

Trolley Tip - Trolley Freight Car Tips - by Richard Kerr

With the growing interest in electric traction freight trains in our modular layout setups over the past several years, we've had a number of operational issues come up, primarily in O scale. These include coupler height, car weight and wheel issues.

The National Model Railroad Association (NMRA) standard for model coupler height is 11/16" in O scale and 25/64" in HO scale. The prototype standard of the Central Electric Railway Association (CERA) interchange was 33" (plus or minus an inch and one-half), which matches the scale standards. All measurements are from the top of the rail to the center of the coupler knuckle.

The NMRA has a "recommended practice" for car weight (unpowered) of 5 ounces plus 1 ounce per inch of carbody length in O scale, and 1 ounce plus 1/2 ounce per inch of carbody length in HO scale. A 48-foot car in O scale works out to 17 ounces, which is quite heavy. I've found that about half this amount of weight works fine, but it's clear that some weighting IS required in wood, plastic or resin cars for good tracking, especially in street trackage and on our tight (but true to scale!) curves.

Finally, the East Penn automatic control and signal system requires that cars have grounding metal wheelsets to bridge the rails and activate the circuitry. Plastic wheels or insulated wheelsets provide no protection against collisions. In O scale, I use the Athearn plastic archbar trucks with the addition of Northwest Short Line metal wheelsets, or all-metal Old Pullman archbar trucks for more weight under flatcars or gondolas. On insulated wheelsets, one wheelset per metal truck can be "flipped" so the truck grounds to both rails, or on all trucks a short piece of overhead wire can be jammed between the wheelbacks (and perhaps tied to the axle in the center) to ground across the wheelsets.

Overall, we've found the trains really add a new dimension to our operations. The O-scalers have a record of a 17-car train in successful operation on the modules. It's great to watch a long train navigate an end loop, with the front part of the train passing the back part that's still entering the loop! Our experience in public train shows is that the trains attract even more attention than the streetcars do. Trains with small traction-style cabooses cause harried, disinterested spouses with kids in tow to stop far more than they normally would.



Printed 1/99

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