

Sharing Ideas & Learning

Modular wooden railways with scale buildings, custom rolling stock and rugged features allow future engineers to immerse themselves in a world of imaginative and collaborative play. The railway is compact and portable – so the layout can travel to libraries, schools and festivals in a passenger vehicle. More importantly, it is reconfigurable – allowing the layout to be set up in a variety of ways so it remains new and fresh. That modularity means that the layout can be scaled down when space is tight too.

Construction is relatively straightforward and can be accomplished in a well-appointed home workshop. A cabinet maker can also make the modular boxes and legs as needed. Completing the railway involves fitting and gluing track while additional features can be added later.

Wooden track is readily available – whether new or used. Buildings, bridges, landscaping and even rolling stock can be made or customized. STEAM ideas and resources are shareable online – graphics of structures and rolling stock ready to print, table construction details, unpainted rolling stock and more.

These are opportunities to introduce STEAM, industrial arts and even model railroading to children at an age long before they are ready to tackle finely-detailed projects. Results are hands-on for all ages – brothers, sisters, classmates, friends. Projects can be safe and allow for unlimited creativity.

Observation is a great teacher

We continue to learn and refine our understanding of what works and what doesn't. Here are some lessons that may not be intuitive when sharing a modular wooden railway at a public festival or event...

Buildings are essentially blocks. They get moved, stacked and knocked down if they aren't physically attached. So structures have to be firmly bolted to the table for safety and to protect both buildings and fingers from being damaged.

Seating is an invitation for parents to sit down and disengage. Sometimes for hours. Limit the number of nearby seats and these will be organically shared among those who really need one.

Abandoned trains are problematic. When left in the way, they are pushed to the side, dropped on the floor or added to a train. Collect trains that are unused to streamline layout operation.

Keep available trains in a box or on a separate table. When new engineers arrive, they can make up a train and carry it to the layout instead of competing for cars in play.

Long trains choke the line. They occupy a lot of track and derail frequently. When the table is busy, shorten long trains through car counting or measuring with a tape. Parents generally cooperate.

When managing the operation, a uniform reinforces authority. This is important so kids and parents know you have a 'role'.

Concrete floors are especially hard on train cars. Every strike against the ground dents corners, chips paint, and distresses the car. Most cars fall within a foot of the table edge near corners and ramps. A carpet runner can provide some relief.

Engine sheds collect cars. Tunnels too. If the stock of engines and cars gets thin, check here first.

Using 'branded' trains on a layout is troublesome and distracting. Children often arrive and leave with trains in their pocket. This is not always a balanced equation, and parents may never realize that they've lost or gained or exchanged a car or engine. Competition for specific 'characters' is a nuisance. And children who have outgrown toy trains are held back by the association of character trains with children's toys.

Anything that rotates can pinch. This is especially true when several children pull at the same time. The turntable in the Turntable Switchyard is a great example. The original implementation incorporated cabinet catches to gently hold the turntable in alignment. Add three hands struggling for dominance and it became a mousetrap. Gaps between tracks were filled, felt bumpers added and the catches backed in.

For a decade and a half our family has shared ideas and experience with families and organizations. Train shows and Children's Museums are just two ways to do this. Each year concepts have matured and new details added or revised. Visit wTrak.org for updates and additional information.



Reprint

excerpt from

"wTrak: the Coolest Train Tables Ever"

posted Feb 1, 2013 at <http://play-trains.com/wtrak-modular-train-tables>
Used by permission

There's nothing quite as exciting as seeing something you know will thrill someone you love before your loved one sees it. That moment of anticipation, where you hold your tongue and wait for the joy to spark on its own, seems to magnify the moment and give it the significance it deserves.

That's exactly what I felt as we came around the corner at the Pacific Science Center's model railroad show last year and saw the wTrak train table. At the time, I would have called it the coolest train table ever, but when we went back this year, they had made it even cooler. I'll show you the new stuff, but first I'll try to put words to just exactly how cool these train tables are.

wTrak isn't a brand, it's a modular standard for wood track tables. What that means is that you can't buy a table, but there are designs to build a number of modules, small train tables with tracks that come right up to the edges at standard points, so that the little tables can be put together in seemingly endless configurations to make bigger tables. End pieces like the one below cap things off and send the trains around and back down the table. I didn't get any good pictures this year that show how big and impressive the table is as a whole, but there are photos of the layouts from several train shows on their website.

While it could certainly be used to create an awesome in-home train table, the system is designed with larger setups in mind, where

many children will be playing at once. The modular nature of the tables allows several different families in a neighborhood or members of a model train club to build their own small set of tables and combine them at bigger events. (There are many thoughts on different applications of this standard, from railroad clubs to community and school groups to private homes, on their website.)

My husband and I have spent a lot of time watching the Little Engineer play on these tables, and so we've had a good amount of time to talk to Tom Stephenson, the designer of the system, and his wife. Between talking to them and watching my son play, I have a deep appreciation not only for the beauty and fun of these designs, but the amount of thought that went into making them practical, safe, and interesting. For me, they epitomize what is so wonderful about the combination of classic wooden trains and growing brains.

Moreover, they model creativity and the maker spirit to the children who play with them. When we first encountered the wTrak table, I was sad that I couldn't just buy one of my own (never mind the fact that I probably couldn't have afforded it if they were for sale). But now I really like the fact that you can't buy one, because if we ever do build one (I have my heart set on the mountain tunnel module, even if it's as a coffee table in my living room decades from now), the Little Engineer will get to watch us do it, and maybe even help a little...



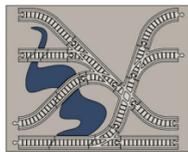
Play Trains!

Short Entry Modules

Shown are a broad mix of segments envisioned – and in many cases, constructed – as a foundation to start with. Each module has a unique character and style. A few are relatively simple, relying on commercially made track and just a handful of mitre cuts to complete. Most are based on standard track with a dozen or so cuts using a scroll saw or bandsaw to accomplish. Some are quite complex, relying on custom pieces cut using a CNC router and CAM software to achieve.

Collaborative play demands multiple routing paths – sidings, spurs and a lot of turnouts. Lines can also be truncated, which requires problem-solving too. Terrain sculpted with a router or jigsaw and orbital sander is a key feature for a couple of these. Terrain and landscaping make the railway immersive. Just a few trees and a building or two completely transforms the layout to facilitate creative play.

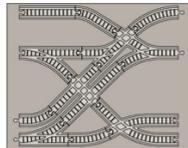
Module configuration and track CAD files (Rhino .3dm or Autocad .dwg) are available for non-commercial use by non-profit groups to imagine, plan and fashion their own layout.



Makeup Endyard Entry

[22-9/16"x18" Common, 5/10]

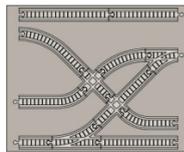
Collects and distributes three lines into one with a single pass-through line. A river, canyon and/or hill can be incorporated.



Staging Endyard Entry

[22-9/16"x18" Common, 4/10]

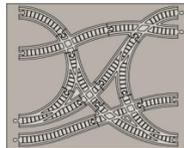
Collects two lines and distributes two lines with all tracks realigned within the module – no direct pass-throughs...



Station Terminus Entry

[22-9/16"x18" Common, 4/10]

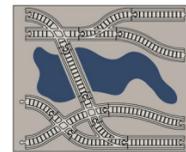
Collects and distributes a pair of tracks with moderate realignment of the others. Space between the rails can be used for buildings, a gully or other special features.



Marshalling Midyard Entry

[22-9/16"x18" Common, 5/10]

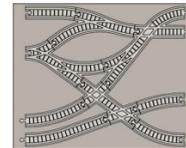
Provides reversals for two tracks from each side – bypassing the module entirely. All four lines pass through.



Shunting Midyard Entry

[22-9/16"x18" Common, 6/10]

Simple crossover for realigning tracks in a short space. Shown with a lake, but a mountain with a tunnel works too. Or both, with a mountain covering the lake.

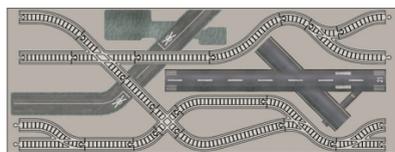


Sorting Midyard Entry

[22-9/16"x18" Common, 3/10]

This complex interchange facilitates sorting operations in an adjoining yard. All lines are rerouted within this short span.

Standard Modules



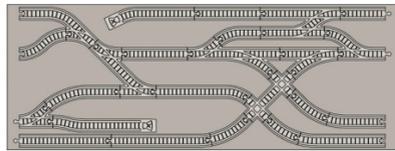
Airport & Town

[48"x18" Common, Complexity 1/10]

Everybody loves an airport (except during holidays) so this simple segment routes trains around a rural airfield and through a neighboring town. The tracks merge and branch making it easy to shift trains from one line to another through this section.

For those willing to invest a little more effort, it presents an opportunity to add sequentially lit runway lights, a flashing landing beacon and lighted town buildings. A control tower and Quonset hut repair shop are great features too.

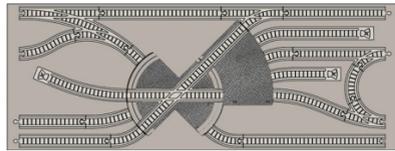
This module is flat with minimal trimming needed if using commercially available track, making this a great first effort.



Industrial Midyard

[48"x18" Common, Complexity 3/10]

Switches and sidings allow other trains to pass. Short trains can pause on one of the two spurs to wait for another train to pass. Cooperative play with other engineers at the table is required. This module could be made flat – and doing so simplifies construction. But adding a half-ramp up and/or down for one siding makes it much more interesting. A few trim cuts to avoid gaps around the double crossovers may be necessary. Still, this is an easy project.

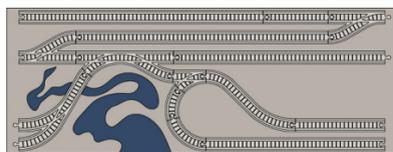


Turntable Midyard

[48"x18" Common, Complexity 4/10]

A recessed turntable is really special in a layout. The table could be driven by a worm gear with a button on the side or turned manually. This feature tends to concentrate passing trains and young engineers may queue up while waiting to transit through the switchyard.

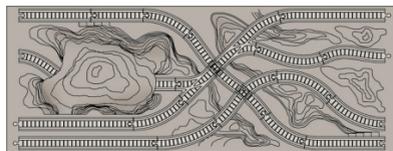
Four track lines require the turntable to be adjusted to permit passage, with only a single path bypassing the turntable completely. The asymmetry of the turntable restricts longer trains from rotating between track lines. Shorter trains can also be shunted to three sidings branching from the table.



Bypass Midyard

[48"x18" Common, Complexity 2/10]

Features a redirect along the main line and several bypass options for trains to find an alternate route. Elevation changes could be incorporated to introduce a rising hill, tumbling canyon, and a series of bridges.



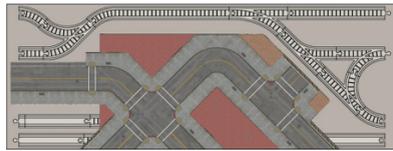
Mountain Village

[48"x18" Common, Complexity 8/10]

Designed with one track dropping below table-top level, this could be reversed to ascend to make the module much easier to construct. But recessing the track allows the base of the mountain to drop another 3" for a more dramatic segment!

The mountain can be constructed many ways. Plywood sections stacked like a contour map is especially rugged and effective. Intermediate contours can be routed into sections to create smaller steps as desired. Edges can be softened further by routing with a roundover or chamfer bit – even sanded to a smooth finish. Chiseled blocks, doweled and glued, could be used for rugged peaks and overhangs.

For transport and stacking, the portion above the 2½" level can be separated and set on the mountain base using steel or wood dowel pins for alignment and stability. Lights can be added in the 'ceiling' of the tunnel. A miniature mine train and shaft entrance could be incorporated and lit too.



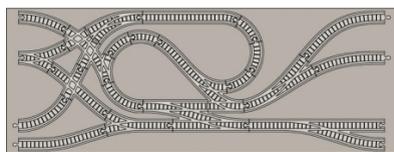
City & Subway

[48"x18" Common, Complexity 7/10]

Several lines skirt the edge of town, while another ducks beneath the city. A trolley line could navigate at street level while a subway line passes below (a great place for a battery-driven engine that cycles into view along the two sides of the table.)

To finish the town, a grouping of low, medium, and tall buildings surfaced with digital images and textures reach skyward and welcome inbound trains. This dramatic module is a hub for inbound, outbound, and express trains alike.

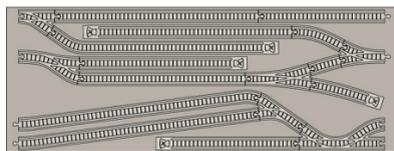
Blinking red LED lights on the corners of the taller buildings add interest – perhaps even a few lighted windows, doorways, signs, and lights washing onto the street and sidewalk. Add a heliport to serve as a destination from the airport too. Or a monorail. Let your imagination run wild!



Spiral Midyard

[48"x18" Common, Complexity 7/10]

Extensive rerouting is possible within this compact module. One path allows trains to pass or overtake another. And a reversing loop allows for trains to change direction. Repair or maintenance yard accessories could be incorporated including workshops, cranes and storage buildings.



Spur Midyard

[48"x18" Common, Complexity 5/10]

Typically trains pass through, but trains can also shift to a spur to bypass oncoming trains, drop cars or pick up new cargo. An engine shed could be incorporated on one or more spurs. Perhaps a loading platform too.



Bay & Bridge

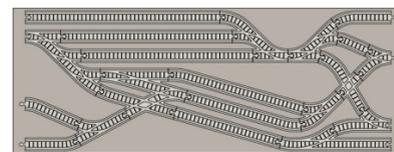
[48"x18" Crossover, Complexity 9/10]

This crossover segment switches which edge the double-line tracks run along. A second crossover segment is required to switch them back again.

The paths of the tracks are clean and straightforward – a welcome break from the complexity of other modules. But the addition of water (perhaps a canvas print, digital photo, or laminate with an acrylic finish) and a long bridge add a visual focal point. A lighthouse, partially submerged ship, flashing buoy, wharf, cargo crane, and waterfront town could be featured as well. Perhaps even a simulated whirlpool...

The bridge could be a dramatic and custom element. A basic plate/girder construction is strong and simple, but I could imagine a swing, bascule, or lift bridge here too. For a truss or Warren bridge, use hardboard or apple-ply plywood faced with a digital print. A series of 'concrete' arches or 'cantilevers' could be made from dimensional lumber and surfaced too.

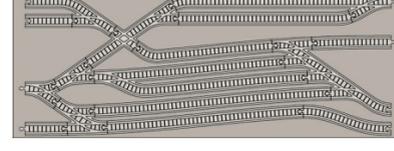
There is enough lead-in space to go underwater instead. Create a tunnel opening at each end and leave the side open and kids could shuttle the train under the bay itself.



Sorting Midyard

[48"x18" Crossover, Complexity 5/10]

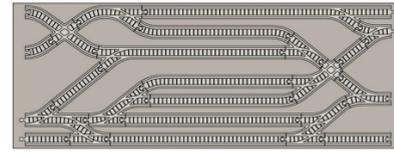
Multiple sidings are stacked to allow cars to be sorted, assembled or disassembled. These can also be used for trains to pass or overtake slower trains. Pair with one or two 'Entry' modules to extend sorting options.



Marshalling Midyard

[48"x18" Crossover, Complexity 5/10]

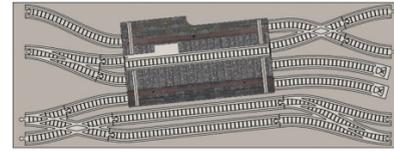
Another yard with a centralized group of sidings to facilitate sorting and passage. Pair with an 'Entry' module to extend utility.



Shunting Midyard

[48"x18" Common, Complexity 5/10]

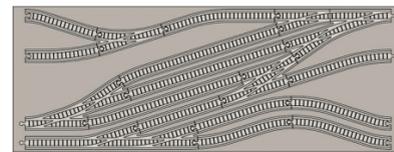
Multipath routing is possible within this compact and complex yard. Space for storage tanks, sheds, buildings and other accessories is available. A spur for a shunting engine could be added too.



Transfer Table Midyard

[48"x18" Common, Complexity 7/10]

A recessed lateral transfer table set across two of the main lines and accessible from a third. Substantial rerouting between the mainlines is possible. Shorter trains can be shunted to two sidings that branch off the table.

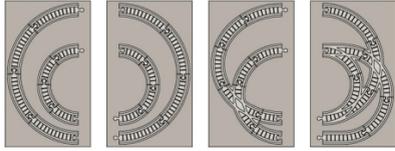


Classification Midyard

[48"x18" Common, Complexity 4/10]

A diagonal ladder yard branching off the main lines without sidings.

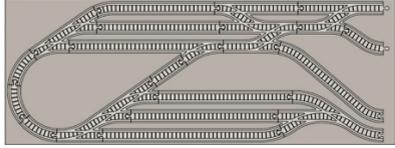
End Modules



Turnaround & Crossaround

[10 1/2" x 18" End, Complexity 1/10]

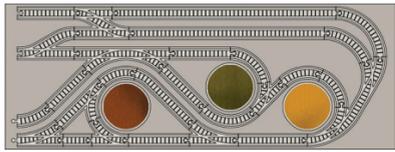
A turnaround module is needed at each end of a layout to ensure continuous play - and the easiest solution is a half-radius. A similar intersecting version is also shown. These are compact and very easy to construct.



Makeup Endyard

[48" x 18" End, Complexity 5/10]

An endyard for making up trains to transit through the railway. This module was designed to be paired with the 'Makeup Endyard Entry' module, but can be used separately or with other medium modules to vary entrance paths into the yard. It complements and provides counterbalance to the 'Rerouting Endyard' module.

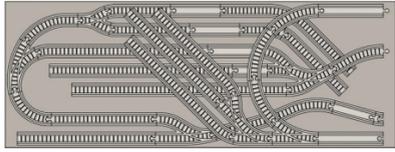


Rerouting Endyard

[48" x 18" End, Complexity 3/10]

This module was carefully designed to allow trains to come in from any track and exit again on any track - including the track entered on. Most return routes are easy to resolve, but a few are more subtle. For one entry/exit combination, it is necessary to back through the loop. Refer to the image shown for clarity.

Oil storage tanks can be set into the loops using images glued to 6" plywood cylinders. A small industrial building and walkways can be added. A yard tower too. This is an easy segment to construct, but requires a fair number of track mitre cuts to achieve. It is a great module to challenge older kids with routing options.

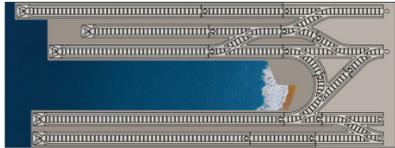


Staging Endyard

[48" x 18" End, Complexity 9/10]

This is a challenging segment to construct and navigate. Particularly useful for assembling trains to navigate through the table, it can serve as a start and finish point.

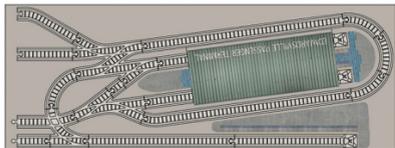
Place lights underneath the elevated tracks to add depth and focus. Signal lights could also be incorporated. Scrub brush, piles of discarded rail, retaining wall, dust, dirt, coal, fence - features on this segment could be dark and spare. A signal tower and repair shed would be appropriate too.



Harbor Terminus

[48" x 18" End, Complexity 3/10]

An end module featuring a harbor with shipside loading possibilities. A switchback allows trains to reverse direction for departure. The edge of the module could be redefined as a shoreline, mountain, dam, international border, factory, cliff or other feature that represents a logical endpoint.

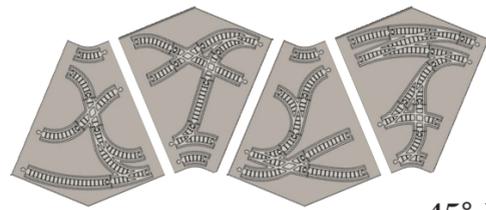


Station Terminus

[48" x 18" End, Complexity 3/10]

A multiplatform station complemented with both a switchback and loop for routing flexibility.

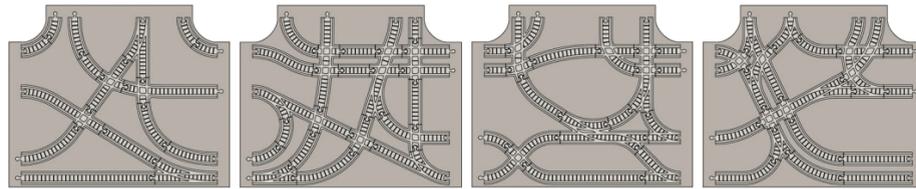
Corner & Branch Modules



45° Bend

[~18" x 18" Branch, Complexity 3/10]

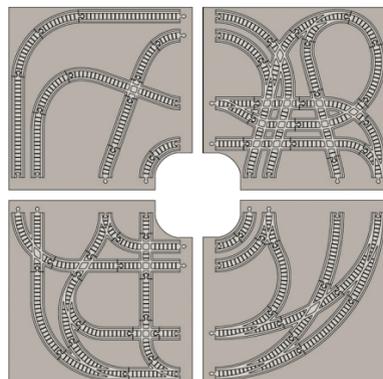
A bend is a half corner that softens railway branching for a more natural flow in an extremely compact footprint. Two bends can be used to create a joggle or 90° corner.



Tee

[22-9/16" x 27-1/8" Branch, Complexity 7/10]

A tee allows for additional branching and one additional end.



90° Corner

[22-9/16" x 22-9/16" Branch, Complexity 6/10]

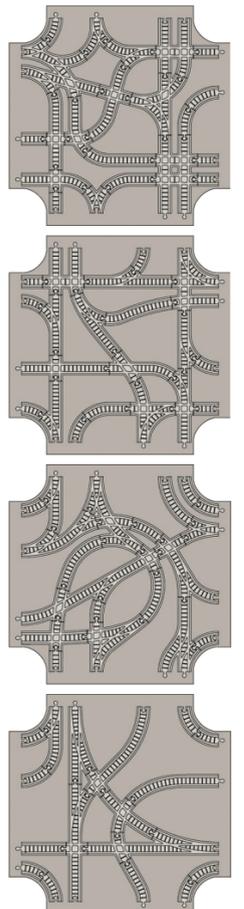
This is a critical piece unless you have a really long room or hallway to work with. Several track variations can be achieved within a corner module - even in this very limited space...

The outside corner extends nearly two feet beyond the leg supports of the railway table. Kids sitting or leaning on the outside corner can put considerable strain on the end joints and/or cause the table to tip. Attach a third leg support in the corner for stability.

Cross

[27-1/8" x 27-1/8" Branch, Complexity 7/10]

A cross introduces two branches and allows a railway to expand and fill a room. Placed in the center of the layout, it creates a hub and spoke arrangement, but placed near a layout end, it creates new return paths and accommodates multiple trains.



Reading Corner

Building on recommendations from Joni James ([Western Maine Play Museum](#)) and Holli Saperstein ([Wilmington Railroad Museum](#)), an expansive list of children's books featuring trains and railway workers was compiled and shared online. Titles are grouped by age-level as a starting point for exploration.

Preschool

Adelaide and the Night Train.....	Liz Rosenberg
All Aboard!.....	Rebecca Kai Dotlich
And the Train Goes.....	William Bee
Alphabet Trains.....	Samantha R. Vamos
Cecil Bunions and the Midnight Train.....	Betty Paraskevas
Choo Choo.....	Petr Horacek
	Choo Choo (Bilingual)
Clickety Clack.....	Robert Spence
Count on the Subway.....	Paul DuBoi Jacobs
Country Crossing.....	Jim Aylesworth
Crossing.....	Philip Booth
Curious George Takes a Train.....	H. A. Rey
Down in the Subway.....	Miriam Cohen
Down by the Station.....	Will Hillenbrand
Engineer Ari and the Rosh Hashanah Ride.....	Deborah Bodin Cohen
Freight Train.....	Donald Crews
	Tren de carga (Bilingual)
Friday's Journey.....	Ken Rush
Grandfather's Trolley.....	Bruce McMillan
Here Comes the Train.....	Charlotte Voake
Hey! Get Off Our Train.....	John Burningham
How to Train a Train.....	Jason Carter Eaton
I'm Taking a Trip on My Train.....	Shirley Neitzel
I Can Make a Train Noise.....	Michael Emberley
I Dream of Trains.....	Angela Johnson
I Saw an Ant on the Railroad Track.....	Joshua Prince
Inside Freight Train.....	Donald Crews
Iron Horses.....	Verla Kay
It's Funny Where Ben's Train Takes Him.....	Robert Burleigh
Jingle the Brass.....	Patricia Newman
The Last Train.....	Gordon Titcomb
The Little Engine That Could.....	Watty Piper
	La Pequena Locomotora Que Si Pudo (Spanish)
Little Locomotive.....	Ib Spang Olsen
Little Red Train Adventures.....	Benedict Blathwayt
The Little Train.....	Lois Lenski
Locomotive.....	Julian Tuwim
My Little Train.....	Satomi Ichikawa
My Subway Ride.....	Paul DuBois Jacobs
Next Stop Grand Central.....	Maira Kalman
Night Train.....	Caroline Stutson
On the Train.....	Carron Brown
Orphan Train.....	Verla Kay
Prairie Train.....	Marsha Wilson Chall
The Prairie Train.....	Antoine O Flatharta
Railroad Hank.....	Lisa Moser
A Railway ABC.....	Jack Townend
The Rain Train.....	Elena De Roo
Steam Train, Dream Train.....	Sherri Duskey Rinker
	Que duermas bien, pequeño tren (Spanish)
Steam, Smoke and Steel: Back in Time.....	Patrick O'Brien
Subway.....	Anastasia Suen

Subway.....	Christoph Niemann
The Subway Sparrow.....	Leyla Torres
	Gorrión del metro (Spanish)
Subway Story.....	Julia Sarcone-Roach
Ten Terrific Trains.....	Fiona Conboy
Terrific Trains.....	Tony Mitton
A Train Goes Clickety-Clack.....	Jonathan London
Train is on Track.....	Peter Bentley
Train Man.....	Andrea Zimmerman
Train Song.....	Diane Siebert
The Train to Glasgow.....	Wilma Horsbrugh
Train Trip.....	Deanna Caswell
Trains.....	Byron Barton
Trains.....	Anne Rockwell
Trains Don't Sleep.....	Andria Warmflash Rosenbaum
Trains: Steaming! Pulling! Huffing!.....	Patricia Hubbell
Trucker and Train.....	Hannah Stark
Trainstop.....	Barbara Lehman
Tupelo Rides the Rails.....	Melissa Sweet
Two Little Trains.....	Margaret Wise Brown
Underground Train.....	Mary Quattlebaum
Where Do Steam Trains Sleep at Night?.....	Brianna Cap
Whoo! Whoo! Goes the Train.....	Anne Rockwell
William and the Night Train.....	Mij Kelly
The Winter Train.....	Susanna Isern
	Tren de invierno (Spanish)

Kindergarten through 2nd Grade

The Banshee Train.....	Odds Bodkin
Bear on the Train.....	Julie Lawson
Black and White.....	David Macaulay
Book of Trains.....	Seymour Simon
City Railways Go Above and Below.....	Patrick McBriarty
The Daylight Limited; Great Railway Adventure.....	Lin Oliver
Locomotive.....	Brian Floca
Lost in NYC: A Subway Adventure.....	Nadja Spiegelman
Northbound: A Train Ride Out of Segregation.....	Michael S. Bandy
The Polar Express.....	Chris Van Allsburg
	El Expreso Polar (Spanish)
The Secret Subway.....	Shana Corey
The Sunday Outing.....	Gloria Jean Pinkney
Ten Mile Day: Building Transcontinental Railroad.....	Mary Ann Fraser
The Train.....	Jodie Callaghan
Train to Somewhere.....	Eve Bunting
The Transcontinental Railroad.....	Rachel Lynette
The Yellow Train.....	Alistair Highet
You Wouldn't Want to Work on the Railroad!.....	Ian Graham

3rd Grade to Middle School

Eyewitness: Train.....	John Coiley
Full Steam Ahead.....	Rhoda Blumberg
The Real Book About Trains.....	Davis Cole
Subway: The Story of Tunnels, Tubes and Tracks.....	Larry Dane Brimmer
Transcendental Train Yard.....	(Bilingual) Norma E Cantú

Middle School

After the Train.....	Gloria Whelan
She's Been Working on the Railroad.....	Nancy Smiler Levinso
Stopping Train Britain: Railway Odyssey.....	Alexander Frater
Time Between Trains.....	Anthony Bukoski
The Train Jumper.....	Don Brown

Durable Trees

Trees are a fundamental part of a layout. They complement the scale and relationship between trains and buildings and bring a sense of realism. Making a safe and durable tree presents a challenge though.

Upholstery fabric gathered on a carriage bolt is one solution. Look through fabric store remnants for greens, yellows and reds. A yard of cloth will make as many as six trees, depending on the weight of the fabric.

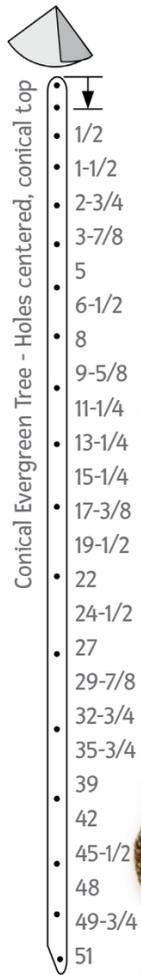
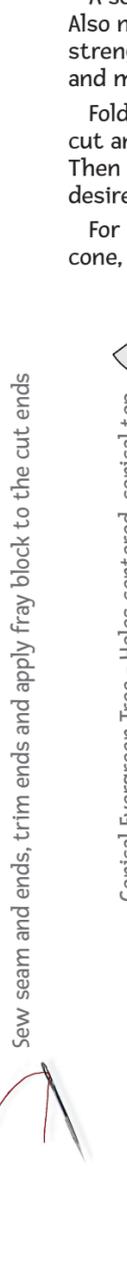
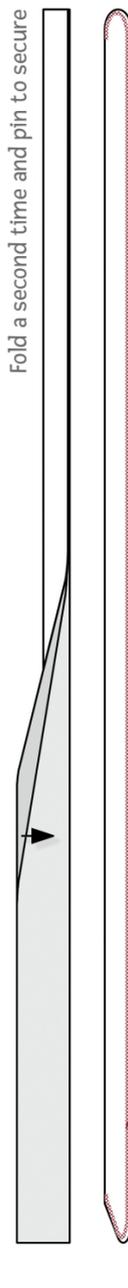
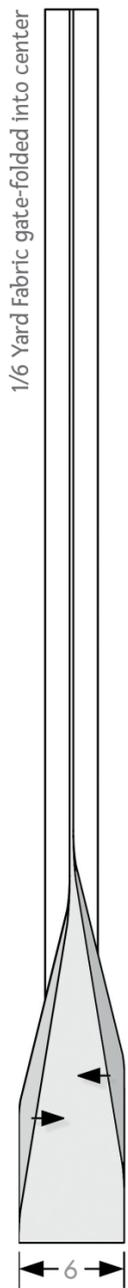
A sewing machine with a sturdy needle and a strong fabric punch are essential. Also needed are a carriage bolt, washer, nut, 6" remnant of heavy fabric, double-strength thread, gorilla glue, fray block, scissors, straight pins, masking tape, string and measuring tape.

Fold, fold again, pin and sew a fabric 'belt' as shown. If the fabric is lightweight, cut an inch or two wider and use five or six plies. Apply fray block to the cut ends. Then mark and punch holes with an arch punch depending on the type of tree desired. Cover the bolt threads with tape to prevent glue adhesion.

For Deciduous trees, apply a thin film of non-foaming glue, center a fabric disc or cone, gather edges, clamp with string until dry, remove string, trim excess, apply fray block to cut ends and remove tape from threads.

Evergreen trees are topped with a conical fabric sleeve about the size of a pinkie finger. Turn inside out to stitch. Fill with leather scraps or similar and follow the other steps outlined above.

Thread the fabric 'belt' onto the bolt – gathering with a mix of twists to achieve desired shape. Compress fabric folds with a washer and nut and wrench tighten. Bolt the tree to the table with a backing washer and locknut. Plant a group of trees for best effect.



Structures

Structures need to be rugged to withstand little 'forces of nature'. Wood buildings and walls faced with custom images are transformational. Cotton rag photographic prints glued with Titebond's 'gray' glue – then sealed – are especially durable.

Small buildings can be made from simple blocks of hardwood. For more substantial structures like factories and skyscrapers, construct a hollow shell using maple or poplar boards – glue and clamp.

Secure buildings to prevent them from being stacked or knocked over. Bolt them to the table so they can be removed for repairs if necessary. Vulnerable elements like smokestacks and trestles can be shielded with stone or trees. Buildings can also be grouped to afford protection. There really is safety in numbers...



Painting and Stamping

New rolling stock can be accomplished by repainting, weathering with black charcoal and lettering either inked by hand or using rubber stamps.

Milk paints come in a wide range of colors and add a natural warmth and tone that isn't shiny or bright. Milk paint is kid-friendly and comes in a broad spectrum of colors. They are made from milk casein and many are mixed from powder so they have a long shelf life. Just

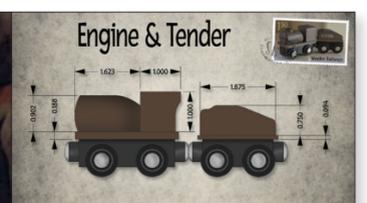
a thin coat is sufficient on unpainted wood and it wears well.

As cars are dropped on the floor and played with, edges and corners start to show dents and dings which look reasonably authentic. Charcoal can be reapplied to subdue edges where too much unpainted wood is showing.

Custom product names and corporate branding can be inked onto cars once they've dried. Create custom

rubber stamps – or just write directly on the cars with permanent ink. There are even stamps that can be customized using ribbed type and a special stamp handle.

A child-safe finish is important. Apply a coat to protect painted train cars and features with weathering and images applied. Choose a dead flat finish that is safe for children – like a varnish that is non-allergenic, non-toxic and free from volatile organic compounds.



Engaging railway and train-based resources are interactive, reconfigurable, gender-neutral, abstracted to foster imagination and tailored for children through 6th grade

Great resources are portable, unbranded and facilitate collaborative play

Ideas and learning from design, construction and community events freely shared – for popup, periodic and fixed exhibits

2008

Development of Modular Standard:
Kenmore, WA

2009

Module construction begins:
Anderson Island, WA
Neighbors Henry and Philipp test
Modular Railway prototype:
Kenmore, WA

2010

19th UNW Train Show:
Monroe, WA
Morning Star Preschool:
Kenmore, WA
Club123:
Bothell, WA

2011

20th UNW Train Show:
Monroe, WA
6th Issaquah Train Show:
Issaquah, WA

2012

21st UNW Train Show:
Monroe, WA
38th Pacific Science Center Train Show:
Seattle, WA

2013

Great Train Expo:
Puyallup, WA
22nd UNW Train Show:
Monroe, WA
39th Pacific Science Center Train Show:
Seattle, WA
2nd Seattle Mini Maker Faire:
Seattle, WA
Boeing Diversity Council Event:
Everett, WA
75th Snoqualmie Railroad Days:
Snoqualmie, WA
29th Annual Int'l Model Railroad Show:
Lynden, WA
16th Mt. Cheam Train Show:
Chilliwack, BC

2014

Great Train Expo:
Puyallup, WA
23rd UNW Train Show:
Monroe, WA
Modular Railway Project:
Seattle ReCreative
Seattle, WA
Great Train Expo:
Pleasanton, CA
40th Pacific Science Center Train Show:
Seattle ReCreative
Seattle, WA
Spring Model Train Show:
Spokane, WA
17th Mount Cheam Train Show:
Chilliwack, BC
STEAM Railway Clinics:
Seattle ReCreative
Seattle, WA
Trains 2014:
Burnaby, BC
Neighborhood Christmas Party:
Seattle, WA

2015

Great Train Expo:
Portland, OR
24th UNW Train Show:
Monroe, WA
Spring Model Train Show:
Spokane, WA
Supertrain 2015:
Calgary, AB
Victoria Model Railway Show:
Victoria, BC
Woodfest 2015:
Sedro-Woolley, WA
4th Freight House Square Train Show:
Tacoma, WA
STEAM Railway Clinic:
Kids Club at the Museum
Steilacoom, WA
NMRA National Train Show:
Portland, OR
Spokane Fall Train Show:
Spokane, WA
1st Annual Neighborhood Trains!
Kirkland, WA
Vancouver Train Expo:
Vancouver, BC

2016

25th UNW Train Show:
Monroe, WA
Spokane Train Show:
Spokane, WA
2nd Annual Neighborhood Trains!
Kirkland, WA

2017

26th UNW Train Show:
Monroe, WA
Fall Spokane Train Show:
Spokane, WA
Victoria Model Railway Show:
Victoria, BC
3rd Annual Neighborhood Trains!
Kirkland, WA
Vancouver Train Expo:
Vancouver, BC

2018

27th UNW Train Show:
Monroe, WA
Spring Spokane Train Show:
Spokane, WA
Modular Railway Project
River City Modelers
Spokane, WA
Fall Spokane Train Show:
River City Modelers
Spokane, WA
Vancouver Model Railroad Show:
Vancouver, BC
4th Annual Neighborhood Trains!
Kirkland, WA
Johnson Farm Neighborhood Trains!
Anderson Island, WA

2019

28th UNW Train Show:
Monroe, WA
Modular Railway Project:
Western Maine Play Museum
Wilton, ME
Truro Fall Train Show:
Western Maine Play Museum
Truro, NS
Trains!
Western Maine Play Museum
Quebec City, QC

North Olympic Peninsula:
Port Angeles, WA
5th Annual Neighborhood Trains!
Kirkland, WA
Victoria Model Railway Show:
Victoria, BC
MOHAI Model Train Show:
Seattle, WA

2020

29th UNW Train Show:
Monroe, WA
MOHAI Maker Day:
Seattle, WA
Tile Railway Project:
The Engine Shed
Reading, UK

2021

Modular Railway Project:
Wilmington Railroad Museum
Wilmington, NC
Custom Railway Set:
Santa Fe Children's Museum
Santa Fe, NM
Custom Railway Set:
Zing Zumm Children's Museum
Jacksonville, NC
Custom Railway Set:
Las Cruces' Railroad Museum
Las Cruces, NM

2022

Modular Railway Project:
Edwardsville Children's Museum
Edwardsville, IL
Real Kids Learning Trains!
Covington, WA
Custom Railway Set:
Multinational Cooperative School
Tel Aviv, Israel
NMRA National Train Show:
Edwardsville Children's Museum
St. Louis, MO
Custom Railway Set:
MOSAIC Children's Museum
Woodland, CA
Neuse River Valley 38th Train Show:
Wilmington Railroad Museum
Raleigh, NC

2023

Modular Railway Project:
MOSAIC Children's Museum
Woodland, CA
30th UNW Train Show:
Monroe, WA
Franklin County Children's Festival:
Western Maine Play Museum
Farmington, ME
Spring Spokane Train Show:
River City Modelers
Spokane, WA
Maine Fiddlehead Festival:
Western Maine Play Museum
Farmington, ME
FLIP Children's Museum Popup Event:
FLIP Children's Museum
Portland, OR
Play PDX:
FLIP Children's Museum
Portland, OR
Grand Strand Train Show:
Wilmington Railroad Museum
Myrtle Beach, SC
Spring into Trains Show:
Wilmington Railroad Museum
Raleigh, NC
Western Gateway Farmers Market:
MOSAIC Children's Museum
Penn Valley, CA
CPP Family Play Day at Waterfront Park:
Columbia Play Project
Vancouver, WA
Explorim!:
Edwardsville Children's Museum
Denton, TX
NMRA National Train Show:
Edwardsville Children's Museum
Grapevine, TX
Maple Valley 25th Train Show:
FLIP Children's Museum
Maple Valley, WA
Neuse River Valley 39th Train Show:
Wilmington Railroad Museum
Raleigh, NC
Fall Spokane Train Show:
River City Modelers
Spokane, WA
International Railfair Train Show:
MOSAIC Children's Museum
Roseville, CA
Willamette Valley MRM Train Show:
FLIP Children's Museum
Rickreall, OR

2024

31st UNW Train Show:
Monroe, WA
Mt. Tabor Neighborhood Event:
Portland, OR
Modular Railway Project:
FLIP Children's Museum
Beaverton, OR
3rd Rails to Trails Maritime Railway Show:
Tacoma, WA
LK&R Spring Train Show:
Kelso, WA
32nd Livingston Train Show:
Livingston, MT
42nd Annual Helena Railroad Fair:
Helena, MT
Flourish: ACM InterActivity Conference:
Madison, WI

...plus other upcoming events and shows
Surfliner - NMRA National Train Show:
MOSAIC Children's Museum
Long Beach, CA
International Railfair Model Train Show:
MOSAIC Children's Museum
Roseville, CA
Johnson Farm Neighborhood Trains!
Anderson Island, WA
Floor Railway Project:
The Engine Shed
Reading, UK

2025

32nd UNW Train Show:
Monroe, WA
4th Rails to Trails Maritime Railway Show:
Tacoma, WA
LK&R Spring Train Show:
Kelso, WA
SuperTrain 2025:
Calgary, AB
NMRA National Train Show:
Novi, MI
International Railfair Model Train Show:
Roseville, CA
Trains 2025:
Burnaby, BC

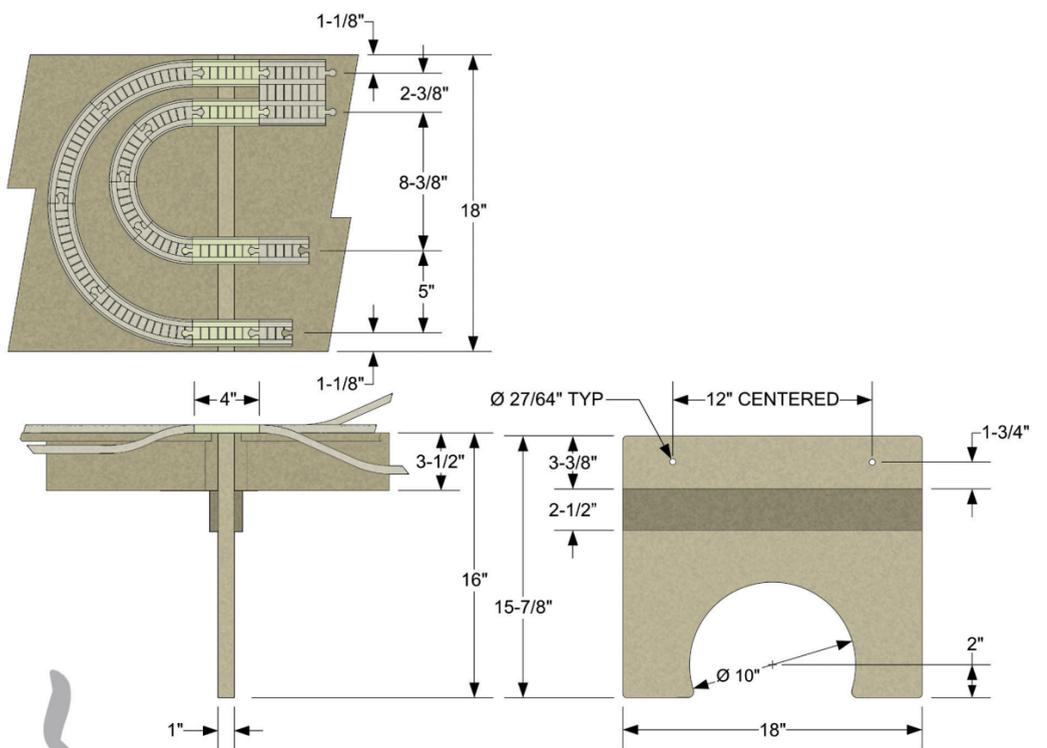


The Standard

Modular railway tables are based on a standard 18"x48" box raised 16" above the floor. Modules can be easily stacked and stored. Adjacent sections can be bolted together through simple supporting legs to prevent stress on track pieces used to join segments. Sections can also be incorporated into a shelf railroad along a wall – important for spaces too small or narrow for mid-room play tables.

This size simplifies construction using standard 4'x8' cabinet-grade plywood sheets, allows sections to be easily transported in a trunk or backseat and accommodates full radii using 6½" curved track. More importantly, the entire width of the table is usable from both sides. This facilitates interaction and engagement and expands the complexity of possible layouts.

Using standard modules, segments can be reconfigured into a wide range of layouts. Exciting and dynamic layouts can be quickly and easily set up. Moving sections around can take a few minutes. One way to make this more convenient is to print out a copy of each segment (making tiles) and work with these until you have a final configuration to implement...



Modular Railway Project Ideas and Applications

There are countless ways to leverage a modular railway. The framework in which tables are developed and constructed can be just as varied – whether an individual or shared effort. An amazing range of STEAM activities can be devised based on railway elements leveraging custom trains, local buildings, abstracted landscaping, visual design, CAD, CNC, laser cutting, 3D printing and more.

Wooden railways can be a mixed media project that stretches the imagination, bringing together woodworking, graphics, photography, art, steel, fabric, carpet and other industrial arts and materials. Expertise accelerates the process, but this is a project for learning, experimenting and developing new skills too.

Concepts and ideas are intended as a bridge between trains as toy and hobby – accessible, tangible and age-appropriate. The medium lends itself to projects where parents and children can work together, using familiar materials and tools. Projects are a springboard to develop new skills and explore ideas. And it is forgiving – dents, dings, damage and stray marks are all part of the railroad landscape.

The goal is also to remove barriers of scale and precision and foster collaboration between families and organizations. Model railway clubs and children's museums could create and combine modular wooden railway segments at shows. With different groups participating in different events, layouts would change dynamically. Families could participate too. And wooden train sets have always been tolerant when it comes to scale. 'Close' is 'Good enough' for most things and there is unlimited room for creativity. A wooden railway module is a perfect place for young engineers to get their start.

Community Organization

Parents and supporters of a preschool, community center or children's museum can work together to create a modular railway – much like a playground project. Cooperative play is reinforced and there are great opportunities to integrate the railway into stories, pictures or videos. Students can create their own buildings or decorate train cars in an individual way. And, of course, the railway can travel to be shared with others on special occasions.

- Children's Museums
- Autism Support Groups
- Community Centers

Children's Hospital

Modules could be constructed by one or more local schools as a collaborative project, with several classes or clubs partnering in developing a well-integrated and varied railway. A teacher or parent – perhaps a local organization – would be needed to provide coordination and oversight. Learning opportunities include:

- Photography (building and train car images)
- Woodshop (modular tables, track, buildings)
- Drafting (layout plans, dimensions, parts list)
 - Math (scaling images, optimizing material usage, estimating cost)
 - Art (manipulating textures and photos, affixing images, defining theme, designing brochures)
 - Language (railway stories, grant writing, sponsorship requests and follow-up)
- Industrial Arts (fabric trees, metal bridges)
 - Business (fundraising, sponsorship, promotion)



Railroad Club Layout

An opportunity for different clubs and scales to collaborate in a new way. Each club could design and build a few tables to combine with other clubs at shows. Constructing 'rugged' buildings and structures may be a new experience for model railroaders... Certainly there could be some creative competition, but new relationships are likely to emerge.

Modular wooden railway tables can be overseen by even the youngest members of the club and present an opportunity to introduce model railroading to a new generation. They are a bridge from toy to hobby and allow creative license too.

Finally, they could be an opening to share model railroading with school and community groups. Modules could be loaned or displayed locally. And they are a great activity to engage families with young children at local railroad meets.

- Local Clubs (Z, N, HO, S, O, and G scale)
- Railway Museum
- Local hobbyists and parents

House or Apartment

Any room could accommodate a floor, table or shelf railway of modest size. Modules are easily stored under a bed or in a closet for set-up in the hall. A shelf railway could be set into brackets on a bedroom or playroom wall. The railroad might even be expanded with a second level using a climbing loop at the end to access both tiers. Layouts can be reconfigured and transported to share with others.

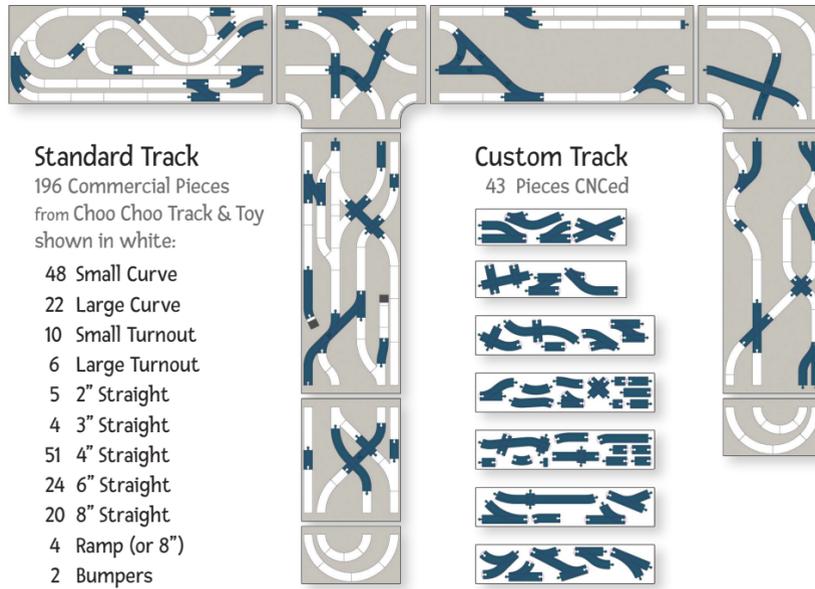
This could be a project involving parent, child, and grandparent through concept, design, and execution. Sewing, sawing, photography, sanding, bolting, gluing, painting, stamping, shopping, testing... There is something for everyone!

Fixed railway that dovetails with a modular one...

Western Maine Play Museum reached out asking if it would be okay to construct a wooden railway based on the wTrak standard for their museum. Of course it was!

Their local Rotary made a donation to underwrite construction by a local furniture maker and I was delighted to provide some custom track to streamline assembly. While the layout is a fixed exhibit and not reconfigurable, the railway is otherwise identical to the modular railway standard.

Beech track from Choo Choo Track & Toy is available 'by the piece' and this accounts for much of the layout. Another 43 custom pieces were CNCed from Beech and donated to streamline assembly and ensure clean joints.



...and a reconfigurable companion layout



The idea of a companion, portable railway that could be leveraged for regional events was welcomed. So a modular wooden railway about the same size was constructed and traveled to Boston as oversize and overweight baggage.

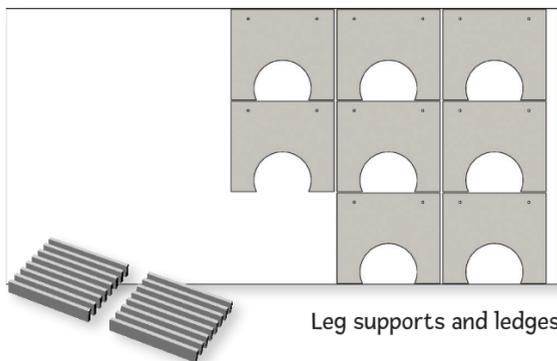
All of the track for this layout was custom made using Beech and some of the buildings were faced with images taken on the East Coast and Atlantic Canada so it has regional authenticity.

The layout was unpacked that first night in the hotel room and then loaded into a rental car the following morning. A couple of community train events in Atlantic Canada welcomed the railway – both Quebec City (QC) and Truro (NS). Now well-traveled, the layout was left with Western Maine Play Museum and has since been leveraged at community events.

Project details for estimating purposes

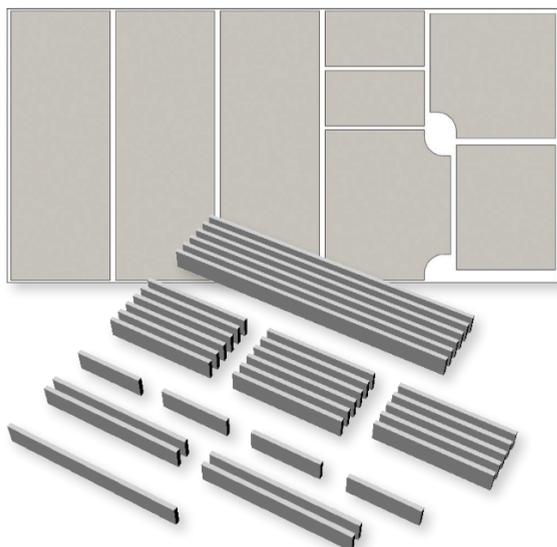
A common question relates to the materials needed, overall expense and hours required to construct a custom railway. There isn't a simple answer because there are many variables. If one is meticulous and the layout is substantial, then it could take more than 200 hours and a few thousand dollars in materials. A modest railway with basic landscaping details might be accomplished in perhaps 100 hours and a thousand dollars.

Following is an outline of the materials used for WMPM's portable modular railway and approximate cost based on 2022 lumber prices. From start to finish, including a few trees, I recall it took about 150 hours to complete.



legs

PREFIN MAPLE, B-B WPF SAP JHXB CORE	\$166
1 @ 1"x48.5"x96.5"	
POPLAR, 1"x3" (net 3/4"x2-1/2" @ \$1.14/ft)	\$30
16 @ 1"x3"x18"	
FASTENERS FOR LAYOUT ASSEMBLY	\$38
16 @ 3/8"x3" Zinc Bolt	
32 @ 3/8" Fender Washer	
16 @ 3/8" Wing Nut	

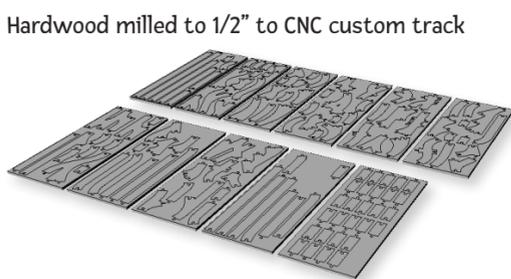


modules

EUROPLY, B-2 MAPLE, WPF, 11 Ply VC	\$181
1 @ 1/2"x4'x8'	
POPLAR, 1"x4" (net 3/4"x3-1/2" @ \$1.50/ft)	\$96
6 @ 1"x4"x48"	
17 @ 1"x4"x18"	
4 @ 1"x4"x11"	
4 @ 1"x4"x23"	
1 @ 1"x4"x28"	
POPLAR for 3 round corners. There are several strategies and mine is overly complex so add something for this	\$20

Other supplies

TiteBond III Wood Glue (1 Gallon)	\$40
SamaN Waterbased Dead Flat Varnish (1 Pint)	\$23
200 Train Cars to remanufacture (Orbrium)	\$300
Approximately 36 BF (1/2" Maple or Beech for Track)	\$230
Beech \$3.30/BF + \$20 milling to 1/2" – or \$140	
Maple \$5.74/BF + \$20 milling to 1/2" – or \$230	
... plus screws to supplement leg ledge attachment, 1/4" cherry splines for module corner reinforcement, milk paint, fabric and countless other details	\$200



Approximate Total

	\$1,324
+ tax and errand running	
	\$1,500

Resources

Discovering resources for an interactive railway is part of the journey, but following are a few starting points for exploration...

LED Kits

bakatronics.com

Textures & Graphics

shutterstock.com
texturama.com

Fonts

railfonts.com

Paints & Stamps &

realmart.com
rubberstamps.net

Trains and Tracks

choochootrack.com
orbriumwoodentoy.com
maplelandmark.com
elevatedTrak.com

Fasteners

Lowes or Home Depot

Lumber

Anywhere but a box store... Look for a lumber store that stocks 1/2" maple Appleply or Europly plywood and you're probably in the right place. If they can custom mill the hardwood maple (or beech) to 1/2" thick for CNC machining track then you're definitely in the right place.

Glue and Varnish

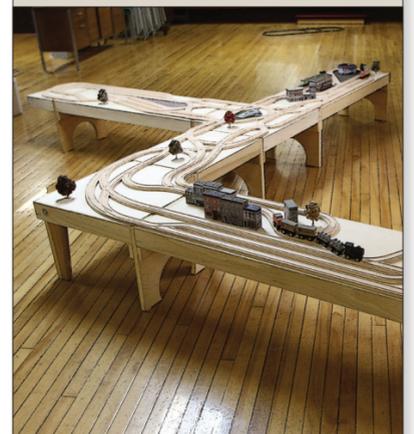
amazon.com

Upholstery Fabric

Check with an upholsterer to see if they might have remnants. Also a local or online fabric retailer.

Archival Matte Prints

www.gicleetoday.com



Resources for Wooden Railways
wRailway.org

Resourcing & Equipping

Prospective organizations for a Modular Railway Project or wooden railway resource donation should:

- be a 501(c)(3) serving children through at least elementary school,
- be an emerging children's museum, railway museum or STEAM-based organization with a local presence,
- provide mobile, popup or other periodic regional event support,
- be accessible to the public, and
- lack resources (financial and volunteer) to fund and construct a railway – but have access to someone capable of minor touch-ups (glue, sharpie, varnish)

Other factors to share might include:

- Programs and exhibits link underserved communities, (broadly defined to include those remote from population centers, kids on the spectrum, families with limited resources, cultural diversity or other barriers and challenges)
- Space available for permanent or periodic hands-on exhibits,
- Geographically distant from an existing modular layout,
- Active in a variety of community events and/or Train Shows,
- Affiliation with local train clubs,
- Regularly conducts Workshops or Maker Events for kids, and/or
- Holds periodic train-themed evening or weekend events

...got Trains?

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Additional content online:
www.wTrak.org

Event Planning

A modular railway is a design and construction investment. Sharing it with others is a commitment too. But in the right context, that engagement is really rewarding for children and their families, for the organizer, for the community...and for you. There are a wide range of events where a modular wooden railway can be integrated and many ways to configure your footprint in a public space. Following are some insights and suggestions based on firsthand experience.

Insights on Interactive Play

There is a fascinating collaborative play dynamic that materializes when a half dozen or more children engage. With a couple of kids at the table, engagement is measured in minutes. With a dozen, that engagement is measured in hours. At one event, a child and his mother spent the entire day at the table.

A crowded table presents a different challenge, requiring gentle requests to shorten trains and providing some turn-taking guidance when multiple trains converge and gridlock. Wearing a uniform (which could be just a cap) helps with that through inference of authority. Returning abandoned trains along the way helps reduce the challenge of incremental train growth and children 'taking' trains from others and also reinforces that you are in charge.

A dynamic with parents exists too. This is a really important observation – one that you'll want to talk about with your event host. Be polite, but be direct. Here it is: **Limit chairs and nearby seating...**

You might also skip a chair for yourself because it will eventually end up being appropriated by someone else. If chairs are provided, they will be used. If there are chairs anywhere nearby, they will aggregate around your table. A parent in a chair doesn't engage with their child. Some settle in for hours with a smart phone. I've even seen situations where a parent lost track of their child and then had to run to find them. A parent without a chair engages with their child and talks with others – a parent with a chair tends to withdraw and completely disconnect.

Kids come with baggage – strollers to be precise. These can become an impenetrable wall around a railway table and sometimes interfere with play itself. Soft barriers or boundaries that keep these at least 8' away from the table are encouraged. A rug, table, tape line, stanchion, the layout configuration itself – even a marked area nearby specifically for stroller parking.

Getting started...

Model railway shows are an obvious choice. There is a general lack of hands-on activities for children at most of these and your railway will be a huge hit with the children there. But local festivals, preschool activities, craft fairs, maker's faires, children's museums, a minicamp and other community venues are great options too. Our first event was at a preschool where expectations were low and learning was quick – so we were (mostly) prepared for the two-day Train Show that followed.

For a couple of years we accepted the majority of invitations received. We have been more selective of late and have incrementally prioritized events with more of a family focus – preferring those that are free or low-cost to those attending with a charity receiving proceeds. Since each event typically involves a commitment of a couple of days, a tank of gas and meals out – sometimes lodging and a ferry too – your personal investment can be significant.

Since the railway will be of greatest interest to toddler through elementary school, the event should appeal to families with children and grandchildren in that age range. Being referenced in the marketing and printed guide lends credibility. Recognition as an exhibit and inclusion in any polling or voting as a favorite for award consideration is also key. A wooden railway strains to be treated as an equal among railway clubs and other displays and some initiative and moxie may be necessary...

Making it worthwhile

Participating in an existing event is an easy way to start. Partnering with an organization – church, community center, festival or school – allows you to focus on event planning without having to contend with publicity, setup, cleanup and insurance. But organizing your own event removes constraints on timing, footprint and format. It also provides an opportunity to remove obstacles. Entrance fees, parking fees and scheduling can be real barriers from a family's perspective. Many shows and events focus on vendor needs, which may be at odds with a priority for creative play.

One form this might take is an immersive Trains! event similar to what has been done locally in Washington State. In addition to the modular railway, there was a hands-on Lego railway that can be operated by children, floor tiles with integral tracks, a Rokenbok monorail, a GeoTrax setup, boxes of loose wooden track allowing children to collaboratively create a floor layout and more. There were also large-format wall banners featuring images from railways and rail museums along with an audio soundscape where steam engines intermittently pass through the room virtually. In Kirkland, we've also had the participation of the Snohomish 4H Railway Group with a modular N- and HO-scale layout and the Puget Sound Lego Train Club.

Starting with whom you intend to engage with and how best to be inclusive, your event can be organized and presented in a way that escapes a more traditional train show format... Imagination and innovation can inspire.

Reprint

excerpt from

“wTrak: An emerging standard?”

posted Feb 16, 2012 at <http://portlandcar.wordpress.com>

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I spent the weekend of 4-5 February in Monroe WA, at the 2012 UNW/4H Model Train Show and Swap Meet. ...Certainly the most popular display, especially among the younger set, was a proposed new standard based on Brio and similar style wooden track using the same proven concepts that have been developed for HO and N gauge modular systems...

In all fairness, I must confess a personal penchant for wooden track trains. I like the 'hands on' aspect. My favorite part of modeling trains is making up the layouts, and wooden track certainly makes that quick and easy. And, from experience, I can tell you that it is possible to 'specialize' your wooden track layout. Mine is 'logging'. It will never be photo realistic, but in my mind, it is beautiful. I can let kids and grand kids play with it, too!

Which is going to be the most difficult part of wTrak to standardize. The adults involved are going to have to understand that they are playing by 'kid rules'. After two days of observing this layout in operation in public, the following points are apparent:

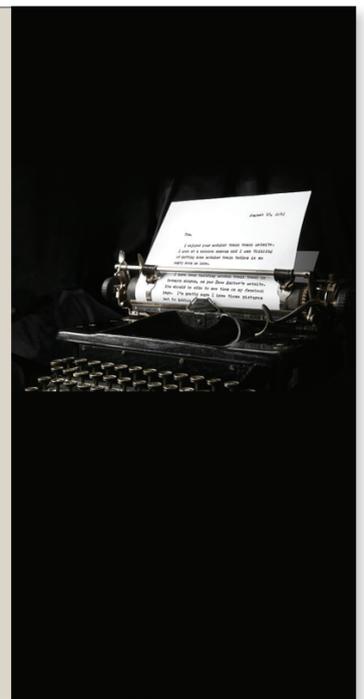
- 1) Not all engines require a train.
- 2) Not all trains require an engine.
- 3) Tracks are a 'suggestion', not a requirement.
- 4) Switches and crossings are interchangeable, and mostly a suggestion.
- 5) Ramps, turntables and anything else that moves are choke points.
- 6) Operational density is a function of module length, and how many kids can squeeze in.
- 7) Passing tracks are not required. In case of an impending cornfield meet, trains can fly!

Mr. Stephenson adds one more, which I did not witness.

- 8) Anything that can be picked up, will be thrown. Good to know!

This standard will never be a threat to the HO or N communities. But I believe that it can be a great adjunct to any train show. It is great to see the excitement in children about getting to go to a train show. But how disappointing to hear nothing but 'Don't touch!'. Here is a layout meant to be touched. My observations suggest that, given enough rolling stock and no adult demands that the trains be operated 'realistically', it is not the nightmare that might first pop into mind. Noisy and, to adult eyes, chaotic, but not really a problem. Supervision is, of course, required. And someone to return abandoned rolling stock to the 'toy box'.

So, check out the website. Chat up Mr. Stephenson (tom@Trak.org), you'll find him knowledgeable, pleasant, and open to a good discussion. And start thinking about how you can add a wooden track railway to your next public appearance. They are really a lot of fun!



Event Setup

We've put a lot of miles on our Prius driving our railway to shows as far away as San Francisco (CA) and Calgary (AB). The car is quite full when packed and front seats have little room left to recline. One show in Missoula was missed when the head gasket failed at 261,000 on the odometer. Now with a rebuilt engine block, the Prius is going strong with more than 300,000 miles. Having to work within the cargo constraints of a small car ensured that the railway design remained portable and right-sized. More than once my packing has been 'watched' at the end of the event until it was clear that everything was actually going to fit back in...

Shown is the car ready to unload, then modules laid out and ready to assemble and finally set up. About 45 minutes in total from start to finish. Load out is nearer to a half hour.



Transportation

After leaving my father's workshop on Anderson Island (WA), every project began its journey by ferry to Steilacoom. The custom railway sets were mailed through the US Post Office. The Engine Shed's tile railway traveled to London as luggage. Seattle ReCreative was local – but the table had a

misadventure when the gas main across the street exploded. WMPM's portable modular railway traveled to Boston (MA) as overweight/oversize luggage and then toured Atlantic Canada by car. RCM's railway was driven to Spokane (WA) by our youngest son on his return to college. MOSAIC's flew to Sacramento as luggage. WRRM's went by train and truck to Wilmington (NC) and ECM's went by train and truck to St. Louis (MO).

