

TrainCat Model Sales

Electrical Transmission Tower Instructions

Style #1 – Z-Scales, N-Scale & HO-Scale

Kit Contents

Your tower kit will come with all of the following:

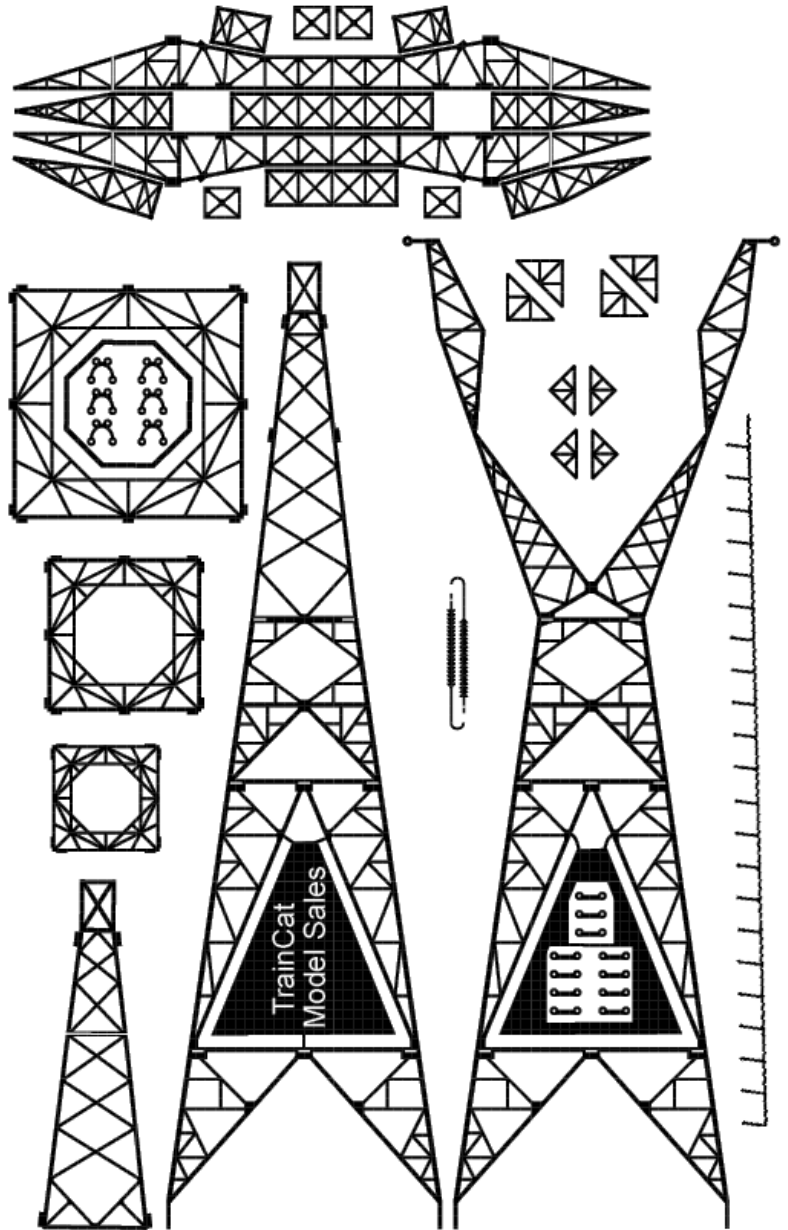
- 2ea. Wye Towers (Front & Back)
- 2ea. Tapered Tower Sides
- 2ea. Tapered Inner Wye Sides
- 1ea. Small, Medium & Large Platform
- 1ea. Bridge Assembly w/ Interior Stiffeners
- 4ea. Large Gussets
- 4ea. Small Gussets
- 6ea. Isolator Hangers
- 6ea. Wire Holders
- 12ea. Wire Separators
- 4ea. Side Ladders Halfs

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. You may need to make a second cut to remove all of the ties, sometimes holding the part under a magnifying glass will help. 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.

SOLDERING BRASS Although you can use CA glues to hold the brass parts together, solder is still preferred by some modelers. For soldering you will need a small soldering iron (30-50 watts) with a good tip, some liquid flux, and some electrical solder. Plug the iron in and let it warm up for several minutes. Be sure you've got a place to set it down where the heat won't damage anything. Get a clean rag to keep handy for wiping the tip should you get more solder on than necessary. "Tin" the tip by applying solder to it so that the whole tip has been covered with a thin film of solder. Leave the coil of solder so that some solder is uncoiled and sticking out so you can touch the tip or the iron to it without holding the coil of solder. Join the pieces as follows: position the two pieces to be joined and



hold one of them with one hand (the other piece will be resting on the work surface). With the free hand, apply some flux to the area that will be soldered, then pick up the hot iron, hold it on the solder and let the solder flow on the tip, touch the tip to the area where the flux is for just a few seconds while the solder flows off the tip and into the joint. The solder will cool and harden almost as soon as the iron is removed. Use waste pieces of brass to experiment with if you are not familiar with soldering. Remove excess solder with a file, clean the assembly in warm soapy water before painting.

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. After the paint is applied it helps to bake it in an oven for a few hours at 250°. 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.

Step #1 – Assembling the Base Tower Section

a) You will need the Medium Platform and one Tapered Side. *NOTE: The Tapered sides have a horizontal etched fold line where the Small Platform attaches. This bend line goes to the outside of the model to properly fold.* The Tapered side has two tabs on either side towards the top. Bend them 90 degrees in the direction of their etched fold line. Prepare the second Tapered side in the same manner.

b) Place a Wye Tower flat down on your building surface. There is no inside or outside to this piece so it does not matter which side goes down. Using the flat Wye side as reference, place the Tapered side next to the Wye standing perpendicular to building surface. Notice the tabs in the Platform and the notches in the Wye and the Tapered side. Attach the Medium platform to the Tapered side by gluing or by soldering. Use the Wye to properly set the angle. Now attach the Small and Large platform in the same manner. Don't forget to remove the Isolator Hangers and their holding ring *prior* to installation of the Large Platform.

c) Now attach the Wye side starting with the center or Small platform. Be sure both tabs fit into the slots of the Wye side. Now do the Medium Platform and then the Large.

d) Install a Large Gusset between the Medium and Large Platform. Be careful not to bulge the sides and create a gap. Install a Small Gusset between the Large Platform and the installation pins. Carefully glue or solder the two sides together the length of the seam from the Small Platform all the way down to the installation pins.

Repeat c & d for the remaining two sides. Leave the top of the Wye sides open. Be sure all seams are secured before proceeding.

Step #2 – Assembling the Mast Tower Section

a) Carefully bend the Tapered sides outward to match the angle of the Wye. Secure the Tapered side to the Wye side **JUST** at the lower tab. Do this to all four lower tabs. Carefully glue or solder the mast side seams together from the lower tab down to the Small Platform.

b) Secure the Tapered side to the Wye side at the upper tab. Do this to all four upper tabs. Carefully glue or solder the mast side seams together from the upper tab down to the lower tab.

c) Prepare the two Tapered Inner Mast sides by bending their tabs in the direction of the etched bend line. *NOTE: The Tapered Inner Mast sides have a horizontal etched fold line in the middle. This bend line goes to the inside of the model to properly fold.*

d) Up to this point, you had it easy. If you do not know how to swear, these steps will teach you! Bend the Tapered Inner Mast side slightly at the center fold line and place into the model aligning the bend line with the thinnest point of the Wye side. Attach the upper tab on the Tapered Inner Mast side to the Wye side. Do this to the other upper tab on the Tapered Inner Mast. Carefully glue or solder both inner mast side seams together from the upper tab down to the bend line.

e) Bend the lower half of the Tapered Inner Mast to match the Wye. Attach the lower tabs and then glue or solder both inner mast side seams together from the bend line down to the lower tab.

f) Repeat steps d & e for the second Tapered Inner Mast side.

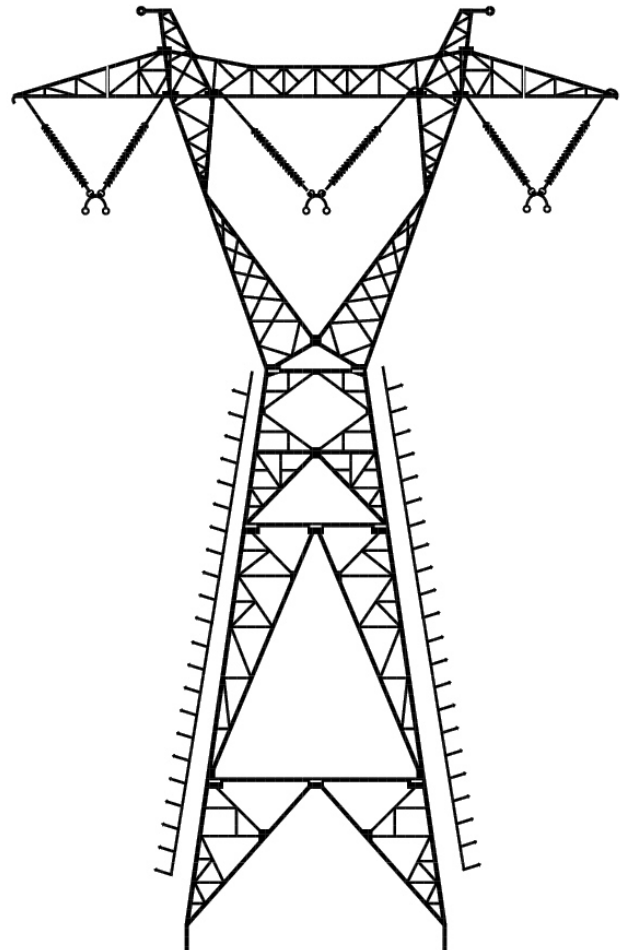
g) Use a piece of .020 wire to help align the Mast top. Place the .020 wire through both holes at the mast top. Bend the tops together and secure. Repeat for the other side. This completes the Tower assembly

Step #3 – Assembling the Bridge Section

- a) It looks worse than it actually is. Start by making sure that all ties have been filed off and all edges are smooth. The Bridge is one piece and has all four sides attached that require bending. The bends have been engineered to be easy and should not prove to be a problem. The middle of the Bridge is the bottom, then the sides and lastly, the tops. All etched bend lines go to the inside of the structure.
- b) Bend the sides up 90 degrees to the bottom to create a “U” shaped assembly. Install the center square pieces on either side of the large opening in the bottom. Although these pieces are not required, they do hold the structure square during assembly.
- c) The top in the center of the Bridge is comprised of three sections that fold in opposite directions. Bend these in and test fit. It is best to secure the center section and then the other two outer top pieces.
- d) The sides have an inner bend line where the bottom tapers to the end. Bend and secure all four sides to the tapered bottom ends.
- e) Bend the tapered tops over and secure to the sides. This completes the Bridge assembly

Step #4 – Final Assembly

- a) Place the masts of the Tower into the large openings of the bottom of the Bridge. Slide the bridge down until it meets the horizontal line on the Tower masts (see diagram). Once lined-up, secure the Bridge to the Tower mast.
- b) There are two different lengths of Isolator Hangers in the kit. The longer pair are for the middle wires. The two shorter pairs are for the ends. The line Isolator Hangers have a hook on one end to hook onto the Bridge. The other end has a fold line. Place this end through the Wire Holder and bend around the Holder eye and back to the Isolator. Do not secure this end yet.
- c) Hook the Isolator Hangers into the Bridge as shown on the diagram and secure the folded Hanger end to the Holder.
- d) Although prototypical, I feel the Ladders made the Tower look “Hairy” and I did not use them on my models. This is up to the user. Tape them to the tower and make the decision yourself. There are four half Ladder sections which will need to be secured to opposite corners (two per corner).
- e) Threading “wire” through the Hangers and the Mast will be made easier using the finest needle threader you can obtain. The thread used for wire should be .015 or smaller and is available at most fabric stores.
- f) The two Mast wires will usually have one or two red and white balls on the wire between each Tower. The main six lines are kept separated by the provided Wire Separators. Each wire pair should have three to four Wire Separators between each Tower.
- g) For more authenticity, insert the Installation Pins at the bottom of the Tower into wooden dowels painted a concrete color. Then, insert the dowels into your layout.



Enjoy your Tower

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