

Flash MX Project 7 – Firework Display

A multi-coloured firework explodes dramatically in the night sky

Includes: Symbols, movie clip instances, masking, sound

Extension: Button actions

Process

- **Create a firework base on Scene 1**
- **Create 2 movie clips –**
 - **'whoosh' – the motion from the firework into the night sky plus sound**
 - **'scatter' – the explosion of light (using masking) plus sound**
- **Create a single 'firework' movie clip from 'whoosh' and 'scatter'**
- **Create a 'display' clip using instances of 'firework' which start at different times, have different colours and are rotated differently**
- **Place 'display' behind the firework base on Scene 1 and test movie**

Extension

- **Add an invisible button to activate the firework**

1. Getting ready and creating the firework base

Open a new movie in Flash MX.

Create a black background by going to Modify menu > Document... and changing the Background Colour. Save the project.

Re-name Layer 1 as 'firework base' (double-click the layer name to change it) and press enter.

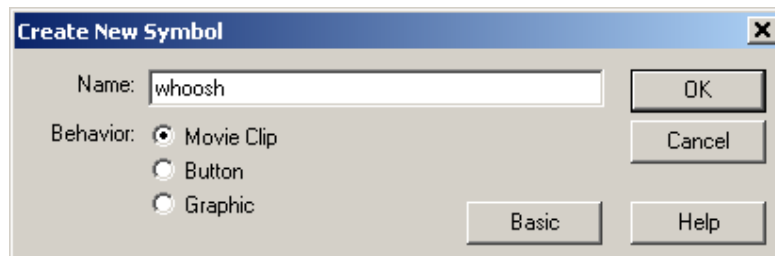
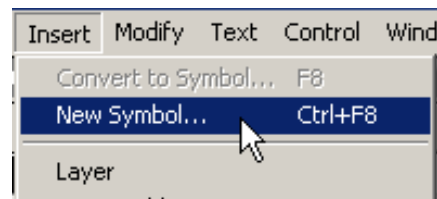


Click the Rectangle tool and choose a bright colour. Set the Stroke tool to 'No colour', so that there will be no border. Draw out a small rectangle at the bottom of the stage.

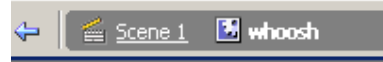
2. Creating the 'whoosh' movie clip

Go to the Insert menu > New Symbol...

Name it whoosh and make sure it is a movie clip. Click OK.



You are now in the 'whoosh' editing timeline. Name Layer 1 'ball'.



You are going to create a white fuzzy ball shape which will shoot up into the sky from the firework base. Insert menu > New Symbol... and name it 'ball', making it a graphic. To get an interesting effect, you are going to use the Colour Mixer panel at the top right of the screen.

If the panel is not there, go to the Window menu and click 'Color Mixer'.



Make sure that the Stroke is set to 'No colour' and choose Radial from the drop-down list.

If you cannot see the expanded version, as below, click the little arrow in the bottom right corner.

Set the colour to black in the colour picker to the left of the drop-down list. (We want a black and white ball shape)

Try for a similar effect to that below:

Choose an overall colour here

The gradient bar

This shows the effect you have achieved

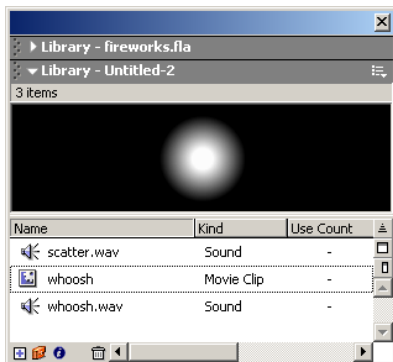
Click a pointer to change its colour from the palette below

Click on or below the gradient bar to add a pointer.

Drag a pointer down and off the gradient bar to remove it.

The brightness control

Now choose the Oval tool and drag out a small circle in the centre of the stage.



Return to the whoosh movie clip by double clicking on it in the Library. Click on frame 1 of the 'ball' layer and drag in the 'ball' graphic symbol.

Next you are going to add a sound file so that we can make the firework match the sound. You will find the files at:

www.sojomedia.com/flashresources

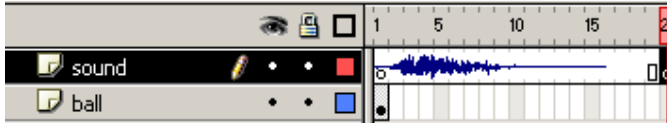
Click on the 'whoosh' link and save the file to your my Work folder. While you are at the site, save the 'scatter' sound file too.

Go to the File menu > Import to Library. Navigate to your sound files. Select both whoosh.wav and scatter.wav by holding down the Ctrl key. Click Open.

The sound files are now in the Library. Go to Window menu > Library. You should see them there, along with your 'whoosh' movie clip.

Add a new layer using the Insert Layer tool (+ sign) and name it 'sound'.

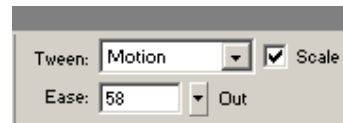
Select the 'sound' layer and drag the whoosh.wav from the Library onto the stage (it does not matter where). Now, on the 'sound' timeline, insert a keyframe (right click on the frame) at frame 20. You will see the sound file in the timeline. Notice



that the sound has finished before frame 20 is reached, which is what we want.

Next, insert a keyframe at frame 20 on the ball layer and move the ball vertically up the stage, using the Arrow tool. Finally Create Motion Tween (right click on frame 1).

Press Enter to test the 'whoosh' movie clip. You can experiment with the Easing effect to make the ball move faster at the beginning than at the end. Click on frame 1 and find the Ease slider in the Properties panel. You want to Ease Out rather than In (which would make it slower at the beginning).



At the moment the movie clip is looping so you need to put a stop on the final frame. Right click in frame 20 (ball layer) and choose Actions. Open Movie Control then double click 'stop'.

Save.

3. Creating the 'scatter' movie clip

Go to the Insert menu > New Symbol... Name it scatter and make sure it is a movie clip. Click OK. You are now in the 'scatter' movie clip timeline.

This effect is going to involve a mask layer on top of a moving background layer.

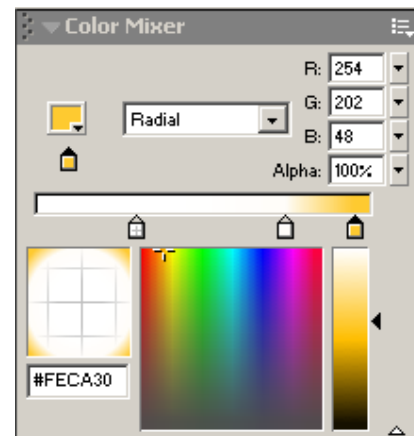
Rename Layer 1 as 'scatter'. Move to the Color Mixer and remove all but 2 of the pointers. Click on each in turn and set their colour to white with the colour picker. You should have a completely white gradient bar with 2 pointers.

Set the first pointer to Alpha 0%. (Click on it and use the slider)

Set the second pointer to white.

Add a third pointer near the end and set it to a bright orange colour.

To save this combination, you can click at the top right and choose 'Add Swatch'. The sample will be added to the Color Swatches panel.



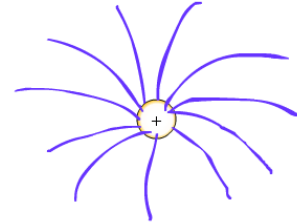
Set the Stroke tool to 'No Colour' or black. Click the first frame of the 'scatter' layer and draw a small circle in the centre of the stage. It should appear as concentric circles, with black in the middle.

Select the circle by clicking on frame 1. Convert the circle to a symbol – Graphic – and call it 'scatterbg'. This circle will be the background of the mask.

Insert a keyframe in frame 20 and use the scale tool to enlarge the circle to as big as it can go, so that part of it is off the screen. Finally click on the first frame and Create Motion Tween. Press Enter to view the effect. Gauge the size of the blank centre of scatterbg at frame 20 – your mask should aim to fit roughly inside that space.



Add a new layer and name it 'mask'. Click in frame 1, select the brush tool, any colour and the smallest brush size. Draw out curved lines from the small circle, like this, the smoother the better:



Now right click on the mask layer name and choose Mask.



The scatterbg layer is now hidden behind the mask. Press Enter to see the effect.

Note that both layers are now locked. You will have to unlock the layer if you want to change anything.

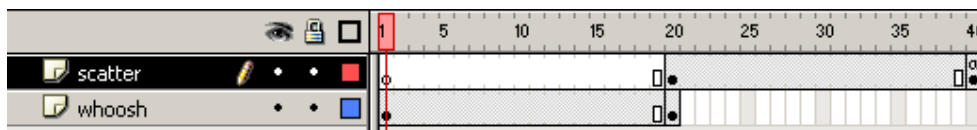
Next, add a new sound layer and drag in the 'scatter.wav' sound from the library as you did before. This sound is a loud bang so it should be placed on frame 1 and then a further keyframe inserted at frame 20.



Finally add a stop to frame 20 as you did before for the whoosh movie clip. Save.

4 Joining the 2 movie clips together to form the 'firework' movie clip

Go to the Insert menu > New Symbol... Name it firework and make sure it is a movie clip. Click OK. You are now in the 'firework' movie clip timeline.



Create layers as above. Drag movie clip 'whoosh' from the Library into frame 1 of the whoosh layer. Drag movie clip 'scatter' from the Library into frame 20 of the scatter layer. Each clip lasts 20 frames, so insert a frame at 20 on the whoosh layer and at 40 on the scatter layer. Don't forget to add a stop action to the final frame of the clip.

You will have to place this movie clip on to a Scene in order to test it.



Return to Scene 1. Add a new layer, name it firework and drag the firework movie clip onto the stage near the bottom. You are just testing, so it does not matter where. Then press Ctrl + Enter to set off the firework. Success? You should see the whoosh, followed by the scatter and then it should stop. If you are getting extra explosions, you have probably forgotten to put a stop on somewhere.

Remember that you can alter the original symbols if necessary. For example, if the ball is too large, open the ball graphic symbol by double clicking and scale it down.

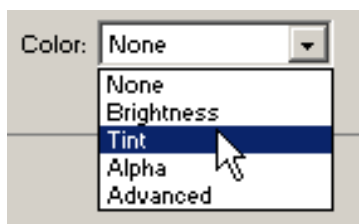
You have now created a firework, but we can make it a lot more exciting fairly easily.

5. Creating a more spectacular firework display using the 'firework' movie clip

Go to the Insert menu > New Symbol... Name it display and make sure it is a movie clip. Click OK. You are now in the 'display' movie clip timeline.

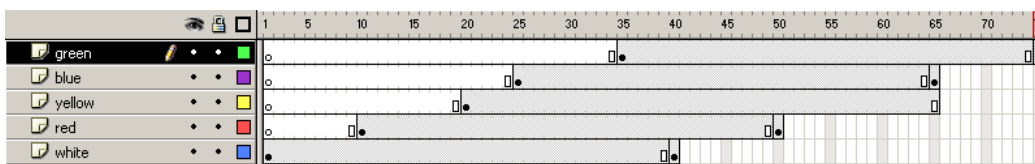
Create 5 layers, named white, red, blue, yellow, green.

Click in frame 1 of the 'white' layer. Drag in a firework movie clip and drop it onto the stage. Insert a frame at frame 40 (the firework movie clip is 40 frames long)



Click in frame 10 of the red layer. Drag in a firework clip as before and place it on top of the previous one. Look in the Properties panel and use the drop-down Color list to select Tint. By choosing a bright red, the firework will change from white to red! Now insert a frame at 50 (frame 10 plus the 40 frames required for the movie clip).

Do exactly the same for the other layers, changing the colour each time. You may wish to vary the timeline for a more realistic effect, eg moving the blue firework 5 frames along the timeline instead of 10 as before.

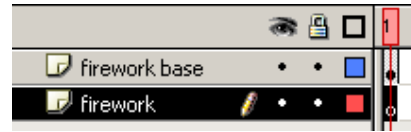


Don't forget to put a stop onto the final frame of the movie clip. Test it out by returning to Scene 1. Delete the firework movie clip from the stage and drag in the 'display' clip. Ctrl + Enter to view.

You can improve the effect by making the fireworks shoot out from slightly different angles. Return to the 'display' movie clip editing window. Click on the first frame of the green firework so that the green ball is selected. Click on the Scale tool. Rotate the ball slightly to left or right. *Note: If the registration point is not in the centre of the ball and it is not rotating properly, simply pick it up and drag it to the centre of the ball.* Ctrl + Enter to test out the effect.

Continue to alter the display clip and test until you are happy.

In order to make the firework will appear from behind the rectangle on the screen, you will have to move the 'firework' layer below the 'firework base' one.



6 Adding an invisible button to activate the firework

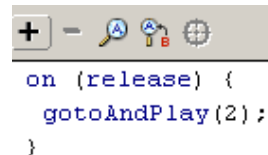


Add a new layer to Scene 1 and name it 'button'. Drag out a rectangle (with no stroke) which covers the firework base rectangle. The colour does not matter as it will be invisible. Select the rectangle and Convert to Symbol, call it button and make sure that it is a Button.

Look at the Properties window and choose Alpha from the Color drop-down list. Slide the Alpha scale to 0%. The button should now be invisible.

You need to move the display clip to frame 2, as frame 1 is just for the button and the firework base. Either double-click to select it or hold down shift and then click. Drag it to frame 2. Insert a frame on frame 2 of the 'firework base' layer so that the firework base remains in the animation.

Click on the button layer and then click the button itself on the stage. Use the Actions window to set the button to play frame 2 on release. *Look at Project 5 for more detail on how to do this.*

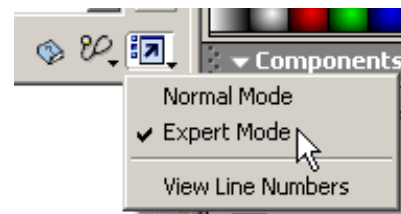


Place a stop action on frame 1 of the firework base layer so that the movie does not start until the button is pressed.

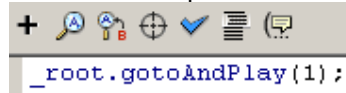
Place a stop action on frame 2 of the firework layer, otherwise the movie will not work.

Test the movie out with Ctrl + Enter. You will see that you cannot click the base to re-activate the firework for a second time. To solve this you will need to return to the 'display' movie clip. Instead of a simple stop action on the last frame, we need to type some code to tell the clip to return to the 'root' (Scene 1 in this case) and play frame 1 of that root.

Open the display movie clip. Select the final frame. Go into Expert Mode (top right of Actions panel).



Delete the stop action and type in:



Check the movie again with Ctrl + Enter.

Why not try some other fireworks using the same methods? Different fireworks could have different effects. Perhaps a Guide layer could be used eg to make a spiralling spark...? The sky's the limit!