

Chapter 7

Heavy Symbolism

In This Chapter

- ▶ Exploring types of symbols
 - ▶ Making symbols
 - ▶ Creating instances
-

Flash offers a way to simplify your work, using symbols. A *symbol* can be any object or combination of objects, animation, or a Web button. When you create a symbol, the objects (or animation or Web button) become one object. Sounds like grouping, yes? (If you've already read Chapter 4, you know what we mean.) The difference is that Flash stores the definition of the symbol in the Library. From the Library, you can now effortlessly insert multiple copies of the symbol into your movie. Each copy is called an *instance*.

Besides making your life easier when you want to use a set of objects more than once, the use of symbols significantly reduces the size of your files. Instead of storing each instance that you use, Flash stores one definition for the symbol and refers to that definition each time you display an instance of the symbol. You can place symbols inside other symbols, which is called *nesting*. Used this way, symbols are the building blocks for complex graphics and animation. Motion-tweened animation requires symbols, groups, or text, so you often create symbols when preparing to animate. (Chapter 9 explains tweened animation.)

So, symbols are all-around good guys, and you should use them as much as possible.

Understanding Symbol Types

Flash offers four types of symbols: graphic, movie clip, button, and font. Each type is made up of one or more objects or animation, but each type has a different purpose. Understanding these types is important to understanding symbols and Flash animation in general.

Using graphic symbols

Graphic symbols are the simplest and most obvious type of symbol. When you create a Flash movie, you create objects on the Stage. Some objects may remain still, such as backgrounds. Other objects are animated — after all, what would Flash be without animation? Use graphic symbols for collections of static objects or for simple animation. Figure 7-1 shows a graphic symbol created from several curves and circles.

Figure 7-1:
A graphic symbol, created from several objects, has a single selection border.



You create graphic symbols to reduce the size of your file and to make it easier to add multiple copies of a graphic to your movie. Symbols are stored in the Library and are available to not only the movie in which you created them but also to any other movie. You don't have to re-create the wheel.

Flash ignores sounds and ActionScript inside graphic symbols. ActionScript code (which we explain in detail in Chapter 10) is the key to creating interactive movies. For that reason, don't use graphic symbols if you want to use ActionScript to directly control them — use movie clips instead.

Using movie clip symbols

A *movie clip* is like a movie within your movie that you can manipulate by using interactive controls (which you can read about in Chapter 10). Movie clips are crucial for complex animation and especially for interactive animation. A movie clip has its own Timeline independent of the movie's main Timeline. For example, you can go to a movie clip at any point in the movie, play it, and then return to where you left off on the Timeline. You can also attach movie clips to buttons. We explain how to create movie clips in this chapter; Chapter 8 discusses using movie clips with buttons. Chapter 9 covers using movie clips in animation, and Chapter 10 explains how to use and control movie clips by using interactive controls.



Flash comes with a library of *components*, which are special movie clips that allow you to add user-interface elements — such as radio buttons, check boxes, and scroll bars — to your movies. Choose Window⇨Components and drag one of your choices to the Stage. Then choose Window⇨Component Inspector to set the parameters of the component. For example, you can insert a list box and then add all the items (called *labels* on the Component Parameters panel) that you want on the list. For more information on components, see Chapter 12.

Using button symbols

Button symbols create *buttons* — those little graphics that you click on Web pages to take you to other pages on the site or the Internet. In Flash, you can use buttons for this type of navigation, but you can also use buttons to interact with your site. For example, you can let viewers decide whether they want to see a movie — when they click the button, the movie starts. You can also use advanced scripting to create buttons that control interactive games and other viewer activities. However you want to use buttons, button symbols are the way to start. You can add movie clips and interactive controls to buttons. Find out about buttons in Chapter 8.

Using font symbols

A *font symbol* exports a font for use in multiple Flash movies. This is great whenever you use the same font in more than one Flash movie on a Web site: Your audience needs to download the font information only once rather than every time for every single Flash movie. This makes your Flash movies smaller and the user's loading time faster. We show you how to use font symbols in Chapter 12.

Creating Symbols

For graphic symbols and button symbols, usually you create the objects that you need and then turn them into a symbol. The same is true of movie clips if they are static and you use ActionScript to control them. However, when you use a movie clip as a type of animation, you can use one of two approaches:

- ✓ Create an animation on the Stage and then convert it to a movie clip symbol
- ✓ Create the movie clip symbol, create the initial objects, and then create the animation

In the next few sections, we explain the various ways of creating symbols, for whichever purpose you want to use them.

Each type of symbol has its own icon that's used in the Library. The following table shows what type of symbol each icon represents:

<i>Symbol</i>	<i>What It Represents</i>
	Movie clip
	Button
	Graphic

Creating symbols from existing objects

To create a symbol from unanimated objects you've already created, follow these steps:

- 1. On the Stage, select the objects that you want to convert to a symbol.**
- 2. Choose **Modify** ⇨ **Convert to Symbol** or press **F8**.**

The Convert to Symbol dialog box opens, as shown in Figure 7-2.

Figure 7-2:
The Convert to Symbol dialog box.



- 3. In the Name text box, type a name for the symbol.**

A common convention is to name the symbol in a way that's unique and also indicates the symbol type. For example, `help_btn` could be the name for a button symbol that will become a Help button on a Web site.

- 4. In the Type list, select the type of symbol you want to create: graphic, button, or movie clip.**

For slightly different results when scaling a movie clip, you can enable 9-slice scaling. To do so, click the Advanced button in the Convert to Symbol dialog box. In the expanded dialog box, select the Enable Guides for 9-Slice Scaling check box. When you're finished, you can see special guides on the symbol in the Library. This feature is not available for graphic or button symbols. For information on how to use this feature, see the "Editing symbols" section, later in this chapter.



5. Click OK to create the symbol and close the dialog box.

The objects that you selected become one object, indicated by a single selection border around all the objects. Flash also stores the symbol in the Library. (Chapter 2 explains how to use the Library.)

Creating empty symbols

Rather than create a symbol from existing objects, you can create an empty symbol and then create the objects for the symbol. If you know in advance that you want to create a symbol, you can use this method.

To create an empty symbol, follow these steps:

1. With no objects selected, choose Insert⇨New Symbol.

The Create New Symbol dialog box opens.

2. In the Name text box, type a name for the symbol.

3. In the Type list, select the type of symbol you want to create — graphic, button, or movie clip — and then click OK.

Flash switches to symbol-editing mode, which we describe in the section “Editing symbols,” later in this chapter.

4. Create the objects or animation for the symbol in the same way you do in regular movie-editing mode.

5. Choose Edit⇨Edit Document to leave symbol-editing mode and return to your movie.

Your new symbol disappears! Don’t worry — Flash saved the symbol in the Library. To find out how to insert an instance of the symbol on the Stage, see the “Inserting instances” section.

Converting an animation to a movie clip symbol

You can create a movie clip symbol by converting regular animation to a movie clip. Use this method when you already have the animation created on the Timeline. To convert an animation on the Stage to a movie clip symbol, follow these steps:

1. On the layer listing, select all frames in all layers containing the animation by clicking the first layer and pressing Shift while you click the last layer in the group.

Alternatively, you can press Ctrl (Windows) or ⌘ (Mac) and click additional layers.

2. **On the Timeline, right-click (Windows) or Control+click (Mac) and choose Copy Frames to copy all the frames of the animation to the Clipboard.**

Alternatively, you can choose Edit⇨Timeline⇨Copy Frames.

3. **With no objects selected (click off the Stage to be sure that no objects are selected), choose Insert⇨New Symbol.**

The Create New Symbol dialog box opens.

4. **In the Name text box, type a name for the movie clip.**
5. **In the Type list, select Movie Clip as the type of symbol. Then click OK.**

Flash switches to symbol-editing mode so that you can edit the symbol.

6. **Click the first frame of the Timeline to set the start of the movie clip symbol.**
7. **Choose Edit⇨Timeline⇨Paste Frames to paste the animation into the Timeline and create the symbol.**
8. **To return to the main movie and Timeline, choose Edit⇨Edit Document.**
9. **To delete the animation from the main movie (now that you've saved it in a movie clip), select all layers as you did in Step 1 and choose Edit⇨Timeline⇨Remove Frames.**

You can delete the animation from the main movie because your Library now has a movie clip that contains that animation. When you choose the movie clip in the Library panel, you can click the small Play button to play the animation in the Library panel's window.

Creating a symbol by duplicating a symbol

One more way to create a graphic, button, or movie symbol is to duplicate an existing symbol. To duplicate a symbol, follow these steps:

1. **Open the Library (choose Window⇨Library).**
2. **Select the symbol that you want to duplicate.**
3. **Click the Options menu in the upper-right corner of the Library window and choose Duplicate.**

Flash opens the Duplicate Symbol dialog box.

4. In the Name text box, type a name for the duplicate. Select the type of symbol that you want to create if you want a different kind from the original.
5. Click OK to close the dialog box and create the duplicate symbol.

Modifying Symbols

Flash is a master of flexibility, and sometimes you need to make changes. Of course, you can change symbols after you create them. Here we explain the procedures you need to know.

Changing the properties of a symbol

You might need to change a symbol's properties. For example, you might create a graphic symbol and then realize that you need it to be a movie clip. No problem!

To change the properties of a symbol, follow these steps:

1. Choose **Window**⇨**Library** to open the Library.
2. **Right-click (Windows) or Control+click (Mac) the symbol's icon (not its name) and choose Properties.**

The Symbol Properties dialog box opens.

3. **If the symbol is a graphic, button, or movie clip, select the type of symbol that you want in the Type list and then click OK.**



Look on our companion Web site at www.dummies.com/go/flash8 for `ffd_reveal fla` — a good example of a short movie with lots of symbols. (The Flash movie is courtesy of Shane Mielke. You can see his other work at www.shanemielke.com.)

Editing symbols

An *instance* is a copy of a symbol that you insert into your movie. Part of the power of symbols lies in their control over instances. If you edit a symbol, Flash updates all instances of that symbol in the movie. You can change a symbol once and save yourself the time of creating the same change for every instance of that symbol. For that reason, it's worthwhile to make a symbol whenever you want to use a certain shape or group of shapes more than once.

You can edit a symbol in three modes:

- ✓ **Edit in symbol-editing mode:** Switches you to symbol-editing mode. You see only the symbol. Right-click a selected symbol and choose Edit.
- ✓ **Edit in place:** Lets you edit a symbol while still viewing other objects on the Stage. Other objects are dimmed while you edit the symbol. Double-click a selected symbol and choose Edit in Place.
- ✓ **Edit in a new window:** Opens a new window where you can edit your symbol. You see only the symbol. Right-click a selected symbol and choose Edit in New Window.

The value of editing in place is that you can see how your change works with the rest of the objects that you have on the Stage. For example, if you want to make your symbol bigger, you may need to make sure that it doesn't obscure some nearby text. However, if you have lots of stuff on the Stage, editing in symbol-editing mode or in a new window can help you focus more easily on the symbol itself.

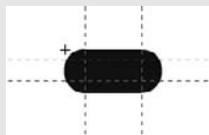
Editing a movie clip's 9-slice scaling guides

Movie clips can have 9-slice scaling enabled to control how they scale. Sometimes, when you scale a symbol, you don't really want it to scale equally throughout; instead, you may want the corners to remain unscaled. The 9-slice scaling feature, new for Flash CS3, allows you to scale everything but the corners, which remain unscaled.

We explain how to enable 9-slice scaling for movie clips in the "Creating symbols from existing objects" section. Here we explain how to edit the guides to get the results you want:

1. Right-click the movie clip and choose Edit.

You enter symbol-editing mode. You cannot edit the guides in any other mode. You see the symbol, with two vertical and two horizontal guides, as shown in the figure.



2. Drag the guides so that they border the corners of the symbol according to your needs.

The sections of the symbol outside each set of vertical and horizontal guides (the corners) will not resize when you scale the symbol.

3. Choose Edit → Edit to return to the main Stage.

For information about scaling objects, including symbols, see Chapter 4. When you scale the movie clip symbol, you'll see that although the entire symbol changes size, the corners remain unchanged.

To see the effect, try creating a shape with curved corners and duplicate it. Turn the first shape into a movie clip and enable 9-slice scaling. You can leave the default positioning of the guides or use the procedure we just described to move the guides. Then scale up both the movie clip and the duplicate. You'll see how the corners of the movie clip don't change when scaled, and you'll clearly see the difference between the two shapes.

To edit a symbol, follow these steps:

1. **Select any instance of the symbol on the Stage.**
2. **Right-click (Windows) or Control+click (Mac) the instance and choose Edit, Edit in Place, or Edit in New Window.**

(Choosing Edit puts you into symbol-editing mode.) Flash displays the symbol name above the Timeline. If you choose Edit in Place, other objects are dimmed, as shown in Figure 7-3.

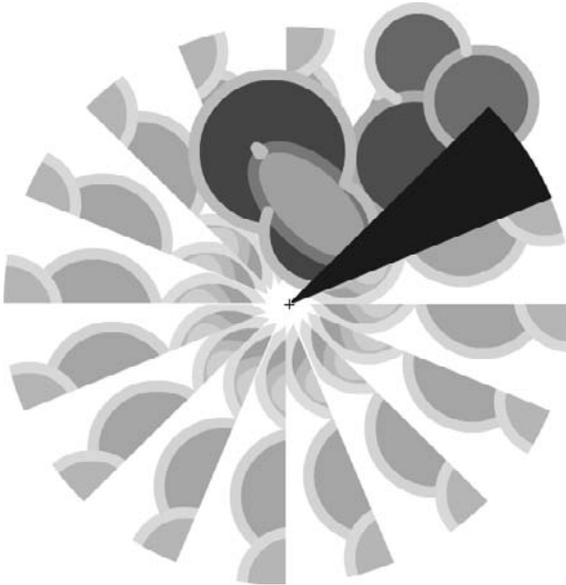


Figure 7-3: One symbol, which includes a wedge and some circles, is being edited.



This kaleidoscope animation is in the Ch07 folder on the companion Web site at www.dummies.com/go/flash8.

3. **Edit the symbol in any way you want.**
4. **After you finish editing, do the following:**
 - **If you chose Edit or Edit in Place, click the scene name to the left of the symbol name or choose Edit↔Edit Document.**
 - **If you chose Edit in New Window, click the Close button.**

You are now back in your main movie.

Using Symbols from Other Movies

After you create a symbol and store it in the Library, you can use that Library in any other movie. You can also open the Library from any other movie and use its symbols in your current movie.

If the other movie is open and its Library is open, you can access that movie's Library from within your current movie. Libraries of any open movie are available from any other open movie. Just choose that other movie in the drop-down list at the top of the Library palette. (Choose Window⇨Library to open the Library.)

To use a symbol from the Library of another movie that is closed, follow these steps:

1. Choose File⇨Import⇨Open External Library.

The Open as Library dialog box opens.

2. Select the movie file.

3. Click Open.

Flash displays the Library of the other movie in a new Library window.

The new Library might hide your current movie's Library. Just drag the new Library by its title bar so that it rests under the current Library until it docks there. In the new Library, many Options menu items and icons are disabled to prevent you from making changes in the other movie's file.



When you have more than one Library open, the background of the listing of open movies is white. The background of Libraries from other, unopened movies is gray, so you can quickly see which Library is which.

To use a symbol from the other Library, drag the symbol onto the Stage. When you do this, Flash places a copy of the symbol in the current movie's Library. (See Chapter 2 for more information about the Library.)

You can also update or replace any graphic, button, or movie clip symbol in your movie's Library with the content of a symbol from any other Library on your hard drive or network. Accessing a symbol in this way is called *author-time sharing* of symbols or assets. On the other hand, you can also share symbols or assets at *runtime*, after you have uploaded your movie. A *font symbol* is a special type of symbol that you use at runtime. We explain runtime shared libraries (which can include sounds) in Chapter 12.

When you share a symbol while you're creating a movie (during *authoring*), the symbol in your current movie keeps its original name, but the contents take

on the properties of the symbol you're sharing. If you have already replaced a symbol and the outside symbol changes (because it has been edited), use author-time sharing to update the symbol in your current drawing.

To update or replace a graphic, button, or movie clip symbol in your movie with the properties of another symbol, follow these steps:

1. Open the Library (choose Window⇨Library) and select the symbol you want to update or replace.

2. In the Library menu, choose Properties.

The Symbol Properties dialog box opens.

3. Click Advanced, if necessary, to see the expanded dialog box. In the Source section, click Browse.

The Locate Adobe Flash Document File dialog box opens.

4. Navigate to the movie (.fla) file that contains the symbol you want to use. Select it and click Open.

The Select Source dialog box opens. You see a list of the symbols in the movie that you selected.

5. Choose a symbol and click OK.

When you choose a symbol, you see a preview in the preview box, so you can easily find the symbol you want. When you click OK, you're back in the Symbol Properties dialog box.

6. In the Source section of the Symbol Properties dialog box, select the Always Update Before Publishing check box if you want to automatically update the symbol if the original has changed.

Enable this check box to create a link between the source symbol and the symbol in your current movie.

7. Click OK.

You now have a symbol in your Library that has its original name but looks like the symbol you chose from the other movie.



Using the Flash Library

Flash comes with three common libraries you can use. To access these libraries, choose Window⇨Common Libraries and then select the one you want. Flash includes buttons, learning interactions (interface items for creating online courses), and classes (building blocks for developing ActionScript applications). These libraries are also a good place to pick up ideas and see what you can create in Flash.

Using the Flash For Dummies Library

The Flash Libraries contain some good examples, but they miss many basic shapes and simple objects, some of which are hard to draw in Flash. We decided to fill in the gaps! We created a Library of art, geometric shapes, and fun shapes that you can use in your movies, with some new shapes designed especially for this edition — a 3-D helix, a cone, and a pyramid. You'll find 79 items in all! The *Flash For Dummies* Library is named `Flash CS3 For Dummies Library.fla`. You can find it at www.dummies.com/go/flashcs3.



To use this Library, go to www.dummies.com/go/flashcs3 and download `Flash For Dummies Library.fla`. In Windows, download it to the `Program Files\Adobe\Adobe Flash CS3\en\Configuration\External Libraries` folder on your hard drive. On the Mac, download it to the `Applications/Adobe Flash CS3/Configuration/Libraries` folder on your hard drive.

After that, you can always open this Library the same way you open other common Libraries: Choose `Window⇨Common Libraries⇨Flash CS3 For Dummies Library.fla`. We hope you enjoy it!

Working with Instances, for Instance

After you create a symbol, you can use it in many ways. You can insert it in your movie, inside other symbols, or even in other movies. Each copy of the symbol is called an *instance*. You can change the properties of an instance so that it differs from its parent symbol. For example, you can change the color of an instance — the original symbol remains unchanged.

Inserting instances

To insert an instance of a symbol, follow these steps:

1. Choose `Window⇨Library (Ctrl+L or F11 for Windows or ⌘+L or F11 for the Mac)` to open the Library, as shown in Figure 7-4.
2. In the layer list, choose the layer where you want the instance to be placed.

See Chapter 6 for the full story on layers.

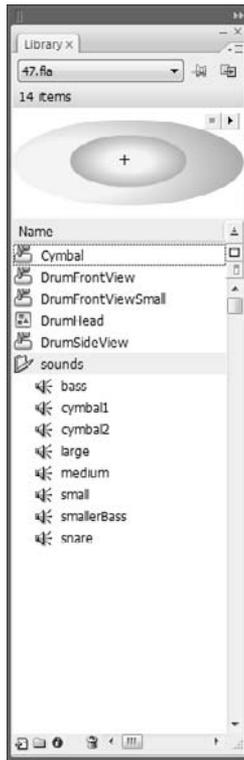


Figure 7-4:

Insert an instance of a symbol by dragging it from the Library.



3. Click a keyframe on the Timeline where you want the instance to be placed.

Flash places instances only in keyframes. If you don't select a keyframe, Flash puts the instance in the first keyframe to the left of the current frame. (See Chapter 9 for more about keyframes.)

4. Drag the symbol from the Library to the Stage.

You can drag from the list of items or directly from the preview at the top of the Library.

When you insert a graphic instance, you need to consider how it fits in your entire animation. For example, the instance might be the starting point for some animation, or it might be part of the background that remains static throughout the animation. Perhaps you want the instance to suddenly appear at some point in the animation. If the instance contains animation, you need to insert it at its proper starting point. (Chapter 9 explains how to copy

graphics across any number of frames to create a static background and covers the entire topic of animation in detail.)

A movie clip instance, however, takes up only one frame on the Timeline. It plays and loops automatically unless you create ActionScript code to control it. (Chapter 10 talks about ActionScript.)

Editing instances

A symbol's children don't have to be carbon copies of their parents, thank goodness. Instances of a symbol can differ from their parent symbol by color, type, and play mode. You can also rotate, scale, or skew an instance, leaving the parent symbol unchanged.

When you edit an instance, Flash remembers the changes. If you later edit the symbol, Flash doesn't forget the changes you made to the instance. Suppose that you create a red circle graphic symbol, and then you create several instances of it and change one instance to pink. Then you edit the (still red!) circle symbol to change it to an oval. All the instances are now ovals, but the one you turned pink is still pink. The instance's shape has been updated, but the pink color remains.

In the Property inspector (choose Window⇨Properties⇨Properties), you can change an instance's color (or tint), brightness, or transparency, giving you some useful control over the appearance of your instances. To change an instance's color, brightness, or transparency, follow these steps:

- 1. Select the instance.**
- 2. Choose Window⇨Properties⇨Properties to open the Property inspector.**
- 3. In the Color drop-down list, select one of these options:**
 - **None:** Adds no color effect
 - **Brightness:** Changes the lightness or darkness of the instance
 - **Tint:** Changes the color of the instance
 - **Alpha:** Changes the opacity/transparency of the instance
 - **Advanced:** Changes both the color and the alpha
- 4. Make the desired changes, as we explain in the next few sections.**

You see the changes that you make in the Property inspector immediately in your selected instance.

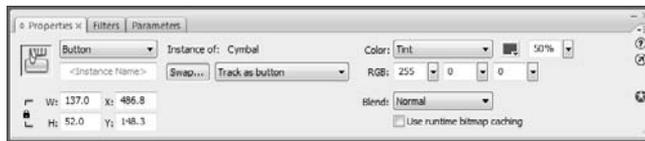
Changing brightness

When you choose Brightness in the Color drop-down list, a text box and a slider appear. Type a brightness percentage or drag the slider and see the result in the symbol instance. High brightness makes the image light, and 100-percent brightness makes the instance white. (It disappears if you have a white background!) Low brightness makes the image dark; 0-percent brightness turns the instance black.

Changing tint

When you choose Tint in the Color drop-down list, you can choose the color and then the amount of the color (the tint), by percentage, that you want to apply. Figure 7-5 shows the controls for this option. You can select a color by clicking the Tint Color button and choosing from the color swatches or by typing red, green, and blue values (if you know them).

Figure 7-5:
Changing
color and
tint used on
a symbol
instance.



Specify the percentage of the color you want to apply by typing a value in the percent text box or by clicking the drop-down arrow and dragging the slider to choose a percentage. When the percentage is set to 100%, the instance changes to the color you specified. If the percentage is set to 0%, Flash leaves the instance unchanged.

The Flash method of specifying a color gives you great flexibility and precision. You can choose a color and use the tint control to create a meld of the current color and your chosen color.



If you want to stick to the 216 Web-safe color palette, just select a color swatch from the ones displayed when you click the Tint Color button and then slide the tint control all the way up to 100%.

Changing transparency

Choose Alpha in the Color drop-down menu to change the transparency of an instance. (*Alpha* enables levels of transparency, and you can think of the term as somewhat synonymous to *opacity*.) Use the slider or type a value in the text box. A value of 0 means that your instance becomes completely transparent — in that case, when you return to the Stage, all you see is the selection border and the small plus sign that marks the symbol's registration point. When you

deselect the instance, you see absolutely nothing! (Chapter 4 explains more about a symbol's registration point, including how to move it. See the section on groups.)



Partial transparency lets your background show through. A partially transparent instance blends in with your background, creating a softer effect. However, transparency is a complex feature and can slow down the loading and playing of a movie.

Changing color and transparency at the same time

Select Advanced in the Color drop-down menu to change both the color and the transparency at the same time by using red, green, and blue values. The Settings button appears on the Property inspector. Click Settings to open the Advanced Effect dialog box. Figure 7-6 shows the controls, which are complex.

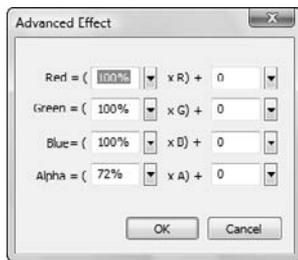


Figure 7-6:
The
Advanced
Effect
dialog box.

Use the controls on the left to specify the color or transparency as a specific percentage of the current value. Use the controls on the right to change the color or transparency to a specific, absolute amount. Flash calculates the new color value by multiplying the current value by the percentage you specified and then adding the value from the right side. As you can see, this method provides lots of control — but it might make you crazy first.



To simply change both the color and the transparency of an instance, choose Tint from the Color drop-down list to change the color and then just change the left Alpha setting in the Advanced Effect dialog box.

Adding filters and blends

You can apply special graphic effects called *filters* to text, buttons, and movie clips. Select the item and click the Filters tab of the Property inspector. Click the plus (+) icon and choose one (or more) of the following filters: Bevel, Drop Shadow, Glow, Blur, Gradient Blur, or Adjust Color. The Filters tab then displays further controls so that you can specify how you want the filter to look. You can get some cool effects this way. You can even add multiple filters to an object.



To apply filter settings from one object to another, you can copy and paste one or more filters.

To copy and paste filters, follow these steps:

1. **Select the object that has the filter (or filters) that you want.**
2. **On the Filters tab of the Property inspector, select all the filters that you want to copy.**
3. **Click the Copy Filters button. In the drop-down menu, choose Copy Selected or Copy All.**
4. **Select the object that you want to have the filters.**
5. **Click the Paste Filters button.**



You can also apply *blend modes* to movie clips. Blend modes determine how movie clips that overlap blend with each other at the point of overlap. To apply a blend, select a movie clip instance and adjust the color and transparency as we explain in the previous sections. Then choose a blend mode in the Blend drop-down list in the Property inspector. The names of the blend modes are not self-explanatory, so you need to try them out to see their effect.

Changing an instance's type

The instance type — graphic, movie clip, or button — comes from the symbol type, but you might want to change it. For example, if you created some animation and saved it as a graphic symbol, you might want to use it as a movie clip. Rather than change the symbol type, you can change only the type of the instance that you have inserted.

To change the instance type, follow these steps:

1. **Select the instance.**
2. **Choose Window⇨Properties⇨Properties to open the Property inspector.**
3. **In the Instance Behavior drop-down list, select one of the following types:**
 - **Graphic:** If the graphic contains animation, select Graphic in the Behavior drop-down list and then determine how the animation will run in the Options for Graphics drop-down list on the Property inspector. You have three choices:
 - Loop* plays the animation contained in the instance over and over during the frames occupied by the instance.
 - Play Once* plays the animation one time from the frame you specify.

Single Frame displays any one frame of the animation. In other words, the animation doesn't play; you specify which frame the movie displays.

- **Button:** Select the Button option to determine how the button is tracked in the Tracking Options section. In the Options for Buttons drop-down list, select Track as Button when you're creating single buttons. Select Track as Menu if you're creating pop-up menus.
- **Movie Clip:** Select the Movie Clip option and specify an Instance name in the Name box. You use this name with certain ActionScript controls so that you can refer to and control the instance. (For more information about ActionScript, see Chapter 10.)



If you select a movie clip or button instance, you can select the Use Runtime Bitmap Caching check box in the Property inspector. Runtime bitmap caching optimizes playback of a Flash movie in a browser. Use bitmap caching only when you have a complex background whose content remains the same. By storing the background as a bitmap, the Flash player can play the animation faster and more smoothly because it doesn't have to redraw the image throughout the movie.

Replacing an instance

Suppose that you create a complex animation with bouncing bunnies all over the Stage. Suddenly your boss decides that some of the bouncing bunnies should be bouncing squirrels instead. Meanwhile, you had already edited all the bunnies to make them different sizes and colors. You need a way to replace some of the bunnies with squirrels without losing their sizes and colors.

To replace an instance, follow these steps:

- 1. Create the squirrel symbol (or whichever new symbol you need).**

Flash stores the new symbol in the Library.

- 2. Select an instance of the bunny — that is, your original instance — on the Stage.**

- 3. Choose Window ⇨ Properties ⇨ Properties to open the Property inspector.**

- 4. Click the Swap button to open the Swap Symbol dialog box.**

- 5. In the dialog box, select the squirrel or any other symbol.**

- 6. Click OK to swap the symbols and close the Swap Symbol dialog box.**

Flash retains your color effects and size changes but changes the symbol.

Unfortunately, you must repeat this process for all the bunnies you want to change on the Stage, but it's better than reinserting all your instances and re-creating the instance changes.

If your boss actually wants you to change all the bunnies to squirrels, your job is much simpler. Just edit the bunny symbol (as we describe in the “Editing symbols” section, earlier in this chapter) to replace the bunny image with a squirrel. Then all the instances of that symbol instantly change to squirrels yet retain the color effects and size changes that you gave them while they were still bunnies.

Duplicate a symbol when you want to use one symbol as a springboard for creating a new symbol. Follow the instructions in the “Creating Symbols” section, earlier in this chapter. Make any changes that you want to the new symbol and place instances on the Stage.

Breaking apart an instance

You can break apart an instance into its component objects. The original symbol remains in the movie's Library. You might want to use the instance as a starting point for creating a completely new symbol, or you might want to animate the components of the symbol so that they move separately. Other instances remain unchanged.

To break apart an instance, select it and choose **Modify** ⇨ **Break Apart**. If an instance contains symbols or grouped objects within it, you can use the **Break Apart** command again to break apart those internal objects as well.