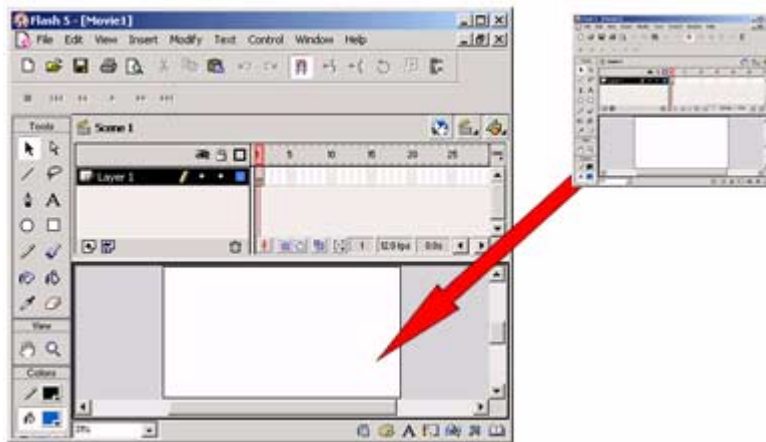

USING MOVIE CLIPS

Remember that unless you're using a shape tween, a symbol is required to animate an object. Symbols can also be used over and over again without increasing the download time. The most used symbol is a movie clip. We've already been using movie clip symbols whenever we created a tweened animation.

Other than being required for animation, a movie clip has some cool properties that become very useful for Flash developers. The extra usefulness of a movie clip hinges on the fact that movie clips have their own multi layer timeline that operates independently of the normal Flash Movie timeline. Basically, you can think of a movie clip as an independent little movie that can be inserted into your main Flash movie. Movie clips can hold animations, buttons, sounds, and interactivity. Basically, a movie clip can do anything a regular movie can do, and it's reusable! If you use an animation more than once, you're better off creating that animation inside a movie clip so that it only has to download once.



The theoretical idea of inserting one movie into another.
The two timelines function independently of each other.
Therefore, one timeline might stop, while the other continues.

Movie Clips Don't Stream

You should understand that movie clips do not stream, and only play after the entire movie clip is loaded. This is a really good thing if you have animations that change quickly. Montages and other

fast moving sequences look bad if slowed by streaming. If the montage is created in a movie clip, the entire montage will download before it displays. Because the entire sequence is downloaded, it will display as intended.

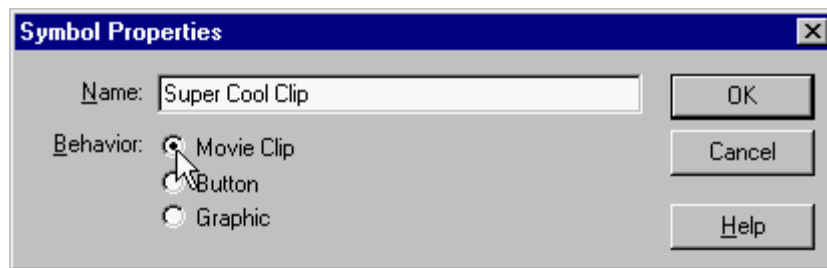
You should also know that movie clip animations do not display in the Flash environment. In order to view inserted movie clips, you must test your movie by hitting F12.

Creating Movie Clips


Creating Movie clips is easy. In fact, we've already done it.

To create a movie clip:

1. Select a drawn or imported object
2. Hit F8 to convert it to a symbol



3. Make sure "Movie Clip" is selected and click **OK**

You'll notice that a new item will appear in the Library. The movie clip icon looks like 



Editing Movie Clips

You can think of a movie clip as a little Flash Movie. It has its own timeline that you can animate. When inserted into a Flash Movie, the clip will play along its own timeline, regardless of what's happening on the main timeline. That means that, among other things, the movie clip can loop while the main movie is stopped.

We're going to make a very simple movie clip right now. Later we'll use movie clips to animate a button when you roll over it. We'll also learn how to control movie clips using buttons. We'll even use movie clips to do other cool things like create a scrollable text window!

It is important to note that if you edit a movie clip that you are actually editing every instance of that clip in the main movie.


To Edit a Movie Clip:

1. Double click the clip on the screen, or in the Library.
2. You'll open into **Movie Clip Editing Mode**.

It's very easy to get in Movie Clip Editing Mode by Accident. The only really reliable visual clue that Flash offers you is in the upper left corner of the screen.



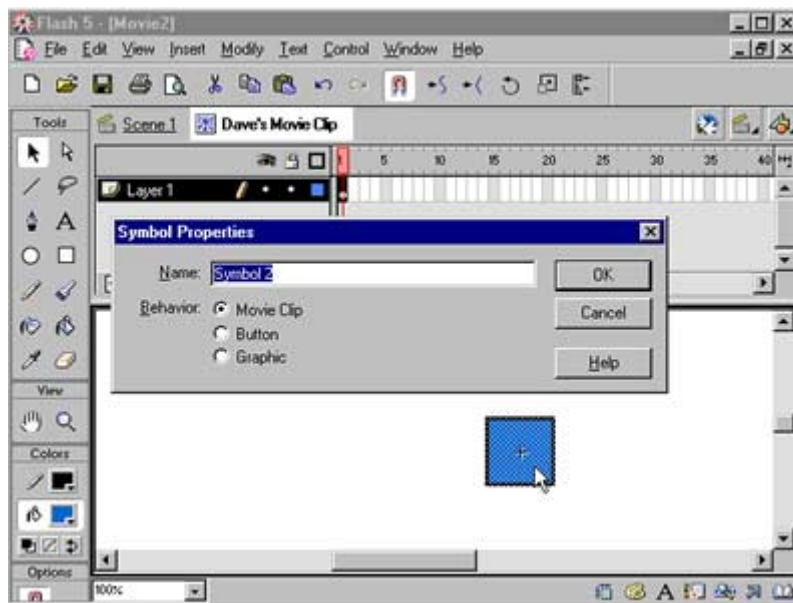
IMPORTANT: Any editing or animating that you do while in Movie Clip Editing Mode only applies to the Movie Clip and will not show up in your normal Flash movie unless the movie clip is currently being displayed. Beginners often get into Movie Clip Editing Mode by accident and end up doing lots of work they can't use.

To return to the main movie, click the  button.

3. Make sure you're in movie clip editing mode.


If you click the shape, you'll notice that it's no longer a symbol. When you enter editing mode, Flash doesn't know what you want to do, so it breaks everything down for you.

If you want to animate the shape you'll need to create another symbol. (F8)



4. Animate the symbol at will.

You can do anything you normally would. Tween symbols, add new symbols, add text, whatever.

5. When you're done, return to the main movie by clicking  in the upper left corner of the screen.

That's it! Drag the movie clip from the Library a couple of times. Test your movie by hitting F12.

You'll notice that the movie clip will loop until the main movie runs out of frames. There are ways to stop movie clips. We'll get to that soon.

Nesting Movie Clips

You can create a movie clip inside of another movie clip, or you can drag one from the library. Each movie clip has its own timeline and can function independently.

Naming Movie Clips

Later on, we'll create buttons that tell specific movie clips to start playing. If you have the same movie clip on the screen four times, you'll need to be able to tell Flash which one to play. Each time you drag a movie clip on the screen, you'll have the opportunity to name that instance of the clip. If each instance is named, you'll be able to control it later on.

Remember, when I say an instance of the Movie Clip, I mean the actual item that displays on the screen after being dragged from the Library.

1. Select the movie clip instance on the screen.

Make sure you don't double click it!

2. Open the **Instance Panel**

WINDOW-> PANELS-> INSTANCE

3. Type the instance name in the box.

You can name it whatever you feel like, as long as you'll remember it later.



Note that the Instance Panel can also be used to easily switch any symbol on the screen for any symbol in the library by selecting the on screen symbol and clicking the Switch Symbols button



FRAME ACTIONS

You'll need to give Flash instructions. Among other things, you'll tell Flash to stop the movie, play the movie, or jump to a specific place in the timeline. These tasks that Flash will perform at your request are called "actions".

Sounds fun, no?

There are two types of actions.

Button actions perform a specific task when a button is clicked. Among other things, you can use button actions to jump to a different part of the timeline, stop the movie, or instruct a movie clip to start playing. We're not going to mess with buttons too much right now, but we'll get to them later.

The other type of action is a frame action. A frame action is automatically triggered when the playback head reaches a certain frame. Among other things, frame actions can be used to stop the movie, jump the playback head to a different part of the timeline, or preload frames to ensure a smooth playing animation.

Correctly Inserting a Frame Action

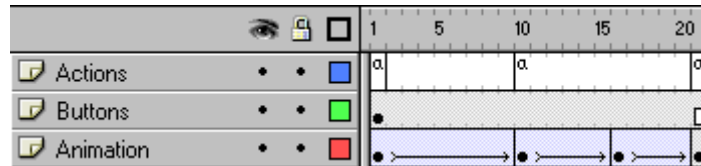
Remember that a frame action is a task that is automatically triggered when the playback head reaches a certain frame. First off, a frame action needs a keyframe to attach to. You'll want to take care when placing your keyframes. When the playback head reaches the keyframe holding a frame action, it will immediately play the action.

You'll Put All of Your Frame Actions on the Top Layer

Frame actions will work wherever you place them, but if you've got fifty layers, it can get very easy to misplace your actions. If another designer ever takes over maintaining your site they'll be totally lost.

Professional Flash designers create a special top layer specifically for frame actions. That layer is usually named "Actions". The actions layer is a normal layer except that they only hold frame actions.

When you create an actions layer, you'll want to make sure it's the top layer. The top layer is easily findable, and items on the top layer will be the first read and acted upon by a users computer.



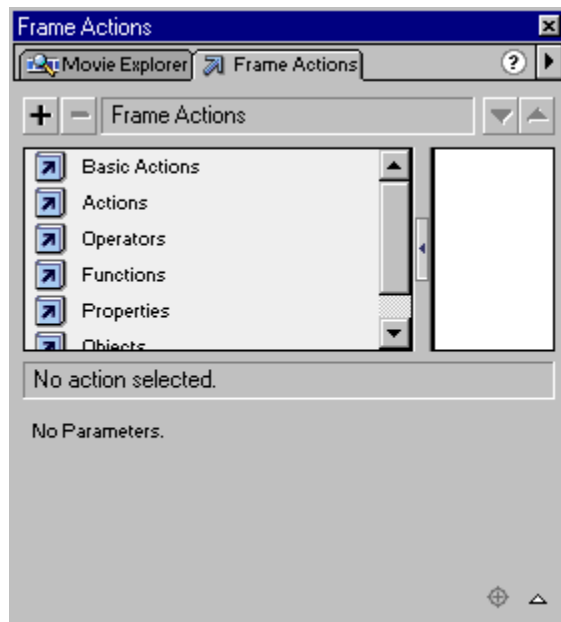
Adding a Frame Action

Adding a Frame action is easy. In a minute, we'll go through an exercise, but first real the basic steps required when adding a frame action.

1. Add or select a keyframe
2. Open the Actions Palette

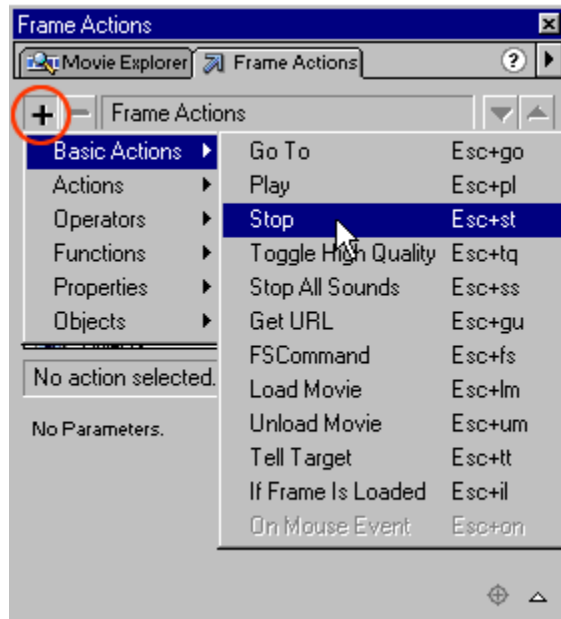
(WINDOW-> ACTION) or (CTRL/CMD + ALT + A) or (DOUBLE CLICK ON THE KEYFRAME)

Isn't is great to live in a free country where you get so many choices to open the Actions Palette?



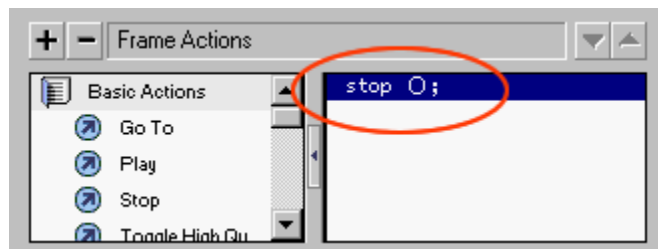
The Frame Actions Palette should open. Mostly, we'll use the **Basic Actions**. Most of the other actions are for use with a basic programming language called action scripting. We'll discuss action scripting later.

3. Open the Basic Actions By clicking on the plus sign.
You'll be able to see the actions.

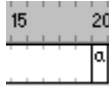


4. Choose an action.

You'll notice that coding for your action was added to the right side of the Frame Action Palette.



You may also notice that a small "a" appeared in your keyframe.



You can add more than one frame action to a frame.

Removing or Editing a Frame Action

You can remove an action by clicking its keyframe and deleting the action from the display window on the Action Panel.

Using Frame Actions

In this section, we'll go through an exercise to use the stop action to keep a movie from looping. The stop action can also be used to halt the movie while you're waiting for a user to make a choice about what button they want to click or what they're going to do next.

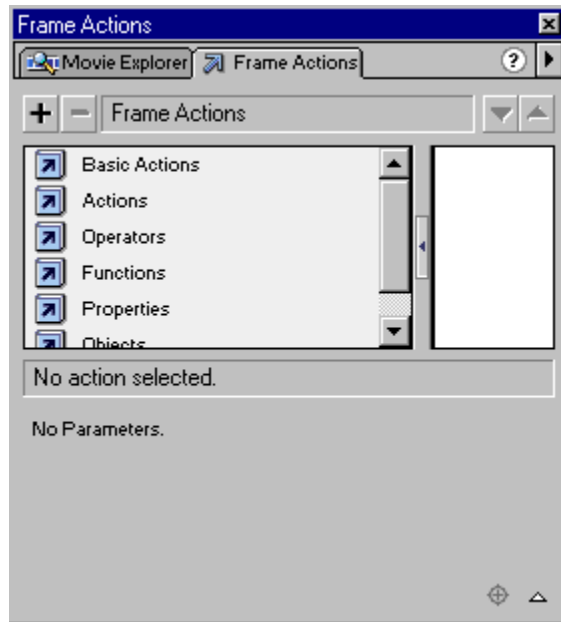
1. Build a small, twenty-frame movie. It doesn't have to be anything special. A symbol animating across the screen will do fine.
2. Hit **F12** to test the movie.
Notice that it loops.

Now we're going to place a stop action on the last frame of our twenty-frame movie. The stop action will keep halt the playback head when it reaches frame 20, thus keeping the movie from looping.

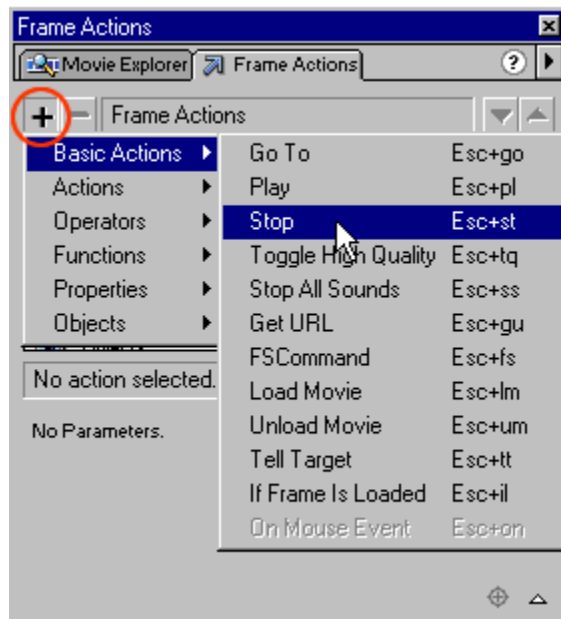
3. Add a new layer and name it **Actions**.
Remember that frame actions should get their own top layer.
4. On the Actions Layer, add a keyframe (F6) on frame 20



5. Open the Actions Palette
(WINDOW-> ACTION)

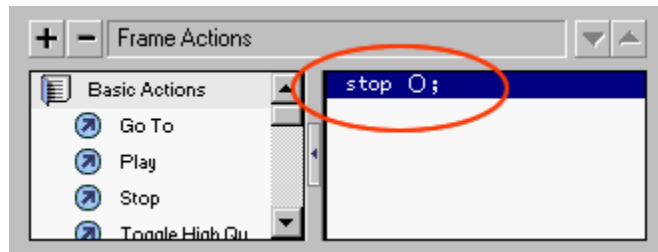


6. Open the Basic Actions By clicking on the plus sign.
You'll be able to see the actions.

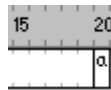


7. Choose **Stop**.

You'll notice that coding for your action was added to the right side of the Frame Action Palette.



You may also notice that a small "a" appeared in your keyframe.



8. Hit **F12** to test your movie.
It should stop at the end!

Actions Will Not Work During Normal Playback

You'll have to test the movie (F12) to see the action function.

If you want to, you can activate the action inside of Flash by clicking:

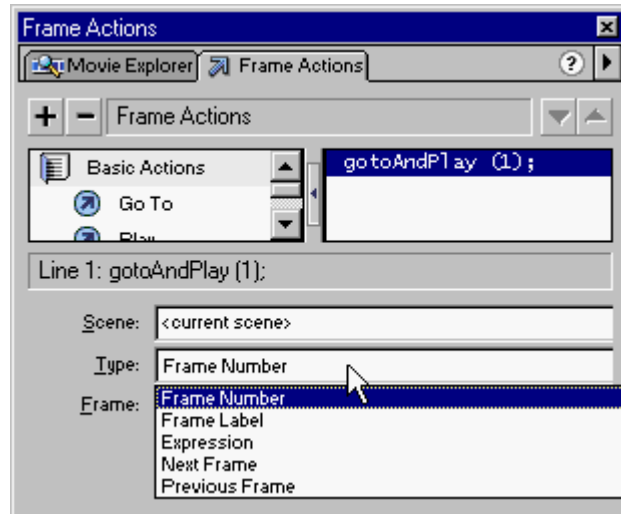
CONTROL-> ENABLE ACTIONS

Understanding Basic Actions

Most of the basic actions do exactly what they sound like they do. Remember that all frame actions are automatically triggered when the playback head reaches them. This section is intended to give you an understanding of what each action does. We will use most of these actions later on.

Go To

The Go To action instructs the playback head to jump to a certain frame, frame label, or scene.



The Go To action is normally set to play when it reaches its destination. Go To can be used for both Frame Actions and Button Actions. Later we will create interactive navigation using the Go To action.

Play

Play instructs the movie to play.

Play can be used for both Frame Actions and Button Actions.

Stop

Stop stops the movie. Stop is the most often used Frame Action. Without the stop action, your movies would need an infinite number of frames. Usually the movie will stop and wait for the user to click a button, which starts the movie again.

Stop can be used for both Frame Actions and Button Actions.

Toggle High Quality

If anti alias is used in a movie, toggle high quality will turn it on or off (depending on it's current state). Anti-alias is used by Flash to smoothly blend one color into another. It looks great, but is harder for slow computers to animate. You can use Toggle High Quality as a frame action to turn off anti alias before a particularly processor intensive animation segment. Chances are that if your

animation is fast moving that anti-alias wouldn't have made a difference in looks, anyway. Once the animation is over, you can use Toggle High Quality again to turn anti-alias back on.

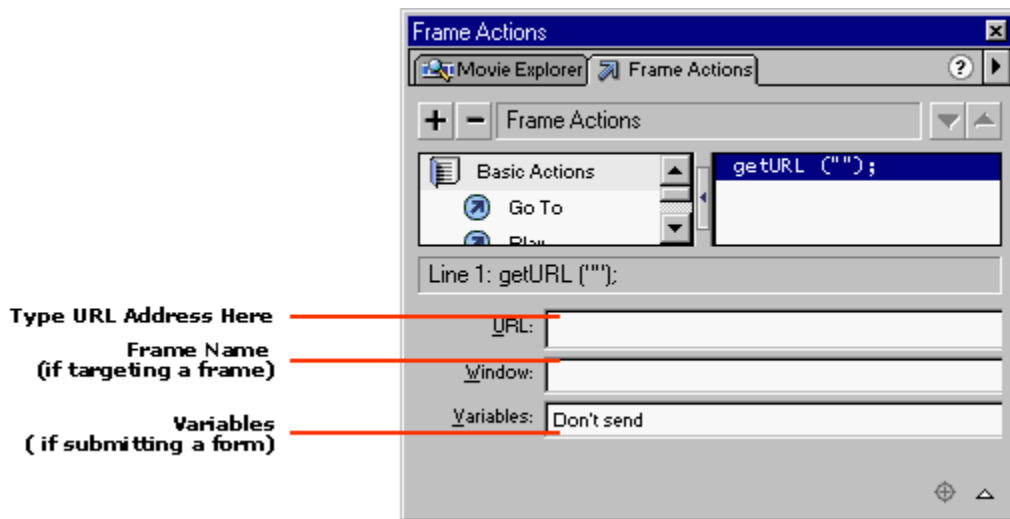
If you wanted to, you could assign Toggle High Quality to a button, but that would assume that your user knew what was best for them...

Stop All Sounds

Stops all sounds playing in the movie. Usable as a frame action to stop a looped or playing sound when your user navigates to a different part of the movie. Also usable on a button to allow a user to turn off sounds.

Get URL

Links the browser to a different URL. The address can be inside your site, or on the World Wide Web.



Get URL can be used for both Frame Actions and Button Actions.

FSCCommand

Flash can create a totally independent movie that runs without the help of a browser or a plug-in. The FSCCommand actions control the display properties of the stand-alone projector.

We will talk more about the FSCCommand when we come to publishing our Flash movies.

Load Movie

You can use Load Movie to load and play totally separate Flash movies inside of your current movie.

Load Movie allows you to break your work into segments. This can be useful in larger sites to allow users to navigate to different parts of the site, even if that part hasn't loaded into memory yet. You could also use Load Movie as a frame action to automatically load unrelated Flash Movies (like banner ads)

We will more fully explore the Load Movie action a little later.

Tell Target

The Tell Target Command is used to instruct movie clips to do something. It "tells" a specific "target" (movie clip) to play, stop, or perform any other action.

If Frame is Loaded

The If Frame is Loaded action is used to create a preloader. It checks to see if a specific frame is loaded. If the frame is not loaded yet, the playback head continues on it's way. Usually the playback head will next encounter a Go To frame action that jumps back before the "If Frame is Loaded" action. This loop continues until the specified frame is loaded, at which point the movie skips ahead of the jump frame.

On Mouse Event

The On Mouse Event action allows you to assign an action to a keyboard key or a mouse event (like right click)