

INSTRUCTIONS FOR USING BASIC BODY KIT #173-101 & DELUXE BODY KIT #173-102

Brass Car Sides Basic Body Kit #173-101 is designed to be used with any of our non-dome streamlined car side sets. It consists of milled basswood roof, floor, and centersill, and a pair of cast "American pewter" ends. The now-discontinued Deluxe Body Kit (#173-102) consisted of the same basswood roof, 0.125" thick fiberglass floor with copper cladding on both sides, and two lost-wax brass end castings. The pewter end castings are also available as a pair of detail parts as our #173-200. [The Deluxe Body Kit was discontinued in 2009 due to limited demand and prohibitive cost increases for the floor and brass end castings. However, we include reference to that kit in these brackets for completeness.]

The Basic Body Kit is an economical alternative to the overlay method (see next paragraph), and lends itself to a more faithful rendering of particular cars when accurate detail parts are chosen and applied. We offer the following instructions as a guide to help modelers avoid certain pitfalls. Modelers typically find that these kits encourage creative approaches that go beyond the basic steps outlined in this sheet.

Most of the sides for our GN, NP and post-war PS prototypes were designed with the option of being applied as an overlay to the plastic cars manufactured by Rivarossi, Con-Cor, or Bachmann. However, we have produced cars in several other length groups, all of which may be used with our body kits. For example, our PS series of five pre-war sleepers (6-6-4, 4-4-2, 10-5, 13 bedroom, and 18 roomette), Milwaukee Road "Hiawatha" coach, parlor, head-end, and "Pioneer Limited" sleepers, NP 588 coach, C&NW "400" coach, and CN 5400-series coach are scale length. Other sets, such as #173-53, -55, -56, -58, -61 through 63 and -65 through 67 match the Train Station Products #807 core kit. More recently-released side sets are sized for various Walthers cars and some others have been found to match a variety of Walthers smoothside cars, particularly the PS 6-6-4 and 4-4-2 prototypes, as noted in updated instruction sheets. Instructions for using the recommended methods are included with the side sets. Step 3 covers cutting the roof and floor to the desired length.

1. **Wood Preparation.** We have found it easier to sand and seal the roof and wood floor pieces before sawing and assembly. Apply two or three coats of a good quality wood sealer, and hand sand with fine and extra fine sandpaper between coats to achieve a smooth metallic texture. Be careful not to round the ends of the pieces during sanding.
2. **Ends Preparation.** The end castings have been inspected and might only require a light dressing with a flat file to remove any roughness around the perimeter or on exterior surfaces. The pewter ends can be bent by hand to correct any slight lack of flatness.

The modeler needs to decide whether the car is to be made with the floor or roof removable. We recommend that the floor be the removable part, using screws for attachment into the tabs on the ends. This gives easy access to interior details and lighting. The pewter end tabs are dimpled and should be drilled out with a No. 50 bit using a wooden block under the tabs. Use care, since these tabs are easily broken off. Tap holes with a 2-56 tap. The brass end tabs can similarly be tapped for 2-56 machine screws.

3. **Cutting to Length (if necessary).** Roof and floor are designed to fit between the two ends. Thus each will have a length equal to the length of your sides minus the thickness of the two ends (about 1/16" each). Make a preliminary fit by taping the ends to the floor with filament or masking tape and laying on the sides to check for length. This is a good way to check for the squareness of the end tabs, too. The sides on most prototype cars were flush with the ends. If the floor is too long for the sides, mark the excess. If the floor length is correct as gauged by the sides, place the roof between the ends. If the roof is too long, mark the excess. Obviously, it's better to err on the side of too long and then take off another thin slice than too short and have to shim.

The roof and floor can be trimmed on a small table saw. A radial arm saw or a band saw are alternatives,

but a small-tooth blade should be used. A miter box saw can also be used, but is harder to control. For all methods, be sure that the cut is square in all directions. Test saw on a scrap piece first.

[The fiberglass floor is a very tough material, and should not be cut with an ordinary saw blade. Small amounts of material are most easily removed with a bench grinder. A band saw with metal cutting blade can also be used to shorten the floor. Use a dust mask and gloves when grinding the fiberglass.]

4. **Basic Assembly.** Position one end casting on top of the floor. Carefully mark the floor through the holes in the tabs. Drill the holes to clear the 2-56 screws using a No. 42 bit. Machine screws of at least 3/16" length will be needed. Pan head, round head or flathead may be used. If you are using flathead machine screws, countersink the bottom of the floor at this time. (Countersunk flathead screws are less forgiving of small hole position errors.) Repeat these steps for the other end. Mark each casting and its respective end for identification in some way.

Temporarily attach the ends to the floor with the screws. Do not overtighten screws. Check the end/floor combination for squareness and position. Lay the brass side over the superstructure with the vestibule end of the side at the end with the open door casting. Check for fit and squareness and touch up parts with hand or power tools as needed.

The notches in the end casting are designed to accommodate the side thickness of 0.010" and a thin layer of adhesive [or solder for brass ends]. The notches may be deepened with a flat file if necessary.

5. **Final Assembly.** Most modelers paint the sides and car superstructure after assembly. Others prefer to paint and bake the sides before attaching them to the ends. Whichever choice you make, now is the time to strip the Krylon coating from the sides using a paste-type stripper, such as Strypeeze. Be sure to follow manufacturer warnings about ventilation. If stiffening braces, such as brass "L" strips from K&S are desired behind the sides, they should be soldered or glued on at this time. Some modelers solder or glue a brass angle piece on the inside of the sides near the floor to increase the stiffness. Attach the sides to the vertical edges of the end castings and the roof using a thin layer of Walthers Goo, Ambroid Fas'N'All, cyanoacrylate cement [or solder for brass ends]. If using Goo or other contact cement, use the "tacky dry" approach and clamp the work for 24 hours. Of course, do not allow glue to join sides to floor if you plan to remove the floor.
6. **Roof Installation.** Test fit the roof in the car. The roof and floor will normally be the same length but trim as necessary. When you have the correct length, glue the roof between the ends (unless the roof is to be left removable).
7. **Other Options.** This completes the car body. Body bolsters for trucks, centersill, couplers (if body mounted) and underbody and roof details require no special instructions, except accurate positioning information, which is often hard to find. [The copper clad pc board floor allows for soldering on brass castings or a centersill from K&S brass angles or strips, as is done with imported brass cars.] Grabirons may be made from brass wire and soldered in place, or Detail Associates grabirons will fit many of hole spacings and may be pressed into cardboard backing and glued in place. Windows may be glazed with strips cut from Evergreen 0.010" or 0.015" clear styrene or microscope slide cover glass. Please refer to the reference sheet supplied with the sides and check our web page for updates.
8. We welcome your suggestions for alternate or better ways for using our parts to make satisfying models. For information about our products, new releases, current bulletin and catalog sheets, modeler photos, reservation form and ordering information, see www.brasscarsides.com. Send any questions or comments by e-mail to info@brasscarsides.com, or call 507-931-2784.

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