

TrainCat Model Sales

Single & Double Track Pratt Bridge Z-Scale, N-Scale & HO-Scale

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.

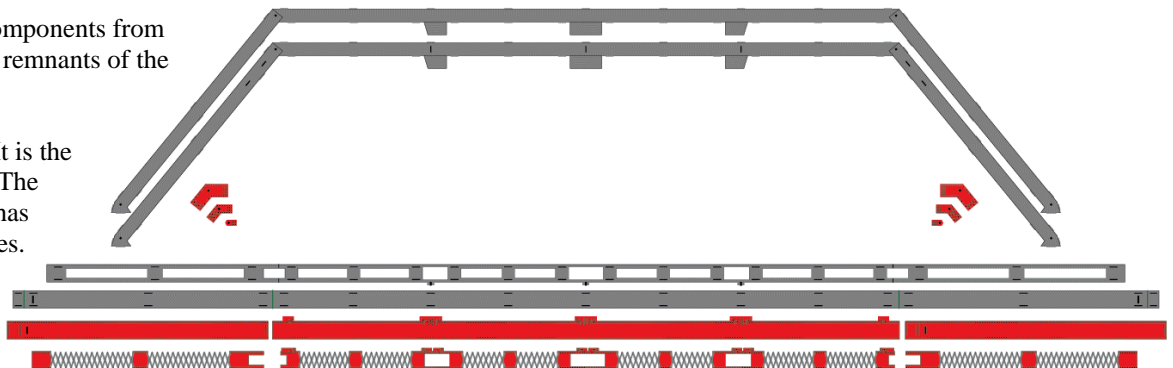
PAINTING BRASS Wash your completed assembly in warm soapy water. If it is really messed up with flux etc. you can clean it with a lacquer thinner first. *Do NOT bake the model if you used CA glue for construction.* Baking will set the paint to the brass as well as allowing you to paint over parts of 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.

Step #1 – Building The Bridge Chord

Remove the following components from the kit sheet. Cleanup all remnants of the attachment ties.

Identify the Chord Top. It is the longest of all the pieces. The inside of the Chord Top has four half-etched bend lines.

Place the Chord Top on the work surface with the inside facing up.

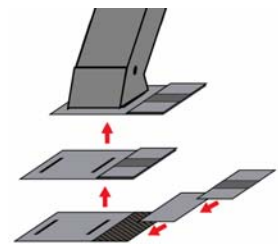


Secure a Chord Side to the Chord Top starting at the center and working out to the inner fold lines one tab at a time. Stop when you reach the inner fold lines. Secure the other Chord Side to the Chord Top using the same process. Tilt the assembly up so the Incline of the Chord Side meets and interconnects with the Chord Top. Secure the Chord Sides to the Chord Top working down the Incline to the outer fold line. Stop there. Repeat the process for the other Incline. Secure the outermost sections of the Chord Top at this time.

The Chord Bottom has two half-etched bend lines that will go in the corner of the incline. The bend lines are also facing outward when installed. Please note that the big Gusset Plates of the Chord Sides will go into the cutouts of the Chord Bottom. Secure the Chord Bottom to the assembly starting at the center and working outward to the bend lines. Next, secure the Chord Bottom to the Incline one side at a time. You are now ready to add the Detail Overlays.

The Chord Sides are slightly different. The Inner Side has seven full-etched slots in them. The Outer Side has only the four pin holes. Begin with the Chord Top. Secure the Detail Overlay to the Chord Top starting at the center and working towards the incline. *NOTE: The Gusset Plates on the Detail Overlay must be placed on the inside of the Chord.* The Detail Overlays for the Inclines have a slot on one end. This slot MUST lineup with the slot on the Chord. Secure this area first to ensure the two slots lineup and secure the remaining Overlay onto the Chord. Repeat the process for the other Incline.

Turn the Chord over on the work surface so the Chord Bottom is facing up. Secure the Bottom Overlay to the assembly starting at the center and working outward to the bend lines. *NOTE: The Gusset Plates on the Detail Overlay must be placed on the inside of the Chord.* Next, secure the Bottom Incline Overlays to the Incline one side at a time. **TIP:** If using CA Glue, use a toothpick and secure every other X-Brace to the Chord Bottom.

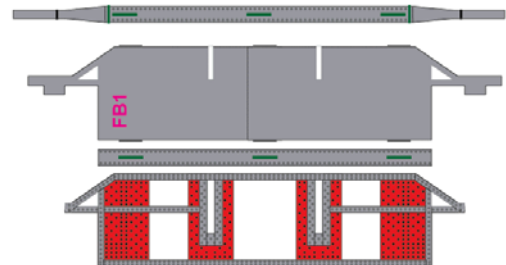


The Shoe Plate consists of three pieces; the Base, a full Spacer and a Slotted Spacer. Using the diagram to the right, assemble the Shoe Plate as shown. Orientating the Spacers to the inside of the Chord, secure the Shoe Plate to the Chord.

Set the completed assembly aside and repeat this step for the other Chord.

Step #2 – Building FloorBeam FB1

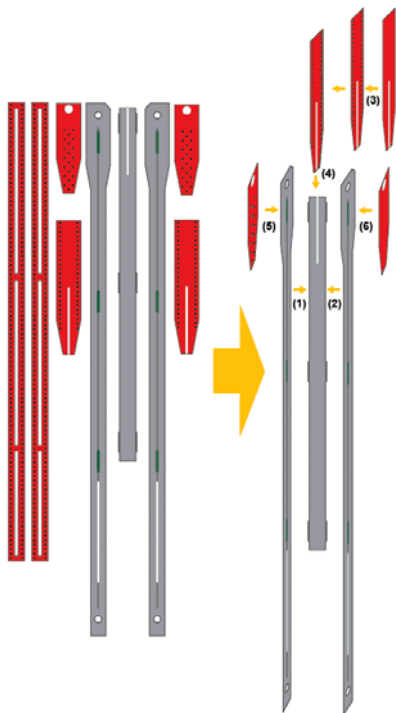
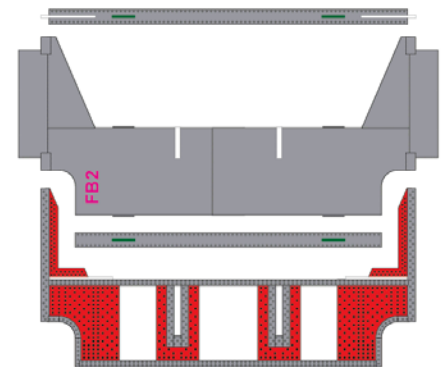
For each FB1 assembly, you will need the Main Floorbeam FB1, two Floorbeam Detail Overlays, the Top Cap Strip and the Bottom Cap Strip. Remove these parts from the kit spue to build both FB1s. Ensure all tie remnants are removed.



Secure the Bottom Cap Strip to FB1 making sure that the small tabs are in the half-etched slots on the Bottom Cap Strip. Next, Secure each Detail Overlay to FB1 ensuring that all edges line up. Any overhang will have to be removed. *NOTE: Adding the Overlays now will block the slots for the Stringers. This is OK. It is easier to remove the Overlay with a cut-off wheel and motor tool after being attached to FB1.* Remove the Overlay blocking the Stringer slots now. The Top Cap Strip will not be installed until the stringers are installed.

Step #3 – Building FloorBeam FB2

For each FB2 assembly, you will need the Main Floorbeam FB2, two Floorbeam Detail Overlays, the Top Cap Strip and the Bottom Cap Strip. Remove these parts from the kit spue to build both FB2s. Ensure all tie remnants are removed.



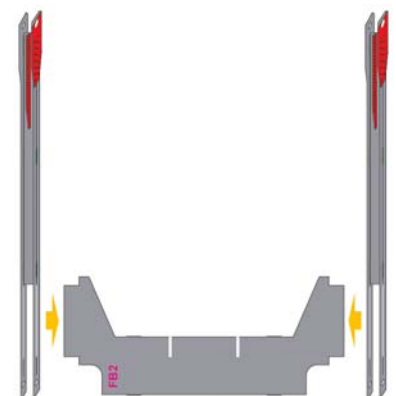
You will also need the following parts to build Post1. Post1 attaches directly to FB2 and must be secured to FB2 before the Detail Overlays are added.

Following the numbered sequence in the image, begin Post1 assembly by securing the Center Spacer to the Post Sides. The Spacer has tabs and the Sides have half-etched slots. Ensure the bevel at the top of each side is orientated in the same direction. Also, ensure the slot in the Spacer is orientated to the top.

The Center Stiffener is built from two identical pieces securing the sides without detail together. The slot of the Stiffener is engaged into the slot of the Center Spacer and secured. Finally, secure the Side Detail Overlays on the outer sides of Post1 ensuring that the pin holes are aligned. Repeat for all four Post1's.

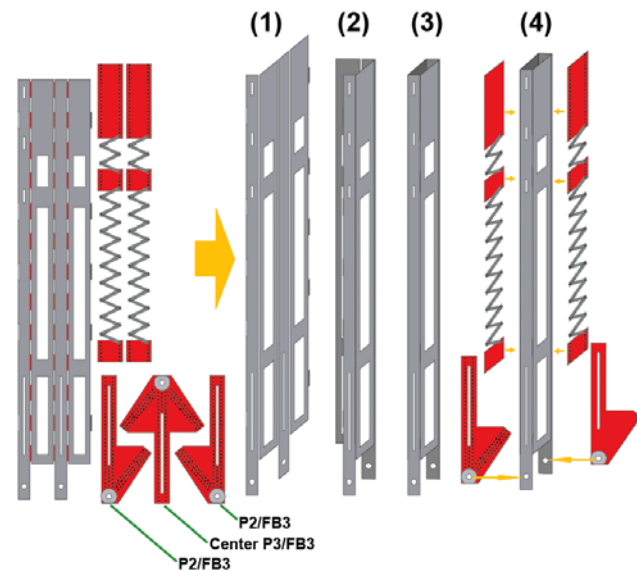
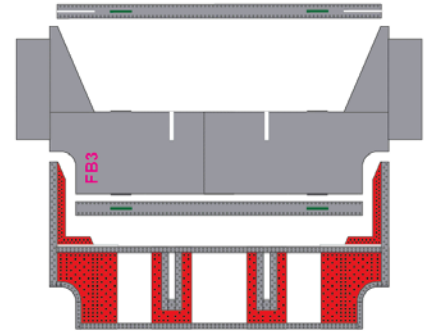
Secure the Bottom Cap Strip to FB2 making sure that the small tabs are in the half-etched slots on the Bottom Cap Strip. Slide the FB2 Floorbeam into the bottom slots in Post1 as shown. Ensure that Post1 is perpendicular to the bottom of FB2 (outer side then inner side). Secure the other Post1 to FB2.

Next, Secure each Detail Overlay to FB2 ensuring that all edges line up. Any overhang will have to be removed. *NOTE: Adding the Overlays now will block the slots for the Stringers. This is OK. It is easier to remove the Overlay with a cut-off wheel and motor tool after being attached to FB2.* Remove the Overlay blocking the Stringer slots now. The Top Cap Strip will not be installed until the stringers are installed. Finally, add the Post1 Detail Overlay directly over the Center Spacer. Repeat for the other FB2.



Step #4 – Building FloorBeam FB3

For each FB3 assembly, you will need the Main Floorbeam FB3, two Floorbeam Detail Overlays, the Top Cap Strip and the Bottom Cap Strip. Remove these parts from the kit spue to build both FB3s. Ensure all tie remnants are removed.



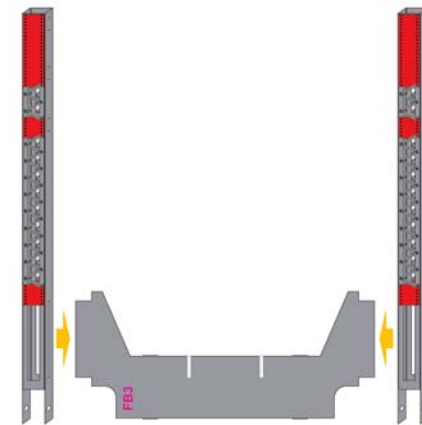
You will also need the following parts to build Post2. Post2 attaches directly to FB3 and must be secured to FB3 before the Detail Overlays are added.

Following the numbered sequence in the image, begin Post2 assembly by bending the main Frame starting with the Inner Side (has three slots for the Sway Braces). Continue bending the Frame sides as shown. One all sides are bent, secure the meeting edges using the tabs and slots. Finally, add the two Detail Overlays to complete Post2. Repeat for all six Post2's.

Secure the Bottom Cap Strip to FB3 making sure that the small tabs are in the half-etched slots on the Bottom Cap Strip. Slide the FB3 Floorbeam into the bottom slots in Post2 as

shown. Ensure that Post2 is perpendicular to the bottom of FB3 (outer side then inner side). Secure the other Post2 to FB3.

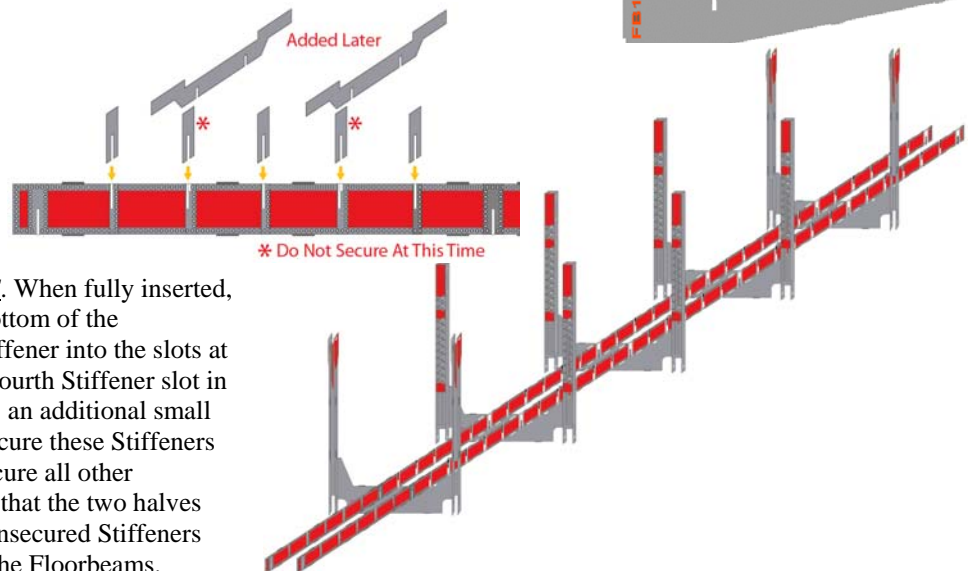
Next, Secure each Detail Overlay to FB3 ensuring that all edges line up. Any overhang will have to be removed. *NOTE: Adding the Overlays now will block the slots for the Stringers. This is OK. It is easier to remove the Overlay with a cut-off wheel and motor tool after being attached to FB3.* Remove the Overlay blocking the Stringer slots now. The Top Cap Strip will not be installed until the stringers are installed. Repeat for the other two FB3's.



Step #5 – Building The Stringers

A) The kit contains either four (2-Track) or eight (4-Track) identical Stringer halves that require 30 small Stiffeners each. Start by removing 30 small U-shaped Stiffeners from the kit sheet for every stringer being built along with all Stringer halves. Be sure to remove ALL tie remnants from the Stiffener and Stringer. Test fit each Stiffener to be sure it will not interfere with the application of the Stringer Cap Strips later in the assembly. Use a slot that is not located where a top and bottom Stringer Cap Strip tabs exists for the test fits.

B) It is best to use the completed Floorbeam assemblies to build the Stringers. The slots in the Stringer and the slots in the Floor Beams allow two Stringer halves placed back to back to fit into the Floorbeam slots. Start by placing to Stringer halves together and place the bottom slot of the Stringer into the slot of the Floorbeam. ***DO NOT SOLDER OR GLUE.*** When fully inserted, the Stringer is equidistant from the top and bottom of the Floorbeam. Place the slot of the U-shaped Stiffener into the slots at the top of the Stringer. Note that second and fourth Stiffener slot in the Stringer between each Floorbeam also has an additional small slot for the Walkway Supports. It is best to secure these Stiffeners later when adding the Walkway Supports. Secure all other Stiffeners to the two Stringer halves ensuring that the two halves are together a tight as possible. Remove the unsecured Stiffeners from the Stringer and then the Stringer from the Floorbeams.

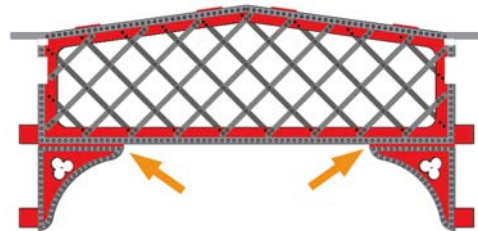
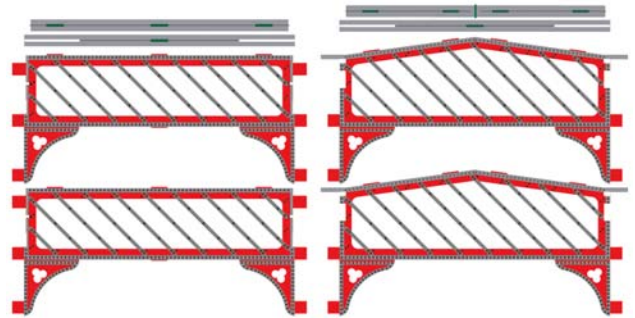


C) Each Stringer will require six large Cap Strips on the bottom of the Stringer. Bottom Cap Strips have etched “dimple” rivets on one side and half-etched slots on the other. Test fit each Bottom Cap Strip on to the Stringer before securing. The tabs on the Stringer bottom will go into the half-etched slots of the Bottom Cap Strip. Secure All Bottom Cap Strips to all Stringers. Repeat for all Stringers.

Step #6 – Build The Upper Sway Braces

There are two different types of Upper Sway Braces. First are the Portal Sway Braces and secondly, the Standard style. The bridge has three Standard types and two Portal types (peaked). Remove the items from the kit sprue and cleanup all tie remnants.

The Sway Braces are actually two pieces carefully sandwiched together to form a single piece. Join a Sway Brace set together now. Once done, secure the Top Cap Strip onto the Sway Brace frame. The Top Cap has three/four half-etched slots on the back (Std = 3, Portal = 4).



Next, install the slotted Bottom Cap Strip into the slot of the Sway Brace as shown. Secure the Bottom Cap Strip. Port Sway Braces also have a Detail Overlay at the peak of the Top Cap Strip. Secure this now.

Repeat for all five Upper Sway Braces.

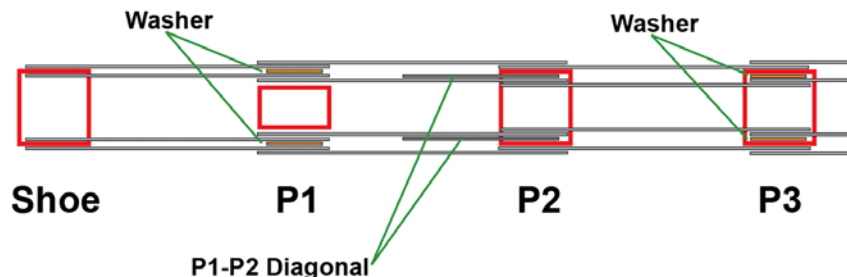
Step #7 – Basic Assembly

A) We will begin by installing the Post1/FB2 assembly into the two chords. You will also need two long Eyebars that will go from the top of Post1 to the bottom of Post2. Place a Chord assembly on the work surface top down. Insert the Post1/FB2 assembly into the opening at the corner of the incline with the bevel on P1 towards the incline of the Chord. Between Post1 and the Chord, insert one end of the long Eyebars into the opening and pin the assembly with a 1/2in .032 rod. Do not secure, nor trim pins yet. Repeat for all Post1/FB2 connections to both Chords.

B) Insert all Stringers into the two installed Floorbeams. **DO NOT SOLDER OR GLUE THE STRINGERS AT THIS TIME DURING THESE STEPS.**

C) Insert Both Post2/FB3 assemblies into both the Chord and the Stringers. Be sure the Bottom Gussets on the Post face towards the center. Do not worry about securing the assembly to the Chord at this time. The top inner slot on Post2 will need to line-up with the slot in the Chord.

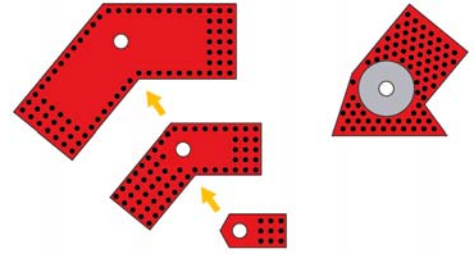
D) Insert the center Post3/FB3 assembly into both the Chord and the Stringers. Do not worry about securing the assembly to the Chord at this time. The top inner slot on Post2 will need to line-up with the slot on the inside of the Chord.



E) Using .032 rod cut to 1/2in lengths as pins, begin connecting the Main Eyebars to the Posts following the diagram. Do not secure, nor trim pins yet. Use a small piece of painters masking tape to keep Eyebars from removing themselves from the pins.

F) **Carefully** skew and spread the two chords apart to allow the tabs on the three center Upper Sway Braces to engage the slots in both Post2s and the center Post3. Since the top inner slot on the Posts will need to line-up with the slot on the inside of the Chord, this will lock the Posts in place and set the correct height of the Post/Floorbeam assemblies.

G) If you have not done so already, ensure the Chord Detail Overlays are in place and secured. **Carefully** skew and spread the two chords apart to allow the tabs of the Potal Sway Braces to engage the slots on the inside of the Chord Incline. Secure all Sway Braces once you are satisfied with the fit.



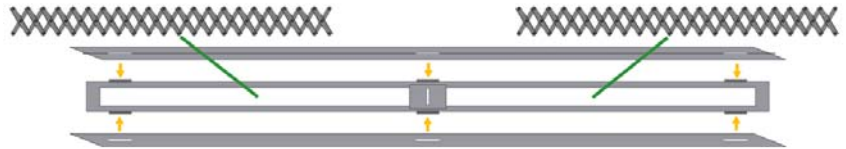
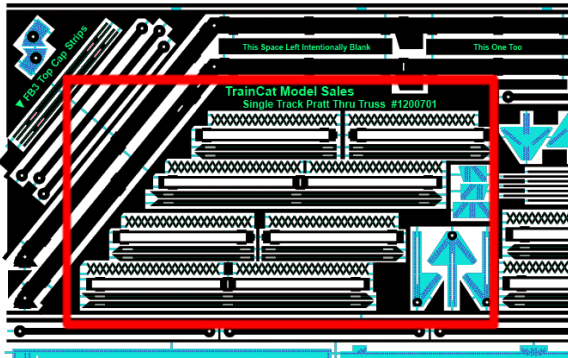
H) Lift the Stringers out of the Floorbeams enough so that FB1 can be installed. The tabs on the side wings go into the slot on the Chord Incline. The Stringer Bottom Cap Strip will go into the etched slot of the Shoe Plate that was assembled earlier. Secure FB1 and repeat for the other FB1.

I) At this juncture, all Stringers can now be secured permanently to the Floorbeams. Refer back to the figure in Step #5 and install the Walkway Supports and the Stiffeners that were omitted earlier. Once all Stiffeners are secured, it is time to install the Stringer Top Cap Strips. Each Cap Strip is comprised of two pieces that go between each Floorbeam on the Stringer. The first strip is a Capture Cap Strip with full-etched slots to capture and secure the Stringer halves. Install these now. When finished, secure the Cap Strip Detail Overlay over the Capture Strip. Repeat for all Top Cap Strips.

J) Secure the Floorbeam Top Cap Strips to the Floorbeams. The Cap Strip for FB1 is slightly different in that it has two bends in it and tapers towards the ends.

k) Secure the Main Eyebars to the Shoe and Posts using a Washer and two simulated Nut pieces. After securing the Eyebars, trim all pins.

Step #8 – Installation of the Latticed Cross Members



A) First remove the required pieces for the long Cross Members. Clean-up all tie remnants. The outer side has a line in the middle to simulate a metal joint. The inner side has three half-etched slots for the Spacer. Secure the Sides to the Spacer such that the Spacer tabs interlock with the slots in the Sides. Add a Lattice cross members over one of the openings in the Spacer and secure. Repeat for the other Lattice member. Repeat for the remaining three long Cross Members.

B) Build the half length Cross Members using the same procedure as the long ones. Repeat for all short Cross Members.

C) Place the bridge on the work surface on it's side. Install the long Cross Member from the top of P2 to the bottom of center P3. Use the center triangle Lower Gusset to set the proper angle. The Cross Members centerline should be directly on the corner of P2's Upper Gusset. Secure and repeat for all other long Cross Members.

D) The short Cross Members have a tab at the square end to go into the center slot of the long Cross Member. Secure each short Cross Member using the P2 Lower Gusset and P3 Upper Gusset for alignment.

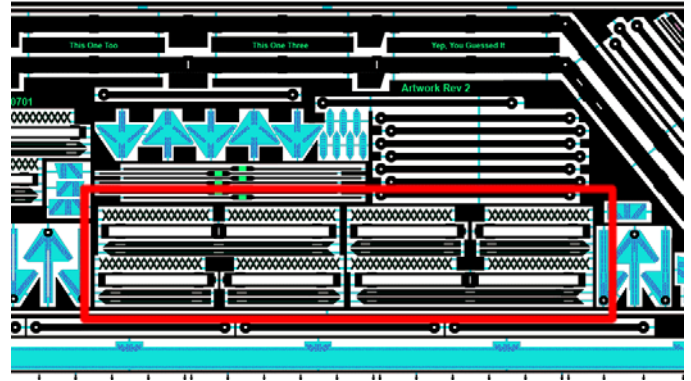


E) Apply the Splice Plate detail from short member to short member over the long member. This will cover-up any gaps in the joint.

Step #9 – Installation of the Latticed Upper Lateral Braces

A) The building process is exactly the same for the Upper Laterals as it was for the Cross Members in Step #8. Build all long and short members.

B) Study the image below. The Upper Laterals are installed into the corners created by the Sway Braces and the Chord. The Upper Laterals are held in place by the Gussets from the top & bottom Detail Overlays of the Chord. Begin by installing the long member in a zig-zag pattern from one Portal to the other Portal. Once complete, install the short members and the center Gusset Strip.

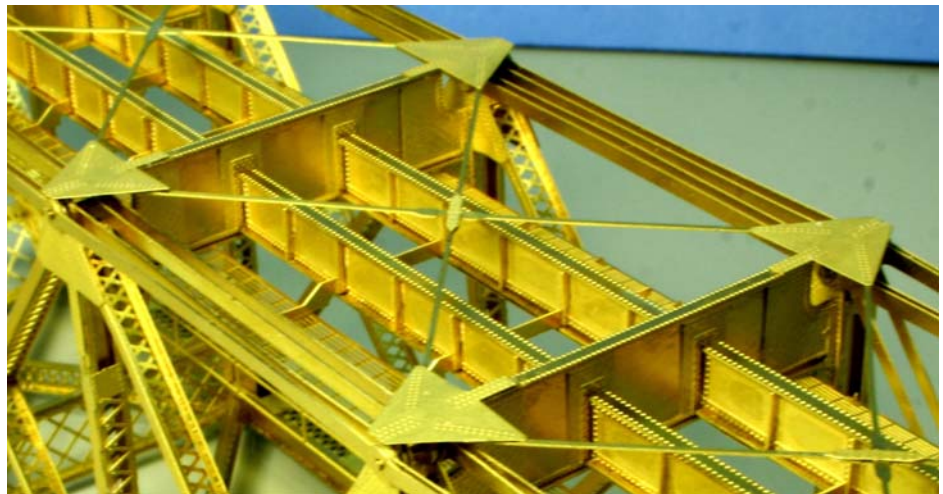


Step #10 – Installation of the Lower Lateral Braces

The Lower Lateral Bracing is a type of X-Brace from one corner of the Floorbeam to the opposite, but adjacent, Floorbeam corner. Please review the following image. Note that the Gusset for the Laterals extend outward from the Floorbeam to the Eyebars.

A) Secure the Lateral Gussets to the Floorbeam and the bottom of the Posts.

B) Use scotch tape to hold the Lateral Braces to the tops of the Gussets. Once they are positioned so the two Laterals cross in the center and the half-etched slots interlock, secure one end of the Lateral that is on the bottom to a Gusset. Secure the end of the bottom Lateral. Secure the top Lateral one end at a time. Finish with the center Gusset Plate.



Repeat for all Lower Lateral Braces. Please note that the Shoe Plate at the ends of the bridge is the place to attach the end Laterals.

Step #11 – Adding Final Details

A) Secure the Railing to the Grated Walkway. Note there is a specific rectangular hole to accept the Railing Post. Repeat for the Second Walkway. Secure the Grated Walkway to the Walkway Supports. There are notches in the Walkway to allow it to fit around the Knee Brace of the Floorbeams. Repeat for the Second Walkway.

B) Install the Detail Overlays for the Upper Gussets on both Post2 and the center Post3. Inner and outer overlays will need to be installed.

C) The Stringers stick out of FB1 at the ends. There are small square Cap Strips that go on the top & bottom of the Stringer. Secure two Mini-Caps on each Stringer end.

That Completes Assembly of the Pin-Connected Pratt Bridge.



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