

OST Publications

# P48

● IS IT  
● FOR  
YOU?



# Introduction

## Why P48?

I was nearsighted as a kid. Without eyeglasses, everything beyond a few inches was just a blur. If I wanted to see an object clearly I had to get close enough to touch it.

Whether it was my eyesight or it developed naturally, I prefer a close up viewpoint. I like to zero in on a small detail and study it carefully. This preference comes through in my photography loud and clear (image right). Sweeping panoramas don't capture my attention to the same degree.

My experience of the railroad was also up close and personal. A long siding that served a waterproofing paint factory ran past our house so closely that I could wave and shout out a greeting from our front porch to the crew of the local that switched it. All these factors find a home in my approach to modeling and P48 allows me to express these qualities with few compromises.

Modelers coming from HO or N are in for a surprise. The abundance you're used to with HO doesn't exist in this scale. Within this market P48 is a niche practice that requires an all-in commitment because of the different track gauge and wheel profile. (See page four.)



You'll want to know how to get started, where to find stuff and what kind of layout you can build. You want to know if P48 is right for you. Those answers are here along with straight talk from other P48 modelers about their experiences.

The key message I want to send about P48 is this: learn to manage your expectations. P48 is very satisfying when you understand what it requires and you're clear about what you want from it. Enjoy the ride.

Mike Cougill- OST Publications

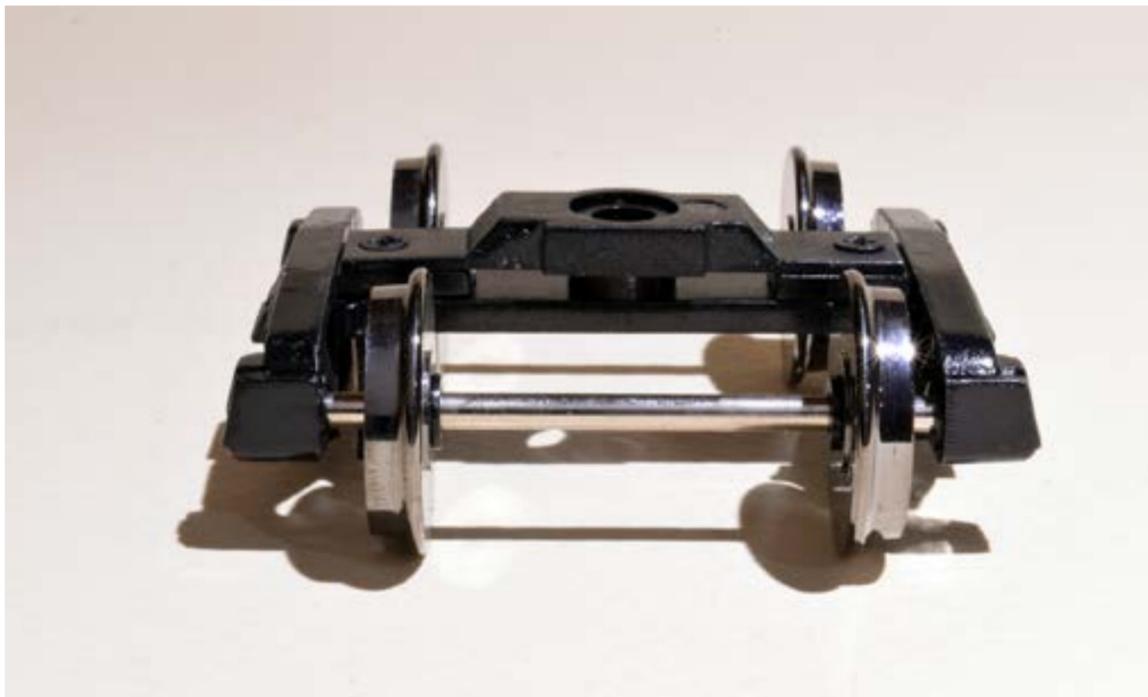
# P48: A Very Brief History

Imagine it's the 1950s and you want to build a dual gauge yard in O scale. Sound's simple right? Just handlay the track and turnouts and you're good. Or are you? The reality isn't that simple because the difference between standard and narrow gauge wheels in that time was like night and day.

In 1954 this was the discovery for Cliff Grandt, Lee Klaus and other members of the *East Bay Society of Model Engineer's* in Emeryville CA. Their On3 narrow gauge addition to the club's layout went smoothly until they tried to build a freight yard with dual gauge track. That's when they discovered that NMRA O scale and On3 don't play nice together.

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***Below: The code 145 wheel profile and five-foot track gauge is overscale in more ways than one.***



On3 wheels are closer to the prototype and to make the dual gauge turnouts work meant the coarse standard gauge wheels had to be modified to fit the tighter flange way spacing. They liked the appearance of these finer scale wheels and going forward, their modeling followed along those lines. At this point the controversy with the O scale traditionalists in the club began, since their equipment wouldn't work on the finer track standards. Eventually the narrow gauge modelers were asked to leave the club and take their modeling with them.

As shown by the problems at the East Bay Club, track and wheels are an integrated system. You simply can't alter one without altering the other. Thanks to the compromised nature of O scale, to have a finer wheel standard with the correct standard gauge means a total commitment. Since these pioneering modelers were blazing a new trail, in the beginning, they had to machine their own wheels from scratch, or cut down and reprofile existing NMRA wheels.

This new standard became known as 1/4" AAR and a step forward occurred when Al Henning offered 1/4" AAR wheel sets and the first published standards appeared in Bob Brown's *Finelines* magazine, which became an early and important resource for finescale modeling.

Another influential pioneer was Bill Clouser of St. Louis, Missouri. A professional model maker by trade, he built magnificent traction models with scale wheels, that gave a greater overall look of realism. Through his photos and articles in *Model Railroader* during the 1960s, Bill's work helped others see what was possible. Later, he began offering many of his 1/4" scale parts including scale wheels. Grandt Line produced a fully detailed 1/4" AAR wheel set while Northwest Shortline Co. also offered steel wheels.

# Track And Wheels Are A System

The problems of O scale wheels and P48 is clear in this photo. The oversized NMRA wheel flanges don't work well with the tighter clearances of P48. Then there's the obvious issue with the mismatched track gauge. You can see how the rear flange is riding on the railhead. The bottom line is the two standards aren't interchangeable.



The next innovation came several decades later from James Harper and Steve Grabowski in the form of extremely accurate 33" and 36" diameter scale wheels. These also had improvements in the fillet and a 20:1 taper on the tread. Known as the Grabowski wheels, they made quite an impression with their contour and tapered axle. They are still available from Protocraft in an expanded range of sizes.

As more articles began to appear in the mainstream press, the interest in finescale modeling continued to grow but it would be decades before any widespread adoption took place. There is a lot of legacy gauge equipment around and it's a common practice among quarter-inch scale modelers to run their equipment on another's layout. The lack of compatibility between finescale and legacy standards makes this impractical.

The movement continued through the 1970s and 1980s with little or no change however, during the 1984 O scale convention in Burlin-

game, CA, an impromptu meeting was organized to establish a set of standards that could be adopted by the NMRA. New terminology was chosen to differentiate this movement from previous efforts. The terms Proto: 48 or simply P48 (with or without the colon in both cases) was thought to be more expressive of the movement as a concept. The term also fit well with fine scale movements in other scales such as P87 in HO or P64 in S scale.



**Above: Steve Grabowski and Jim Harper developed a fully profiled wheel that is still being sold today through Protocraft. This is a 36-inch two wear example for use with modern freight cars.**

**Left: Articles like this about the late Bill Clouser from the March 1971 issue of Model Railroader provided examples of what was possible with finescale standards. This is modeling to aspire towards.**

The success of any new standard around model trains hinges on manufacturer support. Without reliable standards for wheels, track and other core essentials, commercial products are nothing but a pipe-dream. Many people worked tirelessly for years behind the scenes to make P48 a reality and move the process along through the various NMRA committees. The result of their work is an established set of specifications that ensure fidelity to scale and compatibility in operation.

In an era where we expect immediate gratification, it's hard to appreciate how much time and effort went into establishing the foundations of the finescale movement. Thanks to the efforts of those pioneering modelers and the many who have followed, P48 is now accessible to many skill levels. While P48 or quarter-inch scale in general doesn't have the out of the box simplicity of more popular scales like HO, getting started isn't the impossible leap of faith that it was over a half century ago.

With the well established and growing interest in prototype modeling, P48 has much to offer modelers who appreciate finely detailed and accurate models. Much of the growth in P48 today comes from HO modelers who are drawn to what the scale offers. It has bright future that is getting brighter every day.

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## O scale, O gauge, P48, 3-rail. What's The Difference?

There are a lot of confusing terms associated with this scale.

O gauge is often used to describe the 3-rail that includes everything from tinsplate to something called 3-rail scale or 3-RS.

O scale is the traditional term that refers to 2-rail modeling mostly five-foot gauge but is also used as a catch-all term for anything built to quarter-inch equals one foot scale, whether it's standard or narrow gauge track.

P48, Proto48 with or without the colon (Proto:48) refers to models that use the correct track gauge and wheel standards where the scale ratio is applied consistently to every aspect of the model.

It's a confusing mess and rather than use the term O scale, I simply prefer the more accurate descriptor of quarter-inch scale or P48.



Is P48 For Me?

## Is P48 A Good Fit For Me?

If any of the following are your *primary interests or motivations*, then P48 may not be a good choice.

- You have a very limited budget.
- You prefer a casual approach to the hobby and want fast, easy or cheap solutions.
- You see operations as more fun than construction.

I'm being blunt because I want to dispel any illusions about a plug and play approach to P48. That's not what the majority of modelers who love this niche typically practice. The bottom line is that you have a choice to make from the outset as to which standard is the most compatible to your needs. You need to be clear about your expectations with quarter-inch scale and educate yourself about the choices available.

## How Many Hurdles Do You Want To Jump?

Quarter-inch scale lags well behind HO and N in terms of stuff you can simply use out of the box. The scale is divided into three distinct camps that each have their own track and wheel standards and this mishmash of gauges and wheel profiles makes it harder to work in than it should be.

The three markets come with their own criteria and mindset. Because of this, the equipment requires significant modifications for P48. Three-rail wheels aren't insulated and will short out 2-rail track. However, 2-rail cars will run on 3-rail but locomotives won't because of how the electrical current is distributed. Five-foot gauge and 3-rail trucks will not work with P48.

P48 has significant hurdles, with track being one of the biggest. There is ready-to-lay P48 flex track but at this writing (March 2019), there

are no out of the box commercial turnouts. You have to build your own or commission them from a custom builder.

Locomotives are a challenge. Ready-to-run locos with P48 wheel sets have been available but you are looking at limited run brass models priced accordingly. There are replacement wheel sets for ready-to-run equipment that ease the conversion but that is often just the beginning if you want an accurate scale model. Once again, three



***Above: An operations oriented layout is possible with P48 but requires a serious commitment of time and resources. Managing your expectations in this scale is the key to enjoying it. Being clear about what you want and what it takes to realize that vision is important to finding the satisfaction P48 can offer.***



separate standards create more problems than they solve. Older five-foot legacy gauge locomotives can be converted but the process is involved and not for the novice. Of course, if you're seriously looking at P48, you probably aren't a novice modeler. However, if hacking up expensive engines isn't for you, there are custom builders who will do the work for a price.

As for rolling stock, mass-market cars can be good in terms of scale fidelity and accuracy although, as with many commercial models there are always compromises to deal with. Given the tight curves typical of 3-rail layouts, the truck and body bolsters have been greatly modified as a concession to that market. While having to fix obvious errors might seem frustrating, modifying commercial models is a good way to learn the skills that open the doors to a deeper experience of the craft. I'll cover rolling stock options in more detail shortly.

There is a good selection of P48 trucks available from sources like Protocraft, RY Models and others. Most of these are aimed at the steam and transition era modelers, who form the majority of people working in P48 at this time. Seventy and 100 ton roller bearing trucks are available thanks to Protocraft. Again these are often limited run items and priced accordingly.



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***Above: This RY Models brass S12 has P48 wheels and is ready-to go out of the box. As with many brass models, the drive train will need a breaking in period for better operation.***

***Below: These Intermountain boxcar kits are often found at shows. They are a joy to build and make a good foundation for kitbashing. Using finer aftermarket details can make a fine model even better.***

Fine scale modeling is a minority practice in all the scales. Beginners have the easiest time because they can start with a clean slate and not fret over the sunk costs of existing models or having to rebuild a layout to a different standard.

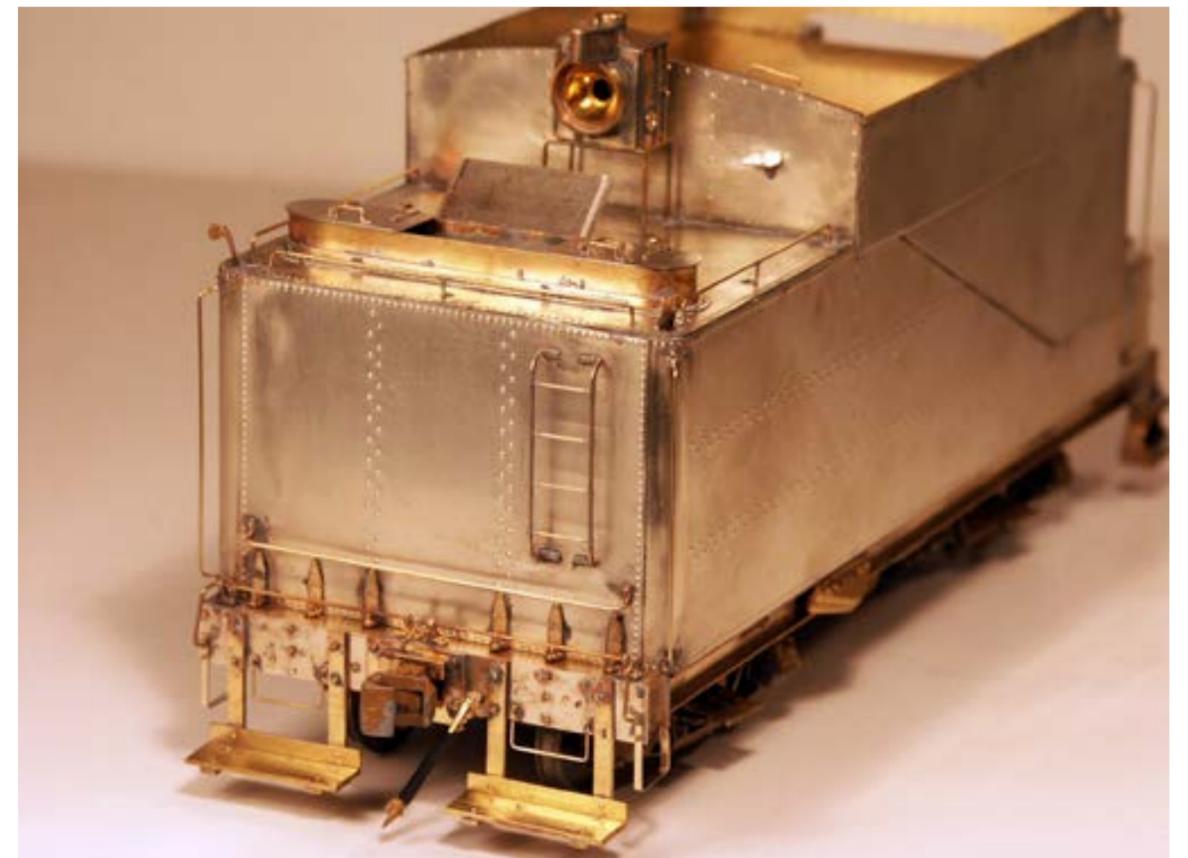
### **It's A Prototype Modelers' Dream.**

As a smaller market with fewer commercial products to rely on, P48 is a haven for model builders who see accuracy and prototype fidelity as important to their enjoyment of the craft. An example in the photos on the right is this beautiful scratchbuilt Burlington 0-2 by Capt. Tom Mix, USMC Ret. Tom has spent a lifetime honing his skills to this level and P48 standards allow him to achieve the delicate proportions of the prototype in the model. Things like the correct driver spacing and cylinder saddle width make a difference to discerning eyes. The size of the models makes scratchbuilding very enjoyable and rewarding, since fine details are more easily seen.

I hasten to add this level of craftsmanship is rare in any scale however, the opportunity is there for those who enjoy the challenge. For others it's an opportunity to go off the beaten path. Like so many things, working with P48 is a personal choice one makes.

### **P48 Myths And Legends.**

The excellence you often see in P48 results from years of model building and deliberate practice to improve one's skills. That said however, working with P48 isn't any more difficult than modeling to NMRA standards. Correcting the track gauge and grossly oversized wheels simply translates to the rest of the model and, in my view, also applies to the entire scene. Another myth is that P48 isn't suited to operation because of the finicky standards and tolerances. Speaking from my own experience and first hand observation of other layouts, I find no difference between P48 and HO in terms of train operation. The wheel profile of P48 is nearly identical to the RP25 standard in



***Above: This beautiful scratchbuilt Burlington 0-2 by Capt. Tom Mix USMC, Ret. is an example of what P48 offers to anyone willing to explore it fully. There's more of Tom's work later in the book.***

***Photos by Tom Mix***



***Above: The differences between the RP25 HO profile and a P48 wheel are only fractions of an inch. The RP25 flange is slightly thicker however, the tire width is nearly identical.***

***Very few people question the tracking ability of the RP25, a wheel that is grossly oversized for HO, yet skeptics of P48 still claim that a nearly identical wheel won't work well with models that have eight times the mass of HO.***

Critics continue to claim that finescale modeling doesn't work.

HO, yet P48 models have many times the mass compared to an HO car. So, what's the deal?

I'm baffled by this idea that P48 is only for show. I built a P48 layout and operated it to the same degree I did in HO and had few if any problems with derailments. In fact, I believe the models actually track better with finescale wheels. My experience was as enjoyable any other layout I've built.

#### **Answering Your Question Of Why?**

People come to P48 because just taking stuff out of a box no longer satisfies. For me, working in HO became a struggle because my vision changed as I grew older and the details I wanted to model were harder to see and enjoy.

People are drawn to the accuracy and finer quality that's possible with P48 and quarter-inch scale. Once you see what's possible with the wheels and track, it's a simple step to rethink the level of detail on the rest of the car.

From there you might reconsider your structures, scenery and the overall quality of your modeling in general, or you might be satisfied just to have the correct gauge and better-looking wheels. It's all your choice and I can't say that enough. The key with any modeling standard is to know what is realistically possible, what you want and the commitment you are willing to make to get there. P48 is as much a mindset as a set of standards.

## Where To Find O Scale Stuff

Looking around most hobby shops or stores that carry model trains it's easy to think that three-rail (or 3-rail) is the only thing available for quarter-inch scale. Ask about two-rail or P48 and you are likely to get a deer-in-the-headlights stare. For veteran quarter-inch modelers this is old news but it's important to remember that our scale is largely invisible to the general hobby.

## Community Is Key

Quarter-inch scale is a niche within the larger hobby. It's enjoyed a surge in popularity lately but is not widely available in most hobby shops. However, like many niches, there is a robust market that flies below the radar.

Quarter-inch scale is a tight knit community that, in some ways prefers to keep to itself. Part of this is generational in nature and I won't go into that. In recent years however, a growing number of younger modelers have come from other scales and they're bringing a more broad-based outlook with them that, in my view, the scale sorely needs.

It's this community of modelers that is key to discovering all the scale has to offer. I was fortunate to have two individuals who helped me find the products and information I needed to get started on a solid foundation. Quarter-inch scale (I'm only referring to two-rail scale modeling from this point on) has two dedicated magazines that are very helpful.

*The O Scale Resource Magazine* is a digital only and free to download bi-monthly publication that is a valuable source of modeling inspiration and product info. It covers the spectrum of two-rail modeling with mostly five-foot legacy gauge and some P48 when they can get the material.

*O Scale Trains Magazine* is a two-rail focused bi-monthly print magazine that is now part of the White River Productions family of publications, after the passing of founder Joe Giannovario. Again, it mostly covers legacy gauge modeling. In the interests of disclosure, I was the editor of this magazine for three years and Joe and I started OST Publications as a separate company in 2010.

Both magazines carry advertising from the major companies and suppliers that gives you a sense of what quarter-inch scale has been in the past and now is. Many of the vendors in this scale are very small operations, often just one to two people. (I'm a one-man shop myself, so I know the drill.) Unlike the mass market of HO or N, product runs are often limited in number and can come and go with little warning. I always wondered why people in this scale were such packrats and now I know. If you see something that is useful, get it if you can, while you can. That's the reality of the scale we enjoy.

With few hobby shops that carry quarter-inch scale products, you'll have to get used to waiting on the post office or UPS for deliveries or save up and wait until one of the quarter-inch scale specific meets. It's a different experience than seeing something in *Model Railroader* and just trotting down to the hobby shop to check it out. As P48 modelers it's the tradeoff we make to practice the craft on the terms we find most enjoyable.

## Shows And Meets

There are several shows dedicated to quarter-inch scale that you need to know about. **The Chicago O Scale Meet** is held in mid-to-late March in the Chicago area. Hosted at an area hotel, where many attendees book rooms for the weekend, this three-day show is a Mecca for all things quarter-inch. Here you will see more products than you ever imagined, meet a lot of the vendors that keep the scale

alive and get a good sense of what's out there. If you can only attend this show once, it's worth the experience.

**O Scale and S Scale Midwest Show** formerly known as the Indianapolis O and S scale show is held every September and hosted by The O Scale Resource Magazine crew. They are working hard to improve this meet and it now includes S scale modeling and products. This is a two-day show also held in a hotel conference facility

Another major show is the **O Scale National Convention** that is hosted at various cities around the country. Like the NMRA National this is a multi-day event with activities for modelers and family alike. Depending on location, the National is often combined with one of the yearly shows.

For West coast modelers there is **O Scale West**, which has now been combined with S scale also. I've never attended this one but I'm told it's similar to the others in size and scope. All of these meets are good places to see and purchase products, attend clinics, meet people and learn about the scale and there are websites with further information if you decide to attend. Like modelers everywhere, we are happy to help newcomers enjoy the scale.

### **Railroad Prototype Modelers' Meets (RPM)**

While not specifically geared to quarter-inch scale or P48, these are a great place to meet other modelers, see lots of inspiring work and learn from the best in the craft.

P48 models always generate a lot of interest at these shows and it's a good place to introduce folks to the scale. In my view, this is where the future P48 modelers are going to come from.

I do suggest that you attend an RPM meet if you can. There is a growing number of these meets held throughout the year from coast to coast. (Far too many to list individually.) A quick online search for

RPM or Railroad Prototype Modelers' meet will get you the info you need. As an alternative to the shows, the magazines will give you a good overview to the products in the scale. In closing the thing to understand about P48 and quarter-inch scale is that it's a different world where you need to be more hands on with the craft than with HO or N where everything seems to show up by magic.

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### **Links**

#### **[O Scale Trains Magazine](http://oscalemag.com)**

<http://oscalemag.com>

#### **[O Scale Resource](http://oscaleresource.com/WP/)**

<http://oscaleresource.com/WP/>

#### **[Chicago O Scale March Meet](http://www.marchmeet.net)**

<http://www.marchmeet.net>

#### **[O and S Scale Midwest](http://oscalemidwest.com)**

<http://oscalemidwest.com>

#### **[O and S Scale West](https://oscalewest.com)**

<https://oscalewest.com>



Thoughts On Layout Design

Everyone has their own ideas about what makes for a satisfying layout. I'm not here to sell you on one way or another, that's your choice to make. This chapter simply presents a few lessons I've learned the hard way.

### **There Is Always The Matter Of Space.**

You can build a linear, multi-town style layout but the cliches about quarter-inch scale are true. You do need plenty of space and other resources like time and money. There is no getting around the fact that a large layout in this scale is a major commitment.

Our formulaic and rule driven layout design thinking tends to treat every scale with the same approach. In quarter-inch scale, there are non-obvious factors to consider. Here are two from the short list: train length and surrounding spaces

### **Train Length**

A 20-30 car train may be the new normal in HO and N but in this scale a fifty-foot boxcar is over a foot long and, you need to include the space between cars too. A 20 car train takes up a lot of space before it even goes anywhere.

Long trains need to get around each other and that brings up the turnouts at each end of any passing siding. A No. 10 requires four feet from the tip of the switchpoint to the clearance point where two cars can safely pass each other. While a No. 10 seems extravagant, in my experience using a shorter turnout is a false economy. You can get away with a No. 8 but, you really won't gain anything in terms of siding capacity.

In 1:48 the lack of distance between towns is especially frustrating. Consider this: if you only have one hundred feet of mainline, a 20 car train is going to travel just five times its own length or less. That's hardly the cross-country journey we picture in our imaginations. The ancient solution in this scale is to loop a double track mainline around

the room as many times as feasible and sit back and watch the trains run. Today I think most of us want more than watching a train chase its tail.

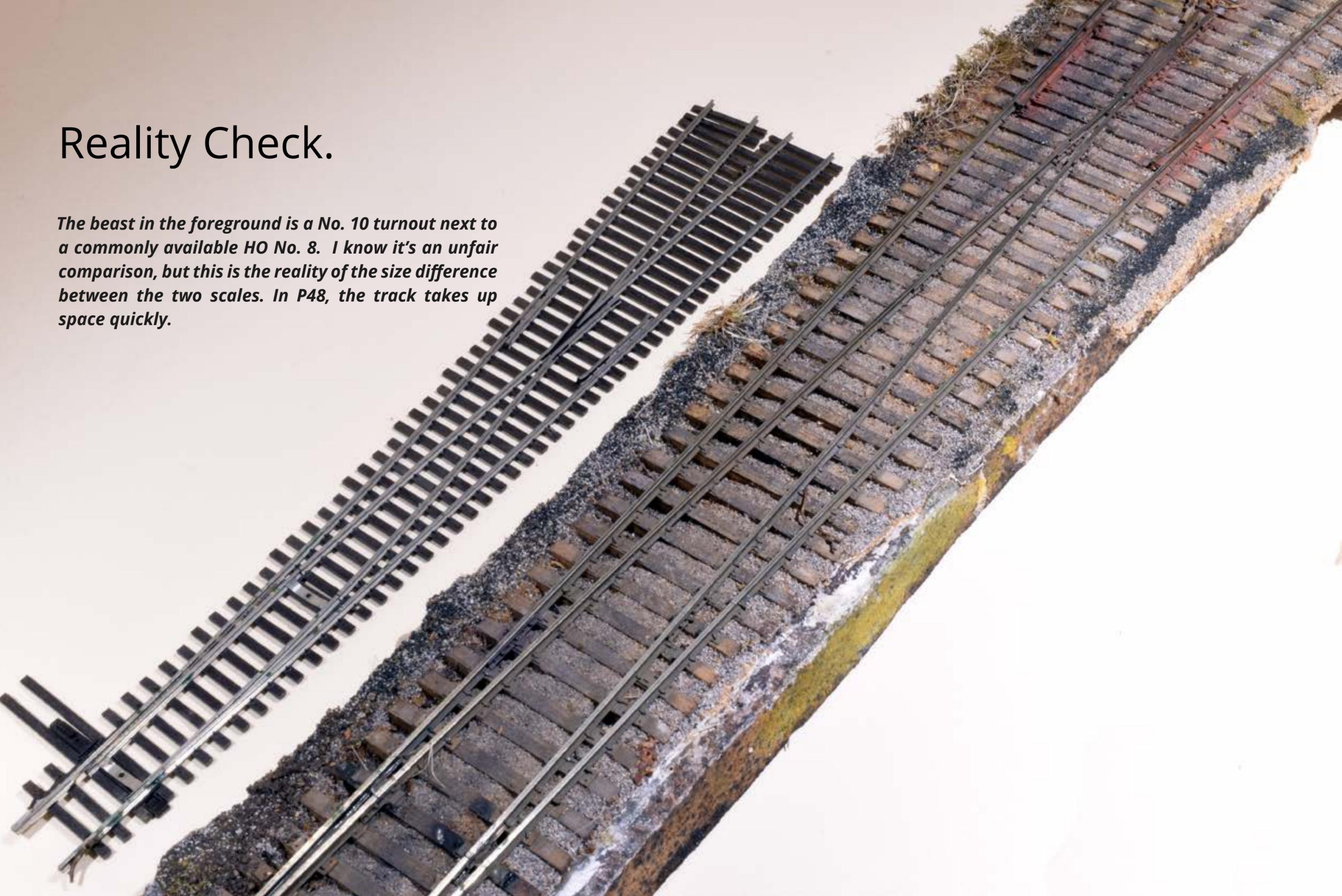
The issues around train and mainline length aside, let's talk about the support areas like yards and engine terminals. Even a modest branchline terminal with a 60-65 foot turntable and three-stall roundhouse can eat up the area of a 4x8 sheet of plywood and then some. A modest freight yard can require benchwork between three and four feet deep. How will you work the rear tracks or read car numbers that far away? It's something to think about before you commit to such a design, not after.



***Measured over the pulling faces of the couplers, this PRR fifty-footer is 13.5 inches. These specs are for steam and early diesel era equipment. Modern rolling stock eats up even more wall space quickly. It's something to factor into your planning.***

# Reality Check.

*The beast in the foreground is a No. 10 turnout next to a commonly available HO No. 8. I know it's an unfair comparison, but this is the reality of the size difference between the two scales. In P48, the track takes up space quickly.*



## Surrounding Spaces

Given how the track eats space so quickly, there is little room left for scenery, so modelers tend to stuff it into whatever spaces are available.

Structures in this scale, even small ones, leave big footprints. For example, I have a model of a small town depot that measures 7.5 x 14.5 inches. On the typical two-foot wide shelf with one or two tracks, this building would be jammed tight against the backdrop, assuming it even fits. There's no room for the scene to breathe, which contributes to an overcrowded toy-like appearance. You can widen the benchwork and while the extra width helps with scenery, it adds to the cost of material and may cause reach-in issues. It's a trade-off born from not thinking of the design as a whole.

I mention these aspects because coming from HO or N scales, you will likely be disappointed by how small a quarter-inch scale layout will seem compared to what you're used to having in a given space. You'll need to learn how to work with the larger size and space requirements.

## Weakness Or Source Of Strength?

The reality is that quarter-inch scale is not the best choice for representing long distances. If a long mainline and multiple town sites are on your must have list, you'll be better off with one of the smaller scales. However, we can choose how we see things. Instead of complaining that the scale is too big, let's flip that mindset around and ask what does P48 do best? While there are several answers, one of them is the immersive quality that quarter-inch scale offers.

Each scale has a natural point of view. In N scale for example, it's easy to create sweeping vistas of a train in the landscape because the natural viewpoint of the scale supports such images. Small

details and textures are all but lost from normal viewing distances and color and shapes play a bigger role in conveying realism. By contrast quarter-inch scale mimics a close-up position where the size of individual objects is more obvious. In P48, details are easily seen and appreciated. Train movements are more suggestive of the mass and inertia of full-size equipment. In my view, what most consider the scale's greatest weakness, its size, is actually the source of its strength, once you learn to embrace it.



***Structures in this scale can get big. I modeled this warehouse to full scale width and height resulting a 20 by 48 inch building flat. Both ends are framed in a way that disguises the lack of depth.***

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Each scale has a natural point of view.  
With P48, think close up

# Surrounding Spaces

*The 15 inch width of this cameo was a deliberate choice that leaves plenty of room for enough scenery to provide a context. Creating scenery that's in scale with the trains is a more of a challenge than you think in 1:48.*



## Let The Scale Breathe

I can't stress enough how easy it is to overcrowd a scene in this scale. My thinking about layouts has changed in recent years. After converting to P48, I now prefer a high quality smaller work. The size and visual mass of the models rewards careful editing. This makes for a very immersive operating experience, that highlights the movements of the trains rather than the distance traveled. Instead of trying to squeeze multiple town sites or design features together, pick one and let it breathe.

The HO and N scale basement sized layouts we're all supposedly building are only feasible because of the massive amount of ready-to-run products that reduces the construction time involved.

With fewer out of a box solutions for P48, I've learned to truly appreciate the models I do have. There is more modeling to be done in P48 and it can be done with fewer of the compromises required in the smaller scales.

For operations, I prefer to focus on handling individual cars rather than big picture scenarios. My layout designs have been getting smaller in overall size as well as depth. The narrow depth of my current project mimics the up close viewpoint I remember and enjoyed as a child. It's counterintuitive that a large scale can fit so well in a small space but it puts you right into the scene.

Being up close to the action, you sense the mass of the equipment as you pull and shove cars in and out of this siding. Switching in this scale is a joy and doesn't need to be rushed. Working uncoupling levers and throwing switchpoints by hand makes you feel as if you are part of the scene rather than looking down from on high. Nothing needs to happen quickly at this spot, so you can take time to appreciate all that goes into spotting cars properly. While simple operations won't be for every taste, it's an option to consider if your primary interest is



### ***Realism in a small space is possible with P48***

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in switching rather than mainline running.

A layout of any size in this scale involves more work in handlaying track and as you'll see in the next chapter, converting equipment. If you don't enjoy model building and just want to play train as fast as possible, then P48 is not a good choice for you. However, when you understand and embrace the strengths of the scale, P48 is a real joy to work with.



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Rolling Stock Options

It's hard to have a train without rolling stock. With P48 you have options ranging from quick and dirty, to state-of-the-art kits and all the way to scratchbuilding. The mass market selection is quite good thanks to companies like AtlasO and Lionel and there's a plentiful supply of legacy kits and cars if you know where to look for them. New models are coming to market that take full advantage of modern technology such as 3D printing and rapid prototyping.

With that said if you're considering the move P48 the amount of stuff you can take from a box and start using is limited. Here are a couple of thoughts to consider.

### **Do you enjoy model building for its own sake?**

If so then working in quarter-inch will be a joy. However, if not, then truthfully, you may be happier with the five-foot legacy gauge where you can get going more easily or sticking with HO. Because P48 standards aren't compatible with the others, you'll have more work to do on each and every car and locomotive you plan on.

### **How far do you want to go with detailing?**

The larger size of quarter-inch scale makes adding details easier and you may want to go further with them than a smaller scale would allow. For some swapping out the trucks on a car is enough. For others, a model is incomplete until all the details are accounted for. You'll have to decide where you fit on that spectrum.

Where P48 shines is in the opportunity to have a smaller roster of equipment, where each piece can be as detailed as you wish without the compromises involved in outfitting a hundred cars.

### **Era**

Quarter-inch scale is primarily focused on the steam era. It's a generational bias, since most modelers in this scale are older. That's changing though with younger models coming to the scale and bringing



***Above: If you care about accuracy and appearance, plan on modifying commercial car kits and ready-to-run stuff. Freight cars aren't that big of an issue but each locomotive will need new wheels and possibly a better drive train. This can make it harder to achieve a large operations focused layout in P48.***

their tastes with them. AtlasO and Lionel both have a range of modern prototypes in their lines and a new company, Modern Era O Scale, has recently introduced a line of contemporary FMC boxcars in resin.

The following information is a brief overview of the major sources for rolling stock. It is by no means a complete list.

## AtlasO

AtlasO freight cars can provide a solid foundation for P48 modeling. Their Master line includes a range of transition and modern era car types. For the most part the car bodies are dimensionally accurate however, the separately applied details can be a bit heavy.

These cars aren't without their issues. They are designed as 3-rail models from the beginning and it doesn't matter if the trucks are 2 or 3-rail you get the exact same car body. The 3-rail version has truck-mounted couplers and non-insulated tinplate wheels while the 2-rail has code 145 insulated wheels and body mounted couplers. With both versions, the trucks and body bolster are greatly compromised as a concession to tighter 3-rail curves. The other difference is the price. The 2-rail versions are as much as 5-10 dollars more. It's a guess but I suspect you're paying some kind of premium for the 2-rail. Since the car bodies are identical and you'll be replacing the truck and couplers anyway, go with the less expensive offering.

Compared to HO these cars don't come cheap. Plan on paying between \$60 -100+ per car. With the added cost of P48 replacement trucks and better couplers, a large roster can get expensive quickly.

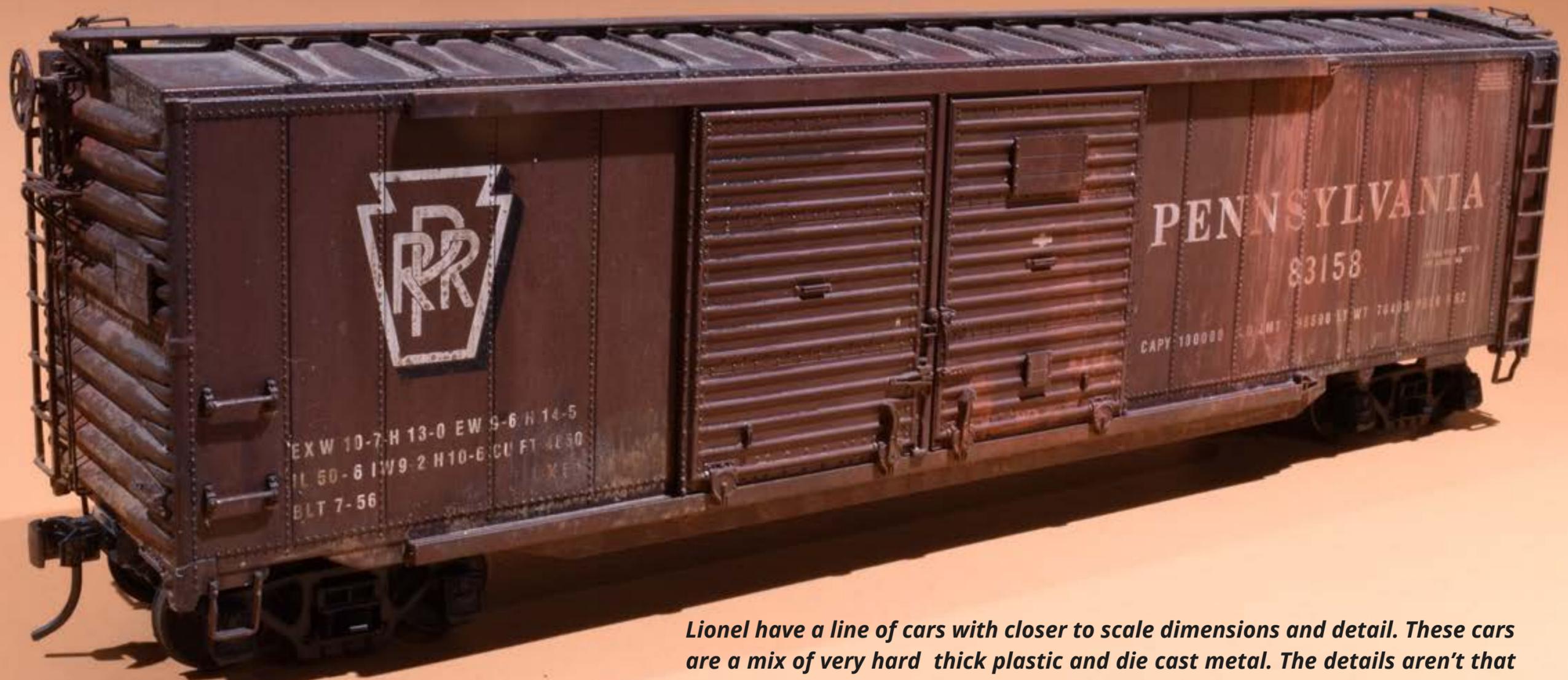
AtlasO also offers a lower price series of cars aimed at the toy-train and entry level market. Their Trainman line offers a barebones level of detail. Again, it depends on what you want and this is a case of picking your battle. Depending on your desired level of accuracy, with some of these cars you're better off starting from scratch. It's a choice you'll have to make for yourself.



***Straight from the box, this 50-foot PS-1 boxcar and Airslide hopper have accurate dimensions and nice detailing. A set of P48 trucks will get you going but there's more you could do with these cars.***



Lionel, seriously?



*Lionel have a line of cars with closer to scale dimensions and detail. These cars are a mix of very hard thick plastic and die cast metal. The details aren't that bad, though they're a bit heavy for my tastes. I've found reworking the stock parts into scale components is often more bother than starting from scratch. Again, the key is to know what you want from the model and choose accordingly. This Pennsy car is straight from the box. I only added weathering, P48 trucks and Kadee couplers to make a quick and dirty stand-in model.*

## Resin Kits

There are a growing number of resin kits that make excellent additions to any P48 roster. Covering the Transition Era for the most part, these are truly scale models. The level of detail varies. In some cases you get a one-piece carbody with no other details. Other kits may have a one piece carbody and floor combination with a separate roof. There are also flat kits where you assemble the body yourself. These kits may also include etched brass material for stirrup steps, ladders and roofwalk supports. The modeler has to source brake equipment, trucks, couplers and other added detail along with paint and decals.

As you're aware, resin kits are limited runs and fill a niche that isn't profitable for the mass market to serve. With 3D printing and metal etching processes becoming more cost effective and refined, a number of important prototypes have been brought to market in P48 that otherwise wouldn't see the light of day.

An encouraging sign is that more new companies such as Modern Era O Scale and Twin Star Cars are bringing sorely needed state of the art pieces of rolling stock to market.

## Older Out Of Production Models

You quickly learn in quarter-inch scale that there is a ton of legacy stock floating around at swap meets and O scale oriented shows. These older cars and kits reflect the nature of the scale before the 3-rail influence took over the mass market. There are some excellent finds out there if you know what you're looking at. I must confess my knowledge of older equipment just isn't there. My modeling tastes are more contemporary and specific and I've never had the urge to dive into the vintage side of this scale.

Old Intermountain and Red Caboose kits are as nice as they come (photo next page). They seem to be plentiful at swap meets and other places. When I first started in the scale in the early 2000s, I found several on consignment in a hobby shop at fire sale prices. Sometimes



***Two examples of quality resin kits. The Soo Line car is an older Chooch Ultra Scale kit that's no longer in production. The M-K-T car is a Southern Car and Foundry kit. Both require the modeler to supply truck, couplers, paint and decals. The patterns for each were designed by Gene Deimling, who also supplied these photos.***



*I can recommend the Intermountain line of car kits. Produced in the 1980s-90s these kits are as nice as they come. The stock details are a bit heavy for my taste but as seen here, you can upgrade them with aftermarket parts from Chooch and Protocraft.*



***(Top) Red Caboose also made a nice series of kits like this 10K gallon tank car. (Above) Interchangeable roofs on Intermountain kits open up scratchbuilding and kitbashing possibilities.***

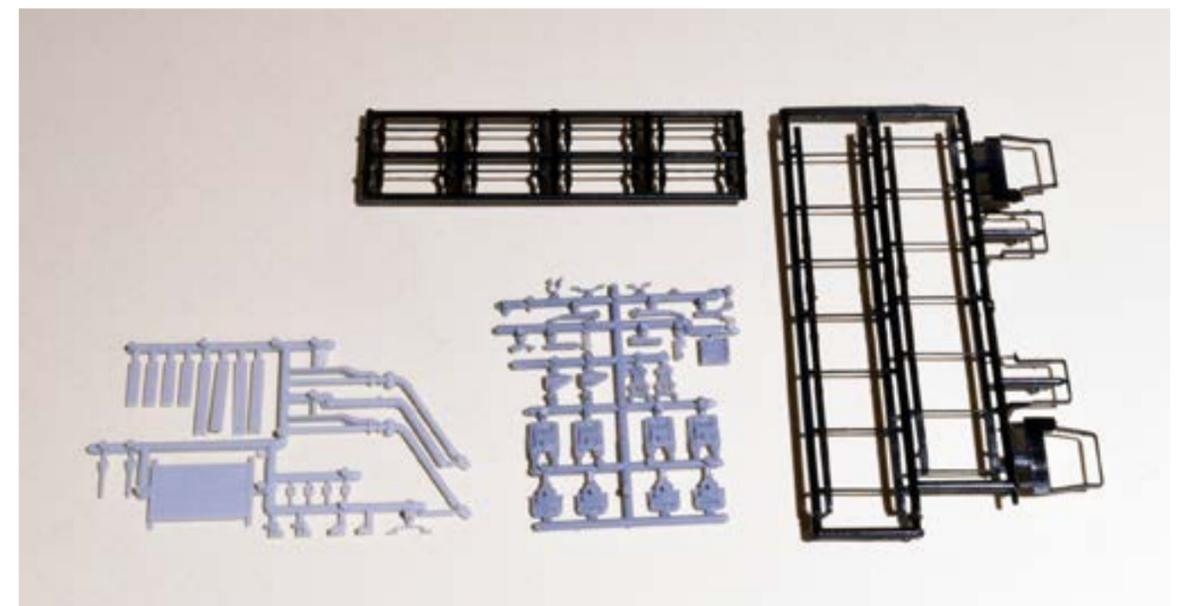
you get lucky like that. The kits are similar to the HO versions and as much fun to build. It's too bad they aren't in production anymore.

A nice feature of these kits is the separate roof on the house cars. This makes it easy to kitbash a wide range of car types and configurations. Speaking of kitbashing, these kits are a great source of parts like end panels and roofs. Coupled with scratchbuilt sides and underframes you can model a number of house car variations.

### **Scratchbuilding**

Scratchbuilding is always an option, especially if you want a unique car, or full control over the quality and amount of detail. There is a wide range of parts and supplies available that make scratchbuilding in P48 an enjoyable experience.

***(Below) Upgrade details from UltraScale II really enhance a model. As of 2020 the company owner retired and the availability of these parts is unknown at this time.***



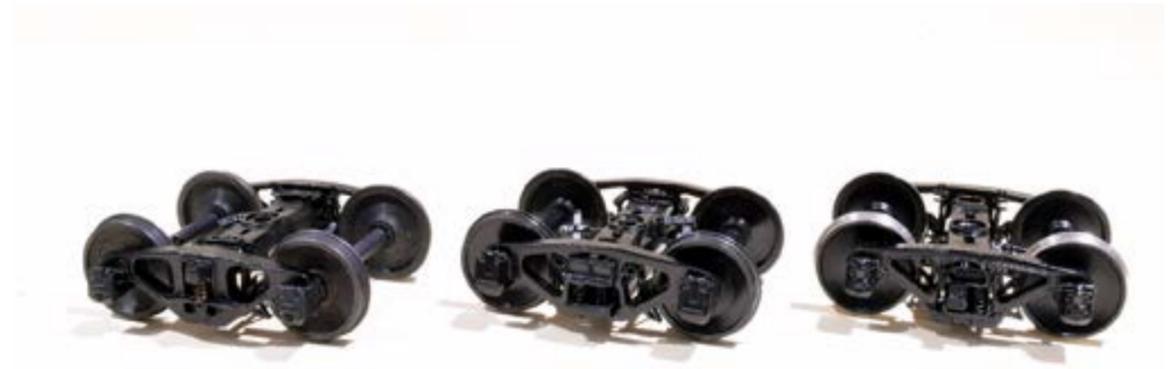
## Trucks

A review of Protocraft and RY Models' websites show over two-dozen different types of freight car trucks from the 1920s to the modern era. Protocraft also carries four and six wheel passenger car trucks and four varieties of caboose trucks. RY Models offers a wide range of freight trucks in P48 with more emphasis on early 1920s design and eastern roads.

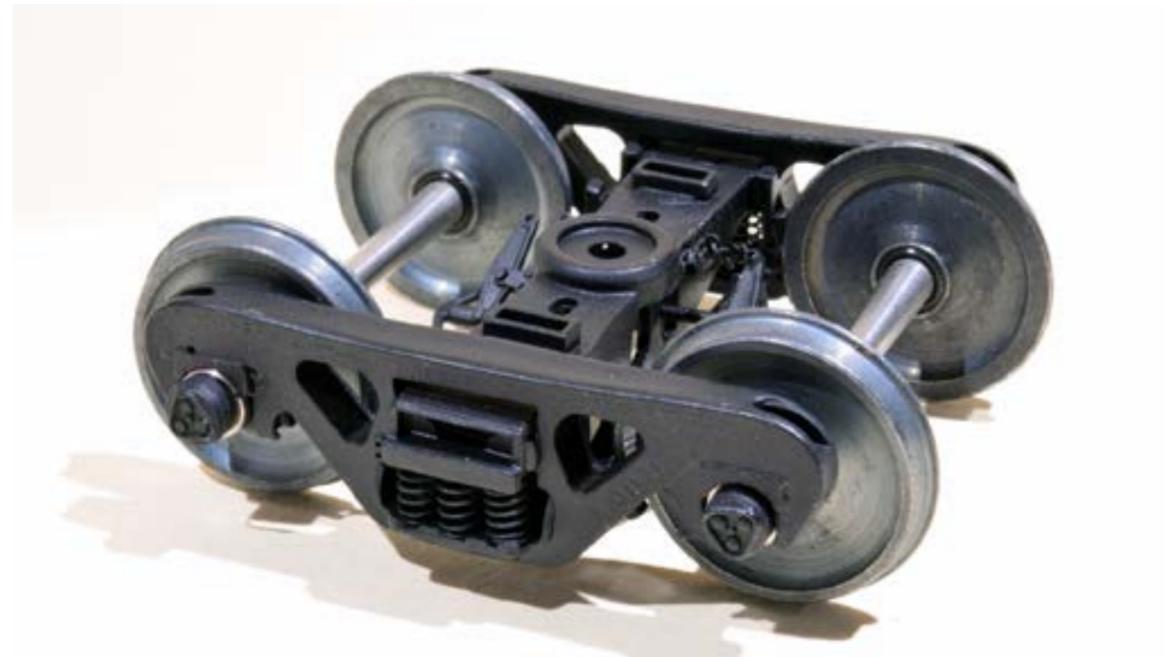
I have used both and can say without hesitation that these trucks are scale models in their own right, being fully sprung and with the appropriate brake detail. A scale truck completes a model in ways you can't imagine and we have an excellent choice of load ratings from 40 to 100 tons. Prices for a pair range from \$40-65 for freight trucks, while passenger trucks from Protocraft go from \$65-130.

There are other options for putting P48 wheels under a model. Protocraft has a wide range of replacement wheelsets in various diameters and axle configurations that you can fit into the truck frames of Intermountain and Red Caboose kits. The rolling qualities will be good and it's a less expensive way to outfit a large number of cars. San Juan Car Company used to make several types of freight trucks in kit form. A recent check of their website didn't show any P48 trucks but I suspect they can be found at shows and swap meets. These come with plastic wheelsets but can be fitted with Protocraft wheels. Northwest Shortline also made P48 wheelsets that lacked the profile on the back of the wheels. As of this writing in early 2019, the company is up for sale, so the future of these is unknown for now.

For the modern era, you'll need 70 and 100-ton roller bearing trucks. At \$60+ a pair the Protocraft trucks are expensive but worth every penny. As an alternative, you can convert AtlasO trucks with P48 wheels and a modified bolster from Jim Lincoln's Shapeways store. It's a compromise that works if you have a large roster to outfit.



***From left to right: RY Models National B-1 truck, 50-ton Bettendorf and PRR 2D F12 Mathieson truck featuring both coil and elliptical springs.***



***Above: Protocraft 100-ton roller bearing truck.***

## Couplers

For years the standard coupler for quarter-inch scale was the Kadee 805. Kadee also has a new type E coupler with a closer to scale appearance. San Juan Car Co. also offers scale couplers.

Protocraft reintroduced Bill Clouser's working type E scale couplers. Initially they were in kit form that you had to assemble but now come preassembled with a closer to scale draft gear that's ready to mount on the car. For the ultimate appearance these can't be beat.



**Three of several options for couplers: Kadees #805 (left), Protocraft preassembled type E (center), San Juan Evolution coupler (right).**

To summarize, modelers have many options to choose from for P48 rolling stock. The amount and level of detail is up to the individual and depends on what you want from the craft.

I've only covered the basics of what's available in this chapter. As mentioned there is a ton of older kits and cars out there. You can spend hours scouring eBay and other online sources for them. Commercial models can be an easy way to get up and running quickly if that's important to you.

## Modelers have many options to choose from for P48 rolling stock.

The selection of P48 trucks and other essentials continues to grow. Twenty-first century technology allows new manufacturers and individuals to develop and market some excellent products that slot right into P48 without modification. It's a good time for the scale and getting better as more people see the potential of it.



Photo by Gene Deimling

## Scratchbuilding get's you the models you want.

Gene Deimling scratchbuilt this Muncie and Western car in styrene using photos and known dimensions. Norm Buckhart developed the decals.

Gene is a well known and respected modeler who has done much to promote P48 and finescale modeling. Here is a bit of his background and a few of thoughts on P48.

### Why P48?

In the late 1960s, I was dissatisfied with HO and started looking at 1/48 scale because of the possibilities for detailing and construction of more accurate models. O scale models of the time were not well detailed and lacked specific prototypes. The major issue for me was the profile of wheels with their deep flanges and wide tire. I became aware of a scale alternative called 1/4" AAR through my association with Bob Brown, editor of the *Finelines* and the *Narrow Gauge and Shortline Gazette* magazines. Periodic visits to Bob's home introduced me to modelers who were building in this offshoot of O scale. I was able to get wheelsets made by Al Henning and brass sprung

trucks done by Lee Klaus. That was all that was needed to launch me in a new direction. That was 1968 and now in 2019 there is a wide variety of goodies available including locomotives. As part of my exposure to new techniques I saw how a basic material like styrene could be used to build rolling stock and structures. There were so many new techniques that were being used by the narrow gauge modelers that it was hard to comprehend them. Casting in low temperature metal, staining wood to recreate aged rolling stock and buildings; the use of artist chinks to weather models are a few enabling skills that propelled me down the road. The concept of building fewer but better models defined what I learned from this early exposure. It was a major change from my HO days of buy lots and build little.

### **Who were/are some of your influences?**

Like many modelers who were introduced to the hobby in the 1950s, *Model Railroader* magazine influenced and inspired me to learn how to build models from scratch and to dream about an eventual layout. To me that period of time was a golden era of model building that we haven't seen since. Authors like Paul Larson, Jack Work, Al Armitage and others exposed me to interesting projects and provided me with the techniques. Much of my early modeling subjects were taken from the pages of *Model Railroader* and *Railroad Model Craftsman*. I became a huge fan of Paul Larson and fell in love with the concept of modeling a mythical short line somewhere in Wisconsin running a small steam locomotive pulling a mixed train. In recent years, modelers like Jim Zwernemann and Lee Turner have shown me that there is still much to learn even after sixty plus years of model building.

### **Do you have a guiding principle for doing your work?**

Early on, I adopted a philosophy of building fewer but better models. I found that in HO there was little attachment to things that came out of box or ready-to-run. Scratch building a model is far better than waiting and hoping that someone will produce it. Learning how to do things is as enjoyable as the end product produced.

### **Do you have any advice for people getting started in P48?**

Model building requires a skillset to be successful. Acquiring the skills takes time with lots of trial and error. Pick achievable goals for your first project. You will find that early projects call out for an upgrade or replacement. It is all part of the process to striving for better models.

Finding a P48 modeler who is willing to share information is most helpful. P48 is still a small section of the overall hobby so large modeling magazines tend to not show much about what we do. You can network with other P48 modelers via email groups such as Groups.IO, websites and blogs. It is amazing what you can discover via the web.

Gene Deimling

P48 is a small section of the overall hobby so large modeling magazines tend to not show much about what we do.

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# Locomotives for P48

Glacier Park NP 4-6-0. Photo by Gene Deimling

I admit up front that the O scale locomotive market is not my area of expertise, so this short chapter is a placeholder for now and will be updated in the future.

As you can imagine converting, or more often, rebuilding a legacy gauge 2-rail or 3-rail loco to P48 can get complicated. Having said that, many diesels can be converted by simply dropping in a set of replacement wheels, as I did with my Red Caboose GP9. The task took all of ten to fifteen minutes and I had an operating unit.

The Geep has a basic horizontal drive that is easy to understand and work on. There is room for improvement to be certain, but after a run-in period, the performance is solid.

I happened to purchase a complete kit for the engine but you could also find the shell and drive train parts separately with a little digging. P&D Hobbies and Des Plains Hobbies are your best bet for the critical pieces.

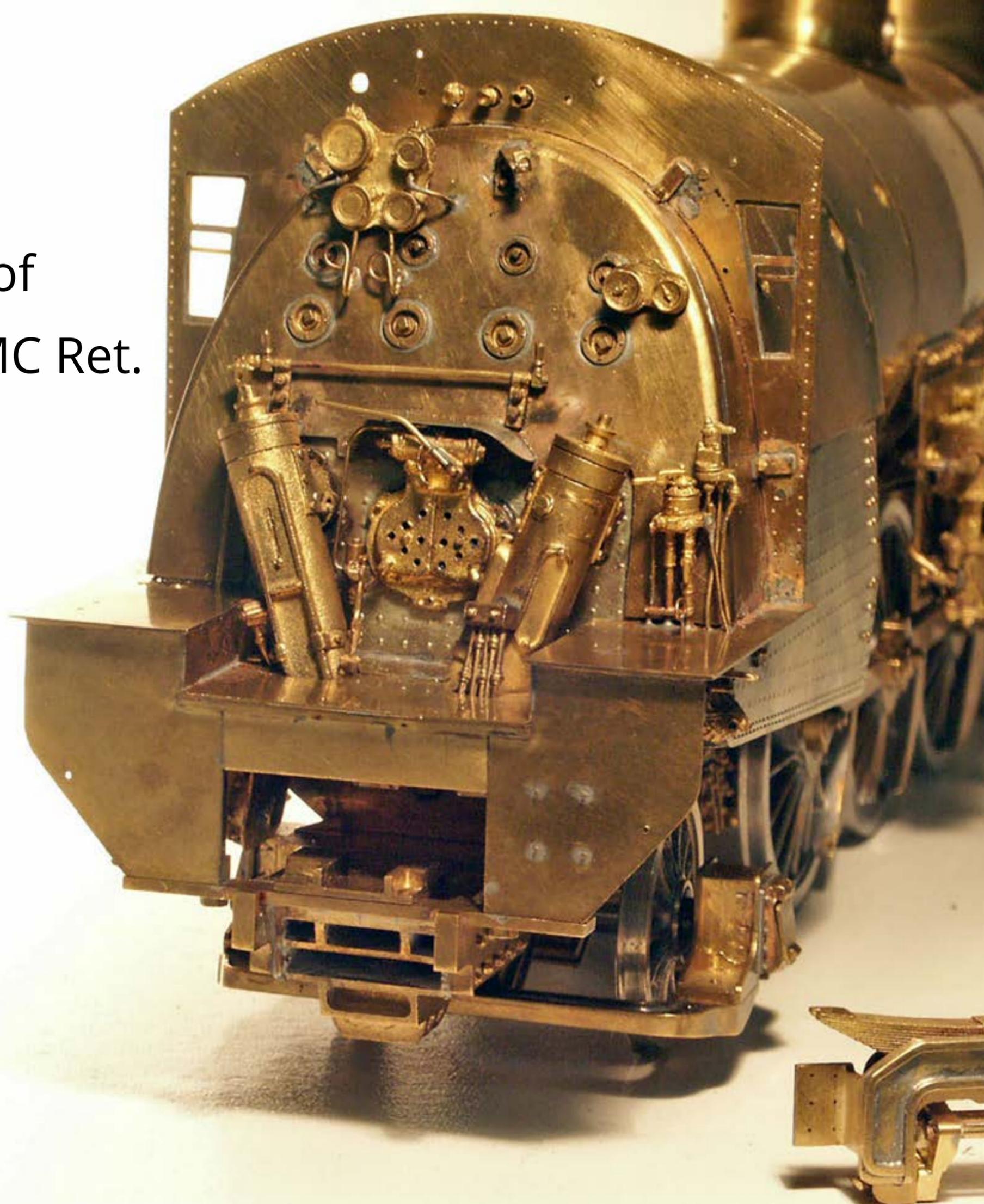
P&D sells a replacement drive kit that includes a beautiful pair of fully sprung brass trucks, a new Pittman motor and other components. Des Plains Hobbies has a predrilled brass frame designed to work with the P&D drive that replaces the factory stock plastic one. Jay Criswell of Right-O'-Way has a P48 conversion kit for these trucks that includes the wheelsets and pieces to bring the sideframes in to the proper width.

Steam engines are another matter entirely and beyond my knowledge to offer an intelligent comment on. As mentioned earlier in the book, they are brass imports that sell out quickly. Older legacy gauge engines can be converted to P48 at a cost. I encourage folks to do their homework and learn what you're getting into.



***The Red Caboose Geep is a solid well engineered loco. The replacement drive train kit from P&D Hobbies(photo above) comes with fully sprung brass trucks, a Pittman motor and universal drive shaft components. Jay Criswell of Right-O'-Way has a P48 conversion kit for the trucks that includes P48 wheelsets and parts to narrow the spacing between the sideframes. Jay, among others, also does complete drive train conversions.***

The Craftsmanship of  
Capt. Tom Mix, USMC Ret.



*The following is an excerpt from the interview with Capt. Tom Mix, USMC Ret. that originally appeared in Vol 04 of The Missing Conversation.*

**Tom Mix:**

*Model Railroader* back in the '50s and '60s was much more about scratchbuilding than it is now. Many projects by well-known authors were published explaining in detail the construction of locomotives, cars, buildings and RR equipment such as cranes and bridges, etc.

The author that changed my total concept of scratchbuilding (and scale) was Mel Thornburgh and his series on building an O scale Wabash 2-6-0. If I remember correctly this was published starting in 1959 or 1960. His models were "kitchen table locomotives," meaning he didn't use a lathe or any fancy equipment. I was fascinated by his clear explanations of construction and his photos and drawings. The interest in changing from HO to O and scratchbuilding my first brass engine came on pretty strong.

**What are the requirements for working to the degree of craftsmanship you do?**

I think that the first requirement in building an accurate model is to have a strong interest and desire in accomplishing the often-complex construction/assembly of individual components that end up as a complete locomotive, car or most any piece of railroad equipment.

Second would be to enjoy the research required to find drawings, photos, and history of the particular locomotive being considered for building. To me, this part is kind of fascinating as individual sources, such as historical societies of different railroads, have an enormous amount of information that they are willing to share. Also libraries, such as the Denver Public Library, have a storehouse of history and best of all photos. Their vast collection of Otto Perry's railroad photos is amazing! Research can take a lot of time and not every modeler may enjoy making this effort but for accuracy it's a must.

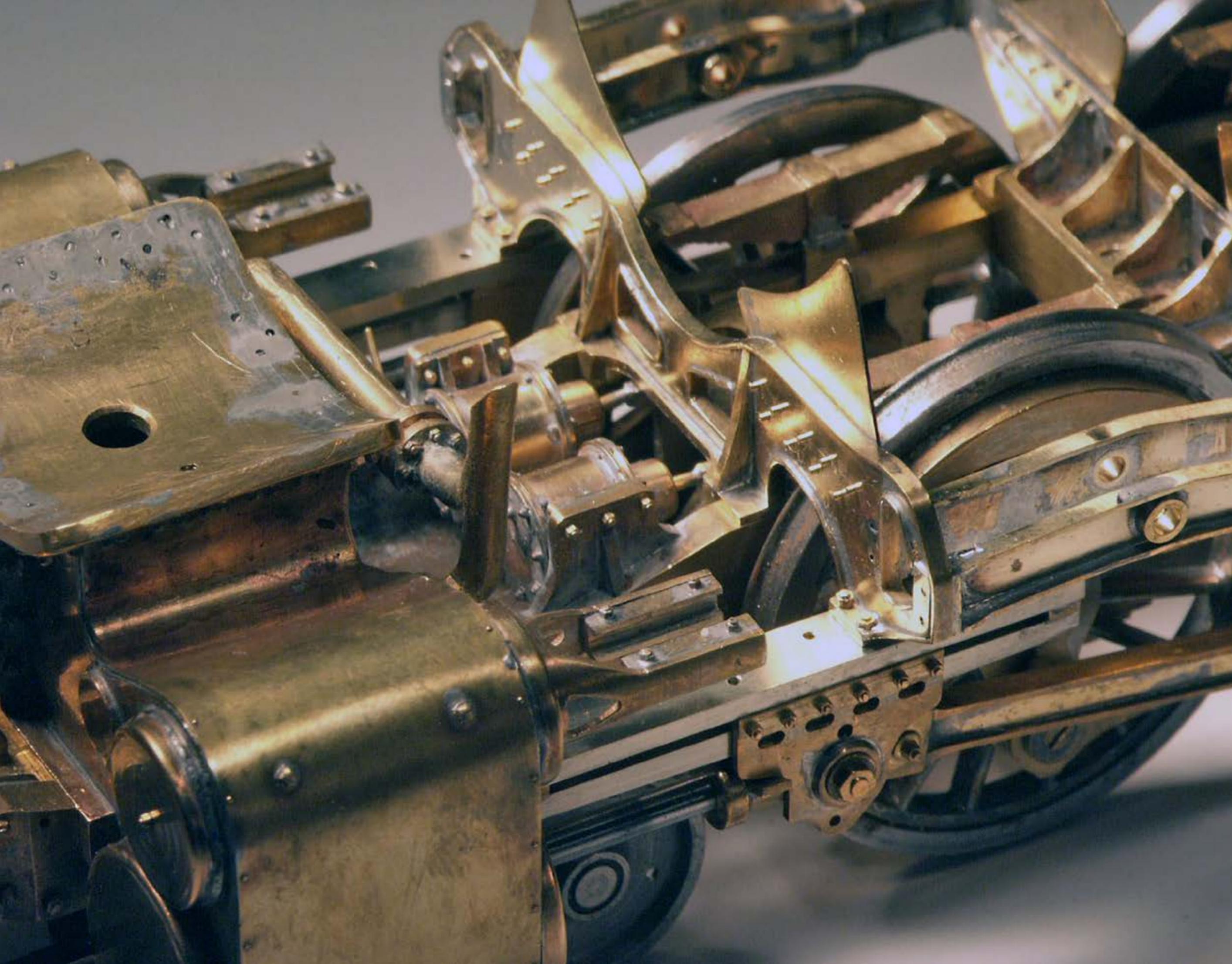
Third would be patience. Machining and soldering the individual components of a brass locomotive can tax the patience of every model builder and accepting the reality that mistakes will be made, which requires a second effort to redo the component or part. I have been building railroad models for more than 40 years and still get it wrong sometimes. Some time ago I was milling the pilot beam for a USRA 0-8-0. This beam has curves, tapers and elevations from center to ends. I was almost done and what a work of art it was! While mentally patting myself on the back at my expertise I turned the mill slide the wrong direction and precisely milled out a big "U" shape in that art piece. The scrapbox inventory increased by one. Oh well. Time to saw another length of brass bar to begin anew.

**What mindset do you approach a project with, knowing it will take years to complete?**

Actually I don't consider the future time involved with the start of a new project. It just happens as time goes by. And I will say here that I almost always have three or four projects going at the same time. Some model builders start a construction project and stay with it until finished. I admire their perseverance but as this, to me, is a hobby, I have no guilt about those uncompleted projects up on the shelf, patiently waiting for me to bring them back to the work desk.

I enjoy constructing the individual components, i.e., locomotive cylinders, to a fine degree using actual railroad drawings. This requires an enormous amount of trial and error in building and fitting individual parts to completion. And, sometimes, I do have a burnout that puts the project up on the shelf and another on-going project restarted. Right now I have a 2-10-4 and a 4-8-2 that rotates from desk to shelf and back again. Also an 0-6-0 tank switcher and a USRA 0-8-0 fits into the same rotation line.

An example for this puzzling way of constructing locomotives is a thought will arise during a component assembly such as happened



when scratchbuilding the Baker valve gear for the 2-10-4. As the valve gear would move, why not try some method to actually move it to the correct position for forward and reverse? This kind of thinking generates an enthusiasm for a 'how is that possible' series of questions that takes off and leads to experimenting with motors and gears, levers and decoders. I worked out a method to do this and the assembly was then applied to other engines.

### **Machining Proto 48 wheels and drivers**

When I switched from HO to O scale, the idea was to scratchbuild a small brass engine as a starting experience in this new scale. In studying the drawings and looking at some photos of that UP 0-6-0 I chose, I began to think about the wheel gauge. I was well aware that O scale was five foot instead of the prototype's 4' 8½". I had purchased a set of 51" drivers from a commercial builder and that set of "fat" sandcast wheels helped to make the decision to try and build a more accurate locomotive.

A lot of thought went into this decision as it would involve machining drivers and tender wheels, indeed, all future models would require re-gauging and resizing the available O gauge wheel sets along with laying my own track to 4' 8 ½ " as per prototype. In this era nobody else that I knew of was doing this but I'm sure there were.

Why bother? Good question. The challenge to construct components with a high degree of accuracy (within reason!) got kind of strong especially when I was able to see an actual UP 0-6-0. What an opportunity to check my half built model with a real one! The resulting photos and drawings showed that I had a lot to learn about accuracy. That was the impetus to learn more about steam locomotives by searching out actual railroad drawings and finding photos for future construction projects.

This first experience was an eye opener in learning to bend and carve brass and solder it together but also to build the replica of a

The challenge to construct components with a high degree of accuracy (within reason!) got kind of strong especially when I was able to see an actual UP 0-6-0.

locomotive accurately even if the assembly would not be easily seen such as a main frame with its openings, both vertical and sloping, along with brake hangers, ash pans, all hidden behind the drivers and trailing trucks.

Proto48 requires correct drivers and wheels, which in the past were not available. That included certain tender and freight trucks, engine drivers that were not made. So scratchbuilding was necessary for accuracy and I must admit, that part is what I enjoy the most. Fortunately some commercial P48 products are now on the market to ease the construction of drivers and trucks such as accurate wheels, driver tires, driver castings, and even track components.

Over the past few years I have machined and built several sets of drivers from 51" to 78" and also scratchbuilt a number of trucks that are not available commercially: tender trucks, freight and passenger, using actual RR drawings. What is nice about P48 is that when building components like these I don't have to compensate to the oversized O gauge wheels.

Complex trucks, for example, can be constructed exactly to measure and scale to match the prototype. Building to this degree takes a lot of time and effort that many would not be interested in doing but when a set of drivers are completed with scale spokes, hubs, and counter weights and the tires are exactly 5 1/2 inches wide, they sure look nice!

Capt. Tom Mix USMC, Ret.

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# Modeling Track in P48



Currently, your choices for track in P48 are limited to handlaying or a combination of flextrack and handlaid turnouts.

### **The Gorilla In The Room**

Let's address the gorilla in the room from the outset: handlaying track with the amount of detail shown here is labor intensive, time consuming and expensive. The quantity of tie plates, joint bars and other details adds up very fast and these items aren't cheap. Placing four spikes per tie is a herculean task if you have many feet of track to do.

You'll need to purchase precut tie stock or cut your own. Of course you have to color the ties and glue them down. Working with small tools like needle-nosed pliers and tiny spikes can be frustrating. Your hands get tired and your vision may not tolerate working up close. It's easy to introduce kinks in the rail when placing spikes and you only have to spill a container of them once to understand how irritating that is.

Placing individual tie plates is also frustrating as they often fall between the ties until you secure them with a spike or weight the rails down to hold everything in place. Spiking track is quite tedious over a long time and requires patience and persistence. If you don't have a tolerance for repetitive work, you'll find it maddening. With regards to spikes, placing them every fifth or sixth tie may be functional and acceptable in a smaller scale but their absence is very noticeable in quarter-inch scale and that goes for the lack of tie plates as well.

If you wait to place joint bars after spiking, you'll have to remove and reset any spikes at each location because they will be in the way unless you planned ahead and left them out.

Flextrack is quicker to put down but you have to weather or paint the plastic ties and you'll still need to handlay the turnouts or commission them from a custom builder like O Scale Turnouts. With prices up to a hundred dollars for a preassembled turnout you can just spike in place, the track for a large layout can get very expensive.

### **Choosing To Handlay.**

One of the prime reasons people choose to work in P48 is to model with as few compromises as possible. Generic track often sticks out like a sore thumb from the rest of the scene. I don't know if it's because of the quantity of track involved or a bias from the toy train roots of the hobby, we often fail to see the contribution that finely crafted track adds to the overall impact of our modeling. With the quality many of us now expect from our rolling stock, scenery and structures, there is little excuse in settling for model track that hasn't changed over the last half century.

The priorities you bring to modeling will determine the degree of detail you include in your track. I chose P48 so I could model track to the high level I've always wanted to. At the time I switched scales, I was already used to working with finescale tolerances and handlaying turnouts in HO. I enjoy the work and find it satisfying. It was a simple choice for me and I never even considered the alternatives.



### What's Available?

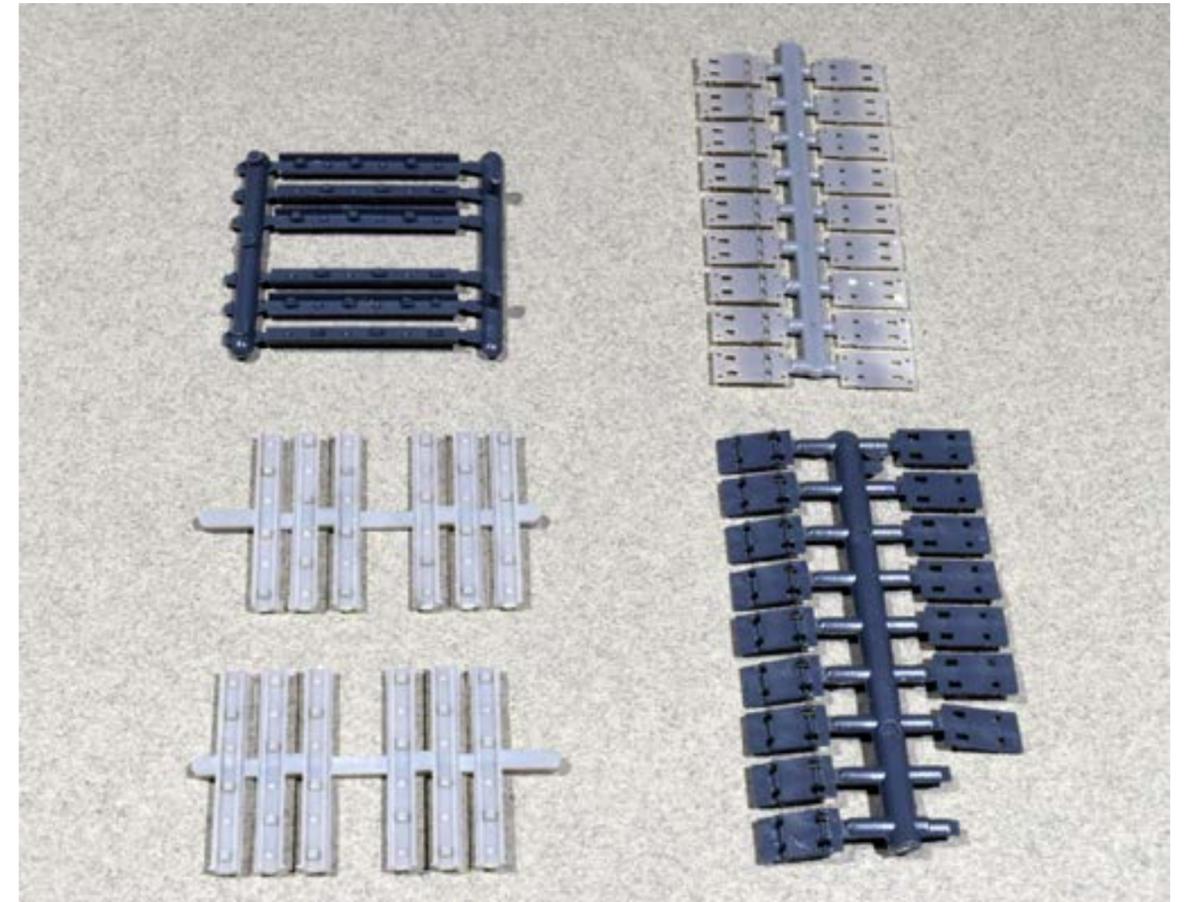
P48 provides an opportunity for truly bespoke track work. You can replicate the texture and appearance of full-size track to an astounding degree if you are willing to make the effort. Right -O' -Way Products, run by Jay Criswell, will be your go-to resource for track modeling. Jay took over the company from the late Lou Cross and has everything you need including tie stock, tieplates, joint bars and turnout castings for both P48 and NMRA standards. He also has code 125 flextrack for P48. Jay is creating a long overdue one-stop shop for P48 and quarter-inch scale track modeling.

### Rail, Tieplates and Joint Bars

The common rail sizes used in P48 are code 125 for 90 to 100 pound rail, code 138 for 112 to 130 pound or code 148 for 132 pound mainline rail. You can purchase tieplates for these rail sizes in both single toe and double toe styles along with the slide plates and rail braces for turnouts. Joint bars come in plastic that you glue to the rail sides or cast brass slip on. Insulated joint bars are also available. ROW offers both four and six-hole versions.

Spikes are a matter of preference. I used the small spikes from Micro-Engineering because they are readily available in most hobby shops. The heads are oversized but the final painting and weathering tends to visually reduce the effect. Many people use the steel spikes from the P87 Stores for their finer scale appearance.

Ballast is also a matter of taste. I prefer a smaller granule size than most and used Woodland Scenic fine grade ballast. I feel the smaller grit allows the track to stand out better. To my eyes the larger granules look too busy and draw the eye too much. It's a choice you'll have to make for yourself.



***A variety of track details are available from Right-O'-Way and other sources. Shown here are canted single toe tieplates (upper right), Double toe tieplates with a ridge on each side of the rail base (lower right).***

***Joint bars come in six and four hole versions that include cosmetic bars you cement on the rail (upper left) and insulated bars to create electrical gaps (lower left). These parts are for code 125 rail but are available for many rail sizes.***

# Frog and switchpoint castings

These nickel silver castings are fully detailed and make turnout construction simpler by eliminating filing the angles for the frog and points. Originally produced by American Switch and Signal in sizes from No 6 to 10 that includes the points, frog and guardrails. Right-O'-Way carries these now. When you're on the site, look for the P48 and finescale links in the menu.



*The size of P48 allows the detail of this self-guarded frog casting to really shine.*

*Skeptics may doubt the reliability, but I assure you that a car tracks through it nicely.*





*A Caboose Industries N scale ground throw, a bit of brass wire and headrod castings from Right-O'-Way make a simple and prototypical solution for moving the points of a P48 turnout.*



**Turnout details include rail braces with and without a slide plate (left and middle) The brass head rod needs to be insulated with a strip of paper and trimmed to fit the desired point spacing. It comes with instructions for doing this.**

**Not shown are brass gauge plates and wider tieplates for guardrails and frog castings. Some of these details along with others like hook tieplates can be scratchbuilt from strip styrene.**

**Turnouts will vary widely in the number of these details. Good reference photos are essential for modeling.**



### **Wrapping It Up: Good Work, Done Well.**

I've been direct with this volume because I want people to have a clear picture of what is involved in P48 modeling. I've made it sound hard and it is in some ways. I believe though, that anyone seriously considering a move to P48 is more than up for the challenge.

### **More Modeling, Less Compromise.**

Because the models are larger, you will naturally consider adding more detail which, will add to the time spent on an individual build. In terms of handlaying track, yes it will take longer because you are adding more detail than anything you would do in HO. But again, the steps are the same as handlaying track in any scale.

With the examples in this volume I've shown what can be done by a modeler willing to put in the time and effort to elevate their craft. This level of work inspires me to do better with my own.

There are those who want to dumb down P48, thinking that's the route to getting more people into it. I couldn't disagree more. The mass market mentality doesn't appeal to everyone. The fact that there are few ready made options for P48 is what draws many people to it. All you have to do is look at what AtlasO has done to legacy gauge 2-rail modeling to see what a dumbed down version of P48 would be like. If that's your choice you're welcome to it. I prefer a different route and make no apologies for it.

People come to P48 for a number of reasons. Most common is a desire to get their hands dirty with active model building again. Many of us are tired of the compromises of good enough modeling and want to include details that are too small or impractical for HO or N. Your vision will change as you get older and that too is a factor. Work in P48 is often easier to see and handle.

Coming from HO myself in the early 2000s, I was shocked at how primitive the O scale market seemed by comparison. It took me a while to adjust my expectations around the limited availability of products and selection compared to what I was used to. I learned to see such obstacles as opportunities and discovered a new level of satisfaction from taking ownership of my craft instead of being dependant on manufactured products.

You'll likely face a similar choice. You will learn to source things on your own from different suppliers and get used to waiting on mail or parcel delivery. With the exception of basic modeling supplies, there is no running down to the hobby shop to see what's new in P48. In my experience most hobby shops have never even heard of it.

The most important thing to know about P48 is there is a community that is happy to help you get started and enjoy what the scale has to offer. There are P48 specific websites and an active P48 Facebook group you can join. These are where you'll learn about new products and ways to get what you need.

Given the many hurdles I've suggested in this book, have I been happy with my choice? Yes, without any doubt. I wanted to model at a higher level and P48 supports that. Once I saw what was possible, there was no going back to the compromises of HO and I never even considered legacy gauge O scale. It's important to understand that this craft is whatever you choose to make of it. If you are tired of mass market compromises and willing to invest in your modeling skills, P48 is an excellent classroom for learning.

Mike Cougill  
OST Publications

# Resources

## Websites:

<https://www.proto48.org>

Gene Deimling's Proto48 Modeler website is the go-to resource for news and suppliers. Rather than duplicate the information here, I recommend that you start your journey there if you're new to the scale.

## Facebook Groups:

[Proto48: The future of 1/48 railroad modeling.](#)

A Facebook group administered by Gene Deimling. You will have to join the group to see and post content. Lot's of helpful folk here.

## Books

[www.ostpubs.com](http://www.ostpubs.com)

*Detailing Track*, covers handlaying track in P48.

A meaningful and satisfying layout doesn't look the same for everyone. Vols. 1-2 of *The Missing Conversation* take a long look at layout design from the perspective of asking and answering questions about why. Why are you making these choices, what do you hope to gain as a result? These questions and others are relevant to P48 modeling in that you will need to set your priorities from the start.

Vol. 3 provides a look at the practicalities of finescale and a tour of Warner Clark's Maumee Basin Lines P48 layout. Vol. 4 includes two interviews with Tony Sissons and Capt. Tom Mix, USMC Ret. about their approach to craftsmanship in modeling

Vol. 5 presents the switching operations of a small plastics factory that would translate well to a modest P48 layout design.

Vols. 11-12 cover a scratchbuilt Pullman Standard boxcar that is not commercially available in quarter-inch scale.

## Rolling Stock (Resin and Brass)

[Modern Era O Scale](#)

[Twin Star Cars](#)

[Protocraft](#)

[RY Models](#)

## Track

[Right-O'-Way Products](#)

[O Scale Turnouts](#)

## A Note About The Products Mentioned

I received no monies or other compensation from the suppliers and products mentioned in this volume. I use some of these products personally and they are important to my modeling and provide genuine value. The P48 community owes a debt of thanks to those who take the time and effort to bring high quality products to market.

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