



**Phillip Kerman**

# { ActionScripting in FLASH™ }

**SAMS**

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# ActionScripting in Flash

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International Standard Book Number: 0-672-32078-9

Library of Congress Catalog Card Number: 00-108995

Printed in the United States of America

First Printing: April 2001

04 03 02 01            4 3 2 1

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# Overview

## **Part I Foundation 1**

- { Foundation } Introduction 3
- 1 Flash Basics 7
- 2 What's New in Flash 5 25
- 3 The Programmer's Approach 37
- 4 Basic Programming in Flash 47
- 5 Programming Structures 73
- 6 Debugging 113
- 7 The Movie Clip Object 141
- 8 Functions 161
- 9 Selecting Text, Trapping Keys, and Manipulating Strings 185
- 10 Arrays 211
- 11 Objects 237
- 12 Homemade Objects 261
- 13 Smart Clips 283
- 14 Interfacing with External Data 303

## **Part II Workshop 351**

- { Workshop } Introduction 353

### **Part IIA Beginning Workshops 357**

- 1 Ensuring That Users Have the Flash 5 Player 359
- 2 Faking Video 367
- 3 Creating Custom Cursors 375
- 4 Creating a Horizontal Slider 389
- 5 Building a Slide Show 403
- 6 Mapping 413
- 7 Working with Odd-Shaped Clickable Areas 423
- 8 Adapting Built-in Smart Clips 431

**Part IIB Intermediate Workshops 439**

- 9 Creating a Currency-Exchange Calculator 441
- 10 Creating a ToolTip Smart Clip 461
- 11 Creating a Digital Timer 473
- 12 Creating an Analog Timer 481
- 13 Creating a Countdown Timer 489
- 14 Using Math to Create a Circular Slider 497
- 15 Developing Time-Based Animations 505
- 16 Creating a Multistate Button 511

**Part IIC Advanced Workshops 521**

- 17 Offline Production 523
- 18 Creating a Dynamic Slide Presentation 529
- 19 Creating JavaScript Cookies 543
- 20 Writing JavaScript Inter-Movie Communications 551
- 21 Fixing Broken Scripts 559

**Part III Appendices 573**

- A Equivalents 575
- B Making Flash Extensions for the Macromedia Exchange Web Site 583
- Index 589

# Contents

## Part I Foundation 1

### { Foundation } Introduction 3

#### 1 Flash Basics 7

Timeline Hierarchy . . . . .	8
Implications for Animation and Filesize . . . . .	8
Implications for Programming . . . . .	10
Targeting . . . . .	10
Script Locations . . . . .	14
Always Movie Clips . . . . .	17
Coordinate System . . . . .	18
Tricks of the Trade . . . . .	20
Invisible Buttons . . . . .	20
Empty Movie Clips . . . . .	21
Empty Layers and Keyframes. . . . .	23
Summary. . . . .	24

#### 2 What's New in Flash 5 25

Advanced Features Making Programming Easy. . . . .	25
Clip Events . . . . .	26
Smart Clips . . . . .	26
External Scripts . . . . .	28
Custom Functions . . . . .	29
Objects. . . . .	29
HTML Text . . . . .	30
Previous Knowledge Worth Forgetting . . . . .	31
Deprecated ActionScript. . . . .	31
Non-Deprecated ActionScripts That Should Be . . . . .	33
Old Tricks That Are Old News . . . . .	34
Summary. . . . .	36

#### 3 The Programmer's Approach 37

Specification . . . . .	37
Prototyping . . . . .	38
Hard Wiring . . . . .	40
Pseudo-Code . . . . .	40
Good Style . . . . .	41
Less Is More . . . . .	41
Comments . . . . .	42
Magic Numbers, Constants, and Variables . . . . .	44
Repeated Code. . . . .	45

Code Data Separation . . . . .	45
Summary. . . . .	46
<b>4 Basic Programming in Flash 47</b>	
Terminology, Special Characters, and Formatting . . . . .	47
Events . . . . .	48
Results of Events . . . . .	49
Terms. . . . .	50
Special Characters and Formatting . . . . .	56
Data Types and Variables. . . . .	58
Variables' Names and Values . . . . .	58
String and Number Data Types. . . . .	58
Other Data Types . . . . .	61
Using Variables . . . . .	65
Assigning and Accessing Variables. . . . .	65
Comparing and Passing Values. . . . .	66
Scope and Variable Collision . . . . .	68
Dot Syntax . . . . .	70
Summary. . . . .	71
<b>5 Programming Structures 73</b>	
Statements, Expressions, and Operators. . . . .	73
Writing Expressions . . . . .	74
Using Operators in Expressions . . . . .	77
Types of Statements . . . . .	84
Built-in Statements. . . . .	87
Simple Objects in Statements . . . . .	89
Using the Math Object . . . . .	89
Using the Number Object. . . . .	94
Conditional and Loop Statements . . . . .	96
Conditional Statements: <code>if</code> , <code>if else</code> , <code>if else if</code> . . . . .	97
Loop Statements: <code>for</code> , <code>for in</code> . . . . .	101
<code>while</code> . . . . .	105
Applied Expression Writing . . . . .	109
Summary. . . . .	112
<b>6 Debugging 113</b>	
General Approaches to a Bug-Free Life. . . . .	114
Finding and Defining Bugs. . . . .	114
Fixing Bugs . . . . .	119
Preventing Bugs. . . . .	120
Using the Debugger. . . . .	122
Viewing and Setting Properties and Variables . . . . .	122
Watching Variables. . . . .	125

Remote Debugging . . . . .	126
Strategies of Debugging . . . . .	128
Summary . . . . .	138
<b>7 The Movie Clip Object 141</b>	
Properties of Clips . . . . .	142
You Can Get Them All, But You Can't Set Them All . . . . .	143
Anonymous Targeting . . . . .	144
Variables in Clips (or "Homemade Properties") . . . . .	145
Methods of Clips . . . . .	147
Referencing Clips and Targeting . . . . .	151
Relative and Absolute Referencing . . . . .	151
Dynamic Referencing . . . . .	155
Summary . . . . .	158
<b>8 Functions 161</b>	
How to Use Functions . . . . .	162
Using Built-in Functions . . . . .	162
Using Homemade Functions . . . . .	164
Creating Homemade Functions . . . . .	166
Basics . . . . .	166
Functions as Subroutines . . . . .	167
Making Functions That Accept Parameters . . . . .	170
Making Functions That Return Values . . . . .	173
Using Functions as Methods . . . . .	175
Local Variables . . . . .	177
Applying Functions to Previous Knowledge . . . . .	179
Review Built-in Functions . . . . .	180
Things to Remember . . . . .	181
Summary . . . . .	184
<b>9 Selecting Text, Trapping Keys, and Manipulating Strings 185</b>	
String Object Form . . . . .	186
Esoteric String Object Details . . . . .	187
Methods of the String Object Explored . . . . .	189
Zero-Based System . . . . .	189
Extracting Portions of Strings . . . . .	190
Extracting Characters, Changing Case, and Searching . . . . .	191
String Object Methods Applied . . . . .	192
Using HTML Text . . . . .	196
Selection Object . . . . .	198
Getting and Setting Focus . . . . .	200
Setting and Getting Selections . . . . .	201



Key Object . . . . .	202
Using the Key Object . . . . .	202
Key Object Examples . . . . .	205
Summary . . . . .	210
<b>10 Arrays 211</b>	
Array Overview . . . . .	212
Array Creation and Manipulation . . . . .	215
Creating and Populating Arrays . . . . .	215
Accessing Array Contents . . . . .	217
Array Object Methods . . . . .	222
Associative Arrays . . . . .	232
Summary . . . . .	235
<b>11 Objects 237</b>	
Formal Rules of Objects . . . . .	238
Attach Sound . . . . .	239
Sound Object Basics . . . . .	239
Advanced Sound Controls . . . . .	241
Controlling Multiple Sounds . . . . .	243
Color . . . . .	245
Simple Coloring . . . . .	245
Using RGB Values . . . . .	246
Using the Color Transform Method . . . . .	248
Date . . . . .	250
Instantiating a Date . . . . .	251
Manipulating Dates . . . . .	251
Attach Movie Clip . . . . .	257
Summary . . . . .	259
<b>12 Homemade Objects 261</b>	
Basic Objects . . . . .	262
Using Constructor Function . . . . .	262
Making Methods . . . . .	264
Inheritance . . . . .	269
Practical Example of Homemade Objects . . . . .	273
Summary . . . . .	281
<b>13 Smart Clips 283</b>	
Standard Smart Clips . . . . .	284
Making Smart Clips . . . . .	285
Advanced Applications for Standard Smart Clips . . . . .	292
Replacing the Clip Parameters Panel with Custom UIs . . . . .	294
Designing Custom UIs . . . . .	295
Building Custom UIs . . . . .	296
Summary . . . . .	300

**14 Interfacing with External Data 303**

- External Scripts . . . . . 304
- External Data Files . . . . . 306
  - Waiting for Variables to Load . . . . . 307
  - Data File Format . . . . . 309
  - Examples of Using External Data Files . . . . . 310
- Server Scripts . . . . . 314
- XML . . . . . 318
- JavaScript . . . . . 327
  - Quick and Dirty Method. . . . . 328
  - JavaScript Talking to Flash. . . . . 329
  - Targeting the Flash Object . . . . . 333
  - Workarounds . . . . . 335
- Director and Authorware . . . . . 338
  - Flash in Authorware . . . . . 339
  - Flash in Director . . . . . 344
- Summary . . . . . 349

**Part II Workshop 351**

**{Workshop} Introduction 353**

**Part IIA Beginning Workshops 357**

- 1 Ensuring That Users Have the Flash 5 Player 359**
- 2 Faking Video 367**
- 3 Creating Custom Cursors 375**
- 4 Creating a Horizontal Slider 389**
  - Creating a Quick and Dirty Slider . . . . . 389
  - Converting the Slider into a Smart Clip . . . . . 394
  - Summary . . . . . 401
- 5 Building a Slide Show 403**
- 6 Mapping 413**
- 7 Working with Odd-Shaped Clickable Areas 423**
- 8 Adapting Built-in Smart Clips 431**

**Part IIB Intermediate Workshops 439**

- 9 Creating a Currency-Exchange Calculator 441**
- 10 Creating a ToolTip Smart Clip 461**

<b>11</b>	<b>Creating a Digital Timer</b>	<b>473</b>
<b>12</b>	<b>Creating an Analog Timer</b>	<b>481</b>
<b>13</b>	<b>Creating a Countdown Timer</b>	<b>489</b>
<b>14</b>	<b>Using Math to Create a Circular Slider</b>	<b>497</b>
<b>15</b>	<b>Developing Time-Based Animations</b>	<b>505</b>
<b>16</b>	<b>Creating a Multistate Button</b>	<b>511</b>
<b>Part IIC</b>	<b>Advanced Workshops</b>	<b>521</b>
<b>17</b>	<b>Offline Production</b>	<b>523</b>
<b>18</b>	<b>Creating a Dynamic Slide Presentation</b>	<b>529</b>
<b>19</b>	<b>Creating JavaScript Cookies</b>	<b>543</b>
<b>20</b>	<b>Writing JavaScript Inter-Movie Communications</b>	<b>551</b>
<b>21</b>	<b>Fixing Broken Scripts</b>	<b>559</b>
	Card Flip . . . . .	560
	Hint . . . . .	560
	Solution . . . . .	561
	Card Snap . . . . .	561
	Hint . . . . .	561
	Solution . . . . .	562
	Circle Move . . . . .	562
	Hint . . . . .	562
	Solution . . . . .	563
	Multiple Choice . . . . .	563
	Hint . . . . .	564
	Solution . . . . .	564
	Rotating Box . . . . .	564
	Hint . . . . .	564
	Solution . . . . .	565
	Word Float . . . . .	565
	Hint . . . . .	566
	Solution . . . . .	566
	Yellow Box . . . . .	566
	Hint . . . . .	567
	Solution . . . . .	567
	Click and Hold . . . . .	567
	Hint . . . . .	568
	Solution . . . . .	568

Objects .....	569
Hint .....	569
Solution .....	570
Move Multiple .....	570
Hint .....	571
Solution .....	571
Summary .....	571

**Part III Appendices 573**

**A Equivalents 575**

Alternatives to Deprecated Code .....	575
tellTarget() .....	575
call() .....	576
ifFrameLoaded() .....	576
toggleHighQuality() .....	576
eval() .....	577
Logical Operators (and, or, and not) .....	577
String Comparison Operators (eq, ge, gt, le, lt, and ne) .....	577
String Functions .....	577
int() .....	578
random() .....	578
No More Funkiness .....	578
Two-Frame “Updater” Movie Clips .....	579
Drag Invisible Movie Clip to Ascertain Mouse Position .....	579
Pseudo Arrays .....	580
URL-Encoded Data Instead of XML-Structured .....	580
The Oldest Ones in the Book .....	580
You Can’t Set <code>_currentframe</code> .....	580
You Can Jump Only to Integer Frame Numbers .....	580
There’s a Big Difference Between = and == .....	580
For-Loops Use Semicolons, Not Commas .....	581

**B Making Flash Extensions for the Macromedia Exchange**

**Web Site 583**

How It Works .....	583
The MXI File Format .....	585

**Index 589**

# Foreword

The upgrade to Flash 5 turned an already compelling medium (Flash animations) into something truly amazing. The inclusion of a new version of the ActionScript language means that Flash 5 can do almost anything. If you just organize your goals and translate them to the language of a programmer, you can make Flash do precisely what you imagined. But therein lies the problem: Translating goals into a programming language is not easy for everyone.

This book targets the reader who can assemble a basic Flash movie and who knows what he or she wants to achieve. I'll help you divide your goal into individual tasks that can then be translated into ActionScript. Naturally, this will involve teaching you how to "program" (and even think like a programmer). This book is not, however, a general programming book; *every* topic is related to and applied to Flash. Naturally, if you are already an experienced programmer, you might find parts of this book to be a review. But for you programmers, I'll show you how to apply your programming knowledge to make Flash perform. All the programming skill in the world (whether I teach it to you or you bring it with you) won't help you if you can't apply it to Flash.

This book definitely does not shy away from advanced topics. But it isn't an exhaustive reference to every detail in the ActionScript language either. The truth is that there are countless other resources for advanced programming topics. That's not what this book is about. It's about giving you the skills so that you can apply any idea you have to Flash. When you're equipped with the knowledge I cover, you'll be able to meet any challenge. It might involve researching an esoteric formula for physics or applying a unique math calculation. If that means you have to research a specific topic, this book will give you the skills to figure out how to apply it to Flash.

I started this book having just finished *Sams Teach Yourself Macromedia Flash 5 in 24 Hours*. Although this isn't a continuation of that book, there isn't much repeated content either. I said earlier that you'll need to be able to assemble a Flash movie (for example, I'm not going to teach you how to draw in Flash). The first chapter, "Flash Basics," goes over the prerequisites. It's important that you come with this basic knowledge. Don't worry, I won't go so fast that you can't keep up, but everyone should start at this base level.

The book is organized in two parts. The foundation chapters are like a textbook. Plenty of examples are interspersed, but you won't need to follow along with Flash running. (I suspect, however, that you'll often want to try things out when inspired.) The workshop chapters are all hands-on tutorials. It's a chance to apply what you learned in the foundation part. If you prefer, you can jump right into the workshops as references are made to the foundations when further explanation might be helpful. You'll find the workshops to be quite useful. In some of them, I even guide you down the wrong path so that we can discuss the solution that follows. I find that this is more true-to-life than some tutorials that seem to prove only that it's *possible* to achieve a particular result with very few steps. Real life is often frustrating and perhaps the simulated reality of these workshops will help you avoid frustration when you go on your own.

One last note before we get rolling. Flash 5 was such a change from Flash 4 that I chose to cover *only* Flash 5. It turns out that there are a few ancillary mentions of Flash 4 in this book, including a good part of Appendix A, "Equivalents." By and large, however, this book is for Flash 5 only. The first workshop provides information about ensuring that your users have the correct Flash player. Naturally, you'll be shown how to upgrade those users so that they can see your Flash 5 creations.

Now get ready to transform yourself from a Flash user to an ActionScripter!

# About the Author

**Phillip Kerman** is an independent programmer, teacher, and writer specializing in Macromedia products. His degree in Imaging and Photographic Technology from the Rochester Institute of Technology was earned back when “multimedia” had a different meaning than today. One of Phillip’s internships, for example, involved programming multiple slide projector presentations with dissolves synchronized to a sound track—the multimedia of the 1980s. In 1993, he found Macromedia Authorware a natural fit for his interest and skills. After getting his start at The Human Element, Inc., he moved back to Portland, Oregon to work on his own.

Phillip has transitioned his expertise from Authorware to Director, and now, to Flash. Over seven years, he has had to adapt to a total of 13 version upgrades—Flash 5 being the most significant of them all! In addition to retooling and building his own skills, Phillip finds teaching the biggest challenge. He has trained and made presentations around the world, in such exotic locations as Reykjavik, Iceland; Melbourne, Australia; Amsterdam, Holland; and McAlester, Oklahoma. He wrote *Sams Teach Yourself Macromedia Flash 5 in 24 Hours* (that is the title, not how long it took to write). His writing has also appeared in such publications as *Macworld*, *Macromedia User Journal*, and his self-published *The Phillip Newsletter* ([www.teleport.com/~phillip/newsletter](http://www.teleport.com/~phillip/newsletter)).

In addition to showing others how to create multimedia, Phillip has had plenty of opportunities to get his hands dirty in programming. Last century, Phillip programmed the all-Flash Web site [www.m-three.com](http://www.m-three.com) for Paris France Inc. This site was included in both *Communication Arts Interactive Design Annual* and the *British Design & Art Direction Annual* in 2000. The latest version of the M3 site won the navigation category at the London Flash Film Festival.

Feel free to email Phillip at [f1ash5@onemain.com](mailto:f1ash5@onemain.com).

# Dedication

*Dedicated to my entire family including our newest member, Savannah. And the canine Kerman, Max, who deserved more walks than he got during the writing of this book.*

# Acknowledgments

The hardest part of writing a book is attempting to acknowledge all those who helped, but knowing that you'll fail to mention everyone. Here is my attempt to acknowledge everyone.

First, the people at Sams Publishing. You'll find a list of the key players in the credits column on the copyright page, but even they would acknowledge that others helped them. After seeing my first book become a reality last year (with the same team), I realized that even if I could write a perfect book on my own (which, of course I can't), it would never get printed because there's so much work involved in preparing the files for the printer. Although I can't say I know how every publisher works, I can say that Sams is professional, responsive, and fun. Of particular note, Kate Small made the book flow. Everything seemed to make sense when I wrote it, but after Kate reorganized parts, it made much more sense. Lynn Baus used her Flash experience both to ensure that technical details were correct and exercises could be performed, as well as to suggest countless additional facts that were included in the text. Copy editors are doubly valuable as they both eliminate errors that would otherwise make the book difficult to read and they also make me a better writer! Reviewing their edits is like a free English class. The production team led by Carol Bowers turns the manuscripts into a real book. Obviously, there are many others who work behind the scenes for whom I am grateful.

Macromedia continues to amaze me with its forthcoming and approachable style. The company is totally involved in email lists and Flash community sites. The folks who seem to go way beyond the call of duty by providing help to all include Brad Bechtel, John Dowdell, Gary Grossman, Erica Norton, Peter



Santangeli, and Eric J. Wittman. Others who provided specific help for this book include Jeremy Clark and Matt Wobensmith.

I subscribe to many e-mail lists, but four in particular have been most helpful—those run by Darrel Plant, Branden Hall, Jon Warren Lentz, and Robert Reinhardt. There are countless instances when a thread on one of these lists has helped me.

One last acknowledgment for some authors of other Flash books. I'm proud of this book, but it contains only my style of communication. For some different perspectives on Flash, check out books containing contributions by the following authors:

Joshua Davis, Brendan Dawes, David J. Emberton, Bruce Epstein, Derek Franklin, Garo Green, Branden Hall, Andreas Heim, Jon Warren Lentz, Colin Moock, Darrel Plant, Robert Reinhardt, Crissy Rey, Gary Rosenzweig, Glenn Thomas, Phillip Torrone, Bill Turner, and Samuel Wan.

I can't vouch for books I haven't reviewed, but I can say these folks know their stuff. They've also provided direct help on various Flash related matters to myself and others for years.

# Tell Us What You Think!

As the reader of this book, *you* are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

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# {Part I }

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## Foundation

- 1 Flash Basics
- 2 What's New in Flash 5
- 3 The Programmer's Approach
- 4 Basic Programming in Flash
- 5 Programming Structures
- 6 Assigning Values
- 7 The Movie Clip Object
- 8 Functions
- 9 Selecting Text, Trapping Keys, and Manipulating Strings
- 10 Arrays
- 11 Objects
- 12 Homemade Objects
- 13 Smart Clips
- 14 Interfacing with External Data