

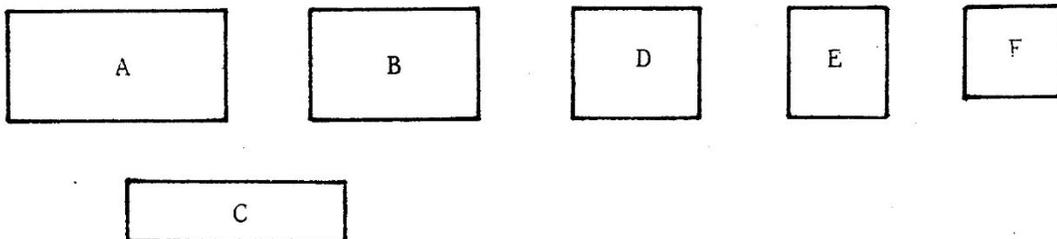
ASSEMBLY SUGGESTIONS

This series of kits may be assembled with styrene solvents wherever styrene components are being fastened together. When fastening metal or wood components to the styrene, we suggest the use of 5 minute epoxy or ACC glues. ALWAYS BE AWARE OF MANUFACTURERS DIRECTIONS AND WARNINGS REGARDING THE USE OF EPOXIES AND ACC STYLE CEMENTS.

Each carside has a red dot on it. This identifies the outside of the carside...the side on which fluting sections are to be applied. One side of the Tavern car has two red dots on it to identify the side that has the service door.

An elevation drawing of each carside is supplied, in 1/8" scale. Use this for determining the location of baggage elevator doors, or other surface details. Notice that the baggage elevator doors are not all the same distance from the car end, so check each car individually.

On the carside elevations you will see a few windows that have a shaded area. Windows so indicated will have to be enlarged as shown to accomodate the particular window that goes in that opening. Each window in the side elevation has a letter in it, which indicates which particular size of cast window goes in that opening. There are 6 different window sizes, shown below in actual size to help you identify each window size correctly. In enlarging the few window openings, use the actual window casting as a guide for opening up the space the proper amount, so that the window fits snugly between the sides of the opening. All window openings are higher than the window castings by design.



Examine the pre-cut fluting sections, and you will find one strip with nine flutes, which will be placed below the windows, and one special shape, which includes the letterboard and goes above the windows. In placing the nine rib flute, be sure to place it so that the half-thick portion of a flute is at the bottom of the carside. The letterboard section is extra-wide and will be trimmed later on.

Begin actual construction by enlarging any window openings in the side you are working on. Next place the 9 rib fluting on the carside, placing the long section in position in relationship to the location of the baggage elevator door. Do not try to build in the baggage elevator door at this time, nor add the short section of fluting between that door and the end of the car.

We suggest you assemble this 9 rib strip in place by placing the carside against a straight edge or T-square, so that the fluting section

is perfectly flush with the bottom edge of the carside. You will notice that the fluting section covers a portion of each window opening. This is by design. We suggest the use of a $\frac{1}{2}$ " soft bristle artists brush for application of styrene solvent over large areas, such as in placing the fluting strip, and for small applications of solvent, a small #3 brush.

When the 9 rib section is securely placed, add an A window(see note A below) at or near each end of the carside, and one somewhere along in the middle of the side so that you can place the letterboard section in place (see noteB below). You can be sure that you get these two fluting sections parallel by taking one of the .030 x .660 strips, which will later be cut and placed between each window, and temporarily setting it between top and bottom flute sections when you place the upper section, to assure that near the ends of the car where there is no window to space these pieces, they remain parallel.

NOTE A: The thickness of the windows is important in the design and final appearance of the car. There may be some slight variation in thickness of window castings, and you want to be sure that all windows end up flush with the outside of the flute section. We suggest that after you drop a window in place from the front side or outside of the carside, you turn the carside over and press lightly on the window from the back to be sure that it is flush with the outside face of the carside. This will assure that when you place the .030 x .660 pier panel pieces between the windows, there is slight evidence of an edge where the window frame sits against the pier panel. If you hold the carside lengthwise up to a light, you will want to see a slight difference in elevation where the window frame butts against the pier panel.

NOTE B: In placing the letterboard section on the coach-baggage, you will have to measure and cut out a portion of the section to accommodate the space required for the top of the baggage door. The side elevation gives this dimension.

You will see in placing the windows that small amounts of solvent around the window frame against each flute section will secure them in place properly, and as each window is placed in position you can temporarily place the .030 x .660 pier material against the edge of the window frame to verify its position as described in NOTE A above.

When placing an F window, be sure to place it in position against the letterboard section, and add a small scrap of .030 below it to fill between the bottom of the window and the lower flute section. This small section would be added after the pier panel sections on either side of the window are in place.

Now place the .030 x .660 pier panel material in place between the windows. This pier panel material can now also be placed in position at the ends of each carside. When this material is in place at the vestibule end of a carside, you can now add the remainder of the 9 rib flute section to the carside, and then add the details to create the baggage elevator door, as shown in the side elevations. Note that the service door on the Tavern car is slightly different from the baggage elevator doors.

When all windows and pier panel sections are securely placed, trim excess material at the ends of the carside, and using a straight edge or T-square, trim the excess of the letterboard section at the top edge of the carside. NOTE. Cut this away "close to" but not exactly against the top edge of the carside, then sand down to be sure that you end up with a line along the top edge that is parallel to the bottom edge. If you attempt to use the top edge of the carside as a cutting guide, and there should be any slight bow in the top edge of the carside from the production cutting of the carside blanks, you would cut into the portion of the letterboard which constitutes the final top rib detail on the carside. If you make this trim as we suggest, there will be a narrow flute rib remaining at the top of the carside which will fit up against the roofline. This is also the top rib on which a stripe will go when you are painting and decorating the carside.

On cars with vestibule doors, at the end with the door, add the .020 x .080 strip, flush with the back of the carside, and even with the top and bottom of the carside.

Next add the vestibule doors as required, and other surface details to the carside, such as the small baggage elevator operating door, and the insignia signboard. Be sure to file off any flash or draft on the cardoors, so that they sit flush against the end of the car wall. Note that the handle details on the doors will be at the outermost end of the carside when in proper position.

Now add the .080 x .125 styrene strip along the inside bottom edge of the carside, again using a straightedge or T-square to place it so it is flush with the bottom edge of the carside. Bring this strip to within 1/8" of each end of the carside.

Trim any flash or draft off the car ends, and mount one carside in place on an end. You will note that there is a rib on the inside of the car end at each side which serves to place the carside in the proper position and another rib across the inside of the end wall which will assure that both carsides will be at the same height when the body is assembled. When both ends are securely fastened to one carside, mount the other carside to this assembly.

When both sides and ends are securely assembled, the floor may be placed in position, resting on the edge of the .080 x .125 strip. If necessary, trim away any excess in the floor width until it drops into place without forcing the carsides apart. The edges of the floor stock will have a slight bevel on them from the production cutting process, and this should be removed to provide a good fit. It may also be necessary to trim away a bit at each corner of the floor to clear the four corner ribs at the ends of the body.

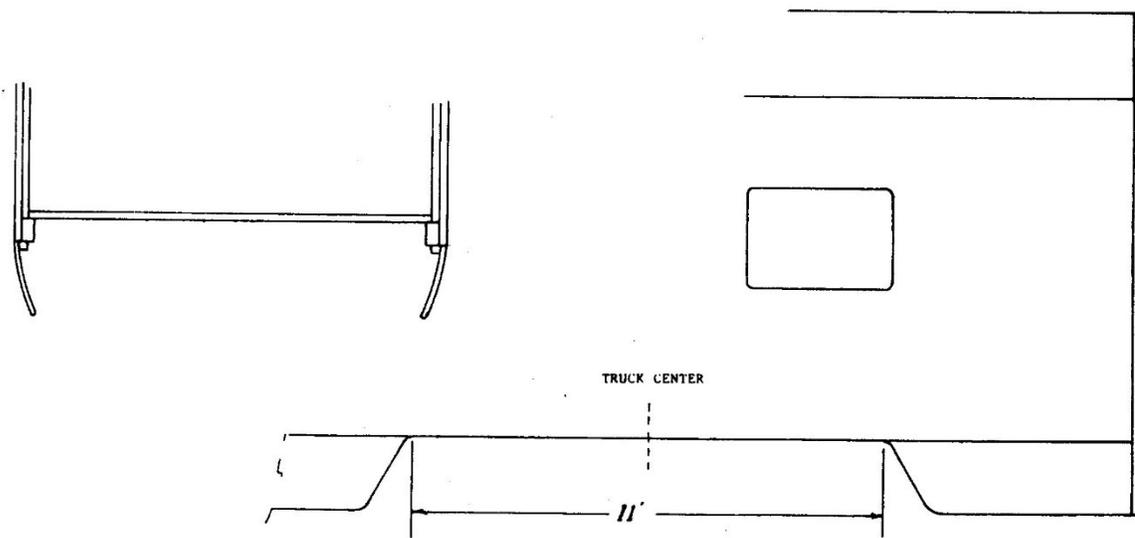
Mount the roof in place next, filing as required to get a neat fit between car ends. If you file away a bit too much, just add a small scrap of styrene to the end of the roof and file again to fit.

We suggest fitting a small piece of scrap wood to the underside of the roof, somewhere along towards the center of the car, so that you can run a mounting screw up through the floor and secure the roof in place. The roof is approximately .100 thick and you probably do not have enough material to drill into the roof and secure it without the

possibility of raising a bump on the surface...therefore we suggest you epoxy a wood piece and run your mounting screw into it. If you are anticipating doing interiors on these cars, you may want to do some advance planning as to the location of the mounting screw, and avoid the center of the car if it will be highly visible in the finished model.

Skirt material should be added now. Here, the period of time you are modeling will determine what skirting you apply. During the later years, most of this equipment had the long center section of skirting removed, leaving only the short sections at the ends. Use the .060 x .060 styrene strip on the back edge of the skirting to help support it in place on the bottom edge of the carside.

Referring to sketches, mount appropriate roof and underbody details with epoxy or ACC cements. Handrails should be formed and carbodies drilled at this time, then set the grabs aside, identified for each carbody location, and when final painting and lettering is done, they can be replaced.



Prior to any final painting on the carbodies, we suggest that they be washed in warm water to remove any possible trace of oil from the production process used in extruding the roof and skirting material.