

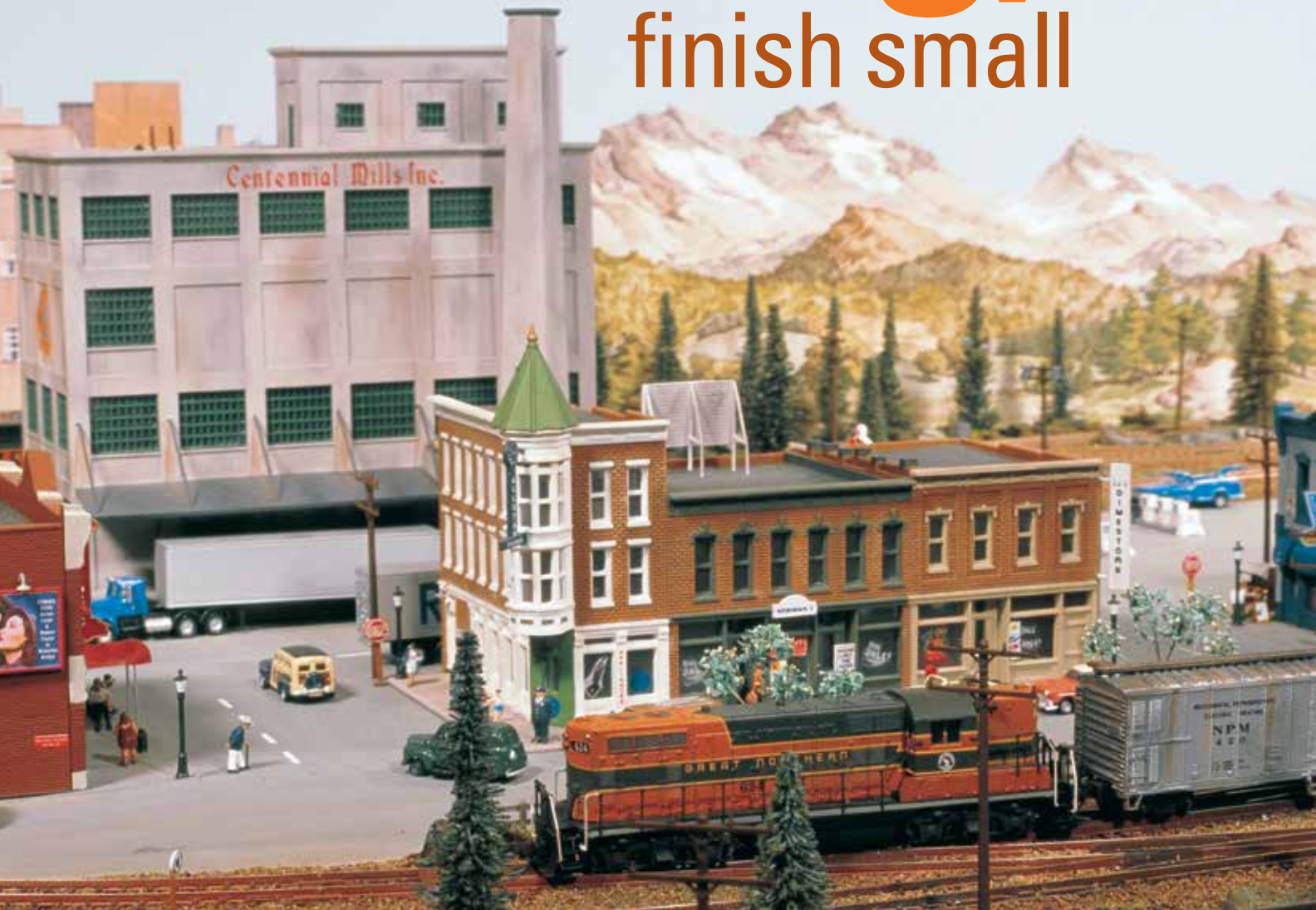
Workshop tips

Compact Track Plans and Layouts



- How to fit realistic layouts into small spaces
- Construct a layout in a spare bedroom or garage
- Creative plans and ideas for HO and N scales
- Add operating interest with scenery and structures

Start big, finish small



Dreams of an HO scale empire yield to this compact Great Northern N scale layout

By Don Culp

Photos by the author

Like many other model railroaders, I intend to construct a big HO scale layout. Someday. As life would have it, however, those lofty aspirations were put on hold several years ago when I moved into a new home with an unfinished basement. While waiting for my plans to materialize into finished walls, I desperately needed something to model.

Although at heart I'm really an HO scale model railroader, I've always been intrigued with N scale trains. Being without any other outlet for modeling, those thoughts translated into the Havaphew Central, my N scale layout.

I modeled the railroad to represent Great Northern Ry. operations in the Pacific Northwest. The fact that Great

Northern tracks once traversed the area where I now live made the railroad an appealing prototype to model. The period for my layout is loosely set between the late 1950s and the early 1960s. While I strive to maintain a reasonable degree of period awareness, I tend to model simply for the pleasure of doing so rather than trying to reconstruct a specific time or place.

Framework

Measuring only 2½ feet wide and 5 feet long, the layout is indeed compact. I built it 32" high with the thought of sitting in a normal desk chair to operate trains. The open-grid framework is assembled from 1 x 4 lumber, a ½" plywood top, and 2 x 2 legs. Although the layout

1. Powered by Great Northern GP7 no. 624, a westbound local rumbles past the business district of Ashton, a fictional community on Don Culp's 2'-6" x 5'-0"-foot N scale Havaphew Central.



2. Judging by the array of realistically weathered locomotives and rolling stock spotted in Welsh Yard, Don's collection now includes more than just "a few" N scale items. For Don, collecting equipment is just as enjoyable as operating it.



3. With a day's work in tow, GN RS-1 no. 183 prepares to switch off the main line. The crew looks forward to ending its trick in Welsh Yard and heading to the bustling business district of downtown Ashton.

isn't particularly heavy, casters on the legs make it easy to move. The backdrop, made from $\frac{1}{8}$ " hardboard fixed to a 1 x 2 wood frame, extends 10" above the surface of the layout.

To help re-create the rugged skyline typical of the Pacific Northwest, I first covered the backdrop surface with light blue (flat finish) latex paint and then used spray adhesive to apply commercially printed background scenes from Detail Associates.

Track and power

You might recognize the track plan as an Atlas original that I modified into an expanded double-loop scheme. Following the design, I used Atlas Snap-Track secured to cork roadbed with track nails.

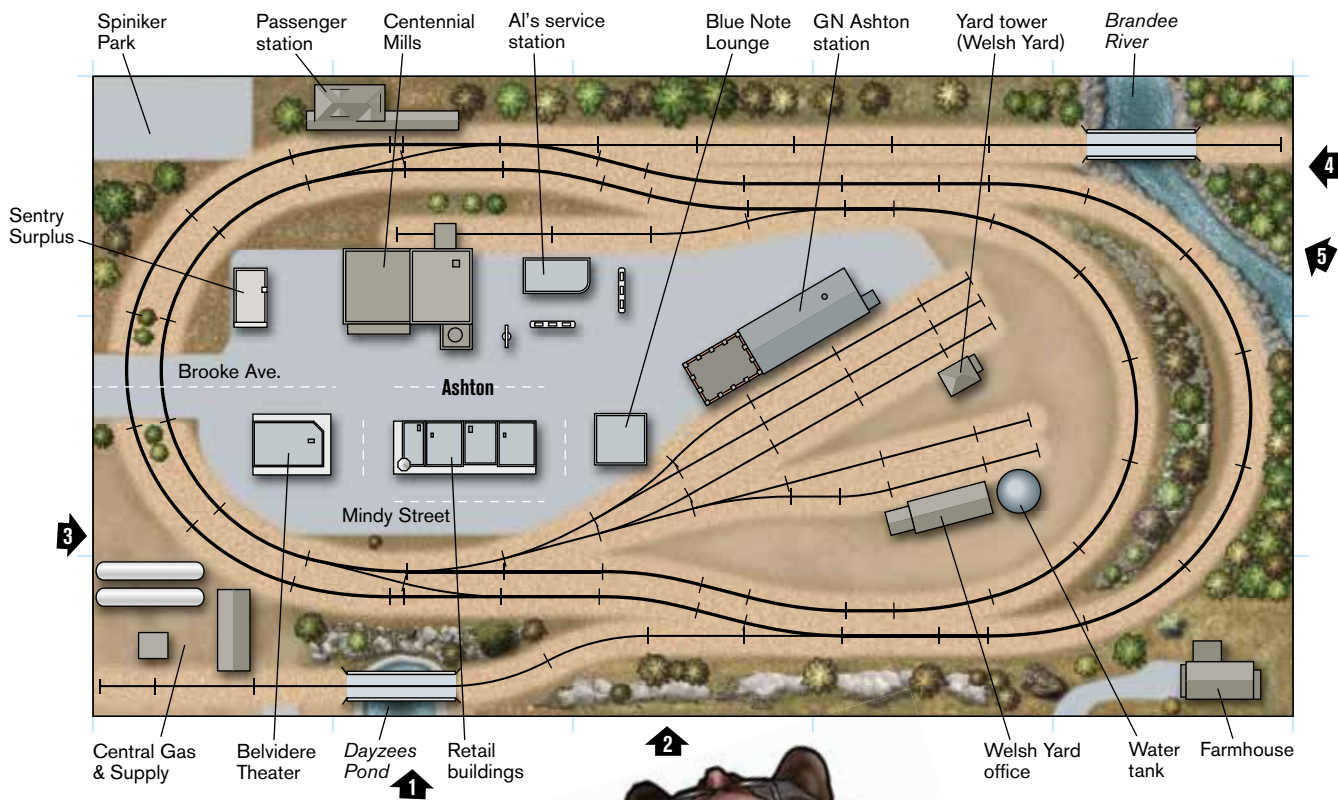
CRAFTING the trees

Although most of the trees on the Havaphew Central are commercial products from Woodland Scenics and Life-Like, I also made several of my own.

Many of the evergreens are crafted from a material called bumpy chenille found at craft stores. It's a fine plastic-strip material twisted into a wire stem. Each length has several conical shapes resembling evergreen trees attached end to end. I used a pair of wire cutters to cut them apart to form trees.

For model railroad purposes, the material is too shiny and uniform as it comes. I did a little random pruning with scissors so their shape would be less uniform. Then I stuck the tree trunks into a sheet of scrap cardboard to hold them upright while I covered them with a dark green (flat finish) spray paint that's normally used for painting dried flowers. Once the paint dried, I dribbled diluted white glue onto each tree and then sprinkled on subtle hues of green ground foam to add texture.

Other trees and wooded growth I made using ground-foam-coated twigs, dried candy tuft, and some real twigs to represent logs and stumps. – D.C.



Don Culp's Havaphew Central

N scale
 Scale of plan: 1 1/4" = 1'-0", 12" grid
 Numbered arrows indicate photo locations
 Illustration by Rick Johnson and Elizabeth Kelly

More on our Web site

To view a sectional track plan of the Havaphew Central, please visit our Web site www.modelrailroader.com



4. Unfettered by the arriving passenger train, the crew of GN SW9 no. 16 continues switching at Centennial Mills. A double-loop track plan, divided into 10 electrical blocks, makes it possible to operate two trains independently.

Atlas Custom Line manual turnouts are operated by ground throws from Caboose Industries. Following installation, I sprayed the track with a combination of flat rust and black paints, applied Woodland Scenics ballast, then cleaned the top of the rails. The plan also includes a Warren truss bridge and a plate girder bridge, both from Atlas.

Power to the rails comes from an MRC Tech II Dual Power 2800 power pack. With the double-loop design broken into 10 blocks, I can run two trains at the same time. One can run continuously on the outside loop while I switch with another on the inside loop.

Landscaping

Hydrocal, paper towels, and cardboard forms cover the layout surface. I painted the landscaping with diluted acrylic paints and added ground covering from Woodland Scenics. Although I made several Hydrocal rock castings using molds from Woodland Scenics, I also included a few real rocks that amount to N scale boulders. Hydrocal, stippled for a wave effect, provided the basis for water that I painted with acrylics and coated with gloss medium.

Locomotives and rolling stock

What starts out as "a few" trains can turn into a few too many, especially on a small layout. Although I'm not always certain exactly where an item will fit on my layout when I acquire it, I'm never hesitant to add something and worry about where it fits on another day.

Like many model railroaders, I've found collecting equipment can be just as enjoyable as operating it. As it now stands, I have a full roster of locomotives and rolling stock on the Havaphew Central. All of my equipment is fitted with Magne-Matic couplers and realistically weathered using water-based paints and powdered pastels.

The appearance of a model is typically what attracts me, but reliable, high-quality performance has become increasingly important as I gain experience. If rolling stock doesn't function well, it can quickly become a source of recurring frustration.

Structures and vehicles

The structures are all kits from Walters Cornerstone, Stewart Products, Plastruct, Model Power, Heljan, and Atlas. Due to space limitations, I had to refine my selection to suit a particular need or location. As with my rolling stock, I weathered all the structures using powdered pastels and then sealed them with Floquil Figure Flat.

The vehicles on the layout are from Champion, Con-Cor, Detail Associates, Classic Metal Works, and Road Apples. Although the Champion vehicles are

Layout at a glance

Name: Havaphew Central
Scale: N (1:160)
Size: 2'-6" x 5'-0"
Prototype: freelanced Great Northern
Locale: Pacific Northwest
Period: 1950s to 1960s
Layout style: free-standing portable
Layout height: 32"
Benchwork: open grid
Roadbed: cork
Track: Atlas Snap Track
Length of mainline run: 13 feet
Turnout minimum: Atlas Custom Line
Minimum radius: 9¾"
Maximum grade: none
Scenery: Hydrocal and paper towels over cardboard forms



5. Great Northern E7A no. 504 leads an eastbound passenger train over the Brandee River and into deeply forested terrain.



6. This overall view of the Havaphew Central reveals just how much Pacific Northwest scenery and railroad operation Don captured in a few square feet.

actually a collection of toy cars that are slightly larger than true N scale proportion (1:160), they are fairly nice representations that look fine when placed strategically on the layout.

All vehicles have been detailed with painted headlights, tail lights, and door handles. It really isn't that difficult to do in this small scale, provided you use a very fine brush and a magnifying lamp.

Figures and details

The layout's cast of characters includes an assortment of figures and animals from Model Power, Preiser, and

Rustic Rails. I repainted some of the figures and even did a little plastic surgery on a few of them to change the way they were posed.

Changing the positions of plastic figures, can be done using tweezers to hold them close to (but not touching) a hot soldering iron, or by cutting away appendages and then gluing them back in a modified position.

To add even more visual interest to the layout, I placed an array of plastic and cast-metal details including signs, telephone poles, garbage cans, and miscellaneous parts from my scrap box.

A start to something bigger

Building the Havaphew Central was both enjoyable and educational. Multiple options in the track plan also make it very entertaining. But most important, in a matter of a few square feet I've been able to practice techniques I'll surely use on my next layout – whatever size or scale it might be. [MR](#)

Realistic shelf layout in mom's garage



1. A Union Pacific Geep pulls its train into Hillsboro, Ore., to do some switching. The action takes place on Shaun Toman's HO scale shelf layout, which he built around two walls of his family's garage.



2. Shaun built the layout in three sections over a period of several years. This view shows the town of Hillsboro, the first section completed. Part of Shaun's challenge was working the layout around the furnace and water heater.

Building and operating a modern HO layout one section at a time

By Shaun Toman

Photos by the author

I've been a model railroader and a Union Pacific fan as long as I can remember. My grandfather got me started in the hobby, and the store where I used to purchase my trains and modeling supplies was owned by a guy who loved the UP. Those two things have pretty much shaped my modeling interests to this day.

My current layout, the freelanced Hillsboro Division of the Union Pacific, features modern railroading set in the Pacific Northwest. In addition to the UP, my HO scale layout also features the Portland & Western RR (a subsidiary of Genesee & Wyoming Inc.). I live near the P&W's main line in Hillsboro, Ore., so in designing the layout, I combined my favorite railroad with my hometown's



3. On Shaun's freelanced railroad, the main line is joint property of the UP and the Portland & Western RR. Here we see a pair of P&W Geeps as they switch the Hillsboro Grain Co-op while a UP freight passes by on the main line.

railroad to come up with the Hillsboro Division – an L-shaped shelf layout that hosts regular operating sessions for small groups. Did I mention that it all fits in the family garage?

Issues of space

The Union Pacific Hillsboro Division is my sixth layout. I started it several years ago, when I was 18. My previous railroad had filled my 11 x 11-foot bedroom, but there was no room to expand. I wanted something that was larger so I could operate it with friends, and in my quest for more space I turned my attention to the garage.

There was a spot along the back wall that had potential for a 2 x 12-foot shelf layout, so I cleaned out all the clutter and started construction on a switching railroad. Once I'd gotten that first section operating, it was quickly apparent that I would need to expand the layout to improve operation.

After doing some sweet talking with my mother (it was her garage, after all), she gave me the go-ahead to extend the layout. The next section I built had to cross in front of the water heater and the furnace, and I needed to make sure that



4. Union Pacific no. 5799 leads a through freight past a stand of tall pines on its way into town. Many of the trees on the layout are from Canyon Creek Scenics.

they were easily accessible. As a result, there's no backdrop along that section of the railroad. Though it's less attractive visually than other parts of the layout, the compromise was well worth the extra railroad space.

The additional 15 feet of layout not only gave me more main line, it allowed

me to add more industries for the railroad to serve. This improved operation quite a bit by giving my crews more work to do. And, despite the additional benchwork, there's still plenty of room for crew members to move around.

Due to job commitments and freelance work as a graphic designer, the

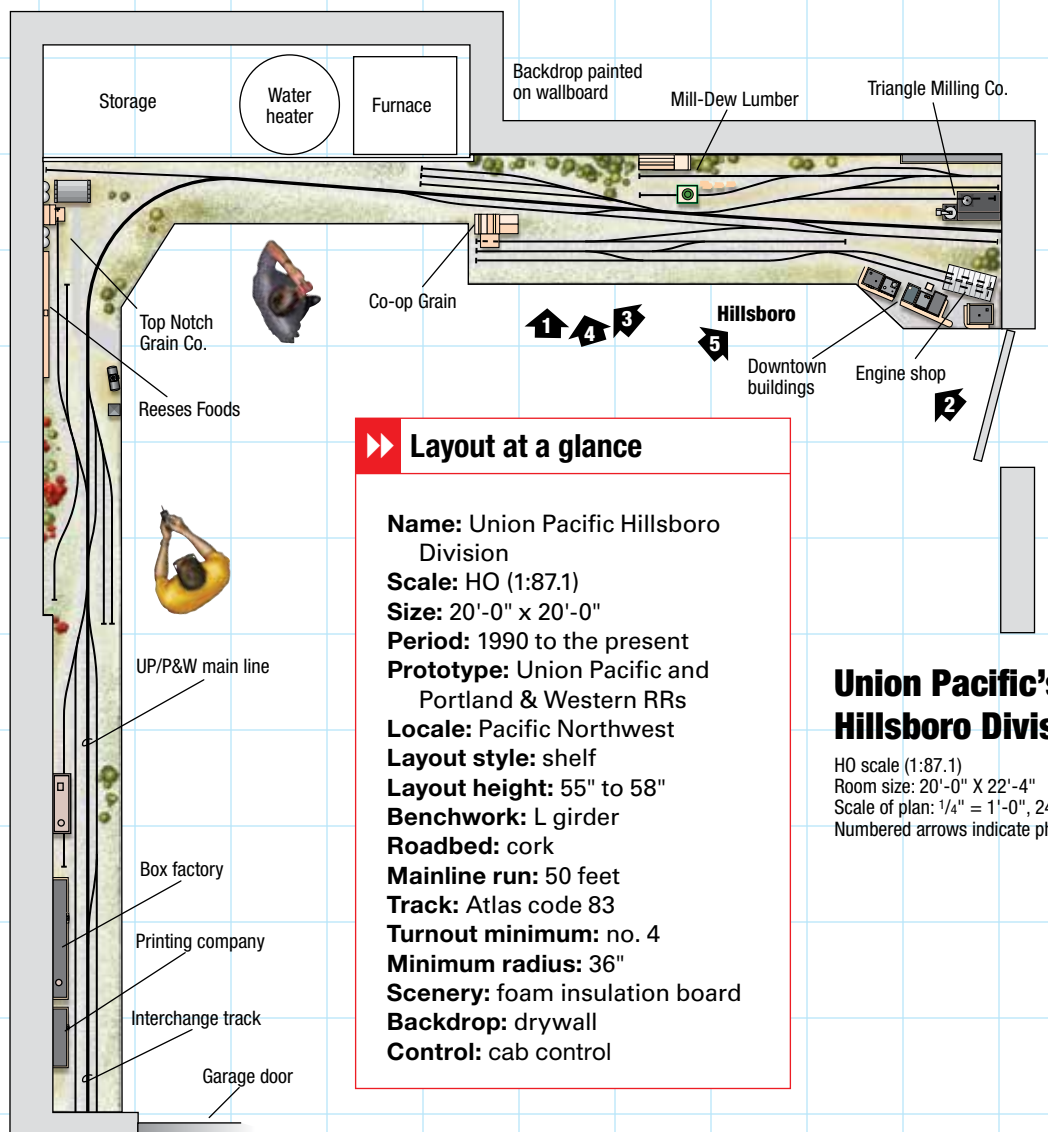


Illustration by Jay Smith

Union Pacific's Hillsboro Division

HO scale (1:87.1)
 Room size: 20'-0" X 22'-4"
 Scale of plan: 1/4" = 1'-0", 24" grid
 Numbered arrows indicate photo locations

layout took a back seat in 2005. However, by the end of that year I began construction of the last section, extending the railroad all the way down the side wall to the garage door. This new section includes more industries and an interchange track. The layout is now roughly a 20 x 20-foot "L" along two walls.

Help from my friends

My model railroading has been influenced by a number of people over the years. My grandfather, Alex Toman, helped me build the benchwork for all my layouts, including this one. Also, my friend Peter Vassler taught me his techniques for making clouds with spray paint and stencils, as well as how to model trees.

Perhaps the most important person in shaping my modeling skills was Lyle Noah. He was the owner of Scratch Built Scale Models. I met him in 1995, and we were friends until his death several years

ago. He taught me everything I wanted to know about the hobby. We built models together, worked on his 15 x 60-foot logging railroad, and went railfanning. We always ate well on those trips!

Lyle was a master model builder, and to have had him as a friend and mentor for seven years was an honor. He taught me a lot.

Scenery

My favorite part of model railroading is building scenery. I love starting with nothing and having the result look realistic. Modeling Pacific Northwest scenery has been especially fun.

I use 2" extruded-foam insulation board for my scenery base. I glue it to the 1/2" plywood that covers my benchwork. I find that the lightweight foam is easy to work and shape. It also makes it easy to plant trees, build up the ground for structures, and make ditches along roads or the railroad right-of-way.

I shape the foam with a rasp and use spackling to fill in gaps or to add contours. I then paint the surface with latex paint, mixed to my own special dirt color. Next, I sprinkle various colors of Woodland Scenics ground foam onto the wet paint and then let it all dry. Later I add other Woodland Scenics foliage materials to represent weeds, shrubs, and bushes. Most of my trees come from Canyon Creek Scenics (www.canyon-creekscenics.com).

I built the majority of the structures on my layout from kits, painting them before assembly. One of my favorite structure tips is to modify the kit while assembling it. This can be as simple as changing window and door arrangements. Other times it's more involved, such as combining parts from several kits in a full-blown kitbashing project.

Detailing structures is an important step in the construction process. I like to make them as realistic as possible, so



5. The local Hillsboro switching crew uses UP no. 1076 to pull a string of boxcars along the main line past a freight waiting on the siding. Farther down the line, the crew will shove the cars onto industry tracks on the far side of the main.

I add weathering, such as rust and grime. Sometimes I'll paint one of the walls a different color from the others to make it look as though the building has been remodeled. Broken windows in factories are another detail I often model. None of my buildings are lighted yet, but I plan to add lights in the future.

Operation on the Hillsboro

For me, the best part about operating is having friends over to run trains. I belong to a group that meets on Tuesday evenings at different members' homes, and we have a lot of fun.

To save money, most of the layout owners in the group use Digitrax Digital Command Control (DCC) systems on their railroads. This way we don't need to own multiple throttles because we simply bring our own Digitrax cabs to an operating session. Though my layout operates with DC cab control, I plan to convert it to Digitrax DCC soon.

When we run an operating session on the Hillsboro Division, most of the

trains are switching jobs, though we do run a couple of mainline trains as well. We follow a predetermined operating sequence, and a complete session takes about two hours.

Operating the layout requires four 2-man crews, each with a conductor and an engineer. The conductor sets up his train's switching moves and lines turnouts; the engineer runs the locomotive. My turnouts all have Caboose Industries N-scale ground throws. I use them because they're reliable, and it's a realistic activity for the crews to line the switch points themselves.

Because my layout is small, all of my way freights run with just a four-axle engine, while through freights use pairs of either four- or six-axle road locomotives. I like large, modern engines, but the layout isn't big enough to handle more of them.

Lessons from this layout

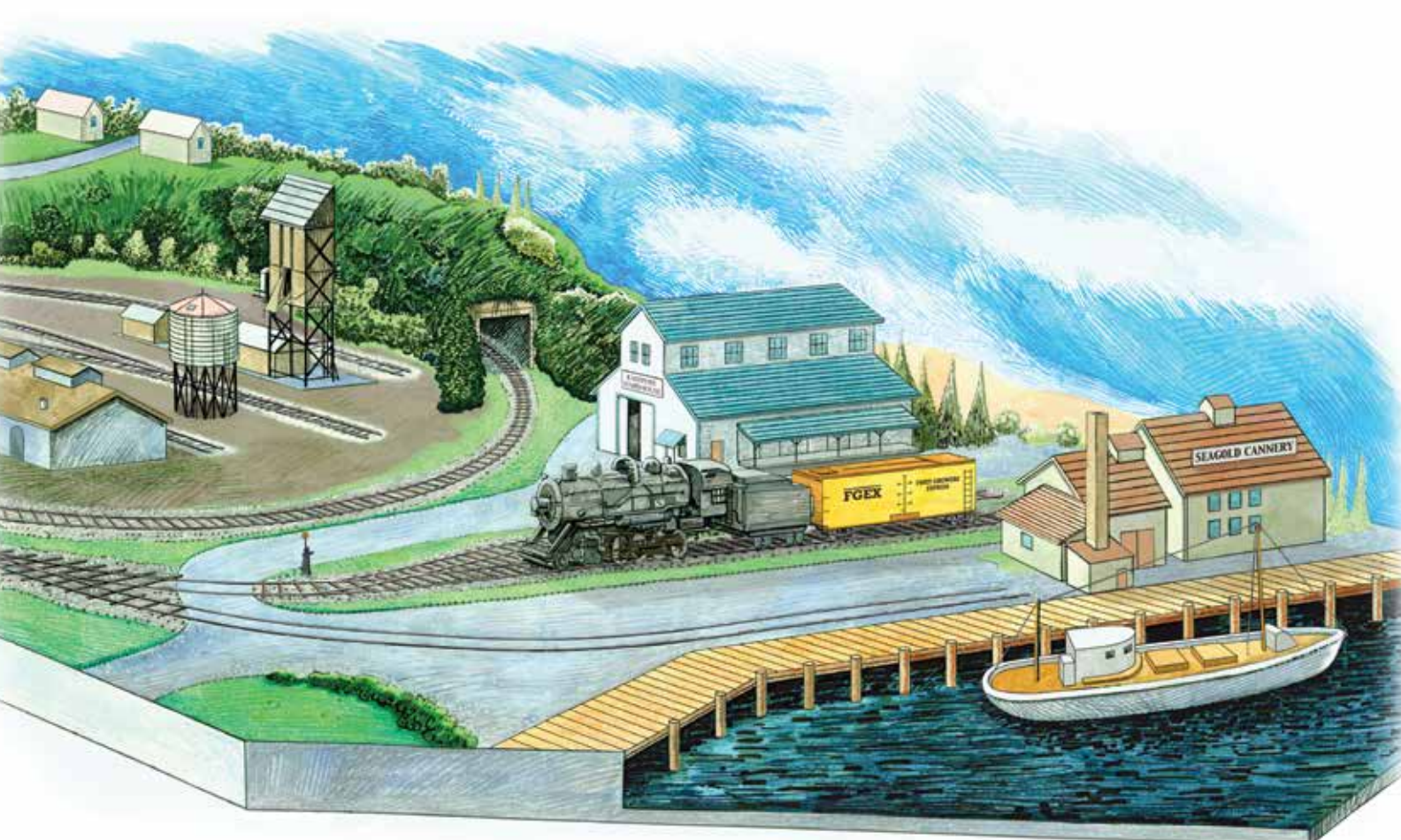
I've been working on my Hillsboro Division layout for four years. As with

my previous layouts, I've learned many new things during this project, and with practice, my model railroading efforts keep getting better.

Designing and building a layout always has lessons to offer. One thing I've learned this time is to have enough room for proper runaround tracks. This is especially important on a point-to-point shelf layout and for trains to be able to switch facing-point industries.

Another lesson is to make sure the sidings are long enough for two trains to pass one another. If I were to start this layout over again, these are just a couple of the things I'd change about the track plan to make it more operations friendly, and they are things I'll keep in mind for my next layout.

Still, when I set out to build the Hillsboro Division, I did so for the purpose of building scenery and structures, and running trains. The garage layout has served that purpose well. [MIR](#)



Illustrations by Theo Cobb

Three track plans for one sheet of plywood

Cutting a 4 x 8 sheet into three pieces yields creative layouts in HO and N

By Steven Otte

Many model railroaders base their first layouts on 4 x 8 sheets of plywood, for obvious reasons. A flat tabletop is a lot easier to build than L-girder benchwork, and almost any home has room for a 4 x 8 table at one side of a bedroom or den.

Great things have been done on a single sheet of plywood. However, that shape does impose certain limitations. Though the tighter curves usable in N scale open up more possibilities, in HO

scale, a plywood sheet restricts you to a few variations on an oval or figure eight. And being able to see your entire layout from a single vantage point limits the perception of realism.

But what happens if we cut that plywood into three pieces, and reassemble them in a different shape? These three track plans use a few cuts of a saber saw to open up the possibilities locked in a 4 x 8, while keeping the benefits of compact size. Supporting and splicing

together the odd shapes resulting from our jigsaw-puzzle technique will require a bit more involved benchwork than a 4 x 8 table does, but it pays off in much greater visual and operating interest. **MR**

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Looking for more ideas? Subscribers can search through more than 500 plans in our Track Plan Database, at www.ModelRailroader.com

Oklahoma & Western RR

The simplest of these three track plans uses one straight and one diagonal cut to add a branch line and an interchange track to an HO scale oval. The double-ended track allows for runaround operations needed to switch the three industrial sidings inside the loop, but it's the eight-foot-long, tapered peninsula that breaks this layout out of the box.

Wrapping the lead for the branch line around the outside of the loop maximizes its length, while a variety of facing- and trailing-point turnouts makes switching challenging. Note that the second track in front of the O&W depot can't be used as a passing track for the loop without a backing maneuver.

The track that crosses the main and the branch represents the Missouri-Kansas-Texas Ry., a real railroad with which the O&W interchanges. This doesn't just add visual interest, but also allows the O&W to ship any kind of car via the interchange track. Cars for delivery to the O&W can be staged in front of the M-K-T depot before the operating session, and shifted to the interchange for pickup by a road switcher. Likewise, cars from online industries for destinations off the layout can be dropped off on the interchange track to be picked up by the Katy.

The locale is the hills of western Oklahoma, hence the elevation on two corners of the layout. The deep cut also serves to visually break up the main line, disguising the oval.

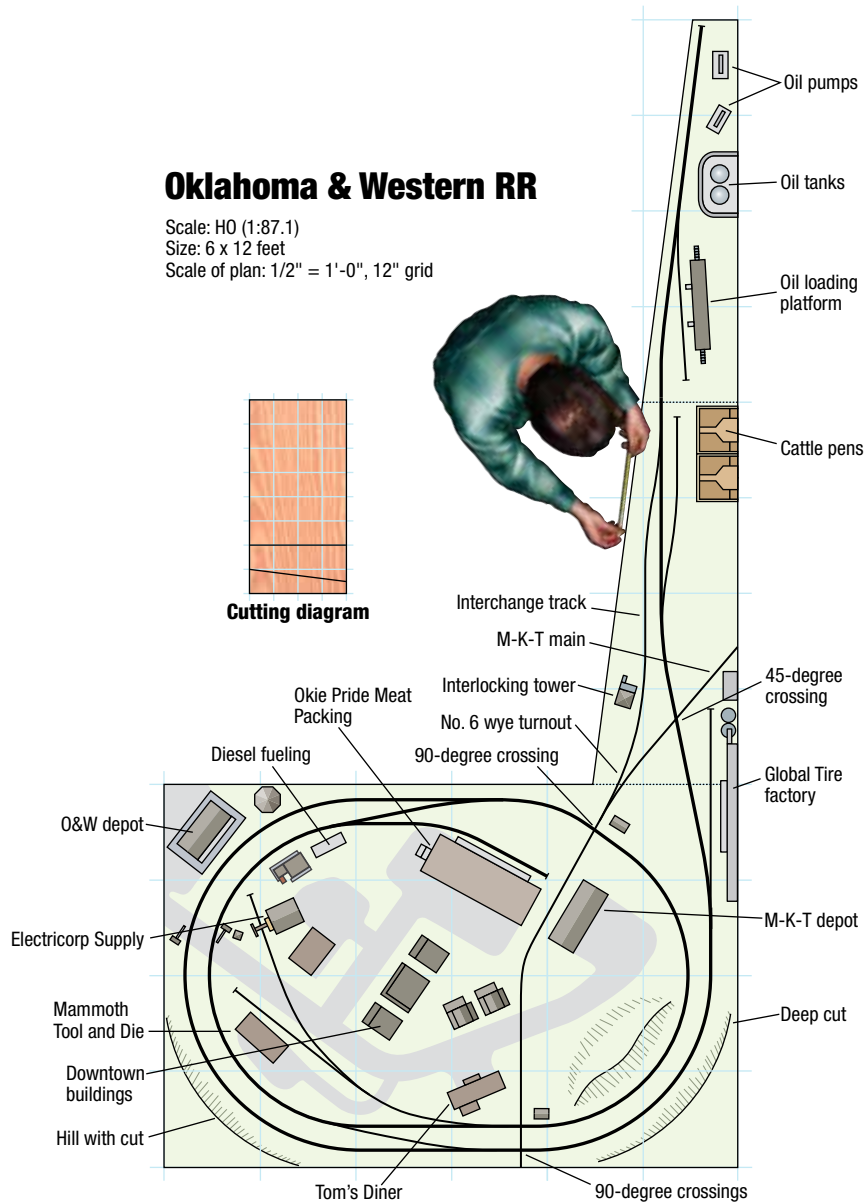
The major industries and resources of the region – cattle, meatpacking, tire manufacturing, and oil – are represented, helping reinforce the layout's sense of place. A couple of industrial spurs branching off the main loop add options.

Setting the railroad in the transition era means either early diesels or oil-fired steam locomotives would be at home on this layout. A Vanderbilt-tender 2-8-2 Mikado or an F unit could handle motive power duties on the O&W. For the M-K-T, an Alco RS-3 would be a good choice.

If you wanted to expand this layout later, the line at the end of the peninsula could be connected to a staging yard. You could also extend the Katy track into a new area.

Oklahoma & Western RR

Scale: HO (1:87.1)
Size: 6 x 12 feet
Scale of plan: 1/2" = 1'-0", 12" grid



▶▶ The track plan at a glance

Name: Oklahoma & Western RR
Scale: HO (1:87.1)
Size: 6 x 12 feet
Prototype: freelanced
Locale: Western Oklahoma
Era: 1950s
Style: tabletop with shelf
Mainline run: 29 feet
Minimum radius: 19"
Minimum turnout: no. 5
Maximum grade: none

▶▶ Suggested structures

Okie Pride Packing: Atlas 721 Middlesex Manufacturing Co.
Mammoth Tool & Die: Design Preservation Models 103 Cutting's Scissor Co.
Electriccorp Supply: Wm. K. Walthers 933-3611
Tom's Diner: City Classics 110 Route 22 Diner
Global Tire factory: Wm. K. Walthers 933-3172 Armstrong Electric Motors (background building) and 933-3514 industrial tank set

Housatonic Valley Ry.

For this N scale plan, one straight and one S-shaped cut yields three long pieces of plywood that assemble into an 8 x 9-foot, U-shaped, walk-in layout. Using 9½" and 11" curves lets us plan loops at the end of the peninsulas for a basic dogbone. Setting the railroad in the rolling terrain of New England gives us a rationale to conceal the return track and even a couple of staging tracks under forested hills along the outer edges. (If you build this layout along the walls, be sure to make your hills removable for access.)

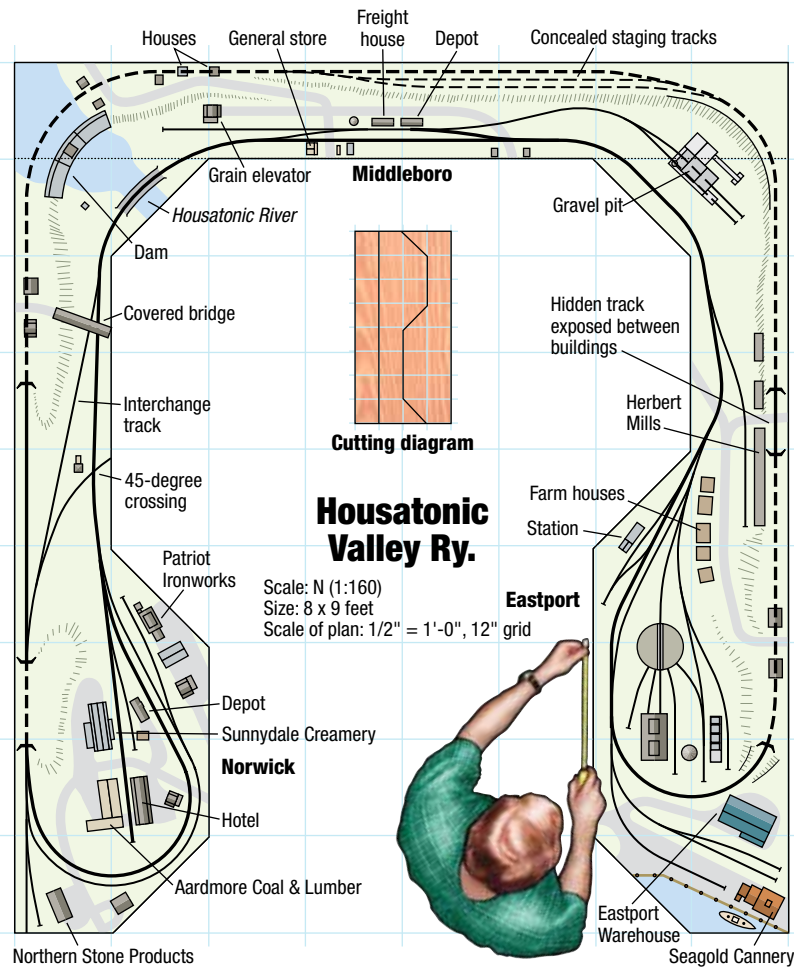
Rather than attaching the track and roadbed directly to the plywood, this plan calls for a layer of rigid extruded-foam insulation on top of the plywood. The foam can be cut away to model water features below the level of the track, like the Housatonic River and the docks at Eastport.

This design is for a steam-era road linking an industrial seaport to an inland agricultural town. Using the hidden track, you can run the layout as a continuous loop, or point-to-point with the staging representing outside connections at both ends.

A cutoff linking a section of track exposed between two tunnels stands in for an interchange track with a second railroad. Like the previous plan, this track lets the home road ship any kind of cars. The cutoff can also be used as a reversing loop.

Also as on the previous track plan, industries on the Housatonic Valley help establish a sense of place. The seaport in Eastport features a fishing boat docked at a cannery, a warehouse, and a team track. A linen mill, gravel quarry, iron foundry, and a creamery represent industries common to the area, while autumn foliage, Cape Cod-style houses, and a covered bridge over the tracks near Middleboro evoke New England.

Another common New England sight is the small hydroelectric dam. The trick here is the upper reservoir's water level is actually above the hidden track. The easiest way to model this water would be with commercial plastic water sheet. Be sure to paint the bottom or back it with opaque material, so your guests don't see trains moving through Davy Jones' Locker!



▶▶ The track plan at a glance

Name: Housatonic Valley Ry.
Scale: N (1:160)
Size: 8 x 9 feet
Prototype: freelanced
Locale: New England
Era: 1930s
Style: walk-in
Mainline run: 43 feet
Minimum radius: 9½"
Minimum turnout: no. 5
Maximum grade: none

▶▶ Suggested structures

Fishing boat: Sea Port Model Works H114N 83-foot sardine carrier
Seagold Cannery: GC Laser 507 Brennon Seed Co.
Eastport Warehouse: American Model Builders 604 transfer building
Herbert Mills: Wm. K. Walthers Modulars sets 933-3295 and 933-3283
Gravel tipple: Wm. K. Walthers 933-3241 Glacier Gravel Co.
Covered bridge: GC Laser 418
Patriot Ironworks: Model Power 1546 Holland Iron & Steel, 1573 National Casket, and 2608 General Electric Co.
Aardmore Coal & Lumber: Branchline Trains 893 Valley Fuel & Supply

Indiana & Aurora RR

This layout represents a diesel-era short line serving a Midwestern city and surrounding farmlands. Sliding apart the sections on either side of the S-shaped cut yields a layout table that is still compact but has room for 24"-radius curves needed by larger, more modern equipment.

Although the cutoff track leading past the grain elevator provides for continuous running, the staging tracks hidden behind the backdrop allow it to be operated as a point-to-point. A train could originate either in the staging yard (Chicago/Gary) or in the yard in front of the Rockland station. As it travels around the layout to the other end, the train would pass through the same urban scenery twice, but since the track isn't connected at this point, for operating purposes it can be treated as two separate cities.

While Rockland has a couple of industry spurs, three station tracks and a team track, Fort Garth's two lineside industries share a double-ended siding. Switching these requires some careful planning by the yardmaster. On the other side of the layout, a farm, a couple of agricultural industries, and the flag stop at Waynesboro represent Indiana's rural countryside.

Fort Garth's flour mill and brewery, both low-profile background buildings, and the other businesses on the layout, a grain elevator and a feed mill/farm supply dealer, represent the line's agricultural theme. The industries in Rockland provide operating variety.

Though there are two depots on the layout, a line set in the 1970s like this would see little passenger service. A short line like this might not have rated an Amtrak route, but you can increase operating interest by adding a coach or combine to turn a daily local freight into a mixed train.

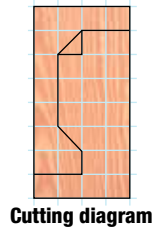
This layout invites expansion. Simply cut the track plan apart at the top and bottom of the D-shaped operating pit, pull the halves apart, and add new sections of benchwork with track in between to extend the main line. The tracks leading past the grain elevator and the seed and feed dealer could also be the connections for new branch lines.

Indiana & Aurora RR

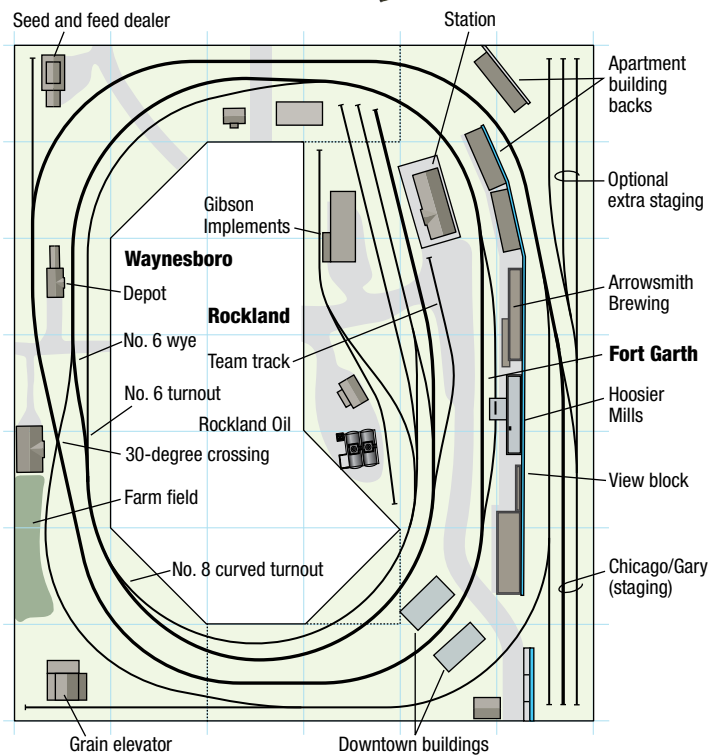
Scale: HO (1:87.1)

Size: 6 x 7 feet

Scale of plan: 1/2" = 1'-0", 12" grid



Cutting diagram



▶▶ The track plan at a glance

Name: Indiana & Aurora RR

Scale: HO (1:87.1)

Size: 6 x 7 feet

Prototype: freelanced

Locale: Northern Indiana

Era: 1970s

Style: doughnut

Mainline run: 40 feet

Minimum radius: 24"

Minimum turnout: no. 5

Maximum grade: none

▶▶ Suggested structures

Hoosier Mills: Wm. K. Walthers
933-3160 Centennial Mills

Arrowsmith Brewing:
Wm. K. Walthers 933-3193
Arrowhead Ale

George A. Nickels Milling & Feed: Branchline Trains 692

Waynesboro depot: Woodland
Scenics 239 flag depot

Gibson Implements: Design
Preservation Models 106 Laube
Linen Mill

Rockland station:
Wm. K. Walthers 933-2841
Clarkesville Depot



6 tips for layouts in small spaces

These ideas may help you fit a model railroad where you didn't think you could

By Mat Chibbaro

Photos by the author

If you've told yourself that you have inadequate space for a model railroad, maybe one of these ideas can change your mind. I've built a number of layouts in various scales, and I've never found limited space to be a problem. I believe anyone can find space for a railroad; it's simply a matter of making the best use of the space you have.

No room for a layout table? Consider a narrow shelf layout. No room for a permanent model railroad? Join a modular club and build a module that becomes

One way to find space for a compact model railroad is to incorporate it into another piece of furniture. Mat Chibbaro built this 2 x 5-foot N scale layout into the top of a bar.

part of a larger railroad. Is your living space already cluttered with model train stuff? Use the room under a layout to create storage space. These are just a few ideas. Check out the rest below, and you may find that all of your space-related excuses will vanish!



1. Wall-mounted shelves

This wall-mounted frame is a good size for a switching layout. Its design of 2½"-wide strips of ¼" plywood or paneling, 1 x 2 joists, and 1" extruded-foam insulation board is sturdy, yet very lightweight. It can sit on standard adjustable shelf brackets as shown here, or on fixed shelf brackets. Mount lights under the shelf above to showcase the layout. Want a larger layout? Use more brackets to support more frame sections.

2. Go sectional

Build your layout in sections that bolt or clamp together, making it portable and expandable. If your available space increases, you can easily extend the layout. With careful track planning, you can make sections that can be arranged in different orders to give operating variety. Support the sections with permanent or removable legs, cabinets, or tables. Even if you don't plan to expand, building a layout in sections can save trouble when it comes time to move – remember, moves can't always be anticipated.



3. Go modular

Join a modular group. Each member builds one or more modules that connect to those belonging to other members. You only need space at home for your module(s), but when the club gets together, you get to operate your trains on a larger layout. This photo shows the Northern Virginia Ntrak club at a meet. The standard Ntrak module is 2 x 4 feet. If even that's too big, Ttrak modules (also N scale) are about 1 square foot and set up on tables. You can find more information at www.ntrak.org and www.t-trak.org.



4. Multiple layouts in one

Make your layout do double duty. The Ntrak module pictured at center in the previous item contains a complete, continuous-running model railroad behind the three Ntrak main lines, making it a fully functional home layout as well as an Ntrak module. Want an unlimited number of layouts in one? Build a frame to hold sections with removable scenery, as shown at right. This Ntrak module accepts a section built on rigid 2"-thick foam that can be exchanged for another section with entirely different scenery.



5. The layout as furniture

Here's my family in the ultimate model railroader's family room, with layouts in both the coffee table and one of the end tables. They take no room away from the living area of the house because they function as furniture – a great selling point if you need to negotiate modeling space with house mates. For another example, see the layout in the bar that leads this article. The glass covers on these layouts are effective at keeping out unwanted dust, fingers, and paws, minimizing the amount of maintenance needed.



6. Storage under the layout

Even if you have room for a layout, you still have to find space to store your rolling stock, tools, kits, and other modeling materials. Beneath this layout, hiding behind the front skirt, are several inexpensive storage cabinets. These can store your model train-related items, or can be give-back space for those with whom you share your home. If the layout is to remain in place, you can use cabinets without casters or easily build shelves right into the legs – just make sure you can still get at the layout's wiring. **MR**

