital command control sends a signal to the locomotive's unique address. The locomotive will then do what it is told from the digital command control.

Figure 11

Because all the locomotives have their own unique address, many locomotives can be operated on one layout with one power pack and much less of a short circuit danger.

Basically with DCC you will reduce your electrical headaches by a huge amount which justifies the initial cost. And the best model train fun comes when you can operate more than one locomotive at the same time and create realistic sounds and smoke effects.

Final Words

I hope you have enjoyed this special report and that it has done its job and shown you exactly what mistakes to avoid with your model trains.

By knowing this information you will save money, time and effort. Your frustrations will disappear and you will enjoy your model trains to the full extent.

Got any comments or feedback? Then we would love to hear them. Just go to:

www.ModelTrainsForBeginners.com/contact-us/

Thank You and Happy Railroading.

Best Regards

Dan Morgan