# Chapter 3:

# DRAWIN' SHAPES AND WORKIN' WITH COLOR!

## HERE'S WHAT YOU'LL LEARN IN THIS CHAPTER

If you're thinkin' this chapter'll be a cakewalk, you're mostly right. Much of the stuff in this chapter is easy, but there are a few things that you won't wanna miss, so don't go skippin' out on me here. Flash behaves oddly when it comes to shapes and color, so we gotta check things out. Stick around and see what it's all about!



## GET CREATIN' THOSE SHAPES

If you have some experience with other graphics programs—perhaps Illustrator, or FreeHand—then this chapter's gonna be easy. But even if you've never worked with these sorts of programs before, fear not, you'll be creating and manipulating Flash objects in no time. Playing with shapes and filling them with color is fun and easy stuff. And it's a total bonus that we can actually pass this stuff off as work.

*If you catch any errors in Ten Ton Flash, let us know over at tentonbooks.com/improve-ten-ton.html. Lord knows, it musta been the booze.*

Flash's Toolbox contains a few basic geometric shape tools for you to tinker with. The Rectangle tool, which allows you to draw—gasp!—rectangles and squares, the Oval tool, for drawing circles and ovals, and the Polystar tool, for drawing cheesy disco logos from the 70's. One other thing before we really get rolling: As you begin drawing shapes on the Stage, you might find Flash behaving a little strangely. For example, if you were to draw one shape over another shape, you might expect Flash to stack your objects one on top of another, just like other graphics programs do. However, Flash actually uses the top shape to cut away from the bottom shape, as if it were a cookie cutter. This behavior is totally unique to Flash, and it takes quite a bit of getting used to (and some anger-management sessions, depending on how frustrated you get). This relates to Flash's drawing models, which we'll delve into shortly. But for now, let's actually start drawing some shapes.

*Can't wait to figure out Flash's drawing models? Then skip ahead to "Before Ya Go Mental Understanding Flash's Drawing Models," later on in this chapter.*

BEFORE YOU DRAW A RECTANGLE, YOU CAN SET ANY OF THE OPTIONS THAT APPEAR IN THE OPTIONS AREA OF THE TOOLBOX AND IN THE PROPERTIES INSPECTOR.

## Drawin' Up Some Squares And Rectangles

The first shape tool we'll take a look at is the Rectangle tool, which will allow you to quickly draw boxes and squares on the Stage. This tool is great for making buttons, banners, and the like. Before you draw a rectangle, you can set any of the options that appear in the Options area of the Toolbox and in the Properties inspector; which show up when you select the Rectangle tool. Or, you can change your rectangle's appearance—perhaps the Fill Color, or Stroke Style, for example—after it's been drawn. You'll see how to change existing shapes a bit later on. Right now, let's draw some freakin' rectangles!

**NOTEWORTHY**

As you're drawing shapes and working with color in Flash, don't forget that at any time, you can use the Zoom tool to magnify the Stage to work more precisely. You saw how to use the Zoom tool all the way back in Chapter 1. And don't forget that the Hand tool allows you to pan around inside Flash's Stage.

Here's how to draw rectangles and squares:

1. From the Toolbox, click the Rectangle Tool.

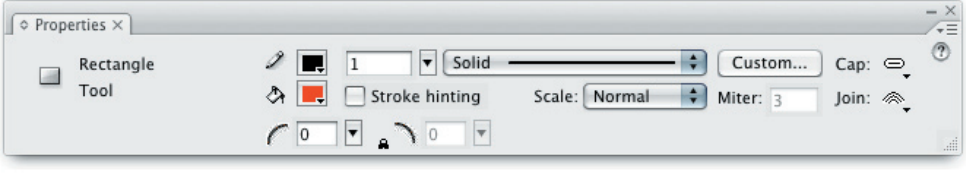
2. In the Options area at the bottom of the Toolbox, set either Object Drawing or Snap to Objects.

   Later in this chapter we'll talk about these two fellas.


3. In the Properties inspector, set any additional options that you'd like to apply to your rectangle.

   For example, you might want to set a Fill Color and a Stroke Color for your shape. The settings in the Properties inspector are the same here as they were for the Pencil tool, which you saw in the last chapter—with the addition of the Fill Color option and Rectangle Corner Radius. For a reminder of the Pencil tool settings, head back to ***"Sharpening up on The Pencil Tool"*** in the last chapter.

*Don't be a square—If you'd like to set a fill color for your square, you can do so either on the Properties inspector or within the Color area of the Toolbar. Both settings are the same.*



As for the Fill Color option, it's a no-brainer—just pick a fill color you'd like to use for your rectangle. And the Rectangle Corner Radius will let you draw a rectangle with rounded corners. If you'd like to set the same corner radius for all four corners, make sure the tiny padlock icon is closed; then enter a value in to the top-left field (or use the field's handy slider thingy). To apply individual settings for each corner, click on the padlock icon to open it, and the fields for all four corners become available. If ya goof on your corner radius, just hit the Reset button to start over.

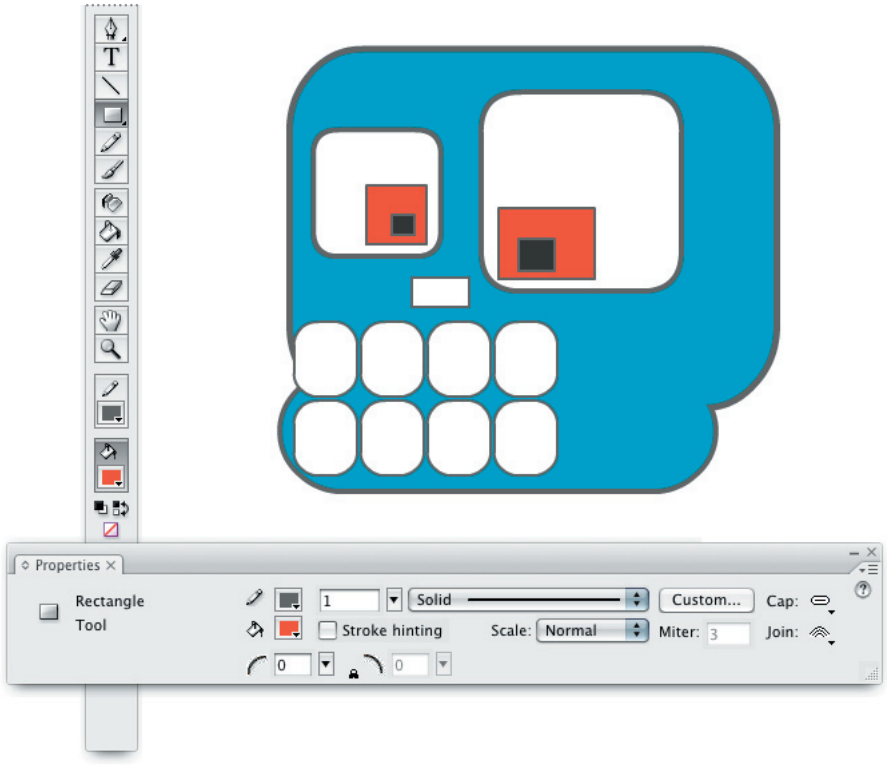
4. Move your cursor onto the Stage, where you'd like to draw your shape; then click and drag to draw a rectangle.

   Obviously, the farther you drag, the larger your rectangle will be. If you'd like to draw a perfect square, hold down the Shift key while you click and drag. This will constrain the width and height of your shape, so that they remain relative to one another.

**NOTEWORTHY**

Rather than drawing a rectangle from the corner, try holding down Alt (Windows) or Option (Mac) as you drag. This will draw a rectangle from the center. Even better, try holding down Alt (Windows) or Option (Mac) and Shift to draw a perfect square from the center. Sweet!

*Are you not getting perfect squares when you hold down the Shift key? As you're dragging your shape, make sure to release your mouse button first; then let go of Shift. It's all in the co-ordination, grasshopper!*

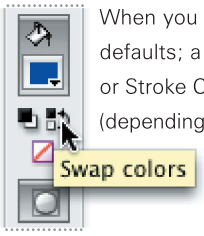



No problems, right? As you continue drawing rectangles—or any other shapes for that matter—the currently set fill, stroke, and other settings are applied to new shapes. In other words, Flash remembers your last settings and continues reusing them until you make a change. Comes in handy when you need several shapes that need to look the same. Alright, ovals are next, so keep those eyeballs movin'!

*Wanna add a corner radius(that is, rounded corners) to your rectangle as you're drawing it? Try hitting your up and down arrow keys on your keyboard as you're clicking and dragging with your mouse. The down arrow key increases the amount of corner radius, and the up arrow reduces it—slightly counter-intuitive, but that's how she goes!*

## FILL AND STROKE COLOR TRIPLE THREAT: THREE EXTRA GOODIES

As you begin drawing shapes and setting fill and stroke colors, it's good to know about three little helpers tucked away in the Color area at the bottom of the Toolbox. Just below the Fill Color setting, you'll see the Black and White button, the No Color button, and the Swap Colors button. In fact, these three buttons are also available underneath the Fill Color setting in the Color Mixer panel, too (Window > Color Mixer—we'll be talking about this panel a little later on). Here's a rundown of each.




When you click the Black and White button, the Fill Color and Stroke Color settings are returned to their defaults; a fill color of white, and a stroke color of Black. To use No Color, first click on either the Fill Color or Stroke Color icon (not the color swatch itself), then click the No Color option. This tells the fill or stroke (depending on which one you'd selected) to not use a color, which is great when you want to create a hollow shape with just an outline, or a filled shape with no stroke. Clicking the Swap Colors button switches the Fill Color and Stroke Color with each other, which is handy when you don't want to have to go and choose the same color twice.

So thery ya go, there's a look at Flash's triple color threat. Keep these three fellas in mind whenever you're working with colors and shapes.

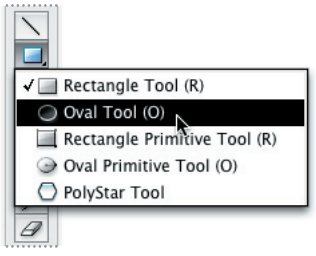
THE OVAL TOOL WORKS JUST THE SAME AS THE RECTANGLE TOOL.

## Drawing Ovals 'n Such

So rectangles are easy, right? Then let's give ovals and circles a try. In fact, the Oval tool works just the same as the Rectangle tool does, so this next bit should be no problem. Not much pre-amble here, let's just go!

Follow these steps to draw ovals and circles:

1. From the Toolbox, select the Oval tool.




*Got yer Oval tool selected? In the Options area at the bottom of the Toolbox, turn on the Object Drawing and Snap to Objects modifiers, if you'd like. More on these two settings coming up.*

2. Using the Properties inspector, set any options that you'd like for your oval.

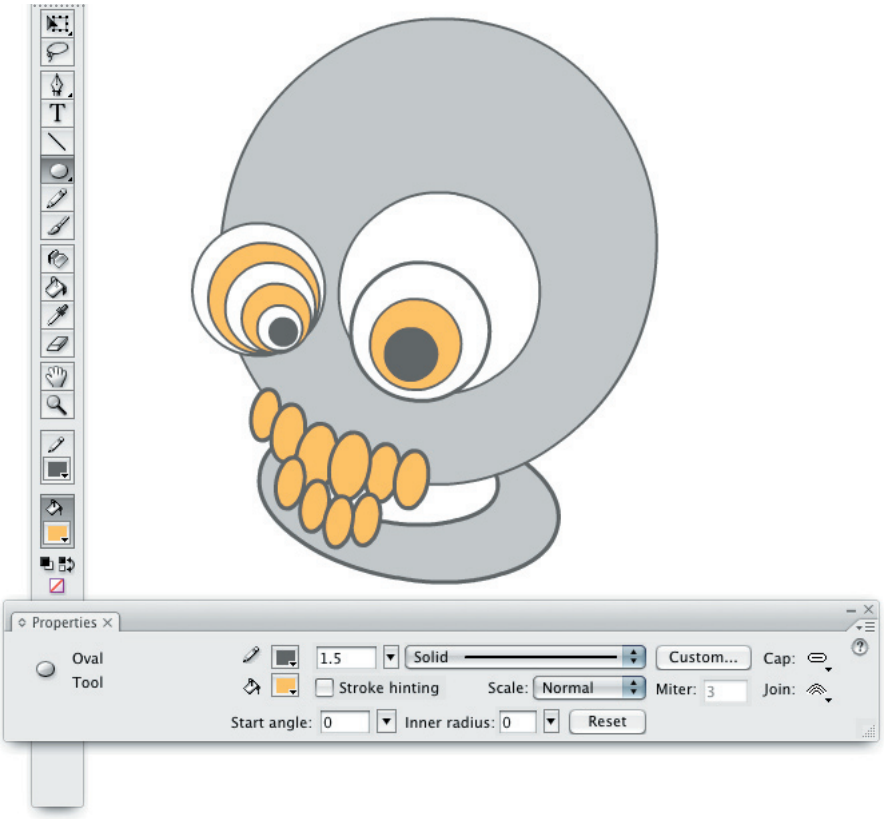
   Most of the settings on the Properties inspector should be familiar to you by now—most are the same as the Rectangle tool. However, there are a few extras that essentially allow you to draw pies and donuts. Mmmm…donuts. I'll be right back…

   Okay, now, if you pop values into the Start Angle and End Angle fields, you can create pie wedges. It ain't the most intuitive, so you might want to play a bit with this. Set a value for Inner Radius, and Flash'll knock a hole in the center of your circle. Finally, unchecking Close Path results in an object created out of strokes, with no fill.

*As hungry as these settings make me, I fund 'em just a wee bit too counter-intuitive. If I had to make pies and donuts, I'd probably think to go to Illustrator first—or maybe Tim Hortons…*

3. Bring your cursor onto the Stage, where you'd like your shape; then click and drag to draw an oval.

   Easy stuff. Just as you saw with the Rectangle tool, if you'd like to draw a perfect circle, hold down Shift as you drag.




The nice thing about Flash's shape tools is that they stay activated after you draw your shape. This means you can keep clicking and dragging to create more shapes. To turn your shape tool off, you'd have to select a different tool in the Toolbox; perhaps the Selection tool, for example.

## GETTIN' PRECISE WITH RECTANGLES AND OVALS

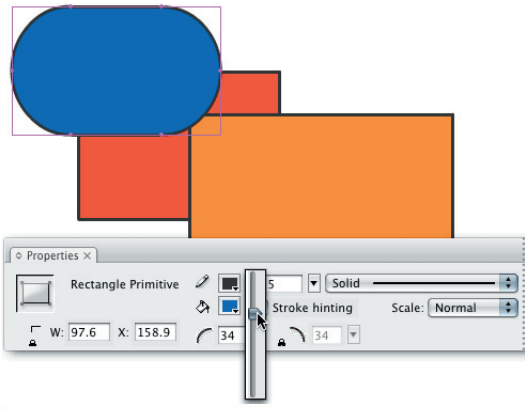
As you can see, when you're drawing shapes in Flash, you're eyeballin' it. But what if you wanted to draw shapes in a much more precise way? Maybe you know the exact dimensions of the shape you want to create. No worries.

Try selecting either the Rectangle or Oval tool, then hold down Alt (Windows) or Option (Mac) and single-click on the Stage where you'd like your shape to appear. This opens the Settings dialog box, where you can enter in exact values for Width and Height. If the Draw From Center option is checked, then where you clicked determines the center-point for the shape. If you uncheck Draw From Center, then where you'd clicked determines the top-left corner of the shape. When you're good to go, click OK. Now that's precision!

## RECTANGLE PRIMITIVE AND OVAL PRIMITIVE TOOLS...TURNS OUT THEY AIN'T SO PRIMITIVE AFTER ALL!

Hidden under the Rectangle tool in the Toolbox, you'll find the Rectangle Primitive and Oval Primitive tools. Why are they called *primitive* tools? I dunno man, I just write the book. But I will say this: They ain't so primitive. In fact, you may wanna ditch Flash's regular Rectangle and Oval tools for their primitive counterparts.

Why? Well here's the deal. If you grab the normal Rectangle tool, you can set options on the Properties inspector for the shape's Fill Color, Corner Radius, and so on—all stuff you already saw not too long ago. But what if you draw a rectangle with a corner radius, but want to change the radius later on? Well, if you select your rectangle after it's been drawn, take a look at the Properties inspector and you'll find your outta luck. However, if you use the Rectangle Primitive tool, you'll be able to go back after you've drawn your shape and adjust the corner radius on the Properties inspector at any time.




Same sorta thing goes for the Oval tool and the Oval Primitive tool, except this time it's the Start Angle, End Angle, Inner Radius, and Close Path options on the Properties inspector that will always be adjustable when you use the Oval Primitive tool.

So why don't the Flash developers just put these settings into the original Rectangle and Oval tools? Good question. If you run into a Flash developer on the street, grab him by the shoulders, give him a shake, and yell, "What's the deal, man?" Until then, we're stuck with two extra tools.

*Okay, that was a lame heading. If you can think of a better one, email me!*

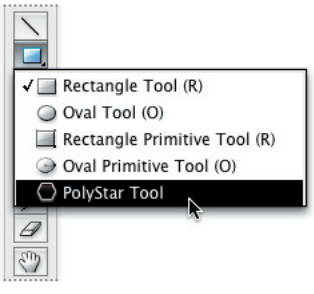
## Where Mathematics and Hollywood Meet: It's Polygons and Stars

Rectangles and ovals are all fun and games, but what if you want to push things a little further? Next up, there's the Polystar tool. As the name implies, this fella will let you draw either polygons or stars; each with as many sides or points as you'd like. Ready? Let's Polystah!

THE POLYSTAR TOOL WILL LET YOU DRAW EITHER POLYGONS OR STARS.

Here's how to draw polygons and stars:

1. From the Toolbox, click and hold on the Rectangle tool; then in the menu that appears, select the Polystar tool.




*Polystar...that's a kinda weird name for a tool. Sounds better than Stargon, I guess. Stargon, hero of the galaxy!*

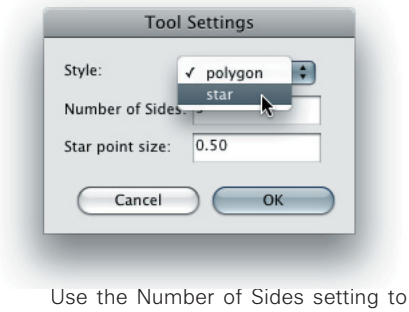
You can use the Object Drawing and Snap to Objects modifiers with the Polystar tool, if you like. Take a gander in the Options area of the Toolbox.

2. In the Properties inspector, set any options that you'd like for your shape.

   Settings here are all the same as before—Fill Color, Stroke Color, Stroke Style, and so on. Only new thing here is the Options button.

3. On the Properties inspector, click the Options button.

4. In the Tool Settings dialog box that appears, use the Style menu to set the type of shape you'd like to draw—either a polygon or a star.




   Use the Number of Sides setting to determine how many sides or points your polygon or star will have. You can enter in a value between 3 and 32 to set the number of sides or points.

   If you're drawing a star, use the Star Point Size to determine the size of your star's points. Type in a decimal value that's between 0 and 1. For example, you might type in .25 or .75. Values closer to 0 create sharper points, while values closer to 1 create shallower points. If you're drawing a polygon, this setting will not affect your shape.

*If you enter in a higher value, Flash won't provide you with a warning, it'll simply ignore your higher value and draw a polygon or a star with 32 sides or points. The same happens if you use a lower value. What an attitude, huh?*

5. When you're ready, click and drag on the Stage to draw your shape.

   Flash draws your star or polygon, using the options that you'd set. Again, you might want to take a moment to mess around with these settings, but don't be too long, cuz we gotta talk about Flash's drawing models, next!

*Check out a cool Flash drawing tutorial over at lashf.com/page/drawing/basic_drawing*

## Before Ya Go Mental—Understanding Flash's Drawing Models

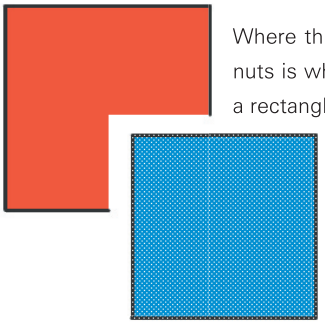
Way back at the beginning, before we even began drawing shapes on the Stage, I mentioned that you may find the way Flash handles shapes little odd (or even downright frustrating). Remember I said that if you draw shapes on top of one another, you actually wind up cutting your shapes apart? Well, let's take a closer look at how all this works.

FLASH HAS TWO DRAWING MODES, MERGE DRAWING AND OBJECT DRAWING. AND BOTH HANDLE SHAPES VERY DIFFERENTLY.

Flash actually has two drawing models, Merge Drawing and Object Drawing, both of which behave and handle shapes in totally different ways. The Merge Drawing model is activated by default, so we'll take a look at that model first. Then we'll take a look at Object Drawing.

When you start drawing shapes on the Stage, you're in Merge Drawing mode. This model actually does two odd things that are unique only to Flash—at least, I've never seen another program that does this. First, when you draw a shape, you're actually creating two separate objects, the shape's fill and the shape's stroke. Weird, huh? This can become a real pain in the neck when you begin moving objects around, cuz you have to make sure that both the fill and the stroke are selected before you try movin' them. If both aren't selected, you'll move just the fill or just the stroke. Arrghh! Now more on this in a bit.

But first, the other behavioral disorder of the Merge Drawing mode: it cuts shapes apart. When one shape is drawn on top of another shape, Flash uses the top shape to cut away from the bottom shape. This only becomes apparent after you draw your shapes and you then try to move them apart. To see this in action, choose the Selection tool from the Toolbox (the black arrow); then drag your overlapping shapes away from one another. What happens is the shapes on top cut away from the shapes below. Frustrating? You bet. Even weirder, this cutting behavior only happens when the shapes are different colors. If the shapes are the same color, they actually merge together to form a single, larger shape. Gahh!



Where this cutting behavior really starts drivin' ya nuts is when strokes get involved. If you draw out a rectangle, you'll actually get four strokes, one for each side—whenever your line changes direction, you get a new stroke. What's more, strokes actually get broken whenever they intersect with each other. These could be strokes that you've drawn with the Pencil, Pen, or Line tool, or strokes that are a part of the shapes you've drawn. I'm telling you, it'll drive you frickin' mental.

To avoid all these headaches in Flash, you can make use of the second drawing model, Object Drawing. Unlike the Merge Drawing model, the Object Drawing model will create your shapes as separate objects and keep them from interfering with one another. In other words, it'll draw your objects just like a regular graphics apps would, like Illustrator for example. This means no cutting, no separate fills and strokes, and so on. If you've used Illustrator or other drawing programs, Object Drawing makes Flash behave just the same. Hallelujah!

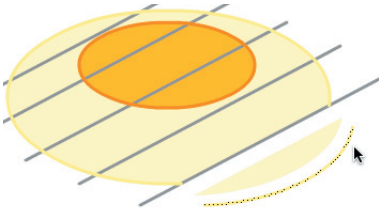
**NOTEWORTHY**

The strange behavior of Flash's Merge Drawing mode only happens when shapes reside on the same layer. Shapes that appear on other layers are isolated from the other objects on the Stage, and therefore have no effect on other shapes. We'll be talkin' layers later on in Chapter 8.

*For Pete's sake, stop nipping from your whiskey flask and focus!*

## CARVIN' UP SHAPES WITH A FEW SIMPLE LINES

If you ever want to take a shape that you've drawn and cut it into pieces, you can do so in a surprisingly accurate way—by simply using a regular line. All you'd do is use the Pencil, Pen, or Line tool and draw a line right across the shape that you want to slice up. The shape is cut where ever your line falls. However, the cutting only becomes apparent when you use the Selection tool (the black arrow tool) to drag pieces away. The line that's slicing up your shape also becomes broken where ever it intersects with other lines, like the shape's stroke, for example.



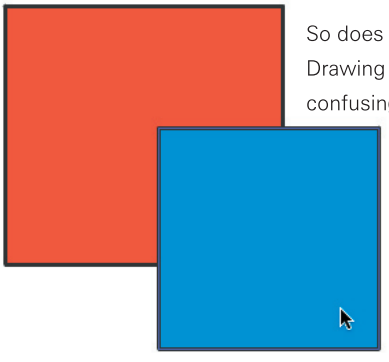
Flash's Merge Drawing mode is weird stuff at first, but as you can see, you can use it to your advantage once you understand how it all works. Happy slicin'!

The trick with Object Drawing is that you have to turn it on when you want to use it. But once it's on, it's on for good, even if you switch tools. It'll be turned on until you shut it off. In fact, when you were using the Pencil, Line, Pen, and Brush tools in the last chapter, and the Rectangle, Oval, and Polystar tools earlier in this chapter, I pointed out the Object Drawing modifier, found in the bottom of the Toolbox, whenever one of these tools is selected. The modifier button actually lets you toggle between the Merge Drawing and Object Drawing modes.

*For godsake, hit the J key on your keyboard to toggle between the Merge Drawing and Object Drawing models whenever you have a shape tool selected!*

With the Object Drawing modifier turned on, whenever you draw an object, it'll now be contained within a blue frame. Whether your shapes overlap or not, shapes won't interfere with one another. And your fills and strokes? All contained within a single object, baby!

*Did that deserve a "baby?" I thought it deserved a "baby?"*



So does all this Merge Drawing and Object Drawing stuff make sense? It's definitely confusing at first, especially because the two modes are so similarly named. It'd be much easier if one was named ***"Totally Frustrating And Useless"*** mode, and the other ***"Just Like Illustrator"*** mode. In fact, I've prepared a wee sticky note to help you remember which is which—you'll see it down on the next page. Just cut it out, and stick it to your monitor. It just needs a bit of tape. Anyway, so there you go, that's what's going on with Flash's drawing and shape tools. It's because of all this nutty-ness that I normally do as much up front work as I can over in Illustrator. I then drop all my Illustrator content into my movie, start creating my symbols, build my animations and so on. Chapter 5 has some killer info on how to work with Flash and Illustrator, so stick around for that.

**NOTEWORTHY**

If you're not working with Object Drawing turned on, selecting and manipulating shapes (which is coming up in the next chapter) can get very frustrating. To give you an idea, if you wanted to select a rectangle, you'd actually have to select five different objects: a line on each side of the shape, plus the fill. Avoid the insanity and use Object Drawing!

## MERGE DRAWING MODE

* CUTS STUFF APART
* TOTALLY SUCKS
* DOESN'T BEHAVE LIKE ANY OTHER GRAPHICS PROGRAM IN THE KNOWN UNIVERSE

## OBJECT DRAWING MODE

* DOESN'T HAVE MENTAL DISORDERS OR MESS UP YOUR STUFF
* TOTALLY RULES
* BEHAVES JUST LIKE EVERY OTHER GRAPHICS APP IN EXISTENCE

**FROM THE LAND OF GEEK**

What the Object Drawing modifier is actually doing is grouping your shape's fill and stroke automatically for you. You could group your fills and strokes manually when the Merge Drawing model is being used by selecting your shape's fill and stroke, then choosing Modify > Group. To break apart a grouped shape (or a shape that's been drawn with Object Drawing), choosing Modify > Ungroup. There's lots more on Grouping and working with objects coming up in the next chapter, so stay tuned!

In the meantime, we're on to our next major topic, working with Color in Flash. In this last section, you saw how to work with Flash's shape tools, now it's time to liven up your objects with a little more color. Let's get a handle on how it all works.

## GETTIN' DOWN WITH COLOR

As you've seen so far, you can set colors for a shape's fill and stroke as you draw, and Flash will continue using the same color settings as you create more shapes. You've also seen how to create a shape without a fill or without a stroke.

But in this section, you'll see the various ways that you can work with color in your Flash movies, including how to change fills and strokes of shapes that you've already drawn, how to add strokes and fills to shapes that don't have 'em, and how to copy colors to other shapes. Then you'll see how you can create your own custom colors and gradient fills. Let's get started by taking a look at the Paint Bucket tool.

**NOTEWORTHY**

Here's a snazzy trick: If you ever want to find out exactly what colors have been used for a shape's fill or stroke, open up Flash's Info panel (Window > Info) and hover your cursor over the shape. Hover over the shape's fill, and the Info panel will tell ya the fill's RGB color values—likewise when ya hover over the shape's stroke. What the heck is RGB? All's revealed in the sidebar "What On Earth Is RGB" later on in this chapter. And the "A" that appears below the RGB color values? That's the color's Alpha setting, or transparency.

### Filling with the Paint Bucket Tool

Flash's paint bucket tool is perfect for changing the fill color of objects that you've already drawn. Earlier, you saw how you can set your shape's fill color as you're drawing it (remember, you can select the shape tool, then set the fill color from either the Properties inspector or at the bottom of the Toolbox and go nuts). No problem. But what if you change your mind and want to adjust your shape's fill color after you've drawn it? The Paint Bucket tool is where you want to be.

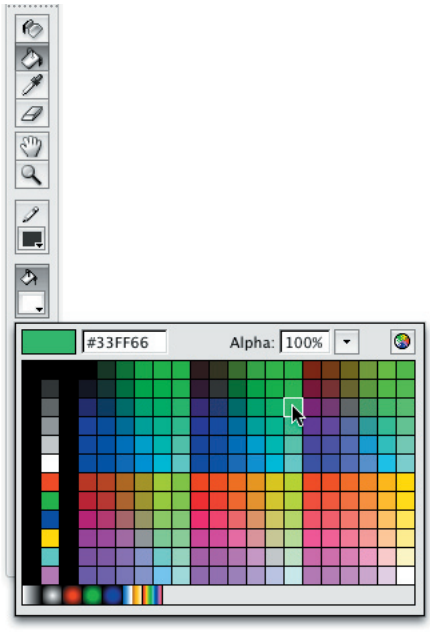
THE PAINT BUCKET TOOL IS GREAT FOR CHANGING THE FILLS ON EXISTING SHAPES.

The Paint Bucket tool is great for changing the fills on existing shapes, but it'll also fill in any other enclosed areas as well. For example, you might use the Pen or Pencil tool to create a freehand outline, then use the Paint Bucket to fill it in. You can also use the Paint Bucket to change the color of shapes and strokes that you've created with the Brush tool—recall that the Brush tool paints with a fill. Lets see how the Paint Bucket works.

To fill with the Paint Bucket, give this a try:

1. In Flash's Toolbox, select the Paint Bucket tool.

2. From the Fill Color option at the bottom of the Toolbox, choose a color to fill with.




   Alternatively, you can use the Fill Color option on the Properties inspector to set your color. In the color window that appears, choose either a solid color or a gradient fill. Gradient fills are fills that blend using more than one color. They can be found across the bottom row of the color window.

3. Use the Gap Size modifier at the bottom of the Toolbox to set how the Paint Bucket will fill shapes whose outlines contain gaps.

   At times, shapes that you're filling may have gaps in their outlines. In other words, you might have a shape that isn't completely closed. In such a case, use the Gap Size option to set how the Paint Bucket will treat open gaps. The choices include: Don't Close Gaps, Close Small Gaps, Close Medium Gaps, Close Large Gaps.

4. Bring the Paint Bucket over the shape that you'd like to fill; then single-click.

   The shape fills with the color that you'd set.

Don't forget that even after an area has been filled in, both the fill and the stroke (the outline) are treated as separate objects. This means you can

*The Paint Bucket tool has a Lock Fill modifier, which allows you to fill multiple shapes with a single fill—either a gradient fill or an imported graphic—which would then continue filling from one shape to the next. Wanna find out more? Then check out "Locking A Fill" in Chapter 5.*

**NOTEWORTHY**

You can set a gradient for your shape's Fill Color, but you can also use them for your shape's strokes, too. In the next section, you'll see how to change a shape's stroke using either a solid color or a gradient.

*How does a shape's outline become gapped in the first place? Maybe you got overly excited with the Eraser tool and accidentally took out part of a shapes outline, or maybe you tried drawing a closed shape by hand, but didn't completely close it. Under normal circumstances though, if you draw a closed shape and don't manipulate it in any way, it'll stay closed.*

*You can also change fill and stroke colors by using Flash's selection tools. Check out the next chapter to see how.*

move one without the other, or delete one and keep the other—that is, unless you have Object Drawing turned on, which we discussed back in the previous section.

Alright, so changing fills with the Paint Bucket is easy stuff, right? Kay then, let's see how to change strokes in Flash using the Ink Bottle tool.

THE INK BOTTLE TOOL ALLOWS YOU TO CHANGE THE STROKES ON EXISTING SHAPES.

*Remember, the Brush tool only paints a fill with no stroke.*

## Creating Outlines with the Ink Bottle

Flash's Ink Bottle tool allows you to change the strokes on existing shapes. Not only can you change strokes that appear around your shapes, you can also change other types of lines that you've drawn, such as those drawn with the Pencil, Pen, or Line tools. The Ink Bottle tool also comes in handy for adding strokes to shapes that currently only have a fill. This would work for rectangles, ovals, or other shapes that don't have a stroke, but it'll also work for filled areas that you've created with the Brush tool, too.

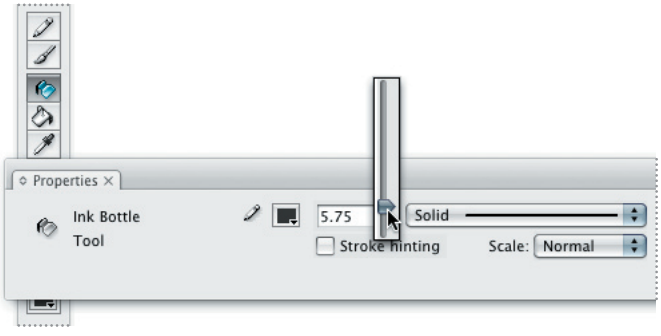
To use the Ink Bottle, try this:

1. In the Toolbox, select the Ink Bottle tool.

2. In the Colors section of the Toolbox, use the Stroke Color option to set either a solid color or a gradient.

   You can use the Stroke Color setting on the Properties inspector to set your color, too.

3. If you'd like, set any additional options that appear on the Properties inspector.




   For example, you might want to set a different Stroke Height or Stroke Style. The settings on the Properties inspector should be pretty familiar by now.

4. Click anywhere on the shape whose stroke you'd like to change.

   If you're changing an existing line that's been drawn with the Pencil, Pen, or Line tool, click directly on the line. When you click, the stroke

changes to reflect the options that you'd set for the Ink Bottle. If you're clicking on a shape that doesn't have a stroke, the Ink Bottle adds a stroke for you using your settings. Cool, huh?

So how's that, easy stuff? Great. Next up, how about copying a shape's fill and stroke, and then applying it to other shapes you've drawn on the stage? They call him the Eyedropper tool, and boy does he save ya time!

*Can't remember those Pencil tool settings? No worries, just go back to "Sharpening up on The Pencil Tool" in Chapter 2. You also miss a turn and have to pick up two cards. Way to go.*

## Be Lazy! Use The Eyedropper to Copy Fills and Strokes

Whew, changing fills and strokes on shapes can be tiring work, especially if you have a lot of shapes you wanna change. So here's a much faster way to work: use the Eyedropper tool! This handy tool will copy fills and stroke settings from one shape, and apply them to another, lickedy split. It makes re-using the same fill and stroke settings very easy, which helps to keep consistency among your objects. Imagine, for example, that you wanted to create a consistent color theme throughout your movie. The good 'ol Eyedropper's gonna help ya out.

THE EYEDROPPER TOOL COPIES FILL AND STROKE SETTINGS FROM ONE SHAPE, AND APPLIES THEM TO ANOTHER SHAPE.

The only downer about the Eyedropper tool is that it'll only let you sample the fill or the stroke on an object, not both at once. Major bummer. This means that if you want to duplicate both the fill and stroke from one shape to another, you'll have to sample twice. Not the end of the world, but hey, that takes more time—and reruns of Laguna Beach are on and we're missing it!

*Selecting the fill and stroke at the same time doesn't even work if your shapes were drawn with Object Drawing turned on. Gahh!*

Here's how to use the Eyedropper to sample fills and strokes:

1. Select the Eyedropper tool from the Toolbox.

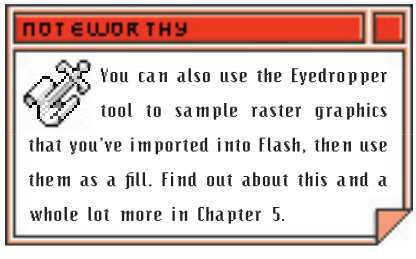
2. Bring your cursor over the shape whose fill or stroke you'd like to sample from; then do one of the following:

- To sample the shape's fill, bring your cursor within the shape; then single-click.

  Notice that a tiny box appears beside the Eyedropper when you're over a fill. This indicates that you're about to sample the fill.

- To sample the shape's stroke, bring your cursor over the shape's stroke; then single-click.

When your cursor's over a shape's stroke, a tiny diagonal line appears beside the Eyedropper, indicating that you're about to sample the stroke.



Now that you've sampled the shape's fill or stroke, you're ready to apply it to another shape.

3. Move your cursor over the shape that you'd like to copy the fill or stroke settings to; then single-click.

   If you sampled a fill, then your cursor changes to a paint bucket; then the shape is filled with the sample. If you'd sampled a stroke, your cursor changes to an ink bottle and the stroke settings are applied to the second shape.

*Did you know that you can use Flash's Find and Replace command to change colors right across your entire movie? You can even replace video, audio, text, and a whole lot more. Surf on over to tentonbooks.com/articles/flash-find-and-replace.html to find out more!*

So there's lookin' at filling with the Paint Bucket tool, adjusting strokes with the Ink Bottle, and copying fills and strokes with the Eyedropper. With that out of the way, lets delve deeper into the world of color. Cue psychedelic music.

First up, you'll learn about creating custom colors and gradients, then you'll see how you can share customized color palettes between your movies in Flash. Need a nap? Are you kidding?! Let's keep going!

FLASH'LL LETCHA CREATE YOUR OWN CUSTOM COLORS, AND STORE THEM IN THE COLOR PALETTE FOR FUTURE USE.

## Creatin' Your Own Custom Colors

As you've seen throughout this chapter, when you use color in Flash, you can choose colors from the Fill Color pop-up window. You saw this color pop-up when you drew shapes, and when you used the Paint Bucket and Ink Bottle tools. By default, the color pop-up window contains 216 colors, known as ***web-safe*** colors—a predefined set of colors that render consistently across all computer monitors. However in this section, you'll see how you can create your own custom colors and how to add them to the default color set. Check out the sidebar ***"A Closer Look at Flash's Color Pop-Up Window"*** for more info on the 216-color web-safe palette.

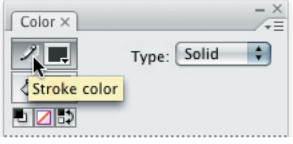
Creating your customized colors happens in the Color panel (Window > Color), where you can create your colors visually using a Color Picker window, or by entering specific color values using either the RGB or HSB color modes. Ready? Then let's create some custom colors!

*Feeling speedy? Try hitting Shift+F9 to open the Color panel. Hit Shift+F9 again to close it. Okay, hit Shift+F9 again, cuz you're gonna need it open for this section…*

Here's how to create your own colors:

1. Choose Window > Color to open the Color panel.

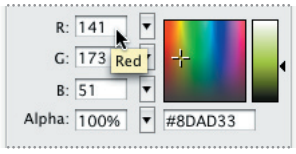
2. In the Color panel, select either the Stroke Color or Fill Color by clicking on their associated icons (the pencil for Stroke, or the bucket for Fill) to specify which one you'd like to adjust.



If you click on the Stroke Color or Fill Color swatch (the box filled with color) to the right of the icons, Flash will display it's color window, which isn't what you want. If you accidentally clicked on the swatch instead of the icon, just hit the Esc key on your keyboard to close the color window.

3. Mix a new color by doing one of the following:

- Type in new values in the R, G, and B fields in the Color panel; or click the down arrow beside each to use the pop-up slider to set a new value.




- Drag your cursor in the Color Picker window to set a new color, then use the Brightness slider at the right to set the amount of black or white in your new color.

- Type in a hexadecimal color value into the Hex field.

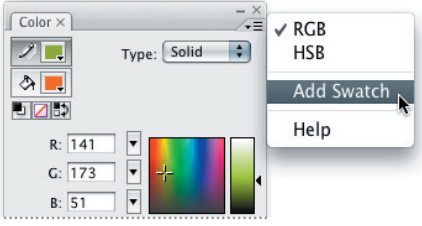
You could also paste in a hex value copied from Photoshop, Dreamweaver, or another program, or if you're really good, you could type in the color you want off the top of your head.

4. If you'd like to adjust your color's opacity (that is, it's transparency), enter a percentage value in the Alpha field.

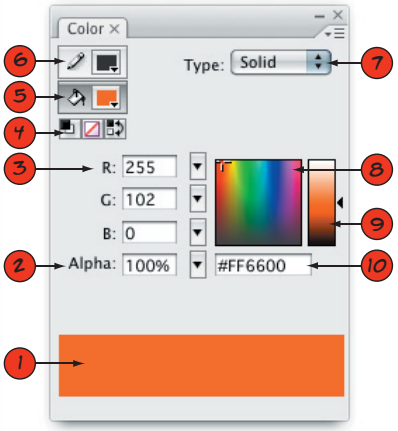
What the rest of the world calls opacity, or transparency, Flash calls Alpha. A lower Alpha setting means the color will be more translucent. A higher value makes the color more opaque.

Once your color is created, you'll want to add it to Flash's color window so that it'll be saved for future use.

5. To add your color to Flash's color window, open the Color panel's Option menu (found in the top-right corner of the panel); then choose Add Swatch.




## THE COLOR PANEL




**1)** Current Color **2)** Alpha (opacity) **3)** Red, Green, and Blue values and sliders **4)** Black And White, No Color, and Swap Colors **5)** Fill Color **6)** Stroke Color **7)** Fill Style **8)** Color Picker **9)** Brightness Slider **10)** Hexadecimal value

### NOTEWORTHY

If you have an object selected on the Stage while you create a new color in the Color Mixer panel, your custom color is automatically applied to your shape. If you don't want to apply your new colors right away, just make sure that no objects are selected before heading into the Color Mixer.

### FROM THE LAND OF GEEK

When you add new colors to Flash's color window, your colors are saved within the current movie only. In other words, your new colors won't be available in other Flash files. However, in a moment you'll see how you can import and export colors so that you can share them between your files.

*In the mood for HSB? From the Color panel menu, choose HSB to switch the panel over to HSB sliders.*

Your color is added to Flash's pop-up color window. Now, whenever you go to set a Fill or Stroke Color, your new color will be available.

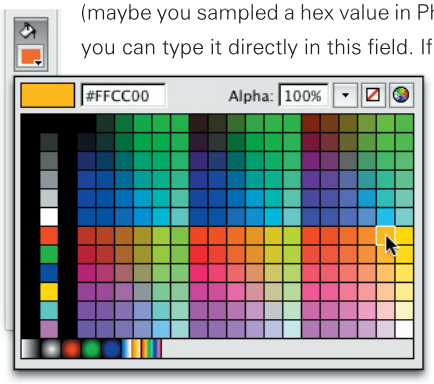
You can also begin using your new color right away. Open up Flash's color window from the Toolbox or Properties inspector, and alas, there's your new color added (down at the bottom…there you go). Now, creating custom colors is all fine and well, but how about custom gradients? Let's check 'er out!

## FLASH'S COLOR POP-UP WINDOW

Whenever you click on the Stroke Color or Fill Color swatches, either in the bottom of the Toolbox or in the Properties inspector, Flash displays the color pop-up window, which is comprised of the 216 color web-safe palette. You'll also find these colors in the Swatches panel, and in the Color panel. The web-safe palette isn't such a big deal in the 21st century, what with everyone having super-ass mainframe computers in their wristwatches, but back in the day we needed a way to create consistent color between monitors and operating systems.

And as you've seen throughout the last two chapters, when the window's open, picking a solid color or a gradient is easy—solids at the top, a row of gradients at the bottom. But here's something neat: you can move your cursor (which changes to an eyedropper) outside of the open color window, and sample color from anywhere inside the Flash interface. Sample from other shapes, imported photos—where ever you'd like!

Something else you might notice is the text field in the top-left corner of the pop-up window, which displays hexadecimal color values. In web design, the hexadecimal color system is used to define color. If you know the hex number of the color you want (maybe you sampled a hex value in Photoshop or Dreamweaver, for example), you can type it directly in this field. If you're up for it, find out more about the hexadecimal color system at `tenton-books.com/articles/understanding-hexadecimal.html`.




Over in the top-right of the pop-up window, you can set a percentage for Alpha, which applies transparency to your color, making it see-through. The next button to the right sets your color to none. This is useful when you want a shape with no fill or no stroke. Finally, the last button in the top-right opens your operating system's color picker window, where you can set a custom color. So there you are, there's a closer look at working with Flash's color window.

*If you ever have Flash's pop-up color window open and you want to close it without sampling a color, just hit the Esc key on your keyboard.*

## WHAT ON EARTH IS RGB ?

You see it all over the place, even in Flash—RGB! What the heck is it and how does it work? Well, it's actually really easy. RGB is a color space (that is, a way to describe color) that's used primarily in web design, on screen presentations, video games, and anything else that would be displayed on a monitor or television screen.

Wikipedia provides us with this technical description: "The RGB color model is an additive model in which red, green and blue are combined in various ways to reproduce other colors. The name of the model and the abbreviation "RGB" come from the three primary colors, Red, Green and Blue."

You could think of the RGB color space as the sister of print design's primary color space, CMYK. Getting into CMYK is a little off topic for Flash, but if you're up for it and wanna kill some time at work, check out `en.wikipedia.org/wiki/cmyk`.

## Makin' Custom Gradients

Back when we were discussing the Paint Bucket and Ink Bottle tools, you saw how you could set your fills and strokes to either solid colors or gradients. Using gradients is where color gets a little more interesting. A gradient, which if you'll recall is a transition from one color to another color, comes in two types: linear and radial. Linear gradients transition from one color to the next, usually from left to right or top to bottom. Radial gradients transition between colors in a circular fashion. Flash's color pop-up window provides both linear and radial gradients by default, and in this section, you'll see how to not only manipulate them, but how to create your own.

YOU CAN EASILY CREATE YOUR OWN CUSTOM GRADIENTS IN FLASH.

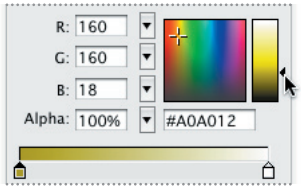
Follow these steps to create a gradient:

1. If it's not already on screen, open the Color panel (Window > Color).

2. From the Type menu, choose either Linear or Radial, depending on the type of gradient you'd like to create.

   The bottom portion of the Color Mixer panel changes to show a gradient ramp, displaying a gradient from white to black. Notice too that on the gradient ramp, color-stop arrows appear for each color. The arrow representing white (on the left) is currently selected. You can tell because the arrow on top of the color-stop box is filled with black.

3. Using the Color Picker window, choose a new color. The new color still appears as black or white, until you drag on the Brightness slider on the right.




**NOTEWORTHY**

Here's an even faster way to set a new color for the color-stops on the gradient ramp: Try clicking and holding momentarily on the color-stop arrow; then release your mouse button. Flash's color panel appears, where you can select a new color. Now how's that for freakin' fast?

Alternatively, you could enter a value into the RGB fields, use their sliders, or enter in a hexadecimal color value in the Hex field—just as you saw in the previous section.

4. On the other end of the gradient ramp, if you'd like to change the black to a new color, single click on the color-stop representing black; then use the techniques used in the previous step to change it's color.

   Remember, you can tell a gradient slider arrow is selected because the arrow changes to black when it's clicked.

   At this point, you have a two-color gradient. However, you might wish to add additional colors to your gradient. In fact, gradients in Flash can contain up to 15 colors.

**FROM THE LAND OF GEEK**

If you'd like your gradient to be compliant with the SVG (Scalable Vector Graphics) standard, check the Linear RGB checkbox in the Color Mixer panel. Honestly though, unless you're up on SVG, I wouldn't worry about it.

5. To add an additional color to your gradient, bring your cursor underneath the gradient ramp; then single-click where you'd like the new color to appear.

   A plus sign appears beside your cursor, indicating that you're about to add another color. When you click, Flash adds a new color-stop arrow.

6. Change the color for your new color-stop by using the techniques discussed earlier.

   You can also change the position of your color-stop (thus changing where the color appears in the gradient) by dragging it to the left and right on the gradient ramp. You can also change the position of the two arrows that you started with, which appear at the far left and far right of the gradient ramp, again just by dragging on them.

7. If you want to remove a color arrow, just drag it off the bottom of the gradient ramp.

8. To save your gradient for future use, choose Add Swatch from the Color panel's Option menu.

   Your new gradient is added to Flash's color window. It can be found in the bottom row with all the other gradients.

**NOTEWORTHY**

Didja know you can manipulate and transform gradient fills within your shapes? Give this a try: Select your gradient fill; then on the Toolbar, select the Gradient Transform tool. Now, try dragging on your gradient, or use the handles that appear to transform it. Later on in Chapter 5, you'll see how you can use this same tool to transform shapes that are filled with imported graphics!

Cool stuff, huh? Creatin' custom colors and gradients is lots of fun, but why keep the party contained to just one Flash movie? In the next section, you'll see how to share your colors between your movies.

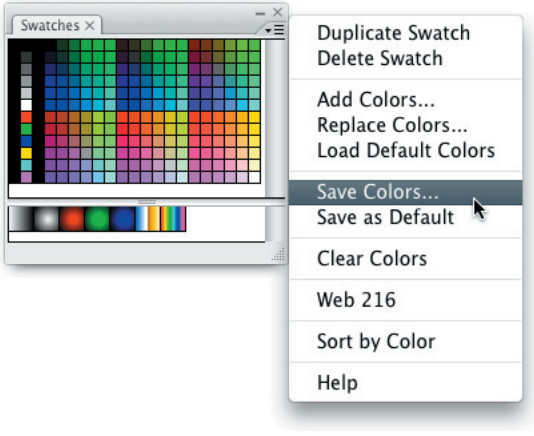
## Remember to Share! Using Color Palettes Between Flash Files

So you've filled shapes with color, created your own custom colors, and even defined your own gradients. We've laughed, we've cried; now it's time to wipe away the tears and move on.

As we discussed earlier, colors that you create in Flash are stored only in the current Flash file. A movie's color palette is displayed as swatches in Flash's color pop-up window. But at some point you'll want to begin sharing your colors between your Flash movies—or even with other Flash users, if you're in a giving kinda mood. To do that, you'll be using the Swatches panel. Choose Window > Swatches to get started.

Flash's Swatches panel displays the file's current palette of colors. In fact, it works the same as the color pop-up window that appears in the Toolbox or Properties inspector when you're setting a fill color or a stroke color. The only real difference with the Swatches panel is that you can use it to import and export color palettes, as well as perform a few other handy functions. Let's check it out.

First up, if you've created a few colors and gradients that you want to use in your other files, you might want to export your movie's color palette. To do this, open the Swatches panel's Option menu; then choose Save Colors. Flash will open an Export Swatch Color dialog box, where you can give your palette a name and save it for future use. You could also choose the next command in the Options menu, Save as Default, which replaces Flash's default color palette with your current color palette.




Next, you might want to import a color palette into your current Flash movie. To do this, choose Add Colors from the Swatches panel's Option menu. You'll be met with an Import Swatch Color dialog box, where you can navigate to and select an existing color palette. The color palette that you select will be added to the Flash file's current palette, although any colors

KEEP CONSISTENCY BETWEEN YOUR MOVIES BY SHARING YOUR COLOR PALETTE BETWEEN FLASH FILES.

*Hit Ctrl+F9 (Windows) or Command+F9 (Mac) to toggle the display of the Swatches panel on and off.*

**NOTEWORTHY**

Now that you know about the Swatches panel, know that you can actually set fills and strokes from three different places within Flash's interface: at the bottom of the Toolbox, on the Properties inspector, and in the Color Swatches panel—they're all the same.

*Using the Save Colors command in the Swatches panel's Option menu is also a great way to back up your color palettes along with all your other important data—in case there's a plague of locusts or your house gets struck by a meteor or something.*

**FROM THE LAND OF GEEK**

When you're importing and exporting your color palettes, you can save or add palettes using the CLR or ACT file format. This means that you can share your color palettes between Flash and other graphics programs, like Fireworks, ImageReady, and Photoshop. What's more, when you're importing color palettes into Flash, you can even choose a graphic with the GIF file extension—meaning that you can pull in colors used in an image into your Flash movie. How cool is that?!

that both palettes have in common will not be duplicated. Alternatively, if you want to import a color palette and replace the existing set of colors rather than add on to it, from the panel's Option menu choose Replace Colors. This does the same as Add Colors, except it removes the old color palette and replaces it with the new one. You can also choose Load Default Colors to replace the current color palette with Flash's set of default colors.

Here's somethin' else that's kind a cool: Are there color swatches in your palette that you no longer need? Just select them and choose Delete Swatch from the Swatches panel's Option menu. Or even faster, hold down Ctrl (Windows) or Command (Mac) and bring your cursor into the Swatches panel. When your cursor changes to a pair of scissors, you can single-click on a swatch to delete it. Spiffy!

So, you're a master at Flash's shape tools, you saw how to work with fills and strokes, and you're an expert at creating colors and gradients. You even know how to use the Swatches panel to share your colors between your Flash movies. Awesome stuff. So what else is there? Well, before this chapter's out, we gotta talk about a few techniques for more precisely working with shapes and objects on the stage. Specifically, Flash's guides, grid, and snapping. Let's get 'er done!

## KEEPIN' THE LAYOUT TIGHT: DRAWING PRECISELY IN FLASH

*How's your coffee lookin'? Getting low? Go ahead and grab a topper-upper, I'll wait for ya...*

Hey nobody's perfect (except your pompus, jerk-ass cousin), right? Well, every once in a while, we may need a little help when we're drawing shapes and setting up our movies. Thankfully, Flash offers a helping hand when it comes to this sort of thing. Namely, we can use rulers, guides, a grid, and snapping to help lay out objects on the Stage. Take a look see in the next few sections to find out how each of these works.

### Keep 'er Measured—Using the Rulers

**RULERS APPEAR ALONG THE TOP OF THE STAGE, AND DOWN THE LEFT SIDE, IN THE DEFAULT MEASUREMENT UNIT, PIXELS!**

*Although Flash allows you to choose between a variety of measurement units for the rulers, including inches and centimeters, it's recommended that you stick with pixels. Pixels are the standard unit of measurement in web design.*

You wanna keep things nice 'n lined up on the Stage right? Or maybe you want to be able to measure the distances between objects. That's where Flash's rulers come in handy. If you've worked with other software programs that use rulers, you should be right at home here.

To turn on the rulers in Flash, choose View > Rulers. You should see a horizontal ruler appear along the top of the Stage, and a vertical ruler appear down the left side. The default unit of measurement for the rulers is pixels, although you can choose Modify > Document to change the ruler's unit of measurement. In the Document Properties dialog box that appears, use the Ruler Units pull-down menu to specify a new unit of measurement.

Now what are rulers good for? More than just lookin' at. For example, with rulers turned on, as you're clicking and dragging to draw a shape, you'll see

markers appear on the ruler showing you where you started, and your cursor's current position. This helps you draw shapes in a much more precise way. You can also use 'em to help measure the distances between objects, as well. Want more? Keep reading then, cuz next you'll see how to work with Flash's guides, which are created using the rulers, too.

## Layin' It Out All Precise Like with Guides

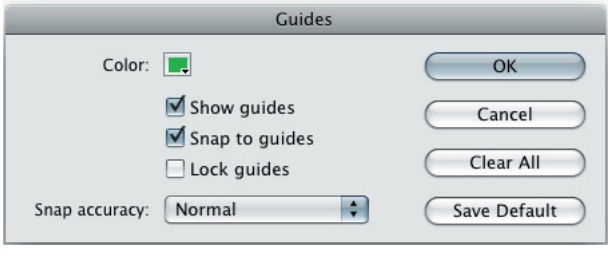
Are you coming into Flash from a print-design background? If so, then here's something familiar—guides! If you're not too sure what guides are, they're horizontal and vertical lines that you can set within your document to help you align and lay out your work. Nearly all graphics programs have guides, and they work exactly the same here in Flash. They're great for creating precise designs, and best of all, you'll be the only one who can see them—they won't appear in your finished movie.

GUIDES ARE HORIZONTAL AND VERTICAL LINES THAT YOU CAN SET WITHIN YOUR DOCUMENT TO HELP YOU ALIGN AND LAY OUT YOUR WORK.

To work with guides, you'll have to first make sure that your rulers are turned on (View > Rulers). With your rulers activated, you're ready to begin creating guides. To create a horizontal guide, bring your cursor into the horizontal ruler; then click and drag downward onto the Stage. When you let go of your mouse button, a green line appears. To create a vertical guide, click and drag from the vertical ruler onto the Stage. If you don't see your guides appearing on the Stage, make sure that guides are turned on by choosing View > Guides > Show Guides. This, by the way, is a toggle for turning the display of guides on and off as you work.

### PIMP MY GUIDES! CUSTOMIZING GUIDES IN FLASH

Looking to pimp out your guides? Maybe some new rims and a slammin' paint job? Nothing could be simpler. Just head for View > Guides > Edit Guides; then use the Guides dialog box that appears to set the appearance and behavior of your guides.




Use the Color setting to change the color of your guides (the default is green), and use Show Guides, Snap to Guides, and Lock Guides to display your guides, turn on snapping for your guides, and to lock the position of your guides—settings which we've discussed already. Then there's Snap Accuracy, which allows you to set a tolerance for snapping. Must Be Close snaps objects to guides only when the object is dragged close to the guide. Normal snaps object when they appear slightly farther away from guides. Finally, Can Be Distant snaps objects to guides from a farther distance. For most uses, Normal should be fine. One other thing: There's also a Clear All button on the right, which removes all the guides on the Stage in one shot. When you're happy with your settings click OK.

If you had guides on your screen already, they should change to reflect your pimpin'. Any new guides that you create will also reflect your settings as well.

**NOTEWORTHY**

When you begin working with symbols, you can create horizontal and vertical guides within your symbol objects, too. You'll learn all about symbols later on in Chapter 8.

You can create as many guides as your layout requires. You can always reposition guides that you've created by simply clicking and dragging them to a new location. To remove a guide from the Stage, click and drag it back into either the horizontal or vertical ruler. To remove all the guides on the Stage in one shot, choose View > Guides > Clear Guides (this only clears guides that are on the Stage. Any guides that you've used within symbols are retained).

*To ensure that you don't accidentally move a guide while you're working, you can lock your guides in place by choosing View > Guides > Lock Guides.*

With a series of guides on your Stage—which always appear on top of all your other objects, by the way—you can now align shapes and objects to them. In fact, you can even turn on snapping for your guides by choosing View > Snapping > Snap To Guides. When snapping is turned on, and you move an object toward a guide, the shape will jump to it, as if the guide were magnetic. This ensures that your layouts and alignments are bang on the money.

THE GRID HELPS YOU DRAW AND LAY OUT SHAPES MORE ACCURATELY.

## Gettin' Precise With Flash's Grid

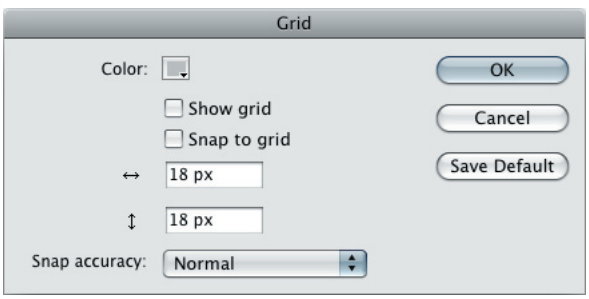
Many graphics programs also come equipped with a grid—and Flash is no different. Just like guides, the grid helps you draw and lay out shapes more accurately, and it won't appear in your final movie. The difference between guides and the grid though, is that the grid is actually like working on a piece of graph paper, where you'll be working within a set of intersecting horizontal and vertical lines.

Ready to see how this fella works? Then choose View > Grid > Show Grid (choose this option again to hide the grid). When the grid is visible, it'll appear behind any objects that are on the Stage. Now, turning on the grid doesn't do much good, it just shows it on the Stage. To actually make the grid useful, turn on grid snapping by choosing View > Snapping > Snap to Grid.

*Wanna toggle that grid on and off faster? Then hit Ctrl+" (Windows) or Cmd+" (Mac). Wanna go even faster? Try using this keyboard shortcut while being fired from a circus cannon. Don't forget your crash helmet.*

## CUSTOMIZING THA GRID

Wanna customize Flash's grid? You can do so just like you were able to customize guides. To edit the grid, choose View > Grid > Edit Grid. When the Grid dialog box appears, you can begin making your changes. Use the Color setting to change the color of the grid lines (grey is the default), and use Show Grid and Snap to Grid to turn on the display of the grid and to turn on grid snapping. Below those settings, you can specify your grid's horizontal and vertical spacing in pixels (18px is the default for both). Finally, at the bottom, you can set a snapping tolerance using the Snap Accuracy menu. The settings here are the same as those in the *"Pimp My Guides! Customizing Guides in Flash"* sidebar, although there's also Always Snap. Always Snap snaps shapes to a gridline, ensuring that your objects are always locked to the grid.




Everything looking good? Then click OK. Your grid now updates to reflect the changes that you'd specified.

With grid snapping turned on, shapes will now snap to the intersecting lines as you draw them or move them around. Now that's precise! Personally, it's a bit too much for me, so I don't use the grid, I just stick with guides. But who knows, you may love it.

So, you have guides and you have the grid. Next up, we gotta talk about working with snapping inside Flash.

## Gettin' Snippy with Snapping

So you've seen how working with guides and using the grid makes drawing and laying out your designs nice and precise. But there's something else that you can use to keep your work nice and tight—snapping.

FLASH OFFERS UP THREE TYPES OF SNAPPING: SNAP TO OBJECTS, SNAP TO PIXELS, AND SNAP ALIGN.

Just a moment ago, you saw how snapping affected guides and the grid. It made them magnetic. Well, in addition to snapping to guides and the grid, you can also use three other types of snapping: Snap To Objects, Snap To Pixels, and Snap Align. Let's take a look at each.

First up is Snap To Objects. This guy snaps shapes and other objects to one another along their edges—effectively making shapes magnetic to one another, snapping their edges together. To turn on Snap to Objects, choose View > Snap > Snap To Objects. Choose this again to turn Snap To Objects off.

*Another way to turn on snapping is by choosing the Selection tool and turning on the Snap to Objects modifier in the Options area of the Toolbox. It also appears as a modifier whenever a shape tool or the Line tool is selected.*

With Snap To Objects turned on, a tiny black circle appears when you drag on shapes using the Selection tool. Think of this little black circle as the magnet on the shape. For example, if you clicked and dragged from the top edge of a shape, the top edge of the shape would become "magnetized" horizontally, while the place that you began clicking and dragging from determines the vertical snapping point. Ideally, dragging from a shape's corner or center point will give you the best results, as this sets the snapping point to either the shape's corner or center.

**NOTEWORTHY**

When you begin working with animating objects along a motion path, Snap To Object comes in very handy. You'll see how Snap To Objects comes into play with motion paths later on in Chapter 8.

### GET SETTING SNAP TO OBJECTS TOLERANCE

Earlier, you saw how you can customize your guides and your grid, and adjust the snapping tolerance for each. Well, you can also adjust the snapping tolerance whenever you're using Flash's Snap To Objects tolerance as well. The tolerance settings for Snap To Objects are just the same as those you saw earlier too, so making settings here should be a piece of cake.

Here's how to set your Snap To Objects tolerance:

1. Choose either Edit > Preferences (Windows) or Flash > Preferences (Mac).

2. From the Category list on the left, click on Drawing.

## GET SETTING SNAP TO OBJECTS TOLERANCE (CONTINUED)

3. From the Connect Lines menu, choose a snapping tolerance.

   The choices are here are the same as those back in the sidebar "Pimp My Guides! Customizing Guides in Flash," except now they're being used to control the tolerance for Snap To Objects instead of guides.

4. When you're done, click OK.

Now, whenever Snap To Objects is turned on, your shapes will snap to one another using this setting. Sweet!

*If you're zoomed in on the Stage and you'd like to temporarily turn off Flash's pixel grid, press and hold the X key on your keyboard. If you'd like to temporarily turn off Snap To Pixels, press and hold the C key. For example, if you don't want an object to snap to the pixel grid when you move it, press and hold the C key as you click and drag the shape.*

Next up is Snap To Pixels. Earlier, you saw how the grid works. You can think of Snap To Pixels as an uber-grid. When this type of snapping is activated, shapes snap to Flash's pixel grid as they're drawn or moved around—they snap in increments of a single pixel. This means you can lay out your work very precisely, right down to the pixel.

To turn this on, choose View > Snapping > Snap To Pixels. As you begin moving shapes or drawing new ones, you'll notice that your shapes lock to an invisible pixel grid. If you don't see this happening, zooming in a little closer on the Stage. In fact, if you're zoomed in to 400% or closer, the pixel grid will appear on the Stage.

And last but not least, there's Snap Align, which is one of the more interesting ways of working with snapping in Flash. Snap Align helps you to align objects in relation to other objects on the Stage using a pre-set tolerance. This tolerance pre-set determines a boundary around shapes, as well as around the edge of the Stage. When a shape is moved against this tolerance area, temporary guidelines appear, indicating that your shape is

## IT'S TIME TO CUSTOMIZE SNAP ALIGN

Wanna have a little more control over how Flash's Snap Align behaves? Put away the riding crop and settle down. This sidebar will explain exactly how it works.

Here's how to customize Snap Align:

1. Choose View > Snapping > Edit Snapping.

   The Edit Snapping dialog box appears, where you can turn on and shut off the various types of snapping available in Flash. But to customize Snap Align, you'll need to expand the dialog box.

2. On the right, click the Advanced button.

   The dialog box expands to display the Snap Align Settings area.

3. Use the settings in the Snap Align Settings area to customize Snap Align. The settings are:

## IT'S TIME TO CUSTOMIZE SNAP ALIGN (CONTINUED)

**Stage Border:** This sets the Snap Align tolerance between objects and the edge of the Stage, similar to a page margin. When an object is moved towards the edge of the Stage, it will snap to the distance you specify.

**Object Spacing:** This sets the tolerance between objects on the Stage. Set horizontal and vertical values to specify the snapping distance between objects when they're moved close to one another. When an object is moved towards another object, Flash will display a visual guideline indicating that you've reached the

**Center Alignment:** With horizontal and vertical center alignment turned on, Flash will display visual guidelines whenever a shape is aligned with another shape's horizontal or vertical center.

4. When you're done, click OK.

That's all there is to customizing Flash's Snap Align.

snapping. Not following? This'll make a whole lot more sense when you actually try it, so let's take a closer look.

To begin, turn on Snap Align by choosing View > Snap > Snap Align. With snap align turned on, try moving shapes around on the Stage. As you move shapes around, notice that dotted lines appear whenever your shape lines up with the horizontal or vertical edge of another shape on the Stage. Dotted lines will also appear when your shape is brought towards the edge of the Stage itself. Neat huh?


Now wasn't that fun? Hope you enjoyed it. You saw how easy it was to draw rectangles, ovals, polygons and stars, and then we demystified Flash's two drawing models (dog-ear that page!). From there, it was all about color—Filling with the Paint Bucket tool, outlining with the Ink bottle tool, and creating custom colors and gradients—and you saw how to share colors between your movies. After that, you saw how to use Flash's rulers, guides, grid, and snapping—all of which come in handy. So how are you feeling with Flash? Are you getting your noodle wrapped around it? I hope so, cuz coming up in the next chapter, you'll see how to manage all these lovely shapes that you've drawn, including how to select, transform, and align shapes, plus a whole lot more. Get up, take a stretch, then let's keep right on rolling!