

TrainCat Model Sales

Electrical Transmission Tower Instructions

Style #2 – Z-Scale, N-Scale & HO-Scale

Kit Contents

Your tower kit will come with all of the following:

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.*

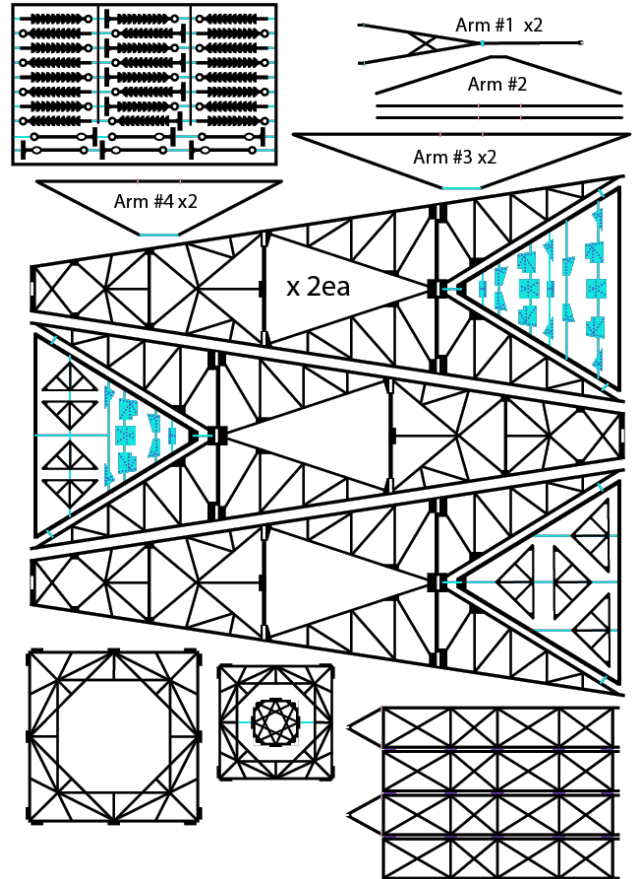
GLUING BRASS Instant super glues, Cyanoacrylate, CA for short, are very prominent in model building today. They will work perfectly with brass, and they are instant. We recommend a thick CA glue such as “Zap-A-Gap” from Pacer Technology. As I have also been building R/C airplanes for over 33 years, I 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.

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 (Tix Flux is best), 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. *Do NOT bake the model if you used CA glue for construction.* 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 two Tapered Side. Place a Tapered Side 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 Tapered side as reference, place the other Tapered side next to the Tapered standing perpendicular to building surface. Notice the tabs in the Platform and the notches in the Tapered sides. Attach the Medium platform to the vertical Tapered side by gluing or by soldering. Use the flat Tapered 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 from the Large Platform *prior* to installation.



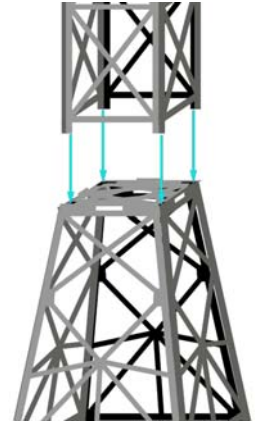
b) Now attach the second Tapered side starting with the Small platform. Be sure both tabs fit into the slots of the Tapered side. Now do the Medium Platform and then the Large.

c) Install a Large Gusset between the Large Platform and the installation pins. Be careful not to bulge the sides and create a gap. 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 steps (a) – (c) for the remaining two Tapered sides. Be sure all seams are secured before proceeding.

Step #2 – Assembling the Mast Tower Section

a) Remove the Mast Tower from the kit sheet and ensure all tie remnants are removed. The Tower is a one-piece assembly designed to fold into a square mast. If you have never bent brass before, TMS recommends using an inexpensive bending tool. Check our website for more details. All of the fold locations are open with small tabs connecting the pieces to be folded. The builder should take note that these tabs have a line etched in them halfway through the tab on one side. The builder should make the bend so that the half-etched line is on the inside of the bend. Bend the Mast sides 90 degrees each to form the Mast. Ensure the structure is square and secure the two single edges together

b) The bottom of the Mast has guide pins that go into the Small Platform. Insert the Mast into the Small Platform ensuring the Mast straight in all axis. Secure the Mast to the Base Tower assembly.



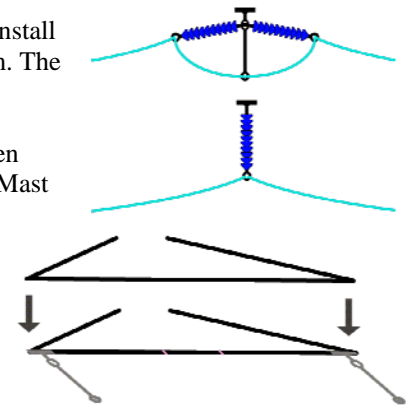
Step #3 – Assembling the Mast Arms

The builder will need to decide what configuration of isolators will be used since the user must install the required vertical component. The Vertical Component has a tab for securing to the Mast Arm. The Mast Arms are built and installed from the bottom up (Mast Arm #4 to Mast Arm #1).

a) Begin by removing both pieces of Mast Arm #4 from the kit sheet along with two of the chosen vertical Isolator components. Ensure all tie remnants are removed before proceeding. Place one Mast

Arm #4 half on the work surface with the etch lines facing up. The etch lines allow the Mast Arm to be secured to the Mast and still maintain the desired shape. Secure the two vertical Isolator components to the Mast Arm as shown. Ensure the vertical Isolator components are perpendicular to the Mast Arm. With the etch lines facing down, secure the other half of Mast Arm #4 to the assembly ONLY at the very ends. Set the completed Mast Arm aside.

b) Repeat step (a) for Mast Arm #3 and #2. *Note: Mast Arm #2 is slightly different in that it is comprised of three pieces instead of two. The process is the same (Arm, Isolators, Center Bridge, Arm).*

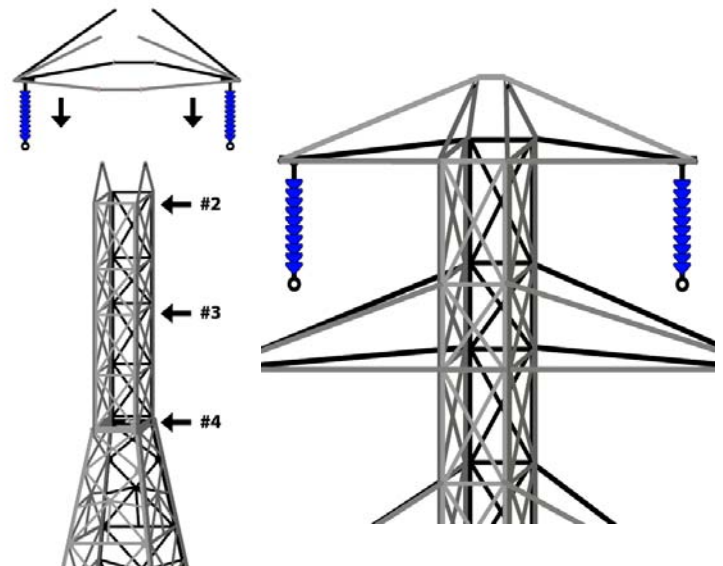


Step #4 – Installing the Mast Arms

The builder should study the two images to the right to see how the Mast Arms are installed on to the Tower assembly.

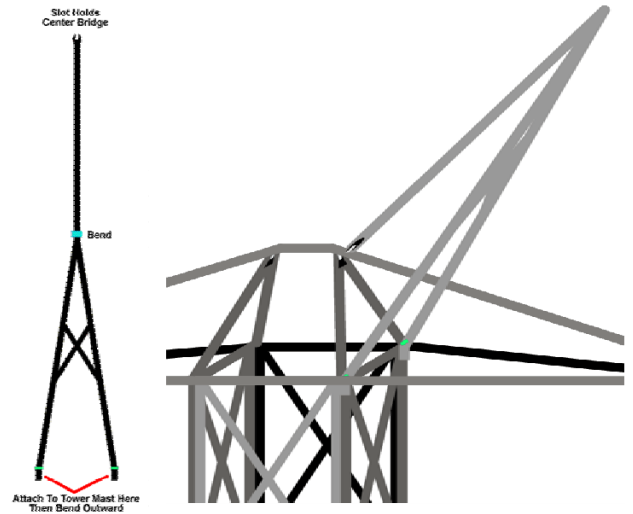
a) Orientate the Tower assembly as shown. The two peaks on the Tower Mast should be to the side. Starting with Mast Arm #4, spread the center section apart and slide the Mast Arm down the Mast Tower. The Arms should be on the same side as the Peaks. Secure the Arm in the location as shown. Ensure the Arms are perpendicular to the Mast Tower. Repeat this step for Mast Arm #3.

b) Bend the peaks together until they touch. Spread the center section apart of Mast Arm #2 and slide it on to the Mast Tower. Secure Arm #2 on to the top of the Mast Tower



ensuring the Arms are perpendicular. The Center Bridge of Arm #2 will go into the slots of the Peaks. Bend the Peaks back outward until the slots in the Peak capture and hold the Center Bridge without deforming the Arm. Secure the Peaks to the Center Bridge.

c) Mast Arm #1 will form what looks like rabbit ears. On the side opposite the etch lines, bend Arm #1 in the middle as shown. The exact angle is not critical at this time, just greater than 90 degrees. Secure the bottom tabs to the outside of the Tower Mast as shown with the etch lines facing outward. The slot on the end of the Arm will fit on to the Center Bridge of Arm #2 at the same location as Peak did. Secure the slot to the Center Bridge.



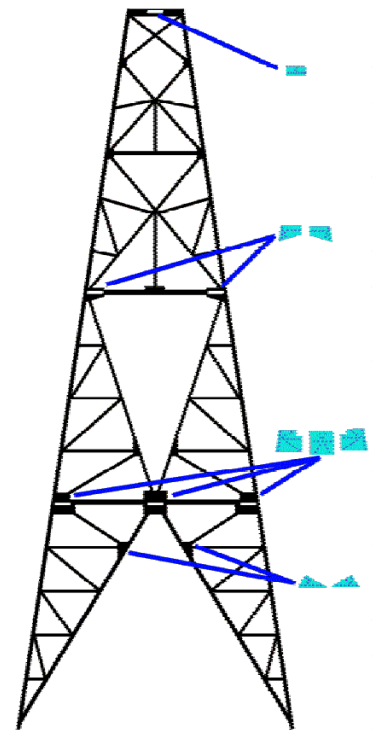
Step #5 – Final Assembly

a) Remove the Detail Overlays for the Gussets. These overlays will hide the slots and tabs used in construction. Ensure all tie remnants are removed. Using a Dremel tool with a sanding drum or grinding wheel, remove any of the tab protruding through the slot. Do this CAREFULLY as not to damage your tower.

b) Using the image to the right, secure the Detail Overlays to the Tower.

c) 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.

d) 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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