



Korber Models

Scale Model Railroad Structures

163 E Main Street

Atlanta, IN 46031

765-292-2044

www.korbermodels.com

Model 950 O Scale Flag Company Instructions

Compiled by: Rich Redmond, Alex Muller



Introduction

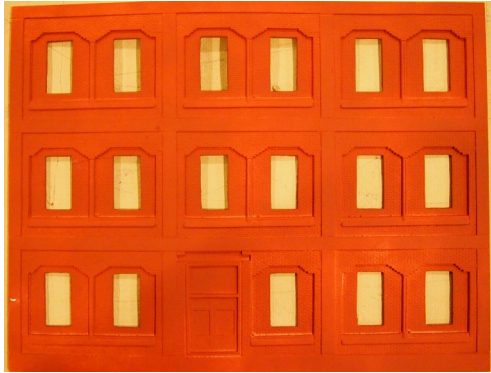
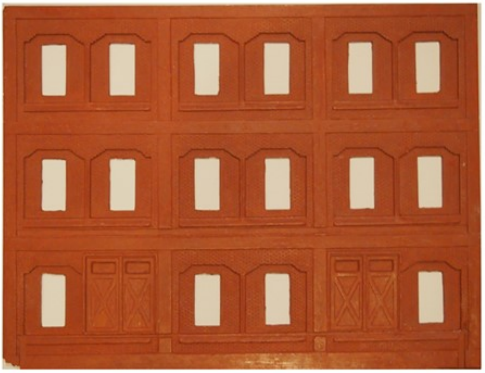
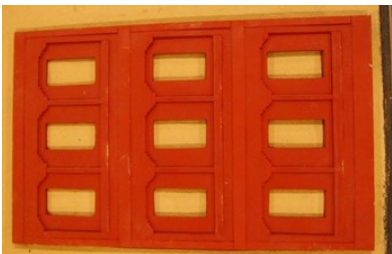
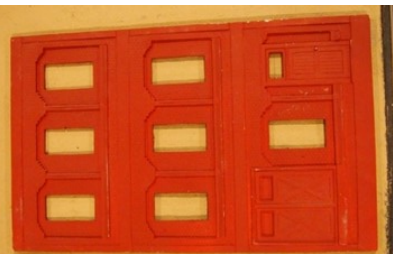
Congratulations, you have purchased the Korber Models #950 Flag Company. The Flag Company is one of the classic Korber O Scale kits. This structure represents thousands of buildings whose back could be seen along the tracks all across the nation featuring a combination of cement structural framing with brick construction.



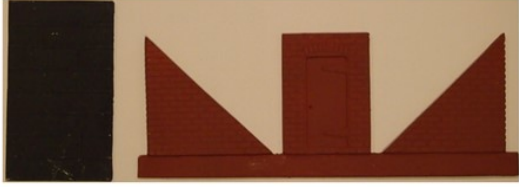

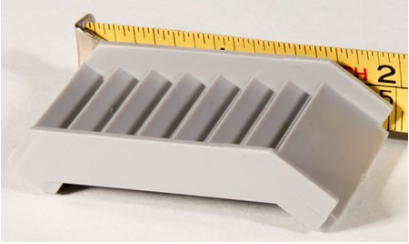
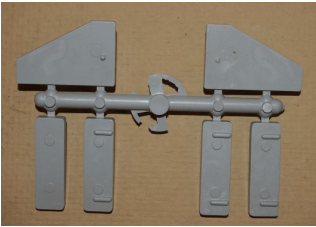
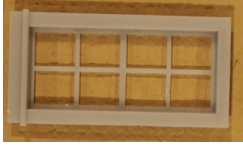
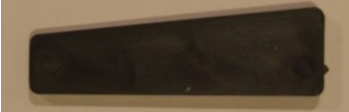





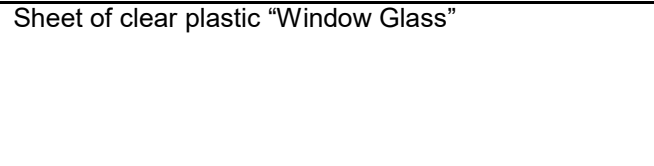

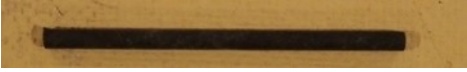


You can follow the simple, step by step instructions outlined in this document to easily assemble this great looking addition to your layout. We have covered not only the required key steps to build the building so you can get it on your layout the quickest, but have also included several optional steps 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.


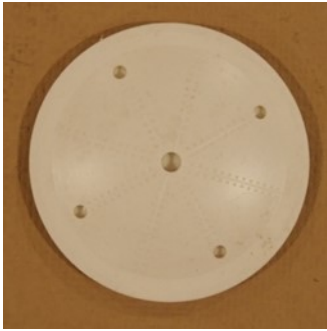

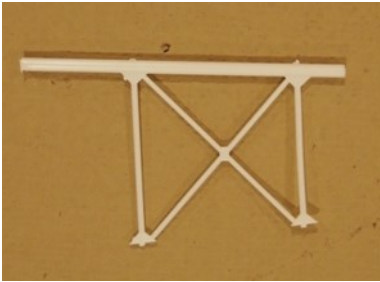
Before you start you may want to read through the instructions to get a feel for the things you will be doing, and the basic order in which they will be done. You are on your way to adding a centerpiece to your layout, so let's get started!

Parts list – (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.

Qty	Description	Qty	Description
1	Front Wall with 17 window and double door 	1	Back Wall with 16 windows and 2 double doors 
1	Side Wall with 9 windows 	1	Side Wall with 7 windows & doors 

Qty	Description	Qty	
1	Loading Dock Roof (12 1/2" x 2 1/8") 	1	Front Door Canopy 
1	Roof Access Stairway Kit (2 side walls, 1 wall w/door, 1 rooftop) 	1	Front Door Step sides 
1	Injection molded steps - Front Door Steps 	1	Injection Molded Steps - Side door steps 
50	Injection molded windows 4x4 	2	Injection Molded Loading Dock Roof side supports 
1	4 Loading Dock Roof Chain (shipped as single 12' chain) 	2	Loading Dock sides— Gray 3mm x 1" x 1-5/8" 
1	Loading Dock front -Gray 3mm x 1" x 12-3/8" 	1	Loading Dock top—Gray 3mm x 1-7/8" x 12-1/2" 
1	Roof material 12 7/8" x 6 1/4" 	2	Sheet of clear plastic "Window Glass" 
1	950 - long may it wave flag company sticker 	1	930 roof top steel water tank - center pipe - dowel 
3	12 1/2" 1/4x1/4 Loading Dock roof support beam & (2) roof supports 	4	5-3/4" 1/4x1/4 corner supports 

Qty	Description	Qty	Description
1	930 roof top steel water tank - top 	1	930 roof top steel water tank - bottom 
1	930 roof top steel water tank - tank 	4	930 roof top steel water tank - legs 

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

The Korber Flag Company, 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 accents on the roof line and side walls
 - 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 really like the new Gorilla brand super glue because it is thicker than most super glues, and allows you to put in 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
- 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.

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 are colored in a brick red and are ready to use, 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.

If you elect to paint the window frames, please follow the clean-up instructions in step 2 to trim windows prior to painting. Use a similar process as the walls for the window frames, and doors if you spray paint them. You may want to paint these same color to create a theme for your Flag Company structure.

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

Option

An optional step that adds a great deal of realism to any model of a brick building is to add the mortar lines to contrast with the red brick color. The ability to lay the wall sections on a flat surface, when done prior to assembly, makes this detail step simpler. There are several ways to do this, including use of water-based paint (Antique White or Light Grey latex well diluted with water until the consistency is as thin as milk), some commercially available products, and the use of light spackling compound to fill mortar joints. In all of these approaches the general concept is to spread the white product you are using over the brick walls, filling in the mortar line groves in the wall section, and then removing the excess from the top of the bricks. We will walk through the water based paint method.

One simple method we have used is to dilute some water based antique white or light grey craft paint to create a soupy like consistency.



- Cover entire wall section with diluted white paint, letting it settle and collect in the mortar lines
- Wait a few seconds and lightly wipe off excess paint using a slightly damp paper towel or soft cloth until paint is removed from the brick surface, but not the mortar joints
- Keep flat and let dry before moving so the paint in the joints does not run
- To remove haze from brick surface, apply a thin layer of Dull-Cote and wipe gently
- It may require several applications to achieve the mortar line that you want
- A finish light coat of Polly Scale Grimy Black done with an air brush will tone down the grey wash and give it an aged look. (Apply lightly and highlight the area where you would expect dirt to collect flat black spray paint can also be used)

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.

Once dry, this area should be washed using a mix of either watered down black paint, or alcohol and India ink. The purpose of the wash is to settle the black color in the groves/joints around the rocks and give definition. The wash should not be so dark as to overpower the cement/light grey color.

2 - Assemble & 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 simulate a finished window.

- Carefully remove any flashing from the window frames
- If the window frames have not been painted, and if you would like to do so, paint them now and let them dry before moving to the next step
- Place the walls to which you want to add windows brick side up 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

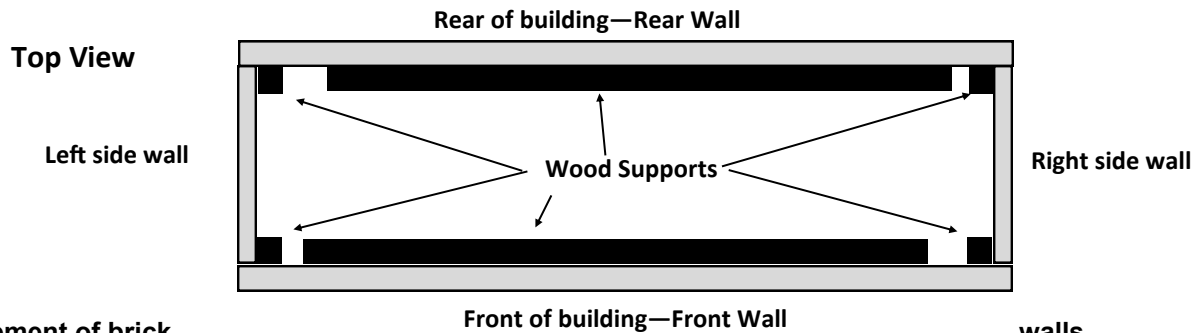
inside the window opening if installed from the back

- 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 falling out
- Prepare to cut and glue small pieces of window clear plastic material over the back of each window. Consider the following two window detailing options for the windows:
- If you want the window panes to have a hazed effect, 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



3 - Assembly of Main Structure

The assembly of the main structure is based on making a simple “box” when viewed from the top. There are four walls, two long ones in the front and back, and two shorter ones on each side. 1/4” square wood is used to add strength to the corners, and provide a lip or cleat for the roof section on the top. Below is a top-down view drawing of the relationship of the wall sections and the wood support pieces.



Placement of brick

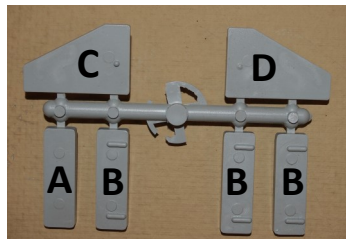
- Take one sidewall and the front wall and line them up to make a right angle. The use of a small square is helpful. The front wall should overlay the edge of the side wall. Glue the two wall sections together, and add the corner wood support piece in the inside corner to add strength and to create a solid right angle
- Some sanding may be necessary. Rough up edges only where you need to glue
- Repeat the last step but using the other sidewall, and finally repeat using the other front/back wall to complete the “box”
- Optionally use clamps as necessary to hold pieces together
- Glue the two 12-1/2” long 1/4” square wood pieces horizontally. 1/4” down from the top of the front and back wall sections as shown on the drawing above. Clamp them together and let the glue dry. The purpose of these pieces is to create a cleat or lip to rest the roof material on in a later step.

4 - Build and install Steps

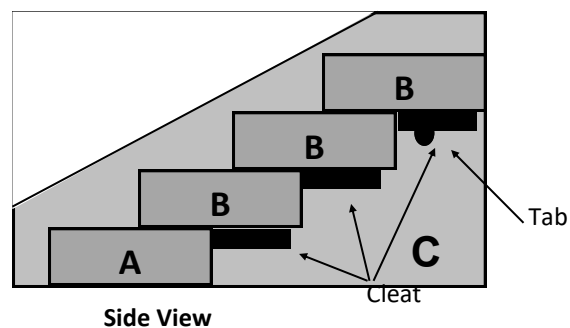
This kit comes with two different set of steps; a side step set to match the side door, and a front step set on the front side of the building (the back side has only loading dock doors and no steps)

The side door steps come in a single injected molded sprue that holds 6 parts including, (A) 1 step with no cleats on the bottom, (B) 3 steps with cleats on the bottom, (C) a left side wall and (D) right side wall. These parts are glued together to form a set of cement steps with side walls.

- Remove all the parts from the sprue and trim any remaining tabs
- Place a small amount of glue on the cleat side of part B and stack it on top of part A using the cleats to align the depth of the step

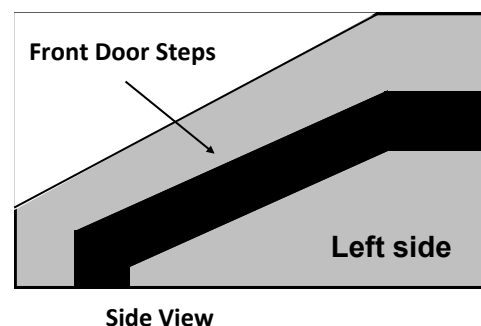


- Repeat using the other two **B** parts in the same manner to create a series of four steps as shown in the figure to the left
- Once the glue dries on the steps, glue the side walls on each side of the steps. Starting with side wall **C**, align the top step **B** to rest flush with the back of the step wall, and rest on the small tab molded into the wall. The bottom **A** step will be flush with the bottom side of the side wall
- Repeat the same process to glue side wall **D** to the step assembly. Once assembled the steps should look like the photo at the beginning of this section.



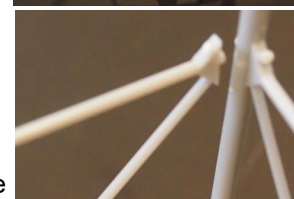
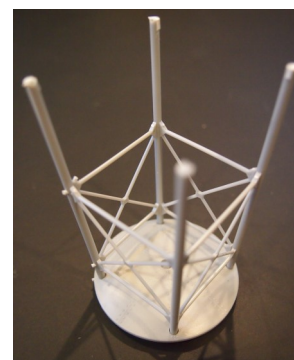
The front door steps are comprised of three parts: a single injected molded set of gray steps, and two side wall sections. These parts are glued together to form a set of cement steps with side walls.

- Remove any flashing on the parts
- Place the left side wall on your work surface oriented as in the drawing—the inside of the side wall should face up while the outside which has the rounded top edge should face down.
- Glue the front door steps part to the left side wall, aligning the steps to be flush with the bottom and right side or back of the side wall as show to the right.
- Repeat the same process to glue the right side wall to the step assembly.
- Once both sets of steps are assembled and the glue has dried, they should be painted a cement color and left to dry. The steps are place in front of the doorways once the rest of the model is complete.



5 - Assemble Steel Roof Top Water Tank

- 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 insert 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 their end 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 that the tank body has one end that is slightly larger than the other in diameter, and the larger end mates to the tank bottom. Glue in place.
- Next, simply add the tank top to the top of the tank body, and glue in place.
- Optionally you can glue the provided center pipe 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 Flag Company sticker to the tank. Set aside until a later step.

4 - Build Roof Top Stairwell

The roof top stairwell consists of four parts, of which three brick walls may be attached to the same sprue.

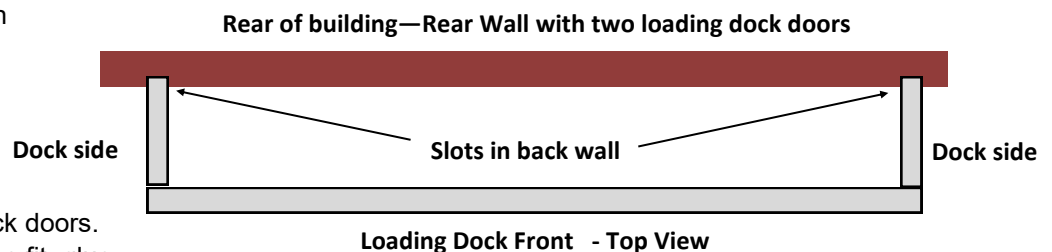
- Trim flash or sprue from the pieces to create a wall with a door, a left and right side triangular wall section, and a rectangular roof section.
- You may want to paint the walls in the same way you painted created mortar lines on the main building walls. At this time you should paint the roof section black. Additionally, you should paint the door detail in a color of your choice—you may want to use the same color you used for the doors and windows of the main building.
- Once the paint has dried, glue together the brick wall with the door, and the two triangular brick walls, one to each side of the door wall. Use a small square if needed to make a right angle joint.
- Glue the roof section to the sloped side of the two triangular wall sections to fully enclose the structure
- The final product should look like the photo to the right. Set aside as this will be attached to the model in the roof section.



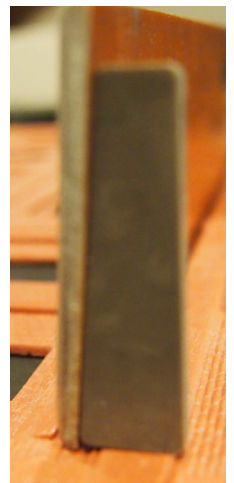
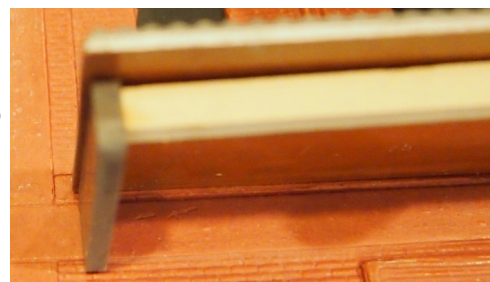
5 - Build and Install Loading Dock and Roof

The loading dock has four pieces, a front section, two sides and a top section each of which is constructed in a grey—cement color such that painting is optional.

- Glue the two dock side pieces to the dock front piece as shown in the diagram below—note that the front piece covers the end of the side pieces, creating 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 rear.
- Dry fit the loading dock top on top of 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 of the building.



- The loading dock roof has a corrugated side that should face up, and attaches to the rear of the building in a slot above the freight doors. This roof section is supported by two side supports that are glued to the back of the building and joined on the front by a piece of 1/4”x1/4” wood. It is simpler to attach the loading dock roof if you place the building front side down on your work surface such that the rear wall is facing up.
- Glue the wood 1/4”x1/4” piece between the two side supports and let dry. They should be attached to the smaller end of the side support and each end should look like the picture to the right. Let dry.
- Dry fit the loading dock roof in the slot in the wall above the loading dock doors, and fit the side support part made in the previous step under the loading dock and position as seen in the photos and glue the support in to place.
- Once dry, glue the loading dock roof to both the back wall in the slot, and to the support you just attached in the previous step.



- Optionally, you can add four pieces of chain between the loading dock roof, and the back wall of the model to simulate a chain roof support structure. The chain comes in a single length. Cut it into four three-inch long pieces, and attach to the roof and back wall similar to the chain seen in the photo of the building on the first page of these instructions. A small dab of super glue on the end of the chain will hold it, you may want to use small pliers or tweezers to place these parts.

6 - Install Roof

The #950 Flag Company has a single level rectangular flat roof made from a black material. The intent is to glue this piece to the wood structure which is about 1/4" below the top of the four walls of the building.

- The black roof material measuring 12 7/8" x 6 1/4" is designed to fit inside the four walls and rest on the two wood roof support pieces. You can glue in this place. You may want to paint the upper inside section of the walls black to match the roof material.
- The roof top water tank and the roof top stairwell should be placed on the roof in the positions you desire. You can optionally glue these in place.
- The canopy piece small half round part can now be attached to the front wall above the front door. Glue the piece into the slot just above the front door.
- Place the side door stairs, and the front door stairs (previously constructed) in place in front of the respective doors.

7 - Final Detailing – Weathering

Your Korber #950 Flag Company is now assembled and ready for placement on the layout. You may wish to provide some additional weathering before you install it, as a building next to the tracks would be a heavily used structure with a layer of soot, and 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 building. Once done you can spray the completed structure with Dullcote to remove any gloss or shine.

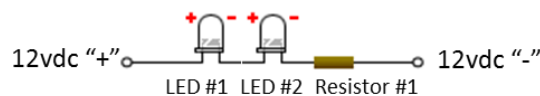
If you choose not to detail the inside of your structure, or light it, an effective and quick way to make a good looking building is to cover the widows with black construction paper from the inside. This creates a dark building look that is more desirable than the view in to an otherwise empty shell of a building.

Option – Lighting

Interior lights add more realism to this great structure. Following the few simple steps outlined here you will be able to add this improvement to your model. Although we outline using individual LED's for the lights, many use incandescent bulbs, or the LED's that come on a role pre-wired work well too. Remember that LED's need 12VDC and are not designed to work directly from track power or another AC source.

The 3mm flat-top white LED's work well as they spread light over a 120-150 degree angle as opposed to the 30 degrees or so that the dome-top LED's give providing an even light inside the building.

This simple diagram shows the basic electrical circuit. The value of Resistor #1 (R1) depends on the LED's used. You can find a good on line calculator and more information on LED's at <http://led.linear1.org/led.wiz/>.



The photo shows how a harness for 2 LED's was made. On top are the LED's and a current-limiting resistor (value depends on what LED's you're using) soldered to black wires. On the bottom, shrink tubing has been added to hide the resistor and the solder joints prior to assembly. You need to be careful to keep the polarity correct on the LED's (don't get the "+" and "-" wires mixed up). Make up and test each harness prior to installation. Once the harnesses are assembled (you may need several for the size of the building), glue them in place on the inside roof and wall of the structure.

