



## Southern Pacific Power House

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This kit was developed from drawings made in 1924 of the power house at Mount Hebron, California, and a photo of the power house at Wendel, California. This was a common standard Southern Pacific power station, which supplied steam and electricity to other buildings, typically maintenance structures such as shops and repair facilities.

### **Warranty**

All Sandy Point Models products are guaranteed against defects in manufacturing. Any defective part will be replaced or repaired as determined by Sandy Point Models after inspection of the part. Contact Sandy Point Models for a return authorization prior to returning any defective part.

## Before you begin

Identify all the parts with the parts list on the last page of these instructions. Check that you have the correct quantity of each part, and that the parts have no defects. There may be extras of small parts or parts that are fragile. Make sure you can identify each part, as some parts can look similar to others.

Wood and paper parts may change size due to atmospheric conditions. This should not cause any problem with assembly, but may require a light sanding to reshape some parts.

## End User Information

This kit is not intended for novice users or users under the age of 18 without the supervision of an adult. Additionally, the user assumes all liability regarding the proper use of this product or any product suggested in these instructions. The user must become familiar with the kit instructions, and any instructions on any product used to complete this kit. Please read and follow any safety procedures for any products used to complete this kit. Details may vary from the sample model shown in the pictures.

## Colors

The SP Power House was typically painted mineral red with black trim. In the prototype photos, it appears the window and door mullions were white. The sample model shown in the photograph was painted with Rust-oleum Brown Rusty Metal Primer, Flat Black and Flat White. If you use spray paints, you will also want a brushable flat black and freight car red for touchup. The roof was textured using Rust-oleum Aged Iron "Multicolor Textured" paint, although any color would be fine.

## Adhesives

**Aleene's Tacky Glue** is used for most joints. It dries clear, so it works very well for mounting the windows into the walls. Elmer's Glue-All can also be used, but requires more time to bond.

**3M Super 77** spray adhesive is used to attach the siding to the walls.

**ACC** (superglue) is used for attaching the chimney and other detail parts.

## Tools

You will need a hobby knife with a new, sharp blade, sanding sticks or emery boards of medium and fine grit, a 1/16 inch drill. You will need a squaring fixture with magnetic clamps, or you can use a machinist's square. Small clamps, while not essential, are helpful.

## Construction

### Pre-painting

*All painting should be done in a well-ventilated area with proper eye and breathing protection.*

The Door Frames, Window Mullions, Door and Window Casings, Roof Cap Strips, Roof Flashing Squares and Strips have peel and stick adhesive. On some small parts it can be difficult to tell which side has the backing sheet. Using your hobby knife, lift up a corner of the peel-off backing sheet and then you'll be able to tell which is the front. Place masking tape on a board or piece of cardboard with the adhesive facing up, and stick the parts on the tape, with the peel-and-stick backing against the tape.

The resin cast parts are the gutters, downspouts, and oil storage tank. Use a sharp knife to remove any molding flash, and then wash the parts in cold water with a mild detergent. Allow to completely dry before painting.

Paint the following pieces flat black: Window and door casings, windowsills, door frames (the ones without the mullions), fascia boards, downspouts, chimney. Make sure to spray lightly from all angles so the edges get painted. On the chimney, spray into one end so the inside gets painted for about an inch.

Spray paint the window mullions and doors the flat white. The grooved side of the door is the front. Note that the door does *not* have peel and stick backing.

### Pre-fitting the windows

The window openings may need to be enlarged slightly for a perfect fit. Peel the protective backing off one side of a window glass. Test fit this window glass, unprotected side toward the outside of the structure, into the back side of each of the seven window openings. It should fit snugly, but go in easily and not need to be forced into place. You may need to sand the openings to get a good fit.

### Assembling the walls and floor

This first gluing step will determine if your kit goes together square, so that all subsequent parts will fit well. To orient the side walls correctly, make sure the horizontal scribed line is near the *bottom* of the wall, facing *outward*.

Glue together the front wall, one side wall, and the floor. This is easy to do in a squaring fixture - using the magnets to hold the parts together will provide enough clamping force while the glue cures. If you do not have a fixture, use a machinist's square and clamps to hold things square and apply clamping pressure.

After these first glue joints have fully cured, attach the other two walls. The walls may not all contact the floor, but the corner joints will provide adequate strength. After the glue dries, sand any protruding tabs flat with the outside wall surface.

## **Assembling the cupola walls**

Using the squaring jig or machinist's square, assemble and glue the cupola walls. The peaked walls fit between the slatted walls. Make sure the end of the slatted wall is flush with the face of the peaked walls. Do not put the roof pieces on yet.

## **Applying the corrugated siding**

Start with an end wall – the rectangular wall without a door. On the outside, apply masking tape covering from the scribed line to the bottom of the wall. Apply masking tape to the insides of the walls so as to cover the window and door openings from the rear, thus protecting the inside walls and floor from spray. Apply masking tape and paper to cover the other walls to protect from over-spray. Spray the adhesive to coat the entire wall, making sure the adhesive goes to all wall edges and the door and window opening edges. Place the first strip of siding as accurately as you are able so the bottom edge is aligned with the horizontal scribed line near the bottom of the wall. Each piece of siding should extend slightly past the corner, so it can be trimmed later. Tap or gently press the siding to the wall to get a good contact, but be careful not to flatten the corrugations. Press firmly at all edges – the wall corners, the top edge of the wall, and window and door openings. Place your second strip with its edge pressed against the first strip, with the corrugations aligned with the lower strip. Keep adding strips to cover the entire wall. The last strips should extend past the top of the wall, and will be trimmed later. Let the siding overlap the window and door opening edges – we will cut out the openings later.

Allow the adhesive to fully cure, and then trim the excess siding. To trim the wall edges, place the wall with the siding facing down on a cutting mat, and trim the two corners and the roof edge with a new, sharp blade. Use light strokes to avoid pulling or tearing the siding.

Apply the siding to the two end walls, trim the corners, then apply the siding to the side (peaked) walls and trim the corners. Now cut the window and door openings. Cut from the outside, always pushing the blade toward the inside of the building so you do not lift the siding from the wall. Trim the siding flush with the door and window openings, being careful not to enlarge the openings

Finally, apply siding to the peaked end walls of the cupola. You can use the spray adhesive here, but it might be easier to use Aleene's Tacky Glue on these small pieces.

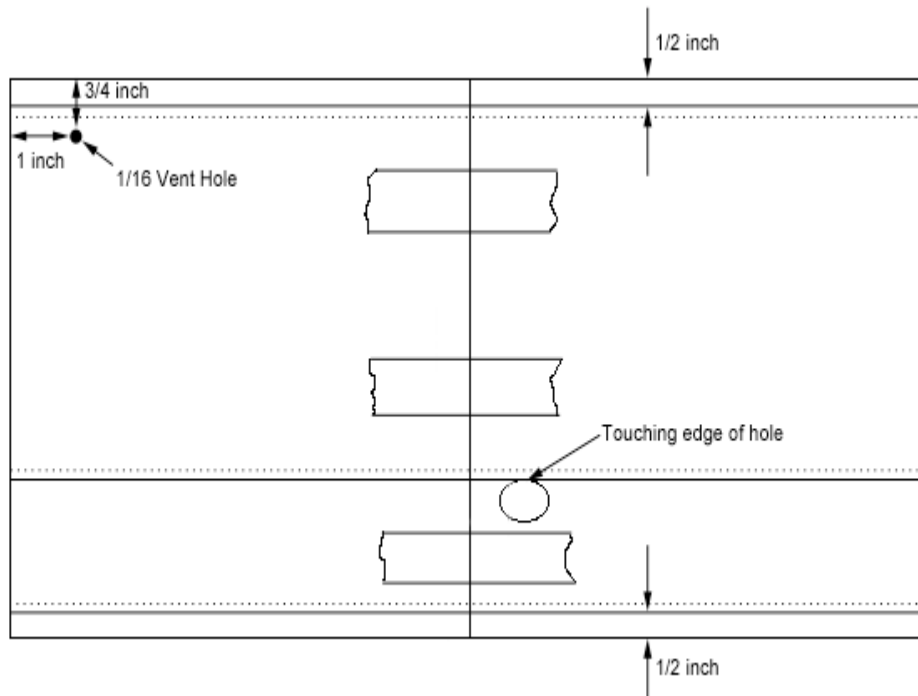
## **Painting the walls and cupola**

Spray paint the walls and the cupola mineral red. Allow to dry about 10 minutes, then paint the inside edges of the window and door openings flat black. Set these assemblies aside to dry.

## **Assembling and painting the roof**

On the inside (non-scribed) surface of the roof panel with the chimney hole draw lines parallel to and 1/2 inch from the short edge. On the panel with the hole for the chimney, use a square to draw another line parallel to the same edge and just touching the hole.

Each of the roof panels has five equally spaced scribe lines. Before assembly, you may wish to make the scribe lines deeper for more definition. Note that one of the scribed sections is narrower than the other five. This section goes at the ridge of the roof. Place both roof panels on a flat surface with the scribed side face down, and with the narrow sections together. Use masking tape to tape the two sections of the roof together, being careful not to tape where the lines are:



Use a straight edge to continue the lines onto the panel without the chimney hole. Drill a 1/16 inch hole for the vent, set in 3/4 inch from the edge of the roof and 1 inch from the eave. Glue one roof support to the roof panels at the edge (not the chimney hole), with the support placed toward the middle (between the solid lines and dashed lines in the diagram). Use a square to make sure the support is vertical. Repeat with the support at the other edge. Temporarily place the third roof support so it is just touching the edge of the chimney hole. It is placed toward the center of the roof. Mark on the roof support where it touches the chimney hole. Use a square to draw two lines perpendicular to the bottom edge of the support and about 1/4 inch on either side of the mark. This will help set the chimney plumb when it is installed. Glue the third support in place, touching the edge of the chimney hole. When these glue joints have hardened, remove the masking tape from the inside ridge.

Temporarily place the cupola in the center of the roof. With a sharp pencil, mark the cupola position on the peak of the roof. Lightly score the shorter flashing pieces along the center line, being careful not to cut through the material. These will form the ridge cap. Remove the peel-off backing, and apply the piece to the peak, bending it on the score line. Press firmly in place. Repeat from the other cupola mark, leaving a gap where the cupola will go. Glue the two small roof panels to the cupola. Attach another ridge cap to the cupola. Trim all ridge caps flush with the edge of the roof.

The roofs are painted with a combination of paints to produce a texture. Spray the underside of the roof panels flat black (to prevent warping), but avoid painting the center roof support. Mask off the cupola walls. Spray the outside of the roof panels with Rust-oleum Multicolor Textured paint, both the main roof and the cupola roof. Spray some of this on a scrap board before you spray the model – this paint is at a higher pressure than other spray cans and you need to avoid applying it too thick. The paint may look milky, like it is puddling, but this will level itself out as long as you don't spray too much paint. Immediately after spraying this texture, run the back edge of a knife through the scribed lines in the roof to clear away any paint.

When the texture paint has dried, apply the long thin flashing pieces to the surface of the roof at the edges of the roof, from the ridge cap to the eave. These butt against the ridge cap. Trim the excess flush with the eave of the roof. Apply the large square flashing piece centered over the chimney hole. Apply the smaller square flashing piece over the vent hole. Use the tip of a knife to cut the vent hole through the flashing. It may be easier to cut just a slit, and then push a round toothpick in to open this hole. Insert the vent pipe, hold it vertical, and glue it in place using ACC from the inside of the roof.

Spray the roof flat back. Spray the roof supports that will face outward flat black. If you are going to weather the roof with paints, it is easiest to do so now. The sample model is weathered with a light spray of Kryon Chalky Finish Anvil Gray applied by holding the can about two feet away from the model and applying a light coat, trying not to cover the entire surface.

## Doors

Refer to the parts list to make sure you can tell which is the door and which is the door frame. Remove the peel-off backing from one of the door frames and attach the frame to the front (grooved side) of the door. Test fit this to the door opening, and lightly sand the door edges if necessary. Sand the door glass if necessary so that it is the same width as the door. Remove any protective film from the glass, and glue it to the back side of the door, being careful not to get any glue on the part of the glass that will show. Test fit the door in the opening again and sand if necessary. Glue the door into place.

*Option:* if you want to install a door partly open, the doors slide toward the center (see the floor plan). Simply glue the door to the inside wall.

## Windows

Peel the protective backing off both sides of all the window glasses. Peel off the backing from one of the window mullion grids and attach it to a glass, being careful to align the edges of the two pieces. It is best to align the two corners of a long edge, then tilt the mullions into place. A light tap at first will allow some movement to realign as necessary. When alignment is achieved, press the two parts together firmly. One at a time, test fit each window into its opening, then apply a thin coat of Aleene's Tacky Glue to the edges of the window glass and push the window assembly into place from the inside of the structure, mullions facing out. Do the same for the remaining six windows.

Glue a windowsill into each window opening. The doors and windows have three pieces for each casing. Make sure you know which pieces are for the doors (longer) and

which are for the windows (shorter). Cut the pieces from the fret and touch up the paint where they were attached to the fret. Peel and stick the short, angled (mitered) pieces above the window or door. Test fit and trim the longer vertical casings, then peel and stick the vertical casings.

### **Finishing the roof**

Cut a hole in the flashing over the chimney hole, one edge touching the roof support, and just large enough to allow the chimney to be inserted. Insert the chimney through the hole from the top of the roof, so it extends one inch into the roof. Align the chimney with the marks you made earlier on the roof support. Use ACC to cement the chimney to the inner roof support

Attach the gutters by cementing the tabs to the underside of the eaves with ACC.

Glue the cupola in place.

### **Final Details**

Clip the four fascia boards off their fret. Touch up the paint where they were attached to the fret. Temporarily put the roof in place, and glue the fascia strips to the wall so they are just touching the underside of the roof. Do not glue the fascia to the roof. The fascia will extend past the outer wall corners.

Paint the foundation below the siding a concrete grey color. Put the roof in place. The chimney side of the roof goes closer to the doors.

Cement the downspouts to the walls with ACC. Trim the longer angled piece if necessary so that it fits behind the gutter.

Apply any weathering you wish, and the main building is complete.

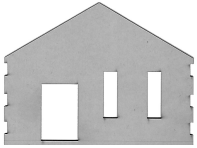
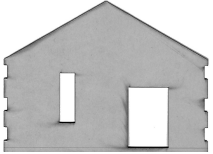
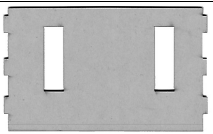
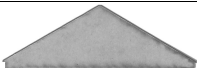
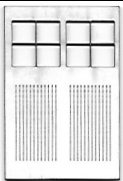
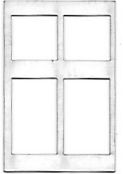

### **Tank**

Attach the safety valves to the tank dome. First mark two spots on the dome – half way from the top edge of the dome to the top of the tank, and on the centerline of the tank. On these marks, Drill 1/16 inch holes at a 30 degree downward angle, then enlarge the hole to 7/64 for O Scale, or 5/64 for S Scale. Cut the valves from the casting sprue leaving some of the angled post. Insert the post in the hole and attach with ACC.


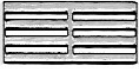
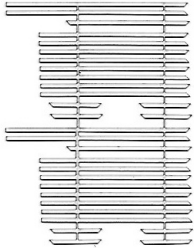

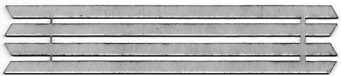


To form the plastic rod into piping, figure out where you want to make a bend. Hold that about an inch above a candle flame, applying a slight bending pressure. As soon as it bends at all, immediately remove from the flame, quickly bend into shape, and let cool.

Paint both the tank and the pipes flat black. You may want to drill a hole in the wall of the power house where the pipe goes into the building. In the photos it looks like the pipe connects to the tank underground, so the pipe can just disappear into your scenery.

# Parts List

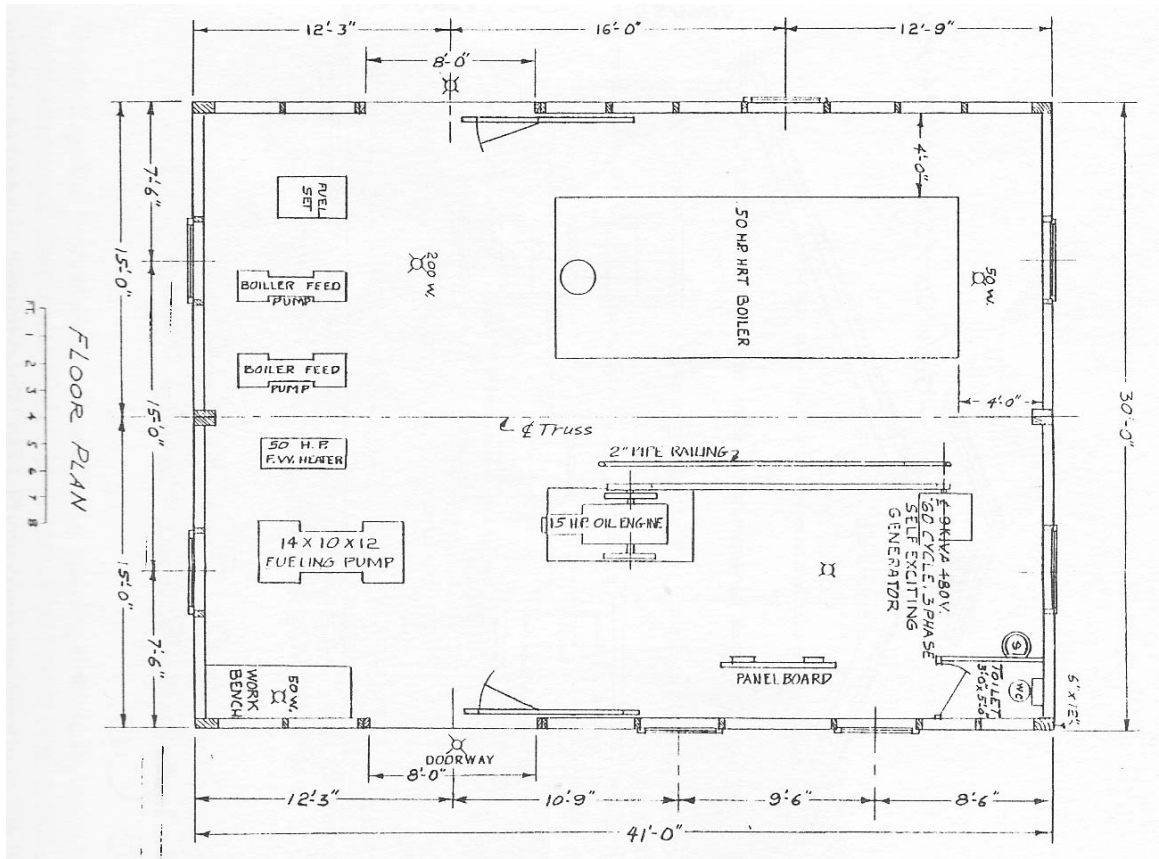
	Roof panel with chimney hole
	Roof panel with no hole
	Side wall (with door and two windows)
	Side wall (with door and one window)
	End walls
	Corrugated siding
	Base
	Roof supports (3)
	Door (2)
	Door frame (2)
	Door glass (2)
	Window frame (7)
	Window glass (7)



	Cupola end (2)
	Cupola side (2)
	Cupola roof panel (2)
	Door and window casings
	Windowsill (7)
	Fascia boards
	Roof flashing – thin strips (4)
	Roof flashing – wide strips (3)
	Roof flashing large square
	Roof flashing small square
	Chimney (large plastic tubing)
	Vent pipe (1/16 tubing)
	Gutter (2)
	Downspout (2)
	Tank body
	Tank safety valve (2)
	Clear rod for pipe

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## Sandy Point Models

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