



HO Structure Kit SMALL SUBSTATION 933-3175

Thanks for purchasing this Cornerstone kit. Please take a few minutes to read these instructions and study the drawings before starting construction - if you're not sure how parts go together, test fit before gluing! Note that this kit consists of styrene parts, while the fence includes metal wire and a plastic mesh material. Use compatible glue and paint to assemble and finish your model. You may find it easier to assemble larger parts and paint them as subassemblies, while smaller parts can be painted while on the sprues and touched up after installation. Please refer to step #7 for tips on painting the fence prior to starting construction. If you wish to paint your model, wash all parts in warm water and plain dish soap, rinse thoroughly and allow to dry before painting.

Getting electrical power from the generator to the customer involves a wide range of specialized equipment, and one of the most important is the substation. To transmit electricity over long distances, amperes are reduced and voltage is increased using transformers located at the power plant. For safety, this high-voltage power is handled by high-tension power lines mounted well above the ground on tall towers. In principle, the substation works like a model railroad power pack, taking high voltage and reducing it to a safe level. This is done at the substation using large transformers supplied by the high-tensions lines. A series of switches route the lower voltage electricity into service lines, which connect to various customers; before reaching a home or business, the voltage is dropped again using a smaller transformer located on a power pole. While substations were once located fairly close to each other, modern systems make it possible to transmit electricity over much longer distances so that one generating plant may serve a network of outlying substations miles away, controlled by a dispatcher. Your new model is typical of substations found all across North America from an open field to a bustling industrial park. Substations of this type are also found alongside all types of large manufacturing operations and heavy industries that use considerable amounts of electricity. It's a natural with the Northern Light & Power Powerhouse (#933-3021) as part of an older facility, or the Metro Power & Light Generating Plant (#933-4052) in a newer setting. You can also model a complete power grid using the High-Voltage Transmission Towers (#933-3121), Modern High Voltage Transmission Towers (#933-3343) and the SceneMaster™ Electric Utility Pole kit (#949-4120). Be sure to check out the SceneMaster Utility Trucks with decals too! For additional structures, figures, vehicles and accessories, see your participating dealer, check out the current Walthers Model Railroad Reference Manual or visit us online at walthers.com.

1) Using raised ridges on Transformer Base (106) and tabs on inside of walls to align parts, glue Front (107), Right (108), Left (109) and Rear (110) Transformer Walls to Base and at inside corners where parts meet. Carefully align tabs on Transformer Top Plate (111) with inset areas on Front Wall as shown and glue to top of wall assembly.

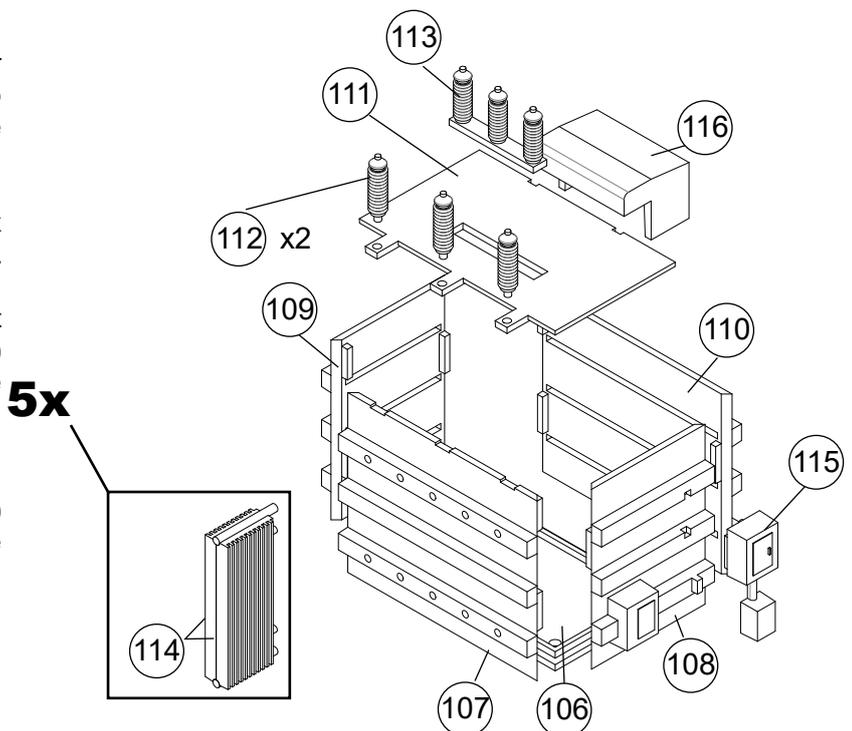
2) Align Front Insulators (3x 112) as shown on top of cover plate and glue where parts meet. Not the inset area at the center of the Top Plate; align and glue Rear Insulator Group (113) in place. Align tabs on underside of Control Box (116) with openings on rear of Top Plate and glue in position. Note inset areas on Right Sidewall: align tabs and glue Control Box (115) in place.

3) Radiators - make five: glue left and right Radiator Halves (114) together. Align round connectors at top and bottom with openings on Front Wall and glue parts in position.

4) Note correct alignment of Tower Insulators (3x 103); glue parts in place to openings on Tower (102).

5) Be sure to evenly space Switches (3x 104) at right and left edges and center of Switch Support (105) Align notches on underside as shown, and glue together.

6) Align tabs on bottoms of completed Tower and Switch Support with slots on Substation Base (101) and glue where parts meet. Align Transformer Base with molded pad as shown and glue together.



Chain Link Fencing

7) PLEASE NOTE: If you wish to paint the mesh we suggest doing this first, using aluminum or silver spray paint (sold separately). When dry, mounting the mesh material on contact paper will make it easier to cut with distorting the material. Cut the mesh into strips 15/16" (2.38cm) wide: using a CA-type adhesive (sold separately), carefully glue one end to a post and allow to dry. Pull the material tight so it touches the next post carefully glue where parts meet and repeat for each additional post.

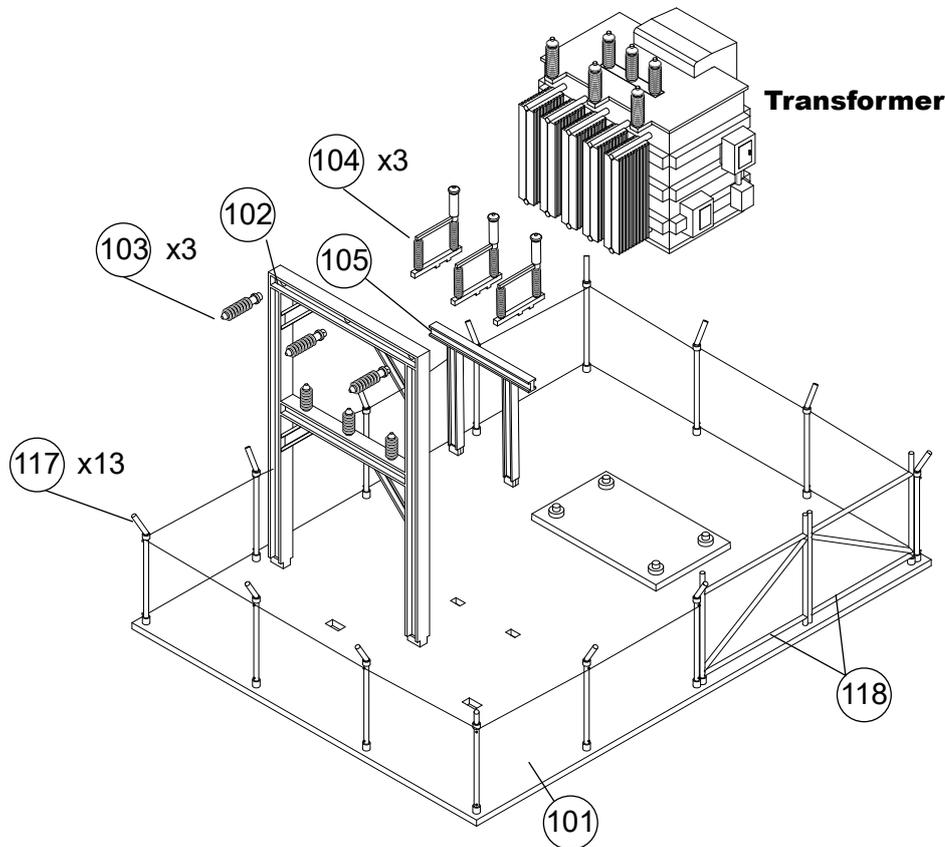
8) With angled top end facing outward as shown, glue Fence Posts (13x 117) to openings in Substation Base.

9) PLEASE NOTE: Wire is included for upper and lower supports, however only the lower is shown here. Cut wires to length: glue lower wires just below bottom collars and upper just above top collars.

Fence Gate

10) or simply glued in place if desired. Using a CA-type adhesive, attach mesh material to inside of each Gate and trim as needed. Insert (or glue) Gates in place on Base.

11) Measure the distance from the outside edges of the posts to the center of each gate, and add about 1/8" (3.1mm). Cut the wires to this length: bend one end about 1/16" (1.5mm) upward to form a right angle. With the bent ends facing up and positioned about 1/16" (3.1mm) beyond the gateposts, attach the gate wires using a CA-type adhesive.



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