

Module Corner

By Ted Larson

The Krause Corner

by guest author Bill Krause

I often get asked this question. What should the limiting radius be that I would recommend for mainline curves on corner modules? For sources I use John Armstrong's many books, NM RA Data Sheets and *The Model Railroad Track Plan Book* (Tab Books No. 1106).

When you are considering building a corner module that could be used anywhere in the USA, I would make sure you could accommodate most types of S gauge rolling stock including 85' passenger cars and long wheelbase steam locomotives such as a 4-8-4. Articulated steam locomotives and long 6 axle diesel power should also be able to make the curves. When you review John Armstrong's material, it seems that 41" radius in S would be the minimum for such unrestricted choices. For realistic broad curves for the long passenger and freight cars, 49" radius would be ideal.

With this in mind, and radii choices of of 44 5/8" and 45 9/16" for double track, let's pose this question: Can corner modules be so designed that they can be freely combined with 4' linear modules into complex shapes without the need for odd-sized "spacer" modules? The answer is YES, but at a price. Back in October, 1987, Ken Mackenzie, NMRA's S gauge S.I.G. editor (*Essence*), published an article: *The Quest For A Perfect Curved Module*. Among many important items covered was this one. To best illustrate the problem I'm including three drawings and some copy taken from Ken's article. See Fig. 1.

To quote Ken: The "no spacer problem" is a tricky one, but it has a solution. Take a close look at Figure 2. In this drawing all linear modules are 48 inches long. The corner modules are drawn so that no spacer modules are required. What size would such corners have to be? The critical dimension seems to be the effective overall radius of the corner module's mainline trackage as measured at the ends of the module. This dimension is equal to the perpendicular distance from one face of the corner module to the mainline trackage centerline of the opposite face.

During the period when we were still working on the develop-

ment of S-MOD standards, Don Thompson and Don DeWitt encouraged me to try developing a corner around the four foot square principle. As a result, the track geometry shown in figure 3 was submitted.

This very same corner design was later submitted to Ken for his article. He, in turn, was so appreciative of my design for "solving the spacer problem", that we would now refer to any corner module with this design as a "Krause Corner."

With limiting radius parameters mentioned earlier in this letter, and some personal testing, I did not want to go down in history as the blankety, blank idiot who recommended this corner. So I wrote Ken telling him the reasons why I couldn't say this is the design that everybody should build, even if it does solve the spacer problem.

But If you look at Fig. 3, you will see that it is indeed possible to have radii of 45 9/16" and 44 5/8" as the 48" centerlines cross between the two curves.

-Bill Krause

The NASG's S-MOD standards have been accepted by the NMRA Engineering Committee as the basis for their proposed new NMRA S standard gauge module standards. If you do not have a copy of the S-MOD materials, for \$5.00 you get the following information: Direct any module questions to Ted Larson, NASG Module Chairman.

Package includes:

- NASG S-MOD Module Standards
- S-MOD Concept Article
- Handheld Throttle Construction Article
- Checking Your Module Wiring Article

Orders to Ted Larson, 5 Kenicott Circle, Fairport, NY 14450.

Below - Figure 1: Spacers in an odd-shaped modular layout.

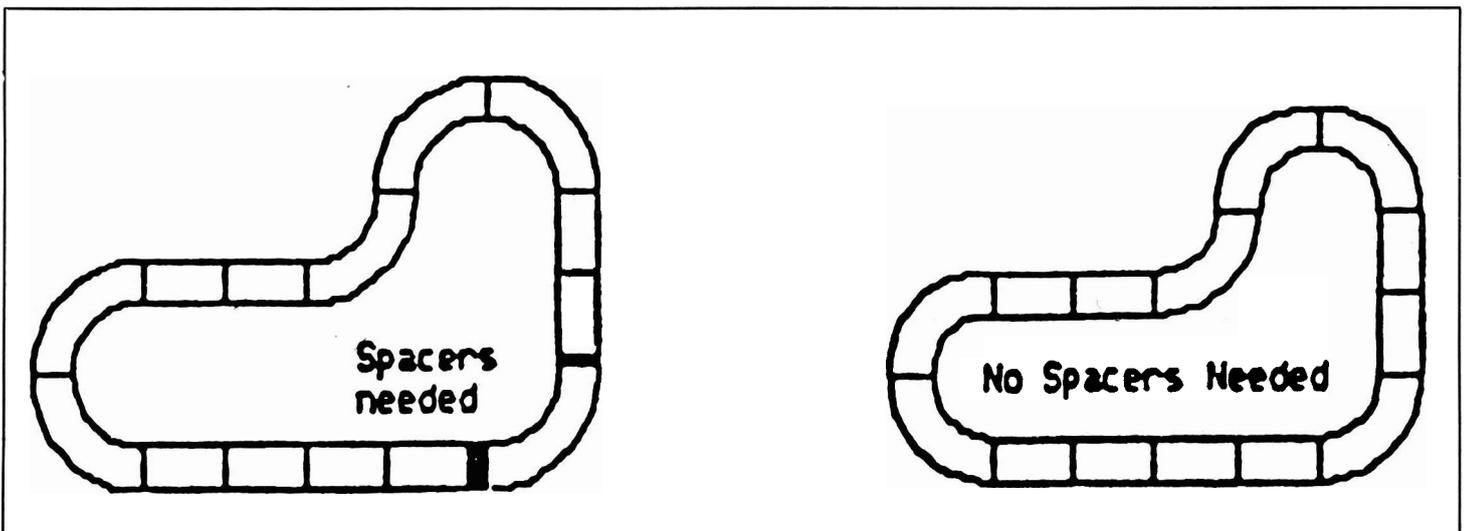


Figure 2:
A complex layout formed from 4' linear modules and reversible 90 degree corners.

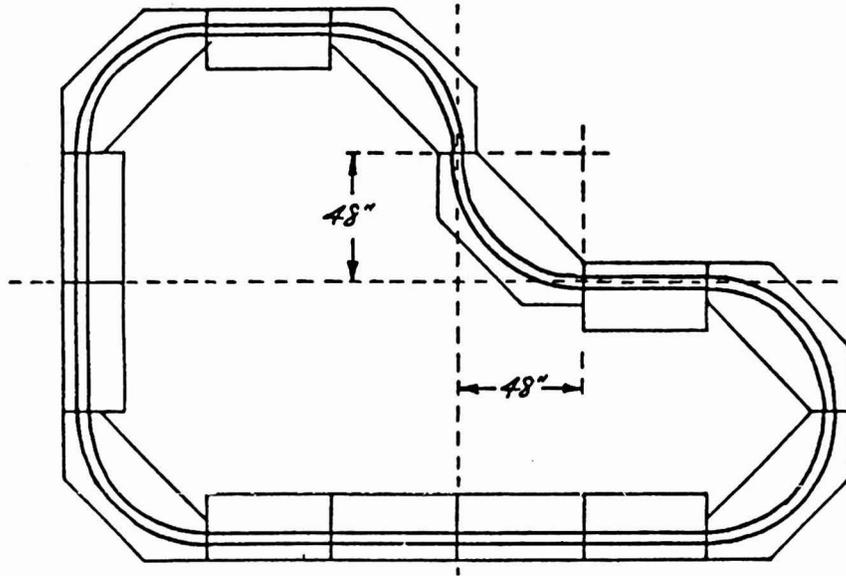


Figure 3:
Track geometry of the "Krause Corner."

