

2-Piece Photoetched Brass Bench Assembly Tutorial

By Bruce Kern

The purpose of this article is to explain an alternate technique for assembling the Tom's Modelworks two-piece photoetched brass benches. In an effort to improve accuracy, efficiency and speed of assembly the following techniques were developed. Although developed for the 1/350 set it is applicable to all scales. Refer to the TRMA article "Working with Photoetched Brass" for specific tools and techniques for cutting, trimming and cementing P/E brass parts. Only the tools specific to this technique are discussed.

Step One: Construct the assembly tool

This technique requires the modeler to build an assembly jig from a pair of flat blade pliers. A pair of self opening flat nose micro-pliers with a maximum blade width of 6mm is suggested. Cut two short pieces of 0.75 x 2.5 mm styrene strip approximately 7.5 mm long. Take one piece and glue to the inside of the pliers' jaw. Align it carefully to overhang three edges and keep parallel to the end of the jaws (see below). Next place a drop of glue on the opposite jaw face and set the second piece of styrene on the first



piece. Lightly close the pliers and make final adjustments to align the front and end faces. Keep jaws tightly clamped while glue dries. To complete the assembly tool, carefully file both ends to obtain a width equal to the slat length (approx 7mm). Also file the front edge to correct any misalignments in the styrene.



Step Two: Paint the benches

Before removing the benches from the brass sheet you will want to paint them. Information about historically accurate colors for the bench slats and armrests is available through the Paint Reference on the TRMA website.. An airbrush is strongly recommended for painting the benches as the intricate detail of the legs and armrests can easily be lost otherwise.

Begin by masking off the area of the benches from the remaining parts on the brass sheet. Use small pieces of paper with tape at the edges and do this on both sides of the brass sheet. If you have chosen to do paint the bench ends, armrests and legs a different color from the slats, first paint all bench parts the color of the slats. Make sure to paint both sides. After the paint is thoroughly dry; mask off the slat areas of all benches remembering to mask both sides. Paint the exposed ends/legs/armrests the color of choice and carefully remove the mask after paint has set (not dried). Remember to do this by slowly pulling the tape back on itself to avoid damaging the parts and pulling off paint.

Step Three: Form the bench backs and legs/armrests (refer to the figures below)

Figure A. Lay the brass sheet on a piece of card stock and remove 4 or 5 bench backs from the sheet. Be sure to trim the sprue tight to the bottom edge of the back pieces.

Figure B. Bend up the armrests of all backs that were removed by placing one back at a time in the pliers, aligning the sides and top edge with the styrene in the jaws and bending the armrests up with a flat tool, blade or tweezers.

Figure C. With the sheet slightly raised off the workbench pick up a back with tweezers, apply glue and carefully align with and cement it to the bottom half. Do this for all backs that have been bent to shape.

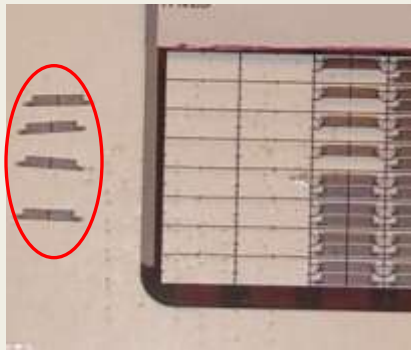


Figure A

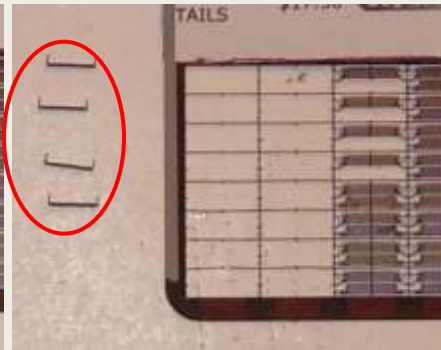


Figure B

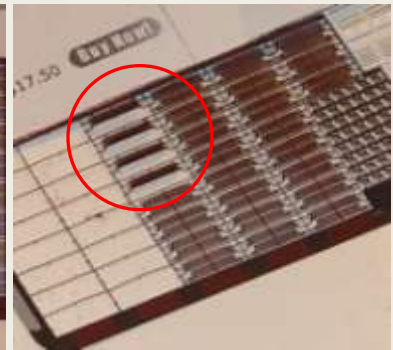


Figure C

Step Four: Final assembly

Figure D. After the glue has set, carefully cut the formed benches from the brass sheet (Figure D). Pick up an assembled bench and insert it into the pliers upside down, gently positioning it using the bench armrests as a guide. Close the pliers to hold it in place and bend up legs on both sides. Remove the assembled bench and use tweezers to do any final straightening of bench legs or armrests; they should all be at exact right angles to the backs and bottoms.



Figure D