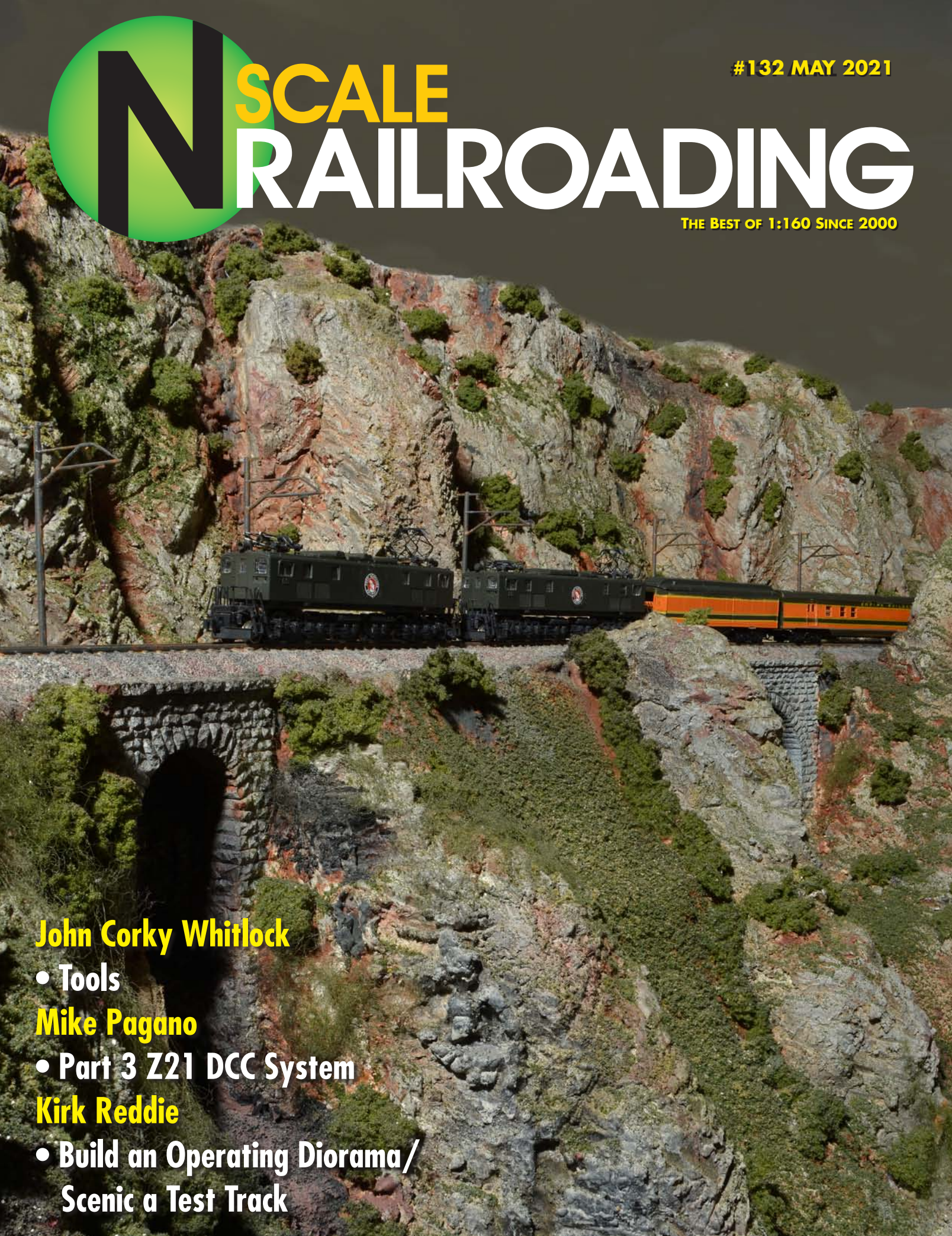
#132 MAY 2021

N SCALE RAILROADING

THE BEST OF 1:160 SINCE 2000



John Corky Whitlock
- Tools

Mike Pagano
- Part 3 Z21 DCC System

Kirk Reddie
- Build an Operating Diorama/ Scenic a Test Track

WELCOME!

Cover Scene: A pair of Great Northern Y-1 motors are staged on a diorama featured in this issue.
I gave Ron Nowka all of my Kato EF-15s, which are the best starting point we knew of to kitbash the Y-1 as well as the GN 'based Y-1a. Changes include raising the EF-15 body shell, new roof details, filling in the center three side windows, and removing the shades over the front cab windows.

AD INDEX

Welcome to ***N Scale Railroading*** #132, the May, 2021 issue.

Page 04. **New Products.** And New Tooling starting on page 06.

Page 14. One of the most clever modelers I know is **John Corky Whitlock.** After I saw some of the tools in his arsenal, I figured this would be a great thing to share with readers.

Page 22. **Mike Pagano** presemts part three of his experiences with the new Fleischmann Z21 DCC system. This issue he discusses options with boosters.

Page 23. After finally starting a home layout, I still liked building smaller projects like issue #105 Jan/ Feb 2018. About 8 years ago I wanted to do an ultimate 4x8 layout but it was going to be too heavy so I switched to a smaller test track/ diorama that I could take to swap meets. These are fun because one can set a time and material budget. And all my tools were out.

Page 54. **NCalendar** and **Observations.** More economies of N scale. Will we see 3D print chassis for new projects? ◗

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N SCALE RAILROADING
NEW PRODUCTS

Above. Rock Island "Mistletoe" is Railsmith RS-501853.

Above. Florida East Coast "Salerno" is half of Railsmith 501846-47.

Above. New York Central 3026 is half of Railsmith 501840-41.

Left, Above. GN 44414, 44416, 44419, 44422, 44427, 44429, 44432, and 44439 are MTL 993 00 5219. Nice!

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Norfolk Southern (Horsehead logo)

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New Products

I am a great fan of going with close-as-you-can-get-with-stand-ins if what you want isn't available. Then there is Rapido's stunning new *Canadian* cars. With add-on cars, including the modifications made to the prototype cars, one can have accurate consists from **1955 through the foreseeable** future.And they are not as expensive as I thought they were going to be. Below is **CP Action Red 10-car Set #2** (SKU: 550004) and **CP Action Red 3-car add-on set** (SKU: 550102) which are not named/numbered but decals are included.

Above and Below. The first car is Baggage-Crew Dormitory car 601.

Next come the coaches: 100 (above) and (122). Notice the line number boxes at the bottoms of the windows next to the door? Amazing.

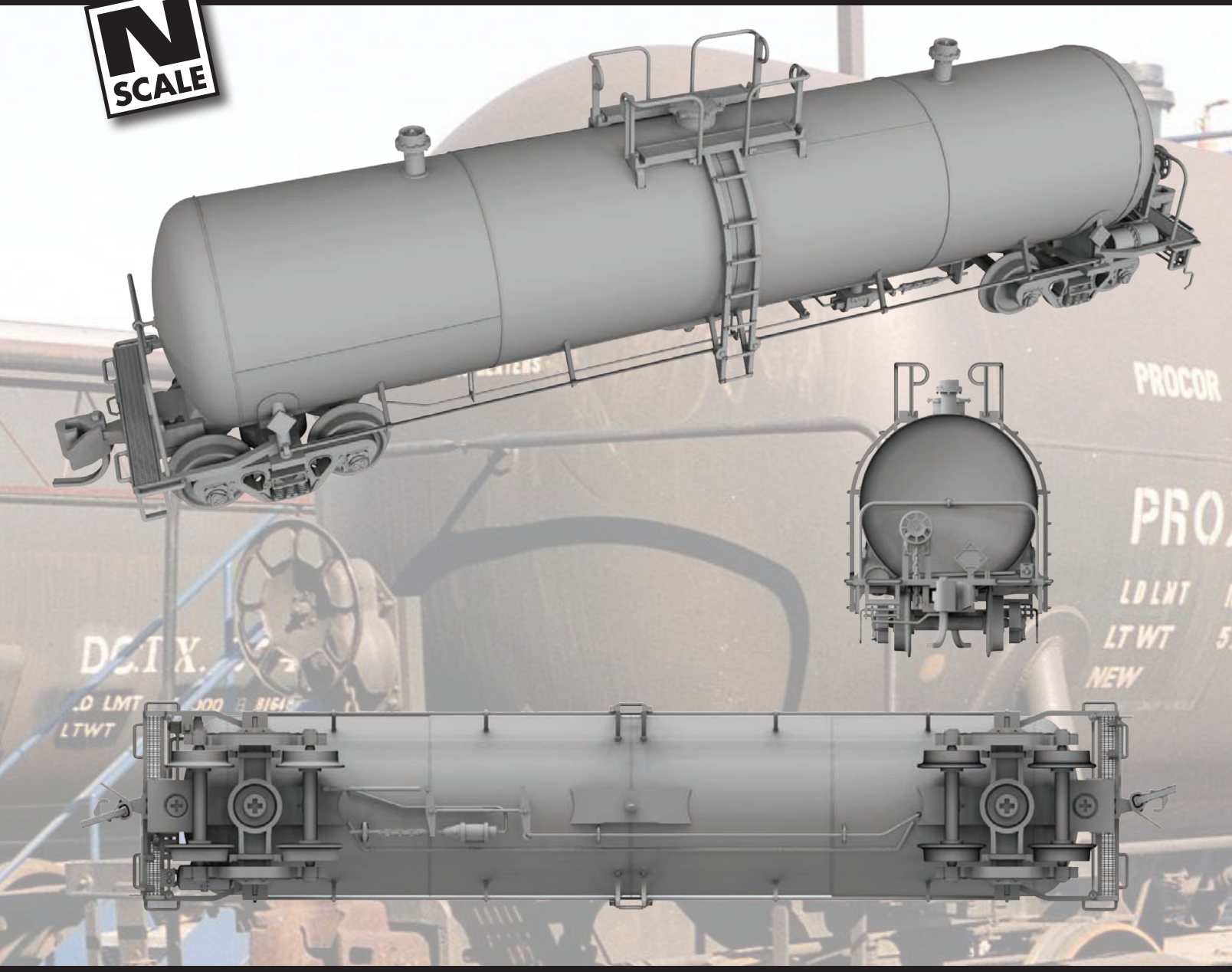
New Products

Above and Below. Next comes the Skyline Dome car (509).

Above and Below. Then the diner Annapolis.

Above. Then first Chateau sleeper Richelieu. The Chateau sleeper had 8 Duplex Roomettes, 4 Sections, 3 Bedrooms, and 1 Drawing Room.

WE GOT THE TANKS



CLICK HERE!

New Products

Above. The second Chateau sleeper is Chateau Varennes. Unlike most US sleepers, the expensive spaces are in the center of the car away from the trucks.

Above is Monck Manor and below is Elgin Manor. The Manor sleepers had 5 Bedrooms, 1 Compartment, 4 Sections, and 4 Roomettes.

Above and Below. Finally we have Tremblant Park. The Dome Observation Park series had 3 Double Bedrooms, 1 Drawing Room, Tavern, and Lounge.

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New Products

Above. This is the Manor sleeper in the **CP Action Red 3-car add-on set** (SKU: 550102). The set comes with a decal set.

Above. The coach in the 3-car set.

Above, The Chateau sleeper in the 3-car set.

These are really nice models and a great tribute to a great prototype train. Preceding the Santa Fe's *El Capitan* and the Burlington's *Denver Zephyr*, the *Canadian* was among the last of the classic North American trains and incorporated lessons learned on the previous trains. Over their 45-year life (and counting) they have appeared in 4 schemes with rebuilt cars to improved accommodations. The exterior was streamlined but Rapido loves (below) detail.

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WHAT'S IN YOUR TOOLBOX

by John Corky Whitlock/ Images by Author

? #01

I don't want to go into this (toolbox thing) too deep, but the editor mentioned that I have some stuff / tools in my stable along with techniques for using them that might be helpful to folks. Things like hammers and screwdrivers probably won't make the cut, but some of my more "exotic" or maybe off-the-wall items could help N scalers.

THE BOX.
I've been using this Plano tackle box as a toolbox for quite a few years. It's full of scuffs and stickers but still serves me well. I actually have two of them, one that's earmarked for N scale, and one that I used for G scale when we were displaying the "G-Whiz" layout at train shows.

The box holds a lot of stuff. At home it sits on a wood step stool right next to my workbench. Dad made the stool for me years ago. For train shows the toolbox goes along with me.

BENDY-NIPPY-GRABBY TOOLS.
Also known by their more generic name of pliers. I'm sure all modelers have their foibles when it comes to this area of tools. I'm no different and have gobs of pairs of these things That said, I keep returning to the same ones for almost every model project. Some of these are no longer made, which totally irks me as I'd update / upgrade them if they were still available. Consequently I try to be careful with them. Biggest problem isn't worrying about breaking any of them, but rather misplacing or losing them! So here's what I use fairly often in my modeling process. The binders on the handles mean they pack easier in the Plano toolbox large drawer.
Clockwise from green pair: needle-nose, yellow pair: round-nose, blue pair: nippers, red pair: nippers, yellow pair: mini diagonal cutters, orange pair: some sort of Fiskers pointed with a vertical slot in the jaws. (More on those later)

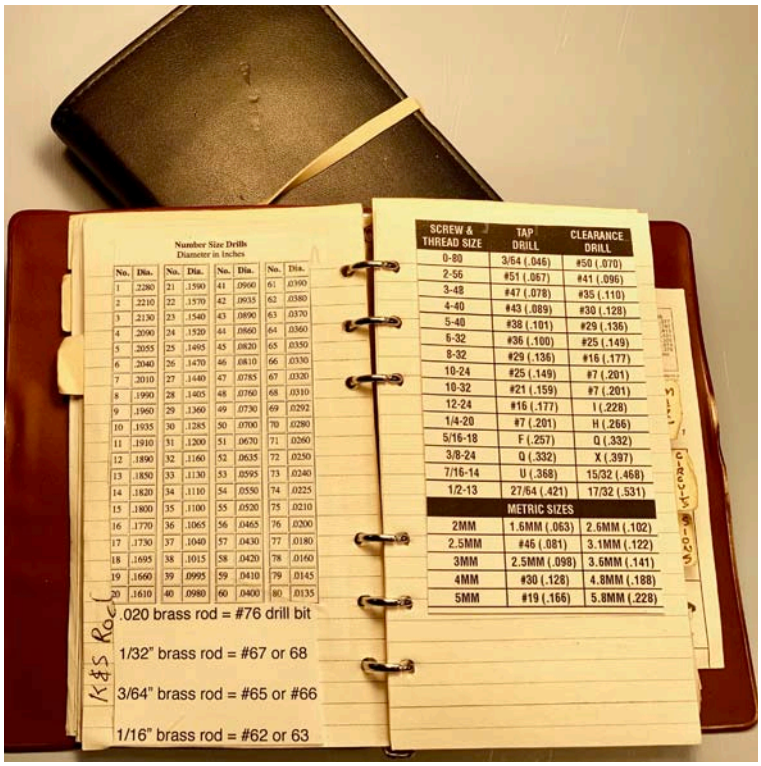
The blue pair works well for sprue or wire cutting. I use smaller diagonals for electronics work, wire cutting and stripping. (I never did learn the technique for using regular wire-strippers.)

The reds are fine cutting and are handy for numerous cutting chores.

The orange Fiskers are unbelievable with a vertical groove that give you the opportunity to hold fine pieces of wire, a pin or needle, 00-90 screws, etc. Really handy at times.

WRITEY-SAVEY BOOKS.
I have two small notebooks in the top tray of the box. One is specific to my NTRK modules I use in our St Paul & Buffalo portable 'N' layout. That book things such as layout setup instructions, layout wiring diagrams and the like.

The second notebook is my archive 'bible' and contains almost everything I need that pertains to my modeling projects. Things such as screw / tap sizes, electronic circuit diagrams for building the circuits I use for my modules, Evergreen sheet styrene sizes, K&S brass shapes listing, and the list goes on. I use this notebook quite a bit and it's handy right there in the toolbox. I have to add and purge this book fairly often.



TWIRLEY-DRILLEY TOOL.
Also known as a hobby rotary motor tool, and often just called a Dremel. I actually have two brand name Dremel tools, one of which I seem to have misplaced. My newest addition to the toolbox is a cordless rechargeable motor tool with the moniker "Hyper-Tough") that I bought at WalMart.

I'm not shilling for that chain, but I think this tool is a gem for under 30 bucks. Five speed ranges, nice feel in your hand. Only comes with 2 collet sizes, but actual Dremel collets (4 different sizes) will fit. It has some other great features I won't dwell on.

MOTOR TOOL BITS.
Of course I have the hobby drill bit set with sizes 61-80 in the toolbox, as well as a couple of mandrels, the heavy-duty cutoff wheels, and a couple of different "shaping" bits. I use this stuff regularly.

CUTTY-POKEY-CLAMPY TOOLS.
These are other necessities in my toolbox. The spring-type mini-scissors are quite handy for cutting any paper type products such as advertising signs, and they'll also work on thin shim brass and thin styrene.

The straight, pointed dental pick is a common and useful item, and also is handy for adding a tiny drop of glue to your project.

Locking forceps are handy for holding things, and especially useful for heat sinking when you are working on / in electronic circuits

CLIPPY-CLAMPY TOOLS.
I use the mini and standard alligator clips for holding parts while gluing them together. Radio Shack sold both sizes, but since it's difficult to find one of their stores lately, I think both sizes are available from Digi-Key. https://www.digikey.com

Hope this installment was helpful for you. Get in that toolbox and start building! ◗

REVIEWING Z21 BOOSTERS
FLEISCHMANN
PART 3
by Mike Pagano/ Images by Author

The Z21 Booster and the Light version are great solutions to any expanding layout that needs extra power districts.

Welcome back to the Z21 test drive series. In the last two articles, we reviewed the Z21 Start system and expanded the system with the WiFi router that will communicate to a remote Roco/Fleischmann hand held throttle or to your phone with a Z21 App. So what happens when your layout grows and power needs are not met? This is where Z21 boosters are added in junction with a command station to balance the current draw requirements around the layout. The Z21 system has three options for boosters. The Z21 Single Booster, Double Booster, and the Z21 Light Booster. All the Z21 boosters are based around the 3 Amp output requirements, as the dual booster will supply two channels of 3 amp outputs with the same parameters as the single unit. Lets look at some of the differences of the single and light booster features.

Z21 Light Booster

The Z21 light Booster #10805 is a compact device that measures at 4" x 4" footprint that can easily be mounted under the benchwork where the current is needed to power the section of layout. The booster can also be programed to perform "Auto Inversion" which is more known as the Auto Reversing in North America. The power requirement is 12-24v DC at a minimum of 3 amps. Roco recommends the incoming power to be supplied by only a DC switching power supply like a Roco #10851 wall mount power supply. This booster communicates to the Z21 command station only through RailCom ports, which are supplied by two 4- pole B-Bus receptacles. If the booster detects a short in the track circuit, the power will momentarily shut off and try to reactivate every 3 seconds until the short is cleared. The notification of a short circuit it transmitted to the control center during the duration of the shorting condition. The flashing of a blue LED light indicates the status of the booster.

Z21 Single/Double Booster

These boosters can perform all the functions that the light booster has to offer along with some added features. The Z21 Booster can communicate through the CAN bus, B-Bus or CDE Port. Mixing the configurations from device to device is not recommended, but the Z21 system can be configured to use other brands of boosters on the layout. Roco recommends using their #10789 booster adapter or by connecting the boosters through the CDE ports when a different bus is utilized to communicate to a third party booster. The Z21 booster can also perform a decoder read out when Programing On the Main (POM) in the booster section. The CAN bus connection to the command station is the preferred way to connect for this application. Track voltage is also adjustable through the Z21 maintenance tool App. The single booster requires a 18-30v DC switching power supply like the Roco #10851 while the dual booster requires the #10857 that is rated for the 6 amps. For more information visit: www.z21.eu/en/products ◗

Right. The back of the Z21 Booster has more than one bus option when connecting other devices to communicate throughout the system. Check the out the Z21 booster manual, available on line about different ways to connect the booster to other components.

Above. Great Northern Y-1a #5011 pulls a GN heater car and consist. The scenery is *Cascadus Genericus*. The Y-1a started life as a Kato EF-15 and is a great runner. The catenary poles are also from Kato. All the rolling stock was kitbashed by Ron Nowka.

Build an Operating Diorama/ Scenic a Test Track

by Kirk Reddie/ Images by Author

Nature is often considered beautiful but is that way because of extremely violent events. Some activity like earthquakes, volcanos and tsunamis can happen quickly but most of this massive change occurs over long periods of time. Mile high glaciers gouging out future water bowls are sprinters compared to the time it takes for mountain ranges to be created by continental drift and their gradual erosion take a huge amount of time. Sure: Grass and trees are visually pleasing as are rock faces, but they tend to accent and disguise the violence that made the mountains.

To capture the look of this slow moving drama, I find using Hydrocal works best for me. Like nature, this is not a lightweight way of doing things and it's not for everyone. Plaster is very messy but I think it is easier to clean up than the foam shavings.

To justify my sloppy woodworking, I put on my Faux-Artiste hat and start with a vision and refine it as I go. The vision needs to include what raw nature looks like and then how the railroad would be built through it. To maximise the visual effect, the vision can push nature forward and back, and similarly change how we visualize how the civil engineers would build the railroad through nature.

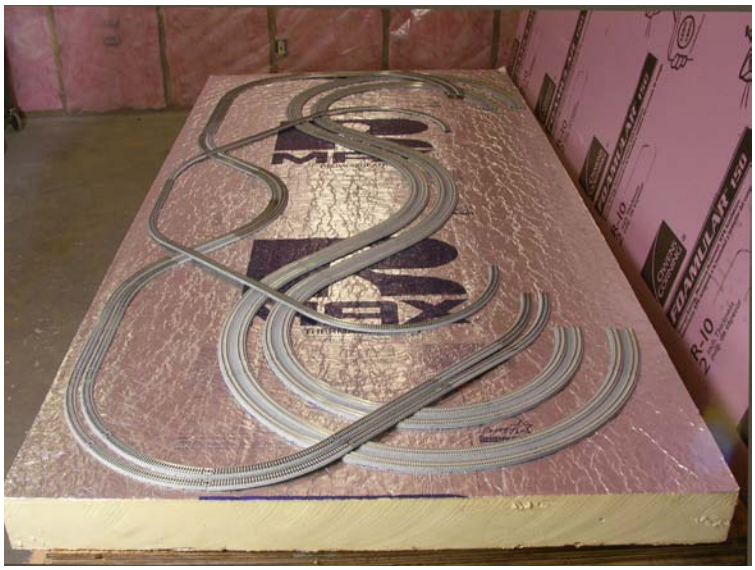
Scenery can be one of the least expensive parts of the hobby. If you don't like the results: tear some out and fix things. Unlike painting locomotives: Patching scenery can improve the scene.

When I saw the Kato 6" radius track, I decided to build an operating diorama that I could bring to swap meets. I wanted a broad visible curve and was able to fit into a 16" by 60" space and still have a lot of space for scenery. I imagined that it would look good if the diorama was 16" high and the track level was at 8".

The Tamiya paint I used to use became very expensive. Most of the color here was done with washes of 3 colors of cheap house paint: Dark gray, light gray, and medium brown.

The article is longer than normal. I recommend the cafeteria approach. Take what is useful for you. Substitute freely. Have fun.

One of my goals was to design and build a potential ultimate 4x8 layout. 4x8 layouts have made F-150s and their competitors the best selling vehicles, right? I figured a 4 track mainlilne in the mountains would be Pennsylvania Railroad Middle Division on the base level with the Trenton cut-off type double track 2+ inches above the base. 2" above that could be a single track line darting around the other two routes. And of course there should be a river rolling through the scenes.



The idea was to have a 1950s commercial art style toy train layout like Lionel and American Flyer had in their catalogs and some department stores. The fantasy of a toy train layout with more realism. Of course the bestg parts of the PRR were like a huge Lionel layout.

With multiple levels I don't trust paper and want to look it in 3D. This is a lot easier using Kato Unitrack. I like the double track sections but their geometry is more for a double track railroad than four track mainlines.

As I played with it I decided to leave off the single track loop because it would interfere with the scenery. The river scene was great and I had some short passing sidings that could be hidden from viewers by hills.

There were still a lot of great potential scenery so I transferred the track to plywood and marked the cookie cutter lines. I didn't have any 1x4s so used by 2x4s for the framing.

I started putting in the double track level and the fascia to help survey what I wanted to do with the hills. The four track main separated on each side of the yard but I figured I could disguise that.

I have enough 1st generation DGLE diesels to keep this layout busy for a show. But the passing sidings were shorter than I'd like. The main problem was with 3/4" plywood, this was already a very heavy layout. I didn't have a full length bed on my truck and I thought if this was sceniced, I might have to upgrade to an F-250 or heavier. So I scrapped this project and decided to go with a smaller diorama.

Left. First gather tools on your arsenal of plywood. This was in 2013 when I was starting my layout, In reality most of this project was done with scrap wood.

Above. I wanted a test track where viewers would only see a gentle curve. I used Kato's 6" radius curves and a hidden staging track so a few trains like Kato's Chibi line and Modemo trollies can run out into the viewing area. The base is 16" x 60".

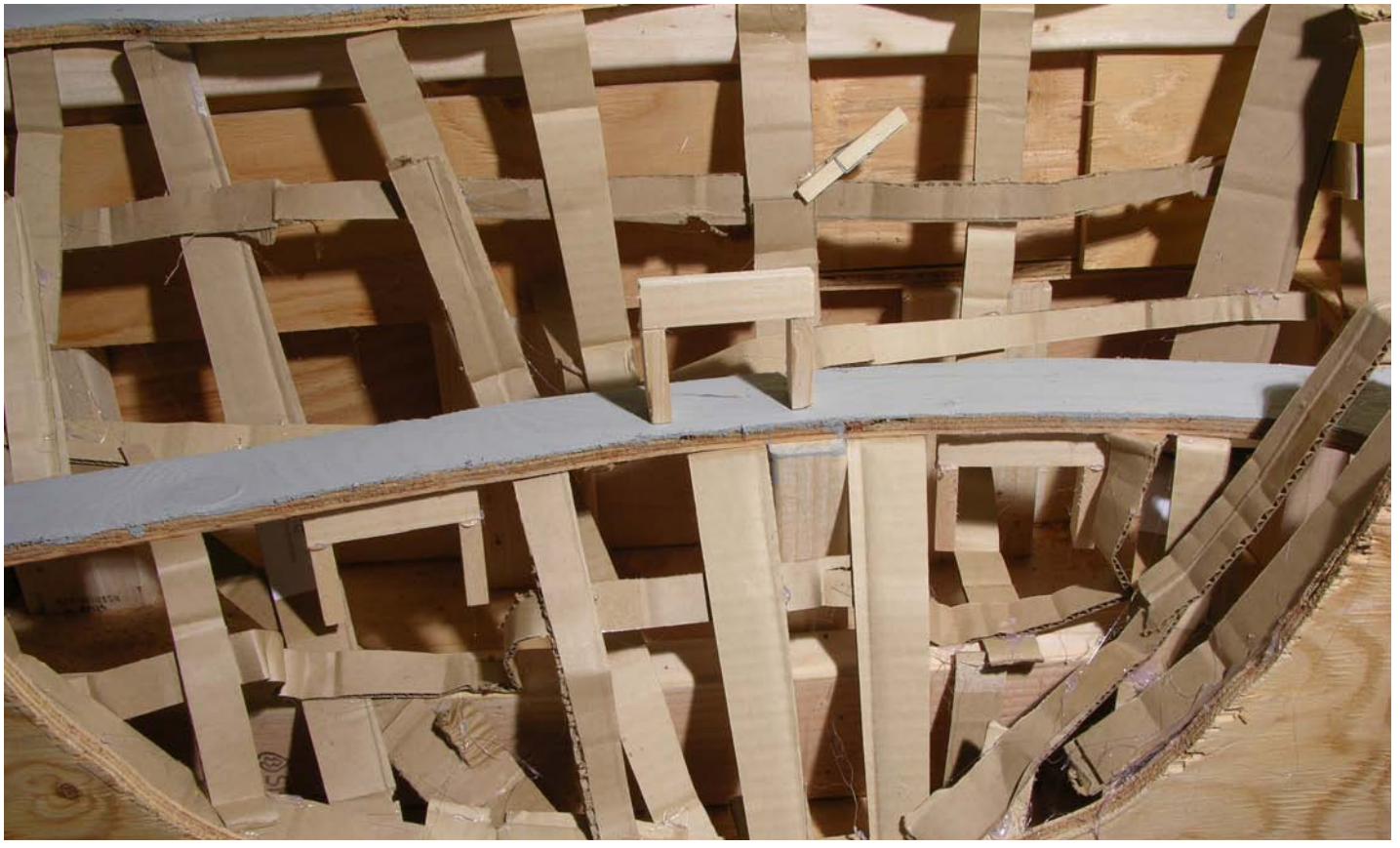
Above. I played with heights and decided a total of 16" with the track at 8" felt right. Then I built a box around it and cut 2x4s to support the sub-roadbed. This was the first time I used pneumatic tools and 4" wire nails with yellow glue. I really liked this.

Above. Next I used scrap plywood to sheath the fascia and the top, I started conservatively because it is easier to cut material away than to add plywood. The goal is to disguise the caps. Notice the well-supported handles on the top. This will be heavy.

Above. The hidden rear track was blocked with plywood to avoid falling scenery. Again: This is being made up as the scenery is figured out and not how one would build the base if one knew exactly how the end result would be. My theory is one needs a plan but it is usually OK if the plan can be improved.

Above. Here the ravine on the right side is being made deeper. The cheap sanding block is a very useful tool.

Above. Cut strips of cardboard (carefully!) using a sharp box cutter. The landforms are created by hot-gluing the strips together with clothespins to temporarily hold the pieces together until the glue cools. One of the problems with tight radius is the wide swing on curves. I decided to cheat and use a double portal and use scenery to hopefully hide this. While staring at the Chooch tunnel, I realized they would make great culvert facings for eastern or European right of ways, which were built before cement became common. And using them for culverts helped my time budget.



Above. Make wood frames to hold the place for culverts and tunnel portals. Now is the time to refine the landforms. The main question: How will water move down the hill?

Above. This is a good step to sharpen the vision. Among the adjustments, I decided to deepen the ravine on the right. These adjustments are hard to visualize before the actual construction.

Above. Now the shapes begin to be solidify. First I used newspaper, then brown paper bags, but I use cheese cloth now after seeing Keith Schaber use it on his Blue Mountains layout. I think it clings better to the cardboard strips and is more precise.

Right. I delayed placing the tunnel portals until I got the shapes down. Due to the tight 6" radius curves, there will be wide overhangs. There is a trade off between recessing the portal into the hill and having an overhanging car hit the portal on a sharp curve. I decided to cheat and use a double portal. The other consideration is my fingers had to reach the inside of the tunnel portal.

Above. It's finally time to get the hydrocal. It is messy but the first thing I do is repackage it (outside!) into plastic containers lined with plastic garbage bags. Store in a dry place!

Above. Arrange your active scenery carts. Originally I did these as a joke but if you have the room, these really make the process a lot more efficient.

Above. The only way to learn hydrocal is to get to it and experiment. I place a couple cups of hydrocal into the bottom of an orange juice container (It is flexible and therefore easy to clean once the hydrocal is dried.) For the hardshell, use a very thin mix. Dip paper towels into the mix and place them over the cheesecloth. The main thing it to go up and down and make sure you don't have any horizontal terracing. If you are adding wet towels to dry hydrocal, mist water onto the dry hydrocal so it won't suck out the moisture on the wet towel. Napkins are usually too thin and need at least two layers. On big scenes I started using paper table cloths. But a single level of towels worked fine here.

Left. After the hardshell is in, it is a lot easier to visualize exactly where the tunnel portal should actually be. Then we can glue the wood pre-liner in place. It is a lot easier to clean Hydrocal off the wood liner than an actual portal.
At this point the hardshell can be built up above the tunnel portal.

Above. It is time to get serious about where the exposed rocks will be. I use aluminum foil as I've never liked my results with rubber molds. This way each casting is unique. Foil does not have the texture rubber molds can have so the texturing needs to be done manually. Hydrocal dries in about 5 minutes: Too quick for some but I think of it as a time budget. I suspect everyone develops their own style based om their tastes and patience. The main thing is to experiment.

Above. The tools can be very simple: A kitchen knife, a cheap hobby blade, sometimes I use a paring knife, a steel brush, a spray bottle,latex gloves, and a flexible plastic mixing container make life easier.

Above. It's time to rock. I wait to color later as my experience is that adding paint or pigments to the hydrocal weakens it and slows down the drying time, so I leave that step for later.

For both casting and carving: Always work from top to bottom. The hardshell step uses a watery mix of hydrocal. For casting, it is much faster to pour thick hydrocal onto the crumpled (but not balled onto itself) aluminum foil. Let it dry to the point it won't slide off the foil, spray water onto the hardshell to keep the new hydrocal from prematurely drying, and carefully slide the foil onto the preselected spot on the hillside. Leave it there until you can peal off the foil without removing any plaster. Then carefully remove all of the foil (paint won't cover aluminium foil!) and you have about 5 minutes to carve away. The goal here is to simulate the slow destruction of solid rock by the alternating forces of liquid and frozen water. I start by making parallel slashes with the kitchen knife and then make a second set of parallel slashes. This simulates fragmenting rock. The wet carved off bits can be used to patch imperfections in the casting and blend the rocks into the hardshell. After it has hardened a bit, I often do finer cuts with a cheap hobby blade. There is no 'grain' in plaster... but sometimes you can visualize a grain and carve parallel to it. Once it is almost hard, I go at it lightly with a wire brush. Sometimes this is just poking little indents into the rocks. Sometimes it is to scrape imperfections into the rocks while knocking off any shavings that should be removed.

Above. Time for some color. Let the plaster dry before painting. A thin wash of dark of medium dark gray makes it a lot easier to see the imperfections. You don't want to "paint" them as undiluted paint will hide the texture. I use a cheap hard brush and use the spray bottle to water down the paint. Make it soak in everywhere vertical. Let the paint dry. I make up another batch of thick hydrocal and patch spots (water the surface first with the spray bottle) and then touch them up with the knives.

Above. Next I did another round of light washes and let it dry. Then I could see where I wanted to add more rocks and exaggerate some current ones. I repeated the casting and carving steps.

Above. I repeated the washes, casting... sometimes just putting careful globs of thick hydrocal and using the kitchen knife to blend it into the previous rocks. Then another round of carving.

Above. Keep at it until you are happy with it. Don't hesitate to tear things out or deepen ravines, etc. Eventually I also knocked plaster off the sub-roadbed.

Above. Yet another round. I wanted to make sure that the formations below the track somewhat complimented those above the track. Remember the construction crews blasted their way through these obstacles. I am saving the culvert and tunnel portals for later. They will be blended into the scenery with Sculptamold. Sculptamold takes forever to dry and doesn't texture like Hydrocal, but it doesn't stick to metal and plastic like Hydrocal does.

Above. At this point I found a darker gray and sometimes I start dark and lighten up as I get to the outer rocks. I think the main thing is to just keep hitting it with different colors. Like shrubbery, the dark goes back and helps create shadows. Lighten up as one gets to the upper areas. I started doing some very thin washes of brown to help visualize the contrast with the rocks.

Above. Here I decided I needed to make some brown areas thicker. I still water it down with a spray bottle, but this gives more of a layered look.

Above. Eventually one wants to highlight the very tips of these rocks. This simulates the harshness of beatings from the sun and wind. Add a little bit of gray on the end of a stiff cheap brush and touch the upper parts of the rocks. There are still flaws that will be patched with sculptamold and hydrocal. This is the opposite of painting a new locomotive. Here we want more layers to create more texture.

Above. Up to this I consider Level 1 scenery. To continue, it is time to add some more highlights. I used what shades I happened to have. The raw umber is sort of a greenish gray that I used to darken the crevices. The burnt sienna is too red for my tastes so I used it very sparingly and will put more coats over it, but it will do it's job of adding depth.

Above. I really overdid the brown on the image above. However it is OK because we just need to continue putting more thin washes and it will blend into the scene just fine. It's like going too far, and then coming back in a bit.

Above. At point we have to clean up our sloppiness. Hydrocal can dull chisels... but what can work even better is an Oscillating Multi-Tool. This works like a vibrating chisel. Practice elsewhere but one can cut through the Hydrocal to remove excess globs, insert culverts, etc. It can be easier to be moderately sloppy and fix than try to be tidy through the whole process.

Above. Yea... I had to do more clean up than I originally thought. But this is a lot easier than using a chisel.

Above. Once the hydrocal has been cleaned up, including making sure things like tunnel portals and culverts can be hot glued to flush surfaces.... time to hot glue them in place. Some like above will have room. Below. Some have to have some of the hydrocal chiseled away for a good fit..

Above. Sculptamold is about the opposite of Hydrocal. Brands vary so one should practice. I use a kitchen knife to apply around critical areas like tunnel portals. I keep a moist paper towel nearby to clean any that strays and tries to cling to places it should not be at, Here it looks like I used hot glue as part of the portal. This will require extra Sculptamold.

Above. The center culvert didn't need a lot of patching. This would have been very hard to do cleanly with Hydrocal..

Above. The culvert on the left needed a lot more material to fill the gap on the left. But it is smoother texture, which Sculptamold excels at.

Above. The culvert on the right needed a lot more work than I realized. Easy to fix and clean up the mess with a wet towel.

Above. This was a good time to look for more flaws in the Hydrocal rocks and patch them with Sculptamold.

Above. After the Sculptamold drives, it is time to blend in the colors with a cheap brush. I should have used thinner washes.

Above. Time to crack out the arsenal of green. Cheap odorless hair spray, yellow glue, white glue, foliage,turf,and the green stretchy fiber stuff. The green stuff should be used in little tiny pieces... but one needs a lot of those pieces.

Above. I like to put yellow glue down and put in a small clump of foliage. This was the first round.

Above. I figure that bushes want to grow where ever there is water. I figure water flows from vertical rocks to dirt so bushes are great to help cover the seam between rocks and smoother places. They are also great to cover up dodgey scenery.

Above. Spider webs. I have mixed feelings about hot glue. I became a fan after watching what great results Lyn St. Laurent had when he used it. He even used it to secure micros witches on his control panels.

Early on I figured that I loved using disposable gloves for scenery, it looked like that would be like Greek Fire if hot glue hit the glove. So I knew not to do that. But then I noticed that doing scenery I had a lot of "spider webs" made of thin strings of hot glue. Often it was worth using it even knowing one had to spend time removing those strings. I no longer use if to track. I had used it in a helix where I figured globs were safely hidden. So a half hour before an open house, we were cleaning the helix with denatured alcohol and a test train of pizza cutter equipped cars derailed behind a Kato F unit. ?!? Impossible! We realized there was a gob of something stuck to the track. It wasn't there an hour earlier. Then I realized that there must have been some hot glue spider webs hidden inside the tracks it balled up when wiped with alcohol. Fortunately the visitors were meeting at another location so nobody showed up until ~20 minutes after the start time. No more hot glue to secure track for me... and careful with scenery.

Above. Blended turf seems like lumpy grass but it ads texture. I learned to not to fully trust hair spray so like to paint diluted white glue to an area and sprinkle turf and grass on the area. Then shoot hair spray over it. When adding lighter grass on top, then one really needs the hair spray. I think the industry has switched from cans to plastic spray bottles.


Above. Many people claim one should make the track perfect before doing the scenery. This often means they never get to scenery. I am just too sloppy with scenery. I really dislike cleaning scenery material off of track. I say make the subroadbed as good as one can, the add the scenery. Especially with Kato Unitrack but I think it applies equally with Atlas and Peco track. Just have a solid subroadbed of 1/2" or 3/4" plywood, or laminated vertical strips with enough supports
The patch of green on the lower left represents a fill covered with vegetation. Normally there would be talice under the green but it would most likely be small sharp rock rather than round boulders.

Clean up the right of way and it is time to add the track. With tight radius, I strongly recommend sectional track.

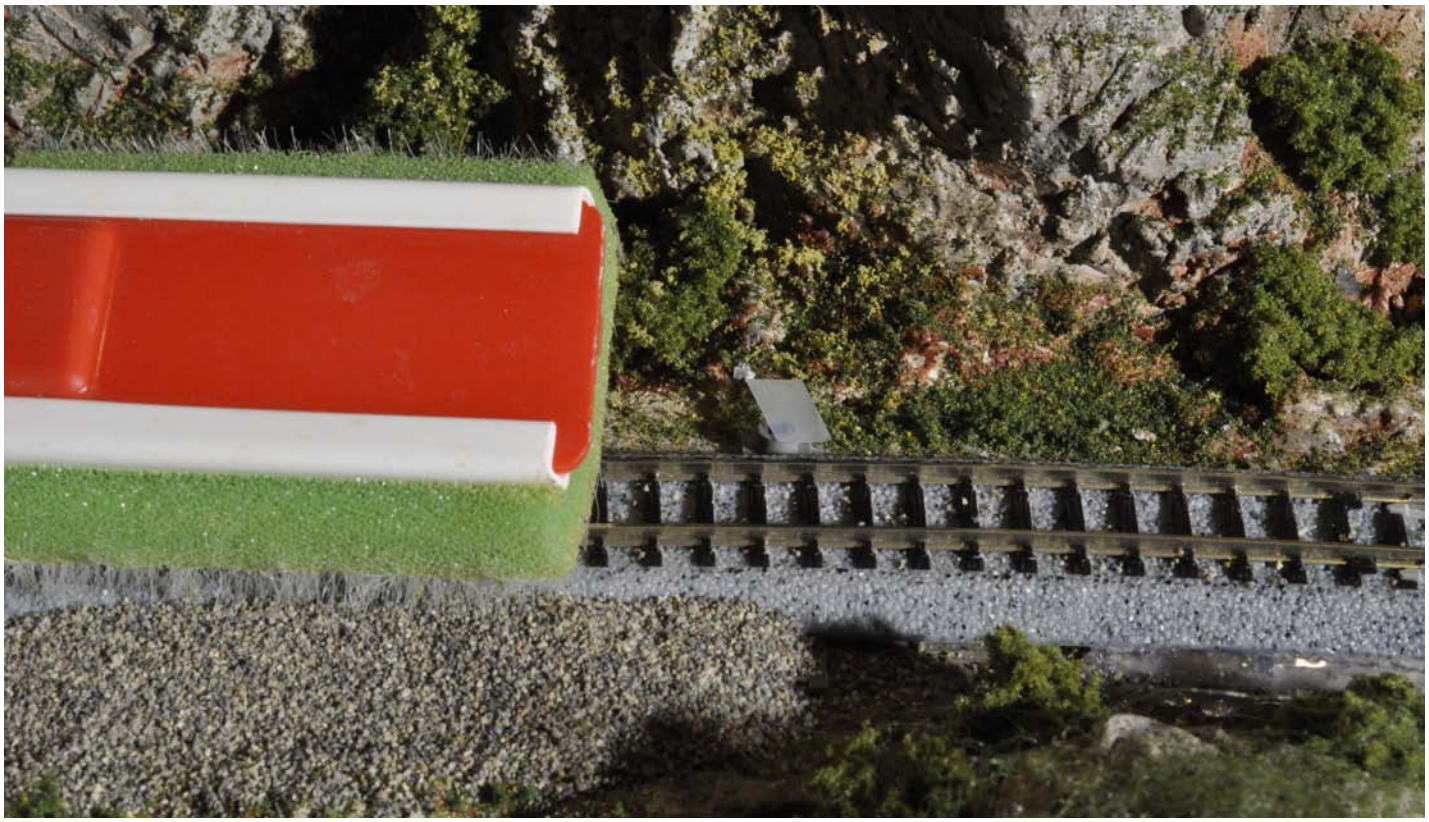
Above. Time to add electrical feeds to the wire, This is sort of the minimum. I do use the Kato feeds but especially for portable layouts, parallelism overkill is a good thing. I have at least two pairs of leads feed the track. Use a soldering pencil and resin. I like to run the wires to a terminal strip (white, screwed to the vertical on the right). Not shown is the alcohol spray to reduce the chance of corrosion. Also not shown: The wires and connector to attach to a power source. I still use Cinch-Jones but NTRAK has switched to Anderson Connectors. They seem to work better. I like to be able to change to a back up throttle... just in case.

Left.. Just before a N-CAT show I was dubbed Mr. Cold Solder, so I'm not the pretty solder type. But used flux and pre-tin the wire and rail. Then touch the two with the hot soldering pencil.

For a much better primer on soldering, see NSR 101 May/ June 2017. Don Miholovich covers how he solders his leads from the underside of the Unitrack sections. This works fine on the outside of rails, too. With N scale you can see them.... so you tell anyone who notices them that you have modeled flange greasers.

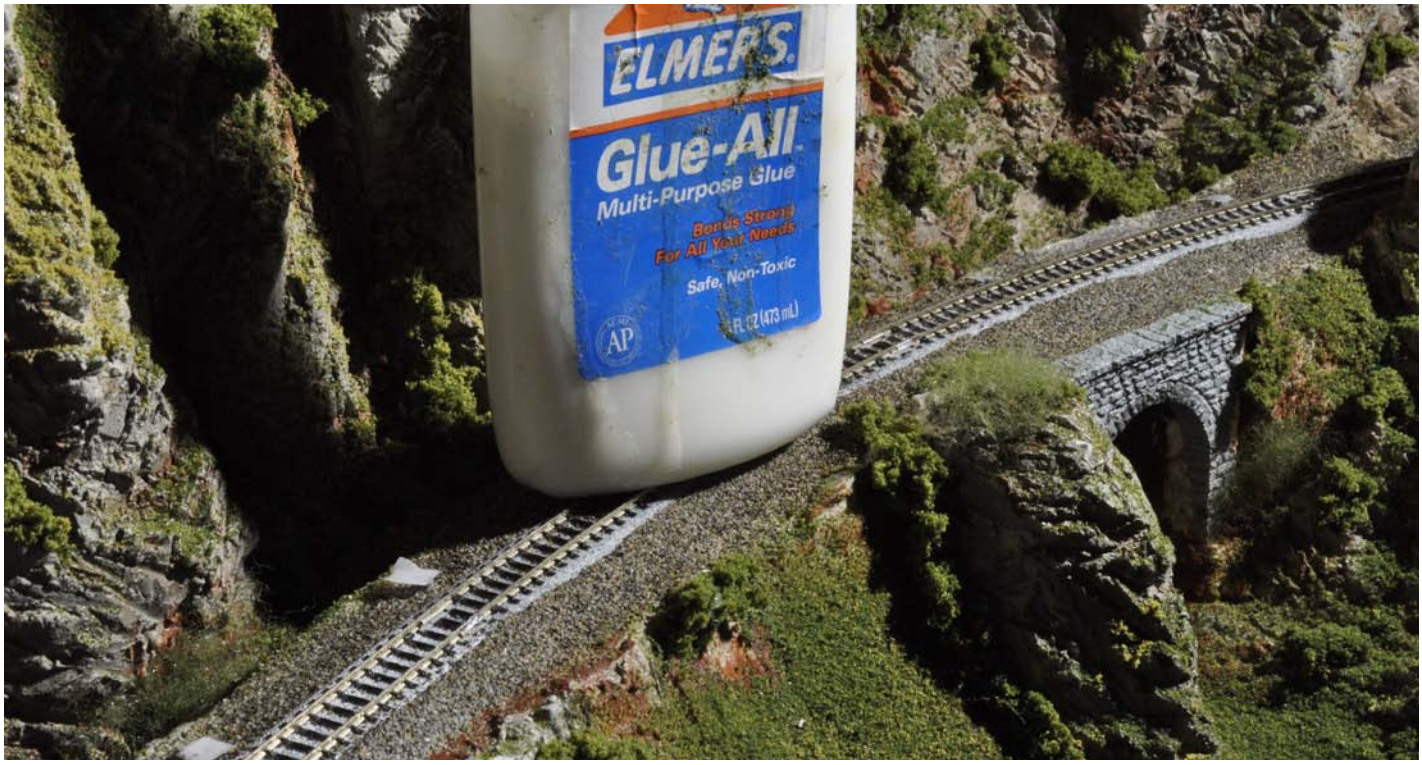
Above. I attached the Unitrack with hot glue. Remember five pages ago? This is the second time I will recommend against this. Though I brought this diorama to several swap meets and never had a problem. I suspect it is because I covered everything with ballast. So it has worked in here but be warned. (Yea... I'll probably do it again sometime....)

Above. The arsenal of ballasting. A container of ballast, the Dick Billings' ballast tool (sold at Home Depot as a paint brush to fill in corners), watered down white glue (I use ~50% water, ~50% alcohol, a coupled drops of dish soap), and rail brown paint. Now I would use Krlyon flat black or Krylon camouflage brown. I don't think any commercial ballasts are magnetic. I have been using pavers sand from Home Depot (40 pounds for ~$5.00) because I can afford that. However I checked with a magnet and there is iron in there, which one does not want in electric motors. So one should check all ballast with a magnet, but also glue down ballast it is all magnetized. Vacuum. Run a magnet over the finished track. You don't want non-magnetic ballast in your drivetrain, either. I should add we have been screening the ballast and using only the smallest grains of paver sand, But it is still larger than most commercial ballast. However, like rail, clever painting will shrink the apparent size of the ballast.



Above. The problem with using a normal brush is most if us are awful at setting the ballast. An awful waste of time. With this brush some can lay it out with the first pass. It often takes me 3 passes and touch up. There isn't much depth between the ties so and that makes this step harder than when using Atlas or Peco track. Usually folks paint the rail before ballasting but (by mistake) I found out that sometimes the spray paint and washes on the ballast can make the ballast look better. I've heard contra opinions but I don't think raw sand/ granite (?) looks like real rock ballast. To me it looks like sand.

Above. This is starting to look good. There are still bare spots on the left, both on the shoulder and between the rails. The shoulders on Unitrack seem a bit steep to me so I use this step to reduce the slope of the ballast. We're about ready to mist on some alcohol (I leave it at full strength), enough to soak it. Then the mix of water, alcohol and white glue can be carefully added...



Above. ...and the results were awful. A lot of the ballast moved away from the shoulders. But then I remembered that this usually happens when I ballast Unitrack and each re-do is easier than the previous redo. It is better to keep adding than to have to chisel away an over-do. The pieces of scotch tape are protecting the bases for the Kato catenary poles. They attach to the underside of Unitrack so they are always spaced correctly. I like to partially bury them in the ballast. The poles look modern to me but most people won't know that... and they fit my budget for time and money.

Above. Most artsy types will use an air brush. I use spray bombs because I despise having to clean up an airbrush. I tend to use more colors than necessary. And I am lightly spraying the ballast as well as the rails. I suspect none of the railroad colors on the right worked right. At some point they had a bad batch and closed shop. Krylon camouflage Brown is better than the cheap brown on the left. And now Krylon sells a plastic handle that greatly improves the control. I figure a new creosoted tie is glossy black, which may last a couple days in service before going flat black and increasingly brown. The angle you spray at changes the look. Spray straight down to paint the ties. If I want them "worn" looking I may come back and hand brush a few of them flat black as if they have replaced within the last decade.

Above. Fortunately I keep a lot of surplus cardboard for tasks such as masking. Sometimes I have to cut them up or even tape some together. Take your time on the masking. It is a lot easier to make for scenery than it is for rolling stock. It is better to do too little and repeat the step than to over do it.

Above. After all this I decided that the ballasting still needed more care. It is easier to ballast over old ballast than when one starts out. Really and for true, sometimes the ballasting works the first time. But probably not as often as I think. One of the beauties of redoing steps, and often future touch ups, can add positive texture and improve the original concept. This doesn't work that way for rolling stock.

Above. More misty alcohol, more glue solution. With each iteration it gets closer to being acceptable. Any runny ballast solution just helps hold the scenery in place.

Above. My final touch up is with micro brushes and mostly light brown paint. Again I am using washes of paint rather than thick paint. In the last step I like to break up solid colors on rocks as well as the rails, ties, and ballast. Perhaps this imitates things such as dust or maybe the haze of looking at distant objects through the atmosphere. I believe we want to disrupt mono-color.

Above. More touch up. I don't know if it is prototype, if so more appropriate for coal fired steam, but I added some vague muddy washes on the ballast perpendicular with the rails. I think it looks good as long as it is subtle.

Above. I think the scenery has held up well. The cover, opening, and above photos were shot about 8 years after the others. Hopefully a nice compliment to Ron Nowka's ConCor observation he modified with filled in solarium windows, paint, and decals.

TRAVEL GUIDE N EVENTS

2021 MAY 15-16 OH Hilliard/ Columbus area. 12th Annual Ohio N-scale Weekend at the Franklin County Fairgrounds, 4100 Columbia St., Hilliard, OH
http://www.centralohiontrak.org/

Expected:

2022 JUN ??-?? TN Nashville. 28th Annual National N Scale Convention

2023 JUN ??-?? NV Sparks/ Reno area. 29th Annual National N Scale Convention.

OBSERVATIONS

Thoughts by Kirk Reddie

Slices of History

I broke down and subscribed to Trains.com. I did find some of the prototype information I was looking for in **Trains** back issues. Then I thought I would scan all the **MR** back issues from Jan 1934 through Dec 1941, and do a loose comparison of where the hobby was then (it was a going concern prior to 1934) vs. my experience with N (which didn't start until Oct 1975, though I did read through the N Gauge News, N Scale News, the ANR publication), and more.

1. The photography was really crude. Photos were probably expensive and it would probably take flash powder (and risk setting the whole block in fire), Klieg lights, or spotlights designed to search the skies for Zeppelins to light up those big O layouts. But photographing N was hard in the 1970s and pin hole lenses were necessary to shoot rail fan type shots. Amazing to me was the quantity and quality of scale drawings and artists renderings of layouts. It must have been less expensive than taking a picture.

2. I loved the coverage of interurbans. Yet the prototype was plummeting during the 1930s. Part of it is a home O traction layout was a lot more practical than an O steam layout. Is my beloved 1950-ish 40' boxcar era modeling plummeting now?

3. I loved the (distant) shots of the custom heavyweight passenger trains. They looked so much better than the shorty Lionel cars I've seen. But examples I've seen in person were rather sloppy looking with stamped steel or even paper sides, hand shaped wood roofs, and were poorly painted and lettered. There is no comparison with what N scalers can buy ready to run now.

4. Most of the cool pictures were from large O layouts. Broad O curves required a lot of real estate. The layouts tended to be "spaghetti bowls" to maximise the runs and some of the images are very cool looking. This era

OBSERVATIONS

Thoughts by Kirk Reddie

of hand laid track also tended to require a lot of people so clubs made sense. There were not a lot of hobby shops during the 1930s so a club setting could greatly accelerate one's understanding of the hobby. I have a drawing of the fascinating early 1950s New York Society of Model Engineers' layout and their earlier work was great, too. The layout in their 1954 program was like a modern prototype railroad cleverly disguised as a bowl of spaghetti.

5. There was a lot of coverage of H0 and OO layouts and interest in those scales must have sky rocked between 1934-1941. Lionel backed OO, American Flyer backed H0. Apparently interest among the two was about equal, and both were more than O. So there were a lot more drawings in those scales than photos. I gather the H0 and OO locos were not as dependable as O locomotives. A lot of the track plans had a lot of hidden track, which I don't think would be advisable then as it is in N now. At least in O one could get one's arm farther into a tunnel. I'm not sure how practical a lot of those layouts were but no doubt they inspired a lot of folks to study layout design and they must have been popular.

6. There must have been a lot of friction among some folks in the different scales. I'm guessing **Model Railroader** walked a tight line on this. There were calls for standardization, hence the NMRA. But when one attempts to legislate things that have been around for a long time, there is going to be perceived winners and losers. I don't remember any 3-Rail layouts in **MR** during my era (which predated **Classic Toy Trains**). What happened to all the OO (1:76) scalers? I can't see them switching to British prototype. Did they join up with the Neanderthals at Gibraltar? Did they switch to slot cars? I'm looking forward to reading more to see what happened because I don't think I have met an OO scaler. (A 3 Railer and an S guy helping on my layout!)

7. He lived in a world of spaghetti bowl layouts, but Minton Cronkhite still holds up today. I knew he did commercial art versions of the hobby with Santa Fe displays at expositions in San Diego, Texas, San Francisco, and eventually the display at the Chicago Museum of Science and Industry. The November 1938 **MR** had an article and track plan of his 26 x 96 home layout. If he had walk around throttles, he could have preceded the Belmont Shore for a walk around layout. At some points some of the H0 philosophers came up with the concept of "sincerity": Every scene has a definite east/west or north/ south and trains don't double back in the same vista. I say Cronkhite's work holds up today in any scale. He may have a minor spaghetti bowl to reverse trains on one end. There is no photos but if he finished it, I bet that area and the whole layout looked great.

8. People made some portable traveling layouts to show the hobby to the public. Some folks built some working small scale trains (QO was 1:196). But no modules. Did they only think of spaghetti bowls.

9. I am fascinated with some of the back stories. Since Arnold Rapido started 1:160, most of N has been injection molded plastic. The cost of the first model is huge but each additional model is cheap. O was all over the place. Probably because it started in an era where machine shops were everywhere and many of them could produce the models. 1:48 normal had a 60" (1 1/8") gauge, but it could be 2 rail, center 3rd Rail, or outside 3rd rail; AC or DC. Then there was Q scale. They used 1 1/8" gauge track but the models were 17/64" scale, or 1:45. And now there is Proto.48 that is 1:48 with 4' 8.5" track.

N is much easier. Even peculiarities like the Japanese meter gauge prototypes in 1:150 can work in our favor. E.g. The two engines on the cover scale out in 1:160 really close to Great Northern Y motors. ◗

SEE YOU NEXT ISSUE!