

CONTENTS

	PAGE
<i>Foreword</i>	v
<i>Preface to the Second Edition</i>	vii
<i>Preface to the First Edition</i>	ix

PART I. SCIENTIFIC BASIS

CHAPTER I

VISION AND COLOUR I

The Visible Spectrum—Colour Vision—The Additive Method of Mixing Colours—The Subtractive Method of Mixing Colours—Reflection, Absorption, and Transmission of Colour—Achromatic Colours, Tints, and Shades—Hue, Brightness, and Saturation—Reaction of Colours on each other—After-Images—Simultaneous Contrast

CHAPTER 2

CONTROL AND MEASUREMENT OF ILLUMINATION 13

Reflection and Refraction—Focal Length—Measurement of Luminous Output—Measurement of Illumination—Illumination Calculations—Spotlights and the Inverse Square Law—Reflector and Lens Efficiency

PART II. THE ADAPTATION AND CONTROL OF LIGHT

CHAPTER 3

LIGHT SOURCES AND COLOUR FILTERS 23

Colour Filters—Tungsten Filament Vacuum Lamps—General Service Gas-filled Lamps—Gas-filled Projector Lamps—Class A₁—Class B₁—Class B₂—Class E—Class F—Cinema Studio Lamps—Reflector Lamps—Electric Discharge and Fluorescent Lamps—High Pressure Mercury Vapour Lamps—Black Glass Ultra-violet Lamps and U.V. Filters—Carbon Arc Lamps—Spectral Composition of Electric Light—Theatre Gelatines and Filters

CHAPTER 4

STAGE LIGHTING APPARATUS 38

Footlights (Floats)—Footlight Spotlights—Proscenium Lengths—Battens—Revolving Battens—Spot Battens—Flood Battens—Acting Area Lanterns—Groundrows—Lengths and Strips—Wing Floods—Projector Lamp Spotlights—Perch Spotlights and Floodlights—Spot and Flood Booms—Spot and Flood Towers—Arc Spotlights—Effects Projectors and Attachments—Balcony Front Spotlights—Floor Stands

CONTENTS

	PAGE
CHAPTER 5	
DIMMERS AND LIGHTING CONTROL EQUIPMENT	64
Purchase of suitable Control Apparatus—Minimum Number of Dimmers—Lay-out of Dimmer Equipment—Types of Dimmers—Slider Type Dimmers—Liquid Dimmers—Radial Lever Dimmers—Rotary Type Dimmers—Auto-transformer Dimmers—Electronic Reactor Dimmers—D.C. Reactor Dimmers—Magnetic Amplifier Dimmers—Electronic Valve Dimmers—Portable and Slider Type Dimmer Switchboards—Dead Front Dimmer Switchboards—Patching Systems—Pre-set Control Systems—Colour Selective Control Systems—Other Special Systems	
CHAPTER 6	
STAGE LAY-OUT AND DESIGN	93
Footlight Projection—Apron Stages—Wing Space—Back Stage—Headroom—Fire Safety Curtain—Overhead Suspension Equipment—Cyclorama Backgrounds—Rolling and Revolving Stages—Lighting Bridges—Stage Terms	
CHAPTER 7	
PLANNING THE STAGE LIGHTING FOR PROFESSIONAL, PRIVATE, AND CINEMA STAGES	105
Types of Stages—Professional Theatres—Variety or Vaudeville Theatres—Repertory Theatres—Concert and Public Halls—Little Theatres—Cinema Stages	
PART III. THE ART OF STAGE LIGHTING	
CHAPTER 8	
DIRECTIONAL LIGHTING, SHADOW, AND COLOUR FOR FACE AND FIGURE	121
Visual Perception—Direction of Light—Lighting Composition—Dominant Lighting—Secondary Lighting—Rim Lighting—Fill-in Lighting—Shadows—Background Lighting—Colour of the Light	
CHAPTER 9	
COLOURED LIGHT, ITS HARMONY, CONTRASTS, AND DISCORD	136
Primary Colours in Lighting—Complementary Colours—Colour Harmony—Colour Contrasts—Discords—Tone and its Effect upon Colour Schemes—Colour Compositions	

CONTENTS

CHAPTER 10 PAGE
BUILDING UP A LIGHTING COMPOSITION . . . 143

The Lighting of an Artist—Lighting of the Vaudeville and Concert Artist—Lighting of the Artist in Theatre Productions—Lighting of the Setting—New Art of Luminous Colour

CHAPTER 11
THE CHOICE AND EFFECT OF COLOURED LIGHT
ON COLOURED COSTUMES AND SETTINGS . 156

Appearance of Colours—Choice of Fabrics—Stunt and Colour Changing Effects on Costumes and Designs—Changing the Appearance of Colours—Bathing Belle to Nude Effect—The White Man to Negro Effect—Changes in the Appearance of Scenery

PART IV. PRACTICAL LIGHTING FOR STAGE PRODUCTIONS

CHAPTER 12
SUGGESTIONS FOR LIGHTING A PLAY . . . 165

General Stage Lighting—Arranging the Spot Batten—Colour Filters for Batten Spotlights—Three-colour Basis for Spotlight Filters—Varying the Hue of Spotlighting—Effect of Light on Make-up—Variations in Coloured Light from Standard Filters—Footlighting for Interior and Exterior Settings—Overhead Battens for Interior and Exterior Settings—Auxiliary Equipment for a Play Setting—Floodlights—Fire Effect—Circle and Balcony Spotlights—Realism of Lighting

CHAPTER 13
SUGGESTIONS FOR LIGHTING OF OPERA, MUSICAL
SHOWS, REVUE, AND BALLET . . . 174

Type of Setting—Lighting of Grand Opera—Comic and Light Opera—Musical Comedy Lighting—Revue Lighting—Lighting Cue Sheets—Ballet

CHAPTER 14
SUGGESTIONS FOR CINEMA CURTAIN EFFECTS . 190

Lighting on Cinema Curtains—Emotional Effect of Colour—Selection of Colours—Lighting the Curtains—Curtain Materials

Index 195