



This MTH Premier 4-8-8-4 Big Boy is an early version from the mid-1990s. But it's a real workhorse, as seen here with a long train of freight cars from various makers.

# Driebuis Junction in the Garden

Article and Photos by Fred van der Lubbe

*Outdoor model railroading is generally done in the larger scales and gauges. However, Fred van der Lubbe runs O gauge and other gauge trains outside his home in the Netherlands. Although a multi-gauge layout might not be to the liking of everyone, Fred's ideas and experiences may benefit those considering trying their hand at O gauge railroading outdoors.—Editor*

## The Beginning

I became interested in live steam locomotives about 40 years ago. Gauge 1 is normally considered the minimum scale for live steam as a hobby pursuit, although there certainly are live steam

examples in gauges smaller than 1. I constructed some Gauge 1 live steam locomotives from kits, but for running these trains I had to go to a club layout or a steam meet.

Live steam is an outdoor activity, so I started looking for a house with a garden. When I finally found a suitable place, an outdoor Gauge 1 layout was erected that could not only be used for live steam but also for Gauge 1 electric running. I am interested in other gauges as well, and I certainly do not have to convince readers of OGR about the virtues of O gauge. Since I enjoyed outdoor running, I got the idea for an outdoor O gauge track and started to think about how I might add this scale to the existing layout.



One of the products 3rd Rail Sunset made for the European market is this 3-rail model of the famous London and North Eastern Railway (LNER) A3-type No. 4472 Flying Scotsman, seen here heading the the Flying Scotsman London to Edinburgh train. The coaches are from ACE.

## Substructure

An outdoor layout for electric running can be laid directly on the ground. For live steam, though, it is quite common to have track located at about waist height to place the locomotives within easy reach for fueling and maintenance. I choose a ground-to-track height of 75 cm (approx. 30"). I asked a friend to design a table-like structure, and in the course of our design discussions, materials like wood and concrete were considered. Ultimately, my friend advised going with a galvanized metal substructure. His advice turned out to be very good because after almost 30 years the structure is still in place without any significant problems.

When looking at Gauge 1 track to use, I chose Tenmille. The manufacturer mentioned all kind of construction do's and don'ts in its catalog, and one of the don'ts was laying the track floating on a ballast roadbed. I had not considered that, but after reading this I thought, why not? So, I decided to have the track not fixed but just floating on/in the ballast as done on real railroads.

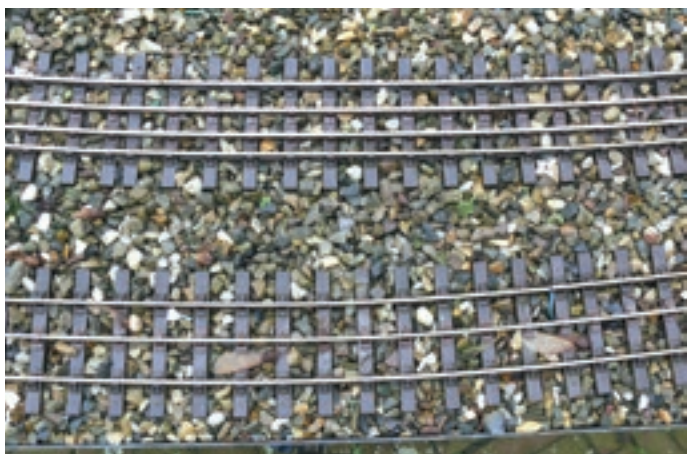
The substructure of the outdoor layout consists of metal poles 1.5



ACE of London produced a model of the steam locomotive speed record holder, the LNER streamlined A4-type No. 5568 Mallard. The prototype reached a speed of 126 mph on July 3, 1938.

meters (about 4.9') long that have been partially dug into the ground. A flat bar is attached between the poles, and on this a 5 cm (approx. 2") high gutter with a width of 30 cm (approx. 1') is attached. The gutter is filled with ballast, and then the track can be laid. All the necessary metal parts were designed by my civil engineering friend and constructed

and galvanized by a metal construction firm. During the design phase, a number of drawings were made, and my friend had to put some sort of name for the project under his drawings. He decided to call my track plan Driehuis Junction. Driehuis (three-houses) is the name of the village I live in, and he thought Junction was a nice railroad term to use.



The outdoor layout features multi-gauge track to permit operating trains of several gauges.



Here's an aerial view of a portion of the layout.



This additional aerial view shows the stepover that allows the operator to gain access to all portions of the layout

## Track Plan and the Garden

The track plan is as simple as you can get with just two loops of parallel track of 30 meters (approx. 98') overall length running for a large part along the borders of the garden. Both loops were connected with points (switches) such that trains could run from one track to the other. Further a spur connected with the outer loop was added to be used for preparing and firing the live steam locomotives. This spur is rather sparingly used since it is against a fence, and for preparing live steam it is better to have access at both sides of the locomotive.

All points (switches) were removed when extra gauges were added, resulting in two simple loops. The spur is now little more than a display track. Since plants, bushes, and conifers are growing in and around the garden, the trains disappear and reappear when running, thus concealing the simplicity of the track plan. The garden itself provides the scenery—the only other scenery I added was a Gauge 1 water tower, which occupies the small area where the spur connected with the outer loop.

## Rail

I use Tenmille ([www.tenmille.com](http://www.tenmille.com)) track since, at the time I constructed my layout, it was the only firm providing weather-resistant Gauge 1 track products. The track is put together using yard lengths of nickel silver code 200 bullhead rail, plastic sleepers (or ties), and nickel silver rail joiners.

Bullhead rail is used in England on the real railways, and since Tenmille is an English firm, this rail was readily available. The plastic used for the sleepers is UV resistant. Each rail used in a curve was bent before being laid. I took special care to assure that rail joiners were staggered such that rail ends were not in the same position, especially with flexible track laid in curves. This helps to prevent kinks in the track.

My layout was originally made for Gauge 1 only, but I wanted to run gauge in the garden as well. At first, I made plans to add a separate track between both Gauge 1 loops but found that there just wasn't enough space for that. So I thought of adding an extra rail to one of my tracks, making a dual Gauge 1/O track. I discussed my plans with Terry Hines of Tenmille, and although he didn't know anyone else who had done this, he thought it was worth trying.

I bought a small bag of rail chairs and with some leftover sleepers and rail made a test section. Since I also



Here's the vintage 2026 Lionel 2-6-2 postwar O gauge locomotive with whistle tender, two 6440 Pullman cars, and a 6441 observation car.



O gauge MTH Premier 203528-2 (2-rail version) of the SNCF (French Railways) 150X 2-10-0 freight locomotive is running with some MTH Swiss beer cars. MTH made a German (black with red wheels) and a French (green) version of this locomotive.

wanted to run 3-rail, I also tried to add yet another rail as center rail for O gauge. It all seemed to work, so an order was placed with Tenmille for 2,400 chairs, 60 meters (approx. 197') of rail, and the necessary rail joiners to add to the inner loop of my layout. The good thing about the inner loop was that it no longer had any turnouts, which would have complicated things considerably. Of course, I first made a drill jig to be sure that the spacing of the chairs would be correct for O gauge. Later I added, in a similar way, an extra rail for S gauge in the outer loop and removed the last turnout that had been connected to the spur. Since S gauge is about half of Gauge 1, this extra rail also acts as a third rail for 3-rail Gauge 1 locomotives, of which I have a couple.



O gauge MTH Premier 3489-2 (2-rail version) of SNCF (French Railways) 141P 2-8-2 Mikado is shown with an MTH Wagon-Lits train.



A 3-rail O gauge model of a French 4-6-2 Nord Pacific (the so-called Pacific Chapelon) is polishing the rails with its matching consist of Fleche d'Or cars. These models were made by the French manufacturer AS in the 1980s.



This sturdy and weather-resistant cart houses the power and control components for the outdoor layout and provides mobile and easy access for operating sessions.



Here's a view of the power cart opened and ready to go.

## Wiring

Some outdoor railways run with trains that have onboard electric power (batteries) that can then be combined with radio control. However, if you have quite a number of different locomotives from different manufacturers, rebuilding to onboard power is not easy. So my

choice was to power the locomotives via the rails.

Before assembling and laying the Gauge 1 track, I soldered a 15-cm wire to the underside of each rail joiner. I ran four bus wires (one pair for each track) through the ballast bed and then laid the rail. I connected each of the wires from the rail joiner using “insulation displace-

ment connectors” (sold in automotive shops) to the corresponding bus wire. The four bus wires were connected to a female connector under the track bed, and I made a length of cable with a male connector so I could put the controller on the terrace or in the garage. Of course, this works independent of the type of controller or power supply. So I ran steam

as well as electric, and for a couple of years things worked fine.

After some time, I did experience some connectivity problems. Some sections of rail did not get any electricity via either rail joiner because an isolating layer of dirt had crept into the joiners. In the beginning the problem could be solved by spraying with contact cleaner, but in the end even that no longer worked.

I initially thought why not just solder rail joiners to all rails. I started with one or two and then realized that this would give one 30 meter length of material without any slack. On a warm sunny day this might result in a kinky, out-of-gauge track due to expansion. So I just soldered a small wire jumper, electrically connecting each rail with the next. This did the trick.



Weather conditions can temporarily affect operations at times.



This Pennsylvania Railroad Boardway Limited trainset from MTH includes a streamlined 4-6-2 K4s locomotive, express reefer, two coaches, and an observation car.

## Power Supply

Because I want to run all kinds of trains, each with their own electrical properties, I need different power supplies. My civil engineering friend came to the rescue. He designed and made a transformer cart that holds all power supplies and has one power cord to the mains. The cart normally

stays in the garage and can be rolled onto the terrace when needed. The cart has drawers for cables, cleaning blocks, and so forth. I also keep the instruction booklets for the locomotives I run in one of the drawers. Power is provided by an MTH Z-4000, an LGB Jumbo, and Märklin AC transformer, supplemented with a Märklin digital controller and Lenz DCC controller. The

outputs of the power supplies are at the back of the cart, and via the cable each output can be connected to each one of the tracks.

## Playing Trains Outside

When I go running trains, I start with an empty track; I never leave a train outside



This reproduction of a Lionel prewar streamlined Hiawatha passenger set was made in 1988 and included reproductions of the Lionel 250E 4-4-2 Hiawatha locomotive and its accompanying passenger cars.

when I am not operating trains. When running electric, I have to go around the track to clean the top of the rails, and for this task I use an LGB track cleaning block. I also push one of the cars I will use around the track to remove any leaves and small twigs.

Then the transformer cart is rolled out from the garage, and the cable is connected to the track. To get inside the loop of track, a stepover is used. There is a strict rule that when a train runs, no stepping over is allowed. Kicking a train would, of course, cause a disaster.

On the inside of the track oval, there is a brick footpath, thus making it possible to chase trains. The train of choice is placed on the track, and the fun begins. Sometimes visitors come to take a look and some of them even bring their own trains to run ([www.dutchhrca.nl/dhrca2016agm.htm](http://www.dutchhrca.nl/dhrca2016agm.htm)).

My brother, who lives in the next village, often comes along bringing one of his trains. With a cup of tea (or a glass of beer) we then enjoy just watching the trains run by. Often I will make a video when running trains in the garden, and these can be seen on my YouTube channel (<https://www.youtube.com/user/sncf231e/>).

## The Models

I run a large variety of trains. My collection can properly be called eclectic because I have a broad taste. I run trains from many countries following the motto “any make, any gauge, any age.”

All locomotives in my collection are steam-outline locomotives (running on live steam, clockwork power, or electricity). In general, I prefer passenger trains to freight trains. However, I cannot resist locomotives like the Union Pacific Big Boy, so I also run freight trains. I try to operate realistic consists, at least they must look good enough to me, and as long as the model railroad police are not looking, I am most definitely having fun! 🚂



## About the Author

Fred van der Lubbe was born and spent most of his life in Amsterdam, Netherlands. He received his first train, an HO gauge Märklin clockwork passenger set, when he was five years old. Fred worked for 45 years in information technology, first at the Dutch technology company, Philips, and later at a large Dutch bank. While at Philips, he spent a year in Piscataway, New Jersey, working on a project and devoted his free time to learning about U.S. models and prototype railroading. Retired now, Fred bicycles a minimum of 10 km daily, maintains his train collection, plays trains, manages his own website (<http://sncf231e.nl/>), and composes e-books (<http://sncf231e.nl/my-e-books/>).

## Big-time railroading in a small space



It may often appear to be the case, but steam is not dead on the WTF, not yet. No. 1, a 2-6-0 runs across the previously damaged and still questionable trestle as it leaves the Westside Lumber camp with a load of pulpwood.

# Northeast Iowa Narrow Gauge

Article and Photos by Mark Watson

It's 1949 and you're on top of a steep river bluff surveying the scene below. In the distance are several orange locomotives that stand out against the lush greenery of the abundant timber that surrounds much of this area. The locomotives belong to the Watson Timber & Freight (WTF), which travels from the mighty Mississippi River to the interior of the Iowa bluffs on two daily scheduled runs along with extras as needed.

The WTF, a narrow gauge railroad located in the northeast corner of Iowa, not only struggles to traverse the steep grades out of the Mississippi River valley but also struggles against the headwinds of the new highway system coming to the area. The railroad is by no means defunct and is still providing a much-needed service for its customers as you can easily tell from the pride showing on the engineers' faces as they pass by.

Just how does a narrow gauge railroad survive this long without using either standard gauge or abandoning? For that answer, we need to back up a few years. By the 1930s, the WTF was all but ready to shut down, and its parent company, the Milwaukee Road that had just sold off the WTF sister railroad, The Bellevue & Cascade, sold all interest in the WTF to a group of local businesses that thought keeping some type of railroad, even a narrow gauge line, was better than surrendering to the mud of the bluff roads.

Although the Bellevue & Cascade had taken a similar path, it was only able to survive until 1936. WTF, however, was able to continue on in part due to the huge demand for timber during the war years and the successful transition from steam to gas-powered locomotives along with a little luck. Now a few years after

the end of hostilities, the WTF is helping supply the country's explosive postwar building boom with wood material and sand mining. The paved highway and trucking industries are starting to make it tough for the little railroad to turn a profit, so no new capital expenditures, like using standard gauge on the line, will be in the cards anytime soon.

The WTF serves the sand mining location at Sandpit and the timber area of Westside, Iowa. An interchange with the Milwaukee Road along the Mississippi River at River Junction is the only rail connection to the outside world. Other industries served are a lumber/general merchandise business in Millstone as well as a lumberyard and two small manufacturers that bring raw material in and send finished goods out at the town of Jacobs Ferry.



**Buster the pooch doesn't really seem to care if a WTF short freight is screeching past.**



**No. 16 eases a load of pulpwood cars past the lone station stop at Jacobs Ferry.**



**Hobos are trying to decide if that empty freight car is tempting enough to leave their warm stew or if they should just wait for the next one.**

## Tipping the Scale

Up until the WTF creation, I modeled exclusively in N scale with layouts ranging from small cupboard size to my largest, the Arkansas and Missouri. I always thought the more whimsical layouts, which many times included narrow gauge, were more my style, but I just never pulled the trigger, preferring instead to stay with little locomotives and long trains.

I went several years without a layout. Raising three kids also kept me on the sidelines, but about five years ago when my oldest left for college, I was ready to start again with a fresh slate.

Something I learned when I was building my N scale Iowa Interstate layout was that it always benefits me if I'm able to model an area I know well. My idea for the new layout was always to model northeast Iowa as the bluffs along the Mississippi are spectacular and, in my opinion, are the next best things to the Rocky Mountains. Don't get me wrong, I love the mountains of Colorado, but it just seemed to me that it's been frequently modeled before, and I never have been one to follow the crowd. I wanted to operate a low-budget private railroad, struggling to get by with second-hand equipment and less than stellar infrastructure.

At first I thought about taking up N scale again, remembering those long trains snaking their way through tall trees. But the reality is that my eyesight was just a tad diminished for close-up detail work, so HO it was.

A track plan was created, benchwork was built, and a couple of locomotives were purchased. I laid most of the track and felt I was ready. But as I looked at the HO equipment, I couldn't get over the feeling that it was a little boring. There was nothing wrong with it of course. It was just that a 40' boxcar looked like...well, a 40' boxcar. Trying to make HO locomotives seem derelict wasn't working either.

So what do you do when you are at a modeling roadblock? You go visit the local hobby shop if you're lucky enough to have one, and for me that is Caboose Stop Hobbies in Cedar Falls. It was on one of these afternoons that I stumbled across some HO<sub>N</sub>30 locomotives—oh so cool and oh so small and very Colorado looking, not to mention the price tag.

Turning around, I spotted some shiny green boxes and asked what's on this shelf? Turns out it was Bachmann On30.



This shot of the tight confines at the east end of Riverview Junction proves you don't have to have a huge room to run trains.



A rare view of both Jacobs Ferry (lower) and Westside (upper) are very close as the crow flies, but separated by several miles of steep grade by rail.

Screch! That's the sound of all my layout plans being abruptly put on hold. It was time to do some research, and who doesn't love researching their special interests? Checking the Internet, I quickly learned there was a wealth of information covering the On30 scene. When I began seeing diesel "critters" again, it was like a watershed moment. The little critters reminded me of Bob Hayden's and Dave Frary's Maine two footers modeled in HOn30. I had been fortunate enough to work with Bob at the start of my graphic design career right out of college and have always been fascinated with his modeling skills. His was the first narrow gauge modeling that I could remember that was not of the western vein. I was sold! O scale it was, specifically On30 on an existing 11-1/2' x 9' layout already fitted with HO track.



Riverview Junction is on the left, and Jacobs Ferry is on the right.



**No. 12 gets called into action when traffic is heavy. Running through the switches at Jacobs Ferry, it will soon back its empty boxcars into the factory siding.**



**The line's lone steam engine rolls past one of the local Westside residents.**



**The factory at Jacobs Ferry is behind old No. 14 as it pulls the refueling tank up to Westside. Speaking of which, the local is passing above with finished lumber for the customers at Westside.**

## The Layout Gets a Facelift

Because I had most of the track already in place and even some of the scenery completed, I made the decision to stay with the HO track and not to use the scale-specific On30 track that is offered by a couple of manufacturers such as Peco and Micro-Engineering. I like the look of the On30 track, but I personally think the large tie spacing is a little much unless modeling a temporary logging spur. Anyhow, it's strictly a personal choice for most. The biggest issue I had was radius and tunnel sizing. Even though On30 is small, it's still 1:48 O scale and still requires more room than HO to look even halfway acceptable, not to mention that On30 locomotives and rolling stock just do not fit through HO tunnel portals no matter how slow or fast you're going.

So I extended the curves in some areas, blasted the tunnel bore larger, sold the HO locomotives, and started buying On30 equipment.

The WTF locomotives have evolved on the layout just like they would have in real life. I had a couple of 4-4-0s and gas mechanical Davenportts that quickly went by the wayside as home-built diesel critters started to take over. On a side note, one has to be careful with the critters because they are just as addictive as that first M&M, and pretty soon the entire one pound bag is gone.

I keep one 2-6-0 at Wayside for the logging operations, but it will probably be the last steam power on the railroad. As of this writing, the WTF diesels include three center cabs and one rear cab. All are running on HO scale mechanisms with a combination of kitbash and commercially available parts along with scratchbuilt details. Most locomotives wear the familiar MILW orange paint scheme, but No. 12 is painted in gray as a nod to that road's Hiawathas.

Always thought of as a little bit unique, the crew of No. 14 has applied a Hiawatha herald on its nose. I'm not sure how the crew managed to accomplish that, but no one has told them to remove it, yet. Freight is handled with a combination of Bachmann ready-to-run cars and a few kitbashed HO scale flatcars. The layout operates with DCC and is mainly a one-man operation.



As No. 18 takes the siding, No. 14 rumbles through Millstone with a heavy load of sand.



No. 18 is seen emerging from the tunnel outside Westside. In 1:1 scale, this is the swing-out portion.



Double heading a heavy load of sand, No.14 and No. 18 rumble across the trestle at Riverview Junction, ending their long day. The hobos have no desire to hop a sand freight.

## Telling a Story

It's obvious that the Watson Timber & Freight is a fictional railroad, but I wanted to model it based on a credible reality. I pulled a lot of my ideas from the real Bellevue & Cascade, which operated as a narrow gauge railroad in the northeastern part of Iowa and was owned by the Milwaukee Road. Although it ceased operations in 1936, you can still see some of the original equipment preserved in the towns it served. With the B&C connection to the Milwaukee Road, it was only fitting I tried to capture the Milwaukee's look with the WTF logo and paint scheme.

Needing a date to help place and narrow down scenery, I wanted to model the time of transition in America out of the prewar era, but I also knew I didn't want to go too modern. When I came across an O scale 1949 Buick convertible, it is the newest thing on the block.

## The Future

I have material ready for a couple more critters and several kits and kitbash items ready for freight cars. Very little of my rolling stock has been weathered to date, and I can always create some more trees. The area on the other side of the wall behind Westside also makes me wonder just how big of a bluff I could model. 🐾



A work crew is debating if the cribbing will hold as No. 1 creeps by high above. The trestle was damaged when a runaway pulp car hit the support and about took down the entire structure. The bridge has seen better days.



No. 12 idles patiently before unloading while the carpenters finish a quick repair on the dock at the local lumberyard in Jacobs Ferry.



The daily sand train is seen rumbling past Riverview Junction with a load of sand that will be dumped and then transferred to standard gauge Milwaukee Road sand hoppers.



### About the Author

Mark has always had a fascination with trains and is quick to recognize his late uncle Dave Jontz for helping him with that fascination. Mark's first job out of college was as a graphic designer with Kalmbach Publishing Company. He was the art director for Model Railroader magazine when he and his family moved back to Iowa, Mark's home state. He became the creative director for an agricultural inputs company that merged with Land O Lakes. Mark and his wife, Vonna, live in a small town in Iowa with their two miniature Golden Doodles. They have three grown children.



Motive power in the engine servicing area of the Gitler Central Coast Railroad includes a variety of locomotives representing eastern and western U.S. roads.

# Choo-Choos at TrilogY

Article and Photos by Stan Gitler

We never planned to move to California. However, after a recent retirement, a couple of very snowy winters in Pennsylvania, and three children with their spouses having moved to California together with five of our grandchildren, the time became right. After much deliberation and planning, we packed up and headed west.

Finding the right home in California, downsized for our retirement years but still spacious enough to house a new O gauge layout, was not easy. I kept looking for a door to the nonexistent basement in all of the houses we viewed.

The prospect of a garage layout did not really appeal to me, although I did get pressure from some of my children who asserted that the garage was the ideal place

for me to spend my retirement years with the trains. Not giving in, my wife and I continued searching for the perfect house.

One morning when it looked like we were at the end of the road, my amazing wife said, “Do you want to build a railroad in the Great Room?” It didn’t take much convincing, and I think I immediately blurted out, “Where do I sign?” Since we were moving to a newly built community, the home designer we were working with started referring to the living room as the “Train Room” and coined the term “Choo-Choo at TrilogY” for our home. We live in a community named TrilogY in central California.

Taking down and packing a 12' x 35' multilevel train layout for a 2,900-mile cross-country move was a challenge.

Luckily, the move went well, and all boxes arrived intact and accounted for. Although we did not move all of our furniture to California, we did move all of the trains, track, accessories, and benchwork. I used the inventory program TrainMinder to assign a packing box location for each item. This worked out great when it came time to unpack and locate each of my trains, and it provided documentation for insurance had a claim been necessary.

In the past I had layouts that had to be torn down. I learned from my previous mistakes and built the benchwork on the prior Pennsylvania layout using components produced by Mianne Benchwork. Once all tracks, scenery, and the plywood top were removed, I was able to dismantle the benchwork as easily as it was originally



Among the many accessories on the layout is a rotary coal dumper.



The layout's basic foundation is made up of versatile and easy to erect or dismantle Mianne benchwork that has been stained to give a furniture-like appearance appropriate for the home's main living area.



The Lionel Rico Station serves Amtrak in the city.

put together, pack it all in the shipping boxes recommended by Mianne Benchwork owner Tim Foley, and have it ready to be reconfigured for the new layout in California.

Once I was sure of the dimensions of the available space, I created plans for the new layout using RR-Track software. After several phone calls to Tim regarding my new track plan, I was certain that I had all the parts needed to assemble the benchwork for the new layout. When I was at my last York, Pennsylvania, train meet, I saw the Mianne Lift-Gate and decided it was a requirement for the new layout. It works great and saves my 67-year-old knees and back from many trips under the table.

Building the layout in this newly finished space right in the center of the home was a challenge. Prior home layouts in basements afforded me the ability to work at my leisure without needing to worry about a messy or unfinished area. Now the Train

Room is next to the kitchen as well as the master bedroom, the most travelled areas of the house. In addition, I now regularly receive input from my wife, family members, and visitors alike regarding what I am working on. A totally new experience!

Building a railroad in a finished space also required some considerations different from basement construction. I used a latex stain on the Mianne benchwork to complement the wooden floor in the room. Prior to assembly, I sanded, applied pre-stain, stain, and a coat of polyurethane to all sides of the legs and I-beams. I also trimmed off about 4" from all legs to lower the layout and not obstruct views from our windows. In addition, before attaching the 1/2" plywood to the benchwork, I primed and painted it on all sides and edges and let it dry outside to ensure no wood odors entered the room.

I used a layer of cork roadbed and tubular track (with extra



Amtrak 519 departs the servicing facility to pick up its next consist of passenger cars.



A track maintenance crew is hard at work on the layout's FasTrack. Other tubular track is also used on the GCCR.



Children and parents pause to watch when heavy UP steam power passes by.



Yard tracks provide storage for a variety of rolling stock, and a near-empty yard indicates that freight and passengers are on the move doing what trains are supposed to do.

ties added) from my prior layout together with Ross switches with DZ-1000 switch motors. Switch tracks are wired to pushbutton controllers installed on the layout perimeter as well as via my Legacy controller using Lionel SC-2s. Since I am using the Legacy system, no large control panel was built. I built a small panel for my eight-track freight yard to house the controls for switch tracks, uncouplers, and block power control.

My Legacy controlled Bowser turntable was installed with a rotary switch in the side of the benchwork to route power to each of the 13 tracks. A single toggle switch controls power to all tracks so that it can be shut off until a track is selected to be powered via the rotary switch. Another toggle switch controls power to the bridge track. For larger engines, I created one through track on the turntable as well as three other sidings separate from the turntable in my engine service facility. Power to these tracks is also controlled by Legacy using the SC-2s.

Transformers, Legacy/TMCC hardware, relays, and terminal strips are all located below table level on the side of the layout facing the far wall so they are out of sight when viewing the layout. I used 14-gauge wire from transformers to the terminal strips with 16-gauge wire used for all track connections.

Shelving from Glenn Snyder Display Systems was installed along the sides of the layout facing the living space to provide storage tracks for trains waiting to run on the layout and to hide wiring under the layout. Quarter-inch-thick plywood was installed between and behind the table legs and recessed so the front of the shelves would be about flush with the front of the table. Pieces of metal shelving were cut to fit between each area along the sides of the train table.

A requirement for this new layout was a large mountain with a waterfall. When my mother, an artist, first saw my prior attempt at modeling a waterfall in Pennsylvania, she was less than enthralled. I was determined to make Mom proud of this new one. I think she would be and I named the waterfall "Jeannette Falls" in her honor. Real rocks were used, as well as some made of lightweight plaster in rubber molds. The rushing water effect was created starting with wax paper strips coated with Water Gel Medium and Water Gloss Medium from Scenic Express applied in multiple layers. A dab of white paint here and there, and I created the look of water rushing down the mountainside.

Since moving to California, my wife and I have been doing a lot of hiking. I studied the various mountains locally as well as in the National Parks that we visited and concluded that no two mountains are exactly alike and that a mountain can look like anything you want it to. I also decided to add some elements characteristic of local areas we regularly see. Front and center on the mountain is a hiking trail complete with hikers as well as rock climbers from Scenic Express. Rocks made of plaster cast in rubber molds were attached to a mountain structure formed using a light wooden frame covered with cardboard strips and plaster cloth.

A coat of beige color latex paint was applied as a base color for mountain scenery. Trees from various sources including SuperTree from Scenic Express were added as well as a variety of colors, shapes, and textures of ground cover from various suppliers.

I had a package of Fusion Fiber that I purchased at a train meet, and after tinting to a desired color, I applied it at various locations to add texture where I wanted exposed rocks.



Seen here in its closed position, a Mianne lift section (lower center) provides for easy access to the central portion of the layout.



Here's the Mianne Lift-Gate in its open position.

## Specifications

**Name:** Gitler Central Coast Railroad

**Dimensions:** 17' x 12'

**Track and switches:** Lionel O tubular/Ross Custom Switches

**Minimum curves:** 072

**Power:** Lionel postwar and modern ZW transformers for track power;  
Lionel KW transformers for accessory power

**Control system:** Lionel Legacy with Powermaster and SC-2

**Locomotives:** Lionel Legacy and TMCC

**Rolling stock:** Lionel, MTH, and K-Line

**Accessories/structures:** Lionel and MTH

**Vehicles:** Die Cast Direct

**Figures:** Artista, Lionel, Bachmann

My track plan required a switch track in the mountain area, and I needed to be able to reach it for either repair and/or to retrieve a derailed train inside the mountain. Inspired by a Jim Barrett article several years ago, I built an access door into the front of the mountain concealed by scenery and held by magnets (my wife's suggestion) for ease of access.

Toggle switches along the sides of the layout control accessories including a rotary coal tippie and playground with operating swings, which are crowd-pleasers. Buildings from Lionel and MTH line Main Street in the downtown area where a Western Hobbycraft trolley tirelessly carries passengers back and forth using an electronic controller designed for that purpose.



Passenger trains are a particular favorite.



Here's a view of a major part of the turntable area.



It looks like a sandwich of UP yellow on the outside and a black steamer on the inside.

When my children began their moves westward, I started acquiring Union Pacific engines and rolling stock. Now relocated, I am in the process of replacing certain East Coast railroad equipment with Amtrak and UP passenger and freight trains. Amtrak Coast Starlight trains operate along the California coast, so I assembled my own version of the train using Superliners from MTH and motive power from Lionel. What a great excuse for buying new trains!

The layout is now at a point where trains can be run. The eight-track freight yard was designed adjacent to the turntable and engine service facility to allow train consist building without fouling the main line.

My grandsons, age seven and eight, each have their own train layouts in their homes. They have been running trains since they were four years old, and both of them are competent with the Legacy controller. Recently, my granddaughter arrived for a visit holding an opened Lionel catalog. She said, "Grandpop, can you buy me this train?" That set arrived at her door for her sixth birthday. It is great fun when she brings that Lionel Pet Shop Express here to run on the Gitler Central Coast Railroad. Her LionChief controller works independently of my Legacy trains, which adds to the excitement.

Nothing beats running trains with the kids in the Great Room! 🚂

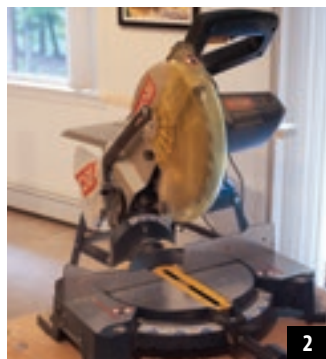


It took a while to build this realistic-looking waterfall.



### About the Author

Stanley H. Gitler is a retired CPA. When not working on the layout or running trains, he enjoys spending time with his children and grandchildren, bicycle riding, hiking, watching movies, travelling, and enjoying the active lifestyle community where he and his wife, Marcia, live in California. He received his first set of Lionel trains in the mid-1950s and has been involved with O gauge model railroading ever since.



# POWER TO THE PEOPLE

Article and Photos  
by Eliot Scher

I dismantled a wonderful layout. No one truly understood why, and after trying to explain it many times to friends and family, I simply began to say, “It was time.” The original Munoz Lines was finished. I was not bored with it; after all who doesn’t love to run trains? I simply like to build and I love challenges, and it was time. Of course, pursuing other endeavors is also a good thing, but I had no idea how much I would miss the trains. The bare tile floor in a beautiful train room did not stay bare for long.

Suddenly, as fate would have it, a loop of track appeared on the tiles. I found myself pulled to the train room as if some mystic force snared me with a grappling hook. The inexorable path to railroading beckoned once again. There would be a second Munoz Lines, and this time the end of the story would be different... probably.

The original Munoz Lines was cool to look at. I had built that railroad without the faintest clue how to design an electronic panel, power feeds, or the number of drops needed to run behemoth locomotives. Each passing week new ideas crept into the design. Bridges appeared, round-houses sprouted up, and track was laid.

I never knew what would happen when power surged through the spaghetti bowl of wires that waited to trap would-be



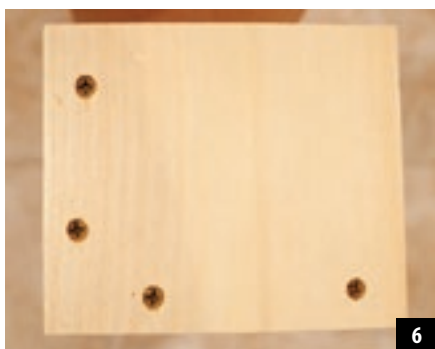
electrical engineers like the net of a gladiator. Woe to anyone who tried to crawl into the labyrinth of table supports and conduits in the depths below.

I had designed a foolproof system of short circuit detection. The wires to all electrical circuits were all white and black, and not numbered or lettered. So to trace a problem, I had to grab a wire at the transformer under the table and hold onto it as I crawled under joists and struggled to fit my corpulent body between cross members.

Drops dangled under the layout like stalactites in the Carlsbad Caverns. I had so many drops that no one could tell what track they were attached to when under the layout. There was a drop every six feet or perhaps every six track sections, as someone suggested. The gauge of the wire was 16 here and 18 there and perhaps some 22 thrown in for good measure, and they were

black and white. It was a miracle a train could make a complete trip around the layout without the red light flashing on the transformer. Oh yes, one day I was running a multiple-unit train of four Legacy diesels when they traversed a short. Remember when R2D2 freaked out in that Star Wars movie? It took me a week to figure out how to reprogram those diesels. It was definitely time for a new Munoz Lines built correctly.

Once the first modules were built with correct bracing that enabled chubby-hubby to crawl anywhere underneath without having to be a contortionist, the track was laid and wired with 14 gauge, pure copper, maximum stranded speaker wire soldered to the track. I started with one drop. I was intent upon getting that wire to a control panel that was functional and, most importantly, off the floor. It would be high enough to work on standing up.





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I designed a control panel, with the help of OGR Forum wizards, that would be installed on a piece of cabinet grade 3/4" birch plywood and would reach from the power cart up to the top of the New York City module about 7-1/2' high (Photo 1). Power would be supplied by transformers that resided on top of and underneath the power cart. The cart would be able to hold anything I put on it, look attractive, and be mobile. It could be positioned at the panel or rolled away from the panel when work was needed.

On the Internet using the Google

search for "rolling cart" revealed several rolling carts I could build that approximated what I envisioned for the Munoz Lines. I would have to change dimensions and add some details.

I began by carefully measuring the space I had and planned for width, height, and depth, including the size and height of the casters since I wanted the cart to roll. I recommend a chop/miter saw to make cutting large and heavy sections of lumber easier (Photo 2).

Construction of the cart frame would be 48" wide and 36" deep with 2x4s. The outer

frame was glued and screwed together, and a center brace was added for strength (Photo 3). I continued with the two-part legs. I used a 2x4 and a 2x5 (5" width) and joined them with carpenter's yellow glue and screws (Photo 4). The bottom plate of the leg is a section of 2x5 cut 5" square and centered on the bottom of the leg (Photo 5). The top of the bottom plate supports the lower plywood shelf, and the casters screw into the bottom of the bottom plate (Photo 6).

I placed the frame on a workbench and installed the legs upside down with glue and screws by first plumbing them with a level (Photo 7). I clamped the legs prior to gluing and screwing them so they would remain plumb (Photo 8).

Once I was satisfied that all four legs were plumb and secure, I inserted the 3/4" cabinet-grade birch plywood lower panel. I glued and screwed the panel in each of the four corners down into the top of the leg bottom plate (Photo 9). At this point I turned the cart upside down and screwed in the casters and then installed the plywood top. It was easier without the weight of the top plywood section. I decided the final piece would be sanded smooth and the wood putty over the screw heads counter sunk into the wood, and then I would paint the cart.

Now my transformers are happy, and more importantly "Scrapiron Scher" (my OGR Forum name) is happy because I can roll my cart away from the panel to work in a standing position. 