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KIT ASSEMBLY INSTRUCTIONS



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THE BASICS OF PAPER MODELING: TOOLS AND EQUIPMENT



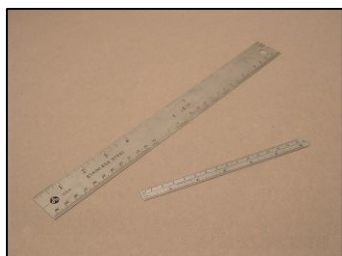
GLUE

There are a variety of glues and adhesives on the market, some of which are nicely suited to building paper models. White glue (also known as PVA glue), glue sticks, Uhu office pens, tacky craft glue, and sometimes even superglue (cyanoacrylate adhesives) all have their own uses. For the great majority of the time, however, you can get by just fine with white glue alone.



SCORING AND CUTTING TOOLS

You'll want to have, at the very least, a sharp hobby knife for cutting parts out of the printed sheet. Scissors are not recommended. For scoring, you can either gently drag the hobby knife across the fold (not recommended), or use specialty tools for scoring without cutting into the paper. Embossing tools such as the ball stylus, an empty ballpoint pen, a scrapbooking bone folder, or even secondhand sculpting tools with smooth and dull blades are great tools for scoring without breaking the paper.



STEEL RULERS

To precisely guide your cuts or scoring, steel rulers come in very handy. Unlike plastic or wood rulers, steel rulers are resistant to sharp hobby knives. You can get by with just a normal 12-inch steel ruler, but you may find that a smaller 6-inch steel ruler is a lot handier and easier to deal with when making small cuts. Along larger parts, steel rulers can also be used as a bending brake.



HOBBY TWEEZERS

Sometimes you'll encounter folds that seem too small to do with your fingers alone. In this situation, a pair of hobby tweezers like the one shown to the left is very handy. In effect, they act as a set of tiny fingers and a miniature bending brake, allowing you to crisply fold very small parts.



BLACK, GRAY, OR DARK GRAY MARKERS

When you cut parts out of the sheet, the edges are naked white. This generally results in a less than pleasing visual effect when the model is fully built, and this is dealt with by a technique called "edging". When edging parts, you will be doing two things: coloring the actual edge itself, and coloring in a portion of the glue tabs. The best marker to use for edging is one that has a soft chisel tip, and which doesn't bleed through thin cardstock. The markers pictured to the left are calligraphy markers with 2mm and 3.5mm chisel tips.



CUTTING PAD/MAT

A good self-healing cutting mat will help your hobby knife blades stay sharp longer, and protect your work surface from damage.

THE BASICS OF PAPER MODELING: TIPS AND TECHNIQUES

Basic Techniques

1. Scoring: Scoring is a technique used to make folding easier by pre-creasing the paper along a fold line. The most common method of scoring is to lightly drag a knife blade across the fold line, slicing through the upper layers of the paper. The recommended method is to instead use an empty ballpoint pen or a ball stylus tool to gently compress the paper along the fold lines. This prevents the appearance of unsightly naked edges and makes for a much stronger model.

2. Cutting: Cutting may seem to be a glaringly obvious technique, but a few pointers are essential. For the majority of cutting where paper models are concerned, a sharp knife and a steel ruler are far more precise and efficient than a pair of scissors. Save the scissors for separating individual parts or groups of parts from the rest of the sheet.

3. Burnishing: Often, you will be building parts that are composed of flat fold-overs. In order to ensure that they stay straight and do not delaminate after building, you will want to burnish the two halves together. You can use your finger, a smooth and flat tool, or even a little rolling pin. Burnishing forces the two layers in a flat fold-over together, spreading out the glue even further and squeezing it into the paper fibers for additional bite.

4. Edging: Edging improves the appearance of paper models considerably by hiding the naked edges of cut parts. Anything from color markers to soft pencils and various types of paints may be used to edge parts. However, in most cases, matching the color exactly is less of a concern than simply matching the contrast. For most purposes, three or four shades of gray from lightest to darkest will more than suffice.

5. Folding and Gluing: Depending on the thickness of the paper or cardstock used, some parts may be difficult to assemble with fingers alone. In this situation, a pair of tweezers is worth more than its weight in gold. Tweezers come in a wide variety of sizes and jaw shapes, and some of the more exotic shapes are fantastically useful for assembling tiny parts. Tweezers can be used to fold tiny flaps and clamp them in place while the glue sets, as well as making it much easier to attach small parts to other parts.

Special Notes

1. Gluing Tabs: This model includes integral gluing tabs for joining certain parts together. However, the utility of gluing tabs decreases proportionally as the thickness of the paper or cardstock increases. Thick cardstock or paper can be used for printing this model, but it is recommended that you try a test assembly before committing wholly to assembling a model. If the gluing tabs won't fit or otherwise throw off the tolerances of the finished test assembly, leave them off the parts entirely and cut your own gluing tabs out of scrap cardstock.

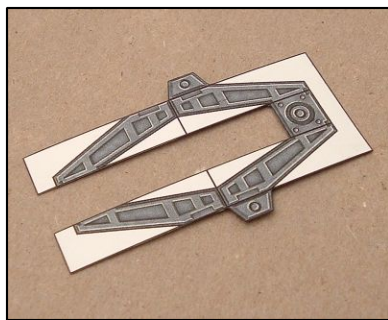
These separate gluing tabs should overlap both of the parts to be joined, and glued to the unprinted surface along the joining edges of both parts. This is called "backing", and a side effect of this is that parts will fit more or less flush. Backing parts with separate gluing tabs also generally yields better modeling results, but the integral gluing tabs are retained for the convenience of beginners and those who prefer to use thinner media for their paper models.

2. Sealing: In most cases, sealing the model with varnish or other form of spray sealant isn't necessary. However, if you want to add further detail to the model with decals or paint, you may want to seal the model with several light coats of a waterproof glossy clear sealant first. This will protect the model from a moderate level of moisture, and the smooth surface will facilitate the application of decals. You can also apply a final coat of a matte clear sealant to kill the gloss afterwards. Keep in mind that the simple act of sealing a model does not necessarily render it waterproof, and that any application of waterside decals needs to be done with great care.

3. Reinforcing: At times you may need to reinforce large pieces, either to make them heavier or to increase their strength. To do this, you may wish to glue toothpicks, craft sticks, or other suitable items to the interior of a model.

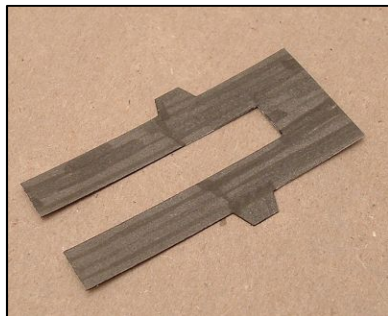
4. Weighting: If you find that your models are too light, you can weigh them down by gluing various ballast items to the inside of the model. Some items that come to mind include pennies, ball bearings, and washers. Affixing these items to the unprinted side of a model before folding and gluing it into shape will give the model a significant amount of heft and weight.

ASSEMBLY INSTRUCTIONS



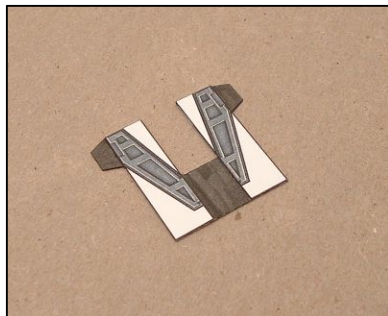
BUILDING THE LEGS, STEP 1

Trim out and score the leg units (Parts 06a, 06b, 06c, and 06d) as shown to the left.



BUILDING THE LEGS, STEP 2

Color the reverse side of the legs black or dark gray. Doing this will eliminate any whitespace caused by off-register cutting.



BUILDING THE LEGS, STEP 3

Fold and glue both sides of the legs together as shown to the left.



BUILDING THE LEGS, STEP 4

Trim out the remaining whitespace as shown to the left.



BUILDING THE LEGS, STEP 5

Fold up the legs as shown to the left. Set the legs aside for now.

ASSEMBLY INSTRUCTIONS

BUILDING THE CRADLE

Fold and glue the cradle (Part 04) together as shown to the right. Set it aside for now. As with the legs, you may want to color the reverse side black or dark gray along the edges beforehand.



BUILDING THE TARGETING POD

The targeting pod is composed of two parts, the upper pod (Part 01), and the lower pod (Part 02). Both parts have matching white gluing regions bordered by black dashed lines. Glue both parts together accordingly, then glue the completed targeting pod to the cradle as shown to the left.

Set the completed cradle and targeting pod assembly aside for now.

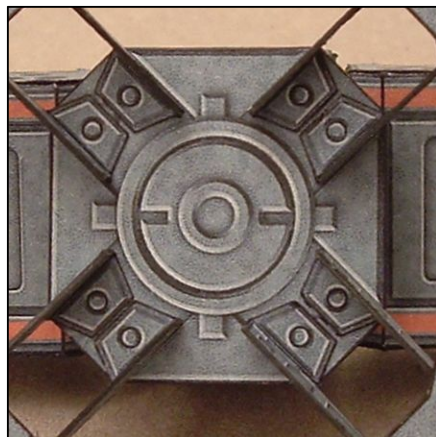
THE PLATFORM BASE

Cut, glue, and fold the platform base (Part 05) over onto itself, and trim out the whitespace at each corner. (You may want to color the reverse side first).

Glue the cradle and targeting pod assembly to the top of the platform base.

Next, glue the legs to the bottom of the platform base as shown to the right. The white regions bordered by dashed black lines, on the bottom of the platform base, indicate the exact positioning of each leg.

The feet (Parts 07a, 07b, 07c, and 07d) are assembled in the same manner as the platform base. As with the platform base, the feet are marked with a white region bordered with a dashed black line to indicate the precise gluing position of each leg.



MOUNTING THE MISSILE PODS

Build the right-side missile pod (Part 08), the left-side missile pod (Part 09), and the weapon rack (Part 03). The weapon rack itself is a simple fold-over part that assembles in the same manner as the platform base and feet.

Glue both missile pods to the weapon rack, then glue the completed weapon system to the top of the targeting pod as shown to the left.

At this point, your model is complete. The next page has additional photos of the completed model for the sake of reference.

REFERENCE IMAGES

