



SECOND EDITION

PAUL WHEELER

PRACTICAL CINEMATOGRAPHY



Practical Cinematography

Dedication

To the memory of my father

Leslie J. Wheeler

who taught me the

Principles of Cinematography

Practical Cinematography

Second edition

Paul Wheeler BSC FBKS



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Preface

When I joined the BBC in the 1960s as a trainee projectionist, I was the youngest trainee at that time. I was lucky enough to be entering a world which offered the best possible training for any aspiring film-maker. As I progressed through the grades, becoming eventually one of the six senior film cameramen before leaving to go freelance, I enjoyed a substantial amount of practical and theoretical training. That training no longer exists – indeed, the BBC Film Department no longer exists, and you cannot get that training anywhere now.

One of the most enjoyable aspects of being a Director of Photography is the opportunity to shoot a wide variety of work. Recently, for instance, I have shot three hours of 35 mm, three hours of Super 16, two hours of Digi Beta, and a one-hour television studio opera and three hours of High Definition – HD. This variety, combined with the opportunity to work with different producers, directors, actors and crew, makes ours one of the most stimulating jobs I know.

Some years ago, I was asked to stand in as Head of Cinematography at the National Film and Television School. Since then, I have repeated that enjoyable position. I have also been asked to take various short courses in a variety of training establishments, something I always enjoy doing, if I am not shooting.

Since I wrote the first edition of this book, I have had a great deal of feedback from readers and this has led me to a greater understanding of their needs. Therefore, this new edition has a more defined purpose – to lead a student or someone in a lower grade than the DP to gain the knowledge to be able to aspire to that most wonderful of jobs – the Director of Photography.

This edition, therefore, starts with the definition and description of the tasks of the DP and goes on to describe all the necessary technical knowledge one might need to get a commission as a DP.

As I have always found it easier to explain theoretical principles using diagrams and pictures in preference to relying on words alone, this book contains a large number of figures. Indeed, for some of the sections, I prepared the figures first and then wrote the text afterwards.

In this new edition there are some added chapters, a complete reorganization of the structure of the book, together with many added illustrations, including over 20 photographs.

Paul Wheeler

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About the author

Paul Wheeler has a wealth of practical experience as a cinematographer combined with wide experience as a highly respected trainer. After 25 years with the BBC, by the end of which he was one of only six senior film cameramen out of a total of 63 DPs employed there at that time, he left to go freelance.

In the years since leaving the BBC, Paul has had a flourishing career which has bought him many awards both in the UK and internationally. In between films, he has stood in as Head of Cinematography at the National Film and Television School a number of times and still takes master classes there. He was also Head of Cinematography at the Royal College of Art. Paul regularly teaches at the New York Film Academy in London (www.nyfa.com) as Tutor in Advanced Cinematography and runs courses at the National Short Course Training Program (www.nftsfilm-tv.ac.uk).

While still maintaining a busy shooting schedule, Paul has decided to spend more time writing and teaching in an effort to improve the quality of knowledge among young Directors of Photography.

Paul's other two books, both published by Focal Press, are *Digital Cinematography* and *High Definition and 24P Cinematography*.

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Introduction

The premise I used to write this, the second edition of this book, is different from that I used for the first edition.

Now I have set out my stall in the first chapter, in which I describe the tasks and responsibilities of the Director of Photography. The rest of the book then tells you how to gain the skills and knowledge you will need, one day, to get your first job as a DP.

You may not use some of the knowledge contained herein on a day-to-day basis on the set, but if you have it somewhere at the back of your mind you will be a much more proficient DP.

I have also been very conscious of the skills needed in the positions leading up to the DP's job; hence, there are chapters on focus pulling, circles of confusion, etc. to enable you to become a very competent 1st AC or focus puller. There are chapters on composition and related matters to take you further on to becoming the camera operator.

Then there is all you will need regarding lighting ratios, exposure meters and what your crew can do for you, together with chapters on the laboratory, grading or timing and digital intermediates that will take you finally to the DP's position.

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Part One
People

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1

The Director of Photography – an overview

I imagine most people buying this book will have aspirations to become a Director of Photography (DP), and therefore I will start the first chapter by discussing and defining the roles and tasks required of the DP. The rest of the book will take you through the necessary knowledge you will need to acquire before you can use the title DP.

The DP is the senior head of department (HOD), whose level of responsibility and depth and breadth of tasks may only be equalled, and then only on a very big picture, by the production designer. All the HODs work to the director.

The prime job of the DP is to create the visual mood of the film and this is primarily achieved by the use and control of light. This, to my mind, is the most exciting part of the job. Even on a simple exterior, the DP will be making judgements that can materially affect the way the audience will perceive the message the script, the direction and the characters the actors are playing is interpreted.

My firm belief is that to bring the most to a movie and also to get the maximum enjoyment from shooting it, the DP must get the preparation right. Nothing, to me, affects the outcome more significantly, not even your talent.

The DP's responsibilities

The DP will be responsible for many things and I am not going to list all of them here. If you would like to peruse a detailed list, the *American Cinematographer* gave a full and exhaustive list in their January 2003 edition and that took three pages of small type. Nevertheless, here are the actions and responsibilities I consider most relevant and most likely to occur; use them as a check list if you will.

In early pre-production

- The first and most important matter is to discuss, in depth and possibly on many occasions, the script with the director until you are both in complete agreement as to the overall look of the film.
- In order to achieve the above, you will have had to have read the script several times, often between your meetings with the director. Early on, you should have made some decisions as to the ebb and flow of the emotional content of the script, so that the mood of your photography will be sympathetic to the story needs.
- During your discussions with the director, the production designer will be having similar discussions and it is most important that the DP and the production designer do not go off in different directions. Very early on, you and the production designer will need to keep in close contact; this will necessitate some meetings with just the two of you and some with the director present.
- Stay in close contact with the locations department and scout, or recce, proposed locations as early as possible.
- If sets are to be built, then you will need to keep a close eye on the progress of the plans, as simple changes that might mean nothing to others can materially affect the ease with which you will be able to light and shoot the necessary scenes. This primarily relates to the size of the sets and their positioning within the studio.
- If the director wishes to work with storyboards, you should keep in close contact during their creation. A good storyboard artist can be one of your greatest allies during pre-production. If the director prefers not to work with a storyboard artist, perhaps through personal preference or even budgetary restraints, a storyboard from the director, even if only drawn as stick men and women, can still be a useful tool, especially if the director does not have the most wonderful 'picture' imagination. Do not take this comment as in any way derogatory; if that director has hired the DP for their visual imagination knowing it will complement theirs, that DP might very well enjoy making a more significant contribution to the movie in question. But remember to let the director make it their own. Don't tell everybody it was your idea; subtlety gets you hired more often.
- Come up with preliminary lighting plots as early as you can so that you can give the lighting company an idea of what you will be needing, and by assessing the number and type of lamps you will need the production office can get provisional lighting budgets organized.
- You will need to nominate your technical crew, as well as choose your film laboratory and equipment suppliers.

Close to shoot preparation

- Approve with wardrobe department all the colours and textures they are intending to use.
- Check any specific make-up requirements such as prosthetics, etc.
- Visit all sets that are still under construction together with the production designer and the construction manager.
- Visit sets with the production designer when construction is finished to approve colours and textures.

- Work with the assistant directors to formulate workable schedules and remind them of any scenes that are time specific due to sun position or tides, etc.
- Formulate your film stock breakdowns and your Technical Diary. See [Chapter 2](#) as to how to do this.
- Attend all readings, run-throughs and off-set rehearsals. These may be the first time you get to see your artists in the flesh and your pre-visualization, from now on, will include the faces you will be photographing rather than your interpretation before they were cast.
- Establish that your shooting crew has amassed all the equipment you have ordered and that they are satisfied that their testing has been successful.
- Make contact with your laboratory, check who will be your daily contact and who will be grading (timing in the US) your rushes (dailies in the US). Your rushes or dailies are the first print ever struck from the camera negative and can be extraordinarily enlightening, especially early on in the shooting of a movie. Establish with your lab contact the processes you will require and ensure that they are fully aware of the look you are going for.
- Shoot and approve any tests you want to carry out, such as emulsion tests, wardrobe colour tests, make-up and prosthetics tests.
- Finalize lighting plans and communicate them to the gaffer.

During shooting

- Get a laboratory report as early as possible.
- Watch the rehearsals, or block-outs, of the scene to be shot.
- Devise and agree with the Director the shots required for the upcoming scene.
- Agree the most convenient shooting order with both the director and the first assistant director (1st AD).
- Ensure your lighting plan has been carried out to your wishes; confirm the stop to the first assistant camera (1st AC or focus puller).
- Work with the 1st AD on background action. This may depend on the union agreements with the background artists; it is common in the UK that the 1st AD and the DP may direct background artists without putting up their daily rate, but if the director gives them instruction they will earn significantly more for their day's work. Check the agreement with the production office.
- Give camera set-ups to your camera operator and confirm these with the director.
- Set any additional cameras for stunts, etc.
- At the end of each scene, confirm with the director that you have sufficient and appropriate shots to have adequately covered the scene. Advise the director as to additional shots if you think the editor may need them.
- Make sure that still photography and, if on set, the EPK (Electronic Press Kit) crew have all the materials they need. This is often overlooked, but to the DP it can be vital that all the pictures generated on set are as good as the DP's pictures. Bad publicity photographs, still or moving, can seriously damage a DP's reputation.
- Last thing at the end of the shooting day, confirm tomorrow's scenes with the director and the 1st AD.

- If the director wishes, discuss tomorrow's work.
- Check and approve call sheets for the following day before they are made official.
- Check if any of the junior members of your crew wish to ask you questions about the day's shooting in order to help their career development.

Post-production

- Time, or grade, any early trailers that may be being constructed.
- Check any EPKs to make sure they are of sufficient technical quality.
- Approve all effect or composite shots before they become part of the final cut.
- Time, or grade, the final cut.
- Attend digital intermediate (DI) grade if this route has been chosen. For further information on DIs, see [Chapter 9](#).
- Approve or modify answer prints as necessary.
- Attend all transfers to tape versions.
- Supervise pan and scan recompositions.
- Supervise and/or approve all other deliverables – VHS, HD, SD, Pal versions, NTSC versions, etc.
- Look for the next picture to shoot.