

The year after its charter, ASC began publishing American Cinematographer magazine, which ever since has served as the club's foremost means of advancing the art.

The ASC has been very active in recent years in expressing concern about choices for Advanced Television (ATV), ranging from the choice of aspect ratio to pushing for the abandonment of interlace displays. At the invitation of the House and Senate in Washington, D.C., members of the ASC have been asked to inform and advise legislators on these issues.

Currently our technology committee has created a standard test (StEM) for digital cinema. They are advising the industry on standards in both production and postproduction for digital capture, manipulation and presentation.

The ASC is not a labor union or guild, but is an educational, cultural and professional organization. Membership is possible by invitation and is extended only to directors of photography with distinguished credits in the industry.

—George E. Turner

## Responsibilities Of The Cinematographer

### DESIGNING THE LOOK

Filmmaking is a uniquely collaborative form of artistic expression with many people playing interlocking roles. Cinematographers require artistic sensibilities, exceptional organizational skills, the ability to master complex technologies that are constantly evolving, and a special talent for collaborating and communicating effectively.

The cinematographer's initial and most important responsibility is telling the story and the design of a "look" or visual style that faithfully reflects the intentions the director, or the producer/show runner if the project happens to be an episodic television series. It is mandatory for the cinematographer to accomplish that primary goal within the limitations of the budget and schedule. Other collaborators who are generally involved in this creative process with the cinematographer and director include the production designer, art director, and occasionally the visual effects supervisor and/or producer. The cinematographer must also provide guidance in all technical aspects of production. They offer advice regarding the choice of the most appropriate film or digital video format for creating the "look" within the restraints of the budget. There are many options today, ranging from anamorphic 35mm film to digital video. The cinematographer is responsible for explaining those options and the creative and financial trade-offs with precise clarity.

If the project is a feature film, the cinematographer can discuss the pros and cons of traditional timing at an optical lab versus a digital intermediate (D.I.) facility. If it is a film made for television, the cinematographer can address upfront and long-term issues linked to finishing in high-definition or standard definition formats. There are no textbook answers because technology is constantly evolving and every situation is different. It is essential for the cinematographer to have a thorough grasp of all technical options, including choice of film and digital cameras, lenses, cranes, dollies and other platforms for moving cameras, new emulsions, and such special techniques as aerial and underwater photography, blue and green screen and other visual effects, as well as the capabilities of equipment rental houses, labs and postproduction facilities.

### PREPRODUCTION PLANNING

The cinematographer is frequently invited to watch rehearsals and offer suggestions for "blocking" scenes to provide artful coverage in the most

efficient way. All aspects of production are planned at this stage, including how many cameras are needed, how to move them and whether older or newer prime or zoom lenses are best suited for each task. Cinematographers also frequently provide input to directors while they are developing storyboards and shot lists. They go on location scouts and make recommendations to the production designer and art director for dressing and painting sets based on the vision for the “look” of the film and requirements for lighting and camera movement. The cinematographer also confers with the director and assistant director about the best times and places to stage exterior scenes to take maximum advantage of available light. They must also plan for such variables as the weather and tides if they are going to shoot on the beach or at sea. The cinematographer consults with the production designer regarding plans for dressing stages and the space they need for rigging lights and moving cameras. This includes the use of wild walls, removable sections of ceilings, placement, sizes and angles of windows, practical lights, and the colors and textures of props and walls.

The cinematographer also organizes camera, electrical and grip crews, whose talents and skills are the right match for the tasks at hand. They work with the gaffer to plan placement and rigging lighting fixtures, including deciding whether a dimmer control console is needed. The cinematographer also confers with the key grip on issues related to camera movement, including what gear is needed. He or she also consults with the production manager regarding arrangements for rental of camera, lighting and grip equipment, and such specialized tools as insert cars, on the days it will be needed.

During preproduction, the cinematographer must establish rapport with the make-up, hair and costume designers, which frequently includes shooting tests with the actors. Using information gained by this testing, the cinematographer can then present a visual interpretation of the actor’s character, helping to define and amplify the performance. They might also test new camera films, lenses and specialized photochemical or digital intermediate processes (DI) to determine the most efficient way to put the final touches on the visual design. In addition, the cinematographer establishes communications with the timer at the film lab or digital postproduction facility, which will provide dailies. They also make arrangements and check out facilities for viewing dailies, meet stand-ins for actors, and establish rapport and an open line of communications with the AD.

## PRINCIPAL PHOTOGRAPHY

The cinematographer is responsible for executing the vision for the “look” of the film, while helping to keep production on budget and on schedule. On many feature films, the day begins with the cinematographer viewing dailies during early morning hours at the lab to verify that there are no

technical problems and nuances in the “look” are working. They frequently watch rehearsals of the first scene with the director, and suggest whether modifications in lighting or coverage are needed. The cinematographer stays in touch with the production manager and AD regarding any changes in the anticipated schedule caused by unforeseen circumstances. In addition, the cinematographer approves the set up of lighting by the gaffer. Many directors want lighting and camera coverage to be “flexible” enough to give the actors the freedom to perform spontaneously.

Shots are often rehearsed with stand-ins. The cinematographer confers with the director regarding adjustments in plans for lighting and coverage and facilitates those changes with the grip, gaffer and lighting crews. They also work with the standby painter for any last minute touch-ups needed on sets, assist the AD in staging background action, and give the sound department the freedom to put their booms where they are needed to record great audio of the dialogue. If the director desires, a final walk-through or rehearsal is done with the actors. When cameras are rolling, the cinematographer assures that there are no technical glitches. They also provide an extra pair of eyes for the director on the set. The cinematographer might suggest retaking a shot because something didn’t quite look or feel right, while assuring the director they will find a way to make up the time.

If a DI finish is planned, the cinematographer might be recording request that digital still images of the scenes be taken, which he or she later manipulates with a personal computer to give the dailies timer and colorist a visual reference for the “look.”

The cinematographer, director and other key collaborators watch dailies together to judge how effectively the “look” is working. At the end of each day, the cinematographer discusses the first set up for the next morning with the AD and possibly the director. He or she also informs the script supervisor if there are special camera or lighting notes, makes sure that the camera, lighting and grip crews have all the information needed to rig their gear, provides any special notes and instructions required by the film lab and dailies timer, and works with the production manager regarding the need to return or acquire equipment.

## POSTPRODUCTION

The cinematographer’s role extends deep into postproduction with the goal of assuring that the “look” that he or she rendered is what audiences see on cinema and television screens. If possible, the cinematographer handles any additional photography required by changes in the script. They are also called on to supervise the seamless blending of visual effects shots with live-action footage. The cinematographer is responsible for timing the film for continuity and for adding nuances to the “look” in either a DI or optical lab envi-

ronment. They also approve the final answer print in collaboration with the director and producer. In addition, the cinematographer verifies that what they approved is reflected in the release print. The final task for the cinematographer involves timing, and, if necessary, reformatting films for release in DVD, HD and other television formats. All of these final steps are meant to assure that audiences experience films on motion picture and display screens the way they are intended to be seen by the creators of the images.

## Summary of Formats

compiled by Tak Miyagishima  
ASC Associate Member

### APERTURE SPECIFICATIONS

<b>35mm Camera – Spherical Lens</b>		
Academy Camera Aperture	.866" X .630"	22mm X 16mm
<b>35mm Theatrical Release – Spherical</b>		
1.37:1	.825" X .602"	20.96mm X 15.29mm
1.66:1	.825" X .497"	20.96mm X 12.62mm
1.85:1	.825" X .446"	20.96mm X 11.33mm
<b>35mm Television Aperture and Safe Areas</b>		
Camera Aperture	.866" X .630"	22mm X 16mm
TV Station Projector Aperture	.816" X .612"	20.73mm X 15.54mm
TV Transmitted Area	.792" X .594"	20.12mm X 15.09mm
TV Safe Action Area	.713" X .535"	18.11mm X 13.59mm
Corner Radii = .143"/3.63mm		
TV Safe Title Area	.630" X .475"	16mm X 12.06mm
Corner Radii = .125"/3.17mm		
<b>35mm Full Aperture – Spherical Lens (For Partial Frame Extraction) Prints (Super 35)</b>		
Camera Aperture (Film Center)	.980" X .735"	24.89mm X 18.67mm
Finder Markings		
35mm Anamorphic 2.4:1 AR	.945" X .394"	24mm X 10mm
70mm 2.2:1 AR	.945" X .430"	24mm X 10.92mm
35mm FLAT 1.85:1 AR	.945" X .511"	24mm X 12.97mm
<b>35mm Panavision 2-Perf</b>		
Camera Aperture (Film Center)	.980" X .365"	24.89mm x 9.27mm
Ground Glass 2.4:1 AR	.825" X .345"	20.96mm x 8.76mm
<b>35mm Panavision 3-Perf</b>		
Camera Aperture (Film Center)	.980" X .546"	24.89mm x 13.87mm
1.78:1	.910" X .511"	23.10mm x 12.98mm
<b>35mm Panavision 4-Perf</b>		
1.85:1 AR Spherical (FLAT) PROJ AP	.825" X .446"	20.96mm X 11.33mm
2.4:1 AR Anamorphic Squeeze PROJ AP	.825" X .690"	20.96mm X 17.53mm
5 perf 70mm 2.2:1 AR PROJ AP	1.912" X .870"	48.56mm X 22.10mm
<b>Panavision 35 and Anamorphic Squeezed Negative</b>		
Camera Aperture	.866" X .732"	22mm X 18.59mm
35mm Squeezed Print		
Finder Marking (2.2:1 70mm) & Proj AP	.825" X .690"	20.96mm X 17.53mm
16mm Squeezed Print	.342" X .286"	8.69mm X 7.26mm
	Max Proj. AP	
16mm Un-Squeezed Print (1.85:1)	.380" X .205"	9.65mm X 5.20mm
	Proj. AP matte	
70mm Unsqueezed Print Proj. AP	1.912" X .870"	48.56mm X 22.10mm