

2026 Grand Rails Convention Clinics

Don Bergmann

Modeling Wood Trestles and Tresses

Since I started modeling in 1961, there has always been something special about watching a heavy locomotive pull a string of cars through the air defying gravity on a bunch of wood sticks. When I decided to model Colorado Narrow gauge in 1972, its bridges drew me to the Rio Grande Southern. Railroads do not like bridges. The RGS did anything they could to avoid them: lay miles of track, if necessary, cut the hill or fill in the valley, even tunnel; the last resort was a bridge, and then it was the least expensive bridge to get the job done. In one ¾ mile the RGS was on 6 bridges more than solid ground. Modeling we usually pick the most spectacular or easily available bridge. Be sure there is a reason on the layout for a bridge. If you are after a wood trestle and/or truss, this will be about how I built them.

Don Bergmann

Modeling the Prototype

Modeling the Rio Grande Southern. A discussion on the pros and cons of prototype modeling. A prototype model layout is one that incorporates not only the rolling stock, but the track plan, topography including elevation, rock strata and color, structures, vegetation, operating practices and anything else that contributes to the “look and feel” of the target subject. It rejects the term “loosely based.” It is modeling the subject as it was, not as you might have wished. There are always some “freelancing” compromises to accommodate the necessary restraints of compression, time, space and resources.

Don Bergmann

Modeling Mountain Streams and Waterfalls

I have modeled the Rio Grande Southern since 1972. I kept putting off any serious attempt to model the mountain streams in my imagination. Every time I visited the Colorado mountains, I would seriously look at the streams. How can I ever match this? My imagination kept putting it off. Over the years I have read articles and attended clinics. In 2021 as I was working on my MMR, I realized it's now or never. I will either make an attempt at the water or not achieve my MMR. This clinic will discuss my method and results.

John Bona

Modeling Coal Train Operations at the JH Campbell Power Plant

Consumers Energy Corporation has operated the JH Campbell power plant in Port Sheldon, Michigan since 1962. They wanted to build an HO scale model of their entire large rail complex as a training tool for employees. The Holland Modular Railroad Club assisted in the planning and construction of this layout. The clinic will describe the process of transporting trainloads of coal from Wyoming to the facility in Michigan. It will explain how the club and Consumer's staff planned and constructed the large layout. And it will follow a train as it is received on the layout, switched through the dumpers and staged for departure.

Dave Capron

Making Real Coal Loads / Coal Operations

Making and modeling real coal loads. This clinic covers the technique of how to make coal loads of various sizes from real coal. We begin with how coal is mined and moved from the mine to Marshaling and Classification Yards to the final customer. This prototype process is why the modeler needs different sizes of coal loads. The loads are easy and fun to make and will make those coal drags really stand out on your layout. Prototype coal operations is reviewed from mines to customers.

Dave Capron

Making and Modeling Rocks

Rocks in one form or another are on all layouts. Making and modeling rock molds is needed for those modelers who want more than a rock or two. This clinic will show you how to make long-lasting molds from natural materials. Then using these castings we will create that scenery to match the prototype. Various methods of how to attach them will be presented. Also see ways to color them to simulate the scenery you want. Rocks can be beautiful.

Dave Capron

Constructing Craftsman Kits (2 hrs)

Fifty years ago there were Campbell and Suydam kits. Scratch building was the only way to get great looking structures on your layout. Today there are hundreds of kits from dozens of craftsman kit manufacturers. This clinic will cover both the basics of kit construction and how to build award winning kits and dioramas. The use of basic and advanced tools, glues and adhesives, paints, stains, washes and chalks will be covered. Construction techniques and various methods will be shown. The tips and suggestions that are not in print are reviewed. Interior and exterior detail and signage is also demonstrated. We will quantify the difference between a layout model and an award winning kit. Finally, the diorama for multiple kits and scenery will be discussed. You have seen scratch building clinics – now learn how to construct the \$50 to \$350 craftsman kits that will be a center point on your layout.

Dave Capron

Chief Clerk and Car Cards

Model railroaders either love or hate Car Cards. While they seem prototypical they are not. Engineers and conductors did not and do not deal with them. The paperwork is handled by the station clerk. We take the Car Card Boxes off the layout facia and put them into a 'Chief Clerks' station. As the train progresses from town to town the Clerk works the Car Cards from his packet for that train. Come and see what a 'Chief Clerk' can do for your layout operations.

Dave Capron

Full Operation, Small Layout

Full and complete operation on a room size layout. This clinic will show you how to have satisfying operation on your small room size layout like the basement empires do. The ideas and suggestions presented will change the way you view your layout. There are possibilities that our discussion will permit you to find in and around your layout. The number of operators you will need along with the operational design will be reviewed. In no time you will be able to host op sessions as part of a round robin group of larger layouts. Come and see the real size of your layout.

Irvin Chmielewski

Using Prototype Railroads of the U P to improve your Freelance RR.

A look at the prototype railroads of the Upper Peninsula from 1900 to 1955. Using the information to improve and explain elements such as scenery and trackage on my freelance railroad. An example is the ability to explain why a 4% grade for a long-distance passenger train is ok.

Irvin Chmielewski

Moveable Scenery

Making Uninteresting places on your layout interesting or at least better. A way to put scenery where needed today and then move the scenery later when change happens. Add things for visitors to look at.

Dr. Bruce Chubb

The Sunset Valley RR: Past, Present and Future

Bruce DeYoung

From Stump To Mill: Logging In The Steam Era

This clinic will focus on the difficulties of moving logs from the forest floor to the sawmill and how entrepreneurs of the era found various techniques and invented some interesting equipment to solve the problem. As the saying goes, "There is more than one way to skin a cat", and we will look at quite a few. Along the way, we will get some ideas of how to model these techniques and equipment. The majority of the photos included in the clinic are from the logging era here in Michigan. Whether you model a logging railroad or are just interested in how our ancestors accomplished tough tasks in the "old days", this is clinic will be of interest to you.

Bruce DeYoung

How I Dipped My Toes Into AI And Am Using It In Our Hobby

Artificial Intelligence (AI) is in the news virtually every day. In this clinic we will look at what prompted me to start using AI in our hobby and how I have found more and more uses along the way. If you are interested in seeing what AI can do for us other than just research, you will enjoy this clinic.

Bruce DeYoung

Modeling "The Old Ones"

If there is one thing we know, we modelers tend to buy more kits than we ever actually build. So, when you look at the used market, you can find loads of kits from days gone by. For the past few years, I have purchased old kits at very reasonable prices and have had fun building them. In this clinic we will get reacquainted with model makers of old, and see how their kits stand up against current offerings. I will turn 80 this year, and recently built a kit produced when I was 10 years old. So, if you would enjoy a trip down memory lane, you will enjoy this clinic.

David Gibbons

A Car Check-in Process

This is a hands-on clinic where attendees will be introduced to a car check-in worksheet that the presenter has used for years to improve the reliability and interchangeability of rolling stock. Several gauges and test fixtures will be shown and discussed. The attendees will then get an opportunity to 'check-in' supplied rolling stock to see how the process works. This process has helped several model railroad clubs to make their operations much more successful. Attendees can bring a piece of their rolling stock if they want to see how they perform during a check-in.

David Gibbons

Soldering for Model Railroaders

This is a hands-on clinic which includes a short PowerPoint, presenting the principles of soldering, techniques for better results, and short demo videos of the activities the attendees will do themselves during the 'hands-on' part of the clinic. All materials are provided, with 7 soldering irons making it possible for up to 25 attendees to try their hand at soldering rail joiners, drop wires, and soldering wires into sample circuit cards.

Patrick Golden

Tappets, Dogs and Bridles - The Basic Principles of Mechanical Interlocking

Part One (of Two Parts) defines mechanical interlocking and looks at much of the component hardware - tower structure, levers, cranks, pipeline, etc. - associated with a mechanical interlocking plant. Signal aspects are covered and the basic operation of the locking bed (where all the actual mechanical interlocking takes place) is introduced as a lead in to Part Two.

Patrick Golden

Tappets, Dogs and Bridles - The Basic Principles of Mechanical Interlocking

Part Two (of Two Parts) builds on Part One in that a mechanical interlocking "locking bed" is built step-by-step on the PowerPoint screen and then lineups are made to demonstrate how manipulating various levers lock out others and how levers are manipulated in a precise order to make lineups and clear signals. Trains are then "run" through the interlocking plant. A crossing (diamond) is introduced to demonstrate the need for "crossing" or "route" levers, trap circuits to protect the dead section of track at the diamond are discussed and time release mechanisms are discussed when it is necessary to take down a signal previously cleared in order to change a lineup.

Patrick Golden

Scratchbuilding Main Line Bridge

Scratchbuilding Main Line Bridge" covers the background, design and scratchbuilding, using basswood and cardstock, of a non-operational O-gauge bascule-type lift bridge. The motivation for the project was to build a reasonable representation of the Chicago and Western Indiana Railroad's Main Line Bridge which carries the railroad's double-track main line and spans the Calumet River on the far southeast side of Chicago, IL. The completed bridge will be exhibited at the clinic.

Kevin Griffin

Developing an Operating Plan for Your (Model) Railroad

What traffic should go in which train and when should those trains run? This is the heart of prototype operating plans. Drawing from prototype examples, this clinic will introduce how to create an operating plan for your railroad. We'll take a look at how the kind of work a train gets involved with along the way affects the rest of your operating plan. Also covered is how to plan out connections between trains based on the traffic carried. Examples from model railroad operations will also be used to help show how to create a line graph to map out your operating plan.

Kevin Griffin

Layout Lighting

In this clinic, we will take a look at how to light your entire layout and show off those great structures and scenery you've been working on all these years. We will begin with the common lighting platforms available for home modelers and then talk about the amount of power needed to light up your railroad, lighting color (color temperature), color rendering, and how many lumens do you need to get the brightness you want at track level. We'll also touch on lighting at the workbench in relation to layout lighting.

Kevin Griffin

How to Create Car Cards and Waybills and Put Them to Use

There are several car forwarding systems in use for model railroaders. This clinic will cover the creation of car cards and waybills using those offered by MicroMark and home-made versions. Topics to be covered are how to design the car card and waybill layout and what information to include on both. We will also take a look at the waybill boxes themselves and how to handle the car cards and waybills as they move through them on your layout. Setting up your car movements along the lines of the prototype's industry locating/car spotting diagrams will also be discussed along with the creation of other information cards that are useful when using car cards and waybills.

Steve Harsh

Enhancing Your Railroad by Lighting Structures and Scenes

By adding lighting to structures and scenes you can generate excitement and interest in your railroad. A small depot without lighting is just that. Add lighting and you can see people in the waiting room, the station agent selling tickets and railroad posters on the wall. The depot has now become a point of interest on your railroad. There is increased interest in lighting structures and scenes and this is reflected by the growth in commercial options available for lighting structures. The components and features of several commercial options will be briefly reviewed. The main focus of the presentation will be on the lower cost "do-it-yourself" method taking into consideration the desired results. Various lighting components will be reviewed including power supplies, LED selection for different purposes, fiber optics, distribution systems, wiring, lighting control and new technologies. These methods and considerations will be illustrated with actual installations which reflect both daytime and nighttime.

Steve Harsh

Scratch Building a Small Turntable

Needing a small turntable with limited space for installation, the commercial options available just did not meet my needs. Scratch building a turntable was a possible alternative but I had no experience in scratch building. This clinic shares my adventure into scratch building. What is shared can be use to build a larger-sized turntable and the tools used are those that most model railroaders will ready own. Following the design stage, the clinic describes the process of building the pit, bridge, drive mechanism and electrical wiring and concludes with what I would do differently next time. It was a fun and exciting introduction to scratch building.

Andrew Keeney

How a Passing Siding Became a Busy Yard

This is a more in depth version of a clinic that I presented to the Layout Design Sig this Spring at their Annual Meeting. It follows the changing design requirements of the Nashville Road layout as it is being built. I discuss the necessary modifications to the layout and how they were made.

Seth Lakin

Modeling Arched/Bow-String Truss Roof Buildings

Arched/Bow-String truss roofed buildings were a common building style from the early 1900's into the 1970's when they fell out of favor. These buildings were typically single-story masonry construction and commonly used for light industrial and commercial uses. We will look at several prototype buildings with arched/bow-string truss roofs. Then we will look at two railroad served arched/bow-string truss roofed buildings. Then build HO scale models that represent both by kit bashing one and scratch building the other.

Seth Lakin

Applying the Layout Design Elements Concept to model Michigan City, Indiana

This clinic looks at the five railroads that served Michigan City Indiana in the early 1960's. Then divides the city's railroads into ten sections each with its own characteristics, that are made into Layout Design Elements. Selecting connecting LDEs are used guide layout planning following the prototype. Layout plans include a 10x12-foot spare bedroom layout and the 12x23-foot double deck layout that is under construction now.

Norm Logan

Preventive Maintenance for Rolling Stock

This is a work shop. Modelers will be working on Rolling Stock that they bring.

Norm Logan

A Museum Quality Backdrop for your Layout (3 Part Clinic)

PART I: Materials, Pre-Production Thinking, and the First Five Layers

If you are tired of flat blue walls and interested in having an effective backdrop for your layout this is the clinic for you. Painting a backdrop can be the quickest way to add a lot of scenery to your model layout in the shortest amount of time. It is also a great way to unify all of your scenic ideas and give focus to your modeling theme. The clinic will cover Pre-Production

choices and backdrop painting techniques. We will show you, with a Power Point Program and will go over material and the steps to help you have a backdrop that will enhance you layout and models.

PART II: Designing scenes with the use of clipped photos from magazines and internet photos, tips and brush tricks

During this clinic, Mr. Logan will talk about designing scenes to tie in the “Far away hills” with the foreground. We will also show how the use of pictures and clip art from catalogs and magazines can add scenes, cities, industry to enhance, detail, and add depth to you backdrop.

PART III: Designing scenes with the use of clipped photos from magazines, internet photos and scene design for the lower 4” to the layout deck.

During this clinic, Mr. Logan will talk about using and the installing of clipped photos from magazines and internet photos. There will be a discussion of matching photos to models on your layout. We will also discuss how to paint around and over photo create a scene that will blend in with the layout on the forefront.

Rich Mahaney

Perishable Operations in the 1950's

This clinic presentation looks at refrigerator cars and operations in the 1950's and the supporting operations (icing, repair, storage buildings and warehouses, brokers and customers) that made system work. Lots of photos and layout photos illustrate this clinic. If you like refrigerator cars in the 1950's, this is a clinic and information for you.

Rich Mahaney

5 Busy Railroad Traffic Locations for Your Layout

This clinic looks at five busy railroad traffic locations that can be built on your layout to increase rail car traffic. Interchanges, freight houses, team tracks, bulk transfer facilities and rail car/engine facilities are discussed and shown in photos. These types of facilities can be built on a spur on an empty corner or a empty space on your layout per your design.

Rich Mahaney

Making "Stuff" for Model Railroads

How do industries make stuff and then move it by railroads. Products come in as parts and leave as finished products. Railroads serve in the movement of solids, liquids and gases for products to industries. This clinic will help model railroaders improve their railroad operations, as they serve the industries on their own layout.

Rich Mahaney

Tank Cars 101

This clinic looks at modern tank cars, their basic features and explains the three main types - low pressure, high pressure, and cryogenics tank cars to help model railroaders better understand how they transport products and the industries that use them. Rich has been presenting this clinic for many years across North America.

Ralph Moxley

Model of Ann Arbor Railroad--1955

Focus is on the Ann Arbor Railroad in 1955, from Cadillac to Elberta, MI. This railroad was very busy operation with six trains each day, most with 90-100 cars. Freight cars were loaded onto ferry boats in Elberta. The boats went to three ports, two in Wisconsin and one in Michigan's upper peninsula. This ferry operation was a short-cut for many shippers whose only other option was to go thru Chicago and see their freight cars get bogged down for a week.

Key focus point in the model is loading a large ferry boat in Elberta (28 freight cars). Cadillac is also a key point of operation with a freight yard and industries, including the Chris Craft Boat Company, a lumber yard, and a freight depot. There is a five track staging yard in an adjacent room to the Selma/Cadillac yard.

The layout also focuses on a Crystal Lake scene with summer cottages overlooking the lake and the railroad tracks. All cottages are small and simple buildings. Automobiles are carefully selected to be 1955 or earlier. Chris Craft boats are seen on the lake. Sun bathers are seen on the beaches. Northwest Michigan is represented as a heavily forested area with 3600 trees in total.

Alex Schneider

Layout Friendly Bridges: Riveted Steel

I identify four broad eras of bridge construction in the US: 1830 to 1870; 1870 to 1900; 1900 to 1930; modern. I discuss the third, consistent with the transition era of my layout, and focus on girder and truss styles appropriate for moderate spans (to 250'). These enhance a layout but do not dominate it, and a wide variety of kits are available. I review the engineering and economic criteria that a prototype bridge engineer would have used to select a bridge; discuss design features that make a model representative of sound and representative practice of the era; and give guidance on selecting a bridge that will fit your layout. I show assembly of representative kits and adapting them to "skew" positioning to minimize the span needed. Samples HO scale models will be brought in for examination during Q and A.

Tim Verberg

Dead rail options for today's modeler

A brief description of dead rail, pro's and con's, and products available to today's modeler. Tim talks about equipment needed with any dead rail system as well as installation ideas. Finally, Tim shows how he implemented dead rail on his HO scale equipment with some lessons learned.

John Young

Ergonomics of Layout Design:

A look at the points to consider in designing a layout for satisfying operations of its crew. Discussions will encompass the builders personal dimensions, the concept of the layout being designed and foreseeable problems to be avoided. This is not a clinic about drawing line where the tracks go. We are going to visualize how you will interact with your creation and maneuver around it in the space you have

David Zolnierrek / Dave Capron MMR

Make-N-Take Tree Clinic (\$20)

In this Make-N-Take Workshop we will take the modeler from start to finish on the following two types of trees. The Colorado Aspen or our similar Michigan Poplar. Each modeler will take home a finished tree along with materials to make many more. The deciduous tree like an Oak or Maple. These will be made out of the Sedum plant. Besides making several of various kinds, sizes and colors including the fall trees, modelers will take home finished trees and materials to make many more.

David Zolnierrek

Making Aspen Trees

Does your layout need some spectacular blaze orange or yellow fall color?

In this presentation we will show you how to make the Colorado Aspen or our Michigan Poplar tree. We will cover the materials required, tools and jigs, steps in making. We will also be discussing seasonal changes, locations & elevations, placement and layout examples.

David Zolnierrek

Structure Illumination

In the clinic we will demonstrate the use of LED lights to add life to a layout. From calculating circuits, pulling wire, installing light fixtures to throwing the switch will be covered. Structure lighting, both interior and exterior will be discussed. We will be showing how to make the iconic gooseneck light fixture. Working kerosene lamps. Stoves, light poles and more.