

6

Reshaping Dimensions

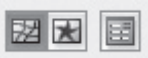
Reshaping Dimensions

Live effects from *fx*

Access any live effects from the Effects menu, and from the *fx* icon in the bottom of the Appearance panel. To simplify instructions in this chapter, we'll be using the convention Effect>3D or Effect>Warp. To edit an effect, select the effect in the Appearance panel and click the underlined effect name, or double-click the *fx* icon to the right of the effect name.

Smart people use Smart Guides

When you work with warps or envelopes, it may become difficult to edit artwork that has an appearance applied to it. With Smart Guides turned on, Illustrator highlights the art, making it easier to identify the actual artwork (and not the appearance). Use ⌘-U/Ctrl-U to turn Smart Guides on and off. —Mordy Golding



The three Envelope buttons in the Control panel, from left to right: Edit Envelope, Edit Contents, and Envelope Options

Deleting a mesh point

To delete a mesh point from a warp or mesh envelope, choose the Mesh tool and Option-click/Alt-click the point you'd like to delete. —Jean-Claude Tremblay

This chapter focuses on the Illustrator tools and functions that allow you to create objects that appear to move beyond two-dimensional space. With warps and envelopes you can easily use familiar vector tools to bend, and bow objects (and text) in two dimensional space, and with envelope meshes you can begin to create an illusion of depth as well. Using Illustrator's 3D effects you actually do revolve, extrude, rotate, and map objects in three dimensions. And then, the Perspective Grid tool helps you to create art based on linear perspective drawing; using one, two or three vanishing points. All of these demand a bit of a different headset, than flat Illustrator objects, and the manipulating of the mesh. 3D and perspective grid in their live states work quite differently from other Illustrator objects. If you decide to expand the art, they become merely complex vector objects, letting you work upon them using any of Illustrator's editing tools.

WARPS AND ENVELOPING

Warps and envelopes may look similar at first, but there's an important difference between them. Warps are applied as live *effects*—meaning they can be applied to objects, groups, or layers. Warps strengths are they are easy to create by choosing from the predefined options in the Warp dialogs; and that you can save them within a graphic style, to apply to other objects. Envelopes, on the other hand, are also live, but rather than effects, they're actual *objects* that contain artwork. Envelopes strengths are that you can edit or customize the envelope shape, and Illustrator will conform the contents of the envelope to the contour.

Warps

Applying a warp is actually quite simple. Target an object, group, or layer and choose Effect > Warp > Arc. (It doesn't matter which warp effect you choose, because you'll be presented with the Warp Options dialog, where you can

choose from any of the 15 different warps.) While the warp effects are “canned” in the sense that you can’t make adjustments to the effects directly, you can control how a warp appears by changing the Bend value, as well as the Horizontal and Vertical Distortion values.

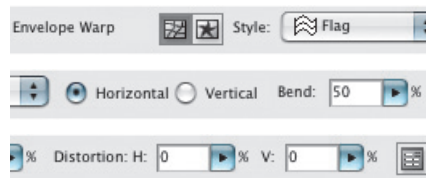
Once you’ve applied a warp, you can edit it by opening the Appearance panel and clicking on the warp effect. Like all effects, a warp can be applied to just the fill, or just the stroke—and if you edit the artwork, the warp updates as well. Since warps are effects, you can include them in a graphic style, which can then be applied to other artwork.

Envelopes

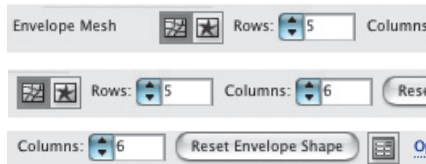
While warp effects do a nice job of distorting artwork (and allow you to save the effect as a graphic style), Illustrator envelopes provide a higher level of control.

There are three ways to apply envelopes. The simplest way is to create a path you want to use as your envelope. Make sure it’s at the top of the stacking order—above the art you want to place inside the envelope. Then, with the artwork and your created path both selected, choose **Object > Envelope Distort > Make with Top Object**. Illustrator will create a special kind of object: an envelope. This object you created becomes an envelope container, which appears in the Layers panel as <Envelope>. You can edit the path of the envelope with any transformation or editing tools; the artwork inside will update to conform to the shape. To edit the contents of the envelope, click the **Edit Contents** button in the Control panel or choose **Object > Envelope Distort > Edit Contents**. If you then look at the Layers panel, you’ll notice that the <Envelope> now has a disclosure triangle that reveals the contents of the envelope—the artwork you placed. You can edit the artwork directly or even drag other paths into the <Envelope> in the Layers panel. To again edit the envelope itself, choose **Object > Envelope Distort > Edit Envelope**.

There are two other types of envelopes, and they’re closely related. Both types use meshes to provide even more distortion control. When using the first type, the

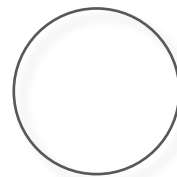


The tools that appear in the Control panel when an envelope warp is selected; you can change the shape of the warp using the pop-up menu



The controls that appear in the Control panel when an envelope mesh is selected; you can easily change the number of rows and columns, and restore the object to its original shape using the **Reset Envelope Shape** button

IMAGE PLACEHOLDER



MICHAEL CRESSY

The building above by Michael Cressy was turned into the building on the right using the drawing tools and then modified with envelopes for each of the windows, the building, and the stacks using: **Object > Envelope Distort > Make with Mesh**

Isolation mode for envelopes

An easy way to edit an envelope: double-click it to enter isolation mode. —*Jean-Claude Tremblay*

Envelope distort options

To use envelopes to distort artwork containing pattern fills or linear gradients, choose **Object > Envelope Distort > Envelope Options** and enable the appropriate options. —*Mordy Golding*

2D or not 2D...?

Illustrator's 3D objects are only *truly* three-dimensional while you're working with them in a 3D effect dialog. As soon as you're done tweaking your object and you click OK to close the dialog, the object's three-dimensional qualities are "frozen"—almost as if Illustrator had taken a snapshot of the object—until the next time you edit it in a 3D dialog. On the page, it's technically a 2D rendering of a 3D object that can only be worked with in two-dimensional ways. But because the effect is live, you can work with the object in 3D again any time you want, by selecting the object and then double-clicking the 3D effect listed in the Appearance panel.



Extruding an object using the Effect > 3D > Extrude & Bevel dialog—the two-dimensional object on the left was extruded to create the three-dimensional version

Hiding the 3D...

To speed up your screen redraw, you can temporarily hide a 3D effect without losing the settings. To do so, click on the Eye for that 3D effect in the Appearance panel (click again to make it visible).

envelope warp, you choose the overall envelope form from a pop-up list of options. When you use the *envelope mesh*, instead of starting from presets, you begin by choosing how many rows and columns your mesh will contain.

To create an envelope warp, select an object and choose Make with Warp (Object > Envelope Distort). This will open the Warp dialog. Once you choose a warp and click OK, Illustrator converts that warp to an envelope mesh. The Control panel will display the Envelope Warp controls, including a pop-up menu that lets you choose a different shape for the warp if you want to. You can edit the envelope warp's individual mesh points with the Direct Selection tool to distort not only the outer edges of the envelope shape, but also the way art is distorted within the envelope itself. To provide even more control, use the Mesh tool to add more mesh points as desired.

To create an envelope mesh, select your artwork and choose Object > Envelope Distort > Make with Mesh. After you've chosen how many mesh points you want, Illustrator will create the envelope mesh. The Envelope Mesh tools in the Control panel will appear, allowing you to easily change the number of rows and columns, and restore the envelope mesh to its original shape if necessary. You can also use the Direct Selection tool to edit the points and use the Mesh tool to add mesh points. (But if you use other tools, you'll need to switch back to the Selection tool if you want the Envelope Mesh controls to reappear in the Control panel.)

3D EFFECTS

Illustrator offers you the power to transform any two-dimensional (2D) shape, including type, into a shape that looks three-dimensional (3D). As you're working in Illustrator's 3D effect dialogs, you can change your 3D shape's perspective, rotate it, and add lighting and surface attributes. And because you're working with a live effect, you can edit the source object at any time and observe the resultant change in the 3D shape immediately. You can also rotate a 2D shape in 3D space and change its perspec-

tive. Finally, Illustrator lets you map artwork previously saved as a symbol onto any of your 3D object's surfaces. Remember that Illustrator is primarily a 2D program—its 3D capabilities are very limited when compared to the plethora of available 3D programs.

To begin, think of Illustrator's horizontal ruler as the X axis and the vertical ruler as the Y axis. Now imagine a third dimension that extends back into space, perpendicular to the flat surface of your monitor. This is the Z axis. There are two ways to create a 3D shape using 3D effects. The first method is by extruding a 2D object back into space along the Z axis, and the second is by revolving a 2D object around its Y axis, up to 360°.

To apply a 3D effect to a selected object, choose one of the 3D effects from the *fx* icon in the Appearance panel (or via the Effect menu). To simplify the instructions throughout this chapter, we'll be using the convention choose Effect > 3D. Once you apply a 3D effect to an object, it will show up in the Appearance panel. As with other appearance attributes, you can edit the effect, change the position of the effect in the panel's stacking order, and duplicate or delete the effect. You can also save 3D effects as reusable graphic styles so that you can apply the same effect to a batch of objects. Once the style has been applied, you can modify any of the style parameters by clicking the underlined effect name in the Appearance panel, or double-clicking the *fx* icon to the right of the effect name. Editing the 2D path will then update the 3D rendering. Following are a few of the key parameters for working in the different kinds of 3D:

- **To extrude a 2D object**, begin by creating a path; the path can be open or closed path, and can contain a stroke, a fill, or both (if your shape contains a fill, it's best to begin with a solid color, not gradient or pattern). With your path selected, choose Extrude & Bevel from the Effect > 3D submenu. In the lower portion of the dialog, enter a point size for depth for your object in the Extrude Depth field, or drag the slider. Adding a cap to your object make

Customized bevels!

All the 3D Bevel shapes are located inside the file "Bevels.ai" (for Mac: Adobe Illustrator CS5 > Required > Resources > en_US > Bevels.ai, and for Win: Adobe Illustrator CS4 > Support Files > Required > Resources > en_US > Bevels.ai). Each bevel path is saved as a Symbol inside this document. To add a custom bevel, draw a new path, drag it to the Symbols panel, name it, and resave the file. —
Jean-Claude Tremblay

Solid advice on 3D colors

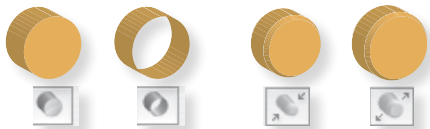
You'll get best results using solid fill colors for 3D objects. Gradients and pattern fills don't produce reliable results.

3D—Three dialogs

There are three different 3D effects, and some features overlap. If all you need to do is change the perspective of an object, use Rotate. If you want to map a symbol to the object, use either Revolve or Extrude & Bevel (you can still rotate an object from these as well). —*Brenda Sutherland*

Not enough steps...

Click the More Options button to adjust Blend steps; find a setting between the default (25) and the maximum (256) that's smooth enough, but not too slow to draw (and print).



Left to right: Turn cap on for solid, Turn cap off for hollow, Bevel Extent In, Bevel Extent Out

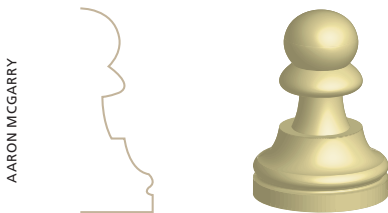
Bevel error messages...

If you apply bevels to some objects (like stars), you might see the error, “Bevel self-intersection may have occurred” when you click “Preview”—this may or may not actually mean there’s a problem.

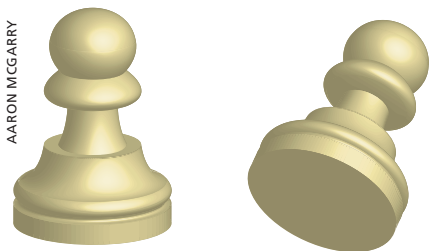
For the smoothest 3D

When creating profile objects for 3D, draw as few anchor points as possible. Each anchor point produces an additional surface to render, and might also create potential problems if you’re later mapping artwork onto surfaces.

—Jean-Claude Tremblay



Revolving an object using the Effect > 3D > Revolve dialog—the open path on the left was revolved to create the 3D chess pawn on the right



An example of rotating an object in 3D space

the ends appear solid, disabling the cap option makes your object appear hollow (see first two figures at left).

You can choose from ten different bevels to style the edges of your object; bevels can be added to the original using Bevel Extent Out, or carved out of the original using Bevel Extent In (second pair of figures at left).

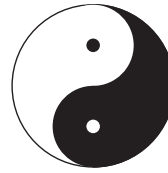
- **To revolve an object around its Y (vertical) axis,** begin by creating a path. The path can be open or closed, stroked, filled, or both. With your path selected, choose Effect > 3D > Revolve to open 3D Revolve Options. Drag the slider to set the number of degrees or enter a value from 1 to 360 in the Angle text field. An object that is revolved 360° will appear solid. An object revolved less than 360° will appear to have a wedge carved out of it. If you offset the rotation from the object’s edge, a 3D shape will appear to be carved out in the center.
- **To Rotate 2D or 3D objects in 3D space,** choose Effects > 3D > Rotate. The 3D Rotate Options dialog contains a cube representing the planes that your shape can be rotated through. Choose a preset angle of rotation from the Position menu, or enter values between -180 and 180 into the X, Y, and Z text fields. To manually rotate your object around one of its three axes, simply click *on the edge* of one of the faces of the white cube and drag. The edges of each plane are highlighted in a corresponding color that tells you through which of the object’s three planes you’re rotating it. The object’s rotation is constrained within the plane of that particular axis. If you wish to rotate your object relative to all three axes at once, click directly on a surface of the cube and drag, or click in the black area behind the cube and drag. Values in all three text fields will change. And if you simply want to rotate your object, click and drag inside the circle, but outside the cube itself.
- **To change the perspective of an object,** enter a number between 0 and 160 in the Perspective field, or drag the slider pop-up. A smaller value simulates the look of a telephoto camera lens, while a larger value simulates a wide-angle camera lens.

Applying surface shading to 3D objects

Illustrator allows you to choose different shading (ranging from dull and unshaded matte surfaces to glossy and highlighted surfaces that look like plastic), as well as customized lighting conditions. The Surface shading option appears as part of both the 3D Extrude & Bevel and the 3D Revolve Options dialogs. Choosing Wireframe as your shading option will result in a transparent object, the contours of which are overlaid with a set of outlines describing the object's geometry. Choosing No Shading, results in a flat-looking shape with no discernible surfaces. Choosing the Diffused Shading option results in your object having a soft light cast on its surfaces, while choosing the Plastic Shading option will make your object look as if it's molded out of shiny, reflective plastic. For mapped surfaces, enable "Shade Artwork" in the Map Art dialog.

If you choose either the Diffused Shading or Plastic Shading option, you can further refine the look of your object by adjusting the direction and intensity of the light source illuminating your object. By clicking the More Options button, the dialog will enlarge and you'll be able to make changes to the Light Intensity, Ambient Light level, Highlight Intensity, Highlight Size, and number of Blend Steps. You can also choose a custom Shading Color to add a color cast to the shaded surfaces. If you choose to maintain a spot color assigned to your Extruded object during output, by enabling the Preserve Spot Colors checkbox, be aware that this removes custom shading and resets your Shading Color to Black. If you choose Preserve Spot Colors, you should enable Overprint Preview (View menu) so you can see your shading and color accurately.

The More Options dialog expanded includes the light source sphere (shown at right). The small white dot within this sphere indicates the position of the light source, while the black box around it highlights this light source as currently selected. There is always one light source by default. Click and drag this dot within the sphere to reposition your light. You'll see the lighting automatically updated on your 3D object if the Preview option is enabled.

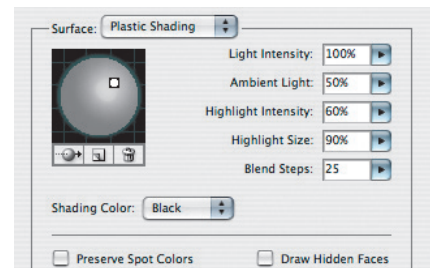


AARON MCGARRY

Rotate objects in three dimensions by using the Effect > 3D > Rotate dialog (or the upper halves of the Revolve and the Extrude & Bevel dialogs); the symbol on the left, rotated in 3D space to create the figure on the right (any 2D object can be rotated in 3D space, without making the object itself 3D)

3D effect—pass it on

Although in this book we generally recommend working with the New Art Has Basic Appearance setting disabled, you might want enable it when working with 3D effects. Otherwise, any new paths that you create subsequent to applying 3D effects to an object will also have the same appearance set, unless you first clear the appearance set from the panel, or click on the default fill and stroke icon in the tools panel. On the other hand, if you *want* your next object to have the same 3D effects as the one you just created, leave New Art Has Basic Appearance disabled.



The expanded More Options dialog shows the position of your light source within the sphere; the three icons located below this sphere from left to right are: "Move selected light to back of object," "New Light," and "Delete Light"

Mapping—don't get lost!

Here are some tips to help you avoid confusion about the surface to which you're mapping symbols:

- Remember to choose a surface. Select by clicking the Arrow keys to view each surface.
- To identify the surface you want to map, look for the red highlight on the object itself, rather than looking at the flattened proxy in the Map Art dialog.
- A stroke will add more surfaces to an object than a fill because a stroke creates a hollow inside the object, which is also treated as a surface.
- A stroke can obscure mapped art on a side or inside of a surface that can't be seen.

—Brenda Sutherland



AARON MCGARRY

The above design was mapped onto the ring below it using the Map Art feature (result shown above right). The ring was created using the 3D Revolve effect with an "offset" value added.

Mapping with gradients

Gradients can be saved as symbols, but they are rasterized when mapped. The rasterized resolution of the resulting image is determined from the resolution setting in the "Document Raster Effects Settings." You can adjust this resolution by going to Effects > Document Raster Effects Settings.

Clicking on the "New Light" icon (below the sphere) adds more light sources. This also selects the new light source (indicated by the black "highlight" box around it). Adjust each selected source independently using the lighting controls (to the right of the sphere). The first icon below the sphere, the "Move selected light to back of object" feature, creates back lighting for an object. When your light source is behind an object, the source indicator inverts to a black dot within a white square. When using multiple light sources, this difference helps you see which light sources are behind or in front of an object. Select a light source and click this icon to toggle the light to the front or back of your object, depending on its current position. To delete a light source, first select it, then click the Trash icon beneath the sphere (you can delete all but one default light source).

Mapping art onto an object

To map artwork onto an object (as with the design on the ring to the left) first define the art that you wish to map onto a surface as a symbol; select the artwork you want to map, and drag it to the Symbols panel. You may also want to define a number of symbols. For instance, the design on the ring above right is from one symbol. To add engraving inside the ring, you'd create a second symbol and add it in the Map Art dialog.

Map the symbols onto your 3D objects from the Extrude & Bevel or Revolve Options dialogs. In either of these 3D options boxes, you simply click on the Map Art button, then choose one of the available symbols from the menu. You can specify which of your object's surfaces the artwork will map onto by clicking on the left and right Arrow keys. The selected surface will appear in the window; then you can either scale the art by dragging the handles on the bounding box, or make the art expand to cover the entire surface by clicking the Scale to Fit button. Note that as you click through the different surfaces, the selected surface will be highlighted with a red outline in your document window. Your currently visible surfaces

will appear in light gray in the Map Art dialog, and surfaces that are currently hidden will appear dark.

Note: *To see artwork mapped onto the side surfaces of your object, make sure the object has a stroke of None.*

THE PERSPECTIVE GRID

The perspective grid allows you to create art on a ground plane representing real world space as viewed by the human eye. Distances between edges converge as you approach the horizon, the terminal point of our vision. This tool is useful for creating scenes such as cityscapes where buildings or roads narrow in view as they recede from our vision eventually vanishing on the horizon.

With this Perspective Grid toolset you can draw dynamically within the perspective environment itself so that shapes or objects automatically conform to the perspective grid as they are created, or you can attach existing flat vector art to the perspective grid and select it using the Perspective Selection tool to transform the art to the perspective environment. You can even position the grid on top of a reference photograph to add vector content. Symbols, text and objects created with the 3D effect are also supported within the perspective environment.

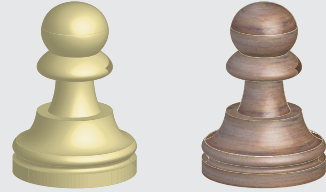
To begin working in perspective mode first define your perspective environment. Click on the Perspective Grid tool found in the toolbar to display the perspective grid on your Artboard or click View>Perspective Grid>Show Grid. The default is Two Point Perspective consisting of two vanishing points. For one point perspective choose View> Perspective Grid>One Point Perspective>1P Normal View which has a single vanishing point or Three Point Perspective>3P Normal View which has three vanishing points (if a perspective grid is customized and saved, it will appear in the respective submenu for 1P, 2P or 3P Normal View as an additional choice).

When the Perspective Grid tool is selected your grid is displayed with grid plane control points on its extremities (but some disappear when the Perspective Selection tool is used). These controls allow you to manually adjust

More on mapping

Even an object's red highlight can fool you. If the symbol isn't mapping to a selected surface, it may be because it's being mapped to the *inside* of the surface..

To map or wrap...?



Although maps can be used in a variety of ways to add designs or texture effects to an object, such as a label on a bottle, they can also be used to cover an entire object (see pawn above mapped with a wood grain image). However, complex objects produce a greater number of surfaces, which can make the rendering process very slow and perhaps generate errors. Enable "Shade Artwork" in the Map Art dialog if you intend to use lighting and shading options on a mapped surface.

Need to get rid of the grid?

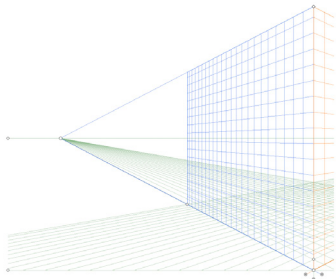
Once the Perspective Grid tool is used, the grid appears and remains regardless of what tool is used. Hide the grid by toggling it off using Command-Shift-I/ Ctrl-Shift-I (View>Perspective Grid>Hide Grid). The visible grid is not visible on finished art when printed or exported.



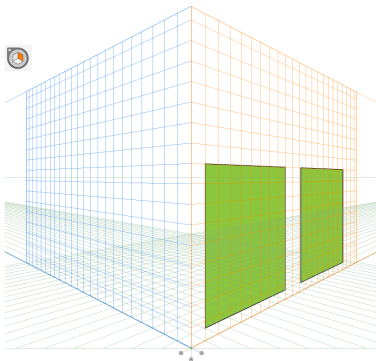
The Plane Switching Widget shown left with the left side highlighted in blue indicates that the left plane (grid) is active. click on a side of the cube with one of the perspective tools (or press 1, 2 or 3 on your keyboard) to activate a different plane (second and third widget): click the area outside the cube within the widget (or press 4) to deactivate perspective mode which allows you to draw normally (widget at far right).



The Perspective Grid tool (left) opens the perspective grid with grid plane controls visible; the Perspective Selection tool (right) is used for bringing objects, text or symbols into perspective, moving these items in perspective space or switching active planes.



Grid control points can be manually adjusted on the grid itself or more precisely using the Define Perspective Grid dialog box (View>Perspective Grid>Define Grid). Presets can then be saved for reuse. View>Perspective Grid>Show Rulers displays a ruler on the visible grid.



The above image shows a square drawn with the Rectangle tool. Notice the Plane Switching Widget indicates that the right plane is active hence the illustrated shape in perspective relative to the right vanishing point (the cursor also includes a line and an arrow which also indicates the active plane). The same square copied and moved with the Perspective Selection tool dynamically transforms it as it moves within the perspective plane.

parameters such as grid height, width, vanishing points, angles and repositioning of planes etc. Scrolling the cursor over these controls yields an indicator below the pointer showing the directional choices available for that control.

To save a customized grid choose View>Perspective Grid>Save Grid As Preset. The new grid is saved under the respective perspective type, for example a customized one point perspective grid will be saved as an option to 1P Normal View when View>Perspective Grid>Two Point Perspective fly out menu is displayed. The Define Grid dialog box (View>Perspective Grid>Define Grid) allows you to adjust the grid with greater numerical precision and save as a preset for further uses.

To begin working within your defined environment first select an active plane to work in. The cube in the upper left hand corner of the work area is the Plane Switching Widget. Use the Perspective Grid tool (or any drawing or editing tool) to click on a cube side, the active plane is highlighted with a color, Orange for example is the default color for the right plane (see figures at left). The active plane means that anything drawn in perspective will conform to the perspective of that specific plane regardless of where it is drawn on the Artboard (only one plane can be active at any time). The Perspective Grid tool cursor also indicates this with the shaded side of a cube below its pointer.

Once an active plane is selected you can use any drawing or editing tool to draw in perspective mode. Simply select a tool such as the Rectangle tool, and begin drawing on the grid. Use the Perspective Selection tool (hidden under the Perspective Grid tool in the toolbar) to select and move art within an active plane (the cursor also has a line and an arrow, indicating the active plane). When you move objects within your plane using this tool, your objects appear to recede and advance within the perspective grid (using the normal Selection tool freezes an object's shape to the current viewpoint, so it won't continue to transform as you move it). You can also use the Perspective Selection tool to select existing vector objects

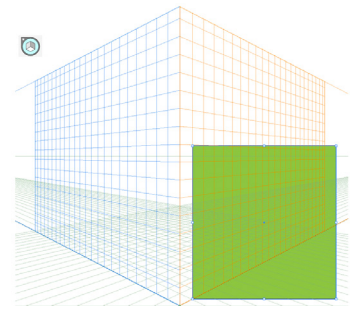
and attach them to the perspective grid. To do so simply activate a plane then select and drag the object to the perspective grid. When you use the Perspective Grid tool to select an object that's already associated with the grid, the associated side of the cube automatically becomes highlighted.

Clicking in the area outside the cube within the widget (or pressing 4) deactivates all perspective planes so you can draw in normal mode (no perspective applied) see figure to right. Once your object is created, use the Perspective Selection tool (or press 1,2 or 3) to activate a plane by clicking on a Widget side and drag the object to position it in perspective. To move more than one object in perspective drag a marquee over the objects with the Perspective Selection tool and then move to reposition (this collects only the objects on the active plane).

If you wish to move an object perpendicular to its current location, hold down the 5 key (top row of numbers on keyboard only, not 5 on right numeric keys) as you drag with the Perspective Selection tool or to duplicate an object and move it perpendicular to the original's position, hold Option-5/Alt-5 as you drag.

With the Perspective Grid tool, double click on any of the grid plane controls (the three circles below where the planes intersect) to open a Vanishing Plane or Floor Plane dialog which allows you to move a plane precisely, with or without selecting the objects associated with that plane.

To work on an object in normal mode after applying perspective; use the Object>Perspective>Release with Perspective or use contextual menu and choose from the Perspective menu (this function does not return an object to a normal state if created initially without perspective but just detaches it from the perspective plane). The object can now be modified normally, however, in order to reattach it to the plane you must use Object>Perspective>Attach to Active Plane; once an object has been detached from a plane. If the object is not reattached this way, using the Perspective Selection tool will automatically add a new perspective to the object.



In this example, clicking within the Plane Switching Widget but outside the cube, deactivated the perspective grid (note the cyan colored area surrounding the cube), so the rectangle was drawn in normal mode; to later apply perspective to the rectangle, select the Grid Selection tool, click on a Widget side to activate a plane, and drag the rectangle to the desired location.

Perspective is permanent!

Once perspective is applied to an object it cannot be released to return to its original (normal) state as with other effects, so save a copy of the original if necessary.

Perspective Limits

- An Artboard can contain only one perspective grid. However, you can position a grid across more than one Artboard.
- Symbols consisting of effects such as rasters, legacy text, non native art, envelope objects and gradient mesh art cannot be applied to the perspective grid.
- You cannot apply perspective mode to the Flare tool.

Draw normally first...

Create Text and symbols normally first and then use the Perspective Selection tool to attach it to an active plane. Once in perspective, use Object>Perspective>Edit Text to modify.