

MODULE::CORE

PRIMARY SET



ASSEMBLY INSTRUCTIONS AND PARTS MANIFEST

36 PAGES OF MODULAR COMPONENTS

1-INCH GRID COMPATIBLE WITH POPULAR GAMING SYSTEMS

SCALED TO MATCH MOST 28MM FIGURES

DESIGNED WITH PRACTICALITY AND ECONOMY AS PARAMOUNT CONSIDERATIONS

Ebbles
Miniatures
<http://www.ebblesminiatures.com>



The Basics Of Paper Modeling

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

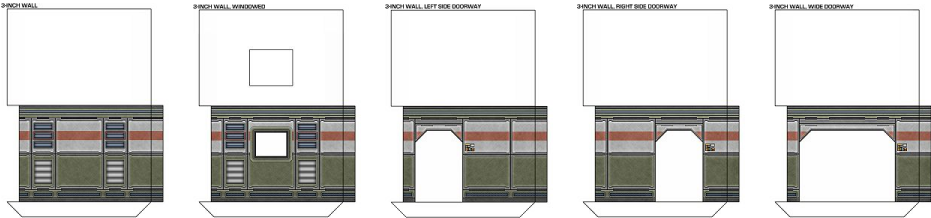
1. Gluing Tabs: This model includes integral gluing tabs for joining certain parts together. However, the utility of gluing tabs decreases proportionally as the thickness of the paper or cardstock increases. Thick cardstock or paper can be used for printing this model, but it is recommended that you 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.

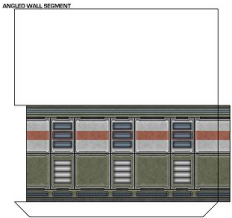
2. Sealing: In most cases, sealing the model with varnish or other form of spray sealant isn't necessary. However, if you want to add further detail to the model with decals or paint, you may want to seal the model with several light coats of a waterproof glossy clear sealant first. This will protect 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.

3-Inch Interior Walls



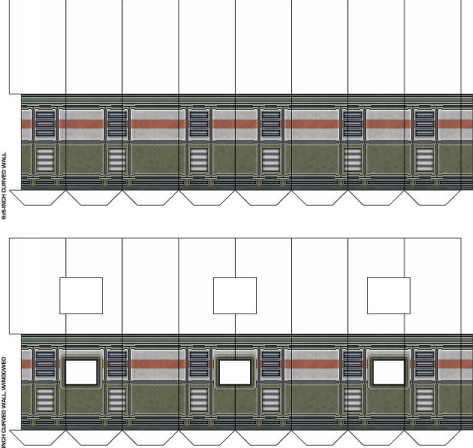
Angled Wall Segment



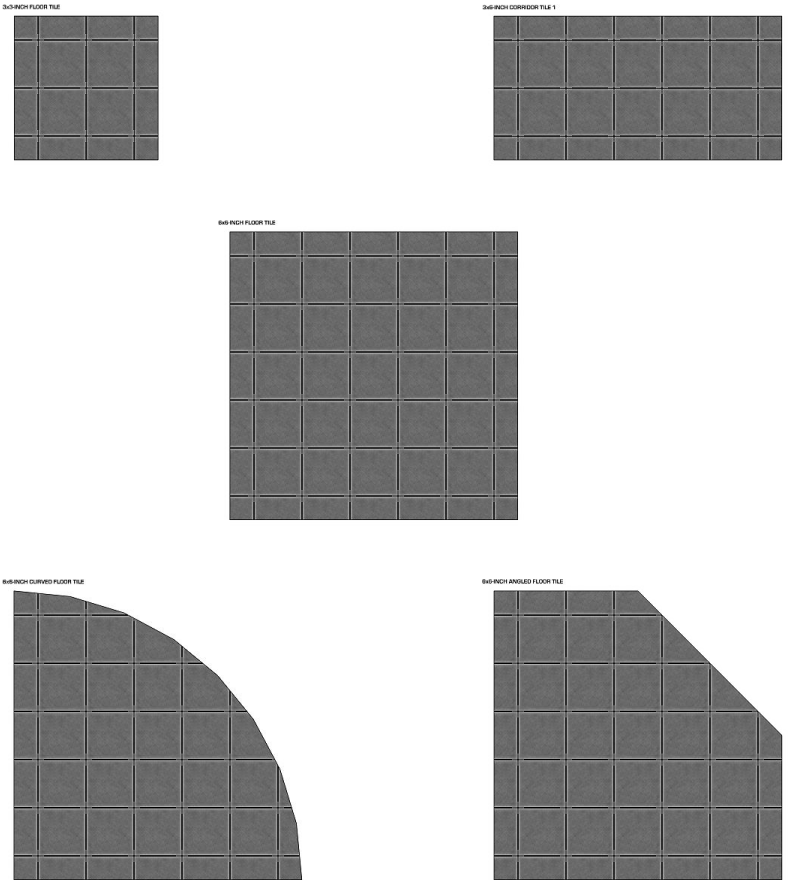
6-Inch Interior Walls



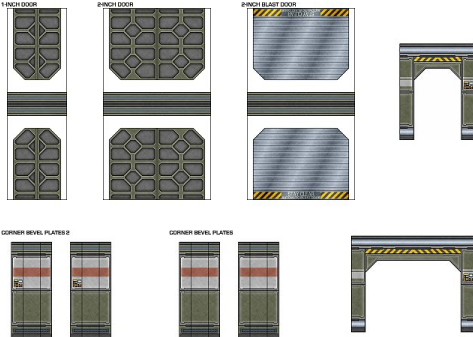
6x6-Inch Curved Walls



Floor Tiles



Doorways and Connectors

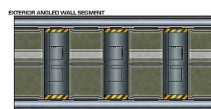


Module::Core Parts Manifest, Page 2

3-Inch Exterior Wall Layers



Angled Ext. Wall Layer



6-Inch Exterior Wall Layers



6x6-Inch Ext. Curved Wall Layers



Basic Principles

The Module::Core Primary Set contains the common core components of a larger, unified cardstock scenery construction system. These core components can be used on their own to lend a quick, easily built, and attractive 3D element to roleplaying sessions or miniatures wargaming scenarios. The Module line of scenery sets will also be extended with expansions containing specialist parts designed to allow you to combine the core components together into specific scenery features. These expansions will allow you to build interlinked habitat structures, towering megavehicles, or sprawling layouts for high-tech crawls.

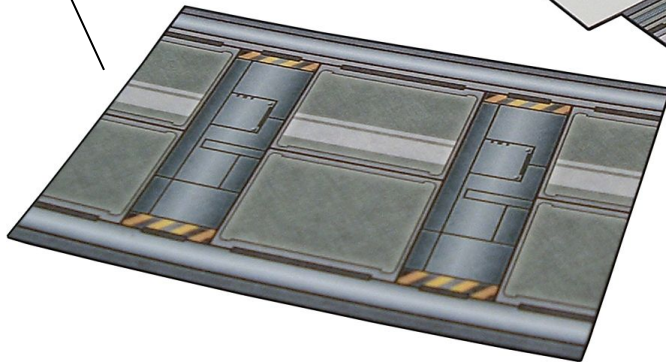
Built upon the success of Derelict II, Module::Core combines the best aspects of Derelict II with a much simpler and quicker build process, along with a greatly increased versatility that requires fewer pieces to construct. The build process involves building simple walls and floor tiles, then combining them into reusable elements that can be arranged in a wider variety of possible layouts.

In addition to the physical modularity of this set, Module::Core is also the first scenery set to be available in UCM3 format. UCM3 allows you to quickly and easily recolor and print out individual parts of this set for even more variety and versatility, without any need for expensive and hard-to-use painting programs. This editing is done in UCMViewer 3, a specialized Windows application designed for this very purpose. Basic instructions on using UCMViewer 3 are included at the end of this document.

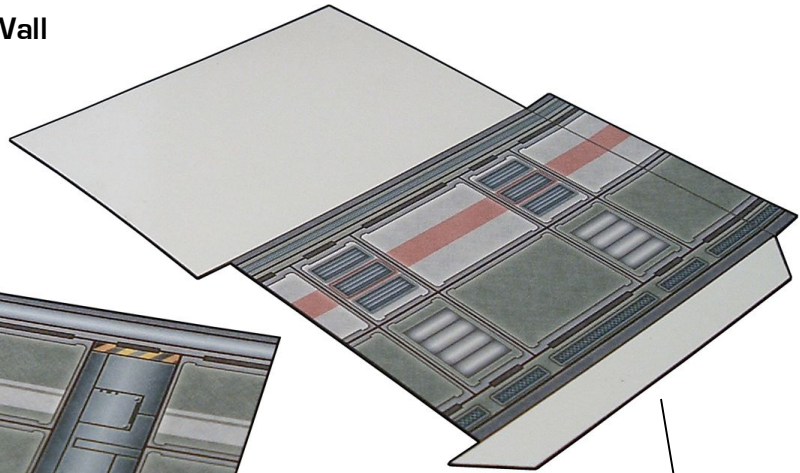
Module::Core is also fully compatible with the existing line of Ambient Elements prop add-on packs. With the Ambient Elements props, you can furnish and superdetail your layouts with tables, chairs, desks, computers, lockers, cabinets, lavatories, cargo containers, bunks, cots, and a variety of other 3D elements. Information and download instructions for the Ambient Elements add-on packs is available in the Ambient Elements section of our website.

Visual Example: Standard 3-Inch Wall

3-Inch Exterior Wall Layer



3-Inch Interior Wall



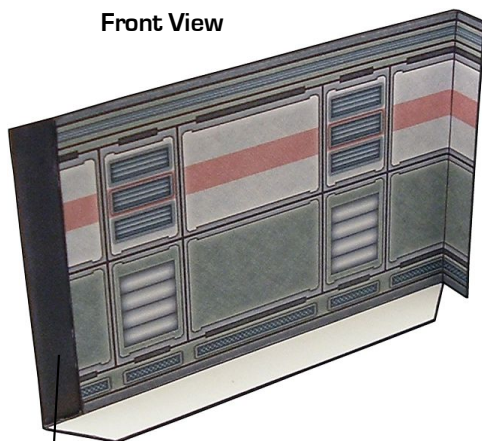
Building Standard Walls

Standard walls are the basic and no-frills plain walls, which are provided in 3-inch, 6-inch, and two specialized lengths for building 6x6-inch curved and angled walls. The assembly process is identical for all lengths of standard wall.

Standard walls have two parts: the interior wall and the exterior wall panel. The interior wall is first folded over onto itself and then glued together. The tab along the bottom is then bent upwards into a 90 degree angle, while the tab along the right side is bent inwards to form a 90 degree corner. The uncolored back side of the interior wall should be colored black or dark gray along all four edges. The final step in building a standard wall is to glue the exterior wall panel directly to the uncolored back side of the interior wall, forming a three-layer-thick wall unit.

Visual Example: Standard 3-Inch Wall

Front View

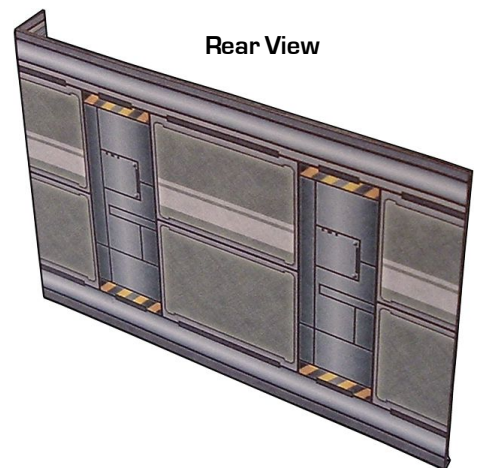


Overlap

Underlap

The white areas on the underlap and overlap have been edged black with a marker. The overlap is intended to be glued to the underlap on the next wall.

Rear View



The exterior wall panel serves two purposes: the extra layer reinforces the wall structurally, and completed modules look much less "naked" than if the backs of the interior walls were uncolored.

Building Doorway Walls and Doors

This set includes three types of 3-inch doorway wall and one type of 6-inch doorway wall. The 3-inch lengths provide 1-inch and 2-inch doorways, while the 6-inch length has a 1-inch doorway.

Doorways differ from standard walls only in two respects. The exterior wall layer on a doorway wall is a two-piece unit, and the doorway itself is cut out of the wall. As with straight walls, the assembly principles are the same for all lengths of doorway wall.

First, fold and glue the wall over onto itself. Then lay the wall flat, colored side up, and slice out the doorway. After the doorway area has been removed, color the edges of the doorway area black or gray with a marker. Fold the bottom gluing tab and the right-side overlap in the same manner you did for the standard walls on the previous page.

You may want to also color the back side of the interior doorway wall black before applying the exterior wall layers, because the exterior wall layers for doorways are designed to leave a gap. For narrow doorways, this gap is 1.25 inches wide and 2 inches tall, and for wide doorways, this gap is 2.25 inches wide and 2 inches tall. The gap allows the 1-inch and 2-inch sliding doors to fit seamlessly into the wall network.

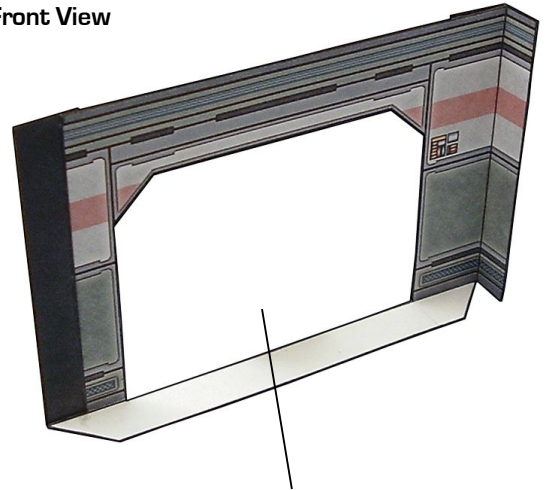
The two pieces of the exterior wall layer are glued to the edges of the interior wall, leaving an empty space around the doorway. This empty space forms half of a door slot, so when two doorway walls are mated together, a vertically sliding door can be freely slotted into the gap provided by the door slot.

The sliding doors themselves are very simple to build, and only require folding the front and back sides together to form a double-sided piece. This set includes a 1-inch wide sliding door, a 2-inch wide sliding door, and a 2-inch wide rolling blast door.

More detailed information on how the doorways and sliding doors are implemented will be presented in a later part of this document, when combining modules into larger layouts is discussed.

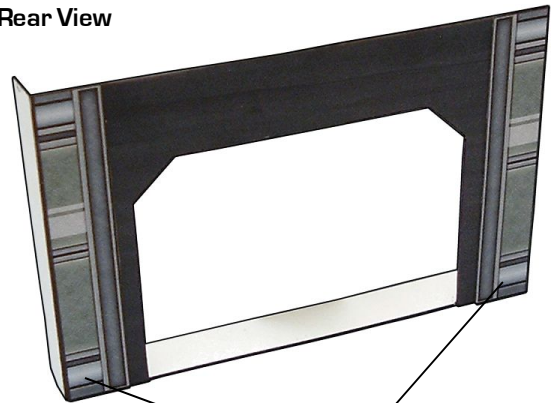
Visual Example: 3-Inch Doorway

Front View



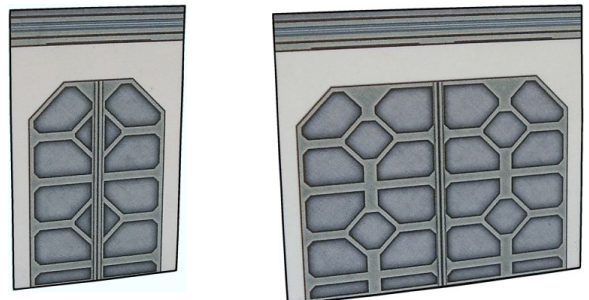
The white area is cut out after folding the front and back of the interior wall together. Note the gap between the two exterior wall layers shown below, which has been colored black with a marker.

Rear View



Exterior Wall Layer Pieces

Visual Example: Sliding Doors



These doors slide in and out of slots formed when two doorway walls are clipped together.

Building Windowed Walls

This set includes a 3-inch wall, a 6-inch wall, and a 6x6-inch curved wall with windows. In addition to the 6-inch windowed wall, a 6-inch windowed wall with a doorway is also included. As with the other wall types, the assembly process is the same for all lengths of windowed wall in this set.

Windowed walls are identical to standard walls in every way save for the window cutouts on both the front and back sides of the interior wall. The cutouts on the reverse side of the windowed interior walls are slightly larger than the cutouts on the front, while the cutouts on the front of the windowed interior walls and the windowed exterior wall layers are the same size.

Because the window cutouts on the reverse side of the interior wall are larger than the cutouts on the front side and the exterior wall layer, a piece of transparent material can be used for window glazing without affecting the wall tolerances. A set of blank templates [templates.pdf, 15 pages] are included with this set, some of which are windows intended for printing on transparency sheets.

You may want to print out a page of window templates on transparency sheet and then set it aside to dry while you build the wall itself.

The first step in building a windowed wall is to cut out all of the window openings on both sides of the interior wall before folding it together. Once the window openings have been cut out, run a black or gray marker along the edges of the window openings on both sides.

Fold and glue both sides of the interior wall together. Viewed from the back side, there will be a rectangular depression surrounding the window opening, and you may want to color this area black or gray. Next, trim out one of the windows on the template sheet that you printed out earlier, and glue it into place from the back side of the interior wall. The window should fit nicely into the depression.

Next, cut out the window opening on the exterior wall layer, and color the edges of the window opening as well as the inner side in the same manner you did on the interior wall. Glue the exterior wall layer into place, and your windowed wall is now completed.

As a side note, the assembly process for the 6-inch windowed doorway combines the construction principles of a doorway wall and a windowed wall, and the ideal sequence is to cut out all the window openings first, as described above. When you fold and glue a windowed doorway wall together, the next step is to remove the door cutout. After that, the process is identical to the windowed wall build process described above.

Visual Example: 3-Inch Windowed Wall

Front View

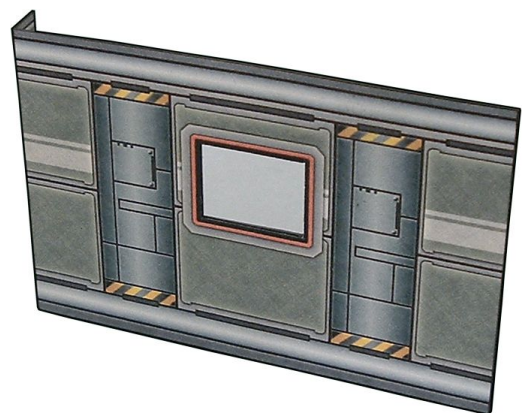


Windowed walls are designed so that the openings can be easily glazed with pieces of transparency sheet, cellophane, acetate, or other transparent material.

The reverse side of the interior wall has cutouts that form a hollow "frame" into which the windows are positioned, glued to the exposed back side of the front half of the interior wall.

The exterior wall layer then locks the window into place, even if the glue doesn't keep it attached.

Rear View



Building Special Walls

Two basic types of special wall are included in this set, a 6x6-inch curved wall and an angled wall segment. Both are intended for use with specific floor tiles, namely the 6x6-inch curved floor tile and the 6x6-inch angled floor tile.

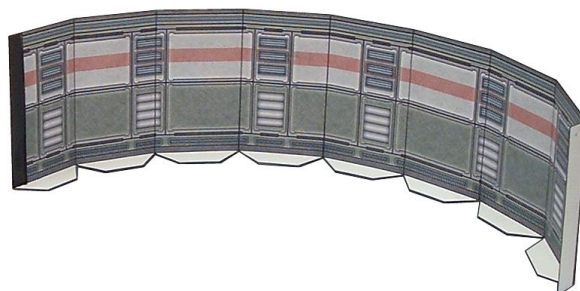
The angled wall segment is designed to be used in conjunction with two 3-inch wall sections to form a full-length angled wall. These two 3-inch walls may be of any type, and the angled wall segment is glued between those two 3-inch walls. The assembly process for the angled wall segment is identical to that of the standard 3-inch and 6-inch walls.

The 6x6-inch curved wall is intended to be shaped into a quarter circle, and forms the entire third wall on a 6x6-inch curved floor tile. The only difference between the 6x6-inch curved wall and the other types of wall is that the completed curved wall section is scored and bent into the quarter-circle shape after folding and gluing, and **before** attaching the exterior wall layer.

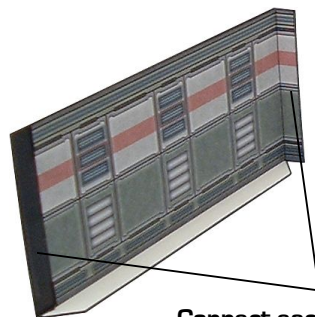
The 6x6-inch wall comes in standard and windowed versions, while the angled wall segment of a standard type.

Visual Example: Special Walls

6x6-Inch Curved Wall



Angled Wall Segment



Angled wall segments are designed to join with two 3-inch walls to form an uninterrupted angled "curve" around the angled side of a 6x6-inch angled floor tile.

Connect each end to a 3-inch wall at a 45 degree angle

A Note on Exterior Wall Layers and Compound Modules

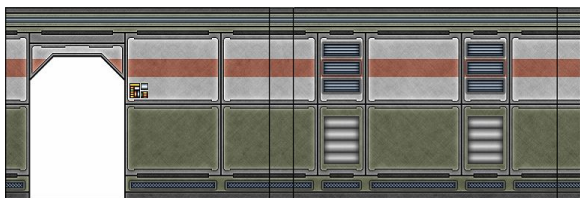
There may be times when you want to create much larger modules than the standard 6x6-inch floor tiles allow you to make. In those circumstances, you'll want to create compound modules by combining multiple floor tiles into a single, larger unit. Since these compound modules are likely to be permanent constructions, the templates.pdf file included with this set contains blank versions of all exterior wall layers to save ink that would otherwise be wasted on walls that will never be seen.

To build a compound module, select and build the floor tiles that you need to define the larger portions of the compound floor-plan. You will want to flip these floor tiles over and lay them out upside down. Tape them together with clear tape or masking tape. This will keep the floor tiles together where there are no walls to secure them in place.

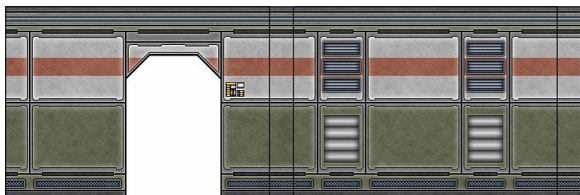
Where the blank exterior wall layers come into play is when you want to integrate permanent walls into a compound module. Glue the blank exterior wall layers to these permanent walls instead of the colored versions, and you'll have saved a lot of ink.

The outer, visible walls of the compound module should be covered in colored exterior wall layers as normal.

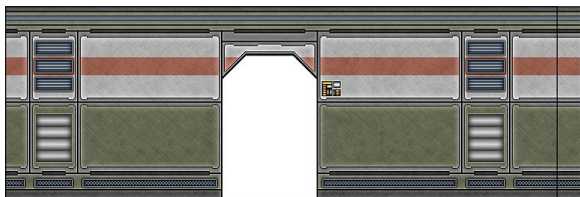
Customizing Your Walls: Putting Doors Where You Need Them Using Compound Walls



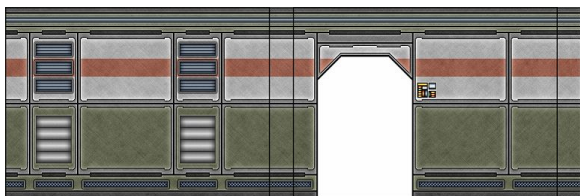
This 6-inch compound wall combines a 3-inch left-side doorway wall with a 3-inch standard wall to form a 6-inch wall with a doorway in the far left corner.



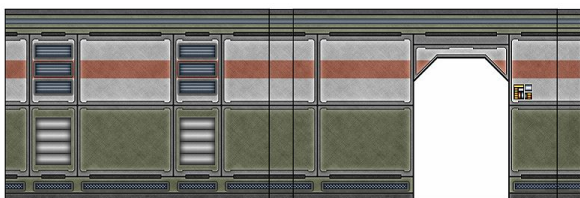
This variation of the above compound wall substitutes a 3-inch right-side doorway wall for the 3-inch left-side doorway wall.



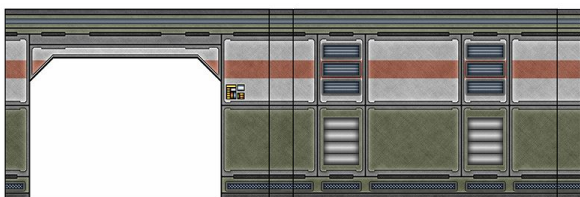
This is the 6-inch doorway wall. It provides the option to have a doorway centered in the middle of the wall, which cannot be done with two 3-inch walls.



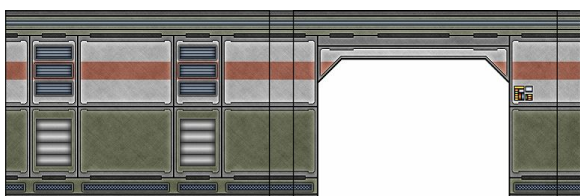
This variation of the compound wall shown below substitutes a 3-inch left-side doorway wall for the 3-inch right-side doorway wall.



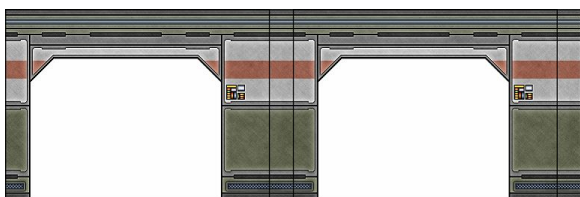
This 6-inch compound wall combines a 3-inch standard wall with a 3-inch right-side doorway wall to form a 6-inch wall with a doorway in the far right corner.



For wide doorways, the 3-inch wide doorway walls can be combined with standard walls or other doorway walls to create any specific compound wall you need.

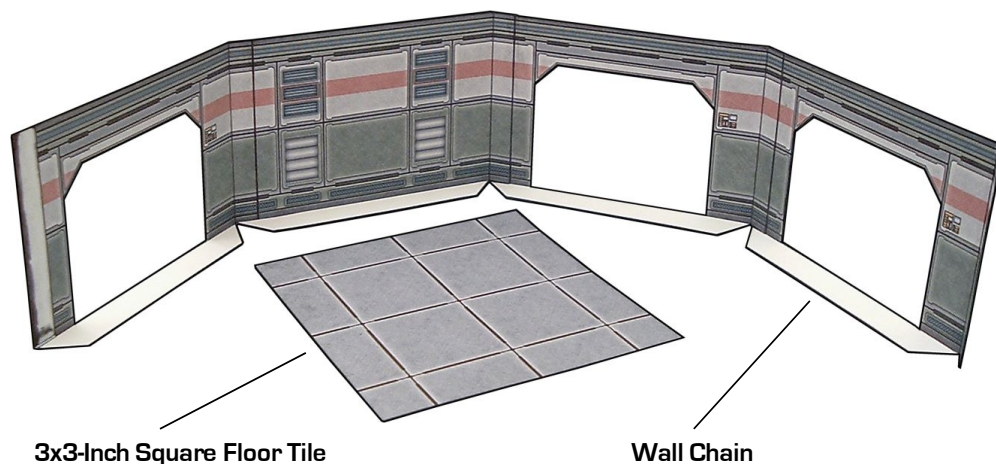


The wide doorways are normally used in corridors and corridor junctions, but they also make good doorways for cargo modules or any module with a high volume of foot traffic, where simultaneous entry/exit is necessary.



Combining two 3-inch wide doorway walls as shown here is also a good way to make a cluster of modules feel more open and airy, by simulating structural arches.

Partially Assembled Example: 3x3-Inch T-Junction Module



The wall chain shown here consists of one 3-inch interior wall and three 3-inch wide doorway walls.

The white tabs along the bottom of the walls shown to the left are where the floor tiles attach during assembly.

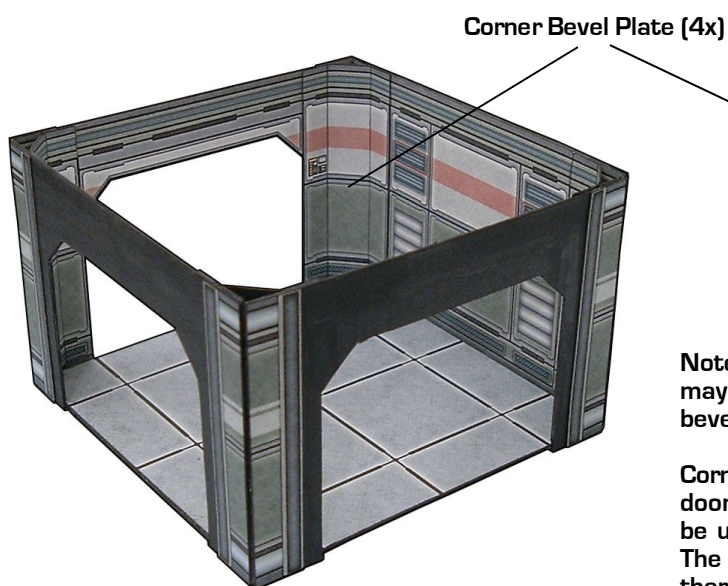
For even more structural strength, all floor tiles should be laminated to an extra layer of scrap cardstock before cutting them out.

Common Module Construction Guidelines

All of the modules in this set share some common basic attributes, namely walls and floor tiles, which are assembled in the same fashion. First, multiple walls are linked together along the vertical edges using a system of underlapping and overlapping tabs, forming a continuous strip of wall sections called a "wall chain". Next, the appropriate floor tile is prepared by trimming it out of the printed sheet, leaving a small border around the cut lines. The floor tile is then laminated to another layer of scrap cardstock and sliced out, yielding a 2-layer thick floor tile.

The wall chain is then closed off in the appropriate shape, and the floor tile is then glued into place atop the gluing tabs on the bottom of each wall. This completed assembly is called a "module". A gaming layout is composed of several modules connected together to represent the desired gaming environment. Modules are designed to connect to each other using bobby pins placed in each corner of a module, with corner bevel plates hiding the bobby pin connectors. Built this way, multiple modules can be slotted together into large temporary layouts and can be rearranged on the fly. This also means that you can get much more mileage out of fewer modules, saving you money and time in the long run.

Completed Example: 3x3-Inch T-Junction Module



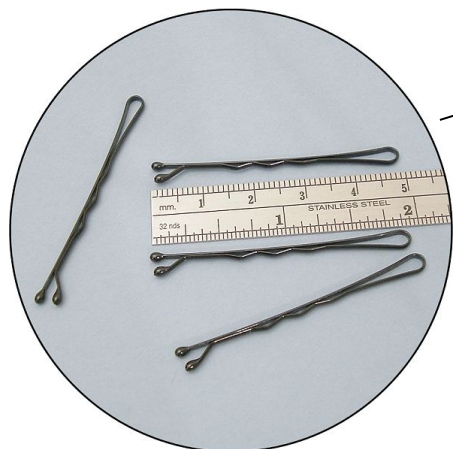
The corner bevel plate shown here serves two purposes: reinforcing a module, and hiding the bobby pin connectors.

Fold the bevel plates as shown here, and glue them into the corners of the module, aligned with the wall texture.

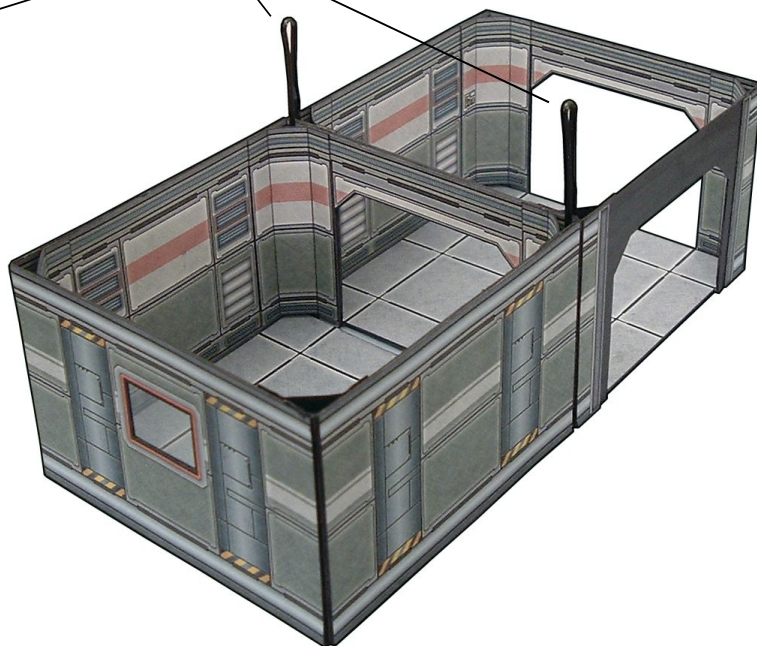
Note: Depending on the thickness of your cardstock, you may need to trim 1-2mm from the bottom of the corner bevel plates to achieve a flush fit.

Corner bevel plates come in two types. One type has a door keypad textured on the left side, and is intended to be used in corners immediately adjacent to a doorway. The other type lacks the keypad, and is used wherever there are no keypads on the walls.

Visual Example: Connecting Modules With Bobby Pins



Bobby Pin Connectors



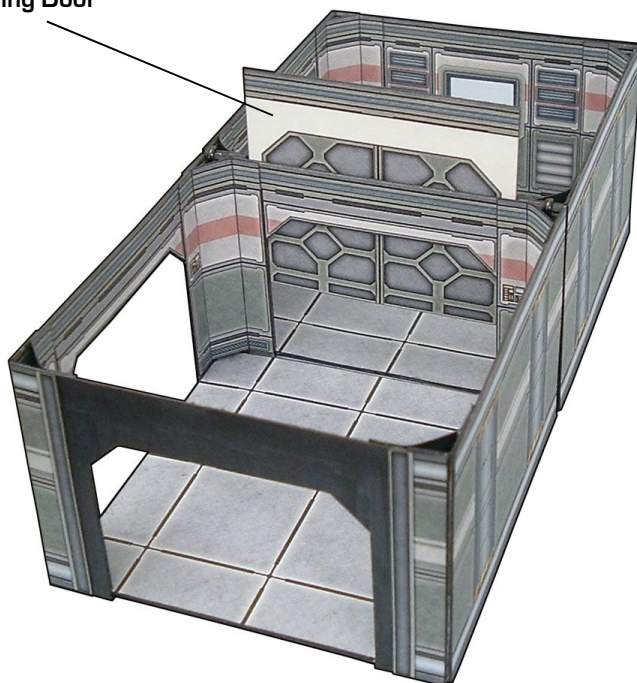
As described on the previous pages, modules are connected together by using bobby pins as a clipping mechanism. For best results, the bobby pins should be in a neutral color like black or gray and no more than 2 inches (50.8mm) long.

If you live outside of the United States and the term “bobby pin” makes no sense to you, show the photo above to a female relative, friend, or spouse, and they should easily be able to tell you what they're called in your country, as well as where to get them. Bobby pins are also incredibly cheap, and their size and low-profile silhouette make them perfect for this sort of application.

To connect modules, lay them out on a table or other convenient surface, in the desired configuration. Once you're satisfied, clip them together by slotting the bobby pins into the recesses formed by the corner bevel plates of adjacent modules, as shown in the photos to the right. The corner bevel plates serve the primary purpose of helping make the bobby pin connectors disappear.

The temporary nature of the bobby pin connections mean that you can reuse the same modules over and over in different configurations, without any need for permanent measures like glue. In addition to this convenience, clipping modules together eliminates the tendency of cardstock scenery to shift or fall over while moving figures around, because the bobby pins fix each module in place and the weight of the entire layout keeps the modules from shifting during play.

Sliding Door



Note: When two adjacent doorways are clipped together as shown above, sliding doors can easily be slotted into the gap between the doorway walls.

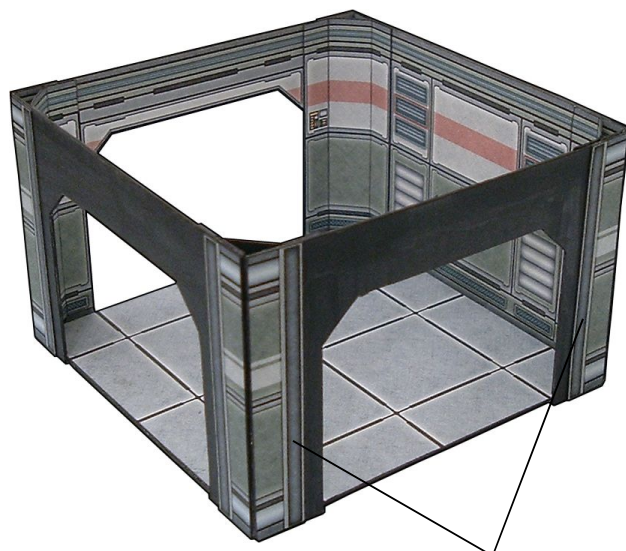
Visual Example: Exterior Doorway Layers

This set includes exterior doorway layer pieces for use with the 1-inch and 2-inch doorways. The build process is identical for both sizes.

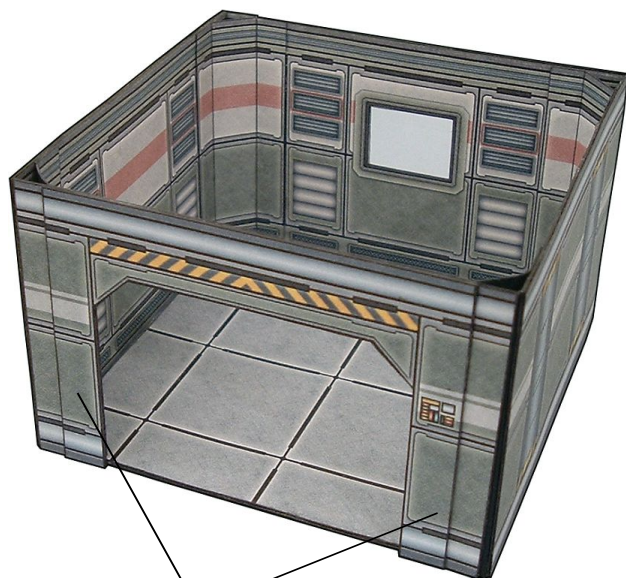
These exterior doorway layers are designed to be used on module doorway walls which are accessible from the outside of the layout. Entrances, emergency exits, and other means of leaving the gaming layout are some examples of externally accessible doorways.

The exterior doorway walls have a visible gap surrounding the door area itself, and this gap is normally hidden completely when modules are clipped together. However, there may be some doorways which don't interface with other module doorways, thus leaving this gap visible along the exterior of a layout. The exterior doorway layers hide this gap.

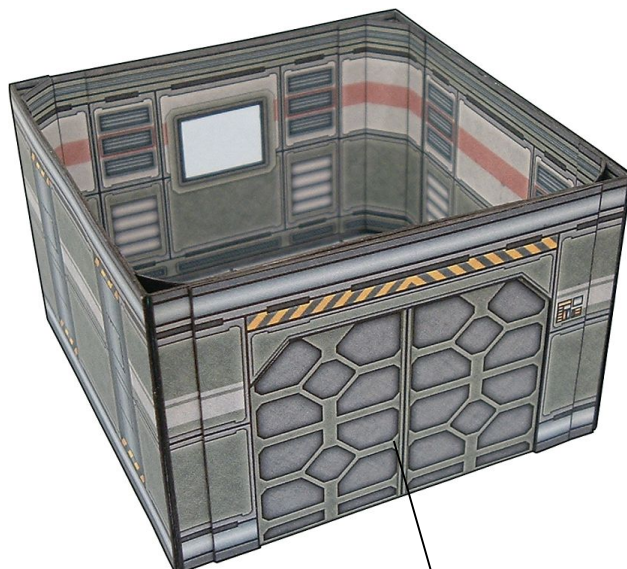
The exterior doorway layers should be laminated to a second layer of cardstock before cutting them out. They are sized so that the edges of the doorway layers align precisely with the vertical rails textured on the exterior doorway walls. Apply a thin line of glue to these rails and press the doorway layer into place.



Vertical Rails (Gray strips)



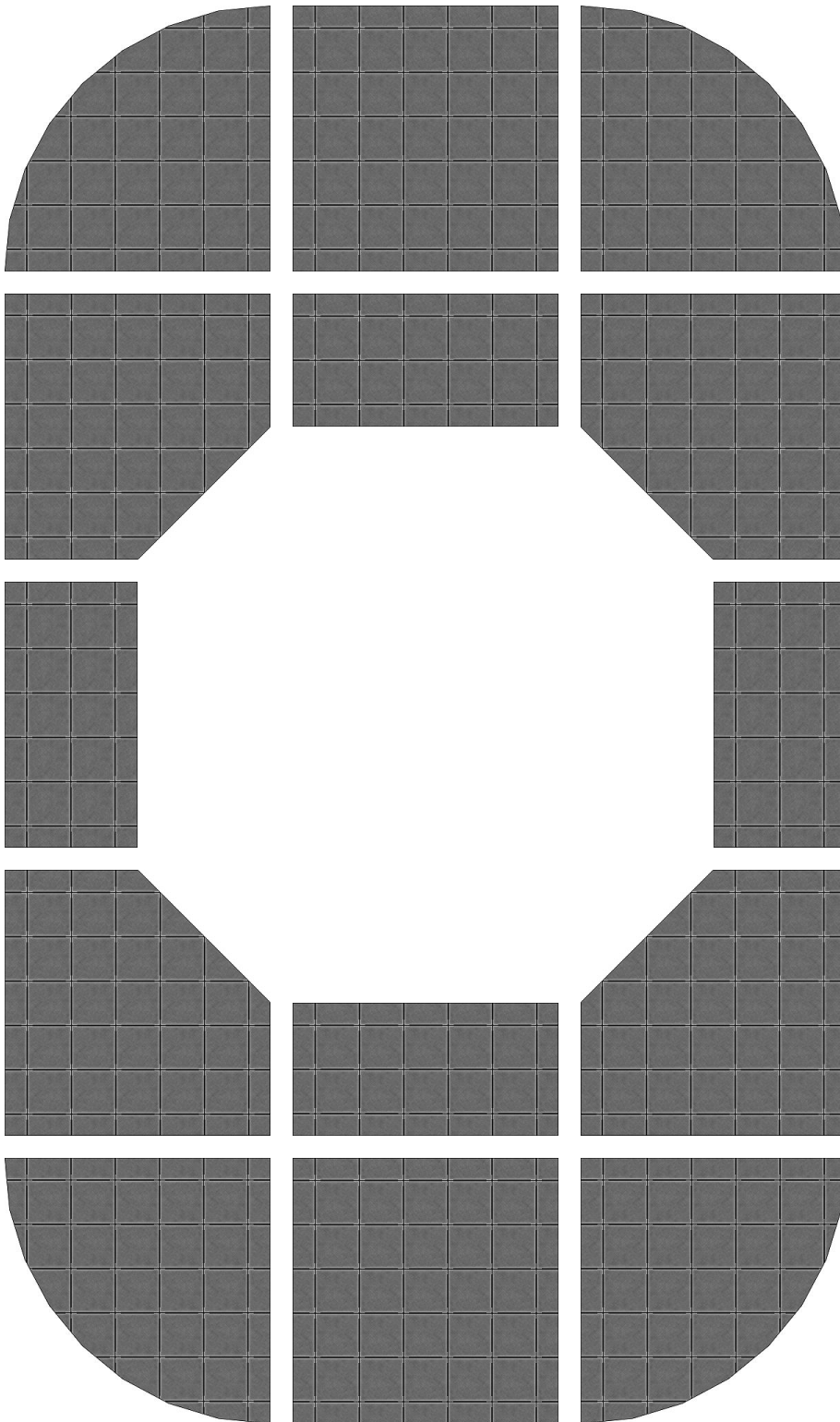
Exterior Doorway Layer
(note alignment with edges of vertical rails)



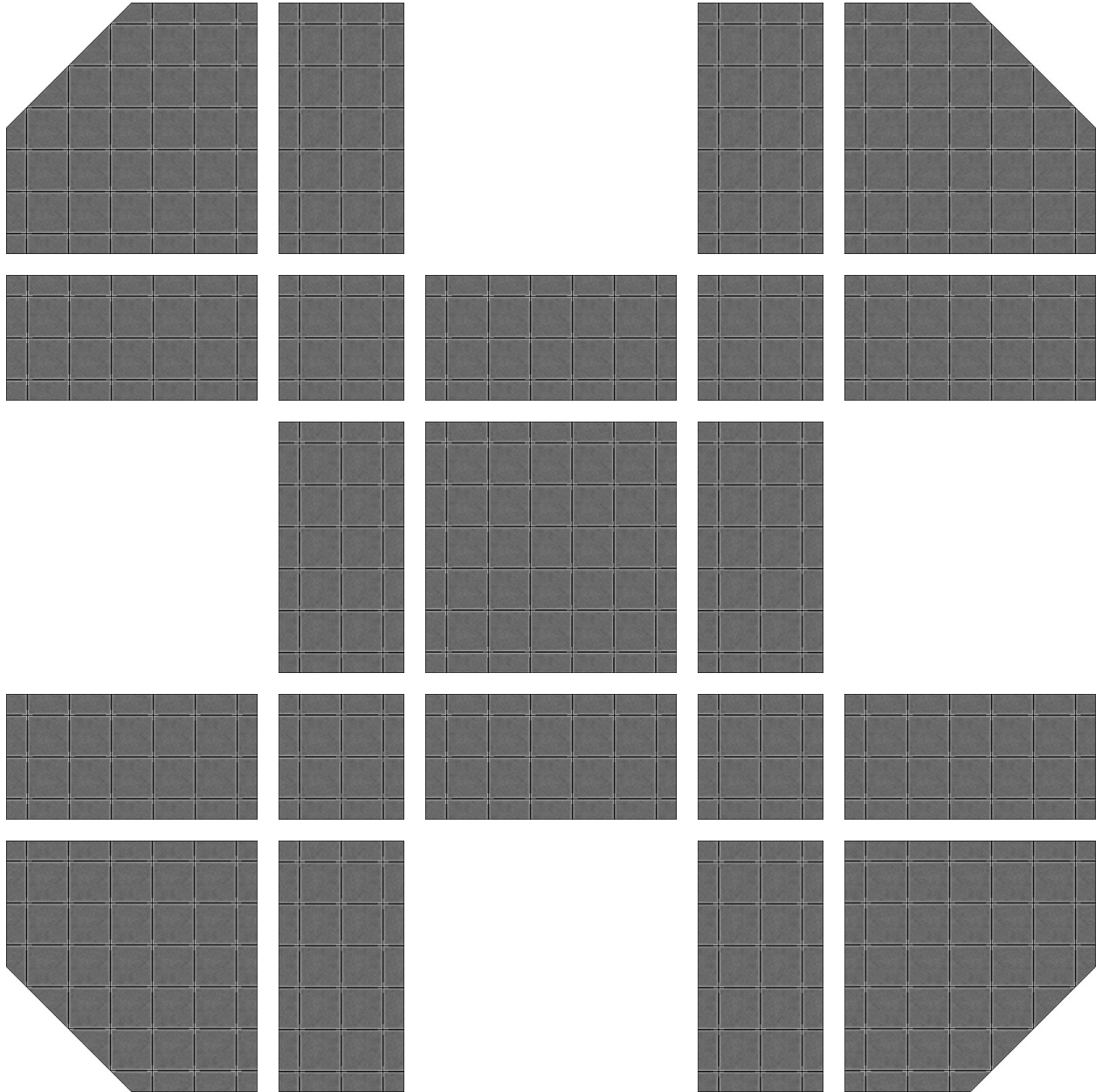
Sliding Door

Note: The sliding doors will fit more snugly into the gap formed by the exterior doorway layer. However, if the cardstock you use is too thick, you may want to double up the thickness of the underlying exterior doorway pieces before gluing the exterior doorway layer into place.

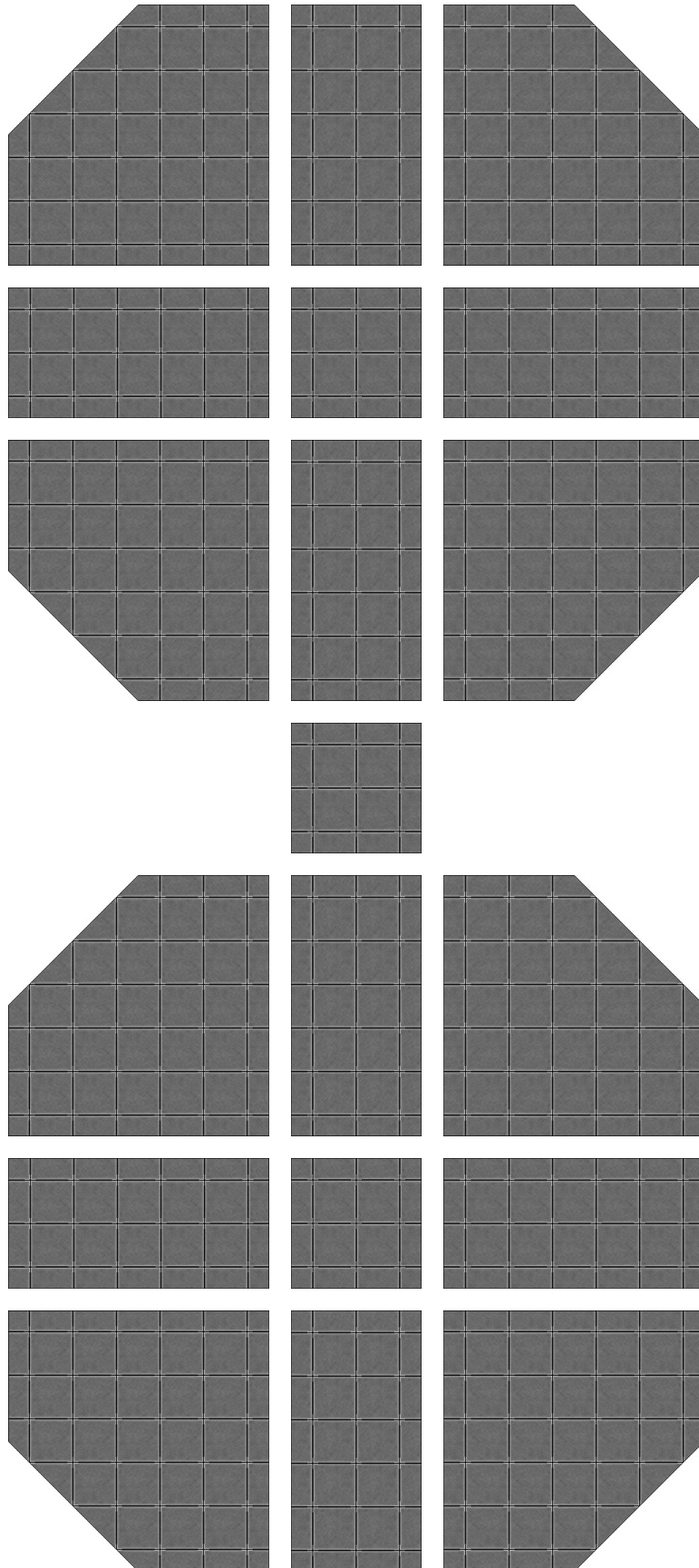
Sample Layout 1



Sample Layout 2



Sample Layout 3



The UCM3 Format and UCMViewer 3

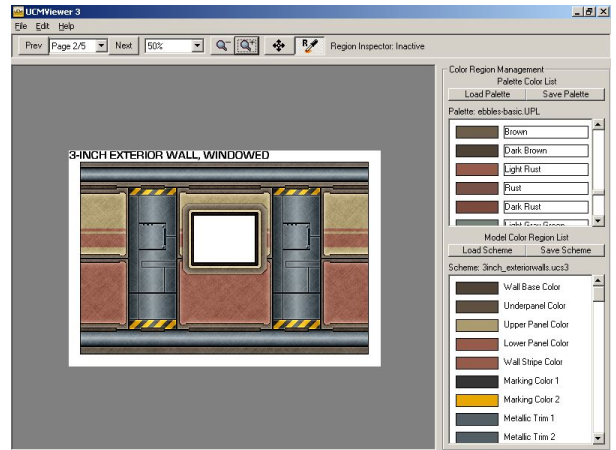
Module::Core is available in UCM3 as well as PDF format. UCM3 models are viewed and edited in UCMViewer 3, a specialized freeware viewer and editor which allows you to load individual parts and change their color scheme with a simple palette-based drag-and-drop interface. The edited parts can then be saved to disk in Windows BMP format for further editing in programs like Paint Shop Pro or Adobe Photoshop, or simply printed out directly from UCMViewer.

Parts can be printed singly or tiled across and down the page. UCMViewer 3 uses your printer's actual margins and ideal paper size as efficiently as possible when printing a tiled part, which can save cardstock and ink over the long run by potentially reducing the amount of pages you need to print, compared to the more conservative one-size-fits-all layout that PDFs require.

UCMViewer 3 currently runs on Windows 98SE, Windows ME, Windows 2000, and Windows XP Home or Professional Editions. The latest version of UCMViewer 3 can be downloaded from our website at <http://www.ebblesminiatures.com>.

If the UCM3 benefits are your primary reason for purchasing the Module::Core set, please ensure that UCMViewer 3 functions perfectly on your system first by downloading it and editing the included sample models.

Visual Example: UCMViewer 3



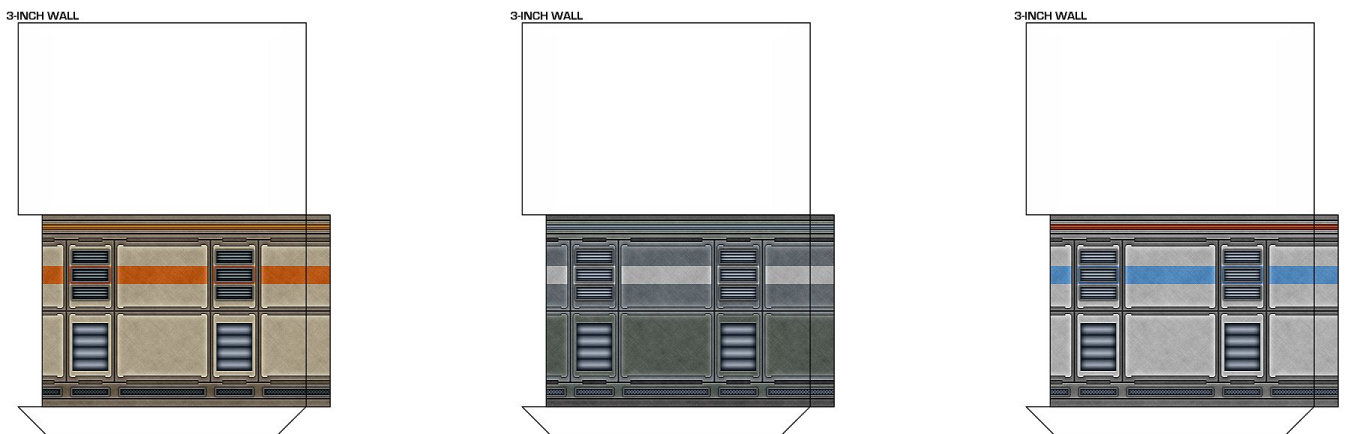
The screenshot above shows a 3-inch exterior wall layer that has had its color scheme radically changed with a few drag-and-drop operations.

To the right of the part, you can see the Palette List and Color Region List. Swatches are dragged from the Palette List to the model itself, or dragged from the Palette List to the Color Region List below it.

Palettes can be loaded or saved, and each color swatch in a palette can be edited individually by right-clicking on the color swatch. Color schemes can be loaded or saved as well, allowing you to build libraries of preset colors, schemes, and palettes easily.

UCM3 models are designed with several regions of editable colors. These regions are named and listed under the Color Region List.

Visual Example: Custom Color Schemes (3-Inch Interior Wall)



The three sample color schemes above are just three of an almost infinite number of possible schemes that you can customize in UCMViewer 3.