

Before Starting

PREPARING BRASS The easiest way to remove the brass parts from the sheet they are produced on, is to use rail nippers. The brass is soft and won't affect their future cutting ability. This will reduce or eliminate the amount of filing to smooth the edge. The next best way is with small sharp diagonal cutters that will fit into the small areas between the part and the sheet holding them. *You should always use a file to remove the balance of the tie. This will ensure a perfect fit.*

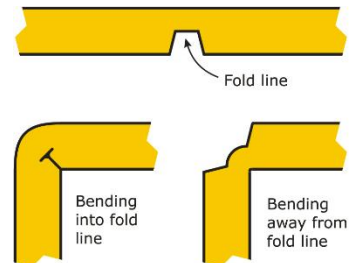
GLUING BRASS Instant super glues, Cyanoacrylate, CA for short, are very prominent in model building today. They will work perfectly with brass, and they are instant. We recommend a thick CA glue such as "**Zap-A-Gap**" from Pacer Technology. As I have also been building R/C airplanes for over 33 years, I have many airplanes built entirely with CA glue and I can tell you that the wood will break before the glue joint. So it is great stuff! Besides being almost instant, thick CA glues will help create a small fillet and fill small gaps when applied to the inside of joints. Using a toothpick to apply the CA glue works really well for getting the glue into the interior areas and controlling the amount of glue used.

PAINTING BRASS Wash your completed assembly in warm soapy water. If it is really messed up with flux etc. you can clean it with a lacquer thinner first. *Do NOT bake the model if you used CA glue for construction.* This will set the paint to the brass as well as allowing you to paint over parts of it without the first coat dissolving as you spread on the second coat. One nice thing about painting on brass, if you don't like the paint job you can use paint remover to get rid of it and start again without hurting the brass.

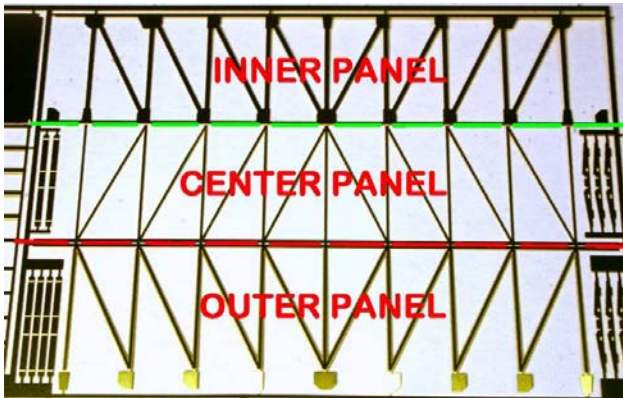
BENDING BRASS

To control where a fold will be, we have put a Fold or Bend line into the design. This line is a small slot that has been etched half-way through the brass sheet at the point of the bend. Normally, you fold into a bend line when the bend is less than 135 degrees. Notice how bend into the line creates a nice corner and the metal pinches together at the bend line.

For bends of 135 to 180 degrees, you must bend against the bend line otherwise the two pieces of metal can not lay flat at the bend due to pinching each other. Other times, you bend outward for better positioning of the piece or better display. The ladder on this Caboose build is bent outward to expose and "pop out" the rungs.

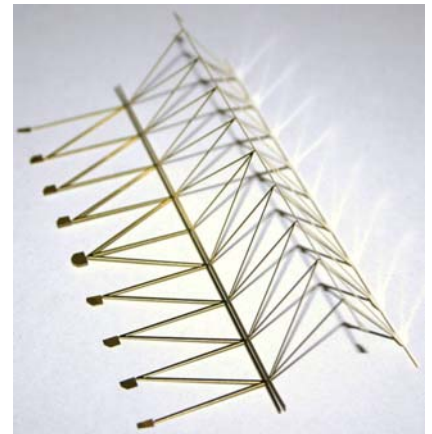


Step #1 – Building the Sides & Ends



Position the Truss Side Panels while in the kit sprue as shown. It is important to keep the Truss Side Panels orientated this way. The first thing the builder should do is to carefully remove the two Truss Side Panels from the kit sprue and clean off all tie remnants.

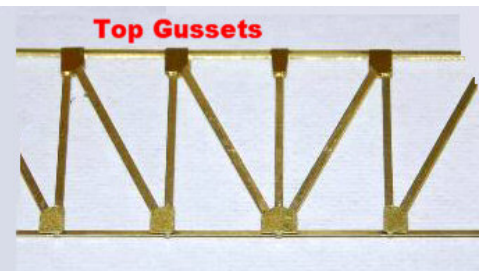
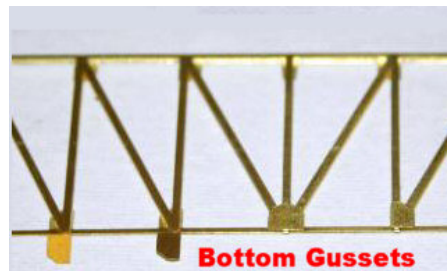
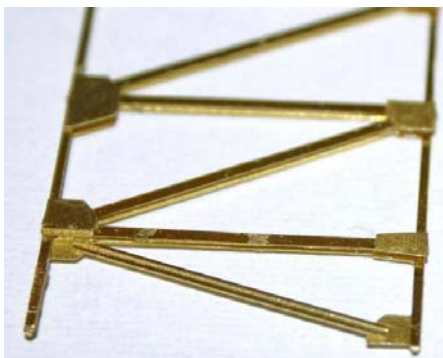
The side panels have two folds around the Center Panel. With the Truss Side Panels in the orientation shown in the image to the left, begin by folding the Inner Panel over on-top of the Center Panel indicated by the green line. Next, bend the Outer Panel up under the Center Panel



This will create the basic "H" beam used in the Trusses of the car. Secure the three Panels together.

The Bottom Gussets are connected to the Outer Panel and are bent over as shown. Secure each Gusset to the Truss Side.

The Top Gussets are separate and must be removed from the kit sprue, cleaned up and attached to the top of the Outer Panel.



The ends of the Truss Sides now get the C-Channel Sway Beam attached to end Gussets.

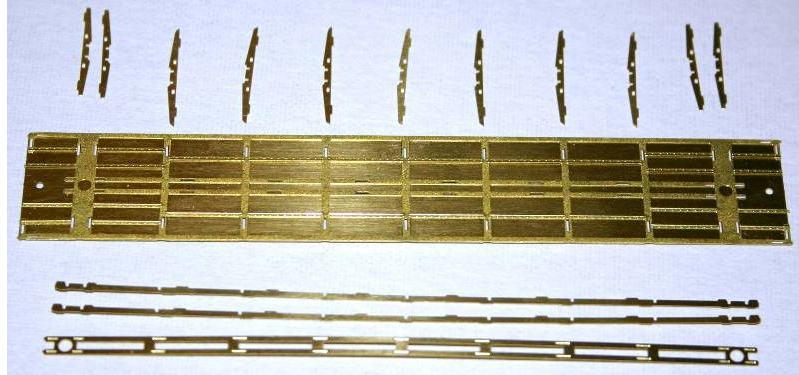
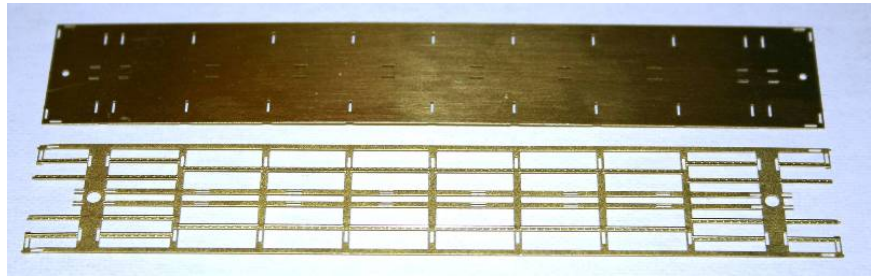
The image to the right shows a completed Truss Side and how the prototype construction has been achieved.



Step #2 – Building the Floor

Remove the Floor and Under-Floor Detail from the kit sprue ensuring that all tie remnants are cleaned off.

The top of the Floor has a half-etched channel along the side where the Truss Sides are attached. Place the Floor on the building surface with these channels facing down. Secure the Under-Floor Detail to the Floor ensuring that slots in both Floor and Under-Floor Detail are properly aligned.



The 11 Ribs are now secured to the underside of the Floor. The tabs on the Ribs go through the slots of both Floor and Under-Floor Detail.

The two Keel Sides have tabs that will also go into both the Floor and Under-Floor Detail AND have slots to go into the top of the Ribs. Carefully work each Keel Side down into the Ribs where the larger tabs of the Keel Side can go into the slots of the Floor. Secure both Keel Sides to the Floor.

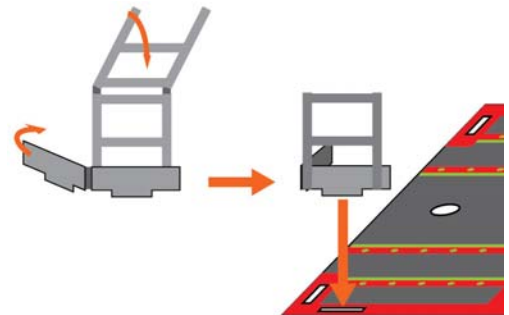
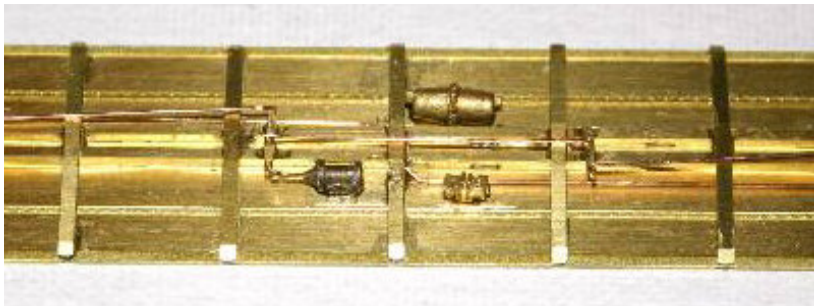
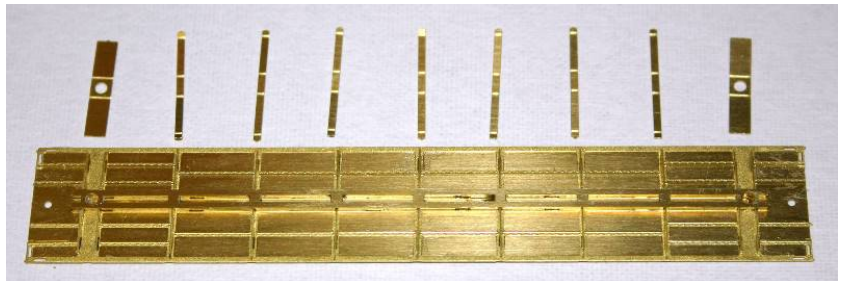
The Keel Capstrip has half-etched slots that are for the smaller tabs of the Keel Sides. Secure the Keel Capstrip to the Keel Sides.

Each Rib gets a Capstrip that goes over the Rib and on top of the Keel. There are four bend lines to help the Rib Capstrip contour to the angles of the Rib.

The Bolster Capstrips are much wider than the Rib Caps. Secure the Bolster Capstrip to the Floor Assembly ensuring the Bolster Pin Holes are aligned.

Install Brake Rigging.

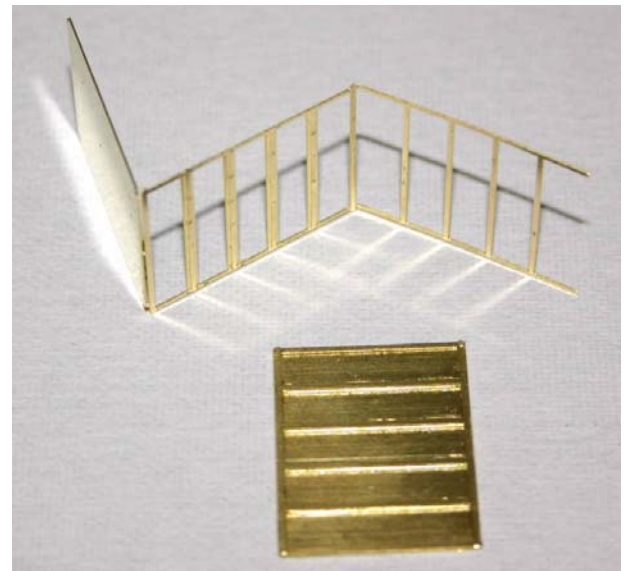
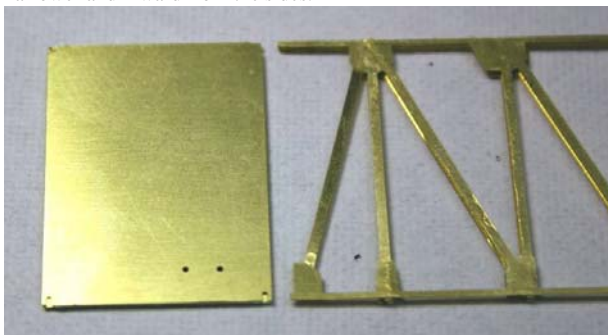
The Stirrups and End Sill assembly for each corner two bends that are done differently. First bend the Stirrup over onto itself by bending AWAY from the bend line. Secure the Stirrups together. Next bend the Sill section INTO the bend line to create the Corner Sill. Secure the tabs of the Stirrup/Sill into the slots in each corner of the Floor. It is wise to install your trucks at this point so the Stirrups are not damaged.



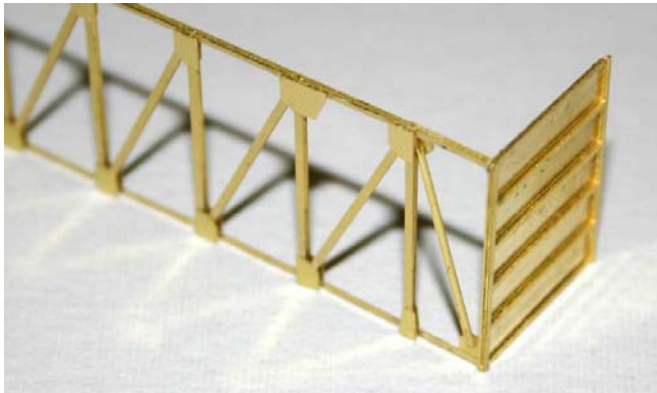
Step #3 – Assembly

Each End has three panels and two fold to create the End detail. Study the part and find the connections between each panel. They are half-etched to aid in bending and must be bent AWAY from the bend line.

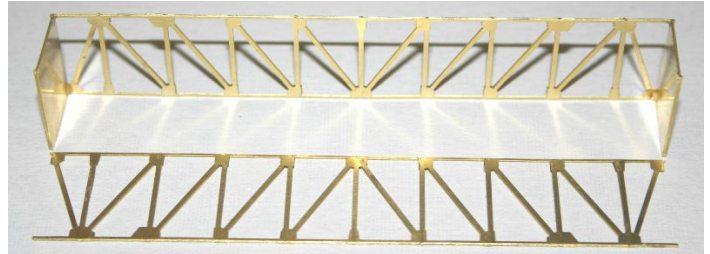
The solid back of the End has notches that will allow the Truss Side to fit. The top of the End has the notches directly in the top corners. The notches at the bottom of the End panel are narrower and inward from the sides.



Secure one End panel to a Truss Side ensuring the Side fits correctly into the End notches. The End panel should be 90 degrees to the Truss Side.

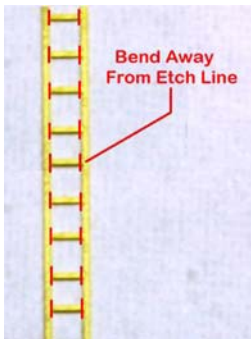


Secure the other End panel to the same Truss Side and ensure it is also 90 degrees to the Truss Side. Secure the second Truss Side to the assembly.



Set the Sides and End assembly into the etched slots on the top of the Floor.

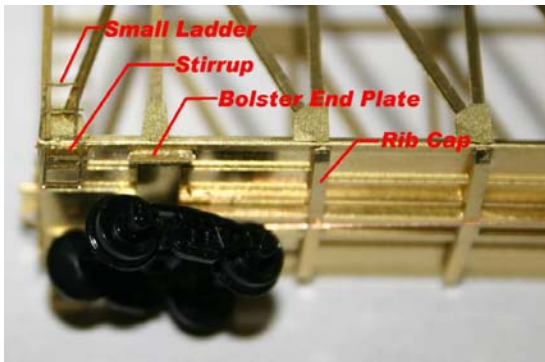
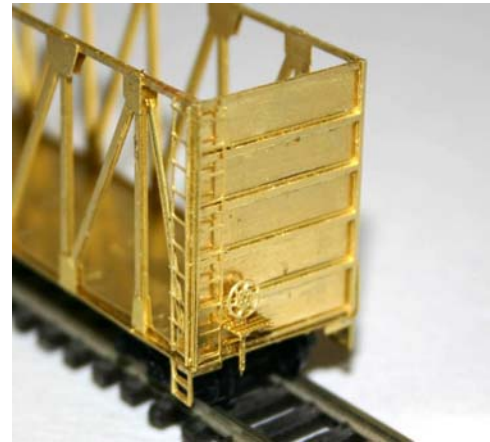
When satisfied with the fit, secure the Sides and End assembly to the Floor.



The kit contains four Long Ladders and two Short Ladders. Looking at the car Side, the Short Ladders go on the left Side corner while the Long Ladders go on the right Side corner. A Long Ladder will also go on the End adjacent to the Long Side Ladder

Each Ladder has half-etched bend lines where each Rung connects to the Ladder Side. The Ladder Sides are bent AWAY from the bend line causing the Rungs to "pop out" for a prototype look. Bend each Ladder and attach as described above.

One car End has two small holes to accommodate the Brake Wheel Platform. Insert the small pins of the Brake Wheel Platform into the holes of the Car End and secure. Bend the Platform supports down and secure to the car End.



The Brake Wheel Support has a small length of Super-Micro 72LPI Chain attached to it. Fold the Support AWAY from the bend line to double the thickness of the Support. Thread the Micro Chain through the Platform and secure to the Car End. Secure the Brake Wheel over the Support.

Install Laser-cut Sides.



**TrainCat
Model Sales**