# Flash and Video

*These instructions are specific to the Windows operating system, but Mac users can probably figure out where the slight differences occur.*

## FLV format

- The best format for the compressed video in Flash (best quality and smallest file size).
- Native format to Flash (FLV not used for any other software).
- Can be created from AVI, MOV, etc.
- To convert video to FLV, use Flash Professional edition, or compression software such as Sorenson Squeeze.

## Simple video in Flash

1. Open Flash — File menu > New — then select "Flash Document."
2. File menu > Import > Import to Stage
3. Find your video file and select it. Now it appears on the Stage.
4. In the Timeline, name the layer "video":
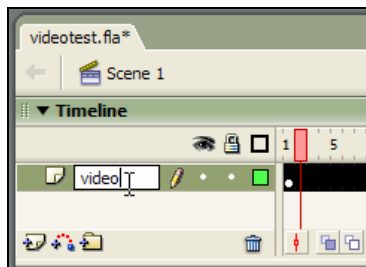


5. Create two new layers (click the icon indicated below with the cursor arrow), and <u>name them</u> "actions" and "buttons":
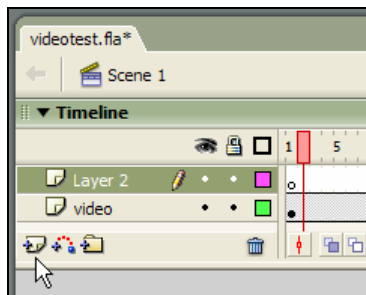


6. Open the Buttons panel: Window menu > Other Panels > Common Libraries > Buttons. This panel contains some ready-made buttons for you to use. You can find Stop and Play buttons inside the Circle Buttons folder.
7. Click on the layer you named "buttons" (Step 5).
8. Drag a Stop button and a Play button onto the Stage.
9. Save your file. Name this file "video1" (this will be important later).

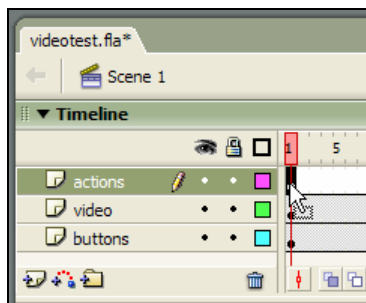## A bit of ActionScript for Stop and Play

1. Open the Actions panel (Window menu > Development Panels > Actions, or instead, press F9).
2. Click <u>only once</u> on your Play button. (If you accidentally click twice, press Ctrl-E to exit and return to normal editing mode.)
3. In the Actions panel, type these three lines of script *exactly*:

```
on (release) {
        play();
}
```

4. Click <u>only once</u> on your Stop button. (If you accidentally click twice, press Ctrl-E to exit and return to normal editing mode.)
5. In the Actions panel, type these three lines of script *exactly*:

```
on (release) {
        stop();
}
```

6. Save your file. (**Note:** You can script a button to do almost anything.)
7. Click on the layer you named "actions."
8. Select Frame 1 on the Timeline. To select it, click the frame <u>once</u>. A selected frame will be black.



9. Open the Actions panel (Window menu > Development Panels > Actions, or instead, press F9) if it is not already open.
10. In the Actions panel, type this script exactly:

```
stop();
```

This script on Frame 1 will cause the video to stop and wait on Frame 1 until the user clicks the Play button. If you want the video to begin playing immediately, then do not place this script on Frame 1.
11. If you want the video to stop playing on the <u>last</u> frame, then scroll in the Timeline until you see the end of all the frames.
12. Select the last frame on the Timeline. To select it, click the frame <u>once</u>. A selected frame will be black.
13. Make <u>sure</u> you have clicked on the layer you named "actions." (If you add something in the "video" layer, the video will not work.)
14. You MUST create a keyframe before you write any ActionScript. (You did not do it on Frame 1, because Frame 1 is always a keyframe in Flash.) To create a keyframe now, press F6 (or on the Modify menu > Timeline > Convert to Keyframes). In Flash, a keyframe has a circle or a dot on it.

15. Open the Actions panel (Window menu > Development Panels > Actions, or press F9) if it is not already open.
16. In the Actions panel, type this script exactly:

```
stop();
```

This script on the last frame will cause the video to stop there and wait—until the user clicks the Play button. If you do not have this script on the final frame, the video will <u>loop</u> back to Frame 1. (If Frame 1 has a `stop()` script, then it will stop there.)
17. Save your file. (**Note:** You can write script on any keyframe.)
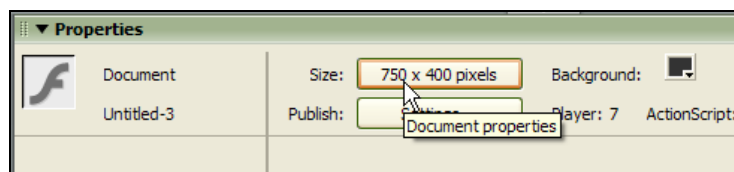
## Test Your Video

Now that your video file in Flash is complete, you must generate a SWF file to play on the Web. (The working file format is FLA.)
- You can edit an FLA in Flash.
- You cannot edit a SWF.
- The SWF is the file we put on the Web.
- The SWF file size is much, much smaller than the FLA file size.

1. To create and test a SWF, press Ctrl-Enter.
2. To see it at actual size, click the Maximize/Restore button in the Windows application window (upper right corner).

You can create all your video SWF files this way. Make sure you name them with different filenames. Filenames should have no spaces, punctuation, or capital letters in them.
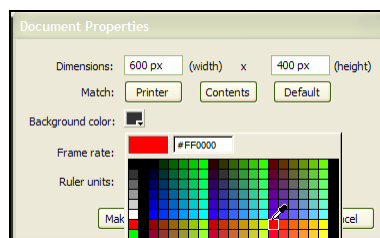
## Create a display interface for all your videos

1. Start a new file in Flash. File menu > New — select "Flash Document."
2. Change the Stage size to 600 pixels wide and 400 pixels high.



After you click the Size button in the Properties panel, a dialog box opens. In the dialog box, you can change width and height of the Flash movie.
3. Change the background color of the Stage.

4. Change the <u>frame rate</u> to HALF the frame rate of your video. For NTSC digital video, this is 15 fps. For PAL digital video, it is 12 fps.
5. Click OK to close the Document Properties dialog box.
6. Use the Text tool to create a headline and other text for your interface. The Text tool can be found in the Tools panel.
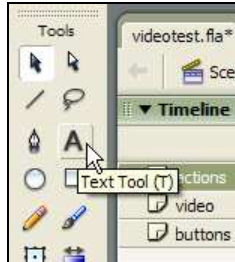


7. After you type some text, select it (click and drag). Then you can change its properties in the Properties panel.
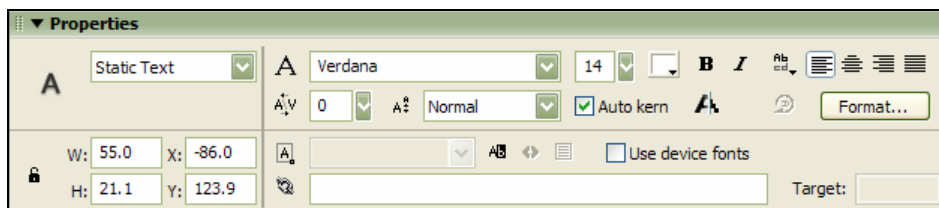


Make sure it says "Static Text" on the left side, as shown above. You can change the <u>Font Family</u> and <u>Font Size</u> and <u>Color</u>.
8. Save your file.


## Add a container for your video SWFs

Flash allows you to create a symbol called a "movie clip." The movie clip symbol is very powerful and can be used for *many* different purposes. <u>One</u> of those purposes is to load external SWFs. To load an external SWF, you need to create an <u>empty</u> movie clip.

1. Create a new layer in the Timeline and name it "clip."
2. Insert menu > New Symbol
   Select "Movie Clip" and name it *Empty Clip,* as shown below. Then click OK.



3. Now the new symbol is in your Library, but not on the Stage. You must drag it from the Library to the Stage. Open the Library panel (Window menu > Library). Find your *Empty Clip* and drag it to the Stage. Place it where you would like the <u>upper left corner</u> of the loaded SWF to be.

4. You must give an instance name to this instance of *Empty Clip* on the Stage. The reason is that ActionScript needs a name for loading the external SWF. Look at the illustration below to see the space where you type the instance name for the movie clip named *Empty Clip*.
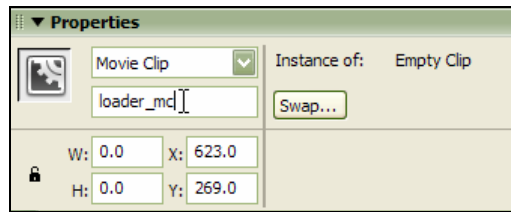


Make sure you type the instance name without any spaces. In this example, the instance name is:  loader_mc (it is important to use *this exact name,* because we will use it soon in some script, below).
5. Press the Tab key or Enter key after you type the instance name.
6. Save your file.
7. Make a new layer and name it "buttons."
8. You will use a different button for <u>each</u> video you want to play in this project. Begin with one button. Drag a button from the Buttons panel to the Stage. (You learned how to find some ready-made buttons on page 1 of this handout.) You will find some nice buttons for this in the Ovals folder in the Buttons panel.
9. Open the Actions panel (Window menu > Development Panels > Actions, or press F9).
10. Click <u>only once</u> on your first button. (If you accidentally click twice, press Ctrl-E to exit and return to normal editing mode.)
11. In the Actions panel, type these three lines of script exactly:

```
on (release) {
        loader_mc.loadMovie("video1.swf");

}
```

12. You should understand three things about this script:
    a. The first line and the last line are the same for any button in Flash.
    b. The phrase "loader_mc" is the instance name you gave to your *Empty Clip* in Step 4 above. (The name there must match this name.)
    c. The filename inside quotation marks must <u>match</u> the filename of the SWF you want to play. (So if you named your file "myvideo.swf," then use that filename instead.)
    **Note:** Make sure you use the name of the SWF file, <u>not</u> the FLV file, and <u>not</u> your original video file.
13. Save your file.
14. Test your Flash movie (Ctrl-Enter). When you click your new button, the video should open. Remember that the <u>upper left corner</u> of your video will be at the location of your *Empty Clip*. If you want to reposition your video, you must reposition the *Empty Clip*.

## Check the layout of your first SWF file

You may find that in your original SWF (the one with your video in it), everything is too far from the upper left corner. Open the FLA to fix this. You can select everything on the

Stage (use the Selection tool and drag a big box around everything to select it) and drag it closer to the upper left corner.

Then save the file, and press Ctrl-Enter to generate a new SWF.

## Generate an instant Web page

In Flash, with the display interface FLA open:

1. File menu > Publish Settings.
2. Make sure both "Flash" and "HTML" are checked in the Publish Settings dialog box.
3. Click the Publish button at the bottom of the dialog box.

Now you will find a new HTML file inside the folder with your other Flash files. The files for one project like this must stay together inside the same folder, or they will not work.

Double-click the new HTML file to open it in your Web browser.

If you upload these files to the Web, make sure all of the SWFs and the HTML file stay together in one folder.

## Add additional videos to your interface

If you want to add more videos to your second FLA, simply add more buttons. You can drag the same button out of the Library more than once (e.g., Oval buttons - blue). You will need to write script each time for a new button, and make sure you are using the filename of a different SWF video file on each button. Of course, you will need to build more SWFs too—see below.

## Create additional video SWFs

For each new video, follow the steps on pages 1–3 of this handout. You will:

1. Create an FLV using Sorenson Squeeze or some other software.
2. Start a new Flash Document (FLA).
3. Import the FLV to the new FLA.
4. Make Stop and Play buttons.
5. Place script on a frame to stop the movie (either Frame 1 or the final frame).
6. Save and test your new movie.

Make sure to name the new file with a different filename!

This concludes the Flash tutorial. For more information, see:
- http://flashjournalism.com/
- http://www.macromedia.com/
- http://www.sorensonmedia.com/
- http://www.on2.com/
- http://www.kaourantin.net/2005/08/quest-for-new-video-codec-in-flash-8.html