



HO Structure Kit OVERHEAD TRAVELING CRANE 933-3102

Thanks for purchasing this Cornerstone kit. All parts are made of styrene, so use compatible glue and paint to assemble and finish your model. If you wish to paint any parts, do so before starting construction. Before starting, decide if you wish to build a longer craneway by combining two or more kits (each sold separately).

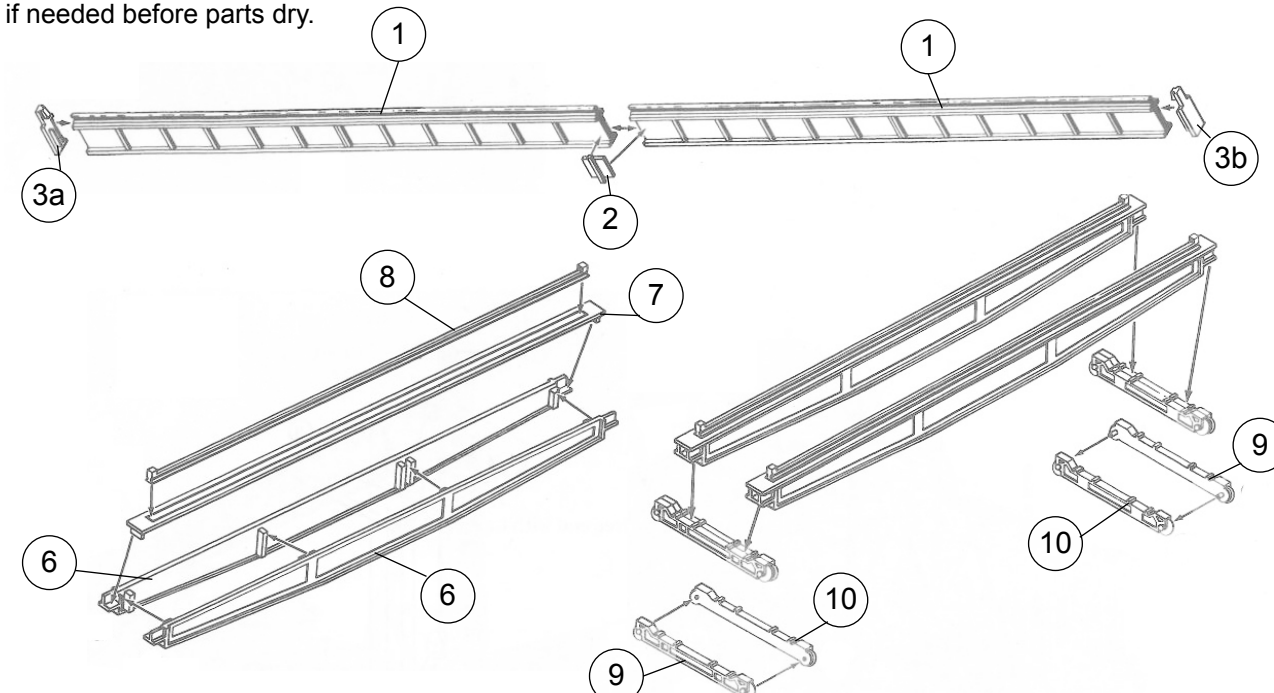
Since the early 1900s, overhead traveling cranes have been used to move all types of heavy loads across a wide area. These units actually consist of three parts: an elevated craneway providing overhead clearance for temporary materials storage or railcar and truck access, a crane bridge that moves the length of the craneway, and a positionable trolley that moves side to side on the bridge, and houses the lifting machinery. Depending on what's being handled, the actual lifting machinery can be equipped with large or small hooks, clamshell buckets or electromagnets. Powerful electric motors drive the bridge, trolley and lifting equipment, and are independently controlled by an operator working from an attached cab. Cranes of this type are found indoors or out, and some are a bit of both to permit movements in or out of a structure. While the craneways have to be parallel, they can be quite long, and in some cases, may support a pair of cranes working independently. Cranes of this type were usually installed with one or two tracks running lengthwise below, but some were built with the tracks crosswise. Based on units with a lifting capacity of about 25 tons, cranes like your new model one can be found at a variety of industries, including scrap yards, steel fabricators, iron foundries and more. Similar units were sometimes installed at railroad team tracks, and a few were used at busy engine terminals for handling ash. Visit your local hobby shop, see the latest Walther's HO Model Railroad Reference Book or log onto walthers.com for more ideas to complete your new model.

1) Make two Craneways as follows, with rails at top as shown. Glue a Splice Plate (2x 2 (one between each pair of girders) to the inset area at one end of a Craneway Girder (4x 1, two per side). Glue a second Girder to the other end of the Splice Plate and at ends where Girders meet. Place on a flat surface and allow to dry. Repeat for second Craneway.

2) Note the recessed areas on outside edges of Craneway Ends (3A, 3B): use these to align the Ends and glue to Craneway Girders as shown.

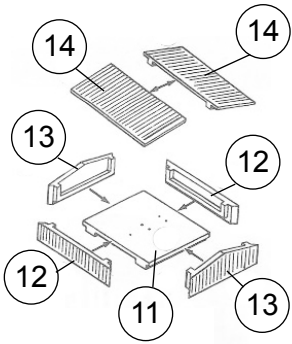
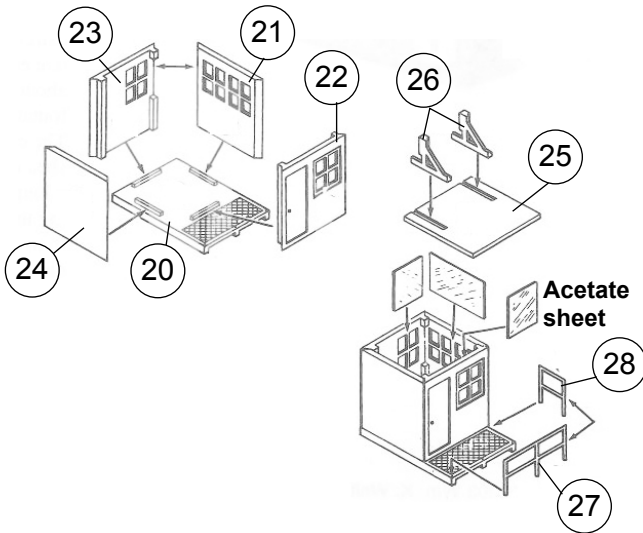
3) Make two Bridge Girders as shown. Using the raised ridges and tabs on back to align parts, glue two Bridge Girders (6) together. Glue Girder Top (7) to completed Bridge Girders, and Bridge Rail (8) to Girder Top. Repeat for second Bridge Girder.

4) Make two Crane Bogies by gluing a Left (9) and Right (10) Bogie Half together as shown. Align ends of Bridge Girder assemblies between raised tabs on top of Bogies and glue in place on left and right – make sure the Bridge assembly is level, adjust if needed before parts dry.



5) Note the alignment ridges on the backs of the Trolley Sides (2x12) and Trolley Ends (2x 13). Carefully align and glue Sides and Ends to Trolley Base (11) and at inside corners where parts meet. Glue Trolley Roof Halves (2x 14) together – the Roof will be installed in Step 12.

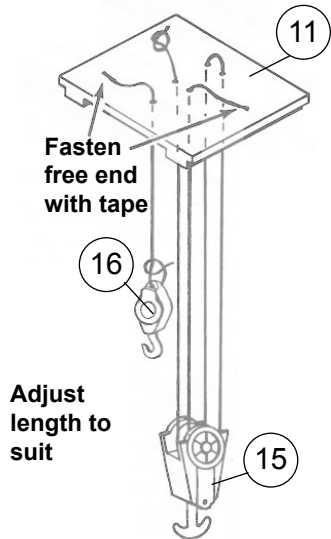
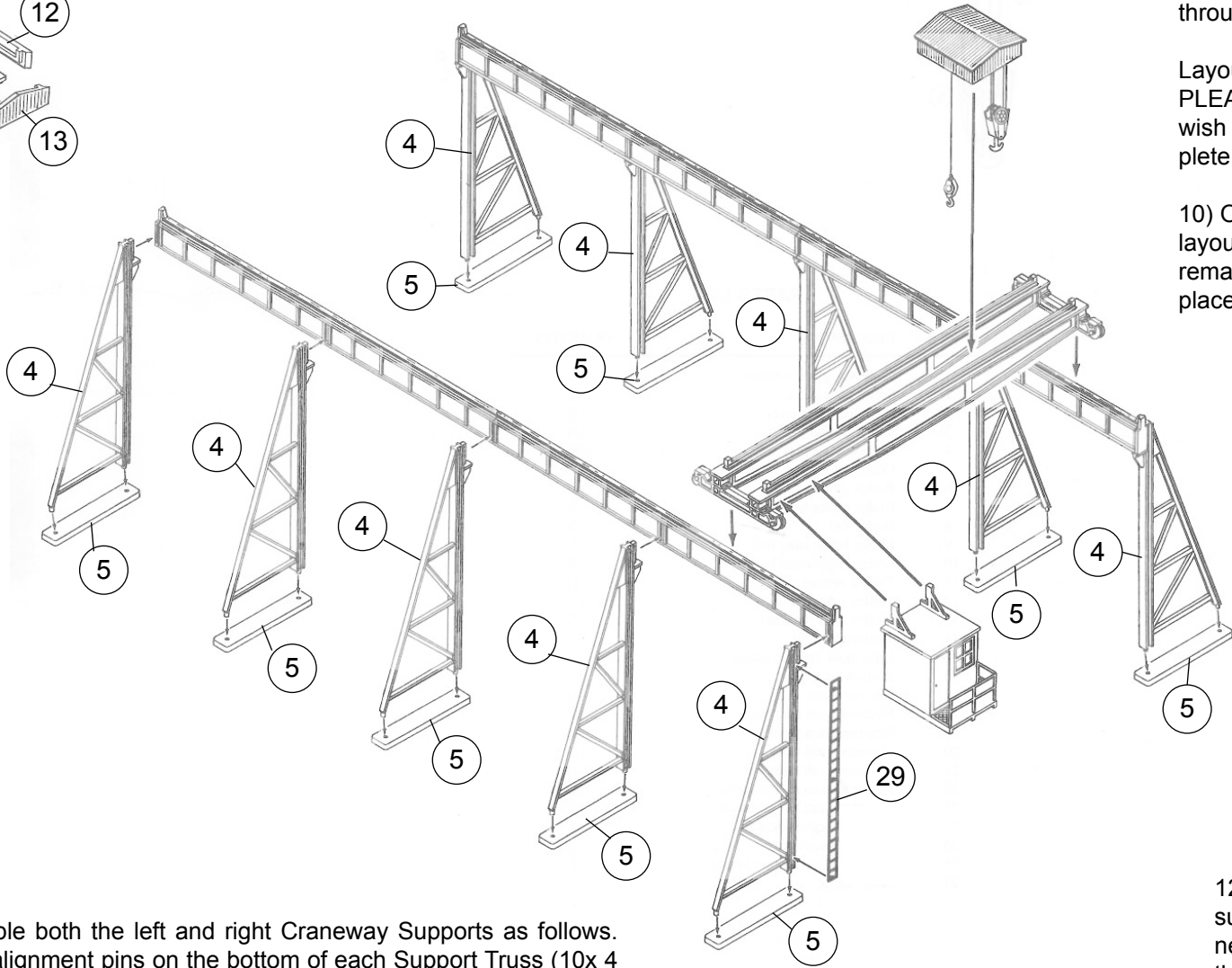
6) Cut small pieces of Acetate slightly larger than windows and glue inside Left (23), Front (21) and Right (22) Cab Walls. Note the alignment ridges on the Cab Base (20) and inside edges of Left and Right Cab Walls. Use these to align parts and glue Front (21), both Side Walls (22, 23) and Rear Wall (24) to Cab Base, and at inside edges where parts meet. Note the alignment of both the Cab Roof (25) with the recessed areas at left and the Cab Support Brackets (2x 26). Glue Cab Roof to Cab assembly, and Support Brackets to Roof as shown. Glue bottom of Long Cab Handrail (27) to molded openings in Base. Glue Short Handrail (28) to Base and Long Handrail where parts meet. Cab will be installed in Step 11.



7) Assemble both the left and right Craneway Supports as follows. Note the alignment pins on the bottom of each Support Truss (10x 4 - five per side) fit the mounting points on top of each Craneway Support Base (10x 5: five per side). Test fit and glue Trusses to Bases as shown. Note the tabs on top of each Support Truss fit the slots between the paired verticals in the craneway girders – test fit each tab – they should fit easily but not too tightly to prevent bending the craneway assembly. Sand or file if needed and glue tabs to Girders as shown.

8) Glue Ladder (29) to left end Craneway Support as shown.

9) Black thread is included to simulate steel cables. We recommend taping the thread to the Trolley Base so the length can be adjusted to clear equipment below. To install and rig the Small Hook (16), tie one end of the Thread at the top of the Hook as shown and feed the other through the single opening in the Trolley Base. For the Large Hook (15), begin by tying a small knot in one end and run the thread through the left front opening of the Trolley Base. Loop the thread around the inside pulley of the Hook, and back through the left rear opening. Loop the thread through the right rear opening, back around the pulley (make sure the hook hangs level) and back into the right front opening in the Base. Tape in place and set aside.



Optional Electromagnet for Small Hook
9A) Glue Eyebolts (3x 18) to Magnet (17). The Magnet should hang about 3/8" (0.9cm) below the Shackle (19); cut three pieces of Thread, tie one end to each Eyebolt and the other to the lower loop of the Shackle. Slip upper loop of Shackle over Small Hook. Another length of thread can be used to simulate the electric cable if desired: glue one end of the thread to the Magnet, run the other through an opening in the Base and tape in place.

Layout Installation
PLEASE NOTE: Some adjustment may be needed in these steps, so if you wish to glue the Bridge and Trolley in place, do so after final assembly is complete.

10) Once you've selected a location, temporarily attach one Craneway to your layout. Using the Bridge as a gauge with the Bogies on the top rails, align the remaining Craneway, make any adjustments and secure both Craneways in place.

Cab Installation
11) Temporarily set the Bridge Girder assembly at the Ladder end of the Craneway. Test fit the Cab Brackets at the lower left end of the Bridge: make sure the Cab clears the Craneway, but is close enough to the Ladder that an operator could step easily from one to the other. Mark your mounting points and glue the Cab to the Bridge.

Trolley Installation
12) Temporarily set the Trolley on the Bridge. Make sure there's sufficient clearance below the Hook for cars and locos, and adjust as necessary. If you wish to make future adjustments, tape the thread to the base and set the Trolley Roof in place, or glue Thread and Roof.

13) If you wish to position the Bridge or Trolley, simply set them in place on the molded rails, or glue them in place as desired.

