FLAAR Reports

Nicholas Hellmuth
March 2010

Books and Publications on Color Management & ICC Color Profiles

Book Reviews and Annotated List

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Introduction

Many of the titles here were already in the FLAAR Reports, as references for Nicholas Hellmuth’s glossary. However we noticed that most training programs on color management failed to include even a basic list of suggested reading. And virtually no training program offered a totally comprehensive bibliography.

So in October 2003 we decided to add this new title to the color management series: “Recommended Reading.” We have updated this several times, most recently in January 2006, and October 2008.

In the process of writing this bibliography we also were surprised to notice that most books on color management, excellent as they are in their own right, totally lack references and usually fail to even include a list of recommended reading.

FLAAR feels this is something that a university professor does well – tracking down publications, articles, and references, and annotating them. The annotations indicate which titles are worth your special attention. The value of Hellmuth’s annotations is that we do not sell books, nor are we otherwise beholden to any particular publisher. This is a polite way of saying that our reviews can be honest because we are not being paid by anyone.

Books specifically on Color Management

Many of the book reviews included here come from a FLAAR report which is part of the digital photography course which FLAAR offered. However for this stand-alone report in the color management series we updated that by adding new titles, overall made it comprehensive, and then edited the content so it might be easier to read. We hope you like the results.

The best book on color management to date is called “Real World Color Management,” Peachpit Press (all their books are great). Authors are Bruce Fraser, Chris Murphy, and Fred Bunting. Buy this book immediately. Just be sure you have the second edition and set aside a rainy weekend to actually read it, and then additional time to practice with the tools and software.
ADAMS, Richard M, II and Joshua B. WEISBERG

216 Pages

Discusses color management in general. Has only three pages on color management for digital photography. Not otherwise oriented either to digital photography nor to inkjet printing. Nonetheless, well written, nicely illustrated, and lots of facts on specific products (hardware and software for color management). The first chapter is almost identical to that of the other GATF book on color management but after that they diverge. I read them both the same day and other than the first chapter I learned something new in each of these books.

Includes a scanner software test chart.

Since many of the color management products mentioned in 1998 are no longer available or obsolete, and as some of the companies have gone out of business, merged, or sort of are not on top anymore, look at the 2nd edition, which is also already eight years out of date, or nine, if you figure it was probably written a year before it could be published. Fortunately

Contents:
- Introduction
- Color Theory
- Closed-Loop Color
- Color Measurement
- Color Characterization
- Color Management Profiling Software
- Integrating Color Management
- Visual Color Evaluation
- Color Management Tools for Users
- Appendices
- Glossary
- Index

ADAMS, Richard M, II and Joshua B. WEISBERG

We do not yet have the update at hand, but will check it out. Most updates of this nature are a considerable improvement over earlier versions.

260 Pages

Contents:
- Introduction
- Color Theory
- Closed-Loop Color
- Color Measurement
- Color Characterization
- Color Management Profiling Software
Dr Richard Adams launched his latest book, entitled Color Management Handbook: A Practical Guide. The text provides explanations and procedures for practical color management. Despite the relative maturity of the topic, color still ranks as one of the main issues in digital camera capture and managing soft and hard copy proofing. This latest title is an invaluable guide to photographers, printers, end-users and everybody who wants to control and manage color. The text reviews the latest products and procedures — if you are into color you need this book! The text is published by PIA/GATF and is co-authored with Abhay Sharma and Joseph Suffeleto.

Color Management Handbook: A Practical Guide grants you valuable insight into the subject through a comprehensive range of topics:

**Contents:**

- Color appreciation
- Color measurement
- Color management for input devices
- Color management for monitors
- Color management for printers and presses
- Profiling applications
- Color utilities
- Color management for packaging
- Color-managed workflows
- Non-ICC applications
- Visual color evaluation
AGFA

An excellent booklet for a general introduction. Worth tracking down, even used. The illustrations are among the best available.

32 pages, naturally all in color.

Contents:
- The Digital Reproduction Workflow
- What is Light?
- How do we Perceive Color
- How do Colors Mix?
- Color Models
- Why is Color Management?
- Input Limitations
- Bit Depth
- Characterizing Input Devices
- Monitor Limitations
- Characterizing Monitors
- Output Device Limitations
- Characterizing Output Devices
- Color Separation
- Principles of Digital Proofing
- Color Management Today
- Glossary

BERNS, Roy S.

304 Pages

Contents:
- Defining Color
- Describing Color
- Measuring Color
- Measuring Color Quality
- Colorants
- Producing Colors
- Back to Principles
- Mathematics of Color Technology
- Bibliography
- Index
BOHNEN, Roy and Sean O’LEARY  

77 page booklet by knowledgeable authors. Worth acquiring, however realize that many illustrations are identical to those in the free booklet by X-Rite. Similarly among various GATF publications on color science, often the same material is in several books. This is natural because the basic material on color science has not changed much over the years. When a good illustration is already available, makes sense to use it.

First appendix nicely lists software products, but is two generations (versions) out of date (circa 1999 or 2000; for example, still on Gretag version 3; current version is 4.1).

You should be able to obtain this from Chromaticity, rbohnen@chromaticity.com, 616 874-2779 ext 124. Not free but worth its price as long as you don’t expect a book which explains step by step what you have to do.

Contents:
- Introduction to Color Theory
- Additive and subtractive color spaces
- Introduction to color range
- Device-independent color spaces
- How color is built
- Principles of calibration
- Image capture devices
- Color look-up tables
- International Color Consortium: Introduction to profiles
- Profiles and the workflow
- RIP’s (raster Image Processors)
- Appendix

No glossary. No index. No bibliography nor any other list of references nor where else to find info.

BOURGES, Jean  

This 159 page book was sold by Agfa Educational Publishing (which I would be surprised if it still exists). I do not include this book because it is on color management, but it definitely is on color and very well presented. Another thing I like about this book is that it is reader-friendly. So if you simply want to learn about color in an easy-going manner, get this book at a local library and enjoy it.

Contents:
- Basic of Bourges
- Choose One
- Black is the third dimension
- Warm or cool
- Opposing Colors
- Four-Color Harmony
- Postscript
This is the kind of book you would expect a German or Swiss color scientist to write. Despite that, it is actually quite readable. Sometimes at tradeshows you can wrangle a copy from the GretagMacbeth booth. If you buy one of their nice products you ought to try to get the book thrown in as a bonus.

Surprising for a German professor: no bibliography, no index. Being a European book don’t expect such handy reader-friendly features such as a glossary. Nonetheless this is essential reading and worth tracking down.

Contents:

- Why Color Management?
  - An Introduction to Colorimetry
    - The perception of color
    - Additive and subtractive color mixing
    - Color temperature and light source
    - The development of the CIE chromaticity diagram
    - The development of visually equidistant CIE color models
    - Color collections
    - The difference between color measurement devices
  - Components of a Color Management System
    - Color space conversion
    - The four ICC rendering intents
    - What is an ICC color profile?
    - Developing ICC device profiles
    - The mechanisms of an ICC profile
    - The ICC standard
    - Other ICC compatible color profile formats
    - The color management module
    - The architecture of Apple ColorSync
    - LogoSync and other ICC color management modules
    - Ideal ICC compatible applications
  - Calibration and profiling an input and output systems
    - Calibration of input and output systems
    - Monitor calibration
    - Calibration of digital color printing systems
    - Standardization of conventional prepress printing
    - Processing measurement data
    - Measurement conditions
    - Measurement geometry
    - Influencing the color target
    - Processing the measured data
    - Correcting print variations in individual prints
- Correcting print variations within a print run
- Updating the print run measurement data over an extended period of time
- Generating a master measurement file for different presses
- Correcting gradation variations
- Profiling input and output systems
- Profiling monitors
- Profiling scanners and digital cameras
- Output profiling
- Separation in a color management system

- Implementing color management today
  - Color management for Macintosh
  - Color management for Windows
  - Color management in PostScript
  - Data formats, PostScript, and BatchMatcher PS
  - Color management in the OPI server
  - Media independent image databases
  - PDF and color management
  - Color management in the World Wide Web

- Color management in Photoshop and QuarkXPress
  - Adobe Photoshop 4.0.x
  - Adobe Photoshop 5.x
  - ICC compatible plug-ins for Adobe Photoshop
  - QuarkXPress 3.3.x
  - QuarkXPress 4.0.x

DALY, Tim

160 Pages

Contents:
- Why color control is essential
- Hardware tools
- Software tools
- Managing color
- Proofing, preview and prediction
- Enhancing color
- Changing color
- Color recipes
- Color techniques
- Special techniques
- Troubleshooting and resources

Nicely presented book but what is disconcerting is that up front they feature an outdated Kodak medium format back. Kodak is long ago no longer an entity in professional digital photography. In general, the tone is low-end to mid-range: definitely not high-end pro. Pros use 33 to 39 megapixels in 2006 (okay, these were not available in 2004 when a book published in 2005 was written). But 129 MB files were available from a BetterLight already many years ago; even back in the 1990’s files from a large format tri-linear scanning camera were substantial. So the author’s comments on how much power you need are all the more consumer-oriented and pro-sumer. This is logical, since there are more people in this situation to buy a book. A book just directed to BetterLight owners would not be commercially realistic.
Has an index, and glossary, but no bibliography, all the more surprising for a person at a university.

If printers are to be mentioned, them metamerism, gloss differential, bronzing and all that need to be included. These are seemingly not in his vocabulary, nor are any printers besides Epson.

Everyone seems to have problems deciding whether manipulation color in Adobe Photoshop is related to color management. The answer is NO. You need two separate books: color manipulation, and color management. There is not really a relationship between the both (at least in theory).

As I continued to read I noticed this was really a book on tweaking color in Adobe Photoshop. It is not a book on color management whatsoever. This is a book for those who don’t ever intend to use ICC color profiles, but then why bother to profile your scanner or profile your monitor?

I was very disappointed.

It is typical that book publishers pump up titles or sub-titles with catchy keywords, but in more than 50% of the books that claim to be on color management, they are really on color balance which is totally and absolutely different.

Tim Daly is a perfectly good photographer; has years of experience. But this book has zero to do with color management other than how to calibrate your monitor. The title claims it is on digital printing: sorry, the book has effectively nothing to do with color printing other than a few snapshots of low-end desktop printers.

Amphoto Books is one of the best publishers of books on photography, so hopefully they will do better next time.

**DREW, John T. and MEYER, Sarah.**

224 pages

**Contents:**
- Introduction
- The Terminology of Color
- Basic Color Theories
- Additive Color Theory
- Subtractive Color Theory
- 3-D Color Theory
- The Creation of Color Wheels
- The Spectral Range of Color Wheel
- Color Legibility
- Readability
- Contrast
- Warm and Cool Matrix
- Utilizing Field Colors with Text Type
- Color Calibration and Overprint
Books and Publications on Color Management

- Quality of Color Proofs
- Color Prepress and Printing
- Dot Gain
- Undercolor Removal
- Pixel, Lines, and Dots per Inch
- Bit Depth Range and Raw Formatting
- Printer Order
- Color Correcting Images for Press
- Type Reversals and Knockouts with Solids, Tints, and Shades
- Behavioral Effects of Color
- Micro Color Responses
- Macro Color Associations
- Acknowledgments
- Contributors
- Index

FIELD, Gary G.

Has a lengthy glossary, albeit technical and not illustrated. However most of the concepts are illustrated in the book itself. If you prefer an illustrated glossary, most Agfa publications are actually in a glossary format – the whole Agfa booklet is a combination of text with illustrations but practically in glossary format.

As you would expect for a book written by a color scientist, the GATF book has an extensive bibliography. The publishers also provide an ample index.

Books by GATFPress are written by color scientists for offset and related traditional press methods. Although these monographs do not include inkjet printing technology, the basic principals of color are the same. If you are a printer operator in any professional setting, it would be useful to peruse the various GATF publications. Find them at a library and then order the specific titles you feel you would like to keep. That is because out of the approximately four GATF titles, they naturally all tend to cover the same basic core material relative to offset printing color management.

It would be helpful for this class of color specialist to address the problems of inkjet color management. So far, the friendly folks at Chromaticity come the closest.

Contents:
- Preface
- History of Color Reproduction
- Color Theory
- Color Systems
- Color Perception Fundamentals
- Complex Image Color Perception
- Color Measurement and Specification
- Paper and Ink
Books and Publications on Color Management

- Color Printing
- Printing Systems Analysis
- Color Originals
- Color Reproduction Objectives and Strategies
- Color Separation
- Color Proofing
- Color Communication
- Color Quality Strategy
- Appendix A: Symbols and Abbreviations
- Appendix B: Color-Related Standards and Specifications
- Appendix C: Color Difference Equations
- Appendix D: Equations for Color Reproduction
- Appendix E: Sources of Standards and Related Technical Information
- Glossary
- References

FIELD, Gary G.

Contents:
- Color Reproduction Objectives
- High-Fidelity Color
- Gray (Color) Balance
- Color Saturation
- Color Halftoning
- High-Resolution Color
- Color Image Sharpness
- Fifty Years of Color Scanning
- Digital Color
- Predicting Color Reproduction
- Color Printing Quality

FIELD, Gary G.

Contents:
- Color Perception basics
- Complex Image Color Perception
- Color Measurement
- Color Reproduction Principles
- Color Imaging Progress
- Digital Color Systems
- Paper and Ink
- Color Printing
Books and Publications on Color Management

- Printing System Calibration
- Color Reproduction Objectives and Strategies
- Color Separation
- Color Correction
- Color Proofing
- Color Specification Techniques
- Color Communication
- Appendices
- Glossary
- References
- Index

FRASER, Bruce, MURPHY, Chris, and Fred BUNTING

An excellent book which describes everything. Nice long descriptions, with plenty of illustrations and examples. Some chapters are veritable glossaries in themselves. However this is not a practical guide for the lost soul who just needs to know how to do linearization and custom profiles to get his/her colors right in the final inkjet print. 533 pages are simply too much for the average mortal. I have considerable interest in learning color management, but I fell by the wayside after about 350 pages. Not that the book is bad, but that it explains too much detail about everything under the sun related to color management. In the process it neglects to walk the lost soul through what they have to do out in the print shop, starting at a print with an angry artist demanding to know why their inspirational colors in the original oil painting did not reproduce in the inkjet (giclee) print.

Includes an ample index, a useful 20 page glossary, but no bibliography. That’s right, not a single solitary list of books, as though nothing else on the planet had ever been written on color management. Not any kind of references nor where else to find info. Within the text, books by other authors are cited from time to time. However a book on a technical subject with no bibliography is almost a contradiction of terms.

Still, we recommend this book as among the best available so far. The authors definitely know the material inside out.

Just be sure you get the second edition and then set aside a rainy weekend to actually read it, and then additional time to practice with the tools and software.

FRASER, Bruce, MURPHY, Chris, and Fred BUNTING

Sub-titled: Industrial-strength production techniques. Indeed the front cover says it all: “Techniques for accurate, consistent color reproduction.” The book combines that kind of help along with “Expert advice on building, evaluating, and editing ICC profiles.”

Our evaluation copy of the book just arrived. It is 582 pages!
The same day we also got our copy of Dan Margulis, “Photoshop LAB Color” (how to correct color in Adobe Photoshop but using the CieL*A*B* color space and not intuitively in traditional RGB). 366 pages plus a CD.

So that is about a thousand pages of material that I am supposed to read in my normal office hours.

It is now three years later (December 2008) and I am perusing this book in more detail. The first thing I notice is that this book is on color management in general: this is not a book on color management solely and specifically for inkjet printers. But it does cover inkjet printers and is by no means devoted entirely to offset presses. But in every chapter it has sections on offset presses, toner laser printers, RGB laser-light printers (LightJet, Durst Lambda, etc).

This is a good book for a general introduction to basic concepts. But this is not whatsoever a step by step book on color management workflow for wide-format inkjet printing. I recommend that you buy this book to read, but do not expect to be able to actually do color management with this book. But this is not a reason not to buy it. Besides, I have not yet found a step by step book on color management for inkjet printers that really provides what the PR releases claim that their book offers.

Also realize that in this year 2009, that a book published in 2005 was written in 2004. This is a polite way to say that today there are new tools, better software and different expectations.

**Contents:**

- Overview: The Big Picture
- Contents: What’s Inside
- Preface: The Color-Management Conundrum
- Introduction to Color Management
- What is color? Reflections on life
- Computers and color: color by the numbers
- Color Management: how it works
- All about profiles: describing devices
- Building and tuning profiles
- Measurement, calibration, and process control: “the map is not the territory”
- Building display profiles: your window to color
- Building Input profiles: Starting out right
- Building output profiles: final destinations
- Evaluating and editing profiles: color orienteering
- Applications and workflow
- Color-management workflow: Where the rubber meets the road.
- Color management in the operating system: Who does what to whom, when?
- The adobe common color architecture: Color Management in adobe photoshop, indesign, and illustrator
- Color Management in Macromedia freehand 10: Capable but quirky.
- Color Management in CorelDraw 10: It manages everything but its own files
- Color Management in Quarkxpress: Incremental Improvement
- Color Management and PDF: the wave of the future
- Automation and scripting: The smart way to be lazy
- Building Color-managed workflows: Bringing it all together the four stages of color management
- Appendices
GIORGIANNI, Edward J. and Thomas E. MADDEN

If these are the people who invented the Kodak Photo CD system I just hope their book is less oriented to low-end, entry-level (which was the original intent of the Kodak Photo CD system). I also hope they don’t push the same color scheme inflicted by Kodak Photo CD either. However since this book does discuss the dreadful Kodak Photo YCC scheme, if you have ever used a Kodak Photo CD, you need to get this book. Also be sure to read the book “Official Kodak Photo CD Handbook,” by Peachpit Press. Out of print but worth getting via Interlibrary Loan.

Contents

- Foreword
- Preface
- Introduction
- Fundamentals
  - Measuring Color
  - Color-Imaging Systems
  - The Human Color-Imaging System
- The Nature of Color Images
  - Video Images
  - Reflection Images
  - Photographic Transparencies
  - Photographic Negatives
- Digital Color Encoding
  - Encoding Concepts
  - Densitometric Color Encoding
  - Colorimetric Color Encoding
  - Photo CD Color Encoding
  - Color-Encoding Data Metrics
  - Output Signal Processing
  - Myths and Misconceptions
- A Unified Color-Management Environment
  - Color-Management Paradigms
  - Unified Paradigm: Basic Properties
  - Unified Paradigm: Color Encoding
  - Unified Paradigm: A Prototype System
  - Unified Paradigm: Color Interchange
  - Unified Paradigm: Overall System Architecture
- Final Thoughts and Conclusions
- Appendices
  - Colorimetry
  - Densitometry
  - Photographic Media
- Adaptation
  - Viewing Flare
  - PhotoYCC Color Space
  - Transformations for Color Interchange
  - PhotoYCC Space to Prototype CES
  - Prototype CES to Photo YCC Space
  - PhotoYCC Space to YC(b)C(r)
  - PhotoYCC Space to Cineon 522
Books and Publications on Color Management

- Prototype CES to FlashPix NIFRGB
- Photo YCC Space to FlashPix NIFRGB
- Glossary
- Recommended Reading

GIORGIANI, Edward J. and Thomas E. MADDEN

Contents:
- Series Preface
- Acknowledgement
- Introduction
- Fundamentals
  - Measuring Color
  - Color-Imaging Systems
  - The Human Color-Imaging System
- The Nature of Color Images
  - Electronic Displays
  - Electronic Imaging Systems
  - Reflection Images
  - Projected Images
  - Photographic Negatives
- Digital Color Encoding
  - Encoding Concepts
  - Densitometric Color Encoding
  - Colorimetric Color Encoding
  - Scene-Based Color Encoding
  - Color-Encoding Data Metrics
  - Output Signal Processing
  - Myths and Misconceptions
- A Unified Color-Management Environment
  - Color-Management Paradigms
  - A Unified Paradigm: Basic Properties
  - A Unified Paradigm: Encoding Concepts
  - A Unified Paradigm: Encoding Transformations
  - Unified Paradigm: Example Systems
  - A Unified Paradigm: Complex Systems
  - A Unified Paradigm: Color Interchange
  - A Unified Paradigm: Implementation
  - Closing Thoughts and Conclusions
- Appendices
  - Colorimetry
  - Densitometry
  - Photographic Media
  - Adaptation
  - Viewing Flare
  - Scene-Based Color Encoding Specifications
  - Transformations for Color Interchange
  - Color-Primary Conversions
GREY, Tim  

We now have this book. It looks excellent. A different style than by more traditional color scientists (whose work is a tad stiff for us photographers). This book discusses profiling a scanner and how to profile your monitor. In the chapter on print output, the coverage is basic (a polite way of saying that it is not a dedicated monograph on color management for printers). But at least the publisher, Sybex, is honest to hint that the book is mainly about digital photography color, and not about printer color management.

252 pages. Has a brief glossary and an index.

GREY, Tim  

Contents:
- Introduction
- Chapter 1 Foundations
  - The Nature of Light
  - Light in Photography
  - The Nature of Color
  - Perceived Color
  - The Color Wheel
  - Color Models
  - Metamerism
  - Color Profiles
  - Rendering Intents
  - Introducing Color Management
  - Limitations of Color Management

- Chapter 2 Photoshop Setup
  - Color Settings
  - Settings Dropdown
  - More Options
  - Working Spaces
  - Color Management Policies
  - Conversion Options
  - Advanced Controls
  - Saving and Loading Color Settings
  - Warnings
  - Gamut Warning Preferences
- Embedded Profile Mismatch
- Paste Profile Mismatch
- Missing Profile
- Embedded Profile Mismatch Alert
- Assigning and Converting Profiles
- Assign Profile
- Convert to Profile

- **Chapter 3 Display**
  - Choosing a Monitor
  - Monitor Adjustments
  - Brightness
  - Resolution
  - Contrast Ratio
  - Pixel Pitch
  - Pixel Response Time
  - Display Size
  - Viewing Angle
  - Special Concerns
  - Choosing a Display Adapter
  - Calibrating and Profiling Your Monitor
  - Target Values
  - Preparing to Profile
  - Tools for Calibrating and Characterizing
  - Evaluation
  - Frequency
  - Display Conditions

- **Chapter 4 Scanning**
  - Choosing a Scanner
  - Flatbed versus Film Scanner
  - Resolution
  - Dynamic Range
  - Bit-Depth
  - Software Issues
  - Approaches to Scanning
  - Information Method
  - Accuracy Method
  - Scanner Profiles
  - MonacoEZcolor
  - GretagMacbeth Eye-One Photo
  - Assigning a Scanner Profile
  - Evaluating Scans

- **Chapter 5 Digital Capture**
  - Digital Cameras
  - Features to Look For
  - Basic Camera Settings
  - Managing Digital Camera Color
- White Balance Presets
- Custom White Balance
- Custom Camera Profiles
- Automating Profile Assignments in Photoshop
- RAW Capture and Conversion
- Working Space Issues
- Tagged Images
- Untagged Images

**Chapter 6 Optimization**
- Evaluating Images
- Memory Colors
- Saturation Testing
- Making Color Adjustments
- Color Balance
- Color Balance with Levels
- Color Balance with Curves
- Neutral by the Numbers
- Selective Color
- Hue/Saturation
- Targeted Adjustments
- Color-Adjusting Black-and-White Images
- Convert with Channel Mixer
- Colorize for Print
- Saving the File
- File Formats
- Embedded Profiles

**Chapter 7 Output**
- Choosing a Printer
- Printer Profiles
- Building Custom Printer Profiles
- Using “Canned” Printer Profiles
- Using Generic Profiles
- Choosing a Rendering Intent
- Preparing Images
- Soft Proofing
- Gamut Warning
- Adjusting Images
- Print Preparation
- Print Setup
- Print with Preview
- Printer Properties
- Printing with a RIP
- QuadTone RIP
- ImagePrint
- Evaluating Prints
- Environment
- Standard Print Target
- When Prints Don’t Match
Books and Publications on Color Management

- CMYK Output
- RGB with Proof Print
- Converting to CMYK
- Web, E-mail, and Digital Slideshows
- Flatten the Image
- Resize the Image
- Convert to sRGB
- Save the Image
- Digital Projector Profiling

- Chapter 8 Workflow
  - Predictable Output
  - The Pre-Workflow Checklist
  - Process-Specific Workflows
  - Scan-to-Print Workflow
  - Digital Capture to Print Workflow
  - Web, E-mail, and Digital Projection Workflow
  - CMYK Output Workflow

- Glossary
- Index

GREEN, Phil
400 pages

GretagMacbeth

Comes along with free animated training manuals.

Contents:
- The Eye-One Color Cookbook
  - Device dependence
  - Device independence
  - Device color space
  - Device profile
  - Profile connection space
  - Device link profile
  - Modular color space conversion
  - Asymmetric color space conversion
  - Printer rendering intents
  - Black point compensation
  - Comparing measured colors
  - Recommended soft-proofing settings
• Eye-One ICC Scanner Profiles
  • Profiling color positive materials
  • Profiling non-ICC scanning systems
• Eye-One ICC Monitor Profiles
  • The RGB viewing space
  • The RGB working space
  • On-screen color consistency
  • Scanner space and RGB working space
  • The monitor-size RGB working space
  • The all-purpose RGB working space
  • Mac OS monitor profiles
  • Matching black and white points
• Adobe Photoshop 6.0.1
  • Linking to the monitor profile
  • One-step soft-proofing
• Adobe Photoshop 5.5
  • Linking to the monitor profile
  • Two-step soft-proofing
• Adobe InDesign 1.5.2
  • Linking to the monitor profile
  • Two-step soft-proofing
  • File formats for soft-proofing
• Adobe Illustrator 9.0.2
  • Linking to the monitor profile
  • Soft-proofing limitations
• Adobe Acrobat 5.0
  • Linking to the monitor profile
  • Soft-proofing limitations

HINKEL Brad.

Contents:
- Ten Steps for Color Management
- Choose a Color Space
- Get a Good Monitor
- Create a Good Work Environment
- Calibrate and Profile Your Monitor
- Get a Good Printer
- Create Basic Prints
- Test Your Color Management System
- Create Advanced Prints
- Obtain Profiles
- Adjusting Colors for Advanced Printing
- What is Color Management?
- Select a Color Space
- What is a Color Space?
- Color Space Options
- sRGB
- Adobe RGB
- sRGB vs. Adobe RGB
- Some Other Color Spaces
- ColorMatch RGB
- ProPhoto RGB
- eciRGB
- scRGB
- Configuring Your Color Space
- Convert to sRGB
- Get a Good Monitor
- Selecting a Monitor
- Some Specific Monitor Recommendations
- Laptop Displays
- Video Cards
- Create a Good Work Environment
- The Effect of Environment on Color
- The Environment Matters
- Room Lighting
- Use a Monitor Hood
- Set Your Computer's Desktop to Boring Gray
- Remove Distracting Colors from Your Environment
- Proofing Light
- Profile Your Monitor
- Tools for Monitor Calibration and Profiling
- Monaco OPTIX & Monaco EZcolor
- Gretag MacBeth Eye-One
- ColorEyes Display
- Calibration
- Profiling
- Get a Good Printer
- Categories of Printer Choices
- Inexpensive Photo Printers
- Printing Online with a Photo Lab
- HP Photosmart Printers
- Epson UltraChrome Printers
- Epson K3 Printers
- Basic Printing
- Main Elements of Good Printing
- Using the Printer Driver
- Use the Printer as it was Designed
- A look at the Printer Driver
- Basic Printing
- Mac Print Dialog
- Windows Print Dialog
- Online Printing Services
- A Color Management Workflow
- A Basic Workflow
- Capture using your Working Color Space
- Converting RAW Files
- Opening Your Images in Photoshop
- Identifying the Color Space of Images in Photoshop
- Convert to sRGB
- Printing Options from within Photoshop
- Test Your Color System
- The Color Test Image
- Visual Evaluation
- Compare a Printed Test Image to the Monitor
- Compare the Printed Test Image to a Print You Make
- Advanced Printing
- Outline for Advanced Printing
- Setup the Soft Proof
- Resolving Changes to Colors due to the Soft Proof
- Printing with Profiles
- Mac Print Dialog
- Windows Print Dialog
- On Rendering Intents
- The Basic Problem - Gamut Mapping
- Gamut Compression
- Gamut Clipping
- The Rendering Intents
- Perceptual Rendering Intent (Photographic)
- Relative Colorimetric Rendering Intent (Graphic)
- The Other Rendering Intents
- Obtaining Profiles
- Manufacturer’s Profiles
- Custom Profiles
- Making your Own Printer Profiles
- Installing Profiles
- Profile Names
- Adjusting Your Color for Printing
- Soft Proofing
- Fixing Color Shifts
- Paper Color
- Color Cast in the Profile
- Resolving Out-of-Gamut Colors
- Inspection
- Change Rendering Intent
- Reduce Saturation
- Color Mapping with Change Color
- Index
HOMANN, Jan-Peter

This English translation of this book has been stalled for almost two years. Evidently available in German original, 2000, Digitale Colormanagement. Farbe in der Publishing-Praxis. Macintosh- und Windows-Version. Possibly finally published as of June 2003 but we have not yet seen a copy ourselves.

Contents:
- Color Theory with Ideal Colors
- Color Theory with Realistic Colors
- The Principles of Color Management
- ISO 12647/GRACoL/SWOP for Separation, Proof and Print
- Using ICC Strengths and Avoiding ICC Problems
- PDF/X-1a and DeviceLink Color Servers
- Corner Stones for a Color-Management Strategy
- Acknowledgements

HSIEN, Che Lee

Contents:
- Preface
- Introduction
- Light
- Radiometry
- Photometry
- Light-matter interaction
- Colorimetry
- Light sources
- Scene physics
- Optical image formation
- Lens aberrations and image irradiance
- Eye optics
- From retina to brain
- Visual psychophysics
- Color order systems
- Color measurement
- Device calibration
- Tone reproduction
- Color reproduction
- Color image acquisition
- Color image display
- Image quality
- Basic concepts in color image processing
- Extended tables.
- Glossary
- Bibliography
- Index
JOHNSON, A. J.
Pira International

We have been unable to locate a copy of this book. It is no longer listed in the Pira web site.

KELLY, Kenneth L, and Deane B. JUDD
1955. The ISCC-NBS Method of Designating Colors and a Dictionary of Color Names. National Bureau of Standards Circular 553,
U.S. Dept. of Commerce, Washington, D.C.

KORNERUP, A and J. H. WANSCHER
London. 243 pp and 30 two page color plates

252 Pages

Monaco by X-Rite: Complete Guide to Color Management

The publication was written by the marketing department of X-Rite in an attempt to spark concerns about color management towards potential customers. Elsewhere it is not realistic to expect a company to give you unbiased information about color management. However, if you can get past the premise, you'll find that the first 18 pages of the book give a very informational, general education about the need for color management. The second half of the book is a catalog-like commercial for X-Rite and Monaco products. The last section of this book contains a very useful glossary of general color management terms. See FLAAR Glossary of Color Management Terms.

Contents:
- Color Management overview
- What is the problem-color doesn’t match?
- Why is there a problem? Devices are different
- Making it work- Calibration and Profiles
- Taking it step by step
- For advanced users
- Practical solutions
- Tips and Tricks
- Glossary
- Soft Proofing guide
MUNSELL, Alfred H.
1976. Munsell Book of Colors. Various editions; various titles over the years.

In the early 1900’s Munsell developed a system for color notation that used numbers instead of illogical names such as passionate petunia. His book of colors has been standard reference at least since the 1950’s. As an archaeologist and art historian I used Munsell color charts for years, to provide color designations for the colors of pre-Columbian art and artifacts. Even today, in the computer era, the Munsell color charts are still valid. A brief but helpful commentary on the Munsell system is available from [www.wikipedia.org/wiki/Munsell_color_system](http://www.wikipedia.org/wiki/Munsell_color_system). Munsell’s position in color science is perhaps best realized by the fact that the Rochester Image of Science named their prestigious lab the “Munsell Color Science Laboratory.”

Munsell color charts are available today from GretagMacbeth.

NELSON, Phil.

Contents:
- Introduction
- The Challenges of Digital Photography
- Building a Digital Photography Workflow
- Why Color Management?
- The Color Problem
- The Extended Photography Workflow: Working with Clients and Service Providers
- Relying on Service Providers
- Working with Clients Who Don’t Understand Color Management
- The Benefits of Color Management
- Predictable Color
- Reduced Waste of Media and Time
- Improved Communication with Members of the Extended Workflow
- Real World Expectations: The Colors Will Not Always Match!
- Certain Devices Cannot Perceive, Display, or Render All the Colors in Your Image
- Aspects of the Workspace Can Negatively Impact Color Perception
- Outside Services Cannot Always “Get It Right”
- The Objective of This Book
- Preview: A Color-Managed Workflow
- A Typical Workflow: No Color Management
- A Typical Color-Managed Workflow
- Color-Management Concepts
- RGB and CMYK Color Models
- RGB
- CMYK
- The Color Space and Color Gamut
- Device-Dependent Color Space
- Different Devices Define the Same Color Differently
- Device-Independent Color Space
- The Importance of Device-Independent Color
- Lab Color
- Profile Connection Spaces
- ICC Color Profiles
- Working Spaces
- Color-Management Methods
- Application-Level Color Management
- System-Level Color Management
- Assigning Color Meaning vs. Converting Color Data
- Assigning a Profile
- Converting to a Color Space
- Rendering Intents
- Relative Colorimetric
- Absolute Colorimetric
- Perceptual
- Saturation
- Embedding Profiles
- Software Setup
- Define a Standard Working Space and Source-to-Destination Conversions
- Where Do ICC Profiles Come From?
- Device Manufacturers, Application Developers, Paper Manufacturers
- Profile Services
- Build Your Own
- Where Do ICC Profiles Live?
- Macintosh
- Windows
- System-Level Color Management: Setting Up
  - Macintosh
  - Windows
  - Shortcomings of System-Level Color Management
  - Application-Level Color Management: Setting Up
  - Color Settings in Photoshop CS2
  - Setting Up Phase One Capture One Pro
  - Building a Color-Managed Workflow
  - What Is Needed?
  - Hardware for Setting Up Color Management
  - Software for Setting Up Color Management
  - Device Calibration vs. Profiling
  - Calibration
  - Display Calibration and Profiling
  - Types of Displays
  - Display Calibration
  - White Point
  - Gamma
  - Luminance
O’QUINN, D.
800 Pages

REINHARD, Erik. KHAN, Erum. AKYUZ Ahmet and JOHNSON Garret.
1074 Pages

Contents:
- Principals
- Introduction
- Physics of light
- Chemistry of matter
- Human Vision
- Perception
- Color Models
- Radiometry and Photometry
- Colorimetry
- Color Spaces
- Illuminants
- Chromatic Adaptation
- Color and Image Appearance Models
- Digital Color Imaging
- Image Capture
- High Dynamic Range Image Caption
- Display Technologies
- Image Properties and Image Display
- Color Management
- Dynamic Range Reduction
- Appendices
- Vectors and Matrices
- Trigonometry
- Complex Numbers

RIDGWAY, Robert
43 pp and 53 color pls.

Bibliographic information on Ridgway is from www.colorsistema.com Ridgway isthe epidomy of elabo-
rate descriptive names for colors. It was probably excessively idiosyncratic naming systems such as
this that Munsell reacted against with a more systematic numerical nomenclature. Considering that
Ridgway was an ornithologist and lover of nature, he can perhaps be forgiven for his flowery names
for colors such as Vinaceous Tawny. Ridgway colors were the standard in archaeological literature up
to the 1930’s. At least by the 1960’s archaeologists had switched to the Munsell system for naming
and referencing colors.
Contents:

- Preface
- Prologue
- Plan
- Color names
- Color Terms
- Table of percentages of component colors in spectrum hues
- Table of percentages of white and black in tone scales
- Table of percentages neutral gray in broken colors
- Table of percentages of black and white in tones of carbon gray
- Dyes and pigments used in coloring of Maxwell disks
- Alphabetical list of color represented on plates
- Colors of old edition not represented on plates
- List of useful books on color

RICH, Jim

I contacted the author who politely responded within a few hours, saying that he was closing down his consulting company and switching to a regular job. He also said the book was no longer available.

RODNEY, Andrew

This is a good book by a well known and knowledgeable author. But, if you notice that the sub-title is “Hands on Techniques for Photoshop Users” then you may wonder beforehand whether this book is not really about color management, but instead about color manipulation in Adobe Photoshop. Color manipulation has absolutely nothing to do with color management and for sure not an iota of relationship with ICC color profiles. But once you open up the book you see that it really does cover color management and profiling. Indeed this does not delve into color manipulation (as expected from the emphasis on Photoshop in the sub-title).

464 pages, good paper, illustrations mostly in color. Glossary, index, bibliography is only of web sites but this is better than no bibliography at all. For some reason it is out of fashion to create a list of suggested reading. Perhaps publishers nowadays want not to list books of competing publishers.

Contents:

- Color management and why we need it
- Photoshop and color management
- Building display profiles
- Building scanner profiles
- Building camera profiles
- Building printer/output profiles
- Printing to a press
- CMS utilities
- Tutorials
- Case studies
SAFFIR, David  

Contents:  
- Introduction: imagine the possibilities  
- Getting a grip on your color: definitions and a road map  
- Controlling your color: tools for photographers  
- Production guide for photographers  
- Color management policies for photographers  
- Production guide for artists  
- Color quality control  
- Black and white imaging in the digital world  
- Preserving color: archiving and storage  
- Helpful tips and tricks  
- Art gallery  

SHaffer, Julie  
2005. Color Management and PDF.  
61 Pages  

SHARMA, Abhay  

Contents:  
- Introduction  
- Color and Vision  
- Color by Numbers  
- Measuring Instruments  
- Inside Profiles  
- Scanner and Camera Profiles  
- Monitor Profiles  
- Press and Printer Profiles  
- Apple Utilities  
- Color Management in Photoshop  
- Profile Quality  

SHARMA, Gaurav  

Contents:  
- Color fundamentals for digital imaging  
- Visual psychophysics and color appearance
• Physical models for color prediction
• Color management for digital imaging systems
• Device characterization
• Digital color halftones
• Human visual model-based color halftoning
• Compression of color images
• Color quantization
• Gamut mapping
• Efficient color transformation implementation
• Color image processing for digital cameras

We found this book in the color reference library of BARBIERI electronic company headquarters in Brixen, Italy, during a factory and demo room visit, November 2008.

STEINMUELLER, Uwe and Juergen GULBINS

Uwe Steinmuller is a well known fine art photographer with a popular website, www.outbackphoto.com. Juergen Gulbins is described on the book jacket flap as a prolific writer and interested in photography. This book provides the reader with many years photography and printing experience of Uwe Steinmuller and his wife, Betinna. If you are interested in fine art inkjet printing you can learn a lot from this book. In other words, we recommend it. You can buy the books of Rocky Nook most places on the Internet. The books are distributed by O’Reilly Media.

The reason why I include this book in a bibliography on color management is because he has one chapter on this subject. The overall book per se, however, is on general aspects of inkjet printing as well as on tweaking your digital photographs before you even get ready to think about a printer.

TAPP Eddie

149 pages.

Contents:
• Introduction
• Chapter 1
• The search for consistent color
• A brief history of color management
• Color management today
• Chapter 2
• Understanding key color management concepts
Books and Publications on Color Management

- Calibration versus profiling device profiles
- Color space
- Rendering intents
- Chapter 3
- Establishing a color management–friendly workflow
- Input stage
- Process stage
- Output stage
- Bonus step: file archiving
- Chapter 4
- Three stages of color management
- Establishing a working color space
- Calibrate and profile devices
- Convert to output profile
- Creating cm workflow actions
- Chapter 5
- Technically speaking
- Under the hood
- Profile editing
- Cm and scanning: in depth
- Raster image processors (rips)
- Hands-on monitor profiling
- Hands-on printer profiling
- Some final cm thoughts
- Appendix
- Additional color management resources
- Additional resources
- Index

TALLY, Taz and Glenn MARTIN

This book was announced in 2002, then delayed. The word on the street was the writer did not agree with the publisher. However, as of 2005, the book seems to be out (dated 2003). We searched for this publication and came across three websites that mentioned the book. Two of them listed that the book had been postponed and Amazon UK listed it as available. Whatever the case, be sure that you are buying the book from a legitimate company.

As of December 2008, the Canadian version of Amazon lists the book as “this title has not yet been released.” The question is whether a book written in 2001 will be pertinent in 2009.

If you happen to be interested in scanner software, one book that Tally did actually finish is on SilverFast, which is the best after-market scanner software (from Germany).

YULE, John A., update chapter by Gary Field

Contents:
- Introduction
- Elementary Principles of Color
Books and Publications on Color Management

- Elementary Principles of Color Reproduction
- Masking Methods
- Tone Reproduction and Color Balance
- Spectral Sensitivities for Color Separation
- Inks and Papers
- Additivity and Proportionality of Densities
- Graphical Analysis of Color Correction
- Mathematical Analysis of Color Correction
- Four-Color Printing and the Black Printer
- Color Scanners
- Moire Patterns
- Appendix A: Tables
- Appendix B: Calculations of Tristimulus Values
- Appendix C: Calculations of Colorimetric Quality Factor
- Appendix D: Calculations of Selected Ordinates
- Appendix E: The Neugebauer Equations
- Appendix F: Construction and Use of Spectroscope
- References
- Index

WEISBERG, Joshua

Contents:
- Color-Management Basics
- Using Color Management in Mac OS X
- Color Profile Basics
- Creating Custom Profiles
- Color Managing Images
- Image Proofing and Output
- Using the Adobe Common Color Architecture
- Managing Color in Page Layout
- Managing Color Proofs
- Color Server Workflows
- Internet and DV Color Management
- Apple’s Digital Production Platform: An integrated Workflow
- Glossary

X-Rite

This booklet is free; we got ours from X-Rite, but due to the date of publication it may be out of print now. This is a glossary of color science; not a ‘how to’ booklet on color management. However it is worth getting a hold of so you can start to learn the terms. It is nicely illustrated.
Contents:
- Color Communications
- Understanding Color
- The CIE Color Systems
- Spectral Data vs. Tristimulus Data
- Color Management and Control
- Instrumentation
- Measurement in the Graphic Arts Workflow
- Color Specification
- Color Management
- Color Formulation
- Color Control
- Color Verification
- Glossary

We found this PDF’S in the color reference library of BARBIERI electronic company headquarters in Brixen, Italy, during a factory and demo room visit, November 2008.


Issue Date

First issued about September 2003. Substantially updated during October 2003, adding all the references and bibliographies present in various individual FLAAR reports on color management. Those lists of references had grown to the point that we felt it more practical to list them all alphabetically in a single place. The impetus for this dedication to forming a comprehensive bibliography on color management was attending a 3-day program on color management where the list of suggested reading was helpful, but meager. Since we already had the lists of pertinent articles and web sites, we felt it would be useful to publish this information so everyone could have it. Updated April 2006 during a time that Paul Huhtula worked on general updates of the color management reports of FLAAR under the editorship of Nicholas Hellmuth. Updated again January 2007.

Updated December 2008 based on surveys of the literature of the last two years by the staff of FLAAR Mesoamerica (the Guatemalan office of FLAAR Reports which otherwise is in the US).

Most recently updated March 2010

SmartStuff Inc. is the master distributor in USA for BARBIERI electronic color management tools. By coincidence SmartStuff Inc. is in the same city as FLAAR USA office is located, so we know all the folks at SmartStuff. Key person is Don Bobenhouse.

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1-800-544-6020

Most recently updated March 2010