How to create a button symbol

Button symbols

Buttons give visitors a way to control parts of a movie. You can use button symbols to create interactive buttons that respond to mouse clicks, rollovers, or other visitor interaction. Button symbols are four-frame interactive movie clips. The first three frames display the button's three possible states: Up, Over, and Down. The fourth frame, Hit, defines the active area of the button. The timeline for a button doesn't play like other movies; it reacts to pointer movement and actions by jumping to and displaying the appropriate frame.

You can create the image that represents your buttons in several ways. For example, you can use an existing graphic as the button, or you can create a shape by using the drawing tools.

Create a button

You will create a new button symbol that contains two layers. One layer will contain a shape representing the background of the button. The second layer will include a text label for the button. You will change the background and text label in the Over and Down states of the button to create the rollover effect.

To create a button:

1. Start Flash and open a new blank document (ActionScript 3.0).

2. Select Insert > New Symbol.

   The Create New Symbol dialog box appears (**Figure 1**).

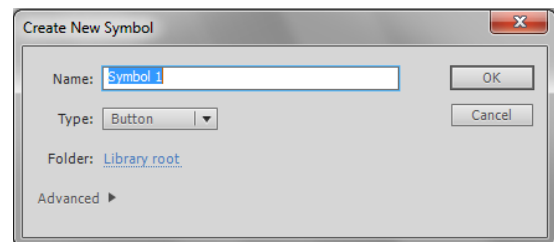3. Select Button for Type, name the button, and click OK.

   You are now in symbol-editing mode and viewing a separate timeline for the button symbol. The Up frame contains a keyframe (**Figure 2**).

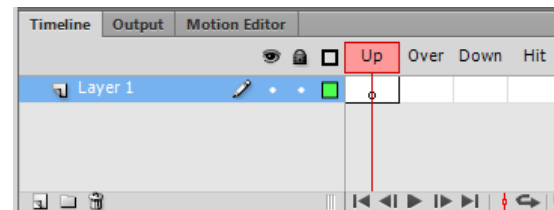   Each frame on the timeline of a button symbol has a specific function:

   • *Up state*: Represents the button's appearance whenever the pointer is not over the button.

   • *Over state*: Represents the button's appearance when the pointer is over it.

   • *Down state*: Represents the button's appearance as it is clicked.

   • *Hit state*: Defines the area that will respond to a mouse click. This area will be invisible in the published movie.

4. Make sure the Up frame is selected.

5. Use the drawing tools to create a shape for your button. Use the Properties panel to set the fill and stroke colors for the Up state of the button.

6. Select the Over state and select Insert > Timeline > Keyframe to add a keyframe.

   Adding this keyframe copies the button graphic from the Up frame to the Over frame.

Figure 1 Create New Symbol dialog box

Figure 2 Button frames: Up, Over, Down, Hit

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7. Select the Over keyframe and use the Selection tool to select the button.

8. Change the fill or stroke color of the button shape.

    When visitors roll over the button, the button will appear as you see it in the Over frame.

9. Insert keyframes in the Down and Hit frames of the layer.

    This copies the button graphic from the Over frame to the Down and Hit frames.

10. Insert a new layer and name it Text.

11. Select the Up frame of the Text layer.

    This frame already contains a keyframe.

12. Use the Text tool to type text on the button shape.

13. Use the Properties panel to adjust the font, size, and color of the text so it fits nicely on your button shape.

14. Use the Selection tool or the Up, Down, Left, and Right Arrow keys to position the text on the button shape.

15. Insert a keyframe in the Over frame of the Text layer.

16. Select the text and use the Properties panel to change some feature of the text in the Over frame, such as color.

17. Insert a keyframe in the Down frame. If you want the text to change appearance when the button is clicked, edit the appearance of the text in the Down frame.

    The timeline should now appear as it does in the example (**Figure 3**).

    Now you can insert an instance (copy) of the button symbol into the main timeline of your movie.

18. Click Scene 1 (**Figure 4**) to exit symbol-editing mode and return to the main timeline.

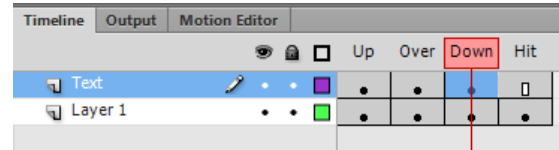19. Select Window > Library to display the Library panel.

    The new button symbol appears in the Library panel (**Figure 5**).

    Note: You must select the symbol in the library to see the symbol in the preview pane.
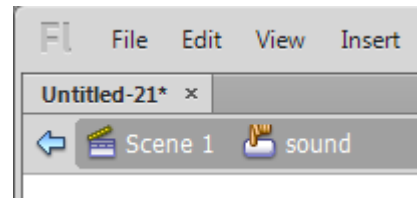
20. Drag the button symbol from the Library panel onto the Stage.

21. Select Control > Test Movie > In Flash Professional to test the movie.

    When you roll over the button with the pointer, you see the changes you defined in the Over frames for the button. If you edited the Down state of the button, this will be visible when you click the button.
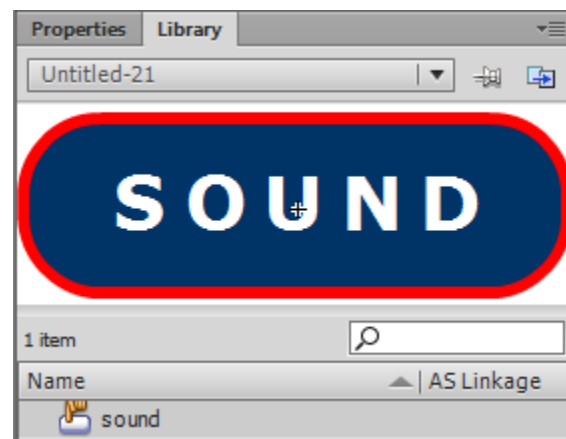
22. Close the preview window.

Figure 3 Button timeline

Figure 4 Symbol-editing mode

Figure 5 Library panel, with the button selected

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## Adding sound to a button

You can also add sounds to a button so visitors hear a sound when they interact with the button.

To add sound to a button:

1. Continue from where you left off in the preceding activity.

2. Use the Selection tool to double-click the button.

    You enter symbol-editing mode for the button.

3. Insert a new layer and name it Sound.

4. Select File > Import > Import To Library to import a short sound into the library.

    You can acquire royalty-free sounds from sites such as www.flashkit.com.

5. On the Sound layer, add a keyframe to correspond with the button state to which you want to add a sound.

    For example, to play a sound when visitors roll over the button, add the keyframe to the Over state.

6. Click the new keyframe.

7. In the Sound section of the Properties panel, select a sound file in the Name menu (**Figure 6**).

    The sound waveform appears in the Sound layer in the Timeline panel (**Figure 7**).

8. Select Event in the Sync menu (**Figure 6**).

    The sound will play when visitors interact with the button.

9. Select Control > Test Movie > In Flash Professional to test the movie.

    When you interact with the button, you hear the sound.

10. Close the preview window.

Sync menu   Name menu
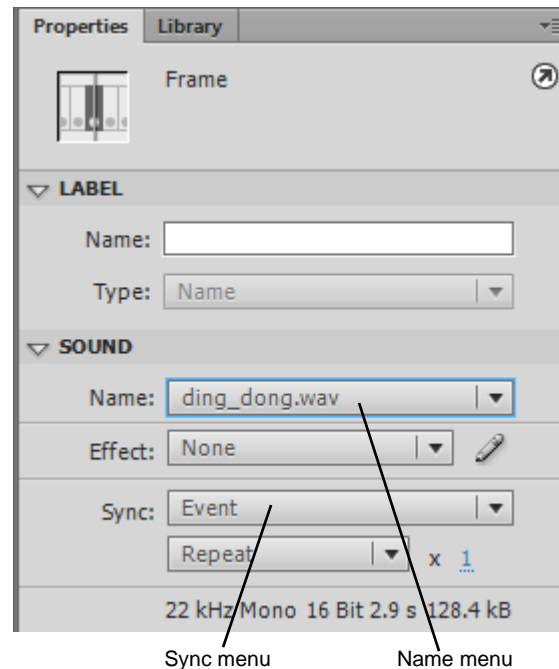
Figure 6 Properties panel, sound properties

Sound waveform

Figure 7 Timeline panel

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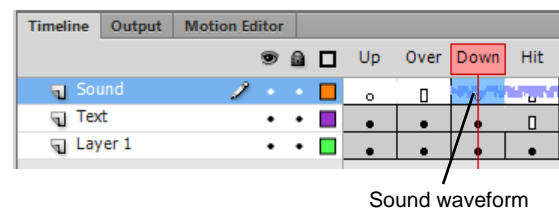
Adding control with actions

Right now the button looks great, but it doesn't perform any action. You can remedy this by adding ActionScript code to your movie. The ActionScript code contains the instructions for what do when someone interacts with the button. Buttons give visitors control over the movie. You can use a button to stop the movie, start and stop sounds, restart the movie (after stopping it), or jump to different frames within the movie and continue playing.

The ActionScript code references a button's instance on the Stage, not the symbol stored in the library. This lets you use the same button symbol to perform different actions, depending on where it appears in your movie.

To add control with actions:

1. Continue from where you left off in the preceding activity.

2. Select the button instance to which you want to add an action.

3. Click in the Instance Name box in the Properties panel (**Figure 8**) and enter a unique name to identify the button instance. The name should be descriptive, such as sound_btn, and cannot contain spaces.

4. In the main timeline of your movie, create a new layer named Actions.

5. Make sure there is a keyframe in the Actions layer that corresponds to the keyframe where your button first appears on the Stage. Select this keyframe in the Actions layer.

   Note: If your button doesn't appear on this frame, Flash generates an error message when you publish the movie because the ActionScript you include on this frame refers to an object that isn't on the Stage yet.

6. Select Window > Actions to display the Actions panel.

7. If you don't see the parameters area in the Actions panel, click the Script Assist button.

8. In the Actions toolbox on the left side of the panel, select the AddEventListener method for the IEventDispatcher class.

   To find the AddEventListener method, expand Flash.Events, and then expand IEventDispatcher and then Methods.

9. Double-click the AddEventListener method to add it to the Script pane (**Figure 9**).

10. Click in the Object box in the parameters area of the Actions panel.

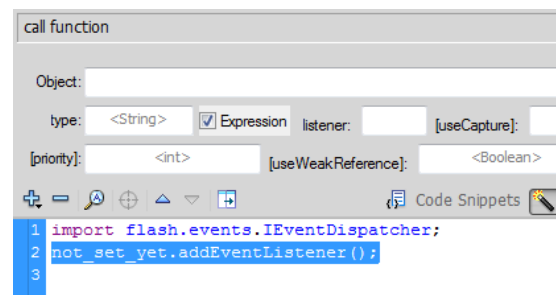   The Insert Target Path button is now active.

11. Click the Insert Target Path button.

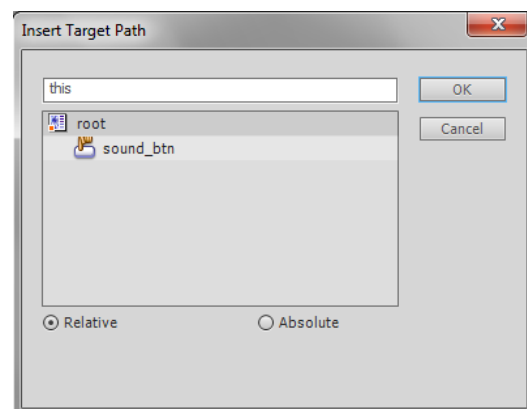   The Insert Target Path dialog box appears (**Figure 10**).

12. Select the Relative option and select the instance name of your button. Click OK to close the dialog box.
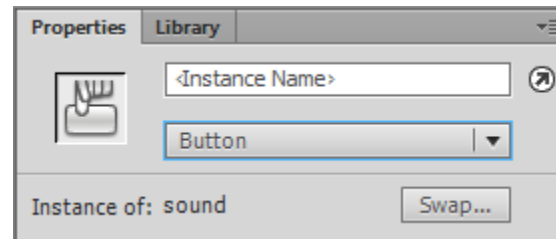
Figure 8 Properties panel

Figure 9 AddEventListener method

Figure 10 Insert Target Path dialog box

13. In the Actions toolbox on the left side of the panel, select the CLICK property from the MouseEvent class.

    To find the CLICK property, expand Flash.Events, and then expand MouseEvent and then Properties.

14. In the Script pane, select the AddEventListener() line to display the parameters for this method. Then, in the parameters area, click in the Type box.

15. In the Actions toolbox, double-click the CLICK property.

    Script Assist adds the property to your code as MouseEvent.CLICK (**Figure 11**).

16. In the Listener box in the parameters area, type a name for the function that should execute when the button is clicked. You can use any name you like, but make sure the name of the function is unique and contains no spaces.

    The function name appears in the Script pane as you type. You have named the function, but you haven't created it yet.

17. In the Actions toolbox, select the **function** keyword from Language Elements.

    To find the **function** keyword, expand Language Elements. Then expand Statements, Keywords & Directives, and expand Definition Keyword.

18. Double-click the **function** keyword in the Actions toolbox.

    The code for creating a function appears in the Script pane.

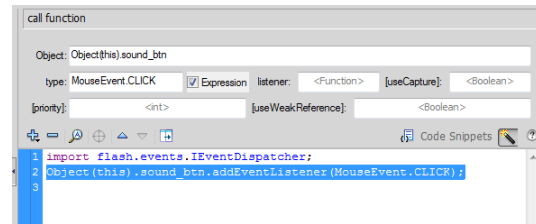19. In the parameters area of the Script pane, type the name of your function in the Name box.

    Note: You must type the function name exactly as you typed it for the AddEventListener function. Function names are case-sensitive.

20. In the parameters area of the Script pane, type event:MouseEvent in the Parameters box (**Figure 12**).
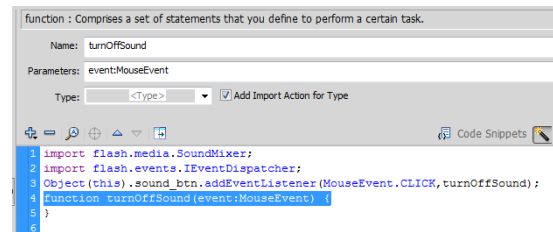
    In this box, you are naming a variable (event) and indicating what type of variable it is (MouseEvent).

21. In the Actions toolbox on the left side of the panel, select the StopAll method for the SoundMixer class.

    To find the StopAll method, expand Flash.Media, expand Methods, and then expand SoundMixer.
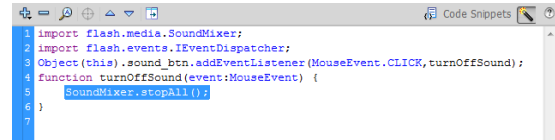

Figure 11 CLICK property in the Script pane

Figure 12 Function code in the Script pane

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22. Select the function in the Script pane and double-click the StopAll method in the Actions toolbox.

The method is added to the function (**Figure 13**).

23. Now when visitors click the button, all sounds currently playing in the movie will stop.


```
1  import flash.media.SoundMixer;
2  import flash.events.IEventDispatcher;
3  Object(this).sound_btn.addEventListener(MouseEvent.CLICK,turnOffSound);
4  function turnOffSound(event:MouseEvent) {
5      SoundMixer.stopAll();
6  }
7
```

Figure 13 StopAll method in the Actions panel

For more about ActionScript, see Programming ActionScript 3.0, "Getting Started with ActionScript" (in Flash, select Help > Flash Help. Select ActionScript 3.0 And Components, select Programming ActionScript 3.0, and select Getting Started With ActionScript).

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