

S5 Tool & Office Car  
as built for  
S Gauge modelers by

SUNSHINE MODELS

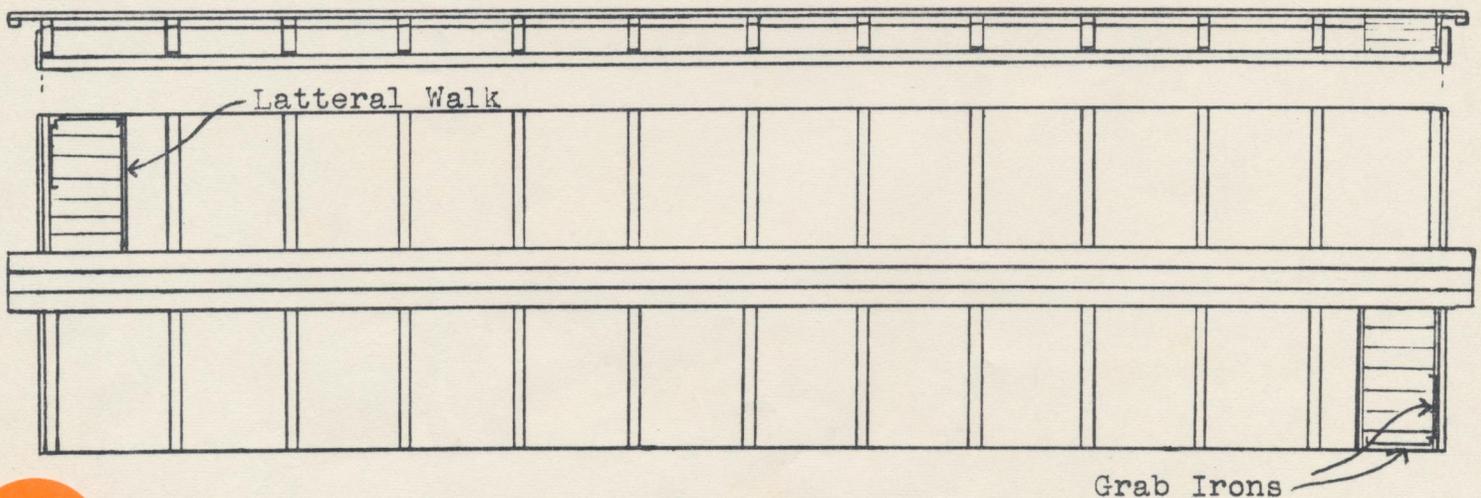


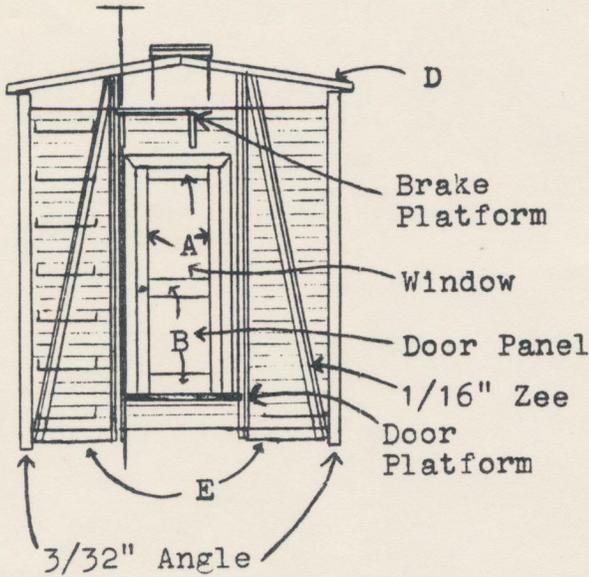
4000 WILLOW RD. BROOKLYN PARK, MINN. 55443

All wood parts should be sanded lightly with fine sandpaper before assembly. This is important as even smooth looking wood may show up badly after painting. The major parts of the kit are precut. For easier identification, the stripwood has been color coded on the ends. The roof and ends are built up as separate assemblies before assembly of the car. Painting is as varied as the number of roads that used these cars. A thin weathered wash of box car red will look good, or many other schemes such as gray with brown roof and underbody. Trucks should be painted either rust or the same color as the car, rather than flat black. If you ruin a part, or one should be missing, write for free replacement.

I. ROOF

To begin cut 13  $1/32$ " x  $1/16$ " roof ribs  $1\ 7/8$ " long. Preferably using a small square, mark where the ribs will go on the roof. Partially cut through the center of each rib so it can be bent over the peak of the roof. Glue them in place and then sand the ends flush with the edge of the roof. Now sand the peak of each rib so that there is a flat section of  $5/16$ " for the roof walk to be fastened. Lay the roofwalk upside down on the roof with an equal amount overhanging each end and hold tightly in place with rubber bands. Cut 15  $1/32$ " x  $1/16$ " x  $5/16$ " pieces and glue on the roofwalk at the 13 places where the ribs will touch, plus one flush with each end. Remove the bands and paint the roofwalk and roof except at the points that the glue will be applied. It is far better for your paint brushes to do it now, than after the roofwalk is glued in place. Paint the underside of the two lateral walks. Now glue the roofwalk on and the two lateral walks using a  $1/32$ " x  $1/16$ " piece to support the side. Also, install the two grab irons at each end of the roof.





**NOTE:** Not all details on this end view apply to both ends of the car. The brake wheel, staff, and brake platform go on the tool end only. The door and door platform are on the office end only. Zee bracing, and parts D & E are on both ends.

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<u>COLOR CODE</u>	
* Door Track	Blue *
* 3/32" Angle	Black *
* 3/64" Zee	Red *
* 1/16" Zee	Yellow *
* 1/32" x 1/16"	Green *
* 1/32" x 3/32"	Red *
* 1/32" x 1/8"	Brown *
* 1/32" x 3/16"	Grey *
* 1/16" x 1/8"	Black *
*	*

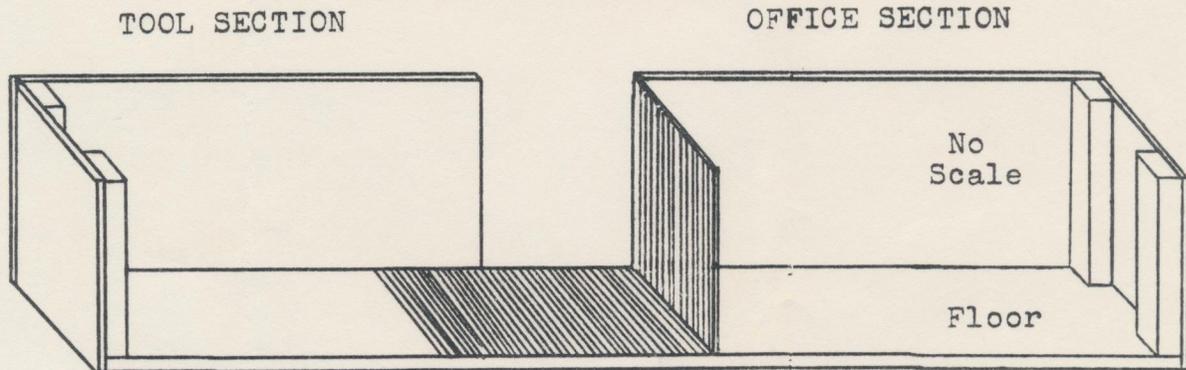
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**II. OFFICE END & DOOR**

The two ends are precut needing only the door opening cut out in the office end. The opening should be 1 3/16" high by 7/16" wide, leaving 5/16" above and 3/16" below. The door is built as shown in the end view with A being 1/32" x 1/16" and B 1/32" x 3/32" material. Cut a piece of the 1/32" x 3/4" strip and glue on the backside for the lower door panel. Mount a 1/32" x 3/32" x 5/8" door platform even with the bottom of the door. The door frame is made of 1/32" x 1/16" strips. Paint the door and frame now, and then glue the window material on the backside.

**III. BODY ASSEMBLY**

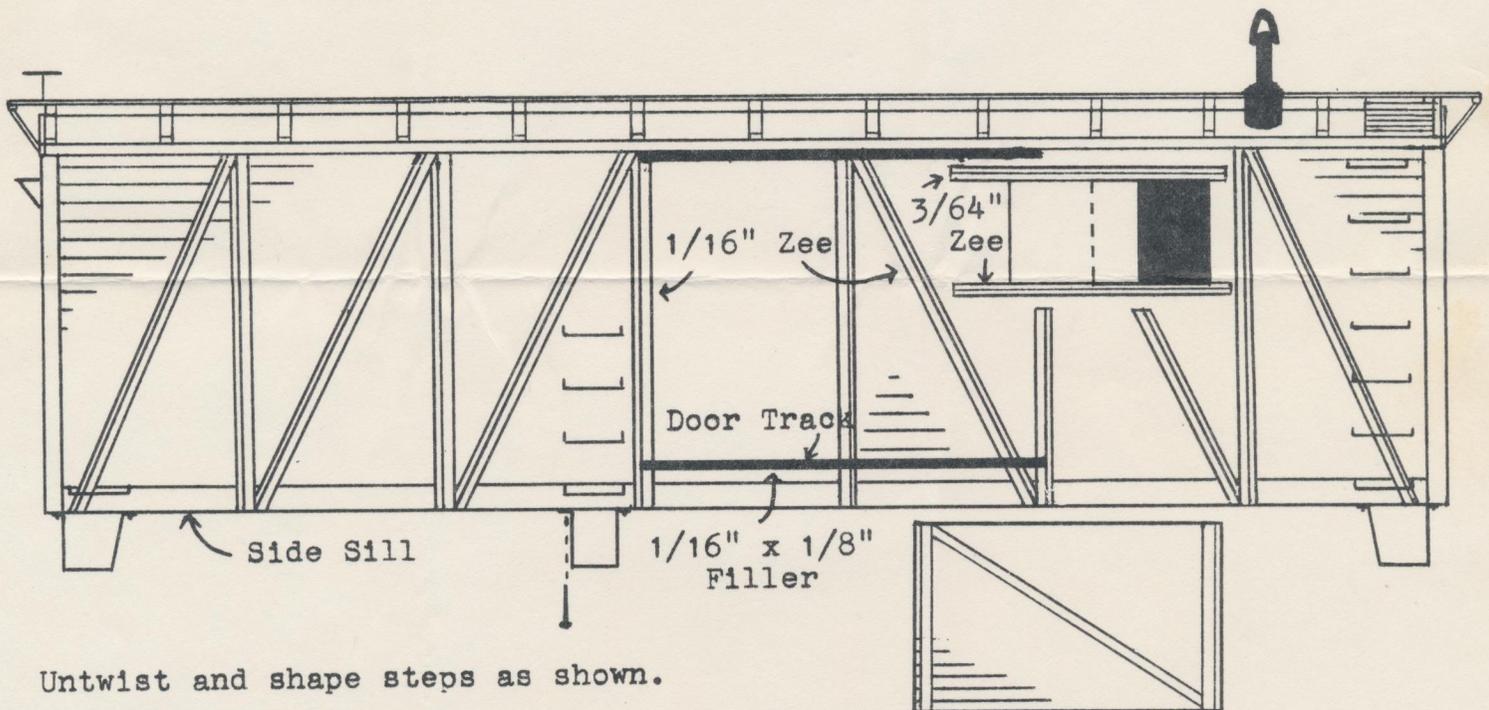
Assemble the roof, floor, ends and corner posts as shown below. The corner posts must be cut to length, 1 9/16", from the 1/4" x 3/8" material. Now glue the sides on one side only. Cut the 1/32" x 1 9/16" scribed sheet to length and glue in place for the tool/office divider. The remainder of this piece is glued to the floor in the tool house section. Before installing the remain-



ing side pieces, paint or stain the complete interior to give it a well weathered appearance. This is a must, especially for the tool side which will show when the doors are open. The side sills are  $1/16''$  x  $1/8''$  material. Next install  $3/32''$  angles to each of the outside corners. The side zee bracing may now be applied, as well as the sliding window covers. These are cut  $5/8''$  x  $11/16''$  and slide in  $3/64''$  zee runners. The covers slide towards the center of the car on both sides.

IV. Sliding Doors

Glue a  $1/16''$  x  $1/8''$  filler strip above the side sill in each door opening, followed by another  $1/32''$  x  $1/16''$  piece on top of this. Cut four door tracks each  $2\ 1/8''$  long, and mount on top of the zee bracing, using a small wood block to fasten the right end of each upper track. The door tracks should all be mounted so that the slot is towards the center of the car. The doors are precut, but may need a little sanding so that they will slide easily in the tracks. Brace the doors with  $1/32''$  x  $1/16''$  strips.

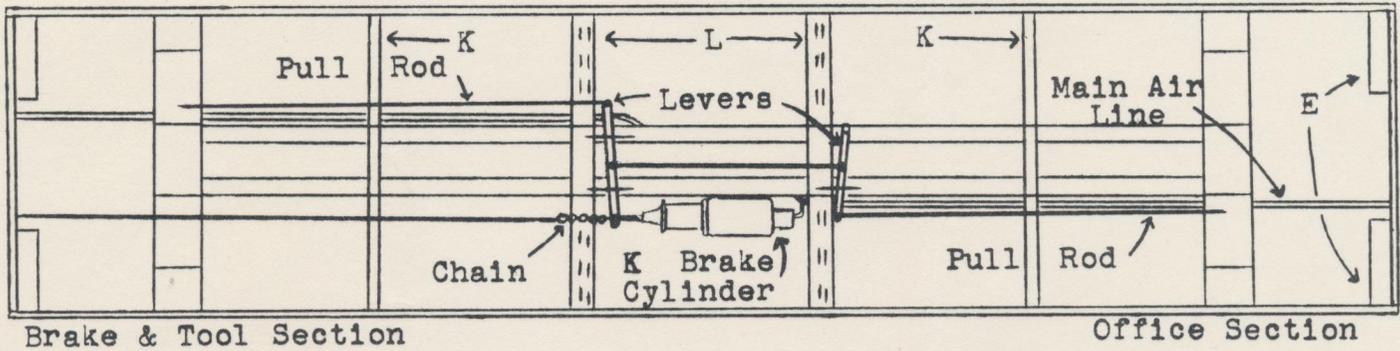


Untwist and shape steps as shown.

V. Underbody

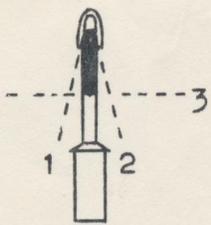
Mount the center sill and bolsters as shown on the plans. The outer crossbearers (K) are  $1/32''$  x  $1/16''$  while the inner (L) are triangles cut from  $1/32''$  x  $3/16''$  stripwood capped by  $1/32''$  x  $1/8''$  wood. Install the coupler pockets, followed by the four parts (E) of  $1/16''$  x  $1/8''$  material. Study the drawing for position of brake rigging. The K brake cylinder is mounted on the  $3/16''$  x  $1/4''$  x  $3/4''$  wood block. Use the larger wire for the main air line, with the smaller for the pull rods. The main air line can be made in four pieces, instead of running it through the bolsters and center sill. The levers are made from  $1/32''$  x  $1/16''$  strips. A small chain is furnished in the kit.

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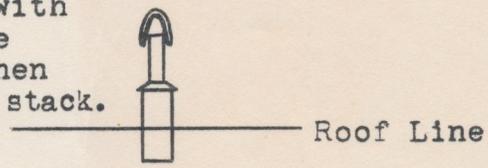


VI. DETAILS

1) Mount the 1/32" x 1/16" strips (D) to the end of the roof.  
 2) Add the Z bracing to the ends. It is very close to the end door and so should be painted before glueing on.  
 3) Install the 38 grab irons to the sides and ends.  
 4) Add roof walk end supports using one grab iron for each end.  
 5) Give the end door a door knob using one of the small pins.  
 6) Mount end and center sill steps.  
 7) The brake platform is mounted with the small pins after first drilling for the brake wheel staff. It is best to epoxy the brake wheel as it is easily melted by a soldering iron.  
 8) Now drill a hole for the smoke jack, after first removing a section from the center as shown below.  
 9) Paint final details and add trucks of your choice. Arch Bar are often used for this car.



Make cuts 1, 2 & 3 with razor saw to remove shaded portion. Then epoxy hood back on stack.



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Tool & Office Car Parts List

- |    |                      |   |                         |
|----|----------------------|---|-------------------------|
| 1  | Freight Roof         | 1 | 1/32" x 1/8"            |
| 1  | Freight Floor        | 1 | 1/32" x 3/16"           |
| 4  | Sides                | 3 | 1/16" x 1/8"            |
| 2  | Ends                 | 1 | 1/32" x 3/4"            |
| 2  | Doors                | 1 | 1/4" x 3/8"             |
| 1  | Roofwalk             | 1 | 3/16" x 1/4" x 3/4"     |
| 2  | Lateral Walks        |   | Piping                  |
| 1  | Center Sill          |   | Window Material         |
| 2  | Bolsters             |   | Coupler Pockets         |
| 1  | Partition & Flooring |   | Chain                   |
| 2  | Door Tracks          |   | Brake Wheel             |
| 2  | 3/32" Angle          |   | K Brake Cylinder        |
| 1  | 3/64" Zee            |   | Brake Platform          |
| 11 | 1/16" Zee            |   | End & Center Sill Steps |
| 8  | 1/32" x 1/16"        |   | Smoke Jack              |
| 1  | 1/32" x 3/32"        |   | Grab Irons              |