

Tips & Tech #02

Bench work

Much has been written about bench work over the years. I have found that using good but inexpensive materials along with proper building techniques will provide a proper and sound base upon which to build your layout. When beginning to build the bench work everyone wants to get it done in a hurry so they can start putting down the track. This is one of the biggest problems with poor operation of a model railroad is improper bench work which yields track work that is not level and free from kinks, both horizontal and vertical.

Most of the printed material on bench work suggests using 1x4 lumber. Although this is a very good way to go, but if you have a lot of bench work to build using 1x2 milled lumber is an alternative. Now 1x2 lumber is sometimes called “furring strips” but there is a lot of difference between the two. Most furring strips are very crooked and have a lot of knots. Milled 1x2s are made from #2 grade SPF lumber and I have had many pieces that do not have a knot for the entire 8 foot length! It pays to pick through the pile at the lumberyard if they will let you.

I use the L-girder and T-girder methods of base bench work. I then use joists that are a maximum of 16” on center and usually a lot closer. If the L/T girders are spaced apart more than 3 feet it is wise to add another L/T girder in between. Legs spaced about every 4 feet is about the maximum one should go unless the L/T girders are doubled up or built of 1x4 material. The legs can be 2x4's ripped in half making a 1 ½ somewhat square support. Second level bench work is made using the open grid with the same subroadbed as the lower levels.

Now for the subroadbed a lot has been said for using ¾ birch plywood. While this is, I feel overkill, none the less it is about as bullet proof a base as there is. There are other alternatives to this and one is using 7/16 OSB board. Now 5/8” would be better but the 7/16 will stand up to the task if your train room is not overly damp. This is the biggest problem with most layouts is the excessive dampness. Painting of the subroadbed is a must as it will seal the wood and keep the moisture from affecting it.

I use Homasote next laid on the subroadbed. This is glued to the subroadbed and then painted. This will again seal out the moisture. I have found that the thickness of the Homasote varies from shipment to shipment and the surface of the Homasote will also have minor variations. I will use a large rasp to grind down the thick piece of Homasote to match the adjoining one if necessary. I am now ready to begin laying the track. I use cork roadbed, this is to give the track work the proper profile for ballast and help reduce noise. For the mainlines I use HO cork roadbed, on the passing sidings I use N scale cork and then for the sidings/industrial spurs the track is laid directly on the Homasote. This helps give the layout the impression that I am using smaller code track when in reality I am using code 100 flex throughout for durability and price. When putting down over 2400ft. of track, price soon becomes a major factor!