PROTO: 48 EA JUNCTION
Testing with a Concept

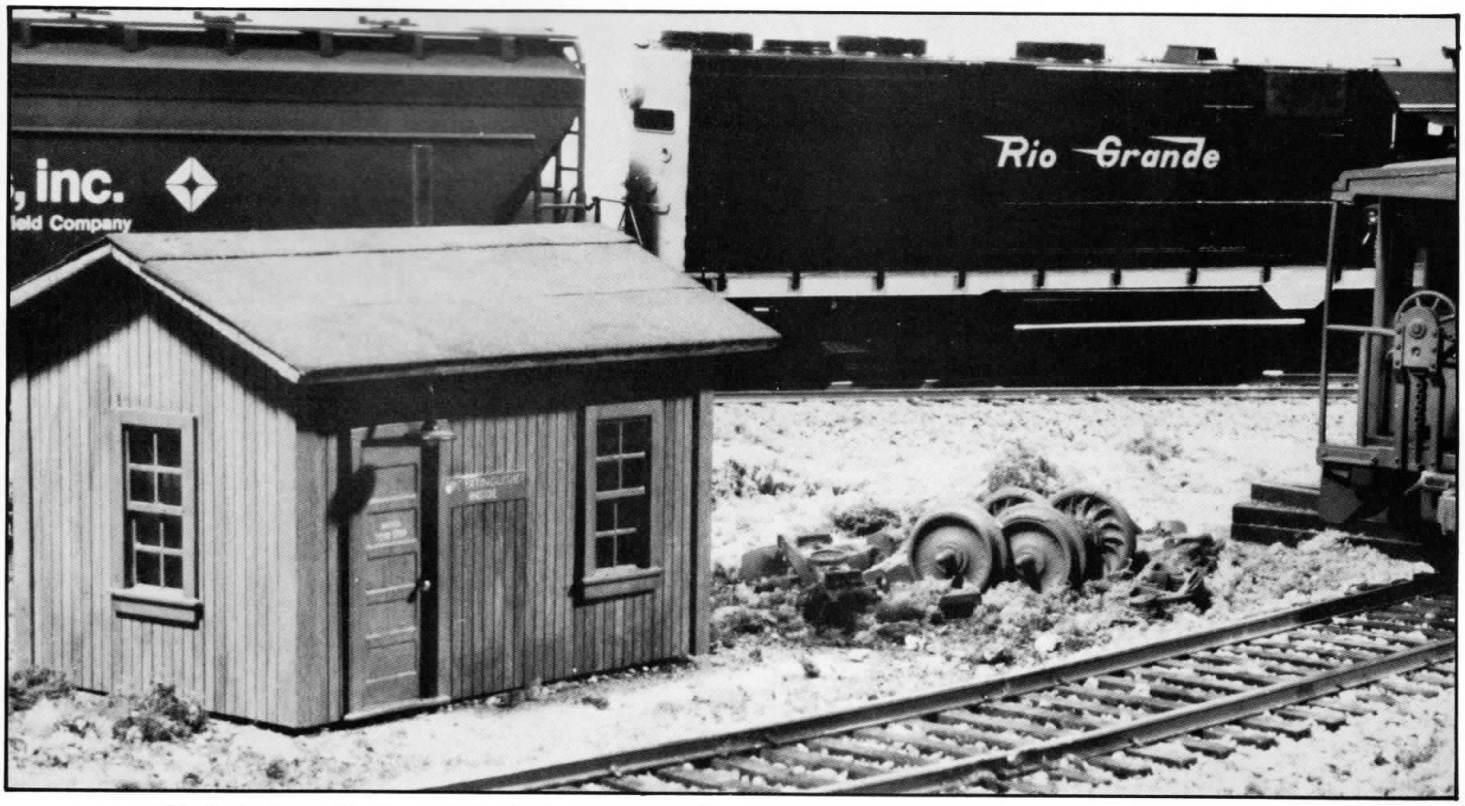
by Roger Akester

I'm hearing a lot of questions concerning Proto: 48. Why would you want to do it? How much trouble is it? Will it operate? Well, just a few weeks ago I asked myself those same questions and really didn't have any answers. Before I started my layout, I wanted to do an evaluation of my own. We often look at what someone else has done but, until we get involved, we don't know how it works for us. As a result, I built a small test module that would allow me to experiment – not only with the Proto: 48 concept, but with some other constraints that concerned me.

EA Junction was created to determine the feasibility of tight radii, turnouts on curves, code 125 rail, reverse curves, 4′ 8½″ rail spacing and scale wheel profiles. My future layout will fit into a relatively small L-shaped area (about 25×29 feet). As a result, I will have some places where curve radii will be as small as 48 inches. EA Junction resides on a 30×96-inch flat module. It contains two tracks for interchange service, a local track that represents a continuous 48-inch radius curve and a mainline running through in an S-curve.

The first locomotive I modified was a Central Locomotive Works GP-35. Nothing special was needed to allow it to negotiate the smaller radius, other than being sure the trucks equalized freely. CLW now has available Proto: 48 wheelsets with gearboxes that make conversion a simple drop-in procedure, eliminating any special rework. I have since converted an Overland ALCO S-2 by replacing the wheels and making new truck bolsters. Again, neither a big project nor a lot of expense.

Rolling stock tested thus far has been limited to freight equipment. I have modified Atlas, Weaver, and some of the old Athearn cars. Again, I took the easy approach. I used both Weaver and Athearn trucks and turned down the wheels to Proto: 48 specs, regauged the back-to-back wheel



The junk pile next to the yard shanty depicts proper disposition of standard O Scale wheelsets at EA Junction.

photos by the author

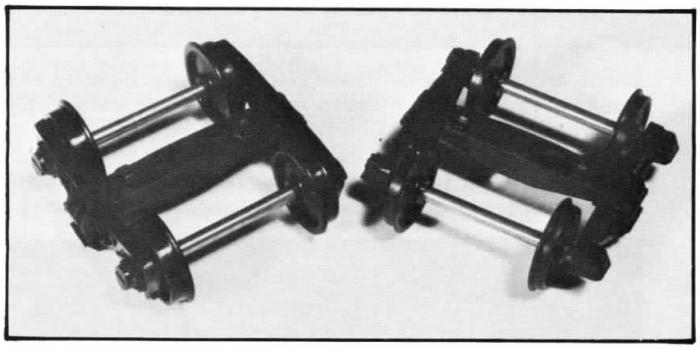
spacing, and replaced them in the trucks. The Athearn truck sideframes are pretty close to scale width as they are; the Weaver's are a little wider, but visually undetectable, so I didn't move in the sideframes or replace the bolsters. They work great and I haven't spent one cent on them. It takes me about an hour to rework a four-axle set on my Unimat.

I have tested cars up to sixty feet in length and have had no problem with them negotiating any of my curves or turnouts. The 89′ 6″ cars, however, are going to require some special effort. I will devise a mounting for the coupler pockets that will allow them to swing sideways on tight and reverse curves. If you must have rigid coupler mountings, then larger radius curves will be required. I don't mind swinging coupler pockets.

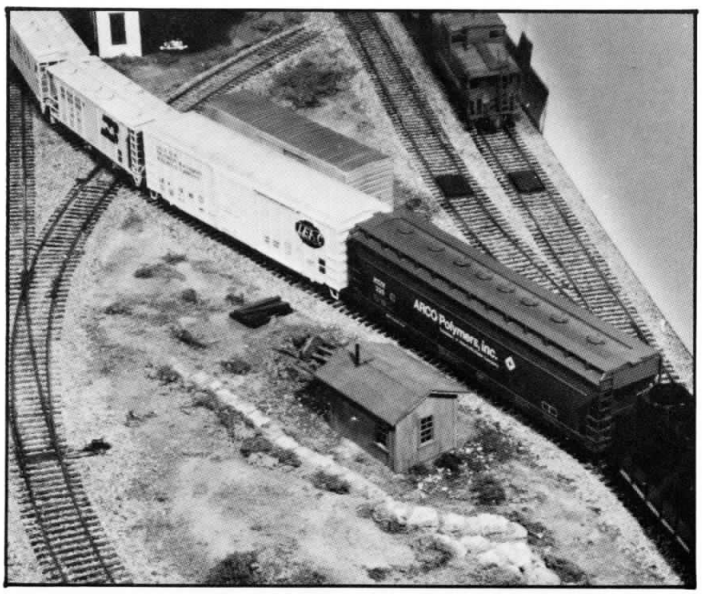
I developed my own track gauge that will produce a slight increase in rail spacing on curves to accommodate the longer diesel trucks on E-units, PA's and SD's. My widest track spacing is still below the maximum allowed by the Proto: 48 standard. I haven't yet done any testing with steam locomotives; however, I believe I could probably operate Mikados, Pacifics or shorter locomotives – anything bigger will require larger radii. I do intend to test a "Mike."

EA Junction has become a great place to get some good photos of various types of equipment. It has also been in demand for the convention circuit, stimulating a lot of interest in Proto: 48. Of course, there are still a few who say it will never work, even when demonstrated that it does. A lot of others are saying this is really the way to model in O Scale. It also seems that, as we conclude one experiment at EA Junction, it gives birth to several more. After all, that's what it's all about.

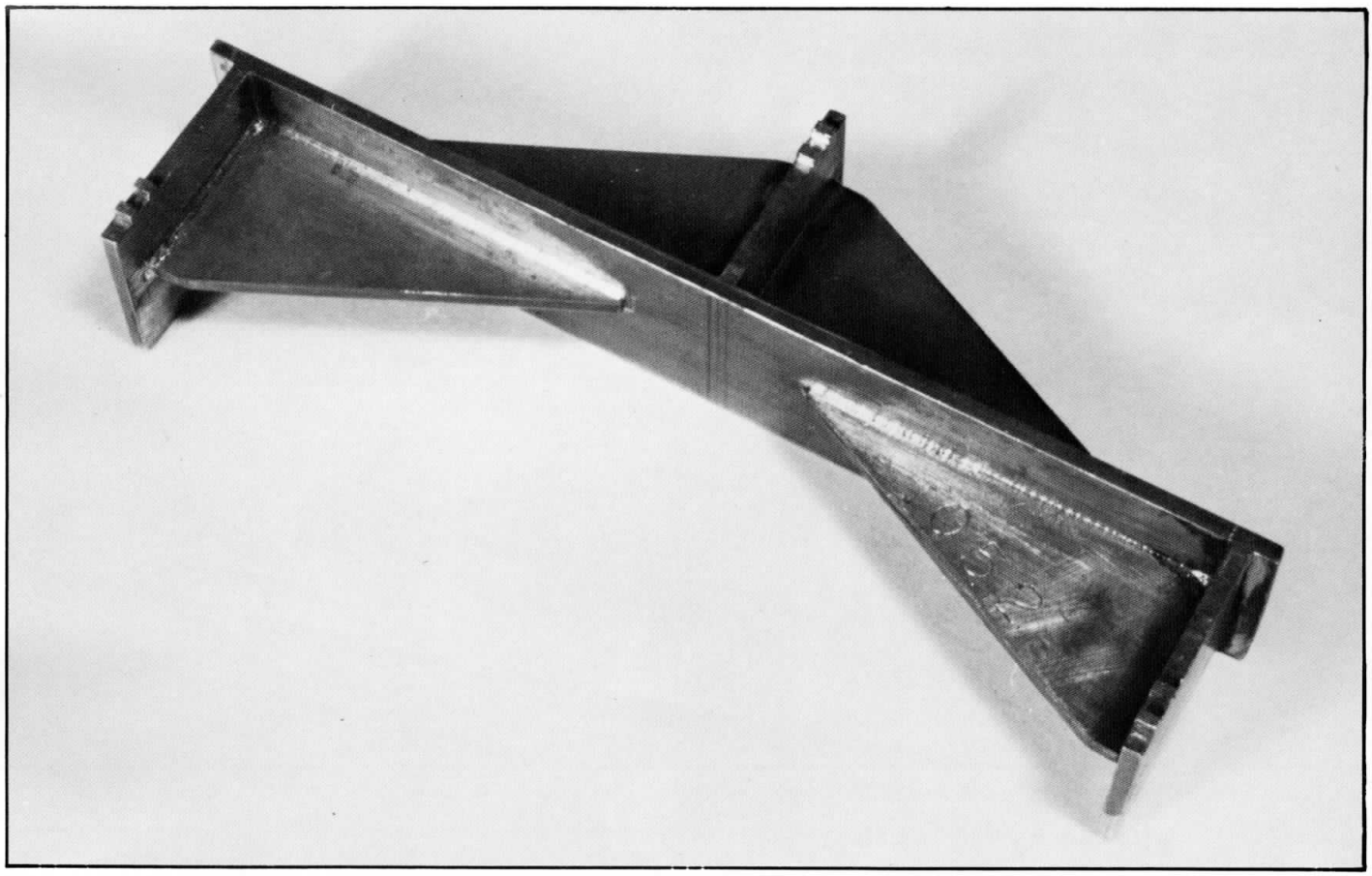
For more information concerning Proto: 48 and three issues of the Proto: 48 newsletter, send three (3) 22-cent stamps to Thomas B. Moore, PO Box 160, Maryland Heights, MO 63043.



Standard Athearn truck and wheelsets as compared to Athearn truck with reworked wheelsets. Note width of wheel tread and flange sizes.

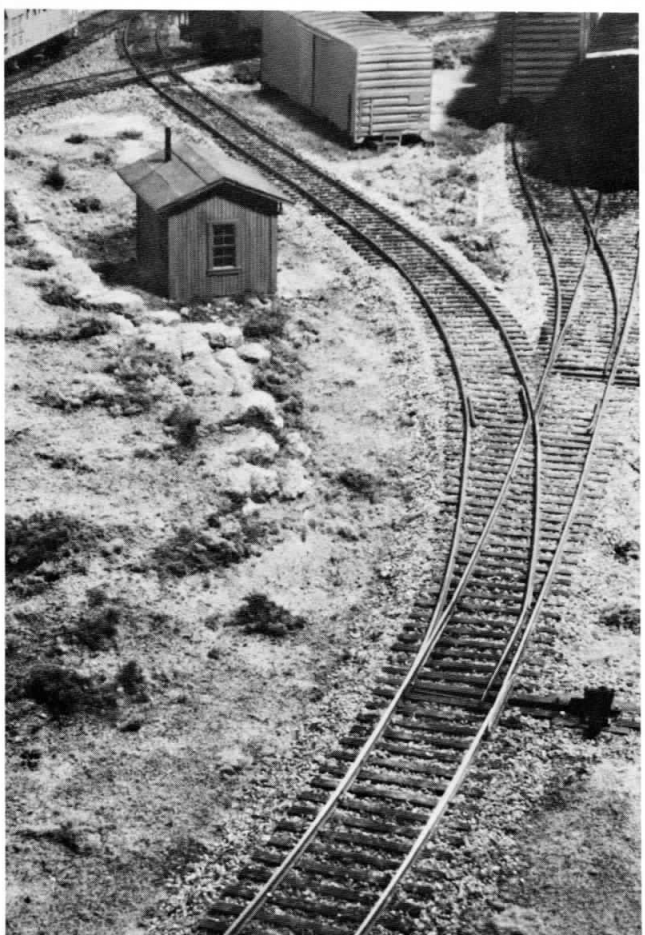


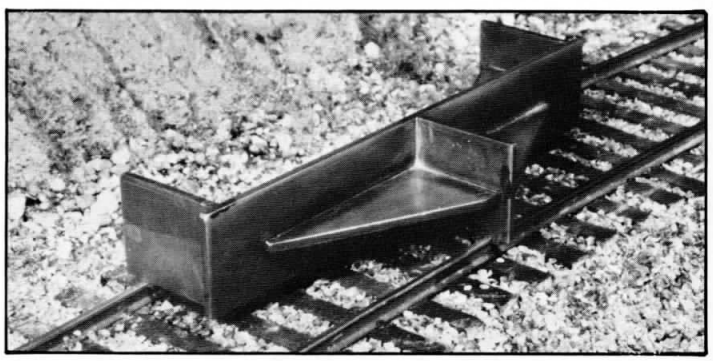
Equipment experiences no difficulties on this S-curve. Both radii are 48 inches. Note crossing located at intersection of curves.



Gauge is fabricated from brass pieces soldered together and machined to produce the nibs for rail gauging. Side shown is for use on 125 rail.

All trackwork is scale 4 feet 8½ inches between rails. There are three turnouts on curves, one straight turnout and a crossing.





Long three-point track gauge assures adequate compensation on curves for SD and E-unit six-wheel trucks.

Number 6 turnout located on 48-inch radius curve. All components were fabricated at installation. Proper gauging assures smooth operation.