



# A Newsletter

For Customers, Friends & Others who enjoy the rail modeling hobby

July, 2011

*Presented by JS Geare and Mike Millitello*

(Please have your Internet connection working to follow links in this newsletter)



## ***THIS* time, I really DO have an excuse!**

Just as I was starting this newsletter on the afternoon of July 3rd, the skies darkened, distant thunder became louder, the skies opened and an horrendous deluge of rain descended upon us. Then, the WIND started. Fortunately, my immediate neighborhood was spared the worst. Not so, within a few miles elsewhere. The pictures above tell the story, and I have others, should you care to see them. Just go to:

<https://picasaweb.google.com/jsgeare/July32011StormInCrozetAreaOfAlbemarleCounty>

And feast your eyes on what happens when Mother Nature gets *really serious* about this weather thing. The weather people are still arguing about whether these were tornadoes, or “micro-bursts.” Whatever they were, they were enough to break up and uproot huge trees, and take down power and phone lines, so for most of the next day we had neither. But now, all has been restored.

The summer weather was less kind to vendors at the June “Great Scale Train Show,” in the last

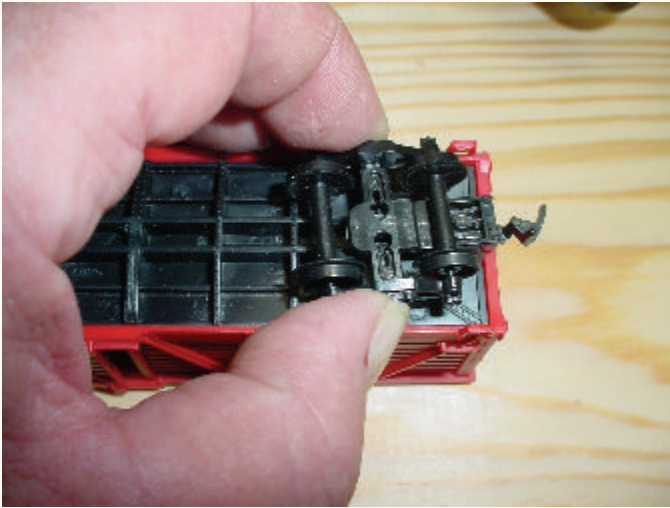
week of June at the Maryland State Fairgrounds just north of Baltimore. The problem here was that the weather was *too good*. Warm, sunny, nice. Impresario Howard Zane made several announcements explaining that, “the only people, to come in good weather, are those diehard souls who qualify as serious modelers. Pray for rain,” he said.

But even so, it was a good time and reasonably productive for us, so we’ve decided to make train shows a steady part of our diet.

If you’ve been following our newsletters, you’ll recall that Mike Millitello joined *Makin’ Tracks!* several months ago. Air brushing and renovation of old cars are among his specialties. This caught the eye of another gentleman who is embarking on a project to manufacture trolley cars for modelers in O and S scale,



segments that are not as well served as HO. Owing to approval of a sample paint job we sent for review, it appears as if we'll have steady work painting this new line of models. We'll let you know when they're on the market. For now, you might want to give a head's up to your friends who model in O and S.



Meanwhile, if YOU have a paint and/or decal project, please let us know. It's amazing what some decent paint work will do for those old "toy" type cars that may be languishing in boxes somewhere. Add some metal wheels and knuckle couplers and you've turned a \$1 kiddie special into something pretty nice.

Speaking of which, we've included a new tutorial on conversions of those old talgo truck and horn and hook coupler models to high performing models which will run well with your other rolling stock. The previous method we used works OK, but this new method is better and faster. We'll come back to that.

Meanwhile, we've got some catching up to do with YOUR projects and pictures.



## **“MR. TURNOUT” ALAN KILBY’S TUTORIAL ON HAND BUILT TURNOUTS, “FOR THE REST OF US”**

Some people are “naturals.” Alan Kilby is probably one of them. He is able to

visualize, then actually construct, turnouts involving 3 or more tracks feeding the turnout complex. Well, if he is able to do that, then surely he can give some guidance on what it

takes to build a basic turnout, that makes a fork in the road.

He has graciously prepared instructional material, which will appear as a series of installments, the first of which is at the end of this newsletter, so you may conveniently print it out.

## **MAN USES SELF TO HIT HOLE-IN-ONE**

Scary, isn't it?

But not to worry. That's just our friend JR Dischert, CEO of the Mystic and Resurrected Railroad. And he hit his hole in one the hard way - from the bottom UP.

Actually, as you probably have guessed, that's really the hole for a turntable he's about to install. But we couldn't resist printing this photo, and invite your suggestions for humors captions.

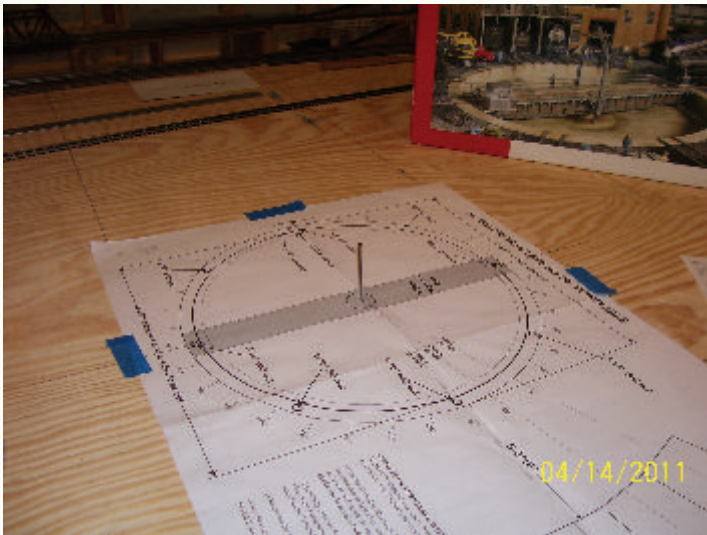


Maybe something like. “And they say I’m holier than thou.” Please, submit YOUR suggestions!

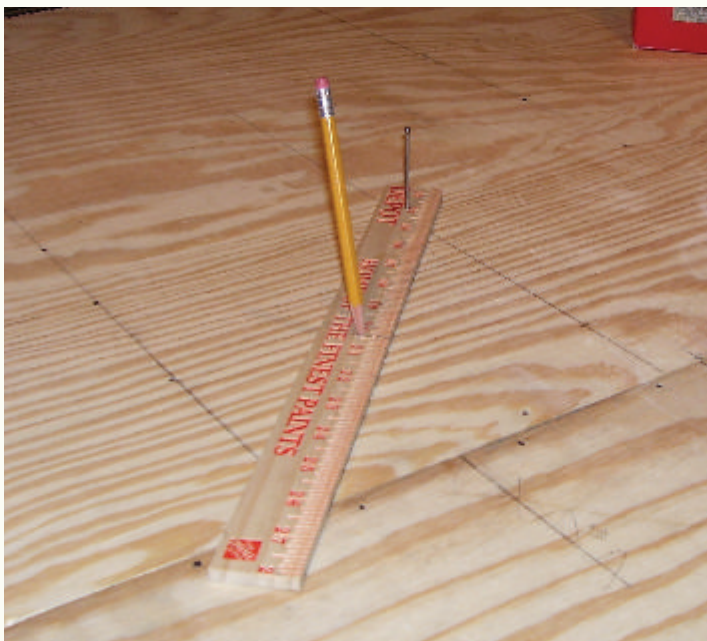


But it wouldn't be fair not to show the highly precise measurements and sophisticated techniques required to actually install the turntable, so, in fairness, here's the illustrated, step by step method.

Here, closely following the instructions, we see a template of the turntable on the layout platform. So far, so good.



Next, a trammel is set up to faithfully follow the circumference of the template:



Excellent!

In the next photograph, at top right, we see a hole. The very thing we've been looking for!



Next, apply the cork pad, cut it out, and place the turntable precisely into the hole:



If the hole is just a wee bit too small, not to worry:



Gentle persuasion, I always say. PERFECT!



But otherwise, there are areas on the layout which are coming to life as well. Given that JR's layout recreates a mountainous terrain over many levels, with gorges and rivers, bridges of all kinds are a compelling visual feature. These pictures tell the story:



Very cool! It is tantalizing to imagine the appearance when the scenery work is complete.

## BOB KETNER, OVER AND UNDER THE TABLE

Modeler Bob Ketner hasn't been asleep at the switch, either. His engineering background has given him a head start on deciphering the more complex aspects of DCC train detection and control, and he is also a quintessential pragmatist, seeking elegant but simple ways to make things work.

He writes with this news:



I threw some rolling stock on the track just to give a sense of the freight yard "filled". I know nothing is from the same era, but that wasn't the point.



Freight Yard track sans rolling stock. The lighter areas are where I painted before laying turnouts since ballasting will be minimal to nil at the points. I used spray paint called "Stone" from Wal-Mart that has a texture like stone. It probably won't match the color of the ballast I use, but that's a battle for another day ...



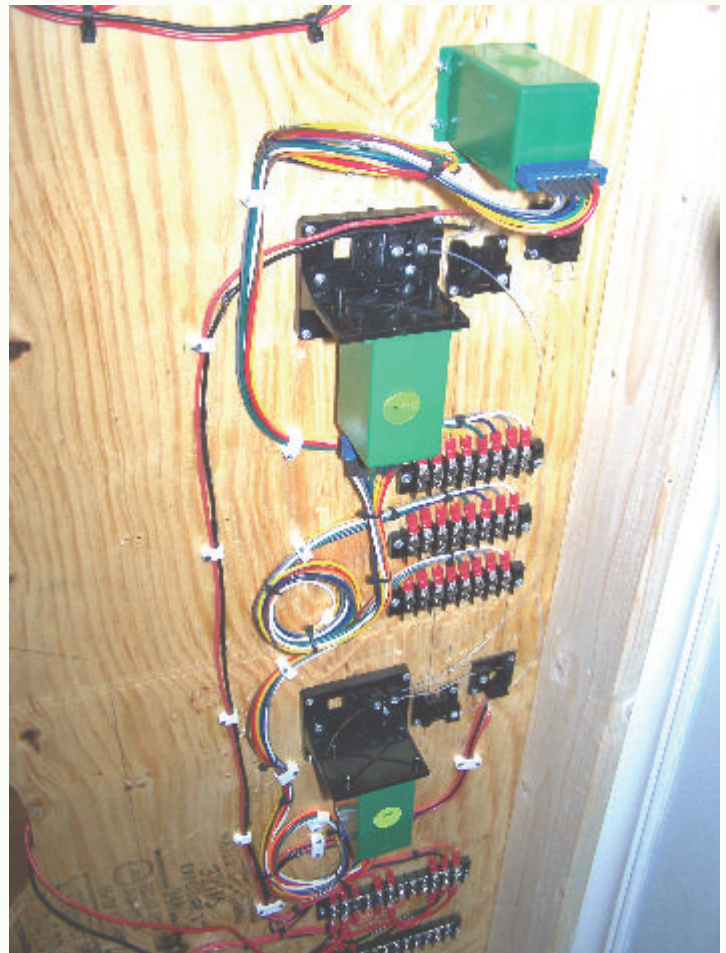


(Bob Ketner, continued)

(Previous page, lower right) . . . the beginnings of the Engine Facilities, turntable pit, and eventual home of the roundhouse (left hand shelf in yesterday's drawing). Nothing to write home about yet . . .



. . . my frame for the Freight Yard. The lattice of 1x's keeps everything rigid and the 2x4s raised the plywood about 4" so I have room to mount the Tortoises.



Tortoises and terminal blocks under the Engine Facilities section. I have a double crossover and I used two Tortoises to throw all four sets of points. I used the logic that if one track was set to go straight the other needed to be set the same way so two trains could pass through at the same time. A compromise to keep things simple.



Here is Bob, and at left, the person whom he calls, "the boss." Hard to imagine working for anyone more delightful, Bob!

He has indicated he will continue sending us updates and progress photos.

We certainly hope so!

That wiring job for the Tortoise Motors, which it was our pleasure to supply, makes the situation under MY train table look like a disaster.

Thanks very much, Bob, for being in touch.



# STEVE SCOTT AND HIS TABLE TOP

Like many of us, Steve Scott is returning to the hobby, having taken leave of it in the days of his youth. And, like many of us, THIS time he's going to do it right. And, again, like many of us, what's this DCC thing?

Steve is meticulous, methodical, and driven by a desire to find out as much as he can about the hobby before he even drives the first nail of his train platform, which will occupy a garage, dedicated in its entirety to his rail empire.

So, while that garage conversion is underway, he has assembled some favorite locomotives and rail cars, together with stocks of track, roadbed and various scenic structures. And he has adapted a dining room table top in his home to serve as a substantial proving grounds to experiment with DCC, check the operation of his equipment, place a few structures, and just relax while the trains go 'round and 'round.



In the picture above you'll note that he already uses automation to program his DCC decoders, which certainly puts him far ahead of many other modelers, myself included.

Pictured next (top right) is the proving grounds as seen from the other end of the table. Five loops, one inside the other to see the impact of various track radii.

And five loops with trains all running at once? Be still, my beating heart!

Again, like many of us, Steve has certain places and scenes in mind for his layout, which he remembers from younger days. One of these is the famous Thomas Viaduct located just south of Baltimore. Yes, Steve does have the model kit

(see sample below) safely stored- awaiting the day of its assembly and placement on the layout.



If there is one way in which Steve is **UNLIKE** many modelers, it is in the advanced degree of preparation, planning and education about the hobby he has undertaken prior to actual construction.

Little doubt that when he gets down to building the layout, he will already know a great deal about what he is doing.

We look forward to continuing reports of progress and photos as his rail empire takes shape.

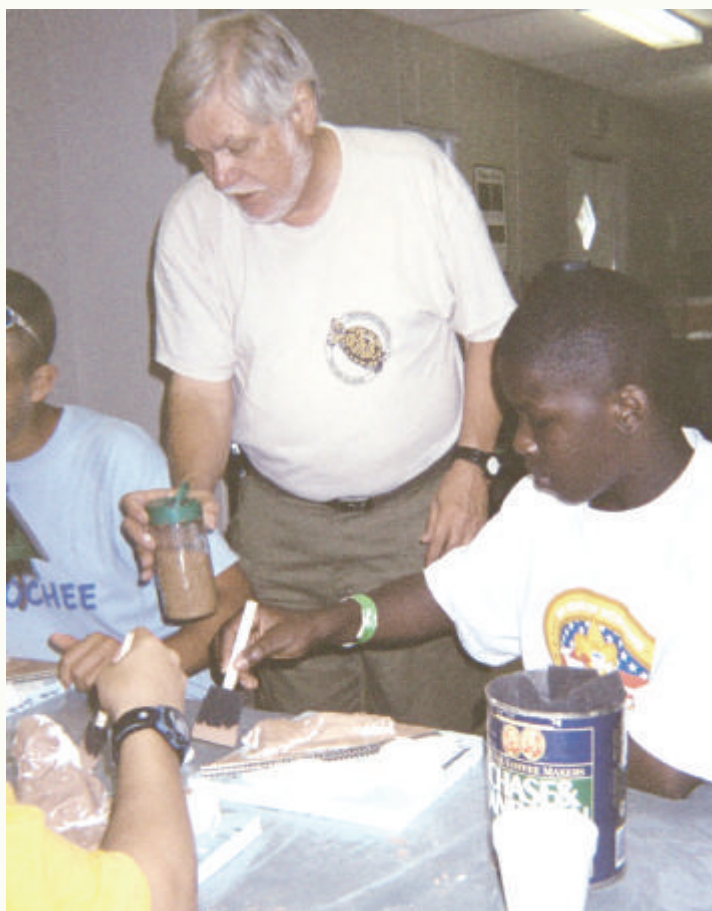
## SCOUT'S HONOR!

It is always a pleasure, of course, to receive orders for dozens of rail model kits all at one time. But it is an even greater pleasure to learn that they will be used to help kids learn how to build the kits, and hopefully fire their interest in model railroading as the great avocation that it is.

Such was the case several months ago, when Jim Davis, master of Boy Scout Troop 277 of Mt. Dora, FL, told me about the annual model railroad project. Members of the troop build up model kits and place them on small scenic



vignettes for display. The pictures below tell the story, and part of the story is that there may yet to be hope for more youth involved in the hobby. Enjoy:



# GIVING CREDIT WHERE CREDIT DUE



Nice loco, yes? Yes.

And you know what else is nice? That nifty, acrylic display box. Ever try to buy one, by itself? Got \$20? Yeah, they're expensive, most places. In our last newsletter, we showed you such a display box, which contained a tractor trailer rig:



Our friend and associate, "The Trainman," who is an active dealer in new and used train merchandise, came up with the very brilliant idea of reworking the case as a display of locos or rail cars, as pictured at top.

This is very clever: Flip the base upside down. Top still fits - perfectly! Lay down a piece of roadbed, a section of track over top of that, and then rest your equipment on top of the track. We think he's entitled to a great deal of credit for this, which is the purpose of this article.

The cases (with trucks) were made as a promotional item for DHL. But they didn't do very well at a price of about \$25.00, so they were liquidated at a much lower cost. Today, they are all gone. But the Trainman may still have a few available, so email him at:

[the\\_original\\_dragonslayer@yahoo.com](mailto:the_original_dragonslayer@yahoo.com)

Or otherwise see his page on our website, at:

[www.ezbizwebsite.com/trainmanlinkpage.htm](http://www.ezbizwebsite.com/trainmanlinkpage.htm)

If Trainman is sold out, give us a shout and we'll see if we can dig out a few for you.

## WEATHER THOU GOETH, CHUCK, I WILL FOLLOW

Chuck Parnall, whom we have been following these many months as he builds his layout, has experimented with weathering, and quite obviously is doing a very credible job with it. In the photo at right, we see a sample of his work.



Nice work, Chuck!

And please, show us MORE.



# ONE PERSON'S TRASH IS ANOTHER PERSON'S . . .

Scott Benson, keen to our various articles about budget friendly ways to use free junk as opposed to costly commercial product, has prepared a list of materials

that he has used or recommends. Together with our added commentary, we are pleased to reproduce his list below, and we invite your own comments and additions. Nice job, Scott, and thanks!

Household Item	Use As	How to Use
Aluminum Foil	Simulating metal and creating rusted girders	Bend, shape, glue, and paint into desired configuration
Egg Cartons	Stone walls, stone flooring.	Cut and paint
Golf Tee	Free-standing posts, hat stands, traffic cones.	Carve and paint. When necessary, glue to a penny to stabilize it.
Kitty litter	Stones	Clear-drying glue and just pile the litter. COMMENT: Use only a pure clay product - nothing that expands when absorbing moisture.
Drinking straws, large	HO scale pipe	Paint silver or black
Drinking straws, cocktail	Light poles	Place 3mm or 5 mm LED light in end of cut-to-size bendable straw, thread wires through straw; paint silver or black.
Heavy Typing Matt Paper 120 lbs	Brick walls, road signs, street signs, building signs	Print design from computer, glue in place.
Talcum and Baby Powders	Snow, dirt, sand.	Baby powder, mixed with colorants. COMMENT: Mix with white glue and sand plus a paint color to make excellent "dirt."
Tissues	Textures such as stucco or projection screens for drive-ins.	COMMENT: Pre-moisten target surface with watered down white glue and apply. Push lightly with a brush for stucco effect.
Wax Paper	Any slick-appearing surface (pond, road surface)	Paint to simulate a pond or coat with crushed nuts and paint to simulate a road surface.
PVC Pipe	Grain elevator, storage tanks	Pipe caps especially can be used with little modification except for painting. They come in a large range of sizes too.
Manila folders	Storage tanks	Wrap a piece of manila folder around a container. Use a ballpoint pen that has run out of ink. Draw lines one inch wide and two inches long. When you turn the folder over the lines will show up elevated and look like welded seams. COMMENT: BRILLIANT IDEA FOR WELDED SEAMS. Suggestion: do the lines before you wrap?



Household Item	Use As	How to Use
Twin frozen O.J. cans or plastic vitamin bottles	Storage tanks	pair of horizontal #2 heating oil tanks, mounted side-by-side on heavy wood framework, in HO trackside industry scene.
Plastic frosting mix containers & similar	Storage tanks	Paint them (Green for Texaco Oil Tanks), then fasten the lid down on a piece of plywood with a screw in the middle then invert the container top so the whole thing is upside down. Add piping etc to detail along with the corporate logo.
Cardboard mailing tubes	storage tanks	Cover with wood strips placed vertically, simulate wire retainers with black thread after painting. Use 8"x8"-sized legs
Cigar Tubes.	Chemical tanks, silos.	Same as above but add see through walkways and protected ladders.
Pill containers	Smaller tanks	Spray paint & place.
Solid copper wire (added by Makin' Tracks!)	Piping	Straighten wire (insulation on or off) then bend to desired angles. On bare wire, a few wraps of electrical tape will mimic pipe joiners/unions.
Old nuts, bolts and broken train gear, etc.	'Junk" around train yard, open gondolas, etc.	Paint, stain, place, etc.

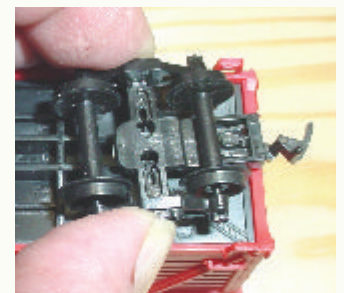
## TOY CAR CONVERSIONS, REVISED & IMPROVED

At some point, most modelers look at the cars in their rosters and wish they could look and work a little better. Perhaps they were purchased early in the hobby experience, just as an inexpensive way to

try things out. Or perhaps they are inherited from a father or grand father, or even just found somewhere. Or maybe they are the ones you had when you were a kid. Or maybe they were given to you as a gift from a well meaning friend or family member who knew only that you had little trains. Had to be better than a tie, right? Or maybe - well, you get the idea.

But, let's be realistic, here. If you were to replace them all with new, ready to run top shelf commercial product, you'd need to shell out a few bucks. Maybe it makes more sense to upgrade them. That's not a bad idea, unless, of course, the cost of the upgrade is prohibitive or the effort so tedious it scarcely seems worth the effort.

About 2 years ago, I wrote an article describing how to upgrade one of those faithful old toys into a better performing and appearing model. The basic idea then, as now, is to replace or modify the talgo style trucks, add metal wheels, and attach a knuckle coupler to the body of the car, to replace the old "horn and hook" style couplers. At right, you see a view of one of these old faithful cars. And at left, you see the first problem you'll encounter when changing out the old talgo truck for a new one - the hole is too big; a 2/56 machine screw, commonly used to attach the better quality trucks, just won't fit in there. Of course, you COULD keep the old style, which is attached either by a split stem that pops into





the hole, or by a plug that runs through the truck and seats firmly in the hole. Just cut off the tongue that holds the coupler, swap out the plastic wheels for metal (now, or later) add a coupler to the car body, and you're done. But we'll assume, for purposes of this tutorial, that you want to do a complete conversion.

**Supplies, materials and tools:** You'll some or all of the following:

- Trucks
- Metal wheels (unless already in the trucks)
- Coupler box
- Couplers
- 2/56 machine screws and nuts, and small, thin washers of several sizes and thicknesses.
- CA glue
- Scrap pieces of plastic sheet goods, balsa or cardboard
- Small screw driver
- 13/64 drill bit
- A small, flat "mill bastard" file. (Ours is about 10 inches long, flat on one side).
- Small straight edge (like a metal ruler)

With the exception of the tools, we carry all the above at Makin' Tracks! The tools are all commonly available at hardware stores, as are the small, thin washers.

**Selecting Cars to Convert:** You may want to use some really ugly old cars for practice, but otherwise select the cars that are already pretty good looking, or which you can weather or paint to make them look good. Often, gondolas are realistically painted and decorated. But just as often certain box cars and hoppers appear to be made of candy or otherwise are simply not very convincing models. Are you supposed to eat them? Or run them on the layout? If you're good with airbrushing, many of these can be salvaged. But if you are not, then focus on the cars whose appearance looks best to you just as they are.

**The Basic Procedure:** In summary, here are the five basic stages of a conversion.

1. Remove the old trucks, ream out the hole with the 13/64 bit (by hand) insert a 2/56 nut, and carefully apply CA glue to secure the nut.
2. Assemble coupler boxes with couplers installed; set aside.
3. Prepare underbody of rail car for placement of the coupler box, apply CA to prepared surface, and affix the coupler box with coupler.
4. Insert metal wheels in the new trucks if necessary, screw truck to car, using the 2/56 nut previously mounted.
5. Compare coupler height to a known good car, or to a coupler height gauge; adjust height of car body over truck as necessary. To raise coupler, insert washer (s) between truck and underbody; to lower, remove material from car body.

Done. After doing a few cars, you should be able to finish a job in ten minutes or less. The illustrated step-by-step methods follow on the next page.

**Preparing for the new trucks:** Most old talgo trucks can be pulled out of their sockets with a little effort, to expose the mounting hole. There is a market for them, so keep them for swap meets, to sell online, etc.

I use a 13/64th's bit to ream out the mounting socket, but you may need something smaller or larger. Visually compare the nut to the bit, then try a test hole in any scrap material. The nut should tip into, but not fall through, the hole. With some force, you should be able to push the nut into the hole so the top of the nut is level with the surrounding material.



Once you've found the correct bit for your nut, then ream out the mounting socket to the same depth as the thickness of the nut, or a bit more. This is something you can do by "eyeballing it." If the nut is just a shade above or below the top of hole, no worries.

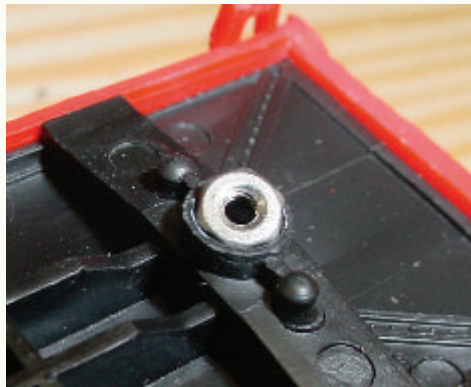
Now place your nut over the hole, and press it in with the flat side of your straight edge, as far as it will go, straight down.



It may be helpful to secure the car using a make-shift cradle as pictured at left. Mine is just a small cardboard tray with a cloth in it which is sufficient to keep the car in place while I work on it.

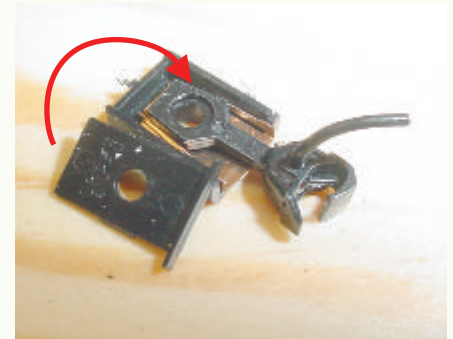
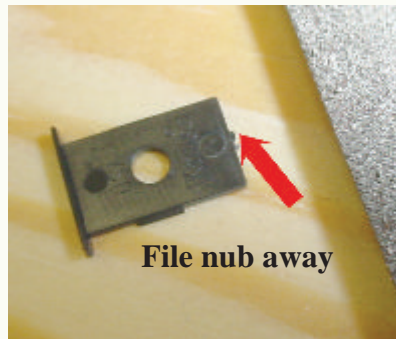
Screw a long 2/56 machine screw just a few turns into the nut. Use the longest you can find - 3/4" or more is good. Very gently move the screw back and forth or side to side until it is as vertical as possible, at a right angle to the bottom of the car. The hole in the nut will now also be vertical, meaning your mounting screw for the truck will go straight down into the nut, so the truck rides evenly with respect to the bottom of the car, without bias to either side or the front or back.

GENTLY turn out your long screw - being careful not to move the nut as you do so. Apply tiny drops of CA Glue ("gap filling" is best) along the outer edge of the nut, so it flows in to fill the voids between the outside of the nut and the hole. If any glue gets into the hole in the nut, wick it up with a corner of a tissue. I squeeze a drop of CA on to the tip of a toothpick, then lightly touch the toothpick to one of the voids between the outside of the nut and the inside of the hole.



*(In our previous instruction, we advised using the tip of a hot soldering iron to embed the nut into hole; the hot metal partially melted the surrounding plastic, embedding the nut. This is faster than our current method, and skips the reaming operation. But the adjustment of the nut for a precise vertical alignment often made the nut come loose - requiring some CA to secure it back in place. The reaming step, by contrast, takes only a few seconds and is much easier to control. The result is a more exact orientation.)*

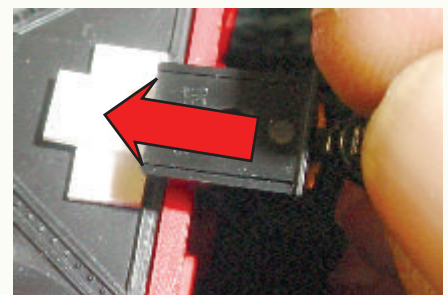
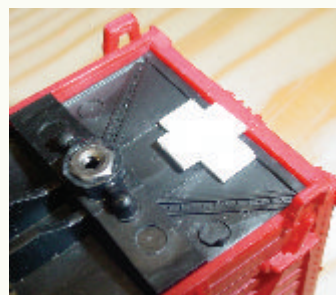
**Couplers:** Use whatever brand of coupler you want. Install them into a Kadee #242 “universal black box” coupler box. These boxes use a snap-fit lid which does not require a screw to hold the lid in place. When you detach the lid from the sprue, file away the bit of sprue on the end of the lid, to assure an exact fit of the lid into the box. The top of the lid has the word “Kadee” on it, and should be facing up to you when you snap the lid into the box. If the lid is upside down, it won’t fit. The lid is secured when you hear it, or feel it, seat itself. As indicated by the pictures below, the curved trip wire of the coupler should face toward you (that is, down, toward the track) when you assemble the couplers. It is the other side of the coupler box that is affixed to the car body, so the lid is in view when you pick up the car and hold it upside down.



**Installation of Couplers on Cars:** Depending on the type and construction of the car, you may, or may not, need to prepare it for affixing the coupler. In the ideal situation, the bottom edge of the end of the car body will exactly match the bottom of the floor of the car. You're home free; just glue the coupler assembly to the underside of the bottom of the car, and you're done. By assembling the box and coupler first, you've made complete unit with a little “handle” -being the coupler itself- to make handling and placement very easy.

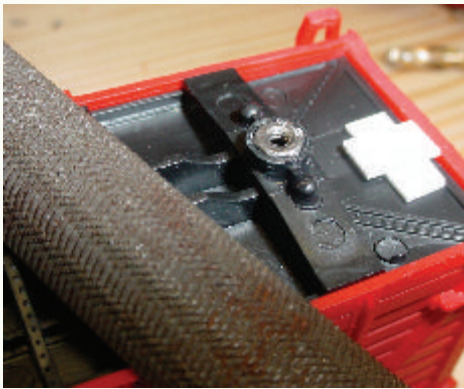
Sometimes, the underbody of the car will be slightly inset below the edge of the end of the car body. Thus, you will either need to build UP the underbody, or cut a notch in the end of the car body. I won't cover all the issues with other cars, but will tell you simply that you may need to adapt the surface to accept the coupler box. In this example, pictured below, we'll build up the underside of the floor to match the edge of the car body.

The first step involves cutting some styrene (or any thin material) to produce a shim. In this case, we need two layers to reach the edge of the car body. You may gently stab a shim with the tip of a hobby knife to lift and move it for an exact placement on the car body. Use CA to build one layer on the next. If the combined height of your shims falls just barely below the edge of the end of the car body, file away the edge of the body. If it is greater, then file down the shims. Finally, place a spot of CA on the shim, and press on the coupler. You will have just a moment to center the coupler, so make any adjustments quickly. If you misplaced the coupler assembly by a wide margin, pry it off - quickly- with the blade of a utility knife and start over. When you are done, the open end of the coupler box should line up with the outside edge of the car body.



**Finish and Install Trucks:** Install metal wheels in trucks, if this has not been done previously.





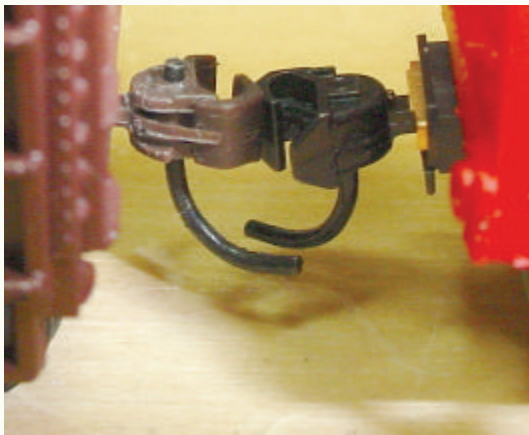
Use a small shop file to flatten the nuts to the same height as the surrounding material, and the same height with respect to one another. If the top of the nut is slightly exposed beyond the plastic, then file away the metal to make a continuous, flat surface of the metal and plastic. If the nut is a bit below the plastic rim, then file away the plastic, even with the top of the nut. Wipe away filings and debris when done.

Mount the trucks to the body with a 2/56 screw turned into the nut. The screws should be turned in to allow free pivot of the trucks, but only a very slight rocking action. One good way is to tighten the screw so the truck does not turn, then slightly turn the screw back out - just enough to allow the free rotation of the truck.

Use the longest 2/56 screw that can be turned fully into the nut. On some cars, the screw will simply appear in a hollow interior. But in others, there may be a metal weight or some other obstacle below the mounting nut. Occasionally, you'll need to cut a screw to the appropriate length. Do so with a pair of side cutters or a cut off wheel. Gently file away any burrs at the start of the threads, so the screw will engage the threads of the nut easily.



**Final Adjustments:** Turn the car upright and sit it on the bench to compare the height of the couplers to a car you already use, or to a coupler gauge such as the Kadee #205.



On any given layout, couplers should be at the *same* height. This need *not* be the same as the Kadee gauge, as long as all couplers are at a uniform height. Be sure the curved metal wire under the coupler (the "trip wire" or "glad hand") is high enough to avoid contact with rails along a curved track section, or in a turnout. Trip wires may be bent up if they are too low. But this should not be done if the coupler heads are not already evenly matched.

On the other hand, if you will be using your cars on a club layout, all members will need to observe the same height, so all cars may be freely interchanged. Most of the time, the Kadee height gauge is accepted as the standard to be observed by all.

Ideally, no height adjustment at all will be necessary. But more often an not, couplers will be too low, by a narrow margin. To raise the coupler, raise the entire car slightly above the trucks, using a small washer placed between the the truck and the car body. It is helpful to have 2 or 3 different small washer sizes available to make a precise adjustment. Buy packets of the smallest standard washers from a hardware or home improvement store. Sometimes, you may need to use a stack of two (or even three) washers to make the adjustment.

You'll note that washers often are smooth on one side, but have a bit of flash around the edge on the other. A few passes with a file will remove this material. Otherwise, let the jagged edge face toward the car underbody - smooth side toward the truck.

Washers may be secured with a tiny bit of CA, but I don't recommend doing so unless it is crucial to stability and performance of the car. Use just a tiny dab, so the washer may be popped free later, if necessary. Aside from raising the car, the washers also provide a bit more shoulder to support the truck when it rotates to follow curves - a performance enhancement.



The situation becomes more difficult if you need to *lower* the car. The most effective way is to remove the nuts, and drill the hole for them a bit deeper. Reseat the nuts, apply glue, allow 5 minutes to bond, then file away the surrounding plastic material. (You may also remove material from the bolster of the truck. But this will result in a truck that probably can't be used elsewhere - this is a last resort).

Finally, mount the car on your track and give it a shove (the "scoot test"). If it moves smoothly with no discernible tilt or wobble, you're done. If there is a definite tilt to one side, it usually indicates means one or more of the following problems:

1. The underbody of the car is not properly seated in the shell of the body; it is slightly cocked to one side or the other. Adjust it so that the edge of the shell is even all the way around, with respect to the underbody.
2. A weight in the car has shifted; inspect and correct.
3. You have filed the top of the nut and any surrounding material at a slight angle. Correct it by filing away enough material to make the mounting area and top of the nut dead flat and parallel to the underbody of the car.
4. If you have used washers, the jagged edge may be either facing the truck, or slightly raising the washer on one side. Correct by filing away the flash or flipping the washer over (or both).

Assuming all has been corrected and your car runs well, you now have successfully converted a former "toy" into a credible model. Spray on some dull coat, add a bit of weathering, and you have one dandy, good looking, nicely performing piece of rolling stock at a much lower cost than purchasing a new kit or ready to run equipment. After you've done two or three cars, you'll be converting cars quickly, easily and reliably with no need to consult instructions.





# WANNA TOOL AROUND A LITTLE BIT?

Our good friend Paul, whose excellent work has often been featured in these newsletters, has not confined himself to superior modeling as a past time.

This time, he has sent a handy reference to various tools and their primary applications.

**DRILL PRESS:** A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly-painted project which you had carefully set in the corner where nothing could get to it.

**WIRE WHEEL:** Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say, 'Oh #@!!&\*##@!!'

**SKIL SAW:** A portable cutting tool used to make studs too short.

**PLIERS:** Used to round off bolt heads. Sometimes used in the creation of blood-blisters.

**BELT SANDER:** An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

**HACKSAW:** One of a family of cutting tools built on the Ouija board principle... It transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

**WISE-GRIPS:** Generally used after pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

**OXYACETYLENE TORCH:** Used almost entirely for lighting various flammable objects in your shop on fire. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race.

**TABLE SAW:** A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

**HYDRAULIC FLOOR JACK:** Used for lowering an automobile to the ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

**BAND SAW:** A large stationary power saw primarily used by most shops to cut good aluminum sheet into smaller pieces that more easily fit into the trash can after you cut on the inside of the line instead of the outside edge.

**TWO-TON ENGINE HOIST:** A tool for testing the maximum tensile strength of everything you forgot to disconnect.

**PHILLIPS SCREWDRIVER:** Normally used to stab the vacuum seals under lids or for opening old-style paper-and-tin oil cans and splashing oil on your shirt; but can also be used, as the name implies, to strip out Phillips screw heads.

**STRAIGHT SCREWDRIVER:** A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screws and butchering your palms.

**PRY BAR:** A tool used to crumple the metal surrounding that clip or bracket you needed to remove in order to replace a 50 cent part.

**HOSE CUTTER:** A tool used to make hoses too short.

**HAMMER:** Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent the object we are trying to hit.

**UTILITY KNIFE:** Used to open and slice through the contents of cardboard cartons delivered to your front door; works particularly well on contents such as seats, vinyl records, liquids in plastic bottles, collector magazines, refund checks, and rubber or plastic parts. Especially useful for slicing work clothes, but only while in use.

**SON-OF-A-BITCH TOOL:** (A personal favorite!) Any handy tool that you grab and throw across the garage while yelling 'Son of a BITCH!' at the top of your lungs. It is also, most often, the next tool that you will need.

***Running a railroad without tracks*** never has been a practical way to move freight, but that's the situation that faced the CSX a few months ago, when thieves stole the actual rails to cash in as scrap. It happened in Taunton Massachusetts, when thieves simply helped themselves, unbeknownst to the engineer, who drove the train right off the tracks.

## YOU KNOW IT'S A BAD DAY WHEN. . .



See the full story at the [Taunton Daily Gazette](#), whose copyrighted picture appears above. Thank you, Crew Heimer, for this story.



***Mother Nature also has ways of separating trains from their tracks***, as you see in the photo at left. According to "Railrodder," who posted the video on Utube,

"The event took place on the CN Ruel subdivision north of Capreol Ontario.

Two helicopters were sent in to retrieve the MOW workers and it took two days to reopen the line.

This incident never received media attention. This surprising seeing as it is a VIA route!"

The original video was supplied by a man who works at the CN railyard in Vaughn, Ontario.

Click to see the complete [video of the washout](#). Some VERY compelling footage. Be warned, it is narrated and includes free use of the vernacular.

Thanks to our friend Bill Bennett for this excellent tip!



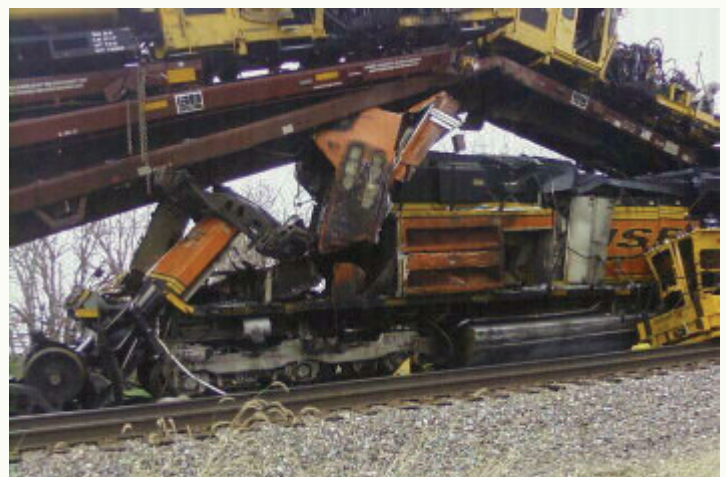
**BNSF Gives New Meaning to Double Stack Trains** in this item sent by Floyd McCarty a real world railroader, who reports,

*A bad one.*

*This incident took place . . . about 40 minutes after Eastbound No. 6 went by. Loaded coal train was Eastbound and rear-ended stopped train loaded with work equipment that was stopped just inside absolute signal at beginning of double track. There should have been an intermediate signal displaying STOP and Proceed, approx. 2.5 miles from where collision took place.*

*This is on the line I work on between Omaha and Chicago . . . Pretty scary.*

Darn tootin' it was bad. Just look:



Thanks very much for this submission, Floyd.

Please keep sending your stories, pics and tips!

# CRASS COMMERCIAL MESSAGES

**Inventories:** Be advised that we still have a good selection of New Atlas RTR and Branchline kits for sale at the usual stupidly low prices. Our original stock of built up pre-owned Athearn freight car kits is getting quite low, however.

Here is a quick listing of links to see everything:

New Atlas RTR Specials: <http://www.ezbizwebsite.com/AtlasSpecial.htm>

Branchline Kit Closeout Specials: <http://www.ezbizwebsite.com/BranchlineSpecial.htm>

Kato SD40-2 DCC & Sound Specials: <http://www.ezbizwebsite.com/KatoSpecial.htm>

Remaining Inventory of pre-owned Athearn Built Up Rolling Stock: [Inventory List](#)

Everyday stuff you need (track, glue, couplers, Tortoise Motors, etc.): [Quick Pick Page](#)

**A word or two about ordering and payment:** The idea here, folks, is to keep this simple. While we have provided various ways to “check out,” the fact of the matter is that you may simply call us at 434-823-4809, or email [jsgeare@yahoo.com](mailto:jsgeare@yahoo.com) and we'll work out what you need. Most often, people like to pay with PayPal, and that's fine with me because most people are accustomed to it. You may also use your credit card to pay a PayPal invoice. I also use Google Checkout if that is your preference. Or you may send me check or money order payable to:

JSGeare Makin' Tracks

And addressed to the same at:

3418 Meadow Wood Lane  
Crozet VA 22932

## Rail Car Upgrade Kits

If the tutorial about upgrading old rail cars inspired you, you might like a kit that gives you most everything you need, all in one package. Owing to other requests for that very thing, we will be adding this as a standard inventory item. Here's what we plan to put in the kit:

The hardware (2/56 screws in various lengths, and nuts)

Accurail trucks (choice of 2 styles)

Intermountain Metal wheels (choice of 33" or 36")

Kadee #242 “Universal black boxes”

A bottle of Gap Filling CA

Couplers (Choice of EZMate II, Kadee #5, 148 or 158).

Basic kit will restore 2 cars, order as many as needed to do all the cars you have.

Prior to the kit being listed, lets us know if we can make up any for you.

### HOW TO FIND US:

One the web: [www.ezbizwebsite.com](http://www.ezbizwebsite.com) and [www.bonanza.com](http://www.bonanza.com)

Email: [jsgeare@yahoo.com](mailto:jsgeare@yahoo.com) Phone: 434-823-4809

That's all for this time - thanks for reading and please be in touch!



# Alan Kilby Turnout Tutorial

## GETTING STARTED - RAILS, MATERIALS, TOOLS & SUPPLIES

Before we buy our rail we have a few decisions to make:

### THE RAIL:

What code rail do we need? The same as the connecting track work. If you know what code that rail is, then you know what code rail you need. Code simply refers to rail height. If you're not sure of the height, measure from bottom of rail to top.

One tenth of an inch (.100) is Code 100

83 thousandths (.083) of an inch is Code 83 (a shade more than 2 millimeters).

70 thousandths (.070) of an inch is Code 70 (a shade less than 2 millimeters).

What kind of metal should we use for the rail? Basically we have 4 choices:

Brass, which is a great conductor of electricity but needs to be cleaned often/constantly as it tarnishes and corrodes quickly; dirty track is a major cause of poor operation.

Steel, which is not as good a conductor as brass, and is difficult to solder. Probably NOT a good choice.

Nickel silver, which is harder than brass, stays clean longer, and is a good conductor of electricity.

Weathered or non-weathered rail? The best thing is non-weathered rail because it is much easier to solder than pre-weathered rail.

### TIES AND SPIKES:

Tie thickness needs to be addressed here. Commercial track (without roadbed) has thin ties. So you will need to buy profile ties to match rail height, or make your own from strip wood. I have had problems finding turnout ties without special ordering them so I use strip wood from the craft store, which may be trimmed or sanded to match the height of the ties on the commercial track. Doing so lowers my cost of ties per turnout from \$3 to less than \$1 and eliminates wasted wood. Prepared ties may be purchased pre-stained or plain. You may use a hobby product, or make your own with Rit Dye, an oil based burnt umber pigment, or India ink (careful with this - it PERMANENTLY stains everything!)

Spiques are sold to correspond with rail size. Try to get pointed spikes; if not then get chisel cut. Blunt spikes are hard to push into roadbed, don't hold as well and in general are to be avoided if possible. My preferred source is Micro-Engineering. Web site: <http://microengineering.com> .

### THE TEMPLATE:

This is the map of your turnout, showing you the exact location of ties and rails. You may download them for free at: <http://www.handlaidtrack.com> . Click the link for Printable Track Templates.

### OTHER SUPPLIES:

White glue

Rosin core solder (solder may have flux in it but solder needs to move fast and smoothly which is why I also use flux). Use solder of 2 different melting points.

homasote or homabed or old ceiling tiles for bench assembly of the turnout (broken or old tiles get thrown out when buildings are remodeled) For permanent track work (on layout) you will want to use homasote or homabed or equivalent material.

#### TOOLS:

6" sharp mill file  
Small needle nose pliers 5"  
Vise: bench type is best but machinists vice works also  
Track gauge you need a NMRA gauge ( additional 3-point or roller style track gauges are quite helpful)  
30 watt soldering iron  
Rail snips (does not need to make perfectly clean cut as you have a file)  
Assortment of riffle files  
Ruler

End of First Installment.

Next Installment - First Step of construction.