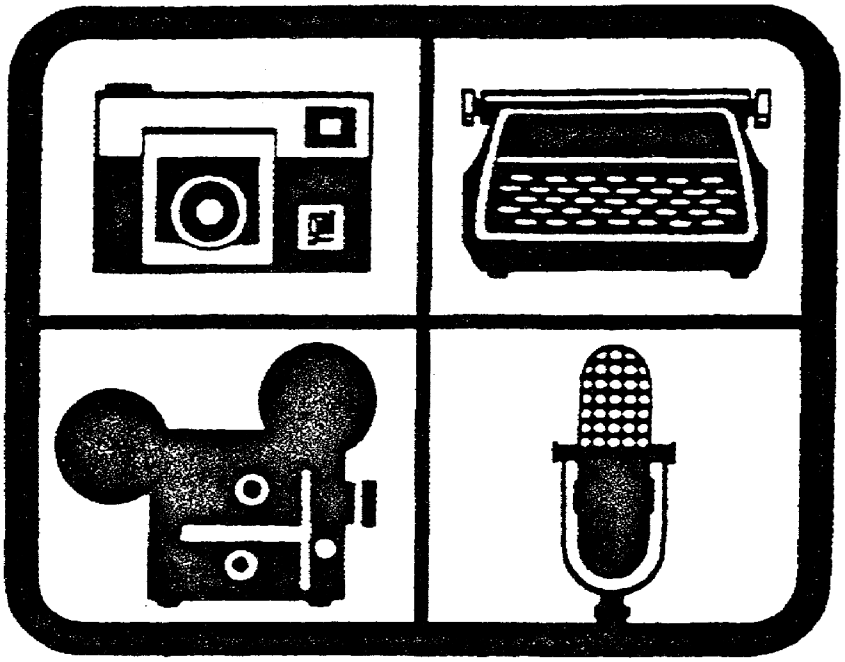
SUBCOURSE
DI 0350

EDITION
A

ELECTRONIC JOURNALISM

PUBLIC AFFAIRS



THE ARMY INSTITUTE FOR PROFESSIONAL DEVELOPMENT
ARMY CORRESPONDENCE COURSE PROGRAM

AIPD

READINESS/ PROFESSIONALISM THRU GROWTH

ELECTRONIC JOURNALISM

Subcourse Number DI 0350

EDITION A

Army Public Affairs Center
Fort George G. Meade, Maryland

10 Credit Hours

Edition Date: March 1991

SUBCOURSE OVERVIEW

We designed this subcourse as part of the Broadcast Journalist course to introduce you to an entry-level understanding of Electronic News Gathering/Electronic Field Production Equipment, Lighting For Electronic News Gathering, Framing And Composition, Video Scriptwriting and Electronic Editing. This subcourse is presented in five lessons.

You must have a basic knowledge of military broadcasting prior to taking this subcourse. There are no prerequisites to this subcourse.

This subcourse reflects the doctrine current at the time the subcourse was prepared. In your own work situation, always refer to the latest official publications.

Unless otherwise stated, the masculine gender of singular pronouns is used to refer to both men and women.

TERMINAL LEARNING OBJECTIVE

ACTION: You will learn the basics of electronic news gathering/electronic field production, lighting for electronic news gathering, video scriptwriting, framing and composition, and electronic editing.

CONDITION: You are given the material presented in this lesson.

STANDARD: To demonstrate competency of this task, you must achieve a minimum of 70 percent on the subcourse examination.

TABLE OF CONTENTS

LESSON ONE

ELECTRONIC NEWS GATHERING/ELECTRONIC FIELD PRODUCTION

46R Soldier's Manual Task: 214-177-1315

OVERVIEW

LESSON DESCRIPTION:

This lesson will provide you an overview of Electronic News Gathering/Electronic Field Production (ENG/EFP) and the equipment necessary to perform these functions.

TERMINAL LEARNING OBJECTIVE:

ACTION: After you complete this lesson you will be able to describe common ENG equipment, its purpose and its functions.

CONDITION: You are given the material presented in this lesson.

STANDARD: Perform all the duties described in this lesson.

REFERENCE: The material contained in this lesson was derived from the following publication:

STP 46-46Ri4-SM-TG Soldier's Manual & Trainer's Guide, Broadcast Journalist, MOS 46R Skill Levels 1/2/3/4/, August 1988

ELECTRONIC NEWS GATHERING/ELECTRONIC FIELD PRODUCTION

INTRODUCTION

The age of the high-quality, portable "mini-camera" is here to stay. The same technology found in the pocket calculator and the computer is responsible for small, lightweight video systems, which are revolutionizing the television industry. Where once we could only take a film camera, the Electronic News Gathering (ENG) /Electronic Field Production (EFP) videotape camera has effectively replaced this older system with cost-effective, portable news gathering equipment. Not only is it portable, it can even allow the broadcaster to play back the recording on the spot and gain instant confirmation of success or failure. With the older film format, the process was time consuming, and expensive.

This subcourse discusses the equipment, operation and capabilities of the small-format video camera system. As an Army broadcaster, you will be dealing extensively with ENG/EFP recording systems used primarily for command information and electronic news gathering. You need to have a basic understanding of the mini-cam system, as well as television in general to perform effectively in your position either as a field reporter or producer of command information material. This subcourse will give you the basic knowledge required to function in these positions.

Commercial television stations use many different terms to describe their mobile production units. However, civilian and Army broadcasters agree on the use of at least two terms: ENG and EFP. There is a difference.

- ENG is the coverage of uncontrolled events such as a training accident or fire. The pictures and story are gathered on the scene, as the events take place.

- EFP uses the same equipment, but under controlled circumstances. A story or script is written in advance. The event is carefully planned and executed until the final product is finished with predetermined results.

ENG/EFP serves two primary purposes in Army broadcasting. They are command information and public information, which will be anything from an uncontrolled event to a carefully planned event. Either could be a news story, in which case, it would be treated the same as ENG, or a produced spot on the other end of the spectrum. Most likely it will fall somewhere in between. EXAMPLE: A training exercise where the event itself is planned, but your coverage of it will be with less control than an EFP.

Most of today's soldiers grew up with television. The last war, Vietnam, came into America's living rooms through television sets. The ability of television to communicate information and ideas by using pictures as well as words far outdistances other media. With all its advantages, however, television poorly produced can lose the audience's interest and attention just as any other medium. You, the broadcaster, must learn, practice and properly employ television production techniques to be most effective in ENG/EFP.

Since television is normally a team effort with every member concentrating on his specialty, the ENG team faces a far greater challenge in that there are fewer members to accomplish all of the tasks necessary to complete the production. In addressing the different aspects of television production it would be simple to concentrate in one specific area with regards to one specific task. However, since the ENG team member must wear many hats, it will sometimes be necessary in this lesson to refer to certain topics in a number of different places. For that purpose, this lesson will explain each facet of the subject, and label it in bold type in order for you to find it more easily whenever it is referred to again. There will be different size letters in bold type to indicate topics and subtopics. It may be necessary for you to refresh your understanding of a particular topic by going back when you find it mentioned again. Don't hesitate to do se.

THE CAMERA

The most obvious production element, the camera, comes in many sizes and configurations. Each has three main parts, the body, the lens and the viewfinder. Some cameras may be easily carried and operated by one person, while others are so large and heavy they must be placed on a special camera mount or **dolly pedestal**. The camera dolly is wheel mounted, enabling the operator to move the camera through a studio, on wheels, with relative ease. However, the chance of you being involved in an EFP requiring studio cameras, is extremely remote. Therefore, the camera we will discuss is the portable camera, the most often used in ENG/EFP.

Whenever possible ENG/EFP cameras should be placed on a **tripod**. A tripod is a stand with three legs having a mounting plate to which the ENG/EFP camera is attached. It is the field equivalent of the studio dolly pedestal. ENG/EFP cameras are automated and fully operational within seconds after switching them on. Adjustments to extreme production situations may be made quickly and easily (see Figure 1-1, Basic Camera).

Almost all important productions are done with color cameras- Black and white cameras are used for inexpensive taping, surveillance, and industrial applications.

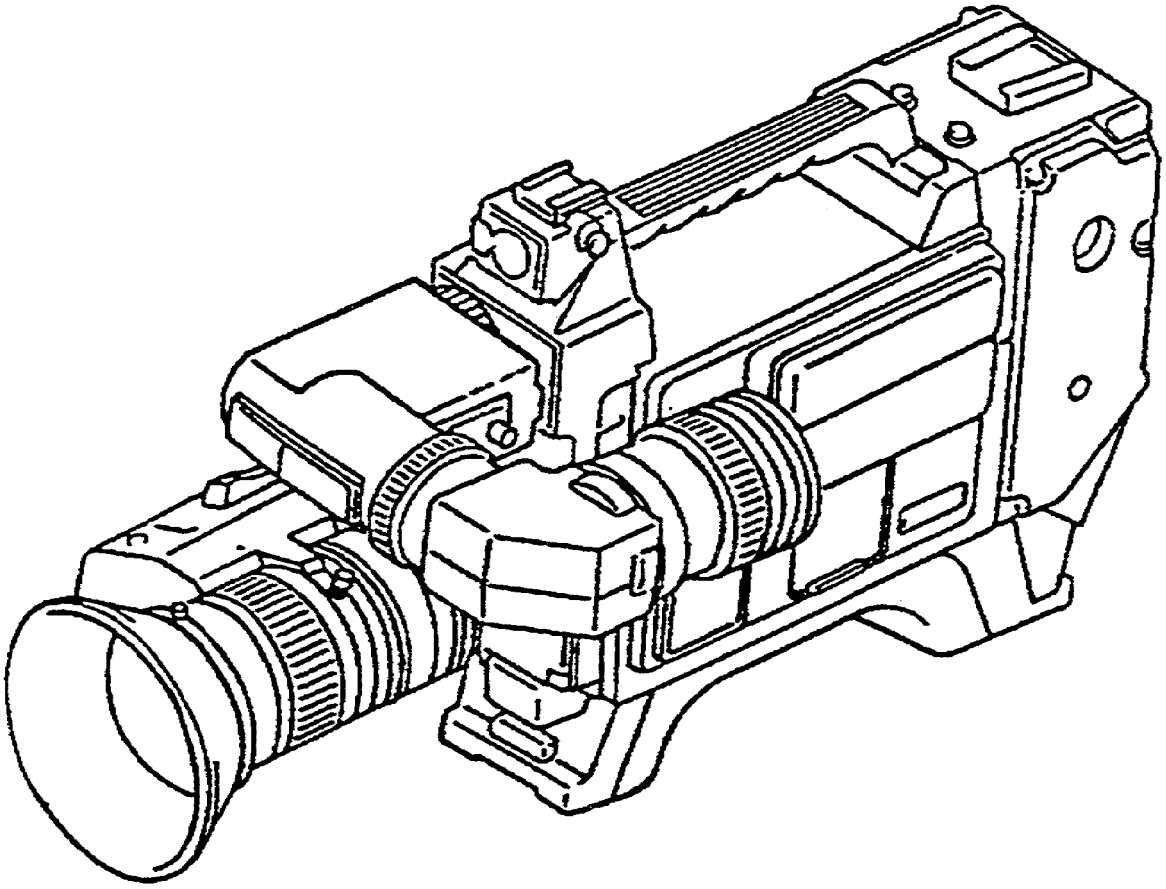


FIGURE 1-1. BASIC CAMERA

HOW THE CAMERA WORKS

All TV cameras, whether color or black and white, studio or portable, operate on the same basic principle. They convert an optical image into electronic information that is then reconstructed by a television set or monitor into visible screen images.

Black and White Camera

The light reflected off an object is gathered by the lens and focused on the camera pickup device. The light is then transformed into electrical energy or the video signal. In the black and white camera, this light stays in the form of different values of gray. The signal is amplified, processed and converted back into images in the viewfinder.

Color Camera

The color camera is more complicated than the black and white camera. In order for you to understand the dos and don'ts of color production, you'll need to know some of the basic workings of the color camera body. Since the camera is a seeing device and requires light, you'll also need to know something about light which will be discussed in another chapter. In this chapter, we will briefly discuss internal optical systems, image devices, electronic characteristics of color cameras, camera types and operational characteristics.

The color camera first splits the white light entering through the lens into the three primary colors; red, blue, and green. Those colors are then processed into separate channels. The color separation device that splits the white light is called the beam splitter.

Electronic characteristics. The electronic characteristics of a camera depend primarily on the performance of the image device used. In discussing internal optical systems and image devices, we'll take a brief look at color response, resolution and operating light level.

Color response. Ideally, the camera should respond to all colors alike. In the past, however, it's been difficult to reproduce different colors with the same accuracy. The greatest difficulty has been encountered when reproducing red. Not only is it difficult to produce a strong video signal for red, but it also has a fuzzier image than other colors. In their attempts, manufactures have gone to special tubes for each channel and special color-correction filters and electronic circuits. For the moment, the battle for accuracy in color response is being waged most successfully between the Saticon tube and the Charged Coupled Device or CCD. The COD is an integrated circuit or chip. Keep in mind that color response is the reproduction of color in the form of an electronic signal, and not the seeing or separating of the color by the beam splitter.

Resolution. The camera pickup device, tube or chip, is the principal element in the camera that determines the sharpness of the picture. Other elements that influence the resolution of the picture are the lens, the quality of the internal optical system, and the TV set or monitor that reproduces the picture. For instance, take a magnifying glass and look at a photo that is reproduced in a newspaper. Then look at one reproduced in a slick magazine. Generally you'll notice that the newspaper picture consists of rather coarse dots, whereas the individual dots are barely discernible in the magazine picture. The newspaper picture has poorer resolution than the magazine picture.

Be conscious of the limited resolution of the TV picture, especially when dealing with television graphics and in areas of production where fine picture detail is essential.

Operating light level. As previously mentioned, the camera converts visual images into an electronic signal for processing to video tape or transmission in some form or another. The first step in the process is accomplished by the pick-up device in the camera, whether it be a tube or chip. A certain amount of light is necessary for the pick-up device to be able to perform its task. The ENG/EFP videographer must make sure there is enough light to meet this technical requirement. There are a number of different aspects of light and a number of different ways to measure them. One common unit of measure that pertains to the amount of light, is the footcandle. Whatever term is used, it's important that your light-measuring device be in the same language as the manual for your camera. EXAMPLE: If the manual for your camera calls for a minimum of 100 footcandles of light, you'll need a light meter that reads in footcandles. It's not important for you to know what a footcandle is other than that it is a unit of measure. It is important for you to know "how much light your camera requires to operate."

Since cameras must operate under varying light levels, portable video cameras have a means of boosting the light. In reality, after the light, or optical image, entering the camera has been converted to an electronic signal, that signal is boosted rather than the light itself. Generally, the camera has a dB gain switch with two positions. They are 9dB and 18dB. For every 6 dB of gain, the camera output signal will double in amplitude, effectively increasing the video level. That means the 9dB setting will triple the signal strength while 18dB will be times eight. CAUTION: Video noise increases in proportion to the video gain.

Video noise. Under low light levels, even the best cameras cannot avoid noisy pictures. A noisy picture has a great amount of snow, or white vibrating spots in the picture. This occurs when the video signals, produced by the pickup device, are not strong enough to override the electronic interference that the system usually generates. At 18dB gain, the system is generating more electronic interference, therefore, more video noise.

Lag. Lag and/or color distortion occurs under low-light conditions when a bright object moves against a dark background, e.g., a white glove moving against a dark background. The white glove will leave a streak or trail against the background, sometimes called "comet tailing." Comet tailing occurs when the camera pickup tube(s) is unable to process "video hits," extremely bright highlights that reflect off highly polished surfaces. You may have

observed what appears to be red flames that seem to tail shiny brass objects whenever they move across a brightly illuminated area. In either case, the white glove on the dark background or the extremely bright highlights, it's a contrast or difference between that one spot and the area of the picture around it. It takes an instant for the picture to darken back down where the brighter object was. It's the camera's pickup device doing the same thing the human eye does when a moving "sparkler" appears to leave a bright line behind it as it is moved around. Of course, the video camera cannot react as quickly as the human eye, thus the same effect occurs in less extreme situations.

Color distortion. Color distortion occurs under low-light levels and makes colors like blue look green, and red look orange, etc.

BODY

The camera body consists of the housing and internal parts. That includes either camera pickup tube(s) or a solid-state image device and the internal optical system. The internal optical system is a series of prisms or mirrors. There are also circuitry boards, resistors, capacitors and wires. You might say that the camera body is the part which translates video images into electronic signals for processing and shipment.

VIEWFINDER

The viewfinder on a portable camera is a relatively small TV screen (1.5 inches in diameter), while a studio camera viewfinder is larger (3 to 9 inches in diameter). They both produce high resolution black and white images. The TV screen on a portable camera is shielded from outside reflections by a flexible rubber eyepiece that adjusts to the operator's eye. In that rubber eyepiece, there is an adjustable lens to focus since the eye is placed within an inch or two of the screen. The studio viewfinder uses a hood to shade the TV screen from overhead studio lights.

The portable camera viewfinder contains a number of control lights or displays that indicate the status of certain camera functions. Most viewfinders automatically display information on tape status, battery condition, tally/record light and low light level indicator. The viewfinders display, on command, bars (color bars), pat terns, white/black balance setup cursor, and camera registration. (All camera viewfinders are black and white.)

Many cameras permit the viewfinder to be used as a playback monitor for the VCR. The advantage of this feature is that

you don't need any other equipment to set up the camera. This function is called video return, and more systems are getting away from it. Camera's are more reliable, recorders have indicators to let you know when you're recording, and video return becomes less cost efficient.

LENS

The lens selects a certain field of view and produces a small, clear optical image of this view. The lens and certain attachments are sometimes called the external optical system.

With the lens we have four primary concerns. These are (1) focal length, (2) focus, (3) f-stop, and (4) depth of field.

Focal Length

Focal length is the distance from the optical center of the lens (which is not always its physical center) to the point where the image as seen by the lens is sharp and clear, or in focus. Portable television cameras have a zoom, or variable focal length lens which enables them to select fields of view at different distances from the camera without moving the camera. It allows you to change the focal length of the lens from long to short or from short to long in one continuous operation. A complicated series of lenses interact and keep the object in focus at all times during the zooming process. Zooming in means changing the lens gradually from a wide-angle lens to a narrow-angle lens. On the television screen, a zoom in appears as though the camera is moving smoothly toward the object. Zooming out means changing the lens from a close-up to a distant shot and it will appear that the camera is moving away.

The degree to which you can change the focal length of a zoom lens is the zoom range of your lens. The range is often given in a ratio, such as a 10:1 zoom range. This means you can increase your focal length ten times. Some cameras have a "times two function," which allows you to double the focal length at any point in the zoom, thus making the maximum 20:1 for the above example.

The speed at which the focal length of a zoom lens can be changed is determined by the operator, whether it is done manually or with a zoom servo.

Manual zoom control. On the ENG/EFP zoom lens, the manual control is a small rod extending from the zoom ring (see Figure 1-2). To zoom in or out, turn the zoom rod clockwise or counterclockwise. It takes some skill and practice to accomplish smooth zooms with the manual control.

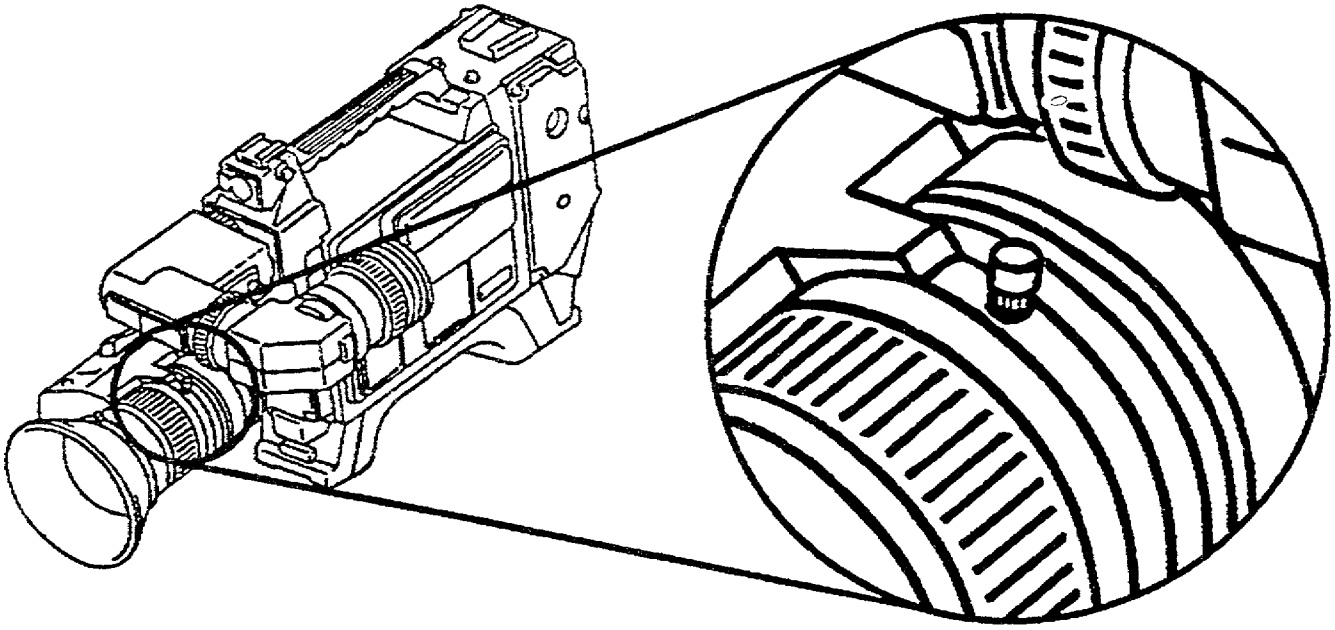


FIGURE 1-2. MANUAL ZOOM CONTROL

A zoom servo is nothing more than a small motor controlled by a lever. The distance the lever is depressed determines the speed of the zoom. The range of speed can be anywhere from 2.5 to 20 seconds. The lever is called the zoom selection or T/W switch. T stands for telephoto and W for wide-angle.

There are several advantages to the servo system. Zooms are steady and smooth, especially during slow zooms. The zoom control is easy to operate and allows you to concentrate more on picture composition and focusing. The servo zoom frees the left hand to operate the manual focus and aperture controls. However, quiet as the servo motors are, they can sometimes be heard by the camera microphone and they require more battery power.

Manual/automatic focus control. The focus control is a manual function (see Figure 1-3, Manual Focus Control Ring). To operate it, the operator rotates the focus ring on the zoom lens, either clockwise or counterclockwise, while looking in the viewfinder to determine if the picture is in focus. Some cameras have an automatic focus device. Obvious problems occur when focusing not on the object that lies next to the camera, but on the one farther away. The operator will have more control in the manual mode.

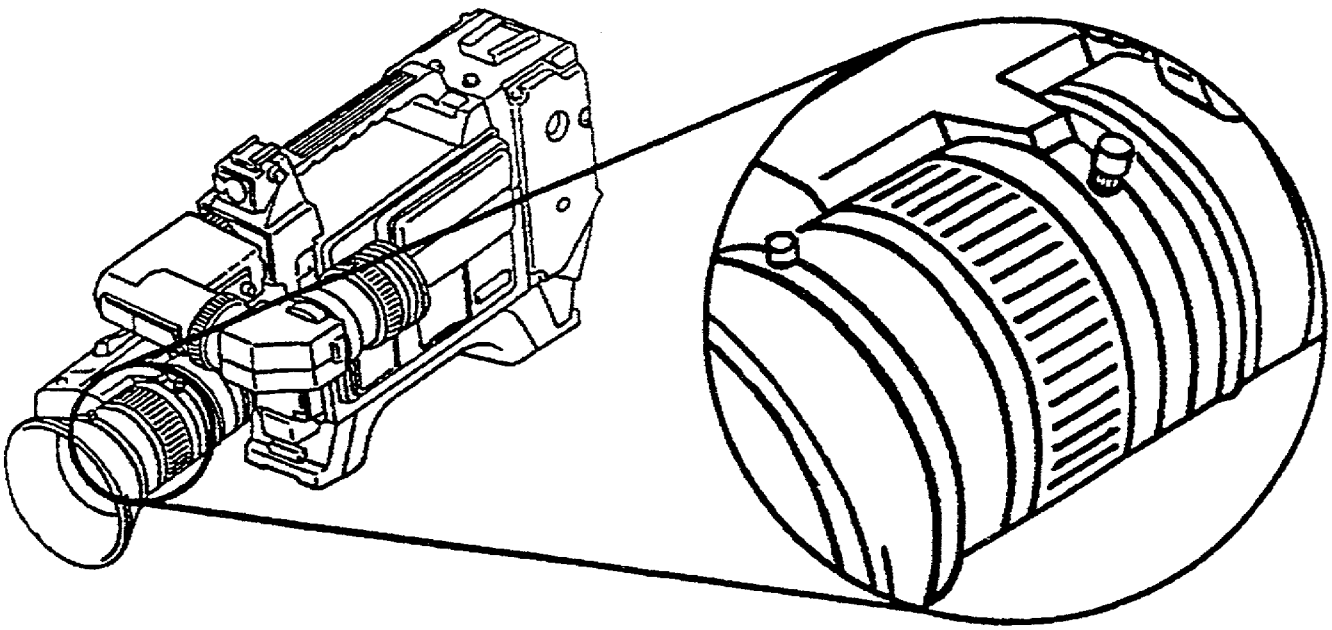


FIGURE 1-3. MANUAL FOCUS CONTROL RING

Getting The Most Out Of A Lens

Generally, lenses fall into one of three categories; wide angle, normal, and narrow angle or telephoto. Since the zoom lens can duplicate all three, we will discuss the characteristics of each.

Wide Angle Lenses

Field of view. The wide angle lens has a very wide field of view and very little magnification. The principal subjects seem relatively small in relation to the background and it is difficult to distinguish much detail in these wide shots.

Perspective. These lenses exaggerate depth and distance. Objects in the foreground will appear much larger than those in the background.

Movement. The speed of subject movement will be greatly exaggerated, especially when moving towards or away from the camera. Camera movement will not be nearly as noticeable as with longer lenses. Subject movement will be very easy to follow since the wide horizontal field of view, minimal magnification, and deep depth of field eliminate camera jitter and focus problems. This lens, (or the zoomed out configuration of the zoom lens), is an excellent choice when

you are trying to follow a lot of action. There are different types of camera movement both in and out of a television studio. Since ENG is accomplished more out of the studio than in, one of those types of movement (camera positioning) becomes much more important. Changing the aim of the camera left or right, up or down, we'll call "camera movements" and physically changing the location of the camera, we'll call "camera positioning." More will be discussed about camera movement and camera positioning in Subcourse DI0351, Electronic Journalism II, but for the purpose of learning about lenses and how they effect movement, you'll only need to know whether we are talking about changing the aim of the camera, or its location.

Distortion. When your subject is too close to the lens there will be immense distortion (see Figures 1-4a and 1-4b, Distortion). In Figure 1-4a the subject's hands appear unnaturally large in relation to her body. In Figure 1-4b her body appears elongated and her head and shoulders appear unnaturally larger than normal. Wide angle lenses create barrel distortion. Barrel distortion is when vertical lines in your field of view appear to bulge outward in the middle of the videospace and to converge at the top and bottom.

FIGURE 1-4a FIGURE 1-4b

DISTORTION

Limitations. Because of distortion when the subject is too close to the lens, you will use the wide angle lens primarily for long establishing shots. Picture definition and detail will be less sharp, making it difficult for the viewer to see all objects clearly. Also, because of the extensive depth of field, you won't be able to use selective focus to your advantage. There will be more information about selective focus later under depth of field. Another limitation of the wide angle lens of great concern to videographers is its susceptibility to lens flare. The wide field of view can inadvertently include the glare from studio lights or the sun. If you're not careful you can

even get the lights or the sun in the shot itself. If your camera has pickup tubes, this will cause burn in.

Normal Lenses

Field of view. Through a normal lens, the field of view will be about the same as normal vision.

Depth of field. Normal lenses will usually give a medium depth of field with the objects in the extreme foreground and background areas of the picture thrown slightly out of focus, but with a fairly wide area of acceptable focus around the principal subject.

Perspective. The normal lens will produce a natural depth perspective with no exaggeration of foreground-to-background subject size,. depth, or speed of movement.

Movement. The movement of subjects toward or away from the camera will appear at near normal speed through a normal focal length lens. Since there isn't much magnification camera movement will not be exaggerated and it is fairly easy to follow a moving subject. However, camera positioning should be kept to a minimum since the jitter and shake of a moving camera could be obvious.

Distortion. Distortion will be almost nonexistent and the slight flattening effect of the normal angle lens may be flattering to people with prominent facial features.

Limitations. There are few limitations with the normal angle lens beyond the jitter and shake seen when the camera is being repositioned. With professional camera steadying equipment, even this can be overcome.

Telephoto (Narrow Angle) Lenses

Field of view. A narrow angle lens has a very narrow field of view and powerful subject magnification.

Perspective. The long lens, or the zoomed-in configuration of the zoom lens, compresses perspective and reduces the perception of space and volume. It also makes everything in the picture appear about the same size regardless of distance. EXAMPLE: The shot from the center field camera at a baseball game is usually zoomed in and makes the pitcher and the batter appear the same size even though the batter is sixty feet further away.

Movement. Extreme magnification and narrow horizontal field of view make it difficult to follow a rapidly moving subject. The focus is so critical and the field of view so

narrow that following a subject with the aim of the camera should not be attempted unless the movement of the subject is totally predictable. EXAMPLE: Following the horse along the backstretch at a horse race. To follow a subject with camera positioning is absolutely out of the question with a long lens. The slightest movement of the camera in this fashion will be greatly magnified.

Distortion. The compression of perspective in the long lens appears to flatten everything to a point that it removes depth perception. Heat waves rising from the ground will be magnified so much as to distort images. This lens will counter your efforts to give the effect of three dimensions.

Limitations. Although the long focal length lens will bring about greater detail of distant subjects, other aspects of the picture are effected negatively. This lens should be used in special applications only.

Focus

Focus with a lens is the same thing as focus with the eye. Sharp and clear is in focus, while fuzzy and unclear is out of focus.

There are two methods of setting the focus on a zoom lens. One, called zoom focus, is by zooming all the way in and setting the focus, then zooming out to the focal length desired. Once this is done, everything in the depth of field will remain in focus for that zoomed out shot, including the object focused on, provided the distance between it and the camera doesn't change.

The other is called rack focus. This is nothing more than setting the focus on something in the field of view. When this is done, only that object and other objects at the same distance will remain in focus as long as the distance between them and the camera doesn't change. Obviously a rack focus is used when there isn't time to zoom focus. There are times when the effects of a rack focus may be desired. EXAMPLE: When the viewer's attention is directed toward something in the foreground and we wish to lead their eye to another object. We can do this by changing the focus to bring the other object into sharp focus while the first object goes out-of-focus,

f-Stop

Just as in photography the camera pick-up device will operate properly only within a certain range of light intensity. If too much or too little light falls on the pick-up tube or chip, the picture quality will suffer.

Since you will use the camera both indoors and outdoors, you will have to adjust for the extreme difference in light levels.

The lens diaphragm, or iris, is used to control the amount of light that enters the lens, and thus the camera by enlarging or reducing the aperture. The f-stops indicate the size of the lens (diaphragm) opening. The lower the f-stop number, the wider the lens opening. When a lens is zoomed in, it will require more light, a wider opening and thus a lower f-stop number (see Figure 1-5, f-Stops & Iris Openings).

Most cameras have an automatic iris that allow the operator to devote his attention to other important aspects of videography such as framing, composition, etc.

Although the automatic iris seems ideal for ENG/EFP systems, it does not always work to the operator's advantage. With a fairly even illumination, the auto iris closes down when it sees an extremely bright area in a scene, or opens up when sensing a large dark area. This will cause silhouetting. This can be avoided by switching to manual iris control and exposing for the subject alone.

It is important for the ENG operator to know that f-stops determine more than just the amount of light entering the camera. They also affect the depth of field.

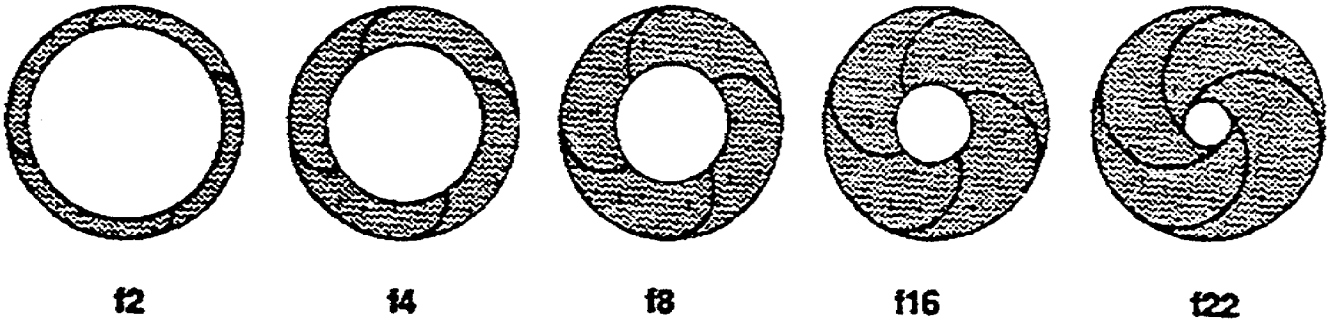


FIGURE 1-5. F-STOPS & IRIS OPENINGS

Depth Of Field

If you place objects at different distances from the camera, some objects will be in focus and some out of focus. The depth of field is that area of the field of view where the objects will be in focus (see Figure 1-6). The depth of field can be shallow or great. If the depth of field is shallow, only the objects in the middle ground may be in focus; the foreground and background will be out of focus. A large diaphragm opening (small f-stop number) will decrease the depth of field and a small diaphragm opening (large f-stop number) will increase the depth of field.

It's important for the ENG camera operator to understand this, because the same rules apply when the camera is moved. A great depth of field makes it easy for the camera operator to stay in focus while moving short distances. A shallow depth of field makes it impossible to move without getting out of focus.

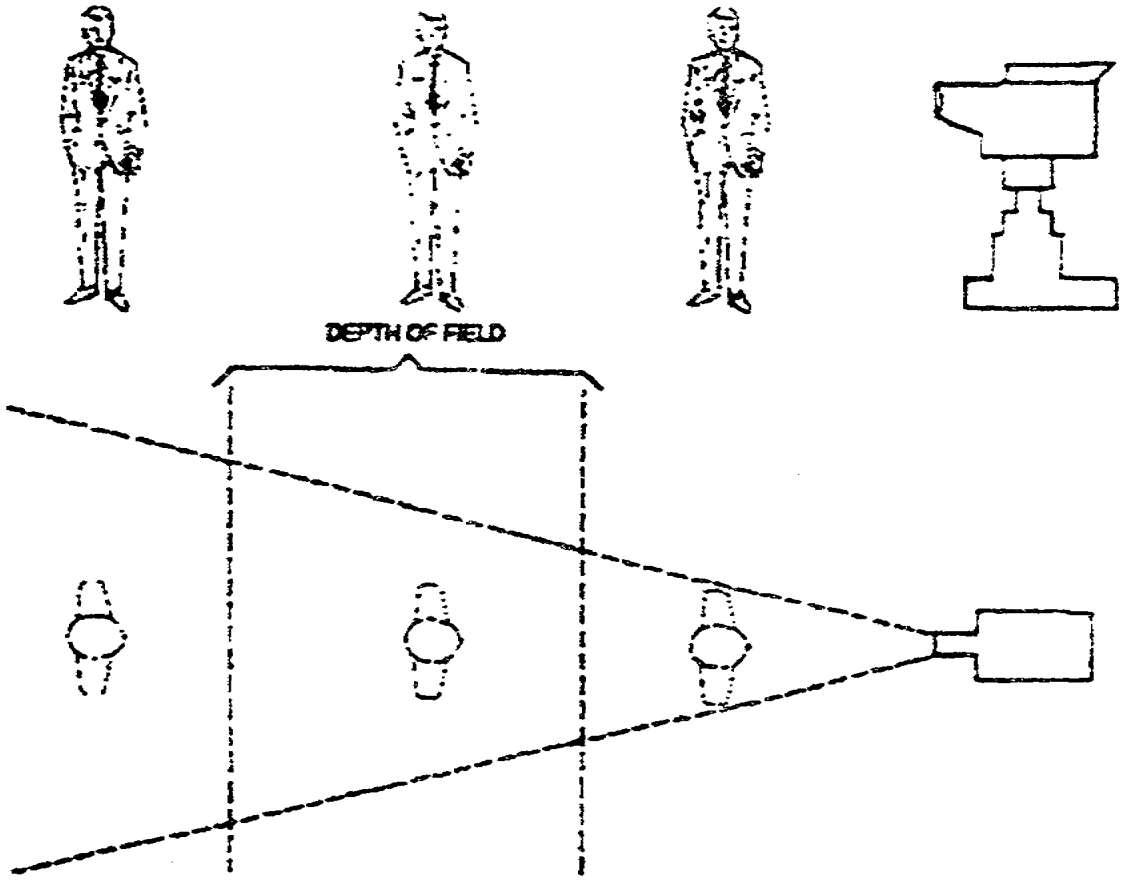


FIGURE 1-6. DEPTH OF FIELD

Although it seems that a great depth of field would be the most desirable in field operations, a medium depth of field is sometimes preferred, because in-focus objects are set apart from out-of-focus background. Thus, the object will be emphasized, and little attention will be drawn to unnecessary background. The foreground, middle ground and background w ill be better defined. The important thing for you, the operator, is to understand the basic principles and apply them properly.

Three things affect the depth of field. They are: (1) the focal length of the lens used, (2) the lens opening (f-stop), and (3) the distance between the camera and object.

- Short lens focal lengths have a great depth of field. Long focal lengths have a shallow depth of field.

- Large lens openings (small f1-stop numbers) cause a shallow depth of field. Small lens openings (large f-stop numbers) cause a great depth of field. A low light level will necessitate the opening of the lens diaphragms, which will cause a decrease in the depth of field.

- The farther away the object is from the camera, the greater the depth of field. The closer the object to the camera, the more shallow the depth of field.

Some of these factors counter each other in practical application. A close-up shot with the lens zoomed all the way out (a short focal length/greater depth of field) would have a small camera-to-object distance (shallow depth of field). The same close-up shot done with the lens zoomed all the way in would have a longer focal length (shallow depth of field), but a greater camera-to-object distance (greater depth of field). With zoom lenses, the depth of field changes as they are zoomed in or out. When zoomed in, you have a shallow depth of field; when zoomed out you have a greater depth of field. Add to this, the lens diaphragm opening will increase as you zoom in and decrease as you zoom out, and you can see the need for a lot of practice.

Sometimes a limited depth of field can work to your advantage. As mentioned earlier, an out-of-focus background will not interfere with, or distract from your main subject. If there are small things in the immediate foreground they can almost be taken completely out of the picture with a reduced depth of field.

EXAMPLE: When shooting through small limbs of a tree, or a chain link fence, they will not even be seen if they are close enough and the camera is zoomed in on something far enough away.

Lenses For Effects

You will not be as concerned about lens effects for ENG as you would be for EFP. There are a few things you should know about different lenses and lens uses and the effects created by them.

Visual perspective of a zoom lens versus a camera dolly shot. There is an important difference between zooming in or out, and physically repositioning the camera closer or farther away. The wide use of a zoom lens and its ease of operation has caused many videographers and directors to rely on the zoom where they would be better served by repositioning the camera. A zoom lens simply magnifies or reduces an image but it s necessary to move the camera to get the full three-dimensional effect. This is particularly important when moving through doorways, and arches, or past furniture and other stationary objects. This movement of the camera is called a "dolly." This movement will be discussed more in the section covering camera operation.

The lens, body and viewfinder combination is called the **camera head**, because it is at the head of the chain of other essential electronic camera equipment. The camera head itself has a series of attachments and controls that help you use the camera efficiently and creatively.

RECORD/PLAYBACK SYSTEM

The video recorder, with the portable camera, offers a whole new concept in television production. Although VCRs are more complex electronically than audio tape recorders, they are no more difficult to operate. Currently, there are a number of videotape formats used in the broadcast industry: 3/4-inch U-matic, 1/2-inch Beta, Super VHS systems, and 8 millimeter, called "HI 8." There are different schools of thought as to which are broadcast quality and which are not, but it is universally accepted that 3/4-inch U-matic and 1/2-inch Beta, are industry standard and the two formats commonly used in Army Broadcasting. Although the camcorder 1/2-inch Beta system started a revolution with its lightweight single system camera/recorder, and the other comparable systems carry it even further, choice of systems seems to be just that, a choice of systems. A basic understanding of 3/4-inch U-matic format will serve you for the purposes of editing to enable you to function in the field of ENG/EFP. Cassettes recorded on 3/4-inch VCRs are all interchangeable (Note: the 1/2-inch system is not compatible wit h the 3/4-inch system, and additional equipment must be used to dub from one format to the other). Besides the video track, the 3/4-inch U-matic cassettes have two audio channels, and a control track channel (see Figure 1-7)

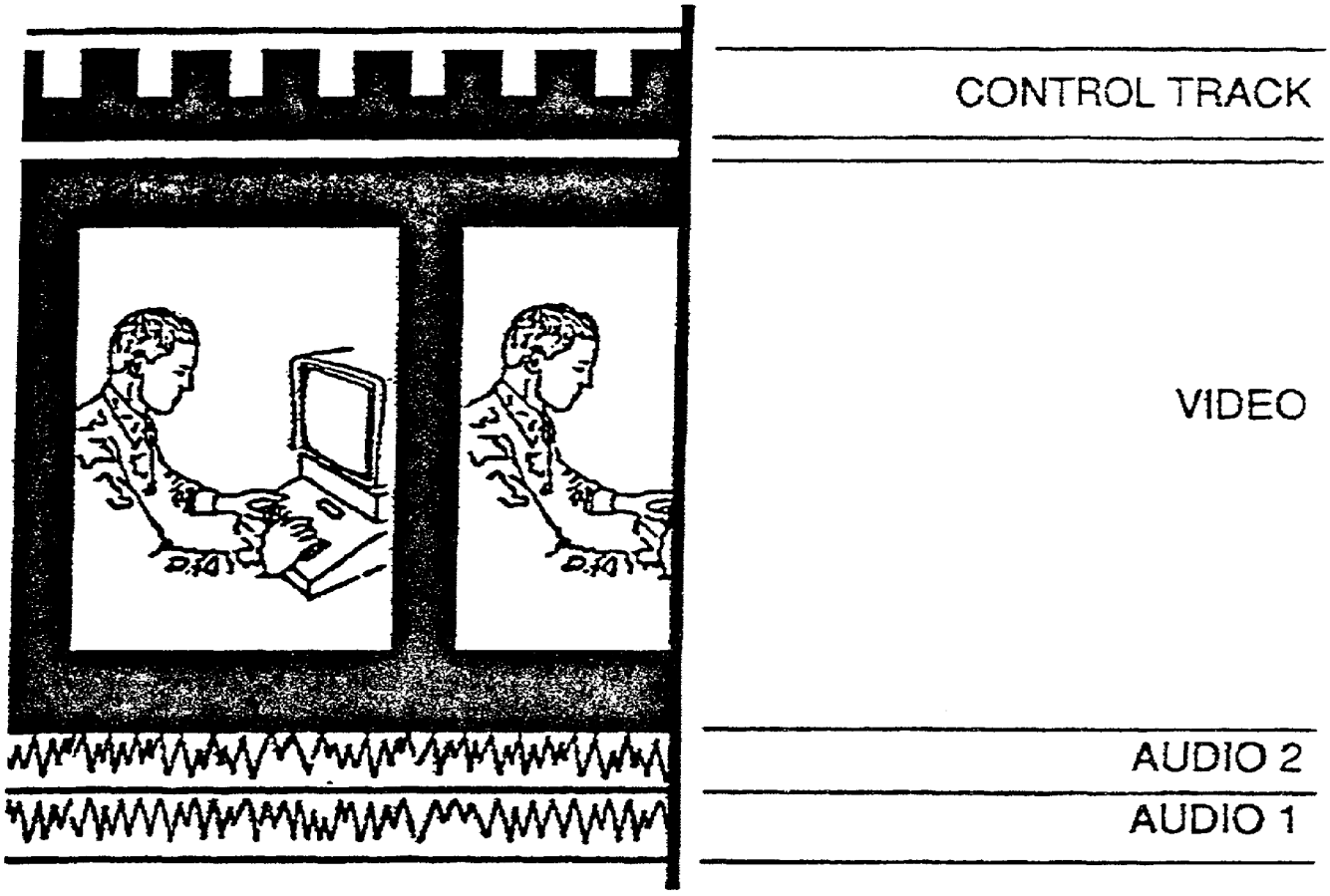


FIGURE 1-7. 3/4 INCH UMATIC TAPE FORMAT

Most portable VCRs run on a 12-volt DC battery or AC power. Currently, batteries available have a charge life of varying lengths and, if you hook up the camera to the same battery, the life is about half. For AC operations, an AC/DC converter is necessary. With AC operation, there is no time limit but you are always tied to the length of the AC cord.

PRACTICE EXERCISE

LESSON 1

SUBCOURSE NO. DI 0350

ELECTRONIC NEWS GATHERING/ELECTRONIC FIELD PRODUCTION

INSTRUCTIONS:

Review the material in this lesson. Answer the questions below by circling the "T" or "F" next to each question. Compare your answers with the answer key on the next page.

T F 1. Electronic News Gathering (ENG) is the coverage of controlled events.

T F 2. All television cameras operate on the same principle.

T F 3. All color TV cameras need a minimum operating light level of 100 footcandles of illumination.

T F 4. Lenses do not have a mechanism to control the amount of light admitted.

T F 5. Zoom lenses can only be operated by manual controls.

T F 6. The 3/4-inch format is currently the only (ENG) format used in the broadcast industry.

T F 7. Most portable VCRs run on 9-volt batteries or AC power.

ANSWER KEY

PRACTICE EXERCISE

LESSON 1

SUBCOURSE NO. DI 0350

ELECTRONIC NEWS GATHERING/ELECTRONIC FIELD PRODUCTION

1. FALSE (Page 2)

2. TRUE (Page 4)

3. FALSE (Page 6)

4. FALSE (Page 14)

5. FALSE (Page 8)

6. FALSE (Page 17)

7. FALSE (Page 18)

LESSON TWO

LIGHTING FOR ELECTRONIC NEWS GATHERING

46R Soldier's Manual Task: 214-177-1212

OVERVIEW

LESSON DESCRIPTION:

This lesson will provide you an overview of Lighting for Electronic News Gathering/Electronic Field Production (ENG/EFP) and the equipment necessary to perform these functions.

TERMINAL LEARNING OBJECTIVE:

ACTION: Describe common ENG lighting equipment and its purpose and functions

CONDITION: You are given the material presented in this lesson.

STANDARD: Perform all the duties described in this lesson.

REFERENCE: The material contained in this lesson was derived from the following publication:

STP 46-46R14-SM-TG Soldier's Manual & Trainer's Guide, Broadcast Journalist, MOS 46R Skill Levels 1/2/3/4/, August 1988

LIGHTING FOR ELECTRONIC NEWS GATHERING

INTRODUCTION

When you leave the comfortable confines of the television news room or production studio for a remote or location assignment, you will encounter more than a few unique problems. The problems can be overcome if you are prepared. Location remotes, are normally ENG news coverage. So let's direct our attention to this area.

One of the major problems is the availability of lights. If you are outdoors on a sunny day, there isn't much of a problem. However, when you move indoors or shoot at night, you'll need a portable, lightweight and versatile lighting system that either runs on batteries or plugs into a wall outlet without blowing fuses. This calls for a small, efficient, variable-beam light that's part of most ENG systems .

To understand lighting for ENG systems, we must first understand something about basic lighting for television. All the principles of television lighting apply to lighting for electronic news gathering with a few interesting wrinkles thrown in. In a studio the lighting is much more controlled than in the myriad of situations and circumstances you'll experience in the world of ENG. Most of the time the production will work with the existing lighting rather than the lighting being created or fit to the needs of the production. However, you'll need a complete understanding of basic television lighting to produce technically proficient and aesthetically pleasing news stories that will draw and hold your audience's attention.

TELEVISION LIGHTING

Lighting for television can be broken down into six basic objectives. They are:

- Fulfill the technical requirements of the system. The lighting must provide enough illumination for the television camera to see and reproduce an image. Low light levels will produce inferior video.

- Give the illusion of three dimensions on a two dimensional surface. (The television screen) The television screen has height and width. Since we cannot actually add depth, we must create the illusion of it. We can do this with camera angles, the considered placement of objects in the videospace and most commonly, with the careful use of lighting

- Guide the viewer's eye to important points in the viewing space. It's a proven fact that our eye is drawn to a bright spot first. Using this, we can lead the viewer's eye and ensure that all the important points are covered.

- Establish or convey a mood. The overall mood of a story or scene can tell the story as much as the scene itself. Lighting can convey the overall mood to the viewer.

- Establish or fix the time. Lighting can fix the time of day as convincingly as a clock on the wall without being so obvious or blunt.

- Contribute to the aesthetic quality of the scene. Perhaps a good analogy of what aesthetic quality does for something is the difference between music and noise.

Of course not all six objectives will apply equally to every scene or even apply at all to absolutely every frame of video, but knowing what they are and how they work will aid you in being more effective when telling the story.

WHAT IS LIGHT?

Light is electromagnetic radiation, transmitted from any number of natural or artificial sources. The human eye can only see a small fraction of the electromagnetic spectrum. That light we can see is called white light although it is made up of all the colors of the rainbow. If you understand the cause of a rainbow, or the effect of a prism, you know that spectral hues are different wavelengths of light. These wavelengths vibrate at different frequencies and appear to us as different colors.

PROPERTIES OF COLOR LIGHT

When we consider the television camera and its operation, we must remember the three basic attributes of color light are hue, saturation and brightness. Hue is the color of the light itself. Saturation is the intensity of the color or how much white light is mixed in with it. (Remember white

light contains all the other colors) You might say "how pure the color of the light is," and brightness is the overall brightness of the color, or how much light it will reflect. Although these three attributes of color light are entirely independent of each other and surrounding objects and difficult to measure accurately, our best understanding of them is in a relative sense. Since it wouldn't matter to us what the measurement of brightness of a particular color was on the television screen, how bright it appears next to the colors around it does matter.

One thing we must keep in mind when considering colors for television, is that not all viewers are watching in color. Therefore, we must k) now what effect a color will have on the gray scale. This is one of the reasons that all viewfinders on portable cameras are monochrome. Be aware that something in the picture that is changing colors may not be evident to those viewing in black and white unless the brightness is also changing.

COLOR TEMPERATURE

Color temperature is the amount of certain colors making up a particular white light. Color temperature is measured in degrees Kelvin. Since the video camera changes images into electronic signals, the wavelengths of light that vibrate at various frequencies, making up the different hues or colors, will have an effect on the output of the camera. As the color temperature of light changes, the human eye adjusts to It much better than the video camera. Even the human eye detects color temperature change though. EXAMPLE: Late afternoon light appears more orange than midday light. This is a result of the light passing through more atmosphere and being filtered by more particles in that atmosphere.

The clearest and simplest way to think of color temperature without getting into complicated formulas is to say that light of a lower color temperature appears more toward the orange end of the scale while light of a higher color temperature appears more toward the blue end of the scale. Studio lighting is standardized at 3,200 degrees Kelvin. Daylight sources are balanced in the range of 5,000 to 7,000 degrees K. We need not know what a degree Kelvin is specifically as long as we accept it as a unit of measure and know how color temperature effects the color television picture. Of course, it only effects color video, not monochrome.

HARD LIGHT, SOFT LIGHT

The difference between hard and soft light is another critical aspect in lighting for ENG. Hard and soft light

appear differently in the video picture and go a long way toward directing attention, establishing a mood and contributing to the aesthetic appeal of your video. Hard light is intense, directional and creates strong shadows. Artificial light sources that produce hard light usually have hard, shiny rather shallow reflectors. Soft light is a more spread out defused light that creates fewer, softer shadows. Soft light is produced by an instrument with a rough or matte surfaced reflector that is deeper or more curved allowing for more angles of reflection (see Figure 2-1). Soft light is used mostly to fill in and soften shadows and provide a more even light.

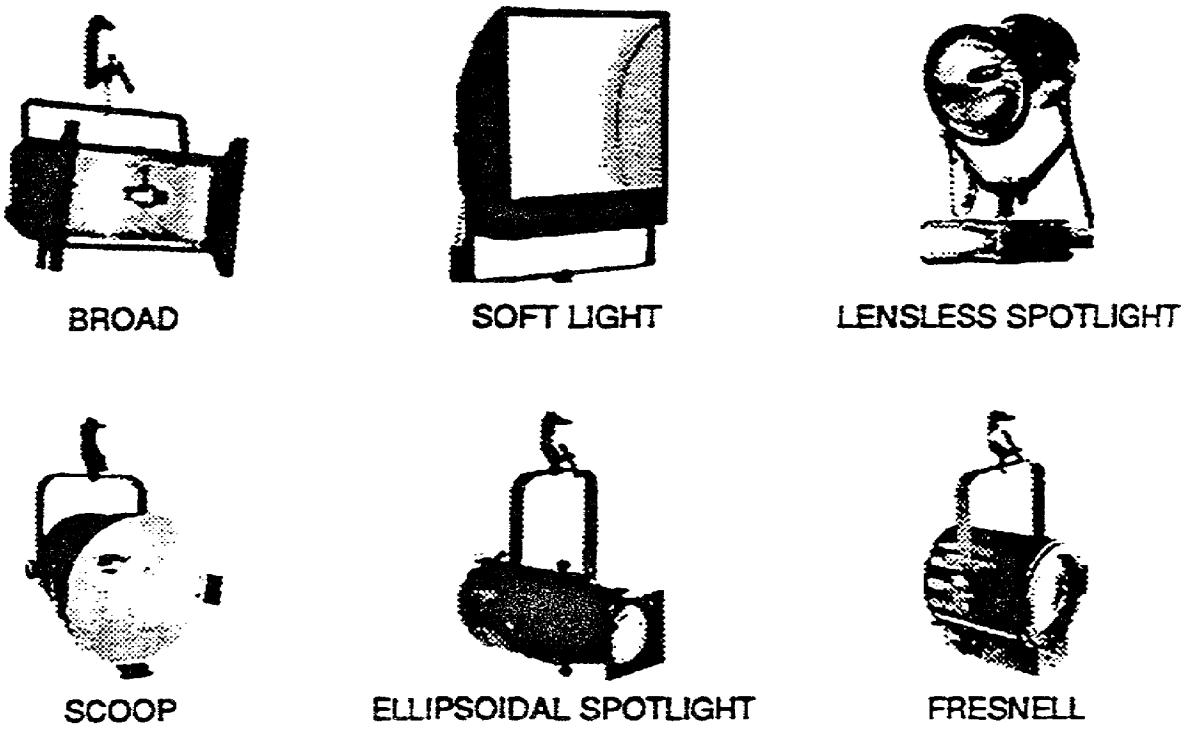


Figure 2-1. ARTIFICIAL LIGHTING INSTRUMENTS

CONTRAST RANGE

Contrast range is critically important since the television camera is not nearly as sensitive as the human eye. Television cameras can handle a range of only 3 to 60 percent reflectance; a 20:1 ratio. Simply stated that means that the brightest part of the video picture can only be 20 times brighter than the darkest part for the camera to be able to reproduce it accurately. Note the term accurately. The camera will still reproduce everything in the picture that is within that range, and will begin to lose accuracy in the reproduction of those elements of the picture that exceed that range. In Electronic News Gathering, we seldom have control of those elements in the videospace. We must

learn to adapt as best we can to what exists. News events will not allow us to control the contrast range, but we must know how it affects our video and adjust. EXAMPLE: If there is an important scene that we must videotape that has a bright spot that exceeds the 60 percent reflectance, we must know that the camera will darken down the rest of the picture in bringing the spot into range. We then decide if we want the other parts of the picture to be darkened or if we go to manual iris and live with a washed out effect in the bright area. **CAUTION:** If you have a tube camera, be careful not to allow bright areas to cause burn-in.

MEASURING LIGHT FOR TELEVISION

Measuring light accurately enough for the television camera requires an instrument. As previously mentioned, sufficient light is a technical requirement which must be met in order for the camera to operate properly. Insufficient light levels will cause a camera to produce pictures with video noise, lag and color distortion. Most light-measuring devices are calibrated in foot candles and as mentioned earlier, most color cameras require between 100 and 250 foot candles. As we stated earlier, whatever the unit of measure, you must have a device that speaks the same language as your camera's manual. EXAMPLE: If the manual calls for a minimum of 100 foot candles, you need a light meter that measures foot candles. Accurately measuring the light is something done more in EFP than in ENG. Since we have little or no control of the contrast range in ENG, we usually concern ourselves with whether there is sufficient light, and when it is obvious that the range is exceeded, how we correct it. There are five ways to control light intensity when using artificial light. First, the wattage of the lighting instruments. Secondly, lamp to subject proximity. As the subject gets closer to the light source, it will decrease the area over which the light is spread and make it more intense (see Figure 2-2).

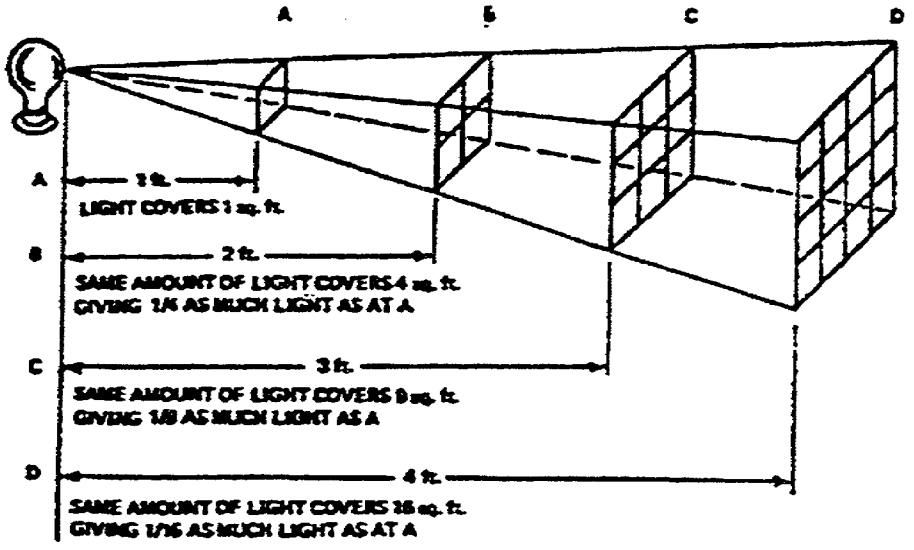


FIGURE 2-2. EFFECTS OF DISTANCE ON BRIGHTNESS

Keep in mind that by doubling the distance between light source and subject, you quadruple the area over which the same amount of light is spread, thus cutting to one fourth the intensity of the light.

The third method of controlling light intensity is with the use of scrims or screens. Scrims are translucent gauze or fiberglass in a frame that can be mounted on the front of a light instrument. Scrims cut down the amount of light allowed through. Screens are just like the material you'll find on any screen door. They do not defuse the light like scrims and are mostly used on spotlights to lessen the intensity without changing the hard directional beam. Key lights, for example, are often used with screens.

Fourth, the spotting of the beam on a spotlight will concentrate the beam or widen it. This is comparable to the effect of moving the light closer or further away, except without actually moving the light instrument.

The fifth way to control the intensity of light, is to lessen the voltage going to the instrument much like a dimmer in a home or the house lights in a theater. There's a negative side to this in that it will also lower the color temperature of the light.

Knowing how to strengthen or weaken the intensity of light won't help us much if we don't understand its applications. The best starting point to light any situation is the basic three-point lighting scheme. The intent of this scheme, in addition to providing enough light for the camera to see, is to create the illusion of three dimensions on the two dimensional television screen. (Height and width, but no depth). Since the screen on which the viewer sees the subject is only two dimensions, any appearance of three dimensions must be an illusion. It is created with the use of light and shadows. Bear in mind that you'll need the shadows. Your intent should be to use the shadows to accomplish your aim, not to eliminate them. Of course, you'll want to use them subtly to keep your product as aesthetically pleasing as possible. Figure 2-3 illustrates the basic three-point lighting scheme.

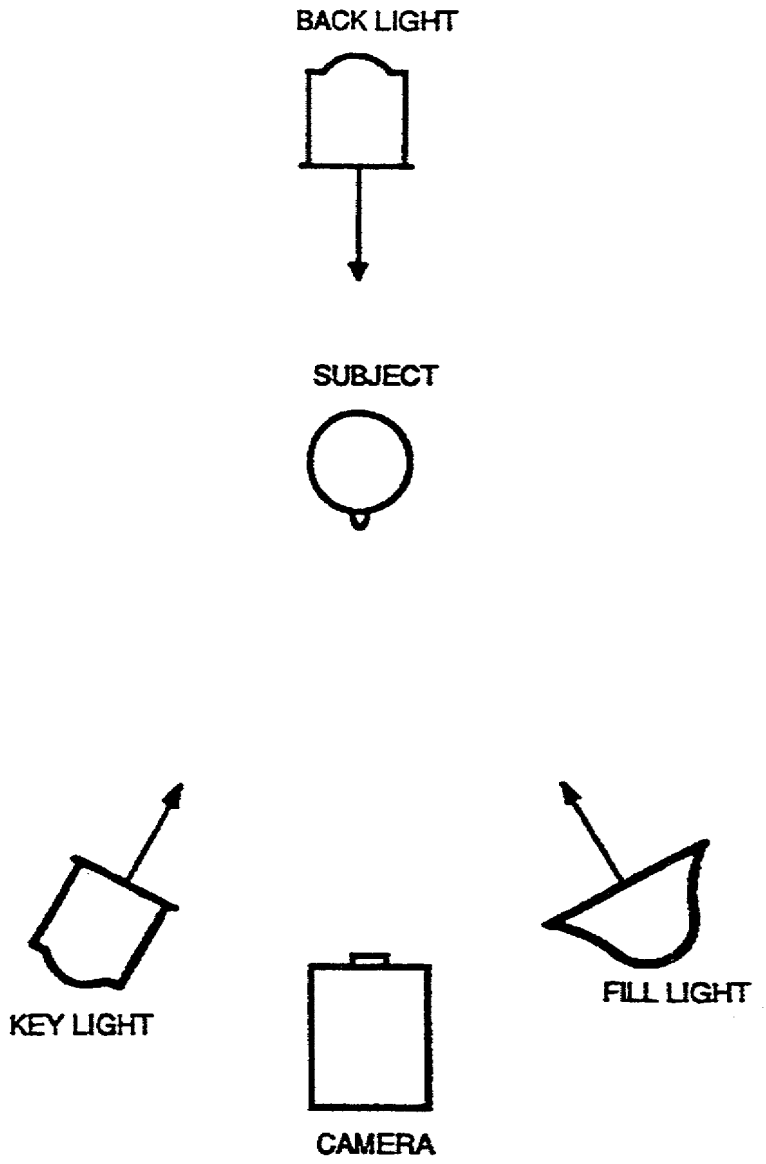


FIGURE 2-3. BASIC THREE-POINT LIGHTING SCHEME

The three points in the scheme are the key light, the fill light and the back light.

The **key light** is the apparent main light source. As the main source, it provides sufficient light to operate the camera, and act as the reference point for all other lighting. It should be placed in front of the subject, to the side about 45 degrees, and elevated 30 to 35 degrees. You may want to make adjustment for any number of reasons, but that's a good starting point. Key lights are usually spotlights.

The **back light** is to separate the subject from the background by casting a rim of light across the head and shoulders of the subject. The back light should be placed

at an elevated angle, but not so much as to light the top of the subject's head. A good starting point for the back light is directly behind the subject, elevated 30 to 35 degrees. If your light is mounted on a stand, move it off to the side a little to get the stand out of the picture. Back lights are also most often a spotlight.

The **fill light** fills in and softens the harsh shadows created by the key light. It is placed on the opposite side of the camera from the key light and also elevated 30 to 35 degrees. Since fill lights usually need a broader beam, they are most often scoops.

News rarely happens in a studio, unless it is a formatted news show or studio interview, where the color temperature and lighting may be controlled. In the studio, production lights are quartz-iodine or quartz-halogen lights. They should all have the same color temperature standard of 3,200 degrees Kelvin. The standard has been set by the television engineers. If we wanted to recreate daylight in the studio, we would have to alter the color temperature to 5,600 degrees Kelvin by changing the lights or using gels.

ENG/EFP crews should always carry portable lights and use them frequently. You may not always need them, but you won't have time to go back to the station and pick up a set. There are occasions when video quality has to suffer to get the news story on videotape, but such times should be rare.

You should have at least three lights with tripods (stands), and clamps for mounting in all locations and situations. The more extension cords you have the better.

Another problem in lighting remote locations is color contamination from different light sources. Be aware of mixing lights of different color temperatures (Subcourse DI 0370, Television Lighting, Audio and Scenery, has more detailed information on TV lighting). **A rule to remember is, white balance whenever the light conditions change.**

PORTABLE LIGHTING KIT

Portable lighting kits will supply you with the lighting equipment you will need in most situations. They include: Lighting instruments, tripods, (short) power cables, battery packs for each light and accessories such as screens and filters. You may want to include a .set of insulated gloves and some heavy-duty masking tape or gaffer's tape and extra bulbs (at least one for each lighting instrument).

There are many commercially available selections of ENG/EFP lighting kits. They usually provide at least enough instruments and accessories for basic three-point lighting.

The color temperature of lighting kit instruments is 3200 degrees Kelvin and they are usually variable-focus lighting instruments which may be adjusted for use as a key, back or fill light (see Figure 2-4, Variable-Focus Instrument)

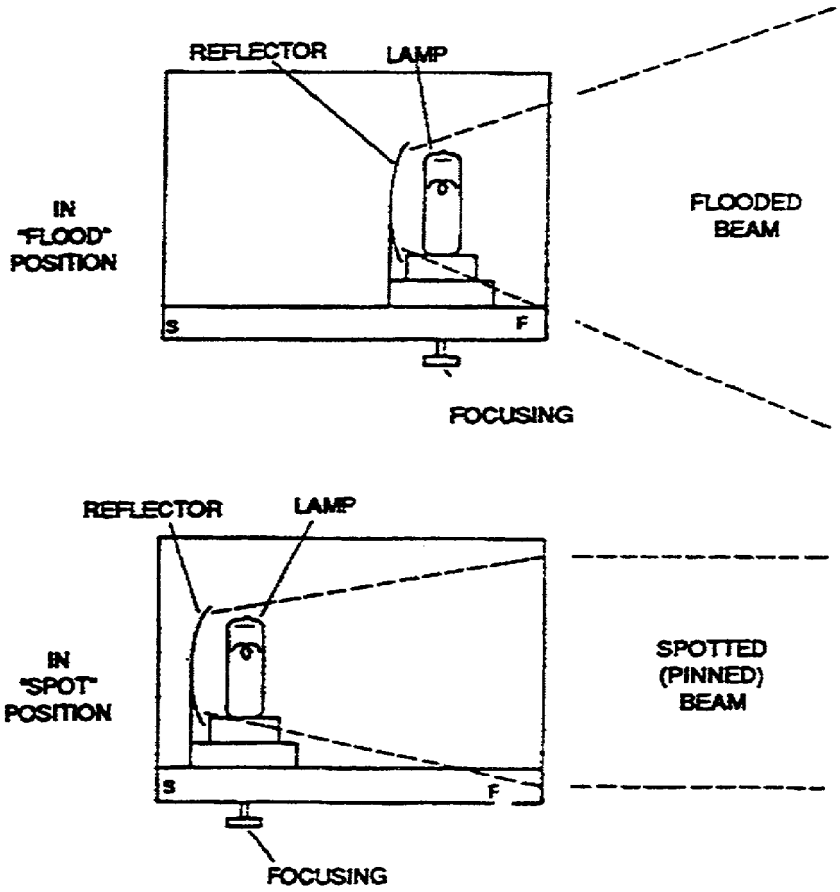


FIGURE 2-4. VARIABLE-FOCUS INSTRUMENT

ACCESSORIES

Your light kit should contain accessories such as barn doors, screens and reflectors. These accessories are discussed in Subcourse DI 0370.

Barn Doors

Barn doors are attached to a ring which is connected to the body of the lighting instrument. The doors may be opened from the top and bottom to crop the light.

Screens

Screens are small round or square pieces of metal screening that are placed in front of the light to reduce the light intensity. The screening does not change the color temperature of the light. Strong shadows may be reduced or eliminated by using screens.

Reflectors

Folding reflectors are sometimes available in lighting kits and sometimes have to be obtained separately. Reflectors bounce natural or artificial light toward the subject in order to fill in or remove strong shadows.

Setting up these accessories takes time, but results will be well worth the time spent. They make the subject look as natural as possible and help eliminate lighting conditions that distract the viewer.

The Five P's rule -- "Proper Planning Prevents Poor Productions" -- is a good guideline when planning any news or production assignment. Only experience will help you to become familiar with many of the requirements before you leave the station. In remote situations, the Five-P' s will save you a lot of headaches.

An extensive review of Lighting for Television may be found in Subcourse DI 0370.

PRACTICE EXERCISE

LESSON 2

SUBCOURSE NO. DI 0350

LIGHTING FOR ELECTRONIC NEWS GATHERING

INSTRUCTIONS:

Review the material in this lesson. Answer the questions below by circling the "T" or "F" next to each question. Compare your answers with the answer key on the next page.

T F 1. Lighting Kits for ENG do not utilize variable beam instruments.

T F 2. Light is electromagnetic radiation, transmitted from any number of natural or artificial sources.

T F 3. Portable lights are rated at 3,200 degrees Kelvin.

T F 4. The fill light is the main light used in lighting the subject.

T F 5. The Five "P's" rule should not be used in remote situations.

ANSWER KEY

PRACTICE EXERCISE

LESSON 2

SUBCOURSE NO. DI 0350

LIGHTING FOR ELECTRONIC NEWS GATHERING

1. FALSE (Page 22)

2. TRUE (Page 23)

3. TRUE (Page 30)

4. FALSE (Page 29)

5. FALSE (Page 31)

LESSON THREE

FRAMING AND COMPOSITION

46R Soldier's Manual Task: 214-177-1315

OVERVIEW

LESSON DESCRIPTION:

This lesson will provide you an overview of television framing and composition.

TERMINAL LEARNING OBJECTIVE:

ACTION: Describe common terms for varying shots and what is acceptable as proper composition of them.

CONDITION: You are given the material presented in this lesson.

STANDARD: Perform all the duties described in this lesson.

REFERENCE: The material contained in this lesson was derived from the following publication:

STP 46-46R14-SM-TG Soldier's Manual & Trainer's Guide, Broadcast Journalist, MOS 46R Skill Levels 1/2/3/4/, August 1988

FRAMING AND COMPOSITION

INTRODUCTION

Framing and composition are important in television production because the audience or viewer must receive all the video information through an instrument that has no peripheral vision. Since we see only what the director and camera operators show us, it is of utmost importance that the camera operator develop a feel for pictorial composition which is learned through intuition, practice and experience. Over the years there have been many guidelines developed through the work of painters, photographers, cinematographers and videographers. Although there is no substitute for intuition, practice and experience, you will be able to begin by applying a few basic principles.

NEEDS AND WANTS

There are many items you need to take into consideration when deciding how to show a subject. However, two basic points should be kept in mind that will make sure you have video picture impact. They are:

- show viewers what they need to see
- show viewers what they want to see

Viewers need to see the event as it is occurring or you would not be taking the time to shoot. So, the event you are shooting has caught your attention. Now that your interest has been aroused, the other is the viewer's want to see and explore the side action that makes the event interesting and exciting.

The best way to describe and fill the needs and wants of the viewer is to observe the event as it is taking place, as an impartial viewer. It's almost as if you are watching this happen in your living room, instead of from behind the camera. You should be involved in the event but not in the actual action.

Video Pictures

Your point of view (the way you describe what is taking place) is done with video-pictures. This point of view is accomplished by two different, but related, functions:

- framing
- composition

These two terms are often interchangeable, but for right now let's look at them separately.

Framing. Framing refers to how the various elements in and out of the video picture relate to each other, and how they are shown to the viewer. Simply put, these are all the important elements within the main picture area.

Composition. Composition refers to the organization of the important elements within the picture(s) and their artistic/aesthetic relationship to each other in the frame. The complete picture to the viewer is then unified or understandable.

These two concepts are closely related, but once you understand how to frame the shot, and compose those elements within the picture in an aesthetic manner, the two concepts merge.

Visual Statement

The main point to remember when setting up any shot for framing and composition is its **visual statement.** The visual statement is your point of view -- the concept you are trying to convey to the viewer. A picture that does not show the viewer the main action is not an effective shot or visual statement.

We have all seen television shows that have left us confused or frustrated because the shots the director had selected or the camera operator framed and composed did not present the visual information we needed or wanted in order to enjoy the program. For example, when the action happens so fast that the camera operator can't respond quickly enough to the events taking place, such as an accident happening on a race track. It's also possible for the director to be fooled when a score is made by a different player than expected.

Each situation is different. You will have to let your experience and feeling for the program material guide the way you frame and compose the shot (s). Experience will teach you the best way to frame and compose.

Framing Loss

The picture that is seen by the viewers is not exactly the same picture that is seen by the camera operator. The camera picture, through transmission to the viewer's set, looses about 10 to 15 percent on the outer edges or borders are cropped or lost. This is why the center of the picture is so important when framing and composing the shot (Figure 3-1). Some operators use a grease pencil to mark the outer

edge of their viewfinders to let them know where the main area of the picture is and to keep all essential elements within this area so the information is not lost. In a studio environment, the director has the ultimate responsibility for framing and composing the final picture or statement. But in a field situation, the camera operator has this responsibility. So it's a lot easier if everyone sets up his shot(s) with the main area in the center of the viewfinder.

FIGURE 3-1. FRAMING LOSS

FIELD OF VIEW

The field of view is of critical importance to the camera operator. The field of view shows the relationship between the main object of the picture and its surroundings.

A good camera operator must be able to properly compose and frame shots. Picture composition is nothing more than the organization of the visual elements (statement) within the available videospace. When framing a shot, the camera operator needs to keep in mind the essential area of the picture. Remember what is seen in the camera viewfinder is not what is seen on the home TV screen. The picture that leaves the TV camera is processed through the TV system and is electronically cropped or reduced.

Since 10 to 15 percent of the picture around the outer border area is lost during transmission, what you see is not necessarily what the viewer gets. You should always frame shots to allow for that 10 to 15 percent border loss.

Another aspect to keep in mind is that most cameras viewfinders are not exact. So even if the shot looks OK in your viewfinder you may have to fine-tune the shot. Experience with the camera system will teach you the quirks of each system.

There are several different camera shots the operator must be able to set up quickly and accurately:

- o extreme long shot
- o long shot
- o medium shot
- o close up
- o extreme close up

These basic shots are the foundation of all other camera shots. They're used to create certain emotional effects in the viewer. Learning and understanding how to achieve these basic shots quickly and proficiently is the mark of a professional cameraman.

Extreme Long Shot

The extreme long shot, also known as the establishing shot, is achieved when the camera lens is zoomed all the way out. This shot is used to let the viewer know where he is; it sets the scene; the background dominates (Fig. 3-2).

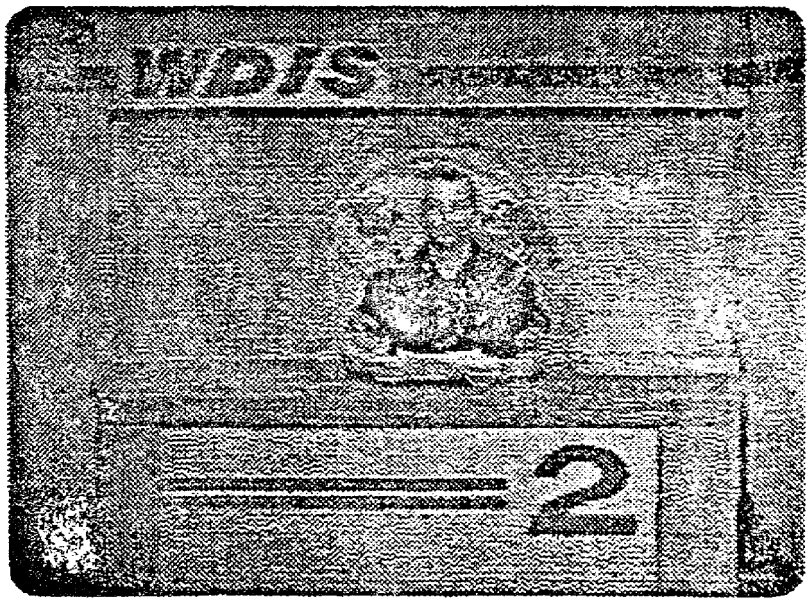


FIGURE 3-2. EXTREME LONG SHOT

Long Shot

The long shot is slightly closer than the extreme long shot but the background still dominates (Fig. 3-3). Everything is in focus.

FIGURE 3-3. LONG SHOT

Medium Shot

In the medium shot, the subject dominates the picture. The medium shot is used primarily to show the subject in relation to the action in a scene (Fig. 3-4). The middle ground and foreground are normally in focus.

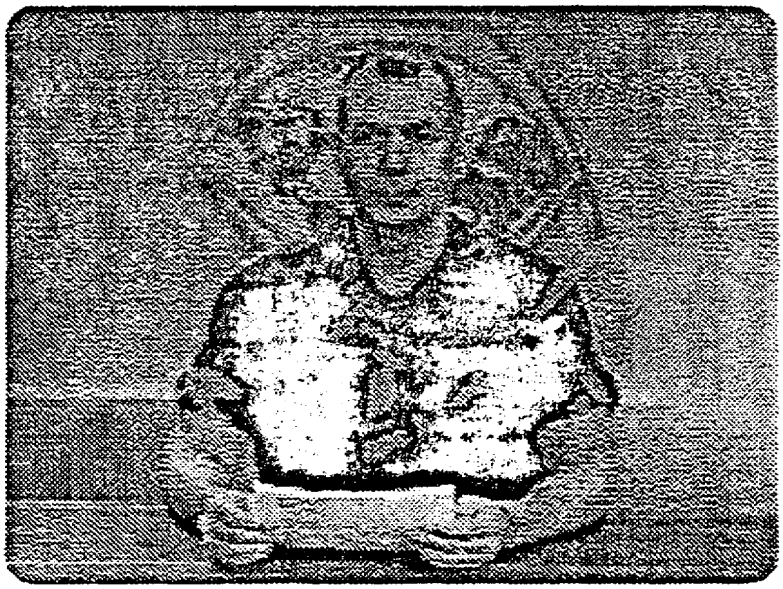


FIGURE 3-4. MEDIUM SHOT

Close-up

The close-up shot focuses primarily on the subject with only a small portion of the background-shown (Fig. 3-5).

FIGURE 3-5. CLOSE-UP

Extreme Close-up

The extreme close-up shows the subject totally dominating the shot. The close-up is used to show details of extreme importance in the picture (Fig. 3-6).

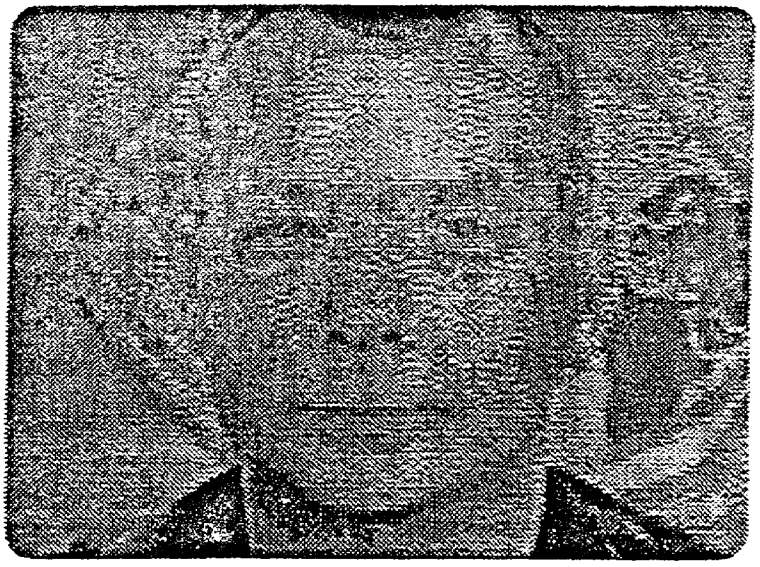


FIGURE 3-6. EXTREME CLOSE-UP

Now let's look at the shots again using, just one person. The extreme long shot establishes the scene. The long shot would be from the subject's feet to his head. Remember to allow space at the top for framing loss. The medium shot or knee shot would be from the head to the knees. The medium close-up is from the waist to the top of the head, or it could be a bust shot from the bottom of the bust to the top of the head. The close-up or head shot is from about the chin to the top of the head. And the extreme close-up is usually just a specific part of a person's face.

Generally, if the subject is facing directly into the camera and is the only subject in the field of view, the subject should be centered.

Lead Room

If the subject is at an angle to the camera, the camera operator needs to provide lead room or speaking room. A good rule of thumb is to center the nose, then pan right or left respectively and allow for head room.

If your subject or object is going to move on camera, e.g., walk across or drive through the scene, you need to leave more space in front of the object than behind (Fig. 3-7 Lead Room).

FIGURE 3-7. LEAD ROOM

Multiple Subjects

The term four-shot means the shot contains four subjects or objects. Likewise, the three-shot designates three subjects or objects. The two-shot identifies two subjects or objects. And the one-shot contains only one subject or object in the picture.

CAMERA ANGLES

Camera angles include the normal angle which show the scene as we see it in real life, at about eye level.

Shooting over-the-shoulder adds depth to the picture and establishes a relationship between individuals.

The high camera angle that shoots down on the subject makes the subject appear smaller than he really is.

The low camera angle looking up at the subject makes the subject look taller and overpowering (Fig. 3-8).

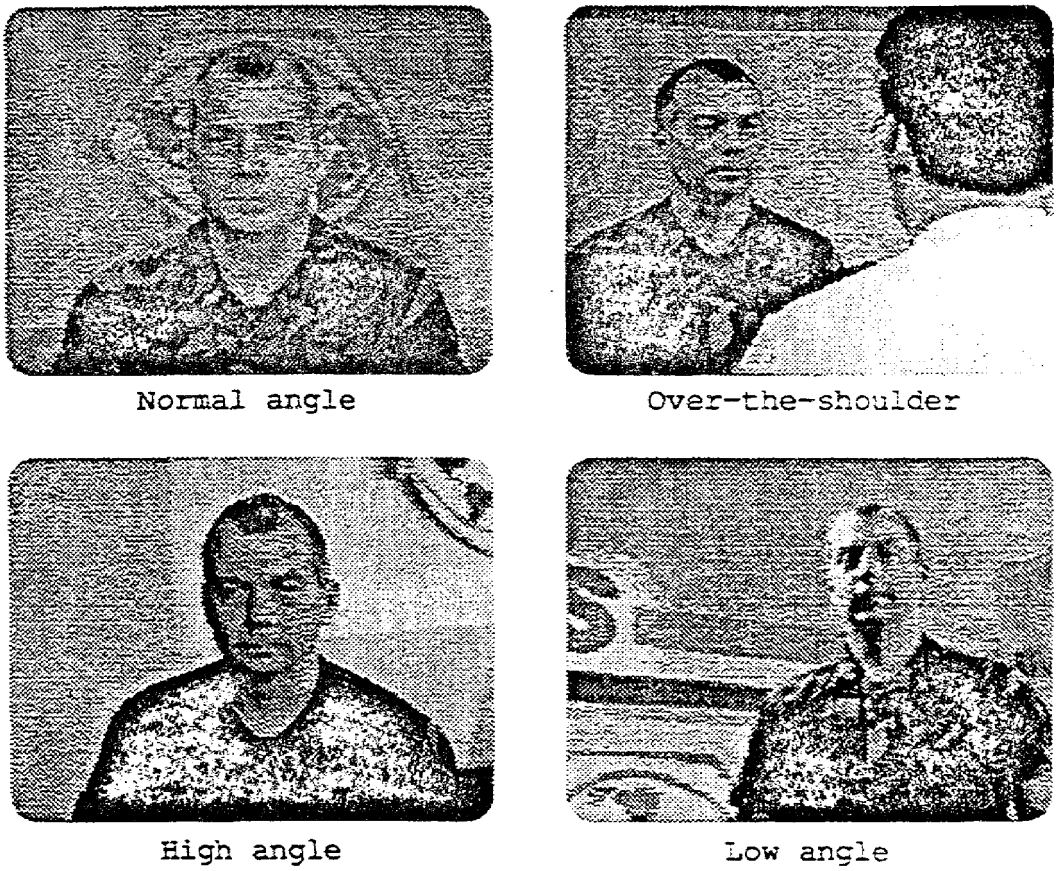


FIGURE 3-8. CAMERA ANGLES

PRACTICE EXERCISE

LESSON 3

SUBCOURSE NO. DI 0350

FRAMING AND COMPOSITION

INSTRUCTIONS:

Review the material in this lesson. Answer the questions below by circling the "T" or "F" next to each question. Compare your answers with the answer key on the next page.

T F 1. With regards to framing and composition, keep the needs and wants of the viewer in mind when shooting an ENG report.

T F 2. There is no difference between framing and composition.

T F 3. The viewer sees exactly what the camera operator sees.

T F 4. You need not allow any more lead room than normal, even when the subject is moving across the screen.

T F 5. If the subject is at an angle to the camera, use the person's nose as a reference to center the picture.

ANSWER KEY

PRACTICE EXERCISE

SUBCOURSE NO. DI 0350

FRAMING AND COMPOSITION

1. TRUE (Page 36)

2. FALSE (Page 36)

3. FALSE (Page 37)

4. FALSE (Page 42)

5. TRUE (Page 42)

LESSON FOUR

VIDEO SCRIPTWRITING

46R Soldier's Manual Task: 214-177-1321

OVERVIEW

LESSON DESCRIPTION:

This lesson will provide you an overview of scriptwriting for television.

TERMINAL LEARNING OBJECTIVE:

ACTION: Describe format and techniques for television script writing.

CONDITION: You are given the material presented in this lesson.

STANDARD: Perform all the duties described in this lesson.

REFERENCES: The material contained in this lesson was derived from the following publications:

STP 46-46R14-SM-TG Soldier's Manual & Trainer's Guide, Broadcast Journalist, MOS 46R Skill Levels 1/2/3/4/, August 1988

Defense Information School, Broadcast Journalism Style Guide

VIDEO SCRIPTWRITING

INTRODUCTION

The ability to write comes from much learning and practice. It's difficult, if not impossible, to teach someone to write, much less write well, in one short lesson. This lesson will give you basic rules of broadcast writing and how it differs from writing for the print media. The single most important direction in learning to write is to...write, write, write. Reading also helps a lot. Observe the writings of others.

PROCEDURES AND LIMITATIONS

When writing for broadcast, you should apply six "C's". They are; **CLEAR ... CONCISE ...CONVERSATIONAL ...COMPLETE …CURRENT ...**and, most importantly, **CORRECT. Let's address each of these points, one at a time.**

Clear

Broadcast copy must be clear. In printed copy, the reader can reread anything that isn't completely clear to him. In the broadcast medium, the viewer hasn't that luxury. If something isn't clear, he won't understand it, and he can't go back over it since it's being read to him by someone else who isn't going to repeat it. Once gone, it's gone forever.

Concise

The need for this comes from the value of time in the broadcast industry. Since air-time is so valuable, we can't afford to use any more of it than necessary.

Conversational

The copy is going to be read to its intended audience. It should be done in a conversational manner, something that's possible only if the copy is written conversationally.

Complete

There are occasions when something will be presented in multiple parts or segments. It must still be complete to the extent that it can stand alone. If something is going to be multiparted, each segment must still be complete as a part. That is to say that there must be something to tell

the audience that there is going to be more to come and it'll probably contain information such as where and when it will be presented. So even though the entire story isn't being presented in one piece, each piece is still complete as a part.

Current

Although there are some exceptions, copy should generally be written in the present tense. When something is presented as being of or about another time, it is presented as in the present. For example, even if we receive something that is of a historical nature, we write about it in the here and now. We never lose sight of the fact that that's where we are, so the copy shouldn't either.

Correct

The importance of being correct cannot be stressed enough. Broadcast media credibility is on the line with every story aired. "I saw it on television" seems to be enough proof for many people. This has both good and bad points. It requires us to work diligently to make sure of accuracy, but it adds a certain value to those things we say in our video scriptwriting.

The structure of a broadcast news story is usually the reverse of that for the print media. The first thing in the broadcast story is the "WHAT." This attracts the listeners' attention and alerts them to what is about to follow...the details. Since a viewer cannot absorb all the facts in the first line, they must be given them in a form that will enhance understanding. Instead of "What happened to who, when and where with a why thrown in" and then explaining it in the rest of the story, broadcast style is more like "What happened", "It happened where and when", "This is why it happened", and we'll put in the how if we have it.

The Lead

The lead is the most important sentence in a broadcast story and should be an attention-getting sentence. It should have enough information to pique the listener's interest, without overwhelming him. It should be written as a general "what happened." There is an art to writing good leads, one of the reasons broadcast writing is difficult to teach. A lead sentence should be 20-words or fewer and contain as much information as possible without overloading the listener. To begin the sentence, use one or two words that are <u>NOT</u> essential information in the story. It's not good to begin with numbers that are essential for the same reason. Much

of the time, the viewers' mind isn't geared up for the story and it takes a word or two for them to be fully alerted to receive the essential information. Usually, a lead can be made much better by changing it around a little. EXAMPLE: "130-thousand soldiers could be cut from the Army in the near future, it was announced today." The listener would better understand this if it were worded, "The Army announced today it is anticipating manpower cuts of 130-thousand in the near future."

The Body

After the lead, the story must have a logical development. This is the body. It's quite simply telling the rest of the story in an orderly fashion, flowing smoothly to an end. Of course, the most important fact will come next and the next most important fact next, and so on. With practice you will learn to discern the important from the trivial. This is of utmost importance in broadcast writing because "air time" is limited and valuable. Typically, the same story will be divulged in both the print and broadcast media. It isn't at all uncommon for the broadcast version to be only one tenth as long as the print version.

Tense

The natural tense for broadcast copy is the PRESENT TENSE. This is because most news reporting is of immediate, or at least, very recent news. However, every story doesn't have to sound as if it happened in the last minute. As a matter of fact, many events which occurred in the past must be reported in the past tense. A good example of this is in the reporting of sports scores. It's acceptable to headline something in the present tense to entice the audience to come back after a break, such as "Ohio State upsets Notre Dame ... that, and the rest of the sports scores right after this." But the fact that they are final scores, makes them past tense and they should be so reported.

Voice

Broadcast copy should be in the active voice. It's quicker, it's more conversational and it carries more impact.

EXAMPLE:

Passive: THE EVIDENCE WAS GATHERED BY THE POLICE DEPARTMENT.

Active: THE POLICE DEPARTMENT GATHERED THE EVIDENCE.

Write For The Ear

In keeping your copy conversational you' II be writing for the ear. Your video will enhance the audio, but the audio must be able to stand alone. It is for this reason that we refer to broadcast writing rather than just television writing. Remember, blind people listen to television and, much of the time, sighted people listen to television while they're doing other things. Use everyday language. Use contractions. Write as people speak.

EXAMPLE:

Bad: IT WAS INDICATED BY THE POLICE CHIEF THAT AN

ARREST WAS IMMINENT.

Good: THE POLICE CHIEF SAID AN ARREST WAS IMMINENT.

Sentence Length

Keep sentences short. They're easier for the newscaster to read and for the audience to understand. Remember, the lead should be 20 words or fewer and the rest of the sentences should be 25 words or fewer. Even though they can be 25 words long, sentences other than the lead should average 17 words. They should vary in length to avoid a pattern effect. For spot announcements, the maximum sentence length should be 17 words. Shorter sentences give a feeling of action and urgency, but it's also easy to sound choppy if you're not careful to vary the sentence length within the word limit.

EXAMPLE:

> Since they were not forwarded for a final vote, they can be resurrected only by a two-thirds vote of the house or by being added to bills under consideration later in house-senate conference committees, in which conferees try to reach agreements on bills that have passed the house and senate but in different forms.

This example is a sentence that was taken directly from a daily newspaper in a major American city. It illustrates the need to shorten sentences for broadcast copy. If you can go over it again, you can understand it, but try to read it aloud and make yourself understood. By dividing this 56-word sentence into four sentences of 1, 10 , 15 and 19 words, we make it much clearer.

THE BILLS WEREN'T FORWARDED FOR A FINAL VOTE, BUT THEY CAN STILL BE RESURRECTED. ONE METHOD IS A TWO-THIRDS VOTE BY THE HOUSE. ANOTHER IS BY ADDING THEM TO BILLS UNDER CONSIDERATION LATER IN HOUSE-SENATE CONFERENCE COMMITTEES. THESE COMMITTEES TRY TO REACH AGREEMENT ON BILLS THAT HAVE PASSED THE HOUSE AND SENATE, BUT IN DIFFERENT FORMS.

Quotations and Attribution

It takes a little subtlety on the part of the broadcast writer when it comes to quotations and attribution. In the printed format, it's nothing more than putting something in quotation marks. However, the listening audience can't see quotation marks. This can be overcome with the use of phrases like, "he said" with a slight pause or a faint change of tone before the actual quote. This will leave no doubt in the mind of the listener that he is hearing the exact words of the original speaker.

EXAMPLE:

THE CHIEF PETTY OFFICER SAID, ...”I THINK SHE'S THE FINEST SHIP AFLOAT"

When it is absolutely necessary to remove all chance of doubt from the listener's mind, you can use "QUOTE" and "END QUOTE." However, this is disconcerting and certainly unconversational, and you should avoid it whenever possible. If you're quoting someone and it's necessary to use a long quote, don't worry about rules for sentence length. Avoid long quotes whenever possible for obvious reasons. When you have to link the speaker with the quote, use conversational phrases.

EXAMPLE:

THE CHIEF ADDED....

or

HE CONTINUED BY SAYING...

It's usually a good idea to identify your source as quickly as possible. We don't want the listener/viewer to miss any of the important information because he's trying to figure out who is being quoted.

Credits

When quoting source material, since we can't use footnotes, we need to give oral attribution to both the source and its author, and it should be done in the first reference. Then in subsequent references we can attribute either the source or the author.

EXAMPLE:

IN THE "NINTH NEW COLLEGIATE DICTIONARY," MERRIAM

WEBSTER PUTS THE ACCENT ON THE FIRST SYLLABLE IN THE

NOUN, "ATTRIBUTE." WHEN IT'S A TRANSITIVE VERB,

HOWEVER, THE ACCENT IS PUT ON THE SECOND SYLLABLE.

Whenever a production is going to require a lot of attribution it can be done in the form of credits at the end. It can also be done with a crawl by the character generator as well as by an announcer. It wouldn't hurt to include the credit in the copy since the video can be missed by anyone in the audience who is just listening. Of course, known facts need not always be credited.

EXAMPLE:

IT'S TIME FOR ALL OF US TO REMIND OURSELVES TO,

“ASK NOT WHAT YOUR COUNTRY CAN DO FOR YOU, ASK WHAT

YOU CAN DO FOR YOUR COUNTRY.”

As a broadcast writer, you must exercise careful judgment in determining whether such material is sufficiently original or identifiable with its author or source as to not require credit.

Numbers

From one to nine. Write out: ONE, TWO, THREE, etc., unless they are being used for sports scores, time, dates or telephone numbers.

From 10 to 999. Use numerals: 10, 20, 30, 128, 925, etc.

More than 999. Both of the preceding styles apply with one slight addition. Substitute for the zeroes, words that mean what those zeroes represent, such as: ONE-HUNDRED, 15-HUNDRED, THREE-THOUSAND or 71-BILLION, etc.

Dates. JANUARY 1ST, JUNE 29TH, JULY 4TH, etc.

Years. Four digit numerals such as 1980 or 1995.

Money. 10-THOUSAND DOLLARS, TWO-MILLION YEN, 29-D-MARK.

Fractions. TWO-THIRDS, ONE-FOURTH, 16-THIRTY SECONDS.

Percentages. FIVE PER CENT, 22 PER CENT.

Telephone numbers. 542-4014 or EXTENSION 4-0-1-4 (for emphasis)

Addresses. ONE WEST EAGER STREET, 65505 NORTH 69TH AVENUE.

Building numbers. BUILDING ONE; BUILDING 400; etc.

Ages. TEPEE-WEEK-OLD BABY, 21-YEAR-OLD PRIVATE.

Time. 9:00 THIS MORNING or NINE A-M.

Decimals. 15-POINT-FIVE or FIVE-POINT-TWO.

Roman numerals. LOUIS THE 16TH, POPE JOHN PAUL THE SECOND.

Ratings. NUMBER SIX ON THE CHART, RANKED 26TH BY THE AP WRITERS.

Scores. 7 TO 3, 19 TO 12, 35 TO NOTHING.

License. B-R 549

Military units. SECOND BATTALION, 82ND AIRBORNE, SEVENTH ARMY. (Written as spoken)

Equipment designations. M-16 RIFLE, C-FIVE-A "GALAXY", C-ONE-30 "HERCULES"

Punctuation

The period. As in any writing, the period indicates the end of a sentence or thought. More periods are used in broadcast writing because broadcast news sentences are shorter and more conversational.

The comma. A comma indicates a pause shorter than that of a period. Geographical names and most items in dates and addresses are also set off by commas.

EXAMPLE:

WE MOVED FROM FORT BRAGG, NORTH CAROLINA, ON JUNE 29TH,

1985.

The dash. Use the dash to set off appositives and other parenthetical expressions.

EXAMPLE:

NATO -- THE NORTH ATLANTIC TREATY ORGANIZATION -- IS

PRIMARILY RESPONSIBLE FOR...

The hyphen. Use the hyphen to help announcers in phrasing difficult words and to instruct them to pronounce individual elements distinctly.

EXAMPLE:

RE-ADJUST, RE-EVALUATE, W-A-B-C, F-B-I, U-S, A-M

DO NOT hyphenate or divide a word at the end of a line. Spell out the entire word OR move it to the next line.

The ellipsis. Occasionally, you can use a series of three dots to indicate a pause longer than that of a comma. The series of three dots can be used for dramatic effect:

EXAMPLE:

THE JURY FOREMAN ANNOUNCED IN A CLEAR FIRM VOICE...

"INNOCENT!"

The quotation marks. In addition to its normal use for indicating quotes, the quotation marks can also be used to set off nicknames, titles of books and plays, etc.

EXAMPLE:

THE ONE--HUNDRED FIRST AIRBORNE DIVISION -- BETTER KNOWN

AS THE "SCREAMING EAGLES" -- MAKES ITS HOME AT FORT...

Parentheses. In broadcast copy, material in parentheses is information for the announcer and normally not meant to be read aloud. It includes notes to the announcer such as pronunciation guides, a date, reading rates, etc.

EXAMPLE:

COLONEL PAIKEN (PAY-KEN) ARRIVES ON SUNDAY (MAY 21ST).

Speaking Of Words

Remember, anyone can turn on a radio or television set. Choose words that everyone will understand, the announcer as well as the listener. Don't expect things of your audience. Make your copy clear and understandable.

Contractions. In day-to-day conversations, contractions are used liberally. "It's" instead of "it is", and "they're" instead of "they are" will make copy more conversational. A couple of exceptions to this are the "it will" contraction ("it'll") and "they will" ("they'll") which are awkward to the ear.

Pronouns. There is a danger in using personal pronouns in broadcast copy. You must be sure your audience knows who you're talking about whenever you use "he", "she" or "they." The ear can't go back and pick-up the identification.

Alliterations. When you compose a sentence consisting of several words beginning with the same vowels or consonants, you have alliterations and the announcer has a problem.

EXAMPLE:

THE WESTERLY WINDS WILL WHIP WRATH WITHIN WINDSOR...

or

THE DEVASTATED DAM DUMPED DRUDGE AND DIRT ON DES MOINES

Sibilants. Too many "s" or "sh" sounds tend to create a hissing sound when read aloud.

EXAMPLE:

THE SIXTH SICK SHIEK'S SIXTH SHEEP'S SICK

And of course, you should always be aware of how difficult your copy will be to read aloud. Try it yourself if you have any doubt. This can be a second reason for reading your copy aloud in addition to double-checking it for time. We'll discuss how to time your copy later.

Homonyms. Watch out for homonyms, words which sound alike but have different meanings. The listener can't hear the difference between "won" and "one", "bear" and "bare."

Here and there. Since your listeners could be anywhere, "here" and "there" can mean something different to each of them and change the meaning of your copy. These words can be avoided simply by calling "here" or "there" by its name. If "here" is Fort Knox, say "FORT KNOX."

Libelous words. Used improperly in your story, many words could lead to libel. Be very careful with words like: atheist, Fascist, seducer, bigamist, illegitimate, deadbeat, addict, etc. Keep in mind also that until someone is convicted of a crime or some wrong doing, he is only a "suspect" or the "accused" and his guilt is "alleged."

Not, "not". Avoid the use of the word "not" in your copy. "Not" can easily be dropped inadvertently and leave the listener wondering if he heard "not" or not.

EXAMPLES

Use	Avoid
DISHONEST	NOT HONEST
INNOCENT	NOT GUILTY
FORGOT	DID NOT REMEMBER
UNABLE	NOT ABLE

Other meaningless words. Avoid meaningless words like "latter," "former" and "respectively," when referring to persons, places or things already mentioned. Again, listeners can't refer back. Likewise, avoid transitional phrases within your stories such as "meanwhile," "meantime" and "incidentally." They're crutches. While each thought, phrase or paragraph should flow to the next, it should be done with skillful organization, not throw-away transitional words.

Steer clear of flowery phrases and trite expressions that take up time and space and add nothing. Avoid slang, vulgarisms and dialect in news writing.

Always translate military jargon, technical, legal and foreign terms into simple language.

EXAMPLES

Use	Avoid
ASSIGNED	DETAILED

BEFORE	PRIOR TO
ENLISTMENT	HITCH
IF	IN THE EVENT OF
SAID	CLAIMED

Good Taste

What can we say about good taste? It's relative. It's very easy to be misunderstood, and even when your meaning is quite clear, there's a chance that someone will feel it's in bad taste. You MUST therefore, take all precautions to be sure your words, phrases and manner of presenting information will not embarrass your command, your service, or the United States Government.

Handling Titles And Names

Don't lead off a broadcast story with a person's name if you can avoid it. In the case of names and titles being used together, precede the name with the title. It should be, "SPECIAL AGENT ELLIOTT NESS", not "ELLIOTT NESS, SPECIAL AGENT." This alerts your listener that a name is coming up and gives him a better chance to comprehend your story.

Official titles. Refer to federal office holders by title or as "mister" or "ms." That is SENATOR JONES or MISTER JONES .. CONGRESSMAN SMITH or MISTER SMITH... CONGRESSWOMAN BROWN or MS BROWN...

Difficult names. Whenever a difficult name isn't essential, use the person's title, such as "THE FOREIGN MINISTER OF SWEDEN... "

Initials. It's best to omit initials in a person's name unless it is a well-known part of the person's name such as HOWARD K. SMITH or MICHAEL J. FOX or F. LEE BAILEY. The other exception is when the nature of the story requires further clarification such as births or deaths.

Phonetic spelling. If there's any way for an announcer to mispronounce a difficult or unusual name, assume he'll do it. So give him all the help you can. Write the phonetic spelling in parentheses and place it immediately after the troublesome word. Be sure to underline the phonetic syllable that is to be accented or stressed.

EXAMPLE:

SERGEANT KOLLMAN (COAL-MAN) ENTERED...

MUNICH (MEW-NICK), GERMANY IS THE CAPITOL OF....

Make sure the phonetic spelling appears on the same line as the word it represents.

Abbreviations

A good rule to remember on the use of abbreviations in broadcast copy is...WHEN IN DOUBT, WRITE IT OUT. (Hours and hours of extra time spent in writing things out isn't worth trading for one moment's embarrassment on the air.) Consider as well, the additional chance of misunderstanding on the part of the listener.

Never abbreviate names of states, cities, countries, political parties (except G-O-P), days of the week, months, titles of officials and address identification such as street, avenue, drive or boulevard.

Never start a sentence with either an abbreviated word or number. WHEN IN DOUBT, WRITE IT OUT.

Acronyms

When using an unfamiliar abbreviation or acronym which will be pronounced as a word, be sure to spell it out in the first usage.

EXAMPLE:

"THE DEFENSE INFORMATION SCHOOL, COMMONLY CALLED DINFOS.."

"CHAMPUS - THE CIVILIAN HEALTH AND MEDICAL PROGRAM FOR THE

UNIFORMED SERVICES - HELPS SERVICEMEN AND THEIR FAMILIES."

All-CAPS or Upper/Lowercase?

Do you type broadcast copy in all-caps or uppercase and lowercase letters? Some newsrooms favor an all-caps format for consistency with copy coming over teletypes. Studies, however, show that copy typed in uppercase and lowercase letters is easier to read. One thing to consider when using uppercase and lowercase is the chance of failure to capitalize, which could confuse an announcer and cause him to stumble.

Timing your copy

The total line count of a broadcast news release is the most common measure of the length or time.

In television scripts, the storyline or audio shares the page with the video. Therefore, with only half the page for the story content, the typewriter margins are set for an average of 35 characters or spaces per line. As a-result, 14 to 16 lines of television copy will average 30 seconds, or two seconds per line.

Though not the preferred method, the length or time of a broadcast news release can also be measured by total word count. Announcers read at varying speeds, but the average is two-and-a-half words per second. This would mean approximately 150 words for a 60-second story.

Numbering pages

Whenever your broadcast copy is more than one page, pages are numbered consecutively: 1 of _, 2 of _, 3 of _. If your script is 10 pages long, the first page would be numbered 1 of 10, and the last page would be numbered 10 of 10. Page numbers are typed in the upper right hand corner of the page. Page numbers are extremely important in broadcast copy. Imagine an announcer on his way to an air shift, exactly on time, who drops his copy and gets the pages mixed up. There won't be enough time to sort them out if they don't have page numbers.

The Four-Unit Reading

This consists of a slugline, date, length of copy and type of release. The slugline serves as a little headline of the story. The date is the date the release was prepared. The copy length tells in seconds, approximately how long it will take to read the story. There are two types of releases. The immediate release for hard news items and the like, and the general release for soft news, features, spots or any other material that doesn't have the immediacy of hard news.

EXAMPLE:

OUTDOOR RECREATION APRIL 1, 19XX

(30 SECONDS) FOR GENERAL RELEASE

In place of the type of release, you can have a DO NOT USE AFTER line with time and date. This is for timely material, usually about an event that will run for a limited time. It gives the broadcaster a cut-off date or time to discontinue

airing the release. You can also have a HOLD FOR RELEASE UNTIL line for advance releases. This is a good tool for providing material in advance, even though it shouldn't be aired until a certain time. It allows others the luxury of planning and scheduling without putting the material out too soon.

Video-change Spacing

In television copy, the rule is double spacing. When a video change is to occur in a television script, we then triple space. This alerts the announcer that there is a video change taking place. It may be returning from another video source to the announcer on camera. The announcer shouldn't be seen looking off camera, and if for some reason he needs to look elsewhere, such as to a monitor for an on-cue point, the script will alert him as to when he won't be on camera.

On-cue

When reading to a videotape in a television script, announcers need a way to prevent coming out ahead of the tape, or being too slow and thus behind the tape. One method used is "ON-CUE." At selected points in the script, the writer builds in places for the announcer to pause, look at the studio monitor and wait for a particular point at which to continue. The number of times this is done in a script depends on the length of the script. The longer the script, the more times the announcer should pause. This is one way to compensate for the varying speeds at which different announcers read.

The End or # # #

The number symbols (# # #) indicate the end of your broadcast release. Sometimes called "Dunphys," they should be centered under your manuscript column. You should have the word "more" in that same position when additional copy follows on another page.

Editing Broadcast Copy

Absolutely clean copy -- free of mistakes -- is the rule for copy designed for outside release to television stations. Sloppy copy is a distraction to the broadcaster, and it makes a negative statement about you, your leadership and your unit. For in-house productions, edit marks may be used sparingly, but only those edit marks that are easily understood. DO NOT USE PRINT MEDIA COPY EDIT MARKS.

When inserting a period, comma, question mark, exclamation point, apostrophe, etc., just insert the mark where it should go. For other corrections, use one of the following broadcast editing methods:

To correct misspellings. Completely blacken out the misspelled word and print or type the correct version above:

EXAMPLE:

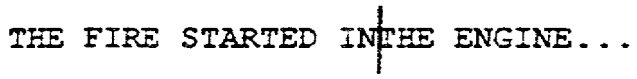
Do not attempt to correct a letter within a word. Correct and rewrite the entire, word. Broadcast has no editing mark to correct a single letter within a word.

Inserting words or phrases. You insert words or phrases by printing or typing the desired words above the line and indicate the point of insertion.

EXAMPLE:

Separating words. Separate run-together words by a single line:

EXAMPLE



Deleting a word. Delete a word by blackening out the word and bridging the gap:

EXAMPLE:

Delete words or more than one line. Delete everything by blackening out all unwanted words and bridging the gap:

EXAMPLE:

Feature Writing

A feature provides a change of pace to a newscast. Features usually focus on soft news items and provide a lighter note.

Use colorful treatment when writing a feature story. Colorful treatment uses active, vivid, descriptive words with precise meanings. Verbs are in the active voice and paint word pictures.

Features need logical development to be convincing. The lead sentence should grab the listener's attention. A sequential arrangement of facts brings the story to a logical conclusion.

At the end, a telling point illustrates the central idea or the informational objective of the story. Often, the telling point refers to the lead by restating the same idea.

Good features don't just happen...they're created through skillful writing.

Spot Announcements

Americans grow up with commercial messages and spot announcements. In contrast to features, which may be used only once, commercials or spots are usually aired over and over again.

Department of Defense public affairs members do not write commercials. We write spots or spot announcements. Understandably there is a similarity, since commercial messages are often called spots.

We think of the civilian media spot or commercial as something that sells a product. The spot announcement, as it applies to DOD public affairs, can do even more. It can "sell" the viewer on an organization, activity or attitude.

There are two forms of spot writing: SELLING and INFORMATIONAL.

The SELLING spot informs the viewer, then tells him to do something. The selling spot has three steps: ATTENTION, APPEAL, and ACTION.

The INFORMATIONAL or information spot simply informs. The information spot uses only the ATTENTION and APPEAL steps. It does not specifically tell the audience what to do (action, etc.). It simply informs.

None of the sentences in a selling spot should be more than 17-words and the action step should not exceed six words.

PRACTICE EXERCISE

LESSON 4

SUBCOURSE NO. DI 0350

VIDEO SCRIPTWRITING

INSTRUCTIONS:

Review the material in this lesson. Answer the questions below by circling the "T" or "F" next to each question. Compare your answers with the answer key on the next page.

T F 1. The lead sentence in a video script may be 25 words in length, but the rest of the sentences must be limited to only 20 words.

T F 2. Three number signs, or Dunphys, must appear at the bottom of each page of your script.

T F 3. Every page of a video script must be numbered sequentially.

T F 4. When giving attribution you must use "QUOTE" and "END QUOTE."

T F 5. It isn't necessary to give attribution to a quote that most people will recognize and associate with its author.

T F 6. You can time your copy by counting lines when you don't have time to read it aloud and time it.

T F 7. It's important to get as many facts in the first sentence as possible because air time is valuable and we need to tell the story quickly.

ANSWER KEY

PRACTICE EXERCISE

LESSON 4

SUBCOURSE NO. DI 0350

VIDEO SCRIPTWRITING

1. FALSE (Page 51)

2. FALSE (Page 61)

3. TRUE (Page 60)

4. FALSE (Page 52)

5. TRUE (Page 53)

6. TRUE (Page 60)

7. FALSE (Page 49)

LESSON FIVE

ELECTRONIC EDITING

46R Soldier's Manual Task: 214-177-1318

OVERVIEW

LESSON DESCRIPTION:

This lesson will provide you an overview of electronic videotape editing.

TERMINAL LEARNING OBJECTIVE:

ACTION: Describe videotape format and techniques for the electronic editing procedure.

CONDITION: You are given the material presented in this lesson.

STANDARD: Perform all the duties described in this lesson.

REFERENCE: The material contained in this lesson was derived from the following publication:

STP 46-46R14-SM-TG Soldier's Manual & Trainer's Guide, Broadcast Journalist, MOS 46R Skill Levels 1/2/3/4/, August 1988

ELECTRONIC EDITING

INTRODUCTION

In the early days of videotape recording, the only way to edit videotape was to physically cut the tape and splice it back together much the same way film is edited. This is extremely difficult because unlike film, which is a physical or chemical process from start to finish, videotape is all electronic. You can't actually see where a picture starts or stops on the tape. The complicated process of cutting and splicing videotape is all but a forgotten art. Today, editing is done electronically.

With the 3/4-inch videocassette system, there is a playback machine, record machine, TV monitors and edit controls. The edit controls allow you to find an accurate beginning and ending -- "in and out" -- points for your edits. The TV monitors allow you to view the video being played back and the video being recorded (see Figure 4-1). The editing controls shuttle the tape back and forth, allowing you to perform the actual edits.

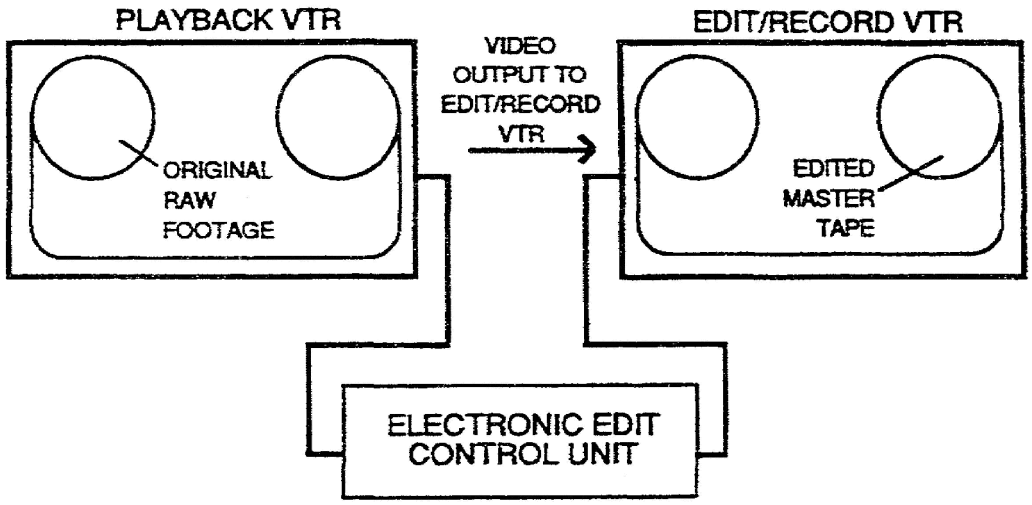


FIGURE 4-1. VIDEOTAPE EDITING SYSTEM

Tons

Before we start learning the editing process we need to become familiar with some of the broadcast terms used in editing.

Video track. The video information takes up most of the space on a videotape. The helical scan process used on 3/4-inch videocassette machines records the information on one or two video heads in a series of diagonal lines onto the videotape.

Audio track. Depending on the system used, you may have anywhere from one to three audio tracks on the videotape. The camcorder's video cassette and 3/4-inch video cassette recorders have only two tracks of audio. The audio tracks are placed in different locations on the videotape, but work just like the audio recording process.

Control track. The control track on videotape is similar to the sprocket holes in film. Without the control track, you can't edit. There are two ways to record the tracks. Laying control track on a blank tape is the first step in the videotape editing process in the insert edit mode. When in the assemble edit mode, the control track is added as you assemble the video package.

The control track consists of evenly spaced electronic blips or spikes called **sync-pulses.**

Cue (address) track. One of the audio tracks (or in some cases a separate track) is used to record cueing information for editing. This information may consist of audio or visual time and/or frame identification (see Figure 4-2).

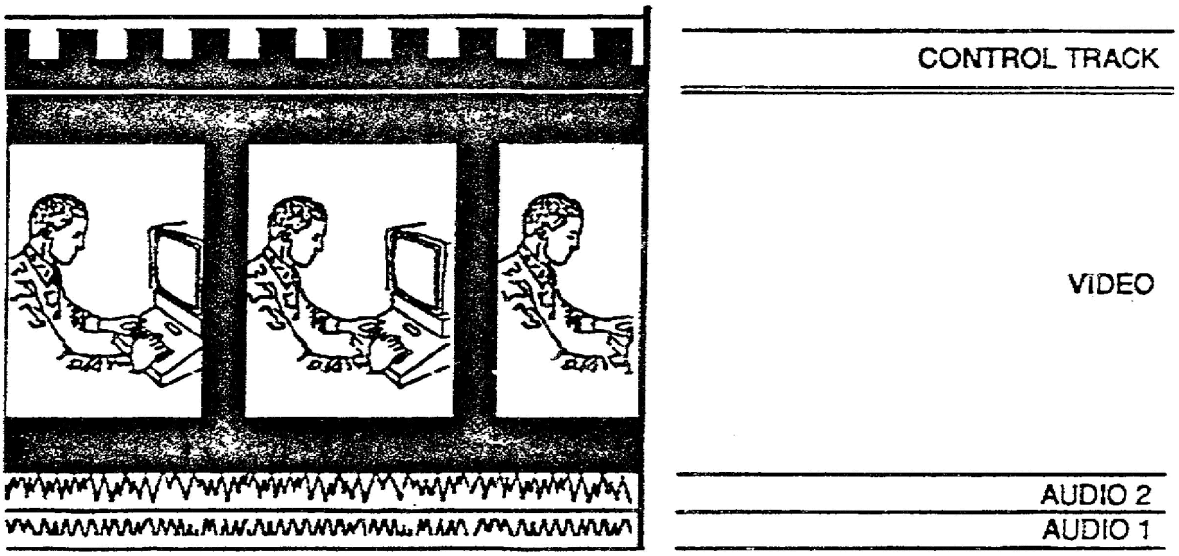


FIGURE 4-2. TRACK LOCATION, 3/4" VIDEOTAPE

Electronic Editing

Electronic editing is a transfer or dubbing process that allows the operator to play back a videotape cassette and to place recorded material from the cassette in the desired order on another tape (see Figure 4-1).

The recorded material, both sound and pictures, is transferred onto an edit/record VCR, which assembles or inserts the raw information or footage into a completed sequence or program. The edit/record controls allow us to precisely place when and where the information on the recorded tape will occur. The operator decides where the raw footage will start or end, placing that footage on the recording tape.

EDITING MODES

There are two kinds of edits that you may make on an editing system. They are:

- assemble edits
- insert edits

Assemble Edits

In the assemble mode, the electronic editor adds control track and program footage (both audio tracks and the video track), to the existing editing VCR at a predetermined in edit point. The editing VCR continues recording the new information and the control track (electronic sprocket holes) until it is stopped. When you are assemble editing, you are inserting new control track at each in edit point and ending control track at each out edit point. Your video may be unstable (picture tearing or breakup) at the edit points during playback. Allow for extra video after your intended stop/out edit point -- otherwise you will not be able to edit onto the last part of the video (see Figure 4-3). Your out edit point will be too short.

Assemble edits are very convenient because you just add segments, building the video story or program.

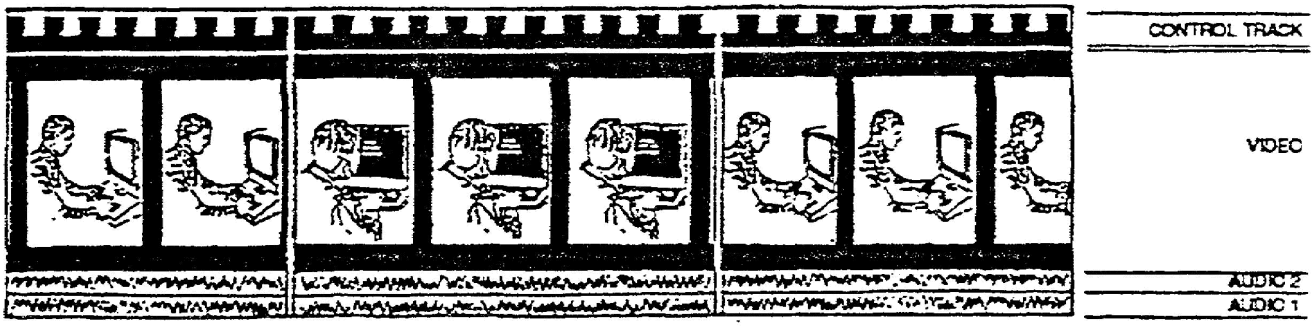


FIGURE 4-3. ASSEMBLE EDITING

Insert Edits

Insert editing allows you to add or change video and/or audio separately or together without affecting the control track. As you insert the new material over the existing information, you use the already established control track to lock the signal into synchronization. The main drawback is that you must lay a long enough control track (TV black or crystal black) on the tape before you start editing. A one-hour program tape requires you to lay one hour of black before you start the editing process. Otherwise you will not have sufficient control track for the VCR machines to read on the recorded videotape (see Figure 4-4).

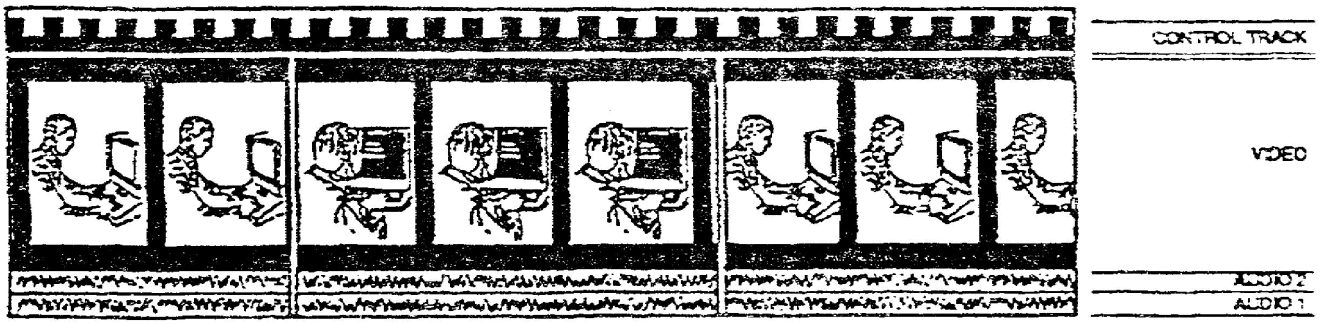


FIGURE 4-4. INSERT EDITING

*** * OPERATOR WARNING * * * ***

After laying the control track in the assemble mode, be sure to change the edit control unit to insert mode. Once you begin to make your first video or audio edit, if you haven't changed out of the assemble mode, the end of the edit will be dirty and there is no way to correct it without relaying the control track for the entire length of the tape.

The best approach is to stay in either the **assemble** or the **insert** mode. If and when you have to insert a piece of audio or video information over an assembled finished product, be careful of which buttons you are pushing.

Continuity

In editing, continuity refers to the viewer's ability to combine the different shots and scenes to make smooth transitions in time and space. In other words, the story is clear and concise without any distracting scenes that interfere with the content of your message.

For example, poor **screen direction** occurs when a subject moves in several directions. You, the cameraman, shot the scene from both sides, left to right and right to left. During the editing process, you edit the scenes together. This makes the subject look like he has made a quick turn around and headed in the opposite direction. A break in continuity will confuse the viewers and make them have to try to figure out what happened. Keep all video on one side of a 180 degree line or the other, and you'll avoid this.

Avoid such abrupt transitions when you are editing. Don't edit in the middle of a zoom, pan (camera movement in which the camera follows action), or tilt (camera movement that adjusts the camera view up or down). These edits usually won't work. The transition is too jarring for the viewer. There are many other dos and don'ts in editing for continuity, but the main thing to remember is to be aware of the viewer's ability to follow certain transitions and keep the message intact.

News/Sport Story

Most ENG news inserts contain four types of footage:

- Actuality - An actuality is the coverage of the event as it occurs.

- Interviews - A subject is answering questions or making a statement.

- Stand-ups - The reporter talks directly to the camera.

- Cut-ins or cut-away - These are secondary shots of action or reaction (also known as "B-roll").

A good cameraman will photograph a story or event with the editing process in mind.

While no two stories are the same, there is a basic format that the majority of the stories will follow. First the reporter introduces the story with a brief background. This is often done as a stand-up from the scene of the event. Then, other speakers, interviews, or actualities are used to fill in the details. These are referred to as "sound bites" or actualities. Finally, the reporter summarizes on camera.

There are many variations to the above formula. The experienced reporter will consistently be looking for a better way to tell the story.

BASIC EDITING PROCEDURES

The format, procedures and editing techniques will vary from person to person and from station to station. Let's assume the script has been written and the primary narration has been laid on the production tape. This is a normal news/production requirement.

When laying (inserting or assembling) the video and audio on the recording tape, the video should match the audio. A typical editing sequence might be:

- The editor will work from a log which lists all of the scenes on the tape(s). It may be prepared at the time of the shooting or as the tape is being reviewed at the station or your office. The log will describe the scene briefly and show where it is located on the tape using the counter on the playback machine.

- The producer, editor, and/or sometimes the reporter will decide which scenes to use, in what order, and the amount of time you have to tell the story. In smaller facilities, one person will, in most cases, do it all.

- The editor prepares a blank video cassette with countdown leader and crystal black. The cassette is put into the edit machine and the countdown leader and enough crystal black to cover the length of the story is recorded. The cue mark is also recorded on the tape.

- The footage (raw video) recorded on location is placed in the playback machine. The editing process is now ready to begin.

- The story is assembled and edited according to the predetermined sequence. Sometimes the audio track is recorded first and the visuals added later and matched to the video. At other times, the sequences are assembled in order, depending on the type of story and available footage.

- The edited tape is labeled with the title, date, and run time. Then it is reviewed by the supervisor and any corrections are made before airing.

The technical side of the editing process is fairly easy to learn. With today's technology, the procedure is almost foolproof. The aesthetic aspects of editing, however, are something else. A good editor must have a thorough knowledge of many related skills in order to provide viewers with a simple, yet effective, message.

PRACTICE EXERCISE

LESSON 5

SUBCOURSE NO. DI 0350

ELECTRONIC EDITING

INSTRUCTIONS:

Review the material in this lesson. Answer the questions below by circling "T" or "F" next to each question. Compare your answers with the answer key on the next page.

T F 1. The process of cutting and splicing videotape is the perfected new method.

T F 2. When recording in the assemble mode, sound and/or pictures, are transferred to the record VCR.

T F 3. After laying control track, you may change either to the insert or assemble mode at any time.

T F 4. Avoid editing in the middle of a zoom, pan or tilt.

T F 5. A cameraman should photograph a story or event with the editing process in mind.

ANSWER KEY

PRACTICE EXERCISE

LESSON 5

SUBCOURSE NO. DI 0350

ELECTRONIC EDITING

1. FALSE (Page 68)

2. TRUE (Page 70)

3. FALSE (Page 72)

4. TRUE (Page 72)

5. TRUE (Page 73)