

Contents

РГЕТАСЕ	9
Introduction	11
Some history	12
Printing pictures	15
Enter lithography and photography	17
■ Milestones in the history of production technology for graphic designers	20
Getting started: studio equipment	21
Design Trailblazers Saul Bass	24
Text & type	27
Type	28
Some history	28
The language of type	34
How type is measured	37
Width and spacing	38
Ems and ens 39; Kerning and tracking 39; Leading 41; Justification and hyphenation 42	
Text	44
Correcting text proofs	47
Casting off and copy fitting	48
Design Trailblazers Zuzana Licko	50
House style	52
Choosing and recognizing typefaces Serif or sons serif? 52	52
■ Helvetica	54
Earmarks 55	
Legibility and readability	59
Typesetting systems	61
Hand lettering and calligraphy	62
"Strike-on" or "cold-metal" setting	63
Hot metal: hand and machine setting	65
Phototypesetting	67
Computer systems	68
More choices of typefaces 68; Quality and flexibility of digital type 68;	
Type manipulation and custom font design 70;	
PostScript and Truetype 73	
ОрепТуре 76	7.0
Summary Hot motel as lettermore 75's Cold motel as strike on 75's Photocotting 77's	76
Hot metal or letterpress 76; Cold metal or strike-on 76; Photosetting 77; Computer setting 77	
Design Trailblazers Frik Sniekermann	78

Illustration	81
line and tone	82
Screens and halftones	84
Color	90
Flat color	90
Duotones	92
Full-color reproduction	92
Color separations	96
Cultural implications of color	97
Design Trailblazers Chris Ware	98
Designing for disability access	100
Choosing and preparing illustrations	101
Briefing an illustrator or photographer	101
Scaling and cropping	102
Desktop scanning	105
Drawing and painting by computer	105
Copyright	109
ummary	111
Computers and their peripherals	115
Computers and their peripherals Hardware and Software	115
lardware and Software Software The processor	116
lardware and Software Software The processor Memory: ROM and RAM	116 117 118
l ardware and Software Software The processor	116 117 118 119
Software and Software Software The processor Memory: ROM and RAM Frame Buffers 120	116 117 118 119
ardware and Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays	116 117
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras	116 117 118 119 120 123
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices	116 117 118 119 120 123 125
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters	116 117 118 119 120 123
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters Hardcopy: other technologies 133	116 117 118 119 120 123 125 126
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters	116 117 118 119 120 123 125 126 128
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters Hardcopy: other technologies 133 Choosing a System	116 117 118 119 120 123 125 126 128 130
Software Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters Hardcopy: other technologies 133 Choosing a System Turnkey systems	116 117 118 119 120 123 125 126 128 130
Software The processor Memory: ROM and RAM Frame Buffers 120 Displays Input devices Digital cameras Design Trailblazers Paul Rand Scanners Output devices: laser printers and imagesetters Hardcopy: other technologies 133 Choosing a System Turnkey systems Selecting, upgrading, and networking the system	116 117 118 119 120 123 125 126 128 130

143
144
146
148
151
152
154
154
157
158
159
160
162
162
164
167
168
171
173
174
176
177
178
180
182
185
185
186
187
188
189
190
197
200
202
203
203 204
203

Digital print	207
Digital print technologies	208
Printing processes: the pros and cons	209
Offset litho 209; Gravure 209	
■ Emerging print technologies	210
Flexography 211; Screenprinting 211; Letterpress 211; Collotype 211;	
Xerography 211; Digital print 211	
Things that can go wrong	211
Finishing	214
How does a designer specify finishing effects?	217
Folding and binding	217
Summary	221
Design Trailblazers Malcolm Garrett	222
Digital Design	225
What is the internet?	226
How to get started	227
Email	228
Decoding internet addresses	228
lewsgroups	229
Chatting on the net	230
Netiquette	230
Acronyms and smileys	230
Ftp: uploading and downloading	231
Norld Wide Web (WWW)	231
Designing for the World Wide Web	232
Do designers really have to learn HTML? 233; Writing your own	
home page 234; Optional extras 240	
Standard and non-standard HTML	240
Graphics formats: GIFs and JPEGs	243
Testing your pages	243
Publicizing your pages	244
Human factors in website design	245
Designing for the small screen	245
Summary	247
Design Trailblazers Tomato	248
Appendix: Standard Sizes for Paper, Books, and Envelopes	250
Glossary	252
Abbreviations and Acronyms	261
Further Reading	262
Web Site Resources	263
Magazines and Journals	264
Organizations	265
Index	
	266
Picture Credits	272

Preface



When the first edition of this book was published, way back in 1992, computers were rarely seen in graphic design studios—there were some expensive turnkey systems around, mainly used for producing national newspapers—but the predominant means of layout was the mechanical. Now computers are not only ubiquitous in every area of the design-to-production cycle, but it is hard to imagine how books and magazines were ever produced without them.

In prepress too, that once analog world of lenses, photographic emulsions, and baths of chemicals has gone digital. Direct computer-to-plate, and even plateless print are becoming more familiar. Xerography and the newer digital print technologies are being used to produce customized short-run jobs on demand. And all the paraphernalia of prepress, currently the province of the repro service bureau, is being brought inhouse.

In the past few years a completely new medium (to designers at least) has shot to prominence—the internet. There was no mention of the internet in the first edition of this book. In the second edition it was deemed important enough to deserve its own chapter, now renamed Digital Design. Through the internet, designers are able to break the bounds of traditional print and incorporate dynamic online resources that could only have been dreamt about when the first edition was put to bed. Despite the rise of the internet, print is still a large part of our lives. According to Printing Industries of America, Inc, printing is still one of the largest manufacturing industries in the USA—employing over a million people in almost 44,000 establishments, and selling over \$157 billion of products in 2003. The industry is dominated by small- and medium-sized businesses, most employing fewer than twenty employees-along with their computers.

This completely revised fourth edition addresses the exciting changes that have taken place since the first three editions of *Production for Graphic Designers* were published. Pre-digital methods of production are still important to know, but have been repositioned into a more appropriate historical and pedagogical context. A development in the second edition was to include, in-between chapters, inspirational profiles of important practicing designers along with portfolios of their work. This coverage has been expanded in the fourth edition.

I should like to thank the friends and colleagues who helped in the production of the first edition, particularly my editor Ursula Sadie at Calmann & King, picture researcher Elizabeth Loving, designer Richard Foenander, Chris Myers at Bookworm Typesetting, and Rosemary Bradley, who commissioned me to write it. Grateful thanks are also offered (almost alphabetically) to Aldus UK (now

Adobe) for a copy of FreeHand (now back with Macromedia) with which to produce the line drawings; Joty Barker of Face to Face; the staff of Brighton Polytechnic (now the University of Brighton) Library at St Peter's House; Jane Brotchie for access to her HP DeskWriter; Roger Burg of Monotype Typography; John Christopher of Strong Silent Type; Eleanor Curtis, formerly at the Royal College of Art, London; Bob and Sue Harrington of RH Design; Nikki Morton and Ruth Jindal for their help in locating and retrieving books; Stan Noble of Towers Noble Design; William Owen; Kanwal Sharma of Lewis Sharma Design; Martin Shovel for the use of his StyleWriter; and Elvis the goldfish RIP for his or her calming influence.

For the second edition I should like to thank my editor Damian Thompson at Calmann & King and designer Cara Gallardo at Area for making my text and picture ideas a joy to read. Cara also art directed the cover and chapter opening spreads, and I should also like to acknowledge and thank: photographer Toby McFarlan Pond; London Graphic Centre for the use of the keyboard introducing Chapter 2; Peripheral Vision, London, for the circuit board (Chapter 5) and cable (Chapter 7); The Pale Green Press, London, for the printing inks introducing Chapter 6. I would also like to mention Philip and Dave Clark of Brighton Print Centre for tirelessly explaining to me the finer points of practical printing; and finally to Lesley Ripley Greenfield, Editorial Director, College & Fine Art at Calmann & King for commissioning me to write this update.

For the third edition I should like to thank my editor Kara Hattersley-Smith at Calmann & King, whose encouragement and support contributed far more to that new edition than can be guessed from this small credit, Cara Gallardo at Area for once again designing my words and pictures into a pleasing and accessible whole, Michelle Clair at Tenazas Design, Kelli Daley at David Carson Design, Tim Kong at Tomato, Kevin Smith at Research Studios, Jane Spencer for lending me her precious books, and my colleagues at the Brighton Illustrators Group for providing images.

For this fourth edition, I should like to thank my editor Nell Webb for her many useful suggestions and eye for detail, Andrew Lindesay at the Golden Cockerel Press for his clear and logical redesign, Frost Design for yet another daring cover design, and picture researcher Amanda Russell for her patience in tracking down the images. Special mention should go to Bolaji Williams at Bruce Mau Design, Steven Bateman at Pentagram and my friends and colleagues in the high-tech City of Brighton and Hove.