



THE TURNTABLE

Newsletter of the

PORT ELIZABETH MODEL RAILROAD CLUB

Every gauge welcome!

January 2022



Sandstone NGG16A #155 at the 2021 Cherry Steam Event. Picture by James Attwell

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PEMRC	Calendar	Committee	AGM 2022	International Model Rail Day
The World's Most Scenic Railway Journeys	Weathering Roads	Dioramas		
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Lindenthal in HO	More YT Videos	TRAINSIDING App	Sketching	with Steve
Chicago Belt Railway Yard	Dr Duino	Gallery		

PEMRC CALENDAR

Date	Time	Detail
NO LAYOUT VISITS IN DECEMBER - JANUARY		
22	Jan 2022	10:00
PEMRC Annual General Meeting Roel van Oudheusden, 10 Wodehouse Street, Mount Pleasant		
12-13	Feb 2022	All day
The Festival of British Railway Modelling 2022 at Doncaster Racecourse The exhibits will feature N, OO, EM, O, 3MM, P4 and more.		
12	Feb 2022	
PEMRC Layout visit at: tba		
12	March 2022	
Layout visit at: tba		
9	April 2022	
Layout visit at: tba		
14-21	Aug 2022	
NMRA National Convention 2022 Birmingham, UK https://www.nmra2022uk.org/		



COMMITTEE 2021:

Chairman:	Roel van Oudheusden	roelvanoza@gmail.com
Treasurer:	Attie Terblanche	terblalc@telkomsa.net
Clubhouse:	JP Kruger	juanpierrekruger@gmail.com
Editor:	Roel van Oudheusden	pemrailroadclub@gmail.com
'Shop':	Graham Chapman	chapman22@telkomsa.net
Workshops:	Mike van Zyl	carpencab@gmail.com

Subscriptions for 2021 remain at **R300** for the year.

EFT is preferred, but the Treasurer may be persuaded to accept cash.

Bank account: Port Elizabeth Model Railroad Club

FNB Walmer Park, branch code 211417, Account no. 62386122057



NOTICE of ANNUAL GENERAL MEETING 2022



**The AGM of the Port Elizabeth Model Railroad Club will be held on:
Saturday 22 January 2022 at 10am
at 10 Wodehouse Street, Mount Pleasant, Port Elizabeth.**

The meeting is open to all members of the club in good standing which entitles them to vote on any issue tabled at the meeting.

Agenda:

1. Opening and welcome.
2. Apologies.
3. Minutes of the previous AGM of 23 January 2021.
4. Matters arising.
5. Chairman's Report.
6. Treasurer's Report.
7. Shop Report.
8. Club House.
9. Election of the Club Committee for 2022.
10. Subscriptions for 2022.
11. Layout visits 2022.
12. General.
13. Closure.

Nominations for Committee:

The following positions need to be filled:

Chairman – Roel has served two years and wants someone else to take over.

Treasurer

Editor – Roel is prepared to continue as editor subject to the agreement of the members.

Clubhouse project leader

Club Shop

Workshops

Club Layout

Club Librarian

Layout visits and outings

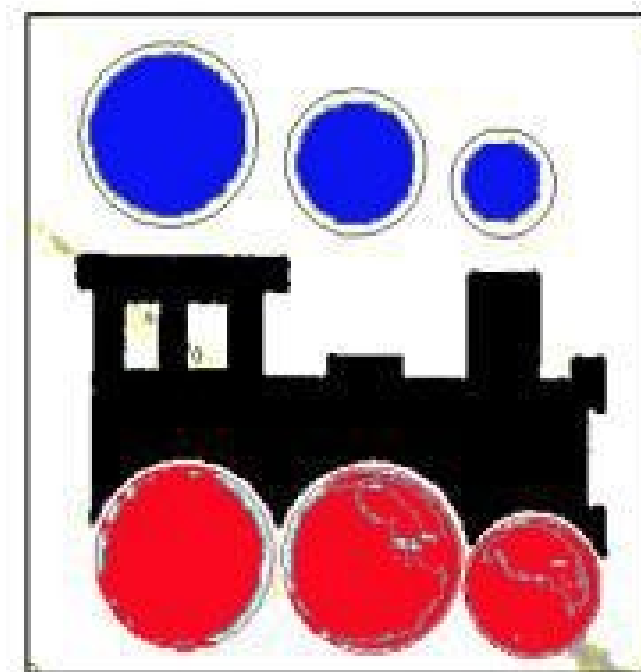


If its model related, The
Modeltrainshop can do it!



Tell us about your

- ✓ Railway interest or experience,
- ✓ Railway layout or scale model etc.
- ✓ Or any ideas, suggestions for the Club...



Write to: pemrailroadclub@gmail.com or via **SMS** or **WhatsApp** to +27 82 739 7679

International Model Railroading Day 2 December 2021

A Good Idea Keeps Growing.

Can a model railroading day be more appropriately experienced than in the pre-Christmas season?

For generations, this time has been virtually predestined for this beautiful hobby. At the initiative of Hagen von Ortloff, famous from the SWR TV series Eisenbahn Romantik, a community was formed of model railroad associations, manufacturers, clubs and publishers.



All of the parties jointly wanted only one thing: to celebrate the most beautiful hobby in the world – model railroading – in a fitting manner and to inspire people for it. Many clubs will open their doors around December 2 and model railroads around the world will go into operation. Promotions around the hobby of model railroading will take place across Germany, even across Europe.

Be there! Experience along with your family an unforgettable day. You can get information about promotions and events in your area at www.tag-der-modelleisenbahn.de

Refrigerator car as a privately owned car decorated by **Märklin** for the 2021 International Model Railroading Day HO Gauge Article 44221.



Links

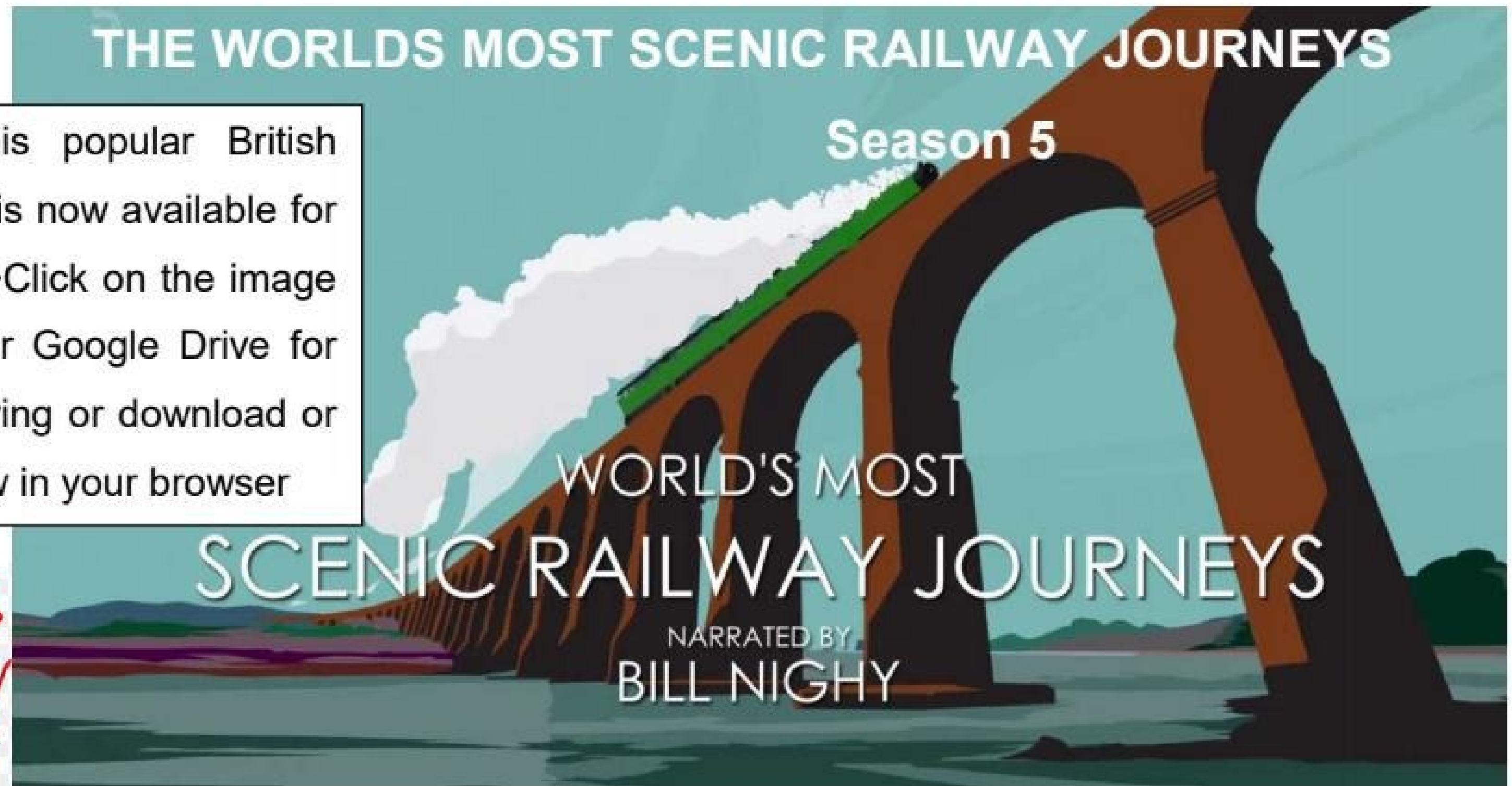


Rechts

THE WORLDS MOST SCENIC RAILWAY JOURNEYS

Season 5 of this popular British Channel 5 Series is now available for you to enjoy; Ctrl+Click on the image to take you to our Google Drive for uninterrupted viewing or download or copy the link below in your browser

WATCH THIS VIDEO NOW



<https://drive.google.com/drive/folders/18wHINciMfBtaZn8f8WslZDUXnBxmYZNC?usp=sharing>



5.1 Australia - The fifth series of the documentary series opens down under as we travel on one of the oldest steam railways in Australia on a coast-to-coast journey, and climb through the Blue Mountains aboard the iconic Indian Pacific.

5.2 Sweden - Our magical mid-summer railway journey through central Sweden starts in Dalarna.



5.3 Alaska - Our journey begins in Anchorage, Alaska, where we board a luxury passenger train. We then head north to enter the vast wilderness of Alaska, America's largest and remotest state.

5.4 A close look is taken at the Far North Line, which travels from Inverness in the Highlands of Scotland to Wick in Caithness County, with a daily Scot Rail service.



5.5 York to Edinburgh Get aboard the magnificent steam train Tornado, coupled with 13 luxury vintage carriages.



WEATHERING ROADS

<https://model-railroad-hobbyist.com/> Rick Sutton

The road is built using 2mm EVA foam sheets. The foam was painted and then striped. All the asphalt cracks are drawn on with artist's pens shown in the picture. Turpentine with a small amount of raw umber oil paint was carefully added to the cracks. Decals were then applied. The road has a crown of small strips of foam applied down the centreline under the road surface. Chalks from Brandon and Pan Pastel applied and then entire surface is hit with dullcote.

I'm really bad about keeping notes on colour. One of the main reasons is I do a lot of mixing and use many different mfg.'s paints. Looking at the scraps of road that have around with base colour on them and remembering that the foam soaks up a lot of paint as it dries here's what I'm pretty sure I did. The base coat is probably standard latex house paint. I use a couple of different dark charcoal colours from the same paint family from Sherwin Williams latex house paint. It took several coats as the colour changed as it dried. Colours were "fate" and "stone cutter" At the price of hobby paints a quart of house paint is so much more economical for large coverage.



After drying I probably sponged some hobby paint on to give random variations. Vallejo is animal) in excellent paint for small areas for colour changes. I use their “panzer” varieties. Until you get the foam properly sealed with the acrylic paints you have to hold off on any petroleum based paint.



ROADS #2



Watch **Luke Towan's** video "Realistic Scenery Vol 5 - A Drive through Yellowstone" for a highly detailed tutorial on using the **Woodland Scenics Road System products** and how to use them to get great results.

<https://www.youtube.com/watch?v=psgXEVK9pbc>



Overall I'm happier with the road on the left, the road on the right was made the same way however I tried using a template to airbrush the road markings on. First of all, the markings are a little chunky and second it takes a bit of setting up (airbrush), not to mention it's difficult to get the template to work on corners. But that said I still have some more experiments to do with the airbrushing method.

The road on the left was made using all Woodland Scenics products:

- Smooth It
- Paving Tape
- Top Coat - Asphalt
- Top Coat - Concrete
- Road Striping Pen - Yellow
- Flexi Edge



And the only things used that weren't Woodland Scenics was:

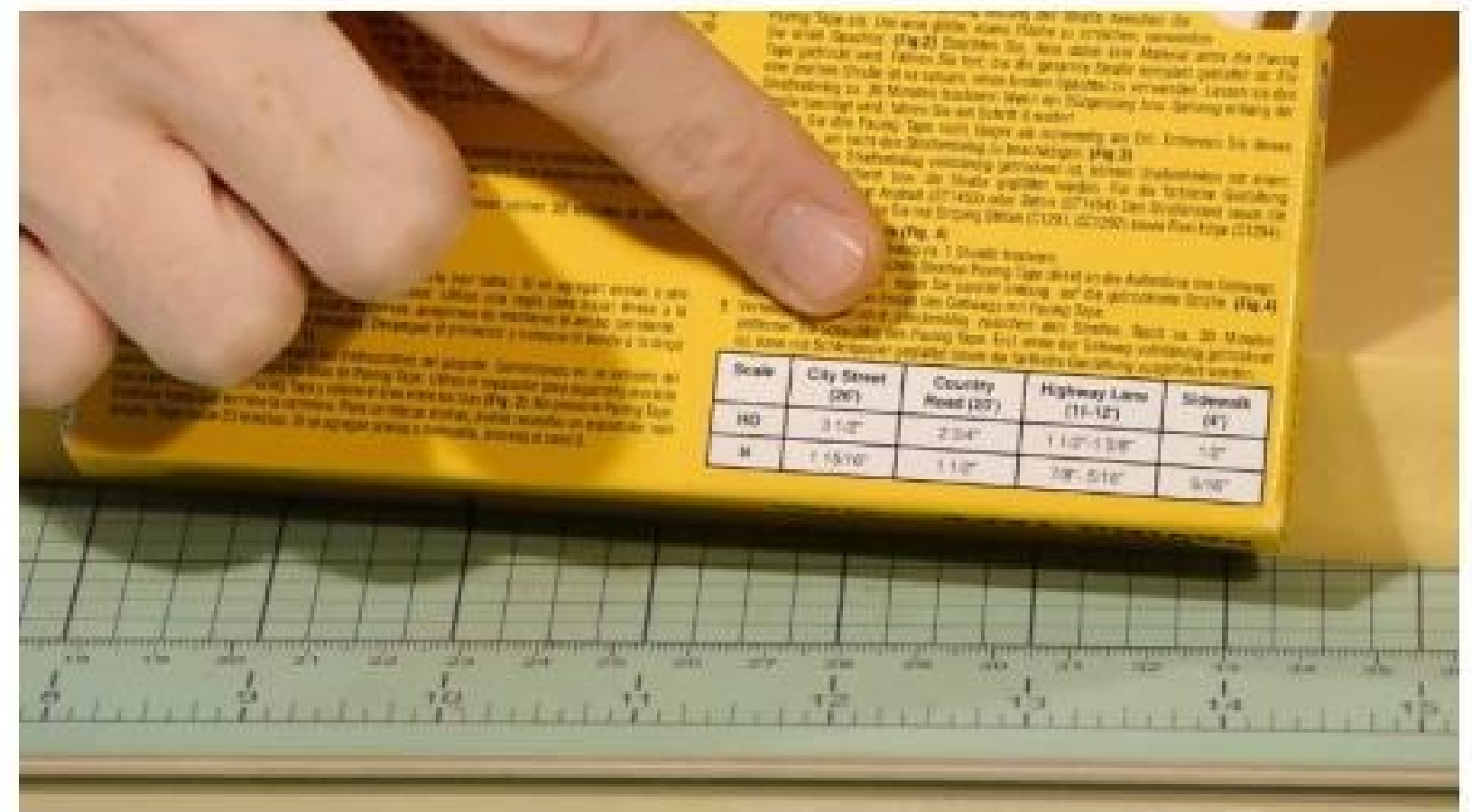
- Sand Paper - 600 grit
- Felt Tip Marker (Cracks in the road surface)
- Semi-Circle Craft Sponge (The grey textured effect)

You can see on the white road that I used the 'white striping pen' to see how it compared to the airbrush, I kind of like the roughness that the pen leaves as opposed the perfect lines left by the airbrush.

Here is a quick dot point description of the steps I took:

1. Use the paving tape to mark out the road on each side (Standard road dimensions are on the package)
2. Spread the 'Smooth It' down the road and let dry, then once dry remove the 'paving tape'.
3. Sand the road surface to make it smooth
4. Base coat the road with the 'Asphalt' paint
5. Texture the road with the sponge - the colour is a small amount of 'concrete' mixed with some 'asphalt' to get a bluish grey colour. I vary the amounts slightly to highlight the edges and centre of the road, giving a no uniform colour to indicate where the cars would drive (it's very subtle).
6. Using the 'Flexi Edge' and the 'Road Striping Pen', mark the road as appropriate using the desired colour. The 'Flexi Edge' has markings to indicate the spacing of each dashed line.
7. Create some cracks using the felt tip pen.

In my opinion the final effect using the felt tip pen to make the cracks is the biggest transformation, it truly looks like a road once the cracks appear!



P.S. The products I used were not without their problems, the only downsides were -

- The 'Flexi Edge' is difficult to get perfectly straight, it's doable but it requires patience.
- The 'Striping Pens' will leave a groove in the plaster if you press too hard, I found lightly touching the pen on the surface works ok but you may need to make a second pass.
- Woodland Scenics also have a 'Road Stripe Removal Pen' which I used but it has the tenancy to

remove the textured layer and base coat if you're not careful.

Overall I'm quite happy with the experiments so far and I'm looking forward to using this road on my layout.



Luke Towan



LUKE TOWAN:

Create an amazing diorama with moving cars & bicycles



<https://www.youtube.com/watch?v= nucQuijwkf0>



City Street with Working Bicycles & Trucks



<https://youtu.be/7oPT2Lkj1Tg>



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EUROSPoor 2021 DIORAMA Winners

A4 Winner 2021:

“Krommelwatan 7” - Henk van Rhenen



2nd place: “Railway food market” - Paul Eijkenaar



3rd place: “Wederopbouw” - Jan Kolkman



MODEL SCENIC PRODUCTS

All club members can get 10% discount

Order through the club or just mention the club when an order is placed

Contact Chris Lourens: chris.modelscenic@gmail.com



THE GREAT LITTLE TRAIN COMPETITION

aka “De Grote Kleine Treinencompetitie”

Six teams had entered the competition but there could only be one winner.

Two teams, Orange and Pink, battled it out in the finals when the theme was “The Future”. Both teams not only has to complete the task in two instead of the

3 days they have had up to now. They also had to line up all the previous 5 layouts with the final one so that a special train could run along all six!

In the 5th challenge, Team Pink had ended their presentation with a rocket launch to the ‘moon’. Their design for “The Future” is a moonscape, complete with working merry go round and moon boarding aliens!



Team Orange chose a two island scenario layout: One detailed what our world would look like when global warming and pollution is not stopped whilst the other showed the possible eco-friendly scene.



Two aquariums below the layout completed the scene.



The judges awarded the following scores:

	Team Pink	Team Orange
Creativity:	8	8
Build quality and technique:	8	9

Team Orange won with a narrow margin and received the title of “Best Model Rail Builders of the Netherlands” and the golden locomotive trophy. In addition, their layout will be displayed at Utrecht Central Station (the country’s busiest) and on the next Model Train Show.



Dream trains

No shipping costs for combined orders of R2000 or more. Shop online and fill your cart, even if less than R2000, then **contact PEMRC Graham Chapman**, to combine your order with fellow club members and all will save.



Miniatur Wunderland Herpa Truck 2021 - 20 Years Wunderland

In a limited edition of 1000 pieces and exclusively from the Miniatur Wunderland, this HO model by Herpa of a Volvo truck and trailer was specially designed to celebrate the growth Miwula has experienced the last 20 years.



The display is adapted to the right and left according to the direction of travel. A special "picture in picture" effect was also used to display on the tailgate of the trailer.

SOUTH AMERICA UPDATE

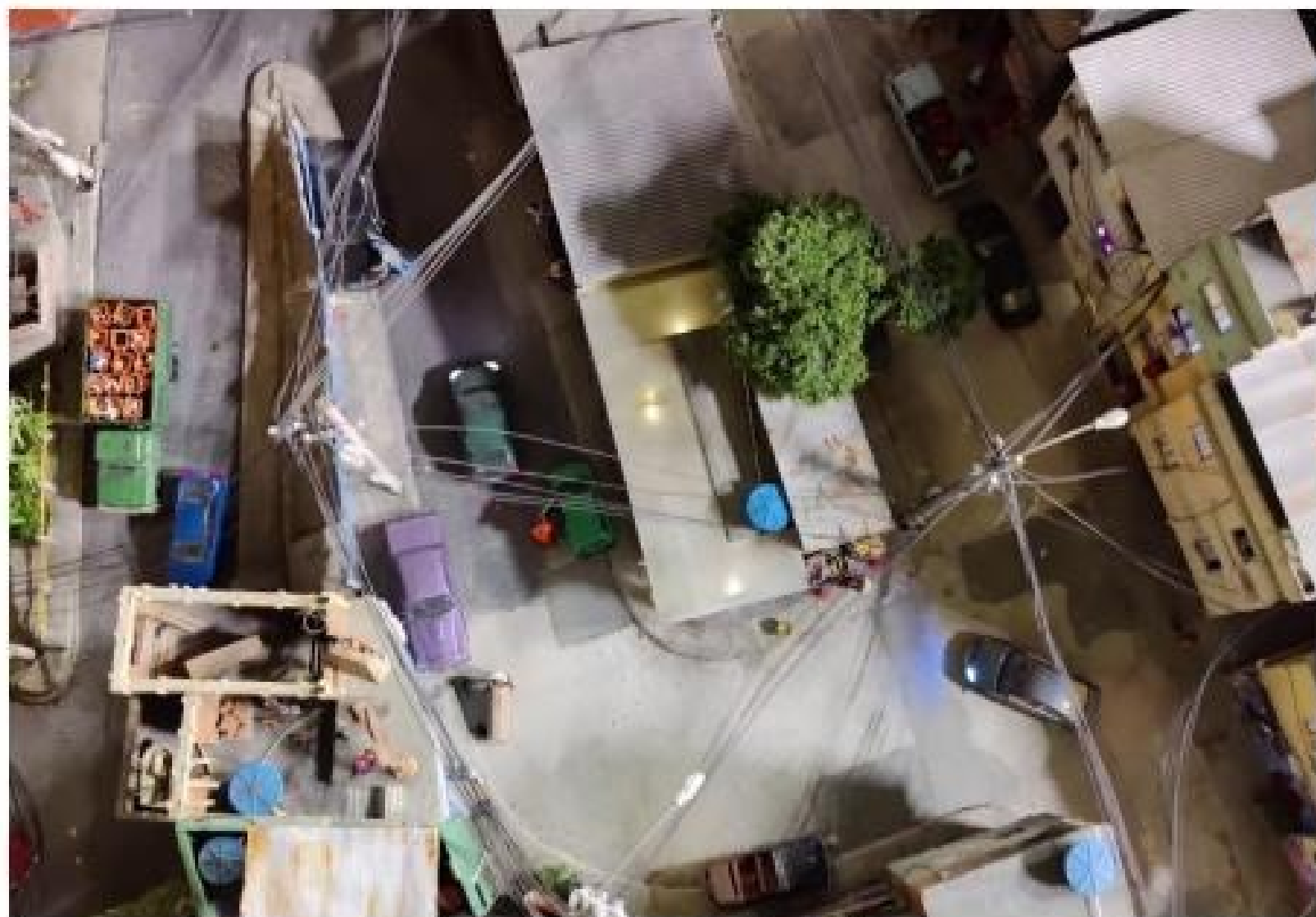
The South America section with Rio de Janeiro as feature opens on Wed. 1 Dec 2021. View the video and see the time-lapse of the 4 years of work involved. This exhibit was built mainly by the family Martinez in Brazil with additional effects and push button actions by the Miwula team.

Part 1 <https://www.youtube.com/watch?v= QW3rPsY3hA>

Part 2 <https://www.youtube.com/watch?v=l6bP9dBEApY>

Here are some screenshots as appetiser.

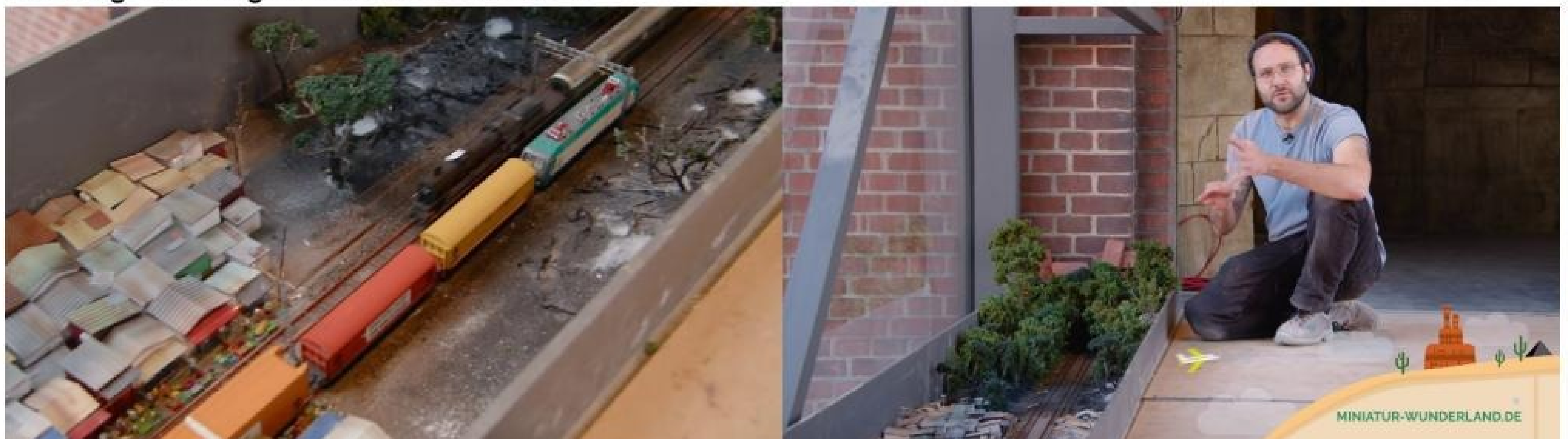






Of course to get to the South America exhibit, you need to cross the canal via the new elevated bridge to the building opposite. Typical Miwula style, you will be engaged by exhibits on the bridge:

“[The world from above](#)”, consisting of various dioramas whilst at the same time, trains are also crossing the bridge to the new continent.



ONE OF GERMANY'S FINEST AND MOST UNKNOWN PRIVATE MODEL RAILWAY LAYOUTS IN N SCALE



https://youtu.be/P5Nb_-q1Arl

Sometimes model railroading causes the question of whether genius and madness are related? In this rail transport modelling video, we find the answer to whether a crazy model railroader or a legendary genius has built this very large model railway layout of the German city of Stuttgart.



This miniature world built in N scale is the life's work of **Wolfgang Frey**. He was a German model railway enthusiast who passed away in 2012. In November 1978, Wolfgang Frey had started building his model train layout. His dream was to build an exact scale model of Stuttgart's central main station, of all platforms, of all houses and buildings, of all roads, of all tramway lines, of all signal boxes, of all freight stations, of all locomotive sheds and of all surrounding railway lines.

Every day, mostly in the evening hours when he came back from work, he built this model railway. He built for more than 30 years until his death. We are not talking about a diorama, which has an area of one or two square meters. No, we are talking about a private miniature world that covers more than **800 square meters**. Everything you see in this video is a unique rarity.

Originally, Wolfgang Frey had started building in HO scale. Soon, he had to realise that the dimensions of his replica would become much too large. Therefore, he decided to switch to N scale. So he started to build the large front building of Stuttgart's central main station. This was followed by the platforms and the surrounding railway stations. Wolfgang Frey built all himself.

When watching this video, many viewers of Pilentum Television will notice that the model railway layout has a lot of defects. Yes, it is in poor condition. But Wolfgang Frey's sudden death - almost ten years ago - led to the fact that we discover a unique but unfortunately never completed work of art that has suffered a lot from storage, transport and water damage. It was a private model railway layout, and after the death of

Wolfgang Frey in 2012, the layout had only been accessible to a handful of people. Indeed, the N scale layout has almost been forgotten.

Thanks to the efforts of **Rainer Braun**, who took over the heritage of Wolfgang Frey, and thanks to the efforts of the enthusiastic members of a local model railway club, it was possible to dismantle fragments, modules and segments. They rebuild not all, but many sections of the original model railway layout into a permanent exhibition, which is now called “**Stellwerk S**”. Anyone who is familiar with railway modelling knows the catastrophic consequences of dismantling and rebuilding - especially when a model railroad layout was originally designed as a permanent, fixed layout for eternity.

All this might explain why only a few of the many tracks are currently used by model trains, why there is no digital model railway control like DCC and why thousands of cables and points have not yet been wired. The construction plan and the wiring existed in Wolfgang Frey's mind and were permanently lost with his death. Of course, it would be nice if the rolling stock, which consists of an incredible number of locomotives and wagons, could run every second in the large main station or shunt in the railway depot on the other site. But it takes a lot of time to turn **Stuttgart's** model railway into a “Miniatur Wunderland”.

However, Wolfgang Frey never had the intention of building a “Miniature Wunderland”. He wanted to create **a true-to-the-original city model of Stuttgart** and of its railway infrastructure. He did not build a commercial model train exhibition. This fact becomes very clear when we analyse the dimensions that the model railway layout had shortly before Wolfgang Frey passed away: The layout required an area of almost 800 square meters; this included about 90 square meters where a replica of the original signal box was installed, which served as the control room for the model trains.

In real life, Wolfgang Frey was a train dispatcher, so that railway operations and railway technology on his model railway had to match the original railway system of the “Deutsche Bundesbahn”. 17 computers were needed to control the model trains. Hardware and software had to coordinate 540 switches or points and more than 90 signals.

When Wolfgang Frey was four years old, his parents gave him his first toy train set. Since then he has been infected by the railway passion both privately and professionally. From November 1978 to October 2012, Wolfgang Frey built one of the largest private model railways in Germany. Every switch, every point, every street, every road and every building of the city of Stuttgart can be found on the model railway layout true to the original. Today, it is still unbelievable that Wolfgang Frey built this miniature world on his own. It is amazing that he has worked with such extreme attention to detail that this model railway layout allows us to travel back in time today.

Markus Lenz, <https://www.pilentum-television.com>



Crafty Arts

10% discount via their discount card scheme. Collaborate with Aubrey de Chalain on building dioramas and exhibits in their newly extended premises.

ONE OF GERMANY'S MOST EXTRAORDINARY HO SCALE MODEL RAILROAD LAYOUTS <https://youtu.be/mZHNdVXrOQ8>



In this video **Pilentum Television** presents a German model railway layout, which contains so many beautiful details that you can't believe your eyes. Although the **HO gauge model trains**, especially the electric locomotives run with pantographs up, they fade into the background when you see the extraordinary beauty of the model railroad scenery. There are such beautiful buildings with incredibly detailed interiors for example the workshop for tractors, the locomotive shed, the old gas station or the farm that you think you are in a real world. But it's just a miniature world built by a German manufacturer for professional model railroading in 1/87 scale ("Stellwerk-Ost").

The focus of this HO scale layout is a double-tracked, electrified main line with a branching local railroad. The miniature world is set in Era III on an area of about 380 cm x 270 cm. On the layout are mainly train sets in operation that were used by the German Federal Railways between the 1960's and 1980's. It goes without saying that the model trains have also been weathered perfectly. They look old, rusty and used. The main line is spanned by a large, rusted steel bridge, over which runs the branch line leading to the station. The station is located in the small village of Lindental. Therefore, the name of the entire model railway layout is also Lindental. Lindental is a fictional village in Bavaria. The village only exists in this miniature world.

Steam trains arrive at the railway station and rail buses depart. Next to the station there is a freight loading station and a small locomotive shed for maintenance work. This locomotive shed is completely furnished - it's amazing! The model railway layout was built for a customer who is a Märklin fan. Underneath the layout are four hidden fiddle yards where trains for the main line and branch line are parked.

The entire rail network is controlled digitally via the PC software "Train Controller".

MORE YT VIDEOS

Large Private Model Railroad H.O. Scale Gauge Train Layout of Pete Walton's awesome trains. Very detailed layout but unstable handheld video.

28 minutes HD 1080px

<https://youtu.be/cvyRTdNsQSE>

This model train layout may be bigger than your house – Lionel O scale. TV broadcast.

3 minute overview 720px

https://youtu.be/ZeJRO_UGe2A

Tony Lash's Masterpiece Model Railroad O gauge

4 minutes HD 1080px

<https://youtu.be/9iEweZKu1Ow>

Big Boys and Great Toys Live Steam Garden Railway and Real Steam Trains - from 5 inch gauge up to 7 1/4 inch gauge

30 minutes 720px Pilentum TV

<https://youtu.be/wG7nvWRxGXs>

Large Private Model Railroad RR HO H.O. Scale Gauge Train Layout of Pete Walton's awesome trains





TRAIN SIDING APP for Mobile phones

<https://www.trainsiding.com/>

Also on Facebook <https://www.facebook.com/trainsiding/>



This is a new social media app developed by Michael Schuijff, available for free from the Google or Apple play store. TRAIN SIDING is a social media platform for railway enthusiasts, train spotters and railway modellers from around the world.

TRAIN SIDING is an online railway community for people who love steam engines, diesel locomotives and high speed trains. Join them and share your railway photos & videos with thousands of like-minded people from around the world!

Features on the TRAIN SIDING app include:

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- * Get access to dedicated timelines for modellers, narrow gauge enthusiasts and subways
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- * Interact with other users, like and subscribe to other profiles
- * Increase exposure by using relevant hashtags in your posts
- * Promote your TRAIN SIDING profile on other platforms

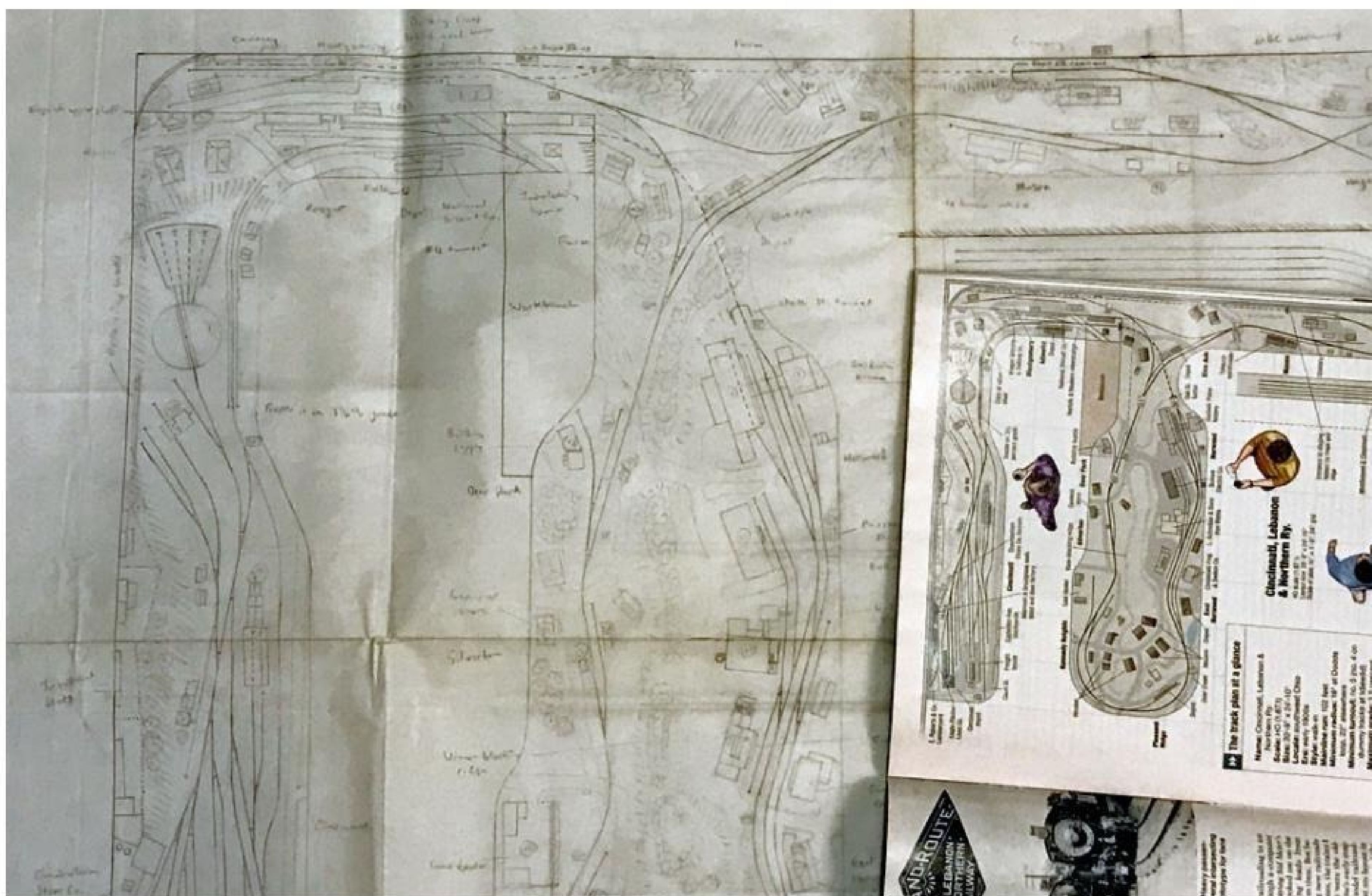
5TRAIN SIDING is your dedicated social media app about trains, model railways and simulators. Get access to posts of fellow train spotters and other railway enthusiasts. Search hashtags and trending topics to stay updated on your friends and their photos & videos.

<https://youtu.be/XLg8L01zHtw>



SKETCHING WITH STEVE:

WHAT'S WRONG WITH THIS PICTURE?



Senior associate editor Steven Otte drew this track plan for Model Railroader long before Sketches With Steve came along. It was also back when he didn't know as much about track planning as he does now. In this instalment, Steve will tell you what's wrong with the plan, while explaining the difference between a walk-in and walk around track plan. It was 2008, and I'd been with Model Railroader less than a year. Finally, the resources to build my HO scale version of the Cincinnati, Lebanon & Northern Ry. in 1906 were within my reach! I drew this track plan to fit in the 2½-car garage belonging to my then-fiancée, now wife, Traci, and was immensely proud when it was published in MR's September 2008 issue. So let's examine my mistakes in this track plan.

Luckily, this track plan was never built. When my mentor, MR executive editor Andy Sperandio, looked at it, he just shook his head. Today, 13 years later, I see what I couldn't see at the time, but he did. Let's see what we can learn from my youthful mistakes. Don't worry if you can't read the photo of my faded drawing; Here is the [link to a PDF of the published version](#).

But first, I'll practice a little self-care by listing the things I still think I did right on this track plan. By selectively compressing the long, boring, rural northern half of the layout into a shelf along the garage's back wall, I managed to model the prototype's entire 29-mile route in a space just under 21 x 25 feet, and still leave room for Traci to park her car. The track arrangements at Cincinnati and Lebanon are fairly close to the prototype, thanks to good diagrams in my reference book, Narrow Gauge in Ohio (Pruett Publishing Co., out of print). I included hidden staging to bring traffic in from the line's northern connections. There's a ton of

operational opportunities all along the line, from depots and industries to team tracks and interchanges. I avoided putting the busy Cincinnati yards and industrial Norwood back-to-back, so operators wouldn't get in each other's way. And I understood that gentle curves that don't parallel the bench work edges look more attractive and interesting than ruler-straight main lines that do.

Now, let's examine the mistakes in this track plan. First of all, it's too crowded. Between Cincinnati and the wye at Blue Ash, the end of the commuter district, are seven named towns, four with depots and three more with passenger sheds. There's just too much going on for this kind of space. As a result, both visual and operational realism suffer. The industrial area in Norwood is fine – in fact, it could be bigger – but the commuter stops at Silverton and Deer Park are only 3 feet apart! I should have added industries to East Norwood and modelled only two of the suburbs on the other side of the peninsula. That would let the commuter trains travel at least a few feet between stops.

Speaking of commuter stops, one thing I'm embarrassed to admit I didn't know at the time was that stations always go on the main line. At many locations on this plan, I placed depots and passenger platforms along passing tracks, stub-ended spurs, and even an interchange. Likewise, there are a few spots where I have the main line going through the diverging route of a turnout. That's not how prototype railroads did things.

A side effect of the crowding is that many of the team tracks and industrial spurs are less than 2 feet long. That's too short even for the 34-foot boxcars of 1906, when the layout is set. Many spurs as shown would only be able to hold one car. And the only sizable passing track on the layout is at Norwood. Trains would be limited to the length of the siding at Blue Ash.

While it's good that I included staging, it's poorly implemented. Both the northern staging yard and the single muzzle-loaded staging track that feeds the Middletown & Cincinnati interchange are under the scenery and pushed back against the wall. Fiddle staging would be impossible, and if there were a derailment back there, reaching it would be difficult.

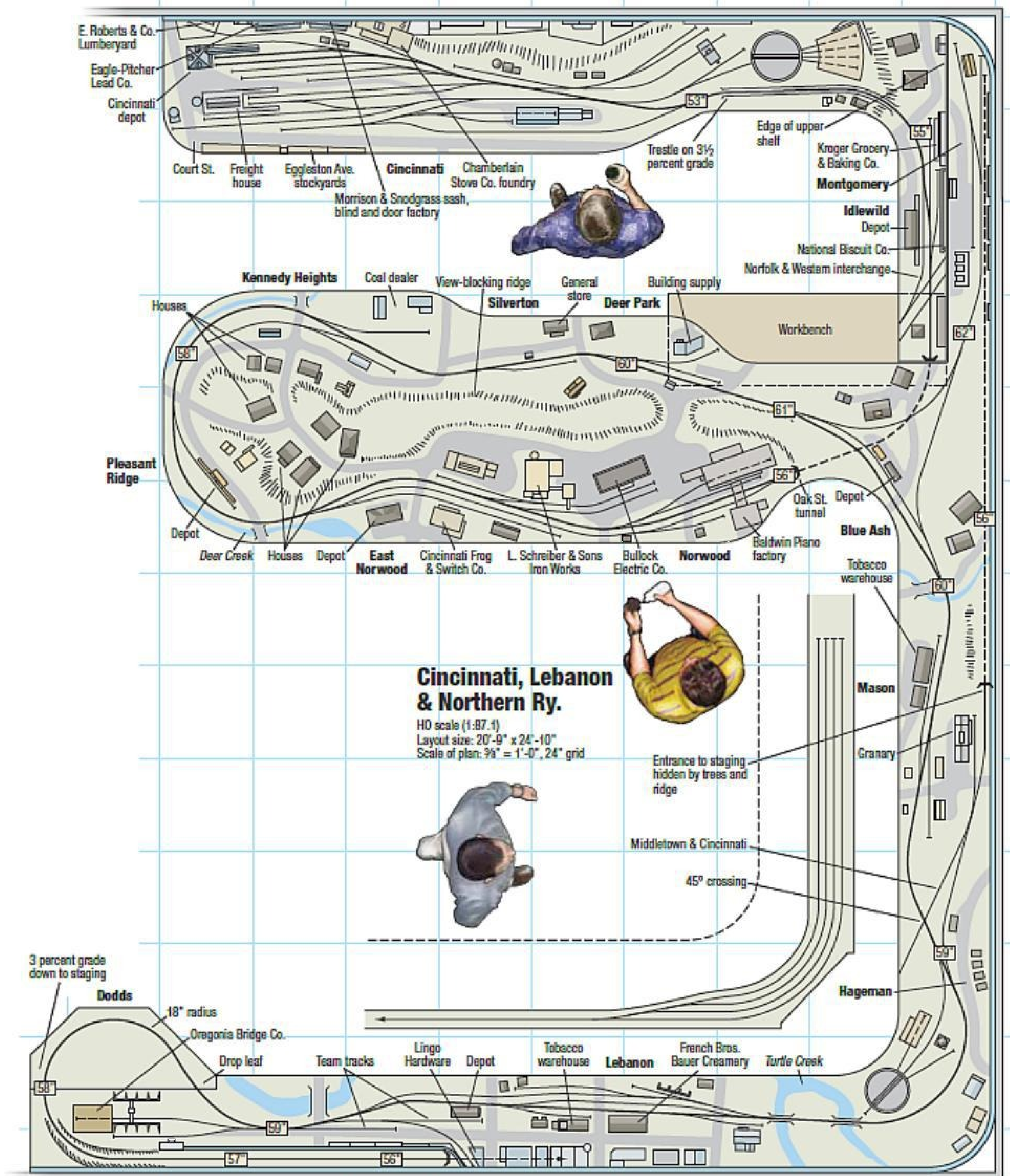
But the biggest problem with the track plan is the one that made Andy shake his head. Do you see it? It's under the Blue Ash wye. In my effort to keep the Cincinnati and Norwood operators from bumping into each other, I flipped the industrial district to the other side of the peninsula. This makes it impossible for an operator to follow his train along the line, since twice he must walk around from Idlewild to Blue Ash while his train moves out of sight.

So how to fix this problem without crowding the aisle? One idea would be to place Norwood along the back wall (to the right of the plan), put the Blue Ash wye where Lebanon is, and extend a peninsula into the centre of the room from there, with rural Mason and Hageman on one side and Lebanon on the other. Exposed staging could then extend along the front wall, on the left. This would eliminate the space for my wife to park her car, but we're talking about improving the track plan, not my marriage.

The other way would be to flip the plan south-to-north. Put Cincinnati where Lebanon is, extend Norwood and the suburbs up the back wall, wedge the Blue Ash wye into the top-right corner, then wind the rest of the mainline along a peninsula branching off the top left. Operators would view the main line from the north

side, contrary to the usual way of doing things, and losing the Montgomery branch isn't ideal. But compromises are often necessary when dealing with what the dean of track planning, John Armstrong, called "givens" – factors that can't be changed, like the size and shape of your layout space.

Oh, right, the difference between walk-in and walk around layouts. A walk-in layout has aisles you can walk into, with layout on both sides. A walk around is one where you can follow your train as it travels from one end to the other. A track plan can be both, but as published, my plan isn't. It's a walk-in, but not a walk around because of that flip-flop on the peninsula. All clear?



BELT RAILWAY OF CHICAGO

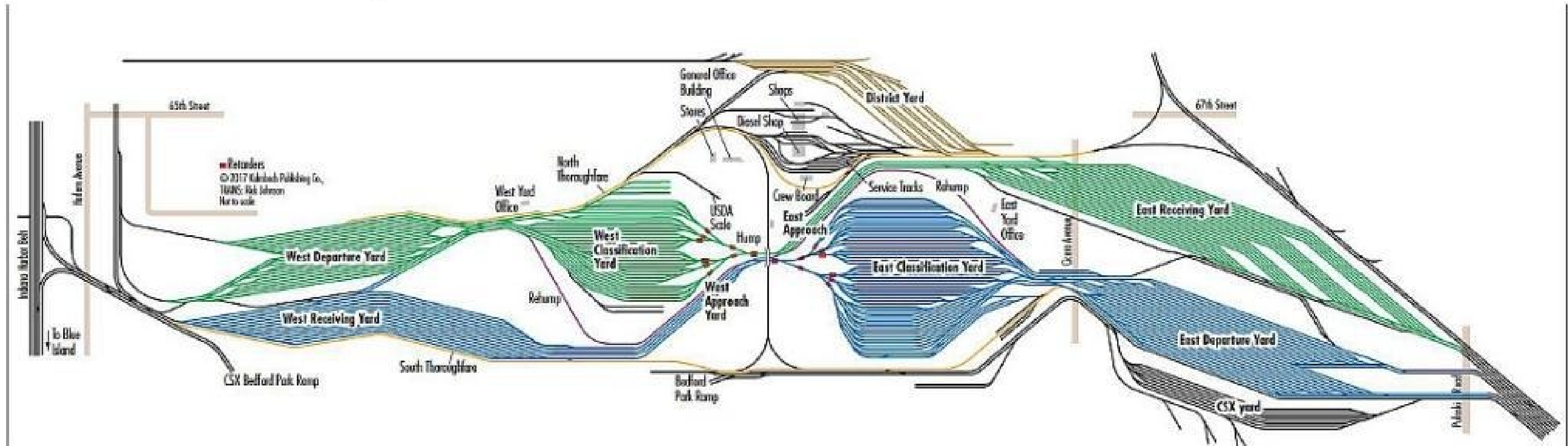
[Wikipedia, the free encyclopaedia](https://en.wikipedia.org/wiki/Belt_Railway_of_Chicago)



Dates of operation: 1882–present

Track gauge: 4 ft. 8+1/2 in (1,435 mm)

The BRC has 28 miles (45 km) of mainline route with interchanges to each of its owner railroads, and over 300 miles (500 km) of switching tracks. The vast majority of the latter are located in the Clearing Yard



The Belt Railway Company of Chicago, is the largest switching terminal railroad in the United States.

It is co-owned by six Class I railroads — BNSF Railway, Canadian National Railway, Canadian Pacific Railway (the BRC's north-south main line's northern terminus is, like the Indiana Harbour Belt, the Milwaukee District West Line in Chicago's Cragin neighbourhood) CSX Transportation, Norfolk Southern Railway, and Union Pacific Railroad — each of which uses the switching and interchange facilities of the BRC. Owner lines and other railroads bring their trains to the Belt Railway to be separated, classified, and re-blocked into new trains for departure. The BRC also provides rail terminal services to approximately 100 local manufacturing industries. The company employs about 440 people, including its own police force.

The Clearing Yard, is one of the largest hump classification facilities in the United States. Some 5.5 miles in length and covering 786 acres (3.2 km²), the yard supports more than 250 miles (400 km) of track. It has six main subdivisions; one arrival, classification, and departure yard in the eastbound and westbound directions.



At the heart of the yard is the wicket-shaped tower which straddles the hump and from which the switches and retarders are controlled of both east- and westbound classification yards to either side of it. Using computer controls, the hump tower efficiently dispatches more than 8,400 rail cars per day. Operating around the clock, employees are able to classify between 40 and 50 miles of consists daily.



The BRC was noted for a fleet of Alco-built locomotives; the BRC owned six 2400HP C424's numbered 600-605. All six locomotives were removed from BRC's roster and sold. 600 and 601 have been scrapped. BRC currently operates rebuilt

Electro-Motive Diesel locomotives, such as the SD38, SD40, GP38, and 1500-series switchers.

As is popular in large hump yards, slugs are used in Clearing Yard to shove the hump. In railroading, a slug is a version of a diesel-electric locomotive which lacks a prime mover, and often a cab. It derives the electrical power needed to operate its traction motors and motor controls from a fully-powered mother locomotive. When coupled together it takes advantage of the excess current that the mother's diesel-electric locomotive produces at low speed, providing additional horsepower and braking at such operation without the expense of a full locomotive. A slug is distinct from a B Unit, which has both a prime mover and traction motors but no cab. A slug may retain an operator's cab to allow engineers to operate a train with the slug in the lead, or may have the cab and much of the body removed to save space and allow the operator in the mother better rear visibility.



A Low-profile slug behind a full-sized diesel. In contrast, a B unit has both a prime mover and traction motors, but never a cab.



A Special Promotional Message

**Model
Railroader.**
Model railroading is fun!

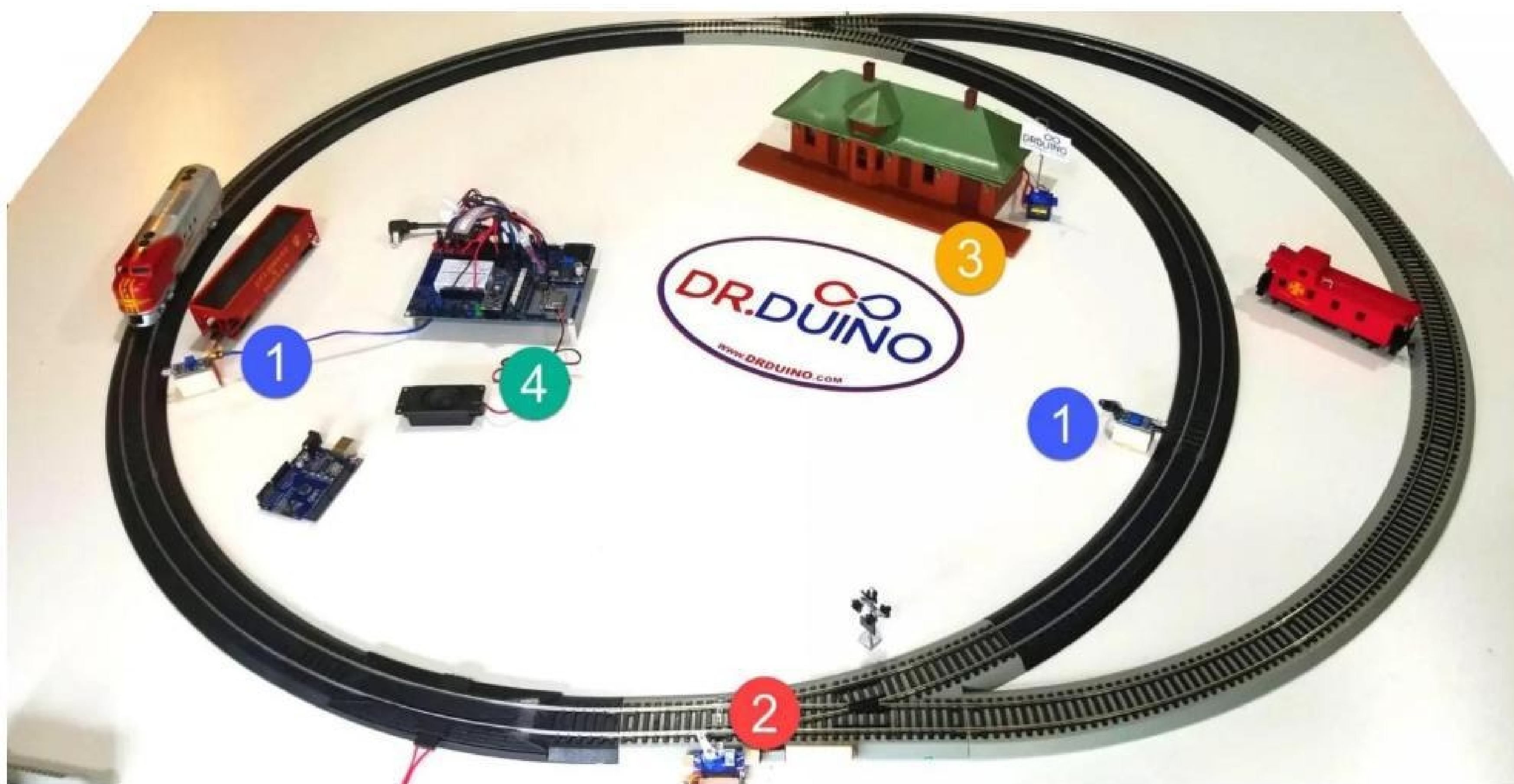


Have you ever wanted to automate certain parts of your model rail layout but just didn't even know where to start? I know I have but it wasn't till my friend told me about something he saw in **Model Railroader magazine** that I was able to bring my layout to life!

Model rail is my little slice of heaven, it's my spot where I go whenever I need to unwind for a bit. The clickity clack of the track, the smell of the smoke billowing from the locomotive, the fine detail I poured into all my buildings, but I've always felt that something was missing. I always wanted to be able to detect where my train was and then based on its location, automatically trigger a turnouts, sound & lighting effects. That kind of interaction would really allow me to build my own little world, to breathe life into it.

Well, last week my buddy Aaron brought over a copy of Model Railroader magazine and showed me something called the **Dr.Duino Explorer Model Railroad edition**.

It was actually reviewed by Model Railroader themselves which was impressive. I have to say I was absolutely blown away, I immediately saw how this could allow me to build the world I wanted!

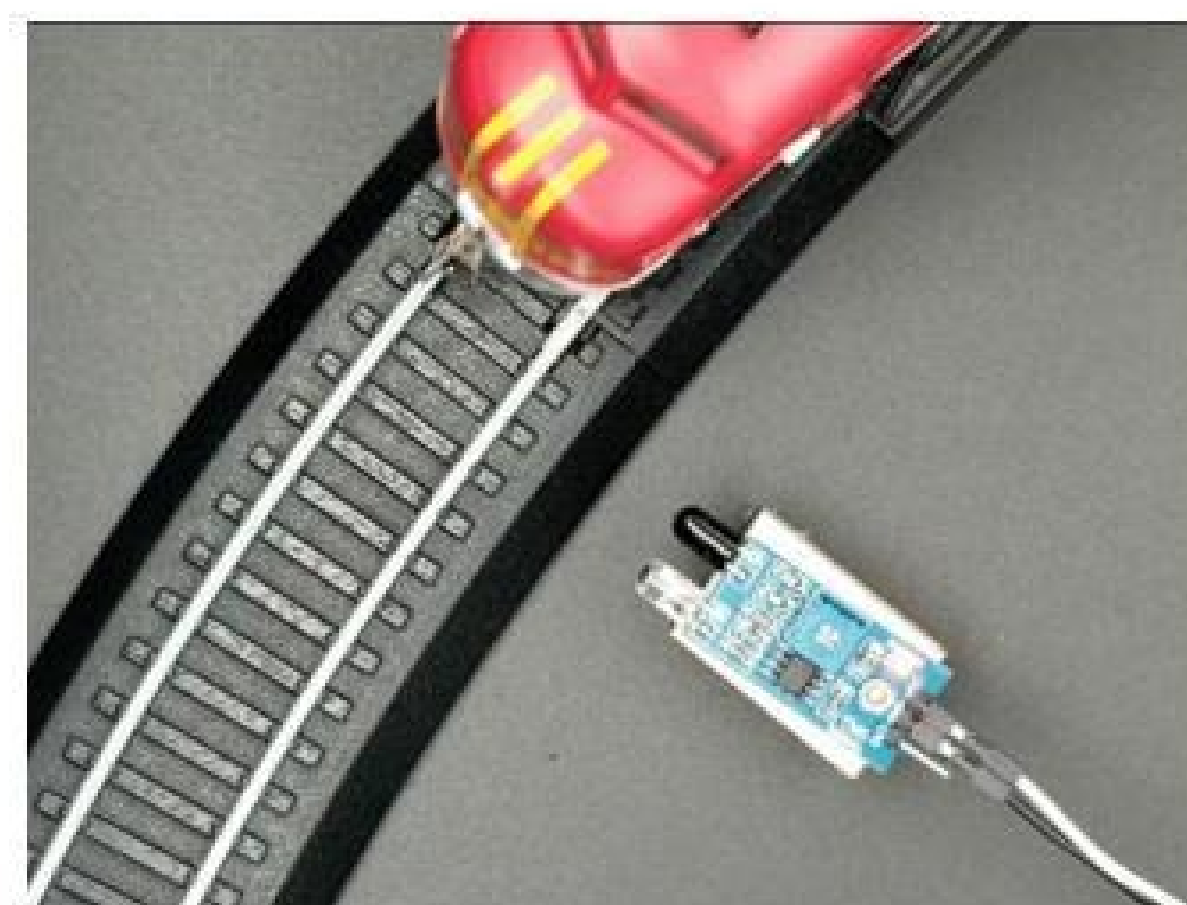


It's a really unique **Arduino powered kit** which not only shows you how to build the exact layout you see above, it also **TEACHES YOU** how to apply **Arduino** to your own layout. If you're not familiar **Arduino** is an Italian based company that created an easy-to-use miniature motherboard. They come in lots of different flavours but this kit comes with an **Arduino Nano**, but can also be used with an **Arduino Uno** clone like you see below (right). PLUS no coding required unless you wanted to make it do something more specific! More on this in a bit.



Dr.Duino Brings The Power Of Arduino To Model Railroad!

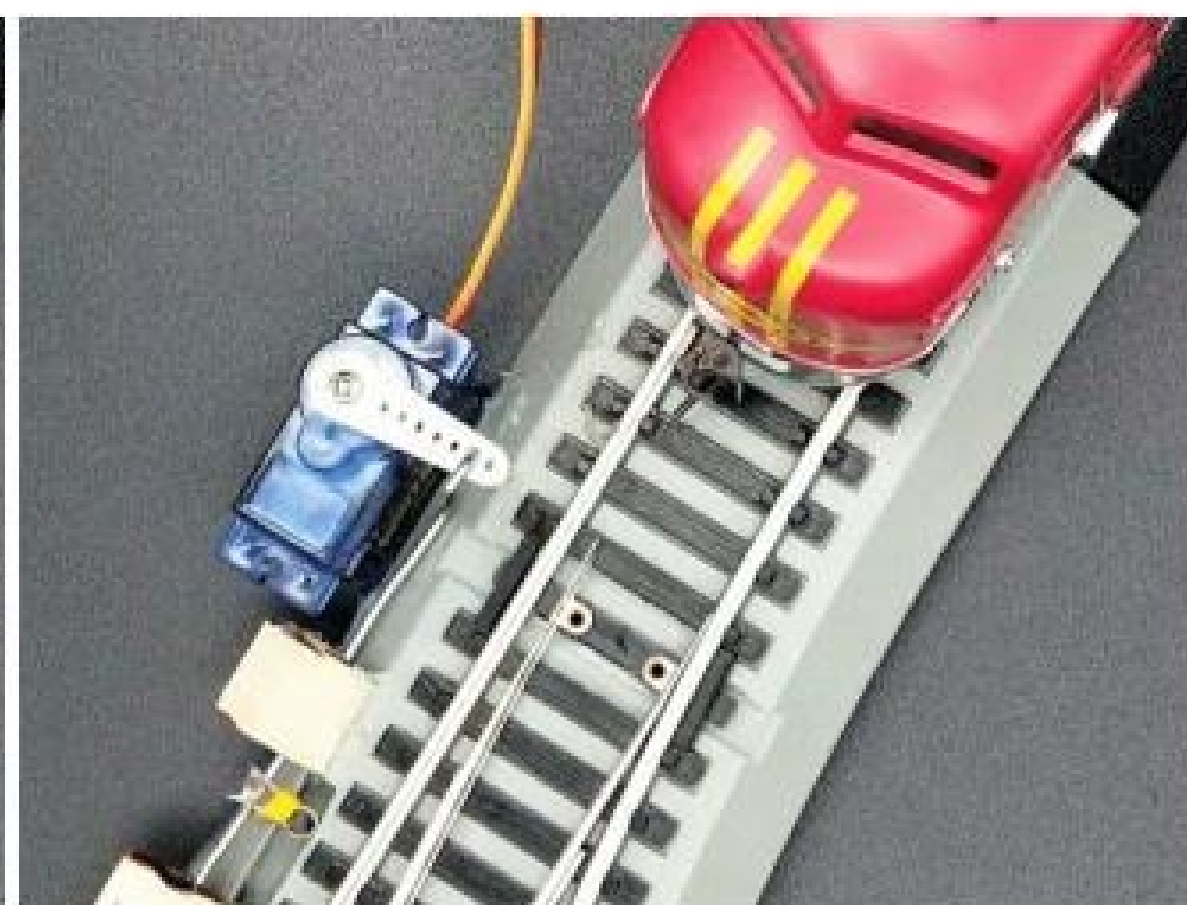
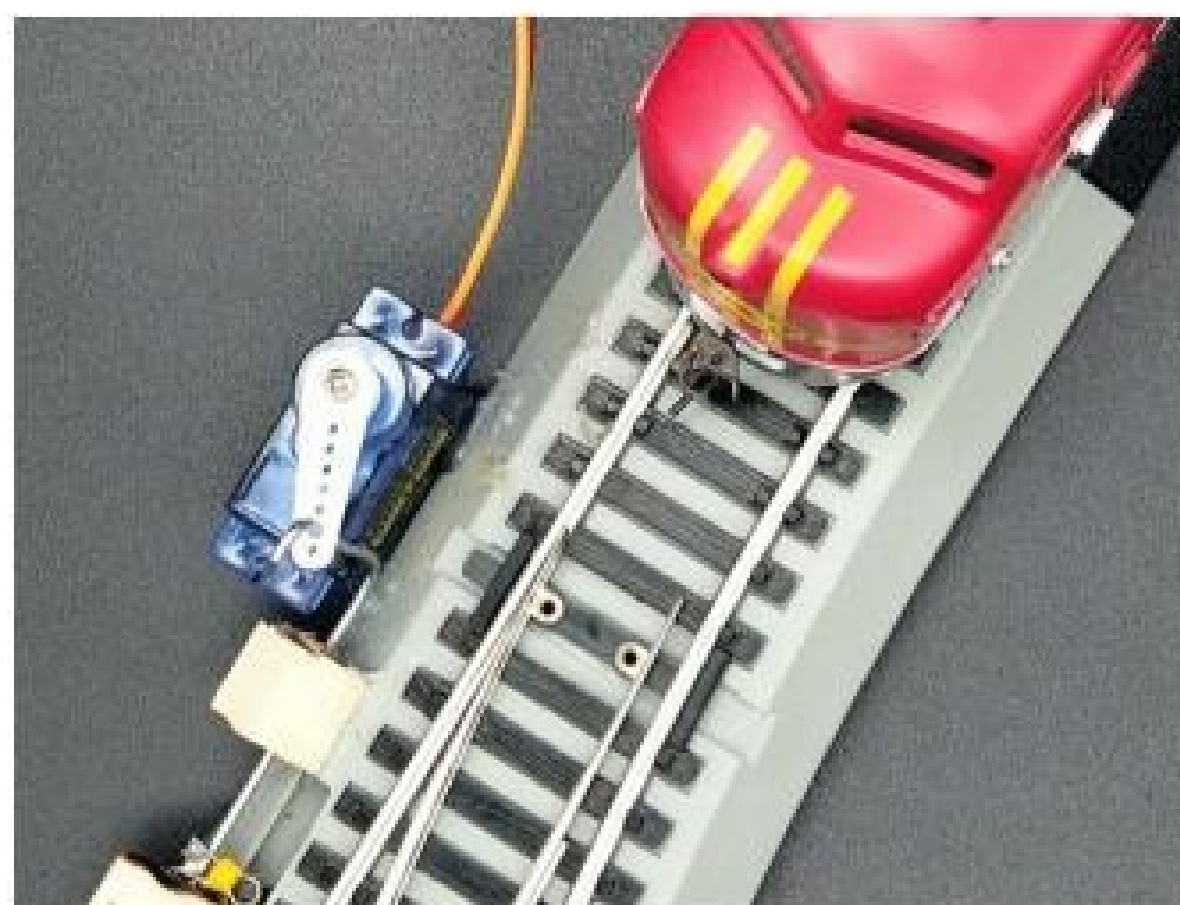
What I thought was really interesting is how the **Dr.Duino Kit** breaks down how exactly to use Arduino with my layout. It is taught in 5 different modules which is meant to teach you how to incorporate servo controlled turn outs, music & sound effects, block sensors and lighting effects into your model rail. Let's break it down!



Without question, I'm always trying to figure out how I can locate where my train is on particular section of track. Well, turns out there's a special sensor which is perfect for this. It's called a block sensor, as soon as the train crosses its path it sends a signal to the Arduino which can then easily trigger some other action. This kit actually has 2 of them, but you can add as many as you like.

Servo Controlled Turn Outs!

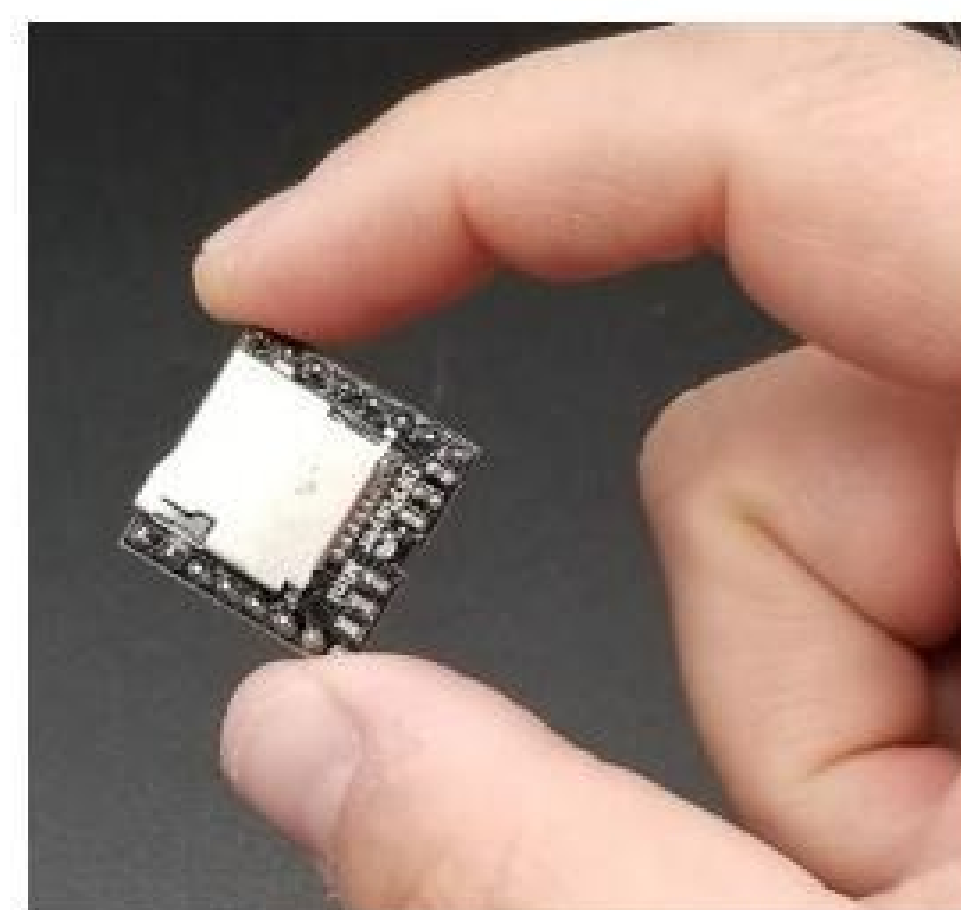
Parts of my layout have an older style turn out which I can't control electrically, so I need a way to control it mechanically. Turns out (pardon the pun), this is really simple to do with a micro servo like



you see here. What I really love about these little micro servos is their size, they are small enough to hide throughout my layout without being intrusive.

Adding Sound Effects Is Easy!

From there, it shows you how to use this impossibly small MP3 player which allows you to add either small clips of sound or full blown hours' worth of music and effects. Don't let the size fool you though, it can be very loud. It can actually drive up to a 3 Watt speaker all by itself. It's amazing. Included with this kit is one of these MP3 players and a 3 Watt speaker.



Something which I thought was a nice touch was that it comes with 5 free sound clips which work right out of the box and are a perfect fit for my layout. You do need your own SD card, but those are so cheap nowadays.

Here are the sounds:

- All Aboard -The familiar sound of the conductor announcing it's time to board!
- Just Train Tracks - The soothing clickity clack sound of a train track!
- Just Whistle - an old time whistle from the golden era of locomotives.
- Track and Whistle - Combines the clickity clack and whistle sounds into one sound effect.
- Railroad Crossing Signal - The classic sound of a train about to cross over a highway complete with crisp bells.

Lighting Control with Talking LEDS?

Perhaps one of the coolest parts to this kit are these tiny LED's which are capable of making 16 million colours. I thought an interesting touch would be to individually control the colour of each window as the train exits the depot.

They add that extra touch of realism to my layout which I needed! They are tiny enough to place where ever I need them and the best part is that they don't require tons of wires to control them either. From just 3 wires, you're able to control an infinite number of these little guys. Usually to add this type of lighting control, you would need hundreds of wires, but not with these!

This is what they look like, they are about .2 inches in diameter and 10 come in the kit.



BUT how is this all happening?

www.DrDuinoMRR.com

FINALLY AN ARDUINO COMPATIBLE MODEL RAILROAD KIT!

LEARN TO
ELECTRONICALLY
CONTROL

NO CODING
EXPERIENCE
NECESSARY



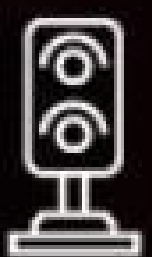
SIGNALS



TURNOUTS



SERVOS



LIGHTING



MUSIC & SFX



BLOCK
DETECTION

Currently if you wanted to do something like this, you're stuck with overly complex DCC hardware or worse, individual modules which don't talk to one another. The result? A model rail layout which isn't realistic in timing, lacks the control you desire, and not easy to work with or expand upon! That's why when I saw the review for this [new Arduino Kit](#) in **Model Roder Magazine**, I knew I just had to have it!

It's an Arduino Uno and Nano compatible kit specifically tailored for model railroad lovers! It comes as a kit which you get to assemble via excellent, step by step online manual. I've never seen such detailed instructions before, it was a real pleasure building it. I felt really accomplished after completing it too!

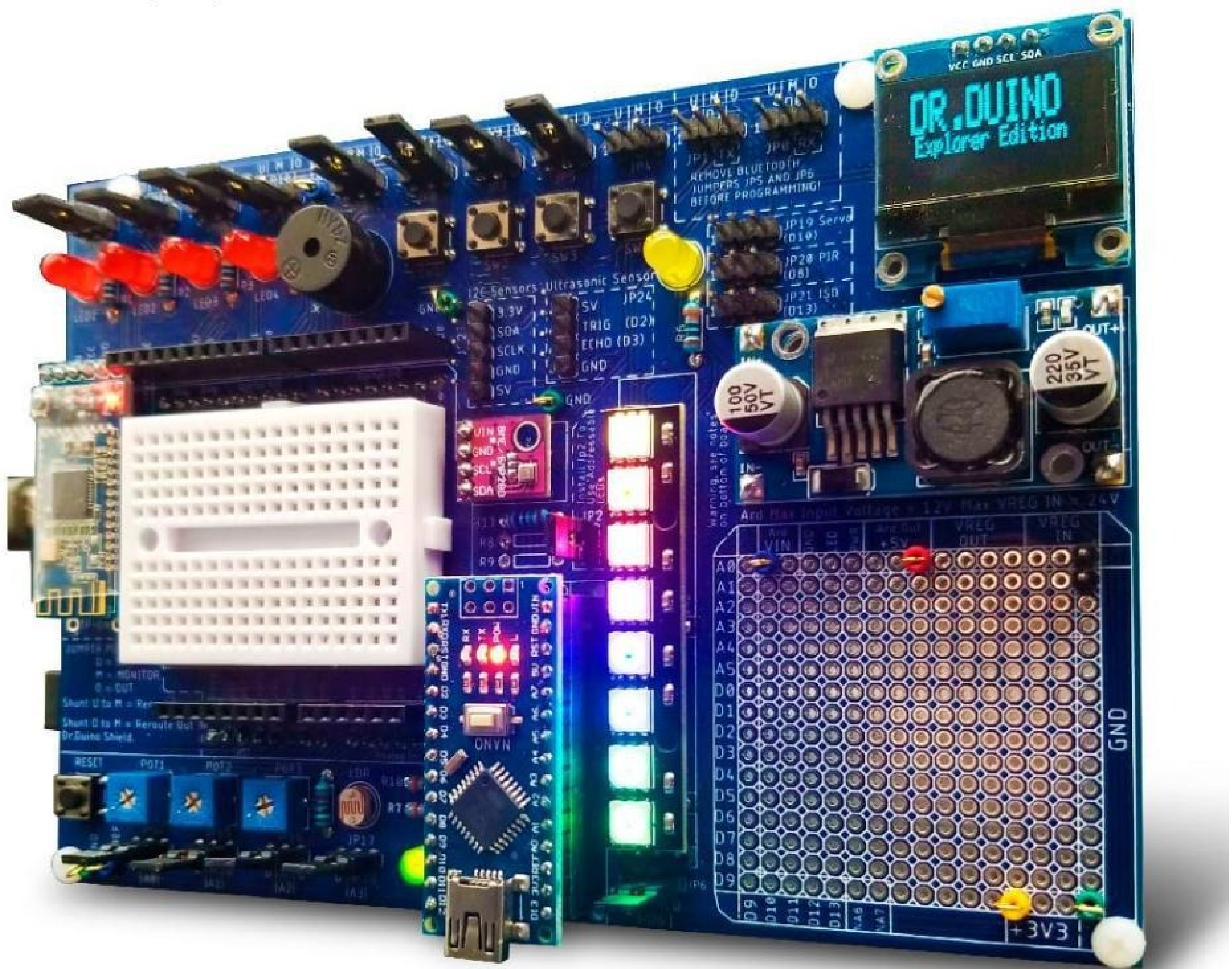
Oh and did I mention it works with whatever SCALE you have!

I think my favourite part of this entire kit is that you don't need to know how to code, **UNLESS YOU WANT TO!** All of the code needed to control everything you read in this article is included.

If you want just the servo code, you have access to it, if you want just the music or lighting control, you have that too! **BUT!!**

That's just the beginning, remember that layout you first saw at the beginning of this article? Well, all of the code is included to control that entire setup. You can either take the code as is and just wire in everything to your existing setup, or build that exact setup and have a working model rail out of the box!

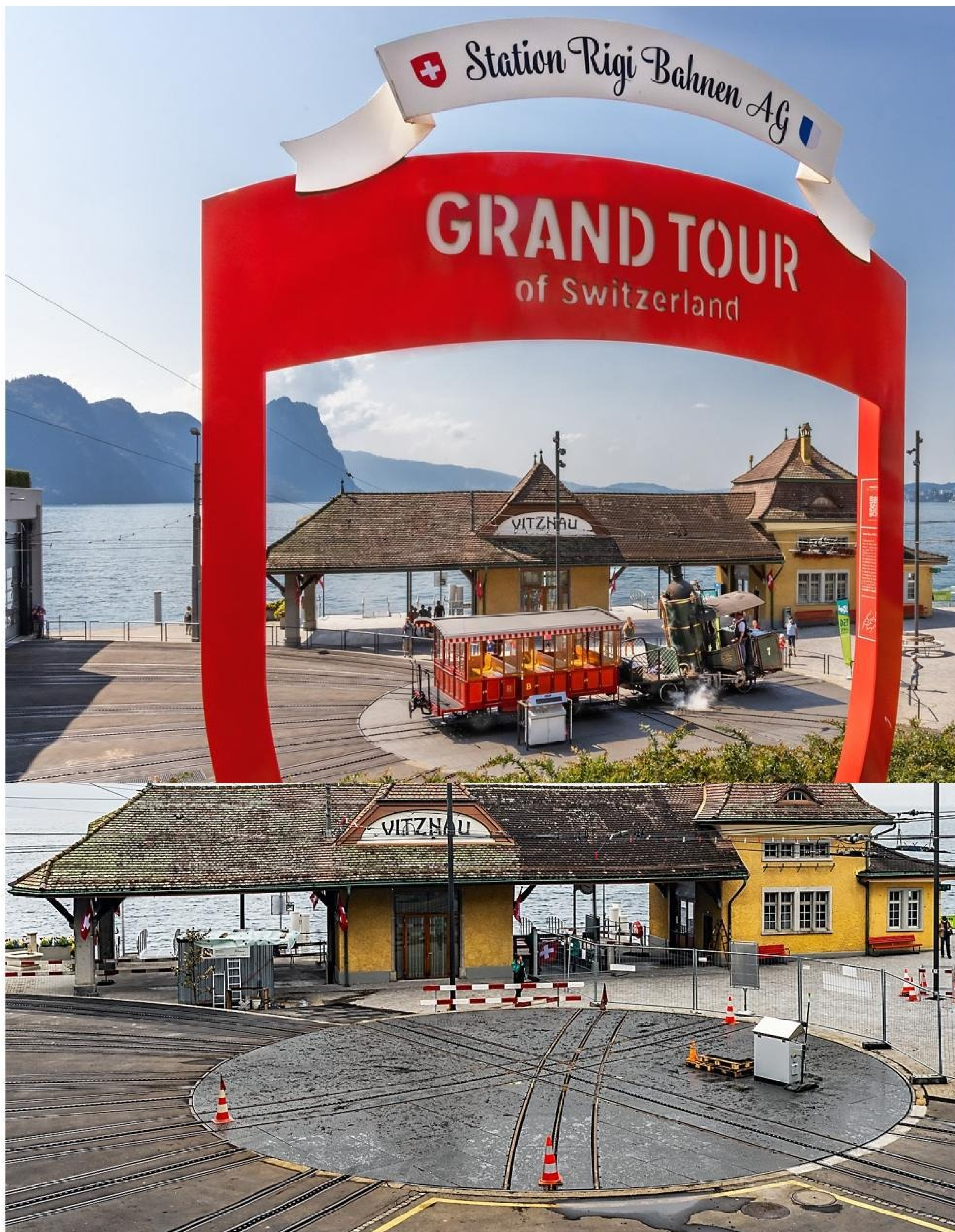
PLUS for you'll even get a **FREE** Arduino Uno Boot Camp course included which teaches you everything from what is Arduino to what you can and can't do with it. It's an 8 lesson mini course on programming with Arduino which is very easy to understand.



Dr. Duino Explorer Model railroad edition as featured in

**Model
Railroader**

www.DrDuinoMRR.com



Cogwheel steamlocomotive H 12 # 7 of the Rigi Bahnen built in 1873 is standing on the turntable in Vitznau with car B # 5 of 1871. In the background the historic ship station and Lake Lucerne © Georg Trüb. Unique turntable with 3 crossing standard gauge rack-tracks (Riggenbach cogwheel system) of the Rigi Bahnen



AVR SD60M 6002 slows as it approaches the NS Island Avenue Yard, rolling through "The Trench" in Pittsburgh, PA. © [Matthew Craft](#) 20 Nov. 2021



Desert dawn on the D&RG. With a layer of mid-level clouds lighting up in spectacular fashion by the approaching sunrise, a Denver & Rio Grande passenger extra charges west over Ferguson's Trestle at MP 285.87, destined for Durango, Colorado, via the Cumbres Pass route. © [Kevin Madore](#) 27 Sep. 2021



Bursol is a shallow salt lake in Altai Kra, Russia. Its main feature is that the color of the water changes depending on the weather. Therefore, the lake is called Pink and even Crimson. In the middle of the lake there is a special installation that scoops salt deposits from the bottom. A small combine harvester powered by diesel delivers salt deposits to the shore from the middle of the reservoir along the rails.

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Russian railways L-2055 at Yanisjarvi, Karelia, Russia (bordering Finland) © [Ulan3](#) 14 June 2021



The tourist retro train Ruskealsky Express with locomotive L-3051 at Yanisjarvi, Karelia, Russia

© [Ulan3](#) 10 Oct 2021.



Charging into Roaring Spring. After making a brief stop for water and lubrication, Everett Railroad Mogul #11 and her short mixed train make a spirited charge up-grade into the Pennsylvania town of Roaring Spring, and a station stop just ahead. This rather unique location is in a residential neighborhood on Main Street (PA Route 867) at approximately Milepost 17.4, perhaps 100 yards north of the Roaring Spring Station.

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