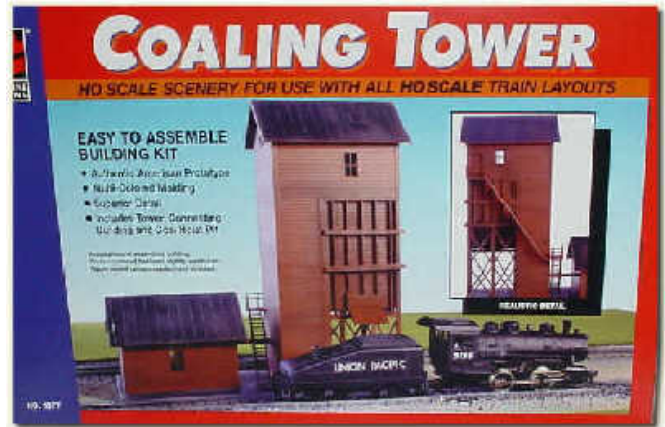


Build a Classic Beginner's Kit Like it was from Scratch!

-a JSGeare Tutorial

Especially if you're new to modeling, building up model structures can be frustrating, time-consuming, expensive, or all three. At the same time, snap-together or ready-made kits, while they have their place, don't allow either the beginner or the experienced hobbyist to give their model railroad or other diorama the appearance they really want.



So, here is a way to get good looking results quickly and inexpensively, using a classic beginning modeler's kit that can, with a bit of ingenuity and care, produce a very convincing addition to your layout.

It seems pretty ordinary, this Life-Like Coaling Tower kit, made of plastic. And it's been around for years. But, even if you built it just as it comes in the box, you'd have a decent model. It comes in 3 colors, so even if you don't paint it, it's decent. Embossed wood grain and tar papered roofs are very nice, really. The windows have actual frames, and real glass (well, clear plastic). Maybe that's why it is still selling so well -it is a good model, just as it stands.

While the coaling tower is by no means a "craftsman style" kit, it will, nonetheless, give you a first hand acquaintance with some of the challenges and techniques of craftsman style model and scratch building. The walls and roofs have embossed ridges to help you line them up, but there's no "snap together" feature. And some features, such as the steps and railings, have no alignment aids or mounting holes whatsoever. You've got to "figure it out" for yourself.

This instruction set has been prepared to help you turn a good looking but ordinary model into something special, and, in the process, expose you to some of the methods of advanced modeling. I should also mention that while the supplied instructions from Life-Like are easy to follow, they tend to tell you the desired result as opposed to the methods to get that result. And sometimes, we frankly take issue with what they tell you to do. Our instructions are therefore a helpful supplement to the ones in the box, even if you plan no customization at all. You'll find pointers on how to accomplish the most difficult parts of the assembly, such the parts with no mounting holes or positioning ridges or grooves built in to the model.

These instructions are based on what I learned from building several of the coaling towers, simply to learn the most effective way to go about it, and as pictured below.

I suggest you do read through the instructions that came with the kit, simply to become familiar with the parts, the over-all fit and the order of assembly. "Dry-fit" (test fit) some components so you'll know how they go together later on. If you need a copy of the factory instructions, follow this [coaling tower instructions link](#) to see and/or download.

Once you've become familiar with the pieces, read through the following material (several times) so you see where and why we have made changes.

With both sets of instructions handy, let's begin to get ready:

But First . . .

Let's get ready to get ready:

SUPPLIES: Other than glue and sandpaper, none of the following are necessary to build the model; however, you'll use them all if you want a first rate model.

- Glue: CA type glue, the kind that sets in 15 seconds and has a "crack filling" property.
- Paint: Select either quick drying spray paint or brushed on cheap acrylic from the craft department, or use both in combination. The spray paint is fast, coats evenly and is expensive. The acrylic requires several coats, but can be more realistic (because of set-in brush strokes) is cheap and dries quickly as well.
- Tape: Masking or "scotch" tape, to temporarily hold pieces in place.
- Abrasives: Fine sandpaper or an emery board, to prepare surfaces for glue and for weathering effects.
- Work Surface: Some old newspaper or flat section of cardboard taped down to keep it still, is fine.

TOOLS: Again, you probably COULD assemble the model with none of the following, but would find it time-consuming, frustrating and likely to produce sloppy results. I recommend:

- Applicators: To apply glue precisely. Round toothpicks with sharp, pointy ends are perfect.
- Cutting and boring tool: A hobby knife with a pointed sharp tip works well, and, optionally, a teeny tiny drill bit.
- Scarifier: Such as a tooth brush style wire brush or heavy steel wool, to scratch up wall surfaces and give more depth to the wood grain.
- Precision screw driver: A jeweler's style straight screw driver, perfect as a scraper to remove paint from narrow, small areas.
- Square (optional): a modeler's square or any rectangular object whose adjoining surfaces are as close to 90 degrees as possible, to help align various sections of the kit.

PREPARATION: Examine every piece which is to be glued to locate surfaces which will be glued to some other piece. Lightly sand any portion that will take glue, to remove the polish from the plastic and smooth away fragments from the sprue. Failure to do so will make the glue take longer to dry and result in poor bonding - this is a guaranteed result if you don't sand surfaces to be glued together. If you do follow this instruction, assembly will go quickly and your model will be solidly built.

ALIGNMENT - THIS IS IMPORTANT: With the exception of window frames and doors that slip easily into the cut out spaces for them, there are no snap-together features in this kit. There are some embossed alignment ridges here and there, but they have no structural function whatsoever and don't do anything to square up assembled sections. To complicate matters, the taller tower pieces are very slightly warped, so that walls joined tightly at one end may be separated at the other.

In my experience, the best way to assure that your tall tower wall sections are properly aligned is to assemble them with the bottoms resting on an absolutely flat surface so that bottoms and tops are positively even. Spot glue near the bottom of two adjoining wall sections, and, with the bottoms sitting on a flat surface (tops exactly even) hold the glued portions firmly together while the glue sets, and as near to a ninety degree corner as possible. The base itself may be helpful for alignment, but otherwise any evenly squared off object may be used. When the glue is cured enough to hold the bond, set these pieces aside, standing up, and work on other building sections.

Then come back to the long tower wall sections which were spot glued, and apply a bead of glue several inches long from that spot and running toward the far end. Now, hold THAT glued portion together until a bond has been created. Repeat this procedure, which will gradually seam the two sections together, creating a tight join along the entire length.

Order of Assembly - Buildings: In general, whenever you join sections together to form a larger corner section, the pieces involved may be set aside for the glue to cure and bond while you work on other sections. Alternate from sections of one structure to another, back and forth until all are complete. This gives you stiff, well cured sub-assemblies that won't collapse when you add additional components to them as would happen if you try to finish each structure completely before moving on to the next.

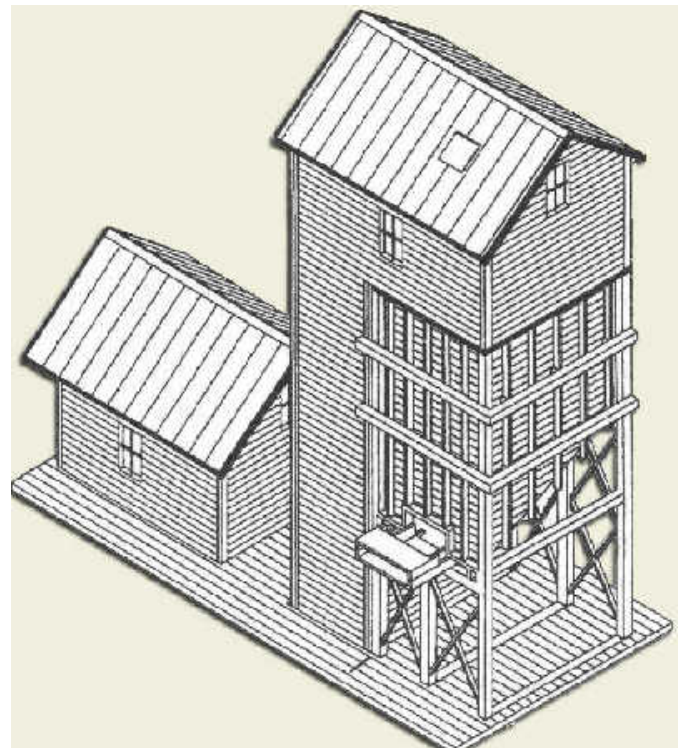
Now, let's get to work!

Painting:

Modelers will frequently paint all the parts of a model before assembling them. But in some cases, we'll partially assemble some portions of the kit BEFORE painting, because this will give us better, faster results.

Roof sections have a convincing, somewhat blistered tar paper pattern already embossed on them and require nothing more than a few coats of flat black paint. These can be painted immediately a dull, flat black and set aside to dry.

Doors and Windows: Next, consulting the supplied instructions, test fit some windows and doors so you see how they slip into the spaces for them, and exactly where you'll apply glue. Paint the exterior surfaces only of window frames and doors (if you



choose to paint them at all). When dry, remove any paint build up that would interfere with the fit, or that would cover any surface that takes glue. Test fit again when dry to be sure of an easy installation and glue points that are free of paint.

Now, glue the glass to the backs of the windows as per the supplied instructions. Set aside to dry.

Walls: Note some wall components include heavy exposed structural members which could be either heavy timber or metal. If you wish to give them a separate color from the rest of the exterior, paint them to suit, now, and let dry.

Otherwise, partially assemble the buildings BEFORE painting the exterior walls. Refer to the supplied instruction sheet to identify parts. Assemble the buildings, leaving tops and bottoms open. Save roof sections for later. The open structures will give you enough space to reach in and apply windows and doors later. Sand away any exterior appearances of glue on the exterior. You may also drag a wire brush or heavy steel wool over the walls to gouge up some shreds of the plastic, simulating splintered, old wood. This scarring may be done before or after painting, or both.

You may now paint the open shells of the buildings quickly because (except for any separately painted exposed structural members) there is nothing in your way to slow you down. If you had painted the wall sections BEFORE assembly, the merest spot of glue would make a mess of the paint, and sanding paint from any dried glue residue would require you to repaint.

Windows and Doors:

With your paint work complete, you can now install the windows and doors, reaching in from top or bottom of the buildings. Done!

Finish the Tower:

As the supplied instructions indicate, you may now glue the hoist tower and coal supply (step C in the instructions) together to give you one structure which should stand up on a level surface. For now, ignore the instruction under step B, 5 regarding attachment of the corner landing -we'll do that AFTER the 2 tower sections are bonded into a single structure.



Exterior Stairs and Railings:

If you wish a separate color for these components, paint them BEFORE assembly: these include steps, railings and a landing that attaches to the corner of the hoist tower.

This is the most difficult, tedious part of the job, because with one exception there are absolutely NO ridges, mounting holes and pins or anything to guide placement. That exception is the landing on the corner of the tower, whose location is marked by a ridge that wraps around the corner.

The Landing and Support: It is critical that this landing be as dead level as possible so the steps and railings will properly join to it later. The supplied instructions cover this operation too quickly as step 5 under section B on the 2nd page (the instructions we ignored until now).

You may want to read the following material a few times before proceeding, to be certain you know exactly how you will proceed.

Take the landing, and the small, triangular support that goes underneath it and hold them against each other and the tower so you see how they are to be assembled to the corner of the tower and to each other. Make sure that all surfaces to be glued have been sanded. Remove any paint from points of contact on the building INCLUDING the vertical corner trim board on the tower where the support will be glued. Test fit the landing and support to be certain no paint remains where they will be glued to the building. You may want to rest the tower on its side so it won't topple when you attach the landing.

When you are ready, apply a thin bead of glue on top of the ridge on the corner of the tower walls; this is where the bottom of the landing will rest. Quickly turn to the landing support (small triangular piece), and apply glue to the edge of the landing support that attaches to the underside of the landing and to the edge that rests on the corner trim board of the tower structure. A toothpick makes a good applicator for this. At this point, you now have glued surfaces awaiting attachment.

Now attach the landing to the building, with the edge facing the tower wall resting on the bead of glue along the ridge. While holding it in place, immediately attach the support to the bottom of the landing and to the corner trim board of the tower. If the edge of the support is dead flat and flush to the corner board, then it will hold the landing at a dead 90 degree angle from the tower. Firmly hold the support flush against the corner board, and hold the bottom of the landing flush against the top of the support. When all attached surfaces are firmly flush, then release and let dry. Practice this instruction with NO glue, so you know exactly what to do.

The steps: You will note that there are only three ways to judge proper attachment of the steps. One is the edge of the landing at the top of the tower; another is the landing we just installed on the corner; and the third is the bottom of the tower. There is no help anywhere else, no ridges or guiderails - nothing. The best approach for the longest steps from corner to top is to mark a line along the tower from top landing to corner landing. Do this by test fitting the steps so they meet properly at each landing, then draw a line on the exterior tower wall along the underside of the steps using the bottom of the steps or any available straight edge as a guide. The underside edge of your steps that attach to the side of the tower should fall exactly on that line when you glue it on. Test fit several times to be sure that the tops and bottoms of the steps correctly meet the edge of the landings at either end.

When you've got it right, scrape away a thin line of paint above your marked line; likewise from the edge of the



steps that attach to the tower. The blade of a small strait screw driver is good for this work. Same treatment to edges of the landings where steps meet them. Not all paint must be removed -just enough to provide good clean surface areas for bonding of plastic to plastic. Note that the steps will cross a raised vertical corner trim board along the hoist tower, which has the effect of pushing the steps away from the building. Mark the steps where this cross-over occurs, and gouge out enough plastic from the edge of the steps at that point to form a gap which will cross the trim board and allow a flush fit of the steps to the structure walls.

Test, test, test. Pick up your steps and place them where they will be glued, so you know how you will pick them up and place them against the building when glue time comes. Observe contact with top and corner landing surfaces. Get your "moves" right so there is no fumbling or uncertainty when you are ready to affix them with glue.

When you ARE ready, apply a thin coat of glue to contact points on the building and landing surfaces - not to the steps. Then gently press the steps onto your glue line and adjust for good contact at both landings.

Steps from door at bottom of tower up to corner landing follow the same procedure.

Take a deep breath.



Railings: This is another tedious job because, again, there are no mounting points or guides. You'll need to make your own. Begin by test fitting to see where the railing posts should attach to steps and landings, and meet each other properly. If your corner landing is not sitting exactly level, the ends of railing sections may be cocked at an odd angle. You can snip away small sections from the bottom of some rail posts so as to make all railings meet the landings and step surfaces uniformly. Once you see where the bottom of the rail posts should fall, then use the tip of a sharp hobby knife or a small drill to carve out slight dimples in the steps or landings at some or all of those locations. The idea is not to make a mounting hole for a friction fit, but rather to provide a catch that will help you align and keep railings steady when you glue them on. Again, removing paint is key. And yet again: test, test, test so you're sure of the moves. You may want the tower standing erect at this point, so the weight of the railing helps make the bond to the steps. If so, tape the tower to the work surface so you don't knock it over.

Apply dots of glue to cleaned dimples on steps and landings, (not the posts) then set the ends of the posts in your dimples. Hold briefly to let the glue set, then let go.

Roofs:

I recommend AGAINST gluing the roof sections on to the the tops of the buildings. Rather, assemble them to one another, so that you may later remove the entire roof structure to add lighting or

otherwise modify the interior. To do this, first sand the sloped edges of adjoining roof sections so they'll take glue well. Test fit to the building to be sure of a tight join along the peak. Now, firmly TAPE one roof section in place, and test fit the other section to it. When the fit looks right, run a piece of tape along the entire peak to join the two. Then tape the entire roof to the building. Make sure roof sections fit each other and fit the building. It will look ugly at this point, but the key is to make sure placement is correct and FIRM.

Now turn the building upside-down. Your tape will hold the roof on. Apply glue to the undersides of the roof sections where they meet at the peak. The glue will naturally wick into the join between the 2 sections, but the tape along the peak on the top of the roof surface will keep it from dripping through. Optionally, you may want to drop in a piece of balsa or similar material to add some muscle to the joined sections. When dry, carefully cut away the tape to free up the finished roof, and peel away portions of tape still attached to roof and building walls. Now, add the other components that fit to the roof (fascia board, etc.) consulting the supplied instructions and/or freely substituting materials of your own.

One of the most maddening aspects of this kit is the coal chute, which is shown mounted in various different configurations depending on whether you are looking at the picture on the box, the instructions, or my finished work. My only advice is to look at actual coaling tower pictures (or pictures of other models) and fashion the supplied parts (or your own) to make the chute look as close to real as you can.

Putting It All Together: You may now return to the supplied instructions to finish up - inserting the hoist crankshaft and the exterior bracing, and placing everything on the base. There is also a drop pit supplied for receiving dumped supply coal from a hopper car -use it, or not.

Finishing Touches and Lighting:

You may in some cases use your own materials instead of parts from the kit: fascia boards of balsa or basswood, for example, are more convincing than the supplied plastic. I have also used my own doors, which are sometimes left hanging open, sometimes with a worker going in or out.

The exterior stairs in particular are most UNprototypical. They appear to be solid, like concrete. But if they were, they would never hang on to the frame walls. You can either add structural members to support them as concrete, or mask the solid appearance by adding a stair carriage of strip wood or plastic along the outer edge to hide the solid sawtooth pattern as seen from the side.

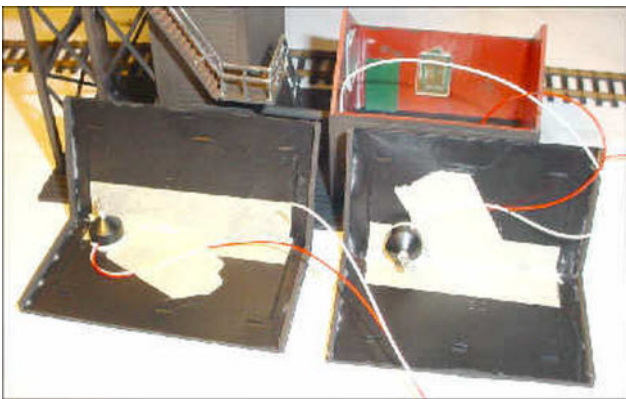
My color for the drab, greenish-brown model was made by mixing together Plaid Brands "Nutmeg Brown" #20432 and Black #20404. I mixed small lots of it, and applied the resulting color until I ran out, then I made some more. I did NOT attempt to exactly duplicate the original color I made,



but just "eye-balled" it to get close. The result is a somewhat uneven application of paint, and that is exactly how a weathered, real structure looks -the paint is NEVER perfectly even from one place to another, because weathering itself occurs at different rates in different places.

The blistered tar paper roofs are very believable and require only the application of flat black acrylic to make them look real. I left some of the shiny black exposed, because a real roof would be shiny in some spots. Likewise, I spray painted the railing silver, then brush applied a weak solution of black paint to "corrode" it.

Another finishing touch would be the addition of some loose coal around the property. Make some by scraping a charcoal briquette to create fragments and dust. Paint on some patches of white glue here and there where coal debris would accumulate; then sprinkle your particles over the glue. Come back over that with some drops of white glue diluted with water to seal and bond. Build up layers, if you like. The white glue will be shiny when dry -exactly right! Coal IS shiny.



One of the most pleasing enhancements is the addition of interior and exterior lighting. This is one very good reason for allowing the roofs to be removable -so you can easily place fixtures at various locations. As you can see below, I have mounted "stick-on" Model Power grain of wheat bulbs to the undersides of the roofs. Let the wires dangle through the bottom openings of the structures and supply 12-16 volts to light 'em up!

The "stick-on" light button adheres well enough at the bottom, where it mounts to a flat roof or wall interior surface. But only the rim of the lamp holder is on the

sticky surface, so it tends to pull away. Apply a dab of glue to secure the holder to the button, or tape 'em up -as you see I have done.

Are these "scratch" structures? No, not really. But with a little extra time and effort, they are pretty convincing models and could be mistaken for made from scratch or a much more complex kit.

I hope you found building and modifying this model to be interesting and rewarding, and welcome your comments, to: jsgiare@yahoo.com.

You may review my other instructional material, other model railroading information and see my sale inventory at my website: www.ezbizwebsite.com

I hope to see you there! Thanks for reading.