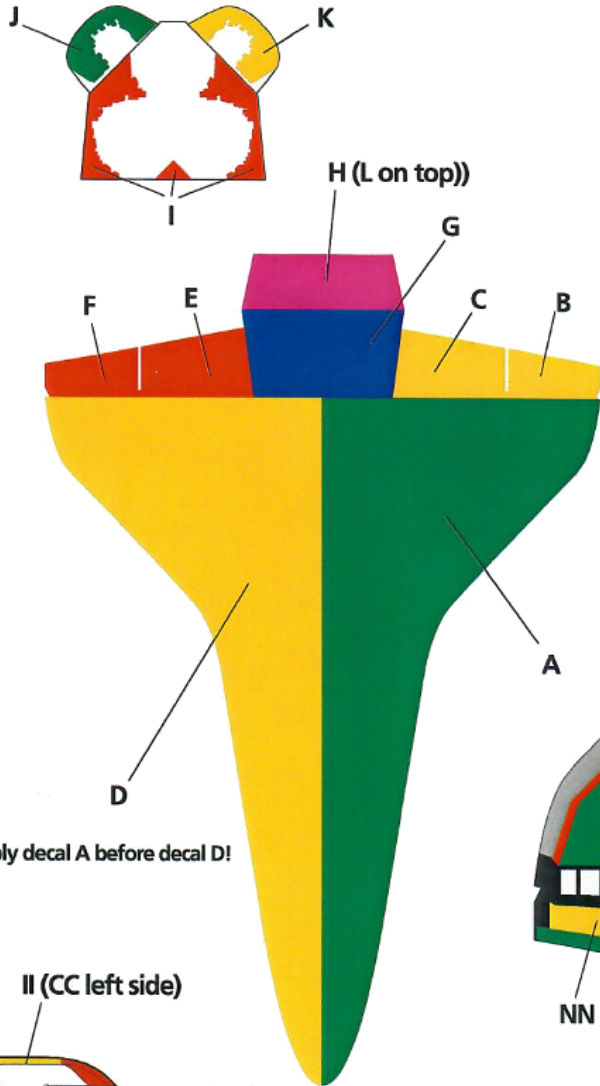
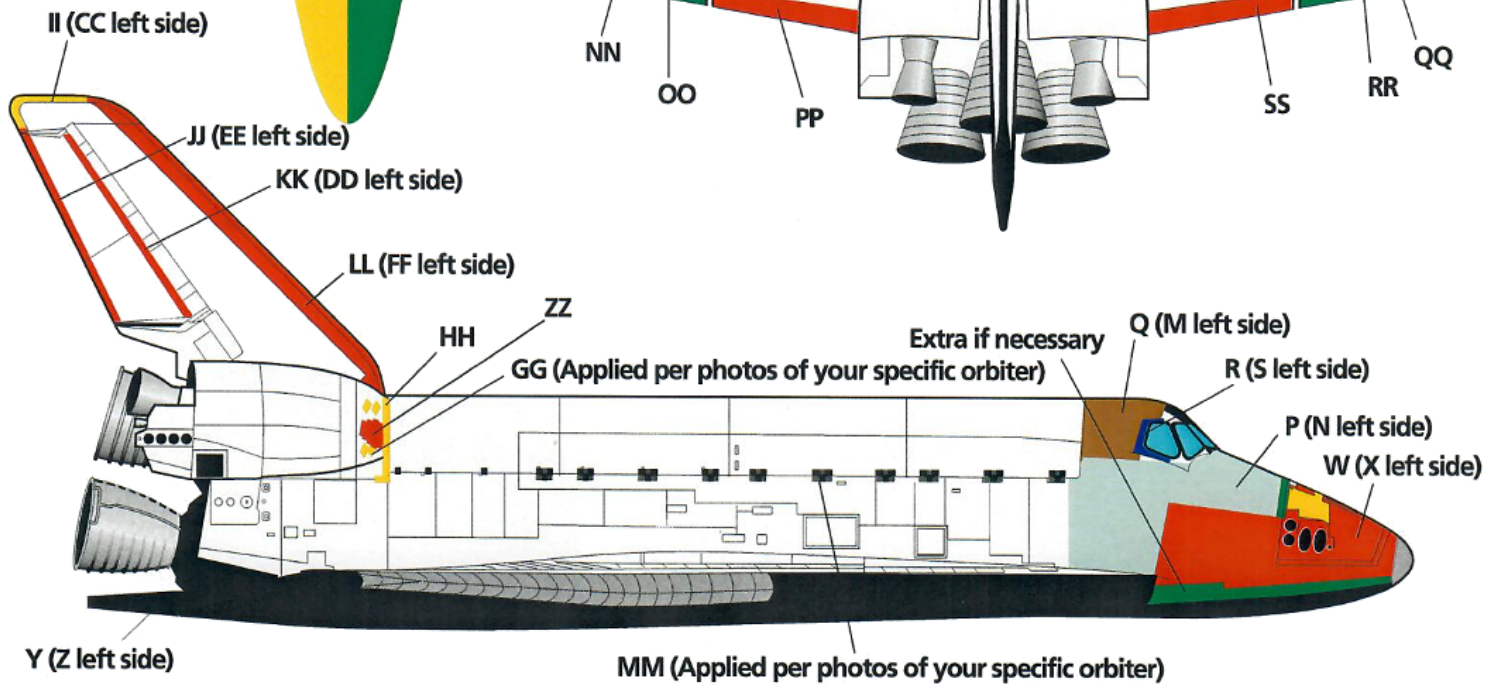


**WARNING!**  
 These are complicated decals meant for advanced modelers. DO NOT apply them without first reading the written instructions!

Special thanks to...  
**Dennis R. Jenkins**  
 "Mr. Shuttle"



Note: Apply decal A before decal D!



**CED44002**  
**Shuttle Orbiter Tiles Decals**  
**SPECIAL APPLICATION INSTRUCTIONS**

1. The Shuttle Orbiter tiles shown on this decal sheet match engineering drawings provided by NASA. However, there were variations between each Orbiter, and in fact variations occurred over time on an individual orbiter. We've given you sufficient decals on these sheets, including the extra tiles, to model most variations.
2. The physical appearance of Orbiter tiles varied greatly, depending on their location and age. While the dark tiles began their lives as pure black tiles and the white tiles as nearly pure white tiles, their appearance changed greatly over time. Reentry changed their appearance, and some tiles were actually replaced over time—but not all at the same time. Therefore, each Orbiter showed a distinctly “brickwork”-like appearance, with various colored tiles all over the airframe. In addition, the “mastic” (which looks like mortar) between the tiles was highly evident in most places, but in other places could not be seen at all. We have faithfully reproduced both of these effects on our decals!
3. These decals are intended to provide an accurate underpinning to additional “weathering” you apply over them to replicate a specific Orbiter on a specific flight. There are numerous possibilities for weathering these tiles; a few are listed below.
4. First, paint your model per your reference photos and the art on the front of this instruction sheet. Basically, paint white on top and very dark gray (not black) on the bottom. We strongly recommend you use BlackMagic™ precut painting masks (CEBM44002, available separately from Meteor Productions, Inc.) to paint the dark gray areas, as these easy-to-use masks are matched to NASA engineering drawings and these decals. The dark gray undercoating will help darken the decals and provide constant color in any locations where your decals don't precisely match.
5. In general, we recommend you apply the white (light) decals first, then the dark ones.
6. Apply the tiles decals according to the diagrams on the color sheet.
7. Very important! The large decals need to be kept flat while soaking and handling, or they will get away from you and you'll ruin them. Be sure to use a water container large enough to hold the decal when it is flat. You might also wish to tape the decal to a piece of cardboard before you dip it into the water to ensure it remains flat during the soaking and application.

8. We recommend you use cool (or lukewarm) water to soak the large decals. Very hot water will make them soft and hard to control during application to your model.
9. Do NOT apply Solvaset or other decal solvent to the surface of your model before applying the large decals! You need to retain control of the decal until you have it in the precise final location. We recommend adding one drop of Foto-Flow (available at camera shops) to the decal water. Foto-Flow is a "wetting" agent and one of the main ingredients in the various decal softeners on the market (Solvaset, Micro-Sol, Micro-Set, etc.). Foto-Flow makes the water "wetter" or slicker, allowing the decal to slide into position more easily. It does not, however, contain any chemicals to soften the decal – all the commercial decal softeners do contain such chemicals.
10. Once your decal is properly positioned, apply Micro-Sol or other commercial decal softener and allow to dry thoroughly. This will cause your decal to conform to all the surface detail on your model.
11. Use extra tile decals to patch areas between decals after application if necessary or if your specific shuttle has a different tile pattern.
12. We recommend you "weather" the decals to replicate the streaking so obvious on most Orbiters.
  - a. One possible method would be to apply the decals, let dry thoroughly, then

airbrush medium and light gray streaks over the tiles decals along the airflow paths. This should be done with a very light touch; you can always add more later!

- b. Another possibility would be to use pastels to represent the color washout common on well-used Orbiters. Also, exceptionally good painters could dry-brush light and medium grays to get a good effect.

13. We recommend using Cutting Edge decals CED44001, Space Shuttle Decals, for the NASA and other markings on the Orbiter. These decals were produced according to NASA engineering drawings!

Other fine Cutting Edge products applicable to the Shuttle Orbiter include:

CELO44008 Space Shuttle Orbiter Superdetailed Engine Nozzles (resin) for any 1/144 Orbiter kit. Based on NASA engineering drawings! The set contains three large and two small nozzles.

CELO44009 Space Shuttle Columbia Fin Tip Camera Pod (resin) for any 1/144 Shuttle Orbiter Kit. Based on NASA engineering drawings!

Have fun building your Orbiter!