

PAUL WHEELER
HIGH
DEFINITION
CINEMATOGRAPHY

SECOND EDITION



High Definition Cinematography

Second Edition

By

Paul Wheeler BSC FBKS GBCT



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To
William and Annabel
who are the future

About the Author

Paul Wheeler has a wealth of practical experience both as a Film and Digital Cinematographer combined with wide experience as a highly respected trainer. He is the author of *Practical Cinematography* which is a standard work for those wishing to become Cinematographers in the traditional art of shooting film, and *Digital Cinematography* which primarily concentrates on the Digi Beta arena. After 26 years with the BBC, by the end of which he was one of only six Senior Film Cameramen out of a total of sixty three DPs employed there at that time, he left to go freelance in order to concentrate on dramatic films.

Since leaving the BBC, Paul has had a flourishing career which has bought him many awards including two Independent Producers Association (INDIE) awards for Digital Cinematography, two BAFTA nominations and a nomination from the Society of Lighting Directors plus numerous others, check his website www.paulwheelerbsc.com. In between shoots he has stood in as Head of Cinematography at the National Film and Television School in the UK several times and also as Head of Cinematography at the Royal College of Art, also in the UK. He is a regular visiting tutor at the London Film School, the New York Film Academy in London and the Metropolitan Film School, again in London. He has designed and run the highly respected Digital Cinematography course at the National Short Course Training Programme, part of the National Film School, as well as taking Lighting Master Classes there both for Film and Digital Cinematography.

In December 2000 Paul was invited to join Panavision Europe as an associate of the company in order to help introduce the Panavision HD cameras to the European film and television community. He had the luck to join just 3 days before they got their first HD camera so was in, by a whisker, just before the start! Paul spent about a third of his working life with Panavision over the next 3 years, finally parting company with Panavision, most amicably, when Europe had become familiar with HD.

Shoots permitting, Paul now spends much of his time teaching, training and writing.

Paul is a member of the British Society of Cinematographers (BSC) and a Fellow of the British Kinematograph, Sound and Television Society (FBKS) and a member of the Guild of British Camera Technicians (GBCT).

Introduction

HD Cinematography is a relatively new acquisition format which, I believe, is set to revolutionise much of the theatrical film world and, perhaps, even more of television. Film with its utterly superb image capture capabilities is an anachronism in a television environment and with more and more digital effects appearing in feature films it is inevitable that, on occasion, there will be advantages in originating in the same image format as that which is to be used for the post production.

HD picture quality is arguably every bit as good as 35 mm film, as I hope to prove, in some way, in this book, yet the pre cutting room costs are going to be less than shooting 16 mm film. Make no mistake about it the drive to HD is fiscal, so let we Cinematographers be thankful that the picture quality, the range of cameras and lenses and their ease of use is nearly always to our advantage. It's not just the saving in film stock and processing that is driving this engine. There is a huge value, especially to the distributors of feature films, to deliver the product to the screen without the cost of making and shipping release prints. Fortunately for Cinematographers there has been a contemporaneous advance in digital projection equipment and it is now possible to be very proud indeed of one's work even if it has never left the digital domain.

In my previous books, *Practical Cinematography* and *Digital Cinematography* I have kept close to the Cinematographers craft, in this book I have covered most of that ground but included a considerable amount of information for both Directors and Producers for it is these crafts, as much if not more so than the Cinematographer, who will influence the decision to shoot on HD.

I am a great believer that people from a visual world gain as much information from pictures as they might from words therefore I often produce the illustrations first and then write the text to them, in this book there are 180 illustrations.

A top of the range HD camera with the finest lenses and recording in the HDCAM, or one of the recently available superior formats, is now my camera of choice – always – not bad for a man whose grandfather joined the British Film Industry only 2 years after the Lumier brothers showed the first on-film moving picture in Regents Street, London. Grandfather was late by the way, his brother had joined 6 months earlier!

The future is bright, very bright. If the work of future DPs can be recorded, and it matters not on what recording format, we Cinematographers have a wonderful future to look forward too. Cinematography is a craft, and often an art form, which will be needed no matter what means science uses to record the Cinematographers work.

Acknowledgments

My special thanks to:

Alan Piper for inviting me to become an associate of Panavision Europe a couple of days before they received their first HD camera, a moment which now seems a long time ago; an invitation which subsequently led to the first edition of this book. My only regret here is that we have both moved on to more interesting things and therefore see less of each other.

Peter Swarbrick, Head of Digital Imaging, Panavision Europe for being wonderfully supportive and a great friend and colleague who took the trouble to start teaching a film man a thing or two about HD and for giving me some great quotes.

Alan Roberts for his amazing patience in teaching me how digital cameras really work.

Alex Golding for his help in preparing some of the illustrations in this book.

The suppliers, who were unstinting in their help whilst always knowing I would criticise as well as praise:

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To all the other equipment manufacturers and suppliers who have given me so much of their time with the absolute understanding that I would write up my own opinions. I think it a great tribute to our industry that not a single one of them was less than enthusiastic for me to explore their product. What a wonderful industry we work in.

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Part 1

High Definition: A Quick Overview

