

1 BASIC MODEL RAILROADING

Introduction and THREE INITIAL DECISIONS

Introduction

It is much easier than you think to enjoy model railroading. It may look complicated or very technical or too artistic, but the beauty of model railroading is that it's easy to learn, you can enjoy the parts that attract you, and you can learn about some aspects that you may not know too much about as you go along. Every model railroad that you see is the product of someone who started out just as you are about to, and learnt as they went along.

And there are lots of learning resources. There's your local hobby store for a start. There are lots of books on "how to", there is lots of information on the Internet, and last but not least, there is the experience of other model railroaders. You may see them at a show, and they may all look as if they are too busy operating their layouts, but ask them a question, and the chances are they'll talk your ear off for the next half hour about the hobby. All you have to do is ask the questions: – how do you do this? – where do you get that? – what is this made of? – what does this mean? – how much does it cost?

Budding model railroaders are essentially of two kinds:

- Those who look wistfully at trains and would just like to get into the hobby. Their most important decision likely is to decide what scale (and gauge) they'd like to be in – what can they (physically) handle – how much can they afford – how much space do they have – what branch of model railroading interests them.
- Those who already have a "train set" handed down to them, or got one for a present. If they are happy with what they have and would like to build on it, the question of scale and gauge has already been decided – it's now questions of what they can afford – how much space do they have – and what branch of model railroading interests them?

Scale and Gauge – the first decision

This can be confusing for a beginner, but it's really quite simple.

Scale is the size relationship of the model to the real railway (its "prototype"). Scale is usually expressed as a ratio, e.g., 1:87. That means that 1" of model represents 87" of the real thing.

As it happens, this ratio is the most popular model railway hobby scale, and is easily recognizable as "**HO**" scale. Around 80 per cent of North American model railroaders enjoy their hobby in this scale. Gauge is the distance between the inside edges of the rails, and follows the determination of scale. In HO scale, the corresponding width of a standard gauge track (1435 mm) is 16.5 mm. Most modellers initially opt for HO scale, but may become attracted to other options (acquired tastes!) as they grow in the hobby. The advantages of this scale are

- relative economy of space and costs
- ease of handling if physical restrictions such as eyesight, or participation by youngsters, are to be considered
- the wide variety and scope of ready-to-run manufactured items available
- ease of modeling realistic surroundings (scenery, buildings, structures) within the abilities of most).

The next-popular scale that has grown to maturity in the last 30 years is "**N**" scale. This is a ratio of 1:160, with a 9 mm gauge. It is an attractive option for anyone with little space to allocate to their hobby, or for those who are attracted to the vision of creating a model railroad in a four-fold larger dimension – thus being able to introduce more railroad (and hence more operation), or a greater vista of scenery (or a combination of both). It is attractive for "scratchbuilders" (those who build models from basic materials) because of the economy of material and design, but it is a less robust scale in which to work (some would call it "finicky"), and therefore requires more than careful attention to track-laying and maintenance. Choice of this scale is contra-indicated if some physical handicaps and/or young children are to be considered.

A growing segment of interest is in the **“larger” scales** that have been making a come-back from the toy train era. For instance Lionel™ is indelibly associated with Scale O (1:45), and now offers quality scale equipment. Ideal for youngsters, great feel for the real thing, but more expensive, and more difficult to create credible scenery. Another revived large scale is Scale 1 (1:32), more popularly known as “G” (for Garden) Scale. This scale does indeed work well in a garden setting because of its robustness and natural scenery surroundings. The same observations as for Scale O apply. Note that “G” scale also includes narrow gauge trains in what is actually Scale 2 (1:26). Finally, **narrow gauge** modeling is gathering momentum for modellers who usually have limited space but would like to work in Scale 1 or O with a resulting track equivalent of Gauges O or HO. They are also intrigued by the idiosyncracies and “whimsy” of narrow gauge operations. The predominant practical attraction is the more modest space demands proportionate to the scales involved, especially if one plans to exhibit as a “solo” modeller at a model railway show. A challenge is the relatively narrow range of ready-manufactured equipment (locomotives and rolling-stock), which means that modellers have to build this largely from component parts, with the result that this segment of the hobby does tend to attract the more advanced modellers.

Getting it off the floor – the second decision

Basically, you become a model railroader once you make the decision to get your track off the floor. Whatever its origin, a train set becomes a model railroad when one gets it off the floor into a designated space of its own, so that the track and scenery don't have to be set up and taken down each time. That space is most popularly in a basement, but also commonly in an attic, garage, spare room, shed, garden, or on a ledge as part of a room used for some other purpose. Model railways have also been found under beds, or in a suitcase, or suspended from a ceiling with hoistable pulleys and rope, or as a module stored in a closet and brought out to be put on a table. Leaving aside the garden railway and the ledge-in-a-room options, the other choices require the ability to construct a simple frame, referred to by modellers as “benchwork”. This prospect may seem daunting, but it is really quite doable if one can handle a saw, drill, hammer and a set of screwdrivers. This subject is dealt with more fully in **2 BASIC MODEL RAILROADING – A HOME FOR YOUR RAILWAY**.

Methods of train control – the third decision

Traditionally, since WWII, most model railways in the smaller scales have operated with power packs converting mains voltage to 12 volt direct current (DC). The hobby is now migrating to Digital Command Control (DCC), which simplifies wiring, provides for the simultaneous operation of multiple locomotives without the hindrance of blocks or cabs, and comes with impressive realism in lighting and sound. The initial investment, however, is considerable. Again, research is advised, and there are many good “how-to” books on wiring and methods of control. DCC controls trains electronically by means of signals transmitted through the rails direct to an on-board receiver on each locomotive, making block wiring and cab control obsolete. DCC control is now gathering momentum in N scale as manufacturers are now offering “decoder-ready” locomotives, that is to say, a connection and space for the necessary microchip receiver on board the locomotive. This subject is dealt with in greater detail in **4 BASIC MODEL RAILROADING – POWERING and WIRING THE LAYOUT**.

A Word about Coupler designs

Equipment in all scales is being offered more and more commonly with the **Kadee™**-type coupler, or in N scale, with its **Microtrains™**-type coupler equivalent. Traditionally, HO equipment came with the **NMRA** standard coupler, and in N scale, with the **“Rapido”** (or **“Elsie”**) –type coupler. Modellers should therefore be aware that they may have to make a decision whether to acquire only equipment of one type of coupler, or to operate with two types of couplers, or whether to convert all their equipment to the more prevalent Kadee/Microtrains –type design coupler.