

The Flash workspace

Stage

The *Stage* is the white, rectangular area of the Adobe Flash CS4 workspace (**Figure 1**). Objects you place on the Stage will appear in your published movie. Objects placed in the pasteboard (the gray area around the Stage) will not appear in the finished movie, but you can place objects there until you want them to appear on the Stage.

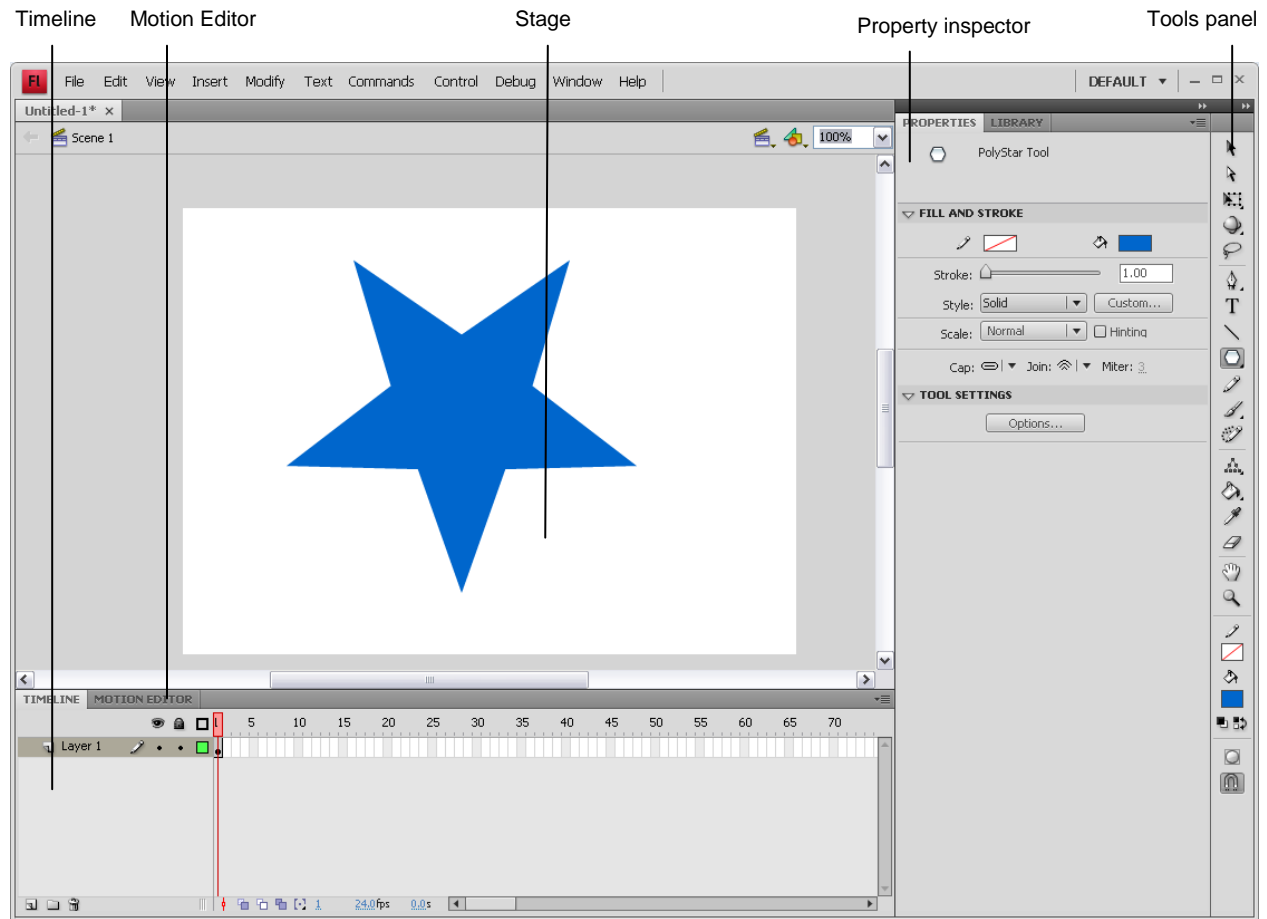


Figure 1 Flash workspace

Timeline and layers

The *Timeline* is where you control the images and sounds in your Flash document (**Figure 2**). The Timeline is divided into frames. In the Timeline, you work with these frames to organize and control the content of your document. You place frames in the Timeline in the order you want the objects in the frames to appear in your finished content.

A *keyframe* is a frame where a new symbol instance appears in the Timeline. A keyframe can also be a frame that includes *ActionScript* code to control some aspect of your document. You can also add a *blank keyframe* to the Timeline as a placeholder for symbols you plan to add later or to explicitly leave the frame blank.

A *property keyframe* is a frame in which you define a change to an object's properties for an animation. Flash can *tween*, or automatically fill in, the property values between property keyframes to produce fluid animations. Because property keyframes let you produce animation without drawing each individual frame, they make creating animation easier. A series of frames containing tweened animation is called a *motion tween*.

Current frame, frame rate, and elapsed time are all shown at the bottom of the Timeline. The *playhead*, represented by a red rectangle with a long red line, shows the current frame you are viewing on the Timeline. You can click a frame to move the playhead to that frame, or you can drag the playhead back and forth on the Timeline to quickly view all or any part of your animation.

Layers in the Timeline provide a way to organize the elements of your movie. You can draw and edit objects on one layer without affecting objects on another layer. Layers control the stacking order of objects—the order moves from top to bottom, so objects displayed in front are in the top layer, while objects displayed in back are in the bottom layer. This allows you to place objects in front of or behind one another. To change the order of layers, drag the layer name to a new position. The layer controls appear on the left side of the Timeline. Each layer has an option for hiding or showing the layer, locking it, and displaying its contents as outlines.

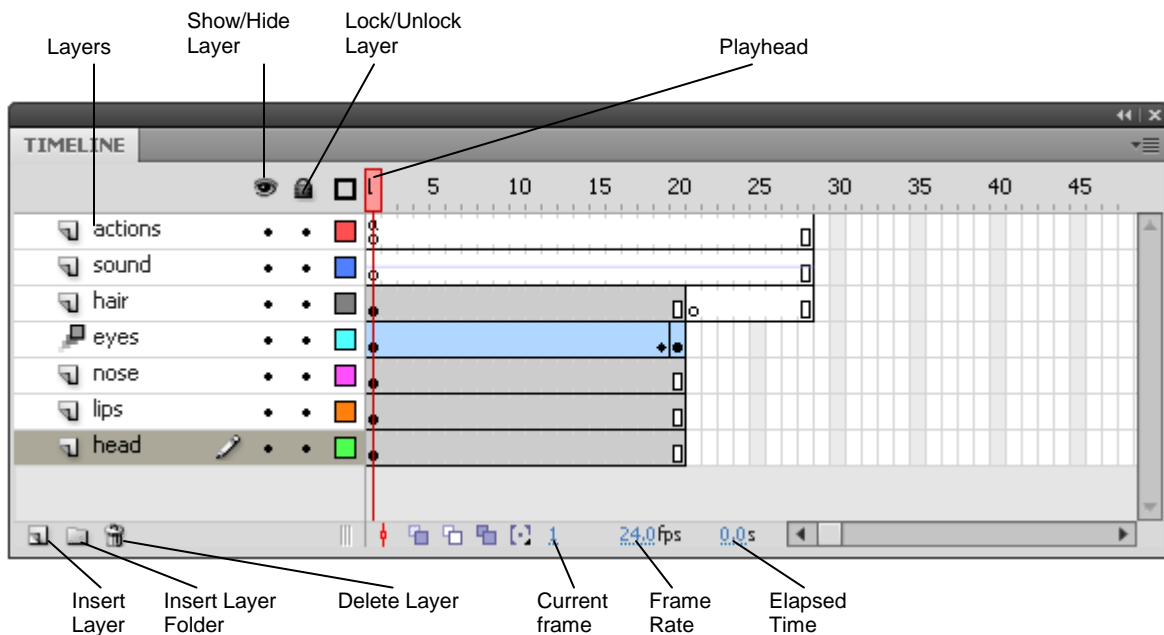


Figure 2 Timeline

Edit bar

The *edit bar*, at the top of the Stage, lets you quickly navigate between different parts of your Flash document (**Figure 3**). It lets you switch between scenes and symbols. You can also change the magnification level of the Stage.

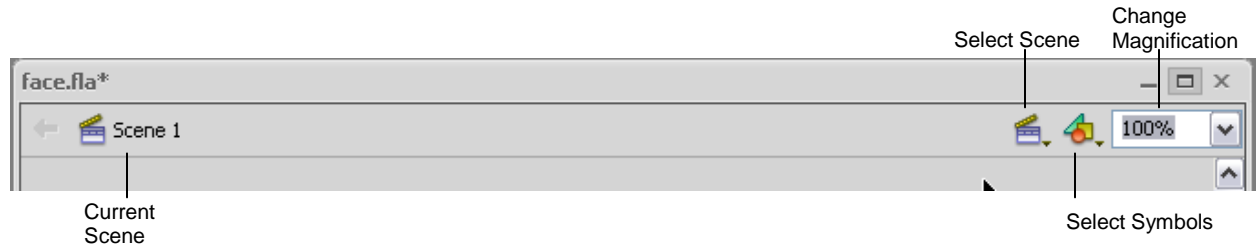


Figure 3 Edit bar

Panels

Panels provide easy access to controls that help you work with the content in your document (**Figure 4**). By default, the Property inspector and the Library panel are docked to the right side of the workspace. Any available panel can be opened by selecting it in the Window menu.

You can undock panel groups, add panels to a group, undock individual panels, rearrange the order of docked panels, and collapse and close panel groups. To undock a panel, drag it by its tab or title bar away from its current position. You can drag it into another dock or make it free-floating.

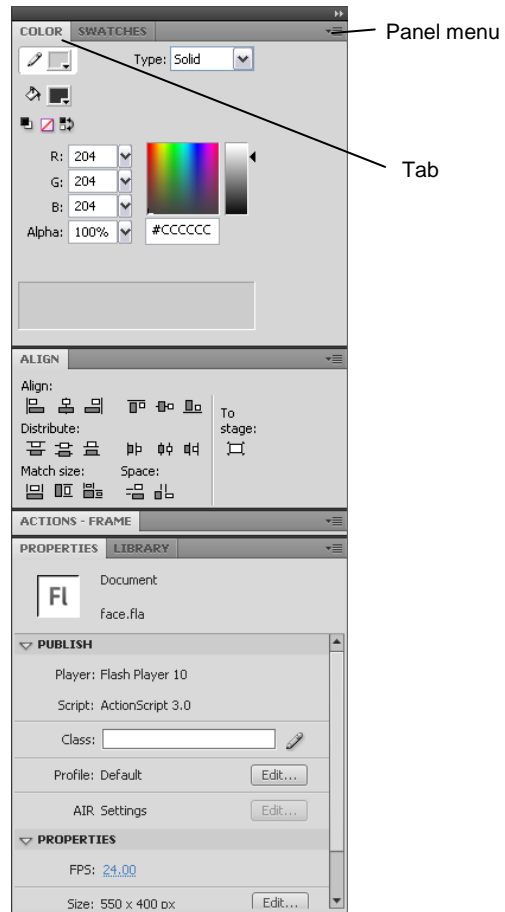


Figure 4 Panels

Tools panel

The tools in the *Tools panel* let you draw, paint, select, and modify artwork, as well as change the view of the Stage (**Figure 5**). The Options area at the bottom of the Tools panel lets you modify a tool you have selected. If the Tools panel is not visible, you can display it by selecting **Window > Tools**. To select a tool, just click it. (You can also use the shortcut key shown in parentheses in the tool tip that appears when you rest the pointer over a tool for a few seconds.)

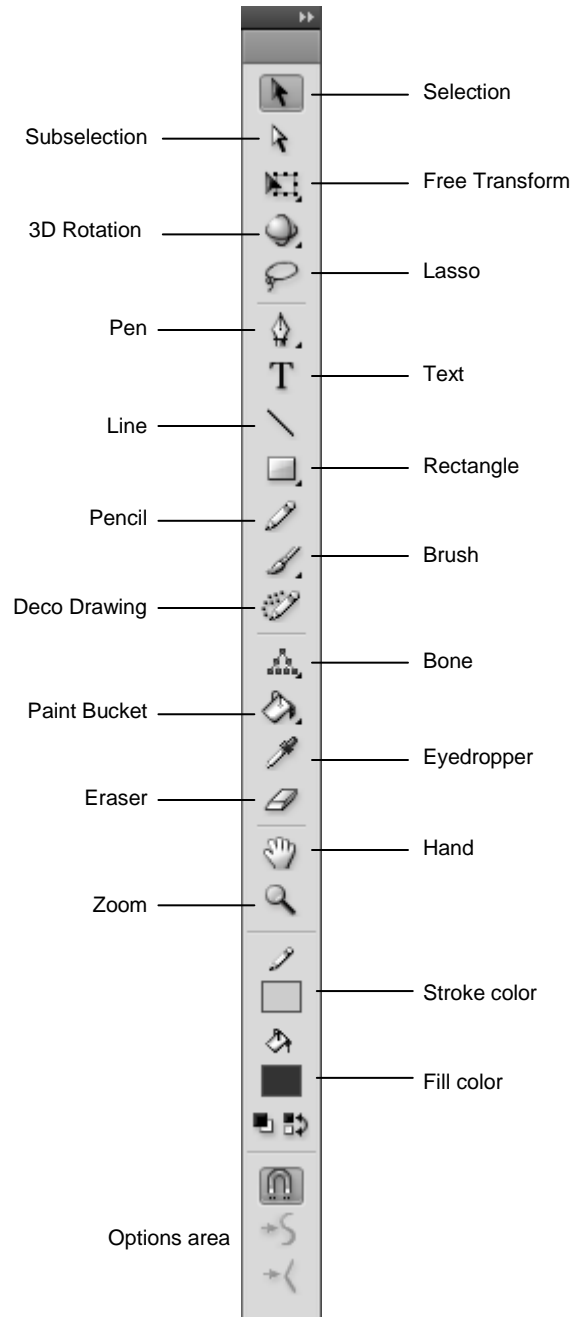


Figure 5 Flash Tools panel

Selection tools

Selection tool (black arrow): Click an object to select it. Drag a selected object to move it.

Subselection tool (white arrow): Select and move points of an object or edit paths between adjacent points.

Free Transform tool: Resize or rotate selected objects by dragging. Also has the Gradient Transform tool (transform a gradient or bitmap fill by adjusting the size, direction, or center of the fill).

3D Rotation tool: Rotate movie clip instances in 3D space. A 3D rotation control appears on top of selected objects on the Stage. The X control is red, the Y control is green, and the Z control is blue.

3D Translation tool: Move movie clip instances in 3D space. When you select a movie clip with the tool, its three axes, X, Y, and Z, appear on the Stage on top of the object. The X axis is red, the Y axis is green, and the Z axis is blue.

Lasso tool: Drag to select an area.

Drawing tools

Pen tool: Create straight or curved lines. You can also create Bezier curves.

Text tool: Create or edit text and text fields.

Line tool: Draw straight lines.

Rectangle tool: Create rectangles or squares composed of fills and strokes, just fills, or just strokes. Also has the *PolyStar tool* (create either polygon or star shapes—you can set how many points both shapes have), the *Oval tool* (create circles and ovals), the *Rectangle Primitive tool*, and the *Oval Primitive tool*. Primitive shapes are individual objects that can be edited in the Property inspector.

Pencil tool: Create lines in any of three modes—straighten, smooth, or ink.

Brush tool: Create shapes with fills only.

Spray Brush tool: The Spray Brush acts like a particle sprayer, letting you “brush” a pattern of shapes onto the Stage at one time. By default, the Spray Brush emits a spray of dot particles using the currently selected fill color. However, you can use the Spray Brush tool to apply a movie clip or graphic symbol as a pattern.

Deco Drawing tool: Apply an effect to a selected object. Choose effects from the Property inspector after you select the Deco Drawing tool.

Bone tool: Inverse kinematics (IK) is a method for animating an object or set of objects in relation to each other using an articulated structure of bones. This tool allows you to add bones to a set of objects in relation to each other.

Bind tool: Inverse kinematics tool that allows you to click a control point or a bone with this Bind tool and display the connections between the bones and control points. You can then change the connections in a variety of ways.

Paint Bucket tool: Add fill inside a shape or change the fill color.

Ink Bottle tool: Change the color or width of a line, or add a stroke to a shape.

Eyedropper tool: Sample a color from swatches or anywhere on the screen.

Eraser tool: Erase parts of an image.

View tools

Hand tool: Drag the Stage to view another part of your document.

Zoom tool: Zoom in or out to view more or less of the Stage. To zoom out, hold down the Alt key (Windows) or the Option key (Mac OS).

Color tools

Stroke Color: Set the stroke color.

Fill Color: Set the fill color.

Property inspector

The Property inspector provides easy access to the most commonly used attributes of the current selection, either on the Stage or in the Timeline. You can make changes to the object or document attributes in the Property inspector without accessing the menus or panels that also control these attributes.

Depending on what is currently selected, the Property inspector displays information and settings for the current document, text, symbol, shape, bitmap, video, group, frame, or tool. When two or more different types of objects are selected, the Property inspector displays the total number of objects selected. By default, the Property inspector is visible; you can hide or show it by selecting Window > Properties. **Figure 6** shows the properties for a text object and a rectangle shape, respectively.

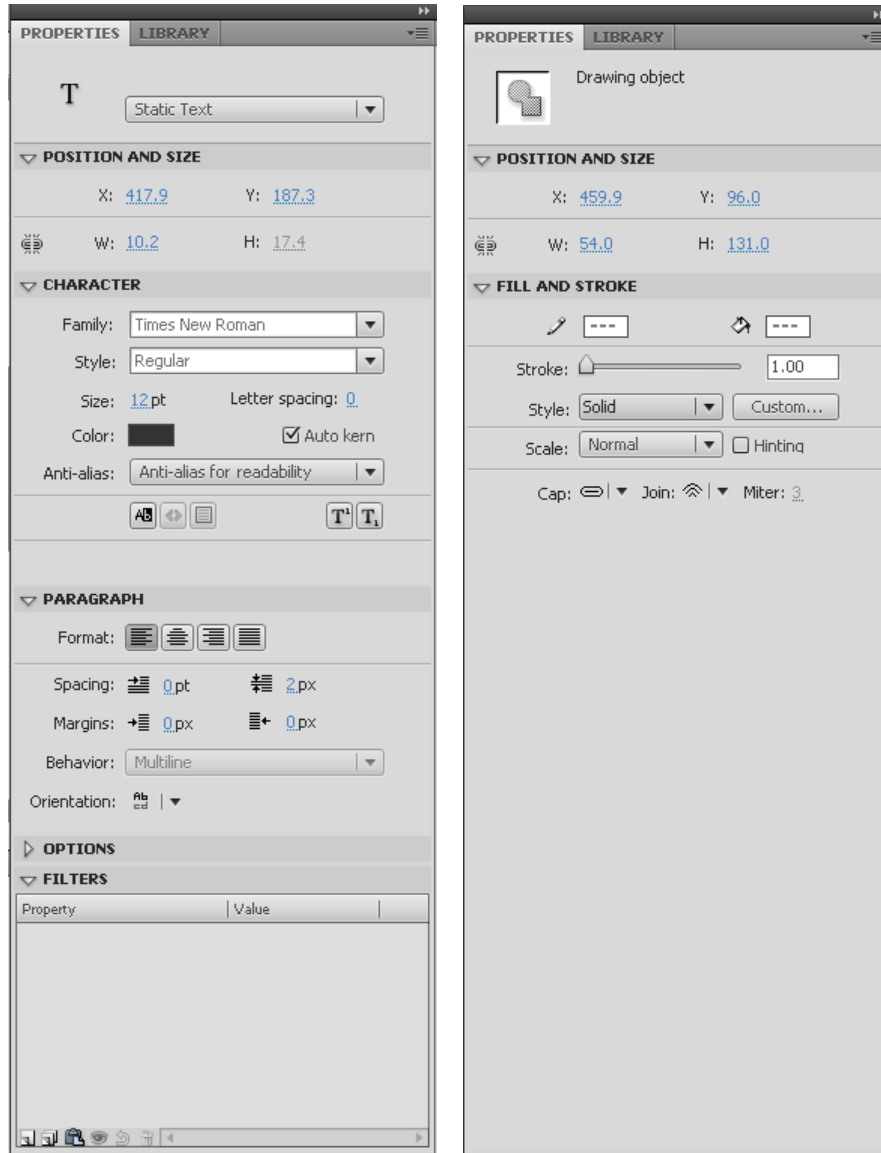


Figure 6 Property inspector for text (left) and for rectangle (right)