

## Scales and Rails

At first 3rail O-scale may seem an odd choice, but here is some of the reasoning:

HO-scale is the most popular scale, due to the number of vendors that have offered HO-scale products over the years (at the time of its initial promotion it was the tiniest practical scale to manufacture). However, HO-scale is *not* ideal. Even though there is a plethora of products, it often does *not* translate into low price. The size is just a little too small for older adults to see details clear enough to read for Car Forwarding. The small size also feels like you are watching the trains from atop a tall building, causing a believability disconnect. The weight is too light to provide consistently reliable switching. Track laying must be precise, or rollingstock will wobble unrealistically. Small details are too fragile to handle, forcing an unsatisfying "no touch" policy, and the use of such hands-off hacks as Car Cassettes.

Although many insist HO-scale is favorable because you can build small layouts, most HO-scale hobbyists tend to shun small layouts. A superior choice for packing a lot into a small space would be N-scale.

N-scale however is also *not* ideal. The rollingstock and structures are very toy-like, as details are molded. On the other hand, due to the use of molded details, N-scale rollingstock is more durable than HO-scale rollingstock, and can be physically handled. Reliable switching is difficult, so N-scale is far more suited to mainline trains. Trains always will seem as if they were being viewed by a drone, so the landscape becomes more of the focus, and reading car markings for Car Forwarding is almost an impossibility.

Most of the problems with HO-scale disappear when you increase modeling scale just slightly.

S-scale is probably the ideal size for indoor model railroading. The size is just big enough to allow car markings to be read for Car Forwarding. The size also crosses the perception threshold of feeling like you are actually watching a train and not just a model. Weight becomes heavy enough that switching is consistently reliable. Details also become durable enough that rollingstock can be physically handled.

Another advantage with S-scale is that it is a common scale for die cast automobile hobbyists, giving modelers a large inventory of pre-built scenery that they can tap. Though larger than HO-scale, it isn't that much larger, so many layouts will fit into the same real estate commonly available to HO-scale.

Although certainly the queen of scales, S-scale does have one significant drawback, in that the track is frustratingly only 2rail, and therefore suffers from all of the 2rail electrical headaches as HO-scale.

For electric trains there is no better track design than 3rail. All electrical polarity problems disappear, and reliable working track side signals are easy to add. Sadly while there is commercial 3rail track available for some larger scales, the smallest currently available 3rail track scale is O-scale/gauge. Fortunately though since most O-scale 3rail rollingstock in their stock form are capable of negotiating tighter curvature, quality layouts can be built within the same real estate as S-scale layouts.