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.

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 waterslide 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 as shown in the picture below.
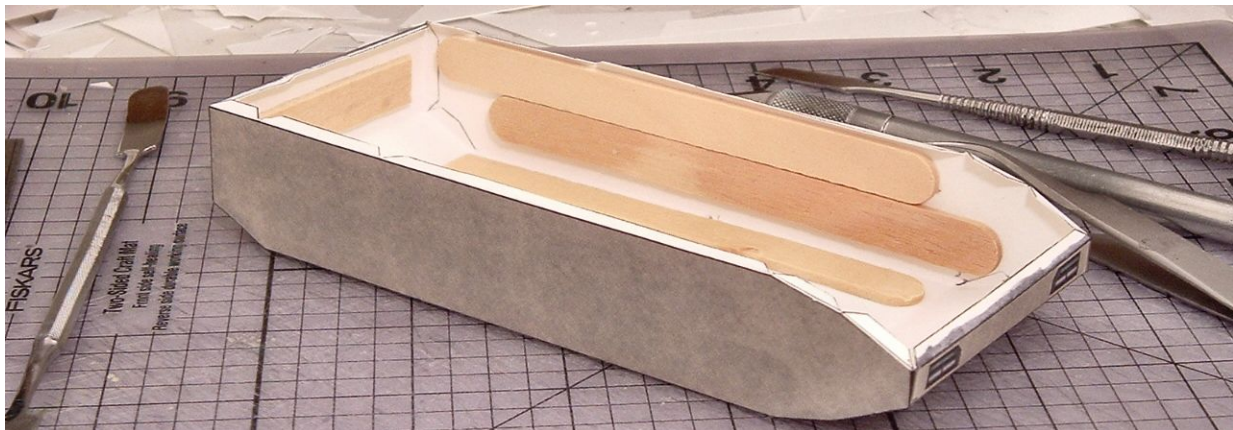
The craft sticks used in the photo above serve the important purpose of strengthening the long sections along the sides and bottom of the model. Reinforcing models goes a long way towards improving their durability and heft as gaming props.

Assembly Instructions
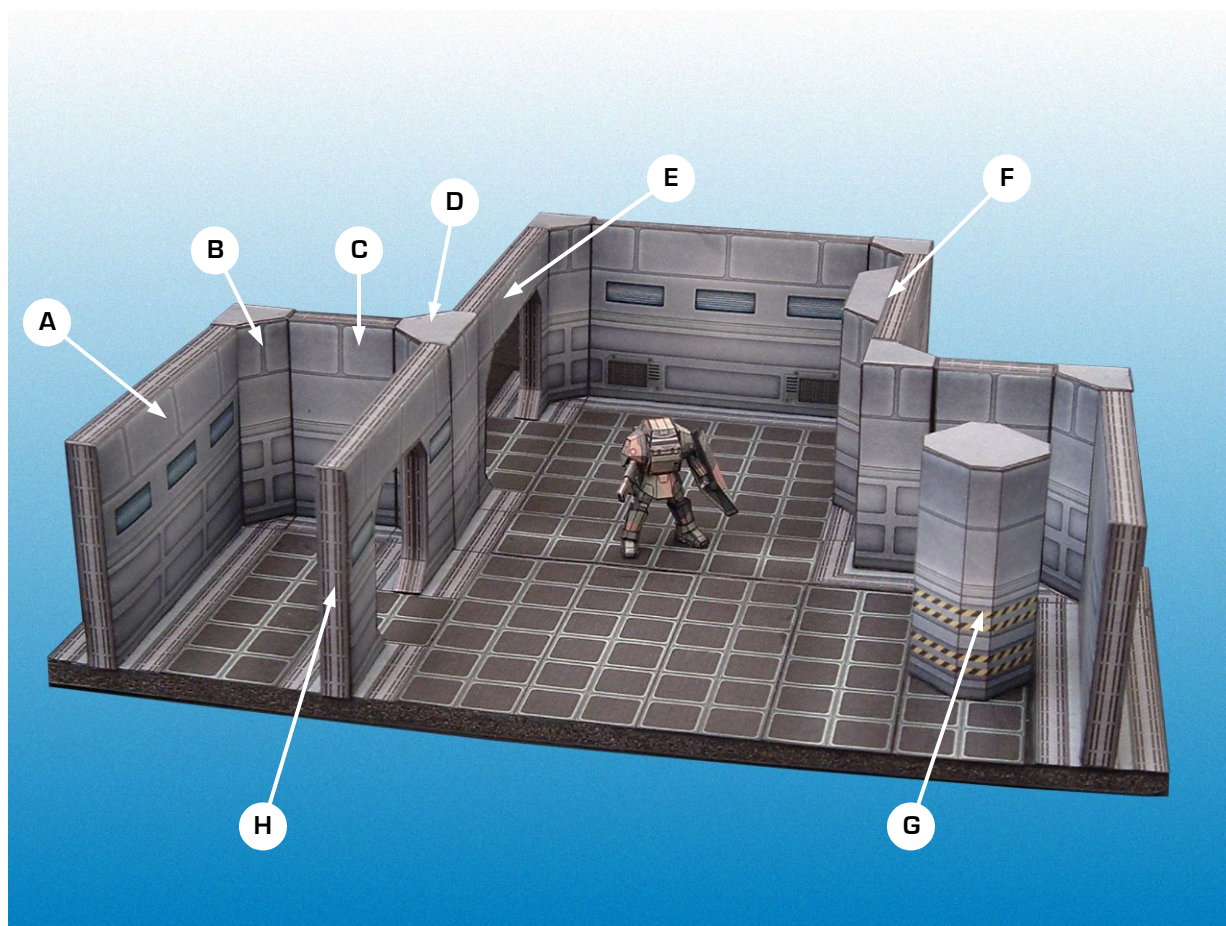
Walls and Floor Tiles

This set contains 1 type of short wall (Part C) and 13 different kinds of long walls (Parts A, E, F, H being four examples), with and without doorways. Each wall is designed to rest atop its own floor tile, and to facilitate the process the gluing areas have been marked in white.

This set also includes dedicated floor tiles in three sizes. In most cases, setting up a playing area involves laying out floor tiles and then bordering them with walls and connectors.

Connectors

There are three types of connectors in this set: X (Same geometry as Part G), L (Part B), and T (Part D) connectors. These are in the form of column pieces that glue to their own floor tiles. As with walls, the gluing areas are marked off in white. Connectors are usually placed at the corners of a room, and then bordered with wall pieces as needed.

Support Columns

Support columns (Part G) are handy for breaking up line of sight in large rooms as well as generally spicing up the place. Like connectors and walls, support columns have their own floor tiles with the gluing areas marked in white. To build rooms that contain one or more support columns, you may need to use the 1x1 and 3x1 inch pieces to fill out the space around a support column's floor tile.

Corridor Adapters

Sometimes you may want to connect multiple rooms by long corridors rather than using 1x1 or 3x1 tiles between adjoining rooms to form corridors. To this end, this set includes corridor adapter pieces designed to interface with the doorway pieces. The corridor adapters create a seamless bottlenecking from a 3x1 inch wide doorway to a narrow corridor. The corridor itself will still be three tiles wide, but the effective area within the corridor itself is one tile wide.

Assembly Instructions

Wall Layer Pieces

This set also includes some specialized flat pieces intended to be glued to a wall piece (Part I being just one example). These layer pieces can be used to give walls a specific function or purpose relevant to your gaming needs. Generally you would want to glue those layer pieces to one of the 3x1 inch special walls (Part F being one example) since those are also more geometrically interesting than the standard box walls.

Decorations

While this set does not include loose decorations such as tables, chairs, consoles, and so forth, those are currently being prepared as a series of supporting releases. For the most part, these will be free upgrades made available to customers at the Ebbles Miniatures web site. Please visit http://www.ebblesminiatures.com regularly to see what free upgrades to this set are available as well as giving our forum a visit.

Basing the Pieces

Basing your pieces helps keep them well-aligned and sturdy during use. Due to the inherent lightness of cardstock, you may wish to base your floor tiles and walls with foamcore, MDF board, illustration board, or thin chipboard. Alternatively, you may wish to look into the affordable, laser-cut 3mm microplywood bases offered by Litko Aerosystems (www.litkoaero.com), which already come in all of the correct sizes needed: 1x1 inch, 3x1 inches, and 3x3 inches. This is the ideal route to take for those who dread the thought of slicing up bits of foamcore and MDF by hand. All you need to do is cut out the floor and wall tiles and then glue them to the appropriately sized microplywood bases. At the end of the instructions you will find links and some helpful pricing information related to the Litko Aerosystems bases.

Securing the Pieces

During gameplay you may find that errant hand gestures or even a mild breeze may have the same effect upon your cardstock scenery as a 21,000 pound fuel-air explosive device detonating in the midst of a trailer park. While this may be convenient for resolving the effects of large explosive devices in games, for the most part this is an extremely irritating phenomenon. Thus, you may wish to secure your pieces to the playing surface using one of the methods on the next page.

Assembly Instructions

Securing Method 1: Magnetic Backing
The first method of securing your pieces to the playing surface is to use magnetic backing. Available from most stores as either squares or rolls of adhesive-backed plastic impregnated with magnetic particles, magnetic backing may be glued to the bottom of your pieces and placed on a sheet metal surface. This method is only recommended if you already have access to these materials, either as leftovers from other projects or because it's on sale at the local craft store.

Securing Method 2: Velcro
In this method, squares of Velcro are used to hold pieces in place on the playing surface. You may wish to attach only the hook end to your pieces and cover the playing surface in a hook-friendly material such as felt or a similar surface due to the fact that if you bond Velcro to itself, trying to remove a piece with undue haste may well leave you holding a freshly crumpled wad of cardstock in a state of openmouthed horror. Velcro hooks have a less tenacious hold on felt, but nonetheless grip securely enough that your scenery will remain in place. This method is recommended for small layouts specifically designed for roleplaying games.

Securing Method 3: Glue
If you absolutely, positively want to make sure your scenery never goes anywhere, ever...glue it to the playing surface. While this method may seem utterly nonsensical at first blush, there are uses for permanently fixed layouts. Ideally the surface you glue it to would be dedicated to just that purpose, such as a bit of extruded polystyrene terrain or some form of rigid backing. This allows you to create predesigned, fixed layouts for tabletop wargames that you may reuse as needed over multiple games.

As an example of what can be done with a fixed layout, one could use 12x12 inch flooring tiles available at home improvement centers as a basic scenery unit to build upon. Gluing structural pieces atop the flooring tile would create a 12x12 block of interior scenery that can easily be butted up against other 12x12 blocks to form large complexes quickly. In addition to the much quicker setup time when using such prefabricated scenery blocks, most flooring tiles have a significant enough mass that the scenery won't be shifted out of position accidentally. As an alternative to flooring tiles, many home improvement centers will gladly cut wood or extruded polystyrene stock to specific sizes on request. This method is recommended for tabletop wargames where larger blocks of prefab scenery are more practical to set up.

Caveat: Gluing scenery to the dining room table permanently usually causes very entertaining and dramatic reactions from spouses and family members. For this reason, it is not recommended that you do so.

Special Notes and Tips
Due to varying cardstock thickness and printer capabilities, there may be some slight tolerance issues with a couple of parts. Most notably, the doors and door trim strips may need trimming to fit after assembly. In the case of doors, you may need to trim them slightly smaller all around to make them fit. For the door strips, start gluing them to the upper middle section of the doorway first, and then evenly attach the rest of the strip to the doorway frame. You may see roughly 1.5 to 2mm of overlap on both of the lower doorway frame edges. Snip off the excess bit of door trim strip and run a dark gray or black marker across the cut edges as a final bit of touching up.

If you have trouble assembling the walls, try leaving off the bottom flap entirely in order to create a volume that is open on the bottom. This will allow access to the side flaps for clamping with tweezers, and will generally mean an easier build at the expense of some structural strength. If you elect to do so, make sure to slice some tabs along the bottom edges so that you have somewhere to apply the glue while attaching the wall piece to the floor tile. Also, it is strongly recommended that you reinforce the walls as described in the Basics of Paper Modeling section in order to negate any potential twisting and warping along the long axis of wall pieces.

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Appendix: Litko Aerosystems Bases and Price List

Note that this list is current as of March 18, 2004, and is offered only as a courtesy to interested customers. The information in this appendix may change at any time. Go to http://www.litkoaero.com for up to date information.

Litko Aerosystems Base Links and Price List

1x1 Inch Bases
Link: http://www.litkoaero.com/Merchant2/merchant.mv?Screen=CTGY&Store_Code=LAI&Category_Code=MB_SB_1in
10ct $2.49
25ct $4.99
50ct $8.99
100ct $11.99

1x3 Inch Bases
Link: http://www.litkoaero.com/Merchant2/merchant.mv?Screen=CTGY&Store_Code=LAI&Category_Code=MB_IS (scroll down to 1x3 bases)
10ct $2.99
25ct $5.49
50ct $9.75
100ct $15.99

3x3 Inch Bases
Link: http://www.litkoaero.com/Merchant2/merchant.mv?Screen=CTGY&Store_Code=LAI&Category_Code=MB_SB_3_in
10ct $3.99
25ct $6.99
50ct $12.99
100ct $23.99

Bundles of all three types, by quantity
10ct $9.47
25ct $17.47
50ct $31.73
100ct $51.97

Optimal Starter Bundle: 50ct 1x1, 50ct 1x3, 10ct 3x3, for $22.73. (This bundle will create 10 full walled 3x3 rooms with 10 1x1 and 10 1x3 pieces left over for corridors. This is sufficient to build basic layouts suitable for most roleplaying scenarios. For larger layouts covering significant tabletop real estate, you may wish to instead look into the other bundles listed above.)