You can add quick and easy interaction to your Flash movies using buttons. Buttons allow users to activate actions for controlling the movie. This chapter shows you how to add your own interactive buttons and make them stand out with animation effects.

Introducing Flash Buttons ..................232
Create a Button Symbol ..................234
Create Shape-Changing Buttons ......238
Add Animation to a Button ..........242
Assign Button Actions .....................246
INTRODUCING FLASH BUTTONS

A popular way to enable users to interact with your Flash movies is through the use of rollover buttons. You can create a simple button that changes in appearance when the user rolls the mouse pointer over it, and changes appearance again when the user clicks it. Buttons are commonly employed on Web pages. You can create buttons in Flash that are static or animated.

Buttons Are Symbols

Buttons are a type of symbol to which Flash assigns behaviors. The behaviors are based on what happens when the mouse pointer interacts with the button. You can assign Flash actions to a button that trigger an action. You can turn any symbol you create in Flash into a button symbol or you can create a new button from scratch.

Button Frames

When you create a button in Flash, it comes with its own Timeline and four distinct frames: Up, Over, Down, and Hit. The four frames make up a mini-movie clip of the button’s behavior. A button’s timeline does not actually play like other Flash timelines, but rather jumps to the appropriate frame directed by the user’s mouse action.
You use the Up frame to display what the inactive button looks like. This is the frame the user sees when the mouse pointer does not hover over the button. By default, the Up frame has an added keyframe.

The Over frame displays what the button looks like when the mouse pointer moves, or “rolls” over the button. For example, you can make the button turn bright red or emit a sound when the user pauses the mouse pointer over it, thereby alerting the user that the button is now active.

The Down frame displays what the button looks like when a user clicks the button. You can use the Down frame to make a button change color or appearance to indicate the user has clicked the button.

The Hit frame defines the button area or boundary as a whole. This frame is often the same size and shape as the image in the Over and Down frames. The Hit frame differs from the other button frames in that the user never actually sees it.
CREATE A BUTTON SYMBOL

You can create button symbols to add interactivity to your Flash movies. Buttons allow users to interact with movies by clicking to start or stop an action. You can create new buttons or turn any symbol into a button.

When you create a button, it includes a Timeline with four frames: Up, Over, Down, and Hit. You must assign an image or action to each of the four button states. You can make the image the same in each frame, or you can vary it to create the illusion of movement.

CREATE A BUTTON SYMBOL

1. Click Insert.
2. Click New Symbol.
3. Type a name for the new button.
4. Click the Button behavior type ( changes to ).
5. Click OK.

You can use a button from another movie by clicking File, Import, Open External Library, and by double-clicking the file from the Open As Library dialog box.

The Create New Symbol dialog box opens.
How do I display and use Flash’s premade buttons?

1. Click Window.
2. Click Other Panels.
3. Click Common Libraries.
4. Click Buttons.
5. In the Library, double-click a folder name to display a list of button types.
6. You can preview a button by clicking its name.
7. To use a button drag it off the Library panel onto the Stage.

CREATE THE UP STATE
- The button’s Timeline opens in symbol-edit mode with four frames allowing you to create each frame’s button state.
- By default, Flash selects the Up frame and inserts a keyframe.

CREATE THE OVER STATE
- Create or place the object you want to use as a button on the Stage.
- Flash insert a keyframe into the frame.

Note: See Chapter 2 to learn more about using the Flash drawing tools. See Chapter 4 to learn how to import graphics.

Note: See Chapter 8 to learn more about frames.
CREATE A BUTTON SYMBOL

When deciding what you want your button to look like, consider your audience. Are they technologically savvy enough to recognize the image you use as a button onscreen, or do you need to keep the button simple and easy to understand? Although it is sometimes tempting to use detailed drawings as buttons, simple geometric shapes are always reliable for a general audience.

CREATE A BUTTON SYMBOL (CONTINUED)

- Flash duplicates the object from the Up keyframe.
- You can make changes to the object.
- This example adds a text box to describe the button.
  Note: See Chapter 3 to learn more about editing objects and Chapter 5 to learn about adding text.

CREATE THE DOWN STATE

- Click the Down frame.
- Press F5.
- Flash duplicates the object from the Over keyframe.
- You can edit the object, if needed, such as adding a sound to the frame, or short animation.
  Note: See Chapter 8 to learn how to create animation in Flash. See Chapter 12 to learn how to add sound clips to frames.
CREATE THE HIT STATE

1. Click the Hit frame.

PLACE THE BUTTON ON THE STAGE

10. Click and drag the button from the Library to the Stage.
11. Click the Scene name to return to movie-edit mode.
12. Open the Library by pressing F11.

TEACH YOURSELF

What edit mode am I in?
Flash switches you from movie-edit mode to symbol-edit mode when you create a button. You can always tell when you are in symbol-edit mode if you see the name of the symbol to the right of the scene name at the top of the Stage. To exit symbol-edit mode, click the scene name. You can also exit by pressing Ctrl + E (⌘ + E).

How do I preview a button?
In symbol-edit mode, click the button’s Up frame, and then press Enter (Return). Watch the Stage as Flash plays through the four button frames. Any changes you make to frames appear during playback.

You can preview the button in movie-edit mode by pressing Ctrl + Alt + B (⌘ + Alt + B) and moving the mouse pointer over the button and clicking it to see the rollover capabilities.

TEACH YOURSELF

What edit mode am I in?
In symbol-edit mode, click the button’s Up frame, and then press Enter (Return). Watch the Stage as Flash plays through the four button frames. Any changes you make to frames appear during playback.

You can preview the button in movie-edit mode by pressing Ctrl + Alt + B (⌘ + Alt + B) and moving the mouse pointer over the button and clicking it to see the rollover capabilities.
CREATE SHAPE-CHANGING BUTTONS

You can create shape-changing buttons in your Flash movies for added graphical impact. Buttons are a great way to add interactivity to your Flash movies, and shape-changing buttons can make an ordinary button much more dynamic.

Creating a shape-changing button requires four different shapes. The Up, Over, and Down frames can each have a different shape, but the Hit frame needs a shape that encompasses all three of the other shapes. Although a user does not view the Hit frame, it defines a button's size.

1. Start a new button symbol.
   
   Note: See the section “Create a Button Symbol” to create a new symbol.

2. Click the Over frame.

   Flash switches to symbol-edit mode, and the button's name appears at the top of the Stage.

   Flash selects the Up frame by default when you switch to symbol-edit mode.
Can I use layers in my button?
Yes. The button’s timeline works just like the main Timeline in movie-edit mode. You can add layers to organize various objects. If your button includes a text block, you may want to place it on another layer, or if your button uses a sound, place the clip on a separate layer. See Chapter 6 to learn about layers.

How do I toggle between symbol-edit and movie-edit mode?
You can quickly toggle back and forth between editing modes using a keyboard shortcut. Press Ctrl + E (⌘ + E).

CREATE THE UP STATE

3 Click Insert.
4 Click Timeline.
5 Click Blank Keyframe.
You can also press F7 to insert a blank keyframe.
Flash inserts a blank keyframe.
6 Repeat steps 3 and 5 to add blank keyframes to the Down and Hit frames.
7 Click the Up frame to select it.

8 Create a new object or place an existing object on the Stage.

CONTINUED
CREATE SHAPE-CHANGING BUTTONS

If a button’s image stays the same for all four frames in the button’s timeline, users cannot distinguish between its active and inactive states. Changing the button’s image for each state gives users some idea of the button’s status. They can see a difference when the mouse pointer hovers over a live button or when they click the button.

CREATE THE OVER STATE

9 Click the Over frame to select it.

10 Create a new object or place an existing object on the Stage to use as the active button state.

The object must differ from the object placed in the Up frame.

CREATE THE DOWN STATE

11 Click the Down frame to select it.

12 Create another new object or place an existing object on the Stage.

Make this object differ from the other two objects used in the previous frames.

CREATE SHAPE-CHANGING BUTTONS (CONTINUED)
Why do I need to draw a shape in the Hit frame?

Although the Hit frame is invisible to the user, it defines the active area of the button. You must make the object you draw big enough to encompass the largest object in the other button frames. If you do not, a user may click an area of the button that does not activate the button. If you have trouble guessing how large of an area to define, click the Onion Skin button ( ) to see outlines of the shapes on all the other frames. Click ( ) again to turn the feature off. For more information on the onion skinning feature, see Chapter 8.

How do I make changes to a button?

Double-click the button symbol to return to symbol-edit mode and make changes to the objects in each button timeline frame. For example, you may decide to use a different shape in your shape-changing button. After modifying your button, remember to check the Hit frame to make sure the defining shape size encompasses any new shapes in the other frames.

CREATE THE HIT STATE

13 Click the Hit frame.
14 Draw a geometric shape large enough to encompass the largest object size used in your button frames.

PREVIEW THE BUTTON

15 Click the Up frame to select it.
16 Press Enter (Return).

On the Stage, Flash plays through the four button frames and you can see the changing button states.

Note: If you do not define the Hit frame area properly, the user cannot interact with the button. Users cannot see the Hit frame’s contents, but it is essential to the button’s operation.
ADD ANIMATION TO A BUTTON

You can create animation effects for buttons, such as making a button seem to glow when the mouse pointer hovers over it. Spinning, jumping, and flashing buttons are all good examples of animation effects you can apply to help draw the user’s attention to interactive buttons.

You can animate buttons by adding movie clips to your button frames. You must first create or import a movie clip and then assign it to a button state. Movie clips utilize their own timelines and play at their own pace. The button remains animated as long as the clip plays.

1. Double-click the button to which you want to add an animation.
2. Click the frame to which you want to add an animation, such as the Up, Over, or Down frame.

Note: Because the user cannot see the Hit frame it is not useful to animate this frame.

Flash switches you to symbol-edit mode.

The button’s name appears above the Stage.

Note: See the section “Create a Button Symbol” to learn how to create a button.

You can create animation effects for buttons, such as making a button seem to glow when the mouse pointer hovers over it. Spinning, jumping, and flashing buttons are all good examples of animation effects you can apply to help draw the user’s attention to interactive buttons.
Should I add my movie clip to another layer in my button timeline?

You can utilize as many layers and layer folders as you need with a button to keep the various elements organized, including movie clips you add to the button. To learn more about timeline layers, see Chapter 6.

Is there a limit to the length of a button animation?

No. However, remember that the purpose of your button is to interact with the user. When you add a long animation sequence to a button state, you keep the user waiting to complete the action. It is a good idea to keep animation sequences short when applying them to buttons.

3 Press Ctrl + L (X + L).
   ■ The Library panel opens.

4 Click the movie clip that you want to insert.
   Note: See Chapters 8 and 9 to learn how to create animations and movie clips in Flash.

5 Drag the movie clip from the Library and place it on the Stage where the button appears.
ADD ANIMATION TO A BUTTON

You can add an animation to any button state. For example, you may want the user to see a spinning animation when the button is inactive, or you may want the object to spin only when the user rolls over the button with the mouse. The only frame you do not want to animate is the Hit frame because its contents are not visible to the user.

ADD ANIMATION TO A BUTTON (CONTINUED)

- Flash inserts an instance of the clip on the Stage.
- You can press F11 to quickly toggle the Library panel open and closed.

TEST THE MOVIE CLIP

6. Click Control.
7. Click Test Movie.

- To test the button states within the button timeline, press Enter (Return).
Can I add sounds to button frames?

Yes. You can add sound clips the same way you add movie clips. Try adding a sound from Flash's Sounds Library. See Chapter 12 to learn more about sounds.

1. Click a frame.
2. Click Window.
3. Click Other Panels.
5. Click Sounds.
6. From the Sounds Library, click and drag a sound onto the Stage.

A sound wave appears in the frame.

The Flash Player window opens.

Move over the button to test the animation (changes to 💥).

The Flash Player window plays the animation.

Click ✗ to close the test window.

The Flash Player window closes.
ADD AN ACTION TO A BUTTON

1. Click the button symbol to which you want to add an action.

Note: See the section “Create a Button Symbol” to learn how to create a button.

2. Click Window.

3. Click Development Panels.

4. Click Actions.

   The Actions-Button panel opens.

ASSIGN BUTTON ACTIONS

You can assign all kinds of actions to buttons you create. Buttons already utilize built-in actions, such as moving immediately to the Down frame when a user clicks the button. You can add other Flash actions, such as a play action that starts a movie clip playing when the user clicks the button.

In the case of buttons, you can assign frame actions that determine how the user interacts with the button. You add frame actions in movie-edit mode, not symbol-edit mode, and you add them to the frame containing the button.
Creating Interactive Buttons 11

What is an event handler?
An event handler, such as the OnMouse Event, manages the action. You can recognize the OnMouse Event in the Object Actions dialog box by the words on, such as on release. The words following the word on set the parameters for the event. You can add your own On Mouse Event handlers in the Actions panel. The script for the on release event, for example, appears as on (release) {}.

I cannot select my button on the Flash Stage. Why?
If Flash activates the button when you move your cursor over the button, you have the Enable Simple Buttons feature turned on. Press Ctrl + Alt + B (⌘ + Alt + B) to disable the feature and then click the button to select it.

TEACH YOURSELF
I cannot select my button on the Flash Stage. Why?
If Flash activates the button when you move your cursor over the button, you have the Enable Simple Buttons feature turned on. Press Ctrl + Alt + B (⌘ + Alt + B) to disable the feature and then click the button to select it.

TEACH YOURSELF

5 Type on (release) {} in the Actions list box or script pane.
6 Press Enter (Return) to start a new script line.
7 Click an action category.
8 Click an action subcategory.
9 Click and drag the action from the list and drop it in the Actions list box.

You can also double-click the action name to immediately place it in the Actions list box.

Note: See Chapter 10 to learn how to work with Flash actions.

CONTINUED
ASSIGN BUTTON ACTIONS

Actions are simplified programming scripts that instruct Flash how to perform a certain task, such as activating a Web page link or stopping a sound clip. Using a basic programming language, actions include command strings to spell out exactly what action Flash must perform.

In addition to the action you assign, you must also assign a special event handler, called the On Mouse Event action, to the button. The On Mouse Event action acts as a manager to make sure whatever action you assign works properly with the button actions that are already built-in for the symbol type.

ASSIGN BUTTON ACTIONS (CONTINUED)

- Flash adds the necessary action script to the Actions list.
- Define any additional parameters required by the action you assigned.
- In this example, a frame number is required.
- Press Enter (Return) to start a new line.
- Type }.
- Click the panel’s title bar.
- Flash minimizes the Actions panel.
- You can also click the panel’s Options menu button (□) and click Close Panel to close the panel.
Can I add multiple actions to a button?
Yes. You can use the Actions-Button panel to add more actions to a button, either before or after an existing action. For example, you can add multiple actions to occur within one set of On/End actions, and Flash triggers all of the actions by a single mouse event. Be sure to add actions before the last line of the script, }, or your actions may not work properly.

How do I edit an action?
You can perform edits to your button actions in the Actions-Button panel. Click the line you want to edit in the Actions list. Depending on the action, different parameters are listed. To remove an action, select the line you want to delete and press [Del]. To add an action, click [Ctrl] and then select another action.