



ABOVE: GEORGE R. COCKLE (COUNCIL BLUFFS, IA.; MAY 1979); BELOW: UNION PACIFIC

Union Pacific's new cabooses

The almost traditional high cupola is gone and a new type of main-line-service carbody is featured on the UP's new cabooses from International Car Co.

They are still yellow with red lettering, but what a difference! The Union Pacific's previous designs for cabooses called for a car of just under 40 feet long with a distinctive high cupola. The majority of their 650-caboose fleet shared the general lines evidenced in the CA-9 car, shown in the January 1974 issue of RMC. However, concern for rising costs, increased safety and



UP's new cabooses

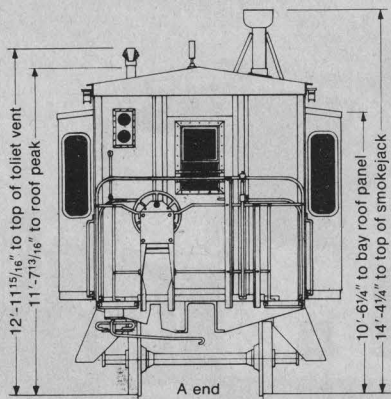


TWO KODACHROMES: GEORGE R. COCKLE (COUNCIL BLUFFS, IA.; MAY 1979)

improved visibility led to the adoption of a bay-window design when the CA-11 class was ordered from International Car Co. in Kenton, Ohio. The bay window cars cost \$60,000 each; this is \$12,000 per car less than the cupola design. Delivery of the first cars, to be numbered 25800-25899, commenced in May 1979.

Officially described as a compact-body, bay-window caboose, the overall length of the car matches the rest of the fleet quite closely. The main difference is in the length of the "body" compartment—it is much shorter than on previous UP cabooses, and is similar to a series delivered to the Missouri Pacific during 1978. The UP version of this

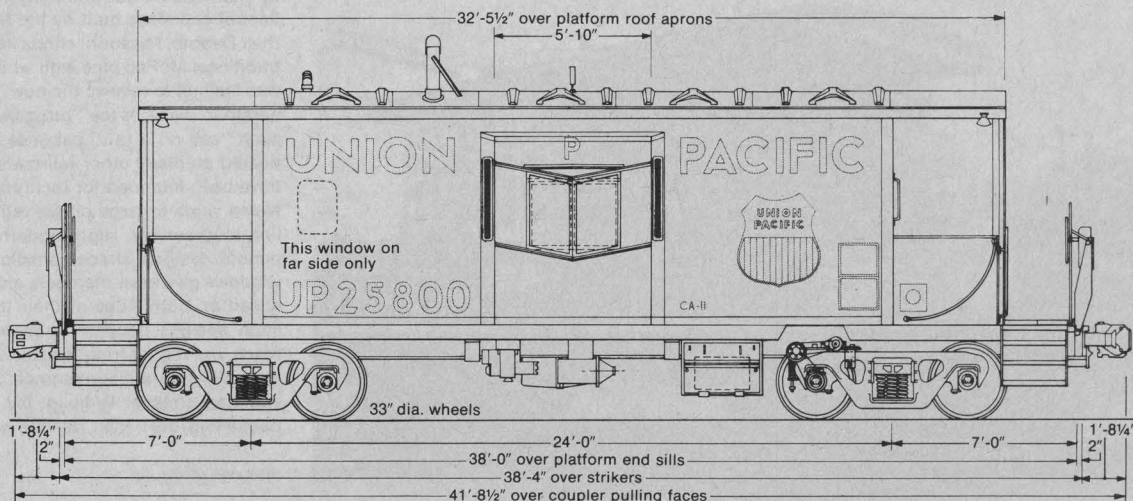
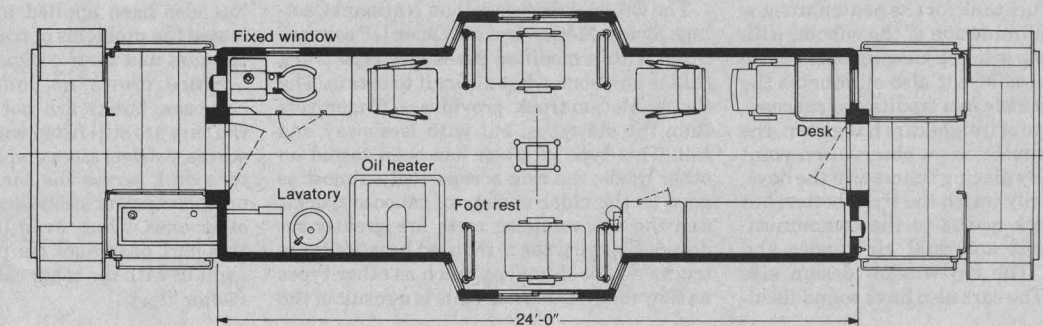
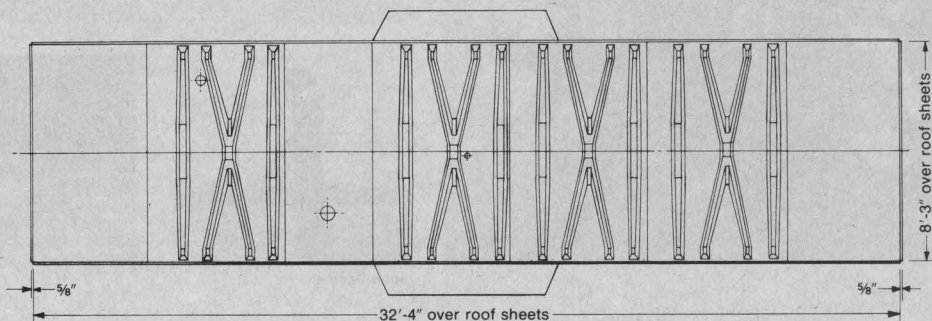
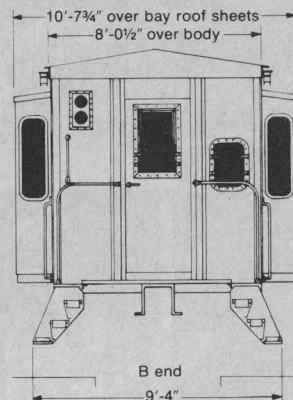
car, however, has a larger roof cover over the decks and safety paneling instead of open railings. This is an aid to the safety of the crew when orders are handed up to a moving train—they need not stand on the open deck or steps. Other features along these lines include shoulder-harness belts in the bays, improved seat shapes and fewer protruding



drawn by Julian Cavalier

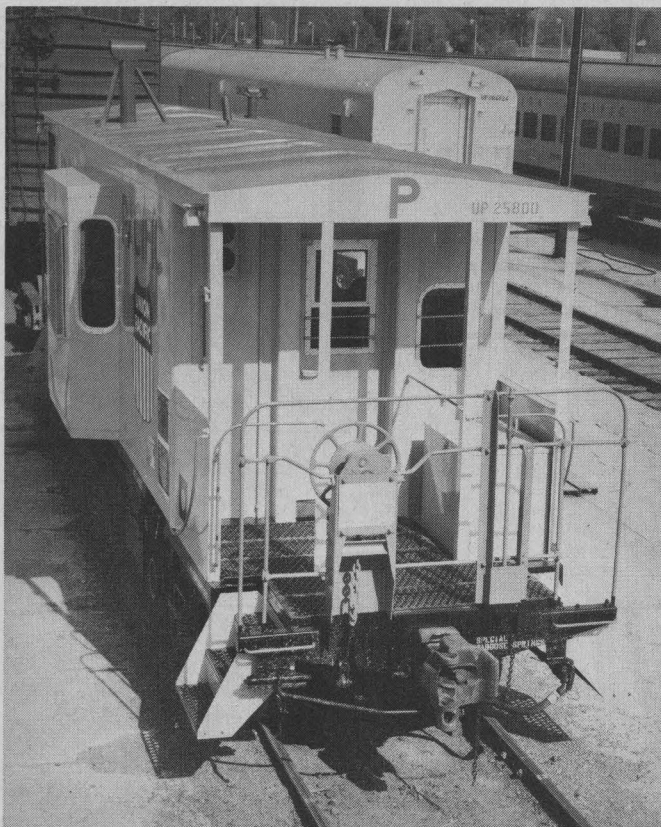
Full-size HO scale: 3.5mm = 1'-0"; 1:87.1

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UP's new cabooses

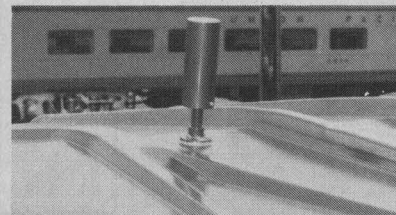
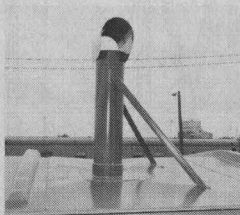
GEORGE R. COCKLE



GEORGE R. COCKLE



UNION PACIFIC



UNION PACIFIC

parts in the crew compartment. Lockers for tools and the fuel tank for the heater are now outside. The elimination of the cupola, with its need to climb into the viewing seat, is also an addition to safety; it also eliminates the rather narrow aisle in a traditional caboose.

Since the size of freight cars has grown, the value of the cupola as an observation point has declined. By placing the crew in the bays, they can not only watch the train better, but also have quick access to the communications equipment and dual air gauges and dump valves. The bay-window design also heats better. The cars also have sound-dead-

ening materials applied.

The CA-11 cabooses roll on National Castings Swing-Motion trucks. Older UP cars are fitted with a modified passenger-type truck that is now somewhat difficult to obtain. The Swing-Motion truck provides a firmer ride than the old types, but with less sway and roll. This type of truck has been tested on other roads; the ride is reportedly almost as good as the older variety of caboose trucks, and the maintenance costs are greatly reduced. Flange wear is reduced because these trucks do not "hunt" as much as other types as they follow the track (this is a result of the

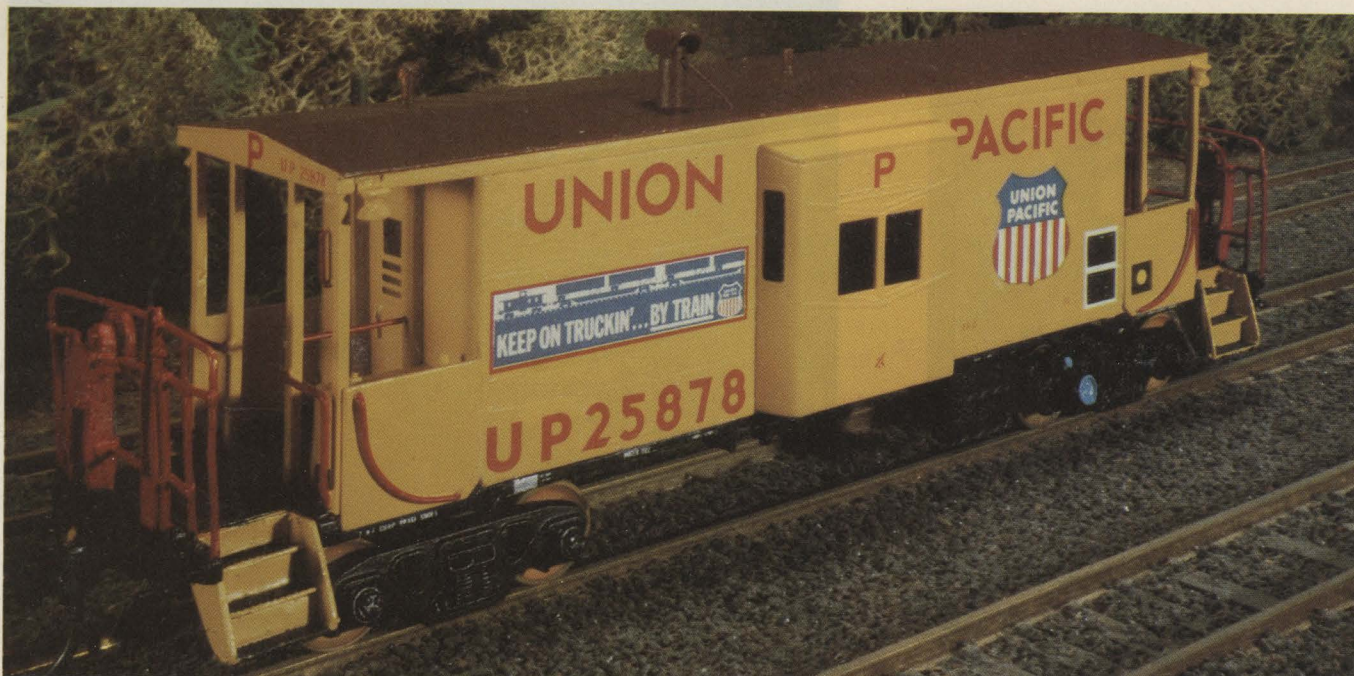
suspension design). Hydraulic cushioning has also been applied to the draft gear to lessen the problems of transmitted shocks on the cars and their occupants.

Since crews no longer sleep in the cabooses, bunks are not needed. However, the cars are still fitted with personal lockers, stoves, refrigerators and toilets. The conductor's desk serves the same records function on these newer cabooses as they do on the older ones. Thus, even in a different form, this part passenger car/part freight car fits right in with the other cabooses in the Union Pacific fleet.



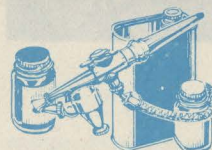
Pre-dating the Union Pacific's new cabooses built by International Car Company in 1979 was a small fleet of cabooses built by the Missouri Pacific at their DeSoto, Missouri, shops in 1977. Painted the traditional MoPac blue with white trim, this series was the first to receive the new "screamin' eagle" herald in place of the "buzzsaw" emblem. While such "cab on a raft" caboose designs have appeared on many other railroads in the past, they have been intended for local transfer service between yards in large cities, rather than for main line road service. High modern cars have made cupola designs almost obsolete, and the bay-windows give crew members a chance to observe ahead on both sides of their train. Obviously, if such designs become accepted on other railroads, the rear of freight trains will assume a dramatically different appearance. Since the new designs are cheaper to build, the likelihood of this happening over next decade or two is high.

MISSOURI PACIFIC PHOTO



A. L. Schmidt

A special Paint Shop feature



Union Pacific's new CA-11 cabooses

BY JIM HEDIGER

UNION PACIFIC'S new class CA-11 cabooses represent a major change in the railroad's caboose design. The UP mechanical forces produced the basic format for their high-cupola-style cabooses in the 1890s. Over the years, the construction methods and materials have changed from wood to steel, but the standard format has remained the same. According to the January 1979 issue of *Union Pacific Info* (UP's employee magazine), 642 cabooses were in service and they put in an average of 4842 miles per month. This heavy utilization created maintenance headaches (caboosees traditionally are one of the most expensive car types to maintain), so the need for additional cabooses became increasingly apparent during the late 1970s.

When the UP went shopping for new cabooses, changing equipment requirements were taken into consideration. Today's modern, high-capacity freight cars are much taller than older cars, a situation that reduced the effectiveness of a cupola as an observation point.

A new bay-window caboose was borrowed from the Missouri Pacific RR. for test purposes and the results were quite favorable. The bay windows allowed a good view of the train ahead, and the new design solved a safety problem by eliminating any need to climb into a cupola. Eliminating the cupola took the constriction out

of the center of the car (usually the space under the cupola was filled with lockers), so heating is more even throughout the crew space. Larger end platforms with safety railings made it easier and safer to observe the train or pick up orders en route.

Another consideration weighing in favor of the bay-window caboose was the price: a new cupola caboose cost around \$72,000, while the bay window design was about \$60,000 in 1978.

The CA-11 cabooses combine design features from the MP car, employee sugges-

tions, and standard UP caboose practices. UP had 100 of these cars, numbered 25800-25899, built by International Car Division of Paccar in 1979 for general service. They are equipped with oil heat, electric lights, and shatterproof windows.

The car interiors are arranged to maximize crew efficiency and safety. All interior corners are rounded off and padded to prevent personal injuries. A rounded handrail is fitted around the stove, and the air gauges, brake valves, and radio equipment are mounted in a padded stand in the middle of the car. Five high-backed seats, with



A. L. Schmidt

All of the prototype CA-11 cabooses have the same paint scheme, but only a few carry this slogan.



Jim Hediger

Even the color scheme emphasizes safety. The yellow steps contrast sharply with the black running gear to make boarding the car safer, even at night.

shoulder harness seat belts, are provided for the crew. A safety railing runs down the center of the car just below the ceiling in case a jolt occurs when someone is not seated.

Other creature comforts include a bunk, refrigerator, lavatory, and a chemical toilet. A cushion underframe helps absorb jolts and National Castings Swing Motion trucks provide a smooth ride.

A toolbox is provided on one platform while the fuel tank occupies a similar location at the opposite end. Spare coupler knuckles are carried in a special box under the car body for easier access if train repairs are needed en route.

The end platforms are made of open steel grating so snow and mud will fall through and not accumulate.

Even though the CA-11 represents state-of-the-art thinking about cabooses, it is still undergoing further testing and modifications. George Cockle's softcover book *Union Pacific CA-11 Cabooses* (published by Overland Models Inc.) details more of the history and continued development of these cars. In fact, a prototype CA-12 caboose (reworked from CA-11 no. 25842) is now running on the UP to test more new concepts that will show up on the next caboose order.

PAINTING THE MODEL

UNION PACIFIC modelers who work in HO or O scale are lucky because Overland Models Inc. has imported models of the CA-11 caboose. For this reason, I thought it would make a fine subject for Paint Shop. As things turned out, this was

more of a project than I had anticipated.

We had an HO CA-11 caboose on hand, so I took a close look at its construction to figure out how it could be painted (some of the construction methods might be slightly different for the O scale version).

Here's the procedure I worked out: First, lay the car on its roof and remove the trucks. With this done, the four floor-mounting screws can be reached just inside the body bolsters. Once these screws have been removed, the floor can be lifted out, but be careful as the end platforms will drop out as the floor is lifted. Also, be careful in handling the end platforms, as the cast end railings are extremely soft and easy to distort if you drop them.

The most important step in painting any brass model is surface preparation. All of the surfaces to be painted must be scrupulously clean or the paint will not adhere properly. Wash the model in warm water

and dishwashing detergent first. Then etch the brass by placing the parts in ordinary household vinegar for about 10 minutes (this will provide some "tooth" for the paint to hold onto). Wash off the vinegar with detergent, or using the appropriate solutions, clean the parts in an ultrasonic cleaner.

Allow your model to air dry without touching the parts (touching the model will deposit oil on the metal, and the surface will have to be cleaned again). I use plastic throwaway gloves to handle the model.

Apply the paint with an airbrush if at all possible since this car has a lot of nooks and crannies to be painted. Spray cans can be used, but they are very hard to control at close range.

The first step in the painting procedure depends upon the brand of paint you are using. Scalecoat colors may be applied directly on clean brass with excellent results.

More about the CA-11 on page 87



TRAINS: J. David Ingles

One of these Missouri Pacific cabooses was test run as part of the CA-11 development program.

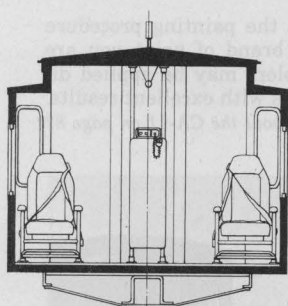
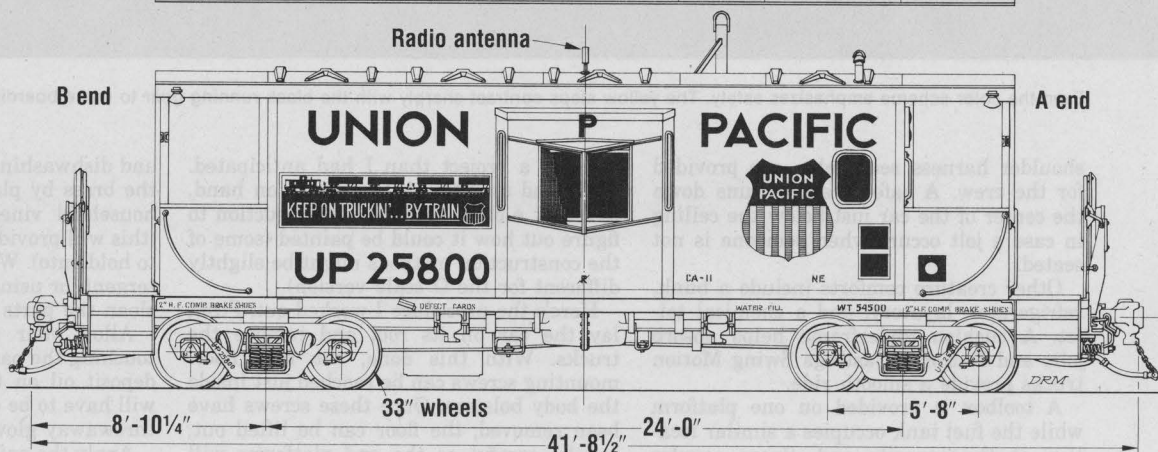
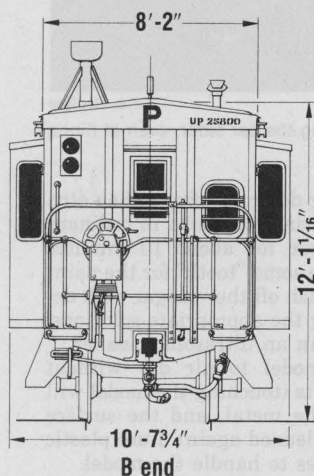
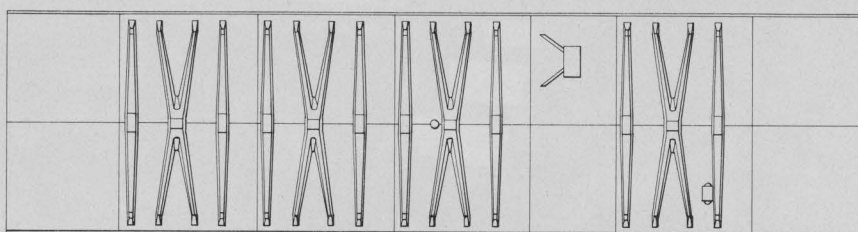


Unless otherwise credited, photos by Jim Hediger

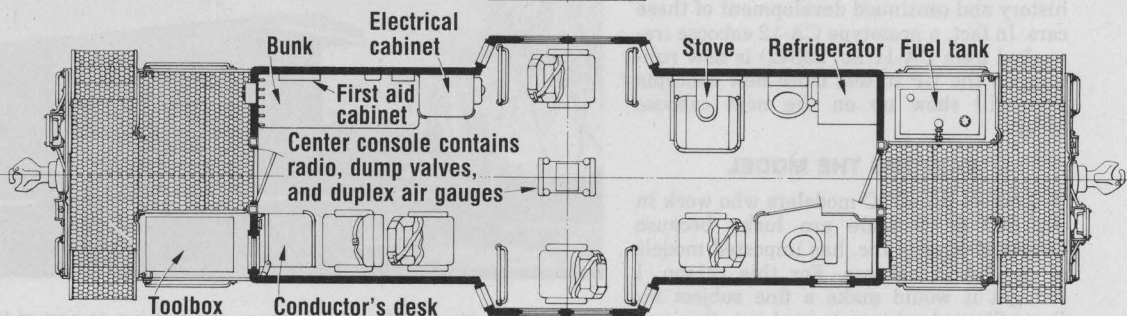
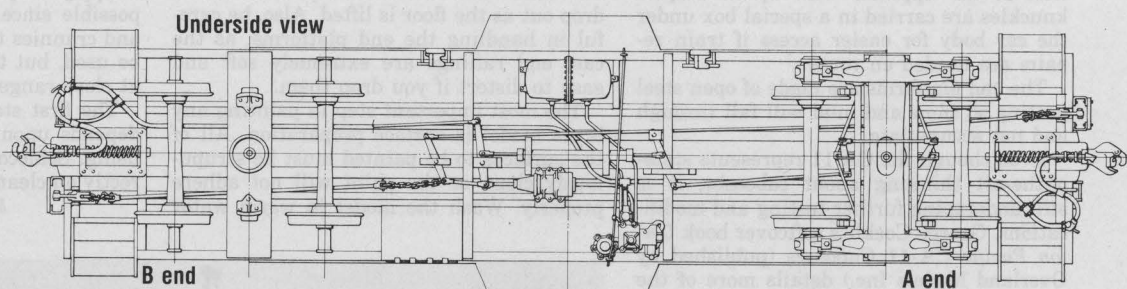
With the exception of one small frosted window in the toilet area, the side windows are all built into the side bays.

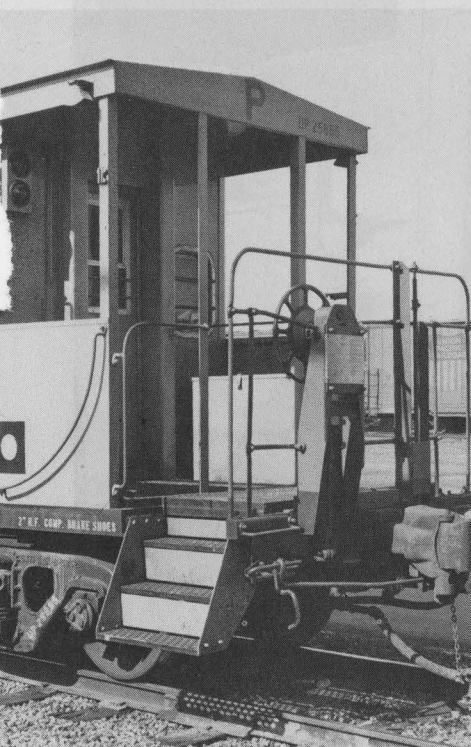
Ratio 1:87 HO scale

Roof plan



Section through center





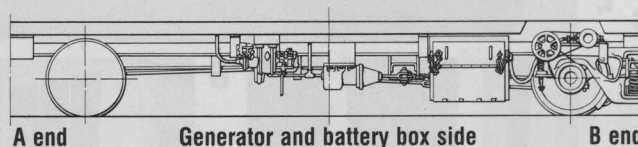
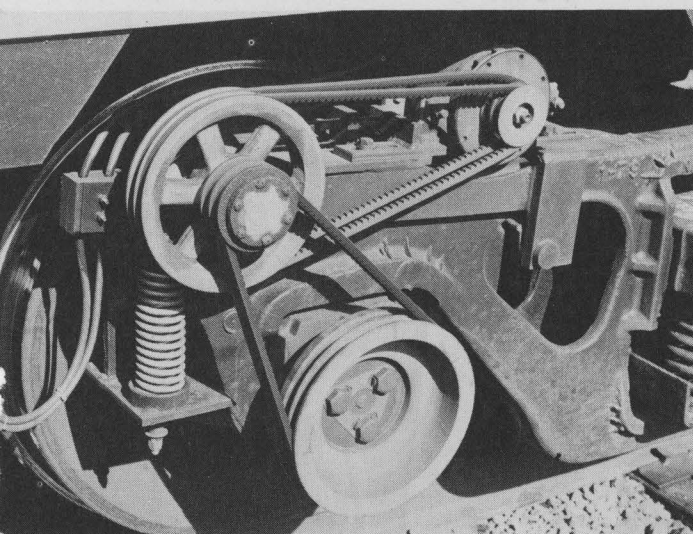
↑ Electric marker lights are built into the end walls, and hooded lights are mounted at the roof corners to provide illumination over each step.

↑ The B end has a toolbox mounted on the platform under the conductor's window. ↗ The stove's fuel-oil tank is carried on the A-end platform.

Drawn for MODEL RAILROADER MAGAZINE by
DON McCLOSKEY

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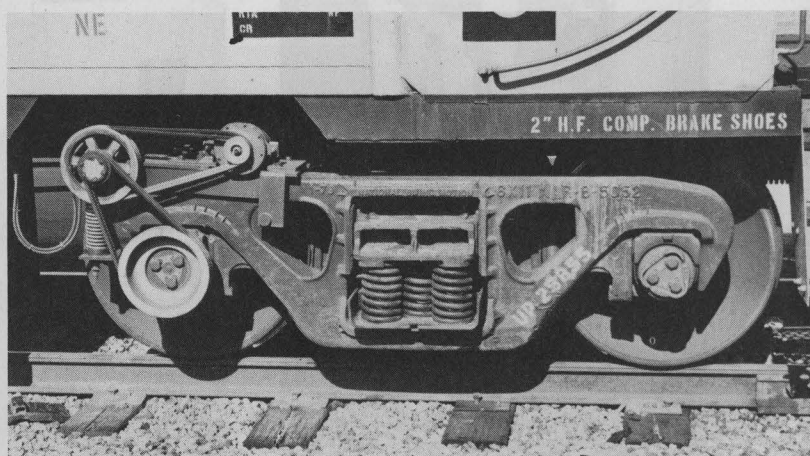
UP 25800 is the first of the 100 CA-11 ca-booses Paccar built starting in April 1979.



A end

Generator and battery box side

B end

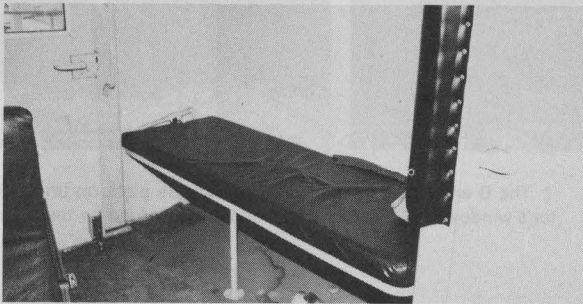


↑ Dual belts are used on the electrical drive to assure reliability. One truck carries a Dayco alternator that supplies electrical power. →



B

A



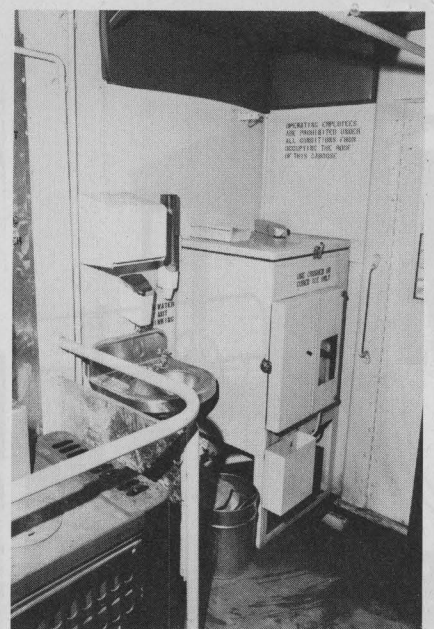
F

E

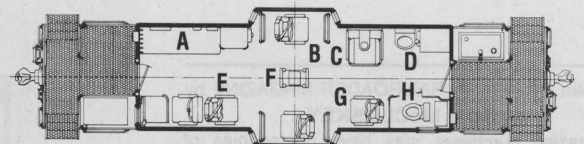
C



D



A This bunk is in the B end of the car opposite the conductor's desk. Note the safety padding on the corner of the electrical locker.
B Each bay window has a high-backed walkover seat that is bolted to the floor. The side windows are shatterproof to frustrate vandals.
C This oil stove provides heat during inclement weather. The safety railing keeps people away from the stove when the train is moving.
D The stainless steel sink is easy to keep clean while cups, soap, and towels are stored in dispensers. The icebox is in the corner.



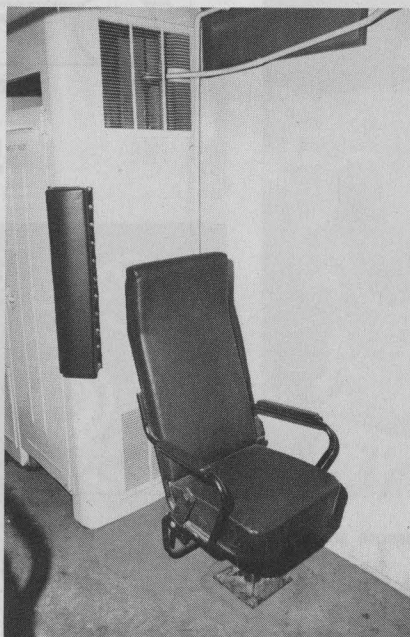
Ratio 1:174 half HO scale

Letters on floor plan correspond to lettered photos

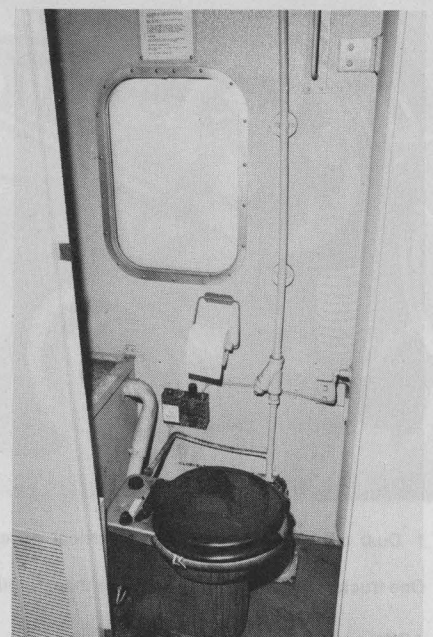
E The conductor's desk has a hinged lift-top, padded edges, and an air gauge. High-backed chairs and seat belts protect the crew.
F This padded rack, in easy reach from either bay seat, holds the train radio equipment, air gauges, and emergency brake valves.
G Extra seats are provided for additional employees riding in the caboose. Note the safety padding on the compartment corner.
H A chemical-retention toilet, conforming to current Federal regulations, is arranged in its own separate ventilated compartment.



G



H



More about the CA-11 from page 83

If you use Floquil paints, apply the gray primer first. Paint the entire car body, except the roof, with Scalecoat no. 22 or Floquil RR-166 Union Pacific Yellow and allow it to dry thoroughly. Don't forget the steps while you are working with the yellow.

Apply a strip of masking tape along both sides and across the ends of the roof so the roof color will not drift onto the sides. Spray the roof with boxcar red and then remove the tape immediately. Strip the tape off by gently lifting a corner and peeling it back along the remaining tape so it forms a very tight loop where the tape is lifting off the model.

After covering the steps with masking tape, spray the end railings bright red and remove the masking. Spray the trucks and all of the underbody parts black.

Now for the tricky part — painting the platforms black. Use a medium-size brush and hand-paint the black onto the end platforms. Flow the paint on; and to get a nice, even job, avoid brushing back through it. Paint the end sills in the same manner, but leave the steps alone. I elected to leave the areas under the fuel tank and the toolboxes yellow, simply because I couldn't reach these areas (the prototype platforms are black). With a little care and a steady hand, you can work the black around the roof supports and details well enough to cover everything.

Next, highlight the railings and grab irons with the bright red. If you use Scalecoat paint, the model is ready for decals. A model painted with Floquil should be given a coat of RR-4 Crystal Cote to prepare it for decals.

Appropriate special Microscale decals for the HO CA-11 model are made by Krasel Industries as set 87-223. Modelers working in O scale will have things a bit rougher as the lettering will have to be pieced together from sets designed for other cars.

The majority of the prototype cars (nos. 25800-25892 except 25830) have the "Keep on truckin' . . . by train" slogan shown in the color photo of model no. 25878. Only a few (nos. 25830, and 25893-25899) carry the "I follow the leader" slogan that appears on model 25899. The letter P on the ends and side bays indicates that these cars are equipped for general pool service all over the system.

Cut bits of black decal striping to fit the stair treads. Use an application of Micro-Sol to soften the decals so they will conform to the details of the model. Allow the decals to dry, and then use a damp cloth or cotton swab to gently wash off any excess glue.

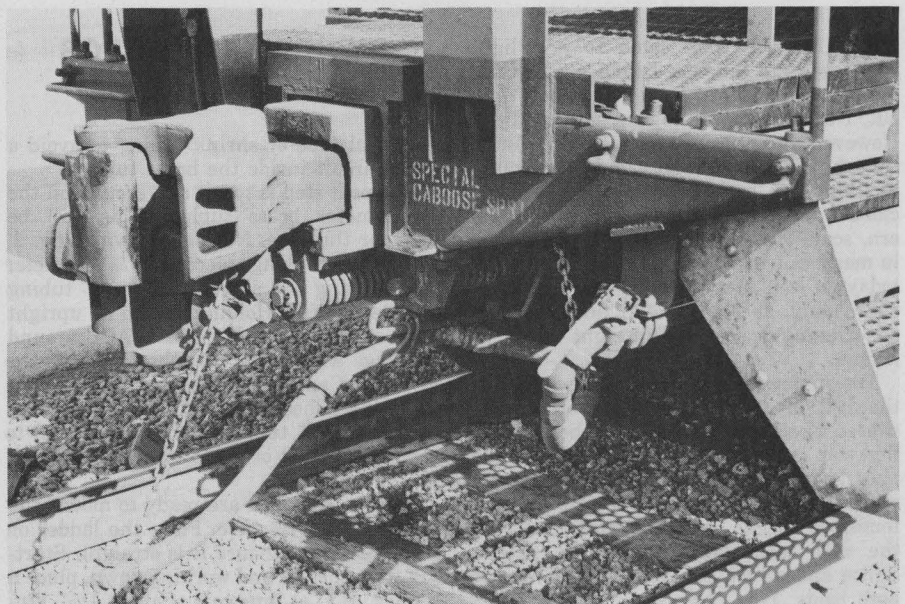
Spray a light coat of clear flat finish on the entire model. Be sure to use the finish matched to the brand of paint you used for the colors or you may get some strange chemical reactions that will spoil the job.

Install clear styrene window material and then reassemble the model. Add Kadee no. 5 couplers and slip the end platforms back into the body. Paint the wheels a light rusty color (prototype wheels are not supposed to be painted) and install the trucks. Once you have touched up the two pulleys on the alternator unit with some light blue, the car is ready for its first road trip. If you weather this model, do it very lightly around the trucks as it should look like a new piece of equipment. ☼



Union Pacific RR.

The CA-11 roof is very spartan, with only a smokejack, radio antenna, and toilet ventilator visible.



This air hose and chain arrangement accommodates the movement of the cushion underframe.



Jeffrey L. Torretta

The Union Pacific RR developed its CA-11 caboose in 1979 after test-running a similar Missouri Pacific car. Eventually 100 of these cars (nos. 25800-25899) were built by International Car.

MR workshop

Conducted by Jim Kelly

We welcome your modeling suggestions and questions. We answer some questions in the magazine and many more by return mail, but can't answer all the Workshop mail we receive. Please write "MR Workshop" at the top of your letter and address it to MODEL RAILROADER Magazine, 21027 Crossroads Circle, P. O. Box 1612, Waukesha, WI 53187. There is no payment for questions, but suggestions are paid for upon publication.

What is the purpose of the extended porches on the Union Pacific's CA-11 cabooses? Also, as I can't afford Overland's brass versions, I would appreciate help with scratchbuilding a CA-11. — Thomas L. Guess, North Richland Hills, Tex.

The end platforms perform the same function as traditional caboose ends. They provide a place for mounting the steps used to get on and off the car. These platforms are made of open steel grating so that mud and snow will pass through.

The more revolutionary design feature is the partially enclosed porches at each end. These provide a safer place for crew members to pick up orders or inspect the train while en route.

The space needed for these porches was available because the CA-11 followed a bay-window design. In a cupola-style caboose the space under the cupola is good for little except storage and ladders up to the cupola seats. A bay-window caboose can have a smaller interior and still have plenty of room for all that's needed.

The Union Pacific adopted the bay-window design because it's less expensive to build and cupolas had lost their effectiveness. As modern cars were built taller conductors couldn't see much of the train from the cupola anyway.

You could scratchbuild the car entirely from styrene, following the drawings included in the April 1981 issue of MODEL RAILROADER. Depending on how exact you want to be, a much easier approach would be to kitbash Athearn's inexpensive plastic bay-window caboose. The obvious feature to capture is the open ends. — *Jim Kelly*