

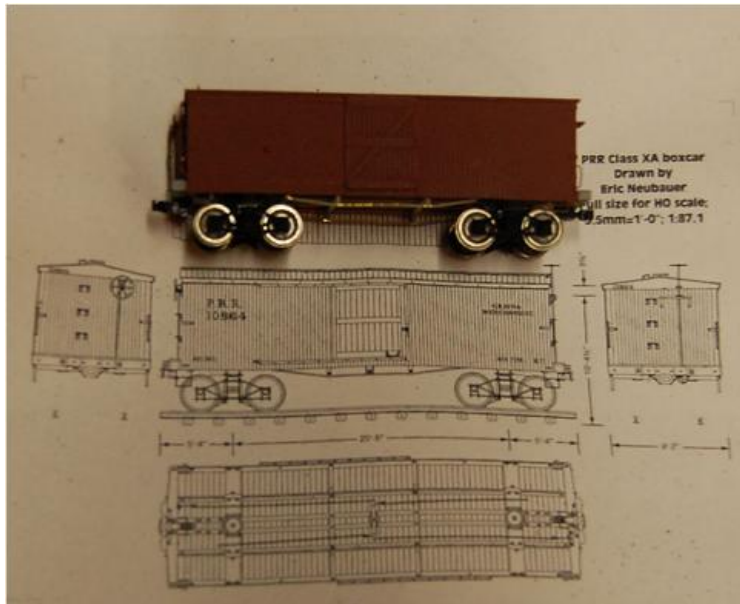
## Lowering Mantua's HO 1860's Boxcars

This an update of the article from 2006. Back then there were few short wheelbase trucks readily available. Now there are several.

The HO Mantua's 1860 car by Model Power makes early rail HO modeling easier. The cars have an eight foot high side. Most cars of the period have a side height in the seven foot range. The 1870's cars are short and squat.

The car can be made into a typical 1870's car, it compares favorably with the Pennsylvania Railroad XA boxcar of the period.

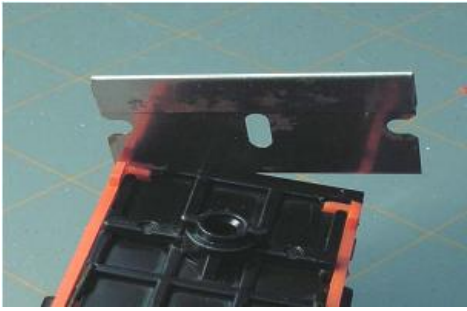
(Click Images to Enlarge)



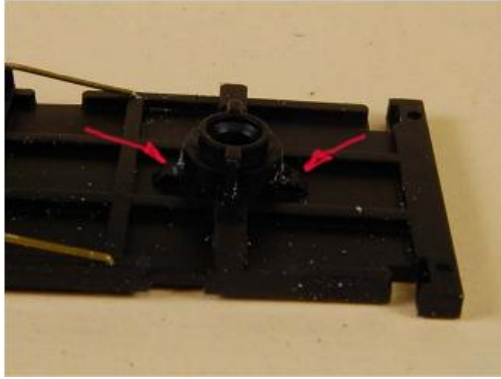
An 1860-70's Central Pacific boxcar, it is short and squat.



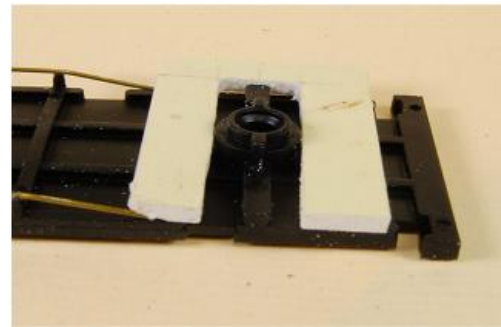
The stock "high cube" Mantua box car and our seven foot side conversion shown with the Bachmann 4-4-0. The original Mantua height made the cars commercially viable with the other era cars when the tooling was developed in the 1950's.



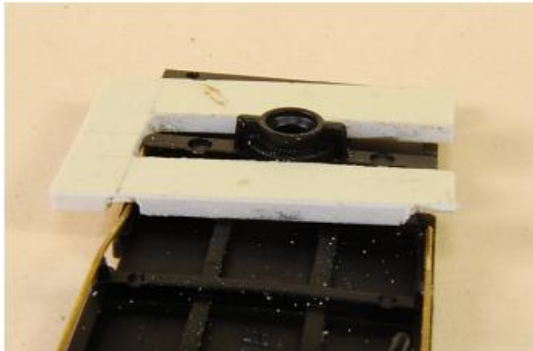
Disassemble the car by slicing off the mounting lug with a single edge razor blade.  
Pry off the metal parts with a screwdriver and pliers.



Remove these lugs.



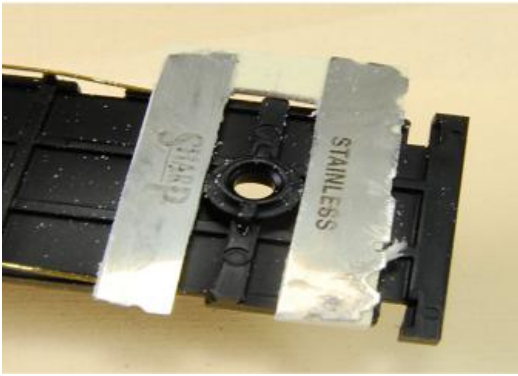
Make a styrene filing height gauge. Mine is .070 thick for use with MicroTrains N-scale 1015 couplers.



File reliefs into the guide to clear the truss rods.



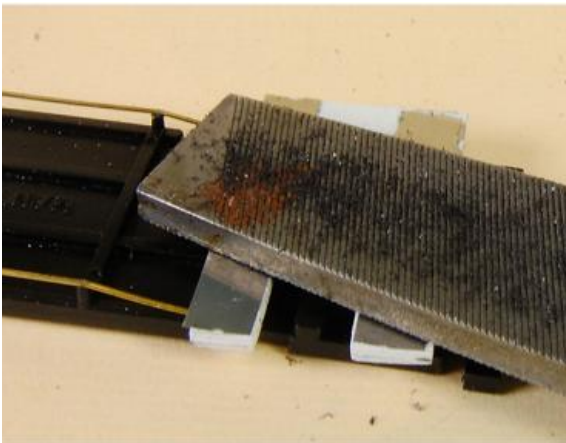
Wear plates are made from double edge stainless steel razor blades. They cut with sissors. Cut the sharp edge off.



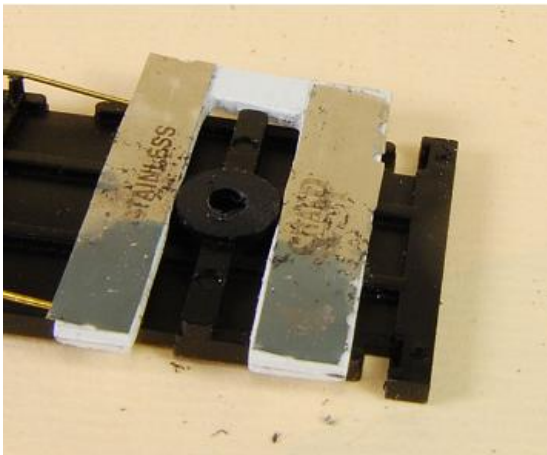
The wear plates are cut and then ACC'd to the styrene guide.

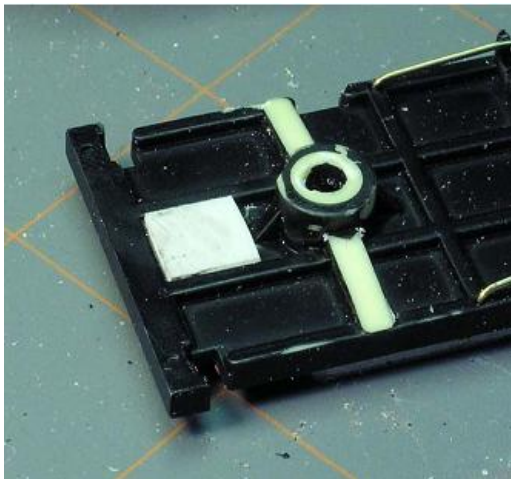


Nip off the truck lug with flush cutters

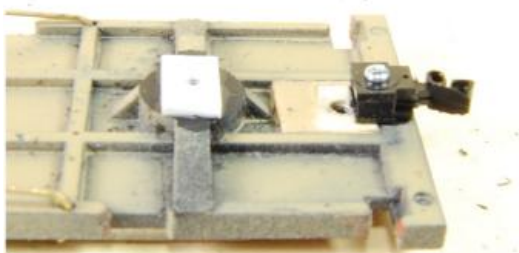


File the lug down until the file is just touching the wear plates.





Glue a .040 thick coupler pad to give a coupler mount surface. Drill and tap for your favorite coupler.

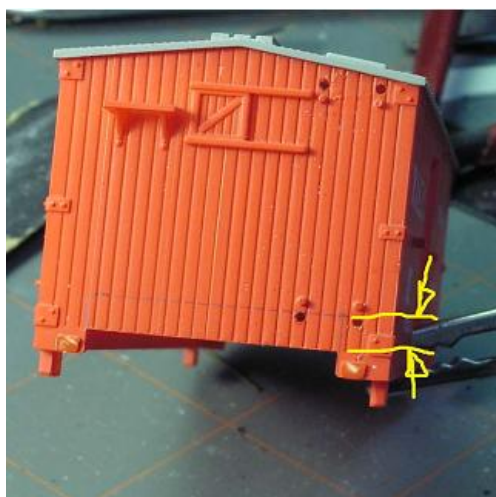


Glue a .060 thick bolster plate that is drilled and tapped for #2-56 screw.



Mount trucks to the frame and check the coupler height. Shim the bolster plate to center the coupler if necessary. Adjust the filing guide to accommodate the coupler height.

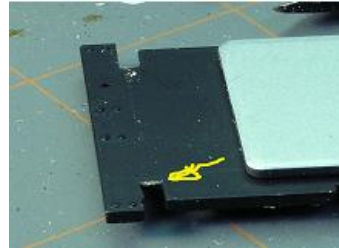
## Lowering the Body



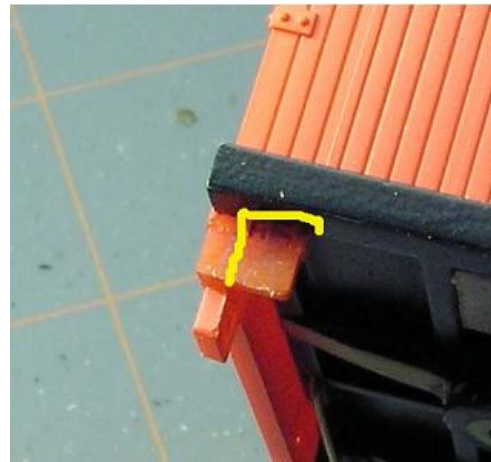
Mark the cutout in the body for the amount of height reduction. Here we are reducing it by a scale foot.



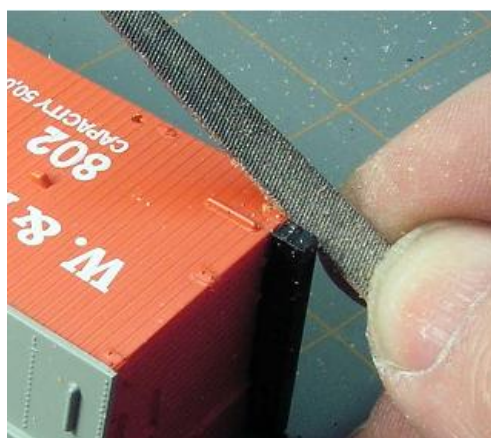
**I nibble out the majority of the plastic with a flush cutter.**



**Break the corners of the frame at the yellow to allow the body to sit flush with the frame. Finish file the body to sit flush on the underbody.**



**Cut away the excess at the corners.**



**Make a notch at the corner to make a cutting guide. Make sure the molded on corner plate is left on the car. This will act as a cutting guide.**



Using the corner plate and notch as a guide use a razor saw to mark the car side for the cut. Carefully make a saw cut over the entire side. Don't cut through just use this cut to make a guide mark.



Use a razor saw to cut along the mark. Come from the ends into the middle.  
After cutting off the side sand the body flat with 220 grit sandpaper.



The stock Manuta and the lowered body car.



Fill the area under the door with a section of the side with the scribing for the cutoff portion.



Add details. Here I used the modified stock door turned 180 degrees and .020 wide strips as door guides. The corner steps are bent staples.



The car with Tahoe Model Works 5' wheelbase archbars.



The car with Panamint Models HOT71s "Cleveland" 4'-10" wheelbase archbars from Shapeways in "Black Strong & Flexible".

Worked on a simplified version utilizing the original paint and parts. The lettering is removed using Testor's ELO. A .06x06 styrene strip is added for the upper guide. A .010x.020 strip is added as a lower guide. New door stops are made from the removed bottom strip.

The only body painting required are the guides.

