

C&O 488111

Scratch built, judged, 104 points

This car is a 60' high cube boxcar designed to carry appliances. Its interior height allows refrigerators to be stacked two high. The prototype was built in 1971 by Pullman in Alabama. See the following pages for drawings and additional photographs. Some of those photos show the car in an earlier paint scheme but the structure of the car is still apparent. Also, please note that the color of the model is poorly represented in the photo. It really is a much darker blue that is close to that of the prototype car. I suspect the fluorescent lighting above this part of the layout may have something to do with the color shift.

The model starts as a block of wood. An article about scratch building a Southern tobacco car (Model Railroading, February, 2003) took this approach. In my case, I glued together two poplar 2x2s then ran them through a radial arm saw to cut out a piece of wood for the car body. The key is to cut the block a bit small to allow for the sides to be laminated to the body. I should note that the car is a tad heavy according to NMRA standards but that is far better than the alternative. It operated without trouble in a recent operating session.

With the block of wood cut, construction can now begin. I started by building the ends of the car. From the photographs, it is clear that the end is some sort of corrugated shape. The end is built starting with a sheet of 0.030 inch polystyrene sheet. The corrugation is simulated by alternating pieces of 0.040 x 0.060 strips and 0.080 diameter rod. The effect is the appearance of half round corrugations. The use of the strips assures even spacing. The ladders on the ends are made from 0.020 x 0.040 strips and 0.030" half round. The ends were then glued to the block.

The sides were done next. Sheet polystyrene 0.030" thick was cut to length. The drawings allowed the side sill to be included in this single piece. An additional thickness of 0.010 polystyrene was added to the side sill. Another strip of 0.010" was added just above the sill to simulate what I guess must be the edge of the floor of the car. Next, 0.030 x 0.040 strips were glued across the top of the side except where the door sits. Ribs were made with strips of 0.010 x 0.060 with 0.020 x 0.040 strips glued on top to simulate the shape of the prototype ribs.

The doors were next. The doors were built as separate items from 0.030 sheet and strip stock. 0.030 x 0.080 strips form the left and right side with 0.156 x 0.030 strips forming the top and bottom. The smaller separators across the door are 0.040 x 0.030 strips. The corrugations were achieved by using 0.030" half round strips evenly spaced through each segment of the door. This was somewhat laborious but the effect is worth the effort. Realizing the proper spacing of these corrugations was the hardest part of building this car, I finally found a piece of wire approximately 0.020" in diameter that served as a spacer. I put the wire against the large rib then applied the half round piece. The wire was then moved to the other side of the half round and another piece added. This was done until all the half round pieces in each section were in place. The bottom of the door overlaps the extra strip of plastic at floor level. This means that the rest

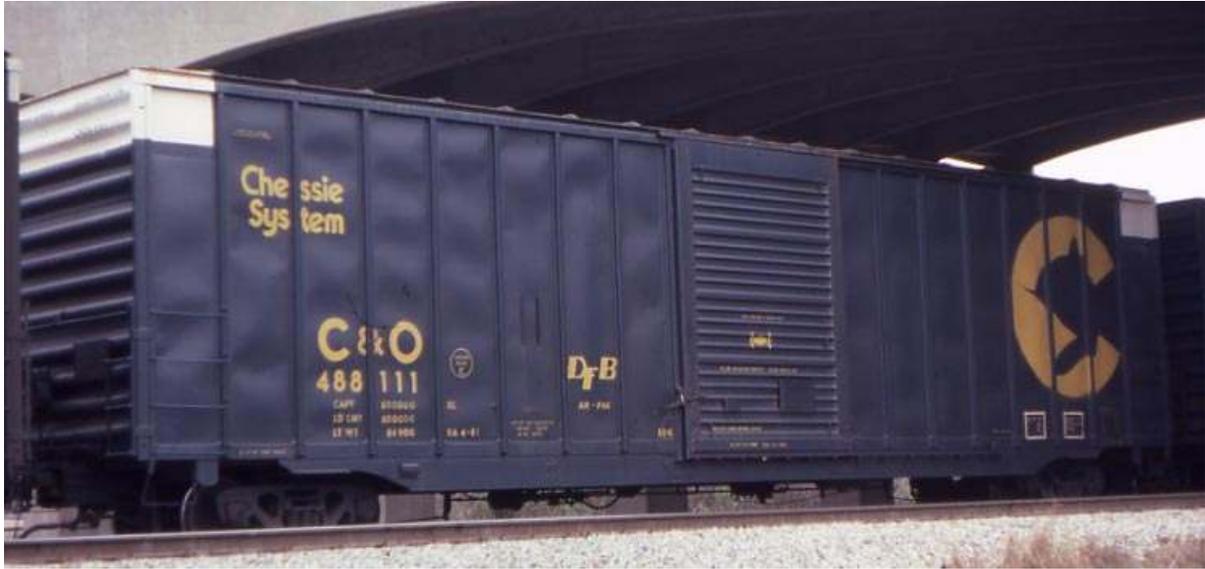
of the door must be shimmed out from the car side to remain plumb. This was done with strips of 0.010" thick strips. The door was installed and door tracks of 0.030 x 0.040 at the top and 0.040 x 0.060 at the bottom were installed. Tack strips were glued to the door. The ladder rungs on the sides are 0.030" half round glued over the ribs. The steps are 0.025" wire. Holes were drilled into the wood block and the wire steps were held in place with ACC.

Next came the roof. There is a noticeable but small gap between the roof edge and the top of the car side on the prototype. This was matched by gluing a piece of 0.010" sheet to the top of the wood block but not extending over the plastic car sides. Another piece, this time of 0.030" sheet, was glued on top of that. This top piece does extend to the outside edge of the car. The ribs on the roof are 3/64" tee. The panels are 0.010 x 0.250 strips.

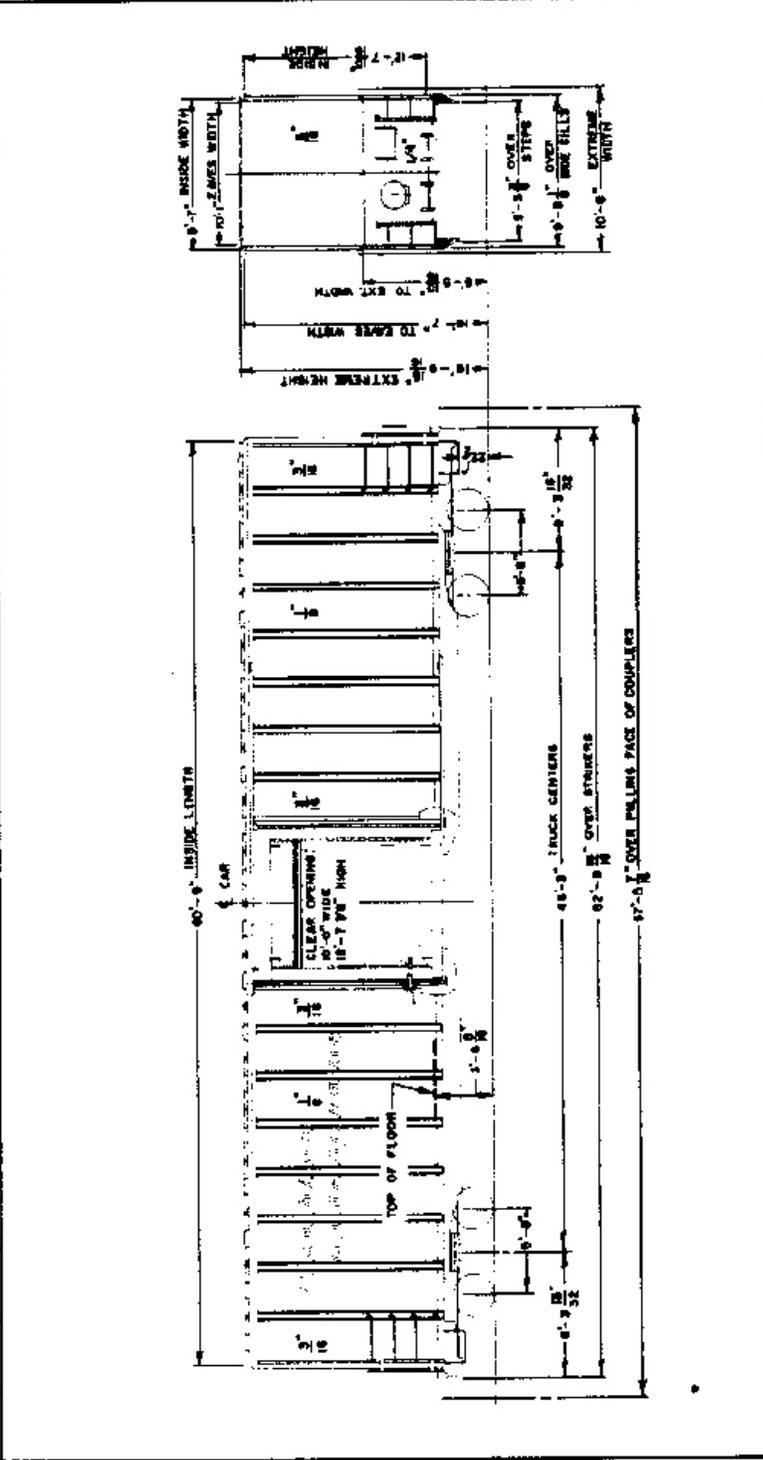
The underside is 0.010" sheet. The center sill is two pieces of 1/8" zee. The bolsters are built of 0.080 x 0.156 and 0.030 x 0.156. The longitudinal stringers are 0.010 x 0.060 strips. The cross pieces are 0.030 x 0.080" strips. The coupler pockets are Walthers as are the trucks. The brake parts are from Details West. These parts, plus some small diameter steel wire, made the brake system.

The roof of the car was painted with Floquil Bright Silver. The sides, ends, and underframe were painted with Scalecoat II C&O Blue. The white area at the top of the ends was painted with Model Master flat white. The car was lettered with Champ set HB-400 for 86' boxcars. This was the only source I could find for the large Chessie logo. Next the car was sprayed with Floquil Flat Finish. Light weathering was applied.

This car contains approximately 350 pieces cut from polystyrene sheet, strips, and shapes. The only commercial parts are the trucks, couplers, brake parts, paint, decals, and coupler pockets. All of those parts except perhaps the special coupler pockets are excluded when counting commercial parts. That means that two of the 350+ parts on the car were not scratch built. Accordingly, I believe it qualifies as scratch built for NMRA Achievement Program purposes.



MECHANICAL DEPARTMENT		CLASS	
<b>Chessie System</b> <small>WASHINGTON, D. C.</small>		RR	SERIES
		B&O	488000 - 488103
<small>DATE: 3-16-71</small>		C&O	488104 - 488116
<b>Chessie System</b> <small>WASHINGTON, D. C.</small>		<b>B-104</b> <b>D-104</b>	



GENERAL DATA	CAR BODY DATA	TRUCK DATA	MISCELLANEOUS
BUILT BY - WALKER STANDARD	BRAKES - AND CONVENTIONAL	TYPE - NUMBER 3-3-C	MITCHELL COMPANY - MOVABLE BOLTHEDS
YEAR BUILT - 1971	BRAKE ARRANGEMENT -	GENERAL USE - 194 - 4 - 385	48000 - 48100 EQUIPPED "AIR CURSOR"
CUBIC CAPY - 7480	CENTER SILL - 416 LB. Z-SECTION	JOURNAL - 8" X 14" R. S.	48000 - 48110 EQUIPPED "AIR PAL"
AVERAGE LD. LBS. - 80000	COUPLER - B-EM - WTE B	SPRING TRAVEL - 3 1/2"	NOTE - 1
AVERAGE LD. WT. WOOD (EXC)	DRAYT BEAR - NOTE 1	WHEELS - 33 DIA. 2 W.W.R.	FRONTMASTER END OF CAR CUSHIONERS -
AVERAGE REFERENCE - LOTS 2000 @ 1950-A	DOOR - 10' WIDE @ 8' HIGH - VOLKSWAGEN	WEIGHT ONE TRUCK -	18" TRAVEL
FULL ROAD SPEC -	DOOR IMPROVEMENT - 21 - 11 - 250	BRAKE STOCKS - 2" COMPRESSION	
GENERAL ARRANGEMENT DIMS - R.R.M. 043 - 800-A	END - 10" DIA. STEEL 3/8" TOP, 1/2" BOT.		
CLEARANCE - EXCEEDS PLATE 'C'	FLOOR - 1/4" TW. - 10" PLATE		
CURVATURE - UNCOUPLED - 70 FT.	HAND BRAKE - AXIAL 14000 W/S B. C.		
COUPLED TO BASE CAR - 144 FT.	LINING - 2000 - 5/32" X 3"		
CENTER OF GRAVITY - LIGHT - 62.84'	UNDERFRAME - NOTE 1		
LOADED - 85.83'			
			NOTE - 2
			IF INCHES CHANGED 100 - 100
			USE LOW PROFILE WIDE FRAMES.



