

## Sectional track basics

**So you opened that train set Christmas morning and couldn't wait to get rolling. Chances are the set came with a circle or oval of track sections. Easy as it is to snap this track together and run your train, after a while, you want to do more with your layout. Sectional track makes it possible to take the next step. The standardized sizes and shapes of sectional track somewhat limit layout design options, but, for ease and simplicity, it can't be beat.**

### What it is

The most common type of track, sectional track comes in standardized, nonflexible sections. Many beginners start building layouts using sectional track because it's easy to use. The track sections can be disassembled and reassembled over and over again to try out different track arrangements.

Sectional track comes in straights, curves, and switch sections (called "turnouts"). Straight sections come in various lengths from 9" in HO scale and 6" in N scale down to 1",  $\frac{3}{4}$ ", and  $\frac{1}{2}$ "-long pieces.

Curved pieces are available in various lengths and are designated with a number that

represents their radius in inches. In HO scale, the most common curves are 15", 18", and 22" radius, with 18"-radius sections found in most train sets and  $9\frac{3}{4}$ " typical in N scale. You can get curved track in wider radiuses in both HO and N scale, though some sizes may be difficult to locate.

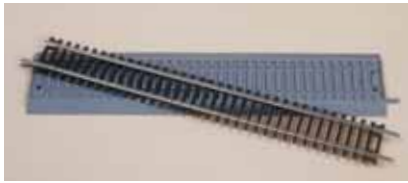
Short "fitter" sections (for example, half curves and one-quarter straights) are usually necessary to complete any layout more complex than an oval. It's a good idea to have a selection of them on hand so you don't end up with a gaping hole in the main line.

Most folks start by snapping together a circle or oval of track

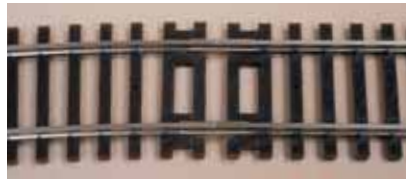
on the floor. After a while, the rail joiners loosen and the track sections work apart from the weight of the train. The result is a spectacular derailment, with track and train sailing across the room. As entertaining as this may be at first, it wreaks havoc with locomotives and cars. If you run your trains on a carpeted floor, carpet fuzz will also work its way into the locomotive mechanism and cause operational problems.

To prevent these mishaps, most model railroaders nail track to a solid surface like a piece of plywood. This may not be the best choice for beginners who want to readily change their track arrangements.

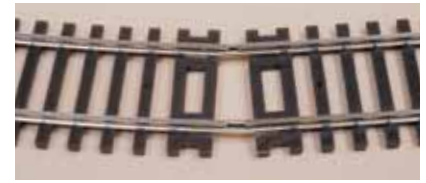
Sectional track often comes with integrated plastic roadbed sections, **1** (page 4). The roadbed sections have interlocking tabs to hold the track securely in place and keep the trains far enough above the floor to evade those dreaded carpet fuzzies.



▲ **1 Track and roadbed.** Most manufacturers offer track with plastic roadbed sections, like this True-Track from Atlas.



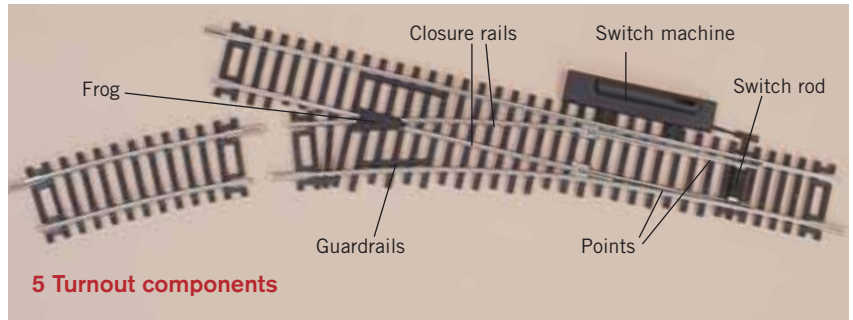
▲ **2 Proper joint.** Track sections should fit together easily, without any obvious gaps in the joint between rail sections.



▲ **3 Forcing track to fit.** This is a common mistake with sectional track. Trains will have a tough time crossing this gap.



▲ **4 High-riding rail.** Note how one of these rails is sitting over the rail joiner. Make sure both rails are seated properly.



### Getting up and running

Laying sectional track is simple: Line up two pieces and slide them together. Make sure the ends of the rail fit together snugly with no gap, **2**. If you are using track with molded roadbed, make sure the tabs lock securely between sections, but don't force the pieces.

The most common mistake is forcing curve sections into a radius tighter than they were designed for. This produces a gap between sections and a kink in the rail that's a sure ticket to a derailment, **3**.

Another common problem is letting one rail slip up and over the adjoining rail joiner, **4**. Make sure the rail is sitting in the joiner before pressing the two sections together.

### Turnouts

Watching a train race around a circle can lose its novelty after a while. The solution is to purchase some turnouts and additional track sections, which will enable you to vary the train's route.

A turnout (called a switch on a real railroad), **5**, is a piece of track that allows a train to go

from one track to another. Turnouts direct trains onto different routes and provide access into yards and sidings. They are available in all the different rail sizes.

Both real-world and model turnouts are identified with numbers that indicate their diverging angles. The numbers are shorthand for the length-to-width ratio of the frog (the point at which two rails join to form a V). For instance, a no. 4 turnout requires four units of length to spread one unit, while a no. 6 turnout requires six units of length to spread one unit. In short, the higher the frog number, the gentler the angle.

Most model railroad turnouts are either no. 4s or no. 6s. (Those are sharp curves by full-sized railroad standards, which commonly require turnout sizes from no. 12 through no. 20 on main lines.)

A wide variety of different types of turnouts is available, some for very specialized applications, **6**. Chances are you'll be able to find the right one to suit the needs of your layout. For more on turnouts, see page 17.

### Track installation tips

Tracklaying is not difficult, but it does require careful attention to detail if you want to do it properly so your trains run smoothly. First, prepare a smooth, even surface for the track (see "Building the roadbed" on page 14).

Straight pieces can be cut to fit; turnouts can even be trimmed shorter to fit into crossovers or to space yard tracks closer together. Most hobby shops that cater to model railroaders sell rail nippers, fine razor saws, and files that can be used for cutting track.

Make sure the rails and rail joiners slip together properly and do not create a hump at the joint. You may have to trim away a little plastic from the ties under the joint to get a good fit. Check the alignment by sighting along the rails and then spike the track in place. Drive the spikes tight, but stop short of distorting the ties or rails. Use a fine file to smooth the top and inside surfaces of every joint.

On turnouts, use a flat jeweler's file to smooth and taper the inside end of each switchpoint (see photo **5**) until