
SboroTV Video Production Guide

The Southborough Cable TV Committee, Town of Southborough, 17 Common St, Southborough, MA 01772 prepared the *SboroTV Video Production Guide* (“*Guide*”). For questions or suggestions about the content of this document, please contact the SboroTV Facilitator at 508-485-8156 or email: info@sborotv.org

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I. Producing A Program

Getting started as a Producer takes a little (actually a lot of) thought and effort if you want to do it right. The Producer is the final authority on every production and is responsible for the total program -- from planning, to production, to post-production, and finally cablecast. The Producer usually originates the idea and develops the treatment or script. The Producer is responsible for developing the production; working with the writer; making the program's objective clear to the director; arranging for a crew; securing talent, visuals and audio materials; seeking releases and copyright clearances; supervising and coordinating all phases of production, promotion and publicity. The Producer may also be the director or host, or perhaps one of the crew. A good producer knows something about every aspect of television production. As far as SboroTV is concerned, the term producer always refers to the producer of record as shown on the Production Proposal form.

A. Pre-Production Planning

If there is only one rule to learn about producing, let it be that you can never be over prepared. While this may all be new to you, others have tread this ground before and here's where they started:

Goals & Objectives

First, identify the goals and objectives of your program. What is the basic idea? Is it a problem, event, emotion, message or personal statement you want to convey? In other words, what is the purpose of this production? Everything starts with the answer to this question. Do not be hazy or approximate about your purpose. You will find that it actually helps to write it out. If you cannot clearly visualize the purpose of this production, chances are your audience never will either.

Target Audience

Next, decide who you want to be your audience. Whom will you be addressing? The typical audience for broadcast television is a broad, undifferentiated spectrum. Commercial broadcasters target their messages so the average 12-year-old can understand them. On cable and public access in particular, you can narrowcast your message - you can be more specific in your aim, targeting your audience to your specific program.

What are the levels of information, attitudes and emotions held by your audience toward the subject? Never assume the audience is interested in the subject just because you are. You must excite their interest. And once you have captured their interest, the best way to maintain it is by entertaining them. Try to determine which of their buttons you can push to do this and always be aware of which ones will turn them off?

Effect

What do you want to happen to your audience after seeing your show? What would you like them to do after viewing your program? What kind of response are you hoping for? Call their councilperson? Join an aerobics class? Take a nature walk? Go to the library and read more about the subject? You should also consider what, if any, emotional response you are seeking. Joy? Introspection? Anger? Compassion?

Development - Search & Research

Once you have worked your way through the above, you have not only taken the first steps in the preparation of your production, but you have also programmed the subtler elements of your subconscious to evaluate possibilities in the context of the guiding vision of your program. In other words, you have thoughtfully formulated a concept for your program and now you're ready to start the development of that concept into the actual program.

As a SboroTV volunteer producer, it will generally be up to you to do the research necessary to gather as much information on your program topic as possible. Obviously, the better informed you are the better your production can be. Fortunately, there's a wealth of information available right here in town that usually cost nothing more than some phone calls and the time you want to invest in it. Half of your work can be done right from the comfort of your own home over the telephone. The other half can be taken care of by a trip to the local library or another organization.

First, decide where you'll try to get your information and to whom you need to talk to. You will also want to get more than one perspective on the topic so seek out people involved on the grassroots levels too. Talk to involved friends and to experts.

Here are some suggestions for places to look for information:

Chamber of Commerce	Museums
Community organizations	Non-elected people who are politically active
Elected politicians	Performing arts centers
Libraries	Professional specialists
Local chapters of National Organizations	Regional, state and local historical societies
Local colleges	Senior citizens groups
Local schools	Service clubs
Local news media (radio, newspapers)	Social clubs
Merchants	Support groups
Minority organizations	Visitor & Tourist Bureau

When you are making new contacts don't be afraid to ask for leads to other people and organizations that might be able to provide you with information.

Finally, you need to decide what information to use and what not to use. You should read as much as possible in the time available, but remember that you must visualize the ideas because, after all, television is a visual medium.

B. Putting Your Production Together

Okay, now you've brainstormed and arranged the flow of your program. The research for the topic is completed. You've even got people and organizations in mind to help produce the show or to interview. Now it's time to decide what you really need and don't need in the production. Here are some things to think about when trying to pull together your program:

- The format will define how your show will look and feel. Is this program going to look like a talk show, like commercial television, a movie or like something we've never seen before?
- Will it be shot "live" or for post-production (editing)?
- Does it need an introduction, an epilogue?
- What is the best length for the show: a half-hour, one hour, much more or much less?
- Is the idea specific enough to fit into a certain time slot? If it is too broad, how can you limit your topic so it will be appropriate for the time slot?
- How many people must be moved on and off screen? Are there people who need to appear on camera to introduce segments?
- Do you need a narrator? Announcer? Moderator? How much time do they need?
- Do you want or need a break? Can it be used to move the people on and off?
- Is this a series or a one-shot special? Do you want a regular format or a different format every week?

Need some help? Magazine style shows, as well as broadcast news and commercials, all do an excellent job of using images to tell a story, sell an idea, image, or product and/or make a point. Turn on your TV and study them. Study the shot selection, the shot order, the shot angles. Study the sounds used and the choice of words. Study the images used. The more powerful the image, the more involved your audience will be. If you have a VCR at home, tape something that may have grabbed your attention. Then play it forward, backward, in slow motion, or speeded up. Play it with the sound on and with the sound off.

Even if it's a negative reaction that it stirs in you, study it. It doesn't necessarily mean it was a bad technique. Their intention may have been to aggravate or irritate you specifically to get your attention. As much as we'd probably hate to admit it, some of the most obnoxious commercials are also some of the ones we remember best.

The words or images can often carry your message alone, but if you use them singularly, you're only using half of the tools at your disposal. Some producers use the images for impact and the words for information. But this can just as easily be reversed using the images for information and the words for impact. In any case, by using a strong combination of the two, the viewer is less likely to miss the point of the program.

Before you get too carried away, remember, everything needs to be weighed against the following considerations:

- The physical space available in the studio or on location.
- The technical capabilities and restrictions of the equipment. What can the equipment do and not do?
- The experience level of your crew and talent. What your crew knows or doesn't know how to do.

- The different time constraints involved. Personnel (crew/talent) availability, equipment and location availability, and production/post-production requirements. Will you have enough time to shoot at all your choices?

Finally, go back and look at your "goals & objectives, target audience, and effect" and make sure all these elements are still evident. Try not to compromise your "ideas," but still face the reality of technical/talent/logistical limitations.

C. Keeping Your Budget Reasonable

Obviously, most SboroTV productions are going to be on very limited budgets. You can look at this in two ways: as a limiting factor when it comes to making purchases and securing set materials; or as a liberating factor, encouraging you to make full use of your imagination and creative talents. Here are some tips that might help keep that budget reasonable:

Talent

Look for professional amateurs, people who want to do TV as a public service, or professionals who are looking for extra exposure (a radio personality never done TV, etc.). Look into local colleges with a media department or a radio station.

Props

Find friends with over-stuffed basements or attics. Search through Resale shops. Talk to furniture stores that are willing to make a contribution in exchange for credit on the show.

Sets

Use materials like wallboard and paint to make a backdrop, or a simple bolt of colored cloth. There are a lot of cheap materials that look very good on camera since the camera is not as perceptive as the human eye.

Music

Again, there are students at colleges, music majors who would probably appreciate the chance to work on a TV show. And there are plenty of good local musicians who need the exposure.

Underwriting

At SboroTV, underwriting (the exchange of goods, service, and/or money) is allowed for the support/improvement of a production. It is not allowed for the personal gain of the producer, crew or sponsor. All underwriting must be registered with SboroTV on an Underwriting Disclosure Form. Failure to do so will be cause for immediate suspension of the user's facility privileges.

D. Copyright & Talent Releases

It is the Producer's responsibility to seek any releases and copyright clearances necessary for a production. The copyright law specifies that someone found guilty of certain categories of intentional copyright infringement can be fined up to \$25,000 and sentenced up to one year in prison for a first offense with double penalties for later offenses. In addition, the court may require the destruction of all equipment, materials and copies related to the infringement. Are there instances in which you might be able to legally use parts of a copyrighted work without the owners' permission?

Yes. One category of such use is called "fair use". However, the problem is making an intelligent determination as to when it may be permissible to use some part of an existing copyrighted work without the consent of the original owner. The fair use issue is a tough one to call. Here are some practical benchmarks that can be used to help evaluate fair use situations.

1) The purpose and character of the use.

Generally, if something is used for non-profit educational purposes it is more likely to fall under the fair use criteria. When something is strictly commercial it is more difficult to call a fair use judgment. However this doesn't mean that any commercial purpose will fall outside of fair use.

2) The nature of the copyrighted work.

The closer the copyrighted work is to being factual in nature or based on public documents the more likely it will be considered fair use. The closer the program is to being pure entertainment or based on a creative element (ex. a novel) the further away it is from fair use protection.

3) The amount and substantially of the portion used.

Depending on how much of a copyrighted work you use you could be in violation of the fair use ordinance.

4) The economic effect of the use.

The less actual or potential economic harm represented to the copyright owner, the better the fair use case.

5) Degree of exposure.

A single use of a copyrighted piece before a small audience is closer to fair use than multiple uses before a large public audience.

6) Level of premeditation.

A spontaneous use would more likely be considered fair use than would use which is part of a systematic and continuing plan.

7) Honesty of use.

If something is used in good faith and full credit is given to the copyright owner it is most likely to be considered fair use. Deception and dishonesty are almost always sufficient by themselves to take proposed use out of the fair use category.

E. Talent Release

A talent release is simply a legal document that states an agreement between a producer and the talent (or writer, or designer, etc.). The terms may cover any situation that either party wishes to include or exclude. Here are two examples:

Example #1

I, Buddy Producer, hereby permit my image and voice, either whole or in part, to be cablecast over the Southborough Community Television Network. I do here release all information and material taped on 4 July 2008 to be used in a videotape on me & my abilities, titled "My Best Friend".

Tape Producers: Joe Producer
Central St., Southborough, MA 01772

Signed: Buddy Producer Date: 3 July 2008

Example #2

I, _____, hereby assign to all rights to the recording and/or taping of my appearance by means of videotape and sound recording made of me this date, _____. And I hereby authorize the reproduction, copyright, exhibition, broadcast and/or distribution of said videotape by producer or his agent or assign without limitation.

Assignee: _____ Producer: _____
Signed: _____ Signed: _____
Dated: _____ Dated: _____

F. Working With A Crew

As a volunteer producer at SboroTV, it's important that you remember the people who help you create your program are volunteers. They give freely of their own time to help you produce your program. Some do it because they're interested in the program, some because they like working with the equipment, and some because they like working with the producer. Whatever their reason, try not to forget their main purpose is to help.

While doing production work at SboroTV, you will encounter a variety of people with a variety of skills - production and other. Here are a few tips when asking others for help:

- Be honest. Tell them what your program is about, what you need help with and how much work you think will be involved.
- Try to get a commitment from a person if he/she plans to act as a co-producer, guest, host, to provide equipment, or to lend a hand.
- Share dates, times and deadlines up front. When will it happen? When does it have to be done by?

- Write up an itinerary of when and where you will need them. Call to remind them the night before you need them. It's not unusual for someone to forget what they promised to do last week.
- Be clear on what you want people to do. What job or position you'll want them doing for your production.
- And after the work is done, remember to thank everybody, regardless of how it went.

Show your appreciation. After the show is done, take the crew out for dinner, a drink, or invite them over to watch the premiere telecast of the show. You could also call or send thank you notes.

II. Directing

The role of the Director is probably the most creative of the video production team and, without a doubt, the most demanding. The Director is responsible for executing the Producer's idea. Once the actual production has started, the Director is in charge and must be able to control, direct and select a multitude of human and technical resources while simultaneously combining them in such a manner that the audience never actually realizes what techniques are being used. He or she assigns tasks to each crew member; chooses camera angles, shots and stage movements; approves graphic designs; consults with the lighting director, set designer and audio operator; directs rehearsals; and coordinates the overall look and sound of the production so that the entire effect is consistent with the Producer's original concept.

A. Preparation

As a director there is nothing more important to being able to do a good job than good preparation, which will save you from many headaches and heartaches. Take time to think through the entire production. Get to know your script. Try to visualize how it begins. How it proceeds from segment to segment. How you will get in and out of each of those segments. What shots, cues, commands, video and/or audio sources will be needed for each segment.

Whenever possible, have a production meeting with the whole crew or at least with the key members and talent. Go over the script. Solicit their suggestions. Discuss the look, feel and movement of the program.

Make a floor plan, a light plot, and a prop list. Develop a shot list and a shooting schedule. All of these will not only help your crew better understand what is required of them or how you want it done, but will also help you, as director, to immediately focus on the specific components of your production should something go wrong.

Be on time, you are the lead person on the day of the shoot. The rest of the crew will be looking to you for their direction. Hold a quick review of the plan for the shoot, clarify assignments and answer any last minute questions. Once the main preproduction tasks are completed (lights, sets, and audio equipment in place) it is time to check the audio, set the light levels and block the camera(s).

Camera Blocking

When using more than one camera, always block the cameras for cross shooting. That means the camera on the right shoots the subject on the left and the camera on the left shoots the subject on the right. Once the subjects start addressing each other they will be presenting more of a "full face" shot to their respective cameras. A "straight on" full face shot is always more desirable than presenting your subject in the harsher looking "profile" shot. The full face shot more easily conveys the feelings, emotions, and intents of the subject to the viewer at home.

Now is the time to work out all the shots you're going to be using later. Don't just tell your camera people their shot selections. Work through every shot they are going to get. Not all over-the-shoulder shots are composed the same way and just how much do you want covered in your cover shot. It's much easier to get these shots set up the way you want them during the blocking than when you're in the middle of the shoot and there are twenty other things that need your attention.

One thing that you will probably discover right away is that there are certain limitations imposed upon you by your set and the location of your shoot. You'll soon agree that it is much nicer to find out during blocking that the over-the-shoulder shot also includes that hole in the back of the chair that you thought nobody would ever see or that stack of boxes you thought were safely out of sight.

If you take the time to block all the shots with your crew, you'll find that life will be much easier and hold fewer surprises during the actual shoot. Don't forget even if you are an experienced director, the chances are that some of your crew may not have any experience. You can bet making *corrections* during the shoot won't look quite as good as well planned, anticipated moves.

Shot Selection

Use shots to establish and reveal.

Select shots that establish the spatial relationship between the subject talking and the subject listening, the relationship between the subjects and their surroundings, and the relationships between the "big picture" and detailed shots. Use shots to reveal what the viewer will want or need to see. A wide or long shot is fairly impersonal. It "distances" a viewer from the subject. Often the wide shot is used to establish the context or environment in which your subject is interacting. This can provide your audience insight into your subject by showing how the subject relates or doesn't relate to the surroundings.

Use shots to show detail.

Select shots that will illuminate what is being said. Show close-ups to enhance and show the audience the detail needed to emphasize a point. The close-up often is used to convey intimacy, emphasis or emotional impact. When the camera is in tight for a close-up, we become involved with that person. We instinctively know that what they have to say at that point is important and we also know that the producer of the program thought it was important to show us the close-up at this time. The close-up can also be used to heighten your awareness of the subject by showing it to you in much greater detail than you would normally look at it.

Keep the action on the screen whenever possible.

Choose shots that maintain the viewer's continuity with the action as it is taking place. In terms of action, the wide or long shot is used to give us an overview of the action and/or to convey the full scope of the action as in a hilltop view of the Battle of Gettysburg. However overwhelmed we might be by the sheer numbers involved in the action, the wide or long shot could not rival the intensity felt in a claustrophobic close-up to just two of the participants in hand to hand combat. That's where the close-up comes in, drawing the viewer into the action.

Use shots that show reaction.

Don't be afraid to show the face of someone reacting to what is being said, shown or demonstrated. This gives the viewer a sense of identification and empathy, and often adds impact to the words being spoken.

Use shots to clarify, intensify and enhance the action for the viewer.

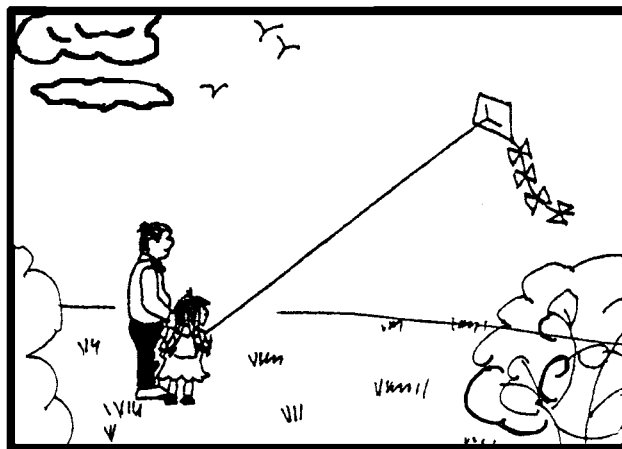
Ask yourself if the shots you select are just for the sake of variety or whether they help the viewer understand what is going on. If the shots are to maintain the visual attention of the audience, how do they support and enhance the goals of your program?

Shot Sequence

Let's go through an example that will show you how to use some shots to put together your own production. There is a basic formula that you can use in covering any event or situation for television. It goes like this:

Wide Shot - Medium Shot - Close-up – Cutaway

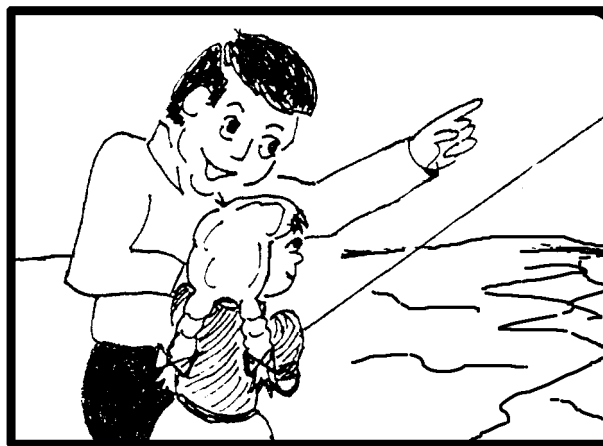
You start with the Wide Shot (WS).



• Figure 1 – Wide Shot

The wide shot orients your viewers to: (1) the action taking place and (2) the context of its surroundings. Also called the establishing shot and it does just that for the viewer, it establishes the who, what, where of a scene.

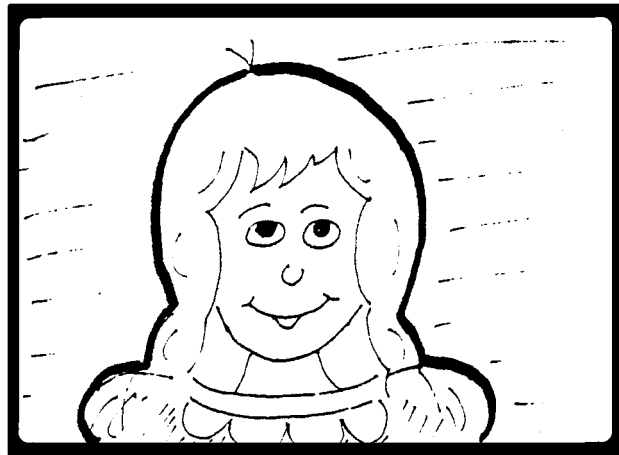
Next comes the Medium Shot (MS).



• Figure 2 – Medium Shot

•

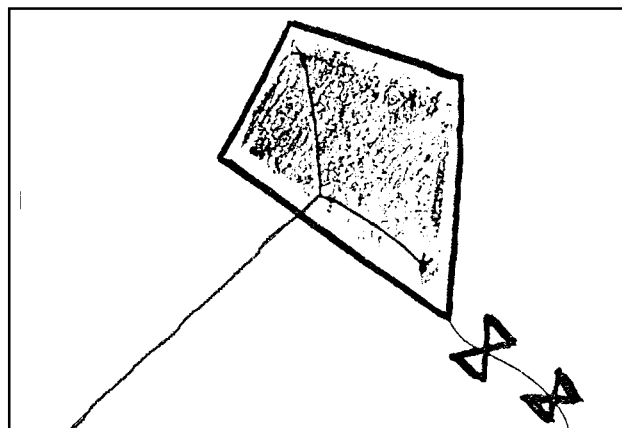
The medium shot draws us closer to the action showing us the main subject(s) of our attention. Then the Close-Up (CU).



• Figure 3 – Close-Up

The close-up goes in tight on the action filling the screen with detail. It's used to draw the viewer into the experience of what is happening.

Lastly, the Cutaway (CA).



• Figure 4 - Cutaway

The cutaway is generally used to show how people are responding to the action. It can also be used to show the effect or results of what is happening.

Like everything on TV, this is not a “hard and fast” rule. You could vary the order of the shots, starting out with the close-up or cutaway for dramatic purposes and then mixing in the others. Almost without exception though, you’ll always use all four kinds of shots in some sequence to tell your story.

Transitions

Transitions from shot to shot should be motivated and should follow the logic of the program that is unfolding. For example you might change to a wide shot to have on-camera talent joined by other talent, or you might change to a close up to show particular statement. Your guide in making transitions should be: "What does the audience want or need to see and for how long?"

Duration of a shot should have something to do with how long it takes for a viewer to absorb all the new information in the shot. This is referred to as the "saturation" point or that point beyond which the shot becomes uninteresting to the viewer.

The "cut" is the least obtrusive way of showing a different picture of the same activity. Good directing should be invisible and never get in the way of the viewer's experience.

The dissolve indicates a change in time and place (as with moving to and from a tape roll-in) or to show a dramatic linkage between what is fading out and what is fading in (as from an emotional conversation to a reaction shot).

Sequential shots have to be significantly different to avoid having the shot-to-shot sequence appear to be a jump-cut or a sloppy edit. For example, a 2-shot should change to a 1-shot rather than another a 2-shot. A long shot should move to a medium or close-up rather than to another long shot. Changing from one shot to another of the same subject should represent a shift of at least 90 degrees in angle or else it will also look like a jump cut.

B. Language of Production

To control all of the elements necessary to complete a television production, a very precise language was created to enable all members of the production crew to understand and act upon all commands given to the team. This language had to provide clear and precise communications to avoid confusion. Yet, because of the multitude of commands being given to coordinate the various elements, it also had to be brief and directed to a specific member of the crew. The Director uses this language to communicate with the crew, and because things can happen fast during a production, the language of production must be mastered by all crew members. If a breakdown in communication happens at any level, the production can also breakdown. The Director will give four basic types of commands:

Prepare - to indicate that a particular activity will be coming up, be prepared to do it. ("Camera 3, prepare to truck right" or "Prepare closing credits".)

Ready/Standby - to indicate to a crew member what activity will be next. ("Standby, Camera 3." or "Standby to roll credits")

Execute - to command a crew member to do what they have been prepared for, NOW! ("Camera 3, truck right, NOW!" or "Roll credits, GO!")

Status - are on-going cues relating to the status of a previous command. ("Camera 3 is still up!" or "Holding credits".)

When using multiple cameras, the Director should always address the cameras by their numbers (Camera 3, Camera 2, etc.). It makes it easier for everyone involved to understand what action is required of who. The Director doesn't have to translate "John's shot" to a camera number, and if you happen to have more than one cameraperson named John..... Here's an example:

FIRST COMMAND: Camera One, standby to truck right.

(Tells the Camera operator to be ready to perform a movement.)

SECOND COMMAND: Camera Two, you're still up.

(Tells the Camera operator they're still "on the air".)

THIRD COMMAND: Ready to take Camera One.

(Prepares everyone for the switch to camera one.)

FOURTH COMMAND: Camera One make your move, now.

(Tells Camera One to start the truck move.)

FIFTH COMMAND: Taking Camera One. One's Up!

(Tells everyone the switch is being made from Camera Two to Camera One. Notifies Camera One that they're "Hot", and lets Camera Two know they are "free".)

As a camera operator you need to listen carefully to the director's commands and act or NOT act accordingly. That could mean getting the shot you've been asked to get - quickly or not moving or changing your shot until you've been released ("freed") by the director.

Next are more examples of directing terminology.

ACTION DESIRED

DIRECTOR'S CUES

Cut from Camera 1 to 2

Ready two-taking two, two's up.

Dissolve from Camera 2 to Camera 1

Ready to dissolve to one – dissolving to one, one's up.

Fade in Camera 1 from Black

Ready to fade in one – fading in one, one's up.

Superimpose Camera 1 over Camera 2

Ready to mix one and two – mixing one and two, one and two are up together.

Return to Camera 2 from
superimpose with Camera 1

Ready to lose one – losing one, two's up by itself.

To have a key from the CG appear
over the person on Camera 1

Give me the key – ready key, taking the key.... key's up over one.... losing the key, one's still up

Command Scripts

Whenever possible, write a command script for the opening and closing of the show, listing all the commands you will be giving in the order you're going to give them. Match the commands with what's going to happen on the show so you know when to give certain commands. Include all the commands, from the prepare commands to the status.

Here is an example of commands that might be given at the start of a two-person interview show using three cameras, music and a CG title for the opening. (Camera 1 has a close-up of the guest, two of the host, and three a cover shot.)

Ready to start recording black

Ready to fade in music

Ready to fade in Cam 3 w/CG

Ready to cross fade music & mics

Ready to cue host & mix to Cam 2

Recording black (30 sec.)

Ready to fade in music & Cam 3 w/CG

Fade in music, fade in Cam 3, bring up CG(10 sec.)

Ready to cross fade music & mics

Ready to lose CG & mix to Cam 2

Ready to cue host

Cross fade music & mics, cue host

Lose CG & mix to Cam 2, Cam 2 is up

C. Last Minute Checklist:

- **Does everyone involved know the “In cues” and “Out cues” for the scene?** That means everyone, not just the camera operator(s) but also the audio operator, floor manager, any other crew and especially the talent.
- **Have you gone over the cues and signals with your floor manager?** Does the talent understand what the cues and signals are?
- **Have the titles and other graphics been checked?** Is everything spelled correctly? Is the information accurate? Is it properly located on the screen? Does the color scheme work with the set? With the wardrobe of the talent?
- **Are there print graphics or additional audio sources** that need to be integrated into the program? Is the audio operator, camera operator or technical director aware of what will be required of them to include these sources?

Even if you're not planning a complicated shoot, you should do a complete run through just to ensure there are no snags and everyone knows their job. You may find out you'll need to do more than one run through to get the kinks out.

Short, technical rehearsals will always prove invaluable. They insure that everyone knows their job and allow for adjustments to be made to the game plan. Make notes on your script, offer guidance to your crew and re-rehearse as necessary. This will make your crew and talent (as well as yourself) feel more comfortable with what they are about to undertake because getting your crew mentally ready is also a part of the director's job.

III. Editing

The job of the Editor is more than just to assemble the video and audio components to create a television program. Editing can determine the pacing, mood, and interpretation of the program. How scenes are edited is just as important as the lighting, the camera angles, color representation, or any other aspect of the production. To edit well is to spend the time required to produce a product you will be proud of. If you rush the process it will be seen in the finished work. So take the time needed to do a good job and you will be happier in the long run.

Forming the program in your mind and on paper is only the beginning; the actual editing process is the hard part. Finding just the right footage and getting it to fit into the program is truly the most difficult. You may find yourself searching for a shot you need and then once you've found the shot, it may not work the way you thought it would. On the other hand, you may not have a much-needed shot, which may cause you to re-edit or even re-shoot a large part of the project. Once in a while a flash of inspiration may come to you, which may be the answer to all your editing problems only to vanish when you try it. The thing is to TRY the edit, it may work out, or you might have to try a series of edits before you realize it isn't going to work. Thus, the Editor has four (4) basic functions:

- **COMBINE** - to assemble various already completed sequences in their proper order.
- **TRIM** - to make raw footage fit a given time slot by eliminating unneeded footage.
- **CORRECT** - to eliminate mistakes such as bad shots, color correction and glitches.
- **BUILD** - to put separate sound and video together to create a program.

It is also the Editor's job to match form and content. For example, a TV News magazine would have a different look, sound and feel than a Saturday afternoon children's program. Form and content go hand in hand. The Editor's role is to ensure that the message is presented in a clear concise form.

A. Aesthetics

Finding solutions to production problems is likely to be the Editor's biggest challenge. Bad camera work, not enough of needed shots, and poor audio are problems all editors face. It is the Editor's job to find aesthetically pleasing and creative solutions to these problems. If successful, the corrections will not be seen as a correction by the viewing audience. There are four areas of aesthetics you should be aware of for each and every edit.

CONTINUITY: is the consistency in movement, color, sound, subject identification and location, direction and ambiance. It is important to maintain consistency as to movement both of and within the shot. Lighting, color and sound (rhythm and ambiance) must be consistent in order not to disorient the viewer. Extreme changes in distance, camera angle, subject location, and vector line can contribute to loss of continuity.

COMPLEXITY: is the intensity and pacing of shots, and the relationship of music or other sounds to video. How quickly or how slowly visuals appear in your program can determine the feel and impact of the program. How the sound relates to the visual pacing, whether it is music, dialogue, narration, or sound effects. All are essential to the complexity of your program.

CONTEXT: is the true content of edit events. Preserving a true representation of an event during editing is very important. Using such items such as stock footage, for example may help in covering edit transitions or explain events, but not necessarily represent what was really going on at that event.

ETHICS: is how the editing of a program relates recorded events. Distortion of events through editing, such as eliminating unwanted or unpopular political views from speeches may be construed as acting in an unethical way. Special care should be taken when juxtaposing two shots together that may imply another idea not contained in either of the two shots. Staging events can also be dangerous if there is no identification of it for viewers.

B. Principles

Although video editing is a subjective art form, there are some basic principles of good editing that you can follow to make your program more viewable. The goal of an editor is to make each edit appear as a natural transition from one point to another. The true test of a good edit is its *transparency*. In order to achieve this goal, the visual elements in each scene must cut together in several essential ways. The following principals provide you with a basis for making aesthetic decisions when editing. Once you have a solid grasp of these principles, you will develop a sense of when they work and when you can break them for impact and effect.

Cutaways

A cutaway is a visual of something or things that are not in the primary scene, but are relevant to the scene. Cutaways are usually associated with interviews and talking heads. Whenever you edit a person's dialogue, you have a jump cut to cover up. This is where cutaways are put to good use. If your subject is talking about wine, you can cut several minutes of the interview to condense time, and cover the edit with an appropriate visual of a wineglass, bottle, wine cellar, or anything that would tie in with the story being told.

The best cutaway will be motivated by more than the need to cover a jump cut. A cutaway is really a second level of action; it can serve as a commentary, distraction, or a bridge for your audience. Is there a shot that can illustrate what is being said? Is there a shift in focus? Is there an action or movement that's important to be seen? A cutaway should provide your audience with additional information and its contribution to the narrative, dramatic or informational flow should be evident. If a cutaway is unmotivated or not relevant, it can disorient and confuse your audience.

Cutaways may also be used to create irony, as when a visual contradicts what someone is saying. Think carefully about whether a cutaway will enhance or detract from your primary scene. There are times when it is better to leave a jump-cut, rather than to insert a bad cutaway.

Cut-ins

A cut-in is a close-up of something in the primary scene. A good cut-in is motivated by your audience's need to know; what is that tiny knob on my answering machine for? Why is that character wringing his hands under the table; is he nervous? Whose hand is turning the doorknob? A cut-in can provide significant new information: a close-up or a detail of something previously seen; a movement that must be emphasized in order to understand its function; or a dramatic movement.

Close-ups create tension and emphasis, so a cut-in of something mildly important to your audience will be distracting. Most of us have seen a program where we're shown a cut-in of something like a letter opener, only to wonder for the next sixty minutes, why? It's frustrating to wait for the importance of a close-up to become apparent, particularly if it never does.

Cut-ins are useful in demonstration and process programs, to show details of products, parts and movements. They also play an important role in drama, both in terms of action and of characters. A small button inside the desk drawer will open a trap door when pushed; or a character's tapping foot will indicate uncharacteristic nervousness during a revealing conversation.

Reaction Shots

A reaction shot is visual of someone or something reacting to something else in the primary scene. Reaction shots are almost essential in any scene with more than one talking subject. If the interviewer squints skeptically at a subject's comment, we all begin to doubt the credibility as well.

In drama, reaction can be more important than action. One character's response to another may cue the audience on content and plot, in addition to serving as commentary. Relationships to people and between cause and effect, can all be conveyed through reaction as well as action. Mechanical objects can have reactions, too. In order to show the result of pushing a button once, you need to cut to the mechanical reaction of the device.

In certain kinds of programs, audience reaction shots are another way of eliciting the wider audience response. Inappropriate or over-reactions may be used for humor, but are otherwise distracting to the audience. A reaction shot, like a cutaway or a cut-in, needs to show your audience something new.

Jump-cuts

An edit is a jump-cut if the subject remains the same, and the camera angle does not change by more than 30 degrees, or the image size does not change by more than 30 percent. Jump-cuts are most commonly a problem in talking heads and interview programs. If only one person is speaking and you cut some of the person's dialogue, you will have a jump-cut whenever you make an edit. Similarly, in an interview situation, if you don't have shots of the interviewer as well as the interviewee, you may be left with jump-cuts after editing.

You may occasionally see jump-cuts on television news programs, where they are considered an acceptable method of showing the audience that some of that person's statements have been edited. Usually, a jump-cut will be covered with a reaction shot of the interviewer, or a cutaway to something that relates to the subject being discussed.

A jump-cut may also be used artistically to create an effect of repetition, stuttering or distorted perception of time. Outside of these documentary or artistic uses of jump-cuts, they are generally considered to be unacceptable edits.

Screen Direction

Draw an imaginary line through the scene you are shooting, creating a space where your talent is on one side of the line and the camera is on the other side of the line. All your camera positions should be on the same side of the line even when you move the camera to a new position. People and objects will stay in the same screen relationship as long as this rule is observed. An edit across the imaginary shooting line will make a subject appear to change directions. A person walking from left to right will appear to be walking back to the same direction from which they had come from if the line is crossed. A football team shot from one side of the field cut to the same team from the other side of the field will make it look as if they are running towards their own goal. In sports, a caption saying "Reverse Angle" is usually keyed over the shot to orient the viewer.

If your scene requires a change of direction, there are two ways of accomplishing the reversal while keeping your audience oriented. Move the camera across the imaginary line, taking your viewer with you as the action changes direction. Or have your subjects move across the line, again keeping your viewer with you as the screen direction shifts.

If you need to edit across the line, insert a neutral screen direction (point of view) shot in between the shift in screen direction.

Continuity

Continuity refers to maintaining appropriate visual, audio, and timing relationships during a shift in background or foreground in two consecutive shots meant to represent continuous action. An obvious example of this kind of edit would be a person sitting in the background of mountains in one shot, cut to the person they're talking to, and cut back to find the first person against a background of ocean shoreline; discontinuous background. Similarly, a person not wearing a hat in the first shot, cut back to find them with a hat in the second shot; discontinuous foreground.

Less obvious continuity problems occur in complicated dramatic scenes where the characters are eating breakfast, for example. Who is drinking coffee from take to take? How much of the toast is eaten, how far down has the cigarette been smoked, etc., all are potential continuity problems. Even in a simple scene where the talent has to perform many takes, problems can arise from a hairstyle losing its shape, a necktie hanging differently, etc.

The editor's job is to make any change in background or foreground continuity less obvious by inserting cutaways, cut-ins, reaction shots, or choosing another shot entirely where possible.

Cutting On Action

An edit made during an action of any kind will be more transparent than an edit where no movement occurs. This is perhaps the most essential rule of good editing. Cutting on action not only hides an edit, it provides a motivation for changing camera angles. Cutting from a wide shot to a close-up looks more natural if there is some subject movement at the edit point.

Remember that an action can be very subtle; they are not always big, obvious movements from frame to frame. Something as minor as a hand movement can provide a good cut when there is an equal movement in the next frame.

Look for a continuation of movement from frame to frame, and avoid reverse directional changes unless you're emphasizing contrast. The goal of the editor is a natural flow from image to image, and cutting on action is one way to achieve this.

Clean Entrances & Exits

Allow subject to enter and exit the frame cleanly. Be sure in production to roll tape both before and after the subject's entrance. Showing an empty scene before the subject enters allows you to cut from any scene to any other scene in one edit. For example, a man walks out of a Paris cafe in scene one, and for a beat after his exit you see the empty cafe. Cut to an exterior of the LA Airport and the same man walks into the frame. You've just condensed time, moved the story forward, and avoided the need to match action in one simple edit.

Clean entrances and exits don't have to be dramatic. This technique is also a simple way of shooting and editing close-ups of products, processes, and demonstrations. A program demonstrating how to use a telephone answering machine, for example, may begin with a wide shot of the product. Then when it's time to describe pushing the first button, the hand comes into the frame a beat after the edit.

The alternative to clean entrances and exits is matching action. For example, man opens a door to leave the Paris cafe, and as he walks through the door, you cut to him walking through a door at the LA Airport. There are situations where one technique will work better than the other, but a lot of your decisions will be based on the footage you have to work with. If the program wasn't shot with clean entrances and exits, you will have to match action. If no overlapping action was shot, but you are provided with clean entrances and exits, your decision is made. When you are in a position to influence the directorial decisions, storyboard the scenes to see which transitions work the best.

C. Editing Tips

Each edit should be reviewed for technical assurance, and each sequence should be reviewed for content and aesthetics.

Think in terms of problem solving. Be resourceful. If you don't have enough ambient audio for a certain scene, loop it; re-record it as many times as you need to.

Loop stationary video if the shot you want isn't long enough.

Use out-takes if you need them; sometimes the best performance is in the throwaway category.

Use good reaction shots and cutaways more than once, if you are short of video and they are appropriate. You don't have to use reaction shot where it occurred in reality; you can cheat as much as you need to if you're not doing documentation.

Use audience expectations and assumptions to condense time and action. Cut as much as two thirds of an action and your audience will fill in what they don't actually see.

Use clean entrances and exits to condense time and get subjects to new location; you don't have to show everything that happens in real time. Involve your audience by forcing them to fill in, imagine, and participate.

Constantly review what you are editing to maintain a sense of the program's flow and pace.

IV. Camera Operation

The Camera Operator prepares the camera for production, and operates the camera during run-through and production. The Camera Operator studies the shot list or script, practices shots, and reports equipment malfunctions. The Camera Operator gets shots at the command of the Director, and does not stray from the shots prescribed. While an eye for composition is an important trait for Camera Operators, they should never make decisions about what shot is needed, when to move, or how to compose a shot. The Director has the advantage of seeing all of the elements of the program at once and knows how they will go together, while the Camera Operator's perception is often more limited. A "creative" Camera Operator can create havoc for the Director who is trying to coordinate all of the elements of the production into a coherent whole. A good Camera Operator is one the director can depend on for a well composed shot, obtained in a timely manner.

A. Screen Space

Every shot is a combination of vertical space, horizontal space, and depth on the screen, and each of these screen dimensions can be used to influence how the viewer perceives your program.

Horizontal Space: Graphic lines (a row of trees, buildings, roadways, fences) or movements (pans) from side to side, or the use of a broad horizon line are generally a calming influence in an image, and usually provides the viewer with orientation.

Vertical Space: Up and down graphic lines (poles, roadways, walls, buildings) or movement (tilts) energizes the shot, enhances and intensifies the action on the screen.

Depth: Television is generally a "flat" medium, and extra effort must be taken to give some depth to your images. This can be done in several ways:

- **Foreground:** Placing an object, such as a plant or the shoulder of an interviewer nearer the camera, in the foreground of the shot, while the major focus is further away from the camera.
- **Background:** Using shadow, lighting or objects behind the subject to suggest a background that the subject is in front of.
- Using **the "Z" axis** (a diagonal) for action: By having the action move toward and away from the camera rather than side to side.
- **Camera movement:** By having the camera move (dolly, zoom) "into" the shot, by moving (trucking, arcing) around the subject thus defining it as three-dimensional.
- **Shifting attention:** By using focus (rack focus, pull focus) or action (combining zooms with other camera movements, pans, trucks, etc.) to shift attention toward or away from the camera in the frame.

B. Composition

Shot composition consists of the directions and commands used to frame the subject.

Long Shot (LS): Head to toe and some surroundings, sometimes called a Full Shot.



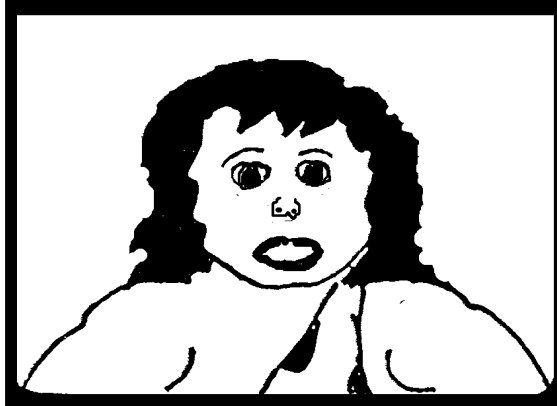
• Figure 5 – Long Shot

Medium Shot (MS): Most of the body of the subject, cut off at the knees (knee shot) or perhaps the waist (waist shot).



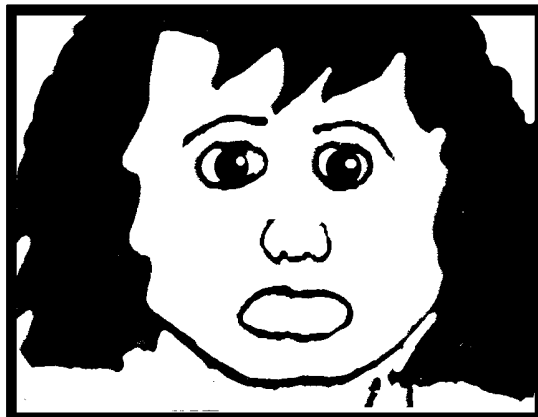
• Figure 6 – Medium Shot

Close-Up (CU): Head and shoulders of the subject, above the elbows would be called a Bust Shot.



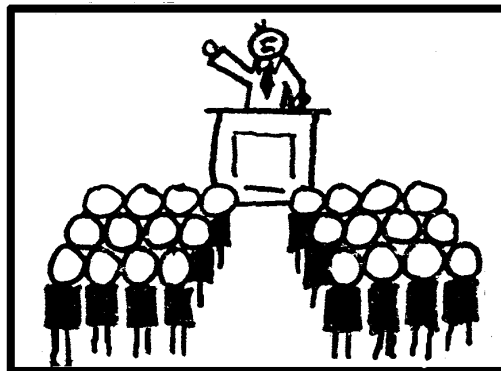
• Figure 7 – Close-Up

Extreme Close-Up (ECU): Full face or closer.



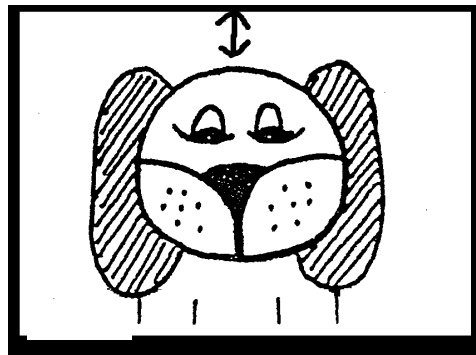
• Figure 8 – Extreme Close-Up

Cover Shot: Wide enough to cover all the action. Also used to orient the viewer with regard to locale, setting, or context (Establishing Shot or Wide Shot).



• Figure 9 – Cover Shot

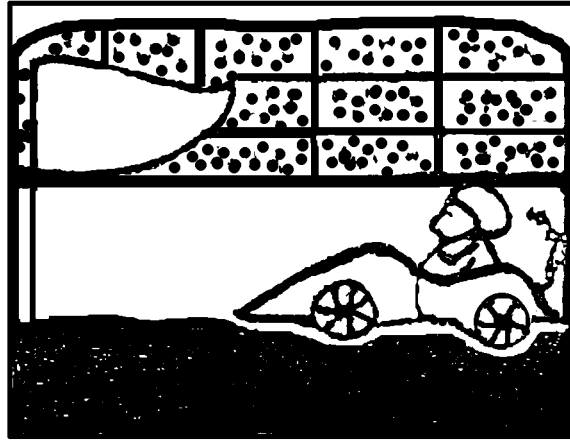
Headroom is the space between the top of a subject's head and the upper edge of the frame. You should always allow about a 5% margin (“**Safe Action Area**”) all the way around your subject to allow for the variations in different TV sets on which the program may be seen. When zooming out, it will be necessary to tilt down to maintain your headroom, and when zooming in you will need to tilt up.



• Figure 10 – Headroom

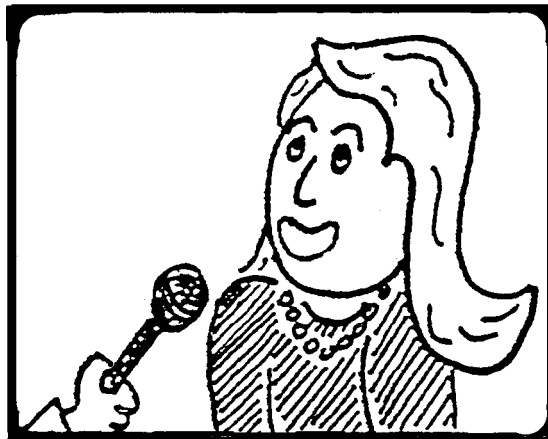
Rule of Thirds is dividing the TV screen with a “Tic-Tac-Doe” pattern and using the pattern to frame your shots. For example, keeping a subject's eyes on the top one third of the screen will generally yield a properly framed shot.

Lead room is the space between the front of a subject and the edge of the frame they are facing. If the subject is moving, lead them with the front of the frame and put them in the back of the frame. This way the viewer can get a feel for where the action is leading. If the subject is talking, give them room to talk into, called Talk Space or Look Space.



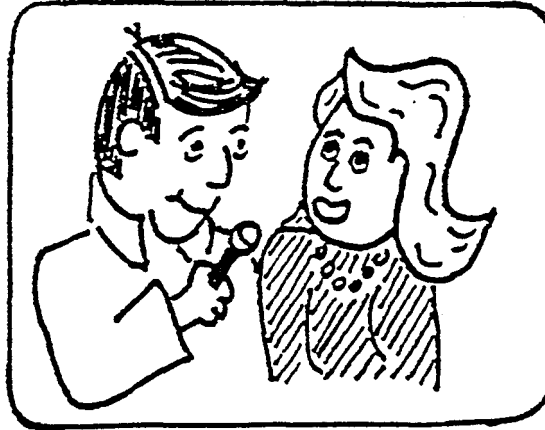
• Figure 11 – Lead room

Single Shot: A single shot is a composition of one subject.



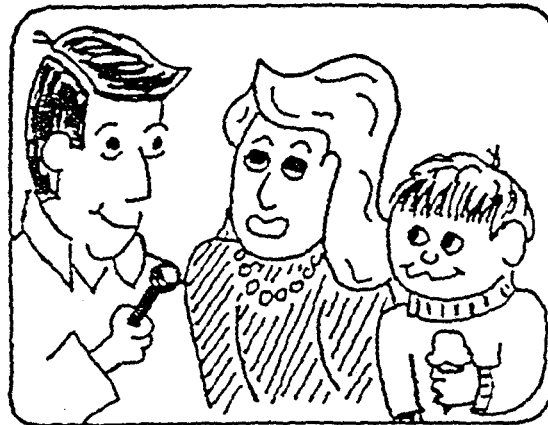
• Figure 12 – Single Shot

Two Shot: A two shot is a composition of two subjects.



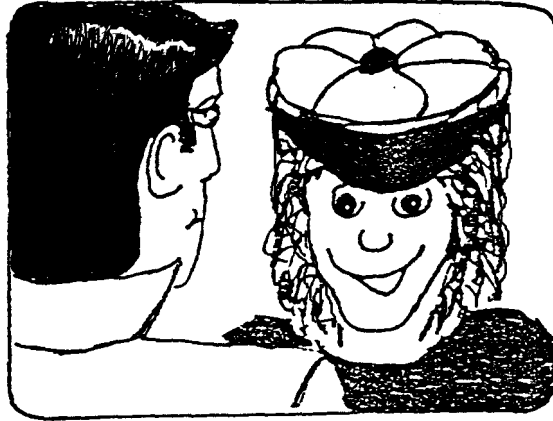
• Figure 13 – Two Shot

Three Shot: A three shot is a composition of three subjects.



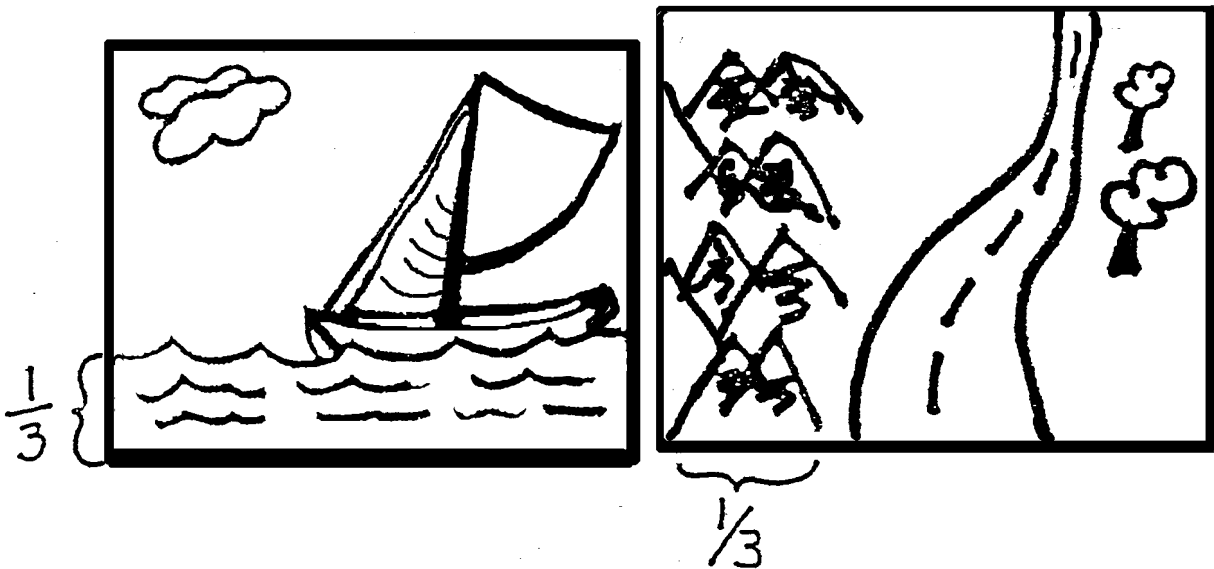
• Figure 14 – Three Shot

Over the Shoulder: An over the shoulder shot is one that is looking over the shoulder of one subject at the face of another subject. In shooting over-the-shoulder shots for interviews and dialogue, it is important to remember screen direction. Always shoot over the opposite shoulders, and your subject screen direction will be maintained.



• Figure 15 – Over the Shoulder

Balance: Perfectly centered pictures are static. Remember this is not still photography, so you need to consider the elements of rhythm (time and movement). Balance the main subject with other visual elements. The **Rule of Thirds** is to divide your frame into three areas, vertically and horizontally. When composing your picture, try to balance the composition 2/3 - 1/3.



• Figure 16 - Balance

C. Placement

The placement of your camera is very important, so put some thought into it. Remember that you're planning the viewing point of your audience, in essence, where they are going to sit in relation to your program. Your camera placement, as well as camera movement and composition, will greatly affect the way that they feel about what is happening on the screen.

A wide or long shot is fairly impersonal. It "distances" a viewer from the subject. When we see people at a distance, we cannot see their features and thus cannot readily identify with them on a personal level. Being a small part of the image, their presence appears to be of less importance. Often the wide shot is used to establish the context or environment in which your subject is interacting. This can provide your audience insight into your subject by showing how the subject relates or does not relate to the surroundings.

The close-up or tight shot often is used to convey intimacy, emphasis or emotional impact. When the camera is in tight for a close-up, we become involved with that person, we tend to feel for them personally. We instinctively know that what they have to say at that point is important and we also know that the producer of the program thought it was important to show us the close-up at this time. The producer has literally put the subject "right in your face" making it harder not to form an opinion, either way, about the subject. The close-up can also be used to heighten your awareness of the subject by showing it to you in much greater detail than you would normally look at it.

In terms of action, the wide or long shot is used to give us an overview of the action and/or to convey the full scope of the action as in a hilltop view of the Battle of Gettysburg. However overwhelmed we might be by the sheer numbers involved in the action, the wide or long shot could not rival the intensity felt in a claustrophobic close-up to just two of the participants in hand to hand combat. That's where the close-up comes in, drawing the viewer into the action.

Another major consideration you need to make is the camera height as it relates to your subject(s). Ideally your camera should be set so that the lens is at the subject's eye level. Shooting "down" on a subject diminishes their stature and/or its importance. Conversely, shooting up at a subject empowers or enlarges that subject. If the subject(s) are going to stand during the program, is the set high enough to simply allow the camera to tilt up or will the camera need to be pedestaled up so as not to include the top of the set or the lights in the shot? You don't want to find this out after you start recording.

D. Movements

Camera movement consists of the directions, instructions, and commands used to capture the visual images for your production. Camera movements can be any combination of three basic types:

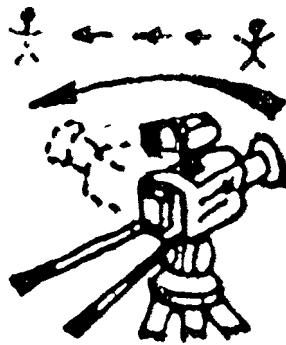
Fixed Position Movements - Where the position of the camera, relative to the subject, remains unchanged.

Changing Position Movements - Where the camera, relative to the subjects, moves to a new position.

Lens Movements - Where the camera lens changes its focal length or focus.

Fixed Position Movements

Pan is the horizontal right or left movement of the camera.



• Figure 17 – Pan Left



Figure 18 – Pan Right

Tilt is the vertical up and down movement of the camera.



• Figure 19 – Tilt Up

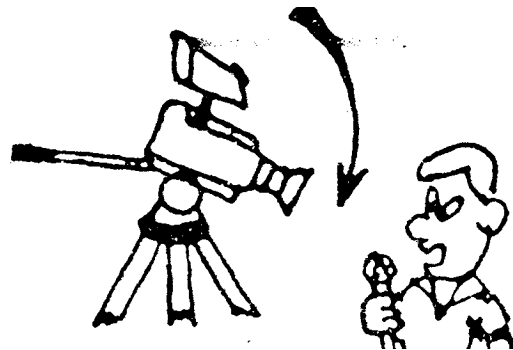
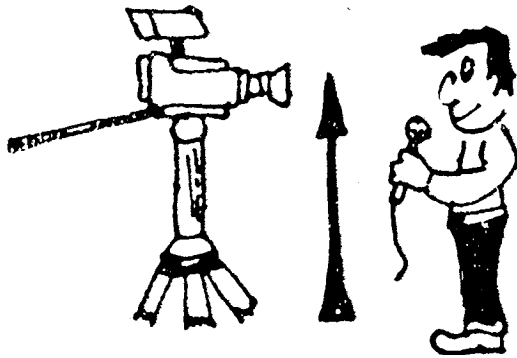


Figure 20 – Tilt Down

Changing Position Movements

Pedestal is the movement of the camera up or down using the tripod's center column crank to raise or lower the column and camera.



• Figure 21 – Pedestal Up

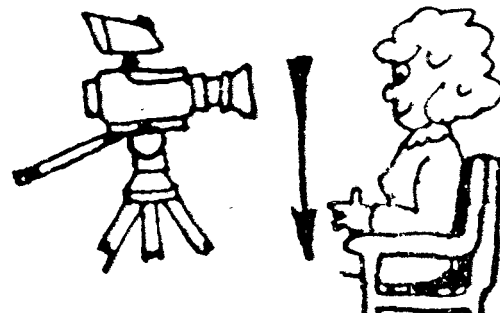
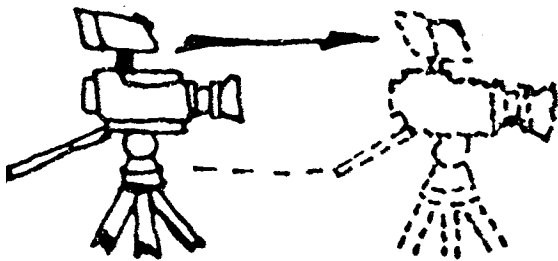


Figure 22 – Pedestal Down

Dolly is the movement of the camera on the tripod or shoulder toward or away from the subject.



• Figure 23 – Dolly In

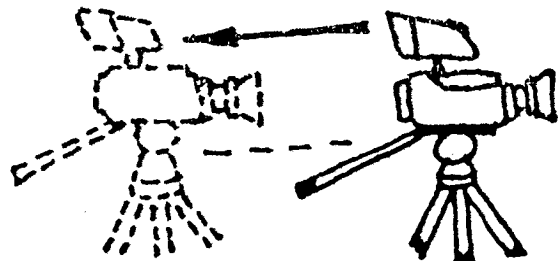
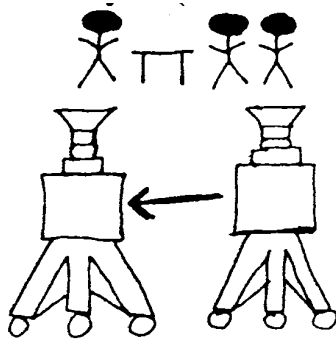


Figure 24 – Dolly Out

Truck is the movement of the camera on the tripod or shoulder to the left or right of the subject.



• Figure 25 – Truck Left

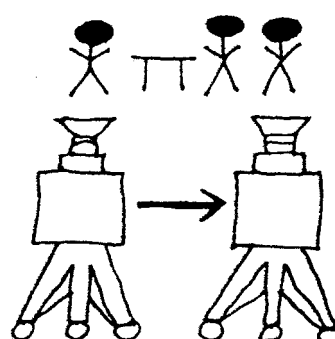
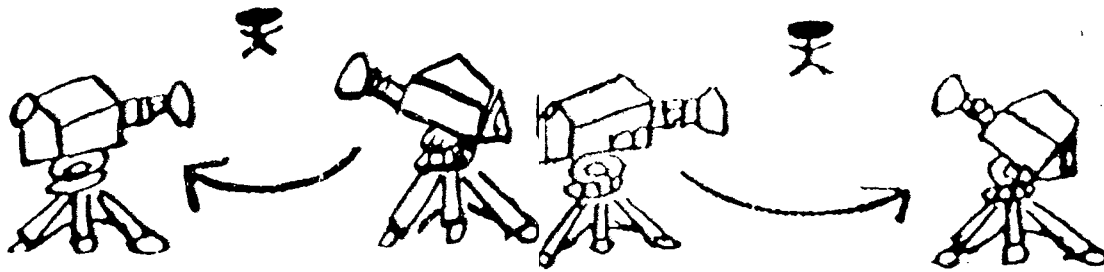


Figure 26 – Truck Right

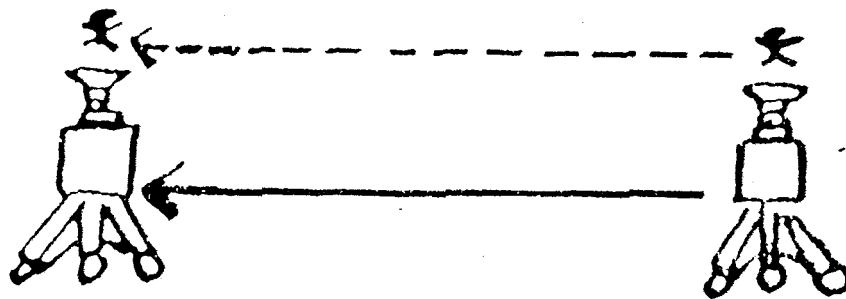
Arc is a semi-circular movement around the subject using the tripod or shoulder and similar to combining a truck with a dolly.



• Figure 27 – Arc Left

Figure 28 – Arc Right

Track is the movement of the camera on a tripod or shoulder, to match the movement of the subject.



• Figure 29 – Track the Subject

You should note that in order to use Dolly, Truck, Arc and Track movements you will need to have a dolly or have the camera on your shoulder.

Lens Movements

Zoom is to change the focal length of the lens from WIDE ANGLE (wide shot) to TELEPHOTO (close-up). You can zoom in (close-up) or you can zoom out (wide angle).

Focus is to adjust the lens for clarity (in) or lack thereof (out).

Pull Focus requires the camera operator to change the focus from one subject to another, foreground to background, or vice-versa.

E. Camera Tips

The camera should always move just a little slower than a person would normally be inclined to look. Too much quick movement without just cause will tend to look confusing to your viewers.

Wide angle shots, because of optical principles, allow for smoother looking pans, tilts and zooms. “Tighter” or telephoto shots (zoomed all the way in) tend to magnify any and all camera movements.

For most viewers, the TV screen is unequally weighted from the upper left to the lower right (could have something to do with the fact that this is the way we’re trained to scan or read materials). Therefore, subjects moving from left to right appear to do so more easily than subjects moving from right to left.

TV is an intimate medium. Don’t be afraid to use close-ups.

Don’t forget about “TV Cutoff”, what you see in your viewfinder is not what the viewer at home is going to see. Be sure to leave enough “headroom” when shooting people and enough “edge” room when shooting graphics.

Make sure the camera is operating properly BEFORE you leave for your location. You may not always have time on location to troubleshoot.

Never use the equipment in dusty or excessively humid areas. Keep the equipment dry and clean. Moisture and dust are both very destructive to electronic equipment.

Avoid subjecting the camera to excessive shock, actually from any shocks, small bumps and crops are the obvious ones, but also keep in mind shock from extreme temperature changes.

Never leave equipment in the trunk of a car overnight. Remember, exposure to cold temperatures can affect the operating condition of the equipment, especially the batteries. Always allow the equipment to warm up before using it, the general rule of thumb is to wait one hour for every ten degrees change in temperature. For example, if it’s 40 outside and 70 inside, wait 3 hours after bringing the equipment in before using it.

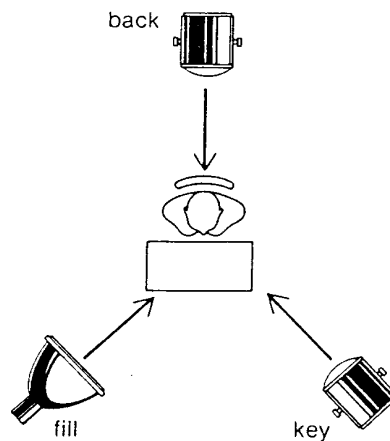
If you are working outside, keep a second battery in an inside coat pocket to keep it warm.

Never point the camera directly at the sun or bright light source for extended periods of time.

V. Lighting

A. Principles

Because there can be many possible variations for lighting a set, there are no hard-and-fast rules regarding how to light a particular situation. However, there are some basic techniques that can be adapted to almost any lighting requirements. The most basic lighting principle, often referred to as 'three-point-lighting', consists of three main light sources: a key light, a back light, and a fill light. Each light has a specific function and together can create the impression of a three-dimensional subject on the two-dimensional television screen.



• Figure 30 – Three Point Lighting

Functions

The Key light is the strongest light and the main light source for a subject. It is generally placed to the right or left of the front side of a subject - from the camera's point of view.

The Back light has several functions; it helps to emphasize the shape of a subject and to separate a subject from its background. It is generally placed directly behind a subject - opposite the camera. It is also important to pay attention to the angle at which the light strikes the back of the subject. If the light is positioned too far behind, the angle may cause the light to shine into the camera lens and cause a 'flare' effect. Setting the light at a downward angle of 45 degrees or greater will usually prevent this.

The Fill light is used to fill in and soften some of the harsh shadows created by the other lights. It is generally placed to the right or left of the front side of a subject - from the camera's point of view, opposite the Key light.

The Back light and Fill light are also usually softer, or not as strong as the Key light.

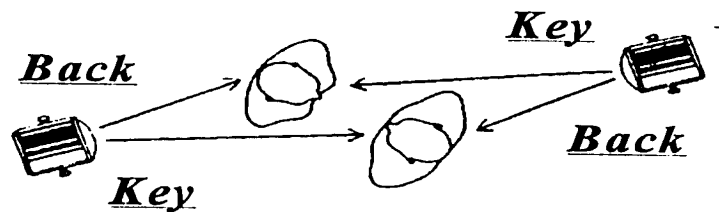
Sometimes a fourth light is used known as the Background light. It is used to light the background behind the subject.

Positioning

It is very important that the subject be lit from the same perspective as the camera, otherwise they will be spending a good portion of the program with unattractive and distracting shadows spilling across their face. Poor lighting can affect the way your audience will relate to the subject(s).

You can often light your subject with sunlight from a window or the lights already located in the room. When shooting outside, you may not need to use any lights, just some well-positioned reflectors or bounce cards.

When initially setting up lights, if possible, position them so that they can serve multiple functions and you'll be able to illuminate your set with fewer instruments.



• Figure 31 – Lights serving multiple functions

In most situations, you will want to set the lights higher than the subject's head to give the lighting a more natural look. However, be careful not to set them too high or you may create dark shadows around the subject's eyes.

Instruments

There are two basic types of lighting instruments: spotlights and floodlights.



• Figure 32 - Spot Light

Figure 33 - Mini Flood Light

The spotlight has a high light output and its light beam can be made narrow or wide by adjusting a focus control. Depending upon the focus, the unit can serve a variety of functions and may be used as a key, back or fill. Floodlights are designed to produce a large amount of diffused light and are principally used to reduce contrast between light and shadow areas. They tend to be used more as background lights or fill lights, but can also be used to key light a large group or area.

Another type of light used in remote productions is the camera light; a small battery powered light mounted on top of the camera. These instruments usually do not provide much light, but can be useful in documentary or reporting type of productions where lighting set-ups are not possible.

Scrim/Diffusion & Gels

Using scrims or diffusion material may reduce the intensity of a light. Scrims are screens that mount on the face of the light. Sheets of diffusion material can be clipped to the barn doors in front of the light. Diffused light is softer and less dramatic and makes skin textures look smoother. Undiffused light is more directional and can bring out textures and facial bone structures and make a scene appear more dramatic.

Gels alter the color of light and are useful for creating various lighting effects. They too, may be clipped to the barn doors. However, if you use gels, balance the camera(s) for the lighting before applying the gels.

- Blue gels are often used to create the look and feel of nighttime and will also give the scene a cooler look.
- Red or Amber gels will give the scene a warmer look.

B. Lighting Tips

Light from above. It's the direction we are most used to light coming from (the sun). However, if you light from below your subject, you can create some "interesting" shadows.

Stay away from walls. They can get in the way of creating a balanced lighting set-up as well as become a display for shadows. A rule of thumb – stay away from walls a distance that exceeds your subjects height (ex. - 6ft. subject, 6 ½ ft away from the nearest wall).

Watch out for high contrast. If the contrast between objects in a scene is too high, you will lose detail of one object or the other. For example, if a person with very light skin is wearing a very dark shirt, to see the person well you will not need as much light as you would to see the shirt. Thus, either you will see the person and their shirt will be a dark blob or you will see the shirt and the person will be a bright spot.

Bounce the light. Bouncing light off walls, ceilings, or even poster board is an easy way to add soft fill light to a scene. However, be aware that the light will take on the color of what it is being bounced off so you may want to avoid objects that are not white.

Light the shot, not the set. No point in lighting areas that won't be seen, so figure out what will be visible in each camera shot and light those areas.

VI. Audio

The audio for any production is just as important as the video; if it doesn't sound good, people won't watch your program. An Audio Operator is usually responsible for the overall sound of a production. He or she consults with the Director, selects, sets up and tests microphones, prepares the audio equipment and sources, including presetting of audio levels, prepares the audio mixing board, tests the mixer output to the videotape recorder and operates the audio mixer during production.

A. Aesthetics

The quality of the audio for any video production can be manipulated by several elements.

Environment

Audio from the environment in which the video is being recorded, also called ambient sound, can be very helpful in several ways. It can be used to create a more real feel to a scene or to affect the mood. For example, in a restaurant scene the ambient sounds could include voices from other people in the restaurant, the sounds of glasses clinking together, silverware on plates, chairs being moved, maybe soft music in the background, a phone ringing, etc. These sounds would help add life to the scene and can also be used in editing to help cover edits done to the main audio track.

Emphasis

The audience can be drawn to parts of a scene by emphasizing certain sounds over others. For example, in a restaurant scene the ambient sounds would be recorded at a lower level than the dialog of the main characters and could be taken out altogether to accentuate an important moment or piece of conversation between the main characters. Also, if the scene began with a wide shot of the entire restaurant, the audience could be drawn to the main characters by raising the level of their conversation as the camera zooms in towards them.

Perspective

It is more natural to the audience when the audio maintains the perspective created by the video. For example, a person's voice should sound closer during a close-up shot than during a medium or long shot. Also, the reverse is true, during a long shot the sound should seem farther away than during a close-up.

Continuity

With audio, continuity refers to the quality of sound between various takes or shots. When shooting different takes or shots in the same location, the same microphones and set-up should be used to avoid noticeable changes in the quality of the audio. It is also important to match the level of the ambient sound from one shot to the next unless there is an obvious (visible) reason for the change. Continuity problems are often more noticeable during editing than during the actual recording.

Energy

Most video can be seen as having a certain amount of energy - think of the difference between a riotous crowd racing through the street versus a single person strolling through a park. It's usually best to try and match the energy of the audio with the video of a scene. For example, a tranquil scene of a pond in some woods would do well to have some quiet nature sounds or soft music. On the other hand, a rock music video should have louder, stronger audio to match the feel of the video.

B. Equipment

Microphones

Microphones pick up sound waves in the air and convert them to an electrical signal that can be carried by wire. There are two basic pickup patterns for microphones:

- **Omnidirectional (Omni):** pick up sound from all directions. Mics with this pickup pattern are good for recording ambient sounds such as crowd noise. Not recommended for studio use because studios are acoustically "live" (lots of echo).
- **Cardioid:** has a more directional pickup pattern, primarily picking up sound from the front with a little from the sides and almost nothing from the rear. Useful for musical instruments and recording interviews.

Microphones come in several styles:

- **Handheld:** both omni and cardioid. Good for interviews, performances, lectures. Some have on/off switches.



• Figure 34 - Handheld cardioid mics.

- **Shotgun:** cardioid. Pickup pattern is usually more directional than the standard cardioid. Good anytime you wish the mic to be "off camera" or to get sounds from a distance. These mics almost always require a battery.



• Figure 35 - Shotgun mics.

- **PZM:** omni. Good for panel discussions or getting sound from a group sitting around a table. Some require batteries, some have on/off switches.



• Figure 36 - PZM mic.

- **Lavalier (Lav):** both omni and cardioid. Tiny, unobtrusive mics that can be clipped on the talent's tie, suit coat, shirt, or blouse. Good for news or talkshow - type productions. Some require batteries, some have on/off switches.



• Figure 37 - Lavalier mic.

Stands

Mic Stands are used to hold mics in position on the floor or table "on camera." Large boom stands can be used to position mics "off camera." Lavalier mics usually come with clips or pins which allow you to attach the mic to the shirt or coat of the talent.



• Figure 38 - Mic stands.

Cables

Mic Cables conduct the audio signal from the microphones to the camera or audio mixer. At one end of a mic cable, there is a 3-pin XLR connector (plug or jack). The other end of the mic cable will either have another XLR connector for plugging into a mixer or a 1/4" or mini phone connector to plug into a camera. XLR connectors are "keyed" connectors, which means that they fit together in only one way. If they do not lock together at first, do not force the connection. Pull the connectors apart, reexamine the pin configuration, and try again.



• Figure 39 - Microphone cable.

Mixer

An Audio Mixing Board (Mixer) mixes all of the audio sources of your program for recording and will allow you to manipulate the audio sources in the following manner:

- Combining two or more sound sources together (mixing).
- Raising or lowering the volume level of one particular sound source, of a selected group, or of all the sound sources (amplifying).
- Directing a sound source to a specific part of the system (routing).
- Emphasizing or de-emphasizing certain qualities or frequency ranges of a particular sound source to make it sound better (equalization).



• Figure 40 - Audio mixer.

C. Audio Tips

Always, **always** use headphones and plug them into the device you are using to record (camera, vcr) to be sure the audio signals are getting onto your tape.

When using a hand-held mic for an interview, remember to hold the mic in the hand closest to the person being interviewed, this helps to keep you facing towards the camera.

If you're adding your mic to a podium with several other mics already there, try to avoid metal-to-metal contact between mics, this could cause a hum in your audio.

When recording ambient sound outside on a windy day, try laying the mic on the ground to reduce the wind noise.

VII. Floor Managing

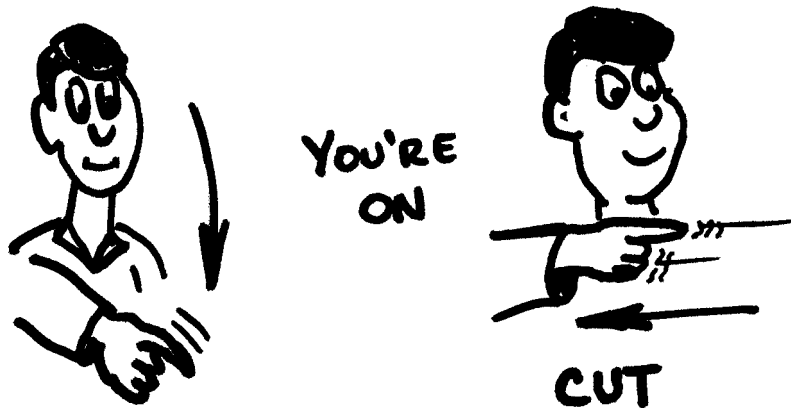
The Floor Manager is the eyes and ears of the Director on the set. The Floor Manager directs activities on the set, relays cues and commands to talent and crew on behalf of the Director, is responsible for props and set materials, and supervises clean-up at the end of production.

A. Giving Cues

The direction of the on-camera talent during a production should be unseen by the cameras and unheard by the microphones. The Floor Manager must use a language made up of hand and arm gestures that can easily be seen by the on-camera talent and understood by all. These gestures are the sign language of the cues and commands given audibly by the Director. The Floor Manager requires mobility, a constant awareness and the ability to communicate clearly and precisely. Let's take a look at some of the more common hand and arm signals.

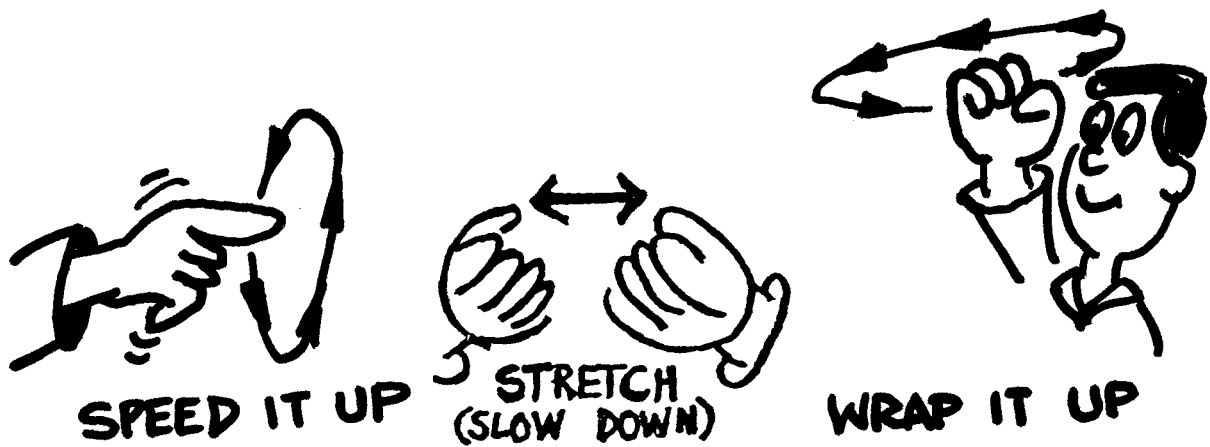


• Figure 41 - Countdown to Standby

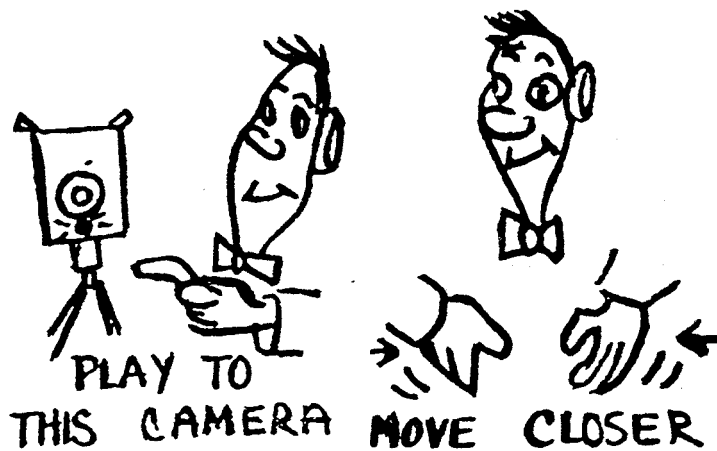


• Figure 42 – You're On, Begin

Figure 43 – Cut, Stop



• Figure 44 – Speed It Up, Faster Figure 45 – Stretch, Slow Down Figure 46 – Wrap It Up, Finish



• Figure 47 – Play to This Camera Figure 48 – Move Closer

B. Floor Manager Tips

As Floor Manager, you must be situated in-line of sight of the on-camera talent in order to have the signals seen over the glare of the lights. It might even be necessary to carefully light the area you will be giving cues from to enable talent to see the cues.

It is the Floor Manager's responsibility to make sure that the cues are received. If the talent is working to camera one, don't stand next to camera two and expect the talent to see your cues.

Don't interrupt the talent when they are speaking, wait for them to stop to give the cue.

Though a lot of the hand and arm signals may seem self-explanatory, they are not! Make sure the you go over the signals with the talent, even if the talent is experienced, the signals may not be the same ones they're used to.

VIII. Set Design

Depending on the type of show, your set may have to simulate a real environment, such as a living room or dining room, or simply provide an efficient and attractive working environment, such as a news set. Whatever the purpose may be, it must allow for:

- Optimum camera angles and camera movement
- Microphone boom movement
- Good lighting
- Smooth and logical action of the performers

Before you design a set, you must know what the show is about. Talk to the director about his or her concept of the show, even if it is a simple interview. Develop a set by defining the necessary spatial environment for optimal communication. Try to imagine what you would like the viewers to see and work backward from there. For example, if for an interview you would like the viewer to see intimate close-ups throughout the show, what kind of set do you need? Two chairs.

A. Scenery

The scenery is the part of the set that simulates an environment or location. The three main types which are used are flats, hanging units and platforms.

Flats are background units, constructed of a lightweight wood frame and covered with canvas or muslin which can be painted, 8 to 10 feet high and 1 to 5 feet wide. They can be used to simulate interior or exterior walls. Because of the light weight, they can be easily moved and arranged and the thinness makes them easily stored. However, they can also be flimsy and may shake when someone brushes against them. Whenever you work with scenery, make sure that all pieces are safely anchored and secured so that they do not tip over when bumped.

Whereas flats usually rest on the floor, hanging units are supported from special tracks or from the lighting grid. Hanging units include curtains, drapes and drops. The SboroTV studio has three curtains attached to a double track encircling the entire studio: light gray covering 180 degrees, blue (180) and black (360). Drapes can also be used and hung from the lighting grid. When choosing drapes, stay away from overly detailed patterns or fine stripes. Drops are wide rolls of canvas with a background scene painted on it or a large photomural and can also be hung from the grid. When hanging drapes or drops, be sure to keep some space between the fabric and the lighting units.

Platforms (also called risers) are used to elevate certain areas of the set, and in some cases the entire set. Sometimes this is done to accentuate part of the set, other times to raise the level of the performers to provide a better camera angle. If you use a platform, you may want to cover it entirely with carpet, to absorb the hollow sounds when somebody is moving.

B. Props

For set props, you can use real furniture. For an interview area, small, simple chairs are often more useful than large, elaborate ones. It is often difficult to bring oversized chairs close enough together for an intimate spacing of a two-shot. Try to get chairs and couches that are not too low; otherwise sitting and rising gracefully may become a problem.

Secondhand stores provide an unlimited source for set dressings such as pictures, lamps, plants, flower pots, candle holders, and sculptures. Or you can always raid your own home, just avoid the good, expensive stuff that you don't want to see accidentally broken.

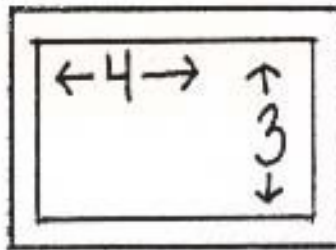
The most important thing about hand props is to actually have them on the set. For any of these objects which will be handled by the performers, try to only use real objects. A real telephone (it doesn't have to be plugged in) works and looks better than a toy one. If you want the actions to be genuine, the hand props must be real. If you use food, make sure it is fresh and keep the hot things hot and the cold things cold. But it doesn't have to be completely real - the glass of whiskey can actually be tea, the audience can't tell the difference.

IX. Graphics

Graphics are any symbols or words that appear during a program; the title of the program; the end credits; names of people on the program, to be superimposed over a shot of the person; addresses to write to or numbers to call for information. They can be created very simply with pen and paper or with a computer graphics program. The Character Graphics (CG) Operator is the crew person responsible for preparing the character graphics in advance of the production so that the pages of text are legible, displayed aesthetically and properly located on the screen.

Whether you wish to make use of your artistic skills to create your own unique, hand generated graphics or you use a graphics program, there are some guidelines to keep in mind:

- All graphics should be created using the same dimension ratios as a TV screen, 4 units wide by 3 units high.



- A border of 10% (“**Safe Title Area**”) should be left on all sides of your graphics for proper framing. This will prevent your information from being cutoff on viewers home TVs.
- Keep the lettering styles simple. Ornate lettering can be difficult to read. And the letters should have sufficient spacing between them so they will not appear to run together.
- Don’t pack the screen with too much information at one time. Consider using multiple pages/screens with less information. Six lines of information is about the maximum.
- When you show graphics during your program, make sure they’re on screen long enough for the audience to read them.
- Take care when choosing colors for your lettering. In general, 90% of your graphics will be white lettering with a thin black outline or shadow. But remember to take the background into consideration – you probably shouldn’t use white lettering if the background is also mostly white.
- To make words stand out from a video background, soften the focus of the video.
- If you can animate your graphics (fly words around, roll credits, fade, etc.), try to use the animation only when it adds to the overall message – don’t just fly the words around because you can.
- If photos are used, they should be non-glossy and a suitable size for framing.
- Charts should have clear, concise labels, large enough to read when the entire chart is seen.

X. Writing

The Writer is responsible for the program's script, if there can be one, and/or any dialogue or statements which can be or need to be scripted. Depending on the type of production you are planning, a television script can be used to help establish the show's format, develop the program content, and/or organize production information. While there are no hard and fast shortcuts to writing, here are a few tips:

Write CONVERSATIONALLY. That is, write to be heard not to be read. This is different from the kind of writing most of us are used to doing. When you write, use short sentences and think visually. Do not simply write the words in the hope that you'll get pictures to match later. See the pictures in your mind as you write. Television is after all a visual medium. Once you've roughed out the script, read it out loud. "See" how it reads. Listen to how it sounds.

Write EFFICIENTLY. Writing a script doesn't necessarily mean you always have to have dialog. Words and pictures should be used support each other. However there are times when you can use few or even no words to make your point. Natural sounds, music, even total silence can be used make a dramatic statement. Try to create visual and verbal transitions that will carry your viewers from one place or point in your production to the next. Avoid "professional" or "technical" jargon unless you, your guest or the material fully explain it.

Write EFFECTIVELY. You'll find a crisp, clean, direct style works best. Establish a clear, logical flow of ideas. Use an appropriate level of sophistication for the audience. For example, children often have trouble following flashbacks, parallel action or flash-forwards.





Write expecting to REWRITE. Do not be overly defensive or possessive about your script. Try to remain open to ideas and suggestions from others. They just might come up with a better way to relate the message you're trying to get across. After all, it's the final product, your program that really matters.

Remember, unlike printed material, your viewers will not have the luxury of being able to review the information once it has disappeared from their TV screen.

Also take the script writing opportunity to make complete suggestions for the music elements, natural sound, video images and the overall "feel" of the piece.

Script Format

There are several formats you can use when preparing a script for shooting, the most common is probably the story board format.

✓		PLANNING STORYBOARD				
SHOT	SKETCH	ACTION	SOUND	TIME	TOTAL TIME	
1		WS- John in the library studying	Audio 1: Music Audio 2: Narrator introduces	00:15	10:25	
2		MS- John in the library studying	Audio 1: Music Audio 2: Narrator continues	00:10	10:35	
3		WS- Susan enters library	Audio 1: music Audio 2: Outside noise	00:10	10:45	
4		WS- Susan approaches John (same framing as Shot 1)	Audio 1: Audio 2: "Hi John..."	00:15	11:00	

XI. Appearing On TV

How you appear on TV is determined by just two things: what you look like and how you behave.

Appearance

Television cameras do not handle high contrast situations very well. Combinations such as pure white shirts with dark suits or skirts prove to be very difficult to light properly. This also applies to skin color. If you are very dark-skinned, stay away from white shirts, dresses, or blouses without jackets to wear over them. Conversely, if you are very pale-skinned, stay away from solid black. In general with clothing you should consider these three things:

Line, whereby a slim cut is generally preferred. The television camera will tend to make you appear ten pounds heavier, therefore wearing tailored or fitted clothing is your best bet. Try to stay away from billowy or large ruffled, full cut attire.

Color, which should harmonize, yet contrast with the dominant color of the set. Try not to wear bright or deeply saturated colors as these tend to bloom on camera. Off-whites, light-saturated or subdued colors and pastel shades all work well.

Texture and detail, which must not make the clothing appear too busy. Avoid patterns with intricate details, such as plaids/stripes/dots, checks, hounds tooth, herringbone, etc. These tend to interact with the TV lines in unusual ways, sometimes appearing to come “alive” or “electric”. Wear simple patterns or solids.

Also, avoid large, shiny jewelry which can create unwanted and/or uncontrollable light reflections. Be aware that excessive chains, necklaces and bracelets can also create audio problems, if they tend to “jingle” or “rattle” easily.

Makeup is generally used to improve, correct, or change appearance. The techniques of television makeup do not differ drastically from applying ordinary street makeup, especially if the makeup functions are to improve or correct appearance. Makeup must be smooth and subtle to appear natural in the actual production lighting and even on extreme close-ups. The most basic makeup item is a foundation that covers minor blemishes. Water-based cake foundations, which come in a variety of skin tones, are generally used for television makeup.

Behavior

Television is an intimate medium, not suited to the grandiose movements of a platform speaker or stage performer. You need to keep in mind, while your total audience may be in the hundreds, you must play to the cameras as if you were playing to an audience of only one or two people. Here are some tips:

If you are talking to the television audience make sure you are addressing yourself directly to the camera. Talk to the camera as if it were a person. Strive for a warm, animated delivery. Emphasize words according to meaning, just as in normal conversation.

In an interview, talk to the reporter or guest. Try for genuine human interaction. And speak in your normal tone of voice, especially when doing your microphone check.

Relax and be yourself. This automatically lowers your voice and makes your movements appear more natural. Your movements need to be deliberate and sure and just a little bit slower than you would normally move.

If you are sitting down, lean forward just a little. This will keep you from slouching, which just doesn't look good.

Observe cues without "telegraphing" them to the audience. A good floor manager and director will try to avoid giving you cues while you're on camera, but sometimes this can not be helped. It is not always necessary for you to acknowledge the cue and often the floor manager can tell if you've gotten it. If you must acknowledge it, try to do it with eye contact or a very slight nod so as to not distract the guest(s).

Always assume that the show goes on. Ignore noises, distractions and any problems and continue with the program as if nothing happened.

Review the tape afterwards. You'll be your own best and worst critic.

XII. Revision History and Acknowledgments

A. Revision History

SboroTV Draft Document, July 2008

SboroTV obtained the original document from Community Television Network of Ann Arbor, MI. Last revised Aug 2002.

B. Acknowledgments

We'd like to thank Lucy Ann and Mike for allowing us to copy and edit CTN's original work for our needs at SboroTV

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Other portions taken from Distributed Learning Services of Douglas College.

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