MAC-212

50’ / 70’ Communication Tower

MACRAIL
Distinctive details that enhance your modeling

Thank you purchasing our MAC-212 70’ Communication Tower kit. This product has been designed using prototype dimensions scaled to suit HO Scale, bringing this Distinctive Detail trackside to your model railroad.

Communication is paramount in the movement of goods and services, and railroads accomplish this across long distances using communication towers. While some are taller than others, and many variations in styles they all share similar abilities to host different type of antennas and dishes to support various frequency bands. This kit represents a 70’ type tower that can be found at a yard office, along right of way, or even at other industries that require the transmission of communication signals. The tower structure being modeled is known as a “Self Supporting Tower” with a robust concrete mat foundation.

- Kit above shown above includes all parts and pieces either finished or prepared to be finished and assembled by the modeler. Awesome looking model railroad shown in photo not included.

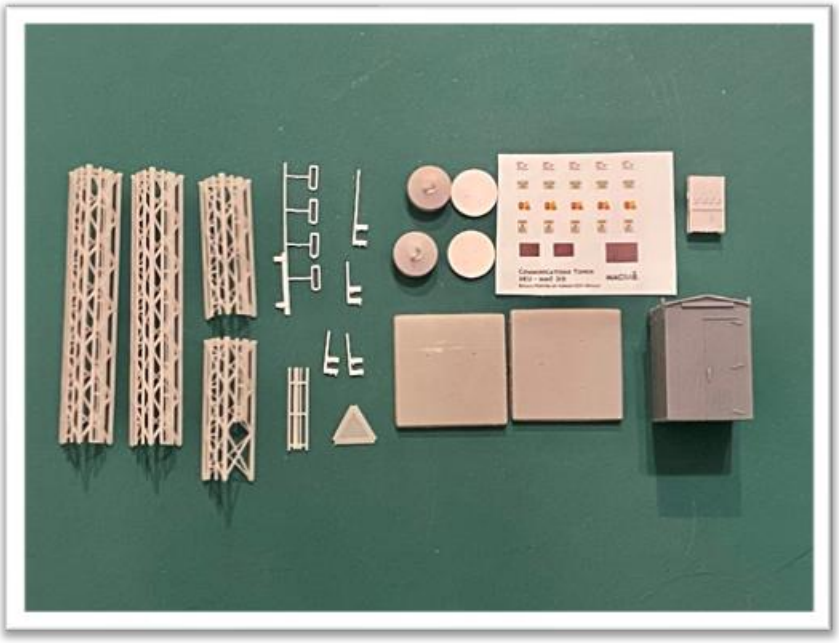
STEP 1 – OPENING YOUR KIT

When opening your kit, you will find the following parts:
(3) 20' Tower Sections
(1) 10' Tower Section A (Conduit Bridge)
(1) 10' Tower Section B (Conduit to Foundation)
(2) Base Foundations
(1) Custom Decal Set
(1) Tower Cap
(1) Bungalow by SooParts
(1) Bungalow Air Conditoner
(1) Conduit Bridge
(1) Di-Pole Antenna
(2) Microwave Dishes w/ Cap
(2) Tall Anteanns
(2) Short Antennas

If you are missing anything or mess up something– please send an email to macrailllc@gmail.com

Tools Required

- Safety Glasses / Mask for Sanding
- Glue (CA Gel Type)
- CA Accelerator
- Toothpick or Applicator for CA
- Sand Paper & Sanding Stick
- Hobby Knife
- Sharpie Marker



STEP 2 – TOWER ASSEMBLY

Before assembling the towers, first lightly ream out the three holes on the foundation pad.

Each of the tower sections are designed to seat into each using a pin on three legs. To provide a stable base choose either 10’ Section A (Conduit Bridge) or 10’ Section B (Conduit to Foundation).

DO NOT GLUE the 10’ section into the foundation pad. We will do that later after its painted.

Using the service and conduit ladders as reference oriented the pieces properly and put a small glue of CA into the “Pin Seat” on the top three corners of the 10’ section. Then add a 20’ section on top.

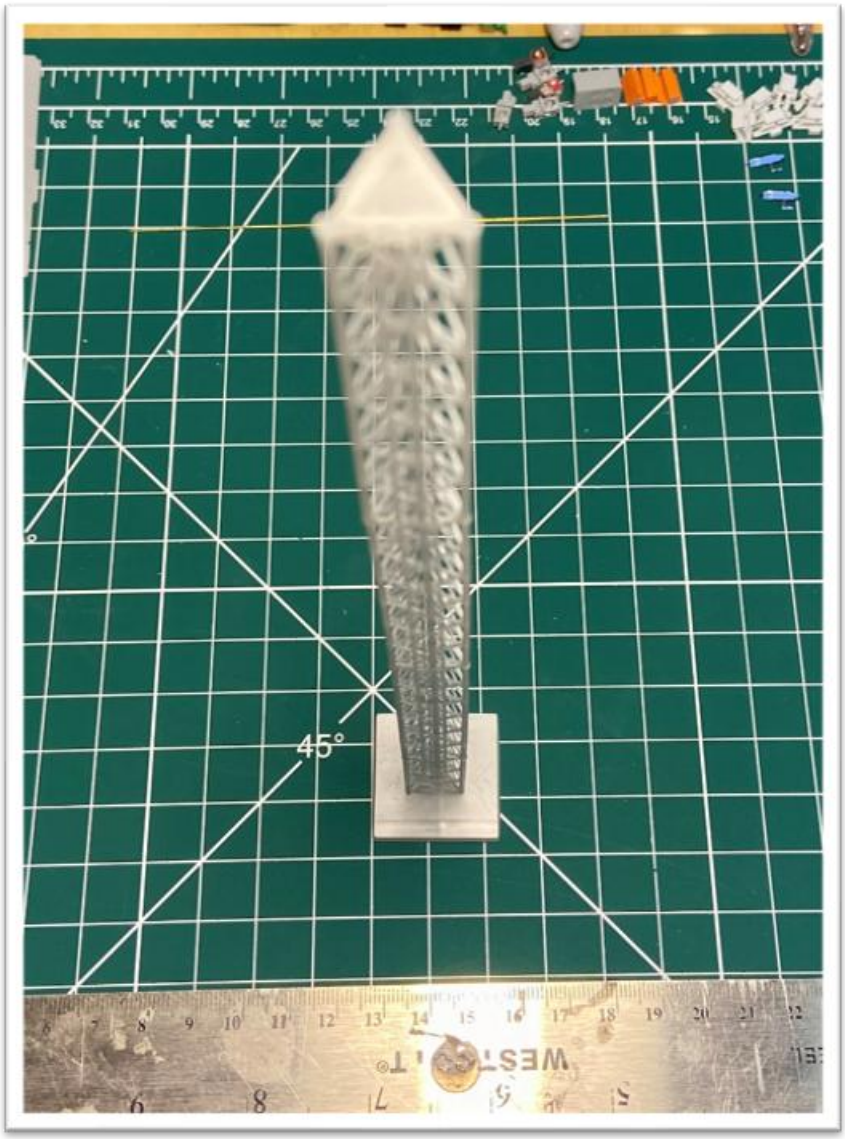
Use a ruler to check tower is assembled straight. You can also do this pre-gluing and test dry fitting the sections together. Some light sanding on the end of the pins may be required.

Continue adding 20’ sections until you either have created a 50’ or 70’ tower depending on what you want to build. Multiple kits can be used to make a kit up to 100’ in height.

Add top cap to 20’ section that will be used on top prior to adding onto tower.

STEP 3 – TOWER COMPLETE

Once all tower sections are glued together set it aside. We will come back to these parts later to paint.



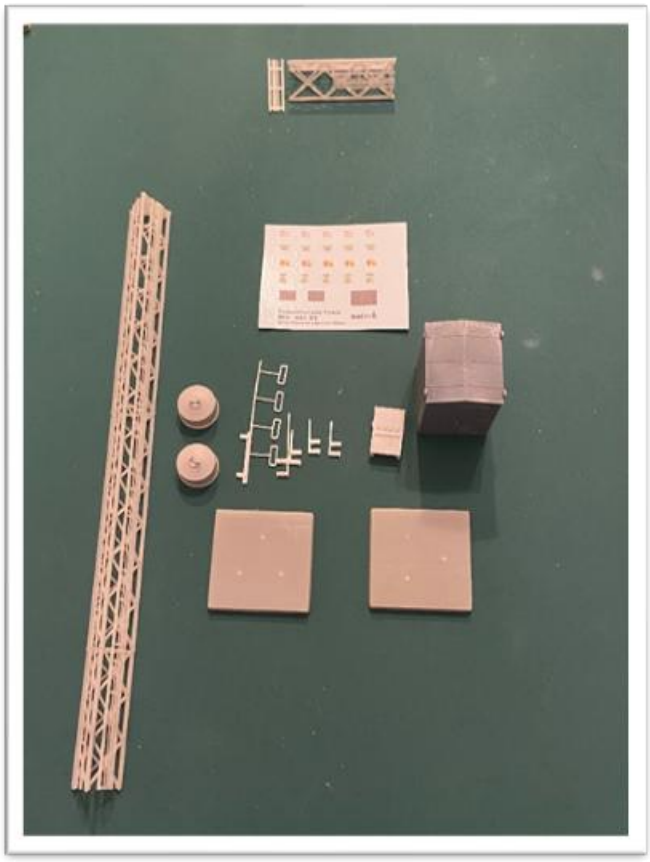
STEP 4 – ASSEMBLE MICROWAVE DISHES

These parts come painted in gray and white. No further painting is required before assembling. Sand the ends of both the dish and cap lightly. Apply CA on the lip of the dish and push the two together. Let dry.

STEP 5 – PAINT

At this point the tower is now in one piece and the microwave dishes are complete. Before continuing any further, the various parts must be painted to your preference.

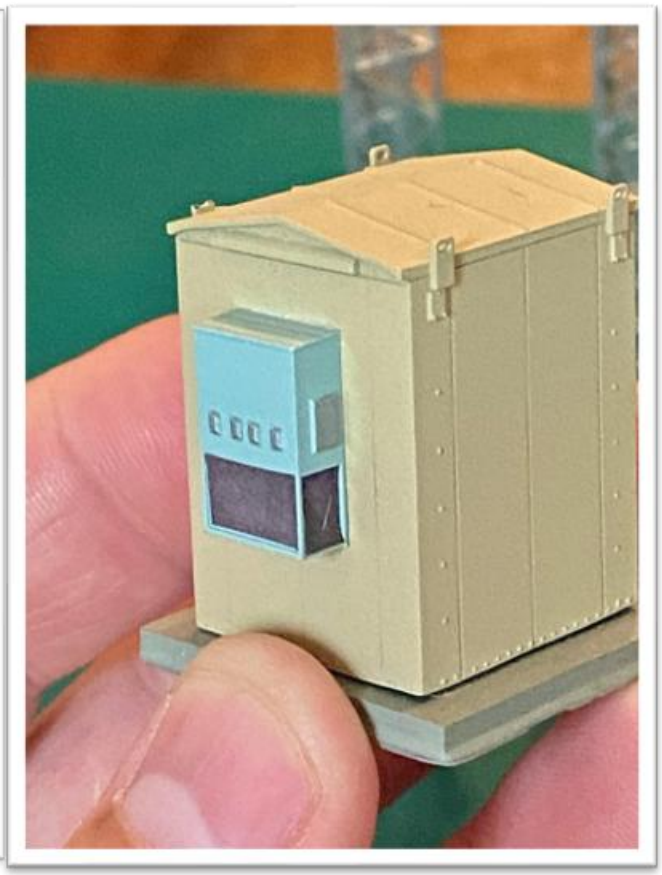
TOWER – Aluminum color
CONDUIT BRIDGE – Aluminum color
FOUNDATION PADS – Concrete color
BUNGALOW – White, Gray, Aluminum, Light Blue, or Tan (reference to prototype)
BUNGALOW A/C – Tan



STEP 6 – BUNGALOW DETAIL

Once all the parts are dry, its time to assemble and detail the bungalow.

- Sand the bottom of the bungalow before gluing to pad.
- Lightly sand the back of the A/C before mounting on the back wall (opposite from door)
- Add warning decals to door and intake filter decals to air conditioner.

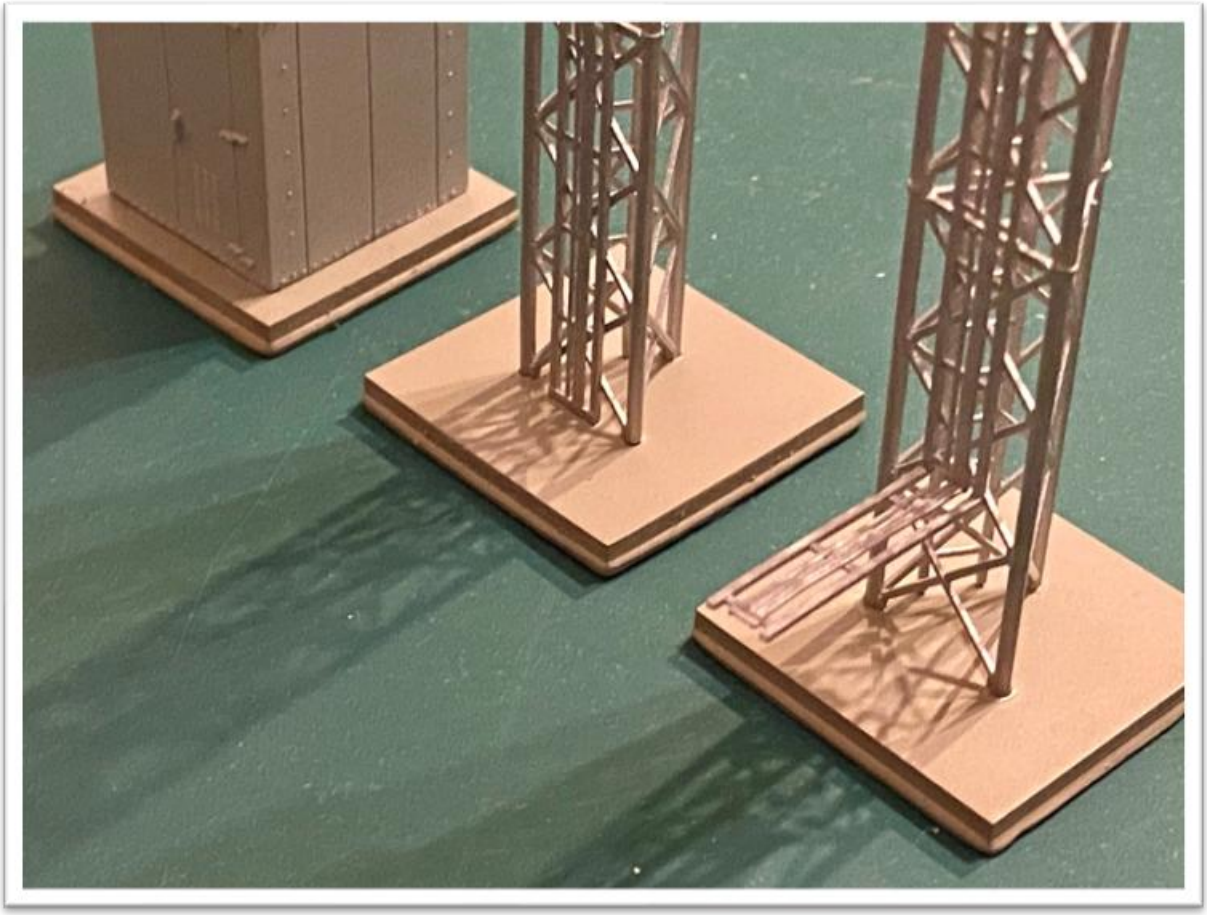


STEP 7 – MOUNTING TOWER

Please note tower orientation on foundation pad. The side with the mounting holes parallel to the edge will be matched up with the conduit side of the tower as shown below. Add CA glue to glue and seat tower onto pad.

Lower photo shows both tower styles mounted on their foundation pad.

If you are building your tower with the 10' Tower A (Conduit Bridge) piece now is the time to add the conduit bridge to the tower. Be sure the conduit bridge is oriented with the conduit on top of the bridge (not under). The end with the rectangle mounts into the side of the rectangle end on the tower where the conduit end.



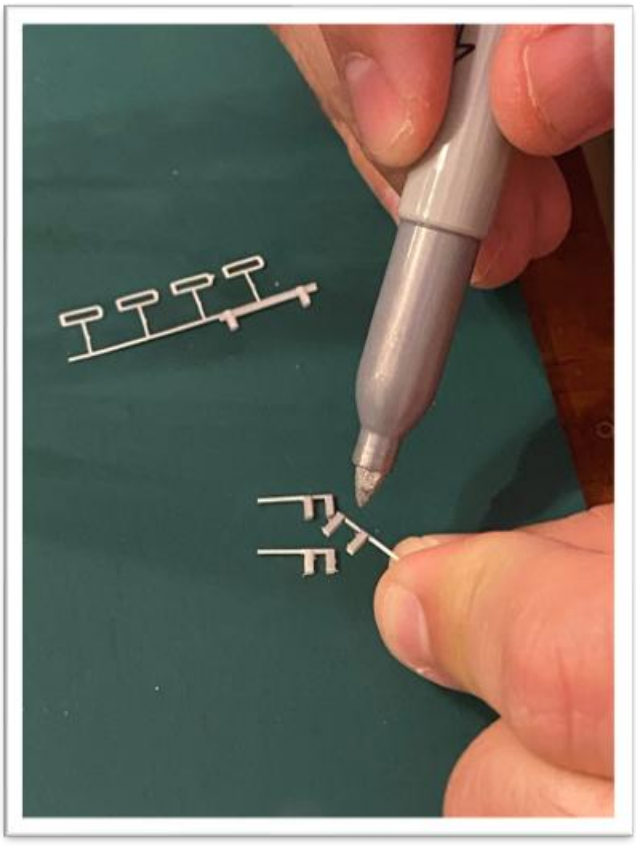
STEP 8 – ANTENNA DETAIL AND INSTALLATION

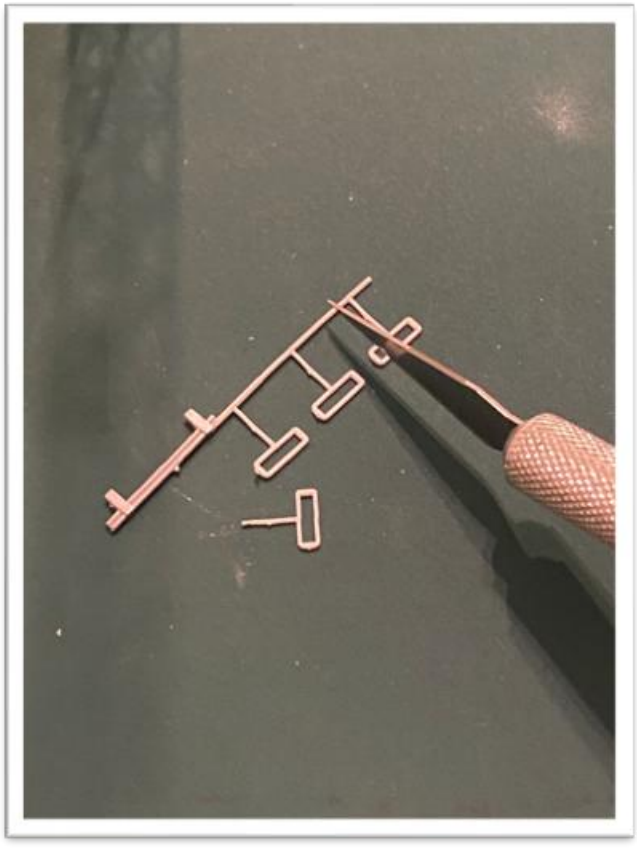
The three antenna types included in kit will complete in primer white. Referring to prototype photos a lot of the antennas are white, but the support frames can be black or aluminum color. To mimic this, I use a silver Sharpie marker to detail the antenna frame.

Antenna Installation: To install the antennas, use a small dab of CA on the back of the antenna mount. It is contoured to match the circumference of the tower leg which will make mounting easier. Place these antennas where you like. Refer to prototype photos for ideas on placement.

Di-Pole Modification: The di-pole antenna comes with four hoops. If you want to modify, just cut off the portion you do not want to keep.

Microwave Installation: The mounting "U" on the back of the microwave will require a bit more CA gel when installing. To help mounting, use a CA accelerator.





STEP 9 – INSTALL ON LAYOUT

You are now ready to install the completed tower on layout.

Basic location criteria like on prototype:

- Level ground
- Somewhere you will not potentially be bumping into it.
- Prototype locations: Near control points, wyes, yards, offices, industries.
- Be sure to "Plant" your structure and shore up foundations with scenery material.

Conduit Bridge Example: Photo on left showing tower at Upper Huron, MI. on MCIS St. Clair Sub. If using the conduit bridge the bridge would connect on the bungalow side walls.

STEP 10 – ENJOY

Thank you again for purchasing and installing the MAC-212 Communication Tower kit on your model railroad. I hope you enjoyed this ALL-IN kit that made the most of your time while working on your model railroad.

Best Regards,

- MAC

Any issues, broken / missing parts please send email to: gmccomas@macrailproducts.com