

Tom Stephenson: Engineering A Model Railroad For The Youngest Enthusiasts

BY BILL VIRGIN
Editor/Publisher

Model train shows and museums can be simultaneously fascinating and frustrating to the youngest generation of enthusiasts used to pushing their own Thomas and Brio and Chuggington trains around the floor on their own layouts at home.

All those beautiful trains racing past towns, over bridges, into tunnels and around mountains — all adorned with “Do Not Touch” signs.

Some train shows do offer those future model railroaders a section of push-it-yourself trains to play with, but the chaotic scenes that result often magnify the problems found in home toy-train layouts — track doesn’t stay put, there’s little opportunity for semi-realistic buildings or landscaping, it’s often too low even for little engineers and unless grownups like stepping on them the trains have to be picked up every time the play session ends.

Commercially made train tables are available, but they’re often both small and bulky, and can’t be combined with others to make longer layouts.

Wouldn’t it be great to have train tables that are long and narrow (but sturdy) rather than squarish, that feature fixed track that will accommodate most of the popular brands of toy trains, that can be easily set up, transported, dismantled and stored, and that come in standardized dimensions and designs so that they can be combined for larger layouts in homes, museums and at model-train shows?

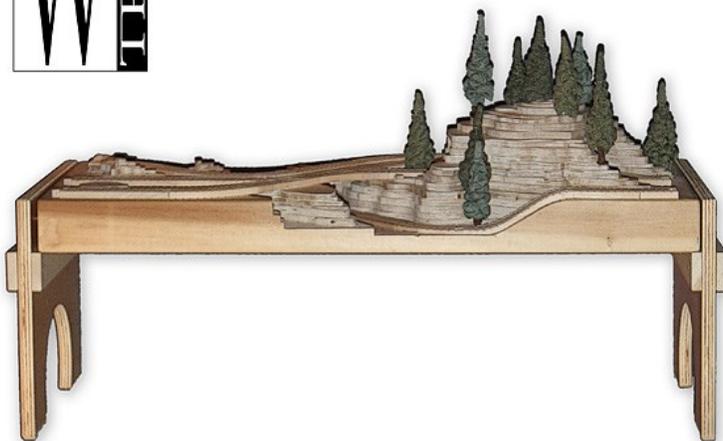
Yes it would, says Tom Stephenson, an aerospace engineer in Kenmore, Wash. And having so concluded, Stephenson went out and designed and built just such a system.

If you’ve been to a train show recently, such as the Great Train Expo in Puyallup, you may have seen Stephen-

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Mountain Village



Tom Stephenson designed wooden-train modules such as the one above that can be joined together to make longer, complex layouts. Photos courtesy of Tom Stephenson and wTrak.



Tom Stephenson: Connecting With Trains At Coffee-Table Level

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son demonstrating his invention. Actually, it doesn't take a lot of demonstrating, at least not for the kids, who quickly grab a toy locomotive and rolling stock and eagerly get to playing.

When they do, the system's attributes become apparent. Kids can reach all the way across the narrow tables (18 inches wide, 16 inches from floor to table surface) to manipulate the trains around curves, up and down grades and over bridges. Track plans include switches, turntables and inclines, offering multiple routes and options. The tables have buildings, trees and scenic features like the grown-ups' layouts. Because the modules can be bolted together into long runs, even T-shaped layouts, there's plenty of room for more than one child to play at the same time without running themselves or their trains into each other.

What may be the most striking feature of the system, dubbed wTrak, is one that kids won't notice at all. Instead of aiming to commercialize his designs himself, Stephenson has created a sort of open-source standard and library of designs for others to build and build upon.

"I'm really trying to best use my time and money to show what could be done and share that knowledge with others," he says. "They may do things I never would have imagined that I can glean from as well."

Although his professional career has been in aerospace, Stephenson has a long history with trains. "I grew up with an HO gauge train in my room; my father was always passionate about trains," he recalls. The family took trains for travel, and his father was project manager for transit-car production at General Electric's Erie, Pa., facility (young Tom got a ride on a test run).

Playing with trains continued with his own sons. "We got wooden track and laid it all over the carpet in the house," as well as at a nearby community club.

It was during those sessions that Stephenson got to see firsthand the frustrations of conventional wooden toy trains and tracks. But it wasn't until about five years ago, during a snowstorm in Seattle, that Stephenson got to won-

dering how to fix them. "Why couldn't you do something like what the N scale and the HO scale groups do and create modular tables?" he asked.

"My first focus was to take some of the designs and actually turn them into reality as quickly as I could so I would have a critical mass of tables where kids could play," he says. "Then I focused on the landscaping, the scenery, including trees, to bring it up to more of a hobby level. Then I worked on customizing some train cars to get away from that commercialization that is so often associated with wood trains."

Stephenson says he designed narrower tables since commercially available train tables "are like a foosball table — it fills the room. Parents say, 'Gosh, I wish there was something different.'" Modules are designed to run along a hallway or be stored under a bed. The height allows kids to interact with trains "at the coffee-table level."

In a sense, Stephenson's approach is a return to the earliest days not just of model trains but of the prototypes, since "wooden tracks and wooden trains, in the form of horse-drawn cars, have been around a lot longer than the age of steam and electric railroads."

With a full-time job as an engineer at Boeing, "The thought of running off on a sideline to make money was never in my mind," he says. "Elements of it have market potential, but the general concept is really to share ideas and benefit from other people sharing their ideas."

To that end, Stephenson has published on his website (wtrak.org) detailed track plans and step-by-step instructions for rolling stock and accessories, including downloadable graphics to add touches of realism.

Such attention to realism might seem lost on train enthusiasts used to seeing faces on the front of toy locomotives. But Stephenson says those details do matter to some kids. "The smallest children, the ones who can barely stand at the edge of the table, they're just holding any train car that they grabbed out of the box," he says. But older kids are "starting to imagine in a way that goes beyond it being a

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TIMETABLE

Dec. 7,8, 14, 15, 21, 22	Toppenish, WA	10th annual Toy Train Christmas at the Northern Pacific Railway Museum, 10 a.m.-4 p.m. Admission: Adults \$6, children \$4. Information: nprymuseum.org.
Dec. 15	Portland	14th annual open house and train meet, Portland chapter, Train Collectors Association, noon-4 p.m., basement of Aloha Mall (Southwest 185th Avenue and Tualatin Valley Highway). Admission: free (food donations requested). Information: facebook.com/portlandchaptertca.
Dec. 21-Jan. 1	Tacoma	18th annual model train festival, Washington State History Museum. Admission to show included with museum admission. Closed Christmas Eve and Christmas Day. Information: washingtonhistory.org.
Jan. 18-20	Seattle	40th annual model railroad show, Pacific Science Center, 10 a.m.-6 p.m. each day. Admission included with museum admission. Information: 4dprn.org/PSCshow.htm.
Jan. 25-26	Portland	Great Train Expo, Portland Expo Center, 10 a.m.-4 p.m. both days. Admission: Adults \$7, children under 12 free. Information: greattrainexpo.com.

Tom Stephenson: A Way To Bring Kids To Model Railroading

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toy.” He also noticed that older children might be reluctant to “play” with the commercially produced cars that they categorized as toys. “They wanted to be involved but they couldn’t bring themselves to lower themselves to play with a children’s toy. Once the engines and the cars were more realistic and the tables had a scale-model feel, older kids would engage with the tables and really get drawn into it. They could see past it as a toy and recognize it as being a complex maze. There’s some social interaction and they could follow (the track pattern) through the table as if they’re driving the train, which they are.”

Stephenson started showing his designs at train shows about a year after his first design efforts, beginning with a show in Monroe, Wash. The table wasn’t adorned with the features he’s since come up with. “It looked more like a children’s activity center than it did a legitimate model railroad or hobby.” As more people see wTrak, and the designs and features become more elaborate, Stephenson gets invited to more shows. This year he did eight.

Stephenson is hoping the message will spread to museum, clubs and train organizations that will be encouraged to build tables. Bellingham Railway Museum used some of Stephenson’s designs and track it had to build tables for their visitors. The museum brought the tables to one show and connected them to ones Stephenson had made. “That was what the intent was, where different railway clubs and parents that built them could combine them at any kind of event to make a larger layout.”

Home adaptation might take longer, since “the biggest hurdle is most people don’t have the tools to build the basic table.” Stephenson has toyed with the idea of making kits available at or close to cost so that a family or a model railroad club could start out with the legs and the table top in unassembled form, gluing them together and using commercially available track.

The idea of someone taking the concept and commercializing it doesn’t faze Stephenson. “I would love to see a couple of sources; if someone wanted to make a table module kit, that would be fantastic,” he says.

Stephenson’s sons are now of college age, but they did get some benefit from dad’s tables, finding them useful for babysitting jobs. “They got paid for playing with trains with a child, and that’s an easy first hour,” he says.

Stephenson plans to continue evangelizing for wTrak for children’s and railway museums. Another potential audience is groups that work with autistic children, since Stephenson has found they will immerse themselves with hands-on activities like trains. He’s working on more complex designs for modules “that show what it could be if you really look at it as a hobby.” One features a model of a steel bridge that is actually made of welded metal, spanning a body of water with a shark and a diver.

He’s also providing a connection for those playing with wooden toy trains today to be tomorrow’s modelers. As he says in a report on wTrak’s progress, “the process captures the essence of model railroading as a hobby in a forgiving, age-appropriate way.”

ON THE WIRE: THE LATEST RAIL NEWS FROM AROUND THE PACIFIC NORTHWEST



PORTLAND: The Oregon Zoo has begun work on a new loop of track for its three 30-inch-gauge trains, Zooliner, the Centennial Steam Train and the Oregon Express. The trains were taken out of service in September in preparation for the project. They're expected to return in time for Zoo-Lights 2014. The longer Washington Park train route, which operates in summer, will also return. The new track loop will follow an elevated trestle in the forest north of the zoo's elephant display. The zoo said changes are needed since the train tracks, which originally ran on the perimeter of the campus, are now within the exhibit grounds. A grade crossing on a primary visitor pathway also posed safety concerns. The Portland Zoo Railway began operating in June 1958.

SEATTLE: Sound Transit said it plans to open the University Link extension of its light-rail system in the first quarter of 2016, six months earlier than it had earlier estimated. The \$1.95 billion project will link downtown Seattle and Capitol Hill with the University of Washington. Sound Transit said the mining phases that posed the biggest risks to the project are complete.

WARDEN, Wash.: Columbia Basin Railroad and BNSF have delivered the first unit train of canola seed to Pacific Coast Canola's crushing and oil refining plant in Eastern Washington. The train was loaded in North Dakota. The canola plant, which began operating in January, has been receiving single rail cars, but has been ramping up production. A train of 110 railcars will supply the plant enough canola seed for about 10 days at full production.

MINERAL, Wash.: Mount Rainier Scenic Railroad has returned to service its Hammond Lumber Co. 2-8-2T locomotive after restoration work that took more than two and

a half years. The locomotive, built in 1929 by American Locomotive Co. for a timber operation in Oregon, has already been put to work on Santa Express excursions. The museum first put it into operation in 1995.

Railroad Bookshelf

Bellingham Railway Museum has published a "Rail Trail Walking Guide," listing rail-related historic sites on a 3.5-mile route from the Amtrak station in Fairhaven to the old trolley power station on Railroad Avenue; 35 markers have been installed along the route. Written by William Rink and Karl Kleeman, the book includes 27 maps and 60 photos.

The museum is holding an open house noon-5 p.m. Dec. 14, which will include sales and signing of the guide. Admission to the museum is free during the open house. The guide costs \$4.95.

The Funnel is the 70-mile corridor between Spokane, Wash., and Sandpoint, Idaho, that sees some of the heaviest traffic in the Pacific Northwest.

Klamath Falls, Ore.-based 7ideaProductions is releasing a new video of action over BNSF on The Funnel, from Latah Junction near downtown Spokane to the 5,000-foot-long Lake Pend Oreille Bridge. The video depicts unit grain trains, coal, intermodal, vehicle, manifests and the new Bakken oil trains. The video is available in DVD and Blu-ray (1 hour 59 minutes, \$29.95).

The narrow-gauge Oregonian Railway, developed between 1877 and 1893, had aspirations of crossing the Cascade Mountains and connecting with the Central Pacific Railroad, thus giving Oregon its first access to the transcontinental railroad system.

Rail author and photographer Ed Austin ("The Southern Pacific in Oregon," "Spokane, Portland & Seattle Railway in Color") chronicles the history of the railway in this latest book in Arcadia Publishing's Images of Rail series (128 pages, \$21.95, available in March 2014).

