

Milwaukee Road HO Passenger Cars Using Brass Car Sides

CONSTRUCTION METHODS

By Jim Schwinkendorf

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As a modeler of The Milwaukee Road, I wanted a way to produce a number of passenger cars to correctly fill out several passenger trains. When Walthers produced their first HO Twin Cities Hiawatha train, this went a long way toward providing some basic cars. But it did not include the wide variety of equipment used by MILW on various trains. I was especially wanting to add some sleeping cars for a second *Olympian Hiawatha* on my roster. In talking with my college buddy who worked at Walthers, I learned about Dennis Henry and then found his Brass Car Sides products. That provided the means to construct some unique cars and good-looking models by using both Walthers cars and different car sides from BCS.

MILW made many of their own passenger cars at Milwaukee Shops, and these cars had some unique and visible features. For me, a distinctive detail was the ribbed roof and car ends, available on the Walthers cars. BCS provided a variety of different window arrangements for the 1947-48 Shops built cars. Also available from both Walthers and BCS were Pullman style roofs for sleepers, and BCS sides had the distinctive MILW window arrangements. I have therefore made a nice fleet of cars, both Shops built and Pullman built, which represented a variety of cars found on MILW trains.

Since I started building the cars, I have refined my process for construction. Dennis Henry asked if I would share my process. I also suggest that you refer to the pdf file on the BCS website (brasscarsides.com) for Jeff Hanson's Construction Methods process that he used to build a different HO car. He provides a lot of the details of his procedures, which are somewhat different from mine. We each developed something that works for each of us – similar – but not the same. Making these specialized cars is not too difficult, but it is not a one-hour “shake-the-box” exercise, either. You can end up with some nice-looking passenger cars, and possibly learn some modeling processes along the way.

The only easy way to get the distinctive MILW rib roof is to acquire and modify a Walthers car. I will describe my process that I have developed and found to make some nice-looking models. This will describe my efforts for building a *Grove* series café lounge, BCS car #173-60. It is an interesting car with both small and large windows on the same car. Originally, they were built as café/parlor cars, and later MILW modified two of the series (the *Union Grove* and the *Twin Grove*) into café/lounges. Depending on the time periods, the cars were painted in both the original orange/maroon/black scheme or the later UP Armour Yellow/Harbor Mist Gray scheme. A normal assignment for these cars on the Milwaukee Road was to position the *Groves* on the *Pioneer Limited*, to separate the coach passengers from those in the Pullmans.

I selected a Walthers tap lounge model (#932-9204) as a starting point. It had a roof and underframe that closely resembled the *Grove* cars. BCS makes the sides for the *Groves*. The first and some of the hardest work is to get the Walthers car apart, separating the roof from the body. The roof is attached with a series of snap plastic tabs in the roof that fit into holes along the sides and into the body skeleton.

Easy to snap together, but hard to get apart. I start in the middle twisting and pressing to get the tabs to release. Once I start getting something to start separating, I keep working at it. You will probably break some tabs in the process, but they can be glued back together later. Once the top releases from the sides, the side panels lift up and out. The car ends snap out as well. Just pry and get them off the body skeleton. I also remove the trucks and couplers, so I end up with just the body skeleton, including the car interior. It's a good idea to mark one end of the car parts, so you know which end is which when you start to reassemble the car. It only goes together one way, but the marks will save you time later.....



I don't detail the car interior, but just modify the one that Walthers has inside to keep the car stiff and sturdy when I'm done. I then match the BCS side to the skeleton and chop out whatever inside details, walls, tables or seats are too close to the car side windows. I used an Xacto knife, Dremel tool, and pliers to get rid of unwanted plastic material that I don't want to see through the car windows. My cars are unlit, and you can't see a lot inside anyway. I also remove the screws and separate the underbody from the skeleton for painting. Besides screws, there is some glue that holds them together.

I refined my process after having built several cars. In my first efforts, I simply attached the BCS side right over the existing Walthers side (after hacking out some plastic side material in the wrong place for the new side windows). But the way Walthers designed their cars, the roofs are just wide enough to match where the sides attach. Even though the brass sides are only .010" thick, they did not snuggle up under the roof sides. That's when I started taking the Walthers sides completely off, thereby letting the brass sides attach directly to the car skeleton, and then they snuggle up under the roof with a tiny lip. The Walthers sides are .047", so adding an overlay made the car body way too wide for the roof. My method is good enough for me.

Now it's time to get out the air brush and start painting. My models use the MILW 1950 scheme for colors, just like the orange/maroon/black colors on the Walthers models. This way when you paint the BCS sides, everything matches (at least as closely as MILW cars ever matched!). I spray using my trusty 45-year-old Binks Wren B airbrush for painting.

I do NOT remove the Krylon from the brass sides. The Krylon gives you some "tooth" on the sides to adhere to the paint. I do spray on a gray automotive primer to be certain. Then I spray on the orange

color, then mask and spray on the maroon. I am using Tru Color paints, and they have worked well with the primer on the Krylon. My process for masking uses some 1/8" pinstripe masking tape for the part line between colors. Once this tape is lined up where I want it and is straight (eyeball down the line of tape), I add 3M #2080 masking tape to cover the sides. I attached this tape to the pinstripe tape and then cover the rest of the side. The pinstripe tape forms the actual part line, and the 2080 tape carefully covers the rest. It sticks well to the pinstripe part line tape, but is not too "grabby" to the rest of the painted side. And now we paint the maroon window stripe, and let the paint dry. Some paints dry quickly, while others take some time for the paint smell to dissipate. Letting things dry overnight is a safe choice.



Now it is time to remove the masking tapes, saying a prayer as I go. I try to remove the tape as soon as the paint is dry. First remove the 2080 tape by pulling slowly and straight back, getting rid of it off the side except for the pinstripe tape. Then carefully use the same process to remove the pinstripe tape, and you should end up with a nicely orange painted side with a maroon window band. Take a deep breath. You can now paint the other Walthers car parts an easy coat of black paint on the roof and underbody, and paint orange on the car ends and end doors on the skeleton car frame. Easy stuff – the hard painting part is already done!



If you don't use a shiny paint (like Tru Color), you will probably want to overspray something like a polyurethane over your painted car prior to adding decals. Decals stick better to a shiny surface. I apply the decals using Microset or Walthers Solvaset, and let them thoroughly dry, usually overnight. Next I overspray everything on the sides with Testor's Dull Cote, or something similar, to get the sheen that you want. That protects the decals and makes everything even out in sheen. I also Dull Cote the ends, roof and underframe.

The next part of my process is making a modification to the Walthers car ends. I snap the painted car ends back onto the skeleton, replace the roof and add the underframe back onto the skeleton. You will now see that this combination of ends, roof and underframe added to the car skeleton is starting to make a nice, firm car. I have found that I must make some minor adjustments to the car ends, since we are not using the Walthers car sides, which they have designed as an integral part of their car.

Walthers has made the sides and ends with a chamfer, so they match at the corners. Your brass sides don't have that chamfer, so you'll just have to slightly adjust things. I have found that the BCS sides fit nicely and square with everything if you remove a bit of the plastic car ends. The BCS sides are just long enough to fit even with the ends when they have been snapped in place on the skeleton. I make this happen by using a single edge razor blade and carefully make the ends even with the width of the skeleton, such that when you put the brass car side against the side of the skeleton, it fits into the newly cut notch and square with the car end. The BCS sides are the same length as the roof and the underframe, and will fit even with the car ends. Just be careful with the razor blade! You can make sure it is all even with a touch of a bastard file at each corner.



We are ready to add the clear window material to the car sides. Now that the sides are painted, decaled, protected, and will fit the ends properly, I take thin .005" clear styrene in strips just wider than the windows and glue the clear strips inside on the brass sides. One can use CA, GOO, or neat stuff called Formula Canopy Glue (get at Amazon). Anything that will adhere to the brass sides and hold the clear material in place where the windows are. **JUST KEEP YOU BIG FINGERS OUT OF THE GLUE.** The objective is to end up with clear windows! I generally use canopy glue. Make sure everything is dry.



I attach the sides to the skeleton using CA, but you could also use fresh GOO as the adhesive, as this will give you a little more time and a little more adjustment to get things right. But use fresh GOO, not some old stuff that you have had for a year on your workbench. Fresh GOO is runny and rather milky in color. Old GOO is orange and thicker. You want your sides sticking right up against the skeleton and not held out by thick GOO. I have had no problems using CA to attach the sides to the skeleton. I put the CA on the skeleton, all along the top and also along the bottom side of the skeleton. The sides fit up against the roof, and are square with the ends. When everything is lined up, I gently drop the sides onto the skeleton, and then press the sides. Just keep the CA away from squeezing out anywhere. Now just let it sit so that the CA cures and holds everything together and in place. It's really starting to look like a passenger car!



I now check for the fit at the ends and touch up a little to ensure that everything is painted. Once you are satisfied with the way it looks, Install the couplers and brackets, and install the trucks. (See the Addendum on the trucks). You should be smiling by now, as your project is just about complete. Set the car on your railroad, stand back, and look at your finished product. Really neat. You have now made a scale model of a unique piece of equipment, and ready for your traveling public.



I do not add the handrails and grab irons to my equipment. On Shops built cars, the grabs and handrails were painted to match the color of the car behind them, so they tend to disappear anyway. That's my method for using the Brass Car Sides to make unique Milwaukee Road passenger equipment, and they fit into consists nicely with other brass and plastic cars. I hope that you enjoy your efforts!

Jim

PS: If you encounter any difficulties or don't understand something, feel free to contact me at jaschwink@aol.com. I would like to thank Dennis Henry for his contributions to enhancing our hobby and assisting me with the explanation of how I build passenger cars using his brass car sides.

I now have seven or eight cars, including Milwaukee Road's third modern business car, the *Montana*. That car was a very special and complicated process, but using custom sides that he produced for me, gives me all three of the modern MILW biz cars.

Here are a couple of shots of a Shippers Special on the Nate Smith Trestle. On the point is SDL39 #589, with a parlor car, the newly built *Union Grove* café/lounge, and business car *Montana*. The first car is a Walthers car, followed by my Brass Car Sides project, and my custom Brass Car Sides business car.....





ADDUNDUM: After I finished my *Groves* car (the *Union Grove*), I discovered an operating situation that was causing derailments. It had to do with the skirting along the bottom of the sides rubbing against the brake pistons on the set of Walthers Nystrom trucks that I had applied. If the car has skirting, you need to select the disc brake type of Walthers Nystrom trucks (and not the brake shoe type), as the disc brake style lacks the pistons that were rubbing. And they are prototypically correct for this series of car. Over the years, the MILW changed trucks around on cars, and is a study unto itself! But choosing the Walthers disc brake Nystroms will solve operating issues.