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PIEDMONT DIVISION LEADERSHIP

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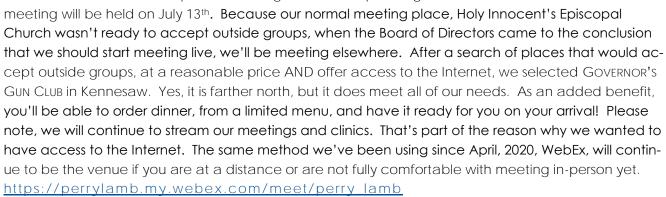
WAITLIES

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PIEDMONT DIVISION SUPERINTENDENT'S REPORT SUMMER 2021

Greetings and welcome to Summer! Must be summer, I came in from cutting the grass, soggy and covered with grass. While I really don't mind the weather, it does mean that I'm not making progress on my version of Acme Manufacturing, Producer of giant rubber bands and atomic disintegrators for coyotes and Martians, galaxy wide! Sigh. Maybe this evening... But wait, what coyotes, the lions patrol for them... never mind, long story...!

We are blasting into the summer program for the Piedmont Division, and, after 16 months, back to in-person meetings! Our first in-person general



Please don't forget that our second in-person event will be our PIEDMONT DIVISION SUMMER PICNIC. We will be meeting on Saturday, July 17th from 11 AM to 4 PM at the Dallas Landing Park Pavilion in Acworth. This is the same location we used two years ago. It is a lovely place with great seating and should be a nice place for those who want to see your fellow train fans, but outside. Remember, the Division will supply the main dishes, hot dogs and hamburgers, all you need to do is bring a side dish to share and your favorite non-alcoholic beverage (yes, this is a city park!). It really would be great to see many of you for a fun afternoon of food and fun. So we know how much to purchase, please RSVP to train-ing@piedmont-div.org so we'll know you are coming!

August and September will also have in-person and virtual general meetings featuring the Model Railroad Museum of Colorado in August and Decals and Paint in September. While we are not certain where will be conducting our in-person meetings, as of this writing, please watch the Piedmont Division Website, www.piedmont-div.org and be on the lookout for the Mailchimp email blasts for more information on our meeting location.



DIVISION SUPERINTENDENT'S REPORT—SUMMER 2021

(CONTINUED)

In longer range news, there are several things to keep on the lookout for. First, this year, we will be going back to an in-person Piedmont Pilgrimage. There will still be some layouts on virtual tour, but there will be a number of layouts open as they have been in years past. Individual layout owners may have requirements for those who visit, but I think getting to see the progress, in-person, that many have made over this past year, will be wonderful.

Second, remember that the 2021 PIEDMONT DIVI-SION MODEL TRAIN SHOW is on the way. It will be held in October, in Cartersville. Yes, we are changing locations. While the Cobb Galleria was very nice, the price for that location kept going up, and Up, AND UP. The Clarence Brown Convention Center is outstanding. The staff there is very professional but super friendly. Best yet, the price to hold our Train Show is FAR more



reasonable. Please plan on both attending AND volunteering to help Your Division host an amazing show. This is the biggest thing we do each year to fund the operations of our Division.

Third, a committee, led by Bob Kelshaw, is working very hard on a full redesign of our websites. Currently, our three websites are VERY hard to manage. Any changes that we need make, from calendar events to urgent announcements must be edited using complicated software and can only be made by three people. This means that if, for example, I'd like to add information about the Train 'N Camp scheduled for July 31st, I need to send that information to those folks, they must move deep into an old, VERY outdated management tool, and then one of those three people can add the information. That's not very effective. Our new management tool will allow the individual committee leads to edit their own information directly.

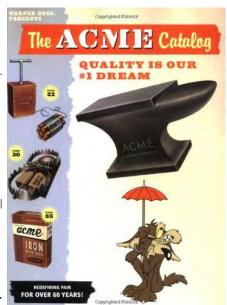
You'll also have access to the Division Library listing, on-line, where you'll be able to reserve books. Additionally, you'll be able to more easily map locations of Piedmont Pilgrimage layouts, directly from our web page. I'm looking forward to the new look and feel of our website. It will take a lot more work, but, in the end, I think it will be well worth the wait.

Finally, as I just, briefly, mentioned, we will be having our next Train 'N Camp on July 31st. The topic of this quarter's camp will be, Constructing a Wood Craftsman Kit. We held this same Camp two years ago and it sold out. Since this year's edition will be virtual, and taught by the staff at Bar Mills, we can't sell out. There are very specific lists of tools and supplies you'll need and some steps you'll have as homework prior to the Camp, so, if you want to sign up, please RSVP to training@piedmont-div.org Should be a lot of fun learning from the experts at Bar Mills! An important note: The format of this Camp will be different. The class will be broken up into three sections, morning, afternoon and evening. Each session will be about an hour, or so, long. During that hour there will be direct instruction on com-

pleting the kit. The class will then break so you'll have time to complete the work. The next session will then start with questions and then go on to the next steps. I think this format will be very interesting but will allow you to complete a quality model in one day.

I think we've covered the summer. Time to get down to the basement and get to work on Acme Manufacturing Building #2. I am really looking forward to seeing folks, in-person, next month. It will be nice to be back together again. If you aren't ready for that, I can understand but, for those who are, we will be ready for you. In the meantime, if you haven't been vaccinated, please do so.

Until next time, Engage!



—Perry Lamb

SUPERINTENDENT, PIEDMONT DIVISION
perry lamb@mindspring.com

PIEDMONT DIVISION

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LIBRARY—VIDEOS Jack Spangler aispan@comcast.net

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SPECIAL PROJECTS Open

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> TRAIN SHOW Hank Primas hprimas@gmail.com 301 706-7932

TRAIN 'N CAMP Perry Lamb training@piedmont-div.org 770 331-1669

WEB/IT COORDINATOR **Bob Kelshaw** bkk151-UPTrainman@yahoo.com 678 224-1261

HEIP OUR DIVISION BY VOLUNTEERING!

Piedmont Division monthly meetings are held at:

Holy Innocents' Episcopal Church



Division meeting are open to everyone. Come join us to see what fun Model Railroading is. See Division Calendar for details.

We hope to see you at our next meeting!

PIEDMONT DIVISION TIMETABLE VOLUME 25 NUMBER 3

EDITOR AND PUBLISHER Jim Datka idatka@mindspring.com 770 772-1538

> ASSISTANT FDITOR Doug Alexander

CONTRIBUTING EDITORS Tom Gordon

PHOTO EDITOR James Bando **CONTRIBUTORS**

Sally Bando Mike Deaton Jim Foley Perry Lamb Charles Mason Peter Thomas

DEADLINE FOR THE OTR 4 2021 TIMETABLE Wednesday September 15, 2021

Please send submissions to:

idatka@mindspring.com



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We're BACK, BABY!

It is so great that we will return to in-person meetings!

There has been so much energy put into keeping the Division together virtually since early last year. The chal-

lenges were great and the support of our members to attend our WebEx meetings and other virtual events has been rewarding. Thank you to everyone that made this successful despite very significant challenges.

I look forward to seeing everyone at the July meeting and picnic.

Along these lines, I want to go back to having member layouts featured in every issue. This month you can see Lori and Peter Thomas' beautiful garden layout as well as their HO modular which depicts Dawsonville and Gainesville in the 1920s. I have one layout more that I shot last year, but would love to start getting more under way.

If you would like to have your layout featured in a future issue, please contact me and we can set up a photo shoot.

Peter Thomas is very methodical and thorough in researching problems. I can confirm this by working with him on the redesign of the Division websites, as well as how he approached model railroading. Fortunately for us, he has turned the latter into an comprehensive article every beginner should use as a roadmap for planning their first layout.

Tom Gordon climbs on his soap box to cut through the (not so) simple solutions proclaimed by many wiring hardware manufacturers and so-called experts. His mantra: simple is good, as long as it works and is reliable.

Trainz.com has announced an author program where they will give \$100 gift cards for original articles. Details are in this issue.

Of course, your *Timetable* editor is ALWAYS looking for articles as well.

While I can't offer financial incentives, I do provide undying thanks and respect. That has to be worth something.

—Jim Datka
TIMETABLE Editor and Publisher
jdatka@mindspring.com 770 772-1538

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PIEDMONT DIVISION CALENDAR



PIEDMONT DIVISION IN-PERSON MEETING

TUESDAY, JULY 13, 2021 6 PM BOD; 7-9 PM Division Mtg

CLINICIAN: JOHN LEES TITLE: SOUTHERN RAILWAY CABOOSE X376

In-Person meeting at Governors Gun Club Kennesaw, 1005 Cobb Place Blvd. Kennesaw, GA 30144. John will describe how he acquired this caboose and the harrowing journey to his back yard. He has written a book on this experience which will be available for purchase at the meeting.

PIEDMONT DIVISION PICNIC

SATURDAY, JULY 17, 2021

11 AM to 4 PM

Dallas Landing Park Pavilion, 5120 Allatoona Dr., Acworth, GA 30101. Hamburgers and hot dogs provided. Bring a dish to share and your favorite non -alcoholic beverage. RSVP to training@piedmont-div.org

TRAIN 'N CAMP: WOOD CRAFTSMAN KIT CONSTRUCTION

SATURDAY, JULY 31, 2021

3 virtual sessions during the day

VIRTUAL clinic conducted by Bar Mills staff! Clinic consists of 3 one-hour sessions: morning—build the kit; afternoon—paint it; evening--weather it. A full day of modeling gives you a layout ready structure. Uses the Bar Mills HO Springfield Station kit available at a discount from Blue Ox Trains. Sessions from prior years sold out quickly—being virtual guarantees you a seat! For more information or to register, contact training@piedmont-div.org

TRAINS, TRUCKS AND TRACTORS

FRIDAY, AUGUST 6 thru SUNDAY AUGUST 8, 2021 10 AM to 4 PM Southeastern Railway Museum, 3595 Buford Hwy., Duluth, GA 30096. For info: www.train-museum.org/event/2021-trains-trucks-tractors

PIEDMONT DIVISION MEETING

TUESDAY, AUGUST 10, 2021 6 PM BOD; 7-9 PM Division Mtg CLINICIAN: MICHELLE KEMPEMA TITLE: MODEL TRAIN MUSEUM IN COLORADO

Location TBD. Michelle is the museum's Executive Director which features a 5,500 square foot operating model railroad that former MODEL RAILROADER magazine Senior Editor Jim Hediger says is "the finest model railroad I've ever seen."

59TH ATLANTA MODEL TRAIN & RAILROADIANA SHOW

SATURDAY, AUGUST 28, 2021

9 AM to 5 PM

Gas South Convention Center (Formerly Infinite Energy Forum) 6400 Sugarloaf Parkway, Duluth, GA 30097. For info: www.gserr.com

SER CONVENTION "SWAMP RABBIT EXPRESS"

THURSDAY, SEPTEMBER 9, 2021 thru SUNDAY, SEPTEMBER 12, 2021 Greenville Hilton, 45 West Orchard Park Drive, Greenville, SC 29615. For info: swamprabbitexpress.org

Model Train Expo

SATURDAY, SEPTEMBER 11, 2021

12 AM to 4 PM

Chatsworth Depot, 3595 500 N. First Ave. Chatsworth, GA 30705. For info: Contact Ted Yarbrough at yarbrought@charter.net

PIEDMONT DIVISION MEETING

TUESDAY, SEPTEMBER 14, 2021 6 PM BOD; 7-9 PM Division Mtg

CLINICIAN: MAC McCANN

TITLE: MODELERS DECALS AND PAINT LLC

Location TBD. Learn what is new in the paint and decal world, the different types of paint, solvent based vs. acrylic paint, and how to choose an airbrush.

L&N RAILROAD HISTORICAL SOCIETY CONVENTION

THURSDAY, SEPTEMBER 16, 2021 thru SATURDAY, SEPTEMBER 18, 2021 Hilton Garden Inn, 24 Liberty Dr., Cartersville, GA. 30121.

For info: Inrr.org/Convention.aspx

TRAIN 'N CAMP: SCENERY CONSTRUCTION

SATURDAY, SEPTEMBER 25, 2021

Location TRD. This is a continuation of the modular construction clinics from 2020, but new attendees can build a diorama. For more information or to register, contact training@piedmont-div.org

ATLANTA TOY AND MODEL TRAIN SHOW

SATURDAY, SEPTEMBER 25, 2021

9 AM to 2 PM

VFW Post 5408, 4764 Cobb Parkway NW, Acworth, GA 30101. For more information www.terminuschaptertca.com/events

May 2021 Director of Finance Report

501(c)(3) application has been filed; \$600 filing fee; up to a year for ruling.

Appeal to IRS concerning late filing fee of \$2,640 - still no news.

Assets:

	2020	2021	2021	2021	2021	2021
	12/31/20	1/31/21	2/28/21	3/31/21	4/30/21	5/31/21
▼ Assets	\$72,521.75	\$73,169.31	\$74,528.50	\$76,388.10	\$76,919.85	\$76,666.25
▼ Cash	\$72,521.75	\$73,169.31	\$74,528.50	\$76,388.10	\$76,919.85	\$76,666.25
Paypal	\$65.41	\$44.24	\$44.24	\$44.24	\$179.88	\$179.88
Piedmont Div Train Show	\$16,194.08	\$16,165.39	\$17,634.08	\$18,994.08	\$20,287.19	\$20,287.19
Piedmont Division	\$15,018.73	\$15,716.15	\$15,606.65	\$15,588.48	\$14,691.48	\$14,437.88
TIAA CDs	\$41,243.53	\$41,243.53	\$41,243.53	\$41,761.30	\$41,761.30	\$41,761.30

May assets change -\$253.60

May transactions:

Category	Date ^	Account	Payee	Memo/Notes	Amount
▼ EXPENSE					-\$253.60
▼ Achievement Program					-\$253.60
▼ Operating Supplies					-\$253.60
	5/26/21	Piedmont Division	Peter Youngblood #975047	Fast Tracks #6	-\$253.60
TOTAL					-\$253.60

—Jim Foley

Piedmont Division Director of Finance james.foley@comcast.net

Engineer's Wish List

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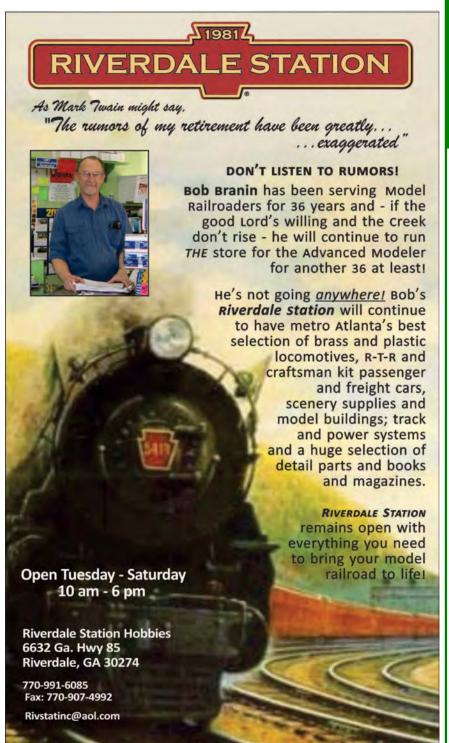
April 24, May 15, Oct 2, Nov 20

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ACHIEVEMENT PROGRAM NEWS



The Piedmont Division has purchased some Fast Tracks jigs and fixtures for the purpose of encouraging members to work on the AP Civil Certificate. One of the requirements for the Civil Certificate is to scratchbuild three pieces of

trackwork and earn merit awards on these three pieces. The Fast Tracks jigs and fixtures simplify the construction of turnouts and their use has been approved by the NMRA. The Piedmont Division has purchased the fixture and related jigs for an HO scale, code 83, #6 turnout. The fixture can be used for both left and right turnouts. In addition to the turnout assembly fixture we have the point form filing tool and the stock rail filing tool.

These tools are available to members who are working on the Civil Certificate at no charge. Members will be required to put up a security deposit to insure a timely return of the tools in good condition. The turnout assembly fixture is designed for Micro Engineering code 83 rail and PC board crossties. The Division has bought a small amount of these materials, which may be purchased by members at a reasonable price. Members will also need a quantity of wood ties for the construction of the turnout. Wood ties are available from several suppliers including Northeastern Scale Lumber and Mt. Albert.

The Fast Tracks website (www.handlaidtrack.com) has detailed instructions and videos on how to build turnouts using their tools. There are additional videos available on YouTube. It is strongly recommended that members review the construction articles on the Fast Tracks website. The NMRA website has all the requirements and forms pertaining to the Civil Certificate.

The rules for borrowing the Fast Tracks tools are currently being developed. The borrower will have to put up a check as a security deposit to borrow the tools. The loan period will be one month—from one Division meeting to the next. The check will be returned when the tools are returned. Charlie Mason, the AP Chairman, is in charge of the Fast Tracks tools and materials. Members who wish to borrow the tools should contact Charlie (candmjmason@att.net or 770-993-1589.)

—Charles Mason MMR Piedmont Division Achievement Program Chairman candmimason@att.net





We also carry an enormous selection of "modelers tackle" such as tools, paints, airbrushes, paint brushes, masking tapes, glues, plastic parts, LEDs, track buildings, vehicles and other stuff you just can't do without.

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We are open Mondays thru Saturdays from 10 am until 9 pm. On Sundays, we're open from Noon until 6.



TRAIN 'N CAMP: WOOD CRAFTSMAN KIT CONSTRUCTION FEATURING BAR MILLS' SPRINGFIELD STATION

SATURDAY, JULY 31, 2021

This clinic consists of 3 roughly one-hour virtual sessions:

Morning—techniques and tips to build the kit

Afternoon—how to paint wood craftsman kits

Evening--how to weather it.

A full day of modeling will give you a complete layout ready structure!

This VIRTUAL clinic is being conducted by Bar Mills staff! Participants will build the Bar Mills HO Springfield Station kit which will be available at a discount from Blue Ox Trains.



Participant will receive a list of tools and supplies required. Sessions from prior years <u>sold out quickly</u>—being virtual guarantees you a seat!

For more information or to register, contact training@piedmont-div.org



Announcing the 2021 Piedmont Pilgrimage



The Piedmont Pilgrimage is coming back down the track this fall! We are delighted to announce that our 19th Annual event will once again feature traditional open house, in-person layout tours. After an "all-virtual" Pilgrimage due to Covid re-

strictions last year, we still plan to produce several new video layout tours this year, too.

Our current plan is to start this year's Pilgrimage tour program on Sat-

urday, October 23rd and to conclude on Sunday, November 21st. At this time, we plan to release all of our video productions on the very first day of the Pilgrimage.

The Pilgrimage Committee is already working on the schedule for this year's tours. As of June 26th, we have about 45 hosts and layouts that we are working with for the program. Based on host preferences, we expect the Pilgrimage to be about 80% in-person open houses, with another 20% as video layout tours. If you have a layout that has not been included in the Pilgrimage before, and would like to be included this year (with an open house or with a video), please contact Charlie Mason, MMR at candmjmason@att.net or Mike Deaton at mdeaton@mindspring.com right away.

While we are not planning to produce a "four booklet" this year, or do commercial advertising, we are again seeking support from Division members to purchase Pike ads. A Pike ad is your calling card published on the Piedmont Pilgrimage website "Supporters" page. Displaying your Pike ad on our website will cost just \$10. Design services and/or business card printing for your Pike ad will be available for an additional fee. For more information, or to place your order, please contact Jim Foley at james.foley@comcast.net.

Another opportunity to support our Pilgrimage is to volunteer as an Operator Assistant. Our OAs help our hosts run trains during the open houses, so our hosts can better "host" their guests. Your service as an OA earns credits toward your NMRA Achievement Program Volunteer Certificate. To sign up as an OA please contact Tom Gordon at twgordon@outlook.com . We also hope to have signup sheets at an in-person Division meeting in August!

The Piedmont Pilgrimage is one of our Division's most successful programs to support and promote model railroading. It is very popular

with the public, even those who are not model railroaders.

We are grateful for all the volunteers who open their layouts to the public. It is a very rewarding and heartwarming activity for those model rail-roaders who have worked so hard to prepare their layouts for public exhibition. This is a unique opportunity to see their actual work and experience, and to discuss and learn how you can enhance your own layouts. And we are simply thrilled to be able to present these open house layout tour events once again!

On behalf of the Piedmont Pilgrimage Committee, thank you for your support. We hope you will join us this fall, in person, online, or both!

Please refer to the Division's Piedmont Pilgrimage website for details and updates: www.piedmontpilgrimage.com

—Mike DeatonPiedmont Pilgrimage Chairpersonmdeaton@mindspring.com404-272-2070



GETTING WIRED

WITH TOM GORDON

Modern Wiring Snake Oil

Please bear with me, but I occasionally find it necessary to do a bit

of soap boxing. This involves the myth that one can take all sorts of shortcuts in wiring a layout that will make a complex environment really simple. All that stuff that manufacturers and proponents of various technologies advertise just might not tend to be quite the panacea they say it is. They can make things easier, but unfortunately some of the tedium (detail work) will always be there.

Let's start with DCC. All you need is 2 wires to power the layout, right? No, that's wrong! Such an approach may be very handy with a small oval, but once you get beyond that, the use of more than two wires becomes necessary. Rails are also not the best conductors of electricity, so it is therefore necessary to use something that is a good conductor to feed the track at various locations. 'So all you need to do is run two wires in parallel to the track and drop occasional feeders.'

Again, do-able, but not necessarily the best approach in the long run. This may work in an environment with limited operations, and limited trackwork, but when one wishes to do more than just run trains, problems can occur. This is mainly due to the current draw of multiple engines and accessories. Current begets magnetic fields. Magnetic fields will cause interference and crosstalk. The interference and crosstalk can mess with the DCC digital signal on the DCC data bus (see: Loconet, etc.). Messed up signals feed the boosters and can, well, cause unexpected and most unexciting things to happen with control of your trains. Yes, you can run the two conductors in parallel to the tracks, but keep them relatively

short, along with being either well separated, or twisted. (See the Wiring for DCC web page at www.wiringfordcc.com). And don't forget, you really should not have the distance from your booster to the end of a wire/rail run exceeding 35 feet. The harmonics on the power bus can be most perplexing.

If you want to run accessories from DCC, it is highly recommended you do NOT use track feeds for the power source. Run a separate booster for your accessories and turnout controls unless you wish a

track short to shut down absolutely everything on the layout. Throwing the turnout to resolve a short might become difficult if its power source has been shorted out. Many manufacturers say hook stuff to the track. Again, OK for a small layout, but not so for anything outside of 4' x 8'.

OK, now for my big gripe: 'data busses save work'. I have professed using these, and they are great for handling 'non locomotive' information. They are not a panacea. One always has to wire everything to the data bus somehow. There are lots of technologies out there that show that their approach cuts down on wiring. This is true, but only to a point. A good bus design will allow an orderly approach to wiring, but that's about all.

When one has a turnout, or a signal head, it always has to be wired to the layout (via a data bus). Each bulb of a signal head needs wires. Each

control button needs wires. Each turnout (powered ones) needs wires. The wires must go somewhere. Some of the 'distributed' technologies (e.g. LCC and C/MRI) have all those wires going to a local logic device, which is nice but here's the catch: you still must connect all that stuff! It is good for you, as the user, to have the option of where to send all those wires. You can send them to some sort of local data concentrator or send them to a central collection point. It's your choice, and your design, but you still need to do it. Lights don't get bright without electricity, and wires are necessary to get the juice to the bulb.



GETTING WIRED

(CONTINUED FROM PREVIOUS PAGE)

I, in my microcosm, prefer to wire all the control stuff to several central locations that allow most of the wire sorting and connections to be performed from a chair, thereby reducing the number of places I have to go to resolve any issues. My new layout has 4 or 5 places where the wires go. Yes, I buy Cat5 wire by the 1000-foot box to feed all the remote locations, and consider that a small price to pay to allow maintenance to be handled from a centralized spot. Cat5 wire is, after all, pretty cheap, even for the good (solid copper) stuff.



When I connect a turnout control, a Cat5 cable goes from a telco punch down block to that control, along with power for the lights to show the status of that turnout. Turnout power comes from a bank of turnout con-

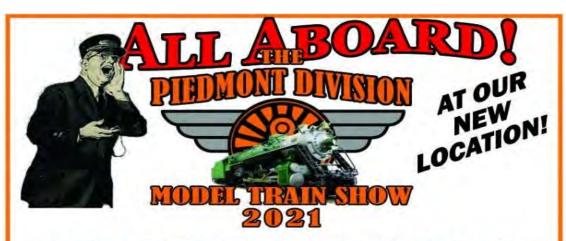
trol circuits, that are all wired into a device that communicates on my C/MRI Net. This is a bit like the 'hub and spoke' approach some airlines take to handle traffic. Not fully distributed, but also not totally concentrated. It makes changes much easier.

My turnouts still need wiring, the rails need feeders, signals need wiring and occupancy needs detecting. It is all tedious regardless of how one approaches the task. Using an organized, well documented approach makes all that easier. So just come up with an approach, a design, and stick with it. And don't listen to all that advertising hype about making things 'so easy'.

If you want to see this in practice (Unabashed plug here....), I'll be glad to show off my electronic installation in the next Piedmont Pilgrimage. The scenery is not yet installed, so you can see the wiring and control devices that used to be 'behind the curtain' on my previous layout.

—Tom Gordon





RESCHEDULED!!

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www.piedmont-div.org

PIEDMONT DIVISION WEBSITE REDESIGN UNDERWAY

What do you love about our PIEDMONT DIVISION websites? What don't you like? What do you wish it had or did?

A committee is currently trying to answer those questions, and would like to get your ideas as well.

This redesign is looking at our PIEDMONT DIVISION home pages as well as the PILGRIMAGE and TRAIN SHOW pages.

We are looking at a complete overhaul of the sites to improve information, accessibility and functionality for Division members. This is your opportunity to help us achieve these goals.

We really want to hear from Division members. Our websites are the primary means of communi-



cating important information. This is your opportunity to have them work better for you!

This committee is chaired by BOB KELSHAW and includes RICK COBLE, JIM DATKA, JIM FOLEY, TOM GORDON and PETER THOMAS. Please email your comments to NewWebdesign@piedmont-div.org

We look forward to your emails helping make this site better for everyone.



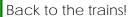




Before we talk about trains, I have to acknowledge the incredible garden walk that leads to their outdoor layout. It truly is breathtaking!

Few public gardens I have seen have as many colors or textures in a shaded area.

Article and Photos by Jim Datka



Their garden layout is a mix of track-powered and self-powered locomotives.



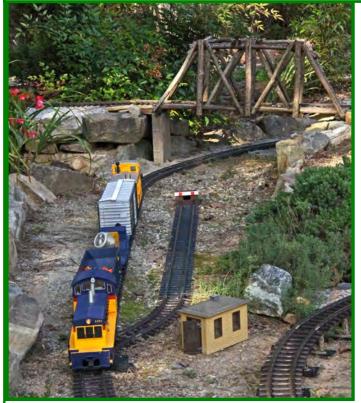
It is a mixture of eras and décor all designed for fun and enjoyment.

The folded dog-bone design features a number of twists, turns and sidings that makes railfanning an extended pleasure.









(continued on next page)

The rustic bridge and trestles are a perfect complement to the plantings and landscaping.













You may have noticed that I did not have a lot of descriptions on the previous two pages. I feel that the beautiful landscaping and gardening speaks for itself.

Lori is the master horticulturalist that turned a shady spot where she couldn't grow grass into a this beautiful garden railway. In 2017, she went to the Piedmont Division Train Show to support Peter in his pursuit of HO equipment. Here she first became aware of garden model railroading, something that solved a problem in her yard and was at a size and scale easier for her to see.

The Thomas' joined our Division in 2017 and are members of the Georgia Garden Railway Socie-TY. Lori credits the friendliness and support provided by members of the GGRS at that show for her jumping into the hobby and the success she achieved on this, her very first layout.



Peter is a Director at Large on the Piedmont Board. His modular HO layout represents Dawsonville and Gainesville in the 1920s. He has made good use of the completed structures he has purchased at train shows, giving them

some detailing and aging with PanPastel powders. This is a guick and easy way to fill a new layout while scratch-built prototypes are planned and made.

One of Peter's first major modeling efforts was the saw mill and lumber yard. In addition to

the mill and passenger stops, there is a dealer's lot for what Peter calls the F150s of that age: the mule.

These enterprises provide a lot of online switching options in a small space. Peter can run more than a dozen different trains on the 3 modules he has built. The modules are described on the following pages.







Peter's first module features the very British fiddle yard. The different tracks permit breaking down and sorting arrivals, reassembling new trains and easy replacement of cars and locomotives to and from off-line storage.

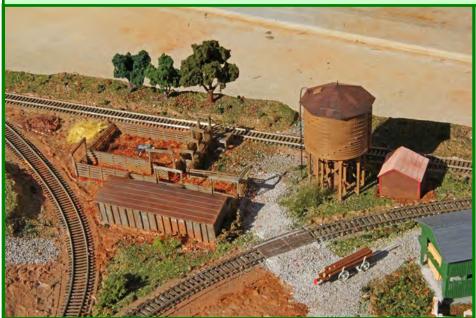
The next is Dawsonville where he and Lori live. A scratch-built model of the 1858 courthouse where they were married is planned.

Multiple sidings in this module provide rail service to stations, businesses and industries.









Peter's third module features a wye to reverse engines and add additional switching possibilities. The lumber mill and mule stockyard reside and are served by rail on this module.



Lori and Peter's layouts were on last year's virtual Piedmont Pilgrimage and the video can be viewed here:

www.youtube.com/watch?v=A2JXRhYRsyY





BY PETER THOMAS

BACKGROUND

This article is the result of several months of research. I was able to find lots of detail but failed to find a good end-to-end description of the steps recommended to plan a layout. I hope this article fills that need for you and that you find the links to articles, videos and other

resources helpful. I must therefore thank the authors of the them and other reference material.

The NATIONAL MODEL RAILROAD ASSOCIATION has a comprehensive list defining railroad terms used in this article at www.nmra.org/beginners-glossary.



INTRODUCTION

Layout planning is taking vague dreams of a model railroad and developing them into a buildable track plan.

This article recommends following these steps:

Step 1 – Identify your ideas and constraints, sometimes called givens and druthers

Step 2 – Prioritize your ideas and assemble them into a relationship (Layout Design Elements)

Step 3 – Draw your ideas into a rough schematic and test your ideas

Step 4 – Create a detailed track plan and start building (benchwork and track laying)

The steps are iterative. You may need to go back to a previous step or steps as your knowledge and abilities increase and your dreams face the realities of space, time and budget.

STEP 1: DEFINE YOUR IDEAS AND CONSTRAINTS

IDEAS

The goal of these questions is to identify what you want from your layout:

- Are you interesting primarily in running trains continuously over a mainline, or in switching cars at multiple locations?
- Do you want a layout for continuous running, point-to-point, or some of both?
- What stations, industries, agricultural and other rail activities interest you?
- Where (location) and when (era) do you want to model?
- Are you planning to run the layout largely by yourself, or do you want to invite fellow hobbyists?
- Do you want to freelance an imaginary railroad or to replicate a prototype?
- Are you interested in operations, which is managing your rail-road like a prototype with schedules, timetables and waybills?

CONSTRAINTS

How much space is available? We all dream of a railroad empire, but the first dash of reality comes as we measure the room where the empire will be built. Even a shelf layout along a wall or two can

offer operating enjoyment and an opportunity to test and develop your skills in construction, wiring and scenery.

Will the layout be permanent or portable? Permanent means once built, the layout is intended to remain in that spot. If there is no space to exclusively devote to a layout, a small layout on a table may be capable of being moved out of the way when not in use.

Modular layouts are a popular option and several organizations have developed construction standard that enable connecting

modules you build to those built by others. The large serpentine layouts exhibited at train shows are individual modules built by multiple hobbyists working to the same standards.



One online magazine has promoted The One Module Approach or TOMA (http://mrhpub.com/2017-08-aug/online/?page=22) whereby the builder starts with a single small module with simple staging at each end.

For a room-size layout, is it to be a standalone island or table, or will it run along walls, possibly with a peninsula? Accessibility is the most critical aspect in planning a layout. You need access to the entire layout for servicing and maintenance, and your operators need space to do their jobs and work around each other. The number and locations of doors often determine whether it is to be an island or around-the-walls configuration.

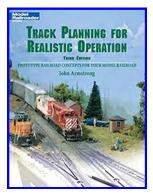
How many openings must be accommodated? Consider features such as closets, electrical panels, water heaters and heating and cooling equipment that must be accessible. For an around-the-walls layout, windows may sometimes be blocked, but doors will require a duck-under or a section of layout that can be moved in some way. Duck-unders present a physical barrier to older folks and many others. Hinged gates or a detachable roll-away portion work but must be constructed precisely to operate reliably.

Are you considering an outdoor layout? Many of the same questions apply to outdoor layouts, generally called garden railroads. How much space is available? What are the required points of access from the house and perhaps other parts of the property? Will the line go around the perimeter of a fenced-in or otherwise physically defined area, or will it form an island in a lawn or garden area? Will structures be weatherproof or needing to be taken up and moved back indoors?

STEP 2: CONCEPTUAL AIDS TO DESIGNING TRACK-WORK
The next step is to capture the scope of the layout at a high level.
You can find a layout in a magazine, book or on-line and copy that as is or with (very) minor changes. An excellent resource is Model
Railroader's long list of proven layouts at mrr.trains.com/how-to/
track-plan-database

You can also get professional assistance in the design and construction of a layout from: www.thetrackplanner.com/getting-started.html and www.traininstallations.com/

If this is your very first layout, there are many publications that go into great detail about design considerations, planning tips and construction techniques. Here are a few I highly recommend that are available from retailers, online and possibly a local library:

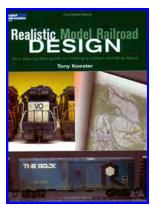


Track Planning for Realistic Operation: Prototype Railroad Concepts for Your Model Railroad
John Armstrong -- 2018 Kalmbach Media Co.
This book details many types of prototype track configurations along with tips on how you can adapt them for a model railroad. Wherever possible railroads were built with a maximum of 1% grade (52 feet per mile). Examples in the book are given to how the they got through the mountains. In the second section of the book, John gives many design hints and tips.

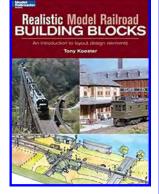
Realistic Model Railroad Building Blocks: An Introduction To Layout Design Elements

Tony Koester

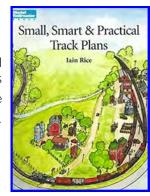
2005 Kalmbach Media Co.



Realistic Model Railroad Design: Your Step-By-Step Guide to Creating a Unique Operating Layout Tony Koester 2004 Kalmbach Media Co.



Small, Smart & Practical Track Plans by Iain Rice 2004 Kalmbach Media Co.

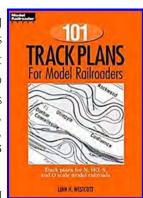




How To Design A Small Switching Layout Lance Mindheim

2009 CreateSpace Independent Publishing

101 Track plans for Model Railroaders Linn H. Westcott 1989 Kalmbach Media Co In addition to the layout plans that can be used or adapted, this book contains many hints, fips, do's and don'ts



TRACK PLANS
For Model Railroaders

101 More Track Plans for Model Railroaders

Jeff Wilson

2010 Kalmbach Media Co.

STEP 3: FIND AN EXISTING LAYOUT OR CREATE A SCHEMATIC OF YOUR OWN DESIGN

CREATING A UNIQUE LAYOUT

There are several techniques which can be used to decide how much space is required for the track plan. All focus on identifying the space and scenery and buildings that provide the context of your railroad's operations. Here are some of the concepts described in the books above and from other sources:

LAYOUT DESIGN ELEMENTS, or LDE's by Tony Koester – These are the elements of the prototype you want to model in some detail. Each needs to be considered visually and for any operational requirements.

LAYOUT SQUARES by John Armstrong - A track planning square contains a 90 degree curve of your minimum curve radius, the next larger curve radius and the curved track clearance.

DOMINOES BY DAVID BARROW - Sections or modules of open grid benchwork typically 2 x 4 foot in size that bolt together to make a railroad layout. This is detailed in Model Railroader magazine of June 2007 "Domino Pike Size Passenger Trains"

ELEMENTS TO INCLUDE IN LDES, SQUARES, AND DOMINOES In addition to the LDEs you decide to model, you will need an origin and destination for your trains. These may include:

Main Line: The route most trains going somewhere on your layout will use. High volume of traffic, frequently with heavy trains hauled by powerful locomotives.

Branch Line: Leaves the main line to service industries and transfer docks or arrive at stations. Often leads to well detailed structures requiring switching and may be serviced infrequently by light trains with secondary motive power.

Helix: A spiral which runs the train from a lower to an upper level.

Major Curves: At the corners of the layout for example.

Balloon track: Used to reverse the direction of a train. Also known as turning loop or reversing loop.

Stations and Customers: Can be on the main line or a branch line consisting of a single spur or small yard possibly with its own switch locomotive.

Engine Servicing: Depot for storing and servicing locomotive, with buildings and facilities appropriate to the era. Requires refueling, cleaning and possibly a turntable.

Classification Yard: Tracks for the storage, sorting and assembly of railroad freight cars into like groups bound for one

or more similar destinations.

Yard design should reflect use. How much traffic in and out? Do through trains drop and add cars? Small town or serving several local jobs? Need arrival/departure tracks?

Switch Ladders: These are the switches that are the approach throat of a yards. See microengineering.com/ Micro_Engineering_Ladder_Track_System_v1.pdf

Staging: Also known as holding, this is a number of parallel tracks that hold cars or complete trains often in a hidden area without scenery. Trains originating or ending in staging represent travel to cities or railroads that are not modeled on the layout. For example, model-railroad-hobbyist.com/node/15594

Fiddle yard: Similar to staging, but typically fewer and wider spaced tracks allowing rolling stock to be manually placed from or removed to storage. There is even a book about these www.crowood.com/details.asp?isbn=9781847978165

DESIGN A LAYOUT TO MATCH A PROTOTYPE

An alternative method is to research track plans of prototype rail-roads, cities or industries. Research resources such as railroad historical associations, Google Earth and Sanborn maps en.wikipedia.org/wiki/Sanborn_Maps

Start with sketches and develop them into a more precise plan of scale drawing. Be aware that most of us are optimistic in how much

track we can fit in the area available. Most railroad modelers work on several versions of their plan until the reach the one they wish to model.

Full size drawings and templates can be produced to confirm it will fit and function in the designated place.

Whilst the schematic is focused on the track plan, thought at this stage needs to be given on how the structures, roads and other scenic elements will be included and relate to each other. Which tracks must have sufficient separation to provide room for the sta-

Sanborn map

tion building/freight depot? How many classification tracks are needed in the yard? How many are required for each industry? John Armstrong's book, and other resources will give guidance to make these decisions.

As you decide where you want to place structures etc, the track plan may need modifying, for example moving an industrial spur. (This planning process is sometimes known as chicken and egg).

REFINING THE LAYOUT PLAN

These considerations ena-

ble you to make appropriate compromises as the layout plan is refined:

Are you more interested in continuous running or switching? Contin-

Steel Steel Sindistry

Industry

Industry

Industry

Industry

Industry

Industry

Industry

uous running requires long lengths of main line. Switching requires having branch line spurs.

What types of trains will you run? Examples include passenger, freight coal logging etc. How long were the trains that ran in that

freight, coal, logging, etc. How long were the trains that ran in that era? What is the size of your locomotives and equipment? This can affect minimum radius required for good running.

The longest reliable operational train is around three quarters of the circumference of a circle of your layouts minimum design curve radius.

For example, 27 inch minimum radius gives about ten feet of train length. This length determines the track length required for stations and arrival/departure tracks in yards or staging areas.

Want to run more than one train at a time? Either a double main line or a siding of sufficient length must be provided for one of the trains to clear the main line.

Single or multiple levels? Slopes on inclines of more than 2% will significantly impact the performance of your locomotives. Make sure there is sufficient clearance where one track goes over another, as well as clearance between tracks on curves for long cars such as passenger equipment.

The scale, gauge and era will dictate the type of rail needed. Will you use sectional or flex track? Sectional track limits radii available for use. Look for a manufacturer that offers the type of rail you need. Consider the rail size (e.g. code 100) and any special radii for curves, curved switch, or double slip.

Compression is when you make a structure or scene smaller to fit within a given space. For example, modeling a six-door prototype freight house as having only four doors to save space.

Forced or Selective Perspective is modeling smaller scale details in the background to give the illusion of them being farther in the distance and is part of a much larger area. This video gives more detail: www.youtube.com/watch?v=bfaDY_ffJYs

Consistency or compliance with your chosen prototype? Will the track plan be identical to a prototype or varied to fit the space available? For example, reducing the number of classification tracks in a yard.

Designing layouts in a small space has its own set of challenges, see here for some tips model-railroad-hobbyist.com/magazine/mrh-2014-09-sep/minimum-space-layouts

STEP 4: DETAILED PLANNING

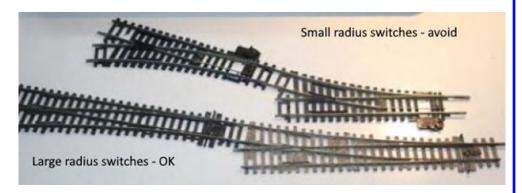
We can now specify the parameters that can be used on the planning phase.

Minimum radius: Based on the scale and gauge - garden requires much more room than N! This is also impacted by the length of locomotives and their wheel arrangement. Steam locomotives with multiple large drive wheels require larger radius curves than diesel engine.

Long passenger carriages or freight cars navigating tight turns look unrealistic and may interfere with adjacent tracks if too close on the inside of curves. Hiding sharp curves or viewing them from the inside of the curve reduces the unsightly effect.

Size of switches: Switches come in several sizes, small no 4, medium no 6, etc. The small size reduces the space for switch ladders. The larger sizes look better on the mainline and are less likely to

cause issues with long rolling stock. Manufacturers provide templates but they can be a little tricky to find, alternatively the CAD software (see below) has the different sizes in their track libraries.



Curves near the corner of the benchwork need placing carefully to allow room for the overhang of the rolling stock. Similarly par-

allel tracks will need additional separation. The NMRA has established standards for Track Curvature, Rolling Stock and Track Centers which can be found at www.nmra.org/track-curvatures-rolling-stock and a simplified table in Linn Westcott's book. The NMRA also offers helpful gauges in most scales that provide the standards for clearances and rolling stock components.

Grades Between Track Levels: The length of these slopes need to be taken into ac-

FLANGEMAYS

FLANGEMAYS

RASE

HO SCALE

MAKE

HO SCALE

count in your track planning. Make sure grades are reasonable with room for smooth transitions at top and bottom. Avoid sudden changes. Allow sufficient clearance between decks to allow access and maintenance even if it means adding another lap to the helix. Grades of more than 2% will significantly impact the performance of your locomotives. Capture details of the scenery contours to be consistent with the grade.

AVOIDING COMMON MISTAKES

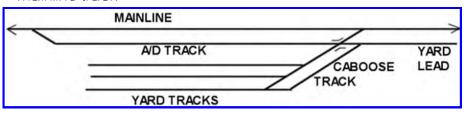
The following considerations will avoid issues with the final plan:

Design the layout to be consistent with your budget, skill levels, and the support you will get from others.

Double-ended yards require a large amount of space; as do double-track mainlines.

Runaround tracks in switching area and passing sidings on mainlines are usually necessary for good operation. Wrapping all or part of the station or passing loop around a curve can save considerable space on your layout.

If there is a yard, try to include a switching lead independent of mainline track



Usually best to avoid:

Turnouts all being in the same direction. This makes train operations (switching) very repetitive.

S curves. A long train sweeping through an S curve looks impressive, however due to the size of our layouts, S curves can have a sting in their tail. The effect on the couplers of your models negotiating an S curve on a model railway needs to be considered in your track planning. If the straight distance between the curves is too short the couplers on your rolling stock might not have sufficient side swing to accommodate the differing side movement of the ends of adjacent vehicles. A good rule of thumb is to separate the reverse curves of an S curve by a length of straight track longer than your longest vehicle fitted with body mounted couplers. Also beware S curves from switches.

Adding easements from straight to curved track will improve the appearance and running of trains, although they require a little

more space. See www.trackplanning.com/easements.htm and www.nmra.org/sites/default/files/d3b3.pdf

Include straight sections of track for coupling and uncoupling, and swapping cars to and from storage.

Use an appropriate distance from the track center line to the edge of the table to allow room for trees and structures.

Ensure the design of your classification yards will enable them to meet the operational requirements.

Build the bench-work to an appropriate height. Whilst viewing the model railroad at eye level helps make it appear more realistic, that is too high to work on comfortably. Many folks use 42 inches.

Ensure you can reach everywhere for layout maintenance (e.g. repairing damage from the cat walking on it) and have room for everyone to operate the layout bearing in mind the location of control panels.

Aisle widths: 24 inches for single access, 36 inches for co-located

operators (900 mm wide access ways and 1,200 mm wide operating areas)

Access hatches – A hole in the benchwork and scenery, sometimes concealed with a lift out section of scenery, for emergency ac-

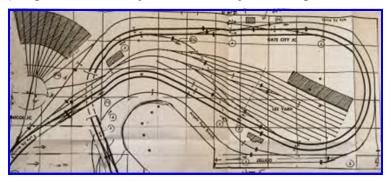


cess to parts of the layout, when the railroad table (baseboard) is too wide to reach from the aisle.

TOOLS FOR DRAWING YOUR TRACK PLAN

The last step is to create a detailed plan from your sketches. This can be done with a detailed drawing which may require drafting skills or using software ("there's an app for that.")

Drawings are a guide to building the layout. If you can't follow the drawings, check there is not an error in the drawings or a mismeasurement of your layout space. Noting changes to the design as you progress will allow you to review your design.



Drawings can be made on paper (using track templates for example www.handlaidtrack.com/track-templates-ho), however there are several (including free) Software (CAD) for drawing track plans, including templates for turnouts, crossings etc.:

SCARM - www.scarm.info

Templot - templot.com

Anyrail - www.anyrail.com

Atlas - shop.atlasrr.com/t-software.aspx

3rdPlanIT -

www.trackplanning.com

Some CAD allows for printing 1:1 output which are helpful for designing complex track work and identifying where grading is required for outdoor layouts, etc.



MOCK UP

It may be helpful to make a three dimensional mock up of your plan. The goal being to prove the plan will fit and function as you want. For example, construct a one-fifth scale model on a sheet of plywood the shape of the space the layout will occupy. Create 3D views of the layout from the drawing tool.

A trick to enable you to appreciate what the layout will look like is to place a printed figure, scaled to the correct height to determine the perspective from your viewpoint.

Remember, the steps are iterative, so the necessary "pause" to build this miniature mockup before the layout building starts to catch any gotchas in advance sometimes gets overlooked.

RESOURCES

Tips on doing Prototype research model-railroad-hobbyist.com/node/36989

Websites and online discussion groups provide resources for ideas and plans as well as critiquing plans.;

www.carendt.com/

model-railroad-hobbyist.com/taxonomy/term/28

www.cke1st.com/m_train5.htm

mrsvc.blogspot.com/

cs.trains.com/mrr/f/11.aspx

modelrailroadersnotebook.blogspot.com/

2011_12_01_archive.html

www.layoutvision.com/clinics

www.building-your-model-railroad.com/

www.layoutvision.com/contact-about

NMRA Layout Design Special interest group (LDSIG) Idsig.net/o/Idsig/wiki/index_title_Category_Primer.html

VIDEOS

NMRA have many videos of clinics available free to members on their website:

www.nmra.org/edutrain/layout-research-and-planning-kirkwood-cutoff-dave-roeder

www.nmra.org/planning-your-model-railroad-prototypevs-freelance

www.nmra.org/planning-realistic-operation

OTHER VIDEO RESOURCES:

TrainMasters www.nmra.org/videos/track-planning

Model Railroad for Beginners - From Loop to Layout - Adding Interest & Industry www.youtube.com/watch?v=N_7y04jKPZA

MRH What's Neat columnist Ken Patterson goes over his approach to track planning www.youtube.com/watch?v=FqOHQySDTGU

3-D rendering of the around-the-wall HO scale model railroad David Popp developed in his multi-part "Designing a layout" planning series for MR Video Plus mrv.trains.com/search?q=ho-scale-cnw-+wisconsin-division-to--crystal-lake-illinois

www.modelrailroadacademy.com/video/better-model-railroad-layout-design-for-larger-scenes-010592/

Luke Towan's approach to planning a modular layout www.bouldercreekrailroad.com/part-1-planning.html

Scott Perry's Better Beginner's Layout that features operations and simple construction to help new modelers get the most out of their layout! hogrr.blogspot.com/

Small/Miniature Layout Track Plan examples (16 sq. ft. or less) model-railroad-hobbyist.com/node/30394

—Peter Thomas



The Trainz Author Program is a way for you to get paid doing what you like best, talking about model trains. We're looking for interesting articles to post on Trainz.com, something original and worth reading.

- Must be original content that you have written
- 500-3000 words in length
- Original pictures are great!
- Accepted submissions will earn the author a \$100 Trainz gift card

What kind of content are we looking for?

- Layout stories (ideas, history, etc)
- Repair articles
- Tips and tricks
- Detailed history pieces of particular items (Lionel 2055 and its variations, for example)
- Personal stories of collecting model trains
- Whatever idea you come up with!

Submit your original writing and any photographs to <u>kgriffis@trainz.com</u>, <u>subject line "TAP Article Submission."</u> If your article is chosen for publication, we will email you a \$100 Trainz digital gift card, valid for purchases on Trainz.com only.

IRADITIONAL CLUBS

The Railroad Model Club of Atlanta (O-Gauge) www.oscale-atlanta.info

Terry Weldon 770 979-0473

Bob Peppel 770 934-4067

Meets every Monday at 7:30 PM

Tri-State Area Model Railroad, Inc. (HO-Gauge) www.tsmri.org

Thomas Roskelly 828 361-2210 thomasroskelly@gmail.com

Meets the first Monday of each month in Mineral Bluff

MODULAR CLUBS

Atlanta Interlocking Model Railroad Club (HO-Gauge) http://home.earthlink.net/~wiles/

Charlie Crawford, MMR 770 565-1845

cacrawford@bellsouth.net

Chattanooga Modular Modelers

www.chatanoogamodularmodelers.org Mark McAllister 423 653-7487

mlmcallister@gmail.com

North Georgia LEGO Train Club

www.ngltc.org questions@ngltc.org

James Trobaugh 770 844-1076 james.trobaugh@ngltc.org

Metro Atlanta N-Scalers (NTRAK)

Larry Graus Roadmaster 770 237-0094

Charles Leak 404 262-2969

Meets the first Tuesday of each month at 7:30 PM

North Georgia Modurail (HO-Gauge) www.northgeorgiamodurail.org

Jon Cook 770 993-9620

North West Georgia T-Trak Club

Kennesaw, GA

Jim Nealand 678-358-9171 casadiego86@gmail.com

OPERATING GROUPS

Atlanta Intown Model Railroaders Inside-ish I-285

Tom Gordon 678 643-6022 tgordon@mindspring.com

Boomers

Athens/Gwinnett/Commerce areas

John Rieken jrieken916@gmail.com

Saturday mornings—email for specific dates

Chattahoochee Express Operating Group North Atlanta Metro

Chris White 770 594-2618

Joint Railway Association of Georgia www.dixierail.com

Norm Stenzel stenzeln@mindspring.com

Meets most Fridays

North Atlanta Rail Barons www.northatlantarailbarons.com

Howard "HOrn" Goodwin 770 529-2103

horn69@bellsouth.net

North County Interchange I-85/I-985 corridor

Paul Rankin paul_r@mindspring.com

S-COG Southern Crescent Operating Group South of I-20

David Gelmini 770 707-5019 atcgel@gmail.com

OTHER CLUBS

Atlantic Coast S-Gaugers www.trainweb.org/acsg

Bob Lacheen Home: 770 578-9937 Cell: 404 431-8032

Georgia Association of Narrow Gaugers www.groups.yahoo.com/group/georgiangers

Georgia NG ers@yahoo groups.com

Pat Turner 423 744-0429

Georgia Garden Railway Society

www.ggrs.info Ted Yarbourgh

yarbrought@charter.net

OTHER CLUBS (continued)

Georgia Society of FerroEquinologists www.trainweb.org/gsof/

Robert Hunt 770 428-3864

Bob Hoenes 770 422-0081

Meets the second Friday of each month at 7:30 PM at Covenant Presbyterian Church in Marietta

Jasper Roundhouse (All Scales)

Jasper, GA

Phil Stead trainman07@aol.com

Meets weekly at a member's home

North Atlanta O-Gauge Railroad Club Roswell, GA

Jeff Peral 770 516-6378

Southern O-Scalers

Canton, GA

Dan Mason 470 385-6638 daniel@masonlawfirmga.com

Volunteer Garden RR Club Vines Botanical Garden 3500 Oak Grove Road Loganville, GA 30052

Need your club information updated?
Please contact Jim Datka
jdatka@mindspring.com
770 772-1538



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