



Scale Model Railroad Structures

165 E MAIN STREET
 ATLANTA, IN 46031 USA
 765-292-2044
 www.korbermodels.com
 Tanya@korbermodels.com

Model 1928 O Scale 22" x 36"

Lionel Factory

Compiled by: Tanya Burdick



Introduction

Skylights were a common feature of factories in the early 20th century, and the Lionel Factory has them in spades. This model is right at home on near a main line or branch line in towns and cities of all sizes. The Lionel Factory is a two story brick industrial building that is a perfect fit on your railroad.

The Korber 1928 Lionel Factory model includes molded brick details, roof top skylights, two roofed loading docks for boxcar switching, 2 story art deco office wing, injection molded roof top water tower, and windows to bring life to your model railroad.

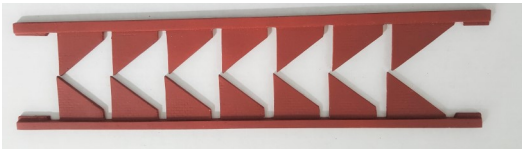
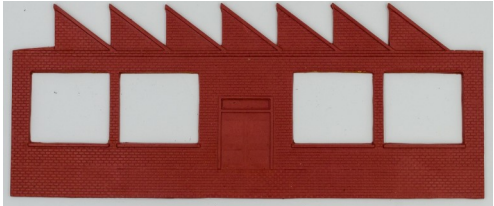


Buildings like this are still in use across the land serving different uses in the community. This structure fits nicely as a key business on your layout ranging from steam thru modern era.


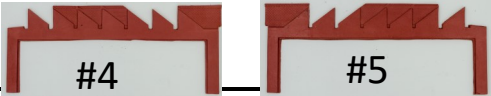
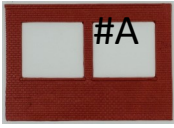






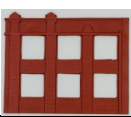
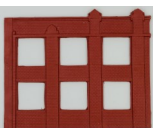


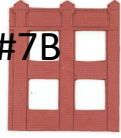


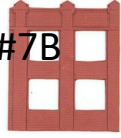
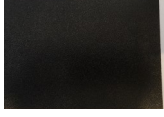
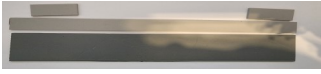




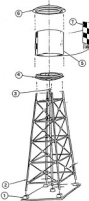

You can follow the simple, step by step instructions outlined in this document to easily assemble this great looking addition to your layout. Once assembled this model has approximately a 22" x 36" footprint. We have covered not only the key required steps to build the building so you can get it on your layout the quickest, but have also included several optional steps to enhance the appearance. These enhancements are based on submissions from modelers just like you who have taken the Korber structures to the next level, and now by following a few extra steps you can achieve the same results.

Before you start you may want to read through the instructions to get a feel for the things you will be doing, and the basic order in which they will be done. You are on your way to adding a centerpiece to your layout, so let's get started!

Parts list & Templates – (What's in the box)

Take a few minutes to locate all the parts in the box to make sure you have all the pieces you will need and that the quantities are right. You may also want to spread these parts out so that you have a small separate stack of each part and make it easy to find each as you start the assembly process. If you are missing anything, please contact us so we can get you any of the missing items. [COLORS AND LENGHTS MAY BE OFF SO NEEDS CUT.](#)

Qty	Description	Qty	Description
2	SKYLINE SUPPORTS Go on inside of #1B and #3A 	1	Side Wall w/ 8 windows  <p style="text-align: center;">SIDE WALL #1 B</p>
2	End Wall with 8 windows each  <p style="text-align: right;">BACK WALL #1</p> <p style="text-align: right;">BACK WALL #3</p>	1	Side Wall w/ 8 windows  <p style="text-align: center;">SIDE WALL #3 A</p>

Qty	Description	Qty	Description
1	BACK MIDDLE Wall  #2	2	Inside Walls  #4 #5
2	End Front Walls  #A  #B	2	Office back wall top  #11 #12
14	Skylights 	4	Skylights Marked x and roofs 7 5/8" 7 5/8" x 2 1/8" - 4 
14	Skylights Roofs 13 1/4" x 2 1/8" 	50	Office Windows plus 4 sheet clear plastic 
2	Office Left and Right Front walls  #8 #10 	46	Factory Windows with 25 spacers 
2	Office Side walls  #6A #7B 	1	Office Main Front wall  #9
2	Office Side walls  #6A #7B 	3	ROOFS FOR BUILDINGS cut to size 5 1/2" x 11 3/4" 2 5 1/2" x 7 7/8" 1 7 3/4" x 3" 1 
2	Loading Docks 2 sets 	8	Loading Dock Roof 2 and Supports 6 
1		1	logo 
2	Loading dock roof beam "L"  8 3/4" x 1/4"	6	13 1/4" X 1/4" WOOD FOR base edging
		4	9 5/8 x 1/4"
		14	Skylight supports 13 1/4"
1	Rooftop Water Tank 4 supports 1 barrel 1 top & bottom 1 pipe  	14	Wood for office 5" x 1/4"
		6	11 1/2" x 1/4"
		2	9 5/8" x 1/4" for middle roof section
		6	7 3/4" for back middle roof
		1	Bag gravel for roof

Materials needed – (What else might I need that is not included)

The Korber Building, like any kit, requires a few additional items to complete the construction. We have included a list here, including some color and brand suggestions based on our experience; however you may use any product that fits the function. Please also note that some items are listed as options such that they either make assembly simpler, or are needed only for optional steps

Flat paint, choice of colors, for doors, windows, trim

“Red” automotive primer spray paint to cover all molded brick surfaces such as Krylon Ruddy Brown

Antique white craft paint for cement lines

Light grey or cement color paint for cement foundation and frame

RustOleum camouflage flat spray paints work well for painting window frames, gutters and doors

Small paint brushes

Paper towels or soft cloth rags

Cyanoacrylate (CA) glue. Also known as Super Glue, Gorilla™ super glue works well

We like the new Gorilla brand super glue because it is thicker than most super glues, and allows you to put it on a seam while holding the part in your hand, and will not run when you turn the seam on the side to put two pieces together. This glue is available in most retailers, including the larger home improvements stores

CA glue accelerator (optional) (turns any CA glue into quick set glue (optional)

Medium grit sandpaper or emery board

Testor's Dull-cote™ (optional)

Small clamps (optional)

Flat black or grimy black spray paint (optional)

1 - Parts preparation & painting

Look over all the molded parts and remove any flashing that might be left on them. Flashing is the thin pieces of the molding material that may be left in widow openings and along edges in the molded parts. This can quickly be removed with a razor type knife, a small file, or an emery board. Some may require more grooming than others. Then it is time to wash parts with soaping water to clean of residue from mold release agent. Dry completely.

The parts in the kit will need to be painted to the final colors you select, and it is much easier to do this step before you assemble them. All the wall sections come colored in a brick red or yellow coloring, however many modelers find a light coat of flat red auto primer spray paint gives not only a great look, but also makes it easier to add the mortar color lines to the walls later on. In a well ventilated area (outside is good) apply a coat to the inside (smooth side) of all the brick wall sections first; once dry, do the same to the other side. By painting the **BACK** side first you avoid any marks that might appear on the brick textured side.

Use a similar process for the window frames and doors. You may want to paint both of these types of pieces the same color to create a theme for your building.

The internal wooden pieces do not need to be painted as they are for structural support only.

Option

To fill mortar joints with white. Paint spray a small section of wall white.

and wipe off excess paint with linen cloth until all paint is removed from surface, except paint that stays in mortar joints. Repeat same procedure throughout entire wall section. To remove haze from brick surface apply a thin coat of testers dull cote and gently wipe over brick surface again.

You must use a clean Linen cloth for this procedure. Apply a second coat of dull cote over entire wall. Let all pieces dry. Mask up with masking tape all doors around door jams.

and cover all brick surfaces with paper. Now spray doors with testers gray primer, not too heavy. Let dry and remove tape. Paint all window sills of factory and stone work on office building rebel gray, care must be taken not to overpaint onto brick work.

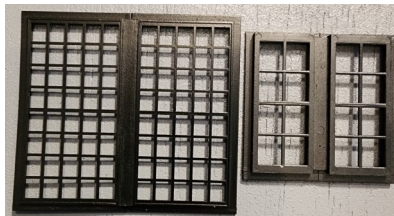
EXAMPLE MAY NOT LOOK LIKE YOUR KIT



The good news with this option is that if you don't like it, the paint is water based, so you can get it wet, remove it, and start over.

The foundation should be painted a cement or light grey color once assembled. There are other cement details that also can be highlighted with the cement color you choose.

Once dry, this area should be washed using a mix of either



2 -Assembly & Install windows

The windows are made from injection molded plastic and will have a clear plastic sheet stock applied over the opening from the inside of the model to form a finished window.

Remove spruce from all windows-. You have two types of windows, eight pane windows for office complex and forty pane windows for factory.

Office windows: take two windows remove sill overhang from left side and right side window, and glue together with super glue- make sure they are tight and even on top and bottom. Repeat same throughout.

Factory window:

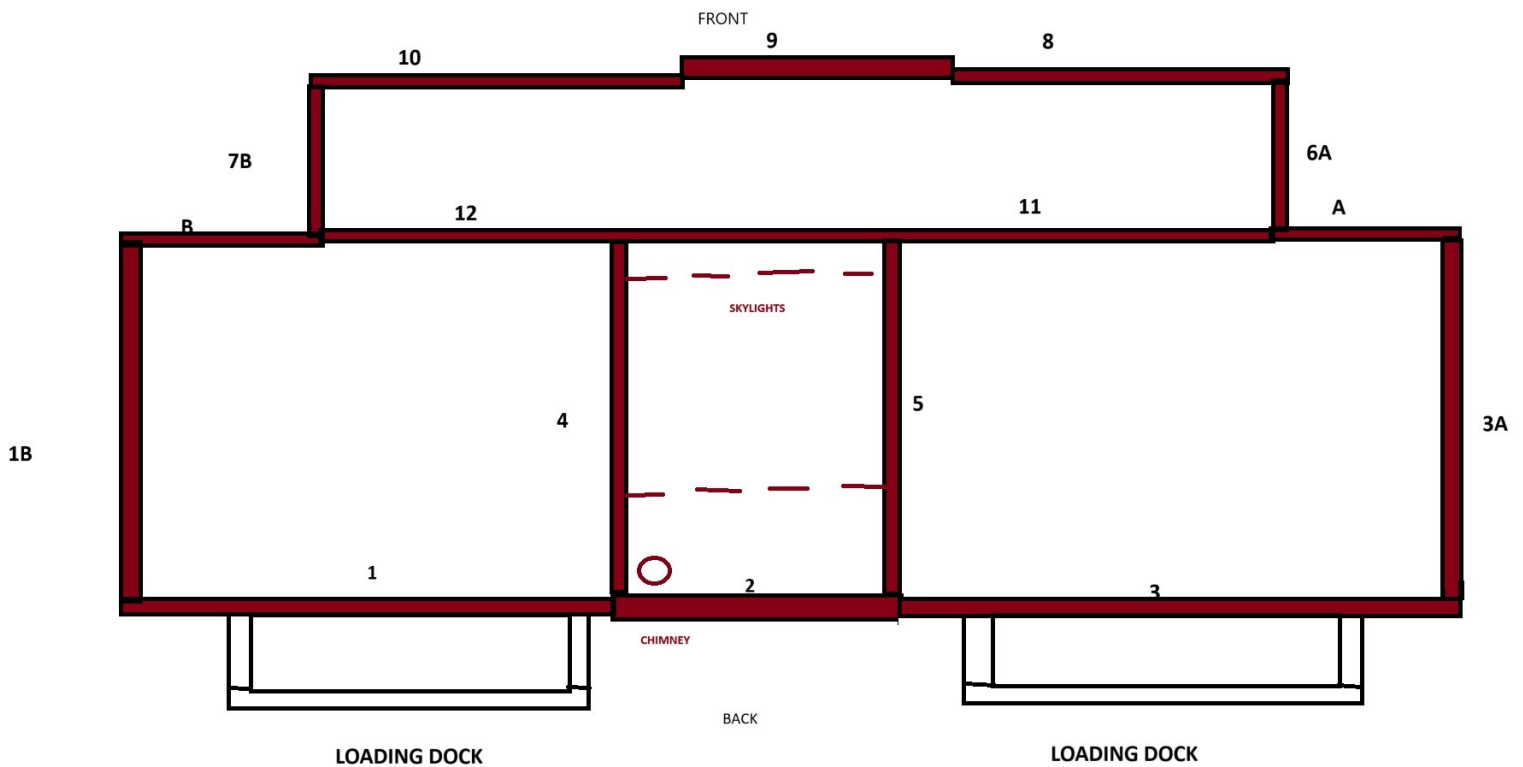
glue two windows together with super glue vertical- make sure break is the same throughout. Repeat same procedure throughout. Before painting windows with testers gray primer take into consideration factory windows must be glued into opening from the back of wall section and office windows must be glued on the brick face of wall section. After you have determined this, spray all windows. Do not overpaint.

- Place the walls to which you want to add windows, **brick side up for Office type and brick side down for freight windows.** on a flat surface
- The windows are designed to overlay the window opening from the front, or outside of the building, and will not fit inside the window opening if installed from the back. Make sure window fits properly. If it does not some light filling is necessary on top and both sides of opening.
- Apply a small amount of glue around the edge of the frame and insert over the openings on the wall sections
- Let the glued windows dry before moving the wall sections to a vertical position to avoid glue running or the windows
- Prepare to cut and glue small pieces of window clear plastic material over the back of each window. Consider the following two window detailing option for the windows:
- If you want the window panes to have a hazed affect, lightly sand the window material until you've achieved desired haze effect prior to cutting into small window pieces
- You may also detail the windows with shades by covering the top portion of the window material with masking tape

Center of factory windows: you must glue in place center plastic strip supplied in package of factory windows. Spray paint all pieces with gray primer and when dry cut to size and glue in place with super glue in center of windows vertically. Now dull cote all windows after super glue is dry to cover shiny parts.

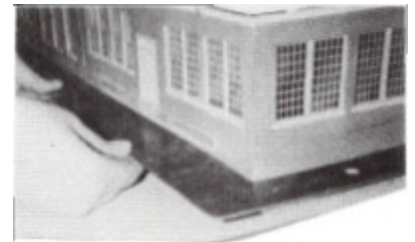
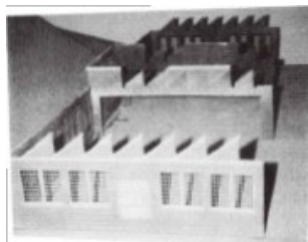


This is how the outside building parts go together.



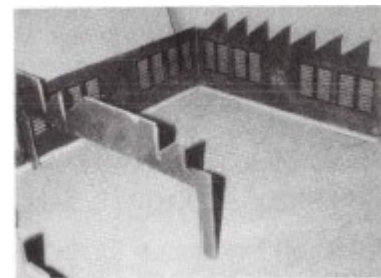
3- Assembly of Factory Wall Section

- Look at sketch to determine where sections go by numbers. Take wall section number 1,2 and 3. working from left to right put a piece of household wax paper just big enough to cover area where gluing is required.
- Before you glue walls together check if walls fit together perfectly-some slight sanding might be necessary.
- Glue wall number 1 against wall number 2-walls must be even and flush on back use super glue on all wall section gluing- Wipe excess-off before drying with paper tissue.
- When walls are dry, glue wall number 3 against wall number 2: and let dry.
- Take this wall section and lay carefully onto board base face up and even with edge of base-space evenly on left and right side and make pencil mark on the end of left side and right side of wall section.
- Put wall section aside and take framing square and draw a square line from back of flake board for wall section number 1B and 3A.
- Now take rear wall section upright from left to right brick face even with edge of flake board previous-. determined marker and tack with super glue left corner only onto flake board-hold until dry, super glue holds best when used sparsely. Now. tack right side corner of wall number 1 • -repeat Same procedure with wall number 3. Now take wall number 1B and glue against inside of wall 1 with super glue, tacking the top first and then line 1, up even with rear wall brick return and glue in place:. Now take framing square against back flake board and line up wall 1B so it will be square and glue in place corner. of left side of wall B, only . Repeat same procedure for wall 3A.



4 - Inside Skylight Support

Take wall section number 4 and glue upper section against wall section number 2: - make sure brick return is even with outside wall, let dry. Now glue in place lower section against inside of wall number 4 and make sure it is straight. Repeat same with wall section number 5.



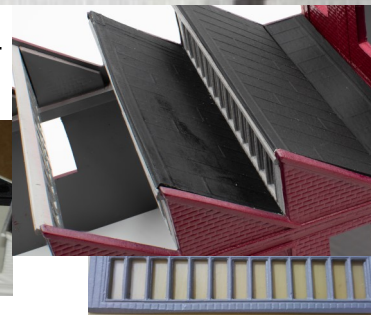
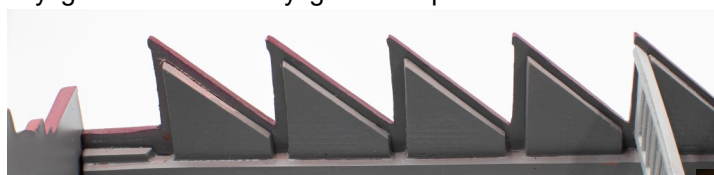
5 - Inside Wood Support

Take quarter by quarter wood stock and cut to length for wall section number 1, 2 and 3 and 1B and 3A. Make sure the two side pieces are not longer than side walls. Take Ambroid cement and apply a bead on inside bottom corner and glue wood strip in place- make sure wall section 1 and 3

- The skylight supports are to be installed allowing about a **1/8" gap at the top edge and vertical edge** of the saw tooth pattern of the wall section. This gap is to allow the skylight windows and roofs to be recessed so that their faces are flush with the saw tooth pattern of the exterior wall.
- Once you have dry fitted in place, glue these supports down making sure to leave 1/8" gaps. Your support may overhang side edge. This is okay as after the pieces are thoroughly dried, you will sand the edged smooth.

Cut window glass for all your skylights. Take skylight window face down apply spray adhesive over back of window. and when glue is tacky put window glass in place- cut excess beyond window space off and remove. To install skylight windows in place you must follow this procedure to determine height of skylights use, the two height spacers colored red- set onto flake board base under skylight. Counting from rear to front

skylight numbers 3, 4 and 5, must be glued in place first- finished side of skylight should face front of building- bevel edge should be on top. Glue skylight onto outside wall even with return wall on inside of wall. Now glue in place skylight on opposite side. Repeat same on skylight number 4 and 5. Now you repeat same procedure on other side of building. Now glue in place remaining skylights in place on outside walls only. Do not glue skylights on center supports, yet. Now you are ready to glue in place the four shorter sections of skylights. Make sure skylights line up on both sides.



6 - Wall Section A and B

Glue in place wall section A onto wall section 3A - make sure brick return lines up properly with wall number 3A . Apply framing square and line up wall A. and wall number 5, tack fa., corner of wall A with super glue only and glue in place wall number 5 and make sure it is straight. Cut and glue in place with Ambroid cement wood support on bottom inside corner of wall A. Repeat same on wall section B.

7 - Skylight Support Wall

You must check the bevel of your skylight support wall- if it is higher than the front top of the skylight some slight filing may be necessary.

8 - Assembly of Roof Support

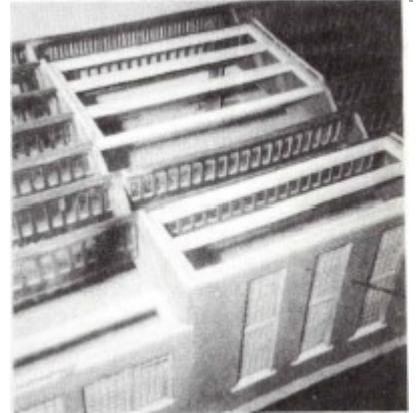
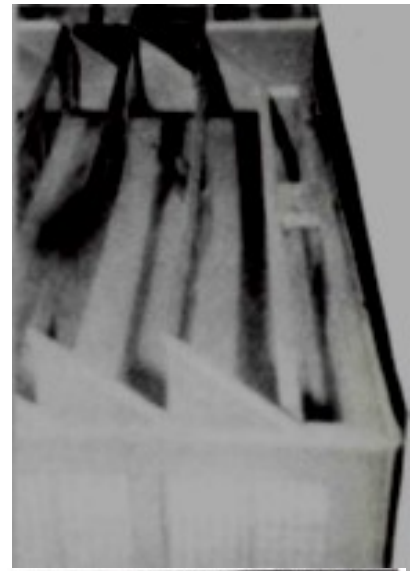
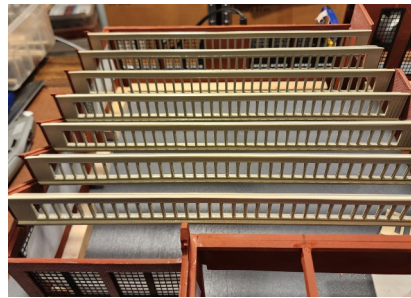
To determine height of rear roof support on wall section number 1 and 3 you must look for it on wall number 4 and 5 on bottom of skylight on rear roof. Cut two pieces of wood 1/4 x 1/4 of the entire length of rear wall section and glue one piece onto rear wall at the determined height. Glue second piece of wood in place 1/4" in from rear wall toward skylight. Look at picture on your right. Now cut three pieces equal length to fit between both wood supports and glue in place. Repeat same on other wall.

9 - Roof Support for Center of Building

Cut two pieces of 1/4 x 1/4 between wall section number 4 and 5 for powerhouse. To determine the height for this roof use top of skylight-glue in place wood piece parallel with skylight. Glue second piece against wall section number 2: make sure it is the same height as first piece. Now cut two pieces for wall section 4 and 5 and glue in place. Now cut one piece for center ok at picture on right.

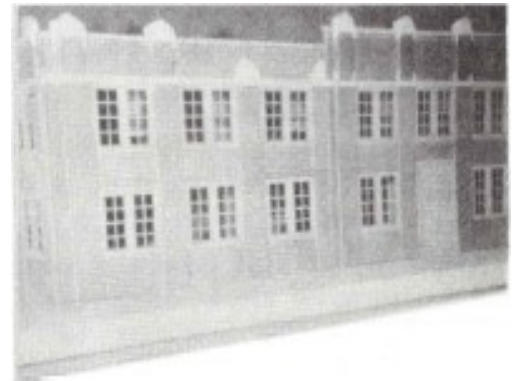
10 - Center Roof Support

Same procedure on this roof section as previous except first piece has to be glued in on the same pitch as skylight bevel and side pieces have to be cut to fit it. Now go back and apply an additional bead of Ambroid cement on all wall sections where wood meets plastic walls.



11- Assembly of Front Office Wall

Wall section number 8, 9, and 10 working from left to right brick face up on flat surface. Wall section number 8 has a flat reset surface-lay wall section number 9 on top of it-make sure it is even on bottom hold down firmly and apply a bead of super glue from top to bottom of joint, wipe off excess with napkin-make sure it is a tight fit. Shiny spot on brick surface will be eliminated with dull cote when dry. When dry turn wall over and apply additional bead of glue on joints, let dry. Repeat same procedure on wall number 10.



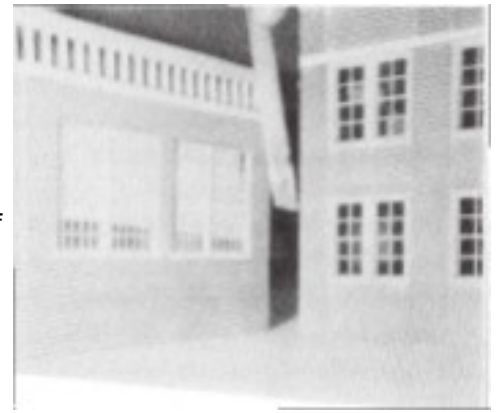
12 - Wood Support for Rear Wall

Cut two pieces 1/4 x 1/4 wood 4 1/4" long and glue one piece vertical onto rear of wall section 6A vertical-make sure it does not extend beyond wall edge-look at picture at right. Repeat same on other wall. Now make up parallel wood support by taking four pieces over lapped to get length. of entire building and glue to-gether with Ambroid cement. Now cut to length by taking dimensions from inside of outside wall. Now glue in place on top of previously glued pieces. Let glue dry.



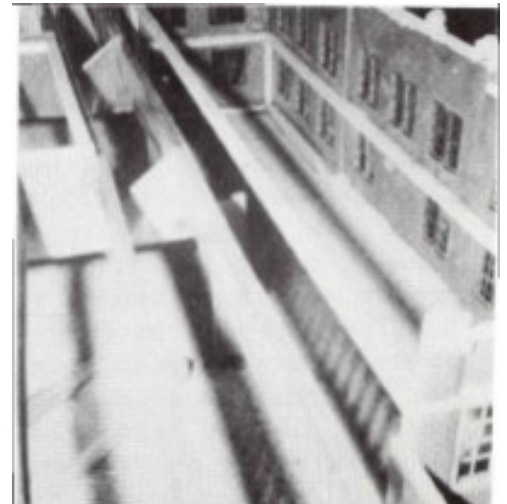
13 - Joining Factory and Office

Take previously assembled office building and position equal spacing on left side and right side of factory building-you will find on top inside corner of wall section A and B. walls an indentation on cornices-make a pencil mark to mark the exact size. These might have to be filed slightly-look at picture. Repeat same procedure on other side. Now glue building in place by applying a bead of super glue through surface make sure wall is straight parallel. Repeat same procedure on other side. Apply a second bead of glue on inside of wall after glue has dried. Take framing square to line up factory and office building corner and only tack with super glue front corner only at this time. Repeat same on other side.



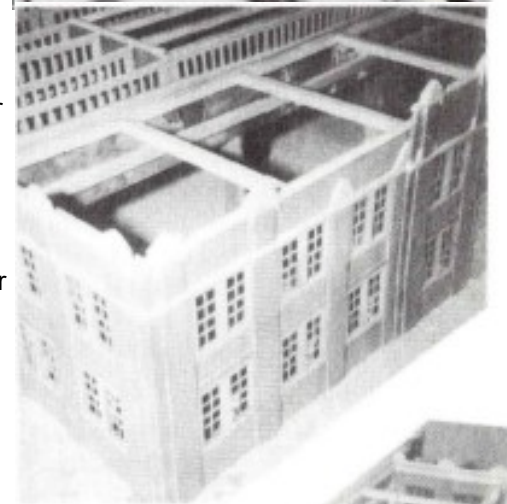
14 - Inside Brace

Look at picture. To keep front wall straight take ruler and measure corner to base edge and make pencil mark on bottom of outside wall number 8 and 10. Now cut two pieces $1/4 \times 1/4$ for inside of wall number 8 and 10. Now glue in place on bottom of inside wall. Make sure outside wall lines up with pencil mark. Now cut piece for wall number 9 and glue in place. Repeat same on side walls. Cut five pieces of $1/4 \times 1-1 \times 2 \text{ } 1/2$ " now glue one of each in each corner. Use the fifth piece for height gauge. Repeat same procedure for mid-way bracing. Glue all pieces in place. This bracing can be used for optional second floor decking.



15 - Office Rear Wall Assembly

Take previously made piece in step #5 for upper rear wall support and make pencil mark $3/8$ of an inch from top of straight wall number 6A, 8, 10 and 7B on inside- this also will determine your roof height. Now glue long vertical piece in place for rear wall onto wall number 6A and 7B- top should not go over pencil mark. Wall number 11 and 12 are longer and must be cut. Take wall number 12 and set on top of wall 8- if notch is not big enough you must do some filing until top of wall is even with wood on top. Also it should meet up with wall number 8. Now glue in place. Repeat same on other side.- Before you glue make sure you cut to proper length.



16 - Roof Support

Cut $1/4 \times 1/4$ pieces of wood as you did on corner base support- now glue in place on wall section 8, 10, 6A, 7B and 9. make sure top does not exceed pencil mark. Now cut six roof cross supports- make sure center support is located in center of building as roof is in two sections. At this time all wood enclosed on inside and visible through windows should be painted. If you want to light up your building the lights should be installed at this time.



17 - Office Plastic Roof Assembly 5 1/2" x 11 3/4" - 2

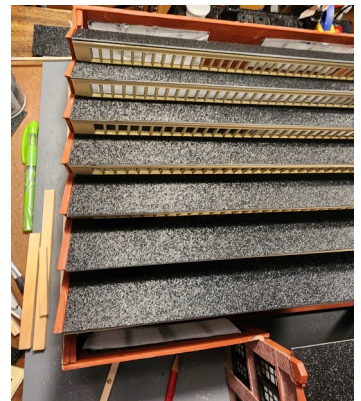
Take two large pieces of black plastic cut to fit contour of roof outlines- both pieces, with a sharp knife. When roof is properly fitted lay pieces onto news paper black color up and spray entire piece with spray adhesive and sprinkle on black gravel. When dry, shake off excess on news paper and don't waste excess. Now apply Ambroid cement on all roof wood parts and put roof in place. When dry, smooth out center joint with sandpaper, cover up exposed building parts with paper and spray glue over joint. Then apply gravel over sprayed area. Same procedure applies on two center roof sections after skylight roof are in place.



18 - Skylight Roofs

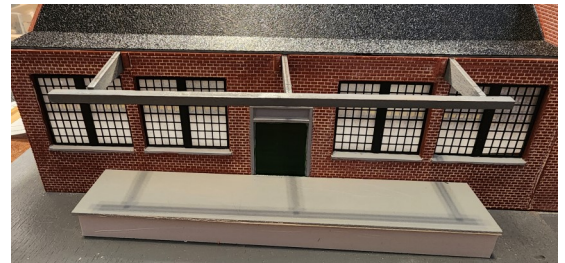
Roof is 2 1/4" wide, but length must be fitted. Start roofs from front and work toward rear of building. Cut piece to fit alongside wall A-II 12 and B- to apply gravel use same procedure as step 17.

Make sure skylight on bot tom is straight, as this will simplify next roof placement. Before gluing in place last skylight glue in place roof alongside wall I and 3. Last skylight roof rests on top of this roof.



19 - Loading Dock Assembly

Glue together pre-cut Plastic and cut it. 1/4 x 1/4 brace for bottom support horizontal- look at sketch. Glue in place-this part goes beyond flake board base and even with top wall support- glue in place concrete deck. Glue in place roof supports this piece is cut for pitch toward building steel beam faces down . Facier board 1/8 x 1/4 cut and glue in place even with top of roof support- make sure assembly is square. Glue in place roof even with back rear wall- make sure asphalt design faces building.



- The loading dock has six pieces, a front section, two sides, 2 interior supports and a top section. Create a three sided "U" shaped part.
- Glue the "U" shaped base to the side of the building. Note that the dock sides should mate to slots in the side wall of the building. **You will need to make 2 more slots for the U base to fit it.**
- Dry fit the loading dock top on the loading dock base you have just attached to the building, some light trimming or sanding may be needed to get a tight fit to the building just below the loading dock doors. Once you are satisfied with the fit , glue the loading dock top to the base and the rear to the building.
- The loading dock roof has a black tar look to it that faces up, and attaches to the rear of the building in a slot above the freight doors. This roof section is supported by plastic braces that are glued in the slots on side of building. See the following sheet to see the door supports placements. **You will need to make 2 more slots in side walls to hold the braces.** This is easier done while building is on the side. Glue the plastic support on small side.
- Once the supports are dry top wooden support align on base and glue to base and side wall. Then it is time for the loading dock roof to be placed and glued down. Then add the side steps to side of dock.



Roof Top Steel Water Tank

Model 930



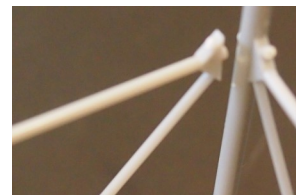
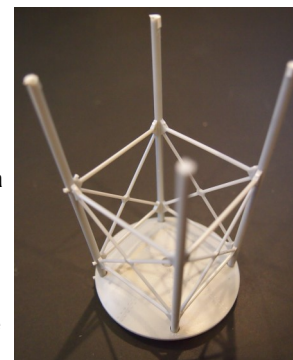
Made In USA



Congratulations, you have purchased the Korber Models #930 injection molded Roof Top Steel Water Tank. This tank represents thousands of similar units that could be seen on roof tops in any city or town all across the nation. You can follow the simple, step by step instructions outlined in this document to easily assemble this great looking addition to your layout.

This kit like any, requires a few additional items to complete the construction. We have included suggestions; however you may use any product that fits the function. RustOleum flat spray paints work well for painting the kit, Black, Grey or White, Cyanoacrylate (CA) glue, also known as Super Glue, Gorilla™ super glue works well, CA glue accelerator (optional) (turns any CA glue into quick set glue), Testor's Dull-cote™ (optional).

- Remove all parts still on a sprue with a sprue nipper or a sharp razor blade. File as needed making sure any unwanted "nubs" are removed.
- Place the tank bottom, bottom side up on your work surface and install the legs in the four holes in the tank bottom. Do not glue at this point.
- Mate the cross supports up to the legs adjacent to them to create a corner joint. The cross supports have a small tab at the end of them that fits into a small hole in the adjacent leg. Glue the joints and hold together until the corner sets. Repeat for the other three corners.
- Once the four corner joints of the leg assembly have dried, remove the leg assembly from the tank bottom, and apply a drop of glue into the leg holes in the tank bottom. Re-insert the four legs into the leg holes in the tank bottom.
- Once dry, stand the tank bottom on the four legs, and set the tank body on top of the tank bottom. Note the tank body has one end that is slightly larger than the other in diameter, the larger end mates to the tank bottom. Glue in place.
- Next simply add the tank top to the top of the tank body, glue in to place. The end product should look like the photo on the opposite page to the left.
- Optionally you can glue the dowel in hole in the center of the bottom of the tank to represent the large pipe running to the tank
- Spray paint the entire model (usually black, white or grey) and let dry.
- Once dry you optionally can add the included American Flag sticker to the tank.
- Your Korber #930 Roof Top Steel Water Tank is now assembled and ready for placement on the layout. You may wish to provide some additional weathering before you install it as a it would rarely look brand new.
- To add a weathered look, spray the entire model with flat black from a distance. This will give a sooty look to the tank. Once done you can spray the completed structure with Dull-cote to remove any gloss or shine.



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Korber Models

Scale Model Railroad Structures

165 E Main Street

Atlanta, IN 46031 USA

765-292-2044

korbermodels.com