

The Basics Of Paper Modeling, Page 1 of 2

Tools Needed

1. Knife
2. Steel ruler
3. Scissors
4. Tweezers
5. White glue
6. Empty ballpoint pen
7. Markers or paint
8. Cutting mat
9. Inkjet or laser printer
10. Cardstock or heavy photo paper
11. Patience



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. 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.

4. 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.

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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. Weighting

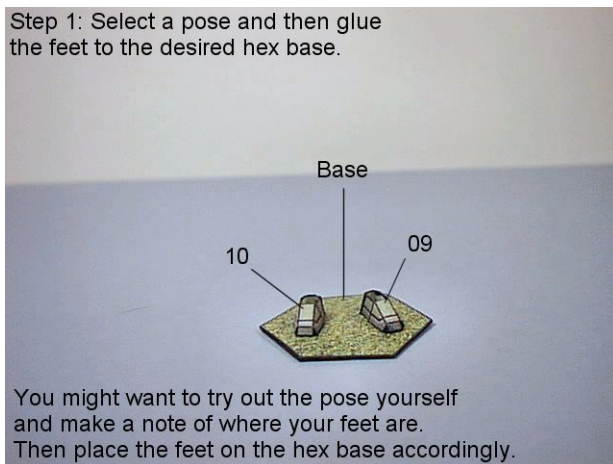
This model comes with a set of hexagonal bases for the convenience of gamers, and these bases are designed with enough interior volume to accommodate several small coins or metal washers. Gluing a few pennies or small washers inside the bases will lend a greater heft and a degree of stability that should make the model more convenient to use in a gaming environment.

3. 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 waterslide decals needs to be done with great care.

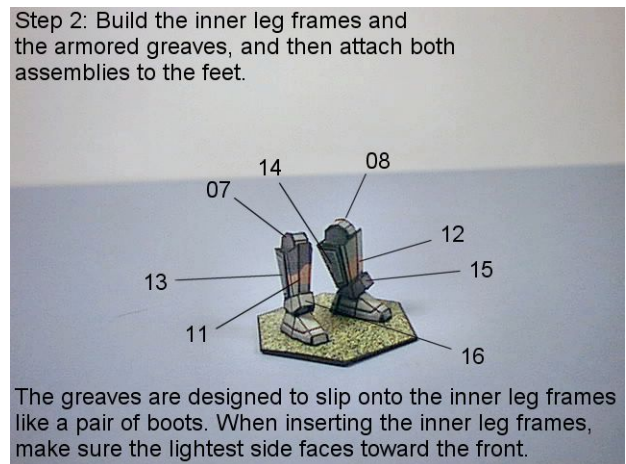
Assembly Instructions: Page 1

Step 1: Select a pose and then glue the feet to the desired hex base.



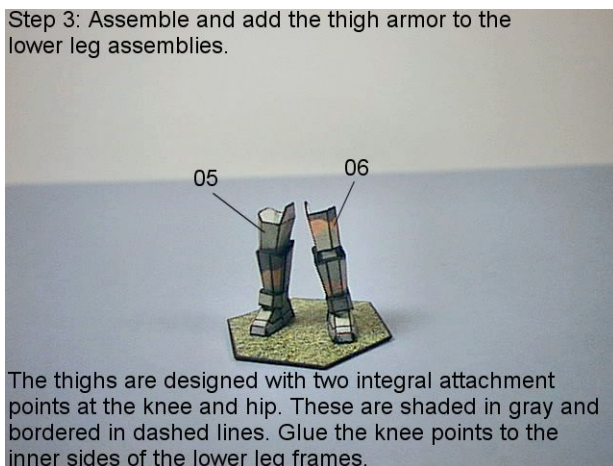
You might want to try out the pose yourself and make a note of where your feet are. Then place the feet on the hex base accordingly.

Step 2: Build the inner leg frames and the armored greaves, and then attach both assemblies to the feet.



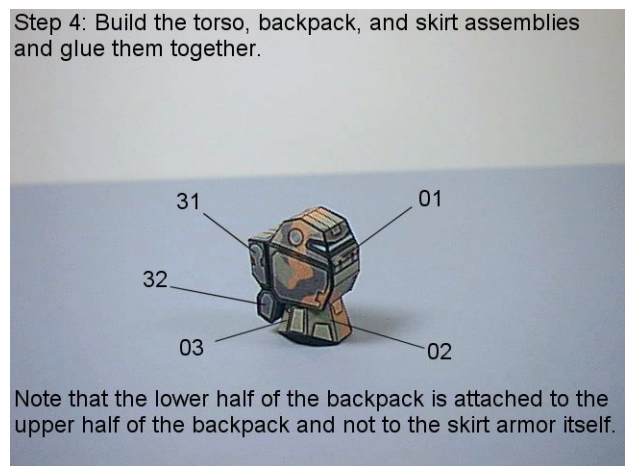
The greaves are designed to slip onto the inner leg frames like a pair of boots. When inserting the inner leg frames, make sure the lightest side faces toward the front.

Step 3: Assemble and add the thigh armor to the lower leg assemblies.



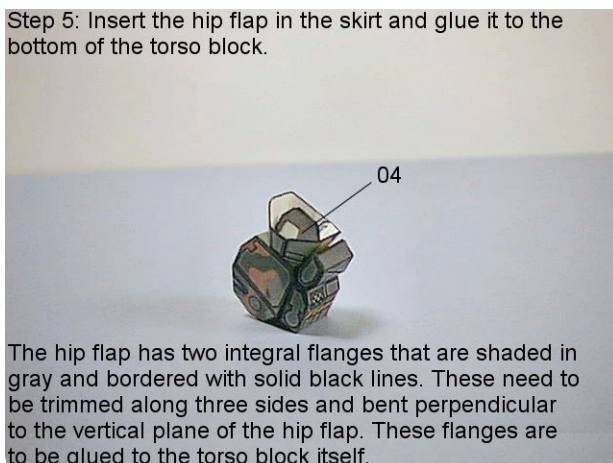
The thighs are designed with two integral attachment points at the knee and hip. These are shaded in gray and bordered in dashed lines. Glue the knee points to the inner sides of the lower leg frames.

Step 4: Build the torso, backpack, and skirt assemblies and glue them together.



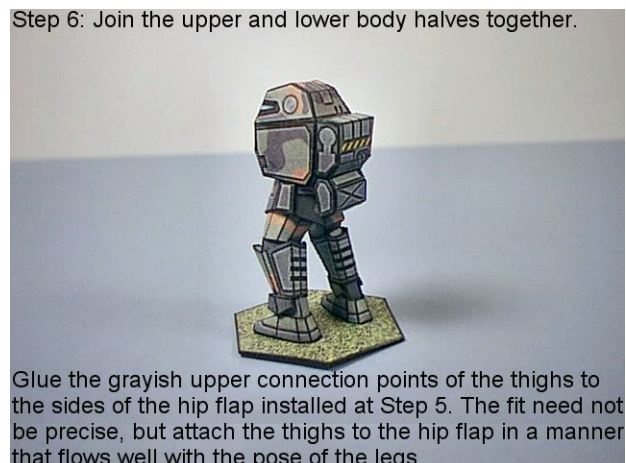
Note that the lower half of the backpack is attached to the upper half of the backpack and not to the skirt armor itself.

Step 5: Insert the hip flap in the skirt and glue it to the bottom of the torso block.



The hip flap has two integral flanges that are shaded in gray and bordered with solid black lines. These need to be trimmed along three sides and bent perpendicular to the vertical plane of the hip flap. These flanges are to be glued to the torso block itself.

Step 6: Join the upper and lower body halves together.



Glue the grayish upper connection points of the thighs to the sides of the hip flap installed at Step 5. The fit need not be precise, but attach the thighs to the hip flap in a manner that flows well with the pose of the legs.

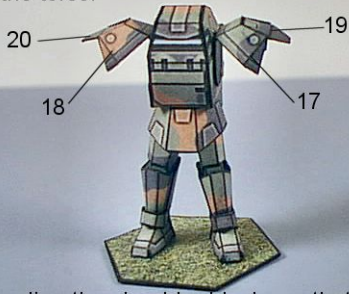
Notes and Tips

This model is shown in a simple, neutral pose. The pose shown is for illustrative purposes only, and you are encouraged to play around with the pose. These photos should be considered as more of a guide to where the various parts belong than anything else.

If you're building this model in cardstock, feel free to ignore the sawtoothed tabs on Parts 07, 08, 23, and 24. You can still use them in the default 35mm scale, but if you want to print at 28mm gaming scale, you need to shrink the printing scale to 90% and ignore these tabs when cutting. Additionally, you may need to remove the smaller tabs on Parts 31, 32, 34, and 35 at 28mm scale.

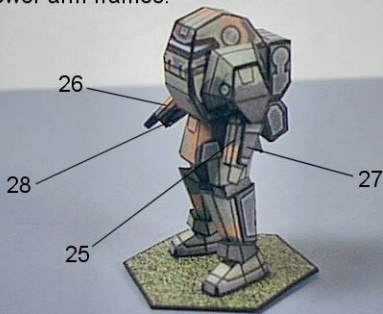
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Step 7: Assemble the shoulder blocks and glue to the sides of the torso.



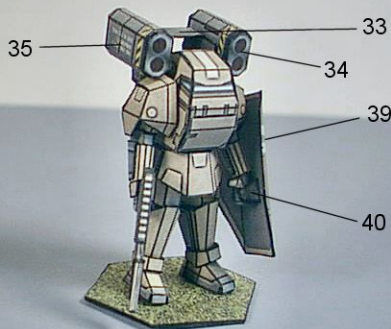
Make sure to align the shoulder blocks so that the upper edge is no higher than the lowest third of the round "ears" on the sides of the head. The rear edges of the shoulders should also be more or less flush along the edges where the backpack unit meets the torso.

Step 9: Fold down the shoulder blocks and glue to the sides of the torso, then build the gauntlets and slip them onto the lower arm frames.



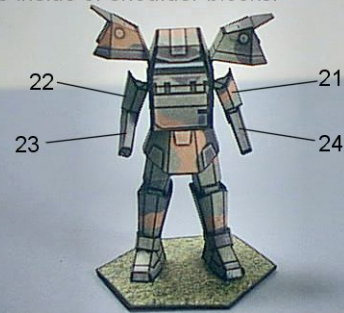
The gauntlets are assembled in the same manner as the greaves, and are slipped over the lower arm frames in the same way that the greaves fit over the lower leg frames.

Step 11: Optional parts. If desired, assemble missile racks, backpack riser frame, and shield unit.



These optional parts may be added in any combination. The shield may be glued into the palm of one hand, and the riser frame/missile pods glued to the backpack.

Step 8: Assemble the upper arms and lower arm frames, then glue to inside of shoulder blocks.



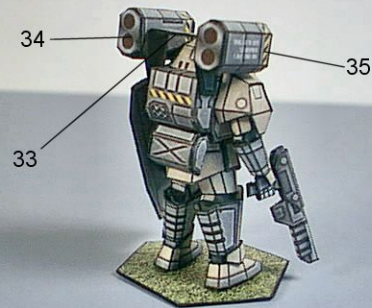
The upper arms and lower arm frames are assembled in the same way as the upper legs and lower leg frames. Align the upper arms so that only 1-2mm of the upper arms are visible with the shoulder blocks down.

Step 10: Fold and shape the wrist plugs, then insert hands into gauntlets. Build the rifle and glue to one or both hands as your initial pose dictates.



The hands and rifle should be laminated to pieces of scrap card to double their thickness before final assembly. The wrist plugs on the hands may need some trimming to fit.

Step 11a: Rear reference image for backpack riser frame and missile pod assembly.



This reference image clarifies the positioning of Parts 33, 34, and 35.

Notes and Tips

When building the hands, note that the "tabs" on the wrist plugs are designed to fold in two different directions. The flap behind the thumb should be folded down in a clockwise direction, while the flap behind the bottom edge of the hand should be folded up in a clockwise direction. Apply glue and heavy pressure to the folded wrist plugs. Once dry, the plugs should be able to socket neatly into the gauntlets. Otherwise, "bevel" the rear of the plugs with a pair of scissors to ease the fit.

When doing the rifle, note that only Part 36 should be laminated to double thickness, and the remainder of the rifle parts are left at normal thickness.