

## 1. The most important aspect of Flash is

### a. Vector graphics

Vector graphics describe **images by using lines and curves, called vectors** that also include color and position properties. For example, the image of a leaf is described by points through which lines pass, creating the leaf's outline. The color of the leaf is determined by the color of the outline and the color of the area enclosed by the outline.



When you **edit a vector graphic, you modify the properties** (Move, resize, reshape, and change the color of the lines and curves) of a vector graphic **without changing the quality of its appearance. Vector graphics are resolution independent**; that is, they can be displayed on output devices of varying resolutions without losing any quality.

**Tow advantages:**

1. V-B images are smaller in file size than the bitmap
2. Lose very little image quality when they resized.

### b. Streaming:

The end product created by flash can be either a few seconds long or several minutes. With the latter there could be problems with downloading.

To overcome this problem Flash has brought a technique called Streaming. This feeds information to the browser as it need to play the movie, without having to wait for the whole things to be downloaded to get started.

### c. Compression:

Most images on the Web are compressed in one way or another. Gif(Graphics Interchange Format), JPEG (Joint Photographic Experts Group), PNG (Portable Network Graphics). Flash uses various compression techniques for images and sounds.

## 2. The use for Flash

- a) **Web Authoring:** Flash document can used for making HTML file/ web animations
- b) **Presentations:** Flash movies can also be used as presentation tool.
- c) **E-commerce:** Flash contains a powerful programming language, called Action Script. Flash action Script is the same as Javascript.
- d) **Flash video** can be export into Quick time format / window AVI format.

## 3. What Flash can do

- a) **Animation:**
  - Text animation
  - Frame-by-Frame animation
  - Tweened animation
  - Motion Guide animation
- b) **Interactivity**
  - Buttons can have action command can assigned to them
  - Buttons can have actions script that play sounds in the movie
  - Buttons can be used to open up other pages on the web.

# Adobe Flash

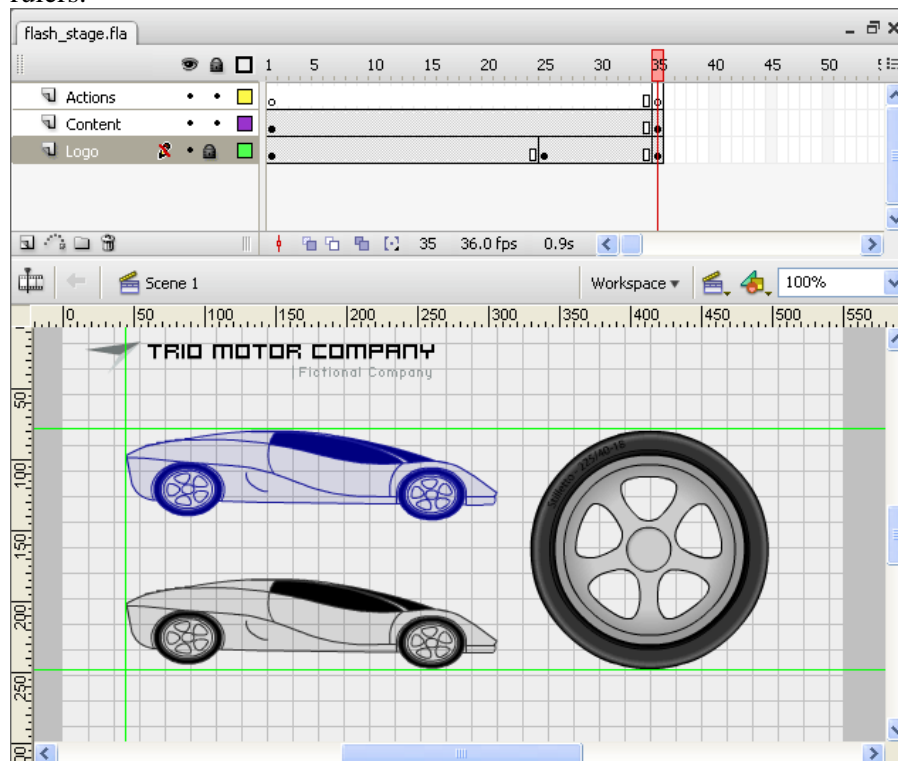
Buttons can be programmed to jump automatically to another part of the same movie. Buttons can be used to create a menubar

## 4. Advantages of Flash

1. **Vector based application:** Flash is a Vector based application, in this graphics describes images by using lines and curves that also include color and position properties. V-B images are smaller in file size than the bitmap and Lose very little image quality when they resized.
2. Flash document can be used for making HTML file/ web animations
3. Flash movies can also be used as presentation tool.
4. Flash contains a powerful programming language, called Action Script. Flash action Script is the same as JavaScript.
5. Flash videos can be export into Quick time format / window AVI format.
6. Flash can create different types of animations-Text animation, Frame-by-Frame animation, Tweened animation, Path animation
7. With the help of button symbol in Flash we can add sound, link, menubar etc.
8. Flash reduces its file size by default when you are running the animation (shockwave files)

## 5. Using the Stage / Scene

The Stage is the rectangular area where you place graphic content when creating Flash documents. The Stage in the authoring environment represents the rectangular space in Flash Player where your document appears during playback. To change the view of the Stage as you work, zoom in and out. To help you position items on the Stage, you can use the grid, guides, and rulers.



## 6. Types of Animation in Flash

### a) **Frame-by-Frame animation**

This type of animation changes the contents of the Stage in every frame and is best suited to a complex animation in which an image changes in every frame instead of simply moving across the Stage.

**Disadvantage:** This type of animation increases the file size more rapidly than tweened animation because Flash stores the values for each keyframe.

To create a frame-by-frame animation, you define each frame as a keyframe and create a different (typically modified) image for each frame. Each new keyframe on a layer typically contains the same contents as the keyframe preceding it because the contents of a frame are copied to the next keyframe when you select a frame and press F6

### **Disadvantages of Frame by frame animation**

- This animation is best suited to a complex animation in which an image changes in every frame instead of simply moving across the Stage.
- Each new keyframe on a layer typically contains the same contents as the keyframe preceding it because the contents of a frame are copied to the next keyframe will increase the file size.

### b) **There are two types of tweening**

- In motion tweening**, you define properties such as position, size, and rotation for an instance, group, or text block at one point in time, and then you change those properties at another point in time.
- In shape tweening**, you draw a shape at one point in time, and then you change that shape or draw another shape at another point in time. Flash interpolates the values or shapes for the frames in between, creating the animation.

### **Explanation**

- Shape tweening:** Shape tweens allows us to change the shape of objects. This is similar to **morphing** where one object changes to another. By tweening shapes, you can create an effect similar to morphing, making one shape appear to change into another shape over time. Flash can also tween the location, size, and color of shapes. You can create Shape Tweened animations using **Shape option from the Tween panel** of the Properties inspector. In shape tweening, you draw a shape at one specific time, and change that shape or draw another shape at another specific time. Flash interpolates the values or shapes for the frames in between, creating the animation.

Eg: Draw a vector using any of the drawing tools in Flash, say a small circle and remove its border.

- Motion Tween:** You create a motion tween by defining properties for an instance, a grouped object, or text in a starting keyframe, and then changing the object's properties in a subsequent keyframe. **Flash creates the animation from one keyframe to the next** in the frames between the keyframes. In motion tweening, **you define properties such as position, size, and rotation for an instance, group, or text block at one specific time, and change those properties at another specific time.** You can also apply a motion tween along a path.

The main difference between motion tweening and shape tweening is that motion tweening operates on grouped objects or symbols, and shape tweening is used with objects that are not symbols and are ungrouped.

### **Advantages of tweening**

- Tweening is a very simple animation in which we use very few keyframes to animate the object
- Few keyframes will reduce the file size
- In both tweening, we are using very few keyframes to animate the objects.
- In motion tweening the objects have to be converted into symbols. These symbols are stored in the internal library available in Flash and can be reused any time in the same scenes or different scenes.

### c) **Motion Guide:**

Motion Guide Layer is used to create a path to move your symbol in a predefined path such as curves or circles or any shape. A motion guide is a line you have drawn with the pencil tool on a guide layer. You can attach your object or text to the line to make it follow that path. Motion Guide is, moving your symbol in a predefined path such as curves or circles.

#### **Steps involved in making path animation**

1. Create an object in a normal layer
2. Convert into graphic symbol
3. Create a motion guide layer on top of the "graphic symbol" layer with the label "Guide"
4. Draw a path for your symbol in this new motion guide layer using pencil or line tool.
5. Select the end frame (30 or 35- you can decide) in the guide layer and press "F5" to insert frames to view till 30 or 35<sup>th</sup> frame.
6. Go to "Frame 1" of "graphic symbol" layer and drag your symbol to one end of your path.
7. Insert key frame (press F6) at the end of the symbol layer and now drag your symbol to the other end of your path.
8. Select frames in between 1 to 30 of your "graphic" layer. Right click and select "motion tween" from the pop-up menu.
9. Run your movie using Ctrl+enter shortcut

### 7. **Use of onion skinning**

**Onion Skinning** allows you to see a faint ghost image of the previous frame so you can see where you want to place the artwork for the next frame. First of all you need to add a new layer on your Stage - you will draw and animate your Frog on this Layer, while your Text is on the previous layer.



#### **How to use:**

To turn on **onion skinning**, click the Onion Skin or Onion Skin Outlines button near the bottom of the Timeline. Drag the markers above the Timeline to view multiple frames at once. The onion skin outlines are enabled for an animation on the Stage.

### 8. **Distributing objects to layers for tweened animation**

- a) To separate layers to apply tweened animation to the objects, distribute selected objects in a frame. **Flash distributes each object to a new, separate layer. Any objects that you don't select** (including objects in other frames) are preserved in their original positions.

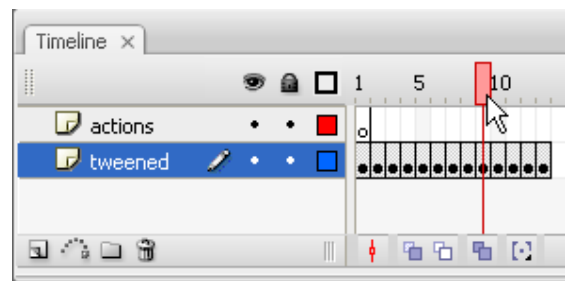
- b) You can **apply the Distribute To Layers command** to any type of element on the Stage, including graphic objects, instances, bitmaps, video clips, and broken-apart text blocks.

### Distribute objects to layers

1. Select the objects to distribute to layers. The objects can be in a single layer, or in several layers, including noncontiguous layers.
2. Do the following: Select Modify > Timeline > Distribute To Layers.

## 9. Timeline window

The Timeline organizes and controls a document's content over time in layers and frames. Like films, Flash documents divide lengths of time into frames. **Layers are like multiple film strips stacked on top of one another**, each containing a different image that appears on the Stage. The **major components of the Timeline are layers, frames, and the playhead**.



Layers in a document are listed in a column on the left side of the Timeline. Frames contained in each layer appear in a row to the right of the layer name. The Timeline header at the top of the Timeline indicates frame numbers. The playhead indicates the current frame displayed on the Stage. As a document plays, the playhead moves from left to right through the Timeline.

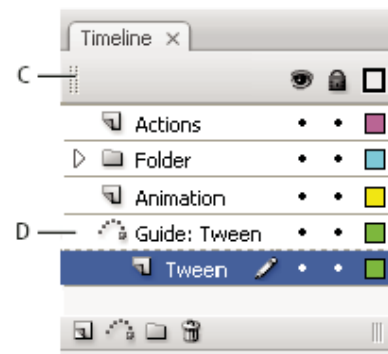
The **Timeline status displayed** at the bottom of the Timeline indicates the **selected frame number, the current frame rate, and the elapsed time to the current frame**.

## 10. Layers

Layers **help you organize the object/symbol in your document**. You can draw and edit objects on one layer without affecting objects on another layer. In areas of the Stage with nothing on a layer, you can see through it to the layers below.

To draw, paint, or otherwise **modify a layer or folder, select the layer in the Timeline to make it active**. Only one layer can be active at a time (although more than one layer can be selected at a time).

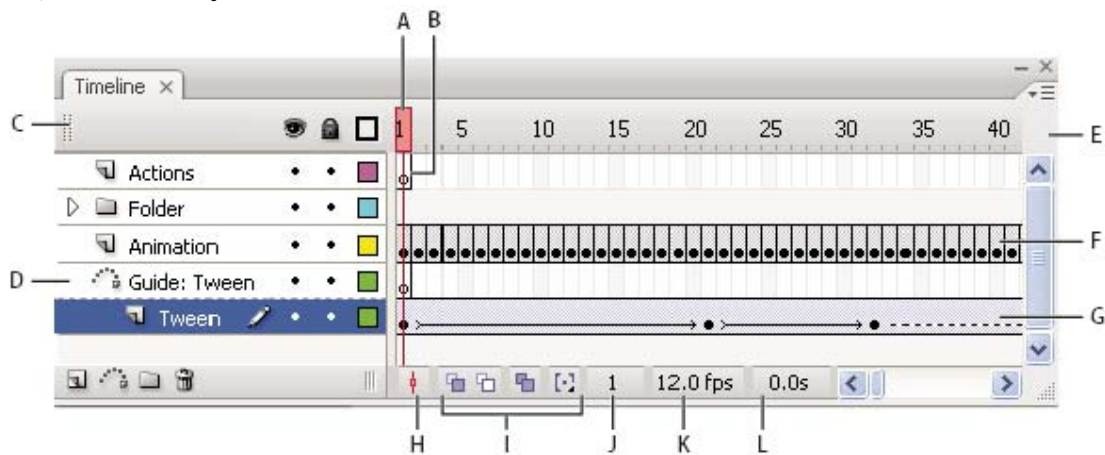
When you create a Flash document, it contains only **one layer**. To organize the objects, animation, and other elements in your document, **adds more layers**. You can also **hide, lock, or rearrange layers**. The **layers do not increase the file size** of your published SWF file. **Only the objects you place into layers add to the file size**.



To **organize and manage layers, create layer folders and place layers in them**. You can **expand or collapse layer folders in the Timeline** without affecting what you see on the Stage. Use **separate layers or folders for sound files, ActionScript, frame labels, and frame comments**. *This helps you find these items quickly to edit them.*

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To help create sophisticated effects, use **special guide layers to make drawing and editing easier, and mask layers.**



**A.** Playhead, **B.** Empty keyframe, **C.** Timeline header , **D.** Guide layer icon , **E.** Frame View pop-up menu , **F.** Frame-by-frame animation, **G.** Tweened animation, **H.** Scroll To Playhead button, **I.** Onion-skinning buttons , **J.** Current Frame indicator, **K.** Frame Rate indicator **L.** Elapsed Time indicator

The Timeline shows where animation occurs in a document, including **frame-by-frame animation, tweened animation, and motion paths.**

### 11.Symbol

A symbol is a **graphic, button, or movie clip** that you create once in the Flash. You can then **reuse the symbol throughout your document** or in other documents.


A **symbol can include artwork (object) that you import from another application.** Any symbol that you create automatically becomes part of the library for the current document.



#### Advantages

- **Using symbols in your documents dramatically reduces file size;**
- **several instances of a symbol require less storage space than saving multiple copies of the contents of the symbol.** (For example, you can reduce the file size of your documents by converting static graphics, such as background images, into symbols and then reusing them.)
- Share symbols among documents (flash files) as **shared library** can link assets in a source document to any number of destination documents, without importing the assets into the destination document.

#### Types of symbols

Each symbol has a **unique Timeline and Stage**, complete with layers. You can add frames, keyframes, and layers to a symbol Timeline, just as you can to the main Timeline.

- a) Use **Graphic symbols**  for static images and to **create reusable pieces of animation** that are tied to the main Timeline. Interactive controls and sounds won't work in a graphic symbol's animation sequence. **Graphic symbols add less to the FLA file size than buttons or movie clips because they have no timeline.**

- b) Use **Button symbols**  to create interactive buttons that respond to mouse clicks, rollovers, or other actions. You define the graphics associated with various button states, and then assign actions to a button instance.
- c) Use movie clip symbols  to create reusable pieces of animation. Movie clips have their own **multiframe Timeline** that is independent from the main Timeline. The main Timeline that can **contain interactive controls, sounds, and even other movie clip** instances.

### Create symbols

You can create a symbol from selected objects on the Stage, create an empty symbol and make or import the content in symbol-editing mode, and create font symbols in Flash. Symbols can contain all the functionality that Flash, including animation.

Using **symbols that contain animation lets you create Flash applications with a lot of movement while minimizing file size.** Consider creating animation in a symbol that has a repetitive or cyclic action—the **up-and-down motion of a bird's wings**, for example. To add symbols to your document, use shared library assets during authoring or at runtime.

### Edit symbols

When you edit a symbol, **Flash updates all the instances** of that symbol in your document. Edit the symbol in the following ways:

The name of the symbol you are editing appears in an Edit bar at the top of the Stage, to the right of the current scene name.

Editing a symbol in a separate window lets you see the symbol and the main Timeline at the same time. The name of the symbol you are editing appears in the Edit bar at the top of the Stage. The name of the symbol you are editing appears in the Edit bar at the top of the Stage, to the right of the current scene name.

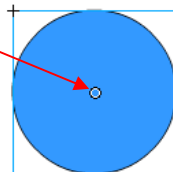
Change the registration point of a symbol (the point identified by the coordinates 0, 0) by using any symbol-editing method.

**Library:** Share symbols among documents (flash files) as **shared library** can link assets in a source document to any number of destination documents, without importing the assets into the destination document. You can reuse / copy objects between documents, rename an item and delete one. Flash includes sample libraries for you that include movies, buttons and sounds as well as pre-made graphics.

### Edit a symbol in place

- **Double-click or right-click an instance of the symbol** on the Stage and select Edit in Place.

To change the **registration point**, a crosshair indicates the location of the



drag the symbol on the Stage. A cross registration point.

To exit edit-in-place mode Click the

scene button on the timeline

**Break apart** **Break apart:** To separate groups, instances, and bitmaps into ungrouped, editable elements, you break them apart, which significantly reduce the file size of imported graphics. Applying the Break Apart command to a text object breaks the object into individual letters and applying it a second time converts the letters to Merge Shapes.


### How to use

Select **Modify > Break Apart**. This action breaks the instance into its component graphic elements.

To modify these elements, use the painting and drawing tools. You can also convert the text to its component lines and fills to reshape, erase, and otherwise manipulate it. After you convert text to lines and fills, you can no longer edit the text.

## 12. Tools

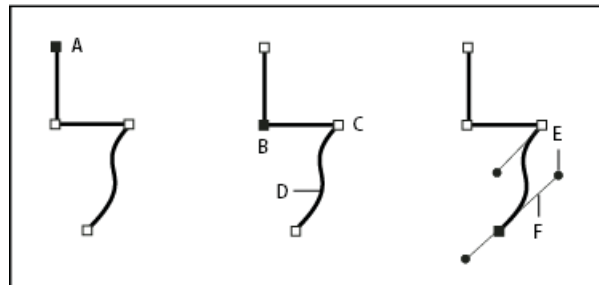
### a) Paint with the Brush tool

The Brush tool  draws brush-like strokes, as if you were painting. It creates special effects, including calligraphic effects. Select a brush size and shape using the Brush tool modifiers. Brush size for new strokes remains constant even when you change the magnification level for the Stage, so the same brush size appears larger when the Stage magnification is lower.



### b) Paths Tools

Whenever you draw a line or shape in Flash, you create a line called a path. A path is made up of one or more straight or curved segments.

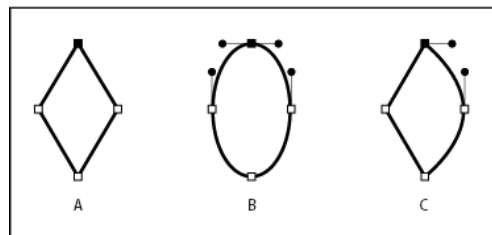


**A.** Selected (solid) endpoint **B.**

Selected anchor point **C.** Unselected anchor point **D.** Curved path segment, **E.**

Direction line, **F.** Direction point

Paths can have two kinds of anchor points: **corner points and smooth points**. At a corner point, a path abruptly changes direction. At a smooth point, path segments are connected as a continuous curve. You can draw a path using any combination of corner and smooth points. If you draw the wrong kind of point, you can always change it.



**A.** Four corner points **B.** Four smooth points **C.** Combination of corner and smooth points

### Eraser Tool



Erasing with the Eraser tool removes **strokes and fills**.

Double-click the Eraser tool.

Select the Eraser tool, and then click the Faucet modifier.



### Copy strokes and fills with the Eyedropper tool



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Use the Eyedropper tool to **copy fill and stroke attributes** from one object and immediately apply them to another object. To apply the attributes of a stroke or filled area to another stroke or filled area, select the Eyedropper tool and click the stroke or filled area whose attributes you want to apply. When you click a **stroke**, the tool automatically changes to the **Ink Bottle tool**. When you click a filled area, the tool automatically changes to the Paint Bucket tool with the Lock Fill modifier turned on.

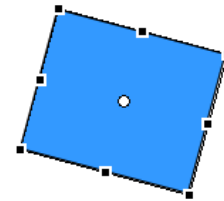
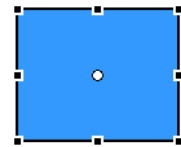
### Transform Tool



You can perform individual transformations or combine several transformations, such as **moving, rotating, scaling, skewing, and distortion**.

**Note:** The Free Transform tool cannot transform symbols, bitmaps, video objects, sounds, gradients, or text. If a multiple selection contains any of these items, only the shape objects are distorted. To transform a text block, first convert the characters to shape objects.

1. Select a graphic object, group, instance, or text block on the Stage.
2. Click the Free Transform tool. Moving the pointer over and around the selection changes the pointer to indicate which transformation function is available.
3. To transform the selection, drag the handles:
  - **To move the selection**, position the pointer over the object within the bounding box, and drag the object to a new position.
  - To set the center of rotation or scaling, drag the transformation point to a new location.
  - **To rotate the selection**, position the pointer just outside a corner handles and drag.
  - **To scale the selection**, drag a corner handles diagonally to scale in two dimensions. Shift-drag to resize proportionally.



### Scale objects

Scaling an object enlarges or reduces the object horizontally, vertically, or both. Select a graphic object or objects on the Stage.

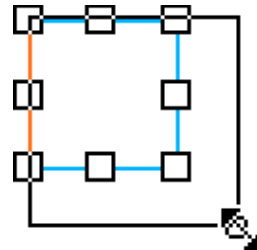
Select **Modify > Transform > Scale**. Or use



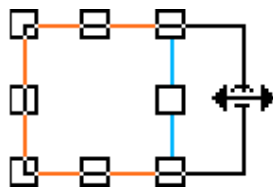
To scale the object both horizontally and vertically, drag one of the corner handles.

Proportions are maintained as you scale.

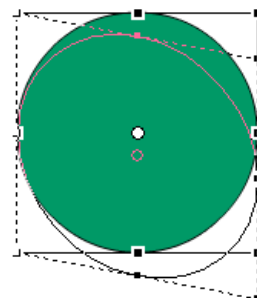
**Shift-drag to scale nonuniformly**




To scale the object either horizontally or vertically, drag a center handle.



### Skew objects



Skewing an object transforms it by slanting it along one or both axes. You can skew by using transform tool.

Select the object or objects. 

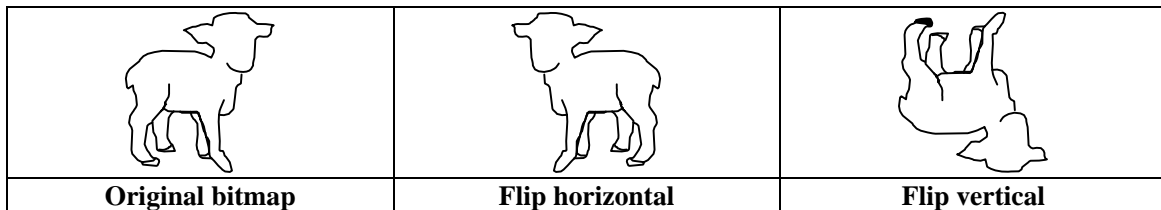
Or

Select **Window > Transform. Click Skew.**

### Flip objects

You can flip objects across their vertical or horizontal axis without moving their relative position on the Stage.


1. Select the object.
2. Select **Modify > Transform > Flip Vertical or Flip Horizontal.**



### Modify strokes with the Ink Bottle tool


To change the stroke color, width, and style of lines or shape outlines, uses the Ink Bottle tool. Using the Ink Bottle tool, rather than selecting individual lines, makes it easier to change the stroke attributes of multiple objects at one time.

### Select objects with the Lasso tool

Draw a freehand selection area using 

When you use the Lasso tool and its Polygon Mode modifier, you can **switch between the freehand and straight-edged selection modes.**

Drag the Lasso tool around the area. End the loop approximately where you started, or let Flash automatically close the loop with a straight line.


Draw a straight-edged selection area Select the Lasso tool's Polygon Mode modifier   
Click to set the starting point. **To close the selection area, double-click.**

### Draw straight lines

To draw one straight line segment at a time, use the Line tool. 

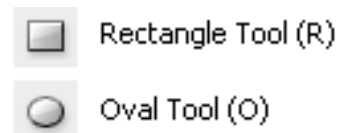
Select **Window > Properties > Properties** and select stroke attributes.

Note: You cannot set fill attributes for the Line tool.

Click the **Object Drawing button**  in the **Options section of the Tools panel**, to select either the Merge or Object drawing model. When the Object Drawing button is depressed, the Line tool is in Object drawing mode.

### Draw rectangles and ovals

The Oval and Rectangle tools let you create these basic geometric shapes, and apply strokes, fills, and specify rounded corners. In addition to the Merge and Object drawing model, the Oval and Rectangle tools also provide the Primitive Object drawing mode.

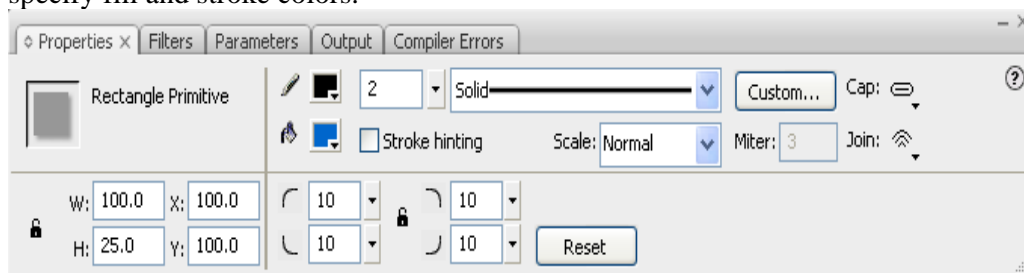


## Primitive rectangles



To select the **Rectangle Primitive tool**, click and hold the mouse button on the Rectangle tool, and select the **Rectangle Primitive tool** from the pop-up menu.

To **change the corner radius while dragging with the Primitive Rectangle tool, press the Up Arrow key or Down Arrow key**. When the corners achieve the desired roundness, release the key. You can use the **controls found in the Property inspector** to further modify the shape, or specify fill and stroke colors.



**Rectangle Corner Radius Controls** : Lets you specify the corner radiuses for the rectangle.

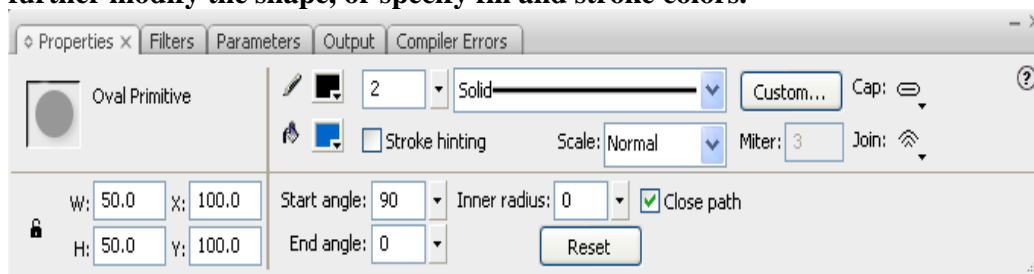
**Reset**: Resets all of the Rectangle Primitive tool's controls, and returns the primitive rectangle shape drawn on the stage to its initial size and shape.

To **reset the corner radiuses**, click the Reset button in the Property inspector.

## Draw primitive ovals



To create a primitive oval, **drag the Primitive Oval tool on the Stage to constrain the shape to a circle, Shift-drag**. You can use the controls found in the **Property inspector to further modify the shape, or specify fill and stroke colors**.



**Start angle and End angle**: Let you specify the angle of the start and end points of the oval.

**Inner radius**: Lets you specify an inner radius (or oval) within the oval.

**Close path**: Lets you specify whether the path of the oval is closed.

**Reset**: Resets all of the Oval Primitive tool's controls, and returns the primitive oval shape

## Draw polygons and stars



To select the PolyStar tool from the pop-up menu, click and hold the mouse button on the Rectangle tool and drag.

Select **Window > Properties > Properties** and select stroke and fill attributes.

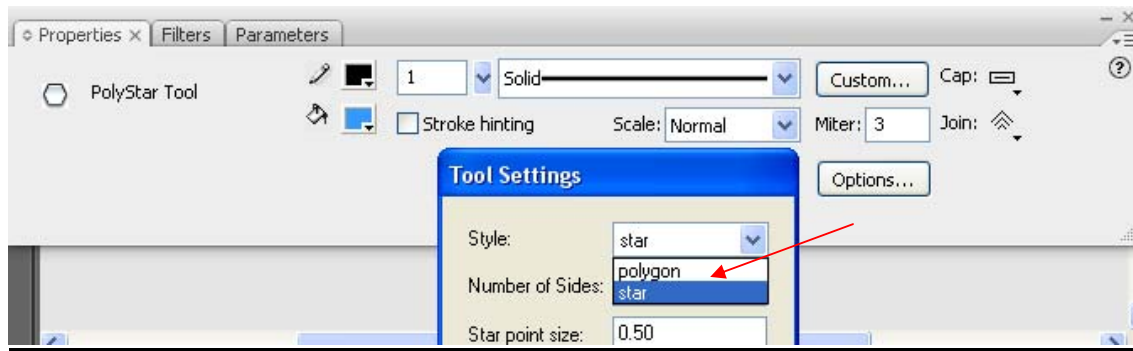
**For Style**, select Polygon or Star.

**For Number Of Sides**, enter a number between 3 and 32.

**For Star Point Size**, enter a number between 0 and 1 to specify the depth of the star points. A number closer to 0 creates deeper points (like needles). Click OK.

## Polygon to Star

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## Draw with the Pencil tool



Select the Pencil tool. Select Window > Properties > Properties and select a stroke color, line weight, and style. Select a drawing mode under Options in the Tools panel:

To draw straight lines and convert approximations of triangles, ovals, circles, rectangles, and

Squares into these **common geometric shapes**, select **Straighten**



To draw **smooth curved lines**, select Smooth



To draw **freehand lines with no modification**



applied, select Ink



Straighten,

Smooth,

Ink mode,

## Interacting with the Pen tool



To draw **precise paths as straight lines or smooth, flowing curves**, use the **Pen tool**. Convert curves to straight lines and the reverse, and display points on lines that you create with other Flash drawing tools, such as the Pencil, Brush, Line, Oval, or Rectangle tools, to adjust those lines.

**The Pen tool provides feedback about its current drawing state by displaying different pointers.** The various drawing states are indicated by the following pointers:

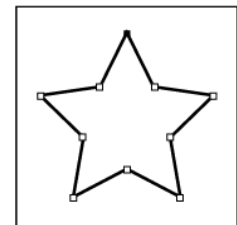
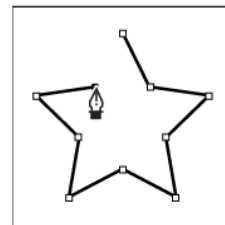
## Draw straight lines with the Pen tool



The simplest path you can draw with the **Pen Tool** is a straight line, made by clicking the Pen Tool to create two anchor points. Continue to click to create a path made of straight line segments connected by corner points.


**Tool** is a straight line, made by clicking Continue to click to create a path made of

- Select the Pen Tool
- Position the Pen Tool where the straight segment is to begin, and click to define the first anchor point.
- Click again where you want the segment to end (Shift-click to constrain the angle of the segment to a multiple of 45°).
- Continue clicking to set anchor points for additional straight segments.

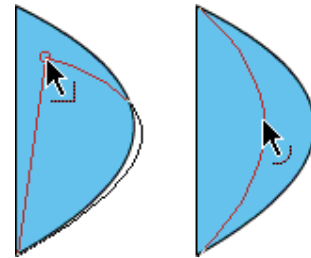


## Reshape using the Selection tool

To reshape a line or shape outline, drag any point on a line using the Selection tool. The pointer changes to indicate what type of reshaping it can perform on the line or fill.

Select the Selection tool . Do one of the following: To reshape the segment, drag from any point.

When a corner appears next to the pointer, you can change an end point. When a curve appears next to the pointer, you can adjust a curve.



Some brush stroke areas are easier to reshape if you view them as outlines.



## snapping :

To automatically align elements with one another, use snapping. Flash provides three ways for you to align objects on the Stage:

Object snapping snaps objects directly to other objects along their edges.

Pixel snapping snaps objects directly to individual pixels or lines of pixels on the Stage.

Snap alignment snaps objects to a specified snap tolerance, a preset boundary between objects and other objects or between objects and the edge of the Stage.

### Use object snapping

To turn on object snapping, use the Snap To Objects modifier for the Selection tool, or the Snap To Objects command in the View menu. If the Snap To Objects modifier for the Selection tool is on, a small black ring appears under the pointer when you drag an element.

The small ring changes to a larger ring when the object is within snapping distance of another object.

## About color

Using the default palette or a palette you create, you can choose colors to apply to the stroke or **fill** of an object you are about to create, or an object already on the Stage.



When applying a **stroke** color to a shape, you can do any of the following:

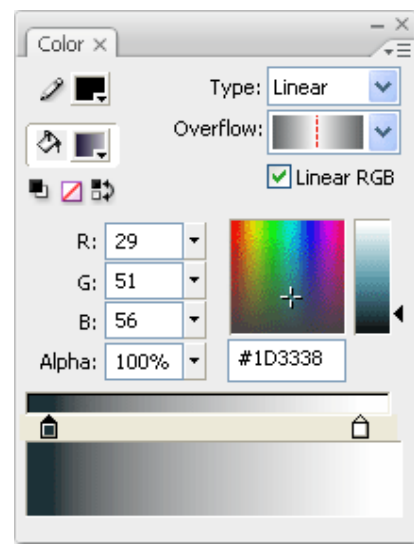
- Apply a solid color, gradient, or bitmap to a shape's fill. To apply a bitmap fill to a shape, you must import a bitmap into the current file. Select any solid color, gradient, and the style and weight of the stroke.
- Create an outlined shape with no fill by using No Color as a fill.
- Create a filled shape with no outline by using No Color as an outline.
- Apply a solid color fill to text.

## About the Color panel

The Color panel lets you change the color of strokes and fills, including the following:

Import, export, delete, and otherwise modify the color palette for a file by using the Swatches panel.

- Select colors in hexadecimal mode.
- Create multicolor gradients.



Use gradients to produce a wide range of effects, such as giving an illusion of depth to a two-dimensional object.

## Transform gradient and bitmap fills



You can transform a gradient or bitmap fill by adjusting the size, direction, or center of the fill.

1. Select the Gradient Transform tool from the Tools panel.
2. Click an area filled with a gradient or bitmap fill. A bounding box with editing handles appears. When the pointer is over any one of these handles, it changes to indicate the function of the handle.

**Center point:** The rollover icon for the center point handle is a four-way arrow.

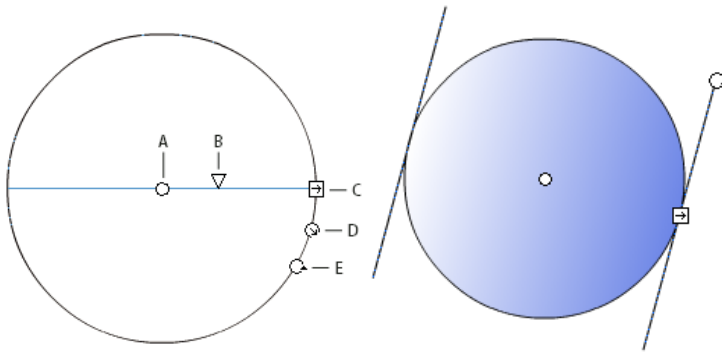
**Focal point:** The focal point handle appears only when you select a radial gradient.

**The rollover icon:** for the focal point handle is an inverted triangle.

**Size:** The rollover icon for the size is a circle with an arrow inside of it.

**Rotation:** Adjusts the rotation of the gradient.

**Width:** Adjusts the width of the gradient. The rollover icon for the width handle is a double-ended arrow.



A. Center point B. Width C. Rotation D. Size E. Focal point

## Keyboard shortcuts

Result	Windows keys	Mac OS keys
Select all	Control+A	Command+A
Select entries (selective)	Control-click	Command-click
Select entries (range)	Shift-click	Shift-click
Select next entry	Down Arrow	Down Arrow
Select previous entry	Up Arrow	Up Arrow
Select next entry (additive)	Shift + Down arrow	Shift + DownArrow
Select previous entry (additive)	Shift + Up Arrow	Shift + Up Arrow
Select first entry	Page Up or Home	Page Up or Home

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<b>Result</b>	<b>Windows keys</b>	<b>Mac OS keys</b>
Select last entry	Page Down or End	Page Down or End
Select an entry and all entries above	Shift + Page Up or Home	Shift + Page Up or Home
Select an entry and all entries below	Shift + Page Down or End	Shift + Page Down or End