

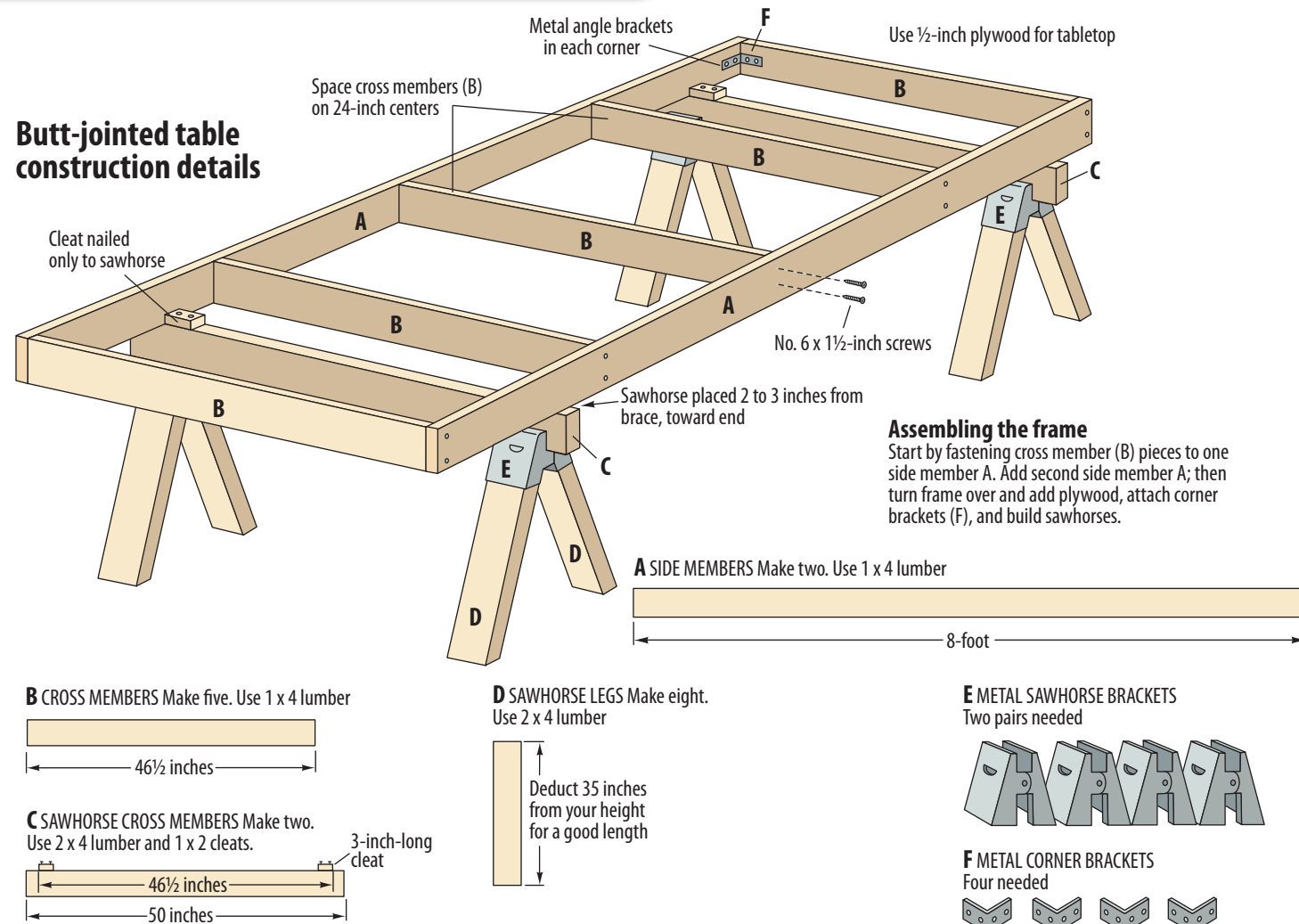
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CLASSIC TOY
TRAINS



BUILD A **WINTER SCENE** TOY TRAIN LAYOUT

Butt-jointed table construction details



Build a basic Train table

TWO SIMPLE WAYS TO BUILD A 4 X 8-FOOT TABLE FOR YOUR TOY TRAINS

By Carl Swanson • Illustrations by Jay Smith

Giving your trains a permanent home starts with building a train table. There are two popular construction types: butt-jointed and L-girder. On these pages we'll show you how to use these techniques to build a simple 4 x 8-foot train table.

Modelers have been using these methods for a long time. In fact, the following information and diagrams are borrowed from a 20-year-old Kalmbach publication, *Small Railroads You Can Build*. Both designs shown on these pages are 4 x 8 feet, which is small by S or O

gauge standards. But it's also the traditional size for a starter train table for the good reason that it's the standard size of a sheet of plywood. You can use these techniques to build larger railroads as well.

These tabletops can be assembled with only a few tools – saw, drill, hammer, measuring tape or yardstick, and screwdriver – and allow you to complete the carpentry stage quickly.

First considerations

Before you dive into construction, you should consider the height of your table. A height of 40 to 48 inches – several inches higher than the average table or desk – is usually considered right. Trains look more impressive running closer to eye level, but train tables above 50 inches

are difficult to work on without standing on some kind of platform.

Next, you need to decide on a method of construction. Let's look at the pros and cons of each.

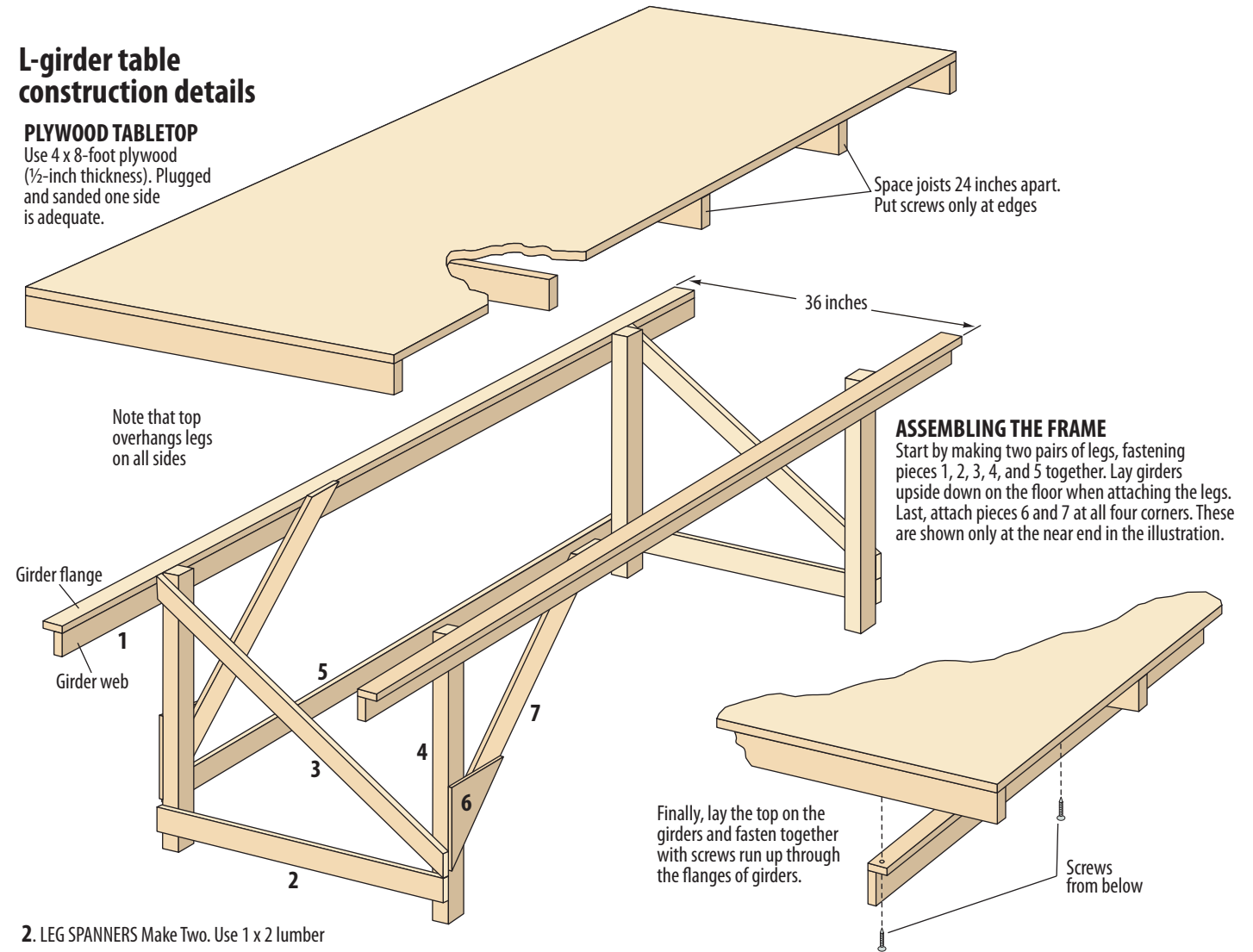
Butt-jointed framework is best if the train table needs to be portable. The frame and top can remain separate from the legs, and the layout can be stored by leaning it against a wall where it will take up very little space. The disadvantage of the butt-jointed system is that the cross members (labeled **B** on the illustration above) must be accurately cut to the same length.

The L-girder design brings the advantage of greater strength, but is thicker than the butt-jointed framework. L-girder framework, which is very sturdy

L-girder table construction details

PLYWOOD TABLETOP

Use 4 x 8-foot plywood (½-inch thickness). Plugged and sanded one side is adequate.



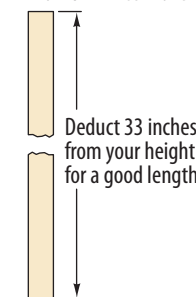
2. LEG SPANNERS Make Two. Use 1 x 2 lumber



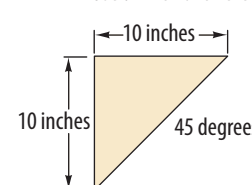
JOISTS for supporting tabletop. Make five. Use 1 x 4 lumber



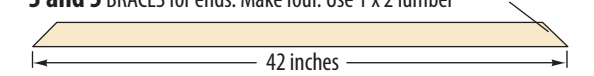
1 and 4 LEGS Make four. Use 2 x 2 lumber



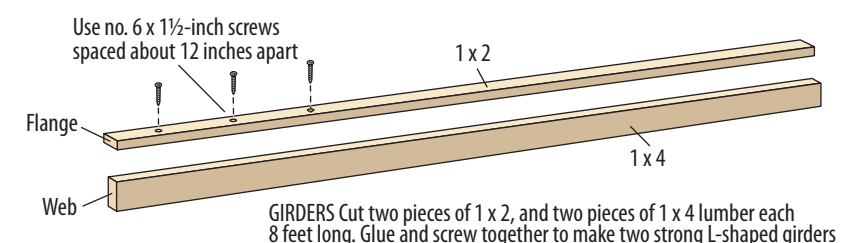
6 GUSSETS Make four. Use ¼-inch or thicker plywood.



3 and 5 BRACES for ends. Make four. Use 1 x 2 lumber



7 BRACES for sides. Make four. Use 1 x 2 lumber



with or without the plywood top, is the framework design most often chosen for extensive layouts.

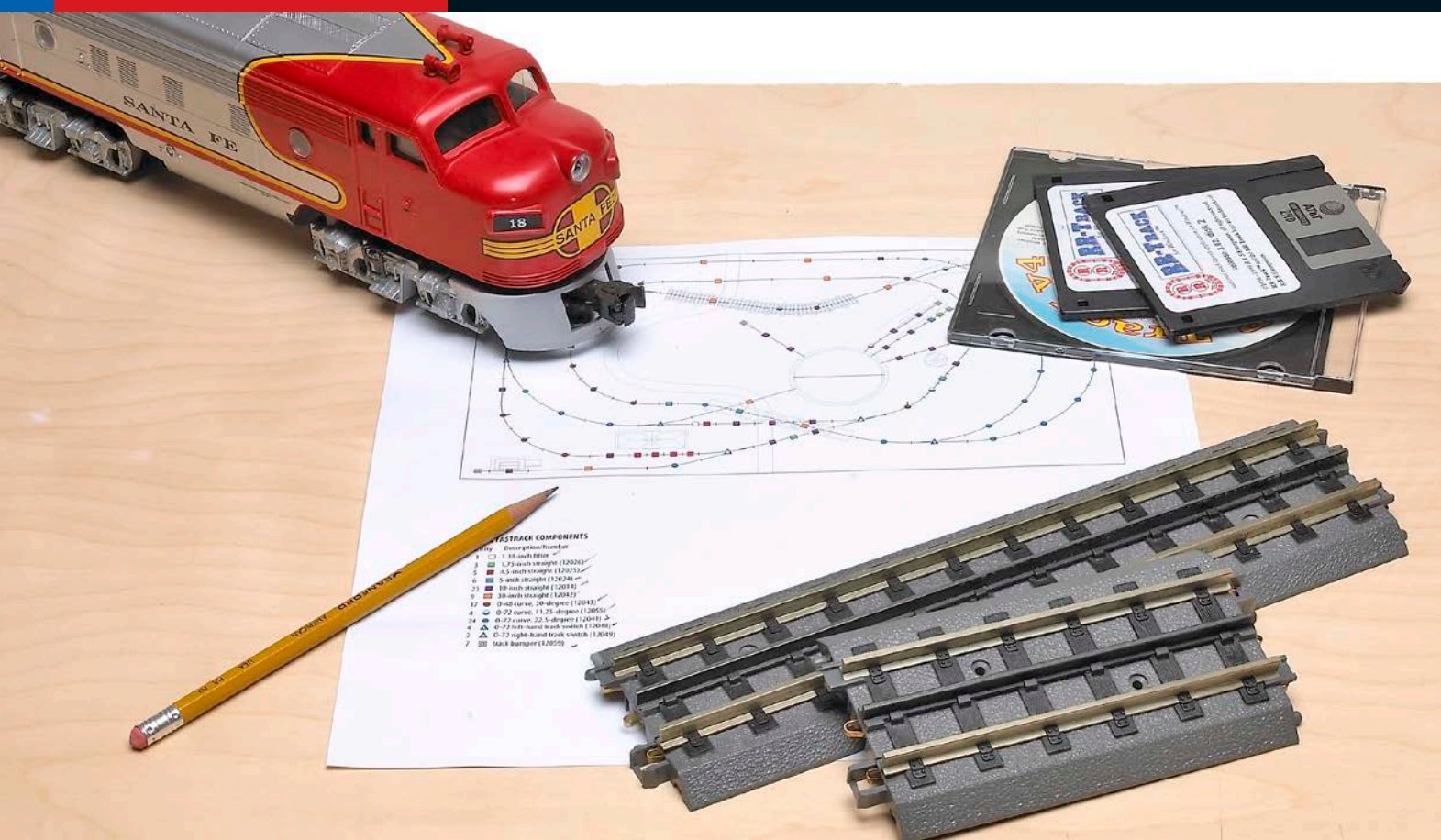
Off to the lumberyard

With height and type of construction determined,

you're ready to visit your local home improvement center or lumberyard. Common-grade pine is adequate for framework, but you may find the cheapest grades to be badly knotted, warped, or twisted. As your lumber needs are

fairly modest, premium grade pine may be a better choice. If you do not have a saw, most lumber dealers will be willing to cut pieces to length for a small fee. Similar considerations apply to plywood. Utility-

grade ½-inch-thick plywood plugged and sanded on one side is fine for a tabletop that will be covered by scenery. If you're going for a painted surface, you may need to look at the better grades of plywood. **CTD**



For most of us, a successful track plan comes when preparation and opportunity intersect. By following the six easy steps outlined here, you'll find a practical path to developing an enjoyable toy train layout that is tailor-made for you.

Design a layout you'll love in 6 easy steps

POINTS TO PONDER BEFORE YOU DRAW YOUR NEXT TRACK PLAN

by Kent Johnson • Illustrations by Kellie Jaeger

Some of the brightest minds in our hobby are gifted with the ability to put pencil to paper and whip up an original track plan. Even though I've designed a fair number of plans for *Classic Toy Trains* magazine, I can assure you that I'm certainly not a person with that kind of raw talent. So don't worry if your genius also falls short in this area – you're not alone.

Like most of us looking to craft "The Perfect Plan," my efforts at track planning require a methodical approach. In fact, even before I sit down to render any track plan – large or small, simple or complex – I work through a number of preparatory steps that help me sketch a quality design.

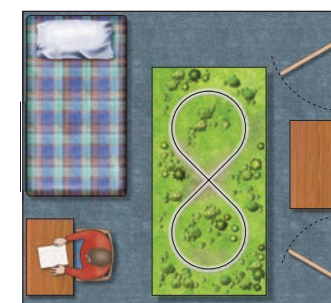
Since many of you have the same goal, I'll gladly share my six-step pre-

design ritual. Granted, my method and the resulting plans won't suit every taste, so I encourage you to adapt my steps or develop your own process.

Even better, if you work through the steps and produce a plan you really like, submit a printout or photocopy (CTT Plans, 21027 Crossroads Circle, Waukesha, WI 53187-1612) for consideration in CTT's Toy Train Track Plan series!

1 Study your space. It's one thing to know that you've got a bit of real estate to erect a toy train layout. But in addition to knowing the precise dimensions of that space, you'll want to consider any unique characteristics of your proposed layout area.

Observe and note the location and orientation of doors, closets, windows, vents, and light switches. It's rarely a good idea to obstruct these fixed features, so you're better off designing around them from the onset. Also consider the height and construction of the ceiling to make sure you account for new layout lighting, backdrop installation, and even exceptionally tall framework.



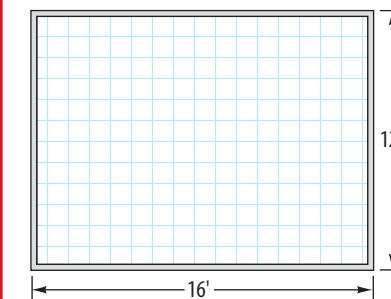
2 Make room improvements. After surveying your proposed layout area, you'll want to make any essential room improvements right away. Speaking from experience, I can tell you that it's much easier to install carpet, paint walls, hang a suspended ceiling, and add lights if you aren't distracted by efforts to plan a layout or maneuver around sections of a layout you've already assembled.

Even if you never get around to building a layout, you'll at least have made improvements that enhance the room for any use. More often than not, you'll be so inspired by the fresh coat of paint or bright lights that you'll immediately want to start designing a layout. But for now, hold on to that thought.



3 Draft a room sketch. While great layouts have begun with something as simple as a sketch on a paper napkin, I prefer to have a more formal drawing of the space for my design.

Typically, I'll start by drawing a pencil sketch of the room on graph paper. After defining the walls, I record each of the previously noted room features. When I'm satisfied with this sketch, I make at least a half-dozen photocopies I can use for doodling out various layout designs any time an idea strikes.



4 Take stock in your toy train inventory and hobby interests.

Though it may seem like an inconsequential step, this is often the make or break point for many designs. In fact, this step was so significant to John Armstrong, the author of hundreds of track plans published in Kalmbach books and magazines, that he rarely began a sketch without completing his "Givens and Druthers" – a list of layout design criteria.

Case in point, when my father first considered building a new layout, I asked him to survey his collection. That's when he realized his latest acquisitions were

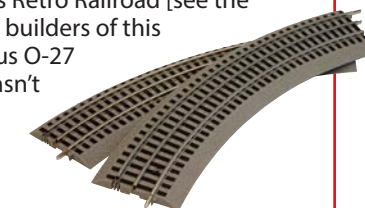


mostly command-controlled locomotives marked for the Chicago, Burlington, & Quincy RR. Hence, the basis of his new layout – a design that reflects the Burlington Route along the mighty Mississippi River [see CTT's July 2006 "12-by-25 rec-room railroad," page 70].

Additionally, never discount the importance of dreaming up a layout that reflects you – not your friends, family, or the latest trend in the hobby. As the chief operating engineer, you'll be much happier with the resulting layout.

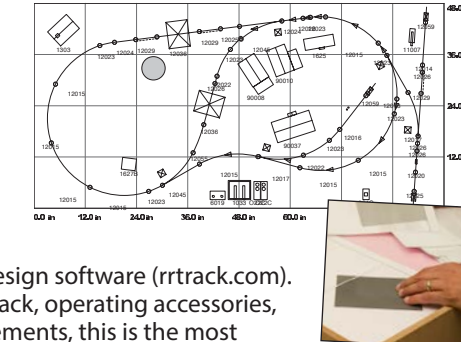
5 Choose your track. The type of track you choose for your layout will influence your design. The cost of each brand is certainly an important consideration, but you'll also find that the physical characteristics and geometry of the various track types may dictate how it fits into a space.

For example, consider the track plan for CTT's Retro Railroad [see the September 2009 issue of *Classic Toy Trains*]. The builders of this 4 x 8-foot O gauge pike opted to use tight-radius O-27 track to accommodate a layout scheme that wasn't feasible with broader curves. As you consider the many track options now available, be sure to reference Bob Keller's tips for selecting the right track, also found in this special section.



6 Pencil and paper ... or PC and printer. Many layout builders still prefer using a pencil, some paper, an eraser, and a few helpful drafting tools and track templates to develop a sketch into a detailed track plan. My preference is to use my personal computer installed with RR-Track layout design software (rtrack.com). Featuring multiple libraries of track, operating accessories, structures, and even scenery elements, this is the most robust design software available to toy train layout builders.

These features are ideal, but the real bonus is the provision that RR-Track includes for printing a full-scale (1 inch equals 1 inch) plan using a standard computer printer. These black-and-white printouts on 8½ x 11-inch paper can then be placed on a layout tabletop to test-fit a plan – all without the expense of purchasing track sections first.





Whether it's a permanent layout like our Cascade & Timber Trail Ry. (introduced in the December 2008 issue of CTT) or a temporary display, there are a variety of ways to add a touch of winter to any layout — without making a mess.



Winter along the Timber Trail

ADD A TEMPORARY TOUCH OF WINTRY WEATHER

story by Kent Johnson
photos by Jim Forbes

When you envision winter on a toy train layout, you most likely think of a display covered in a thick blanket of artificial snow. In the December 2005 *Classic Toy Trains* feature, “Let it snow, let it snow, let it snow,” CTT’s Bob Keller explained three simple techniques for creating a permanent wintry effect.

But if you’re just looking to suggest there’s a chill in the air and Christmas is coming soon, we’ve got a few tips for adding winter scenery that don’t require a total transformation of your layout. From white caulk clinging to the treetops to drifts made of craft foam, I’ll share several easy ways to usher in winter weather just in time for the season.



Winter arrives early in the mountains, so that’s where I concentrated my efforts to add seasonal elements. The heavy snow will be arriving soon, but for now the cold nights bring light flurries and ice that partially melt throughout the day. This freeze-and-thaw cycle results in the mix of exposed ground and patches of snow depicted here.



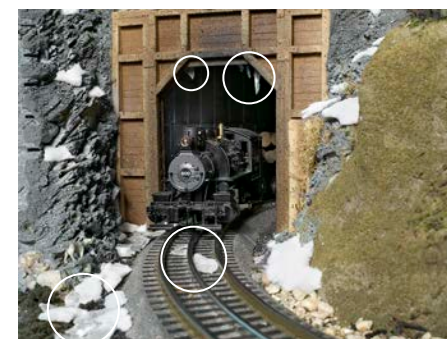
Snowy treetops. The first hint of snow starts at the treetops. Use a putty knife to lightly frost the limbs with white adhesive caulk. A modest application is effective and much easier to brush off later.



Brown is in ... for fall fashion and forest foliage. In addition to planting a few diseased trees, I covered some ground with Scenic Express no. EX830B brown turf to represent decaying brush and leaves.



Sheets of snow. Even by day, tall trees keep snow chilled in the shade. To make piles of snow, I broke 1-inch pieces from a sheet of craft foam, molded them with my fingers, and placed them near trees.



Slippery slope. Melting snow turns to ice in the shadows of the cliffs and tunnel. I applied a small string of clear window stripping over waxed paper to make icicles. Then I flattened beads of the material to make frozen puddles.



Holiday lights. A string of miniature lights (or LEDs) attached to a house or even a small evergreen tree symbolizes the approach of Christmas. You can also imagine roasting chestnuts by a battery-powered votive candle fire. **CTT**

SUPPLY LIST

- **Snow** – Use Kwik Seal (dap.com) no. 44581 or a similar white adhesive caulk and DOW (styrofoamcrafts.com) Styrofoam (not insulation or bead) ½ x 12 x 36-inch board available at stores carrying craft supplies, such as Michaels and Walmart.
- **Ice** – Red Devil (reddevil.com) no. 0606 Zip-A-Way removable sealant.
- **Details** – Scenic Express no. EX830B brown turf ground cover; SmartCandle (smartcandle.com) no. SC3684A-C6 votive candles; Department 56 no. 53187 string of Christmas lights
- **Tools** – Grab a putty knife, waxed paper, white glue, and Woodland Scenics no. ST1432 foam nails to temporarily hold scenery.



PROPER WINTERIZATION

- Choose figures dressed for the cool weather
- Remove critters that migrate or hibernate
- Add vehicles with chains, plows, tracks, and skids for use on snow



CTT+ ON THE WEB

Subscribers can view a winterization project by going to ClassicToyTrains.com and clicking on “News,” then “Videos.”



It's a busy night at the switch tower on the Werner family's O gauge Polar Mountain & Warren RR, a multi-level under-the-tree Christmas layout based on a favorite track plan from the pages of *Classic Toy Trains* magazine.

Creating magical Christmas memories

A *CLASSIC TOY TRAINS* PLAN INSPIRED THE O GAUGE POLAR MOUNTAIN & WARREN

By **Ed Werner** • Photos by Douglas Werner

The Polar Mountain & Warren RR is a family Christmas layout built by my son, Michael Werner; his wife, Jody Warren; and their two sons, Ben and Seth. It is based on a popular holiday track plan from the pages of *Classic Toy Trains*, with a few changes that make this old favorite even better.

Trains have always been a Christmas tradition with our family, and when our

first grandson, Ben, was born in 2003, my wife and I extended the tradition to a new generation by giving him an O gauge Pennsylvania RR freight set from MTH Electric Trains for his first Christmas.

The arrival of our second grandson, Seth, in 2005 meant more trains and track for under the tree. He received an MTH O gauge passenger set, also decorated in Pennsylvania RR colors.

Room for a growing layout

In time the oval around the Christmas tree developed into a dogbone-shaped track arrangement under the tree and couch, complete with cardboard tunnels and a snow scene. In 2007, Mike and Jody approached us and asked if we would supply the materials and other support for a semi-permanent Christmas layout as a family gift.

I designed the layout based on Neil Besougloff's "Three times around the tree" track plan from the December 2006 *Classic Toy Trains*. [See "The 'Three times around the tree' layout" sidebar.]

The original design was a figure-8, folded to cross over itself with the cross-over track occurring near the top of the grade to the upper level. The up-and-down grades crossed under the upper level via bridges or tunnels.

Neil's plan called for Lionel tubular track. I modified the design to use MTH RailTrax with a minimum track and turnout size of O-45.

I added a pair of turnouts to form an independent upper loop. Then I put in another pair of turnouts to create an independent lower loop.

My final modification to the original design involved placing the far side of the new lower loop in a tunnel under the upper loop.

The second phase of the project, built in 2008, saw the addition of a maintenance siding and engine house to the upper level, and an outer passing siding and Warren Station to two sides of the bottom loop.

Operating is fun

The layout modifications provide a variety of operational possibilities perfect for young engineers. Two trains can operate unattended with one each on the upper and lower loop. Alternatively, two trains can operate in opposite directions with one circulating up and down between the two levels while one circulates on the outer lower loop.

The boys can operate three trains. One runs on the top level of Polar Mountain and two run on the bottom level either in the same or opposite directions.

The railroad fleet was growing to match the added running room of the new layout. We gave Ben and Seth additional O gauge cars on their birthdays and for Christmas, and their aunts and uncles also contributed items.

We even gave Mike his own 0-8-0 locomotive for double-heading with his sons' engines. I bring over additional motive power for operating sessions.

Mike named the holiday layout the Polar Mountain & Warren RR. The layout uses block control wiring, with two MTH Z-1000s supplying power to six blocks.

Mike built the benchwork from plywood with the different track levels supported by 2 x 4s. He extended the scenery

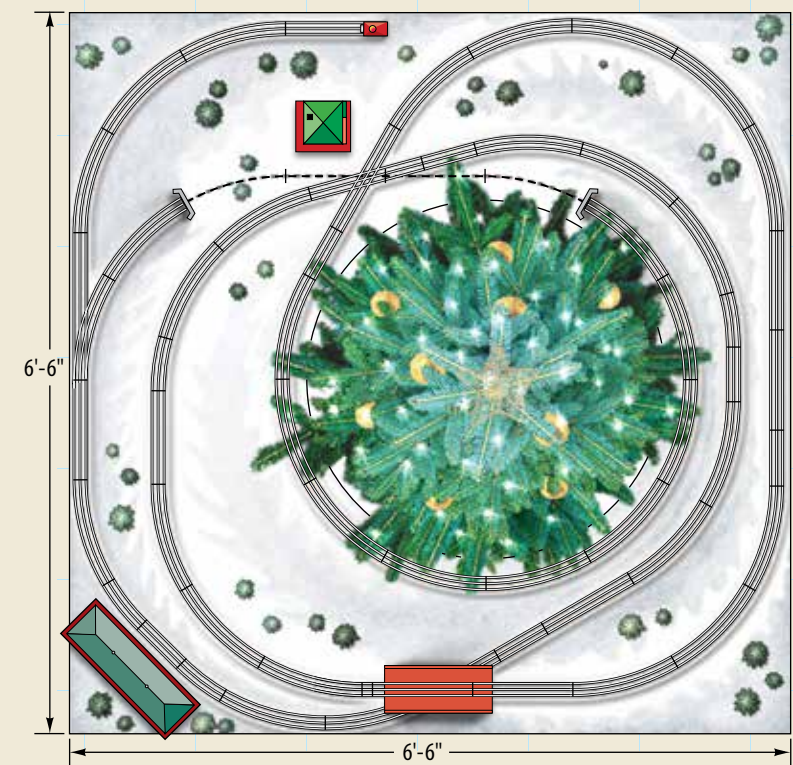


Although the railroad features a relatively compact footprint, block-style electrical wiring allows two trains to operate at the same time.



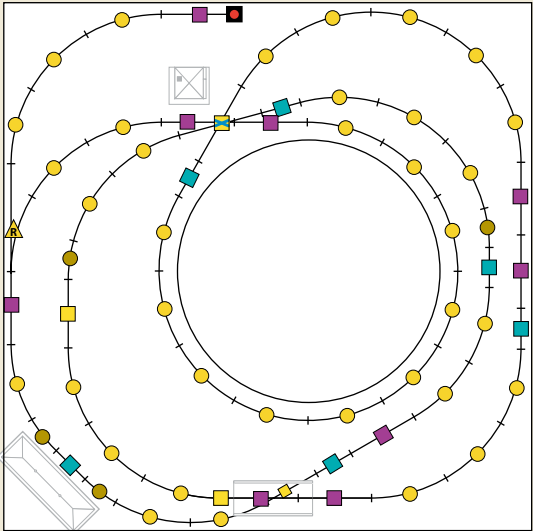
Three generations of the Werner family operate trains on the layout, making priceless holiday memories as the locomotives fly around the tracks.

THE “THREE TIMES AROUND THE TREE” LAYOUT



In the December 2006 issue of *Classic Toy Trains*, then-Editor Neil Besougloff presented his design for a “three times around the tree” layout. It has since become a favorite with many readers and has inspired several holiday layouts, include the Werner family’s Polar Mountain & Warren RR. Here’s Neil’s original plan, featuring Lionel O-42 tubular track curves, a tunnel, and a 45-degree crossing. The entire mult-level display fits neatly in a 6½ x 6½-foot space.

One of the three loops is flat 5½ inches above the base of the layout. The other two loops are split between climbing to the upper level of the layout and descending to its base. You can use Lionel or MTH graduated trestles to create your grades, or simply elevate appropriate sections of track with blocks of wood draped with a white cloth to represent snow.



LIONEL O GAUGE TUBULAR TRACK COMPONENTS	
Quantity	Description/Number
6	half-straight (65505)
9	single straight (65500)
3	custom-cut straight
36	O-42 curve (12925)
4	O-42 custom-cut curve
1	K-Line O-42 right-hand track switch (K0374)
1	45-degree crossing (65545)
1	track bumper (260)

Illustrations by Kellie Jaeger



The first phase of the railroad is complete and ready for scenery. It take about two weeks to set up and decorate the family layout. Mike Werner photo



A crafts store “snow blanket” and the white painted roadbed of the MTH RailTrax sections add convincing wintry touches.

in layers and is able to reuse most of it from year-to-year. Mike made the hills and snow banks from sheets of extruded foam board glued together and carved to shape. He draped white sheets over the foam pieces to provide a base layer for the scenery. Next, a crafts store “snow blanket” was used to cover the sheets. Small pieces of snow blanket were cut for each building’s rooftop. A new snow blanket is purchased each time the layout is set up, which keeps the snow looking fresh. Once the blanket was in place, Mike planted more than 500 crafts store decorative trees, which were hand-trimmed and flocked. Trees ranged in size from 8 inches for some of the decorated foreground trees to less than an inch for some of the smaller trees which were used near the top of Polar Mountain and toward the back of the layout for forced perspective. As a finishing touch, Mike sprinkled crafts store snow crystals over the layout, which gave the snow some sparkle under the tree lights. Mike also spray-painted the plastic track base and sides of rails white, being



It’s a frosty morning on the Werner family’s Polar Mountain & Warren RR, a holiday layout shared by three generations.

careful to keep paint away from the top of the rails. The truss bridge, water tank, and signals are by Lionel. All other structures are by MTH. The snow-bound wilderness railroad currently has no roads for vehicular traffic.

A layout worth sharing

Since it takes at least two weeks at a very busy time of year to completely rebuild the layout starting from the two-piece base, Mike and Jody decided to install it for Christmas in even-numbered years when all of the Werner family’s aunts and uncles gather for a week-long celebration. Mike starts construction in early November, with the goal of having the trains running for Thanksgiving so they can be enjoyed through late January. Mike and his two brothers grew up with HO scale trains, and they now enjoy playing with the O gauge layout. Often, my three grown sons and I enjoy more operating time than Ben and Seth who are otherwise occupied with their latest Christmas bounty. In addition to creating new magical memories for the boys, the layout has become the focal point of a gathering of friends and neighbors during the holiday season. **CTT**



The flying reindeer must have the night off because Santa Claus is waiting for a train at the North Pole passenger station.