N-Circle Railroad Update – December 26, 2022

In this N-Circle Railroad Update we will discuss creating your own custom decals, painting a 3-D printed plastic structure and building thin-metal scenery detail kits.

Creating Custom Decals

This project started by wanting to develop signs for a hot air balloon chase truck, to be used in the evolving park scene on the N-Circle layout. Having decided to attempt creating my own decals and investing in the decal paper for this first test case, I grouped designs for multiple projects that have been accumulating:

- 1950s and 1980s Shell pectin logos for more Shell oil trucks
- Wayne Feeds logos to complete the grain trucks from Update 13 in September 2022
- St. Johnsbury Trucking logos for semi tractors
- Old Style Beer logos for semi-trailers to go with Ford LNT tractors recently released by Atlas
- 1950s and 1980s Hood Dairy logos to go on delivery and semi-trucks

As discussed previously for making signs, it is relatively easy to find graphics on the internet for business logos and images. Once downloaded into a file on your computer, it is easy to then insert them into a Microsoft Power Point slide, where they can be resized to fit the area where the decal will go. You can add your own lettering in any font, size and color around the graphic. While I use Microsoft Power Point, the same techniques also would work in Microsoft Word.

I purchased a pack of Hayes InkJet 8.5" x 11" Water Slide Decal Paper, 20 sheets were about $23 on eBay. These can be used in a standard home inkjet printer. After printing, you let the sheet dry for 5 minutes, then apply three coats of acrylic clear coat, one minute apart. I used Testor's Dull Cote.

Given the decal paper is expensive, you will want to make dry runs with your printer on white copier paper initially to test the size and appearance of your designs before committing them to decal paper. Also, with small N-scale graphics, you can place dozens of decals on a single sheet – be sure to include multiple copies of each design, so if you damage a decal during application, you don't have to print a whole new sheet to get a second copy!

I found that after soaking in water for about 45 seconds, these decals slid off the paper quite easily, and thus were easy to apply.

Note that a home printer does not print white ink – any white areas are the result of not printing anything on the white copier paper. I purchased white decal paper, it also comes in clear. The clear decals allow the surface color to show through anywhere you don't print an image, but you can't have any white areas in your graphic. The white paper works fine for most logos, etc., but can be a problem for some designs, as we will see later.

Here is a photo of my first sheet of decals drying after spraying on the clear coat.

N-Circle_22-11-07_Decals

Now back to the original project. I started with a Road Apples 1972 GMC Cube Truck kit, using the same finishing techniques discussed in the previous Update 15 from October 2022. Note that the backing on the wheels for this truck was much thinner than on the wheels of the Road Apples vehicles in Update 15. Therefore, they were much easier to cut, as they should be.

As an aside, a modelling lesson learned: I superglued the first rear wheel on the truck too hastily. There was no guide for where to place the rear wheels, so I just glued it onto the chassis. Unfortunately, the chassis is quite narrow, so the wheels were deeper under the box than they should be, and I set them too far back towards the rear. But having glued one wheel, I had to glue the other in the same position on the other side. In retrospect, I should have placed a spacer behind the wheels.

After pondering this problem for a day, I added a pair of wheels leftover from the earlier resin kits builds. These were slightly larger diameter, so when glued to the existing wheels, they were spaced out further, and you don't see the inner wheels. While this fix brought the wheels out to the edge of the box, it couldn't remedy their placement too far back. Nonetheless, here we see the before and after of the truck.

N-Circle_22-11-11_Balloon-1_Cropped and N-Circle_22-11-11_Balloon-2_Cropped

So again, always carefully check the placement of parts before reaching for the glue!

But we see the colorful balloon graphic captured from the internet, with the “Fly High” lettering added below it in Power Point

Having created the decals, I could then follow up on completing past projects. The following photo shows adding Wayne Feeds decals to the 1980s trucks from Update 13 in September 2022. Note that previously I had used commercially produced decals, which only contained two Wayne Feeds signs on a sheet containing many other signs. Therefore, to complete the three trucks and the trailer would require purchasing many sheets, where here I could produce more than I needed on one sheet with other decals.

N-Circle_22-11-11_Decals-1_Cropped

The next two photos show the GHQ Metro delivery truck from Update 14 finished as a 1950s Hood milk truck. Adding the maroon trim was tricky, even using a sharp-ended wood toothpick – there isn’t a paint brush fine enough for this work, and it requires an incredibly steady hand! While the truck looks rough in this close-up photo, it looks fairly decent at normal viewing distance on the layout.

I haven't done the Old Style Beer semi-trailers yet, as they will require painting some undecorated units first, but I used the decals to redo the logos on a custom-painted Old Style Beer truck – the originals were hand-painted and quite crude, so I painted them over with silver paint matching the original paint. The new decals improve a low-quality Burt Industries model, like the Fire Tanker truck in Update 14.

N-Circle_22-11-11_Decals-2_Cropped

N-Circle_22-11-11_Decals-3_Cropped

Finally, I added Shell and St. Johnsbury Trucking logos on these Atlas undecorated Ford LNT tractors. Athearn produced nice St. Johnsbury van trailers a few years ago, but never released 1980s tractors to go with them. St. Johnsbury used a few Ford tractors, but mostly Mack R tractors. I have multiple Mack tractor resin kits to build and detail, so this test-case verified I will be able to complete them, as I have never found commercial decals for St. Johnsbury.

N-Circle_22-11-12_Decals_Cropped

The same techniques used here for vehicles could be easily employed to create large signs for buildings – eventually I may replace the paper signs created for the bowling alley in Update 15 and the freight depots in Update 3.

While the decal paper is expensive, you can put a lot of N-scale decals on a single sheet, so with some careful planning, you can decorate a lot of vehicles or structures for much less than purchasing commercial decals, where I find I often use only a couple of decals on a sheet. And with some creativity, you can create decals for any product in any size as you need for your project!

To conclude this section on custom decals, here is a lesson on "How not to do it…"

For some years, I have wanted decals for Burlington Electric wood chip hoppers, as have run on the Central Vermont Railway from Swanton to Burlington, Vermont from 1984 to today. They were produced in HO scale by Highball Graphics, but I contacted the developer a while ago and he did not want to create N-scale versions.

The prototypes are 6-bay hoppers. I have never found exact models of these in N-scale, but some years ago I found Ortner Rapid-Discharge 5-bay open hoppers made by Red Caboose, which are "close enough" for now. I have four painted for Union Pacific and sacrificed one for this project. The starting point for the project is shown in the next photo.

BurlingtonElectric_22-11-30_1

I had read that MicroScale's Micro Set may remove painted lettering on cars, so I tried it here. I poured some into a bottle cap, so I wouldn't pollute the bottle with re-dipping with the cotton Q-Tip applicator and used blue painter's tape to mask off the car data that I did not want to remove – it of course is not correct for the Burlington Electric cars, but again is "close enough." After the Micro Set had softened the lettering some, I used a hobby knife to scrape it off. But clearly the Micro Set did not separate the lettering from the underlying black paint very well, so I ended up damaging the paint, as sadly can be seen in this photo.

BurlingtonElectric_22-11-30_2

I nonetheless continued on, in order to try the decals I had created. I designed the decals in an Excel spreadsheet, using white lettering with a black background fill. Excel was better for this design than Word or Power Point, because you can manipulate the column width to alter the lettering spacing to align to the ribs on the side of the car. Multiple test prints on white copier paper were required to test and tweak the lettering spacing before committing to the decal paper.

The next photo shows the final results, which were less than optimal. First, on these larger decals, the black background peeled away from the edge in some places when cut with a hobby knife, in retrospect I should have used sharp scissors. The lettering spacing on the ribs is off some, as it is difficult to judge how much to add to the spacing to account for that vertical displacement. To remedy this, I should cut the decal into shorter sections to align to the ribs. While not obvious in this photo, the black background is not solid after printing and spray coating the decal. And finally, the road number lettering size needs to be reduced.

So, this was an interesting experiment, which could be improved using these decals and a better means for removing the original lettering. But for a successful project, it would be much better to print white lettering on clear decal paper. I will revisit this in the future.

BurlingtonElectric_22-11-30_3

Hot Air Balloon Park Scene

The next project was to complete a 3-D printed hot air balloon kit from Gold Rush Bay. The model as delivered is a single piece made with a very shiny, very white hard plastic.

I didn't attempt to mask between sections before painting, as that would have been extremely tedious. But it turns out that the paint wicked in the horizontal grooves of the 3-D printed surfaces and I don't think masking tape could have prevented this. This caused some bleeding of colors at the boundaries, but I found that once paint from one side wicked into the grooves, paint from the other side would not wick back the other way as much, so I was able to produce fairly clean edges between the panels. But nonetheless, painting 3-D printed structures has its challenges, as we saw with the grain trucks in Update 13.

The balloon has twenty-four vertical panels – it would have been way too tedious to get straight edges on that many paint boundaries! Therefore, I used four alternating colors, alternately applied to groups of three panels each. The 3-D printing ridges were considerably more pronounced around the top ring of the balloon, and the top is flat, which detracts from the final realism quality of the model. But this is not so noticeable from a distance.

The model has two small holes in the top so it can be suspended in the air with thin thread, but I don't have a way to hang it over the layout, so I chose to model it on the ground preparing for takeoff. I may eventually glue a pin to the underside of the basket to hold it in place, and maybe add ropes to handlers glued to the ground, to add stability.

I didn't take progress photos while completing the trucks or the balloon, as there was not much to show that wasn't already discussed in previous N-Circle Updates about finishing vehicles kits. This final photo shows the finished balloon with the 1972 GMC truck, and a Classic Metal Works 1954 International R-190 van truck with the same "Fly High" decals added. Thus, we now have trucks for both a 1950s and 1980s version of the scene – the balloon should work for both!

N-Circle_22-11-11_Balloon-4

Eventually the balloon will probably be mounted on a styrene panel with additional park scenery around it, to fill in the east end of the N-Circle layout.

Thin Metal Detail Kits

I wanted a bicycle rack and bicycles for the developing park scene and remembered I had a Gold Medal Models kit to build ten bicycles and a bicycle rack from thin etched metal. I also had their shopping carts and telephone booths kits, so in the interest of efficiency like with the vehicle kits, I decided to build all three kits in parallel, as they would involve very similar techniques to write about. These thin metal kits are similar to the Showcase Minatures detail parts discussed in Update 12 from January 2022 when building the Shell gas stations, and the ladders and handrails on the GHQ fire trucks in Update 14 from October 2022.

N-Circle_22-11-15_GoldMedalModels_2

I first added black tires on the bicycles and black wheels on the shopping carts using paint before removing them from the sprues – it is much easier to hold and handle the parts while they are still on the sprues. I then used the colored Sharpie pens from Update 15 to color the bicycle frames and signs on the telephone booths. The ink probably adheres to the metal as well as paint, and using the pens was much easier than opening and mixing multiple paint colors to cover a couple square millimeters of surfaces! Here we see the details of the finished bicycles.

N-Circle_22-11-25_GoldMedalModels_1

I then super-glued four of the bicycles into the simple rack that came with the kit, and four more into a Graham Farish (sold under Scenecraft by Bachmann) covered bicycle rack. A figure in the bike rack adds some life to the scene.

N-Circle_22-11-30_GoldMedalModels_1_Cropped

Here we see the bicycle rack incorporated into the developing park scene on the east end of the layout, next to the restrooms discussed in Update 13 from September 2022. Eventually these disjoint pieces will be integrated into a better park scene, but at least they are adding some interest to the “plywood plains” for now!

N-Circle_22-12-26_GoldMedalModels_ 6_Cropped

Next, we turn to the shopping carts, which require a lot of intricate bending to form the basket and underframe from the flat etched metal starting shape. I find the best way to produce a straight bend along the etched crease is to hold the shape on a small wood block with a thin plastic ruler, aligning the bend line to the edge of the block and ruler. You can then gently bend the outer piece up or down as required to form the piece, as shown in the following photo.

N-Circle_22-11-25_GoldMedalModels_3-1

Forming these baskets (and the telephone booths discussed below) requires three bends in the same directions to create the four sides. I find it best to start each with a partial bend of 45 degrees or so, then gently press them to the full 90-degree corners with your fingers after. If you try to do each corner to the full 90 degrees to start, the shape comes back on itself, which makes it difficult to start the third bend. The final trick is to hold the shape to glue together the ends to create the fourth corner. For the shopping carts, I was able to do this by just holding them in position with my fingers for a couple of minutes until the super glue held.

I built four of the eight carts in the kit for now, and will save the others for another day, when we build our 1980s grocery store kit. To create grocery bags to go inside the carts, I whittled down square wood toothpicks to the desired dimension, then used the colored pens to add colored grocery packages in the tops. The natural wood color of the sticks was fine to simulate the sides of brown paper grocery bags without painting.

I was fortunate to find in my collection of figures men pushing a cart from a set of passenger platform workers with the hands lining up very nicely to the handlebar on these grocery carts!

I also tried the colored pens for applying clothes on a few unpainted figures to accompany the shopping carts. This worked fairly well, as the super-fine tips of the pens were small enough to work into the spaces around the arms and legs. The results were shinier than one would want for clothing, perhaps a spray of Dull Cote will tone them down. I have many more figures to paint in the future and will try the gradual mixing of color shades technique discussed for vehicles in the previous Update 15. No specific color shades are required for clothing like for railroad cars, you just want a lot of variations, so your people don't all look the same.

To create a stable base for these figures, I cut a rectangle from the clear plastic that I use for windows, on the theory that this would better than styrene, as the color of the ground surface would show through, so the base will "disappear" when placed on a sidewalk or parking lot. The base is just large enough to hold the figures, so it will blend into the surrounding sidewalk.

An application of Testor's Dull Cote did dull the shine on the base and figures, but unfortunately also caused the color to run on the figures some, as we saw in Update 15, but not too bad.

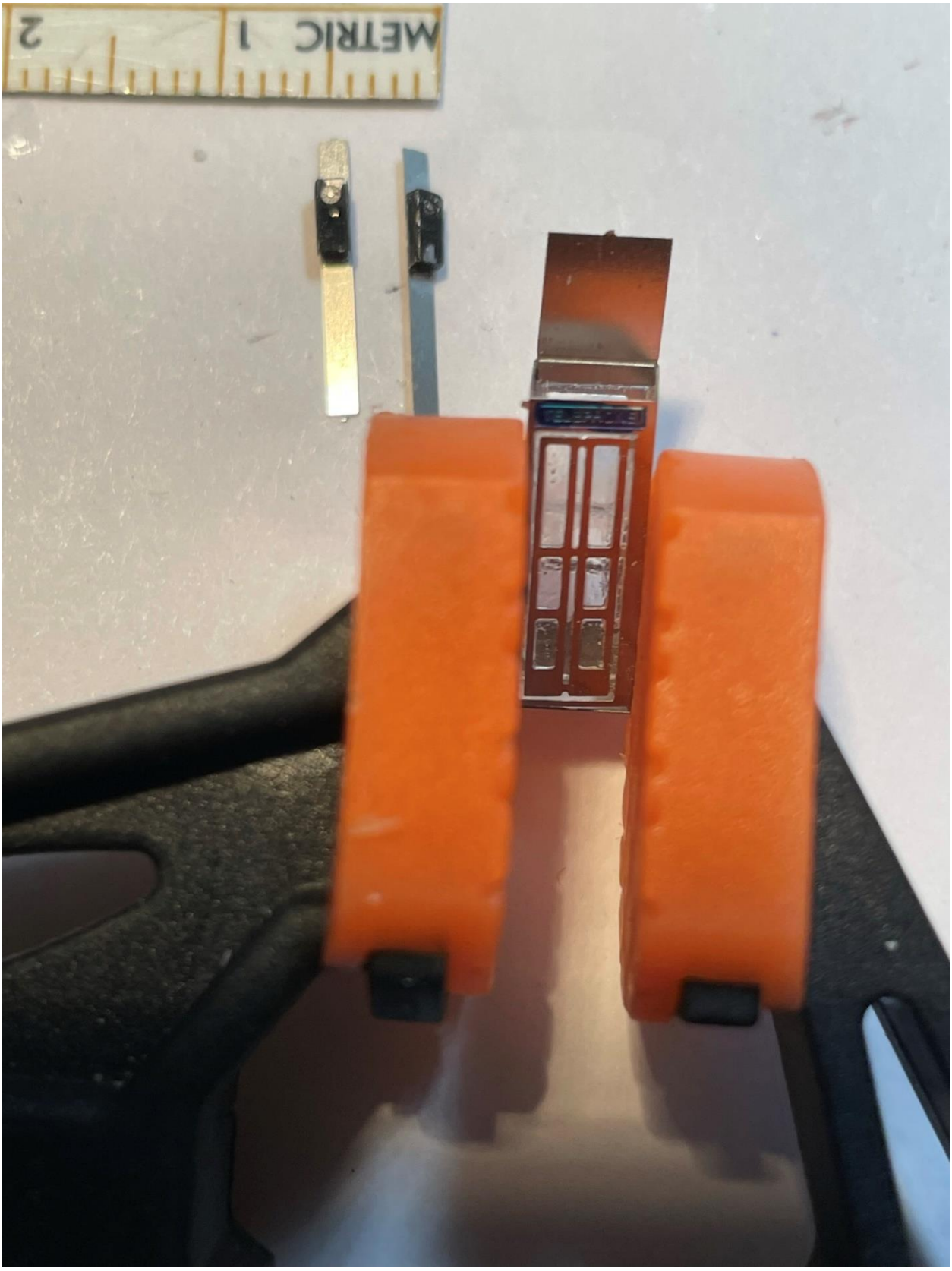
The last of the three kits was the two telephone booths. The kit did not include glass for the windows, so I cut 4x11 mm rectangles from thin clear plastic to super-glue to the inside of the four sides before removing them from the sprue and forming the booths.

The kit requires bending the four sides of an N-scale telephone to create a box … though this is a tiny shape, the scoring on the back side of the metal made this task easier than one would expect … assuming one can see and grasp the part…

Unlike the shopping carts, it was difficult to keep the edges of the fourth corner of the booth aligned manually long enough for the glue to set. Therefore, I resorted to using the handy mini clamp introduced in earlier Updates. In the following photo we see one of the booths in the clamp. Next to the booth are the two telephone stands – shown as much to satisfy me as to inform you, as I realized after painstakingly assembling them, their details would disappear forever once mounted inside the booths, and they will just be a shadow through the plastic windows!

One challenge of this technique is that because the glue will ooze some out of the fourth corner joint, you probably will end up with the booth glued to the clamp… Fortunately, it did not stick tightly to the soft face of the clamp, so it came off without damage to the booth or clamp. I don't have a recommended solution for this, other than to model modern times and assume everyone on your layout has a cell phone…!

N-Circle_22-11-28_GoldMedalModels_1



I added clear plastic bases to the phone booths too, as otherwise they likely would not remain upright in a temporary, non-attached setting. The bases then invited adding figures to complete the scene. Here we see the completed phone booths and the two grocery carts with figures described above.

N-Circle_22-12-02_GoldMedalModels_3

The phone booths and shopping carts add much-needed people to the N-Circle layout, which at this point only shows a few signs of human life! First, we see the grocery carts in front of the A&P and Piggly Wiggly stores. Note the clear bases are not too noticeable.

N-Circle_22-12-26_GoldMedalModels_5

N-Circle_22-12-26_GoldMedalModels_4

Then the businessman stepping out of one of the phone booths added to the passenger station built in Update 9 in October 2021, just as the eastbound Canadian National passenger train pulls into the station.

N-Circle_22-12-26_GoldMedalModels_ 2_Cropped

And the other phone booth and the small bicycle rack dressing up the City Hall scene from Update 7 in April 2021.

N-Circle_22-12-26_GoldMedalModels_3

With these three Gold Metal Models kits completed, I have worked through all of the thin metal details kits in the N-Circle's inventory, other than a Miller Engineering "Parkway Diner" kit that I will attempt to build one of these days. As these N-Circle Updates have discussed, the various types of metal kits are generally high quality and produce nice, distinctive details for a layout, if you invest very careful and fine work to paint and assemble them.

The three thin metal projects took about six hours to complete. Building and detailing the chase truck added another three hours, and painting the balloon another two hours, thus about eleven hours to complete all of these details for developing the park scene and adding to existing scenes.

Modeling Environment Update

With winter approaching, I wanted to extend as long as possible the time when I can still do odor-producing gluing and painting tasks in the garage. Therefore, I suspended a 250 Watt heat lamp over the workbench, now moved to the rear to allow the car to be brought in. When the temperature outside is about 30 degrees, the temperature in the garage is about 45 to 50 degrees due to heat leakage from the house and furnace room. The lamp increases the temperature on the bench surface to almost 60 degrees. This may not be warm enough for spray clear coating, but it will allow extending gluing and some brush painting a little longer. And it will allow soldering work on electrical controls planned for this winter for as long as I can stand the cold!

Workbench_22-11-30_2