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Basics of Cinematography

The motion picture industry uses many terms and principles that are not used anywhere else. To perform your duties as a Camera Assistant, you need to be aware of these terms and the basics of cinematography along with the names of specific pieces of equipment. You will hear many of these terms in the day-to-day performance of your job. By introducing and explaining some of them here, I hope to make it easier for you as you read this book, as well as the first time you step onto a film set. To my knowledge all of this information is true and accurate and is based on my experience as well as research done in the compilation of this text. If you would like a more in-depth discussion about any of this information, you may consult any of the books listed in the Recommended Reading at the end of the book.

FILM FORMATS

The term *format* may be used to indicate a few different things in the motion picture industry. In most instances the term format is used to refer to the size of the film stock being used for shooting. The two primary film formats used for shooting filmed productions are 16 mm and 35 mm. Almost all professional cinematography is shot using one of these two formats. The 65 mm/70 mm format is a popular release print format but it is used very infrequently for production primarily because of cost.

All motion picture film contains perforations so that it can move through the camera. The perforations may also be referred to as *perfs* or *sprocket holes*. These are equally spaced holes that are punched into the edges of the film so that it can be transported through the camera at a constant speed. The spacing between the perforations is known as *pitch* and is defined as the distance from the top of one perforation to the top of the next perforation (see Figure 1.1).

2 THE CAMERA ASSISTANT'S MANUAL

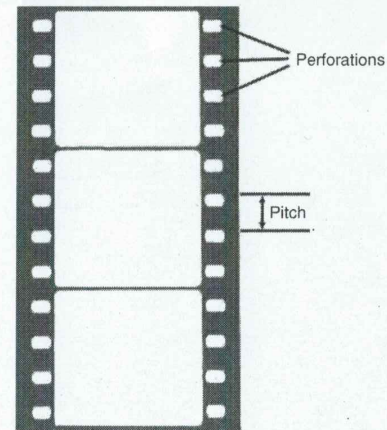


Figure 1.1
A piece of film showing perforations and pitch.

16 mm film may be used to shoot standard 16 mm format or Super 16 mm format. The film itself is the same width; the differences are the perforations on the piece of film and how much of the film is used for the image. Generally speaking, standard 16 mm is shot using 16 mm film that contains perforations on both sides of the frame (see Figure 1.2A).

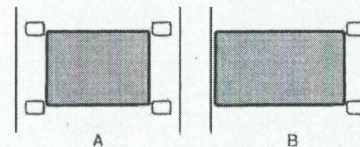


Figure 1.2
A, Standard 16 mm frame.
B, Super 16 mm frame.

Super 16 mm is shot using 16 mm film with perforations only on one side of the frame. This enables the filmmaker to use more area of the film frame to create a larger image (see Figure 1.2B). 16 mm film contains 40 frames per foot. 35 mm film contains four perforations per frame on each side of the film, and there are 16 frames per foot (see Figure 1.3).

The 65 mm/70 mm format is a popular release print format. Many films that are photographed on 35 mm film are enlarged to 65 mm/70 mm for release to theaters. A larger negative will result in a sharper, clearer picture when it is projected on the big screen. Figure 1.4 shows the 65 mm/70 mm film frame.