

# Learning Flash CS4 Professional

Rich Shupe

HOCHSCHULE  
UECHTENSTEIN  
Bibliothek

**O'REILLY\***

Beijing • Cambridge • Farnham • Koln • Sebastopol -Taipei -Tokyo

# CONTENTS

Foreword.....	xv
Preface.....	xvii
<b>Chapter 1. Interface Essentials.....</b>	<b>i</b>
Introduction.....	1
Getting to Know the Flash CS4 Interface.....	2
Creating a New Document . . . •.....	2
Using the New Application Window.....	3
Understanding Panels..... •.....	6
Understanding the Timeline.....	11
Customizing Your Interface.....	13
Selecting and Editing a Workspace.....	13
Minimizing Panels.....	14
Grouping and Docking Panels.....	14
The Preferences Dialog.....	15
Customizing the Tools Panel.....	17
Keyboard Shortcuts.....	18
Project Progress.....	19
Creating Your First FLA.....	20
Importing Your First Asset.....	20
Creating Your First Shape.....	21
Testing Your File.....	22
Creating a Guide Layer..... •.....	22
Adding Utility Layers..... ∴.....	23
Saving Your File As a Template.....	23
The Project Continues.....	24

Chapter 2. Creating Graphics.....	25
Introduction.....	25
Drawing Modes.....	26
Merge Drawing Mode.....	26
Object Drawing Mode.....	27
Grouping and Breaking Apart.....	28
Drawing au Naturel.....	29
Drawing with Bezier Curves.....	29
Selecting.....	30
Using Fills and Strokes.....	30
Selecting Separately.....	30
Stroke Properties.....	31
Mining Properties with Tools.....	32
Working with Color.....	33
Pop-Up Palette.....	33
Swatches Panel.....	34
Color Panel.....	34
Kuler Panel.....	35
Using Context-Sensitive Tool Options.....	35
Paint Modes.....	35
Erase Modes.....	36
Transforming Assets.....	36
Free Transform Tool.....	36
Transform Panel.....	37
Gradient Transform Tool.....	37
Creating Static Text.....	38
Using the Spray Brush.....	39
Creating a Symbol.....	40
Project Progress.....	40
Creating a New File and Container Movie Clip.....	42
Adding Title Text and Underline.....	42
Adding Skills Text and Underline.....	44
Cascading Rectangles Primitives.....	45
Applying a Gradient to the Cascade.....	46
Adding Grime.....	47
The Project Continues.....	48

<b>Chapter 3. Using Symbols</b>	<b>49</b>
Introduction	49
Symbol Types	50
Button	50
Movie Clip	55
Graphic	57
Converting Symbol Types	57
Creating and Editing Symbols	59
Convert to Symbol and Edit in Place	59
Insert Symbol and Edit Selected	59
Reusing Symbols	60
Using the DecoTool	61
Vine Fill	61
Grid Fill	62
Symmetry Brush	63
Project Progress	64
Creating the Sound Controller	65
Adding ActionScript-Controlled Animation	69
The Project Continues	71

<b>Chapter 4. Importing Graphics</b>	<b>73</b>
Introduction	73
Importing Graphics	73
Importing Nonnative Formats	74
Importing from SWF	75
Importing from Adobe Photoshop	75
Importing from Adobe Illustrator	79
importing from Other Native Formats	82
Importing an Image Sequence	83
Working with Bitmaps	83
Publish Settings	84
Bitmap Properties	84
Tracing a Bitmap	85
Using a Bitmap As a Tile	87
Project Progress	87
Importing the Interface Shell	87
Importing the Background	90
Importing the Logo	91
Importing the Lab Screen	92
The Project Continues	94

Chapter 5. Animation.....	95
Introduction ... •.....	95
Knowing the Timeline.....	96
Layers.....	96
Frames.....	98
Frame Editing Controls.....	100
Creating Frame-by-Frame Animations.....	100
Editing Multiple Frames.....	101
Copying and Pasting Frames.....	101
Swap Symbols.....	102
Creating a Shape Tween.....	103
Shape Hints.....	105
Adding a Layer Mask.....	106
Creating a Motion Tween.....	107
Editing the Motion Path.....	108
Drawing a Motion Guide.....	109
Color Effects.....	112
Using Motion Presets.....	113
Copying Motion.....	114
Using the Motion Editor Panel.....	114
Adding Property Keyframes in the Motion Editor.....	116
Editing Property Curves in the Motion Editor.....	116
Easing.....	117
Adding Easing with the Motion Editor.....	118
Creating a Custom Easing Preset.....	119
Creating a Classic Tween.....	122
Adding Easing with the Properties Panel.....	122
Custom Easing.....	123
Classic Motion Guide.....	124
Project Progress.....	125
Inner Section Timeline Structure.....	126
Project-Wide Timeline Structure.....	130
Button Script.....	135
Testing Your Work.....	136
The Project Continues.....	136

<b>Chapter 6.</b>	<b>ActionScript Basics</b>	<b>137</b>
	Introduction	137
	How Much ActionScript Is Covered in This Book?	139
	Introducing ActionScript Interface Elements	140
	Actions Panel	140
	Output Panel	142
	Basic Script Grammar	143
	Introducing Properties	143
	Introducing Methods	143
	Introducing Events and Event Listeners	144
	Basic Syntax Issues	144
	Dot Syntax	144
	Case Sensitivity	145
	Execution Order	146
	Use of the Semicolon	146
	Evaluating an Expression	146
	Absolute Versus Relative Addresses	146
	Comments	147
	Checking and Formatting Your Scripts	148
	Variables and Data Types	150
	Casting Data Types	151
	Operators	152
	Scope and this	153
	Functions	153
	Arguments	154
	Return Values	154
	Conditionals	155
	if	155
	switch	157
	Loops	158
	for Loop	158
	while Loop	159
	A Loop Caveat	160
	Arrays	160
	Multidimensional Arrays	161
	Associative Arrays and Objects	162
	Properties	163
	Methods	165

Events .....	165
Event Listeners.....	166
Using Mouse Events to Control Properties and Methods.....	168
Frame Events.....	170
Removing Event Listeners.....	171
The Display List .....	172
Adding and Removing Children.....	172
Using addChildOT.....	173
Adding Symbol Instances to the Display List from the Library.....	173
Using addChildAtQ.....	175
Removing Objects from the Display List and from Memory.....	176
Finding Children by Position and by Name.....	177
Casting a Display Object.....	178
Timeline Control.....	179
Frame Labels.....	181
Frame Rate.....	183
Project Progress.....	184
Chapter 3:The Deco Tool.....	184
Chapter 5: The Portfolio Project Navigation.....	185
The Project Continues.....	186

## Chapter 7. Filters and Blend Modes.....187

Introduction.....	187
Bitmap Caching.....	187
The Properties Panel.....	188
The ActionScript Method.....	188
Filters.....	189
Filter Inventory.....	189
The Properties Panel.....	191
The ActionScript.....	191
Filters in Practice.....	192
Blend Modes.....	194
Blend Mode Inventory.....	194
The Properties Panel.....	196
ActionScript.....	197
Blend Modes in Practice.....	197
Alpha Masks.....	197
The Timeline Limitation.....	198
The Blend Mode Solutions.....	198
The ActionScript Solution.....	198

Project Progress .....	199
Confirming the Imported Blend Mode .....	199
Filters .....	199
The Project Continues .....	202

## Chapter 8. 3D.....203

Introduction .....	203
Moving Objects in 3D Space.....	204
Translating 3D Objects.....	205
Rotating 3D Objects.....	205
Transforming Multiple Objects in 3D Space.....	207
Changing the 3D Center Point .....	208
Global Versus Local 3D Transformations.....	208
Global 3D Environment Settings.....	209
Vanishing Point .....	209
Perspective Angle.....	211
Taking Advantage of Global 3D Settings with Movie Clip Containers.....	212
Animating 3D Properties.....	213
Depth Management.....	215
Parallax Scrolling.....	216
Using ActionScript to Change 3D Properties.....	217
Practical Demonstrations... ,•.....	217
Project Progress.....	219
Adding Depth for Parallax Scrolling.....	220
Animating the Gallery.....	221
Adding ActionScript Control.....	222
Adding a Layer Mask.....	223
Adding the Gallery to the Main Project File.....	224
The Project Continues.....	224

## Chapter 9. Components.....225

Introduction.....	225
Adding and Configuring Components.....	226
Functionality Without Programming.....	227
Scrolling Text.....	227
Adding a Pinch of ActionScript.....	228
Triggering Actions with Buttons.....	228
Working Hand-in-Hand with Code.....	229
Navigating with Menus.....	229
Skimming UI Components.....	233

Project Progress.....	233
Loading an External Graphic at Runtime.....	233
Display Details of a Larger Image.....	234
The Project Continues.....	236

## Chapter 10. Inverse Kinematics..... 237

Introduction.....	237
Anatomy of an Armature.....	238
Using the Bone Tool with Movie Clips.....	239
Authortime Mode.....	240
Tweening Armatures.....	241
Armature Easing.....	242
Runtime Mode.....	243
Joint Rotation and Translation.....	244
Constraining Joint Rotation.....	244
Enabling Joint Translation.....	247
Transforming Movie Clips and Armatures.....	248
Using the Bone Tool with Shapes.....	248
Using the Bind Tool.....	250
Adjusting Points.....	250
Basic ActionScript.....	251
Supporting Runtime Armature Use Beyond Frame 1..	251
Posing an Armature with Code.....	252
Project Progress.....	254
The Project Continues.....	259

## Chapter 11. Text..... 261

Introduction.....	261
Components.....	262
Using the Component Inspector Panel to Configure Text Components.....	262
Using ActionScript to Configure Text Components...	263
Configuring Text Fields with the Flash Interface.....	265
Dynamic Text.....	265
InputText.....	268
Static Text.....	269
Resizing Text Fields.....	270
Configuring Text Fields with ActionScript.....	270
Dynamic Text.....	270
InputText.....	271
Formatting Text.....	271
Fonts.....	272
ActionScript.....	275

Using HTML .....	277
Using CSS.....	278
Loading Text .....	280
Using InDesign and XFS.....	282
Project Progress.....	283
Cosmetic Assets.....	283
Dynamic Text Field.....	284
InputText Field.....	285
The Project Continues.....	286

## Chapter 12. Audio.....287

Introduction.....	287
Supported File Formats.....	287
Importing Audio.....	288
External Audio Playback.....	288
Compression.....	289
Compressing External Sounds.....	290
Internal Asset-Specific Sound Properties.....	291
Internal File-Wide Publish Settings.....	292
Timeline Use.....	293
Sync Types.....	294
Repeating and Looping.....	295
Editing a Sound.....	295
Setting Volume and Pan.....	295
Using an External Editor.....	297
ActionScript Use.....	297
Playing a Library Sound.....	297
Playing an External Sound.....	298
Setting Volume and Pan.....	299
Visualizing Volume.....	299
Project Progress.....	300
Scripting the Sound Controller.....	300
The Project Continues.....	302

## Chapter 13. Video.....303

Introduction.....	303
Video Formats.....	304
Encoding Software.....	305
On2 Flix.....	305
Sorenson Squeeze.....	306
Adobe.Media Encoder.....	307
Playing Video with the FLVPlayback Component.....	315

Full-Screen Video . . . . .	317
Captioning Video . . . . .	318
Streaming Versus Progressive Download . . . . .	319
Embedding Videos in a SWF . . . . .	320
When to Embed . . . . .	320
When Not to Embed . . . . .	322
Project Progress . . . . .	323
Adding Video . . . . .	323
The Project Continues . . . . .	324
<b>Chapter 14. Publishing and Deploying . . . . .</b>	<b>325</b>
Introduction . . . . .	325
Using a Preloader . . . . .	325
The Assets . . . . .	326
The ActionScript . . . . .	327
Testing Your Preloader . . . . .	328
Project Progress Preloader . . . . .	329
Distributing External Assets . . . . .	329
Deploying for Web Browsers . . . . .	330
Publish Settings: Format . . . . .	330
Publish Settings: Flash . . . . .	331
Publish Settings: HTML . . . . .	334
Deployment . . . . .	337
Project Progress HTML . . . . .	337
Deploying for AIR . . . . .	339
Publish Settings . . . . .	340
Deployment . . . . .	346
Project Progress AIR . . . . .	348
What's Next? . . . . .	350
<b>Index . . . . .</b>	<b>351</b>