









week::six

Object Transformations

Transformations

Basic Transform Tools

- Selection (V; ) & Direct Selection (A; )
 - Press the Option key while moving an object to make a copy of it.
- Rotate (R; )
- Reflect (O; )
 - Creates a mirror image of an object.
- Scale (S; )
- Shear ()
- Free Transform (E; )
 - To *Shear* an object, drag a side handle, then press and hold the Command key.
 - To *Distort* an object, drag a corner handle, then press and hold the Command key
 - To apply *Perspective*, drag a corner handle, then press and hold Command-Option-Shift.
- **Blend** (W; )
 - Morphs one object into another by creating a multi-step color and shape progression.
 - Double-click the tool to change its default options.
 - Blend options can be changed at any time by selecting the blend with the Selection tool, then choosing the **Object > Blend > Blend Options...** menu option.
 - Select Object > Blend > Expand to convert your blend into discrete objects.
 - To release a Blend, select Object > Blend > Release... (Command-Option-Shift-B).

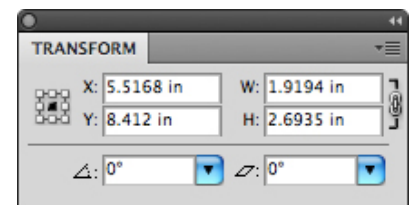


Transform Tool Basics

- The Rotate, Reflect, Scale and Shear tool allow for the altering of the **point of origin**.
 - The Selection tool does not.
- Holding down the **Option** key while transforming causes the object to transform around the point of origin.
- Holding down the **Shift** key while transforming forces the object to maintain its proportions.
- Transforms can also be accomplished numerically by selecting the object and then **double-clicking** on a transform tool, or by using the Object > Transform... menu (see next page).
- **Smart Guides** (View > Smart Guides; Command-U) can provide valuable alignment information when performing transformations.

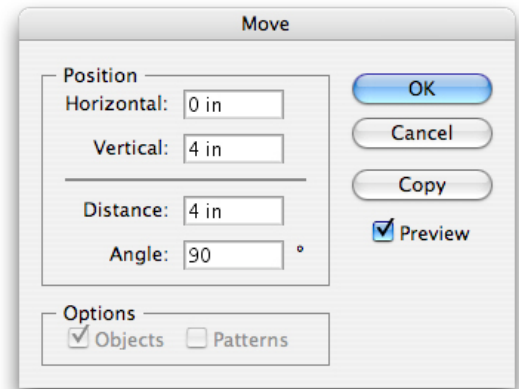
Transform Panel

- Allows for numeric transformation of an object.
- The nine small boxes to the left of the panel control the point of origin for the transformations. The **black box** is where the current selected object (or objects) is anchored.
- Click the chain link to the right of the Width and Height boxes to **lock-in the proportions** of the object. The screenshot to the right shows the width and height linked together.



Object > Transform Menu

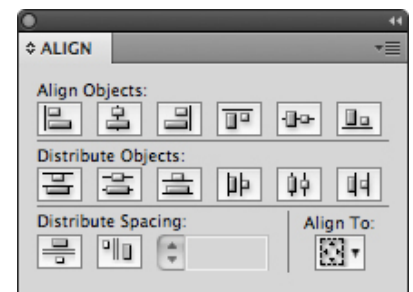
- Allows for numeric transformation to an object.
- **Move...** command (Command-Shift-M)
 - Numerically moves the selected object.
 - You can enter either the exact distance (horizontal and vertical) from the current object location, or specify a distance from the origin point and an angle.
 - Very handy option when used in conjunction with **Transform Again**.
- **Preview** and **Copy** options (within each transform option)
 - **Preview** allows you to view changes to an object before committing them.
 - **Copy** allows you to apply a transformation, and then make a copy of the object. The original object remains in place and unchanged.
- **Transform Again** (Command-D)
 - Allows you to repeat the previous transformation.
 - Excellent for creating new, similar objects in a numerical manner, including consistently spaced objects (for example, rule lines on a piece of notebook paper).
 - Must be used immediately after a transformation is made.
- **Transform Each...** (Command-Option-Shift-D)
 - Allows you to apply a transformation to multiple, individual objects by using just one command. Each objects uses its own Point of Origin for the transformation.



Aligning Objects

Align Panel

- The Align panel can be used to precisely align individual objects in a number of different ways.
- Multiple objects can be **aligned** along a common boundary using the Align Objects options:
 - *Horizontal Align:* Left, Center, Right
 - *Vertical Align:* Top, Center, Bottom
- Using the Align panel you can also **distribute** objects, evenly spacing all selected objects between the two objects that are furthest apart.
- The Distribute Objects options differ in what area of an object Illustrator uses as the basis of the distribution.
 - *Vertical Distribute:* Top, Center, Bottom
 - *Horizontal Distribute:* Left, Center, Right
- The **Distribute Spacing** options allow you to create an even amount of space in-between the selected objects.
- The default **Align To** option aligns objects to other objects in a selection (*Align to Selection*). The *Align to Artboard* option, however, aligns any selected artwork to the Artboard itself.
 - This makes it easy for objects to be perfectly centered within the Artboard, or aligned to the Artboard edge.



Align in the Control Bar

- Most of the Align panel options are available in the Control Bar when multiple objects are selected.