



Hosting a Successful Operating Session

by Bill Mosteller

In general, hosting an operating session can be the harshest performance test of a model railroad. My theory of the underlying issue is floor loading: having many people in the layout room depresses the floor and throws off the geometry of the layout. While this theory may work for a layout in a bedroom, I'm not sure it's valid for a basement layout, built on poured concrete. No matter, let's talk about layout issues that can be troublesome for the session. This discussion is limited to tune-up and maintenance; major surgery to correct grade and radius problems are excluded.



height. *Note:* Gladhand height should only be adjusted after coupler height has been checked: you should not adjust gladhand height to compensate for couplers at the wrong height.

Coupler Centering. As the Kadee instructions indicate, graphite should be injected into the draft gear and worked into the mechanism to insure proper coupler centering. Without graphite, the mechanism typically has too much friction for the spring to properly center the coupler. The result is that couplers don't align, and thus cannot be easily coupled. A second result is that over an uncoupling magnet, the couplers won't swing wide enough to allow delayed uncoupling.

An interesting observation about operating sessions is that people who are new to the layout do things that the owner would never think of doing, thereby uncovering latent flaws.

Couplers

I'm assuming here that your railroad uses Kadee-style magnetic couplers. Four installation areas are critical to proper coupler operation — vital for an enjoyable and trouble-free session.

Coupler Height. All the couplers on the railroad need to be at exactly the same height above the railhead. Deviation from this standard will result in break-in-twos as your train rolls over the railroad. Dangling particples, a cut of cars left behind to surprise the next train crew that comes upon them, will result. Use a gauge to check coupler height.

Gladhand Height. In HO-scale the gladhand needs to sit 1/32" of an inch above the rail head. Check this with a 1/32" piece of plastic, it should slide easily between rail head and gladhand. Anything lower and the gladhand will come in contact with turnout and crossing rails, and grade crossing planking, with serious results: at best, a break-in-two, at worst, equipment damage. Similarly, grade crossing planking (or whatever leveling is used) must not exceed rail

Avoid Painting Couplers. Some modelers dislike the color of Kadee couplers, and paint them a rusty color. Two bad things happen when you paint couplers: (a) the knuckle hinge becomes sticky and hard to move, and (b) the knuckle face becomes less slippery. The result is couplers that are hard to couple and hard to uncouple. Instead, use the McHenry couplers that are made of rust colored plastic, and don't paint them.

Check that the couplers actually work. adjusting to conform to standards is prerequisite to actual testing. Couplers should be tested to make sure they work properly when positioned over uncoupling magnets.

Turnouts

Holding the points in place. I've operated on a couple railroads where the host has decided not to install some mechanism that holds switch points against the stock rail. Instead, they allow the turnout points to blow in the breeze. While the host may have success with this technique, I never do. Such turnouts are guaranteed derailment points, just the thing for dumping my train on the ground. All turnouts should have



a throw mechanism that assures they stay in the right position.

Mechanisms include having switch machines, ground throws, push-rod/choke cables, or built-in spring clips such as those on Peco. Not using a mechanism not only causes derailments, but there is a tendency to use your finger in the moveable point rails to set the turnout - causing the two point rails to eventually fail and separate.

My worst experience with this was on a layout where there was a piece of ballast stuck between one switch point and the stock rail. Oh, and this was on the lower deck of a double deck railroad, without under-deck lighting. Turnouts must be adequately tested by running trains in both directions both straight through and diverging using an assortment of engines. Don't neglect to address lateral grades across the rails, which should be close to 0% or bank slightly into the curve. Any nonzero grade across a turnout rails can often cause a derailment.

Rolling Stock

Cars that are too light often cause problems. They can get pulled off the track going around curves and tend to derail when pushed instead of being pulled. The solution is to add weight to come up to the NMRA recommendations. You can purchase lead sheeting from a roofing supply house to use for weights. Lead shot can be glued in all sorts of odd places.

Check the wheel gauge. Also eyeball the wheel sets to make sure that the wheels are in line and not offset.

Keep Records

Don't waste time and nervous energy repairing the same problem again and again. Some problems are best solved by eliminating the culprit. One technique is to put a stick-on colored dot on the bottom of a car when it is serviced; three strikes and its out!

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Wireless Throttles. I was at an open house recently where the host said he didn't support wireless throttles on his Digitrax railroad because it would be too expensive, hundreds of dollars. I've sponsored wireless throttle receivers on two railroads I operate on (my hosts had the same misconception) and the cost was just over \$100 each. The point is that adding wireless support doesn't mean wired throttles stop working. On both layouts, guest operators were happy to bring their own wireless throttles, relieving the host of that cost.

I've gotten my money back in more convenient operation the first session where they were in use! Wireless throttles are particularly important on railroads where at some point you have to move quickly from one side of the railroad to the other to keep up with your train. Particularly in this situation, the wire represents a hazard to you and others. And both railroads had examples of this.

Admittedly, a single receiver can be prone to interference. Typically, if a large model railroader is standing directly between your throttle and the receiver, his or her body may block the radio signals. You can mitigate this by two strategies: (a) install a second receiver, or (b) mount the receiver on the ceiling. Admittedly, you lose the utility of being able to plug throttles into the ceiling mounted receiver, but reliable radio communication is worth it. More Information Many model railroaders have written about preparing for an operating session. If you'd like some more information, take a look at: Model Railroad Operations from the Gateway Division, NMRA. <http://www.gatewaynmra.org/modelrailroad-operations>