

5x7 toy train layout for continuous running

To maximize enjoyment, railroad model layouts should be designed with a purpose. Normally this is to simulate a transportation system in miniature. The purpose of this layout however is provide a place to watch toy trains, such as old Marx and Lionel O-27 trains, go around and around in a circle. Since play is foremost, it is best to lay the track directly on low pile carpeting (you could even forgo benchwork and build the layout directly on the floor). Consider using durable freestanding structures, so that you can easily change the theme on a whim (such as to a dinosaur train or spooky Halloween theme) Keep structure count minimal in order to maximize train car viewing (you want to be able to see those aquarium car fish swim as they travel around the layout).

Trains are intended to only be run in a clockwise direction on the layout. The minimum radius is O-36, which will accommodate the majority of 3-rail trains without binding. However as long rolling stock will look terrible going around such sharp curvature, it is suggested that nothing longer than a 50 scale foot car be run. Many of the curves at the elevated segment (indicated in Yellow) are O-45, so as to reduce drag from wheel friction. Track should be divided into old school electrical blocks. Ideally three sides of the layout should be accessible (the right layout side can be against a wall), and the best location for a fixed control panel is the layouts front center.

This freestanding layout was drawn in its most compact state. You can increase the layouts width (preferable, as you can widen it to fill a 5x9 ping pong table exactly) or depth by adding complementary sections of straight track. Although it looks busy, the layout is nothing more than two ovals, one inner and one outer, connected by two crossovers that allow running trains to switch between the ovals. For visual interest, one of the crossovers has been extended around the inner oval, passing over its complementary crossover via a bridge. Two trains can be kept in motion simultaneously, one on each oval.

Additionally, three spurs have been added. Two are located in the center of the innermost oval, and one attaches to the outer edge of the outermost oval. The inner spurs do not have to be straight like they are drawn, and make good locations for "operating" accessories. The outer spur is equipped with both a tray for dumping items such as log loads, and a track magnet to operate the plunger on operating cars such as satellite launchers. The spur has a clear view to a long section of unobstructed straight track along both the left side and front side of the layout, so it can also be used as a launch location to fire missiles. This spur can be extended beyond the layouts edge to attach to staging tracks, or even as an interchange track that connects to another layout.

The track forward most towards the front of the layout will typically be used as a "fiddle" track, to place trains on and off the layout. The outer oval has no overhead restrictions, and additionally has one corner that uses O-54 track, so that you get excellent visuals of your moving train. A 24" long trestle bridge (indicated in Orange) is suggested for the bridge passing over the crossover track. The clearance under the bridge should be as high as possible (although you do not need to make it higher than the clearance through the bridge). NEVER make a clearance less than 5 inches (and always test that cars like the Lionel Cop and Hobo Car No. 3357 can pass).

The inner oval is equipped with a Passenger Platform. It is suggested that passenger trains on the layout use very short passenger cars, such as the Lionel O-27 streamlined cars. It is possible that the inner spurs can also be used as parking spaces for trains. One train could back into an empty spur, then another can leave the opposing spur to take its place running around the layout. Minimalist realistic switching operation is also possible.

All the spur tracks should be electrically isolated (indicated in Blue) just past their turnouts. Also the crossing between the two O-54 crossover turnouts under the bridge should be split. The bridging crossover should be isolated just past the turnouts leading to this bridging crossover. To allow trains to use this bridging section as a pseudo oval, the outer oval should be isolated at the O-54 crossover turnout and the bridging entrance turnout, and the inner oval should be isolated at the O-54 crossover turnout and the spur turnout just past the bridging exit turnout (so that the bridging section can electrically use this spur). If using DCS/DCC or traditional variable voltage with only one locomotive (and by the way, traditional locomotives are capable of being operated on DC), all of these separate sections may be powered simultaneously.