

Deck Girder Bridge

All Scales

Before Starting

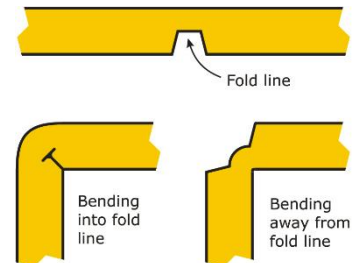
PREPARING BRASS The easiest way to remove the brass parts from the sheet they are produced on, is to use rail nippers. The brass is soft and won't affect their future cutting ability. This will reduce or eliminate the amount of filing to smooth the edge. The next best way is with small sharp diagonal 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

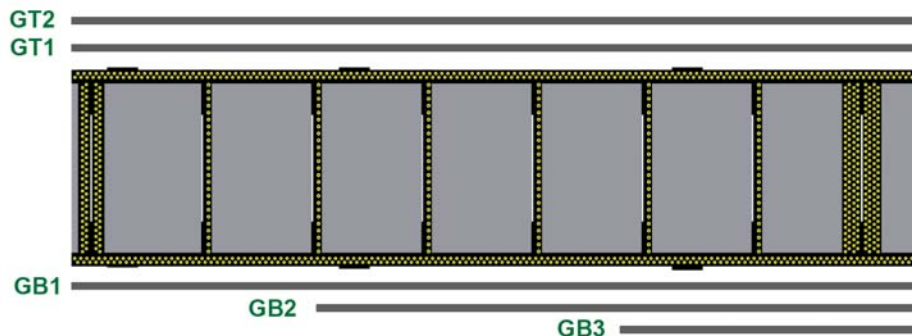
To control where a fold will be, we have put a Fold or Bend line into the design. This line is a small slot that has been etched half-way through the brass sheet at the point of the bend. Normally, you fold into a bend line when the bend is less than 135 degrees. Notice how bend into the line creates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

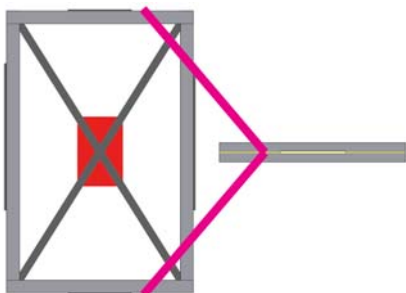
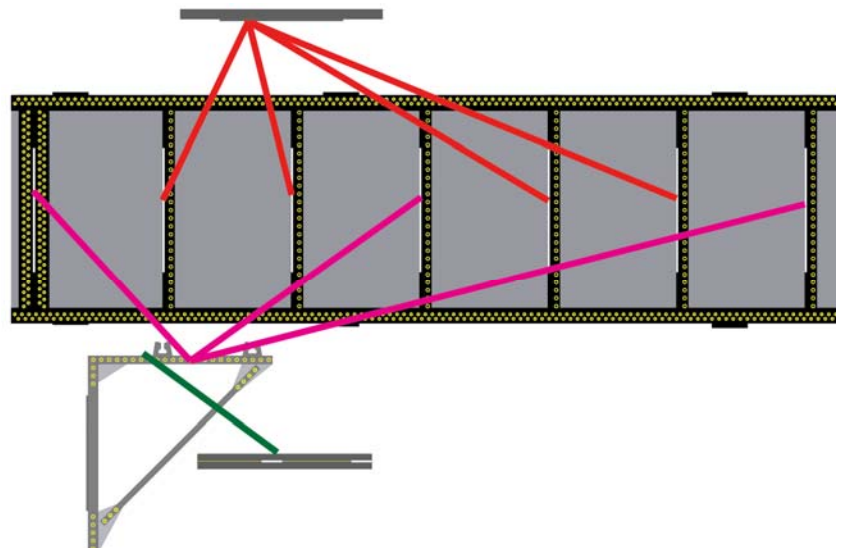
If you are soldering, you will want to add the stiffeners to the Girder Beams first by soldering from the back of either half. **Z-Scale and N-Scale Stiffeners slide down through slots AFTER the two Girder Beam halves have been assembled together but BEFORE the Top CapStrips are added.** If you are using CA glue, you will want to assemble the two halves first and then add the stiffeners. Adding stiffeners after assembling the Girder Beam halves does produce a better layered cap strips. Choose which you want to assemble the Girder as either way is acceptable

Girder Beam: Remove all four Beam halves from the sprue and remove all tie remnants with a jewelers file. The top of the Girder has tabs that are a constant height for all tabs. The bottom of the Girder has tabs of different heights to accommodate the three Capstrip layers. Begin adding the bottom Capstrips with the longest GB1. Secure the GB1 to the Girder beam only at the two end tabs that do not protrude through the Cap. Follow GB1 with GB2 securing it to the Girder Beam and GB1 at the next two inner tabs that do not protrude GB2. Finally, add the fully riveted Capstrip GB3 on to GB2 and secure all tabs and slots. For Z-Scale and Z-Scale, add Stiffeners at this point.



Next, install the first top Capstrip GT1 and align both Girder halves together inserting the tabs through the slots in GT1. Secure GT1 to the top of the Girder halves ensuring that the Capstrips are perpendicular to the Girder Beam. Secure the fully riveted Capstrip GT2 on to GT1.

Stiffeners: Remove all of the Stiffeners from the sprue and clean off all tie remnants. Every third long slot on the Girder Beam is either for a Walkway Support Bracket on the exterior of the Beam, or a Vertical Swaybrace on the interior. **For Z-Scale and N-Scales, the Walkway Supports are DOUBLED and can be installed on one or both sides.** Either of the special brackets will be in the first end slot, and then every third one. Between these Brackets is where the Stiffeners are to be secured to the Girder Beam. **Note: if not installing the Grated Walkway, Stiffeners will be needed in every slot on the Girder Exterior.** Secure all required Stiffeners to the Girder Beam.

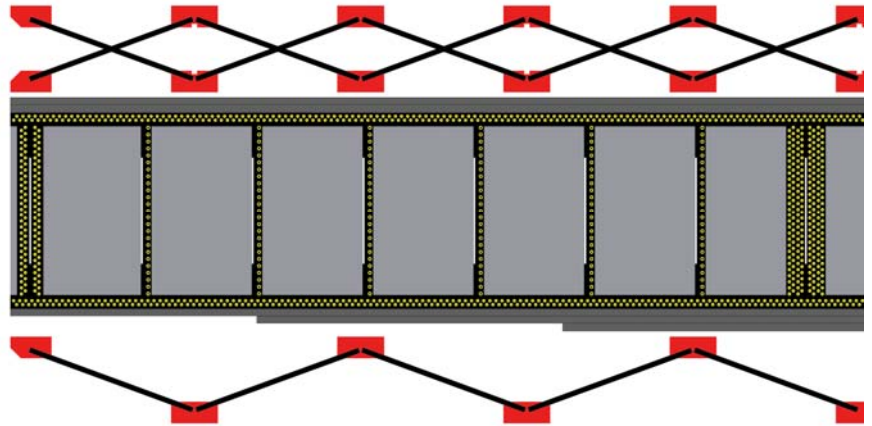


Assemble the Vertical Swaybrace by securing the top and bottom Capstrip to the main assembly. The top and bottom tabs fit into half etched slots on the Capstrip.

Secure the assembled the Vertical Swaybrace to one of the Girder Beams with the etched relief detail facing towards the ends. The Vertical Swaybrace will go into the end slots and every third slot on the interior of the Girder Beam. Ensure the each the Vertical Swaybrace is perpendicular to the Girder Beam. Do not secure the other beam to the spacers just yet.

Slide the Gussets for the Upper Horizontal Swaybrace into the space between upper Capstrips and the Vertical Swaybrace. The Upper Horizontal Swaybrace has the double crossbracing while the Lower Horizontal Swaybrace only has one cross brace. See image. Secure the Upper Horizontal Swaybrace to the Beam and then repeat for the Lower Horizontal Swaybrace.

Carefully fit the Vertical Swaybraces into the slots of the other beam one at a time. I have found that it is best to start on end and work towards the other end. I use rubber bands to hold the beams together once the tab of the Vertical Swaybrace is installed into the slot on the Beam. Once all Vertical Swaybraces are in their slots, secure the second Beam onto the assembly.



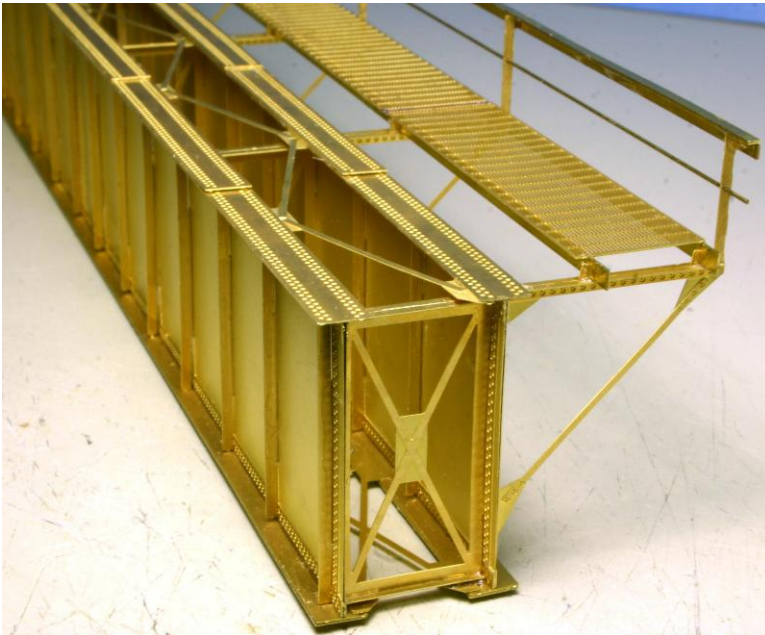
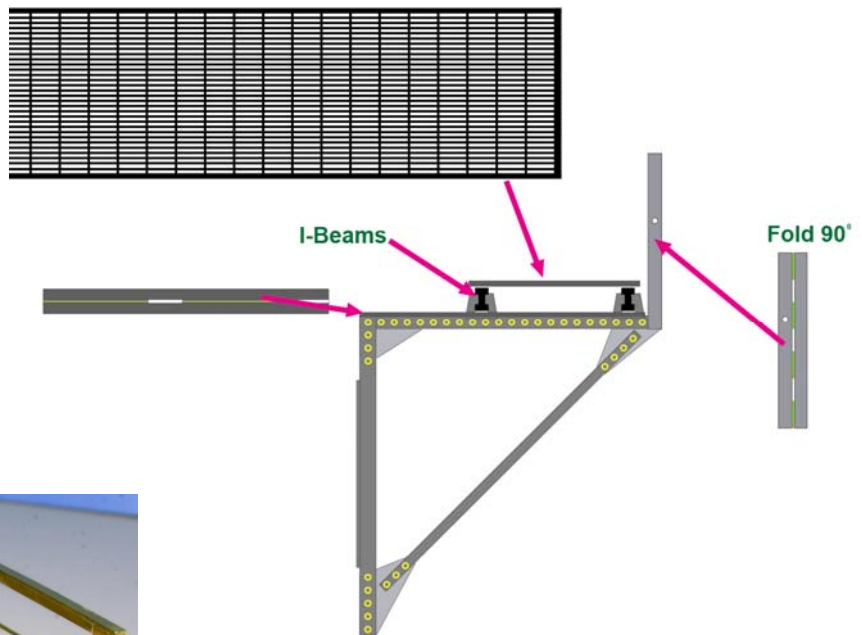
Step #2 – Building the Optional Grated Walkway

Remove all tie remnants from the triangular shaped Walkway Support Brackets. *For Z-Scale and N-Scales, the Walkway Supports are DOUBLED and can be installed on one or both sides.* Start the assembly process by sliding protruding I-Beams Supports through the slots in the Capstrip and secure it to the Bracket. Fold a Vertical Railing Post 90 degrees to form an L angle. Secure the Vertical Railing Post to the Support Bracket ensuring the hole is positioned as shown and the Vertical Railing Post is perpendicular to the Support Bracket.

Secure the completed Walkway Support Bracket to the proper slot on the exterior of the Girder Beam. Repeat for all Brackets. Thread the supplied wire through all of the holes in the Walkway Support Brackets and secure. Ensure the Posts are perpendicular to the beam when viewed from the side. Attach the supplied L-Angle to the vertical post to create the Railing Cap.

Secure the Beams into the their Supports. Finally, secure the Grated Walkway to the I-Beams.

This completes the assembly.



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